Critical Release Notice

Publication number: 297-8021-543 Publication release: Preliminary 17.01

The content of this customer NTP supports the SN09 (DMS) software release.

Bookmarks used in this NTP highlight the changes between the NA015 baseline and the current release. The bookmarks provided are color-coded to identify release-specific content changes. NTP volumes that do not contain bookmarks indicate that the NA015 baseline remains unchanged and is valid for the current release.

Bookmark Color Legend

Black: Applies to content for the NA015 baseline that is valid through the current release.

Red: Applies to new or modified content for NA017 that is valid through the current release.

Blue: Applies to new or modified content for NA018 (SN05 DMS) that is valid through the current release.

Green: Applies to new or modified content for SN06 (DMS) that is valid through the current release.

Purple: Applies to new or modified content for SN07 (DMS) that is valid through the current release.

Pink: Applies to new or modified content for SN08 (DMS) that is valid through the current release.

Orange: Applies to new or modified content for SN09 (DMS) that is valid through the current release.

Attention!

Adobe [®] *Acrobat* [®] *Reader* [™] 5.0 *or higher is required to view bookmarks in color.*

Publication History

Note: Refer to the NA015 baseline document for Publication History prior to the NA017 release.

September 2005

Preliminary release 17.01 or software release SN09 (DMS). Updates made for this release are shown below:

Volume 1

Corrected paragraph on page 4-36 according to CR Q01117454

Volume 2 - 4

No changes

March 2004

Standard release 16.03 for software release SN06 (DMS). Updates made for this release are shown below:

Volume 1

No changes

Volume 2

New alarm – Lns CR C critical – according to CR Q00720148.

Volume 3 - 4

No changes

September 2003

Standard release 16.02 for software release SN06 (DMS). Updates made for this release are shown below:

Volume 1 - 4

No changes

June 2003

Preliminary release 16.01 for software release SN06 (DMS). Updates for this release are shown below:

Volume 1 - 4

No changes

297-8021-543

DMS-100 Family North American DMS-100

Alarm Clearing and Performance Monitoring Procedures Volume 1 of 4

LET0015 and up Standard 14.02 May 2001



DMS-100 Family North American DMS-100

Alarm Clearing and Performance Monitoring Procedures Volume 1 of 4

Publication number: 297-8021-543 Product release: LET0015 and up Document release: Standard 14.02 Date: May 2001

Copyright © 1996-2001 Nortel Networks, All Rights Reserved

Printed in the United States of America

NORTEL NETWORKS CONFIDENTIAL: The information contained herein is the property of Nortel Networks and is strictly confidential. Except as expressly authorized in writing by Nortel Networks, the holder shall keep all information contained herein confidential, shall disclose the information only to its employees with a need to know, and shall protect the information, in whole or in part, from disclosure and dissemination to third parties with the same degree of care it uses to protect its own confidential information, but with no less than reasonable care. Except as expressly authorized in writing by Nortel Networks, the holder is granted no rights to use the information contained herein.

Information is subject to change without notice. Nortel Networks reserves the right to make changes in design or components as progress in engineering and manufacturing may warrant. Changes or modification to the DMS-100 without the express consent of Nortel Networks may void its warranty and void the user's authority to operate the equipment.

Nortel Networks, the Nortel Networks logo, the Globemark, How the World Shares Ideas, Unified Networks, DMS, DMS-100, Helmsman, MAP, Meridian, Nortel, Northern Telecom, NT, SuperNode, and TOPS are trademarks of Nortel Networks.

Contents

Alarm Clearing and Performance Monitoring Procedures Volume 1 of 4

Ab	out this document How to check the version and issue of this document xix References in this document xix	xix
	What precautionary messages mean xx How commands, parameters, and responses are represented xxi Input prompt (>) xxi	
	Commands and fixed parameters xxi Variables xxi Responses xxii	
1	Procedures to clear application alarms	1-1
	Introduction 1-1	
	Alarm display 1-1	
	Indication 1-1	
	Meaning 1-1	
	Result 1-1	
	Common procedures 1-2	
	ACTION 1-2 APPL Calle major 1-3	
	APPL SDM critical 1-5	
	APPL SDM minor 1-6	
	OCDL OCSysB critical 1-7	
	OCDL OCSysB major 1-11	
2	Common channel signaling alarm clearing procedures	2-1
	Introduction 2-1	
	Alarm display 2-1	
	Indication 2-1	
	Meaning 2-1	
	Result 2-1	
	Common procedures 2-2	
	Action 2-2	

CCS	2RS LBC SPM critical	2-3
CCS	2RS OPR SPM critical	2-9
CCS	2RS OPT SPM critical	2-16
CCS	LK minor 2-24	
CCS	LK minor in a DPNSS	2-43
CCS	LKM major 2-52	
CCS	LSSC critical 2-70	
CCS	LSSM major 2-78	
CCS	PC minor 2-87	
CCS	PCC critical 2-91	
CCS	RS critical 2-95	
CCS	RS major 2-101	
CCS	RSSC critical 2-106	
CCS	RTRC critical 2-115	
CCS	RTRM major 2-124	

3 Computing module alarm clearing procedures

3-1

Introduction 3-1 Alarm display 3-1 Indication 3-1 Meaning 3-1 Result 3-1 Common procedures 3-2 Action 3-2 CM AutoLd minor 3-3 CM CBsyMC major 3-6 CM ClkFlt major 3-14 CM CMFlt major 3-21 CM CMTrap major 3-34 CM E2A minor 3-37 CM EccOn minor 3-41 CM IMAGE critical 3-46 CM JInact minor 3-49 CM LowMem critical 3-52 CM LowSpr major 3-60 CM LowSpr minor 3-68 CM MBsyMC major 3-76 CM MC Tbl minor 3-84 CM MemCfg minor 3-96 CM MemCor major 3-109 CM MemCor minor 3-115 CM MemFlt minor 3-118 CM MemLim minor 3-123 CM MMnoSy major 3-126 CM MMsync major 3-136 CM NoBrst minor 3-139 CM NoOvr minor 3-146 CM NoSYNC major 3-153 CM NoTOD critical 3-159 CM PMCFlt major 3-166

	CM PMCTbl minor 3-176 CM PrcOpt major 3-185 CM RExFlt major 3-188 CM RExSch minor 3-191 CM RExTst minor 3-197 CM SBsyMC major 3-202 CM SLMLIM major 3-213 CM SLMLim minor 3-216 CM SRAMFL major 3-219 CM SramFl minor 3-226 CM StrAlc critical 3-229	
4	Procedures to clear an external alarm Introduction 4-1 Alarm display 4-1 Indication 4-1 Meaning 4-1 Result 4-1 Common procedures 4-1 Action 4-2 Ext Crit critical 4-3 Ext Maj major 4-12 Ext Min minor 4-34 Ext CPPOOL critical 4-42 Ext CPPOOL major 4-47 Ext CPPOOL minor 4-52 Ext E911_ALI major 4-57 Ext E911_LDT critical 4-67 Ext E911_LDT critical 4-67 Ext E911_LDT minor 4-75 Ext E911_OFBSR critical 4-79 Ext E911_OFBSR minor 4-89 Ext E911_OFBSR minor 4-89 Ext E911_PSAP_OFFHK minor 4-93 Ext E911_RCER major 4-100 Ext E911_RCER minor 4-105 Ext E911_SRDB_MEMORY minor 4-121	4-1
	 Ext FSP major 4-125 Ext FSP APC cabinet major 4-128 Ext FSP CCC frame major 4-137 Ext FSP CDSN cabinet with an MSP shelf major 4-146 Ext FSP CIOE cabinet with an MSP shelf major 4-153 Ext FSP CIPE cabinet with an MSP shelf major 4-160 Ext FSP CISM, CMTA, and CTME cabinet with an MSP shelf major Ext FSP CPDC cabinet major 4-174 Ext FSP DCE frame major 4-182 Ext FSP DPCC cabinet major 4-191 	4-167

Ext FSP DSNE frame or CDSN cabinet major 4-201 Ext FSP DTE or IDTE frame major 4-210 Ext FSP IOE frame and CIOE cabinet major 4-219 Ext FSP LME frame (with fuses only) major 4-228 Ext FSP LPP cabinet major 4-242 Ext FSP MEX frame major 4-250 Ext FSP MS7E frame major 4-265 Ext FSP NET0 or NET1 frame (circuit breakers and fuses) major 4-274 Ext FSP NET0 or NET1 frame (with fuses only) major 4-283 Ext FSP NETC frame major 4-292 Ext FSP PDC frame major 4-301 Ext FSP RLCE frame major 4-310 Ext FSP RLM frame (with fuses only) major 4-328 Ext FSP TME frame or CTME cabinet with FSP shelf major 4-341 Ext JESCALL minor 4-353 Ext JESUNANS minor 4-357 Ext MALO Major 4-361 Ext MALT Major 4-365

NTP Summary Contents

Alarm Clearing and Performance Monitoring Procedures Volume 2 of 4

About this document

Vol. 1, xix

How to check the version and issue of this document Vol. 1, xix
References in this document Vol. 1, xix
What precautionary messages mean Vol. 1, xx
How commands, parameters, and responses are represented Vol. 1, xxi
Input prompt (>) Vol. 1, xxi
Commands and fixed parameters Vol. 1, xxi
Variables Vol. 1, xxi
Responses Vol. 1, xxii

1 Procedures to clear application alarms

Vol. 1, 1-1

Introduction Vol. 1, 1-1 Alarm display Vol. 1, 1-1 Indication Vol. 1, 1-1 Meaning Vol. 1, 1-1 Result Vol. 1, 1-1 Common procedures Vol. 1, 1-2 Action Vol. 1, 1-2 APPL CallP major Vol. 1, 1-3 APPL SDM critical Vol. 1, 1-5 APPL SDM minor Vol. 1, 1-6 OCDL OCSysB critical Vol. 1, 1-7 OCDL OCSysB major Vol. 1, 1-11

2 Common channel signaling alarm clearing procedures

Introduction Vol. 1, 2-1 Alarm display Vol. 1, 2-1 Indication Vol. 1, 2-1 Meaning Vol. 1, 2-1 Result Vol. 1, 2-1 Common procedures Vol. 1, 2-2 Action Vol. 1, 2-2 CCS 2RS LBC SPM critical Vol. 1, 2-3 CCS 2RS OPR SPM critical Vol. 1, 2-9 Vol. 1, 2-1

3

CCS 2RS OPT SPM critical Vol. 1, 2-16 CCS LK minor Vol. 1, 2-24 CCS LK minor in a DPNSS Vol. 1, 2-43 CCS LKM major Vol. 1, 2-52 CCS LSSC critical Vol. 1, 2-70 CCS LSSM major Vol. 1, 2-78 CCS PC minor Vol. 1, 2-87 CCS PCC critical Vol. 1, 2-91 CCS RS critical Vol. 1, 2-95 CCS RS major Vol. 1, 2-101 CCS RSSC critical Vol. 1, 2-106 CCS RTRC critical Vol. 1, 2-115 CCS RTRM major Vol. 1, 2-124 Computing module alarm clearing procedures Vol. 1, 3-1 Introduction Vol. 1, 3-1 Alarm display Vol. 1, 3-1 Indication Vol. 1, 3-1 Meaning Vol. 1, 3-1 Result Vol. 1, 3-1 Common procedures Vol. 1, 3-2 Action Vol. 1, 3-2 CM AutoLd minor Vol. 1, 3-3 CM CBsyMC major Vol. 1, 3-6 CM ClkFlt major Vol. 1, 3-14 CM CMFlt major Vol. 1, 3-21 CM CMTrap major Vol. 1, 3-34 CM E2A minor Vol. 1, 3-37 CM EccOn minor Vol. 1, 3-41 CM IMAGE critical Vol. 1, 3-46 CM JInact minor Vol. 1, 3-49 CM LowMem critical Vol. 1, 3-52 CM LowSpr major Vol. 1, 3-60 CM LowSpr minor Vol. 1, 3-68 CM MBsyMC major Vol. 1, 3-76 CM MC Tbl minor Vol. 1, 3-84 CM MemCfg minor Vol. 1, 3-96 CM MemCor major Vol. 1, 3-109 CM MemCor minor Vol. 1, 3-115 CM MemFlt minor Vol. 1, 3-118 CM MemLim minor Vol. 1, 3-123 CM MMnoSy major Vol. 1, 3-126 CM MMsync major Vol. 1, 3-136 CM NoBrst minor Vol. 1, 3-139 CM NoOvr minor Vol. 1, 3-146 CM NoSYNC major Vol. 1, 3-153 CM NoTOD critical Vol. 1, 3-159 CM PMCFlt major Vol. 1, 3-166 CM PMCTbl minor Vol. 1, 3-176 CM PrcOpt major Vol. 1, 3-185

	CM RExFlt major Vol. 1, 3-188 CM RExSch minor Vol. 1, 3-191 CM RExTst minor Vol. 1, 3-197 CM SBsyMC major Vol. 1, 3-202 CM SLMLIM major Vol. 1, 3-213 CM SLMLim minor Vol. 1, 3-216 CM SRAMFL major Vol. 1, 3-219 CM SramFl minor Vol. 1, 3-226 CM StrAlc critical Vol. 1, 3-229	
4	Procedures to clear an external alarm Vol. 1, 4-1	-
	Introduction Vol. 1, 4-1	
	Alarm display Vol. 1, 4-1	
	Indication Vol. 1, 4-1	
	Meaning Vol. 1, 4-1	
	Result Vol. 1, 4-1	
	Common procedures Vol. 1, 4-1	
	Action Vol. 1, 4-2	
	Ext Crit critical Vol. 1, 4-3	
	Ext Maj major Vol. 1, 4-12	
	Ext Min minor Vol. 1, 4-34	
	Ext CPPOOL critical Vol. 1, 4-42	
	Ext CPPOOL major Vol. 1, 4-47	
	Ext CPPOOL minor Vol. 1, 4-52	
	Ext E911_ALI major Vol. 1, 4-57	
	Ext E911_ALI MINOF VOI. 1, 4-62	
	EXT E911_LDT CHIICal Vol. 1, 4-67	
	Ext E911_LDT major Vol. 1, 4-71 Ext E011_LDT minor Vol. 1, 4-75	
	EXT EQ11 \triangle EPSP critical Vol 1,470	
	Ext E911_OFBSR childal Vol. 1, 4-79 Ext E011_OFBSP major_Vol. 1, 4-84	
	Ext E911_OFBSR minor Vol 1 $4-64$	
	Ext E911 PSAP OFFHK minor Vol 1 $4-93$	
	Ext E911 RCER major $Vol = 1, 4-100$	
	Ext E911 RCER minor Vol 1 $4-105$	
	Ext E911 SRDB MEMORY minor Vol. 1, 4-110	
	Ext ESR minor Vol. 1. 4-117	
	Ext ESR TIME ALARM minor Vol. 1, 4-121	
	Ext FSP major Vol. 1, 4-125	
	Ext FSP APC cabinet major Vol. 1, 4-128	
	Ext FSP CCC frame major Vol. 1, 4-137	
	Ext FSP CDSN cabinet with an MSP shelf major Vol. 1, 4-146	
	Ext FSP CIOE cabinet with an MSP shelf major Vol. 1, 4-153	
	Ext FSP CIPE cabinet with an MSP shelf major Vol. 1, 4-160	
	Ext FSP CISM, CMTA, and CTME cabinet with an MSP shelf	
	major Vol. 1, 4-167	
	Ext FSP CPDC cabinet major Vol. 1, 4-174	
	Ext FSP DCE frame major Vol. 1, 4-182	
	Ext FSP DPCC cabinet major Vol. 1, 4-191	
	Ext FSP DSNE frame or CDSN cabinet major Vol. 1, 4-201	

x NTP Summary Contents

Ext FSP DTE or IDTE frame major Vol. 1, 4-210 Ext FSP IOE frame and CIOE cabinet major Vol. 1, 4-219 Ext FSP LME frame (with fuses only) major Vol. 1, 4-228 Ext FSP LPP cabinet major Vol. 1, 4-242 Ext FSP MEX frame major Vol. 1, 4-250 Ext FSP MS7E frame major Vol. 1, 4-265 Ext FSP NET0 or NET1 frame (circuit breakers and fuses) major Vol. 1, 4-274 Ext FSP NET0 or NET1 frame (with fuses only) major Vol. 1, 4-283 Ext FSP NETC frame major Vol. 1, 4-292 Ext FSP PDC frame major Vol. 1, 4-301 Ext FSP RLCE frame major Vol. 1, 4-310 Ext FSP RLM frame (with fuses only) major Vol. 1, 4-328 Ext FSP TME frame or CTME cabinet with FSP shelf major Vol. 1, 4-341 Ext JESCALL minor Vol. 1, 4-353 Ext JESUNANS minor Vol. 1, 4-357 Ext MALO Major Vol. 1, 4-361 Ext MALT Major Vol. 1, 4-365

Alarm Clearing and Performance Monitoring Procedures Volume 2 of 4

1 Procedures to clear an Input/output device	
alarm	Vol. 2, 1-1
Introduction Vol. 2, 1-1	
Alarm display Vol. 2, 1-1	
Indication Vol. 2, 1-1	
Meaning Vol. 2, 1-1	
Results Vol. 2, 1-1	
Common procedures Vol. 2, 1-1	
Action Vol. 2, 1-2	
IOD 2MPCOS CSS SPM minor Vol. 2, 1-3	
IOD 2MPCOS CV SPM minor Vol. 2, 1-9	
IOD 2MPCOS CVFE SPM minor Vol. 2, 1-16	
IOD 2MPCOS ES SPM minor Vol. 2, 1-23	
IOD 2MPCOS ESFE SPM minor Vol. 2, 1-31	
IOD 2MPCOS SEFS SPM minor Vol. 2, 1-38	
IOD 2MPCOS SES SPM minor Vol. 2, 1-46	
IOD 2MPCOS SESFE SPM minor Vol. 2, 1-54	
IOD 2MPCOS UAS SPM minor Vol. 2, 1-62	
IOD 2MPCOS UASFE SPM minor Vol. 2, 1-69	
IOD DEVBnn critical, major, or minor Vol. 2, 1-76	
IOD DMNTnn minor Vol. 2, 1-79	
IOD HOLDnn minor Vol. 2, 1-85	
IOD ITOC critical Vol. 2, 1-88	
IOD ITOC minor Vol. 2, 1-95	
IOD KEEPn minor Vol. 2, 1-103	
IOD MPCLNK minor Vol. 2, 1-106	

IOD MPCLNK on an IOM minor Vol. 2, 1-115 IOD nCKEr minor Vol. 2, 1-126 IOD nCKEr on an IOM minor Vol. 2, 1-133 IOD nCKOS major or minor Vol. 2, 1-142 IOD nCKOS on an IOM major or minor Vol. 2, 1-151 IOD nDDUOS major or minor Vol. 2, 1-164 IOD nDDUOS on an IOM major or minor Vol. 2, 1-178 IOD nDPCOS minor Vol. 2, 1-191 IOD nIOCOS major or minor Vol. 2, 1-196 IOD nIOCOS on an IOM major or minor Vol. 2, 1-204 IOD nMPCOS in an IOC major or minor Vol. 2, 1-211 IOD nMPCOS on an IOM major or minor Vol. 2, 1-222 IOD nMTDOS in an IOC minor Vol. 2, 1-235 IOD nMTDOS on an IOM minor Vol. 2, 1-245 IOD nnAMA critical, major, or minor Vol. 2, 1-260 IOD nnJF critical, major, or minor Vol. 2, 1-264 IOD nnOM critical, major, or minor Vol. 2, 1-268 IOD NO AMA on device type DISK critical Vol. 2, 1-272 IOD NO AMA on device type TAPE critical Vol. 2, 1-281 IOD NOssys on device type DISK critical, major, or minor Vol. 2, 1-295 IOD NOssys on device type TAPE critical Vol. 2, 1-304 IOD nSVC critical Vol. 2, 1-317 IOD PnnVnn minor Vol. 2, 1-323 IOD POOLnn minor Vol. 2, 1-333 IOD SCAX25 major Vol. 2, 1-339 IOD SENDn minor Vol. 2, 1-344 IOD SLMbsy major Vol. 2, 1-349 IOD SLMbsy minor Vol. 2, 1-355 IOD SLMoff minor Vol. 2, 1-361 IOD SLMtbl minor Vol. 2, 1-367 IOD ssys B critical Vol. 2, 1-373 IOD ssys B minor Vol. 2, 1-374 IOD ssys E minor Vol. 2, 1-377 IOD ssys F minor Vol. 2, 1-381 IOD ssys I minor Vol. 2, 1-384 IOD ssys MP or ssys P critical Vol. 2, 1-389 IOD XMITn minor Vol. 2, 1-398 Lines alarm clearing procedures Vol. 2, 2-1 Introduction Vol. 2, 2-1 Alarm display Vol. 2, 2-1 Indication Vol. 2, 2-1 Meaning Vol. 2, 2-1 Result Vol. 2, 2-1 Common procedures Vol. 2, 2-1 Action Vol. 2, 2-2 Lns DF Major Vol. 2, 2-3 Lns DIAG critical, major, or minor Vol. 2, 2-7

- Lns FAC major Vol. 2, 2-11
- Lns HZD major Vol. 2, 2-15

2

Lns IMAJ major Vol. 2, 2-19 Lns IMIN major Vol. 2, 2-23 Lns LCARD major Vol. 2, 2-27 Lns LSET major Vol. 2, 2-31 Lns MCARD critical, major, or minor Vol. 2, 2-35 Lns MSET major Vol. 2, 2-39 Lns NDIAG major Vol. 2, 2-43 Lns OMAJ critical, major, or minor Vol. 2, 2-47 Lns OMIN critical, major, or minor Vol. 2, 2-51 Lns PSDF critical, major, or minor Vol. 2, 2-55 Lns PSPD major Vol. 2, 2-59 Lns QDIAG major Vol. 2, 2-63 Lns SDIAG major Vol. 2, 2-67 Lns TCM major Vol. 2, 2-71 3 Message Switch alarm clearing procedures Vol. 2, 3-1 Introduction Vol. 2, 3-1 Alarm display Vol. 2, 3-1 Indication Vol. 2, 3-1 Meaning Vol. 2, 3-1 Result Vol. 2, 3-1 Common procedures Vol. 2, 3-1 Action Vol. 2, 3-2 MS CCFB minor Vol. 2, 3-3 MS CLOCK major Vol. 2, 3-8 MS CMIC minor Vol. 2, 3-11 MS DDM major Vol. 2, 3-24 MS FCFB minor Vol. 2, 3-30 MS IMSL minor Vol. 2, 3-35 MS Istb minor Vol. 2, 3-43 MS ManB major Vol. 2, 3-57 MS MaxPt minor Vol. 2, 3-61 MS MBCD minor Vol. 2, 3-64 MS MBCH minor Vol. 2, 3-73 MS MBCL minor Vol. 2, 3-82 MS MbFb minor Vol. 2, 3-91 MS MBPT minor Vol. 2, 3-96 MS MbTp minor Vol. 2, 3-101 MS NOIMSL major Vol. 2, 3-106 MS pair critical Vol. 2, 3-114 MS REx minor Vol. 2, 3-117 MS RExByp minor Vol. 2, 3-121 MS RExFlt minor Vol. 2, 3-134 MS SBCD minor Vol. 2, 3-141 MS SBCH minor Vol. 2, 3-150 MS SBCL minor Vol. 2, 3-158 MS SbFb major Vol. 2, 3-168 MS SBPT minor Vol. 2, 3-173 MS SbTp major Vol. 2, 3-182 MS SPAN minor Vol. 2, 3-187

MS SysB major Vol. 2, 3-191 MS TRIstb minor Vol. 2, 3-203 MS TROOS major Vol. 2, 3-206

4 Network alarm clearing procedures

Vol. 2, 4-1

Introduction Vol. 2, 4-1 Alarm display Vol. 2, 4-1 Indication Vol. 2, 4-1 Meaning Vol. 2, 4-1 Result Vol. 2, 4-1 Common procedures Vol. 2, 4-1 Action Vol. 2, 4-2 Net Bsy minor Vol. 2, 4-3 Net CBsy major Vol. 2, 4-9 Net CdPr critical Vol. 2, 4-22 Net CSLk minor Vol. 2, 4-27 Net ISTb in ENET minor Vol. 2, 4-37 Net ISTb in JNET minor Vol. 2, 4-40 Net ISTb on a crosspoint card minor Vol. 2, 4-46 Net ISTb on a link minor Vol. 2, 4-51 Net ISTb on a system card minor Vol. 2, 4-58 Net JcTr minor Vol. 2, 4-63 Net Link minor Vol. 2, 4-71 Net LOAD minor Vol. 2, 4-82 Net MBCd minor Vol. 2, 4-94 Net MBsy minor Vol. 2, 4-100 Net Pair critical Vol. 2, 4-105 Net PSLk minor Vol. 2, 4-111 Net REx minor Vol. 2, 4-122 Net RexByp Vol. 2, 4-125 Net RExOff minor Vol. 2, 4-128 Net RExSch minor Vol. 2, 4-131 Net SBCd major Vol. 2, 4-137 Net SBsy major Vol. 2, 4-143 Net Shlv critical Vol. 2, 4-148 Net SysB major Vol. 2, 4-152

Alarm Clearing and Performance Monitoring Procedures Volume 3 of 4

1 Peripheral module alarm clearing procedures Vol. 3, 1-1

Introduction Vol. 3, 1-1 Alarm display Vol. 3, 1-1 Indication Vol. 3, 1-1 Meaning Vol. 3, 1-1 Result Vol. 3, 1-1 Common procedures Vol. 3, 1-1 Action Vol. 3, 1-2 PM 1SPM CLKOOS SPM major Vol. 3, 1-3 PM 1SPM COTLOW SPM minor Vol. 3, 1-13 PM 1SPM DTMFLOW SPM minor Vol. 3, 1-18 PM 1SPM ECANLOW SPM minor Vol. 3, 1-23 PM 1SPM HLDOVR SPM major Vol. 3, 1-28 PM 1SPM HLDOVR24 SPM major Vol. 3, 1-34 PM 1SPM ISTB SPM minor Vol. 3, 1-40 PM 1SPM MANB SPM major Vol. 3, 1-48 PM 1SPM MANBNA SPM major Vol. 3, 1-54 PM 1SPM MFLOW SPM minor Vol. 3, 1-62 PM 1SPM NOSPARE SPM major Vol. 3, 1-67 PM 1SPM PROTFAIL SPM critical Vol. 3, 1-74 PM 1SPM SYSB SPM critical Vol. 3, 1-82 PM 1SPM SYSBNA SPM critical Vol. 3, 1-88 PM 1SPM TONESLOW SPM minor Vol. 3, 1-96 PM 1SPM VCXO70 SPM minor Vol. 3, 1-101 PM 1SPM VCXO90 SPM major Vol. 3, 1-106 PM APU critical Vol. 3, 1-111 PM APU major Vol. 3, 1-134 PM APU minor Vol. 3, 1-153 PM CBSY major Vol. 3, 1-178 PM DCH major Vol. 3, 1-182 PM DCH minor Vol. 3, 1-192 PM DCH (in a TMS) major Vol. 3, 1-211 PM DCH (in a TMS) minor Vol. 3, 1-220 PM DTC critical Vol. 3, 1-229 PM DTC major Vol. 3, 1-249 PM DTC minor Vol. 3, 1-270 PM EIU critical Vol. 3, 1-283 PM EIU major Vol. 3, 1-310 PM EIU minor Vol. 3, 1-334 PM EXND minor Vol. 3, 1-360 PM FP critical Vol. 3, 1-365 PM FP major Vol. 3, 1-371 PM FP minor Vol. 3, 1-376 PM FP CPUFIt minor Vol. 3, 1-380 PM FP device-related fault minor Vol. 3, 1-387 PM FP JInact minor Vol. 3, 1-402 PM FP LowMem minor Vol. 3, 1-405 PM FP MemCor minor Vol. 3, 1-413 PM FP MemFlt minor Vol. 3, 1-419 PM FP MMThrs minor Vol. 3, 1-425 PM FP NoOvr minor Vol. 3, 1-428 PM FP NoSync minor Vol. 3, 1-434 PM FP PrtFlt minor Vol. 3, 1-440 PM FP PrtTbl minor Vol. 3, 1-445 PM FP Trap minor Vol. 3, 1-454 PM FRIU critical (on an LPP) Vol. 3, 1-457 PM FRIU major on an LPP Vol. 3, 1-470 PM FRIU minor on an LPP Vol. 3, 1-482 PM FRIU critical (on an SSLPP) Vol. 3, 1-498

PM FRIU major on an SSLPP Vol. 3, 1-508 PM FRIU minor (on an SSLPP) Vol. 3, 1-517 PM HLIU critical Vol. 3, 1-528 PM HSLR critical Vol. 3, 1-542 PM IPGW Major Vol. 3, 1-555 PM IPML major or minor Vol. 3, 1-560 PM ISTb minor Vol. 3, 1-568 PM ISTb (OSNM) minor Vol. 3, 1-579 PM LCM critical Vol. 3, 1-585 PM LCM major Vol. 3, 1-600 PM LCM minor Vol. 3, 1-613 PM LCM ringing generator (LRG) critical Vol. 3, 1-623 PM LCME major Vol. 3, 1-633 PM LCME minor Vol. 3, 1-645 PM LGC critical Vol. 3, 1-656 PM LGC major Vol. 3, 1-676 PM LGC minor Vol. 3, 1-698 PM LIM critical Vol. 3, 1-713 PM LIM major Vol. 3, 1-725 PM LIM minor Vol. 3, 1-739 PM LIMF critical Vol. 3, 1-749 PM LIMF major Vol. 3, 1-758 PM LIMREX minor Vol. 3, 1-766 PM LIU7 critical Vol. 3, 1-767 PM LIU7 major Vol. 3, 1-783 PM LIU7 minor Vol. 3, 1-797 PM LMDrwr major or minor Vol. 3, 1-816 PM LMPr critical Vol. 3, 1-821 PM LMRex minor Vol. 3, 1-830 PM LMRGen major or minor Vol. 3, 1-834 PM LTC critical Vol. 3, 1-838 PM LTC major Vol. 3, 1-858 PM LTC minor Vol. 3, 1-879 PM LTCI critical, major, or minor Vol. 3, 1-892

Alarm Clearing and Performance Monitoring Procedures Volume 4 of 4

1 Peripheral module alarm clearing procedures Vol. 4, 1-1 Introduction Vol. 4, 1-1

Alarm display Vol. 4, 1-1 Indication Vol. 4, 1-1 Meaning Vol. 4, 1-1 Result Vol. 4, 1-1 Common procedures Vol. 4, 1-1 Action Vol. 4, 1-2 PM MLIU critical Vol. 4, 1-3 PM MLIU major Vol. 4, 1-19

PM MLIU minor Vol. 4, 1-33 PM MSB6, MSB7 critical, major, or minor Vol. 4, 1-52 PM NIU critical Vol. 4, 1-82 PM NIU major Vol. 4, 1-101 PM NIU minor Vol. 4, 1-116 PM PMLOAD minor Vol. 4, 1-145 PM STC major or minor Vol. 4, 1-156 PM SysB major Vol. 4, 1-168 PM SysB (OSNM) major Vol. 4, 1-182 PM talk battery critical Vol. 4, 1-186 PM talk battery minor Vol. 4, 1-198 PM TMS critical Vol. 4, 1-209 PM TMS major Vol. 4, 1-227 PM TMS minor Vol. 4, 1-240 PM TMS (ETMS OCDL OOS) major Vol. 4, 1-251 PM TPC critical Vol. 4, 1-267 PM TPC (for MP) critical Vol. 4, 1-292 PM TPC (for MP and IWS) major Vol. 4, 1-310 PM TPC (for MP and IWS) minor Vol. 4, 1-332 PM UEN critical Vol. 4, 1-339 PM UEN major Vol. 4, 1-354 PM UEN minor Vol. 4, 1-367 PM VLCM critical Vol. 4, 1-375 PM VLCM minor Vol. 4, 1-381 PM VPU critical Vol. 4, 1-385 PM VPU major Vol. 4, 1-410 PM VPU minor Vol. 4, 1-432 PM XLIU critical Vol. 4, 1-458 PM XLIU major Vol. 4, 1-472 PM XLIU minor Vol. 4, 1-485 Trunks alarm clearing procedures Introduction Vol. 4, 2-1 Alarm display Vol. 4, 2-1 Indication Vol. 4, 2-1 Meaning Vol. 4, 2-1 Result Vol. 4, 2-1 Common procedures Vol. 4, 2-1 Action Vol. 4, 2-2 TRKS 62CG AIS SPM minor Vol. 4, 2-3 TRKS 62G BERSF SPM minor Vol. 4, 2-10 TRKS 62GC LOS SPM critical Vol. 4, 2-16 TRKS 62TG BERSD SPM minor Vol. 4, 2-22 TRKS 62TG LOP SPM minor Vol. 4, 2-28 TRKS 62TG RAI SPM minor Vol. 4, 2-35 TRKS 62TG RFI SPM minor Vol. 4, 2-42 Trks C minor Vol. 4, 2-49 Trks CB critical, major, or minor Vol. 4, 2-55 Trks CC critical Vol. 4, 2-61 Trks CE critical, major, or minor Vol. 4, 2-69

Vol. 4, 2-1

2

Trks CG minor Vol. 4, 2-74 Trks CM major Vol. 4, 2-81 Trks CR C and CR M critical Vol. 4, 2-88 Trks CS critical, major, or minor Vol. 4, 2-96 Trks EX critical, major, or minor Vol. 4, 2-102 Trks GC, GM, and G critical, major, or minor Vol. 4, 2-106 Trks MB critical, major, or minor Vol. 4, 2-115 Trks MJ C and MJ M critical or major Vol. 4, 2-120 Trks MN C and MN M critical or major Vol. 4, 2-128 Trks SB critical, major, or minor Vol. 4, 2-137 3 Vol. 4, 3-1 XAC alarm clearing procedures Introduction Vol. 4, 3-1 Alarm display Vol. 4, 3-1 Indication Vol. 4, 3-1 Meaning Vol. 4, 3-1 Result Vol. 4, 3-1 Common procedures Vol. 4, 3-1 Action Vol. 4, 3-2 FWsoak minor Vol. 4, 3-3 FWvers major Vol. 4, 3-4 4 Alarm clearing common procedures Vol. 4, 4-1 Introduction to alarm clearing common procedures Vol. 4, 4-1 Application Vol. 4, 4-1 Action Vol. 4, 4-1 Accessing SPM alarms DMS-Spectrum Peripheral Module Vol. 4, 4-2 Activating CCS7 links Vol. 4, 4-16 Activity switch with memory match Vol. 4, 4-26 Allocating a volume Vol. 4, 4-34 Checking the electronic fuse unit in an LME or RLM frame Vol. 4, 4-38 Clearing lines alarms Vol. 4, 4-43 Clearing PM C-side faults Vol. 4, 4-47 Clearing ringing generator faults LCM Vol. 4, 4-63 Connecting temporary fiber cable between MS and SSLPP Vol. 4, 4-69 Connecting temporary fiber cable from an ENET to a PM Vol. 4, 4-80 Connecting temporary fiber cable from an ENET to an MS Vol. 4, 4-91 Correcting a load mismatch Vol. 4, 4-103 Deallocating a volume Vol. 4, 4-118 Failure to switch clock mastership Vol. 4, 4-122 Loading a PM Vol. 4, 4-131 Monitoring system maintenance PM Vol. 4, 4-139 Moving an XSG to a spare XLIU Vol. 4, 4-144 Resetting a volume Vol. 4, 4-150 Restoring LIM unit cross-links Vol. 4, 4-154 Returning LIM-to-MS links to service Vol. 4, 4-167 Returning LIM-to-MS links to service for an ELPP Vol. 4, 4-189 Running a C7BERT Vol. 4, 4-211 Running a C7BERT for high-speed links Vol. 4, 4-244

About this document

How to check the version and issue of this document

The version and issue of the document are indicated by numbers, for example, 01.01.

The first two digits indicate the version. The version number increases each time the document is updated to support a new software release. For example, the first release of a document is 01.01. In the next software release cycle, the first release of the same document is 02.01.

The second two digits indicate the issue. The issue number increases each time the document is revised but rereleased in the same software release cycle. For example, the second release of a document in the same software release cycle is 01.02.

To determine which version of this document applies to the software in your office and how documentation for your product is organized, check the release information in *Product Documentation Directory*, 297-8991-001.

This document is written for all DMS-100 Family offices. More than one version of this document may exist. To determine whether you have the latest version of this document and how documentation for your product is organized, check the release information in *Product Documentation Directory*, 297-8991-001.

References in this document

The following documents are referred to in this document:

- Card Replacement Procedures
- Customer Data Schema Reference Manual, 297-8021-351
- Input/Output System Reference Manual, 297-1001-129
- Log Report Reference Manual
- Magnetic Tape Reference Manual, 297-1001-118
- Office Parameters Reference Manual

- Recovery Procedures
- Routine Maintenance Procedures
- Subscriber Carrier Module-100 Urban Maintenance Manual, 297-8241-550
- SuperNode Data Manager User Guide
- Translations Guide, 297-8021-350
- Trouble Locating and Clearing Procedures

As of NA0011 (LEC and LET) and EUR010 (EUR) releases, any references to the data schema section of the Translations Guide will be mapped to the Customer Data Schema Reference Manual.

What precautionary messages mean

The types of precautionary messages used in NT documents include attention boxes and danger, warning, and caution messages.

An attention box identifies information that is necessary for the proper performance of a procedure or task or the correct interpretation of information or data. Danger, warning, and caution messages indicate possible risks.

Examples of the precautionary messages follow.

ATTENTION - Information needed to perform a task

ATTENTION

If the unused DS-3 ports are not deprovisioned before a DS-1/VT Mapper is installed, the DS-1 traffic will not be carried through the DS-1/VT Mapper, even though the DS-1/VT Mapper is properly provisioned.

DANGER - Possibility of personal injury



DANGER Risk of electrocution

Do not open the front panel of the inverter unless fuses F1, F2, and F3 have been removed. The inverter contains high-voltage lines. Until the fuses are removed, the high-voltage lines are active, and you risk being electrocuted.

WARNING - Possibility of equipment damage



WARNING

Damage to the backplane connector pins

Align the card before seating it, to avoid bending the backplane connector pins. Use light thumb pressure to align the card with the connectors. Next, use the levers on the card to seat the card into the connectors.

CAUTION - Possibility of service interruption or degradation



CAUTION Possible loss of service

Before continuing, confirm that you are removing the card from the inactive unit of the peripheral module. Subscriber service will be lost if you remove a card from the active unit.

How commands, parameters, and responses are represented

Commands, parameters, and responses in this document conform to the following conventions.

Input prompt (>)

An input prompt (>) indicates that the information that follows is a command:

>BSY

Commands and fixed parameters

Commands and fixed parameters that are entered at a MAP terminal are shown in uppercase letters:

>BSY CTRL

Variables

Variables are shown in lowercase letters:

>BSY CTRL ctrl_no

The letters or numbers that the variable represents must be entered. Each variable is explained in a list that follows the command string.

Responses

Responses correspond to the MAP display and are shown in a different type:

FP 3 Busy CTRL 0: Command request has been submitted.

FP 3 Busy CTRL 0: Command passed.

1 Procedures to clear application alarms

Introduction

This chapter provides procedures to clear application alarms. Application alarms appear under the APPL header of the alarm banner in the MAP display. All of the procedures contain the following sections:

- Alarm display
- Indication
- Meaning
- Result
- Common procedures
- Action

Alarm display

This section indicates how the alarm appears at the MAP terminal.

Indication

This section indicates:

- the location of the alarm indication
- how the system represents the alarm
- the affected subsystem
- the alarm level

Meaning

This section indicates the cause of the alarm.

Result

This section describes the results of the alarm condition.

Common procedures

This section lists common procedures used during the alarm clearing procedure. A common procedure is a series of steps repeated within maintenance procedures, for example card removal and replacement. Common procedures appear in the common procedures chapter in this NTP.

Do not use common procedures unless the step-action procedure directs you to the common procedures.

Action

This section provides a summary flowchart of the procedure and a list of steps to clear an alarm. A detailed step-action procedure follows the flowchart.

APPL CallP major

Alarm display

1	 СМ	MS	IOD	Net	PM	CCS	Lns	Trks	Ext	APPL
	•	•	•	•	•	•	•	•	•	CallP M

Indication

At the MTC level of the MAP display, CallP appears under the APPL header of the alarm banner. The CallP indicates a call processing (CallP) major alarm.

Meaning

Continuous traps occur on software for the call processing base (CallP Base) during the processing of CallP transactions. A minimum of 20 traps in a maximum of one minute cause service maintenance to raise this alarm. The service maintenance system attempts to clear the alarm automatically.

Result

The system cannot permanently deny call originations and feature activations. The service maintenance system attempts to clear the alarm. The CallP Base service is in a state of in-service trouble while the system attempts to clear the alarm.

Common procedures

There are no common procedures.

Action

Manual action is not needed to clear the alarm. The service maintenance system responds to traps in CallP Base and attempts to clear the fault automatically. A continuous alarm indicates that call processing software traps at a low rate.

APPL CallP major (end)

Summary of Clearing an APPL CallP major alarm



Clearing an APPL CallP major alarm

At the MAP display

- 1 To access the MTC level of the MAP display, type
 - > MAPCI;MTC

and press the Enter key.

2 Wait ten minutes for the system attempt to clear software traps of the CallP Base service.

If the CallP major alarm	Do
cleared	step 4
did not clear	step 3

3 For additional help, contact the next level of support.

4 The procedure is complete.

APPL SDM critical

Alarm display

ſ	СМ	MS	IOD	Net	PM	CCS	Lns	Trks	Ext	APPL
	•	•	•	•			•	•	-	SDM *C*

Indication

SDM followed by *C* under the APPL header of the alarm banner indicates an SDM critical alarm. The preceding alarm display illustrates an alarm banner with an SDM critical alarm.

Meaning

There is a critical alarm on the SDM.

Action

Refer to the alarm clearing information in the *SuperNode Data Manager User Guide* for your system.

APPL SDM minor

Alarm display

ſ	 СМ	MS	IOD	Net	PM	CCS	Lns	Trks	Ext	APPL
	•	·	•	·		•	•	•	•	SDM

Indication

SDM under the APPL header of the alarm banner indicates an SDM minor alarm. The preceding alarm display illustrates an alarm banner with an SDM minor alarm.

Meaning

There is a minor alarm on the SDM.

Action

Refer to the alarm clearing information in the *SuperNode Data Manager User Guide* for your system.

OCDL OCSysB critical

Alarm display

ſ	СМ	MS	IOD	Net	PM	CCS	Lns	Trks	Ext	APPL
	-	•	•	•	•	-	·		•	nOCSysB C

Indication

Follow path MAPCI>MTC to the MTC level. At the MTC level under APPL, a number (n) precedes OCSysB under the OCDL header in the alarm banner. The number indicates the number of OC-IP data links that are affected. The C below the OCSysB indicates a critical alarm for an OC-IP data link.

The OCSysB alarm is visible at the MTC MAP level under APPL, at the APPL MAP level under TOPSIP, and at the TOPSIP MAP level beside OCDL.

Meaning

For a given distant OC office, no OC-IP data links to it are InSv and at least one is SysB.

This alarm is raised to indicate that a data link is in the SysB state. When this alarm is raised, a TOPS504 log is generated indicating the data link has changed state. Also, a TOPS304 log is generated indicating the data link is in the SysB state.

The alarm is lowered if there are no longer any OC-IP data links in the SysB state.

When the fault for a link is cleared, a TOPS504 log is generated indicating the data link has changed state. Also, a TOPS304 log is generated indicating the data link is no longer in the SysB state.

Result

Signaling and traffic routes on any links to the distant office are not possible.

Common procedures

Do not go to the common procedure unless the step-action procedure directs you to go.

OCDL OCSysB critical (continued)

Action

This procedure contains a summary flowchart and a list of steps. Use the flowchart to review the procedure. Follow the steps to perform the procedure.



Summary of How to clear an OCDL OCSysB critical alarm

How to clear an OCDL OCSysB critical alarm

At the MAP display

1 To access the OCDL level of the MAP display, type >mapci;mtc;appl;topsip;ocdl and press the Enter key.

OCDL OCSysB critical (continued)

2 Check under the PM header in the MAP display alarm banner. Determine if alarms appear for digital trunk controllers (DTCs) under the PM header in the MAP display alarm banner.

If DTC alarms	Do
appear	step 3
do not appear	step 4

- **3** Perform the correct procedures in this document to clear all PM DTC alarms. Complete the procedure and return to this point.
- 4 To post an OC-IP data link that runs an OCSysB critical alarm, type

>post s sysb

5

6

and press the Enter key.

Example of a MAP display:

OCDL : OCSysB TOPSDEV: .

Status	Offl	ManB	SysB	InSv
OCDL	0	0	60	180
MXPIPHOST4 2 CC Size of Post set post s sysb)MID 2: 66	27 SysB		

lf you	Do
posted an out-of-service link	step 5
did not post an out-of-service link	step 11
Record the comid number.	
<i>Note:</i> The comid number appears MAP display.	on the right of the Link header on the
To post the out of service link, type	
>post c <comid number=""></comid>	
and press the Enter key.	
where	
<comid number=""> is the number of the comid fron</comid>	n the above step
Example of a MAP display:	

OCDL OCSysB critical (end)

OCDL :	OCSysB	TOPSDE	EV: .		
Status		Offl	ManB	SysB	InSv
OCDL		0	0	60	180
MXPIPHOS Size of post c 2	T1 1 C Post se	OMID t: 1	2 InSv	7	

- 7 Determine from office records the far-end office that connects to the posted link.
- 8 Contact the far-end office to determine if the far-end office has DTC alarms.

If the far-end office	Do
has DTC alarms	step 9
does not have DTC alarms	step 10

9 When the problems at the far-end office clear, determine the state of the posted link.

>post s sysb

Note: The link state appears on the right of the link name on the MAP display.

OCDL : OCSysB	TOPSD	EV: .		
Status OCDL	Offl 0	ManB 0	SysB 60	InSv 180
MXPIPHOST4 2 CC Size of Post set	OMID z: 66	27 SysE	8	

If the state of the linkset	Do
is InSv or ISTb	step 11
is ManB or SysBsy	step 10

- **10** For additional help, contact the next level of support.
- **11** The procedure is complete.
OCDL OCSysB major

Alarm display

ĺ	 СМ	MS	IOD	Net	PM	CCS	Lns	Trks	Ext	APPL
	•	•	·	•	•				•	nOCSysB M

Indication

Follow path MAPCI>MTC to the MTC level. At the MTC level under APPL, a number (n) precedes OCSysB under the OCDL header in the alarm banner. The number indicates the number of OC-IP data links that are affected. The M below the OCSysB indicates a major alarm for an OC-IP data link.

The OCSysB alarm is visible at the MTC MAP level under APPL, at the APPL MAP level under TOPSIP, and the TOPSIP MAP level beside OCDL.

Meaning

At least one, but not all, OC-IP data link to a distant office is SysB.

This alarm is raised to indicate that a data link is in the SysB state. When this alarm is raised, a TOPS504 log is generated indicating the data link has changed state. Also, a TOPS304 log is generated indicating the data link is in the SysB state.

The alarm is lowered if there are no longer any OC-IP data links in the SysB state.

When the fault for a link is cleared, a TOPS504 log is generated indicating the data link has changed state. Also, a TOPS304 log is generated indicating the data link is no longer in the SysB state.

Result

Signaling on the link is not possible. Traffic routes on another link to the distant office. The traffic can be at a degraded level of service.

Common procedures

Do not go to the common procedure unless the step-action procedure directs you to go.

OCDL OCSysB

major (continued)

Action

This procedure contains a summary flowchart and a list of steps. Use the flowchart to review the procedure. Follow the steps to perform the procedure.



Summary of How to clear an OCDL OCSysB major alarm

How to clear an OCDL OCSysB major alarm

At the MAP display

1 To access the OCDL level of the MAP display, type >MAPCI;MTC;APPL;TOPSIP and press the Enter key.

OCDL OCSysB major (continued)

2 Check under the PM header in the MAP display alarm banner. Determine if alarms appear for digital trunk controllers (DTCs) under the PM header in the MAP display alarm banner..

If DTC alarms	Do
appear	step 3
do not appear	step 4

- **3** Perform the correct procedures in this document to clear all PM DTC alarms. Complete the procedure and return to this point.
- 4 To post an OC-IP data link that runs an OCSysB major alarm, type

>POST A OCSYSB

and press the Enter key.

Example of a MAP display:

Lir	Linkset SSP100_LK		S	ysB					
	Traf	Sync							Link
LK	Stat	Stat	Resou	irce	Stat	Physical	Access	Stat	Action
0	SysB	Sync	LIU7	101	InSv	DS0A			
1	ManB	Sync	LIU7	103	InSv	DS0A			

Size of Posted Set = 2

5

6

lf you	Do
posted an out-of-service link	step 5
did not post an out-of-service link	step 11
Record the link name.	
Note: The link name appears on th display.	ne right of the Link header on the MAP
To post the out of service link, type	
>POST C link_name	
and press the Enter key.	
where	
link_name is the name of the link that you	recorded before you started this

Example of a MAP display:

OCDL OCSysB major (end)

Tran f Crimin			Timle			
LK Stat Stat Resource 0 SysB Sync LIU7 101 1 ManB Sync LIU7 103	Stat Physic InSv DSOA InSv DSOA	al Access	Stat Action			
Size of Posted Set = :	2					
Determine from office r link.	ecords the far-	end office the	at connects to the pos			
Contact the far-end offic	ce to determin	e if the far-en	d office has DTC alar			
If the far-end office		Do				
has DTC alarms		step 9				
does not have DTC	alarms	step 10				
When the problems at t posted link. <i>Note:</i> The link state display.	the far-end offi	ce clear, dete ne right of the	rmine the state of the link name on the MAI			
When the problems at t posted link. Note: The link state display. Example of a MAP disp	the far-end offi appears on th <i>blay:</i>	ce clear, dete ne right of the	rmine the state of the link name on the MAI			
When the problems at the posted link. Note: The link state display. Example of a MAP disp Linkset SSP100_LK Traf Sync	the far-end offi appears on th blay:	ce clear, dete	rmine the state of the link name on the MAI			
When the problems at the posted link. Note: The link state display. Example of a MAP display. Linkset SSP100_LK Traf Sync LK Stat Stat Resource 0 SysB Sync LIU7 101 1 ManB Sync LIU7 103	the far-end offi appears on the blay: SYSB Stat Physic InSv DSOA InSv DSOA	ce clear, dete ne right of the al Access	rmine the state of the link name on the MAI Link Stat Action			
When the problems at the posted link. Note: The link state display. Example of a MAP display. Linkset SSP100_LK Traf Sync LK Stat Stat Resource 0 SysB Sync LIU7 101 1 ManB Sync LIU7 103 Size of Posted Set = 3	the far-end offi appears on the blay: SYSB Stat Physic InSv DSOA InSv DSOA	ce clear, dete ne right of the al Access	rmine the state of the link name on the MAI Link Stat Action			
When the problems at the posted link. Note: The link state display. Example of a MAP display. Linkset SSP100_LK Traf Sync LK Stat Stat Resource 0 SysB Sync LIU7 101 1 ManB Sync LIU7 103 Size of Posted Set = 3 If the state of the linit	the far-end offi appears on the blay: SYSB Stat Physic InSV DSOA InSV DSOA 2 kset	ce clear, dete he right of the al Access Do	rmine the state of the link name on the MAI Link Stat Action			
When the problems at the posted link. Note: The link state display. Example of a MAP display. Linkset SSP100_LK Traf Sync LK Stat Stat Resource 0 SysB Sync LIU7 101 1 ManB Sync LIU7 103 Size of Posted Set = 3 If the state of the line is InSv or ISTb	the far-end offi appears on the blay: SYSB Stat Physic InSV DSOA InSV DSOA 2 kset	ce clear, dete ne right of the al Access Do step 11	rmine the state of the link name on the MAI Link Stat Action			

2 Common channel signaling alarm clearing procedures

Introduction

This chapter provides alarm clearing procedures for common channel signaling. The MAP display indicates alarms for common channel signaling under the CCS header of the alarm banner. Each procedure contains the following sections:

- Alarm display
- Indication
- Meaning
- Result
- Common procedures
- Action

Alarm display

This section indicates how the MAP terminal displays the alarm.

Indication

This section indicates:

- where the alarm indication appears
- how the system represents the alarm
- the affected subsystem
- the alarm level.

Meaning

This section indicates the cause of the alarm.

Result

This section describes the results of the alarm condition.

Common procedures

This section lists common procedures used during the alarm clearing procedure. A common procedure is a series of steps repeated within maintenance procedures, for example card removal and replacement. You can find common procedures in the common procedures chapter in this NTP.

Do not use a common procedure unless the step-action procedure directs you to the common procedure.

Action

This section provides a summary flowchart and a list of steps. A detailed step-action procedure follows the flowchart.

CCS 2RS LBC SPM critical

Alarm display

CM MB CO Hot FM COS THe Met	СМ	MS	IOD	Net	PM	CCS	Lns	Trks	Ext	APPL
	•	•	•	•		2 RS	•		•	•
	•		•	•		*C*	•		•	•

Indication

At the carrier level of the MAP display, an RS preceded by a number appears under the CCS header of the alarm banner and a critical alarm indicator appears beneath it.

Meaning

The DMS-Spectrum Peripheral Module (SPM) alarm system detects a threshold crossing alert (TCA) for the laser bias current (LBC) performance parameter. The metered measurement value for the LBC in the OC3 module has exceeded 150% of its original installed value. A TCA occurs when the LBC parameter count exceeds 150. The SPM clears the alarm when the parameter count is less than 125.

Logs CARR800 and CARR810 relate to the LBC alarm. Table MNHSCARR contains the datafill related to the LBC alarm.

Impact

A severe service-affecting condition exists. Immediate corrective action is required.

The LBC alarm applies to the OC3 Section carrier type.

Common procedure

For basic information about SPM alarms, see "Accessing SPM alarms" in this document.

Action

The following flowchart is only a summary of this procedure. Use the instructions in the step-action procedure that follows the flowchart to clear the alarm.

Summary of clearing an LBC alarm



Clearing LBC alarms

At the MAP terminal

1 Access the carrier level of the MAP screen by typing

> MAPCI;MTC;TRKS;CARRIER

and pressing the Enter key.

Example of a MAP screen:

Common channel signaling alarm clearing procedures 2-5

CCS 2RS LBC SPM critical (continued)

CLASS	ML	OS	ALRM	SYSB	MANB	UNEQ	OFFL	CBSY	PBSY	INSV
TRUNKS	1	0	28	28	0	0	0	0	0	50
TIMING	0	0	0	0	0	0	0	0	0	2
HSCARR	0	0	0	1	3	0	1	0	0	180
MTC:										
TRKS:										
CARRIER:										

2 Display all carrier alarms by typing

>DISP ALARM and pressing the Enter key.

Example of a MAP screen:

PM	NO	CKT									
DTC	0	13	DTC	0	14	DTC	0	15	DTC	0	18
SPM	20	29	SPM	20	30	SPM	20	31	SPM	20	32

DISPLAYED BY CONDITION : ALARM DISP: MORE...

- **3** Record the SPM number (NO) and circuit (CKT) number combinations.
- 4 Post the SPM OC3 carrier circuits by typing

>POST SPM spm_no OC3S

and pressing the Enter key.

where

spm_no is the number of the SPM (0 to 63)

Example of a MAP screen:

OC:	3S									
Ν	CLASS	SITE	SPM	OC3RM	OC3S	STS3L	CKT	STATE	TR	MA
0	HSCARR	HOST	20	0	0	-	1	InSv		
1	HSCARR	HOST	20	1	0	-	6	InSv		
SI	ZE OF PO	OSTED	SET	: 2				MOR	Е	

CCS 2RS LBC SPM

critical (continued)

5	List the alarms on each carrier by typing
	>LISTALM carrier_no
	and pressing the Enter key.
6	Identify the carrier with the LBC alarm. Identify its respective OC3 module by typing
	>DETAIL carrier_no
	and pressing the Enter key.
	Example of a MAP screen:
	Detail 1 SPM 0 Ckt 6 Name: SPM_0_OC35_2
7	Access the PM level of the MAP screen by typing >MAPCI;MTC;PM
	and pressing the Enter key.
	Example of a MAP screen:
	SysB ManB OffL CBsy ISTb InSv
I	PM 1 1 1 3 2 12
8	Post the SPMs by typing
	>POST SPM spm_no
	and pressing the Enter key.
	where
	<pre>spm_no refers to number of the SPM (0 to 63)</pre>
	Example of a MAP screen:

SysB ManB OffL CBsy ISTb InSv РМ 7 2 2 2 9 16 Ω 2 1 Ο Λ Ω SPM SPM 20 InSv Loc: Site HOST Floor 1 Row A FrPos 13 Shlf0 SL A Stat Shlf0 SL A Stat Shlf1 SL A Stat Shlf1 SL A Stat ----- 1 - ---- CEM 1 8 I InSv ----- 1 - ---- 8 - --------- 2 - ---- OC3 0 9 A InSv ----- 2 - ---- 9 - ----DSP 3 3 I InSv OC3 1 10 I InSv ----- 3 - ---- 10 - --------- 4 - ---- ----- 11 - ---- ----- 4 - ---- ----- 11 - --------- 5 - ---- DSP12 12 A InSv ----- 5 - ---- 12 - --------- 6 - ---- DSP13 13 A InSv ----- 6 - ---- 13 - ----CEM 0 7 A InSv ----- 14 A InSv ----- 7 - ---- 14 - ----9 Select the active OC3 module by typing >SELECT OC3 module no and pressing the Enter key. where module no is the number of the OC3 module (0 to 1) Example of a MAP screen: SPM 20 OC3 1 Act InSv Loc : Row E FrPos 8 ShPos 24 ShId 0 Slot 10 Prot Grp : 1 Default Load: SPMLOAD Prot Role: Spare

10 Determine whether the alarm condition applies to the active OC3 module.

lf	Do
the active OC3	step 11
the inactive OC3	step 13

 11
 Access the protection level of the MAP screen by typing

 >PROT

 and pressing the Enter key.

12 Do a manual protection switch with a module in the same protection group by typing

>MANUAL from_unit_no to_unit_no

and pressing the Enter key.

CCS 2RS LBC SPM critical (end)

where

from_unit_no
 is the number (0 to 27) of the module with the alarm

to_unit_no is the number (0 to 27) of the inactive module in the same protection group

Example of a MAP screen:

SPM 20 OC3 1 Manual: Request has been submitted. SPM 20 OC3 0 Manual: Command completed.

- **13** Replace the OC3. For detailed instructions, see the SPM section of the *Card Replacement Procedures*. When you complete the card replacement procedure, go to step 14 of this procedure.
- 14 Return to the carrier level of the MAP screen and list the alarms on the carrier by typing

>LISTALM carrier_no

and pressing the Enter key.

15 Determine whether the alarm has cleared.

If the alarm list shows	Do
LBC	step 16
the inactive OC3	step 17

- **16** For further assistance, contact the personnel responsible for the next level of support.
- 17 You have completed this procedure. Return to the CI level of the MAP screen by typing

>QUIT ALL

and pressing the Enter key.

CCS 2RS OPR SPM critical

Alarm display

Cal MB CO Hot PM COS The Rd LNV	СМ	MS	IOD	Net	PM	CCS	Lns	Trks	Ext	APPL
		•	•	•		2 RS	•		•	•
	•		•	•		*C*	•		•	•

Indication

At the carrier level of the MAP display, an RS preceded by a number appears under the CCS header of the alarm banner and a critical alarm indicator appears beneath it.

Meaning

The DMS-Spectrum Peripheral Module (SPM) alarm system detects a threshold crossing alert (TCA) for the optical power received (OPR) performance parameter. The metered measurement value for OPR in the OC3 module has dropped below 85% of the original calibrated value. A TCA occurs when the OPR parameter drops below 85. The SPM clears the alarm when the parameter rises above 95.

Logs CARR800 and CARR810 relate to the OPR alarm. Table MNHSCARR contains the datafill related to the OPR alarm.

Impact

A severe service-affecting condition exists. Immediate corrective action is required.

The OPR alarm applies to the OC3 Section carrier type.

Common procedure

For basic information about SPM alarms, see "Accessing SPM alarms" in this document.

Action

The following flowchart is only a summary of this procedure. Use the instructions in the step-action procedure that follows the flowchart to clear the alarm.

Summary of clearing an OPR alarm



Clearing an OPR alarm

At the MAP terminal

- Access the carrier level of the MAP screen by typing
 - > MAPCI;MTC;TRKS;CARRIER

and pressing the Enter key.

Example of a MAP screen:

CLASS	ML	OS	ALRM	SYSB	MANB	UNEQ	OFFL	CBSY	PBSY	INSV
TRUNKS	1	0	28	28	0	0	0	0	0	50
TIMING	0	0	0	0	0	0	0	0	0	2
HSCARR	0	0	0	1	3	0	1	0	0	180

MTC: TRKS: CARRIER:

2 Display all carrier alarms by typing

>DISP ALARM and pressing the Enter key. Example of a MAP screen:

PM	NO	CKT									
DTC	0	13	DTC	0	14	DTC	0	15	DTC	0	18
SPM	20	29	SPM	20	30	SPM	20	31	SPM	20	32

DISPLAYED BY CONDITION : ALARM DISP: MORE...

- 3 Record the SPM number (NO) and circuit (CKT) number combinations.
- 4 Post the SPM OC3 carrier circuits by typing

>POST SPM spm_no OC3S

and pressing the Enter key.

where

spm no

is the number of the SPM (0 to 63)

Example of a MAP screen:

	OC3S N CLASS S 0 HSCARR H 1 HSCARR H	SITE SPM OC IOST 20 IOST 20	23RM OC3S 0 0 1 0	STS3L CKT - 1 - 6	F STATE T L InSv	R MA
	SIZE OF POS	TED SET :	2		MORE.	
5	List the ala	arms on ead	ch carrier b r_no	y typing		
6	Identify the typing	carrier with	h the OPT a	alarm. Iden	tify its resp	ective OC3 module by
	and pressi <i>Example o</i>	ng the Ente	er key. Breen:			
	Detail 1 SPM 20 Ckt	6 Name: Sl	PM_0_0C35_:	2		
7	Access the >MAPCI;M and pressin <i>Example o</i>	e PM level o ITC;РМ ng the Ente of a MAP so	of the MAP er key. sreen:	screen by	typing	
	SysB PM 1	ManB 1	OffL 1	CBsy 3	ISTb 2) InSv 12
8	Post the SI >POST S and pressin where spm_r refe Example o	PMs by typ PM spm_ ng the Enter no rs to number of a MAP sc	ing _ no er key. er of the SI ereen:	PM (0 to 63	3)	

SysB ManB OffL CBsy ISTb InSv 9 2 2 РМ 7 2 16 0 0 2 1 0 0 SPM SPM 20 InSv Loc: Site HOST Floor 1 Row A FrPos 13 Shlf0 SL A Stat Shlf0 SL A Stat Shlf1 SL A Stat Shlf1 SL A Stat ----- 1 - ---- CEM 1 8 I InSv ----- 1 - ---- 8 - --------- 2 - ---- OC3 0 9 A InSv ----- 2 - ---- 9 - ----DSP 3 3 I InSv OC3 1 10 I InSv ----- 3 - ---- 10 - --------- 4 - ---- 11 - ---- 4 - ---- 11 - --------- 5 - ---- DSP12 12 A InSv ----- 5 - ---- 12 - --------- 6 - ---- DSP13 13 A InSv ----- 6 - ---- 13 - ----CEM 0 7 A InSv ----- 14 A InSv ----- 7 - ---- 14 - ----Select the active OC3 module by typing >SELECT OC3 module no and pressing the Enter key. where module no is the number of the OC3 module (0 to 1) Example of a MAP screen: SPM 20 OC3 1 Act. InSv Loc : Row E FrPos 8 ShPos 24 ShId 0 Slot 10 Prot Grp : 1 Default Load: SPMLOAD Prot Role: Spare 10 Determine whether the alarm condition applies to the active OC3 module. If the alarm applies to Do the active OC3 step 11 the inactive OC3 step 13 11 Access the protection level of the MAP screen by typing >PROT and pressing the Enter key.

12 Do a manual protection switch with a module in the same protection group by typing >MANUAL from_unit_no to_unit_no and pressing the Enter key.

where

9

CCS 2RS OPR SPM

critical (continued)

from_unit_no

is the number (0 to 27) of the module with the alarm

to_unit_no

is the number (0 to 27) of the inactive module in the same protection group

Example of a MAP screen:

SPM 20 OC3 1 Manual: Request has been submitted. SPM 20 OC3 0 Manual: Command completed.

13 Remove the fiber connector from the receiver socket on the OC3 module. Clean the socket and the connector with compressed air. Use an optical power meter to measure the power at the receiver connector.

If the power is	Do
above -34 dBm (for example, -30 dBm)	step 14
below -34 dBm	step 15

14 Plug the fiber optic connector into the receiver socket. Return to the carrier level of the MAP terminal and check if the alarm has cleared by typing

>LISTALM carrier_no

and pressing the Enter key.

15 Troubleshoot the incoming fiber optic cable and the network according to your company procedures. When you have completed the procedure, return to this point.

Note: Contact you next level of support if you are not familiar with the procedures required to troubleshoot fiber optic and network connections.

16 Use an optical power meter to measure the power at the receiver connector.

If the power is	Do
above -34 dBm (for example, -30 dBm)	step 17
below -34 dBm	step 21

17 Plug the fiber optic connector into the receiver socket. Return to the carrier level of the MAP terminal and check if the alarm has cleared by typing

>LISTALM carrier_no

CCS 2RS OPR SPM critical (end)

and pressing the Enter key.

If the alarm list shows	Do
OPR	step 18
None	step 22

18 Replace the OC3 module. For detailed instructions, see the SPM section of the *Card Replacement Procedures*. When you complete the card replacement procedure, go to step 19 of this procedure.

19 Return to the carrier level of the MAP screen and list the alarms on the carrier by typing

>LISTALM carrier_no

and pressing the Enter key.

20 Determine whether the alarm has cleared.

If the alarm list shows	Do
OPT	step 21
None	step 22

- 21 For further assistance, contact the personnel responsible for the next level of support.
- 22 You have completed this procedure. Return to the CI level of the MAP screen by typing

>QUIT ALL

and pressing the Enter key.

CCS 2RS OPT SPM critical

Alarm display

CM MR CD HC PM CC6 The Ba	СМ	MS	IOD	Net	PM	CCS	Lns	Trks	Ext	APPL
			•	•		2 RS	•		•	•
			•	•		*C*	•		•	•

Indication

At the carrier level of the MAP display, an RS preceded by a number appears under the CCS header of the alarm banner and a critical alarm indicator appears beneath it.

Meaning

The DMS-Spectrum Peripheral Module (SPM) alarm system detects a threshold crossing alert (TCA) for the optical power transmitted (OPT) performance parameter. The metered measurement value for OPT in the OC3 module has dropped below 85% of its original installed value. A TCA occurs when the OPT parameter drops below 85. The SPM clears the alarm when the parameter rises above 95.

Logs CARR800 and CARR810 relate to the OPT alarm. Table MNHSCARR contains the datafill related to the OPT alarm.

Impact

A severe service-affecting condition exists. Immediate corrective action is required.

The OPT alarm applies to the OC3 Section carrier type.

Common procedures

For basic information about SPM alarms, see "Accessing SPM alarms" in this document.

Action

The following flowchart is only a summary of this procedure. Use the instructions in the step-action procedure that follows the flowchart to clear the alarm.

Summary of clearing an OPT alarm

DMS-100 Family NA100 Alarm Clearing and Perform. Monitoring Proc. Volume 1 of 4 LET0015 and up



Clearing an OPT alarm

At the MAP terminal

- Access the carrier level of the MAP screen by typing
 - > MAPCI;MTC;TRKS;CARRIER

and pressing the Enter key.

Example of a MAP screen:

CLASS	ML	OS	ALRM	SYSB	MANB	UNEQ	OFFL	CBSY	PBSY	INSV
TRUNKS	1	0	28	28	0	0	0	0	0	50
TIMING	0	0	0	0	0	0	0	0	0	2
HSCARR	0	0	0	1	3	0	1	0	0	180

MTC: TRKS: CARRIER:

2 Display all carrier alarms by typing

>DISP ALARM and pressing the Enter key. *Example of a MAP screen:*

PM	NO	CKT									
DTC	0	13	DTC	0	14	DTC	0	15	DTC	0	18
SPM	20	29	SPM	20	30	SPM	20	31	SPM	20	32

DISPLAYED BY CONDITION : ALARM DISP: MORE...

3 Record the SPM number (NO) and circuit (CKT) number combinations.

Post the SPM OC3 carrier circuits by typing

>POST SPM spm_no OC3S

and pressing the Enter key.

where

4

spm_no

is the number of the SPM (0 to 63)

Example of a MAP screen:

	OC3S											
	N CLASS S 0 HSCARR H	SITE SPM OC H OST 20	3RM OC3S	STS3L CKT - 1	STATE TI	r ma 						
	1 HSCARR H	HOST 20	1 0	- 6	InSv -							
	SIZE OF POS	STED SET :	2		MORE.							
5	List the ala	rms on eacl	n carrier by	typing								
	>LISTALM	carrier	_no									
	and pressir	ng the Enter	key.									
6	ldentify the typing	carrier with	the OPT al	arm. Identi	fy its respe	ective OC3 module by						
	>DETAIL	carrier_	no									
	and pressir	ng the Enter	key.									
	Example of	f a MAP scr	een:									
	Detail 1	Name, CDM	0 0035 2									
	SPM U CRU U	Name: SPM_	0_0C35_2									
7	Access the	PM level of	the MAP s	creen by ty	/ping							
	>MAPCI;M	>MAPCI;MTC;PM										
	and pressir	and pressing the Enter key.										
	Example of	f a MAP scr	een:									
	SysB	ManB	OffL	CBsy	ISTb	InSv						
	PM 1	1	1	3	2	12						
8	Post the SF	PMs by typir	ng									
	>POST S	PM spm n	0									
	and pressir	na the Enter	kev									
	where											
	snm n											
	refer	rs to numbe	r of the SPI	M (0 to 63)								
	Example of	f a MAP scr	een:									

TnSv

CCS 2RS OPT SPM critical (continued)

ManB OffL CBsy ISTb SysB 7 9 2 2 2 ΡМ 16 SPM 0 2 1 0 0 SPM 20 InSv Loc: Site HOST Floor 1 Row A FrPos 13 Shlf0 SL A Stat Shlf0 SL A Stat Shlf1 SL A Stat Shlf1 SL A Stat ----- 1 - ---- CEM 1 8 I InSv ----- 1 - ---- 8 - ----2 - ---- OC3 0 9 A InSv ----- 2 - ---- 9 - ----DSP 3 3 I InSv OC3 1 10 I InSv ----- 3 - ---- 10 - ----4 - ---- 11 - ---- 4 - ---- 11 - --------- 5 - ---- DSP12 12 A InSv ----- 5 - ---- 12 - --------- 6 - ---- DSP13 13 A InSv ----- 6 - ---- 13 - ----CEM 0 7 A InSv ----- 14 A InSv ----- 7 - ---- 14 - ----9 Select the active OC3 module by typing >SELECT OC3 module no and pressing the Enter key. where module no is the number of the OC3 module (0 to 1) Example of a MAP screen: SPM 20 0C3 1 Act InSv Loc : Row E FrPos 8 ShPos 24 ShId 0 Slot 10 Prot Grp : 1 Default Load: SPMLOAD Prot Role: Spare 10 Determine whether the alarm condition applies to the active OC3 module. If the alarm applies to Do the active OC3 step 11 the inactive OC3 step 13 11 Access the protection level of the MAP screen by typing >PROT and pressing the Enter key. 12 Do a manual protection switch with a module in the same protection group by typing >MANUAL from_unit_no to_unit_no and pressing the Enter key. where

CCS 2RS OPT SPM

critical (continued)

from_unit_no

is the number (0 to 27) of the module with the alarm

to_unit_no

is the number (0 to 27) of the inactive module in the same protection group

Example of a MAP screen:

SPM 20 OC3 1 Manual: Request has been submitted. SPM 20 OC3 0 Manual: Command completed.

13 Remove the fiber connector from the transmitter socket on the OC3 module. Clean the socket and the connector with compressed air. Use an optical power meter to measure the power at the transmitter socket.

If the power is	Do
above -34 dBm (for example, -30 dBm)	step 14
below -34 dBm)	step 15

14 Plug the fiber optic connector into the transmitter socket. Return to the carrier level of the MAP terminal and check if the alarm has cleared by typing

>LISTALM carrier_no

and pressing the Enter key.

If the alarm list shows	Do
OPT	step 15
None	step 19

- **15** Replace the module. For detailed instructions, see the SPM section of the *Card Replacement Procedures*. When you complete the card replacement procedure, go to 16 of this procedure.
- 16 Return to the carrier level of the MAP screen and list the alarms on the carrier by typing

>LISTALM carrier_no

and pressing the Enter key.

17 Determine whether the alarm has cleared.

If the alarm list shows	Do
OPT	step 18

CCS 2RS OPT SPM critical (end)

If the alarm list shows	Do
None	step 19

- **18** For further assistance, contact the personnel responsible for the next level of support.
- **19** You have completed this procedure. Return to the CI level of the MAP screen by typing

>QUIT ALL

and pressing the Enter key.

CCS LK minor

Alarm display

 СМ	MS	IOD	Net	РМ	CCS	Lns	Trks	Ext	APPL
•	•	•	•	•	1LK	•	•	•	•

Indication

At the MTC level of the MAP display, a number and LK appear under the CCS header in the alarm banner. The LK indicates a minor alarm for a linkset (LK).

Meaning

A linkset is in-service trouble. Not all links in the linkset are in-service trouble or are out of service. The number of links in service is less than the required threshold number.

The number under the CCS header in the alarm banner indicates the number of linksets affected.

Result

The linkset can still carry traffic, but the traffic can be at a degraded level of service. Clear this alarm as soon as possible. If all signaling links in the in-service trouble linkset go out of service, a linkset major (LKM) alarm rises. The linkset cannot carry traffic after an LKM alarm rises.

If a total router outage (TRO) occurs, all CCS7 links are blocked (Blkd) and taken out of service. During a TRO, the system does not transmit or receive the ISDN user part (ISUP) or transaction capabilities application part (TCAP) messages. With the CCS7 links out of service, the system notifies the rest of the CCS7 network that the service switching point (SSP) office is no longer providing service.

When CCS7 links are blocked (Blkd), the system rejects commands RTS, ACT, and UNIH until the CCS7 links are unblocked.

Common procedures

This procedure refers to the Running a C7BERT procedure.

Do not go to the common procedure unless the step-action procedure directs you to go.

CCS LK minor (continued)

Action

This procedure contains a summary flowchart and a list of steps. Use the flowchart to review the procedure. Follow the steps to perform the procedure.

CCS LK minor (continued)

Summary of Clearing a CCS LK minor alarm



CCS LK minor (continued)

Clearing a CCS LK minor alarm

At the MAP display

1 To access the C7LKSET level of the MAP display, type

>MAPCI;MTC;CCS;CCS7;C7LKSET

and press the Enter key.

2 Determine if LIM, LIU7, HLIU, or HSLR alarms appear under the PM header in the MAP alarm banner.

If LIM, LIU7, HLIU, or HSLR alarms	Do
appear	step 3
do not appear	step 4

- 3 Perform the appropriate alarm clearing procedures in this document to clear all PM LIM, PM LIU7, PM HLIU, or PM HSLR alarms. When you have completed the procedures, return to this point.
- 4 To post a linkset that is running an LK minor alarm, type

>POST	Α	LK	

and press the Enter key.

Example of a MAP display:

LinksetSSP100_LKISTbTrafSyncLinkLKStatResourceStat0SysBSyncLIU71ISTbSyncLIU71ISTbSyncIISV2BlkdAlndIIU7

Size of Posted Set = 3

5

lf you	Do
posted an in-service trou linkset	uble step 5
did not post an in-service trou linkset	uble step 56
Record the linkset name.	
<i>Note:</i> The linkset name appe MAP display.	ars on the right of the Linkset header on the

6 Determine from office records which far-end office connects to the posted linkset.

CCS LK minor (continued)

7 Contact the far-end office to determine if the office has LIM, LIU7, HLIU or HSLR alarms.

If the far-end office	Do
has LIM, LIU7, HLIU, or HSLR alarms	step 8
does not have LIM, LIU7, HLIU, or HSLR alarms	step 9

8 Wait until the far-end office problems clear. Check the MAP display to determine the state of the posted linkset.

Note: The linkset state appears on the right of the linkset name.

Example of a MAP display:

Liı	nkset	SSP100_LK	SYSB	
	Traf	Sync		Link
LK	Stat	Stat Resource	Stat Physical Access	Stat Action
0	SysB	Sync LIU7 101	InSv DS0A	
1	ISTb	Sync LIU7 103	InSv DS0A	
2	Blkd	Alnd LIU7 105	InSv DS0A	

Size of Posted Set = 3

If the state of the linkset is	Do
InSv	step 56
RInh, LInh, ISTb, ManB, or SysB	step 9
is ISTb, ManB, or SysB	step 9
Blkd	step 9

Determine if out-of-service or in-service trouble links are in the list for the posted linkset.

Note: The link traffic state appears under the Traf Stat header in the MAP display. Four links can show at one time in the posted linkset. The word MORE appears at the bottom of the MAP display if more than four links are in the linkset.

Example of a MAP display:

9

CCS LK minor (continued)

Linkset SSP100_LK SYSB Traf Sync LK Stat Stat Resource Stat Physic O SysB Sync LIU7 101 InSv DSOA 1 ISTb Sync LIU7 103 InSv DSOA 1 Blkd Alnd LIU7 105 InSv DSOA Size of Posted Set = 3	Link al Access Stat Action
lf	Do
out-of-service or ISTb links appear, and you did not work on any of these links	step 11
out-of-service or Blkd links ap- pear, you worked on all of these links, and there are more links to be displayed	step 10
out-of-service or ISTb links ap- pear, you worked on all of these links, and there are no more links to be displayed	step 52
all displayed links are InSv and there are more links to be dis- played	step 10
all displayed links are InSv and there are no more links to be dis- played	step 52
To display the next four links in the po	sted set, type
>NEXT	
and press the Enter key.	
Go to step 9.	ion trouble link leak at the traffic
for each link.	
<i>Note:</i> The link traffic state appears display.	under the Traf Stat header of the I
If the traffic state for	Do
at least one link is RInh. and you have not worked on that link	step 14

DMS-100 Family NA100 Alarm Clearing and Perform. Monitoring Proc. Volume 1 of 4 LET0015 and up

CCS LK minor (continued)

Do
step 17
step 14
step 23
step 25
step 55
step 23
step 25
step 55
the link, type
5)

12

CCS LK minor (continued)

Linkset COMR_COML_LKSET SvsB Traf Sync Link LK Stat Stat Resource Stat Physical Access Stat Action 2 Blkd Alnd LIU7 20 InSv DSOA Size of Posted Set = 1 QueryFlt 0 Link in Blkd state due to unavailability of External Routing Display CCS alarms for External Routing information To clear the Blkd condition, display the CCS RSRC or RTRM alarms. To clear the alarms, bring additional routers online. Use the following procedures in this document to bring the routers online: Clearing an RSC alarm • Clearing an RTRM alarm. Go to step 44. Determine from office records which far-end office connects to the posted linkset. Contact the far-end office to determine why the operating company personnel inhibited the link at that location. Wait until the far-end office restores the link. Determine the traffic state of the remote inhibited link. Note: The link traffic state appears under the Traf Stat header of the MAP display. Example of a MAP display: Linkset SSP100_LK ISTb Traf Sync Link LK Stat Stat Resource Stat Physical Access Stat Action 0 InSv Sync LIU7 101 InSv DSOA 1 ISTb Sync LIU7 103 InSv DS0A 2 InSv Sync LIU7 105 InSv DS0A Size of Posted Set = 3 If the link traffic state is Do InSv step 52 step 17 LInh step 23 ManB step 25 ISTb or SysB

13

14

15

16

17 Determine from office records or from operating company personnel why the link is inhibited locally.

CCS LK minor (continued)

and press the Enter key.	
where	
is the number of the inhibit	ted link (0 to 15)
If the UINH command	Do
passed	step 19
failed, and this is the first tempt to uninhibit the link	at- step 20
failed, and this is the second tempt to uninhibit the link	at- step 9
Determine the link traffic state.	
Note: The link traffic state app display.	ears under the Traf Stat header on
Example of a MAP display:	
Linkset SSP100_LK ISTb Traf Sync	Link
LK Stat Stat Resource Stat Phys 0 InSv Sync LIU7 101 InSv DS0 1 ISTb Sync LIU7 103 InSv DS0	sical Access Stat Action A A
LK Stat Stat Resource Stat Phys 0 InSv Sync LIU7 101 InSv DS02 1 ISTb Sync LIU7 103 InSv DS02 Size of Posted Set = 2	sical Access Stat Action A A
LK Stat Stat Resource Stat Phys 0 InSv Sync LIU7 101 InSv DS03 1 ISTb Sync LIU7 103 InSv DS03 Size of Posted Set = 2 If the link traffic state is	sical Access Stat Action A A DO
LK Stat Stat Resource Stat Phys 0 InSv Sync LIU7 101 InSv DS03 1 ISTb Sync LIU7 103 InSv DS03 Size of Posted Set = 2 If the link traffic state is InSv	sical Access Stat Action A Do step 52
LK Stat Stat Resource Stat Phys 0 InSv Sync LIU7 101 InSv DS03 1 ISTb Sync LIU7 103 InSv DS03 Size of Posted Set = 2 If the link traffic state is InSv other than listed here	sical Access Stat Action A A Do step 52 step 9
LK Stat Stat Resource Stat Physical Stat Physical Stat Physical Sync LIU7 101 InSv DS02 1 ISTb Sync LIU7 103 InSv DS02 Size of Posted Set = 2 If the link traffic state is InSv other than listed here Contact your next level of support changed at either end of the link.	Sical Access Stat Action A A Do step 52 step 9 to determine if datafill that relates to
LK Stat Stat Resource Stat Phys 0 InSv Sync LIU7 101 InSv DS02 1 ISTb Sync LIU7 103 InSv DS02 Size of Posted Set = 2 If the link traffic state is InSv other than listed here Contact your next level of support changed at either end of the link. If entries	sical Access Stat Action A A Do step 52 step 9 to determine if datafill that relates to Do
LK Stat Stat Resource Stat Physic 0 InSv Sync LIU7 101 InSv DS02 1 ISTb Sync LIU7 103 InSv DS02 Size of Posted Set = 2 If the link traffic state is InSv other than listed here Contact your next level of support changed at either end of the link. If entries changed at either end of the link	sical Access Stat Action A A Do step 52 step 9 to determine if datafill that relates to Do ink step 21

When you correct the problem, go to step 18.
CCS LK minor (continued)

22	Consult your next level of support to determine why the UINH command failed.							
	When you correct the problem, go to a	step 18.						
23	Determine from office records or from operating company personnel why the link is manual busy.							
	When you have permission, continue	this procedure.						
24	To return the link to service, type							
	>RTS link_no							
	and press the Enter key.							
	where							
	link_no is the number of the inhibited lin	nk (0 to 15)						
	If the RTS command	Do						
	failed	step 9						
	passed, but the link traffic state is RInh	step 14						
	passed, but the link traffic state is LInh	step 17						
	passed, but the link traffic state is ISTb or SysB	step 25						
	passed, and the link traffic state is InSv	step 52						
25	Determine the link synchronization sta	ate.						
	<i>Note:</i> The link synchronization stat of the MAP display.	e appears under the Sync Stat header						
	Example of a MAP display:							
	Linkset SSP100_LK ISTb Traf Sync	Link						
	0 InSv Sync LIU7 101 InSv DSOA 1 ISTb Sync LIU7 103 InSv DSOA	I ACCESS Stat ACTION						
	Size of Posted Set = 2							
	If the link synchronization state is	Do						
	Sync or Alnd	step 42						

CCS LK minor (continued)

If the link synchronization state is	Do
other than listed here	step 26
To inhibit the link, type	
>INH link_no	
and press the Enter key.	
where	
link_no is the number of the link (0 to 1	5) you want to inhibit
If the INH command	Do
passed	step 27
failed, and the link traffic state is SysB	step 27
failed, and the link traffic state is	step 9
ISTb To manually busy the link, type >BSY link_no and press the Enter key.	
ISTb To manually busy the link, type >BSY link_no and press the Enter key. where link_no is the number of the link (0 to 1	5)
ISTb To manually busy the link, type >BSY link_no and press the Enter key. where link_no is the number of the link (0 to 1 If the response is	5) Do
ISTb To manually busy the link, type >BSY link_no and press the Enter key. where link_no is the number of the link (0 to 1 If the response is Link link_no:Traffic is running on that link Please confirm ("YES", "Y", "NO", or "N"):	5) Do step 28
ISTb To manually busy the link, type >BSY link_no and press the Enter key. where link_no is the number of the link (0 to 1 If the response is Link link_no:Traffic is running on that link Please confirm ("YES", "Y", "NO", or "N"): a message not listed here, which can include the above response	5) Do step 28 step 55
ISTb To manually busy the link, type >BSY link_no and press the Enter key. where link_no is the number of the link (0 to 1 If the response is Link link_no:Traffic is running on that link Please confirm ("YES", "Y", "NO", or "N"): a message not listed here, which can include the above response To confirm the command, type	5) Do step 28 step 55
ISTb To manually busy the link, type >BSY link_no and press the Enter key. where link_no is the number of the link (0 to 1 If the response is Link link_no:Traffic is running on that link Please confirm ("YES", "Y", "NO", or "N"): a message not listed here, which can include the above response To confirm the command, type >YES	5) Do step 28 step 55

CCS LK minor (continued)

29	To deactivate the link, type	
	>DEACT link_no	
	and press the Enter key.	
	where	
	link_no is the number of the link (0 to 1	5)
30	To activate the link, type	
	>ACT link_no	
	and press the Enter key.	
	where	
	link_no is the number of the link (0 to 1	5)
	If the ACT command	Do
	passed, and the link synchroni- zation state is Sync or Alnd	step 44
	passed, and the link synchroni- zation state is not Sync or Alnd	step 33
	failed	step 33
31	To return the link to service, type	
	>RTS link_no	
	and press the Enter key.	
	where	
	link_no is the number of the link (0 to 1	5)
32	To uninhibit the link, type	
	>UINH link_no	
	and press the Enter key.	
	where	
	link_no is the number of the link (0 to 1	5)
	If the UINH command	Do
	passed, and the link synchroni- zation state is either Sync or Alnd	step 44

CCS LK minor (continued)

33

34

35

If the UINH command	Do
passed, and the link synchroni- zation state is neither Sync or Alnd	step 33
failed	step 33
Wait 8 min to see if the link activates.	
If the link synchronization state is	Do
Sync or Alnd	step 44
other than listed here, and you did not ask the far-end office to activate the link	step 34
other than listed here, and you asked the far-end office to acti- vate the link	step 9
Tell operating company personnel at th	ne far-end office that:
 You will busy, deactivate, return to the link again. 	service, and activate the link to align
 The link must activate from both e return the link to service. 	nds after you busy, deactivate, and
Coordinate your activities with the activ	vities of the far-end office to realign the
To inhibit the link, type	
>INH link_no	
and press the Enter key.	
where	
link_no is the number of the link (0 to 1	5)
If the INH command	Do
passed	step 36
failed, and the link traffic state is	step 36

CCS LK minor (continued)

	If the INH command	Do
	failed, and the link traffic state is ISTb	step 9
36	To manually busy the link, type	
	>BSY link_no	
	and press the Enter key.	
	where	
	link_no is the number of the link (0 to 1	5)
	If the response is	Do
	Link link_no:Traffic is running on that link Please confirm	step 37
	("YES","Y","NO", or "N"):	
	other than listed here, which can include the above response	step 55
37	To confirm the command, type	
	>YES	
	and press the Enter key.	
	<i>Note:</i> If the link is associated with DEACT command. Go to step 40, the step 40, t	an HLIU or HSLR, do not use the hen step 39, then continue with step 41.
38	To deactivate the link, type	
	>DEACT link_no	
	and press the Enter key.	
	where	
	link_no is the number of the link (0 to 1	5)
39	Tell personnel at the far-end office to a working. Activate the link at your end activates the link. Type	activate the link on which you are at the same time as the far-end office
	>ACT link_no	
	and press the Enter key.	
	where	
	link_no is the number of the link (0 to 1	5)

CCS LK minor (continued)

40	To return the link to service, type						
	>RTS link_no						
	and press the Enter key.						
	where						
	link_no is the number of the link (0 to 1	5)					
	If the ACT command	Do					
	passed, and the link synchroni- zation state is Sync or Alnd	step 42					
	passed, and the link synchroni- zation state is not Sync or Alnd	step 9					
	failed	step 9					
41	To uninhibit the link, type						
	and press the Enter key						
	where						
	link_no is the number of the link (0 to 1	5)					
	If the UINH command	Do					
	passed, and the link synchroni- zation state is Sync or Alnd	step 42					
	passed, and the link synchroni- zation state is not Sync or Alnd	step 9					
	failed	step 9					
42	Determine the traffic state of the link.						
	<i>Note:</i> The link traffic state appears display.	under the Traf Stat header on the MAP					
	Example of a MAP display:						

CCS LK minor (continued)

Linkset SSP100_LK SYSB	Link
LK Stat Stat Resource Stat Physics 0 SysB Sync LIU7 101 InSv DSOA 1 ISTb Sync LIU7 103 InSv DSOA	al Access Stat Action
Size of Posted Set = 2	
If the link traffic state is	Do
InSv	step 52
other than InSv	step 43
is other than InSv	step 44
and press the Enter key. <i>where</i> link_no is the number of the link (0 to 1	5)
If the INH command	Do
passed	step 44
failed, and the link traffic state is SysB	step 44
failed, and the link traffic state is ISTb	step 9
To manually busy the link, type	
>BSY link_no	
and press the Enter key.	

43

44

CCS LK minor (continued)

link_no is the number of the link (0 to 1	5)
If the response is	Do
<pre>Link link_no:Traffic is running on that link Please confirm ("YES","Y","NO", or "N"):</pre>	step 45
other than listed here, which can include the above response	step 55
To confirm the command, type	
>YES	
and press the Enter key.	
To test the link, type	
>TST link_no	
and press the Enter key.	
where	
link_no is the number of the link (0 to 1	5)
If the TST command	Do
passed	step 48
failed, and you did not run a bit error rate test on the link	step 47
failed	step 9
failed, and you ran a bit error rate test on the link	step 9
Perform the procedure <i>Running a C7I</i> procedure and return to this point.	BERT in this document. Complete the
<i>Note:</i> Perform a bit error rate test o the manual test at step 46.	n any link in the posted linkset that fails
Go to step 50.	
To return the link to service, type	
>RTS link_no	
and press the Enter key.	

CCS LK minor (continued)

If the RTS command	Do
passed, and the link is LInh	step 51
passed	step 52
failed, and this is the first time you have tried the RTS com- mand at this point	step 49
failed, and this is the second time you have tried the RTS command at this point	step 9
Wait 10 min.	
Go to step 48.	
Your next action depends on the resul	ts of the bit error rate test.
If during the bit error rate test the system instructed you	Do
to return the link to service	step 51
not to return the link to service	step 9
To uninhibit the link, type	
>UINH link_no	
e e di e accessi de la 🗖 e tra di e	
and press the Enter key.	
and press the Enter key. <i>where</i>	
and press the Enter key. <i>where</i> link_no is the number of the link (0 to 1	5)
and press the Enter key. where link_no is the number of the link (0 to 1 If the UINH command	5) Do
and press the Enter key. where link_no is the number of the link (0 to 1 If the UINH command passed, and the link is InSv	5) Do step 52
and press the Enter key. where link_no is the number of the link (0 to 1 If the UINH command passed, and the link is InSv passed, and the link is not InSv	5) Do step 52 step 9

CCS LK minor (end)

Example of a MAP display:

Linkset SSP100_LK Traf Sync LK Stat Stat Resource 0 InSv Sync LIU7 101 1 ISTb Sync LIU7 103	InSv Stat Physica InSv DS0A InSv DS0A	l Access	Stat	Link Action
Size of Posted Set = 2				
If the state of the links	et is	Do		
InSv		step 56		
ManB, ISTb, or Sys links are InSv	B, and all	step 53		
ManB, ISTb, or System the displayed links a and there are more li	B, none of are InSv, inks to be	step 9		

ManB, ISTb, or SysB, none of step 55 the displayed links are InSv., and there are no more links to be displayed

- **53** Determine from office records which far-end office connects to the posted linkset.
- 54 Tell the operating company personnel at the far-end office that you are running an LK minor alarm and that one or more associated links connected to your office are in service.

Go to step 56.

displayed

- 55 For additional help, contact the next level of support.
- 56 The procedure is complete.

Common channel signaling alarm clearing procedures 2-43

CCS LK minor in a DPNSS

Alarm display

СМ	MS	IOD	Net	PM	ccs	Lns	Trks	Ext	APPL
•	•	•	•	•	1 LK	•	•	•	•

Indication

At the MTC level of the MAP display, a number and LK appear under the CCS header in the alarm banner. The LK indicates minor alarm for a linkset (LK).

Meaning

The number of DPNSS links affected appears to the left of LK. These links are system busy or in service trouble.

Result

An LK alarm indicates that the linkset cannot communicate with the private branch exchange (PBX). To prevent an change in service, clear the LK alarms at the first opportunity.

Common procedures

There are no common procedures.

Action

This procedure contains a summary flowchart and a list of steps. Use the flowchart to review the procedure. Follow the steps to perform the procedure.

CCS LK minor in a DPNSS (continued)

Summary in Clearing a CCS LK alarm



CCS LK minor in a DPNSS (continued)

Clearing a CCS LK alarm

At your current location

- 1 To access the DPNSS level of the MAP display, type >MAPCI;MTC;CCS;DPNSS and press the Enter key.
- 2 To post all links that have an LK minor alarm, type
 - >POST A

and press the Enter key.

Example of a MAP display:

Link name	Link	ST	Carr.	action in
(carrier)	state	No. state	state	progress
PDTC 0 3	SYSB	108 INSV	INSV	

2 links in post set, 1 after current link

- **3** Record the link name. The link name appears under the header Link name on the MAP display.
- 4 To display the next link, type
 - >NEXT

and press the Enter key.

- 5 Repeat steps 3 and 4 until you record the names of all links that have alarms.
- 6 To post a link that has an LK alarm, type

>POST L link_name

and press the Enter key.

where

link_name

is the name of the link that you recorded in step 3

7 Identify the link state of the posted link. Example of a MAP response:

CCS LK minor in a DPNSS (continued)

1 after current link
Do
step 8
step 22
Do
step 10
step 9
t you cannot busy. To force the
Do
step 11
step 12
ent.
Do
step 6
step 39

CCS LK minor in a DPNSS (continued)

Link name	Link	ST	Carr.	action in
(carrier)	state N	lo. state	state	progress
PDTC 0 3	SYSB 1	08 SYSB	INSV	
2 links in p	ost set,	1 a	fter curre	ent link
If the ST		Do		
is SysB		step	13	
is CBsy		step	13	
is InSv		step	17	
Perform the proc	edure <i>Clearing</i>	g an STC ala	rm in this do	cument. Clear
alarm for the sign	tuno	controller (S	IC) and retu	irn to this point.
	type			
SREE				
·	4 a.m. 1 . a			
and press the Er	ter key.			
and press the Er	ter key.	Do		
and press the Er If you can set the Sys	ter key. B link to bus	Do sy step	16	
and press the Er If you can set the Sys cannot set the	ter key. B link to bus SysB link to	Do sy step busy step	16 15	
and press the En If you can set the Sys cannot set the Use the FORCE command on the	ter key. B link to bus SysB link to option on the l link, type	Do sy step busy step ink that you	16 15 cannot busy.	To force the
and press the Er If you can set the Sys cannot set the Use the FORCE command on the >BSY FORCE	ter key. B link to bus SysB link to option on the l link, type	Do sy step busy step ink that you	16 15 cannot busy.	To force the
and press the En If you can set the Sys cannot set the Use the FORCE command on the >BSY FORCE and press the En	ter key. B link to bus SysB link to option on the l link, type	Do sy step busy step ink that you	16 15 cannot busy.	To force the
and press the Er If you can set the Sys cannot set the Use the FORCE command on the >BSY FORCE and press the Er To return the link	ter key. B link to bus SysB link to option on the l link, type ter key. to service, typ	Do sy step busy step ink that you e	16 15 cannot busy.	To force the
and press the Er If you can set the Sys cannot set the Use the FORCE command on the >BSY FORCE and press the Er To return the link >RTS	ter key. B link to bus SysB link to option on the l link, type ter key. to service, typ	Do by step busy step ink that you be	16 15 cannot busy.	To force the
and press the Er If you can set the Sys cannot set the Use the FORCE command on the >BSY FORCE and press the Er To return the link >RTS and press the Er	ter key. B link to bus SysB link to option on the l link, type ter key. to service, typ	Do sy step busy step ink that you be	16 15 cannot busy.	To force the
and press the En If you can set the Sys cannot set the Use the FORCE command on the >BSY FORCE and press the En To return the link >RTS and press the En If the RTS com	ter key. B link to bus SysB link to option on the l link, type ter key. to service, typ ter key.	Do busy step ink that you be	16 15 cannot busy.	To force the
and press the En If you can set the Sys cannot set the Use the FORCE command on the >BSY FORCE and press the En To return the link >RTS and press the En If the RTS com passed	ter key. B link to bus SysB link to option on the l link, type ter key. to service, typ ter key.	Do sy step busy step ink that you be Do step	16 15 cannot busy. 11	To force the

Example of a MAP response:

13

14

15

16

17

CCS LK minor in a DPNSS (continued)

18

19

20

21

22

Link name (carrier) PDTC 0 3	Link state SYSB	ST No.sta 108 In	ate nSv	Carr. state SysB	action in progress
2 links in po	ost set,		1 af	ter curre	ent link
If the carrier sta	ate		Do		
is SysB			step 1	.8	
is InSv			step 2	22	
Perform the proce alarm for the inter	edure <i>Cleari</i> peripheral r	<i>ing an IPN</i> nessage li	<i>IL aları</i> ink (IPI	<i>n</i> in this do ML) and ret	cument. Clear th urn to this point.
To busy the link, t	уре				
>BSY					
and press the Ent	er key.				
lf you			Do		
can set the Sys	B link to b	usy	step 2	21	
cannot set the S	SysB link t	o busy	step 2	20	
	ntion on th	o link that	vou ca	nnot busv	To force the
Use the FORCE of command on the	link, type		,	iniot buby.	
Use the FORCE of command on the >BSY FORCE	link, type		,	iniot budy.	
Use the FORCE of command on the >BSY FORCE and press the Ent	link, type		,	line buoy.	
Use the FORCE of command on the >BSY FORCE and press the Ent To return the link	ink, type er key. to service, t	ype	,	inici buby.	
Use the FORCE of command on the >BSY FORCE and press the Ent To return the link >RTS	ink, type er key. to service, t	ype	,	inter buoy.	
Use the FORCE of command on the >BSY FORCE and press the Ent To return the link >RTS and press the Ent	ink, type er key. to service, t er key.	уре	,	inter buoy.	
Use the FORCE of command on the >BSY FORCE and press the Ent To return the link >RTS and press the Ent If the RTS com	ink, type er key. to service, t er key. mand	ype	Do		
Use the FORCE of command on the >BSY FORCE and press the Ent To return the link >RTS and press the Ent If the RTS comm passed	ink, type er key. to service, t er key. mand	ype	Do step 1	1	

Example of a MAP response:

CCS LK minor in a DPNSS (continued)

	Link name (carrier) PDTC 0 3	Link state SYSB	ST No. st 108]	tate InSv	Carr. state SysB	action in progress resetting all LAPS
	2 links in po	ost set,		1 aft	ter curr	ent link
	If the MAP res	ponse		Do		
	is querying ST	Γ		step	23	
	is hunting flag	<u></u> s		step	2	
	is resetting all	LAPS		step	24	
	is resetting <n< th=""><th>>LAPS</th><th></th><th>step</th><th>25</th><th></th></n<>	>LAPS		step	25	
	is all LAPS de	eactivated		step	34	
	is LAP(s) dead	ctivated		step	34	
	is no display			step	39	
23	This message ap seconds, a fault	ppears at no is present.	ormal inte	ervals. If	the messa	ge does not clear in
	Go to step 38.					
24	The fault is with	the other Pl	BX.			
	Go to step 38.					
25	This temporary s	tate is norr	nal while	the link i	returns to s	service.
26	Use the QUERY		and to ide	entity the	ELAPS that	attempt to reset.
	>QUERYLAP FU	LL				
	and press the Er	nter key.				
	Example of a MA	AP respons	e:			
	LAP:	0000000 0123456	0001111 7890123	111111 8456789	22222222	22233 78901
	Real: Virtual:	 		rr-rr	····rri	rrrr rrrr
27	To reactivate the	LAPs, type	;			
	>ACTLAP ALL					

CCS LK minor in a DPNSS (continued)

and press the Enter key.	
If the LAP	Do
reactivates	step 39
does not reactivate	step 28
To access the trunk test position (TTF) level of the MAP display, type
>TRKS;TTP	
and press the Enter key.	
Example of a MAP response:	
POST DELQ BUSYQ DIG TP1	
EKT TYPE PM.NO COM LA EW DP DP PDTC 1 5 17 SVNV2W	NG STA S R DOT TE RESUL 60 SB + . DIG
If the trunks	Do
are in lock-out (LO) state	step 38
are in system-busy (SB) state	step 29
To post the link that is system busy, ty	ре
>POST A SB	
and press the Enter key.	
To busy the link, type	
>BSY	
and press the Enter key.	
lf you	Do
can set the SysB link to busy	step 32
cannot set the SysB link to busy	step 31
Use the FORCE option on the link that command on the link, type	t you cannot busy. To force the
>BSY FORCE	
and press the Enter key.	
To return the link to service, type	
>RTS	

CCS LK minor in a DPNSS (end)

If the RTS command	Do
passed	step 33
failed	step 38
The LAP resets automatically.	
If the LAP	Do
does reset	step 39
does not reset	step 38
To reactivate the LAPs, type	
>ACTLAP ALL	
and press the Enter key.	
To busy the link, type	
>BSY	
and press the Enter key.	
lf you	Do
can set the SysB link to busy	step 37
cannot set the SysB link to busy	step 36
Use the FORCE option on the link that command on the link, type	you cannot busy. To force the
>BSY FORCE	
and press the Enter key.	
To return the link to service, type	
>RTS	
and press the Enter key.	
If the RTS command	Do
passed	step 11
	step 38
failed	r

CCS LKM major

Alarm display

ſ	СМ	MS	IOD	Net	PM	CCS	Lns	Trks	Ext	APPL
	•	•	•	•	•	1LKM	•	•	•	·

Indication

At the MTC level of the MAP display, a number precedes LKM under the CCS header in the alarm banner. The LKM indicates a major alarm for a linkset.

Meaning

A linkset is out of service. No links in the linkset can carry traffic.

The number under the common channel signaling (CCS) header in the alarm banner indicates the number of linksets affected.

Result

Signaling on the linkset is not possible. Traffic routes to another linkset if a linkset is available. The traffic can be at a degraded level of service.

Common procedures

This procedure refers to Running a C7BERT.

Do not go to the common procedure unless the step-action procedure directs you to go.

Action

This procedure contains a summary flowchart and a list of steps. Use the flowchart to review the procedure. Follow the steps to perform the procedure.

Summary of How to clear a CCS LKM major alarm



DMS-100 Family NA100 Alarm Clearing and Perform. Monitoring Proc. Volume 1 of 4 LET0015 and up

CCS LKM

major (continued)

How to clear a CCS LKM major

At the MAP display

2

3

4

1 To access the C7LKSET level of the MAP display, type

>MAPCI;MTC;CCS;CCS7;C7LKSET

and press the Enter key.

lf you	Do
come to this procedure from the RSM alarm clearing procedure	RSC or the step 6
do not come to this procedure fro or the RSM alarm clearing proce	om the RSC step 2 redure
Determine if LIM, LIU7, HLIU, or HS in the MAP display alarm banner.	LR alarms appear under the PM hea
If LIM, LIU7, HLIU, or HSLR alarms	Do
appear	step 3
do not appear	step 4
>POST A LKM and press the Enter key. Example of a MAP display:	
Linkset SSP100_LK SysB Traf Sync LK Stat Stat Resource Stat Phys 0 SysB Sync LIU7 101 InSv DS0A 1 ManB alnd LIU7 103 InSv DS0A 2 ManB DAct DLIU 300 InSv DS1	Link Sical Access Stat Action
Size of Posted Set = 3	Do
If you	
If you	
If you posted an out-of-service linkset	step 5

5 Record the linkset name.

Note: The linkset name appears on the right of the Linkset header on the MAP display.

6 To post the out of service link, type

>POST C linkset_name

and press the Enter key.

where

linkset_name

is the name of the linkset that you recorded before you started this procedure

Example of a MAP display:

Linkset SSP100_LK ISTb Traf Sync Link LK Stat Stat Resource Stat Physical Access Stat Action 0 SysB Sync LIU7 101 InSv DS0A 1 ManB alnd LIU7 103 InSv DS0A 2 ManB DAct DLIU 300 InSv DS1 Size of Posted Set = 3

- 7 Determine from office records the far-end office that connects to the posted linkset.
- 8 Contact the far-end office to determine if it has LIM, LIU7, HLIU, or HSLR alarms.

If the far-end office	Do
has LIM, LIU7, HLIU, or HSLR alarms	step 9
does not have LIM, LIU7, HLIU, or HSLR alarms	step 10
When the problems at the for and offic	a clear determine the state of the

When the problems at the far-end office clear, determine the state of the posted linkset.

Note: The linkset state appears on the right of the linkset name on the MAP display.

Example of a MAP display:

9

Lin LK 0 1	nkset Traf Stat SysB ManB	SSP1 Sync Stat Sync alnd	Resource LIU7 101 LIU7 103	SYSB Stat Physica InSv DS0A InSv DS0A	al Access	Link Stat Action
2 Si: 	ManB ze of the s	Poste	of the links	set	Do	
i	s Ins	Sv or	ISTb		step 54	
i	sRIr	nh, L	Inh, Man	B, or SysB	step 10	
i	s Mar	ıB or	SysBsy		step 10	

10 Determine if the posted linkset contains out-of-service links.

Note: The link traffic state appears under the Traf Stat header in the MAP display. Up to four links show at one time in the posted linkset. If more than four links are in the linkset, the word "more" appears at the bottom of the MAP display.

Example of a MAP display:

Li	nkset	SSP	L00_LK	SYSB		
	Traf	Sync				Link
LK	Stat	Stat	Resource	Stat Physical	Access	Stat Action
0	SysB	Sync	LIU7 101	InSv DS0A		
1	ManB	alnd	LIU7 103	InSv DS0A		
2	ManB	DAct	DLIU 300	InSv DS1		
Si	ze of	Poste	ed Set = 3			

lf	Do
out-of-service links are displayed and you did not work on any of these links	step 12
out-of-service or ISTb links are displayed, you worked on all of these links, and there are more links to be displayed	step 11
out-of-service or ISTb links are displayed, you worked on all of these links, and there are no more links to be displayed	step 51
all displayed links are InSv or ISTb, and there are more links to be displayed	step 11

	lf		Do
	all displayed links are InSv or I are no more links to be displayed	STD, and there	step 51
Т	o display the next four links in the pos	sted set, type	
>	NEXT		
а	and press the Enter key.		
Ģ	Go to step 10.		
Т	o choose an out-of-service link, chec	k the traffic state fo	or each link.
	<i>Note:</i> The link traffic state appears display.	under the Traf Stat	header of the M
	If the traffic state for	Do	
	at least one link is InSv and you cannot restore any RInh, LInh, ManB, or SysB links	step 51	
	a minimum of one link is InSv and you cannot restore any ManB or SysBsy links	step 51	
	at least one link is RInh and you did not work on that link	step 13	
	at least one link is LInh and you did not work on that link	step 16	
	at least one link is ManB and you did not work on that link	step 22	
	at least one link is SysB and you did not work on that link	step 24	
	all links are RInh, LInh, ManB, or SysB and these links did not return to service	step 56	
	all links are ManB or SysBsy and these links did not return to service	step 56	

14 Contact the far-end office to determine why the operating company personnel inhibited the link at a remote location.

15 When the far-end office restores the link, determine the traffic state of the remotely inhibited link.

Note: The link traffic state appears under the Traf Stat header of the MAP display.

Example of a MAP display:

Liı	nkset	SSP	100_LK	IS	Tb		
	Traf	Sync					Link
LK	Stat	Stat	Resource	Stat	Physical	Access	Stat Action
0	SysB	Sync	LIU7 101	InSv	DSOA		
1	ManB	alnd	LIU7 103	InSv 3	DS0A		
2	ManB	DAct	DLIU 300	InSv	DS1		
Siz	ze of	Poste	ed Set = 3				

If the link traffic state is	Do
InSv or ISTb	step 51
LInh	step 16
ManB	step 22
SysB	step 24

- **16** Determine from office records or from operating company personnel why the link was locally inhibited.
- 17 When you have permission, uninhibit (UINH) the link. Type

>UINH link_no

and press the Enter key.

where

```
link_no
```

is the number of the inhibited link (0 to 15)

If the UINH command	Do
passed	step 18
failed, and this is the first time you have tried to uninhibit the link	step 19
failed, and this is the second time you have tried to uninhibit the link	step 10

18 Determine the link traffic state. Note: The link traffic state appears under the Traf Stat header on the MAP display. Example of a MAP display: Linkset SSP100_LK InSv Traf Sync Link LK Stat Stat Resource Stat Physical Access Stat Action 0 SysB Sync LIU7 101 InSv DSOA 1 ManB alnd LIU7 103 InSv DSOA 2 ManB DAct DLIU 300 InSv DS1 Size of Posted Set = 3 If the link traffic state is Do InSv or ISTb step 51 other than listed here step 10 19 Contact your next level of support to determine if datafill that relates to the link has been changed at either end of the link. If datafill Do changed at either end of the link step 20 did not change at either end of step 21 the link 20 Consult your next level of support. Follow the instructions of your next level of support to correct the problem. When you correct the problem, go to step 17. Consult your next level of support to determine why the UINH command 21 failed. When you correct the problem, go to step 17. 22 Determine from office records or from operating company personnel why the link is manual busy. When you have permission, continue this procedure. 23 To return the link to service, type >RTS link_no and press the Enter key. where link no is the number of the link (0 to 7)

If the RTS command	Do
failed	step 10
passed, but the link traffic state is RInh	step 13
passed, but the link traffic state is LInh	step 16
passed, but the link traffic state is SysB	step 24
passed, and the link traffic state is InSv or ISTb	step 51
Note: The link synchronization stares of the MAP display. Example of a MAP display: Linkset SSP100_LK ISTb Traf Sync LK Stat Stat Resource Stat Physic 0 SysB Sync LIU7 101 InSv DS0A 1 ManB alnd LIU7 103 InSv DS0A 2 ManB DAct DLIU 300 InSv DS1 Size of Posted Set = 3 If the link synchronization state	Link .cal Access Stat Action
Sync or Alnd	sten 41
other than listed above	step 25
other than listed above	step 26
o inhibit the link, type	

25

24

link_no is the number of the link (0 to 1	5)
If the INH command	Do
passed	step 26
failed, and the link traffic state is SysB	step 26
failed, and the link traffic state is ISTb	step 10
To manually busy the link, type	
>BSY link_no	
and press the Enter key.	
where	
link_no is the number of the link (0 to 7)
link_no is the number of the link (0 to 1	5)
If the response is	Do
Link link_no:Traffic is running on the link Please confirm ("YES","Y","NO", or "N"):	step 27
other than listed here, including additional messages with above response	step 56
To confirm the command, type	
and press the Enter key.	
To deactivate the link, type	
>DEACT link_no	
and press the Enter key.	
where	
link_no is the number of the link (0 to 7)

	link_no is the number of the link (0 to 1	5)		
29	To activate the link, type			
	>ACT link_no			
	and press the Enter key.			
	where			
	link_no is the number of the link (0 to 7)		
	link_no is the number of the link (0 to 15)			
	If the ACT command	Do		
	passed, and the link synchroni- zation state is Sync or Alnd	step 41		
	passed, and the link synchroni- zation state is not Sync or Alnd	step 32		
	failed	step 32		
	To return the link to service, type			
	>RTS link_no			
	and press the Enter key.			
	where			
	link_no is the number of the link (0 to 7)		
	link_no is the number of the link (0 to 1	5)		
	To uninhibit the link, type			
	>UINH link_no			
	and press the Enter key.			
	where			
	link_no is the number of the link (0 to 15)			
	If the UINH command	Do		
	passed, and the link synchroni- zation state is Sync or Alnd	step 41		

Do
step 32
step 32
Do
step 41
step 33
step 10
rsonnel at that location the following
o service, and activate the link in order
iter you busy, deactivate, and return the
end office to align the link again.
15)
Do
step 35
step 35

failed, and the link traffic state is step 10 ISTb To manually busy the link, type >BSY link_no and press the Enter key. where link_no is the number of the link (0 to 7) link_no is the number of the link (0 to 15) If the response is Do Link link_no:Traffic step 36 is running on the link Please confirm ("YES", "Y", "NO", or "N"): other than listed here, including step 56 additional messages with above response To confirm the command, type >YES and press the Enter key. To deactivate the link, type >DEACT link_no is the number of the link (0 to 7) link_no is the number of the link (0 to 15) Tell the personnel at the far-end office to activate the link on which you working. Activate the link at your end at the same time the far-end office activates the link at their end. Type >ACT link_no and press the Enter key.	If the INH command	Do
To manually busy the link, type >BSY link_no and press the Enter key. where link_no is the number of the link (0 to 7) link_no is the number of the link (0 to 15) If the response is Do Link link_no:Traffic step 36 is running on the link Please confirm ("YES", "Y", "NO", or "N"): other than listed here, including step 56 additional messages with above response To confirm the command, type >YES and press the Enter key. To deactivate the link, type >DEACT link_no and press the Enter key. where link_no is the number of the link (0 to 7) link_no is the number of the link (0 to 15) Tell the personnel at the far-end office to activate the link on which you working. Activate the link at their end. Type >ACT link_no and press the Enter key.	failed, and the link traffic state is ISTb	step 10
<pre>>BSY link_no and press the Enter key. where ink_no is the number of the link (0 to 7) link_no is the number of the link (0 to 15) if the response is Do Link link_no:Traffic step 36 is running on the link Please confirm ("YES", "Y", "NO", or "N"): other than listed here, including step 56 additional messages with above response To confirm the command, type >YES and press the Enter key. To deactivate the link, type >DEACT link_no and press the Enter key. where link_no is the number of the link (0 to 7) link_no is the number of the link (0 to 7) link_no is the number of the link (0 to 15) Tell the personnel at the far-end office to activate the link on which you vorking. Activate the link at your end at the same time the far-end office activates the link at their end. Type >ACT link_no and press the Enter key.</pre>	To manually busy the link, type	
and press the Enter key. where link_no is the number of the link (0 to 7) link_no is the number of the link (0 to 15) f the response is Do Link link_no:Traffic step 36 is running on the link Please confirm ("YES", "Y", "NO", or "N"): other than listed here, including step 56 additional messages with above response To confirm the command, type >YES and press the Enter key. To deactivate the link, type >DEACT link_no and press the Enter key. where link_no is the number of the link (0 to 7) link_no is the number of the link (0 to 15) Tell the personnel at the far-end office to activate the link on which you working. Activate the link at your end at the same time the far-end office activates the link at their end. Type >ACT link_no and press the Enter key.	>BSY link_no	
<pre>where link_no is the number of the link (0 to 7) link_no is the number of the link (0 to 15) If the response is Do Link link_no:Traffic step 36 is running on the link Please confirm ("YES", "Y", "NO", or "N"): other than listed here, including step 56 additional messages with above response To confirm the command, type >YES and press the Enter key. To deactivate the link, type >DEACT link_no is the number of the link (0 to 7) link_no is the number of the link (0 to 7) link_no is the number of the link (0 to 15) Tell the personnel at the far-end office to activate the link on which you working. Activate the link at your end at the same time the far-end office activates the link at their end. Type >ACT link_no and press the Enter key.</pre>	and press the Enter key.	
<pre>link_no is the number of the link (0 to 7) link_no is the number of the link (0 to 15) // the response is Do Link link_no:Traffic step 36 is running on the link Please confirm ("YES", "Y", "NO", or "N"): other than listed here, including step 56 additional messages with above response To confirm the command, type >YES and press the Enter key. To deactivate the link, type >DEACT link_no and press the Enter key. where link_no is the number of the link (0 to 7) link_no is the number of the link (0 to 15) Tell the personnel at the far-end office to activate the link on which you working. Activate the link at your end at the same time the far-end office activates the link at their end. Type >ACT link_no and press the Enter key.</pre>	where	
link_no is the number of the link (0 to 15) If the response is Do Link link_no:Traffic step 36 is running on the link Please confirm ("YES", "Y", "NO", or "N"): other than listed here, including step 56 additional messages with above response To confirm the command, type >YES and press the Enter key. To deactivate the link, type >DEACT link_no and press the Enter key. where link_no is the number of the link (0 to 7) link_no is the number of the link (0 to 15) Tell the personnel at the far-end office to activate the link on which you working. Activate the link at your end at the same time the far-end office activates the link at their end. Type >ACT link_no and press the Enter key.	link_no is the number of the link (0 to 7)	
If the response is Do Link link_no:Traffic step 36 is running on the link Please confirm Please confirm ("YES", "Y", "NO", or "N"): other than listed here, including step 56 additional messages with above response To confirm the command, type >YES and press the Enter key. To deactivate the link, type >DEACT link_no and press the Enter key. where link_no is the number of the link (0 to 7) link_no is the number of the link (0 to 15) Tell the personnel at the far-end office to activate the link on which you working. Activate the link at your end at the same time the far-end office activates the link at their end. Type >ACT link_no and press the Enter key.	link_no is the number of the link (0 to 15	5)
Link link_no:Traffic step 36 is running on the link Please confirm ("YES", "Y", "NO", or "N"): other than listed here, including step 56 additional messages with above response To confirm the command, type >YES and press the Enter key. To deactivate the link, type >DEACT link_no and press the Enter key. where link_no is the number of the link (0 to 7) link_no is the number of the link (0 to 15) Tell the personnel at the far-end office to activate the link on which you working. Activate the link at your end at the same time the far-end office activates the link at their end. Type >ACT link_no and press the Enter key.	If the response is	Do
other than listed here, including step 56 additional messages with above response To confirm the command, type >YES and press the Enter key. To deactivate the link, type >DEACT link_no and press the Enter key. where link_no is the number of the link (0 to 7) link_no is the number of the link (0 to 15) Tell the personnel at the far-end office to activate the link on which you working. Activate the link at your end at the same time the far-end office activates the link at their end. Type >ACT link_no and press the Enter key.	Link link_no:Traffic is running on the link Please confirm ("YES","Y","NO", or "N"):	step 36
To confirm the command, type >YES and press the Enter key. To deactivate the link, type >DEACT link_no and press the Enter key. where link_no is the number of the link (0 to 7) link_no is the number of the link (0 to 15) Tell the personnel at the far-end office to activate the link on which you working. Activate the link at your end at the same time the far-end offic activates the link at their end. Type >ACT link_no and press the Enter key.	other than listed here, including additional messages with above response	step 56
<pre>>YES and press the Enter key. To deactivate the link, type >DEACT link_no and press the Enter key. where link_no is the number of the link (0 to 7) link_no is the number of the link (0 to 15) Tell the personnel at the far-end office to activate the link on which you working. Activate the link at your end at the same time the far-end offic activates the link at their end. Type >ACT link_no and press the Enter key.</pre>	To confirm the command, type	
and press the Enter key. To deactivate the link, type >DEACT link_no and press the Enter key. where link_no is the number of the link (0 to 7) link_no is the number of the link (0 to 15) Tell the personnel at the far-end office to activate the link on which you working. Activate the link at your end at the same time the far-end office activates the link at their end. Type >ACT link_no and press the Enter key.	>YES	
To deactivate the link, type >DEACT link_no and press the Enter key. where link_no is the number of the link (0 to 7) link_no is the number of the link (0 to 15) Tell the personnel at the far-end office to activate the link on which you working. Activate the link at your end at the same time the far-end offic activates the link at their end. Type >ACT link_no and press the Enter key.	and press the Enter key.	
<pre>>DEACT link_no and press the Enter key. where link_no is the number of the link (0 to 7) link_no is the number of the link (0 to 15) Tell the personnel at the far-end office to activate the link on which you working. Activate the link at your end at the same time the far-end offic activates the link at their end. Type >ACT link_no and press the Enter key.</pre>	To deactivate the link, type	
and press the Enter key. where link_no is the number of the link (0 to 7) link_no is the number of the link (0 to 15) Tell the personnel at the far-end office to activate the link on which you working. Activate the link at your end at the same time the far-end offic activates the link at their end. Type >ACT link_no and press the Enter key.	>DEACT link_no	
<pre>where link_no is the number of the link (0 to 7) link_no is the number of the link (0 to 15) Tell the personnel at the far-end office to activate the link on which you working. Activate the link at your end at the same time the far-end offic activates the link at their end. Type >ACT link_no and press the Enter key.</pre>	and press the Enter key.	
<pre>ink_no is the number of the link (0 to 7) link_no is the number of the link (0 to 15) Tell the personnel at the far-end office to activate the link on which you working. Activate the link at your end at the same time the far-end offic activates the link at their end. Type >ACT link_no and press the Enter key.</pre>	where	
<pre>link_no is the number of the link (0 to 15) Tell the personnel at the far-end office to activate the link on which you working. Activate the link at your end at the same time the far-end offic activates the link at their end. Type >ACT link_no and press the Enter key.</pre>	is the number of the link (0 to 7)	
Tell the personnel at the far-end office to activate the link on which you working. Activate the link at your end at the same time the far-end office activates the link at their end. Type ACT link_no and press the Enter key.	link_no is the number of the link (0 to 15	5)
>ACT link_no and press the Enter key.	Tell the personnel at the far-end office working. Activate the link at your end a activates the link at their end. Type	to activate the link on which you a at the same time the far-end office
and press the Enter key.	>ACT link_no	
	and proce the Enter key	

where	
link_no is the number of the link (0 to 7)
link_no is the number of the link (0 to 1	5)
If the ACT command	Do
passed, and the link synchroni- zation state is Sync or Alnd	step 41
passed, and the link synchroni- zation state is not Sync or Alnd	step 10
failed	step 10
To return the link to service, type	
>RTS link_no	
and press the Enter key.	
where	
link_no is the number of the link (0 to 7)
link_no is the number of the link (0 to 1	5)
To uninhibit the link, type	
>UINH link_no	
and press the Enter key.	
where	
link_no is the number of the link (0 to 1	5)
If the UINH command	Do
passed, and the link synchroni- zation state is Sync or Alnd	step 41
passed, and the link synchroni- zation state is not Sync or Alnd	step 10
failed	step 10

39

40

<i>Note:</i> The link traffic state appears display.		
Example of a MAP display:		
Linkset SSP100_LK SYSB Traf Sync LK Stat Stat Resource Stat Physic 0 SysB Sync LIU7 101 InSv DSOA 1 ManB alnd LIU7 103 InSv DSOA 2 ManB DAct DLIU 300 InSv DS1	al Access	Link Stat Acti
Size of Posted Set = 3		
If the link traffic state is	Do	
InSv	step 51	
other than listed here	step 42	
other than listed here	step 43	
To inhibit the link, type >INH link_no and press the Enter key.		
To inhibit the link, type >INH link_no and press the Enter key. <i>where</i> link_no is the number of the link (0 to 1	5)	
To inhibit the link, type <pre>>INH link_no and press the Enter key. where link_no is the number of the link (0 to 1 If the INH command</pre>	5) Do	
To inhibit the link, type >INH link_no and press the Enter key. where link_no is the number of the link (0 to 1 If the INH command passed	5) Do step 43	
To inhibit the link, type >INH link_no and press the Enter key. where link_no is the number of the link (0 to 1 If the INH command passed failed, and the link traffic state is SysB	5) Do step 43 step 43	
To inhibit the link, type >INH link_no and press the Enter key. where link_no is the number of the link (0 to 1 If the INH command passed failed, and the link traffic state is SysB failed, and the link traffic state is ISTb	5) Do step 43 step 43 step 10	
To inhibit the link, type >INH link_no and press the Enter key. where link_no is the number of the link (0 to 1 If the INH command passed failed, and the link traffic state is SysB failed, and the link traffic state is ISTb To manually busy the link, type	5) Do step 43 step 43 step 10	
To inhibit the link, type >INH link_no and press the Enter key. where link_no is the number of the link (0 to 1 If the INH command passed failed, and the link traffic state is SysB failed, and the link traffic state is ISTb To manually busy the link, type >BSY link_no	5) Do step 43 step 43 step 10	
To inhibit the link, type >INH link_no and press the Enter key. where link_no is the number of the link (0 to 1 If the INH command passed failed, and the link traffic state is SysB failed, and the link traffic state is ISTb To manually busy the link, type >BSY link_no and press the Enter key.	5) Do step 43 step 43 step 10	

	link_no is the number of the link (0 to 15)				
	If the response is	Do			
	Link link_no:Traffic s is running on the link Please confirm("YES","Y","NO", or "N"):	tep 44			
	other than listed here, including s additional messages with above response	tep 56			
44	To confirm the command, type				
	>YES				
	and press the Enter key.				
45	To test the link, type				
	>TST link_no				
	and press the Enter key.				
	where				
	link_no is the number of the link (0 to 7)				
	link_no is the number of the link (0 to 15)				
	If the TST command		Do		
	passed		step 47		
	failed, and you did not run a bit erro the link	r rate test on	step 46		
	failed		step 10		
	failed, and you ran a bit error rate tes	t on the link	step 10		
46	Perform the procedure <i>Running a C7BE</i> , procedure and return to this point.	<i>RT</i> in this docu	ment. Complete the		
	<i>Note:</i> Perform a bit error rate test on failed the manual test at step 45.	any link in the	posted linkset that		
	Go to step 49.				
47	To return the link to service, type				
	>RTS link_no				

and press the Enter key.		
where		
link_no is the number of the link (0 to 7	7)	
link_no is the number of the link (0 to 1	15)	
If the RTS command		Do
passed, and the link is LInh		step 50
passed		step 51
failed, and this attempt is your fir RTS command at this point	st attempt with the	step 48
failed, and this attempt is your se the RTS command at this point	econd attempt with	step 10
Wait 10 min.		
Go to step 47.		
Your next action depends on the resu	lte ef the hit ennen net	
	lits of the bit error rate	e test.
If, during the bit error rate test, you received the instruction	Do	e test.
If, during the bit error rate test, you received the instruction to return the link to service	Do step 50	
If, during the bit error rate test, you received the instruction to return the link to service to not return the link to service	Do step 50 step 10	
If, during the bit error rate test, you received the instruction to return the link to service to not return the link to service To uninhibit the link, type	Do step 50 step 10	
If, during the bit error rate test, you received the instruction to return the link to service to not return the link to service To uninhibit the link, type >UINH link_no	Do step 50 step 10	
If, during the bit error rate test, you received the instruction to return the link to service to not return the link to service To uninhibit the link, type >UINH link_no and press the Enter key.	Do step 50 step 10	
If, during the bit error rate test, you received the instruction to return the link to service to not return the link to service To uninhibit the link, type >UINH link_no and press the Enter key. where	Do step 50 step 10	
If, during the bit error rate test, you received the instruction to return the link to service to not return the link to service To uninhibit the link, type >UINH link_no and press the Enter key. where link_no is the number of the link (0 to return the link (0 to return)	Do step 50 step 10	
If, during the bit error rate test, you received the instruction to return the link to service to not return the link to service To uninhibit the link, type >UINH link_no and press the Enter key. where link_no is the number of the link (0 to - If the UINH command	Do step 50 step 10 15) Do	
If, during the bit error rate test, you received the instruction to return the link to service to not return the link to service To uninhibit the link, type >UINH link_no and press the Enter key. where link_no is the number of the link (0 to If the UINH command passed, and the link is InSv or ISTb	Do step 50 step 10 15) Do step 51	
If, during the bit error rate test, you received the instruction to return the link to service to not return the link to service To uninhibit the link, type >UINH link_no and press the Enter key. where link_no is the number of the link (0 to If the UINH command passed, and the link is InSv or ISTb passed, and the link is ManB or SysB	Do step 50 step 10 15) Do step 51 step 10	
CCS LKM major (end)

51 Determine the linkset state.

Note: The linkset state appears on the right of the linkset name on the MAP display.

Example of a MAP display:

Linkset SSP100_LK InSv Traf Sync Link LK Stat Stat Resource Stat Physical Access Stat Action 0 SysB Sync LIU7 101 InSv DS0A 1 ManB alnd LIU7 103 InSv DS0A 2 ManB DAct DLIU 300 InSv DS1 Size of Posted Set = 3

If the linkset state is	Do
InSv or ISTb	step 54
ManB or SysB, and at least one link is InSv or ISTb	step 52
ManB or SysB, not any of the displayed links are InSv or ISTb, and more links are present on the linkset	step 10
ManB or SysB, not any of the displayed links are InSv or ISTb, and no more links are present on the linkset	step 56
-	
Determine from office records which far-end office co linkset. Contact the far-end office. Tell operating company pe	onnects to the pos
Determine from office records which far-end office co linkset. Contact the far-end office. Tell operating company pe is not in service, and that one or more associated lin office are in service.	onnects to the pos ersonnel that the li ks connected to y
Determine from office records which far-end office co linkset. Contact the far-end office. Tell operating company pe is not in service, and that one or more associated lin office are in service. Your next action depends on the reason you are perf	onnects to the pos ersonnel that the li ks connected to yo orming this proce
Determine from office records which far-end office co linkset. Contact the far-end office. Tell operating company pe is not in service, and that one or more associated lin office are in service. Your next action depends on the reason you are perf If you	onnects to the posersonnel that the links connected to y orming this proce
Determine from office records which far-end office co linkset. Contact the far-end office. Tell operating company pe is not in service, and that one or more associated lin office are in service. Your next action depends on the reason you are perf If you came to this procedure from the RSC or the RSM alarm clearing procedure	onnects to the pos ersonnel that the li ks connected to y orming this proce Do step 55
Determine from office records which far-end office co linkset. Contact the far-end office. Tell operating company per is not in service, and that one or more associated lin office are in service. Your next action depends on the reason you are perf If you came to this procedure from the RSC or the RSM alarm clearing procedure did not come to this procedure from the RSC alarm clearing procedure	onnects to the pos ersonnel that the li ks connected to y orming this proce Do step 55 step 57
Determine from office records which far-end office co linkset. Contact the far-end office. Tell operating company per is not in service, and that one or more associated lin office are in service. Your next action depends on the reason you are perf If you came to this procedure from the RSC or the RSM alarm clearing procedure did not come to this procedure from the RSC alarm clearing procedure Return to the routeset alarm clearing procedure that procedure. Continue as directed.	onnects to the pos ersonnel that the li ks connected to y orming this proces Do step 55 step 57 sent you to this
Determine from office records which far-end office co linkset. Contact the far-end office. Tell operating company per is not in service, and that one or more associated lin office are in service. Your next action depends on the reason you are perf If you came to this procedure from the RSC or the RSM alarm clearing procedure did not come to this procedure from the RSC alarm clearing procedure Return to the routeset alarm clearing procedure that procedure. Continue as directed. For additional help, contact the next level of support.	onnects to the pos ersonnel that the li ks connected to y orming this proce Do step 55 step 57 sent you to this

CCS LSSC critical

Alarm display

 СМ	MS	IOD	Net	PM	CCS	Lns	Trks	Ext	APPL
-	•	•			1LSSC *C*	·	•	•	·

Indication

At the MTC level of the MAP display, a number and FSP appear under the CCS header in the alarm banner. The LSSC indicates a critical alarm for a local subsystem (LSSC).

Meaning

A local subsystem is system busy or manual busy.

If all occurrences in an affected subsystem are system busy, the associated service can have had a coordinated state change. The system routes all queries to the mate service control point II (SCPII). At this time, you must correct the problem at the SCPLoc level. Subsystem occurrences are not always in a fault condition.

The number under the CCS header in the alarm banner indicates the number of subsystems affected.

Result

The affected local subsystem is out of service.

Common procedures

There are no common procedures.

Action

This procedure contains a summary flowchart and a list of steps. Use the flowchart to review the procedure. Follow the steps to perform the procedure.

Summary of How to clear a CCS LSSC critical alarm



How to clear a CCS LSSC critical alarm

At the MAP terminal

- 1 To access the CCS7 level of the MAP, type
 - >MAPCI;MTC;CCS;CCS7

and press the Enter key.

2 To display all subsystems that cause LSSC alarms, type

>DISALM LSSC

and press the Enter key.

Example of a MAP response

Subsystem		Alm	Stat
	800P	SSC	SYSB
	ACCS	SSC	MANB

- 3 Choose a subsystem to work on. Choose the out-of-service local subsystem with the highest value. The MANB has a higher value than SYSB.
- 4 Record the name and state of the subsystem.

Note: The subsystem name appears under the subsystem header on the MAP display. The subsystem state appears under the state header.

5 To access the SCCPLOC level of the MAP display, type

>SCCPLOC

and press the Enter key.

- 6 To post the local subsystem, type
 - >POST subsystem

and press the Enter key.

where

subsystem

is the name of the local subsystem that you selected in step 3

Example of a MAP display:

CCS7	SCP					
1 LSSC						
C7 SCCP LOCAL	L			111111	11112222	22222233
Subsystem		State	01234567	89012345	67890123	45678901
800P		MANB	SMMO			

Determine the state	e of all o	ccurrences	for the pos	st subsyste	m.
lf					Do
all occurrences a	ure S (s	ystem bus	y)		step 8
a minimum of or ual busy), or dot	ne occu (.)(in	rrence is C service)) (offline),	M (man-	step 10
Determine if the MA header.	P displa	y indicates	a SCPLC c	critical alarn	n under the S
Example of a MAP	display:				
CCS7 SCP 1 LSSC 1 SCPLC C7 SCCP LOCAL Subsystem 800P	State SYSB	01234567 SSSS	111111 89012345	11112222 67890123 	22222233 45678901
If an SCPLC alar	m		Do		
appears			step 9		
does not appear			step 10		
The SCPII node cha to clear an SCPLC	anged to <i>critical a</i>	a coordina alarm. Retu	ted state. F urn to this p	Perform the point.	procedure
Go to step 25.					
Choose a local sub	system	occurrence	to use.		
lf					Do
at least one subs not tried to return	ystem c n the su	occurrence Ibsystem t	is M, and you service	you have	step 11
at least one subs not tried to return	ystem o n the su	occurrence Ibsystem t	is O, and yo service	you have	step 12
at least one subs not collected info the LOCATE co	ystem c ormatio mmand	occurrence on on the o	is S, and g	you have that uses	step 16
you tried to retur vice, and you car	rn all M, nnot ret	, O, and S turn the su	occurrence bsystem to	es to ser- o service	step 24

Determine from office records or from of have permission to return the manual b	operating company per ousy occurrence to se	ersonnel if g rvice.
lf you		Do
have permission to return the occu	irrence to service	step 14
do not have permission to return service	the occurrence to	step 10
Determine from office records or from of have permission to return the offline of	operating company percent operating company percented by the service.	ersonnel if y
lf you		Do
have permission to return the occu	rrence to service	step 13
do not have permission to return service	the occurrence to	step 10
To manually busy the occurrence, type		
>BSY instance_no		
and press the Enter key.		
where		
instance_no is the number of the occurrence	(0 to 31)	
To return the occurrence to service, typ	be	
>RTS instance_no		
and press the Enter key.		
where		
occurrence_no is the number of the occurrence	(0 to 31)	
If the RTS command	Do	
passed, and the occurrence is dot (.) (in service)	step 15	
passed, but the occurrence is S	step 10	
failed	step 22	
Determine the subsystem state. Note: The subsystem state appears	s under the state head	der on the

Example of a MAP:

Common channel signaling alarm clearing procedures 2-75

CCS LSSC critical (continued)

C 1 C7 SC Subsy 800P	CS7 SCP LSSC . CP LOCAL stem	State MANB	01234567 SMMO	111111 89012345 	11112222 67890123 	22222233 45678901
If the	e local subsy	stem s	tate	Do		
is I:	nSv			step 25		
is no curr	ot InSv and ence is O, M,	at leas or S	t one oc-	step 10		
is no are (ot InSv and O, M, or S	no occ	urrences	step 24		
To ma >вsy	nually busy th	ne syste _no	m busy occ	currence, ty	pe	
and p	ress the Enter	r key.				
where	è					
0	is the numbe	o er of the	occurrence	e (0 to 31)		
If the	e BSY comm	and		Do		
pass	sed			step 18		
faile	ed			step 17		
To for	ce the occurre	ence to l	ousy, type			
>BSY	instance	_no F	ORCE			
and p	ress the Enter	r key.				
where	è					
0	ccurrence_no is the numbe	o er of the	occurrence	e (0 to 31)		
To ret	urn the occuri	rence to	service, ty	ре		
>RTS	instance	_no				
and p	ress the Ente	er key.				
where	è					
0	ccurrence_no is the numbe	o er of the	occurrence	e (0 to 31)		
Evom	nle of a MAP	respons	se			

DMS-100 Family NA100 Alarm Clearing and Perform. Monitoring Proc. Volume 1 of 4 LET0015 and up

If the RTS command	Do
passed. The occurrence is dot (.) (in service)	step 23
passed. The occurrence remains S	step 19
failed	step 22
The subsystem waits for an indication froe occurrence to return to service.	om the application. Wait 1 min for the
If the subsystem occurrence	Do
is dot (.) (in service)	step 23
is other than dot (.) (in service)	step 20
To learn more about the occurrence, ty	ре
>LOCATE instance_no	
and press the Enter key.	
where	
occurrence_no is the number of the occurrence	(0 to 31)
Example of a MAP response	
000P 1 is located on EIU 210 w The TCP connection to port 308	which is currently ManB. 308 at 47.12.0.2. is closed
Record why the occurrence returns to s	system busy.
Record the number of occurrences to re support. Do not try to correct the occurr occurrences that you did not try.	eport the number to your next level c ence now. Continue to work on othe
Go to step 10.	
Determine the subsurface state	
Determine the subsystem state.	

CCS LSSC critical (end)

CCS7 SCP 1 LSSC . C7 SCCP LOCAL Subsystem State 0 800P MANB .)1234567 MMO	111111 89012345 	11112222 67890123 	22222233 45678901 	
If the local subsystem sta	ite	Do			
is InSv or ISTb		step 25			
is not InSv or ISTb and one occurrence is O, M, o	at least or S	step 10			
is not InSv or ISTb and currences are O, M, or S	l no oc-	step 24			
For additional help, contact the	he next lev	vel of supp	ort.		

25 The procedure is complete.

24

CCS LSSM major

Alarm display

СМ	MS	IOD	Net	PM	CCS	Lns	Trks	Ext	APPL
	•	•	•	•	1LSSM M	•	•	•	·

Indication

At the MTC level of the MAP display, a number and LSSM appear under the CCS header in the alarm banner. The LSSM indicates a major alarm for a local subsystem (LSSM). The number indicates the number of occurrences of affected local subsystems.

At the CCS;CCS7;SCCPLOC level of the MAP display, IsTb appears under the subsystem state header. The I appears under the number for a local subsystem occurrence.

Meaning

The Freephone subsystem is the only system that uses the common channel signaling (CCS) LSSM alarm.

Freephone subsystems associated with the LSSM alarm are as follows:

- E800 toll-free number service for the United States
- 800P toll-free number service for Canada
- E008 toll-free number service for for Australia

Communication problems with the database for the service control point (SCP) occur on the Freephone subsystem. A minimum of two time-outs occurred during queries by the Freephone subsystem to the SCP database. Interruptions to queries to the SCP database require additional analysis. The Freephone subsystem continues to process toll-free calls.

Result

The CCS LSSM alarm monitors all occurrences of a subsystem. Occurrence 0 is the only occurrence for the Freephone subsystem. Occurrence 0 in-service trouble does not affect service. The alarm warns that problems can be present that require analysis.

The following logs generate when the state of the local subsystem changes to in-service troubles:

- The CCS231 indicates that communication problems with the SCP database occur on the local subsystem
- The CCS250 indicates the local subsystem state changed to in-service troubles

LINE138 log generates when a query time-out for a service control point (SCP) database occurs .

When a call times out, the system pegs Register NSCSFLTO in the number service code (NSC) in the operational measurements (OM) group.

Common procedures

There are no common procedures.

Action

This procedure contains a summary flowchart and a list of steps. Use the flowchart to review the procedure. Follow the steps to perform the procedure.

Summary of How to clear a CCS LSSM major alarm



At th	e MAP terminal						
1	To access the Co	CS7 level o	of the MAP	display, ty	/pe		
	>MAPCI;MTC;C	CS;CCS7					
	and press the Er	nter key.					
2	To list the local s	ubsystems	with LSSN	1 alarms,	type		
	>DISALM LSS	м					
	and press the Er	nter key.					
	Example of a MA	AP respons	ie:				
	Subsystem			Alm	Stat		
		800P		SSM	ISTB		
3	Record the name	es of the lo	cal subsyst	tems that	have in-serv	vice troub	
	<i>Note:</i> The su header on the	bsystem na MAP displ	ame appea lay. The st	rs under, ate appea	on the right c ars under the	of the sub e Stat hea	
4	To access the SCCPLOC level of the MAP display, type						
	>SCCPLOC						
	and press the Er	nter key.					
5	To post the local	subsystem	n, type				
	>POST subsy	stem					
	and press the Er	nter key.					
	where						
	subsystem is the nan	ne of the lo	cal subsyst	tem that y	ou recorded	l in step 3	
	Example of a MA	AP display:					
	CCS7 SC 1 LSSM .	Ρ					
	C7 SCCP LOCAL Subsystem	State	01234567	11111 8901234	1 11112222 5 67890123	2222223 4567890	
	800P	ISTB	I				
6	Choose a local s	subsystem	occurrence	to work	on.		
	lf					Do	

to service

If	Do
a minimum of one subsystem occurrence is O (of- fline) and you did not try to return the subsystem to service	step 10
a minimum of one subsystem occurrence is S (sys- tem busy) and you did not collect information on the occurrence through the LOCATE command	step 14
you tried to return all O, M, and S occurrences to service and you cannot return the local subsystem to service	step 22
a minimum of one subsystem occurrences is I (in-service trouble) and no O, M, or S occurrences are present	step 7

7 Wait for the alarm to clear.

Note: The alarm will automatically clear when you enter option ALARMTIM in table NSCDEFS. The alarm also clears when entry time (1 to 1441 min, default 10 min) passes without additional SCP query time-outs. If the alarm clears, the state of the freephone subsystem changes from in-service trouble to in service. The system generates a CCS220 log to indicate that the subsystem occurrence is in service. The system generates a CCS235 log to indicate that the state of the freephone subsystem changed to in service.

If the alarm	Do
clears	step 23
does not clear	step 8

Note: Use the disable procedure to clear the alarm. To disable the alarm, enter option NSCALARM in table NSCDEFS as OFF. The alarm clears within 30 s of the entry change. When the alarm clears, the state of the E800 subsystem changes from in-service trouble to in service. The system generates CCS220 and CCS235 logs to document the alarm clearance and the state change.

8

10

11

12



CAUTION

Loss of service The alarm will not clear if you wait for the system to clear or disable the alarm. If the alarm occurs often, investigate the cause of the alarm.

Ask the next level of support to help you determine the cause of the alarm.

9 Determine from office records or operating company personnel if you can return the manual busy occurrence to service.

lf you	Do
can return the occurrence to ser- vice	step 12
cannot return the occurrence to service	step 6
Determine from office records or oper return the offline occurrence to servic	ating company personnel if you can e.
lf you	Do
can return the occurrence to ser- vice	step 11
cannot return the occurrence to service	step 6
To manually busy the offline occurrent	ce, type
>BSY occurrence_no	
and press the Enter key.	
where	
occurrence_no is the number of the occurrence	e (0 to 31)
To return the occurrence to service, ty	rpe
>RTS occurrence_no	
and press the Enter key.	
where	

If the RTS com	mand		Do		
passed. The o	step 13				
failed. The occ	currence i	s S	step 6		
failed			step 20		
Determine the su	bsystem s	state.			
<i>Note:</i> The sub display.	osystem s	tate appea	rs under the	e State hea	der on th
Example of a MA	P display:				
CCS7 SCP 1 LSSM . C7 SCCP LOCAL Subsystem 800P	State ISTB	01234567 M	111111 89012345	11112222 67890123	2222223 4567890
If the local sub	system s	tate	Do		
If the local sub is InSv	system s	tate	Do step 23		
If the local sub is InSv is not InSv an M, and S occur	system s	tate more O, e present	Do step 23 step 6		
If the local sub is InSv is not InSv an M, and S occur is not InSv a occurrences ar	system s nd one or rences are nd no O e present	tate more O, e present , M, or S	Do step 23 step 6 step 22		
If the local sub is InSv is not InSv an M, and S occur is not InSv a occurrences ar To manually busy	system s nd one or rences arc nd no O e present t the syste	tate more O, e present , M, or S m-busy occ	Do step 23 step 6 step 22	/ре	
If the local sub is InSv is not InSv at M, and S occur is not InSv a occurrences ar To manually busy >BSY occurr	system s nd one or rences are nd no O e present the syste cence_no	tate more O, e present , M, or S m-busy occ	Do step 23 step 6 step 22	/pe	
If the local sub is InSv is not InSv at M, and S occur is not InSv a occurrences ar To manually busy >BSY occurr and press the En	system s nd one or rences are nd no O e present the syste cence_no ter key.	tate more O, e present , M, or S m-busy occ	Do step 23 step 6 step 22	/pe	
If the local sub is InSv is not InSv an M, and S occur is not InSv a occurrences ar To manually busy >BSY occurr and press the En where	system s and one or rences are nd no O e present the syste cence_no ter key.	tate more O, e present , M, or S m-busy occ	Do step 23 step 6 step 22	/pe	
If the local sub is InSv is not InSv an M, and S occur is not InSv a occurrences ar To manually busy >BSY occurr and press the En where occurrence_ is the num	system s nd one or rences ard nd no O e present the syste cence_no ter key. <u>no</u> ber of the	tate more O, e present , M, or S m-busy occ	Do step 23 step 6 step 22 currence, ty	/pe	
If the local sub is InSv is not InSv an M, and S occur is not InSv a occurrences ar To manually busy >BSY occurr and press the En where occurrence_ is the num If the BSY com	system s nd one or rences are nd no O e present the syste cence_no ter key. <u>no</u> ber of the mand	tate more O, e present , M, or S m-busy occ	Do step 23 step 6 step 22 currence, ty e (0 to 31) Do	/pe	
If the local sub is InSv is not InSv an M, and S occur is not InSv a occurrences ar To manually busy >BSY occurr and press the En where occurrence_ is the num If the BSY com passed	system s nd one or rences are nd no O e present the syste cence_no ter key. <u>no</u> ber of the mand	tate more O, e present , M, or S m-busy occ	Do step 23 step 6 step 22 currence, ty e (0 to 31) Do step 16	/pe	

and press the Enter key.	
where	
occurrence_no is the number of the occurrence	e (0 to 31)
To return the occurrence to service, ty	ре
>RTS occurrence_no	
and press the Enter key.	
where	
occurrence _no is the number of the occurrence	e (0 to 31)
Example of a MAP response:	
RTS Passed The EIU peripheral is not in	n service
If the RTS command	Do
passed and the occurrence is dot (.) (in service)	step 21
failed and the occurrence is S	step 17
failed	step 20
The subsystem waits for an indication to occurrence to return to service.	from the application. Wait 1 min for the
If the subsystem occurrence	Do
is dot (.) (in service)	step 21
is other than listed here	step 18
To learn more about the occurrence, t	уре
>LOCATE occurrence_no	
and press the Enter key.	
where	
occurrence_no is the number of the occurrence	e (0 to 31)
Example of a MAP response:	
800P 1 is located on EIU 210 The TCP connection to port 30	which is currently ManB. 0808 at 47.12.0.2. is closed
Record why the occurrence returns to	system busy.

16

17

18

19

CCS LSSM major (end)

20 Record the number of this occurrence to report this occurrence to your next level of support. Do not restore the occurrence at this time. Work on occurrences that you did not try.

Go to step 6.

21 Determine the subsystem state.

Note: The subsystem state appears under the State header on the MAP display.

Example of a MAP display:

CCS7 SCP 1 LSSM . C7 SCCP LOCAL Subsystem 800P	State ISTB	01234567	111111 89012345 	11112222 67890123 	22222233 45678901 	
If the local subsy	stem st	ate	Do			
is InSv			step 23			
is not InSv and M, or S occurren	one or ices is p	more 0, resent	step 6			
is not InSv. and currences are no	l O, M, t presen	or S oc- t	step 22			
	-					

- 22 For additional help, contact the next level of support.
- 23 The procedure is complete.

CCS PC minor

Alarm display

ĺ	СМ	MS	IOD	Net	PM	CCS	Lns	Trks	Ext	APPL
	•	•	•	•	•	1PC	•	•	•	·

Indication

At the MTC level of the MAP display, a number and PC appear under the CCS header in the alarm banner. The PC indicates an alarm for a point code (PC).

Meaning

Traffic congestion occurs on the routes between your office and the office represented by the point code.

The number under the common channel signaling (CCS) header in the alarm banner indicates the number of route and far-end office groups affected.

Result

Traffic congestion can affect service. If the congestion level is too high, the system can discard messages to the signaling point identified by the point code.

Common procedures

There are no common procedures.

Action

This procedure contains a summary flowchart and a list of steps. Use the flowchart to review the procedure. Follow the steps to perform the procedure.

CCS PC minor (continued)

Summary of Clearing a CCS PC minor alarm



CCS PC minor (continued)

At th	e MAP terminal			
1	To access the CCS7 lev	el of the N	IAP display, ty	ре
	>MAPCI;MTC;CCS;CC	S7		
	and press the Enter key	Ι.		
2	To display the name of	the PC tha	t causes the P	C alarm, type
	>DISALM PC			
	and press the Enter key	Ι.		
	Example of a MAP disp	lay:		
	Point code	Alm	Stat	
	IPTRS4	PC	ISTb	
3	Record the name of the	PC.		
	Note: The PC name	appears u	under the PC h	eader on the MAP display
4	To access the C7RTES	ET level of	the MAP disp	lay, type
	>C7RTESET			
	and press the Enter key	Ι.		
5	To post a routeset that i	runs an RS	S major alarm,	type
	>POST A RSM			
	and press the Enter key	<i>ι</i> .		
	Example of a MAP disp	lay:		
C	Routeset SSP100_RT		ISTb	Linkset Transfe:
	Rte State Mode Co	st Links	et	State Status
	0 SysB Assoc 0	SSP10	00_LK	SysB TFP
		55910		IIISV IFA
	lf you		Do	
			sten 6	
	posted a routeset		step o	

DMS-100 Family NA100 Alarm Clearing and Perform. Monitoring Proc. Volume 1 of 4 LET0015 and up

CCS PC minor (end)

f the PC alarm	Do
cleared	step 9
did not clear	step 8

9 The procedure is complete.

CCS PCC critical

Alarm display

СМ	MS	IOD	Net	PM	CCS	Lns	Trks	Ext	APPL
•	•	•	•	•	1PCC *C*	·	•	•	•

Indication

At the MTC level of the MAP display, a number and PCC appear under the CCS header in the alarm banner. The PCC indicates a critical alarm for a point code (PCC).

Meaning

A routeset (RS) is out of service as a result of a manual busy or system busy point code.

The number under the common channel signaling (CCS) header in the alarm banner indicates the number of far-end offices affected.

Result

The signaling point that the point code identifies cannot receive signaling.

Common procedures

There are no common procedures.

Action

This procedure contains a summary flowchart and a list of steps. Use the flowchart to review the procedure. Follow the steps to perform the procedure.

Summary of Clearing a CCS PCC critical alarm



Clearing a CCS PCC critical alarm

At the MAP terminal

4

5

- 1 To access the CCS7 level of the MAP display, type
 - >MAPCI;MTC;CCS;CCS7
 - and press the Enter key.
- 2 To display the name of the point code that causes the PCC alarm, type
 - >DISALM PCC

and press the Enter key.

Example of a MAP response:

Point code	Alm	Stat
IPTRS4	PCC	ManB

3 Record the point code name and state.

Note: The point code name appears under the point code header on the MAP display. The point code state appears under the state header.

If the state of the point code	Do
is SysB	step 4
is ManB	step 8
To access the C7RTESET level of the	e MAP display, type
>C7RTESET	
and press the Enter key.	
To post an RS with an RS critical ala	rm, type
>POST A RSC	
and press the Enter key.	
Example of a MAP display:	
C7Routeset ESTP_C200_RTESET S Rte State Mode Cost Link 0 SysB Assoc 0 ESTP_C2	ysB Linkset Transfer kset State Status 200_Lkset SysB
lf you	Do
posted an RS	step 6
did not post an RS	step 12

CCS PCC critical (end)

If the PCC alarm	Do
cleared	step 13
did not clear	step 12
Determine from office records manually busied the point cod to service.	or operating company personnel why a person e. Determine if you can return the point code
When you have permission to procedure.	return the point code to service, continue the
To access the SCCPRPC leve	l of the MAP display, type
>SCCPRPC	
and press the Enter key.	
To post the point code that has	s the PCC alarm you want to clear, type
>POST point_code	
and press the Enter key.	
where	
<pre>point_code is the name of the point</pre>	t code recorded in step 3
To return the point code to ser	vice, type
>RTS	
and press the Enter key.	
If the RTS command	Do
passed	step 13

13 The procedure is complete.

CCS RS critical

Alarm display

ĺ	 СМ	MS	IOD	Net	PM	CCS	Lns	Trks	Ext	APPL
	•	•	•	•	•	1RS *C*	•	•	•	•

Indication

At the MTC level of the MAP display, a number and RS appear under the CCS header in the alarm banner. The RS indicates a critical alarm for a routeset (RS).

Meaning

A routeset is manual busy or system busy for one of the following reasons:

- faults in the peripheral modules that associate with the linksets in the routeset
- faults on the links that associate with your office
- problems on the network

The number under the common channel signaling (CCS) header in the alarm banner indicates the number of routesets affected.

Result

Signaling on the routeset is not possible.

Common procedures

There are no common procedures.

Action

This procedure contains a summary flowchart and a list of steps. Use the flowchart to review the procedure. Follow the steps to perform the procedure.

Summary of Clearing a CCS RS critical alarmd



Clearing a CCS RS critical alarm

At the MAP terminal

1 To access the CCS7 level of the MAP display, type

>MAPCI;MTC;CCS;CCS7

and press the Enter key.

2 Determine if LIM, LIU7, HLIU, or HSLR alarms appear under the PM header in the MAP display alarm banner.

If LIM, LIU7, HLIU, or HSLR alarms	Do
appear	step 3
do not appear	step 4

- **3** Perform the appropriate alarm clearing procedures in this document to clear all PM LIM, PM LIU7, PM HLIU, or PM HSLR alarms. When you have completed the procedures, return to this point.
- 4 To access the C7RTESET level of the MAP display, type
 - >C7RTESET

and press the Enter key.

5 To post a routeset that runs an RS critical alarm, type

>POST A RSC

and press the Enter key.

Example of a MAP display:

Network		NATL_N	ΞT					
C7Rc	uteset SSP10		100_RT S		ysB	Linkset	Transfer	
Rt	Rte State Mode Cost		Linkset		State	Status		
0	0 SysB Assoc 0 S		SSP100_1	SSP100_LK		TFA		
1	1 SysB Quasi 1		1	SSP101_LK		ISTb	TFA	
	lf you				Do			
	posted a busy rou	t manual iteset	busy o	step 6				
did not post a manual busy of system busy routeset					step 20			

6

Record the routeset name and state.

Note: The routeset name appears on the right of the C7Routeset header on the MAP display. The routeset state appears on the right of the routeset name.

If the state of the routeset is	Do
ManB	step 7
SysB	step 9

7 Determine the state of the linksets in the posted routeset.

> Note: The linkset state appears under the linkset state header on the MAP display.

Example of a MAP display:

Networł	NATL_NE	ΞT				
C7Routeset		SSP100_RT		ManB	Linkset	Transfer
Rte	State	Mode	Cost	Linkset	State	Status
0	SysB	Assoc	0	SSP100_LK	ManB 7	FFP
1	SysB	Quasi	1	SSP101_LK	SysB 7	FFP

If all linksets are	Do
InSv	step 8
RInh, LInh, ManB, or SysB	step 11
ManB or SysB	step 11

8

•	Determine from office records or from operating company personnel why the routeset is manually busy .

If someone	Do						
manually busied the routeset from your office	step 15						
did not manually busy the route- set from your office	step 17						
To force the routeset to busy, type							
>BSY FORCE							
and press the Enter key.	and press the Enter key.						
Determine the state of the linksets in the posted routeset.							
<i>Note:</i> The linkset state appears un MAP display.	der the linkset state header on the						

9

10

	Exa	mple of	a MAP di	splay				
Ne C	etwor Route Rte 0 1	set State SysB SysB	NATL_NE SSP100_ Mode Assoc Quasi	T RT Cost O 1	Ma Linkset SSP100_I SSP101_I	nnB .K .K	Linkset State SysB ISTb	Transfer Status TFP TFR
	lf					Do		
	all	linkset	ts are In	Sv		step 17		
	at IS ou	least o STb and t of ser	ne links d at least vice	et is I one l	InSv or inkset is	step 17		
	all	linkset	ts are Ma	nB or	SysB	step 11		
11	Rec	ord the	name and	d state	for each li	nkset for t	he posted route	eset.
	∧ d	<i>lote:</i> Tł isplay.	ne linkset The linkse	name et state	appears u appears u	nder the li Inder the	inkset header o linkset state he	n the MAP ader.
12	Perf Con	orm the	procedur ne proced	e <i>Clea</i> ure an	a <i>ring a CC</i> d return to	S <i>LKM ma</i> this point	a <i>jor alarm</i> in this 	s document.
13	To a	iccess tl	he C7RTE	SETI	evel of the	MAP disp	olay, type	
	>C7	RTESEI	r					
	and	press th	ne Enter k	key.				
14	То р	ost the	routeset,	type				
	>P0	ST C	rteset		e			
	and	press th	ne Enter k	æy.				
	whe	ere						
rteset_name is the routeset name you recorded in step 6								
	Exa	mple inj	out:					
	>PO	STCS	SP100_F	۲				
	Exa	mple of	a MAP di	splay:				
C7	Route	eset :	SSP100 1	RT	Ν	lanB	Linkset	Transfer
	Rte	State	e Mode	Cost	Linkset		State	Status
	0	InSv	Assoc	0	SSP100_	LK	InSv	TFA
	1	InSv	Quasi	1	SSP101_	LK	InSv	TFA
15	Whe	en you h	nave perm	ission	to return tl	ne routese	et to service, ty	ре
	>RT	S						

CCS RS critical (end)

and press the Enter key.							
If the RTS command	Do						
passed and the routeset is InSv or ISTb	step 20						
failed	step 16						
passed and the routeset is SysB	step 17						
Determine the routeset state. Note: The routeset state appears under the state header of the MAP.							
If the state of the routeset is	Do						
InSv or ISTb	step 20						
ManB or SysB, and at least one linkset is InSv or ISTb	step 17						
ManB or SysB, and no linksets are InSv or ISTb	step 19						
Determine from office records which for routeset.	ar-end office connects to the posted						
Contact the far-end office. Tell personnel there that you are running a routeset critical alarm. Tell personnel also that one or more associated linksets connected to your office are in service.							
Go to step 20.							
For additional help, contact the next level of support.							
The procedure is complete.							

CCS RS major

Alarm display

ĺ	СМ	MS	IOD	Net	PM	CCS	Lns	Trks	Ext	APPL
	•	•	•	•	•	1RS M	•	•	•	-

Indication

At the MTC level of the MAP display, a number and RS appear under the CCS header in the alarm banner. The RS indicates a major alarm for a routeset (RS).

Meaning

A routeset has in-service trouble for the following reasons:

- faults in the peripheral modules associated with the linksets in the routeset
- faults on the links associated with your office
- problems on the network
- problems within a network cluster

The number under the common channel signaling (CCS) header in the alarm banner indicates the number of routesets affected.

Result

The routeset can carry traffic with the risk of a degraded level of service.

Common procedures

There are no common procedures.

Action

This procedure contains a summary flowchart and a list of steps. Use the flowchart to review the procedure. Follow the steps to perform the procedure.

Summary of Clearing a CCS RS major alarm



Clearing a CCS RS major alarm

At the MAP display

1 To access the CCS7 level of the MAP display, type

>MAPCI;MTC;CCS;CCS7

and press the Enter key.

2 Determine if LIM, LIU7, HLIU, or HSLR alarms appear under the PM header in the MAP display alarm banner.

If LIM, LIU7, HLIU, or HSLR alarms	Do
appear	step 3
do not appear	step 4

- **3** Perform the appropriate alarm clearing procedures in this document to clear all PM LIM, PM LIU7, PM HLIU, or PM HSLR alarms. Complete the procedure and return to this point.
- 4 To access the C7RTESET level of the MAP display, type

>C7RTESET

and press the Enter key.

5 To post an routeset that runs an RS major alarm, type

>POST A RSM

and press the Enter key.

Example of a MAP display:

Network		NATL_N	ET				
C7Ro	uteset	SSP100	100_RT		STb	Linkset	Transfer
Rt	e Stat	e Mode	Cost	Linkset		State	Status
0	SysI	B Assoc	0	SSP100_LK		SysB T	FP
1	InSv	7 Quasi	1	SSP101_	LK	InSv T	FA
	lf you				Do		
	posted routese	an in-serv t	rice tro	ouble	step 6		
	did not routese	post an in t	-servic	ce trouble	step 15		

6	Determine the state of the linksets in the posted routeset.									
	lf			Do						
	all	linksets	are InSv	step 12						
	at least one linkset is RInh, step 7 LInh, ManB, or SysB a minimum of one ManB or step 7 SysBsy linkset is present									
7	Record the name of the routeset. Record the linkset name and state for ea linkset in the posted routeset.									
	Note: The routeset name appears on the right of the C7Routeset head on the MAP display. The linkset name appears under the Linkset head The linkset state appears under the Linkset State header.									
8	Perfe Corr	Perform the procedure <i>Clearing a CCS LKM major alarm</i> in this document Complete the procedure and return to this point.								
9	To access the C7RTESET level of the MAP display, type									
	>C7RTESET									
	and press the Enter key.									
10	To post the routeset, type									
	>POST C rteset_name									
	and press the Enter key.									
	where									
	rteset_name is the routeset name that you recorded in step 7									
	Example of a MAP display:									
Ne	Network NATL_NET									
07	Rte	State	Mode Cost	Linkset	5	State	Statu			
	0	InSv	Assoc 0	SSP100_	_LK	InSv	TFA			
	1	InSv	Quasi 1	SSP101_	_LK	InSv	TFA			
11	Determine the routeset state.									
	<i>Note:</i> The routeset state appears on the right of the routeset name on t MAP display.									
	If the state of the routeset is Do									
	In	ıSv			step 15					
CCS RS major (end)

	If the state of the routeset is	Do
	ISTb and at least one linkset is RInh, LInh, ManB, or SysB	step 8
	ISTb and at least one linkset is ManB or SysB	step 8
	ManB or SysB and no linksets are InSv or ISTb	step 12
	ManB or SysB and at least one linkset is InSv or ISTb	step 14
12	Office records will show the far-end of routeset.	fice that connects to the posted
13	Contact the far-end office. Tell persor routeset major alarm. Tell personnel a office are in service.	nnel there that you are running a also that all linksets connected to your
	Go to step 15.	
14	The alarm associated with the posted alarm to an RS critical alarm. Perform <i>critical alarm</i> in this document.	routeset upgrades from an RS major n the procedure <i>How to clear an RS</i>
15	The procedure is complete.	

CCS RSSC critical

Alarm display

 =	СМ	MS	IOD	Net	PM	ccs	Lns	Trks	Ext	APPL
		·	·	·	•	1RSSC *C*	·	·	•	

Indication

At the MTC level of the MAP display, a number and RSSC appear under the CCS header in the alarm banner. The RSSC indicates a critical alarm for a remote subsystem (RSSC).

Meaning

The indicated number of remote subsystems is out of service.

Result

The number shown under the common channel signaling (CCS) header of the alarm banner indicates the number of remote subsystems affected.

Common procedures

There are no common procedures.

Action

This procedure contains a summary flowchart and a list of steps. Use the flowchart to review the procedure. Follow the steps to perform the procedure.

Summary of Clearing a CCS RSSC critical alarm



Clearing a CCS RSSC critical alarm

At the MAP display

- 1 To access the CCS7 level of the MAP display, type
 - >MAPCI;MTC;CCS;CCS7

and press the Enter key.

2 To display the remote subsystems that run the RSSC alarm, type

>DISALM RSSC

and press the Enter key.

Example of a MAP response:

Subsystem		Alm	Stat
SSP100_RT	800P	RSSC	SysB
SSP107_RT	ACCS	RSSC	ManB

3 Record the point code name, the subsystem name, and state for the first remote subsystem shown on the MAP display.

Note: The point code name appears under the Subsystem header on the MAP display. The remote subsystem name appears on the right of the point code name. The remote subsystem state appears under the state header.

If the state of the remote sub- system	Do
is SysB	step 4
is ManB	step 7
is INI	step 14

4 To determine if PCC critical alarms are present, type

>DISALM PCC

and press the Enter key.

Example of a MAP response:

Point	code				Alm	St	at
SSP100 SSP107)_RT 7 RT				PCC PCC	Sy Sy	sB sB
If the	MAP	displa	ıy				Do
respoi alarm	nds s	with	a l	ist	of P	CC	step 5
respon	nds w	ith no	o PC	CC	alarm	5	step 38
Perform Comple	n the p ete the	roced	ure edur	<i>Cle</i> e a	<i>aring a</i> nd retu	rn to	<i>S PCC critical alarm</i> in this document. this point.
Determ	ine if t	he RS	SSC	ala	rm cle	ared.	
If the	RSSC	alarr	n				Do
cleare	ed						step 39
did no	ot clea	ar					step 38
To acce	ess the	SCC	PRI	ъС	level of	the	MAP display, type
>SCCPF	RPC						
and pre	ess the	e Ente	r ke	у.			
The ren	note s	ubsys	tem	is (on a po	oint c	ode. To post this point code, type
>POST	poi	.nt_c	ode				
and pre	ess the	e Ente	r ke	y.			
where							
poi it	nt_co s the p	de point c	ode	e na	me rec	orde	d in step 3 for the
S	subsys	stem t	hat i	s ir	use		
Exampl	le of a	MAP	res	oon	se:		
C7 SCC Poi SSP107	CP RE int c 7_RT	MOTE	PC	St	tate INSV	Nu	mber of SS 1
To acce	ess the	SCC	PR	SS	level of	the I	MAP display, type
>SCCPF	RSS						
and pre	ess the	e Ente	r ke	y.			
To post	the re	emote	sub	sys	tem, ty	pe	
>POST	sub	syst	em				

and press the Enter key.

where

subsystem

is the name of the remote subsystem that you recorded in step 3

Example of a MAP response:

C7 SCCP REMOTE SS Subsystem State 800P INSV

- **11** Determine from office records or from operating company personnel why the subsystem is manual busy.
- 12 When you have permission to return the subsystem to service, type

>RTS subsystem

and press the Enter key.

where

subsystem

is the name of the remote subsystem that you recorded in step 3

Example of a MAP response:

800P : RTS passed

If the RTS command	Do
passed	step 39
failed	step 13

13 Determine the state of the remote subsystem.

If the state of the remote sub- system	Do
is INI	step 14
is other than listed here	step 38

14 Wait 5 min to see if the state of the remote subsystem changes to InSv

If the state	Do	
changed to InSv	step 37	
did not change to InSv	step 15	

15 To return to the command interpreter (CI) level of the MAP display, type >QUIT ALL

	and press the Enter key.
16	To access the C7NETSSN table, type
	>TABLE C7NETSSN
	and press the Enter key.
	Example of a MAP response:
	TABLE: C7NETSSN
17	To position on the tuple for the point code, type
	>POSITION point_code
	and press the Enter key.
	where
	<pre>point_code is the name of the point code recorded in step 3 and posted in</pre>
	step 8
	Example of a MAP response:
	, , ,
	PCNAME SSNAMES SSP107_RT (ACCS 7) (E800 254)\$
18	To display table headings, type
	>LIS
	and press the Enter key.
	Example of a MAP response:
	PCNAME SSNAMES
	SSP107_RT (ACCS 7) (E800 254)\$
19	Record the subsystem names and numbers.
	<i>Note:</i> The subsystem names and numbers appear in parentheses under and on the left of the header SSNAMES on the MAP display.
20	Determine which names and numbers recorded at step 19 are the names and numbers of the subsystem you are working on.
21	To quit the C7NETSSN table, type
	>QUIT
	and press the Enter key.
22	The office records reveal the point code that represents the far-end office. The point code is in use at this time. You must work with the operating company personnel in the far-end office for the remainder of this procedure.

23 Contact the far-end office. To inform the operating company personnel to access the C7LOCSSN table, type

>TABLE C7LOCSSN

and press the Enter key.

Example of a MAP response:

TABLE: C7LOCSSN

24 To inform the operating company personnel at the far-end office to search for the subsystem in use, type

>LIST ALL (SSNUMBER EQ subsys_no)

and press the Enter key.

where

subsys_no
is the number of the subsystem recorded in step 19

Example of a MAP response:

SSNAMESSNUMBERMININSTREPLINFOTFMIPCNAMESE8002541NNSSP100_RT

25 Determine from the far-end office the results of the LIST command.

If the far-end office	Do
reports that a tuple appears	step 26
reports that a tuple does not appear	step 38
Inform operating company personnel a subsystem name.	at the far-end office to record the
<i>Note:</i> The subsystem name appea SSNAME on the MAP display.	ars under and to the left of the header
To inform operating company personn C7LOCSSN table, type	el at the far-end office to quit the
>QUIT	
and press the Enter key.	
To inform operating company personn SCCPLOC level of the MAP display, ty	el at the far-end office to access the /pe
>MAPCI;MTC;CCS;CCS7;SCCPLOC	
and press the Enter key.	
To inform operating company personn subsystem in use, type	el at the far-end office to post the

>POST subsystem

26

27

28

29

and press the Enter key.

where

subsystem

is the name of the subsystem recorded in step 26.

If the subsystem	Do
runs an LSSC alarm	step 30
is OFFL	step 32

- **30** Inform the operating company personnel at the far-end office to perform the procedure *Clearing an LSSC critical alarm* in this document. When the operating company personnel complete the procedure, return to this point.
- **31** Go to step 36.
- **32** Contact the operating company personnel at the far-end office. Determine from office records or from operating company personnel why the subsystem is offline. When the operating company personnel have permission to perform maintenance on the offline subsystem, continue the procedure.
- **33** To inform operating company personnel at the far-end office to manually busy the subsystem, type

>BSY

and press the Enter key.

If the BSY command	Do			
passed	step 34			
failed	step 35			
To inform operating company subsystem to service, type	personnel at the far-end office to return the			
>RTS				
and press the Enter key.				
Go to step 36.				
Inform operating company per level of support for help.	rsonnel at the far-end office to contact the next			
To access the CCS7 level of t	he MAP display, type			
>MAPCI;MTC;CCS;CCS7				
and press the Enter key.				
Determine if the RSSC alarm	cleared.			
If the RSSC alarm	Do			
h	stop 20			

CCS RSSC critical (end)

If the RSSC alarm	Do
did not clear	step 38
For additional help, contact th	e next level of support.

39 The procedure is complete.

CCS RTRC critical

Alarm display

СМ	MS	IOD	Net	ΡM	CCS	Lns	Trks	Ext	APPL
•			•	•	1RTRM *M*	•			•

Indication

At the MTC level of the MAP display, a number and RTRC appear under the CCS header in the alarm banner. The RTRC indicates a critical alarm for a C7 (RTR).

Meaning

An RTRC alarm rises if all the entered routers are not available. A router is not available if the router is SysB, ManB or Offline.

The number for the alarm indicates the number of routers that are not available. Table C7ROUTER must contain a minimum of one router. If table C7ROUTER does not contain any routers, the number associated with the alarm is one.

Result

If a total router outage (TRO) occurs, all CCS7 links in an office become blocked (Blkd). The TRO also results in the removal of the links from service. All messages for ISDN user part (ISUP) or messages for transaction capabilities applications part (TCAP) do *not* transmit. Another possibility is that messages cannot reach a specified destination during a TRO.

An RTRC alarm is more important than all types of common channel signaling (CCS) critical alarms.

Note: The return of a router *InSv* after you clear the *RTRC* alarm can cause a *RTRM* alarm.

Action

This procedure contains a summary flowchart and a list of steps. Use the flowchart to review the procedure. Follow the steps to perform the procedure.

Summary of Clearing a CCS RTRC critical alarm



Clearing a CCS RTRC critical alarm

At the MAP terminal

- 1 To access the C7ROUTER level of the MAP display, type >MAPCI;MTC;CCS;CCS7;C7ROUTER and press the Enter key.
- 2 To display routers that have RTRC alarms, type

>DISALM RTRC

and press the Enter key.

Example of MAP display:

External Routing Alarm:RTRC C7RouterResourceStatus 2LIU7102SysB 3LIU7103SysB 8LIU7108ManB

Note: A total router outage onset (TRO) occurs if all routers are not available or out of service.

3 To post the routers, type

>POST ALL

and press the Enter key.

4 To display status of routers, type

>QUERYRTR_ALL

and press the Enter key.

Example of MAP display:

External RoutingInSv 111111111222222222333 Router12345678901234597890123456789012 OSSOOOOM------

RtrStateResourcePM State 2SysB LIU 101SysB

Size of Posted Set = 8

RtrStateResourcePM State Congestion Level 1OffLLIU7 101OffL 2SysB LIU7 102 SysB0 3SysB LIU7 103 SysB0 4OffL LIU7 104 OffL 5OffL LIU7 105 OffL 6OffL LIU7 106 OffL

70ffL LIU7 107 OffL 8ManB LIU7 108 InSv0

If any routers	Do	
are ManB	step 5	
are OFFL	step 7	
are SysB	step 9	

5 Note the numbers of an *ManB* router and the equivalent LIU7.

- 6 Determine from office records why the router is ManB.
- When you have permission, go to step 26.
- Select an OFFL router and the equivalent LIU7 7

If the LIU7	Do		
is InSv	step 20		
is ISTb	step 20		
is other than listed here	step 11		
Go to step 11.			
Note the number of the SysB ro	uter and equivalent LIU7.		
Go to step 11.			
To access the PM level of the M	AP display, type		
>MAPCI;MTC;PM			
and press the Enter key.			
To post the LIU7 you selected, t	уре		
>POST LIU7 liu_no			
and press the Enter key.			
where			
liu_no is the number of the LIU7	′ (0 to 215)		
If the LIU7	Do		
is ManB	step 13		
is SysB	step 15		
	. 14		

8 9

13	Determine from office records why the LUI7 is ManB.					
	When you have permission, go t	o step 16.				
14	To manually busy the LIU7, type >BSY					
	and press the Enter key.					
	If the BSY command	Do				
	passed	step 16				
	failed	step 15				
15	Perform the correct procedure in Complete the procedure and ret	this document to clear all PM LIU7 alarms. urn to this point.				
16	To return the LIU7 to service, typ	De				
	>RTS					
	and press the Enter key.					
	If the RTS command	Do				
	passed	step 17				
	failed	step 15				
17	To access the C7ROUTER level	of the MAP display, type				
	>MAPCI;MTC;CCS;CCS7;ROUT	ER				
	and press the Enter key.					
18	Select the OFFL router for return	n to service (RTS).				
19	To post the router, type					
	>POST router_no					
	and press the Enter key.					
	where					
	router_no is the number of the route	er				
20	To busy the required posted rou	er set, type				
	>BSY					
	and press the Enter key.					
	Example of MAP display: External Routing Bsy					
	111111111222222222333 Router12345678 90123459 7890123456789012 MSSM					

RtrStateResource PM State 1ManB LIU7 108InSv

Size of Posted Set = 4

Note: The preceding MAP response is for a *OFFL* router and LIU7.

If the BSY command	Do
passed	step 26
failed - no message to router management	step 25
failed - no response from router management	step 25
failed - system problems	step 21
failed - router not entered in ta- ble C7ROUTER	step 23
Check CCS196 log and reason for sys	stem problems.
Go to step 25.	
Contact the next level of support to de router.	termine if you entered the selected
Go to step 7 and select another OFFL	router and equivalent LIU7.
To busy the failed router again, type	
>BSY router_no	
and press the Enter key.	
where	
router_no is the number of the router	
Example of MAP display:	
External Routing Bsy	
1111111111222222222333 Router12345678 90123459 7890123 MSSM	3456789012
RtrStateResource PM State 1ManB LIU7 101InSv	

21 22 23

24 25

	0				
passed st	ep 26				
failed st	ep 35				
To return the selected routeset to service, type					
>RTS router_no					
and press the Enter key.					
where					
router_no is the number of the router					
Example of MAP display:					
External Routing Bsy					
111111111222222222333 Router12345678 90123459 7890123456 .SSM	6789012				
RtrStateResource PM State 1ManB LIU7 101InSv					
Size of Posted Set = 1					
<i>Note:</i> The preceding MAP response is	s for a <i>Bsy</i> router and LIU				
If the RTS command	Do				
	step 30				
passed					
passed passed but a RTRM alarm is active	step 27				
passed passed but a RTRM alarm is active failed - no message to router man- agement	step 27 step 29				
passed passed but a RTRM alarm is active failed - no message to router man- agement failed - no response from router management	step 27 step 29 step 29				
 passed passed but a RTRM alarm is active failed - no message to router management failed - no response from router management failed - system problems 	step 27 step 29 step 29 step 29				

29

To return the failed router set to service	e, type
>RTS router_no	
and press the Enter key.	
where	
router_no is the number of the router	
Example of MAP display:	
External Routing Bsy	
111111111122222222333 Router12345678 90123459 7890123 .SSM	456789012
RtrStateResource PM State 1ManB LIU7 101InSv	
Size of Posted Set = 4	
<i>Note:</i> The preceding MAP respons	e is for a <i>Bsy</i> router and LIU7.
If the RTS command	Do
passed	step 30
passed but a RTRM alarm is active	e step 35
is other than listed here	step 35
Remove the TRO condition when one	router is <i>InSv</i> .
If the TRO condition	Do
cleared	step 32
failed because of a link alarm	step 31
is other than listed here	step 35
Use the correct procedures in this mar link problem. Complete the procedure	ual to clear link alarms and clear the and return to this point.
To check the status of the router set, ty	ре
>QUERYRTR_ALL	
and press the Enter key	
Example of MAP display:	

External RoutingInSv

30

31

32

CCS RTRC critical (end)

111111111122222222333 Router12345678901234597890123456789012

RtrStateResourcePM State 4InSv LIU 101InSv

Size of Posted Set = 8

RtrStateResourcePM State Congestion Level 1InSvLIU7 101InSv0 2InSv LIU7 102 InSv0 3InSv LIU7 103 InSv0 4OffL LIU7 104 OffL 5OffL LIU7 105 OffL 6OffL LIU7 106 OffL 7OffL LIU7 107 OffL 8InSv LIU7 108 InSv0

- 33 Office records will reveal the far-end office that connects to the posted linkset.
- **34** Contact the far-end office. Inform the operating company personnel that you activated a CCS7 critical alarm. Inform the operating company personnel that one or more associated links are now in service.
- **35** For additional help, contact the next level of support
- **36** The procedure is complete.

CCS RTRM major

Alarm display

ĺ	 СМ	MS	IOD	Net	PM	CCS	Lns	Trks	Ext	APPL
	-	·	•	•	·	1RTRM . *M*		•	•	•

Indication

At the MTC level of the MAP display, a number and RTRM appear under the CCS header in the alarm banner. The RTRM indicates a major alarm for a C7 (RTR). A CCS 189 log indicates the congested router or routers and the congestion level of the routers.

Meaning

An RTRM alarm raises against a router or routers for the following reasons:

- the router or routers are in a manual busy (ManB) state
- the router or routers are in a system busy (SySb) state. This state occurs when the peripheral that matches the router is in an out-of-service state
- the router or routers are in an in-service trouble (ISTb) state. High traffic volume causes congestion. Congestion causes an ISTb in the routers

Note: One router must be available for this alarm to take effect.

Result

This major alarm can disappear if the last router is not available. If the last router is not available, all routers become RTRC critical alarms.

Action

This procedure contains a summary flowchart and a list of steps. Use the flowchart to review the procedure. Follow the steps to perform the procedure.

Summary of Clearing a CCS RTRM RTRM major alarm



DMS-100 Family NA100 Alarm Clearing and Perform. Monitoring Proc. Volume 1 of 4 LET0015 and up

Clearing a CCS RTRM major alarm

At the MAP display

- 1 To access the C7ROUTER level of the MAP display, type >MAPCI;MTC;CCS;CCS7;C7ROUTER and press the Enter key.
- 2 To display routers that have RTRM alarms, type

>DISALM RTRM

and press the Enter key. Example of MAP display:

External Routing Alarm:RTRM

C7Router	Resource	Status
1 2	LIU7 101 LIU7 102	ManB ISTb
3	LIU7 103	ISTb
5	LIU7 105	SvsB

3 To post the router, type

>POST ALL

and press the Enter key.

4 To display status of routers, type

>QUERYRTR_ALL

and press the Enter key.

Example of MAP display:

	External	Routing	ISTb		
	Router	123456 MILOSO	1111111 78 90123459	11122222 78901234	22222333 56789012
	Rtr 2	State ISTb	Resource LIU 101	PM Sta InSv	te
	Size of	Posted Se	et = 8		
	Rtr 1 2 3 4 5 6 7 8	State ManB ISTb ISTb OffL SySb OffL OffL OffL	Resource LIU7 101 LIU7 102 LIU7 103 LIU7 104 LIU7 105 LIU7 106 LIU7 107 LIU7 108	PM State InSv InSv OffL SysB OffL OffL OffL	Congestion Level 0 2 2 0
	If one	e or more o	f the routers	Do	
	is Ma	anB		step 5	
	is ISI	ГЬ		step 7	
	is Si	sh		sten 8	
	15 59	50		step o	
5	Note th CCS7	ne number c (LIU7).	of the <i>ManB</i> router	and equivalent	link interface unit for the
5 6	Note th CCS7 Determ	ne number c (LIU7). nine from of	of the <i>ManB</i> router fice records why tl	and equivalent	link interface unit for the
5 6	Note th CCS7 Detern When	ne number c (LIU7). nine from of you have pe	of the <i>ManB</i> router fice records why the ermission, continue	and equivalent ne router is <i>Mar</i> e this procedure	link interface unit for the B. . Go to step 23.
5 6 7	Note th CCS7 Detern When Select	ne number c (LIU7). nine from of you have pe an <i>OFFL</i> ro	of the <i>ManB</i> router fice records why the ermission, continue outer and equivale	and equivalent ne router is <i>Mar</i> e this procedure nt LIU7.	link interface unit for the B. . Go to step 23.
5 6 7	Note th CCS7 Detern When y Select	ne number c (LIU7). nine from of you have pe an <i>OFFL</i> rc LIU7	of the <i>ManB</i> router fice records why the ermission, continue outer and equivale	and equivalent ne router is <i>Mar</i> e this procedure nt LIU7.	link interface unit for the B. . Go to step 23.
5 6 7	Note th CCS7 Detern When Select If the is In	ne number c (LIU7). nine from of you have pe an <i>OFFL</i> ro LIU7	of the <i>ManB</i> router fice records why the ermission, continue outer and equivale	and equivalent ne router is <i>Mar</i> e this procedure nt LIU7. Do step17	link interface unit for the B. . Go to step 23.
5 6 7	Note th CCS7 Detern When Select If the is In is IS	ne number c (LIU7). nine from of you have pe an <i>OFFL</i> rc LIU7 <i>Sv</i>	of the <i>ManB</i> router fice records why the ermission, continue outer and equivale	and equivalent ne router is <i>Mar</i> e this procedure nt LIU7. Do step17 step17	link interface unit for the B. . Go to step 23.
5 6 7	Note th CCS7 Detern When Select If the is In is IS is oth	ne number c (LIU7). nine from of you have pe an <i>OFFL</i> ro LIU7 <i>Sv</i> <i>Tb</i> ner than lis	of the <i>ManB</i> router fice records why the ermission, continue outer and equivale	and equivalent ne router is <i>Mar</i> e this procedure nt LIU7. Do step17 step17 step 9	link interface unit for the B. . Go to step 23.
5 6 7 8	Note th CCS7 Detern When Select If the is In is IS is oth Note th	ne number c (LIU7). nine from of you have pe an <i>OFFL</i> rc LIU7 <i>Sv</i> <i>Tb</i> ner than lis	of the <i>ManB</i> router fice records why the ermission, continue outer and equivale ted here	and equivalent ne router is <i>Mar</i> e this procedure nt LIU7. Do step17 step17 step17 step 9 and equivalent 1	link interface unit for the bB. Go to step 23.
5 6 7 8 9	Note th CCS7 Determ When y Select If the is In is IS is oth Note th To acce	ne number c (LIU7). nine from of you have pe an <i>OFFL</i> rc LIU7 <i>Sv</i> <i>Tb</i> ner than liss ne number c ess the PM	of the <i>ManB</i> router fice records why the ermission, continue outer and equivaled ted here of the <i>SysB</i> router level of the MAP of	and equivalent ne router is <i>Mar</i> e this procedure nt LIU7. Do step17 step17 step9 and equivalent I display, type	link interface unit for the bB. Go to step 23.
5 6 7 8 9	Note th CCS7 Detern When y Select If the is In is IS is oth Note th To acco >MAPC	ne number c (LIU7). nine from of you have pe an OFFL rc LIU7 Sv Tb ner than liss ne number c ess the PM I;MTC;PM	of the <i>ManB</i> router fice records why the ermission, continue outer and equivaled ted here of the <i>SysB</i> router level of the MAP of	and equivalent ne router is <i>Mar</i> e this procedure nt LIU7. Do step17 step17 step9 and equivalent I display, type	link interface unit for the B. . Go to step 23.
5 6 7 8 9	Note th CCS7 Detern When Select If the is In is IS is oth Note th To acco >MAPC and pro	ne number c (LIU7). nine from of you have pe an OFFL ro LIU7 Sv Tb ner than lis ne number c ess the PM I;MTC;PM ess the Ente t the LIU7 v	of the <i>ManB</i> router fice records why the ermission, continue outer and equivaled ted here of the <i>SysB</i> router level of the MAP of the key.	and equivalent ne router is <i>Mar</i> e this procedure nt LIU7. Do step17 step17 step9 and equivalent l display, type	link interface unit for the B. . Go to step 23.

and press the Enter key.				
where				
liu_no is the number of the LIU7	(0 to 215)			
If the LIU7	Do			
is ManB	step 13			
is OFFL	step 11			
is SysB	step 12			
To manually busy the LIU7, type				
>BSY				
and press the Enter key.				
If the BSY command	Do			
passed	step 13			
failed	step 12			
To return the LIU7 to service, typ >RTS and press the Enter key.	e			
If the RTS command	Do			
passed	step 14			
failed	step 12			
To access the C7ROUTER level	of the MAP display, type			
>MAPCI;MTC;CCS;CCS7;C7RO	UTER			
and press the Enter key.				
Select the OFFL router to return	to service.			
To post the router, type				
POST router_no				
and press the Enter key.				
where				
router_no is the number of the router	r			

To bus >BSY and p	sy the require	d posted router, t r key.	ype	
Exam	ріе от мар а	isplay:		
Exte	rnal Routi	ng Bsy		
Rout	er 123456 MIIMS	11111 78 901234 000	L11 1112 459 7890	2222 22222333 1234 56789012
Rtr 4	State ManB	Resource LIU 104	PM State InSv	
Size	of Posted	Set = 1		
Rtr 1 2 3 4 5 6 7 8	State ManB ISTb ISTb ManB SySb OffL OffL OffL	Resource LIU7 101 LIU7 102 LIU7 103 LIU7 104 LIU7 105 LIU7 106 LIU7 107 LIU7 108	PM State InSv InSv InSv SysB OffL OffL OffL	Congestion Leve 0 2 2 1 0
No	te: MAP resp	oonse shown is fo	or an OFFL ro	outer and LIU7.
If th	e BSY comm	and	Do	
pass	sed		step 23	
faile man	ed - no me nagement	ssage to router	r step 22	
faile man	ed - no respo agement	onse from router	r step 22	
faile	ed - system	problem	step 18	
faile ble	ed - router n C7ROUTER	ot entered in ta-	- step 20	
Checl	k logs and the	reason for syste	m problems.	
Go to	step 22.			
Conta	act your next le ed.	evel of support to	determine if	the selected router is n

17

18 19 20

21 Go to step 7 and select another *OFFL* router and equivalent LIU7.

CCS RTRM

major (continued)

22

To busy the failed router again, type										
>BSY router_no										
and press the Enter key.										
where	l.									
router_no is the number of the router										
Exam	ple of MAP di	splay:								
Exter	rnal Routin	ng Bsy								
Route	er 123456' MIIMSO(1111111 78 90123459 00	L 11122222	2 22222333 4 56789012						
Rtr 4	State ManB	Resource LIU 104	PM State InSv							
Size	of Posted	Set = 8								
Rtr 1 2 3 4 5 6 7 8	State ManB ISTb ISTb ManB SySb ManB OffL OffL	Resource LIU7 101 LIU7 102 LIU7 103 LIU7 104 LIU7 105 LIU7 106 LIU7 107 LIU7 108	PM State InSv InSv InSv SysB InSv OffL OffL	Congestion Level 0 2 2 1 0						

Note: MAP response shown is for an *OFFL* router and LIU7.

If the RTS command	Do
passed	step 23
other than listed here	step 27

23 To return the selected router to service, type

>RTS router_no

and press the Enter key.

where

router_no is the number of the router

Example of MAP display:

Extern	hal Routing	InSv		
Router	12345678 I000	1111111 90123459 	11122222 78901234 	22222333 56789012
Rtr 4 Size d	State I InSv I of Posted Se	Resource LIU7 104 et = 8	PM State InSv	

Note: The following MAP response covers:

- an Offl router and LIU7 selected in step 7
- a ManB router selected in step 5

24

• a SySb router and LIU7 selected in step 8

_	If the RTS command	Do
-	passed	step 25
	failed - no message to router management	step 24
	failed - no response from router management	step 24
	failed - system problem	step 24
-	To return the failed router to service, ty	/pe
3	<pre>>RTS router_no</pre>	
á	and press the Enter key.	
	where	
	router_no is the number of the router	
	Example of MAP display:	

```
External Routing InSv
111111111222222222333
Router12345678 901234597890123456789012
..I..000 -----
RtrState ResourcePM State
6InSv LIU7 106InSv
Size of Posted Set = 1
```

If th	e RTS comr	nand	Do	Do			
pass	ed		step 25				
othe	er than listed	l here	step 27				
To ch	eck the statu	s of the routers,	type				
>QUE	RYRTR_ALL						
and p	ress the Ente	er key.					
Fxam	nle of MAP	displav:					
	/						
Exte	rnal Rout	ing InS	Sv.				
Pout	ar 12345	111111 678 901234	1 1112222	22 22222333			
Roue	. I	000					
Rtr	State	Resource	PM State				
1	InSv	LIU 101	InSv				
Size	of Poste	d Set = 6					
Rtr	State	Resource	PM_State	Congestion Level			
Ţ	InSv	LIU7 IOI	InSv	0			
∠ 2	T2.LD	LIU/ 102	Insv	1			
3	InSV	LLU/ LU3	Insv	U			
4 5	TURA	ЦЦU/ ЦU4 ТТП7 105	LUSV	0			
5	TII2A Offi	LLU/ LUS T TTT7 106	LIISV Offi	0			
7	OFFI.	T.TTT7 107	OFFT.				
,							

25

CCS RTRM major (end)

Note: The following MAP response covers:

- an Offl router and LIU7 selected in step 7
- a *ManB* router selected in step 5
- a SySb router and LIU7 selected in step 8

If the RTS command	Do
cleared the alarm	step 28
did not clear the alarm. Conges- tion continues to occur on the #2 router.	step 26
Go to step 7 and bring another OFFL r congestion level alarm.	outer and LIU7 into service to clear the

27 For additional help, contact the next level of support

28 The procedure is complete.

26

3 Computing module alarm clearing procedures

Introduction

This chapter provides alarm clearing procedures for the computing module (CM). Computing module alarms appear under the CM header of the alarm banner in the MAP display. Each procedure contains the following sections:

- Alarm display
- Indication
- Meaning
- Result
- Common procedures
- Action

Alarm display

This section indicates how the alarm appears at the MAP terminal.

Indication

This section indicates the following:

- Appearance of the alarm
- Model of the alarm
- Affected subsystems
- Alarm intensity

Meaning

This section indicates the cause of the alarm.

Result

This section describes the results of the alarm condition.

Common procedures

This section lists common procedures used during the alarm clearing procedure. A common procedure consists of a series of repeated steps within maintenance procedures, for example, removal and replacement of a card. Common procedures are in the common procedures chapter in this Northern Telecom publication (NTP).

Do not go to a common procedure unless the step-action procedure directs you to go.

Action

This section provides a summary flowchart of the alarm clearing procedure. A detailed step-action procedure follows the flowchart.

CM AutoLd minor

Alarm display

СМ	MS	IOD	Net	PM	CCS	Lns	Trks	Ext	APPL
AutoLd	•	•		•			·		·

Indication

At the MTC level of the MAP display, AutoLd appears under the computing module (CM) header of the alarm banner. The AutoLd indicates a minor alarm for an automatic reload.

Meaning

A defect or error prevents the automatic reload of the switch.

Result

The problem does not affect subscriber service.

Common procedures

There are no common procedures.

Action

This procedure contains a summary flowchart and a list of steps. Use the flowchart to review the procedure. Follow the steps to perform the procedure.

CM AutoLd minor (continued)

Summary of Clearing a CM AutoLd minor alarm



CM AutoLd minor (end)

Clearing a CM AutoLd minor alarm

At the MAP terminal

- 1 Obtain all recent CM logs.
- 2 For additional help, contact the next level of support.
- **3** The procedure is complete.

CM CBsyMC major

Alarm display

СМ	MS	IOD	Net	PM	CCS	Lns	Trks	Ext	APPL
CBsyMC M			·						

Indication

At the MTC level of the MAP display, CBsyMC appears under the CM header of the alarm banner. CBsyMC indicates a major alarm for a C-side busy message controller.

Meaning

The message controller (MC) is control-side (C-side) busy. The links to the message switch (MS) are system busy or manual busy.

Result

The computing module (CM) contains two MCs. If one MC is out of service, the second MC assumes the full messaging load. After the removal of the second MC, the switch cannot maintain subscriber service.

Common procedures

There are no common procedures.

Action

This procedure contains a summary flowchart and a list of steps. Use the flowchart to review the procedure. Follow the steps to perform the procedure.
Summary of Clearing a CM CBsyMC major alarm



DMS-100 Family NA100 Alarm Clearing and Perform. Monitoring Proc. Volume 1 of 4 LET0015 and up

Clearing a CM CBsyMC major alarm

At the MAP terminal

- 1 Use the correct MS alarm clearing procedures in this document to clear any MS alarms. Complete the procedures and return to this point.
- 2 Determine if the CBsyMC main alarm cleared.

If the alarm	Do
cleared	step 24
changed to another alarm	step 22
did not clear	step 3

3 To access the MC level of the MAP display, type

>MAPCI;MTC;CM;MC

and press the Enter key.

Example of a MAP display:

CM 0 MC 0 MC 1 . cbsy

4 To test the affected MC, type

>TST mc_number

and press the Enter key

where

mc_number is the number of the C-side busy MC (0 or 1)

Note: The state of the MCs appears under the MC 0 and MC 1 headers of the MAP display. In the example in step 3, MC 1 is C-side busy.

Example of a MAP response:

```
Maintenance action submitted.
MC test passed.
Link 0: 0 messages sent, 0 messages received
    - Possible C-side problem.
Link 1: 0 messages sent, 0 messages received
    - Possible C-side problem.
 TOD 0 test passed
 TOD 1 test passed
 If the TST command
                                    Do
 passed
                                   step 15
 failed, and the system generated
                                   step 5
 a card list
Record the location, description, slot number, product engineering code
(PEC), and PEC suffix of the first card on the list.
Perform the correct procedure in Card Replacement Procedures. Complete
the procedure and return to this point.
To access the MC level of the MAP display, type
>CM;MC
and press the Enter key.
Example of a MAP display:
CM 0
MC 0
          MC 1
          mbsy
   .
To test the affected MC, type
>TST mc number
and press the Enter key
where
mc_number is the number of the affected MC (0 or 1)
 If the TST command
                                                       Do
                                                       step 10
 passed
 failed, and you did not replaced all the cards on the
                                                       step 9
 list
 failed, and you replaced all the cards on the list
                                                       step 23
```

5

6

7

8

9

CM CBsyMC major (continued)

If the 151 command	Do
is other than listed here	step 23
Record the location, description, slocard on the list.	ot number, PEC, and PEC suffix of the n
Go to step 6.	
Determine if the affected MC is ma	anual busy.
<i>Note:</i> The term mbsy under the means the MC is manual busy. busy.	e MC0 or MC1 header on the MAP disp In the example in step 7, MC 1 is man
If the state of the MC	Do
is mbsy	step 11
is no mbsy	step 12
To return the manual busy MC to s	service, type
>RTS mc_number	
and properthe Enter Key	
and press the Enter key.	
where	
where mc_number is the number of the manua <i>Example of a MAP response:</i>	ll busy MC (0 or 1)
where mc_number is the number of the manua <i>Example of a MAP response:</i> Maintenance action submit MC RTS ok.	ll busy MC (0 or 1)
<pre>where mc_number is the number of the manua Example of a MAP response: Maintenance action submit MC RTS ok. If the RTS command</pre>	Il busy MC (0 or 1) ted. Do
<pre>where mc_number is the number of the manua Example of a MAP response: Maintenance action submit MC RTS ok. If the RTS command passed</pre>	al busy MC (0 or 1) ated. Do step 12
<pre>where mc_number is the number of the manua Example of a MAP response: Maintenance action submit MC RTS ok. If the RTS command passed failed</pre>	Il busy MC (0 or 1) tted. Do step 12 step 23
<pre>where mc_number is the number of the manua Example of a MAP response: Maintenance action submit MC RTS ok. If the RTS command passed failed Determine if the inactive CM surface</pre>	Il busy MC (0 or 1) tted. Do step 12 step 23 ce powered down.
<pre>where mc_number is the number of the manua Example of a MAP response: Maintenance action submit MC RTS ok. If the RTS command passed failed Determine if the inactive CM surface If the inactive CM surface</pre>	Il busy MC (0 or 1) It ed . Do step 12 step 23 ce powered down. Do
<pre>where mc_number is the number of the manua Example of a MAP response: Maintenance action submit MC RTS ok. If the RTS command passed failed Determine if the inactive CM surface If the inactive CM surface powered down</pre>	Il busy MC (0 or 1) Eted. Do step 12 step 23 ce powered down. Do step 13
<pre>mc_number is the number of the manua Example of a MAP response: Maintenance action submit MC RTS ok. If the RTS command passed failed Determine if the inactive CM surface If the inactive CM surface powered down did not power down</pre>	Il busy MC (0 or 1) Etted. Do step 12 step 23 ce powered down. Do step 13 step 15
<pre>and press the Enter key. where mc_number is the number of the manua Example of a MAP response: Maintenance action submit MC RTS ok. If the RTS command passed failed Determine if the inactive CM surface If the inactive CM surface powered down did not power down To test the inactive central process >CM;TST and press the Enter key.</pre>	Il busy MC (0 or 1) Etted. Do step 12 step 23 ce powered down. Do step 13 step 15 sing unit (CPU), type

Example of a MAP response:

The test(s) listed below will destroy
the software load in inactive CPU:
 Static RAM test
Do you want to do the test(s) anyway?
Please confirm: ("YES", "Y", "NO", or "N"):
To confirm the command, type
>YES
and press the Enter key.

Example of a MAP response:

14

Maintenance action submitted. Test passed.

If the TST command	Do
passed	step 15
failed	step 23
is other than listed here	step 23

15 Determine if the inactive CPU jammed.

Note: The word yes under the Jam header means that the CPU jammed. The area is blank if the CPU did not jam.

If the inactive CPU	Do
jammed	step 16
did not jam	step 17

At the CM reset terminal for the inactive CPU

16 To release the jam on the inactive CPU, type

>\RELEASE JAM

and press the Enter key.

RTIF response: JAM RELEASE DONE.

At the MAP terminal

17 Determine if the CM is in sync.

Note: A dot or EccOn under the Sync header means that the CM is in sync. The word no means that the CM is not in sync.

If the CM	Do	
is in sync	step 20	
is not in sync	step 18	
To synchronize the CM, type		
>CM; SYNC		
and press the Enter key.		
Example of a MAP response:		
Maintenance action submitt Synchronization successful	ed.	
If the response		Do
indicates the SYNC command i	is successful	step 20
problem with mismatches. At logs before you synchronize the Do you wish to continue? Please confirm (yes, `Y (SN/SNSE Series 70 only)	nalyze the mismatch e logs again. " or no, "N")	
is other than listed here		step 23
(SN/SNSE Series 70 only)		
To deny the action, type		
>NO		
and press the Enter key.		
Go to step 23.		
Determine if the CBsyMC main alar	m cleared.	
If the alarm	Do	
cleared	sten 2/	
	step 24	

CM CBsyMC major (end)

If the alarm	Do
did not clear	step 21
f a fiber link that has faults	is present between the CM and MS, go to step 23

22 Perform the correct alarm clearing procedure in this document.

23 For additional help, contact the next level of support.

24 The procedure is complete.

21

CM ClkFlt major

Alarm display

	CM CikFit M	MS	IOD	Net	PM	CCS	Lns	Trks	Ext	APPL
Indication	At the M the alarr	ITC lev n banne	el of the er. The	e MAP o ClkFlt i	lisplay, ndicate	ClkFlt a s a clock	ppears c major	under the alarm.	e CM h	eader of
Meaning	One of t	he cent	ral proc	essing u	units (C	PU) has	a proce	ssor clo	ck fault	
Result	In simpl active C duplex n A CPU on the cl	ex or sp PU. In node, b with a p lock of	olit mod duplex oth CPU processo the mat	le, the a mode, t Js are in or clock e CPU.	ctive Cl he com 1 sync v that has	PU norm puting n with a co s faults c	ally rur nodule (mmon o an oper	ns on the (CM) is clock. rate whil	e clock in sync e the C	of the . In PU runs
Common pro	ocedur There ar	e no co	mmon j	procedu	res.					
Action	This pro	cedure	contain	s a sum	mary fl	owchart	and a li	st of ste	ps. Use	e the

flowchart to review the procedure. Follow the steps to perform the procedure.

Summary of Clearing a CM ClkFlt major alarm



Clearing a CM ClkFlt major alarm

At the MAP terminal

- To access the CM level of the MAP display, type
 - >MAPCI;MTC;CM

and press the Enter key.

Example of a MAP display:

CM Sync Act CPU0 CPU1 Jam Memory CMMnt MC PMC 0 no cpu 1 clk . yes

2 Determine if the inactive CPU jammed.

Note: The word yes under the Jam header means that the CPU jammed. The area is blank if the CPU did not jam. In the example in step 1, the inactive CPU (CPU 0) jammed.

If the inactive CPU	Do
jammed	step 5
did not jam	step 3

At the CM reset terminal for the inactive CPU

3



WARNING Loss of service

Make sure that you do not jam the active CPU. If you jam the active CPU while the CM is out of sync, a cold restart occurs. The word Act on the top banner of the display identifies the reset terminal for the active CPU.

To jam the inactive CPU, type >\JAM and press the Enter key. *RTIF response:* Please confirm: (YES/NO)

4 To confirm the command, type

>YES

and press the Enter key.

RTIF response:

JAM DONE

At the MAP terminal

6

7

At 8

5 Determine that the CM is in sync.

 $\it Note:$ A dot or EccOn under the Sync header means that the CM is in sync. The word no means that the CM is not in sync.

If the CM	Do	
is in sync	step 6	
is not in sync	step 9	
To drop synchronization, ty	уре	
>DPSYNC		
and press the Enter key.		
If the response		Do
is About to drop sync v	vith CPU n active.	step 7
The inactive CPU JAM	IMED.	
Do you want to continu	ie?	
Please confirm ("YES"	, "Y", "NO", or "N"):	
is other than listed here	2	step 22
To confirm the command,	type	
>YES		
and press the Enter key.		
the CM reset terminal for the	inactive CPU	
Wait until A1 flashes on the	e reset terminal for the inact	ive CPU.
Note: Wait five minutes	s for A1 to flash.	
If A1	Do	
flashes	step 9	
does not flash	step 22	

At the	MAP terminal		
9	To test the inactive CPU, type		
	>TST		
	and press the Enter key.		
	If the response		Do
	is The test(s) listed below will de load in inactive CPU:Static RAM Do you want to do the test(s) any Please confirm: ("YES", "Y", "No	estroy the software test way? D", or "N"):	step 10
	is other than listed here		step 22
10	To confirm the command, type		
	>YES		
	and press the Enter key.		
	If the TST command	Do	
	passed	step 17	
	failed, and the system generated a card list	step 11	
	is other than listed here	step 22	
11	Record the location, description, slot r (PEC), and PEC suffix of the first card	number, product engin	eering code
12	Perform the correct procedure in <i>Card</i> the procedure and return to this point.	Replacement Proced	lures. Complete
At the	MAP terminal		
13	To access the CM level of the MAP dis	splay, type	
	>CM		
	and press the Enter key.		
	Example of a MAP display:		
	CM Sync Act CPU0 CPU1 Ja 0 no cpu 1 clk . ye	m Memory CMMnt s	MC PMC
14	To test the inactive CPU, type		
	>TST		

and press the Enter key.

	If the response	Do
	is The test(s) listed below will destroy the software load in inactive CPU:Static RAM test Do you want to do the test(s) anyway? Please confirm: ("YES", "Y", "NO", or "N"):	step 15
	is other than listed here	step 22
15	To confirm the command, type	
	>YES	
	and press the Enter key.	
	If the TST command	Do
	passed	step 17
	failed, and you did not replace all cards on the list	step 16
	failed, and you replaced all cards on the list	step 22
	is other than listed here	step 22
16	Determine the location, description, slot number, PEC, and F next card on the list.	PEC suffix of the
	Go to step 12.	
At the	CM reset terminal for the inactive CPU	
17	To release the jam on the inactive CPU, type	
	>\RELEASE JAM	
	and press the Enter key.	
	RTIF response:	
	JAM RELEASE DONE	
At the	MAP terminal	
10	To purphyonize the CM turne	

18 To synchronize the CM, type

> >SYNC and press the Enter key.

Example of a MAP response:

CM ClkFlt major (end)

If the response		Do
indicates the SYNC comman	d was successful	step 20
indicates the CPUs are out of problem with mismatches. logs before you synchronize Do you wish to continue? Please confirm (yes, `Y" or n (SN/SNSE Series 70 only)	of sync as a result of a Analyze the mismatch the logs again. o, "N")	step 19
is other than listed here		step 22
(SN/SNSE Series 70 only)		
To deny the action, type		
>NO		
and press the Enter key.		
Go to step 22.		
Determine if the ClkFlt main alar	n cleared.	
If the alarm	Do	
cleared	step 23	
changed to another alarm	step 21	

23 The procedure is complete.

CM CMFIt major

Alarm display

 СМ	MS	IOD	Net	PM	CCS	Lns	Trks	Ext	APPL
CMFIt M	•	·	•	·	•	•	·		·

Indication

At the MTC level of the MAP display, CMFlt appears under the CM header of the alarm banner. The CMFlt indicates a major alarm for a computing module (CM) fault.

Meaning

A fault is present on one of the central processing units (CPUs).

Result

When a fault occurs in one of the CPUs, CPU activity automatically switches and synchronization drops. These actions allow the fault-free CPU to take control.

Common procedures

There are no common procedures.

Action

This procedure contains a summary flowchart and a list of steps. Use the flowchart to review the procedure. Follow the steps to perform the procedure.

Summary of Clearing a CM CMFlt major alarm



Clearing a CM CMFIt major alarm

At the MAP display

1 To access the CM level of the MAP display, type

>MAPCI;MTC;CM

and press the Enter key.

Example of a MAP display:

CM Sync Act CPU0 CPU1 Jam Memory CMMnt MC PMC 0 no cpu 1 flt . yes

2 Determine the type of fault that causes the alarm.

Note: The fault indicator is under the CPU0 and CPU1 headers of the MAP display. In the example in step 1, the fault indicator for CPU 0 is flt.

If the fault indicator	Do
is clk	step 3
is e2a	step 4
is rex	step 5
is flt	step 24
is mem	step 24

- **3** Perform the procedure *Clearing a CM ClkFlt major alarm* in this document.
- 4 Perform the procedure *Clearing a CM E2A minor alarm* in this document.
- **5** Determine if the inactive CPU jammed.

Note: The word yes under the Jam header of the CM level MAP display means that the CPU jammed. The area is blank if the CPU did not jam.

If the inactive CPU	Do
jammed	step 6
did not jam	step 7

CM CMFIt

major (continued)

At the CM reset terminal for the inactive CPU

6 To release the jam on the inactive CPU, type

>\RELEASE JAM

and press the Enter key.

RTIF response:

JAM RELEASE DONE

At the MAP display

7 Determine if the CM is in sync.

Note: A dot or EccOn under the Sync header means that the CM is in sync. The word no means that the CM is not in sync.

If the CM	Do
is in sync	step 9
is not in sync	step 8
To synchronize the CM, type	
>SYNC	
and press the Enter key.	
Example of a MAP response:	
Maintenance action submitted Synchronization successful.	1.
If the response	Do
indicates the SYNC command is successful	step 9
is other than listed here	step 50

9

8



CAUTION

Possible service degradation

Check with operating company personnel to make sure that a REx test can run at this time. Make sure that you initiate REx tests during a low traffic period as a result of the high level of CPU occupancy required. Synchronization automatically drops and you cannot synchronize the CM again, while the REx test runs.

and press the Enter key.		
If the response		Do
is CAUTION: CM sync and a change. Please confirm ("YES", "Y", "NC	ctivity states will ", or "N"):	step 1
is CMREx test not authorized by	REX controller.	step 1
is other than listed here		step 5
REx tests run on another node. Consupersonnel. Determine where the REx before you run the CM REx test. To ru	It office records or ope tests run. Wait until t un the test, type	erating c he tests
and proce the Enter key		
If the response		Do
is CAUTION: CM sync and a change Please confirm ("YES", "Y", "NC is other than listed here)", or "N"):	step 1 step 5
To confirm the command, type		
and press the Enter key.		
Example of a MAP response:		
Maintenance action submitte	d.	
If the REXTST command	Do	
passed	step 48	
failed, and the system generated a card list	step 12	

13 Perform the correct procedure in *Card Replacement Procedures.* Complete the procedure and return to this point.

14 Determine if the inactive CPU jammed.

Note: The word yes under the Jam header means that the CPU jammed. The area is blank if the CPU did not jam.

If the inactive CPU	Do
jammed	step 15
did not jam	step 16

At the CM reset terminal for the inactive CPU

15 To release the jam on the inactive CPU, type

>\RELEASE JAM

and press the Enter key.

RTIF response:

RELEASE JAM DONE

At the MAP display

16 To make sure that the MAP display is at the CM level, type

>CM

and press the Enter key.

- 17 Determine if the CM is in sync.
 - *Note:* A dot or EccOn under the Sync header means that the CM is in sync. The word no means that the CM is not in sync.

If the CM	Do	
is in sync	step 20	
is not in sync	step 18	
To synchronize the CM, type		
>SYNC		

and press the Enter key.

Example of a MAP response:

18

Maintenance action submitted. Synchronization successful.

If the responseDoindicates the SYNC command is successfulstep 20is other than listed herestep 50Determine if the CMFIt major alarm cleared.If the alarmIf the alarmDoclearedstep 44did not clearstep 20		
indicates the SYNC command is successfulstep 20is other than listed herestep 50Determine if the CMFlt major alarm cleared.If the alarmDoclearedstep 44did not clearstep 20	If the response	Do
is other than listed here step 50 Determine if the CMFIt major alarm cleared. If the alarm Do cleared step 44 did not clear step 20	indicates the SYNC command is successful	step 20
Determine if the CMFIt major alarm cleared. If the alarm Do cleared step 44 did not clear step 20	is other than listed here	step 50
If the alarmDoclearedstep 44did not clearstep 20	Determine if the CMFIt major alarm cle	eared.
clearedstep 44did not clearstep 20		
did not clear step 20	If the alarm	Do
	If the alarm cleared	Do step 44

20

19



DANGER Possible service degradation

Check with operating company personnel to make sure that a REx test runs at this time. Make sure you initiate REx tests during a low traffic period, as a result of the high level of CPU occupancy required.

To run a REx test on the CM, type **>REXTST** and press the Enter key. *Example of a Map response:*

CAUTION: CM sync and activity states will change Please confirm ("YES", "Y", "NO", or "N"):

21 To confirm the command, type

>YES

and press the Enter key. Example of a MAP response:

Maintenance action submitted.

	Do	
	step 44	
failed, and you did not replace all the cards on the list failed, and you replaced all the cards on the list		
Record the location, description, slot number, PEC, and PEC card on the list.		
active or active CPU.		
Do		
step 24		
step 25		
in sync.		
Do		
step 26		
step 37		
sync.		
Do		
step 36		
step 50		
mmed.		
e Jam header means that the lid not jam.	e CPU jammed.	
Do		
Do step 32		
	ee all the cards on the list he cards on the list slot number, PEC, and PEC active or active CPU. Do step 24 step 25 in sync. Do step 37 sync. Do step 36 step 50 mmed. e Jam header means that the did not jam.	

- 27 To access the memory level of the MAP display, type
 >MEMORY
 and press the Enter key.
- To match the memories of the CPUs, type
 MATCH ALL
 and press the Enter key.
 Example of a MAP response:

Matching memory between CPUs in sync.

- **29** Determine if the memory match caused the following conditions to occur:
 - The memory match was successful.
 - The system did not generate mismatch logs, MM100 or MM101.
 - The CM remained in sync, indicated by a dot or EccON under the Sync header on the MAP display.

If the conditions	Do
occurred	step 30
did not occur	step 50

At the CM reset terminal for the inactive CPU

30

31



DANGER Loss of service

Make sure that you do not jam the ACTIVE CPU. If you jam the active CPU while the CM is not in sync, a cold restart occurs. The word Act on the top banner of the display identifies the reset terminal for the active CPU.

To jam the inactive CPU, type >\JAM press the Enter key. *RTIF response:* PLEASE CONFIRM ("YES" OR "NO") To confirm the response, type >YES

	and press the Enter key.		
	RTIF response:		
	JAM DONE		
32	To drop synchronization, type		
	>DPSYNC		
	and press the Enter key.		
	If the response		Do
	is About to drop sync with CPUn CPU is jammed.	active the inactive	step 33
	Please confirm("YES" OR "NO")		
	is Drop synchronization fails.		step 50
	is Cancelled. Active CPUn has a processor cloc	k that has faults	step 35
			
33	to confirm the command, type		
	2165		
	and pless the Enter key.		
At the	CM reset terminal for the inactive CP	U	
34	Wait until A1 flashes or fails to flash or	the RTIF for the inac	tive CPU.
	lf A1	Do	
	flashes	step 37	
	did not flash after 5 min	step 50	
35	The DPSYNC command is not available the active CPU. Perform the procedure CM CLK major alarm.	le as a result of the da es in this document or	maged clock of how to clear a
36	Perform the activity switch with memor Complete the procedure and return to	y match procedure in this point.	this document.
37	To test the inactive CPU, type		
	>TST		

and press the Enter key.

	If the response	Do
	is The test(s) listed below will destroy the software load in inactive CPU: is Static RAM test is Do you want to do the test(s) anyway?	step 38
	Please confirm: ("YES", "Y", "NO", or "N"):	
	is other than listed here	step 50
38	To confirm the command, type	
	>YES	
	and press the Enter key.	
	Example of a MAP response:	
	Maintenance action submitted.	
	If the TST command	Do
	passed	step 44
	failed, and you did not replace all the cards on the list	step 39
	failed, and you replaced all the cards on the list	step 50
	is other than listed here	step 50
39	Record the location, description, slot number, PEC, and PEC card on the list.	suffix of the next
40	Perform the correct procedure in <i>Card Replacement Proced</i> the procedure and return to this point.	lures. Complete
41	To test the inactive CPU, type	
	>TST	
	and press the Enter key.	
	If the response	Do
	s The test(s) listed below will destroy the software load in inactive CPU: Static RAM test	step 42
	is Do you want to do the test(s) anyway? Please confirm: ("YES", "Y", "NO", or "N"):T	
	is other than listed here	step 50

DMS-100 Family NA100 Alarm Clearing and Perform. Monitoring Proc. Volume 1 of 4 LET0015 and up

42 To confirm the command, type >YES and press the Enter key. Example of a MAP response: Maintenance action submitted. If the TST command Do passed step 44 failed, and did not replace all cards on the list step 43 failed, and replaced all cards on the list step 50 is other than listed here step 50 43 Record the location, description, slot number, PEC, and PEC suffix of the next card on the list. Go to step 40. 44 Determine if the inactive CPU jammed. Note: The word yes under the Jam header means that the CPU jammed. The area is blank if the CPU did not jam. If the inactive CPU Do jammed step 45 did not jam step 46 At the CM reset terminal for the inactive CPU 45 To release the jam on the inactive CPU, type >\RELEASE JAM and press the Enter key.

RTIF response:

JAM RELEASE DONE

CM CMFIt major (end)

At the MAP display

47

48

49 50

46 Determine if the CM is in sync.

Note: A dot or EccOn under the Sync header means that the CM is in sync. The word no means that the CM is not in sync.

	Do
is in sync	step 48
is not in sync	step 47
To synchronize the CM, type	
>SYNC	
and press the Enter key.	
Example of a MAP response:	
Maintenance action submitte Synchronization successful.	d.
If the response	Do
indicates the SYNC command is successful	step 48
	step 50
is other than listed here	
is other than listed here Determine if the CMFlt major alarm c	eared.
is other than listed here Determine if the CMFlt major alarm cl If the alarm	eared.
is other than listed here Determine if the CMFlt major alarm cl If the alarm cleared	eared. Do step 51
is other than listed here Determine if the CMFIt major alarm cl If the alarm cleared changed to another alarm	leared. Do step 51 step 49

51 The procedure is complete.

CM CMTrap major

Alarm display

СМ	MS	IOD	Net	PM	CCS	Lns	Trks	Ext	APPL
CMTrap M	·	·	·					·	

Indication

At the MTC level of the MAP display, CMTrap appears under the CM header of the alarm banner. The CMTrap indicates a major alarm for the trap rate.

Meaning

The trap rate approaches a threshold that can cause a warm restart.

Result

The computing module (CM) requires more time to correct faults than the average amount of time the CM requires. Subscriber service problems can arise as a result of the slow system response time. If the trap rate exceeds the threshold, a warm restart occurs.

Common procedures

There are no common procedures.

Action

This procedure contains a summary flowchart and a list of steps. Use the flowchart to review the procedure. Follow the steps to perform the procedure.

CM CMTrap major (continued)

Summary of Clearing a CM CMTrap major alarm



CM CMTrap major (end)

Clearing a CM CMTrap major alarm

At the MAP display

1 To access the CMMNT level of the MAP display, type >MAPCI;MTC;CM;CMMNT and press the Enter key. Example of a MAP response:

CMSyncActCPU0CPU1JamMemoryCMMntMCPMC0.........

Traps: Per minute = 108 Total = 6342

AutoLdev: Primary = SLM 0 disk Secondary = SLM 1 DISK

Image Restartable = No image test since last restart

Next CM image test restart type= RELOAD

Last CMREXTST executed

System memory in kbytes as of 14:39:07 Memory(kbytes):Used = 105984 Avail = 12800 Total = 118784

2 Record the total number of traps.

Note: The total number of traps is on the right of the Traps header in the Total field.

- **3** Obtain all current trap logs.
- 4 For additional help, contact the next level of support.
- 5 The procedure is complete.

CM E2A minor

Alarm display

СМ	MS	IOD	Net	PM	CCS	Lns	Trks	Ext	APPL
E2A	•	•	•	•	•	•	•	•	•

Indication

At the MTC level of the MAP display, E2A appears under the computing module (CM) header of the alarm banner. The E2A indicates an E2A minor alarm.

Meaning

The E2A links are not in service. The E2A links provide remote access to the reset system of the switch.

Result

The problem does not affect subscriber service. Remote access to the reset system of the switch through one or both of the E2A links is not available.

Common procedures

There are no common procedures.

Action

This procedure contains a summary flowchart and a list of steps. Use the flowchart to review the procedure. Follow the steps to perform the procedure.

CM E2A minor (continued)

Summary of Clearing a CM E2A minor alarm



CM E2A minor (continued)

Clearing a CM E2A minor alarm

At the MAP terminal

1 To access the CM level of the MAP display, type >MAPCI;MTC;CM and press the Enter key. Example of a MAP display:

CM Sync Act CPU0 CPU1 Jam Memory CMMnt MC PMC 0 no cpu 1 e2a . yes . . .

2 To determine the status of the E2A links, type

>E2ALINK CHECK

and press the Enter key.

Example of a MAP response:

Maintenance action submitted. CPU0: E2A Link is DISCONNECTED, ENABLED. CPU1: E2A Link is DISCONNECTED, DISABLED.

If the response indicates that either E2A link	Do
is UNSTABLE,ENABLED or UNSTABLE,DISABLED	step 3
is DISCONNECTED, DISABLED or DISCONNECTED, ENABLED	step 3
is CONNECTED, DISABLED	step 5

At the switch

3 At the back of the switch, make sure that all connections between the NT9X26 cards and the E2A telemetry equipment are secure.

At the MAP terminal

4 To determine the status of the E2A links, type

>E2ALINK CHECK

and press the Enter key.

Example of a MAP response:

5

6

7

CM E2A minor (end)

Maintenance action submit	ted.
CPU0: E2A Link is DISCONN	ECTED, DISABLED.
If both E2A links	Do
are CONNECTED, ENABLEI	D step 6
are CONNECTED, DISABLE	CD step 5
are other than listed here	step 7
To enable the E2A links, type	
>E2ALINK ENABLE n	
and press the Enter key.	
where	
n is the number of the central link (0 or 1)	processing unit (CPU) with the disabled
Example of a MAP response:	
Maintenance action submit CPU1: E2A Link is CONNECT	ted. TED, ENABLED.
Determine if the E2A minor alarm	cleared.
If the alarm	Do
cleared	step 8
did not clear	step 7
For additional help, contact the new	xt level of support.

8 The procedure is complete.

CM EccOn minor

Alarm display

ſ	 СМ	MS	IOD	Net	PM	CCS	Lns	Trks	Ext	APPL
	EccOn	•	•	•	•	•	•	•	•	•

Indication

At the MTC level of the MAP display, EccOn appears under the CM header of the alarm banner. The EccOn indicates an error-checking minor alarm.

Meaning

The computing module (CM) runs in synchronization with memory error checking and correction enabled. Mismatches caused by adjustable single bit memory errors do not occur.

Result

Processor performance is slower.

Common procedures

There are no common procedures.

Action

This procedure contains a summary flowchart and a list of steps. Use the flowchart to review the procedure. Follow the steps to perform the procedure.

CM EccOn minor (continued)

Summary of Clearing a CM EccOn minor alarm


CM EccOn minor (continued)

Clearing a CM EccOn minor alarm

At your current location

1 Consult office records or operating company personnel. Determine the reason for the enabled memory checking. Determine when you can disable memory error checking and correction.

To disable memory error checking and correction, continue this procedure as permitted.

At the MAP terminal

2 To access the CM level of the MAP display, type

>MAPCI;MTC;CM

and press the Enter key.

Example of a MAP display:

3 Determine if the inactive central processing unit (CPU) jammed.

Note: The word yes under the Jam header means that the inactive CPU jammed. The area is blank if the CPU did not jam.

If the inactive CPU	Do
jammed	step 6
did not jam	step 4

At the CM reset terminal for the inactive CPU

4



WARNING Loss of service

Make sure that you do not jam the active CPU. If you jam the active CPU while the CM is not in sync, a cold restart occurs. The word Act on the top banner of the display identifies the reset terminal for the active CPU.

To jam the inactive CPU, type >\JAM and press the Enter key. *RTIF response:*

CM EccOn minor (continued)

	Please confirm (YES/NO)	
5	To confirm the command, type	
	>YES	
	and press the Enter key.	
	RTIF response:	
	JAM DONE	
At th	ne MAP terminal	
6	To drop synchronization, type	
	>DPSYNC	
	and press the Enter key.	
	If the response	Do
	is About to drop sync with CPU n active.The inactive CPU is JAMMED. Do you want to continue? Please confirm ("YES", "Y", "NO"	step 7
	is other than listed here	step 12
7	To confirm the command, type > YES	
	and press the Enter key.	
At th	he CM reset terminal for the inactive CP	U
8	Wait until A1 flashes on the reset termine Note: Wait 5 min for A1 to flash.	nal for the inactive CPU.
	If A1	Do
	flashes	step 9
	does not flash	step 12
9	To release the jam on the inactive CPU	, type
	and press the Enter key.	

CM EccOn minor (end)

JAM RELEASE DONE

At the MAP terminal

10 To synchronize the CM, type

>SYNC

11

and press the Enter key.

Example of a MAP response:

Maintenance action submitted. Synchronization successful.

If the response	Do
indicates the SYNC command was successful	step 11
is other than listed here	step 12
Determine if the EccOn minor alarm c	leared.
If the alarm	Do
cleared	step 13
did not clear	step 12

12 For additional help, contact the next level of support.

13 The procedure is complete.

CM IMAGE critical

Alarm display

ĺ	СМ	MS	IOD	Net	PM	CCS	Lns	Trks	Ext	APPL
	IMAGE *C*					·				

Indication

At the MTC level of the MAP display, IMAGE appears under the CM header of the alarm banner. The IMAGE indicates an IMAGE critical alarm.

Meaning

The software load on the inactive central processing unit (CPU) cannot maintain a restart.

Result

The problem does not affect subscriber service. If a fault occurs on the active side, the switch cannot recover immediately.

Common procedures

There are no common procedures.

Action

This procedure contains a summary flowchart and a list of steps. Use the flowchart to review the procedure. Follow the steps to perform the procedure.

CM IMAGE critical (continued)

Summary of Clearing a CM IMAGE critical alarm



CM IMAGE critical (end)

Clearing a CM IMAGE critical alarm

At the MAP

- 1 Obtain all the latest CM logs.
- 2 For additional help, contact the next level of support.
- **3** The procedure is complete.

CM JInact minor

Alarm display

СМ	MS	IOD	Net	PM	CCS	Lns	Trks	Ext	APPL
JInact	•	•	·	•	•	•	•	•	•

Indication

At the MTC level of the MAP display, JInact appears under the computing module (CM) header of the alarm banner. The JInact indicates a jammed inactive CPU minor alarm.

Meaning

The inactive central processing unit (CPU) jammed. If the system generated the alarm, SysJam appears on the RTIF status line of the RTIF terminal. If the inactive CPU manually jammed, ManJam appears on the RTIF status line of the RTIF terminal.

Result

The problem does not affect subscriber service. Activity cannot switch with a jammed inactive CPU.

Common procedures

There are no common procedures.

Action

This procedure contains a summary flowchart and a list of steps. Use the flowchart to review the procedure. Follow the steps to perform the procedure.

CM JInact minor (continued)

Summary of Clearing a CM JInact minor alarm



CM JInact minor (end)

Clearing a CM JInact minor alarm

At the CM reset terminal for the inactive CPU

1 Determine if the inactive CPU system jammed or manually jammed.

If the inactive CPU	Do
system jammed	step 3
manually jammed	step 2

- 2 Maintenance personnel jammed the inactive CPU. Determine from office records or from operating company personnel why the CPU jammed.
 - When you have permission, continue with this procedure.
- 3 To release the jam on the inactive CPU, type

>\RELEASE JAM

and press the Enter key.

RTIF response:

JAM RELEASE DONE

If the response	Do
is JAM RELEASE DONE	step 5
is other than listed here	step 4

- 4 For additional help, contact the next level of support.
- 5 The procedure is complete.

CM LowMem critical

Alarm display

1	СМ	MS	IOD	Net	PM	CCS	Lns	Trks	Ext	APPL
	LowMer *C*	m .							·	

Indication

At the MTC level of the MAP display, LowMem appears under the CM header of the alarm banner. LowMem indicates a critical alarm for low memory.

Meaning

The computing module (CM) has no spare memory left. The CM runs low on the amount of allocated memory.

Result

The problem does not affect subscriber service. A critical switch procedure can require additional memory for any reason. If the procedure requires and cannot obtain additional memory, a warm or cold restart occurs.

Common procedures

There are no common procedures.

Action

This procedure contains a summary flowchart and a list of steps. Use the flowchart to review the procedure. Follow the steps to perform the procedure.

Summary of Clearing a CM LowMem critical alarm



DMS-100 Family NA100 Alarm Clearing and Perform. Monitoring Proc. Volume 1 of 4 LET0015 and up

Clearing a CM LowMem critical alarm

At the MAP terminal

1 To access the memory level of the MAP display, type

>MAPCI;MTC;CM;MEMORY

and press the Enter key.

Example of a MAP display for DMS SuperNode:

CM Sync Act CPU0 CPU1 Jam Memory CMMnt MC PMC 0 . cpu 1 CM 0 1 Plane 0 C | C Plane 1 1 0987654321 P | P 1234567890f U | U

MEMORY:

Example of a MAP display for DMS SuperNode SE:

CM Sync Act CPU0 CPU1 Jam Memory CMMnt MC PMC 0 . cpu 1 CM 0 Plane 0 C | C Plane 1 54321 P | P 12345f U | U

MEMORY:

Determine if a memory card that has faults exists .

Note: An f under the card number indicates that the card has faults.

lf	Do
a memory card that has faults is present	step 3
a memory card that has faults is not present	step 4
Perform the procedure <i>Clearing a CM</i> . Complete the procedure and return to	<i>MemFlt minor alarm</i> in this document. this point.
Go to step 1.	

3

2

4 Determine if the inactive CPU jammed.

Note: The word "yes" under the Jam header means that the CPU jammed. The area is blank if the CPU did not jam.

Example of a MAP display:

CM 0	Sync no	Act cpu	C 1	PUO	CP	U1	Jam yes	Memory	CMMnt	MC •	PMC	
lf t	he CPU						[Do				
jar	nmed						S	step 7				
dic	l not jai	m					S	step 5				

At the CM reset terminal for the inactive CPU

5



WARNING

Loss of service

Make sure that you do not jam the active CPU. If you jam the active CPU while the CM is not in sync, a cold restart occurs. The word Act on the top banner of the display identifies the reset terminal for the active CPU.

To jam the inactive CPU, type >\JAM and press the Enter key. *RTIF response:*

Please confirm: (YES/NO)

6 To confirm the command, type >YES and press the Enter key. *RTIF response:*

JAM DONE

At the MAP terminal

7 Determine if the CM is in sync.

Note: A dot or EccOn under the Sync header means that the CM is in sync. The word no means that the CM is not in sync.

	If the CM	Do			
	is in sync	step 8			
	is not in sync	step 12			
8	To access the CM level of t	he MAP display, type			
	>CM				
	and press the Enter key.				
9	To drop the synchronizatior	n, type			
	>DPSYNC				
	and press the Enter key.				
	If the response		Do		
	is About to drop sync w The inactive CPU is JA Do you want to continu Please confirm ("YES"	vith CPU n active. MMED. e? "Y" "NO" or "N");	step 10		
	is other than listed here	1, NO, 01 N <i>)</i> .	step 23		
10	To confirm the command, to	уре			
	>YES				
	and press the Enter key.				
At th	e CM reset terminal for the i	nactive CPU			
11	Wait until A1 flashes on the	e reset terminal for the inact	ive CPU.		
	Note: Wait 5 min for A1	to flash.			
	If A1	Do			
	flashes	step 12	step 12		
	does not flash	step 23			

At the MAP terminal

12 To access the memory level of the MAP display, type >MEMORY

and press the Enter key.

13



WARNING Possible service degradation

The memory claim requires a high level of CPU occupancy. An attempt to reclaim additional memory while the switch runs under heavy traffic can affect call processing.

To claim additional memory, type

>CLAIM

and press the Enter key.

Example of a MAP response:

The reclaiming of unused Data Store and Program Store to the Spare Pool should only be done if the switch is NOT running under heavy traffic. Please confirm ("YES", "Y", "NO", or "N"):

- 14 To confirm the command, type
 - >YES

and press the Enter key.

If the CLAIM command	Do
passed	step 15
failed	step 20

At the CM reset terminal for the inactive CPU

15 To release the jam on the inactive CPU, type

>\RELEASE JAM

and press the Enter key.

RTIF response:

JAM RELEASE DONE

At the	MAP terminal					
16	To access the CM level of the MAR	P display, type				
	>CM					
	and press the Enter key.					
17	To synchronize the CM, type					
	>SYNC					
	and press the Enter key.					
	Example of a MAP response:					
	Maintenance action submit	ted.				
	Synchronization successfu	1.				
	If the response		Do			
	indicates the SYNC command is successful step 19					
	indicates the CPUs are not in problem with mismatches. A logs before you synchronize th is Do you wish to continue? P "Y", or "NO", "N")	a sync as a result of a Analyze the mismatch ne logs again. lease Confirm("YES",	step 18			
	is other than listed here		step 23			
18	(SN/ SNSE Series 70 only)					
	To deny the action, type					
	>NO					
	and press the Enter key.					
	Go to step 23.					
19	Determine if the LowMem critical a	alarm cleared.				
	If the alarm	Do				
	cleared	step 24				
		~~··F = -				
	changed to another alarm	step 22				

20 To extend the memory, use the *Memory extension in the SuperNode CM* procedure in *Card Replacement Procedures.* Complete the procedure and return to this point.

CM LowMem critical (end)

If the alarm	Do
cleared	step 24
changed to another alarm	step 22
did not clear	step 23

23 For additional help, contact the next level of support.

24 The procedure is complete.

CM LowSpr major

Alarm display

ſ	СМ	MS	IOD	Net	PM	CCS	Lns	Trks	Ext	APPL
	LowSpr M								·	
`										

Indication

At the MTC level of the MAP display, LOWSpr appears under the CM header of the alarm banner. The LOWSpr indicates a major alarm for low spare memory.

Meaning

Both central processing units (CPUs) run out of available spare memory.

Result

The problem does not immediately affect subscriber service.

If a single memory fault occurs, not enough spare memory is available for single memory fault recovery. Synchronization drops and the switch cannot recover in sync.

Common procedures

There are no common procedures.

Action

This procedure contains a summary flowchart and a list of steps. Use the flowchart to review the procedure. Follow the steps to perform the procedure.

Summary of Clearing a CM LowSpr major alarm



DMS-100 Family NA100 Alarm Clearing and Perform. Monitoring Proc. Volume 1 of 4 LET0015 and up

Clearing a CM LowSpr major alarm

At the MAP display

1 To access the memory level of the MAP display, type

>MAPCI;MTC;CM;MEMORY

and press the Enter key.

Example of a MAP display for DMS SuperNode:

 CM
 Sync
 Act
 CPU0
 CPU1
 Jam Memory
 CMMnt
 MC
 PMC

 0
 .
 cpu1
 .
 .
 .
 .
 .
 .
 .
 .

 CM
 0
 .
 .
 .
 .
 .
 .
 .
 .
 .
 .
 .
 .
 .
 .
 .
 .
 .
 .
 .
 .
 .
 .
 .
 .
 .
 .
 .
 .
 .
 .
 .
 .
 .
 .
 .
 .
 .
 .
 .
 .
 .
 .
 .
 .
 .
 .
 .
 .
 .
 .
 .
 .
 .
 .
 .
 .
 .
 .
 .
 .
 .
 .
 .
 .
 .
 .
 .
 .
 .
 .
 .
 .
 .
 .
 .
 .
 .
 .
 .
 .
 .
 .
 .
 .
 .
 .
 .
 .
 .
 .
 .
 .
 .

MEMORY:

Example of DMS SuperNode SE MAP display:

```
CM Sync Act CPU0 CPU1 Jam Memory CMMnt MC PMC

0 . cpu 1 . . . . . . .

CM 0

Plane 0 C | C Plane 1

54321 P | P 12345

.f... U | U .....
```

MEMORY:

2 Determine if a memory card that has faults is present.

Note: An f under a card number indicates that the card has defects.

If a memory card with defects	Do
is present	step 3
is not present	step 4

3 Perform the procedure *Clearing a CM MemFlt minor alarm* described in this document. Complete and return to this point.

Go to step 1.

4 Determine if the inactive CPU jammed.

Note: The word yes under the Jam header means that the CPU jammed. The area is blank if the CPU did not jam.

Example of a MAP display:

СМ	Sync	Act	CPU0	CPU1	Jam	Memory	CMMnt	MC	PMC	
0	no	cpu 1	•	•	yes	•		•	•	
lf t	he CPL	J			0	Do				
jan	nmed				s	tep 7				
did not jam					S	tep 5				

At the CM reset terminal for the inactive CPU

5



WARNING

Loss of service

Make sure that you do not jam the active CPU. If you jam the active CPU while the CM is not in sync, a cold restart occurs. The word Act on the top banner of the display identifies the reset terminal for the active CPU.

To jam the inactive CPU, type >\JAM and press the Enter key. *RTIF response:*

Please confirm: (YES/NO)

6 To confirm the command, type >YES and press the Enter key. *RTIF response:*

JAM DONE

8

9

At the MAP terminal

7 Determine if the CM is in sync.

Note: A dot or EccOn under the Sync header means that the CM is in sync. The word no means that the CM is not in sync. In the example in step 4, the CM is not in sync.

	If the CM	Do	
	is in sync	step 8	
	is not in sync	step 12	
8	To access the CM level of th	e MAP display, type	
	>CM		
	and press the Enter key.		
9	To drop synchronization, typ	e	
	>DPSYNC		
	and press the Enter key.		
	If the response		Do
	is About to drop sync wi The inactive CPU is JAN Do you want to continue Please confirm ("YES",	th CPU n active. MMED. ?? "Y", "NO", or "N"):	step 10
	is other than listed here		step 23
10	To confirm the command, ty	ре	
	>YES		
	and press the Enter key.		
At th	e CM reset terminal for the in	active CPU	
11	Wait until A1 flashes on the	reset terminal for the inact	ive CPU.
	Note: Wait 5 min for A1	to flash.	
	If A1	Do	
	flashes	step 12	
	does not flash	step 23	

At the MAP display

12 To access the memory level of the MAP display, type >MEMORY

and press the Enter key.

13



CAUTION Possible service degradation

The memory claim requires a high level of CPU occupancy. An attempt to reclaim additional memory while the switch runs under heavy traffic can affect call processing.

To claim additional memory, type

>CLAIM

and press the Enter key.

MAP response:

The reclaiming of unused Data Store and Program Store to the Spare Pool should only be done if the switch is NOT running under heavy traffic. Please confirm ("YES", "Y", "NO", or "N"):

- 14 To confirm the command, type
 - >YES

and press the Enter key.

If the CLAIM command	Do
passed	step 15
failed	step 20

At the CM reset terminal for the inactive CPU

15 To release the jam on the inactive CPU, type

>\RELEASE JAM

and press the Enter key.

RTIF response:

JAM RELEASE DONE

CM LowSpr

major (continued)

At the	MAP terminal		
6	To access the CM level of the MAP	display, type	
	>CM		
	and press the Enter key.		
7	To synchronize the CM, type		
	>SYNC		
	and press the Enter key.		
	MAP response:		
	Maintenance action submit	ted.	
	Synchronization successful	1.	
	If the response		Do
	indicates the SYNC command	is successful	step 19
	indicates that the logs do not m	atch.	step 18
	The CPUs are out of sync. Revie	ew mismatch logs be-	
	fore you synchronize the CM as	gain	
	Do you wish to continue?		
	Please Confirm(TES , T , or	NO, N)	
	is other than listed here		step 23
8	(SN/SNSE Series 70 only)		
	To deny the action, type		
	>NO		
	and press the Enter key.		
	Go to step 23.		
9	Determine if the LOWSpr major ala	rm cleared.	
	If the alarm	Do	
	cleared	step 24	
	changed to another alarm	step 22	
	did not clear	step 20	
0	To evidence the mean only use the Man	nom contonoion in the O	

20 To extend the memory, use the *Memory extension in the SuperNode CM* procedure in *Card Replacement Procedures.* Complete the procedure and return to this point.

CM LowSpr major (end)

If the alarm	Do
cleared	step 24
changed to another alarm	step 22
did not clear	step 23

23 For additional help, contact the next level of maintenance support.

24 The procedure is complete.

CM LowSpr minor

Alarm display

СМ	MS	IOD	Net	PM	CCS	Lns	Trks	Ext	APPL
LowSpr	•	·	·	·	•	·	·	•	•

Indication

At the MTC level of the MAP display, LowSpr appears under the CM header of the alarm banner. The LowSpr indicates a minor alarm for low spare memory.

Meaning

The computing module (CM) runs out of available spare memory on one central processing unit (CPU).

Result

This alarm can affect handshake override capability. The handshake override increases the speed of CPU operations. The handshake override overrides the handshake synchronization of memory access between CPUs. This alarm can cause the fault tolerance capability to degrade.

Common procedures

This procedure refers to Activity switch with memory match.

Do not go to the common procedure unless the step-action procedure directs you to go.

Action

This procedure contains a summary flowchart and a list of steps. Use the flowchart to review the procedure. Follow the steps to perform the procedure.

Summary of Clearing a CM LowSpr minor alarm



DMS-100 Family NA100 Alarm Clearing and Perform. Monitoring Proc. Volume 1 of 4 LET0015 and up

Clearing a CM LowSpr minor alarm

At the MAP terminal

1 To access the memory level of the MAP display, type >MAPCI;MTC;CM;MEMORY and press the Enter key.

Example of a MAP display for DMS SuperNode:

CM Sync Act CPU0 CPU1 Jam Memory CMMnt MC PMC 0 . cpu 1 CM 0 1 Plane 0 C | C Plane 1 1 0987654321 P | P 1234567890f U | U

MEMORY:

Example of DMS SuperNode SE MAP display

CM Sync Act CPU0 CPU1 Jam Memory CMMnt MC PMC 0 . cpu 1 CM 0 Plane 0 C | C Plane 1 54321 P | P 12345f U | U

MEMORY:

2 Determine if a memory card that has faults is present.

Note: An f under a card number indicates a card has faults.

If a defective memory card	Do
is present	step 3
is not present	step 4

3 Perform the procedure *Clearing a CM MemFlt minor alarm* in this document. Complete the procedure and return to this point.

Go to step 1.

4 To determine if the low spare memory (LowSpr) condition is on the active or inactive CPU plane, type

>SPARE

5

and press the Enter key.

Note: The plane with the lowest number of spare memory modules has the LowSpr condition.

Example of a MAP response:

Plane 0 has 1 spare 8 Mbyte Modules. The total Spare memory available is 8 Mbytes. Plane 1 has 0 spare 8 Mbyte Modules. The total Spare Memory available is 0 Mbytes.

If the LowSpr condition	Do
is on the active CPU	step 13
is on the inactive CPU	step 5

Determine if the inactive CPU jammed.

Note: The word yes under the Jam header at the CM level of the MAP display means that the CPU jammed. The area is blank if the CPU did not jam.

Example of a MAP display:

СМ	Sync	Act	CPU0	CPU1	Jam	Memory	CMMnt	MC	PMC
0	no	cpu 1			yes				

If the CPU	Do
jammed	step 8
did not jam	step 6

At the CM reset terminal for the inactive CPU

6



WARNING Loss of service

Make sure you do not jam the active CPU. If you jam the active CPU while the CM is not in sync, a cold restart occurs. The word Act on the top banner of the display identifies the reset terminal for the active CPU.

To jam the inactive CPU, type >JAM and press the Enter key. *RTIF response:*

Please confirm: (YES/NO)

7 To confirm the command, type

>YES

and press the Enter key.

RTIF response:

JAM DONE

At the MAP display

8 Determine if the CM is in sync.

Note: A dot or EccOn under the Sync header means that the CM is in sync. The word "no" means that the CM is not in sync. In the example in step 5, the CM is not in sync.

If the CM	Do					
is in sync	step 9					
is not in sync	step 14					
To access the CM level of the MAP display, type						
>CM						
and press the Enter key.						
To drop synchronization, type						

>DPSYNC

9

10

and pressing the Enter key.

	If the response	Do							
	is About to drop sync with CPU n step 11 active. The inactive CPU is								
	JAMMED. Do you want to continue?								
	Please confirm ("YES", "Y" "NO", or "N"):	,							
	is other than listed here	step 25							
11	To confirm the command, type								
	>YES								
	and press the Enter key.								
At the	CM reset terminal for the inactive CF	ะบ							
12	Wait until A1 flashes on the reset term	inal for the inactive CPU.							
	Note: Wait 5 min for A1 to flash.								
	If A1	Do							
	flashes	step 14							
	does not flash	step 25							
	does not flash	step 25							

13 Perform the procedure Activity switch with memory match in this document. Complete the procedure and return to this point.

At the MAP terminal

14 To access the memory level of the MAP display, type

>MEMORY

and press the Enter key.

15



WARNING

Possible service degradation

The memory claim requires a high level of CPU occupancy. An attempt to reclaim additional memory while the switch runs under heavy traffic can affect call processing.

To claim additional memory, type >CLAIM

and press the Enter key.

MAP response:

The reclaiming of unused Data Store and Program Store to the Spare Pool should only be done if the switch is NOT running under heavy traffic. Please confirm ("YES", "Y", "NO", or "N"):

16 To confirm the command, type

```
>YES
```

and press the Enter key.

If the CLAIM command	Do
passed	step 17
failed	step 22

At the CM reset terminal for the inactive CPU

- 17 To release the jam on the inactive CPU, type
 - >\RELEASE JAM

and press the Enter key.

RTIF response:

JAM RELEASE DONE

At the MAP terminal

- 18 To access the CM level of the MAP display, type
 - >CM

and press the Enter key.

19 To synchronize the CM, type

>SYNC

and press the Enter key.

Example of a MAP response:

Maintenance action submitted. Synchronization successful.

If the response	Do			
indicates the SYNC command was successful	step 21			

CM LowSpr minor (end)

If the response	Do
indicates the CPUs are not in as a result of a problem with mismatches. Analyze the mis logs before you synchroniz logs again. Do you wish to continue? I Confirm ("YES", "Y", or "N") (SN/ SNSE series 70 only)	n sync step 20 match ze the Please "NO",
is other than listed here	step 25
(SN/SNSE Series 70 only) To deny the action, type > № Go to step 25.	
•	
Determine if the LowSpr minor ala	arm cleared.
Determine if the LowSpr minor ala	arm cleared. Do
Determine if the LowSpr minor ala If the alarm cleared	arm cleared. Do step 26
Determine if the LowSpr minor ala If the alarm cleared changed to another alarm	arm cleared. Do step 26 step 24
Determine if the LowSpr minor ala If the alarm cleared changed to another alarm did not clear	arm cleared. Do step 26 step 24 step 22
Determine if the LowSpr minor ala If the alarm cleared changed to another alarm did not clear To extend the memory, perform the procedure in <i>Card Replacement P</i> return to this point.	arm cleared. Do step 26 step 24 step 22 e Memory extension in the SuperNode C Procedures. Complete the procedure an
Determine if the LowSpr minor ala If the alarm cleared changed to another alarm did not clear To extend the memory, perform the procedure in <i>Card Replacement H</i> return to this point. Determine if the LowSpr minor ala	arm cleared. Do step 26 step 24 step 22 e <i>Memory extension in the SuperNode C</i> Procedures. Complete the procedure an arm cleared.
Determine if the LowSpr minor ala If the alarm cleared changed to another alarm did not clear To extend the memory, perform the procedure in <i>Card Replacement P</i> return to this point. Determine if the LowSpr minor ala If the alarm	arm cleared. Do step 26 step 24 step 22 e Memory extension in the SuperNode C Procedures. Complete the procedure an arm cleared. Do
Determine if the LowSpr minor ala If the alarm cleared changed to another alarm did not clear To extend the memory, perform the procedure in <i>Card Replacement P</i> return to this point. Determine if the LowSpr minor ala If the alarm cleared	arm cleared.
Determine if the LowSpr minor ala If the alarm cleared changed to another alarm did not clear To extend the memory, perform the procedure in <i>Card Replacement I</i> return to this point. Determine if the LowSpr minor ala If the alarm cleared changed to another alarm	arm cleared.

26 The procedure is complete.

CM MBsyMC major

Alarm display

СМ	MS	IOD	Net	PM	CCS	Lns	Trks	Ext	APPL
MBsyM(M	С.	•		·		·	·		•
Ų									

Indication

At the MTC level of the MAP display, MBsyMC appears under the CM header of the alarm banner. The MBsyMC indicates a major alarm for a manual busy message controller.

Meaning

Maintenance personnel manually busy a message controller (MC).

Result

The problem does not affect subscriber service. Failure of the last MC results in the loss of subscriber service.

Common procedures

There are no common procedures.

Action

This procedure contains a summary flowchart and a list of steps. Use the flowchart to review the procedure. Follow the steps to perform the procedure.

CM MBsyMC major (continued)

Summary of Clearing a CM MBsyMC major alarm



DMS-100 Family NA100 Alarm Clearing and Perform. Monitoring Proc. Volume 1 of 4 LET0015 and up

CM MBsyMC major (continued)

Clearing a CM MBsyMC major alarm

At the MAP terminal

- 1 To access the MC level of the MAP display, type
 - >MAPCI;MTC;CM;MC

and press the Enter key.

Example of a MAP display:

CM 0 MC 0 MC 1 . mbsy

- 2 Record the number of the manual busy MC.
- 3 Consult office records or operating company personnel. Determine the reason for the removal of the MC from service.

When you have permission, continue this procedure.

4 To test the manual busy MC, type

>TST mc_number

and press the Enter key

where

- mc_number
 - is the number of the manual busy MC (0 or 1) that yourecorded in step 2

If the TST command	Do
passed	step 16
failed, and the system generated a card list	step 5
is other than listed here	step 27
To access the clock level of the MAP of	display, type
>CLOCK	
and press the Enter key.	

Example of a MAP display:

5
	T O D MCO MC1		
	Link 0 . manb		
	Link 1 . manb		
	SSC . oos		
6	To test the manual busy SSC, type		
	>TST SSC ssc_number		
	and press the Enter key.		
	where		
	ssc_number is the SSC for the manual bu	sy MC (0 or 1) that you r	recorded in step 2
	If the TST command		Do
	passed		step 9
	failed, and the system generated	d card list generates	step 7
	is other than listed here		step 27
7	To replace the NT9X22 card, perfor	m the correct card proc	edure in Card
	Replacement Procedures. Comple	te the procedure and ret	turn to this point.
8	Replacement Procedures. Comple To test the manual busy SSC again	te the procedure and ret , type	turn to this point.
8	Replacement Procedures. Comple To test the manual busy SSC again >TST SSC ssc_number	te the procedure and ret , type	turn to this point.
8	Replacement Procedures. Comple To test the manual busy SSC again >TST SSC ssc_number and press the Enter key	te the procedure and ret , type	turn to this point.
8	Replacement Procedures. Complet To test the manual busy SSC again >TST SSC ssc_number and press the Enter key where	te the procedure and ref , type	turn to this point.
8	Replacement Procedures. Complet To test the manual busy SSC again >TST SSC ssc_number and press the Enter key where ssc_number is the SSC for the manual bu	te the procedure and ref , type sy MC (0 or 1) that you r	turn to this point. recorded in step 2
8	Replacement Procedures. Complet To test the manual busy SSC again >TST SSC ssc_number and press the Enter key where ssc_number is the SSC for the manual busy If the TST command	te the procedure and ref , type sy MC (0 or 1) that you r Do	turn to this point. recorded in step 2
8	Replacement Procedures. Complet To test the manual busy SSC again >TST SSC ssc_number and press the Enter key where ssc_number is the SSC for the manual bu If the TST command passed	te the procedure and ref , type sy MC (0 or 1) that you r Do step 9	turn to this point. recorded in step 2
8	Replacement Procedures. Complet To test the manual busy SSC again >TST SSC ssc_number and press the Enter key where ssc_number is the SSC for the manual bu If the TST command passed is other than listed here	te the procedure and ref , type sy MC (0 or 1) that you r Do step 9 step 27	turn to this point. recorded in step 2
8	Replacement Procedures. Complet To test the manual busy SSC again >TST SSC ssc_number and press the Enter key where ssc_number is the SSC for the manual bu If the TST command passed is other than listed here To quit from the clock level of the M	te the procedure and ref , type sy MC (0 or 1) that you r Do step 9 step 27 AP display, type	turn to this point. recorded in step 2
8	Replacement Procedures. Complet To test the manual busy SSC again >TST SSC ssc_number and press the Enter key where ssc_number is the SSC for the manual bu If the TST command passed is other than listed here To quit from the clock level of the M >QUIT	te the procedure and ref , type sy MC (0 or 1) that you r Do step 9 step 27 AP display, type	recorded in step 2
8	Replacement Procedures. Complet To test the manual busy SSC again >TST SSC ssc_number and press the Enter key where ssc_number is the SSC for the manual bu If the TST command passed is other than listed here To quit from the clock level of the M >QUIT and press the Enter key.	te the procedure and ref , type sy MC (0 or 1) that you r Do step 9 step 27 AP display, type	recorded in step 2
8 9 10	Replacement Procedures. Complet To test the manual busy SSC again >TST SSC ssc_number and press the Enter key where ssc_number is the SSC for the manual bu If the TST command passed is other than listed here To quit from the clock level of the M >QUIT and press the Enter key. To test the manual busy MC again,	te the procedure and ref , type sy MC (0 or 1) that you r Do step 9 step 27 AP display, type type	recorded in step 2
8 9 10	Replacement Procedures. Complet To test the manual busy SSC again >TST SSC ssc_number and press the Enter key where ssc_number is the SSC for the manual bu If the TST command passed is other than listed here To quit from the clock level of the M >QUIT and press the Enter key. To test the manual busy MC again, >TST mc_number	te the procedure and ref , type sy MC (0 or 1) that you r Do step 9 step 27 AP display, type type	recorded in step 2
8 9 10	Replacement Procedures. Complet To test the manual busy SSC again >TST SSC ssc_number and press the Enter key where ssc_number is the SSC for the manual bu If the TST command passed is other than listed here To quit from the clock level of the M >QUIT and press the Enter key. To test the manual busy MC again, >TST mc_number and press the Enter key	te the procedure and ref , type sy MC (0 or 1) that you r Do step 9 step 27 AP display, type type	recorded in step 2

_	If the TST command	Do		
	passed	step 16		
	failed, and the system generated a card list	step 11		
	is other than listed here	step 27		
F (Record the location, description, slot r PEC), and PEC suffix of the first card	umber, product engine on the list.	neering code	
F	Perform the correct procedure in <i>Card</i> ne procedure and return to this point.	Replacement Proce	dures. Complete	
]	To access the MC level of the MAP dis	play, type		
>	CM;MC			
2	and press the Enter key.			
I	o test the manual busy MC, type			
	>TST mc_number			
2	and press the Enter key.			
V	vhere			
<pre>mc_number is the number of the manual busy MC (0 or 1)</pre>				
	If the TST command		Do	
	passed		step 16	
	failed, and you did not replace all	cards on the list	step 15	
	failed, and you replaced all cards	on the list	step 27	
	is other than listed here		step 27	
	Record the location, description, slot nu ard on the list.	umber, PEC, and PEC	Suffix of the next	
	Cata stan 12			
	30 to step 12.			
	To return the manual busy MC to servi	ce, type		
	To return the manual busy MC to servi >RTS mc_number	ce, type		
	To return the manual busy MC to server >RTS mc_number and press the Enter key.	ce, type		

	mc_number is the number of the manu	al busy MC (0 or 1)				
	If the RTS command	Do				
	passed	step 17				
	failed	step 27				
17	Determine if the inactive CM plan	e powered down.				
	If the inactive CM plane	Do				
	powered down	step 18				
	did not power down	step 20				
18	To test the inactive CPU, type					
	>CM;TST					
	and press the Enter key.					
	Example of a MAP response:					
	The test(s) listed below the software load in ina	will destroy ctive CPU:				
	Static RAM test					
	Do you want to do the te Please confirm: ("YES",	st(s) anyway? "Y", "NO", or "N"):				
19	To confirm the command, type					
	>YES					
	and press the Enter key.					
	Example of a MAP response:					
	Maintenance action submitted. Test passed.					
	If the TST command	Do				
	passed	step 20				
	failed	step 27				

20

Determine if the inactive CPU jammed.

Note: The word yes under the Jam header means that the CPU jammed. The area is blank if the CPU did not jam.

If the inactive CPU	Do
jammed	step 21
did not jam	step 22

At the CM reset terminal for the inactive CPU

21 To release the jam on the inactive CPU, type

>\RELEASE JAM

and press the Enter key.

RTIF response:

JAM RELEASE DONE

At the MAP terminal

22 Determine if the CM is in sync.

Note: A dot or EccOn under the Sync header means that the CM is in sync. The word no means that the CM is not in sync.

Example of a MAP display:

СМ	Sync	Act	CPU0	CPU1	Jam	Memory	CMMnt	MC	PMC
0	no	cpu 1			no	•		•	

If the CM	Do
is in sync	step 25
is not in sync	step 23

23 To synchronize the CM, type

>SYNC

and press the Enter key.

Example of a MAP response:

Maintenance action submitted. Synchronization successful.

If the response	Do
indicates the SYNC command was successful	step 25

CM MBsyMC major (end)

indicates the CPUs are out of sync ca lem with mismatches. Analyze the mismatch logs before y the logs again.Do you wish to contin Please confirm ("YES", "Y" or (SN/SNSE Series 70 only) is other than listed here (SN/SNSE Series 70 only) To deny the action, type >NO and press the Enter key. Go to step 27. Determine if the MBsyMC main alarm clee If the alarm Do cleared ste	used by a prob-step 24 ou synchronize ae? "NO", "N") step 27
is other than listed here (SN/SNSE Series 70 only) To deny the action, type >NO and press the Enter key. Go to step 27. Determine if the MBsyMC main alarm clear If the alarm Determine is the statement of	step 27
(SN/SNSE Series 70 only) To deny the action, type >NO and press the Enter key. Go to step 27. Determine if the MBsyMC main alarm cle If the alarm Do cleared ste	
To deny the action, type >NO and press the Enter key. Go to step 27. Determine if the MBsyMC main alarm cleared If the alarm cleared ste	
>NO and press the Enter key. Go to step 27. Determine if the MBsyMC main alarm cle If the alarm Do cleared ste	
and press the Enter key. Go to step 27. Determine if the MBsyMC main alarm cle If the alarm Do cleared ste	
Go to step 27.Determine if the MBsyMC main alarm clearIf the alarmDoclearedstored	
Determine if the MBsyMC main alarm cle If the alarm cleared ste	
If the alarmDoclearedstore	ared.
cleared ste)
	p 28
changed to another alarm ste	ep 26
did not clear ste	p 27

DMS-100 Family NA100 Alarm Clearing and Perform. Monitoring Proc. Volume 1 of 4 LET0015 and up

CM MC Tbl minor

Alarm display



Indication

At the MTC level of the MAP display, MC Tbl appears under the computing module (CM) header of the alarm banner. The MC Tbl indicates a minor alarm for message controller trouble.

Meaning

A minimum of one message controller (MC)

- is in-service trouble
- has a subsystem clock (SSC) fault
- has a time-of-day (TOD) clock fault

Result

The problem does not now affect subscriber service. If problems develop on the second MC, communications with one or both message switches can end.

Common procedures

There are no common procedures.

Action

This procedure contains a summary flowchart and a list of steps. Use the flowchart to review the procedure. Follow the steps to perform the procedure.

Summary of Clearing a CM MC Tbl minor alarm



DMS-100 Family NA100 Alarm Clearing and Perform. Monitoring Proc. Volume 1 of 4 LET0015 and up

Clearing a CM MC Tbl minor alarm

At the MAP terminal

To access the MC level of the MAP display, type

>MAPCI;MTC;CM;MC

and press the Enter key.

Example of a MAP display:

CM 0 MC 0 MC 1 . istb

2 Determine the type of fault that causes the alarm.

Note: The fault indicator appears under the MC 0 and MC 1 headers of the MAP display. In the example in step 1, the fault indicator for MC 1 is istb.

If the fault indicator	Do
is istb	step 3
is todf	step 11
is sscf	step 14

3 To access the port level of the MAP display, type

>PORT

and press the Enter key.

Example of a MAP display:

PORT MCOMC1 LinkO.oos Link1.

4 To test the MC port that has faults, type

>TST mc_number link_number

and press the Enter key.

where

mc number

is the number of the MC (0 or 1) that has in-service trouble

link_number

is the number of the link (0 or 1) that is out of service

Note: In the example in step 1, MC 1 has in-service trouble. In the example in step 3, link 0 of MC 1 is out of service.

Example of a MAP response:

Mainte	nance ac	ction s	submit	ted.	
In ser	vice por	rt test	t pass	sed.	
1000 m	lessages	sent,	1000	messages	received.

If the TST command	Do
passed	step 28
failed, and the system generated a card list	step 5
Record the location, description, slot (PEC), and PEC suffix of the first car	number, product engineering code d on the list.
Perform the correct procedure in <i>Car</i> the procedure and return to this point	d Replacement Procedures. Complete
To access the port level of the MAP of	lisplay, type
>MC; PORT	
and press the Enter key.	
To test the MC port, type	
>TST mc_number link_numbe	r
and press the Enter key.	
where	
mc_number is the number of the affected N	ЛС (0 or 1)
link_number is the number of the link that v	vas out of service (0 or 1)
If the TST command	Do
passed	step 28
failed, and you did not replace all cards on the list	step 9
failed, and you replaced all cards on the list	step 10
Record the location, description, slot r card on the list.	number, PEC, and PEC suffix of the next
Go to step 6.	
Perform the procedure <i>Clearing an M</i> Complete the procedure and return to	<i>IS CMIC minor alarm</i> in this document. this point.
Go to step 28.	

11 To access the clock level of the MAP display, type

>CLOCK

and press the Enter key. Example of a MAP display:

CM 0 MC 0 MC 1 . todf

TOD MC0 MC1 Link 0 . flt Link 1 . .

SSC . .

12 Record the number of the MC that has the TOD fault, and the number of the TOD clock that has faults.

Note: In the example in step 11, MC 1 has the TOD clock fault. The link number of the TOD clock that has faults is 0.

13 To test the TOD clock that has faults, type

>TST TOD mc_number link_number

and press the Enter key.

where

mc_number is the number of the MC (0 or 1) that has a TOD clock fault

link_number

is the link number (0 or 1) of the damaged TOD clock

Example of a MAP response:

```
Maintenance action Submitted MC 0 TOD 0 test passed.
```

If the TST command	Do
passed and alarm cleared	step 42
passed and TOD status is OK but alarm not cleared	step 28
passed but TOD status is not OK	step 26
failed	step 18
is other than listed here	step 41

To access the clock level of the MAP display, type
 CLOCK
 and press the Enter key.
 Example of a MAP display:

TOD MC0 MC1 Link 0 . . Link 1 . .

15 Record the number of the MC that has the SSC fault, and the number of the SSC that has faults.

Note: In the example in step 14, MC 1 has the SSC fault. The number of the SSC that has faults is 1.

16 To test the SSC that has faults, type

>TST SSC ssc_number

and press the Enter key.

where

ssc_number

is the number of the SSC that has faults (0 or 1)

Example of a MAP response:

```
A complete test will include temporary loss of two links.
Please Confirm ("YES", "Y", "NO", or "N"):
```

17 To confirm the command, type

>YES

and press the Enter key.

If the TST command	Do						
passed	step 27						
failed, and the system generated a card list	step 18						
is other than listed here	step 41						

- **18** Record the location, description, slot number, PEC, and PEC suffix of the first card on the list.
- **19** Perform the correct procedure in *Card Replacement Procedures*. Complete the procedure and return to this point.

20	To access the clock level of the MAP of	display, type
	>MC;CLOCK	
	and press the Enter key.	
21	Determine the type of cleared clock fa	ult.
	<i>Note:</i> A fault indicator that was too clock fault. A fault indicator that wa fault.	If in step 2 indicates a cleared TOD is sscf step 2 indicates a cleared SSC
	If the cleared fault	Do
	is todf	step 22
	is sscf	step 23
22	To test the TOD clock, type	
	>TST TOD mc_number link_n	umber
	and press the Enter key.	
	where	
	<pre>mc_number is the number of the affected M</pre>	IC (0 or 1)
	link_number is the link number of the tested	TOD clock $(0 \text{ or } 1)$
	Example of a MAP response:	
	Maintenance action Submitte MC 0 TOD 0 test passed.	d
	-	De
	If the ISI command	Do
	passed	step 26
	failed, and you did not replace all cards on the list	step 25
	failed, and you replaced all cards on the list	step 41
	is other than listed here	step 41
23	To test the SSC, type	
	>TST SSC ssc_number	
	and press the Enter key.	
	where	
	<pre>ssc_number is the number of the tested SSG</pre>	C (0 or 1)

	Example of a MAP response:	
	A complete test will include t Please Confirm ("YES", "Y", "N	cemporary loss of two links. NO", or "N"):
24	To confirm the command, type	
	>YES	
	and press the Enter key.	
	If the TST command	Do
	passed	step 27
	failed, and you did not replace all cards on the list	step 25
	failed, and you replaced all cards on the list	step 41
	is other than listed here	step 41
5	Record the location, description, slot na card on the list.	umber, PEC, and PEC suffix of the next
	Go to step 19.	
5	To return the TOD clock to service, typ	be
	>RTS TOD mc_number link_n	umber
	and press the Enter key.	
	where	
	mc_number is the number of the affected M	IC (0 or 1)
	link_number is the link number (0 or 1) of the	TOD clock that you returned to service
	If the RTS command	Do
	passed	step 28
	failed	step 41
7	To return the SSC to service, type	
	>RTS SSC ssc_number	
	and press the Enter key.	
	where	

If the RTS command	Do					
passed	step 28					
failed	step 41					
To access the MC level of the MA	.P display, type					
>MC						
and press the Enter key.						
Example of a MAP display:						
СМ 0						
MC 0 MC 1						
. mosy						
Determine if the accessed MC is	manual busy.					
Note: If an MC is manual busy header.	, mbsy appears under the MC 0 or I					
If the MC	Do					
is mbsy	step 30					
is not mbsy	step 31					
To return the manual busy MC to	service, type					
>RTS mc_number						
and press the Enter key.						
where						
<pre>mc_number is the number of the manua </pre>	al busy MC (0 or 1)					
mc_number is the number of the manua If the RTS command	al busy MC (0 or 1) Do					
mc_number is the number of the manua If the RTS command passed	al busy MC (0 or 1) Do step 31					
mc_number is the number of the manua If the RTS command passed failed	al busy MC (0 or 1) Do step 31 step 41					
mc_number is the number of the manua If the RTS command passed failed Determine if the inactive CM plan	al busy MC (0 or 1) Do step 31 step 41 e powered down.					
mc_number is the number of the manua If the RTS command passed failed Determine if the inactive CM plan If the inactive CM plane	al busy MC (0 or 1) Do step 31 step 41 e powered down. Do					
mc_number is the number of the manual If the RTS command passed failed Determine if the inactive CM plan If the inactive CM plane powered down	al busy MC (0 or 1) Do step 31 step 41 e powered down. Do step 32					
mc_number is the number of the manual If the RTS command passed failed Determine if the inactive CM plan If the inactive CM plane powered down did not power down	al busy MC (0 or 1) Do step 31 step 41 e powered down. Do step 32 step 34					

32 To test the inactive CPU, type
>CM;TST
and press the Enter key.
Example of a MAP response:
The test(s) listed below will destroy
the software load in inactive CPU:

Static RAM test

Do you want to do the test(s) anyway?
Please confirm: ("YES", "Y", "NO", or "N"):

33 To confirm the command, type

>YES

and press the Enter key.

Example of a MAP response:

Maintenance action submitted. Test passed.

If the TST command	Do
passed	step 34
failed	step 41
is other than listed here	step 41

34 Determine if the inactive CPU jammed.

Note: The word yes under the Jam header means that the CPU jammed. The area is blank if the CPU did not jam.

If the inactive CPU	Do
jammed	step 35
did not jam	step 36

At the CM reset terminal for the inactive CPU

35 To release the jam on the inactive CPU, type

>\RELEASE JAM

and press the Enter key.

RTIF response:

JAM RELEASE DONE

At the MAP terminal

36 Determine if the CM is in sync.

 $\it Note:$ A dot or EccOn under the Sync header means that the CM is in sync. The word no means that the CM is not in sync.

	If the CM	Do
	is in sync	step 39
	is not in sync	step 37
37	To synchronize the CM, type	
	>SYNC	
	and press the Enter key.	
	Example of a MAP response:	
	Maintenance action submitte Synchronization successful.	d.
	If the response	Do
	indicates the SYNC command is successful	step 39
	indicates the CPUs are not in sync as a result of a problem with mismatches. Analyze the mismatch logs before you syn- chronize the logs again. Do you wish to continue?Please Con- firm("YES", "Y", or "NO", "N")(SN/ SNSE series 70 only)	step 38
	is other than listed here	step 41
38	(SN/ SNSE series 70 only)	
	To deny the action, type	
	>NO	
	and press the Enter key.	
	Go to step 41.	

CM MC Tbl minor (end)

f the alarm Do								
cleared	step 42							
changed to another alarm	step 40							
did not clear	step 41							

41 For additional help, contact the next level of support.

42 The procedure is complete.

CM MemCfg minor

Alarm display

СМ	MS	IOD	Net	PM	CCS	Lns	Trks	Ext	APPL
MemCfg M									

Indication

At the CM level of the MAP display, MemCfg appears under the CM header of the alarm banner. The MemCfg indicates a minor alarm for the wrong memory configuration.

Meaning

The computing module (CM) maintenance detects a memory card configuration that is not correct on one of the CM planes.

Result

Mismatches can occur which result in a power failure. CM operation that is not the same can result in a power failure.

Common procedures

There are no common procedures.

Application

The following figures illustrate the correct position of memory cards for the SN50MX product.

Configuration of SN50MX product with two NT9X14EA 96M memory cards



	FRONT VIEW																										
	-					- C	PU	0 -										CPU 1						-			
\Diamond	Filler faceplate	Filler faceplate	NT9X14DB	NT9X14DB	NT9X14DB	NT9X14DB	NT9X14DB	NT9X14EA	NT9X14EA	NT9X14EA	NT9X12AD	NT9X12AD	NT9X10AA	NT9X10AA	NT9X12AD	NT9X12AD	NT9X14EA	NT9X14EA	NT9X14EA	NT9X14DB	NT9X14DB	NT9X14DB	NT9X14DB	NT9X14DB	Filler faceplate	Filler faceplate	⊳
Slot num	07 Iber	08 s	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	
Note Note	e 1: e 2: (24	s v S Mby	Slots vhe Slots /te)	s 12 n th s 09 car	2-16 iree)-11 ids.	an NT an	d 23 9X d 28	3-27 14E 8-30	7 co A (§) co	ntai 96 N ntai	n th Ibyt n o	ne m te) c ptio	nano card nal	dato Is ai mei	ory r re u mor	mini sed y e>	mu I. kten	m n Isioi	nem	iory / up	cor to 1	nfig thre	urat ee N	ion, T9>	(14	DB	

Configuration of SN50MX product with three NT9X14EA 96M memory cards

DMS-100 Family NA100 Alarm Clearing and Perform. Monitoring Proc. Volume 1 of 4 LET0015 and up

CM MemCfg

minor (continued)

Action

This procedure contains a summary flowchart and a list of steps. Use the flowchart to review the procedure. Follow the steps to perform the procedure.

Summary of Clearing a CM MemCfg minor alarm



DMS-100 Family NA100 Alarm Clearing and Perform. Monitoring Proc. Volume 1 of 4 LET0015 and up

Clearing a CM MemCfg minor alarm

At the MAP terminal

1 To access the memory level of the MAP display, type >MAPCI; MTC; CM; MEMORY and press the Enter key. Example of SN MAP display

> CM Sync Act CPU0 CPU1 Jam Memory CMMnt MC PMC 0 • • . cpu 1 . . . CM 0 Plane 0 Plane 1 1 1 0987654321 P | P 1234567890 - - - ----- - - - --

2 Determine if the CM is in sync.

> Note: A dot or EccOn under the Sync header means that the CM is in sync. The word no means that the CM is not in sync.

If the CM	Do
is in SYNC	step 3
is not in SYNC	step 7

3 To check the two CM planes for wrong memory configurations, type

>ORYMEM

and press the Enter key.

Note: Responses to the QRYMEM command are for the two planes.

The following are possible responses:

- a memory configuration result (valid or invalid)
- a possible processor optionality that is not consistent or error warning
- a possible out of sync warning (for the inactive plane only)
- if the memory configuration of the plane is wrong, the system provides a description of the wrong configuration

Example of SN MAP display

CM Sync Act CPU0 CPU1 Jam Memory CMMnt MC PMC 0 No cpu 0 . . MemCfg . . CM 0 Plane 0 Plane 1 1 1 0987654321 P | P 1234567890 MEMORY: >QRYMEM CPU 0 has a valid memory configuration CPU 1 has an invalid memory configuration WARNING: The CM is out of sync with the CPU 0 active. The data for CPU 1 may be out of date. Empty slots found between the outer port card (NT9X12AC) and the first memory card. Move memory cards so that memory grows away from the processor.

4 Check for responses to the QRYMEM command. The responses are warning responses for processor optionality.

If the response	Do
shows processor optionality inconsisten- cy	step 5
shows processor optionality error	step 28
shows no warning	step 5

5 Check for No Sync warning responses to the QRYMEM command as follows:

If the response	Do		
shows the CM is out of sync	step 7		
shows no warning	step 6		
eview the correct configuration responses	s as the table indicates.		
is CPU 0 has an invalid memory con- figuration. There are empty slots	step 10		

6

If the response	Do
is CPU 0 has an invalid memory con- figuration. Empty slots between the outer port card <n> and the first memory card.</n>	step 11
s CPU 0 has an invalid memory con- figuration. The NT9X14DB and NT9X14EA cards are intermixed.	step 12
s CPU 0 has an invalid memory con- iguration. The block of NT9X14DB ards are closest to the processor.	step 13
is CPU 0 has an invalid memory con- figuration. There are too many memory type> cardspresent on CPU <n>.</n>	step 14
s CPU 0 has an invalid memory con- figuration. There are too few <mem- ory type> cardspresent on CPU <n>. On the SN50MX platform, a mini- num memory configuration consists of 2 NT9X14EA's and 4 NT9X14DB's or 3 NT9X14EA's and 2 NT9X14DB's</n></mem- 	step 16
is CPU 0 has an invalid memory con- figuration. There are too many NT9X14DB cardspresent on CPU <n>. There should be a maximum of <n> NT9X14DB's on a CPU plane with <n> NT9X14EA cards</n></n></n>	step 17
is CPU 0 has an invalid memory con- figuration. There are too few <mem- ory type> cardspresent on CPU <n>.</n></mem- 	step 15

If the response	Do
is CPU 0 has an invalid memory con- figuration. There are too few NT9X14DB memory cardspresent on CPU <n>. There should be a min- imum of <n> NT9X14DB on a CPU plane with <n> NT9X14EA cards.</n></n></n>	step 18
is No reply from request	step 19
is Software difference action cancelled.	step 20
is CPU <n> has an invalid memory configuration.The internal <compo- nent> inventory tables are corrupt.</compo- </n>	step 21
is CPU <n> has an invalid memory configuration. The <component> PEC <pec> is not recognized.</pec></component></n>	step 22
is CPU <n> has an invalid memory configuration. The memory PEC <pec> is not supported by Processor Option.</pec></n>	step 23
is CPU <n> has an invalid memory configuration. This platform does not support mixed memory.</n>	step 24
is no mailbox available.	step 25
is both CPU's have valid configura- tion.	step 27
Consult office records. Determine if maint time the CM was last in sync. Determine i performed.	enance was on the CM fi f a memory configuration
If the answer Do	
is yos sta	n 8

If the answer	Do
is no	step 6
To configure the memory to make data is up to date, type	sure that the inactive memory configuration
>CONFIG	
and press the Enter key.	
Example of MAP display	
WARNING: I will now ask the mate (memories. I will take th re-build the MEMORY MAP of memory cards. This must and during a memory exten deleting a memory card of one of a different PEC co Please confirm ("YES or "	CPU to re-configure its ne new configuration data and display for the inactive CPU only be done when out of SYNC nsion or reduction (adding or replacing a memory card with ode). 'Y", "NO" or "N")
To confirm the command, type	
>YES	
and press the Enter key.	
Example of MAP display	
Maintenance action submi	tted
If the response	Do
indicates the CONFIG command passed	step 3
indicates the CONFIG command failed	step 28
indicates Configure abort NT9X14BB	ed. step 28

memory is incompatible with

NT9X14EA memory

At the switch

10 Empty memory slots are between the memory cards.

Compare the design of the CPU with the diagram at the start of this procedure. Note the differences in card positions.

To move the memory cards to fill the empty slots, perform the correct procedure in *Card Replacement Procedures*. Complete the procedure and return to this point.

Note: To achieve the desired result, move the least number of memory cards.

Go to step 26.

11 Empty slots are between the outer port card and the first memory card. Mixed memory on the CM must grow out from the processor with all empty slots on the ends of each plane.

Compare the configuration of the CPU with the diagram at the start of this procedure. Note the differences in card positions.

Move the memory cards in order to fill the empty slots. Perform the correct procedure in *Card Replacement Procedures*. Complete the procedure and return to this point.

Note: To achieve the desired result, move the least number of memory cards.

Go to step 26.

12 The memory cards mix together. Keep the NT9X14EA and NT9X14DB cards as continuous sets. Keep the NT9X14EA set nearest to the processor, followed by the NT9X14DB set.

Compare the configuration of the CPU with the diagram at the start of this procedure. Note the differences in card positions.

Move the memory cards so that they do not mix together and the NT9X14EA cards are nearest to the processor. Perform the correct procedure in *Card Replacement Procedures*. Complete the procedure and return to this point.

Note: Empty slots should not be present between the memory cards.

Go to step 26.

13 The NT9X14DB cards are nearest to the processor. Keep the NT9X14EA and NT9X14DB cards as continuous sets. Keep the NT9X14EA set nearest to the processor, followed by the NT9X14DB set.

Compare the configuration of the CPU with the diagram at the start of this procedure. Note the differences in card positions.

Move the memory cards so that the NT9X14EA cards are nearest to the processor. Perform the correct procedure in *Card Replacement Procedures*. Complete the procedure and return to this point.

Note: Empty slots should not be present between the memory cards.

Go to step 26.

14 Too many memory cards of a given memory type are on the plane.

Reduce number of memory cards of an indicated type to equal or be less than the indicated limit. Perform the correct procedure in *Card Replacement Procedures.* Complete the procedure and return to this point.

Go to step 26.

15 Not enough memory cards of a given type are on the plane.

Decrease the number of NT9X14DB cards on the plane to equal or be greater than the indicated limit. Perform the the correct procedure in *Card Replacement Procedures*. Complete the procedure and return to this point.

Go to step 26.

16 Not enough memory cards of a given type are on the plane. On the SN50MX platform, a minimum memory configuration has two NT9X14EA cards and four NT9X14DB cards. A minimum memory configuration also can have three NT9X14EA cards and two NT9X14DB cards.

Compare the configuration of the CPU with the diagram at the start of this procedure. Note the differences in card positions.

Increase the number of memory cards of the indicated type in order to conform to a supported configuration. Perform the correct procedure in *Card Replacement Procedures*. Complete the procedure and return to this point.

Note: This response is for the SN50MX platform.

Go to step 26.

17 Too many NT9X14DB cards are on the plane. A maximum number of NT9X14DB cards is on a CPU plane with a given number of NT9X14EA cards.

Compare the configuration of the CPU with the diagram at the start of this procedure. Note the differences in card positions.

Reduce the number of memory cards of an indicated type in order to equal or be less than the indicated limit. Perform the correct procedure in *Card Replacement Procedures.* Complete the procedure and return to this point.

Go to step 26.

18 Not enough NT9X14DB cards are on the plane. A minimum number of both NT9X14DB cards are on a CPU plane with a given number of NT9X14EA cards.

Compare the configuration of the CPU with the diagram at the start of this procedure. Note the differences in card positions.

Increase the number of NT9X14DB cards on the plane in order to equal or be less than the indicated limit. Perform the correct procedure in *Card Replacement Procedures*. Complete the procedure and return to this point.

Go to step 26.

19 The QRYMEM command expired and cancelled.

Go to step 28.

20 Software is not compatible - action cancelled.

Go to step 28.

21 The internal CPU or memory tables have defects.

Go to step 28.

22 The QRYMEM command found a PEC code that the command does not recognize in the internal software inventory tables.

If the information is correct, and the PEC described is present on the indicated plane, remove the card from the shelf. To replace the card with the correct card, perform the correct procedure in *Card Replacement Procedures*. Complete the procedure and return to this point.

Go to step 26.

23 The QRYMEM command found a memory card that the current configuration does not support.

Remove the card from the shelf. To replace the card with the correct card, perform the correct procedure in *Card Replacement Procedures*. Complete the procedure and return to this point.

Go to step 26.

24 The QRYMEM command found multiple memory types on a platform that does not support mixed memory.

To configure the memory design again with a single memory type, add or replace cards. Perform the correct card procedure in *Card Replacement Procedures*. Complete the procedure and return to this point.

Go to step 26.

25 An internal software error occurred.

Go to step 28.

At the MAP display

26 To check both CM planes for wrong memory configurations, type

>QRYMEM

and press the Enter key.

Example of SN MAP display

CM Sync Act CPU0 CPU1 Jam Memory CMMnt MC PMC 0 cpu 0 CM 0 Plane 0 Plane 1 1 1 0987654321 P | P 1234567890 ----..... MEMORY: >QRYMEM CPU 0 has a valid memory configuration CPU 1 has an valid memory configuration

CM MemCfg minor (end)

f the alarm	Do
cleared>	step 29
did not clear	step 28
is other than listed here	step 28

29 The procedure is complete.

CM MemCor major

Alarm display

ſ	 СМ	MS	IOD	Net	PM	CCS	Lns	Trks	Ext	APPL
	MemCor M	·								

Indication

At the MTC level of the MAP display, MemCor appears under the CM header of the alarm banner. The MemCor indicates a major alarm with an adjustable memory fault.

Meaning

A high number of adjustable memory faults occurred in a given time for a given memory module, memory card, or surface. You can expect a fixed rate of adjustable memory faults in normal switch operation. Excess of this rate causes MemCor to initiate. The excess is an indication of a damaged module, card, or surface.

Result

The mismatch handler isolated the hardware element with the fault. The mismatch handler also synchronized the switch again. The card(s) affected appear at the memory level of the MAP display with a mark of IsTb. The problem does not affect switch operation. The purpose of the alarm is to indicate that the hardware is the cause of a high number of mismatches. The alarm indicates that the hardware requires replacement.

Common procedures

There are no common procedures.

Action

This procedure contains a summary flowchart and a list of steps. Use the flowchart to review the procedure. Follow the steps to perform the procedure.

Summary of Clearing a CM MemCor major alarm



Clearing a CM MemCor major alarm

At the current location

- 1 Obtain a duplicate of the MFC111 log report generated at the same time as the MemCor alarm. Refer to *Log Report Reference Manual* for a description of this log.
- 2 Identify the value of the field <threshold_type>. This field has the value "module", "card", or "plane". The field indicates the suspect hardware element.

If the MFC111 log	Do
indicates a suspect module	step 3
indicates a suspect card	step 5
indicates a suspect plane	step 10

Note: A card has three memory modules. A memory module is on a card. A suspect memory module requires replacement of the card.

- **3** Consult the log report. Identify the type and location of the card that requires replacement. The card is an NT9X14DB or NT9X14EA.
- 4 Go to step 6.
- 5 Consult the log report. Identify the type and location of the card that requires replacement. The card is an NT9X14DB or NT9X14EA.
- 6 Refer to the correct procedure in *Card Replacement Procedures* and replace the card in question.

At the MAP display

7



CAUTION

Keeping the mismatch database up to date.

Keep the mismatch database up to date. Make sure that you inform the database of card changes through the SWAPHW command. If you do not keep the database up to date, the mismatch software cannot diagnose later mismatches correctly.

To notify the maintenance software system of the card replacement, type

>SWAPHW SLOT <shelf> <slot> <side>

and press the Enter key

where

shelf

is the shelf number of the replaced card

```
slot
```

is the slot number of the replaced card

```
side
```

is the side number of the replaced card

Example of a MAP response:

WARNING: You have indicated that the following circuit pack has been replaced. Please verify that the following list accurately reflects the location of the replaced circuit pack, and that the displayed PEC code matches the pack currently equipped in that slot: Site Flr RPos Bay_id shf Description Slot EqPEC

<site><flr><rpos><bay> <shf> <desc> <slot> <pec> <side>

Do you wish to continue? Please confirm ("YES", "Y", "NO", "N"):

8 To confirm, type

>YES

and press the Enter key. Example of a MAP response:

Card replacement has been recorded.

9 Go to step 14.

10 Identify from the log report the suspect plane.

Note: As a first attempt to fix the plane that has faults, replace the CPU card (NT9X10 or NT9X13). Also replace the terminator card (NT9X21).

Refer to the correct procedures in *Card Replacement Procedures*. Replace the CPU and the terminator cards on the plane in question.

11 Notify the next level of support that a MemCor alarm occurred for a plane. If you replaced the terminator and CPU cards on this plane, the next level of support can investigate the problem.

At the MAP

12



CAUTION

Keeping the mismatch database up to date. Keep the mismatch database up to date. Inform the database of card changes through the SWAPHW command. If you do not keep the database up to date, the mismatch software cannot diagnose later mismatches correctly.

To notify the maintenance software system of the card replacement, type

>SWAPHW plane

and press the ${\ensuremath{\mathsf{Enter}}}\,key$.

Example of a MAP response:

- WARNING: All "Memory Fault, Correctable" history will be deleted during the next manual sync attempt. The PLANE option of this command should be used only during manual recovery from a MFC Plane threshold being exceeded.
- **13** To confirm, type

>YES

and press the Enter key.

14 To begin to clear the MemCor alarm, type

>CLRALARM MemCor

and press the Enter key. Example of a MAP display:

The MemCor alarm will be cleared.
Do you wish to continue?
Please confirm ("YES", "Y", "NO",
"N"):

CM MemCor major (end)

- 15 To clear the MemCor alarm, type
 >Y
 and press the Enter key.
 Example of a MAP display:
 The MemCor alarm has been cleared.
 Note: A generated CM176 log indicates that the alarm cleared
- 16 The procedure is complete.
CM MemCor minor

Alarm display

ſ	СМ	MS	IOD	Net	PM	CCS	Lns	Trks	Ext	APPL
	MemCor	•	•	•	•	•	·	•	·	·
l	J									

Indication

At the MTC level of the MAP display, MemCor appears under the computing module (CM) header of the alarm banner. The MemCor indicates an adjustable minor alarm for the memory fault.

Meaning

A correctable memory fault occurred. The switch attempts to correct the fault. Correction of the fault clears the alarm. A memory fault alarm occurs if the fault remains.

Result

The problem does not affect subscriber service.

Common procedures

There are no common procedures.

Action

This procedure contains a summary flowchart and a list of steps. Use the flowchart to review the procedure. Follow the steps to perform the procedure.

CM MemCor minor (continued)

Summary of Clearing a CM MemCor minor alarm



CM MemCor minor (end)

Clearing a CM MemCor minor alarm

At the MAP terminal

1 To access the MTC level of the MAP display, type >MAPCI;MTC and press the Enter key. Example of a MAP display:

> MAPCI: MTC:

2 Wait for the MemCor minor alarm to clear.

If the alarm	Do
clears	step 6
does not clear within 6 h	step 4
changes to another alarm	step 3

- **3** Perform the correct CM alarm clearing procedure in this document.
- 4 The system failed to clear the memory faults. Obtain copies of the associated CM and MM log reports.
- 5 For additional help, contact the next level of support.
- 6 The procedure is complete.

CM MemFlt minor

Alarm display

ĺ	СМ	MS	IOD	Net	PM	CCS	Lns	Trks	Ext	APPL
	MemFlt	•	•		•	•		•		·

Indication

At the MTC level of the MAP display, MemFlt appears under the computing module (CM) header of the alarm banner. MemFlt indicates a correctable major alarm for the memory fault.

Meaning

In a given time, a memory module, memory card, or plane has correctable memory faults which exceed a fixed number. You can expect a fixed rate of correctable memory faults in normal switch operation. If the number of faults exceeds the fixed rate of faults, MemFlt appears. The exceeded rate is also an indication of a module, card, or plane that has faults.

Result

The mismatch handler isolated the hardware element that has faults and synchronized the switch again. The card(s) affected are marked FLT at the memory level of the MAP display. The problem does not affect switch operation. The alarm indicates that the hardware is the cause of a high number of mismatches. The alarm also indicates the hardware requires replacement.

Common procedures

There are no common procedures.

Action

This procedure contains a summary flowchart and a list of steps. Use the flowchart to review the procedure. Follow the steps to perform the procedure.

CM MemFlt minor (continued)

Summary of Clearing a CM MemFlt minor alarm



DMS-100 Family NA100 Alarm Clearing and Perform. Monitoring Proc. Volume 1 of 4 LET0015 and up

CM MemFlt minor (continued)

Clearing a CM MemFlt minor alarm

At your current location

- 1 Obtain a duplicate of the MFC111 log report generated when the MemFlt alarm occurred. Refer to *Log Report Reference Manual* for a description of this log.
- 2 In the MFC111 log, identify the value of the field <threshold_type>. This field has the value "module", "card", or "plane" and indicates the suspect hardware elements.

If the MFC111 log	Do
indicates a suspect module	step 3
indicates a suspect card	step 5
indicates a suspect plane	step 10

Note: Three memory modules are on a card. A suspect memory module indicates that the card requires replacement.

- **3** Identify from the log report the type and location of the card that requires replacement. The card is an NT9X14DB or NT9X14EA.
- 4 Go to step 6.
- 5 Identify from the log report the type and location of the card that requires replacement. The card is an NT9X14DB or NT9X14EA.
- 6 Refer to the correct procedure in *Card Replacement Procedures*. Replace the suspect card.

lf	Do
The SWAPHW command has not been performed	step 7
The SWAPHW command has already been performed	step 14

CM MemFlt minor (continued)

At the MAP display

7



WARNING Keep the mismatch database up to date.

Keep the mismatch database up to date. Make sure that you inform the database of card changes through the SWAPHW command. Make sure the database is up to date so the mismatch software can diagnose later mismatches.

To notify the maintenance software system of the card replacement, type

>SWAPHW CARD <shelf> <slot> <side>

and press the Enter key.

where

shelf

is the shelf number of the card that you replaced

```
slot
```

is the slot number of the card that you replaced

```
side
```

is the side number of the card that you replaced

Example of a MAP response:

You have indicated that the following circuit WARNING: pack has been replaced. Please verify that the following list accurately reflects the location of the replaced circuit pack, and that the displayed PEC code matches the pack currently equipped in that slot: Flr RPos Bay_id shf Description Slot EqPEC Site <site><flr><rpos><bay> <shf> <desc> <slot> <pec> <side> Do you wish to continue? Please confirm ("YES", "Y", "NO", "N"): To confirm, type >YES and press the Enter key. Example of a MAP response:

Card replacement has been recorded.

9 Go to step 14

8

CM MemFlt minor (end)

10 Identify the suspect plane from the log report.

Note: As a first attempt to fix the plane that has faults, replace the CPU card (NT9X10 or NT9X13) and the terminator card (NT9X21).

Refer to the correct procedures in *Card Replacement Procedures* Replace the CPU and the terminator cards on the suspect plane.

11 Notify the next level of support that a MemFlt alarm occurred for the plane. A recent replacement of the terminator and CPU cards means that the next level of support can investigate the problem.

At the MAP

12



WARNING

Keep the mismatch database up to date. Keep the mismatch database up to date. Make sure that you inform the database of card changes through the SWAPHW command. Make sure the database is up to date so the mismatch software can diagnose later mismatches.

To notify the maintenance software system of the card replacement, type

>SWAPHW plane

and press the Enter key.

Example of a MAP response:

- WARNING: All "Memory Fault, Correctable" history will be deleted during the next manual sync attempt. The PLANE option of this command should be used only during manual recovery from a MFC Plane threshold being exceeded.
- **13** To confirm, type

>YES

and press the Enter key.

14 You have completed the procedure.

CM MemLim minor

Alarm display

ſ	СМ	MS	IOD	Net	PM	CCS	Lns	Trks	Ext	APPL
	MemLim M		·	•					·	

Indication

At the CMMNT level of the MAP display, MemLim appears under the computing module (CM) header of the alarm banner. The MemLim indicates a minor alarm for the memory limit.

Meaning

The memory allocation to the operating system reached approximately 90% of the limit for the given platform.

Result

Problems with operations can be present.

Common procedures

There are no common procedures.

Action

This procedure contains a summary flowchart and a list of steps. Use the flowchart to review the procedure. Follow the steps to perform the procedure.

CM MemLim minor (continued)

Summary of Clearing a CM MemLim minor alarm



CM MemLim minor (end)

Clearing a CM MemLim minor alarm

At the MAP display

- 1 Obtain all recent CM logs.
- 2 For additional help, contact the next level of support.
- **3** The procedure is complete

CM MMnoSy major

Alarm display

ĺ	СМ	MS	IOD	Net	PM	ccs	Lns	Trks	Ext	APPL
	MMno *M*	oSY					•		•	

Indication

At the CM level of the MAP display, MMnoSy appears under the CM header of the alarm banner. The MMnoSy indicates that the switch is out of synchronization because of a mismatch.

Meaning

The switch is out of sync as a result of one of the four following conditions:

- The mismatch handler finds a hard fault. The system does not attempt to synchronize again and produces log MM111.
- System recovery does not occur for one of the following reasons:
 - mate under test
 - synchronization lost during test
 - mismatch threshold exceeded
 - active CPU cannot stop activity
 - software error
- An attempt at system recovery failed.
- Some external condition caused the loss of synchronization. Examples of external conditions are:
 - power supply problems, such as an unexpected loss of A-feed power or B-feed power
 - static discharge

The two CPUs of the computing module (CM) normally operate in the synchronous matched mode (in-synchronization). The out-of-sync condition indicates that manual recovery may be required.

Impact

Subscriber service is not affected. In most cases, the mismatch handler is able to clear the fault automatically and recover full functionality of the faulty CPU.

In some cases, the cause of the fault is not known and analysis of associated log reports is required to determine the cause.

Action

This procedure contains a summary flowchart and a list of steps. Use the flowchart to review the procedure. Follow the steps to perform the procedure.

CM MMnoSy

major (continued)

Summary of Clearing a CM MMnoSy major alarm



Clearing a CM MMnoSy major alarm,



Possible compromise of system integrity

Synchronization was dropped due to a mismatch event. Analyze mismatch logs properly, and take all appropriate recovery actions before continuing with the synchronization attempt. Attempts to regain synchronization when unresolved mismatch-causing conditions exist can compromise system integrity.

At the MAP terminal

- 1 To access the CM level of the MAP display, type
 - >MAPCI;MTC;CM

and press the Enter key.

Example of MAP display:

СМ	Sync	Act	CPU0	CPU1	Jam	Memory	CMMnt	MC	PMC
0	no	CPU1						•	

2 Determine the cause of the alarm.

If the cause of the alarm	Do	
is known	step 16	
is not known	step 3	

3 Check for the type of MM log and recovery log produced after the mismatch occurred.

If the logs	Do
produced are MM100 and MM111	step 4
produced are MM100 and MM112	step 19
produced are MM100 and MM113	step 19
produced are MM102 and MM111	step 23

4 Review the MM100 fault and MM111 recovery logs for results of the mismatch analysis.

Example of an MM100 log report

MM100 Mismatch Feb14 03:44:36.673 Mismatch number 17, Activity: Start: CPU 0, Final: CPU 0, Mismatch result: No hardware fault found Mismatch condition: Mismatch during sync transition System recovery action: Test mate, re-sync undertaken CPU 0 CPU 1 Data is valid Data is valid Module Entry: IOABP SSTI: #052F CMCHKPR SSTI: #022B AHR Value: 0B0107A4 01471240

 AHR Value.

 AHR Data:
 A5A5A5A5

 534Corto

 MAU AHR:
 000E07A0

 00000000

 MCR:
 00000000

 Owner #1C23,#0000:

 A0-A6 (00042A00,01471244) (000429C0,00044570) (FFFF0000,00DB2D34) (00042B64,016CC9D8) (01F9E658,016CE0E8) (00042A20,01D1E524) (000300C0,0147FFFE) (00030100,0147036E) (00000007,534C5F43) D0-D7 (000000AD,9D8241CB) (0000276C,01470000) (78F0FFF4,00000000) (00030100,00000000) (0000000C,0000000) (FFFF0000,FFFF0000) PC: (0B011254,0B1921EC) USP: (035478C4,01D1E508) SR: (2410,000A) ISP: (00042A18,00042B6C) MSP: (0040E7D0,0040E7D0) ICache:(0001,0001) FTR: (0001,0000) MM_Ctrl:(086C,081C) Timer: (3c2B,5967)

 MAU_ctrl: (00AD,00AD)
 MAU_err:(0080,0080)
 Clk_stat: (0006,0004)

 FC: (0006,0001)
 IRM: (0000,0000)
 ProcStat: (2A00,2E00)

 SRam_Err: (FFC0,FFC0)
 PerInt:(0055,0055)
 Acc Prot: (00CF,00CF)

 Mate_FIR: (0000,0001)
 MateFIR_OK: (y,y)
 MCR_STAT: (0,0)

 Stack Dump
 Interrupt
 Stack Dump

 FFFF0000
 0B1953B2
 0B0107A6
 FDFDFDFD

 019E0000
 000101F6
 0004000C
 FDFDFDFD

 01050002
 00003C00
 00042B20
 FDFDFDFD

 00010000
 00000400
 0D752322
 FDFDFDFD

 00000007
 01471000
 000002B0
 FDFDFDFD

 0050EB58
 00690000
 00002B0
 FDFDFDFD
 User Stack Dump MTC Info: 000D0550 00000000 020C1550 001010D0 20000000 00000000 00010000 00000000 00000000 0000000 00000000 00000000

Example of an MM100 log report (continued)

```
Traceback:

0B011254=SYSDEFS.FM07:DISABLE_+#0000

0B1921EC=CMMEMORY.AG04:CHECKSUM+#0008

0D752322=TRAPDEFS.FJ03:TRAPHAND+#0162

0B1A2282=CMMEMORY.AG04:SET_CHEC+#013E

0B016C7E=INTSYS.BW04:FIR_INTE+#00D6

0B19525C=CMMEMORY.AG04:DO_CHECKS+#0098

0B049B3C=MODULES.DP02:INITIALIZ+#0014

0B323876=CMCHKPR.AQ01:CHECKSUM+#00FA

0B03D78Eis valtxt=PROCS.EY01:LIVEANDD+#0012

0B049B3C=MODULES.DP02:INITIALIZ+#0014
```

0B03D78E=PROCS.EY01:LIVEANDD+#0012

Example of an MM111 recovery log report

MM111 SEP15 07:09:10 4400 INFO MM RECOVERY Mismatch 9, CM 0, Faulty CPU 1 System recovery complete: CPUs out-of-SYNC Manual action required to resynchronize the CPUs Suspect: Site Flr RPos Bay-id Shf Description Slot EqPEC HOST 02 A02 DPCC:00 13 CPU: 00:1:0 20 9X13BC FRNT HOST 02 A02 DPCC:00 13 CPU: 00:1:0 19 9X13BC FRNT

If the recovery action		Do
is system recovery CPUs out of SYNC	complete,	step 5

```
anything else
```

- step 25
- 5 Record the location, description, slot number, shelf number, product engineering code (PEC), and PEC suffix, of the first card on the list.
- 6 Perform the correct procedure in *Card Replacement procedures*. Complete the procedure and go to step 10.
- 7 Determine if all cards listed in the MM111 log have been replaced.

If all cards on the list have	Do
been replaced	step 25
not been replaced	step 8

- 8 Record the location, description, slot number, shelf number, and product engineering code (PEC), including the suffix, of the next card on the list.
- **9** Perform the correct procedure in *Card Replacement procedures*. When you have completed the procedure, go to step 10.

CM MMnoSy

major (continued)

10 Choose the next step based on the type of CM that you are working on. If you are working on Do an SR70 CM step 13 anything else step 11 11 To record the card change in the mismatch history database, type >SWAPHW CARD shelf_no slot_no side_no and press the Enter key. where shelf no is the number of the shelf (0 or 1) slot no is the number of the slot (1 to 38) side_no is the side of the computing module (front or back) Example of MAP response: WARNING: You have indicated that the following circuit pack has been replaced. Please verify that this accurately reflects which circuit pack has been changed, and that the displayed PEC code matches what is currently equipped in that slot: Site Flr RPOs Shf Description Slot EQPEC A00 DPCC 0 18 CM 0;0;0 19 9X13BC HOST 00 Do you wish to continue? Please confirm ("YES", "Y", "NO" "N"): YES ("YES", "Y") if the displayed card = replaced card 12 To confirm the command, type >YES and press the Enter key. 13 To clear the MMnoSy alarm, type >CLRALARM MMNOSY and press the Enter key. Example of MAP response: The MMnoSy alarm will be cleared. Do you wish to continue? Please confirm ("YES", "Y", "NO" "N)

14 To confirm the command, type

>YES

and press the Enter key.

Example of MAP response:

The MMnoSync alarm has been cleared

If the system	Do
confirms the command	step 15
does not confirm the command	step 25

15 Synchronize the CM by typing

>SYNC

and pressing the Enter key.

Example of a MAP response:

The following cards have been reported as being replaced since the last drop of synchronization. Verify that these cards truly reflect all hardware which has been replaced before before continuing with the synchronization attempt.

PLANE replacement has NOT been recorded.

Site Flr RPos Bay-id Shf Description Slot EqPEC HOST 01 F02 DPCC:00 00 CPU :00:0:0 19 9X10AA FRNT HOST 01 F02 DPCC:00 01 PMC00:00:0:1 18 9X12AD FRNT Please confirm ("YES", "Y", "NO" "N")

If the response indicates	Do		
synchronization was successful	step 26		
anything else	step 7		

16 To clear the *MMnoSy* alarm, type

>CLRALARM MMNOSY

and press the Enter key.

Example of MAP response:

The MMnoSy alarm will be cleared. Do you wish to continue? Please confirm ("YES", "Y", "NO" "N)

17 To confirm the command, type

>YES

CM MMnoSy

major (continued)

and press the Enter key.

Example of MAP response:

The MMnoSync alarm has been cleared

If the system	Do
confirms the command	step 18
does not confirm the command	step 25

18 Synchronize the CM by typing

>SYNC

and pressing the Enter key.

Example of a MAP response:

The following cards have been reported as being replaced since the last drop of synchronization. Verify that these cards truly reflect all hardware which has been replaced before before continuing with the synchronization attempt.

PLANE replacement has NOT been recorded.

Site Flr RPos Bay-id Shf Description Slot EqPEC HOST 01 F02 DPCC:00 00 CPU :00:0:0 19 9X10AA FRNT HOST 01 F02 DPCC:00 01 PMC00:00:0:1 18 9X12AD FRNT Please confirm ("YES", "Y", "NO" "N")

If the response indicates	Do
	20
synchronization was successful	step 26
anything else	step 25
To retrieve the MM112 and MM113 m	ismatch logs, type
>LOGUTIL	
and press the Enter key.	
Print all MM logs.	
If the software load is	Do
BCS34 or earlier	step 22

19

20

CM MMnoSy major (end)

- Retrieve the MMINFO associated with the MM logs by typing
 MMINFO ALL DECODE
 and pressing the Enter key.
 Go to step 24.

 Print all MMINFO logs.
 Go to step 24.
 The MMnoSy alarm is associated with matcher transient mismatches. Print all MM logs.
 Send all log reports to the next level of support and proceed as directed.
- **25** For additional help, contact the next level of support.
- 26 The procedure is complete.

CM MMsync major

Alarm display

ĺ	СМ	MS	IOD	Net	PM	CCS	Lns	Trks	Ext	APPL
	MMSync M	·								

Indication

At the MTC level of the MAP display, MMSync appears under the CM header of the alarm banner. The MMSync indicates a major alarm for a fault mismatch.

Meaning

A fault mismatch occurred. An adjustable memory fault did not occur. Synchronization of the switch occurred again. In most occurrences, a hardware fault causes the mismatch. The next level of support must analyze the mismatch history.

A Series 60 burst mode write operation can cause a type of mismatch referred to as a matcher transient mismatch (MTM). The MMsync alarm threshold for MTMs is different than the threshold for other types of mismatches. For MTMs, the default threshold is 30 per da8y. This threshold can be reset to any value in the range of 10 to 50 using the MMSYNC SET command.

Result

The problem does not affect switch operation. The switch continues to operate in the synchronous mode.

Common procedures

There are no common procedures.

Action

This procedure contains a summary flowchart and a list of steps. Use the flowchart to review the procedure. Follow the steps to perform the procedure.

CM MMsync major (continued)

Summary of Clearing a CM MMsync major alarm



CM MMsync major (end)

Clearing a CM MMsync major alarm

At your current location

1 Notify the next level of support to perform direction analysis on the mismatch logs.

At the MAP display

2 To access the CM level of the MAP display, type

>MAPCI;MTC;CM

and press the Enter key. Example of MAP display:

CMSyncActCPU0CPU1JamMemoryCMMntMCPMC0noCPU1........

3 To begin to clear the MMsync alarm, type

>CLRALARM MMsync

and press the Enter key. Example of a MAP display:

The MMsync alarm will be cleared.
Do you wish to continue?
Please confirm ("YES", "Y", "NO",
"N"):

4 To clear the MMsync alarm, type

>Y

and press the Enter key. Example of a MAP display:

The MMsync alarm has been cleared.

Note: A generated CM176 log indicates that the alarm cleared.

5 The procedure is complete.

CM NoBrst minor

Alarm display

ſ	 СМ	MS	IOD	Net	PM	CCS	Lns	Trks	Ext	APPL
	NoBrst	•	·	•	·	•	•	•	•	•
l										

Indication

At the MTC level of the MAP display, NoBrst appears under the computing module (CM) header of the alarm banner. At the CM level of the MAP display, noB appears in status fields for both central processing units (CPUs).

Meaning

The system disabled burst mode operation.

This alarm occurs for one of the following reasons:

- Synchronization of the (CM). The system always disables burst mode during the part of synchronization when the CM operates in memory update mode
- Synchronization of the CM by the command SYNC NOBURST
- Synchronization of the CM with the burst mode enabled on the active CPU. The CM does not have support on the inactive CPU

Note: The system may raise a NoBrst alarm during a recovery of a mismatch or a memory fault correctable (MFC) mismatch. The alarm clears when the recovery completes. Do not take action unless the alarm remains set after the recovery is complete.

Result

During periods of high call processing activity, call-start failures can occur.

Common procedures

There are no common procedures.

Action

This procedure contains a summary flowchart and a list of steps. Use the flowchart to review the procedure. Follow the steps to perform the procedure.

Summary of Clearing a CM NoBrst mnor alarm



Clearing a CM NoBrst minor alarm

At the MAP terminal

4

1 To access the CM level of the MAP display, type

>MAPCI;MTC;CM

and press the Enter key.

Example of a MAP display:

СМ	Sync	Act	CPU0	CPU1	Jam	Memory	CMMnt	MC	PMC
0	no	cpu 1	ut		yes				

2 Determine if the CM is in synchronization .

If the CM is in synchronization, the following status indicators appear in the alarm banner. The status indicators disappear as synchronization progresses:

- under test (ut) under the CPU0 or CPU1 header
- InStp under the CM header
- ut under the Memory header

If the CM	Do
is synchronizing	step 3
is not synchronizing	step 5

3 Wait until synchronization is complete. Determine if synchronization was successful.

Note: If synchronization is complete, a dot or EccOn appears under the Sync header. The response synchronization successful appears on the right of the command menu.

If the response	Do
indicates synchronization was successful	step 4
indicates synchronization failed	step 18
is other than listed here	step 18
Determine if the CM NoBrst minor ala	rm cleared.
If the alarm	Do
cleared	step 19
did not clear	step 6

DMS-100 Family NA100 Alarm Clearing and Perform. Monitoring Proc. Volume 1 of 4 LET0015 and up

5 Determine if the CPUs are in sync.

Note: A dot or EccOn under the Sync header means that the CPUs are in sync. The word no means that the CPUs are not in sync.

Example of a MAP display:

CM 0	Sync	Act cpu 1	CPU0 noB	CPU1 noB	Jam yes	Memory	CMMnt	MC ·	PMC	
lf t	the CPI	Js			I	Do				
ar	e in syı	nc			5	step 6				
are	e not in	n sync			1	step 13				

6 Determine if the inactive CPU jammed.

Note: The word yes under the Jam header means that the CPU jammed. The area is blank if the CPU did not jam.

If the inactive CPU	Do
jammed	step 9
did not jam	step 7

At the CM reset terminal for the inactive CPU

7



WARNING

Possible loss of service

Make sure that you do not jam the active CPU. If you jam the active CPU while the CM is not in sync, a cold restart occurs. The word Act on the top banner of the display identifies the reset terminal for the active CPU.

To jam the inactive CPU, type >\JAM and press the Enter key. *RTIF response:* PLEASE CONFIRM: (YES/NO) To confirm the command, type >YES

>YES

and press the Enter key.

8

ат тпе 9	To drop synchronization type								
9									
	To drop synchronization, type								
	>DPSINC								
	If the response	Do							
	is About to drop sync with CPU active. The	n step 10							
	inactive CPU is JAMMED.								
	Do you want to continue.	11							
	or "N"):	,							
	is other than listed here	step 18							
10	To confirm the command, type								
	>YES								
	and press the Enter key.								
	Example of a MAP response:								
	Maintenance action submitted. Running in simplex mode with	active CPU n.							
At the	CM reset terminal for the inactive CP	U							
11	Wait until A1 flashes on the reset termi	nal for the inactive CPU.							
	Note: Wait 5 min for A1 to flash.								
	If A1	Do							
	flashes	step 12							
		step 18							
	does not flash	To release the jam on the inactive CPU, type							
12	does not flash To release the jam on the inactive CPU	l, type							
12	does not flash To release the jam on the inactive CPU	l, type							
12	does not flash To release the jam on the inactive CPU >\RELEASE JAM and press the Enter key.	l, type							

To synchronize the CM, type		
and press the Enter key.		
Example of a MAP response:		
Maintenance action submitted Synchronization successful.	ł.	
If the response		Do
indicates the SYNC command successful	was	step 15
indicates the CPUs are not in sync result of a problem with mismate Analyze the mismatch logs before synchronize the logs again. Do you wish to continue? Please Confirm ("YES", "Y", or "I "N") (SN/ SNSE series 70 only)	as a ches. you NO",	step 14
is other than listed here		step 18
(SN/ SNSE series 70 only) To deny the action, type >NO and press the Enter key.		
Go to step18.		
Determine if the CM NoBrst minor alar	m clea	ared.
If the alarm	Do	
cleared	step	19
did not clear	step	16
Record the product engineering code (both CM planes.	PEC) :	suffixes of the memory cards on
<i>Note 1:</i> For DMS SuperNode, men These memory cards are in slots 7F in CM 1.	nory ca to 16	ards have an NT9X14 PEC. F in CM 0 and slots 23F to 32F
<i>Note 2:</i> For DMS SuperNode SE, n These memory cards are in slots 12 in CM 1	nemor F to 16	y cards have an NT9X14 PEC. 6F in CM 0 and slots 23F to 27F

CM NoBrst minor (end)

Note 3: Locate the PEC and suffix at the top of the card faceplate.

Record the release code of the processor cards in both CM planes.

Note 1: Processor cards have an NT9X10 PEC. These processor cards are in slot 19F in CM 0 and slot 20F in CM 1.

Note 2: Locate the release code on the bottom of the card faceplate.

- **18** For additional help, contact the next level of support.
- **19** The procedure is complete.

17

CM NoOvr minor

Alarm display

ĺ	СМ	MS	IOD	Net	PM	CCS	Lns	Trks	Ext	APPL
	NoOvr	•	•	•	•	•	•	•	•	•
l										

Indication

At the MTC level of the MAP display, NoOvr appears under the computing module (CM) header of the alarm banner. The NoOvr indicates a no handshake-override minor alarm.

Meaning

The switch runs in sync without handshake-override capability.

Result

The central processing unit (CPU) runs 3% to 5% slower. A minor effect on call processing can occur during a period of high traffic.

Common procedures

There are no common procedures.

Action

This procedure contains a summary flowchart and a list of steps. Use the flowchart to review the procedure. Follow the steps to perform the procedure.

Summary of Clearing a CM NoOvr minor alarm



Clearing a CM NoOvr minor alarm

At the MAP terminal

1 To access the CM level of the MAP display, type

>MAPCI;MTC;CM

and press the Enter key.

Example of a MAP display:

CM Sync Act CPU0 CPU1 Jam Memory CMMnt MC PMC 0 . CPU 1

2 Determine if the inactive CPU jammed.

 $\it Note:$ The word yes under the Jam header means that the CPU jammed. The area is blank if the CPU did not jam.

If the inactive CPU	Do
jammed	step 5
did not jam	step 3

At the CM reset terminal for the inactive CPU

3 To jam the inactive CPU, type >\JAM and press the Enter key. *RTIF response:*

Please confirm: (YES/NO)

4 To confirm the command, type

>YES

and press the Enter key.

RTIF response:

JAM DONE

	To drop synchronization, type					
	>DPSYNC					
	and press the Enter key.					
	If the response	Do				
	is About to drop sync withCPU n a tive.The	ас- step б				
	inactive CPU is JAMMED. Do you want to continue? Please confirm ("YES", "Y", "NO or "N"):	D",				
	is other than listed here	step 20				
	To confirm the command, type					
	>YES					
	and press the Enter key.					
t th	Wait until A1 flashes on the inactive CP Wait until A1 flashes on the reset termine Note: Wait 5 min for A1 to flash.	U inal for the inactive CPU.				
t th	Wait until A1 flashes on the reset terminal for the inactive CP Wait until A1 flashes on the reset terminal Note: Wait 5 min for A1 to flash.	inal for the inactive CPU.				
t th	Wait until A1 flashes on the reset terminal for the inactive CP Wait until A1 flashes on the reset terminal Note: Wait 5 min for A1 to flash.	PU inal for the inactive CPU. Do step 8				
t th	Wait until A1 flashes on the reset terminal for the inactive CP Wait until A1 flashes on the reset terminal Note: Wait 5 min for A1 to flash.	PU inal for the inactive CPU. Do step 8 step 20				
t th	Wait until A1 flashes on the reset terminal for the inactive CP Wait until A1 flashes on the reset terminal Note: Wait 5 min for A1 to flash. If A1 flashes does not flash To release the jam on the inactive CPL	PU inal for the inactive CPU. Do step 8 step 20 J, type				
t th	To release the jam on the inactive CPL Note: Wait 5 min for A1 to flash. If A1 flashes does not flash	PU inal for the inactive CPU. Do step 8 step 20 J, type				
t th	The CM reset terminal for the inactive CP Wait until A1 flashes on the reset terminal Note: Wait 5 min for A1 to flash. If A1 flashes does not flash To release the jam on the inactive CPL >\RELEASE JAM and press the Enter key.	PU inal for the inactive CPU. Do step 8 step 20 J, type				
t th	The CM reset terminal for the inactive CP Wait until A1 flashes on the reset terminal Note: Wait 5 min for A1 to flash. If A1 flashes does not flash To release the jam on the inactive CPU >\RELEASE JAM and press the Enter key. RTIF response:	PU inal for the inactive CPU. Do step 8 step 20 J, type				
t th	To release the jam on the inactive CPL >\RELEASE JAM and press the Enter key. JAM RELEASE DONE	PU inal for the inactive CPU. Do step 8 step 20 J, type				
t th	To release the jam on the inactive CPL >\ RELEASE JAM and press the Enter key. <i>RTIF response:</i> JAM RELEASE DONE	PU inal for the inactive CPU. Do step 8 step 20 J, type				
t th	To release the jam on the inactive CPU >\RELEASE JAM and press the Enter key. RTIF response: JAM RELEASE DONE	PU inal for the inactive CPU. Do step 8 step 20 J, type				
t th	To release the jam on the inactive CPL >\RELEASE JAM and press the Enter key. RTIF response: JAM RELEASE DONE De MAP terminal To synchronize the CM, type >SYNC	PU inal for the inactive CPU. Do step 8 step 20 J, type				
t th	The CM reset terminal for the inactive CP Wait until A1 flashes on the reset terminal Note: Wait 5 min for A1 to flash. If A1 flashes does not flash To release the jam on the inactive CPL >\RELEASE JAM and press the Enter key. RTIF response: JAM RELEASE DONE To synchronize the CM, type >SYNC and press the Enter key.	PU inal for the inactive CPU. Do step 8 step 20 J, type				

If the response	Do
indicates the SYNC command was successful	step 11
indicates the CPUs are not in sync as a result of a problem with mismatches. Analyze the mismatch logs before you synchronize the logs again. Do you wish to continue? Please Confirm("YES", "Y", or "NO", "N") (SN/ SNSE series 70 only)	step10
Is other than listed here (SN/ SNSE series 70 only) To deny the action, type	step 20
Is other than listed here (SN/ SNSE series 70 only) To deny the action, type >NO and press the Enter key. Go to step 20. To access the memory level of the MAP disp >MEMORY and press the Enter key.	step 20
Is other than listed here (SN/ SNSE series 70 only) To deny the action, type >NO and press the Enter key. Go to step 20. To access the memory level of the MAP disp >MEMORY and press the Enter key. <i>Example of a MAP display for DMS SuperNo</i>	step 20 Ilay, type
Is other than listed here (SN/ SNSE series 70 only) To deny the action, type >NO and press the Enter key. Go to step 20. To access the memory level of the MAP disp >MEMORY and press the Enter key. Example of a MAP display for DMS SuperNo CM Sync Act CPU0 CPU1 Jam Mer 0 . cpu 1	step 20 Nay, type Dode: nory CMMnt MC PMC

Example of DMS SuperNode SE MAP display:

10

11
CM NoOvr minor (continued)

CM Sync Act CPU0 CPU1 0 . cpu 1	Jam Memory CMMnt MC PMC					
CM 0 Plane 0 C C Plan 54321 P P 1234 U U	ne 1 45					
MEMORY:						
To match the memories of the CP >MATCH ALL and press the Enter key. Example of a MAP response: Matching memory between C	PUs, type CPUs in sync.					
If the response	Do					
is Match ok	step 13					
is other than listed here	step 20					
To access the command interpret >QUIT ALL and press the Enter key. To access the log utility, type >LOGUTIL and press the Enter key.	er (CI) level of the MAP display, type					
To determine if the system genera match, type	ated an MM100 log report by the memory					
>OPEN MM 100						
and press the Enter key.						
<i>Note:</i> If the system did not ge empty.	nerate a log report, the response is Log					
If the response	Do					
is Log empty	step 16					
is other than listed here	step 20					
	step 20					

CM NoOvr minor (end)

To determine if the system genera match, type	ated an MM101 log report by the memo				
>OPEN MM 101					
and press the Enter key.					
If the response	Do				
is Log empty	step 17				
is other than listed here	step 20				
To quit the log utility, type					
>QUIT					
and press the Enter key.					
Determine if the NoOvr minor ala	rm cleared.				
If the alarm	Do				
	step 21				
cleared	step 21				
cleared changed to another alarm	step 21 step 19				

20 For additional help, contact the next level of support.

21 The procedure is complete.

CM NoSYNC major

Alarm display

ĺ	 СМ	MS	IOD	Net	PM	CCS	Lns	Trks	Ext	APPL
	NoSYNC M									

Indication

At the MTC level of the MAP display, NoSYNC appears under the CM header of the alarm banner. The NoSYNC indicates a major alarm for no synchronization.

Meaning

Synchronization of the pair of central processing units (CPUs) on the computing module (CM) does not occur. In most occurrences, operating company personnel drop synchronization. If synchronization drops automatically, a more important alarm can bypass the NoSYNC alarm.

Result

The problem does not affect subscriber service. A fault can occur on the active side and the switch can attempt to switch activity between the CPUs. If a fault occurs and the switch affects activity between the CPUs, a cold restart occurs. Calls in progress terminate.

Common procedures

There are no common procedures.

Action

This procedure contains a summary flowchart and a list of steps. Use the flowchart to review the procedure. Follow the steps to perform the procedure.

CM NoSYNC major (continued)

Summary of Clearing a CM NoSYNC major alarm



CM NoSYNC major (continued)

Clearing a CM NoSYNC major alarm

At the MAP terminal

- To access the CM level of the MAP display, type
 - >MAPCI;MTC;CM
 - and press the Enter key.

Example of a MAP display:

CM Sync Act CPU0 CPU1 Jam Memory CMMnt MC PMC 0 no CPU1

2



WARNING

Possible loss of service

If the CM is in SPLIT mode do not try to synchronize. Synchronization of the CM causes the CM to drop the split mode and return to sync. This synchronization disrupts all other activity that occurs at the time.

Determine if the CM runs in split mode.

Note: If the CM runs in split mode, the word split appears under the Sync header of the MAP display.

Example of a MAP display:

CM Sync Act CPU0 CPU1 Jam Memory CMMnt MC PMC 0 split CPU1

If the CM	Do
runs in split mode	step 12
does not run in split mode	step 3

3 Determine if the CM is the subject of tests.

If the CM is the subject of tests, ut appears under the following MAP display headers:

- CPU0
- CPU1
- Memory
- MC

4

5

6

7

8

CM NoSYNC major (continued)

Example of a MAP display:

If the CM	Do	
is the subject of tests	step 4	
is not the subject of tests	step 5	
Complete the tests. Continue the	procedure.	
<i>Note:</i> The removal of the ut st complete.	atus indicator occurs when the tests	
Determine the type of fault that ca	auses the alarm.	
<i>Note:</i> The fault indicator appe	ars under the Memory and MC heade	
the MAP display.		
Example of a WAF display.		
CM Sync Act CPU0 CPU1	Jam Memory CMMnt MC PMC	
0 no CPU 1 .	flt	
0 no CPU 1 .	flt Do	
0 no CPU 1 . If . (dot) appears under the Me ory and MC headers	flt ^I Do em- step 8	
0 no CPU 1 . If . (dot) appears under the Me ory and MC headers flt appears under the Memo- header.	flt . . Do em- step 8 ory step 6	
0 no CPU 1 . If . (dot) appears under the Mere ory and MC headers flt appears under the Mere header. tbl appears under the Mere header	flt . Do em- step 8 ory step 6 MC step 7	
0 no CPU 1 . If . (dot) appears under the Me ory and MC headers flt appears under the Memory header. tbl appears under the Memory header Memory faults cause the CM to drow Clearing a CM MemFlt minor alar procedure. Go to step 13.	flt . . Do . . em- step 8 . . ory step 6 . . MC step 7 . . op synchronization. Perform the process . on synchronization. Perform the process <t< td=""></t<>	
0 no CPU 1 . If . (dot) appears under the Me ory and MC headers flt appears under the Memor header. tbl appears under the Memor header Memory faults cause the CM to drop Clearing a CM MemFlt minor alar procedure. Go to step 13. MC faults cause the CM to drop so Clearing a CM MC Tbl minor alarm procedure. Go to step 13.	flt . . Do . . . em- step 8 . . . ory step 6 . <th .<="" <="" td=""></th>	

CM NoSYNC major (continued)

СМ	Sync	Act	CPU0	CPU1	Jam	Memory	r CMMnt	MC	PMC	
0	no	CPU 1	•		yes	з.			•	
lf	the ina	ctive Cl	PU			Do				

jammed	step 9
did not jam	step 10

At the CM reset terminal for the inactive CPU

- 9 To release the jam on the inactive CPU, type
 - >RELEASE JAM and press the Enter key.

RTIF response:

JAM RELEASE DONE

At the MAP terminal

11

10 To synchronize the CM , type >SYNC

and press the Enter key.

Example of a MAP response:

Maintenance action submitted. Synchronization successful.

If the response	Do
indicates the SYNC command was successful	step 13
indicates the CPUs are out of sync as a result of a problem with mismatches. Analyze the mismatch logs before you synchronize the logs again. Do you wish to continue? Please confirm ("YES", "Y", or "NO", "N") (SN/SNSE Series 70 only)	step 11
is other than listed here	step 12
SN/SNSE Series 70 only)	
o deny the action, type	
NO	

CM NoSYNC major (end)

and press the Enter key.

Go to step12.

- **12** For additional help, contact the next level of support to determine why the CM runs in split mode.
- **13** The procedure is complete.

CM NoTOD critical

Alarm display

ĺ	СМ	MS	IOD	Net	PM	CCS	Lns	Trks	Ext	APPL
	NoTOD *C*								·	

Indication

At the MTC level of the MAP display, NoTOD appears under the CM header of the alarm banner. The NoTOD indicates a no time-of-day critical alarm.

Meaning

An accurate time of day is not present. The system detected faults on all time-of-day clocks. Loss of real-time value occurred. The system set the clocks to zero.

Result

The switch needs time-of-day clocks to record billing information (automatic message accounting) and log reports.

Common procedures

There are no common procedures.

Action

This procedure contains a summary flowchart and a list of steps. Use the flowchart to review the procedure. Follow the steps to perform the procedure.

Summary of Clearing a CM NoTOD critical alarm



Clearing a CM NoTOD critical alarm

At the MAP terminal

2

- 1 To access the message controller (MC) level of the MAP display, type
 - >MAPCI;MTC;CM;MC

and press the Enter key.

Example of a MAP display:

CM 0 MC 0 MC 1 . todf

Determine the type of fault that caused the alarm.

Note: The type of fault appears under the MC 0 and MC 1 headers of the MAP display. In the example in step 1, a time-of-day fault (todf) appears under the MC1 header.

lf	Do
one MC is istb	step 3
one MC is todf	step 3
both MCs are todf	step 4

- **3** Perform the procedure *Clearing a CM MC Tbl minor alarm* in this document. Complete the procedure and return to this point.
- 4 To set the date, type

>SETDATE dd mm yyyy
and press the Enter key
where
dd
 is the day (01 to 31)
 mm
 is the month (01 to 12)
 yyyy
 is the year
Example input:
>SETDATE 15 10 1996
Example of a MAP response:

```
setdate 15 10 1996
        Warning:
                     There is an automated TOD clock change
                     request scheduled on:
                     1996/10/30 at 1:00 (see table DSTTABLE).
                     Do you want to proceed with this request?
                     Please confirm ("YES", "Y", "NO", or "N"):
5
      To confirm the command, type
      >Y
      and press the Enter key.
      Example of a MAP response:
      Date is THU. 15/OCT/1996 00:00:00
6
      To use the 24-h clock and set the time, type
      >SETTIME hh mm
      and press the Enter key
       where
          hh
            is the hour (00 to 23)
          mm
            is the minute (00 to 59)
       Example input:
      >SETTIME 03 09
       Example of a MAP response:
        Warning:
                     There is an automated TOD clock change
                     request scheduled on:
                     1996/10/30 at 1:00 (see table DSTTABLE).
                     Do you want to proceed with this request?
                     Please confirm ("YES", "Y", "NO", or "N"):
7
      To confirm the command, type
      >Y
      and press the Enter key.
       Example of a MAP response:
       Time is 03:09:00 on TUE. 1996/10/15.
8
      To access the CM level of the MAP display, type
      >CM
      and press the Enter key.
```

Example of a MAP display:

CM	Sync	Act	CPU0	CPU1	Jam	Memory	CMMnt	MC	PMC
0	no	cpu	1.		yes				•

Determine if the inactive CPU jammed.

Note: The word yes under the Jam header means that the inactive CPU jammed. The area is blank if the CPU did not jam.

If the inactive CPU	Do
jammed	step 10
did not jam	step 11

At the CM reset terminal for the inactive CPU

10 To release the jam on the inactive CPU, type

>\RELEASE JAM

and press the Enter key.

RTIF response:

RELEASE JAM DONE

At the MAP terminal

12

9

11 Determine if the CM is in sync.

Note: A dot or EccOn under the Sync header means that the CM is in sync. The word no means the CM is not in sync.

If the CMDois in syncstep 14is not in syncstep 12To synchronize the CM, type>SYNCand press the Enter key.Example of a MAP response:Maintenance action submitted. Synchronization successful.If the responseDoindicates the SYNC command was successful			
is in syncstep 14is not in syncstep 12To synchronize the CM, type>SYNCand press the Enter key.Example of a MAP response:Maintenance action submitted.Synchronization successful.If the responseDoindicates the SYNC command was successfulstep 14	If the CM	Do	
is not in sync step 12 To synchronize the CM, type >SYNC and press the Enter key. Example of a MAP response: Maintenance action submitted. Synchronization successful. If the response Do indicates the SYNC command was successful step 14	is in sync	step 14	
To synchronize the CM, type >SYNC and press the Enter key. Example of a MAP response: Maintenance action submitted. Synchronization successful. If the response Do indicates the SYNC command was successful	is not in sync	step 12	
>SYNC and press the Enter key. Example of a MAP response: Maintenance action submitted. Synchronization successful. If the response Do indicates the SYNC command was successful step 14	To synchronize the CM, type		
and press the Enter key. Example of a MAP response: Maintenance action submitted. Synchronization successful. If the response Do indicates the SYNC command was successful step 14	>SYNC		
Example of a MAP response: Maintenance action submitted. Synchronization successful. If the response Do indicates the SYNC command was successful step 14	and press the Enter key.		
Maintenance action submitted. Synchronization successful. If the response Do indicates the SYNC command was successful step 14	Example of a MAP response:		
If the responseDoindicates the SYNC command was successfulstep 14	Maintenance action submitte Synchronization successful.	d.	
indicates the SYNC command was successful step 14	If the response		Do
	indicates the SYNC command v	vas successful	step 14

13

14

15

16

CM NoTOD critical (continued)

If the response		Do
is The CPUs are out of problem with mismatc Do you wish to conti: Please confirm("YES" (Applies to SuperNode or Sup only)	f sync due to a hes. nue? , "Y", "NO", "N perNode SE Series 7	a step 13 " 0
is other than listed here		step 19
To deny the action, type		
>NO		
and press the Enter key.		
<i>Note:</i> This step applies to Supe	erNode or SuperNode S	SE Series 70 only.
Go to step 18.		
Determine if the NoTOD critical ala	arm cleared.	
If the alarm	Do	
cleared	step 17	
changed to another alarm	step 15	
did not clear	step 19	
Perform the correct alarm clearing procedure, and return to this point	procedure in this docum	ent. Complete the
The next step depends on the use	of table DSTTABLE.	
<i>Note:</i> The MAP response that appears in step 4.	indicates the use of tab	le DSTTABLE
If table DSTTABLE	Do	
is in use	step 17	
is not in use	step 20	

CM NoTOD critical (end)

17 Make sure that conflicts do not exist between the SETDATE and SETTIME command entries and the entry in table DSTTABLE.

Note: The warning message indicates a possible problem with an entry in table DSTTABLE. The message appears when an entry that did not expire is in the table when you use SETDATE or SETTIME commands.

If a conflict	Do
occurs with an entry in DSTTA- BLE	step 19
does not occur with an entry in DSTTABLE	step 20
Collect mismatch logs and contact the	e next level of support.

- **19** For additional help, contact the next level of support.
- **20** The procedure is complete.

18

CM PMCFIt major

Alarm display

ſ	СМ	MS	IOD	Net	PM	CCS	Lns	Trks	Ext	APPL
	PMCFlt M	•	•	·	•	•	•	·	·	

Indication

At the MTC level of the MAP display, PMCFlt appears under the CM header of the alarm banner. The PMCFlt indicates a major alarm for the peripheral module controller fault.

Meaning

The two ports of the peripheral module controller (PMC) are out of service. The ports are in one of the following states:

- P-side busy (The associated system load module is [SLM] out of service.)
- manual busy
- system busy (hard fault)

Result

The computing module (CM) cannot access either SLM.

The problem does not affect subscriber service. If a fault occurs, the switch cannot access the CM and MS files in order for the switch to recover. The CM and MS files are on the SLMs.

Common procedures

There are no common procedures.

Action

This procedure contains a summary flowchart and a list of steps. Use the flowchart to review the procedure. Follow the steps to perform the procedure.

Summary of How to clear a CM PMCFIt major alarm



DMS-100 Family NA100 Alarm Clearing and Perform. Monitoring Proc. Volume 1 of 4 LET0015 and up

How to clear a CM PMCFIt major alarm

At the MAP terminal

- 1 To access the PMC level of the MAP display, type
 - >MAPCI;MTC;CM;PMC

and press the Enter key.

Example of a MAP display:

PMC 0 sbsy

PORTO: pbsy PORT1: sbsy

Determine the state of the PMC ports.

Note: The state of the PMC ports appears on the right of the PORT0 and PORT1 headers on the MAP display.

If the state of either port	Do
is sbsy	step 5
is pbsy	step 3
is mbsy	step 4

3 The SLM that connects to the P-side busy port is out of service. Perform the correct alarm clearing procedure for an input/output device (IOD) SLM. Complete the procedure and return to this point.

Go to step 1.

4 Consult office records or operating company personnel. Determine the reason for the removal of the manual busy port from service. When you have permission, continue with the procedure.

Go to step 1.

5 To manually busy the system busy PMC port, type

>BSY 0 PORT port_number

and press the Enter key

where

If the BSY command	Do
passed	step 6
failed	step 35
Determine the state of the PMC.	
<i>Note:</i> The state of the PMC appe display.	ars under the PMC header of the MA
If the state of the PMC	Do
is sbsy	step 7
is other than listed here	step 13
Obtain a duplicate of CM133 log repo	orts generated during the past hour.
Determine the reason that the PMC i	s in the system busy state
<i>Note:</i> The reason for the system reason text of the CM133 log repo	busy state of the PMC appears in the rt.
If the reason for the system busy state of the PMC	Do
is A stuck hardware fault was detected	step 9
is other than listed here	step 13
Obtain a duplicate of any CM140 and generated during the past hour.	d CM152 log reports that the system
To replace the first card on the list in correct procedure in <i>Card Replaceme</i> procedure and return to this point.	the CM152 log report, perform the ent Procedures. Complete the
<i>Note 1:</i> When both planes have a interrupt mismatch does not occur hardware fault, the system also do the system does not generate a C has faults. To identify the card tha CM 140 log report.	a stuck hardware fault, a peripheral When both planes have a stuck es not generate a CM152 log report. M152 log report, identify the card that t has faults, use the information in the
<i>Note 2:</i> The CM140 log report ide CM152 log report contains a list of	entifies the affected PMC and link. Th f cards that can require replacement.
entroz log report containe a not el	
To test the PMC port that you busied	in step 5, type
To test the PMC port that you busied >TST 0 PORT port_number	in step 5, type

port_number is the number of the manual busy PMC port (0 or 1)If the TST commandDopassedstep 18failed, the system generated a card list, and you did not replace all cards on the list in the CM152 log re- port.step 12failed, the system generated a card list, and you re- port.step 35failed, the system generated a card list, and you re- port.step 35failed, the system generated a card list, and you re- placed all cards on the list in the CM152 log report.step 35To replace the next card on the list in the CM152 log report, perform the correct procedure in Card Replacement Procedures. Complete the report.step 12						
If the TST commandDopassedstep 18failed, the system generated a card list, and you did not replace all cards on the list in the CM152 log re- port.step 12failed, the system generated a card list, and you re- placed all cards on the list in the CM152 log report.step 35To replace the next card on the list in the CM152 log report.To replace the next card on the list in the CM152 log report.						
passedstep 18failed, the system generated a card list, and you did not replace all cards on the list in the CM152 log re- port.step 12failed, the system generated a card list, and you re- placed all cards on the list in the CM152 log report.step 35To replace the next card on the list in the CM152 log report.To replace the next card on the list in the CM152 log report, perform the correct procedure in <i>Card Replacement Procedures</i> . Complete the						
 failed, the system generated a card list, and you did step 12 not replace all cards on the list in the CM152 log report. failed, the system generated a card list, and you restep 35 placed all cards on the list in the CM152 log report. To replace the next card on the list in the CM152 log report, perform the correct procedure in <i>Card Replacement Procedures</i>. Complete the procedure and the table point. 						
failed, the system generated a card list, and you re- placed all cards on the list in the CM152 log report. To replace the next card on the list in the CM152 log report, perform the correct procedure in <i>Card Replacement Procedures</i> . Complete the						
To replace the next card on the list in the CM152 log report, perform the correct procedure in <i>Card Replacement Procedures</i> . Complete the						
To replace the next card on the list in the CM152 log report, perform the correct procedure in <i>Card Replacement Procedures</i> . Complete the procedure and return to this point. Go to step 11.						
>TST 0 PORT port_number						
and press the Enter key						
where						
<pre>port_number is the number of the manual busy PMC port (0 or 1)</pre>						
If the TST command Do						
passed step 18						
failed, and the system generated step 14 a card list						
failed, and the system generated step 14 a card list Record the location, description, slot number, product engineering code (PEC), and PEC suffix of the first card on the list.						
failed, and the system generated step 14 a card list Record the location, description, slot number, product engineering code (PEC), and PEC suffix of the first card on the list. Perform the correct procedure in <i>Card Replacement Procedures</i> . Complete the procedure and return to this point.						
failed, and the system generated step 14 a card list Record the location, description, slot number, product engineering code (PEC), and PEC suffix of the first card on the list. Perform the correct procedure in <i>Card Replacement Procedures</i> . Complete the procedure and return to this point. To test the manual busy PMC port, type						
failed, and the system generated step 14 a card list Record the location, description, slot number, product engineering code (PEC), and PEC suffix of the first card on the list. Perform the correct procedure in <i>Card Replacement Procedures</i> . Complete the procedure and return to this point. To test the manual busy PMC port, type >TST 0 PORT port_number						
failed, and the system generated step 14 a card list Record the location, description, slot number, product engineering code (PEC), and PEC suffix of the first card on the list. Perform the correct procedure in <i>Card Replacement Procedures</i> . Complete the procedure and return to this point. To test the manual busy PMC port, type >TST 0 PORT port_number and press the Enter key						

If the TST command	Do					
passed	step 18					
failed, and you did not replace all cards on the list	step 17					
failed, and you replaced all cards on the list	step 35					
Record the location, description, slot n card on the list.	umber, PEC, and PEC suffix of the next					
Go to step 15.						
To return the PMC port to service, type						
>RTS 0 PORT port_number						
and press the Enter key						
where						
<pre>port_number is the number of the PMC port</pre>	that you busied in step 5 (0 or 1)					
If the RTS command	Do					
passed	step 19					
failed	step 35					
Determine the state of the other PMC	port.					
If the state of the other PMC port	Do					
is pbsy	step 3					
ismbsy	step 4					
is sbsy	step 5					
is insv	step 20					
To access the MC level of the MAP di	splay, type					
>MC						
and press the Enter key.						
Example of a MAP display:						

mbsy .	
Determine if the message controlle	r (MC) is manual busy.
<i>Note:</i> The state of the MC appe	ears under the MC 0 and MC 1 h
If the state of the MC	Do
is mbsy	step 22
is not mbsy	step 23
To return the manual busy MC to se	ervice, type
>RTS mc_number	
and press the Enter key	
where	
mc_number is the number of the manual	busy MC (0 or 1)
Example of a MAP response:	
If the RTS command	Do
1	-t
passed	step 23
passed failed	step 23 step 35
failed To access the CM level of the MAP	step 23 step 35 display, type
failed To access the CM level of the MAP	step 23 step 35 display, type
failed To access the CM level of the MAP >CM and press the Enter key.	step 23 step 35 display, type
failed To access the CM level of the MAP >CM and press the Enter key. Determine that the inactive CPU pla	step 23 step 35 display, type ane turned off.
failed To access the CM level of the MAP >CM and press the Enter key. Determine that the inactive CPU plane	step 23 step 35 display, type ane turned off.
failed To access the CM level of the MAP >CM and press the Enter key. Determine that the inactive CPU plane If the inactive CPU plane turned off	step 23 step 35 display, type ane turned off. Do step 25
failed To access the CM level of the MAP >CM and press the Enter key. Determine that the inactive CPU plane If the inactive CPU plane turned off did not turn off	step 23 step 35 display, type ane turned off. Do step 25 step 27
failed failed To access the CM level of the MAP >CM and press the Enter key. Determine that the inactive CPU plane If the inactive CPU plane turned off did not turn off To test the inactive CPU, type	step 23 step 35 display, type ane turned off. Do step 25 step 27
failed To access the CM level of the MAP >CM and press the Enter key. Determine that the inactive CPU plane If the inactive CPU plane turned off did not turn off To test the inactive CPU, type >TST	step 23 step 35 display, type ane turned off. Do step 25 step 27

```
The test(s) listed below will destroy
       the software load in inactive CPU:
            Static RAM test
       Do you want to do the test(s) anyway?
       Please confirm: ("YES", "Y", "NO", or "N"):
      To confirm the command, type
      >YES
      and press the Enter key.
      Example of a MAP response:
      Maintenance action submitted.
      Test passed.
        If the TST command
                                         Do
        passed
                                         step 27
        failed
                                         step 35
      Determine if the inactive CPU jammed.
         Note: The word yes under the Jam header means that the CPU jammed.
         The area is blank if the CPU did not jam.
        If the inactive CPU
                                         Do
       jammed
                                         step 28
        did not jam
                                         step 29
At the CM reset terminal for the inactive CPU
      To release the jam on the inactive CPU, type
      >\RELEASE JAM
      and press the Enter key.
      RTIF response:
      JAM RELEASE DONE
```

26

27

28

CM PMCFIt

major (continued)

At the MAP terminal

29 Determine if the CM is in synchronization.

Note: A dot or EccOn under the Sync header means that the CM is in synchronization. The word no means that the CM is not in synchronization.

If the CM	Do					
is in synchronization	step 31					
is not in synchronization	step 30					
To synchronize the CM, type						
>SYNC						
and press the Enter key.						
Example of a MAP response:						
Maintenance action submitted Synchronization successful.						
If the SYNC command	Do					
was successful	step 31					
was not successful	step 35					
To access the PMC level of the MAP display, type						
>MAPCI;MTC;CM;PMC						
and press the Enter key.						
Determine if the PMC ports are in service.						
<i>Note:</i> The state of the PMC ports appears in the PORT0 and PORT1 fields, under the PMC 0 header. A dot means the port is in service.						
lf	Do					
all PMC ports are in service	step 33					
a minimum of one PMC port is not in service	step 2					
Determine if the PMCFIt major alarm cleared.						
If the PMCFIt major alarm	Do					
cleared	step 36					
changed to another alarm	step 34					
-	_					

CM PMCFIt major (end)

	If the PMCFIt major alarm	Do
	did not clear	step 35
34	Perform the correct alarm clearing	g procedure in this document.
35	For additional help, contact the ne	ext level of support.

36 The procedure is complete.

CM PMCTbl minor

Alarm display

ĺ	 СМ	MS	IOD	Net	PM	CCS	Lns	Trks	Ext	APPL
	РМСТЫ	•	•	•	•	•	•	•	•	•

Indication

At the MTC level of the MAP display, PMCTbl appears under the computing module (CM) header of the alarm banner. The PMCTbl indicates a minor alarm for a peripheral message controller problem.

Meaning

A peripheral message controller (PMC) is in-service trouble because a PMC port is in one of the following states:

- P-side busy (The associated system load module [SLM] is out of service.)
- manual busy
- system busy (hard fault)

Result

The CM cannot access an SLM. The problem does not affect subscriber service.

Common procedures

There are no common procedures.

Action

This procedure has a summary flowchart and a list of steps. Use the flowchart to review the procedure. Follow the steps to perform the procedure.

Summary of How to clear a CM PMCTbl minor alarm



DMS-100 Family NA100 Alarm Clearing and Perform. Monitoring Proc. Volume 1 of 4 LET0015 and up

How to clear a CM PMCTbl minor alarm

At the MAP terminal

- 1 To access the PMC level of the MAP display, type
 - >MAPCI;MTC;CM;PMC

and press the Enter key.

Example of a MAP display:

PMC 0	
istb	
PORTO: .	

PORT1: sbsy

2 Determine the state of the PMC ports.

Note: The state of the PMC ports appears on the right of the PORT0 and PORT1 headers on the MAP display.

If the state of either port	Do
is pbsy	step 3
is mbsy	step 4
is sbsy	step 5

3 The SLM that connects to the P-side busy port is out of service. Perform the correct alarm clearing procedure for the input/output device (IOD) SLM. Complete the procedure and return to this point.

Go to step 1.

4 Consult office records or operating company personnel. Determine the reason for the removal of the manual busy port from service. When you have permission, continue this procedure.

Go to step 1.

5 To manually busy the system busy PMC port, type

>BSY 0 PORT port_number

and press the Enter key.

where

port number

is the number of the system busy PMC port (0 or 1)

If the BSY command	Do
passed	step 6
failed	step 32

6 Obtain copies of CM137 log reports generated during the past hour.

7 Determine the cause of the system busy state of the PMC port.

Note: The reason for the system busy state of the PMC port appears in the reason text of the CM137 log report.

If the reason for the system busy Do state of the PMC

is A stuck hardware step 8 fault was detected

is other than listed here step 12

- 8 Obtain a duplicate of any CM140 and CM152 log reports generated during the past hour.
- **9** Replace the first card on the list in the CM152 log report. Perform the correct card replacement procedure in *Card Replacement Procedures.* Complete the procedure and return to this point.

Note 1: A peripheral interrupt mismatch does not occur when a stuck hardware fault occurs on both planes. The system does not generate a CM152 log report when a stuck hardware fault occurs on both planes. If the system does not generate a CM152 log report, identify the card that has faults. To identify the card that has faults, use the information in the CM140 log report.

Note 2: The CM140 log report identifies the affected PMC and link. The CM152 log report contains a list of cards that can require replacement.

10 To test the PMC port that you busied in step 5, type

>TST 0 PORT port_number

and press the Enter key.

where

port_number

is the number of the manual busy PMC port (0 or 1)

If the TST command	Do
passed	step 17

If the TST command		Do
failed, the system generated a car not replace all cards on the list in port	d list, and you did the CM152 log re-	step 11
failed, the system generated a car placed all cards on the list in the C	d list, and you re- M152 log report	step 32
Replace the next card on the list in the 0 procedure in <i>Card Replacement Proce</i> return to this point.	CM152 log report. Per edures. Complete the	form the corre procedure and
Go to step 10.		
To test the manual busy PMC port, typ	e	
>TST 0 PORT port_number		
and press the Enter key.		
where		
<pre>port_number is the number of the manual bus</pre>	sy PMC port (0 or 1)	
If the TST command	Do	
passed	step 17	
failed, and the system generated a card list	step 13	
Record the location, description, slot n (PEC), and PEC suffix of the first card	umber, product engine on the list.	eering code
Perform the correct procedure in <i>Card</i> the procedure and return to this point.	Replacement Proced	ures. Comple
To test the manual busy PMC port, typ	е	
>TST 0 PORT port_number		
and press the Enter key.		
where		
<pre>port_number is the number of the manual bus</pre>	sy PMC port (0 or 1)	
If the TST command	Do	
	step 17	
passed	I I	

If the TST command	Do
failed, and you replaced cards on the list	step 32
Record the location, description, slot no card on the list.	umber, PEC, and PEC suffix of the next
Go to step 14.	
To return the manual busy PMC port to	o service, type
>RTS 0 PORT port_number	
and press the Enter key.	
where	
port_number is the number of the manual bu	sy PMC port (0 or 1)
If the RTS command	Do
passed	step 18
failed	step 32
To access the MC level of the MAP dis	splay, type
>MC	
and press the Enter key.	
Example of a MAP display:	
CM 0 MC 0 MC 1 mbsy .	
Determine if the message controller (<i>I</i> C) is manual busy
<i>Note:</i> The term mbsy under the MC busy.	C header means that the MC is manual
If the state of the MC	Do
Text CharFormat="Mono">is mbsy Text>	step 20
is not mbsy	step 21
To return the manual busy MC to serv	ice, type
>RTS mc_number	
and press the Enter key.	

mc_number

is the number of the manual busy MC (0 or 1)

Example of a MAP response:

Maintenance action submitted. MC RTS OK.

If the RTS command	Do	
passed	step 21	
failed	step 32	

21 To access the CM level of the MAP display, type

>CM

and press the Enter key.

Example of a MAP display:

CM Sync Act CPU0 CPU1 Jam Memory CMMnt MC PMC 0 no cpu 1 . . yes . . .

22 Determine if the inactive CM plane powered down.

If the inactive CM plane	Do	
powered down	step 23	
did not power down	step 25	

23 To test the inactive CPU, type

>TST

and press the Enter key.

Example of a MAP response:

The test(s) listed below will destroy the software load in inactive CPU:

Static RAM test

Do you want to do the test(s) anyway? Please confirm: ("YES", "Y", "NO", or "N"):

24 To confirm the command, type >YES and press the Enter key.

Example of a MAP response:

Maintenance action submitted. Test passed.

If the TST command	Do
passed	step 25
is other than listed here	step 32

25 Determine if the inactive CPU jammed.

Note: The word yes under the Jam header means that the inactive CPU jammed. The area is blank if the CPU did not jam.

If the inactive CPU	Do
jammed	step 26
did not jam	step 27

At the CM reset terminal for the inactive CPU

26 To release the jam on the inactive CPU, type

>\RELEASE JAM

and press the Enter key.

RTIF response:

JAM RELEASE DONE

At the MAP terminal

28

27 Determine if the CM is in synchronization.

Note: A dot or EccOn under the Sync header means that the CM is in synchronization. The word no means that the CM is not in synchronization.

If the CM	Do	
is in synchronization	step 30	
is not in synchronization	step 28	
To synchronize the CM, type		
>SYNC		
and press the Enter key.		
Example of a MAP response:		

CM PMCTbl minor (end)

If the response		Do
indicates the SYNC command w	as successful	step 30
<pre>indicates The CPUs are ou to a problem with mis mismatch logs should b fore re-syncing. Do you wish to continu Please confirm ("YES", "N") (SuperNode and SuperNode SE</pre>	t of sync due matches. The e analyzed be- ue? "Y", or "NO", Series 70 only)	step 29
is other than listed here		step 32
To deny the action, type NO and press the Enter key. Go to step 32. Determine if the PMCTbl minor alarr	n cleared.	
If the PMCTbl minor alarm	Do	
cleared	step 33	
changed to another alarm	step 31	
e e		

33 The procedure is complete.

29

30

31 32

CM PrcOpt major

Alarm display

ĺ	СМ	MS	IOD	Net	PM	CCS	Lns	Trks	Ext	APPL
	PrcOpt M	•	·	·	·		·	·		·

Indication

At the MTC level of the MAP display, PrcOpt appears under the CM header of the alarm banner. The PrcOpt indicates a processor optionality alarm.

Meaning

The PEC number on the processor card and the value entered for the processor card do not match.

Result

The problem does not now affect subscriber service. If a fault occurs on the active side, the switch cannot recover automatically.

Common procedures

There are no common procedures.

Action

This procedure contains a summary flowchart and a list of steps. Use the flowchart to review the procedure. Follow the steps to perform the procedure.

CM PrcOpt major (continued)

Summary of Clearing a CM PrcOpt major alarm


CM PrcOpt major (end)

Clearing a CM PrcOpt major alarm

At the MAP terminal

- 1 Obtain all current CM logs.
- 2 For additional help, contact the next level of support.
- **3** The procedure is complete.

CM RExFlt major

Alarm display

ſ		СМ	MS	IOD	Net	PM	CCS	Lns	Trks	Ext	APPL
	_	RExFlt		-							
		Μ									
l											

Indication

At the MTC level of the MAP display, RExFlt appears under the CM header of the alarm banner. The RExFlt indicates a fault major alarm.

Meaning

The CM RExFlt major alarm occurs if a scheduled computing module (CM) routine exercise (REx) test does not finish.

Reasons for the failure of CM REx testing to finish include:

- a minimum of one failed REx test
- manual termination of REx testing
- a minimum of one trap
- a minimum of one mismatch
- a minimum of onelinks closure
- an RMS timeout
- an environment error

Result

There is no result.

Common procedures

There are no common procedures.

Action

This procedure contains a summary flowchart and a list of steps. Use the flowchart to review the procedure. Follow the steps to perform the procedure.

CM RExFlt major (continued)

Summary of Clearing a CM RExFlt major alarm



CM RExFlt major (end)

Clearing a CM RExFlt major alarm At the MAP terminal 1 Obtain copies of current CM, TRAP, SWER, and footprint logs for the active and inactive sides. 2 To access the CMMNT level of the MAP display, type >MAPCI;MTC;CM;CMMNT and press the Enter key. Example of a MAP display: СМ Sync Act CPU0 CPU1 Jam Memory CMMnt MC PMC . cpu 0 . . 0 . . . • Traps: Per minute = 108 Total = 6342 AutoLdev: Primary = SLM 0 DISK Secondary = SLM 1 DISK Image Restartable = No image test since last restart Next image test restart type= RELOAD Last CMREXTST executed System memory in kbytes as of 14:39:07 Memory(kbytes):Used = 105984 Avail = 12800 Total = 118784 3 To determine the value of the counts for the system stability threshold, type >QUERYCM REXSCHD COUNTS ALL and press the Enter key. Example of a MAP response: The Link Closure count is 2. The Out-of-sync Recovery Mismatch count is 1. The In-Sync Recovery Mismatch count is 0. The Trap Rate count is 0. The Processor Memory Fault count is 0. The Clock Fault count is 0. The Cancelled REx count is 2. 4 Record the values that appear for each count. 5 For additional help, contact the next level of support.

6 The procedure is complete.

CM RExSch minor

Alarm display

 CM RExSch	MS	IOD	Net	PM	CCS	Lns	Trks	Ext	APPL
•									

Indication

At the MTC level of the MAP display, RExSch appears under the computing module (CM) header of the alarm banner. The RExSch indicates a REx schedule minor alarm.

Meaning

The CM RExSch minor alarm occurs for the following reasons:

- Cancellation of two consecutive automatic daily routine exercise (REx) tests. System stability faults exceed the thresholds and cause the cancellation of an automatic daily REx test. Maintenance personnel enter these thresholds to detect recurring problems.
- Entry in table REXSCHED disabled CM REx testing.

Result

There is no result.

Common procedures

There are no common procedures.

Action

This procedure contains a summary flowchart and a list of steps. Use the flowchart to review the procedure. Follow the steps to perform the procedure.

CM RExSch minor (continued)

Summary of Clearing a CM RExSch minor alarm



CM RExSch minor (continued)

Clearing a CM RExSch minor alarm

At the MAP terminal

4

5

6

- 1 Obtain copies of current IOAU112 log reports.
- 2 Determine if maintenance personnel disabled the CM REx testing. If maintenance personnel disabled the CM REx testing, the following message appears in the IOAU112 log report:

The CRITICAL CM_REX_TEST has been DISABLED INDEFINITELY.

If maintenance personnel	Do
disabled CM REx testing	step 3
did not disable CM REx testing	step 16

3 Contact your next level of support to determine if CM REx testing disabled.

If maintenance personnel	Do
intended to disable CM RE testing	x step 20
did not intend to disable CM REx testing	A step 4
To access table REXSCHED, type	
>TABLE REXSCHED	
and press the Enter key.	
Example of a MAP response:	
MACHINE NOT IN SYNC - DMO JOURNAL FILE NOT AVAILABLE TABLE: REXSCHED	S NOT ALLOWED E- DMOS NOT ALLOWED e, type
· >POS CM_REX_TEST	
and press the Enter key.	
Example of a MAP response:	
CM_REX_TEST N 1 1	NONE
To activate write access, type	
>RWOK ON	
and press the Enter key.	

CM RExSch minor (continued)

	Example of a MAP response:
	WRITE ACCESS ENABLED FOR RESTRICTED DATA
7	To start the tuple change, type
	>CHA
	and press the Enter key.
	Example of a MAP response:
	MACHINE NOT IN SYNC - DMOS NOT ALLOWED JOURNAL FILE NOT AVAILABLE- DMOS NOT ALLOWED ENTER Y TO CONTINUE PROCESSING OR N TO QUIT
8	To enable CM REx testing, type
	У
	and press the Enter key.
	Example of a MAP response:
	TIDLE TO BE CHANGED:
	CM_REX_TEST N 1 1 NONE
	ENTER Y TO CONFIRM, N TO REJECT OR E TO EDIT
9	To enter the time period between CM REx tests, type
	>period
	and press the Enter key.
	where
	period is the minimum number of days between CM REx tests (1 to 7)
	Note: If you do not want to change this part of the tuple, do not make an
	entry. Press the Enter key.
10	To enter the number of CM REx tests that run in parallel, type
	>number
	and press the Enter key.
	where
	number is the maximum number of CM REx tests (0 to 99) that run in parallel
	<i>Note:</i> If you do not want to change this part of the tuple, do not make an entry. Press the Enter key.
11	To enter the days of the week that you want to disable the CM REx test, type
	>daysdsbl
	and press the Enter key.
	where

CM RExSch minor (continued)

(MON, TUE, WED,

THU, FRI, SAT, SUN, ALL, or NONE)

Note: If you do not want to change this part of the tuple, do not make an entry. Press the Enter key.

12 To confirm the tuple change, type

>Y

and press the Enter key.

Example of a MAP response:

TUPLE CHANGED JOURNAL FILE INACTIVE

13 To exit table REXSCHED, type

>QUIT

and press the Enter key.

14 To verify the activation of CM REx testing, review the most recent IOAU112 log reports.

Note: If maintenance personnel enabled CM REx testing, the message The CRITICAL CM_REX_TEST has been ENABLED. appears in the log report.

If the system	Do
confirms CM REx testing	step 15
does not confirm CM REx testing	step 19

15 When the next scheduled CM REx test is complete, determine if the RExSch alarm cleared.

If the RExSch alarm	Do
clears	step 20
does not clear	step 16

16 To access the CMMnt level of the MAP display, type

>MAPCI;MTC;CM;CMMNT

and press the Enter key.

Example of a MAP display:

CM RExSch minor (end)

```
СМ
         Sync Act CPU0 CPU1 Jam Memory CMMnt MC
                                                            PMC
              cpu 0 .
     0
         .
                             •
                                          •
                                                  .
                                                        .
                                                             •
    Traps:
                     Per minute =
                                      108
                                                Total =
                                                            6342
                   Primary = SLM 0 DISK Secondary = SLM 1 DISK
    AutoLdev:
    Image Restartable = No image test since last restart
    Next image test restart type= RELOAD
    Last CMREXTST executed
    System memory in kbytes as of 14:39:07
    Memory(kbytes):Used = 105984 Avail = 12800 Total = 118784
17
      To determine the value of counts for the system stability threshold, type
      >QUERYCM REXSCHD COUNTS ALL
      and press the Enter key.
      Example of a MAP response:
      The Link Closure count is 2.
      The Out-of-sync Recovery Mismatch count is 1.
      The In-Sync Recovery Mismatch count is 0.
      The Trap Rate count is 0.
      The Processor Memory Fault count is 0.
      The Clock Fault count is 0.
      The Cancelled REx count is 2.
18
      Record the values that appear for each count.
19
      For additional help, contact the next level of support.
```

20 The procedure is complete.

CM RExTst minor

Alarm display

ĺ	СМ	MS	IOD	Net	PM	CCS	Lns	Trks	Ext	APPL
	RExTst	·	•	•	•	•	•	•	•	•
l										

Indication

At the MTC level of the MAP display, RExTst appears under the CM header of the alarm banner. The RExTst indicates a routine exercise (REx) test minor alarm.

Meaning

The computing module (CM) undergoes routine exercise (REx) tests.

Result

The problem can affect subscriber service during a CM REx test. Suppression of all CM alarms except ClkFlt, CM Flt, CMTrap, IMAGE, LowMem, and NoTOD occurs.

Common procedures

There are no common procedures.

Action

This procedure contains a summary flowchart and a list of steps. Use the flowchart to review the procedure. Follow the steps to perform the procedure.

CM RExTst minor (continued)

Summary of Clearing a CM RExTst minor alarm



CM RExTst minor (continued)

Clearing a CM RExTst minor alarm

At the MAP terminal

4

5

6

7

1 To access the CM level of the MAP display, type >MAPCI;MTC;CM and press the Enter key. Example of a MAP display:

 CM
 Sync
 Act
 CPU0
 CPU1
 Jam
 Memory
 CMMnt
 MC
 PMC

 0
 .
 cpu 0
 .
 .
 .
 .
 .
 .
 .
 .
 .
 .
 .
 .
 .
 .
 .
 .
 .
 .
 .
 .
 .
 .
 .
 .
 .
 .
 .
 .
 .
 .
 .
 .
 .
 .
 .
 .
 .
 .
 .
 .
 .
 .
 .
 .
 .
 .
 .
 .
 .
 .
 .
 .
 .
 .
 .
 .
 .
 .
 .
 .
 .
 .
 .
 .
 .
 .
 .
 .
 .
 .
 .
 .
 .
 .
 .
 .
 .
 .
 .
 .
 .
 .
 .
 .
 .
 .
 .
 .
 .
 .
 .
 <t

2 Wait until the REx test is complete. Continue the procedure.

Note: Wait a maximum of 90 min for the REx test to finish.

3 Determine if the REx test passed.

Example of a MAP response:

Maintenance action submitted. RExTst passed.

If the response	Do					
indicates the REx test passed	step 12					
indicates the REx test failed, and the system generated a card list	step 4					
is other than listed here	step 14					
Record the location, description, slot number, product engineering code (PEC), and PEC suffix of all cards on the list.						
Choose a card to work on.						
Note: One or more of the cards th inactive side. If the cards are on th inactive side first.	at require replacement can be on the ne inactive side, work on a card on the					
Perform the correct procedure in <i>Carc</i> the procedure and return to this point	d Replacement Procedures. Complete					
Determine if more cards require repla	cement.					
Note: You recorded this informatic	on in step 4.					
lf	Do					
more cards require replacement	step 5					
no more cards require replacement	step 8					

DMS-100 Family NA100 Alarm Clearing and Perform. Monitoring Proc. Volume 1 of 4 LET0015 and up

CM RExTst minor (continued)

8



DANGER Possible service degradation

Check with operating company personnel to make sure that a REx test can run at this time. Make sure you initiate REx tests during a low traffic period. The REx tests require a high level of CPU occupancy.

To run a REx test on the CM, type

>REXTST

and press the Enter key.

If the response	Do
is CAUTION: CM sync and ac- tivity states will change Please confirm ("YES", "Y", "NO", or "N"):	step 10
is CMREx test not authorized by REX controller.	step 9
is other than listed here	step 14
rom operating company personnel wh tests finish. To run the CM test, type	here the REx tests run. Wait until
From operating company personnel whether the tests finish. To run the CM test, type >REXTST and press the Enter key.	Determine from once records here the REx tests run. Wait until
<pre>internet in a REX test of another no from operating company personnel wh tests finish. To run the CM test, type >REXTST and press the Enter key. If the response is CAUTION: CM sync and ac- tivity states will change Please confirm ("YES", "Y", "NO", or "N"):</pre>	Do Step 10
<pre>include a REX test of another he from operating company personnel wh tests finish. To run the CM test, type >REXTST and press the Enter key. If the response is CAUTION: CM sync and ac- tivity states will change Please confirm ("YES", "Y", "NO", or "N"): is other than listed here</pre>	Do Step 10
If the response is CAUTION: CM sync and ac- tivity states will change Please confirm ("YES", "Y", "NO", or "N"): is other than listed here To confirm the command, type	Do Step 10
<pre>is CAUTION: CM sync and ac- tivity states will change Please confirm ("YES", "Y", "NO", or "N"): is other than listed here To confirm the command, type >YES</pre>	Do step 10 step 14

9

CM RExTst minor (end)

If the response	Do
indicates the REx test passed	step 12
indicates the REx test failed, and you did not replace all cards on the list	step 11
indicates the REx test failed, and you replaced all the cards on the list	step 14
is other than listed here	step 14
Record the location, description, slot r cards on the list.	number, PEC, and PEC suffix
Go to step 5.	
Determine if the RExTst minor alarm of	cleared.
If the alarm	Do
cleared	step 15
did not clear	step 14
above and to everther alows	step 13

15 The procedure is complete.

CM SBsyMC major

Alarm display

ĺ	СМ	MS	IOD	Net	PM	CCS	Lns	Trks	Ext	APPL
	SBsyMC M	•	·				·		•	

Indication

At the MTC level of the MAP display, SBsyMC appears under the CM header of the alarm banner. The SBsyMC indicates a major alarm for a system busy message controller.

Meaning

A message controller (MC) is out of service for one of the following reasons:

- a hard fault
- a subsystem clock fault

Result

The computing module (CM) contains two MCs. If one MC is out of service, the full messaging load transfers to the second MC. The removal of the second MC from service means the switch cannot maintain subscriber service.

Common procedures

There are no common procedures.

Action

This procedure contains a summary flowchart and a list of steps. Use the flowchart to review the procedure. Follow the steps to perform the procedure.

Summary of How to clear a CM SBsyMC major alarm



DMS-100 Family NA100 Alarm Clearing and Perform. Monitoring Proc. Volume 1 of 4 LET0015 and up

Summary of How to clear a CM SBsyMC major alarm (continued)



How to clear a CM SBsyMC major alarm

At the MAP terminal

3

4 5

6 7

- 1 To clear all MS alarms, use the correct procedure in this document. Complete the procedure and return to this point.
- 2 Determine if the SBsyMC major alarm cleared.

If the alarm	Do
cleared	step 38
changed to another alarm	step 36
did not clear	step 3
To access the MC level of the MAF	^o display, type
>MAPCI;MTC;CM;MC	
and press the Enter key.	
Example of a MAP display:	
CM 0 MC 0 MC 1 . sbsy	
Record the number of the system	busy MC.
To manually busy the system busy	MC, type
>BSY mc_number	
and press the Enter key.	
where	
mc_number is the number of the systen	n busy MC (0 or 1)
Obtain copies of CM104 log report	ts generated during the past hour.
Determine the cause of the system	n busy state of the MC.
<i>Note:</i> The reason for the system reason text of the CM104 log re	m busy state of the MC appears in the port.
If the reason for the system bus state of the MC	sy Do
is A stuck hardwar fault was detected	ce step 8

	If the reason for the system busy Do state of the MC	
	is other than listed here step 12	
B	Obtain a duplicate of CM128 and CM152 log reports genera past hour.	ted during th
9	Replace the first card on the list in the CM152 log report. Per procedure in <i>Card Replacement Procedures</i> . Complete the return to this point.	form the corr procedure a
	Note 1: When both planes have a stuck hardware fault, a mismatch does not occur. When both planes have a stuck the system also does not generate a CM 152 log report. If t not generate a CM152 log report, use the information in the identify the card that has faults.	a peripheral chardware fa che system do he report to
	<i>Note 2:</i> The CM128 log report identifies the affected MC CM152 log report contains a list of cards that can require	and link. Th replacement
10	To test the manual busy MC, type	
	>TST mc_number	
	and press the Enter key.	
	where	
	mc_number is the number of the manual busy MC (0 or 1)	
	If the TST command	Do
	passed	step 23
	•	
	failed, the system generated a card list, and you did not replace all cards on the list in the CM152 log re- port	step 11
	 failed, the system generated a card list, and you did not replace all cards on the list in the CM152 log report failed, the system generated a card list, and you replaced all cards on the list in the CM152 log report 	step 11 step 13
11	 failed, the system generated a card list, and you did not replace all cards on the list in the CM152 log report failed, the system generated a card list, and you replaced all cards on the list in the CM152 log report To replace the next card on the list in the CM152 log report, correct procedure in <i>Card Replacement Procedures</i>. Comp procedure and return to this point. 	step 11 step 13 perform the lete the
1	 failed, the system generated a card list, and you did not replace all cards on the list in the CM152 log report failed, the system generated a card list, and you replaced all cards on the list in the CM152 log report To replace the next card on the list in the CM152 log report, correct procedure in <i>Card Replacement Procedures</i>. Comp procedure and return to this point. To test the manual busy MC, type 	step 11 step 13 perform the lete the
1	 failed, the system generated a card list, and you did not replace all cards on the list in the CM152 log report failed, the system generated a card list, and you replaced all cards on the list in the CM152 log report To replace the next card on the list in the CM152 log report, correct procedure in <i>Card Replacement Procedures</i>. Comp procedure and return to this point. To test the manual busy MC, type >TST mc_number 	step 11 step 13 perform the lete the
11	 failed, the system generated a card list, and you did not replace all cards on the list in the CM152 log report failed, the system generated a card list, and you replaced all cards on the list in the CM152 log report To replace the next card on the list in the CM152 log report, correct procedure in <i>Card Replacement Procedures</i>. Comp procedure and return to this point. To test the manual busy MC, type TST mc_number and press the Enter key. 	step 11 step 13 perform the lete the

	<pre>mc_number is the number of the manual bu</pre>	sy MC (0 or 1)
	If the TST command	Do
	passed	step 23
	failed, and you did not replace all the cards listed in the CM152 log report	step 11
	failed, and you replaced all the cards listed in the CM152 log report	step 13
	is other than listed here	step 37
13	To access the clock level of the MAP	display, type
	>CLOCK	
	and press the Enter key.	
	Example of a MAP display:	
	T O D MCO MC1 Link O . manb Link 1 . manb	
	SSC . oos	
14	To test the manual busy SSC, type	
	>TST SSC ssc_number	
	and press the Enter key.	
	where	
	<pre>ssc_number is the SSC for the system busy</pre>	MC (0 or 1) that you recorded in step 4
	If the TST command	Do
	passed	step 17
	failed, and the system generated a card list	step 15
	failed, and the system did not generate a card list	step 37

15 To replace the NT9X22 card, perform the correct procedure in Card Replacement Procedures. Complete the procedure and return to this point. 16 To test the manual busy SSC, type >TST SSC ssc_number and press the Enter key. where ssc number is the SSC for the system busy MC (0 or 1) that you recorded in step 4 If the TST command Do passed step 17 failed step 37 17 To quit from the clock level of the MAP display, type >QUIT and press the Enter key. 18 To test the manual busy MC, type >TST mc_number and press the Enter key. where mc number is the number of the system busy MC (0 or 1) that you recorded in step 4 If the TST command Do passed step 23 failed, and the system generated step 19 a card list failed, and the system generated step 37 a card list 19 Record the location, description, slot number, product engineering code (PEC), and PEC suffix of the first card on the list. 20 Perform the correct procedure in Card Replacement Procedures. Complete the procedure and return to this point. 21 To test the manual-busy MC, type >MC;TST mc number and press the Enter key. where

If the ISI command	Do
passed	step 23
failed, and you did not replace all cards on the list	e step 22
failed, and you replaced all card on the list	ls step 37
Record the location, description, slo card on the list.	t number, PEC, and PEC suffix of the n
Go to step 20.	
To return the manual busy MC to se	ervice, type
>RTS mc_number	
and press the Enter key.	
where	
<pre>mc_number is the number of the manual</pre>	busy MC (0 or 1)
If the RTS command	Do
passed	step 24
failed	step 37
Determine the state of the MC that	you returned to service.
If the state of the MC	Do
is todf, sscf, or istb	step 35
is other than listed here	step 25
To access the CM level of the MAP	display, type
>CM	
and press the Enter key.	
Example of a MAP display:	
CM Syma Act CDIIO CDIII	Jam Memory CMMnt MC PMC

If the ina	ctive CM plane	Do	
turned of	ff	step 27	
did not t	urn off	step 29	
To test the	inactive CPU, type		
>TST			
and press	the Enter key.		
Example c	f a MAP response:		
The test the soft	(s) listed belo ware load in in	w will destroy active CPU:	
Stat	ic RAM test		
Do you w Please c	ant to do the t onfirm: ("YES",	est(s) anyway? "Y", "NO", or	″N″):
To confirm	the command, type		
>YES			
and press	the Enter key.		
Example c	f a MAP response:		
Maintena Test pas	ance action subm ssed.	nitted.	
If the TS	T command	Do	
passed		step 29	
failed		step 37	
Determine	if the inactive CPU j	ammed.	
Note: 1 The are	he word yes under th a is blank if the CPU	ne Jam header means did not jam.	s that the CPU jammed.
If the ina	ctive CPU	Do	
jammed		step 30	
did not i	am	sten 31	

297-8021-543 Standard 14.02 May 2001

At the CM reset terminal for the inactive CPU

- **30** To release the jam on the inactive CPU, type
 - >\RELEASE JAM

and press the Enter key.

RTIF response:

RELEASE JAM DONE.

At the MAP terminal

31 Determine if the CM is in synchronization.

Note: A dot or EccOn under the synchronization header means that the CM is in synchronization. The word no means that the CM is not in synchronization.

If the CM	Do	
is in synchronization	step 32	
is not in synchronization	step 34	
To synchronize the CM, type		

>SYNC

32

33

and press the Enter key.

Example of a MAP response:

Maintenance action submitted. Synchronization successful.

If the response	Do
indicates the SYNC command was successful	step 34
<pre>indicates The CPUs are out of sync due to a problem with mismatches. Re- view the mismatch logs should before re-syncing. Do you wish to continue? Please confirm ("YES", "Y", or "NO", "N") (SuperNode and SuperNode SE Series 70 only)</pre>	step 33
is other than listed here	step 37
(SuperNode and SuperNode SE Series 70 only)	

CM SBsyMC major (end)

	To deny the action, type						
	>NO						
	and press the Enter key.						
	Go to step 37.						
34	Determine if the SBsyMC major a	larm cleared.					
	If the alarm	Do					
	cleared	step 38					
	changed to another alarm	step 36					
	did not clear	step 37					
35	Perform the procedure <i>How to cle</i> document.	ar a CM MC Tbl minor alarm in this					
36	Perform the appropriate alarm clearing procedure in this document.						
37	For additional help, contact the ne	xt level of support.					
~~							

38 The procedure is complete.

CM SLMLIM major

Alarm display

ĺ	СМ	MS	IOD	Net	PM	CCS	Lns	Trks	Ext	APPL
	SLMLIM M		·			•		·		·

Indication

At the CMMNT level of the MAP display, SLMLIM appears under the CM header of the alarm banner. The SLMLIM indicates an image size major alarm.

Meaning

The image is too large to transfer to tape for the system load module (SLM). The two computing module (CM) loads of this size will not fit on the SLM disk.

Result

The problem does not now affect subscriber service. If a critical switch process requires additional memory and cannot obtain the additional memory, a warm or cold restart can occur.

Common procedures

There are no common procedures.

Action

This procedure contains a summary flowchart and a list of steps. Use the flowchart to review the procedure. Follow the steps to perform the procedure.

CM SLMLIM major (continued)

Summary of Clearing a CM SLMLIM major alarm



CM SLMLIM major (end)

Clearing a CM SLMLIM major alarm

At the MAP

- 1 Obtain all recent CM logs.
- 2 For additional help, contact the next level of support.
- **3** The procedure is complete.

CM SLMLim minor

Alarm display

ſ	СМ	MS	IOD	Net	PM	CCS	Lns	Trks	Ext	APPL
	SLMLim M	•		•						

Indication

At the CMMNT level of the MAP display, SLMLim appears under the CM header of the alarm banner. The SLMLim indicates an image minor alarm.

Meaning

The image is too large to transfer to tape for a system load module (SLM). Two loads for a computing module (CM) of this size will not fit on the SLM disk.

Result

The problem does not immediately affect subscriber service. If a critical switch process requires and cannot obtain additional memory, a warm or cold restart occurs.

Common procedures

There are no common procedures.

Action

This procedure contains a summary flowchart and a list of steps. Use the flowchart to review the procedure. Follow the steps to perform the procedure.

CM SLMLim minor (continued)

Summary of Clearing a CM SLMLim minor alarm



CM SLMLim minor (end)

Clearing a CM SLMLim minor alarm

At your Current Location

- 1 Obtain all recent CM logs.
- 2 For additional help, contact the next level of support.
- **3** The procedure is complete.

CM SRAMFL major

Alarm display

	СМ	MS	IOD	Net	PM	CCS	Lns	Trks	Ext	APPL
_	SRAMF	L		•						•
	М									

Indication

At the MTC level of the MAP display, SRAMFL appears under the CM header of the alarm banner. The SRAMFl indicates that the system reached a parity trap threshold for static random access memory (SRAM).

Note: This alarm does not apply to offices with the SR70 version of Bell Northern Research (BNR) reduced instruction set computers (BRISC).

Meaning

The number of occurrences of SRAM parity traps on the computing module (CM) CPU card reached the threshold for the 48-h software counter. This condition indicates a potentially serious hardware problem.

Result

The problem does not affect subscriber service. The damaged hardware requires replacement.

Common procedures

This procedure refers to Activity switch with memory match.

Action

This procedure contains a summary flowchart and a list of steps. Use the flowchart to review the procedure. Follow the steps to perform the procedure.

CM SRAMFL major (continued)

Summary of Clearing a CM SRAMFL major alarm



CM SRAMFL major (continued)

Clearing a CM SRAMFL major alarm

At the MAP terminal

1 To access the SRAMCNT level of the MAP display, type >SRAMCNT and press the Enter key. *Example of a MAP display*

SRAMCNT:

- 2 To display the SRAM fault counter values, type
 - >QUERYCNT and press the Enter key. *Example of a MAP display*

Query SRAM fault counters

Counter/Threshold	Value
act24	2
act48	2
inact24	0
inact48	0
dsdiff24	1
dsdiff48	2
minoralarm	1
preventrex	1
preventsync	2
preventswact	1

- **3** Note the values of counters act48 and inact48.
- 4 To exit from the SRAMCNT level of the MAP display, type

>QUIT

and press the Enter key.

5 Determine if the reason for the alarm is the active or inactive CM. To determine the reason, note if act48 or inact48 shows a minimum value of two.

If the alarm	Do
is on the active CM	step 6
is on the inactive CM	step 7

CM SRAMFL

major (continued)

- 6 Perform the procedure *Activity switch with memory match* in this document. Complete the procedure and return to this point.
- 7 To determine if the inactive central processing unit (CPU) jammed, access the CM level of the MAP display. Type

>MAPCI;MTC;CM

and press the Enter key.

Example of a MAP display:

СМ	Sync	Act	CPU0	CPU1	Jam	Memory	CMMnt	MC	PMC
0	no	cpu 1			yes				

Note: The word yes under the Jam header means that the CPU jammed. The area is blank if the CPU did not jam.

If the CPU	Do
jammed	step 10
did not jam	step 8

At the CM reset terminal for the inactive CPU

8



CAUTION Loss of service

Make sure that you do not jam the active CPU. If you jam the active CPU while the CM is not in sync, a cold restart occurs. The word Act on the top banner of the display identifies the reset terminal for the active CPU.



WARNING

Loss of service

Make sure that you do not jam the active CPU. If you jam the active CPU while the CM is not in sync, a cold restart occurs. The word Act on the top banner of the display identifies the reset terminal for the active CPU.

To jam the inactive CPU, type >\JAM and press the Enter key. *RTIF response:*
CM SRAMFL major (continued)

Please confirm: (YES/NO)

9 To confirm the command, type

>YES

and press the Enter key.

RTIF response:

JAM DONE

At the MAP display

11

12

10 Determine if the CM is in sync.

Note: A dot or EccOn under the Sync header means that the CM is in sync. The word no means that the CM is not in sync. In the example in step 7, the CM is not in sync.

If the CM	Do
is in sync	step 11
is not in sync	step 14
To drop synchronization, type	
>DPSYNC	
and press the Enter key.	
If the response	Do
is About to drop sync with CPU n	ac- step 12
tive.	-
The inactive CPU is JAMMED.	
Do you want to continue?	
Please confirm ("YES", "Y", "NO",	, or
"N"):	
is other than listed here	step 19
To confirm the command, type	
>YES	
and press the Enter key.	

CM SRAMFL

major (continued)

At the CM reset terminal for the inactive CPU

13 Wait until A1 flashes on the reset terminal for the inactive CPU.

Note: Wait 5 min for A1 to flash.

lf A1	Do
flashes	step 14
does not flash	step 19

14 Replace the NT9X13 or the NT9X10 CPU card on the inactive CPU. Perform the correct procedure in *Card Replacement Procedures*. Complete the procedure and return to this point.

At the CM reset terminal for the inactive CPU

15 To release the jam on the inactive CPU, type

>\RELEASE JAM

and press the Enter key.

RTIF response:

JAM RELEASE DONE

At the MAP terminal

16 To set the values of the SRAM inactive 24- and 48-h software counters to zero, type

>SRAMCNT;CLEARCNT INACT

and press the Enter key.

Example of a MAP display:

The inact counter will be cleared by this command. Do you wish to continue ? Please confirm ("YES", "Y", "NO", or "N"):

- 17 To synchronize the CM, type
 - >SYNC

and press the Enter key.

MAP response:

CM SRAMFL major (end)

	Maintenance action submitted Synchronization successful.	1.
	If the response	Do
	indicates the SYNC command was successful	step 18
	is other than listed here	step 19
18	To confirm the command, type	
	>YES	
	and press the Enter key.	
	Go to step 20.	
19	For additional help, contact the next le	evel of support.
20	The procedure is complete.	

CM SramFI minor

Alarm display

CM SramFl	MS	IOD	Net	PM	CCS	Lns	Trks	Ext	APPL
	·								

Indication

At the MTC level of the MAP display, SramFl appears under the computing module (CM) header. The SramFl indicates a static RAM (SRAM) fault minor alarm.

Note: This alarm does not apply to offices with the SR70 version of BNR reduced instruction set computers (BRISC).

Meaning

A 48-h software counter reached a specified threshold. The system generated a CM168 log to indicate the level of SRAM faults. Set thresholds for SRAM faults to prevent potential power failures.

Result

There is no result.

Common procedures

There are no common procedures.

Action

This procedure contains a summary flowchart and a list of steps. Use the flowchart to review the procedure. Follow the steps to perform the procedure.

CM SramFI minor (continued)

Summary of Clearing a CM SramFl minor alarm



CM SramFl minor (end)

Clearing a CM SramFl minor alarm

At the MAP display

1 To access the SRAMCNT level of the MAP display, type >SRAMCNT and press the Enter key. *Example of a MAP display*

SRAMCNT:

2 To display the SRAM fault counter values, type

>QUERYCNT

and press the Enter key. Example of a MAP display

Query SRAM fault c	ounters
Counter/Threshold	Value
act24	2
act48	2
inact24	0
inact48	0
dsdiff24	1
dsdiff48	2
minoralarm	1
preventrex	1
preventsync	2
preventswact	1

- 3 Note the values that appear for each count in the upper part of the display.
- 4 To exit from the SRAMCNT level of the MAP display, type
 - >QUIT

and press the Enter key.

- 5 Allow the alarm to remain for a 48-h period. If the system does not detect more faults, the alarm clears. If additional SRAM faults occur, a CM169 log and an SRAM major alarm appears.
- 6 The procedure is complete.

CM StrAlc critical

Alarm display

 CM	MS	IOD	Net	PM	CCS	Lns	Trks	Ext	APPL
StrAic		•	•	•	•	•	•		

Indication

At the MTC level of the MAP display, StrAlc appears under the CM header of the alarm banner. The StrAlc indicates a critical alarm for storage allocation.

Meaning

The used data store exceeds the maximum data store threshold. The used program store exceeds the maximum program store threshold. The current image size exceeds the maximum image size.

Result

The problem does not affect subscriber service. A critical switch procedure can require additional memory. If the procedure requires additional memory and cannot obtain the memory, a warm or cold restart can occur.

Common procedures

There are no common procedures.

Action

This procedure contains a summary flowchart and a list of steps. Use the flowchart to review the procedure. Follow the steps to perform the procedure.

CM StrAlc critical (continued)

Summary of Clearing a CM StrAlc critical alarm



CM StrAlc critical (end)

Clearing a CM StrAlc critical alarm

At your current location

- 1 Obtain all the latest CM logs.
- 2 For additional help, contact the next level of support.
- **3** The procedure is complete.

4 Procedures to clear an external alarm

Introduction

This chapter provides procedures to clear external alarms. External alarms appear under the EXT header of the alarm banner in the MAP display. Each procedure contains the following sections:

- Alarm display
- Indication
- Meaning
- Result
- Common procedures
- Action

Alarm display

This section indicates how the alarm appears at the MAP terminal.

Indication

This section indicates:

- the location of the alarm indication
- the alarm appearance
- the affected subsystem
- the alarm intensity

Meaning

This section indicates the cause of the alarm.

Result

This section describes the results of the alarm condition.

Common procedures

This section lists common procedures used during the procedure to clear an alarm. A common procedure is a series of steps repeated within maintenance

procedures, for example, the removal and replacement of a card. The common procedures chapter in this Northern Telecom publication describes common procedures.

Do not go to a common procedure unless the step-action procedure directs you to go.

Action

This procedure contains a flowchart and a list of steps. Use the flowchart to review the procedure. Follow the steps to perform the procedure.

Ext Crit critical

Alarm display

(СМ	MS	IOD	Net	PM	CCS	Lns	Trks	Ext	APPL
	-	•	·	•	•		•	·	1Crit *C*	

Indication

At the MTC level of the MAP display, Crit (preceded by a number) appears under the Ext header of the alarm banner. Crit indicates a critical external alarm.

Meaning

The alarm determines the meaning of the Crit alarms. Refer to the "Result" section.

The number that precedes Crit indicates the number of critical alarms.

Result

An alarm for an automatic message accounting failure (AMAFAIL) indicates that the system does not record billing information. The alarm does not affect subscriber service.

The critical power (CRPWR) alarm indicates that a critical fault is present in the power equipment of the DMS switch. Power equipment that supplies main or emergency power to the DMS switch can generate this alarm. The alarm does not affect subscriber service unless main and emergency power sources fail. If main and emergency power sources fail, all subscribers lose service.

The dead system (DEADSYSM) alarm indicates that a critical alarm scan point (scannm) changed state. The alarm only occurs if you set the alarm through ALMSC.

The line load control alarm (LLC_ALARM) indicates that line load control was activated at the MAP terminal. An office uses line load control to control a processor overload caused by a period of unusually high traffic. When line load control is active, calls made to subscribers with the essential line (ELN) service option have first priority. Calls made to lines that do not have ELN service experience a delay in reception of a ringing tone.

The message to central control not acknowledged (MCCNACK) alarm indicates a peripheral failure. The alarm indicates that at least one peripheral did not respond to a metering time-of-day changeover request. This alarm indicates a loss of billing information.

The no call processing alarm (NCPALARM) indicates that the switch does not process calls. All subscribers lose service.

The operational measurements critical alarm (OMCRITICAL) indicates that the OM critical alarm index reached the threshold within the scan period.

The power fault previous floor (PFPREFLR) alarm indicates that a critical fault is present on a lower floor of the building. The result of this alarm depends on the configuration of your office.

The power fault succeeding floor (PFSUCFLR) alarm indicates that a critical fault is present on a higher floor of the building. The impact of this alarm depends on the configuration of your office.

A voice relay critical alarm (VR1_CRITICAL) indicates that no datalinks are available to the TOPSVR1 application in table MPCFASTA.

A voice relay critical alarm (VR2_CRITICAL) indicates that no datalinks are available to the TOPSVR2 application in table MPCFASTA.

The voice services node critical alarm (VSN_CRIT_ALM) indicates that a critical error condition occurred in the voice services node. The alarm does not affect service.

The voice services node no links (VSN_NO_LINKS) alarm occurs when all logical datalinks to a voice services node are out of service. When all logical datalinks are out of service, the system routes Automated Alternate Billing Service (AABS) calls through the operator.

Common procedures

There are no common procedures.

Action

This procedure contains a flowchart and a list of steps. Use the flowchart to review the procedure. Follow the steps to perform the procedure.

Summary of Clearing an Ext Crit critical alarm



Clearing an Ext Crit critical alarm

At the MAP terminal

1 To access the Ext level of the MAP display, type >MAPCI;MTC;EXT and press the Enter key. Example of a MAP display:

Ext	Alarms	Crit	FSP	Major	Minor	NoAlm
		1	0	1	0	12

2 To list the critical external alarms, type >LIST CRIT and press the Enter key. Example of a MAP response:

AMAFAIL

3 Determine the name of the first critical external alarm on the list.

If the first alarm	Do
is AMAFAIL	step 6
is CRPWR	step 4
is CRITEQUIP	step 4
is DEADSYSM	step 21
is LLC_ALARM	step 18
is MCCNACK	step 27
is MCPALARM	step 4
is OMCRITICAL	step 21
is PFSUCFLR	step 4
is VR1_CRITICAL	step 21
is VR2_CRITICAL	step 21
is VSN_CRIT_ALM	step 21

	If the first alarm	Do
	is VSN_NO_LINKS	step 21
4	Use the procedures supplied w fault. Complete the procedure	ith your power equipment to find and fix the and return to this point.
5	Go to step 26.	
5	Determine if the system display an AMA-related alarm. These MAP display.	s an IOCOS, DDUOS, or MTDOS alarm, or alarms appear under the IOD header of the
	If an IOD alarm	Do
	appeared	step 7
	did not appear	step 8
•	Perform the correct procedure in return to this point.	n this document. Complete the procedure and
;	To start the AMA process agair	n, type
	>AMARESTART	
	and press the Enter key.	
	MAP response:	
	STREAMS TO BE RESTARTED.	DEAD RECORDING PROCESSES FOR ALL DO YOU WISH TO PROCEED?
•	This COMMAND WILL CAUSE STREAMS TO BE RESTARTED. Please confirm ("YES", " To confirm the command, type >Y and press the Enter key. Example of a MAP response: CALL RECORDING PROCESS A	DEAD RECORDING PROCESSES FOR ALL DO YOU WISH TO PROCEED? YY", "NO", or "N"): ALREADY RUNNING FOR STREAM: AMA
)	To confirm the command, type >Y and press the Enter key. Example of a MAP response: CALL RECORDING PROCESS F CALL RECORDING PROCESS F	DEAD RECORDING PROCESSES FOR ALL DO YOU WISH TO PROCEED? 'Y", "NO", or "N"): ALREADY RUNNING FOR STREAM: AMA ALREADY RUNNING FOR STREAM: SMDR
0	This command will cause STREAMS TO BE RESTARTED. Please confirm ("YES", " To confirm the command, type >Y and press the Enter key. <i>Example of a MAP response:</i> CALL RECORDING PROCESS A CALL RECORDING PROCESS A CALL RECORDING PROCESS A	DEAD RECORDING PROCESSES FOR ALL DO YOU WISH TO PROCEED? YY", "NO", or "N"): ALREADY RUNNING FOR STREAM: AMA ALREADY RUNNING FOR STREAM: SMDR m cleared.
0	This command will cause STREAMS TO BE RESTARTED. Please confirm ("YES", " To confirm the command, type >Y and press the Enter key. <i>Example of a MAP response:</i> CALL RECORDING PROCESS A CALL RECORDING PROCESS A CALL RECORDING PROCESS A Determine if the AMAFAIL alarm	DEAD RECORDING PROCESSES FOR ALL DO YOU WISH TO PROCEED? YY", "NO", or "N"): ALREADY RUNNING FOR STREAM: AMA ALREADY RUNNING FOR STREAM: SMDR m cleared. Do
9	This command will cause STREAMS TO BE RESTARTED. Please confirm ("YES", " To confirm the command, type >Y and press the Enter key. <i>Example of a MAP response:</i> CALL RECORDING PROCESS A CALL RECORDING PROCESS A CALL RECORDING PROCESS A Determine if the AMAFAIL alarm If the AMAFAIL alarm cleared	DEAD RECORDING PROCESSES FOR ALL DO YOU WISH TO PROCEED? YY", "NO", or "N"): ALREADY RUNNING FOR STREAM: AMA ALREADY RUNNING FOR STREAM: SMDR m cleared. Do step 11
0	This command will cause STREAMS TO BE RESTARTED. Please confirm ("YES", " To confirm the command, type >Y and press the Enter key. <i>Example of a MAP response:</i> CALL RECORDING PROCESS F CALL RECORDING PROCESS F	DEAD RECORDING PROCESSES FOR ALL DO YOU WISH TO PROCEED? YY", "NO", or "N"): ALREADY RUNNING FOR STREAM: AMA ALREADY RUNNING FOR STREAM: SMDR m cleared. Do step 11 step 12
9 10	THIS COMMAND WILL CAUSE STREAMS TO BE RESTARTED. Please confirm ("YES", " To confirm the command, type >Y and press the Enter key. Example of a MAP response: CALL RECORDING PROCESS A CALL RECORDING PROCESS A Determine if the AMAFAIL alarm If the AMAFAIL alarm cleared did not clear Record the action taken to clear	DEAD RECORDING PROCESSES FOR ALL DO YOU WISH TO PROCEED? YY", "NO", or "N"): ALREADY RUNNING FOR STREAM: AMA ALREADY RUNNING FOR STREAM: SMDR m cleared. Do step 11 step 12 rr the alarm in the office log.

12	Determine if your office connects to a telephone-network operating system (TNOS).
	(TNOS).

If your office	Do
connects	step 13
does not connect	step 28
To access the TNOS software, type	
>TNOS	
and press the Enter key.	
To determine if throttling is ON, type	
>FTSTA SCHEDULE	
and press the Enter key.	
If throttling	Do
is ON	step 28
is OFF	step 15
Determine if the AMAFAIL alarm occu	rred during a period of high traffic.
If the AMAFAIL alarm	Do
occurred during a period of high traffic	step 16
did not occur during a period of high traffic	step 28
To activate throttling of TNOS for high	-traffic periods, type
>FTSCH ENABLE starthour s and press the Enter key.	startmin endhour endmin
where	
starthour is a number from 01 to 23 that	indicates the hour at which
throttling is to begin	
startmin is a number from 01 to 59 that	indicates the minute at which
throttling is to begin	
endhour is a number from 01 to 23 that	indicates the hour at which

throttling is to end						
endmin is a number from 01 to 59 that i	ndicates the minute at which					
throttling is to end						
Example input:						
>FTSCH ENABLE 14 03 23	04					
Determine if the AMAFAIL alarm contiperiods.	nues to occur during high-traffic					
If the alarm	Do					
continues to occur during high-traffic periods	step 28					
does not continue to occur dur- ing high-traffic periods	step 25					
Determine if you can deactivate the lin	ne load control.					
lf you	Do					
have permission	step 19					
do not have permission	step 28					
To deactivate the line load control, type						
>LLC OFF						
and press the Enter key.						
Example of a MAP response:						
LINE LOAD CONTROL IS OFF						
Determine if the LLC_ALARM alarm c	leared.					
If the LLC_ALARM alarm	Do					
cleared	step 25					
did not clear	step 28					
Determine if the system generated an	EXT103 or an EXT108 log.					
If the system	Do					
generated an EXT103 or an EXT108 log	step 22					

DMS-100 Family NA100 Alarm Clearing and Perform. Monitoring Proc. Volume 1 of 4 LET0015 and up

If the system	Do
did not generate an EXT103 or an EXT108 log	step 28
Determine if the alarm turned OFF.	
Example of a log report:	
EXT108 APR01 09:13:48 425 IN LANLINK_FAILURE 1	NFO VSN_CRIT_ALM OFF
<i>Note:</i> The word OFF is on the righ OFF indicates that the alarm turned	t side of the alarm name. The v I OFF.
If the alarm	Do
turned OFF	step 25
did not turn OFF	step 23
Wait 30 min. Determine if the system log.	generated an EXT103 or an EX
If the system	Do
generated an EXT103 or an EXT108 log	step 24
did not generate an EXT103 or an EXT108 log	step 28
Determine if the alarm turned OFF.	
If the alarm	Do
turned OFF	step 25
did not turn OFF	step 28
To list the critical external alarms, type	,
>LIST CRIT	
and press the Enter key.	
	alaarad
Determine if the EXT Crit critical alarn	l cleareu.
Determine if the EXT Crit critical alarn	Do

Ext Crit critical (end)

If the alarm	Do
changed to a lower number (for example, changed from 2Crit to 1Crit)	step 2
did not clear	sten 28
ala not elear	5 10 p 2 0
Inform the next level of support that an min. Determine if the MCCNACK alar	MCCNACK alarm is available. Wai m cleared.
Inform the next level of support that an min. Determine if the MCCNACK alar	MCCNACK alarm is available. Wai m cleared.
Inform the next level of support that an min. Determine if the MCCNACK alar If the MCCNACK alarm cleared	MCCNACK alarm is available. Wai m cleared. Do step 29

29 The procedure is complete.

Ext Maj major

Alarm display

– См	MS	IOD	Net	PM	CCS	Lns	Trks	Ext	APPL
-	·	•	•	·	•	•	•	1Maj M	·

Indication

At the MTC level of the MAP display, Maj (preceded by a number) appears under the Ext header of the alarm banner. The Maj indicates a major external alarm.

Meaning

The meaning of this alarm depends on the alarm. Refer to the Result section.

The number that precedes Maj indicates the number of major alarms.

Result

The alarm and battery maintenance trunk module fail (ABMTMFL) alarm indicates that a fault is present in the dead system alarm (DSA) card. The DSA card is present in the backup maintenance trunk module (MTM). The alarm does not affect subscriber service.

The alarm and battery office alarm unit fail (ABOAUFL) alarm indicates that a fault is present. The primary office alarm unit (OAU) card contains the fault. The OAU card is in the backup maintenance trunk module (MTM). The alarm does not affect subscriber service.

The alarm and battery supply fail (ABSFAIL) alarm indicates that a fault is present. The fault is present in the alarm and battery voltage supply of the power distribution center (PDC) frame. The alarm does not affect subscriber service.

The digital recorded announcement machine (DRAM) fail (DRAMALRM) alarm indicates one of the following conditions:

- The DRAM fails to return the message that the central control (CC) sent.
- The queue audit for the idle terminal linkage blocks (TLB) encounters a condition that is not planned.

- The CC cannot communicate with the DRAM.
- A power loss is present on the DRAM.

The Emergency 911 automatic location identifier major (E911_ALI_MAJOR) alarm indicates a multiprotocol controller (MPC) link failure. The failure can occur in the asynchronous multiprotocol controller (MPC) link to the automatic location identifier (ALI) controller. The failure also can occur in both MPC links to an open interface ALI controller. No ALI information is available to the line or automatic call distribution public safety answering point (ACD PSAP) operators served by the database.

The Emergency 911 remote call event records major (E911_RCER_MAJOR) alarm indicates a problem. The problem occurs in all of the MPC links to a remote location. This location prints records of calls to the exact public safety answering point (PSAP). The MPC links failed. This alarm does not affect the records of events, logs, and calls generated at the E911 tandem location.

A malicious call trace (MCTALARM) alarm indicates that a malicious call trace occurs on the line of a subscriber.

A metering backup (METBCK) alarm indicates a problem with the backup file used for metering. The Device Independent Recording Package (DIRP) subsystem uses the backup file for metering. The METBCK alarm indicates that the system did not mount the DIRP. The metering system does not have a backup. Billing-related data are in jeopardy.

A major previous floor (MJPREFLR) alarm indicates that a major fault is present on a lower floor of the building. The impact of an MJPREFLR alarm depends on the configuration of your office. The impact of the alarm also depends on the items that your company chose to trigger the alarm.

A major power (MJPWR) alarm indicates that a major power fault is present in the equipment that supplies power to the DMS switch. The fault only affects subscriber service if a failure is present in both main and emergency power supplies.

A major succeeding floor (MJSUCFLR) alarm indicates that a major fault is present on a higher floor of the building. The impact of an MJSUCFLR alarm depends on the configuration of your office. The alarm result also depends on the items that your company chose to trigger the alarm.

A major operational measurements (OM) buffered reports (OMBRFAIL) alarm indicates an output device failed during a write operation. The alarm does not affect subscriber service.

The OM major alarm (OMMAJOR) indicates that the OM major alarm index reached the threshold within the scan period.

The post autoapply sanity (POST_AUTOAPP_SAN) alarm indicates an exceeded log count. The number of specified logs during the POSTMON period after the autoapply process exceeds the allowed number. The following conditions can cause this alarm.

- The switch detects a maintenance condition not related to the autoapply process. The type of logs, and the number of the logs, identifies the affect on subscriber service.
- The counted logs include information-only logs and other low-priority logs. Subscriber service is not affected.
- The number of logs allowed during a POSTMON period may be too low. Subscriber service is not affected.

A power distribution center failure (PDCFAIL) alarm indicates that a power fault is present in a power distribution center (PDC) frame. The fault only affects subscriber service if the fault interrupts power to a shelf that does not have backup power supply.

An SL-100 link error (SLLNKERR) alarm indicates that data transfer stopped. A data transfer stop interrupts subscriber service.

A Traffic operator position system personal audio response system application (TOPS_PARS_APPL) alarm indicates a problem with (MPC) datalinks. The alarm indicates that all MPC datalinks for the TOPS_PAR are out of service. The alarm does not affect subscriber service.

A voice alarm (VCEALM) indicates that a fault is present in analog recorded announcement machine that connects to a DMS switch. The analog recorded announcement machine does not have a DMS switch. Subscribers do not receive recorded announcements.

A voice services node major alarm (VSN_MAJ_ALM) indicates a major error condition. The alarm indicates that a major error condition occurred or is resolved in the voice services node. The alarm does not affect subscriber service.

Common procedures

There are no common procedures.

Action

This procedure contains a flowchart and a list of steps. Use the flowchart to review the procedure. Follow the steps to perform the procedure.

Summary of Clearing an Ext Maj major alarm



Clearing an Ext Maj major alarm

At the MAP terminal

1 To access the Ext level of the MAP display, type >MAPCI;MTC;EXT and press the Enter key.

Example of a MAP display:

Ext Alarms	Crit	FSP	Major	Minor	NoAlm
	1	0	1	0	12

2 To list the major alarms, type >LIST MAJ and press the Enter key. *Example of a MAP response:*

DRAMALRM

3 Determine the name of the first major external alarm on the list.

If the first alarm	Do
is ABMTMFL	step 69
is ABOAUFL	step 81
is ABSFAIL	step 23
is DRAMALRM	step 97
is E911_AU_MAJOR	step 25
is E911_RCER_MAJOR	step 25
is MCTALARM	step 96
is METBCK	step 68
is MJPWR	step 27
is MJPREFLR	step 27
is MJSUCFLR	step 27
is OMBRFAIL	step 104

DMS-100 Family NA100 Alarm Clearing and Perform. Monitoring Proc. Volume 1 of 4 LET0015 and up

If the first alarm	Do
is OMMAJOR	step 104
is POST_AUTOAPP_SAN	step 4
is POST_AUTOPROC_SA	step 4
is PDCFAIL	step 23
is SLLNKERR	step 29
is TOPS_PARS_APPL	step 21
is VCEALM	step 27
is VSN_MAJ_ALM	step 97

4

ATTENTION

Follow office policy when you troubleshoot and correct any maintenance condition. If necessary, contact the next level of support.

Review recent logs for any maintenance condition not related to the autoapply process.

If recent logs	Do				
indicate a maintenance condi- tion	Perform the correct procedure to clear the maintenance condition. When completed, go to step 19.				
do not indicate a maintenance condition	step 5				
Access table AUTOMON by typing					
>TABLE AUTOMON					
and pressing the Enter key.					
List the table by typing					
>LIS ALL					
and pressing the Enter key.					
Example of a MAP response:					

5

6

NAME	LOGNU	JM
LC	DST	101
LC	DST	104
LC	DST	105
LC	DST	106
	MM	100
	CM	103
	CM	111
	CM	112
	CM	116
	CM	119
	CM	122
	CM	125
AU	JDT	101
AU	JDT	102
AU	JDT	397
I	AUD	395

7 Review the contents of the table for any information-only logs or low-priority logs.

If table AUTOMON	Do

lists any information-only or low-priority logs that step 8 can deleted from the table

does not list any information-only or low-priority step 10 logs that can be deleted from the table

8

ATTENTION

Check office policy before you delete any logs from table AUTOMON. You may have to add the logs to table AUTOMON at a later date.

Delete the log from the table by typing

>DEL logname_lognum

and pressing the Enter key.

where

logname_lognum

is the name and number of the log

9 Repeat step 8 for each log to be deleted from the table.

If you									D	0
deleted a	any logs	from	tab	le Al	JTC	OMO	N		S	tep 19
did not o	delete ai	ny logs	s fr	om ta	ble	AUT	OM	ON	S	tep 11
Access tak	ole AUTC	OPTS	s by	typing	g					
>TABLE	AUTOOP	TS								
and pressi	ing the E	nter ke	ey.							
List the tab	ole by typ	bing								
>LIS AI	L									
and pressi	ing the E	nter ke	ey.							
Example of	of a MAF	respo	nse	:						
KEY FI DROPSYNC MO MNTTIME	ILEALRM ONDAY TU	APPROVI ESDAY 1	AL WEDI	NSDAY	THU	RSDAY	MOND FRID	ATA D AY SA	URATION TURDAY S	MAXATI SUNDAY
AUTOOPTS	N		N		Y	т15	т15	15	30	
N 2315	2300	2300		2300		2300	23	00	2300	2300

Change the percentage increase to allow for logs before an EXT MAJ alarm by typing

>CHA

and pressing the Enter key.

- **14** Press Enter to scroll through the fields until you receive the MONLIMIT prompt.
- **15** Record the current value in MONLIMIT. This value is the percentage increase that is allowed for logs before an EXT MAJ alarm.
- 16 Enter the new percentage increase by typing

>percent_increase

and pressing the Enter key.

	where	
	<pre>percent_increase is a number between 1 and 100</pre>)
17	Confirm the change by typing	
	>Y	
	and pressing the Enter key.	
18	Quit the table by typing	
	>QUIT	
	and pressing the Enter key.	
At the	EXT level of the MAP display	
19	Release the alarm by typing	
	>SETSC alarm_name REL	
	and pressing the Enter key.	
	where	
	alarm_name is POST_AUTOAPP_SAN or P	OST_AUTOPROC_SA
20	Go to step 105.	
21	Perform the correct procedure in the c Complete the procedure and return to	orresponding <i>Maintenance Manual.</i> . this point.
22	Go to step 101.	
23	A power fault is present in the PDC fra an Ext FSP PDC frame major alarm in procedure and return to this point.	ame. Perform the procedure <i>Clearing</i> this document. Complete the
24	Go to step 101.	
25	Perform the correct procedure in this c	document and return to this point.
26	Go to step 101.	
27	Use the procedures supplied with your fault. Complete the procedure and ret	r power equipment to find and fix the ourn to this point.
28	Go to step 101.	
29	Determine if the system generated an	SLNK103 log.
	If the system	Do
	generated an SLNK103 log	step 30
	did not generate an SLNK103 log	step 104
30	Determine the device in error.	

Note: The SLNK log report lists the name of the failed device.

	Example of an SLNK103 log report:
	SLNK103 Jun12 02:03:47 1991 INFO SESSION SMDR Reports transfer stopped on device MRLINK
31	To access table TERMDEV, type
	>TABLE TERMDEV
	and press the Enter key.
32	To position on the device, type
	>POSITION dev_type
	and press the Enter key.
	where
	<pre>dev_type is the name of the device that you determined in step 30</pre>
33	Record the input/output controller number (listed under the IOCNO header), and card number (listed under the CKTNO header).
34	To quit from table TERMDEV, type
	>QUIT
	and press the Enter key.
35	To access table SLLNKDEV, type
	>TABLE SLLNKDEV
	and press the Enter key.
36	To position on the device, type
	>POSITION dev_type
	and press the Enter key.
	where
	<pre>dev_type is the name of the device that you determined in step 30</pre>
37	Record the link transfer type (listed under the XFERS header).
38	To quit from table SLLNKDEV, type
	>QUIT
	and press the Enter key.
39	To access the link utility, type
	>LNKUTIL
	and press the Enter key.
40	To stop the transfer of data, type
	>DEVSTOP dev_type xfer_type
	and press the Enter key.

```
where
          dev_type
            is the name of the device that you determined in step 30
          xfer type
            is the transfer type that you determined in step 37
41
      To stop the device, type
      >DEVDISC dev_type KILL
      and press the Enter key.
       where
          dev type
            is the name of the device that you determined in step 30
42
      To access the IOD level of the MAP display, type
      >IOD
      and press the Enter key.
      Example of a MAP display:
    IOD
    IOC 0 1 2
                    3
    STAT . S .
                    S
    DIRP: AMA B XFER: .
                                NOP : . SLM : SLMbsy DVI :
    DPPP: . DPPU:
                          .
                                NX25:
                                             MLP : .
                                                           SCAI:
                                        .
    CDR :
43
      To access the IOC level of the MAP display for the device, type
      >IOC ioc no
      and press the Enter key.
       where
          ioc no
            is the IOC number that you recorded in step 33
       Example of a MAP display:
    IOC
           CARD
                    0
                         1
                               2
                                     3
                                           4
                                                 5
                                                      б
                                                            7
                                                                    8
       1
           PORT 0123 0123 0123 0123 0123 0123 0123
                                                           0123
                                                                  0123
           STAT C--- P--- C-CC P--- CC-- P--- -C-C P---
                                                                  ____
           TYPE MTD DDU CONS MPC CONS MPC CONS MPC
44
      To access the Card level of the MAP display, type
      >CARD card no
      and press the Enter key.
       where
```

	car is	d_no s the c	ircuit nui	mber that yo	u recorded ir	n step 33	
	Example	e of a	MAP dis	play:			
	Card Status Cons I ConTyp	2 Id	Ckt	0 CS BUSY RV120 VT100	1 -	2 CS BUSY TEAM1 VT100	3 CS BUSY CRTCOML3 VT100
45	To deter	mine	the synta	ax needed to	manually bu	usy the card, typ	be
	>HELP	BSY					
	and pre	ss the	Enter ke	ey.			
46	To manu following	ually b g:	usy the o	circuit that c	orresponds to	o the device, typ	be one of the
	>BSY	circ	uit				
	and pre	ss the	Enter ke	ey.			
	>BSY	link					
	and pre	ss the	Enter ke	ey.			
	<i>Note</i> devic	: Synte cont	tax for th roller ca	e BUSY cor rd.	nmand varies	s according to t	he type of
	where						
	circ is	uit s the n	umber o	f the circuit	(0 to 3)		
	link is	s the n	umber o	f the link (0	to 3)		
47	To deter	mine	the synta	ax needed to	o offline the c	ard, type	
	>HELP	OFF	L L				
	and pre	ss the	Enter ke	ey.			
48	To put th	ne circ	uit offline	e, type one o	of the followir	ng:	
	>OFFL	cir	cuit				
	and pre	ss the	Enter ke	ey.			
	>OFFL	lin	k				
	and pre	ss the	Enter.				
	<i>Note</i> devic	: Synte cont	tax for th roller ca	e OFFLINE rd.	command va	aries according	to the type of
	where						
	circ is	uit s the n	umber o	f the circuit	(0 to 3)		
	link is	s the n	umber o	f the link (0	to 3)		

49	To manually busy the circuit, type one of the following:
	>BSY circuit
	and press the Enter key.
	>BSY link
	and press the Enter key.
	where
	circuit is the number of the circuit (0 to 3)
	link is the number of the link (0 to 3)
50	To determine the syntax needed to return the card to service, type
	>HELP RTS
	and press the Enter key.
	<i>Note:</i> Syntax to return the card to service varies according to the type of device controller card.
51	To return the circuit to service, type one of the following:
	>RTS circuit
	and press the Enter key.
	>RTS link
	and press the Enter key.
	where
	circuit is the number of the circuit (0 to 3)
	link is the number of the link (0 to 3)
52	To access the CI level of the MAP display, type
	>QUIT ALL
	and press the Enter key.
53	To access the link utility, type
	>LNKUTIL
	and press the Enter key.
54	To start a session on the datalink, type
	>DEVCON dev_type
	and press the Enter key.
	where
	<pre>dev_type is the name of the device that you recorded in step 30</pre>

55	To start data transmission, t	ype xfer_type				
	and press the Enter key.					
	where					
	is the name of the de	vice that you recorded in step 30				
	xfer_type is the transfer type th	at you determined in step 37				
56	To access the Ext level of the MAP display, type					
	>MAPCI;MTC;EXT					
	and press the Enter key.					
57	To list the major alarms, type	e				
	>LIST MAJ					
	and press the Enter key.					
58	Determine if the SLLNKERR alarm is present.					
	If the SLLNKERR alarm	Do				
	is present	step 59				
	is not present	step 102				
59	is not present To stop the transfer of data,	step 102 type				
59	is not present To stop the transfer of data, >DEVSTOP dev_type	step 102 type tfer_type				
59	is not present To stop the transfer of data, >DEVSTOP dev_type a and press the Enter key.	step 102 type tfer_type				
59	is not present To stop the transfer of data, >DEVSTOP dev_type 2 and press the Enter key. where	step 102 type ffer_type				
59	is not present To stop the transfer of data, >DEVSTOP dev_type 2 and press the Enter key. where dev_type is the device that you	step 102 type tfer_type recorded in step 30				
59	is not present To stop the transfer of data, >DEVSTOP dev_type a and press the Enter key. where dev_type is the device that you xfer_type is the transfer type th	step 102 type fer_type recorded in step 30 at you recorded in step 37				
59 60	is not present To stop the transfer of data, >DEVSTOP dev_type 2 and press the Enter key. where dev_type is the device that you xfer_type is the transfer type the To stop the device, type	step 102 type tfer_type recorded in step 30 at you recorded in step 37				
59 60	is not present To stop the transfer of data, >DEVSTOP dev_type a and press the Enter key. where dev_type is the device that you xfer_type is the transfer type the To stop the device, type >DEVDISC dev_type B	step 102 type tfer_type recorded in step 30 at you recorded in step 37				
59 60	is not present To stop the transfer of data, >DEVSTOP dev_type 2 and press the Enter key. where dev_type is the device that you xfer_type is the transfer type the To stop the device, type >DEVDISC dev_type B and press the Enter key.	step 102 type tfer_type recorded in step 30 at you recorded in step 37				
59 60	is not present To stop the transfer of data, >DEVSTOP dev_type 2 and press the Enter key. where dev_type is the device that you xfer_type is the transfer type the To stop the device, type >DEVDISC dev_type F and press the Enter key. where	step 102 type tfer_type recorded in step 30 at you recorded in step 37				
59 60	is not present To stop the transfer of data, >DEVSTOP dev_type 2 and press the Enter key. where dev_type is the device that you xfer_type is the transfer type the To stop the device, type >DEVDISC dev_type E and press the Enter key. where dev_type is the device that you	step 102 type tfer_type recorded in step 30 at you recorded in step 37 KILL recorded in step 30				
59 60 61	is not present To stop the transfer of data, >DEVSTOP dev_type 2 and press the Enter key. where dev_type is the device that you xfer_type is the transfer type the To stop the device, type >DEVDISC dev_type F and press the Enter key. where dev_type is the device that you To access the IOD level of the	step 102 type tfer_type recorded in step 30 at you recorded in step 37 tILL recorded in step 30 he MAP display, type				
59 60 61	is not present To stop the transfer of data, >DEVSTOP dev_type 2 and press the Enter key. where dev_type is the device that you xfer_type is the transfer type th To stop the device, type >DEVDISC dev_type F and press the Enter key. where dev_type is the device that you To access the IOD level of th >IOD	type tfer_type recorded in step 30 at you recorded in step 37 tILL recorded in step 30 he MAP display, type				
62	To access the IOC level of the MAP display for the device, type					
----	---					
	>IOC ioc_no					
	and press the Enter key.					
	where					
	ioc_no					
~~	is the IOC number for the device that you recorded in step 33					
63	To access the Card level of the MAP display, type					
	>CARD card_no					
	and press the Enter key.					
	where					
	card_no is the circuit number that vou recorded in step 33					
64	To determine the syntax needed to manually busy the card, type					
	>HELP BSY					
	and press the Enter key.					
65	To manually busy the circuit that corresponds to the device, type one of the following:					
	>BSY circuit					
	and press the Enter key.					
	>BSY link					
	and press the Enter key.					
	<i>Note:</i> Syntax for the BUSY command varies according to the type of device controller card.					
	where					
	circuit is the number of the circuit (0 to 3)					
	link is the number of the link (0 to 3)					
66	To determine the syntax needed to put the card offline, type					
	>HELP OFFL					
	and press the Enter key.					
67	To put the circuit offline, type one of the following:					
	>OFFL circuit					
	and press the Enter key.					
	>OFFL link					
	and press the Enter key.					
	Note: Syntax for the OFFLINE command varies according to the type of device controller card.					

	where							
	circuit is the number of the circuit (0 to 3)							
	link is the number of the link (0 to 3)							
	Go to step 104.							
68	Mount the backup volume in the DIRP subsystem. After the backup process runs, the METBCK alarm clears automatically or manually. To manually clear the METBCK alarm, execute the Mstore command at the MTRSYS level of the MAP display.							
	Go to step 102.							
69	To access table ALMSD, type							
	>TABLE ALMSD							
	and press the Enter key.							
70	To position on the tuple for the signal distributor (SD) point MTMFAIL, type							
	>POSITION MTMFAIL							
	and press the Enter key.							
	Example of a MAP response:							
	MIMFAIL I O I N N							
71	To display the table headings, positioned on the SD point tuple, type							
	>LIST							
	and press the Enter key.							
	Example of a MAP response:							
	FUNCTION SDGROUP POINT NORMALST AUDIBLE LAMPTEST							
	 MTMFAIL 1 0 1 N N							
72	Record the SD point group number.							
	<i>Note:</i> The SD point group number appears under the SDGROUP heading.							
73	To quit from table ALMSD, type							
	>QUIT							
	and press the Enter key.							
74	To access table ALMSDGRP, type							
	>TABLE ALMSDGRP							
	and press the Enter key.							
75	To position on the SD point group number tuple, type							
	>POSITION sdgroup_no							

and press the Enter key.

where

sdgroup_no
is the SD point group number that you recorded in step 72
Example of a MAP response:

1 MTM 1 0 3X82AA

76 Display the table headings positioned on the SD point group number tuple. To display the table headings, type

>LIST

and press the Enter key.

Example of a MAP response:

 SDGROUP TMTYPE TMNO TMCDTNO CARDCODE

 1
 MTM
 1
 0
 3X82AA

- I MIM I O SAOZAA
- 77 Record the TMTYPE, TMNO, and CARDCODE for the MTM.
- 78 To quit from table ALMSDGRP, type

>QUIT

and press the Enter key.

79 To access the PM level of the MAP display, type

>PM

80

and press the Enter key.

Example of a MAP display:

РМ	SysB O	ManB 0	OffL 1	CBsy 9	ISTb 0	InSv 0
To def > POS and p <i>where</i>	termine the τ ΜΤΜ π ress the Ent ?	state of the htm_no ter key.	e MTM, type	9		
m	itm_no is the TMN	O that you	recorded ir	n step 77		
If the	e MTM			Do		
is C	B sy or Sys	sB		step 95		
is no	ot CB sy o	r SysB		step 93		

81	To access table ALMSD, type										
	>TABLE ALMSD										
	and press the Enter key.										
82	To position on the tuple for the SD point OAUFAIL, type										
	>POSITION OAUFAIL										
	and press the Enter key.										
	Example of a MAP response:										
	OAUFAIL 1 0 1 N N										
83	Display the table headings, positioned on the SD point tuple. To display the table headings, type										
	>LIST										
	and press the Enter key.										
	Example of a MAP response:										
	FUNCTION SDGROUP POINT NORMALST AUDIBLE LAMPTEST										
• •	OADFAIL I U I N N										
84	Record the SD point group number.										
	Note: The SD point group number appears under the SDGROUP heading.										
85	To quit from table ALMSD, type										
	>QUIT										
	and press the Enter key.										
86	To access table ALMSDGRP, type										
	>TABLE ALMSDGRP										
07	and press the Enter key.										
87	To position on the SD point group number tuple, type										
	>POSITION sagroup_no										
	where										
	sdaroup po										
	is the SD point group number that you recorded in step 84										
	Example of a MAP response:										
	1 OAU 1 0 3X82AA										

Display the table headings, positioned on the SD point group number tuple. 88 To display the table headings, type >LIST and press the Enter key. Example of a MAP response: SDGROUP TMTYPE TMNO TMCDTNO CARDCODE _____ OAU 1 0 1 3X82AA 89 Record the TMTYPE, TMNO, and CARDCODE for the OAU. To guit from table ALMSDGRP, type 90 >QUIT and press the Enter key. 91 To access the PM level of the MAP display, type >PM and press the Enter key. Example of a MAP display: ManB OffL CBsy ISTb InS SysB ΡМ 0 0 1 9 0 (92 To determine the state of the OAU, type >POST OAU oau no and press the Enter key. where oau no is the TMNO that you recorded in step 89 If the OAU Do is CBsy or SysB step 95 step 93 is not CBsy or SysB 93 To replace the card that you recorded in step 77 or step 89, perform the correct procedure in Card Replacement Procedures. Complete the procedure and return to this point. 94 Go to step 101. 95 Perform the correct procedure to clear a peripheral module alarm. Complete the procedure and return to this point. Go to step 101.

To silence the alarm, type						
>MAPCI;MTC;SIL						
and press the Enter key.						
Determine if the system generated on	e of the following logs.					
If the system	Do					
generated an EXT103 log	step 98					
generated an EXT107 log	step 98					
generated an EXT108 log	step 98					
generated an AUDT205 log	step 103					
generated an AUDT206 log	step 103					
generated an AUDT207 log	step 103					
generated a log other than listed here	step 104					
Determine if the alarm turned OFF.						
Example of a log report:						
EXT107 APR01 09:13:48 425 INFO VSN_MAJ_ALM OFF CNTRLNK_INTERFACE 1						
<i>Note:</i> The word OFF appears on the word OFF indicates that the alarm	he right side of the alarm name. The turned OFF.					
If the alarm	Do					
turned OFF	step 102					
did not turn OFF	step 99					
Wait 30 min. Determine if the system of log or an EXT108 log.	generated an EXT103 log, an EXT107					
If the system	Do					
generated a log	step 100					
did not generate a log	step 104					

Ext Maj major (end)

100	Determine if the alarm turned OFF.						
	If the alarm	Do					
	turned OFF	step 102					
	did not turn OFF	step 104					
101	Determine if the TOPS_PARS_APPL	alarm cleared.					
	If the alarm	Do					
	cleared	step 102					
	did not clear	step 104					
100 101 102 103 104	Determine if the EXT Maj major alarm cleared.						
	If the alarm	Do					
	cleared	step 105					
	changed to a smaller number (for example, changes from 2Maj to 1Maj)	step 2					
	did not clear	step 104					
103	Refer to the correct log report and ma <i>Reference Manual</i> .	intenance action in the Log Report					
104	For additional help, contact the next le	evel of support.					

105 The procedure is complete.

Ext Min minor

Alarm display

СМ	MS	IOD	Net	PM	CCS	Lns	Trks	Ext	APPL
-	•	•	•	•	•	•	•	1Min	•

Indication

At the MTC level of the MAP display, Min (preceded by a number) appears under the Ext header of the alarm banner. The Min indicates a minor external alarm.

Meaning

The meaning of the minor alarms depends on the exact alarm (see Result).

The number that precedes Min indicates the number of minor alarms.

Result

A BLUEBOX alarm indicates that system software detects a false attempt to make a toll call with a bluebox. A bluebox is a tone generator. Blueboxes allow persons to make toll calls that are not legal and do not incur toll charges. The problem does not affect subscriber service.

An emergency 911 automatic location identifier minor (E911_ALI_MINOR) alarm appears. The alarm indicates that the asynchronous multiprotocol controller (MPC) link to an open interface automatic location identifier (ALI) controller failed. Only one of the two redundant links in the ALI interface can operate. The problem does not affect subscriber service.

An emergency 911 remote call event records minor (E911_RCER_MINOR) alarm appears. The alarm indicates that one of the MPC links to a remote location failed. Records of calls to the exact public safety answering point (PSAP) print at the remote location. The problem does not affect subscriber service.

An off-hook alarm for the emergency 911 public safety answering point (E911_PSAP_OFFHK) indicates that a PSAP operator was off-hook. The PSAP operator was off-hook and did not connect to another party for a time

that exceeds an office parameter setting. The PSAP operator cannot answer incoming emergency calls. The problem can affect subscriber service.

An alarm for the emergency 911 selective routing database memory (E911_SRDB_MEMORY) indicates that one of the following conditions is present:

- the selective routing database (SRDB) uses storage that exceeds a specified percentage of the total store
- the free memory is below a specified value
- the number of tuples in the SRDB exceeds a specified value

The preceding conditions do not affect subscriber service.

A metering out-of-service (METOOS) alarm appears. The alarm indicates that the out-of-service file on the device independent recording package (DIRP) subsystem for metering is not mounted. You cannot withdraw the allocation of software meter blocks.

A meter recycle (METXRCYL) alarm indicates a meter audit failed to clear recycle meters. The alarm occurs after an image backup loads again.

A minor previous floor (MNPREFLR) alarm indicates that a minor power fault is present on a lower floor of the building. The problem does not affect subscriber service.

A minor power (MNPWR) alarm indicates that a minor fault is present in the equipment that supplies power to the switch. The problem does not affect subscriber service.

A minor succeeding floor (MNSUCFLR) alarm indicates that a minor power fault is present on a higher floor of the building. The problem does not affect subscriber service.

A minor alarm for operational measurements buffered reports (OMBRSTOP) indicates that an output device fails during a read operation. If you ignore the failure for an extended period, the disk buffer fills and all operational measurements (OM) data goes unbuffered to the log system. The problem does not affect subscriber service.

An OCDL_CONGESTION indicates a large volume of traffic on and along the OCDL links.

that exceeds an office parameter setting. The PSAP operator cannot answer incoming emergency calls. The problem can affect subscriber service.

An alarm for the emergency 911 selective routing database memory (E911_SRDB_MEMORY) indicates that one of the following conditions is present:

- the selective routing database (SRDB) uses storage that exceeds a specified percentage of the total store
- the free memory is below a specified value
- the number of tuples in the SRDB exceeds a specified value

The preceding conditions do not affect subscriber service.

A metering out-of-service (METOOS) alarm appears. The alarm indicates that the out-of-service file on the device independent recording package (DIRP) subsystem for metering is not mounted. You cannot withdraw the allocation of software meter blocks.

A meter recycle (METXRCYL) alarm indicates a meter audit failed to clear recycle meters. The alarm occurs after an image backup loads again.

A minor previous floor (MNPREFLR) alarm indicates that a minor power fault is present on a lower floor of the building. The problem does not affect subscriber service.

A minor power (MNPWR) alarm indicates that a minor fault is present in the equipment that supplies power to the switch. The problem does not affect subscriber service.

A minor succeeding floor (MNSUCFLR) alarm indicates that a minor power fault is present on a higher floor of the building. The problem does not affect subscriber service.

A minor alarm for operational measurements buffered reports (OMBRSTOP) indicates that an output device fails during a read operation. If you ignore the failure for an extended period, the disk buffer fills and all operational measurements (OM) data goes unbuffered to the log system. The problem does not affect subscriber service.

An OCDL_CONGESTION indicates a large volume of traffic on and along the OCDL links.

Ext Min minor (continued)

An OCDL_SYSB alarm indicates an affected operator centralization from a remote toll center to a host DMS TOPS toll center. A reduction of remote links to the TOPS toll center occurred.

An alarm for a traffic operator position system personal audio response system link (TOPS_PARS_LINK) appears. The alarm indicates that an MPC datalink for the TOPS_PARS application is out of service. The problem does not affect subscriber service.

A traffic operator position system personal audio response system node (TOPS_PARS_NODE) alarm indicates that all MPC datalinks to any PARS application are out of service. The problem does not affect subscriber service.

A TQMSFCQA_ALM alarm indicates missing datafill in table TQMSFCQA. An EXT 106 log will be generated when the alarm is set. Field CT4Q will reference the queue that was assigned a CT4Q in table CT4QNAMS but is missing from TQMSFCQA.

A minor alarm for the testline 101 (TSTLN101) indicates a call. The call enters on a 101-type test line at a transmission test center (TTC). The problem does not affect subscriber service.

A voice relay one (VR1_MINOR) alarm indicates that only one datalink is available to the TOPSVR1 application in table MPCFASTA. The problem does not affect subscriber service.

A voice relay two (VR2_MINOR) alarm indicates that only one datalink is available to the TOPSVR2 application in table MPCFASTA. The problem does not affect subscriber service.

A voice services node minor alarm (VSN_MIN_ALM) indicates that a minor error condition occurs in the VSN. The alarm also indicates a resolution of a problem in the VSN. The problem does not affect subscriber service.

A voice services node one link (VSN_ONE_LINK) alarm appears. A VSN alarm indicates that only one datalink in a set of two or more datalinks attached to a VSN can operate.

Common procedures

There are no common procedures.

Ext Min minor (continued)

Action

This procedure contains a summary flowchart and a list of steps. Use the flowchart to review the procedure. Follow the steps to perform the procedure.

Summary of clearing a Net ISTb on a link minor alarm



Ext Min minor (continued)

If the first alarm	Do
is TOPS_PARS_LINK	step 4
is TOPS_PARS_NODE	step 4
is TQMSFCQA_ALM	step 18
is TSTLN101	step 11
is VR1_MINOR	step 18
is VR2_MINOR	step 18
is VSN_MIN_ALM	step 18
is VSN_ONE_LINK	step 18

- 4 Perform the correct procedure that supports Traffic Operator Position System (TOPS) to clear the alarm. Complete the procedure and return to this point.
- 5 Go to step 23.
- 6 Use the procedures supplied with your power equipment to find and fix the fault. Complete the procedure and return to this point.
- **7** Go to step 23.
- 8 The occurrence of this alarm depends on the configuration of your office. The occurrence of the alarm also depends on the stimulus that your company chose as the trigger for the alarm. Use the procedures outlined by your company to find and fix the fault. Complete the procedure and return to this point.
- 9 Go to step 23.
- **10** Perform the correct procedure in this document. Complete the procedure and return to this point.

Go to step 23.

- 11 Answer the incoming call on a 101-type test line at a transmission test center (TTC). Take action according to the procedure on how to respond to 101-type calls. Your company outlines the procedure. Complete the procedure and return to this point.
- **12** Go to step 23.
- **13** Determine if the system generated a TRK153 log report.

If the system	Do
generated a TRK153 log report	step 14
did not generate a TRK153 log report	step 24

Ext Min minor (continued)

14	Respond to the alarm and log report as indicated in your company procedure to handle toll calls that are not legal. Complete the procedure and return to this point.								
15	Go to step 23.								
16	Mount the out-of-service volume on the DIRP subsystem.								
	Go to step 23.								
17	At the CI level of the MAP display, exe	cute the RCLR command.							
	Go to step 18.								
18	Determine if the system generated an	EXT106 log report.							
	If the system	Do							
	generated an EXT106 log report	step 19							
	did not generate an EXT106 re- step 24 port								
19	An alarm is present in the alarm bann following command	er. Fix the datafill fault. Enter the							
	>setsc tqmsfcqa_alm rel								
	and press the enter key. Proceed to step 25.								
20	Determine if the alarm is OFF.								
	Example of a log report:								
	EXT106 APR01 09:13:48 425 INFO VSN_MIN_ALM OFF CNTRLNK_INTERFACE 1								
	<i>Note:</i> The word OFF on the right si alarm is off.	de of the alarm name indicates that the							
	If the alarm	Do							
	is OFF	step 23							
	is not OFF step 21								
21	Wait 30 min. Determine if the system	generated an EXT106 log.							
	If the system	Do							
	generated an EXT106 log	step 22							
	did not generate an EXT106 log	step 23							

Ext Min minor (end)

22	Determine if the alarm is OFF.					
	If the alarm	Do				
	is OFF	step 23				
	is not OFF	step 24				
23	Determine if the EXT Min minor alarm	cleared.				
	If the alarm	Do				
	cleared	step 25				
	changed to a lower number (for example, changed from 2Min to 1Min)	step 2				
	did not clear	step 24				
24	For additional help, contact the next le	vel of support.				
25	The procedure is complete.					

Ext CPPOOL critical

Alarm display

ĺ	 СМ	MS	IOD	Net	PM	CCS	Lns	Trks	Ext	APPL
	•	•	•	•	•	•	•		1Crit	
l)									

Indication

At the MTC level of the MAP display, CPPOOLMGR critical appears under the computing module (CM) header of the alarm banner. The CPPOOLMGR critical signal indicates that an audit finds a fault condition. The audit finds a fault when the audit finds an error condition with the pools.

Meaning

The system raises the CPPOOL critical alarm because of the following conditions:

- The system raises POOL302 when the number of free areas owned by the server reduces to 10% of the server memory.
- The system raises POOL312 when the number of areas used by a pool reaches 90% of the server's limit of vast areas of that pool.
- The system raises POOL321 when a pool reaches 100% of the absolute possible usage level.

Result

This alarm indicates that memory runs very low. Report the condition immediately to next level of support, so that call processing does not degrade.

Common procedures

There are no common procedures.

Action

This procedure contains a summary flowchart and a list of steps. Use the flowchart to review the procedure. Follow the steps to perform the procedure.

Ext CPPOOL critical (continued)

Summary of Clearing an Ext CPPOOL critical alarm



Ext CPPOOL critical (continued)

Clearing an Ext CPPOOL critical alarm

At the MAP display

- 1 To access the Ext level of the MAP display, type >MAPCI;MTC;EXT and press the Enter key.
- 2 To access pool information, type
 - >CPPOOLMGR
 - and press the Enter key.
- 3 Review pool logs.

If the log	Do
is POOL 302	step 4
is POOL 312	step 5
is POOL 321	step 10

4 To display current information about the server and office parameter, type >DMEMINFO

and press the Enter key. Example of MAP display:

DYNAMIC MEMORY SIZE PARM

	PARM	MEMORY IN KE	BYTES	VAST AREAS				
	SIZE	Total	USED	Total USED				
	15MB	15360K	2112K 13%	240 33К	13%			
		POOLS IN ALARM						
	POOL	FTRQ2WPERMS	is in alarm for	a POOL_LIMIT	alarm			
(Go to step 7	7.						

5 To access pool information, type

>POOL poolname

and press the Enter key.

where

Ext CPPOOL critical (continued)

poolname

is the name of the pool

Example of MAP display:

CUF	RRENT PO	OOL INFO	ORMATION	I in BLOCKS	
POOL NAME	IN USE	HWM AI	LLOC PER	RCENT PERCE	NT ALARM
	BLOCKS	BLOCKS	BLOCKS	Tot MEM	Pool Max
FTRQ2WPERMS	0	69615	69615	7%	100%*
FTRQAGENTS	0	100	4681	1%	7%
FTRQOWAREAS	0	0	8191	1%	11%
FTRQ2WAREAS	0	0	5461	1%	8%
FTRQ4WAREAS	0	0	4095	1%	5%
FTRQ8WAREAS	0	0	2730	1%	4%
FTRQ16WAREAS	0	0	1638	1%	2%
FTRQ32WAREAS	0	0	910	1%	1%
FTRQOWPERMS	0	0	5461	1%	8%
NUMBER_OF_NCCBS_	_				
SCRATCHEXT_AREAS	5 0	0	8191	1%	2%
FTRQ4WPERMS	0	0	3276	1%	4%
FTRQ8WPERMS	0	0	2340	1%	3%
FTRQ16WPERMS	0	0	1489	1%	2%
FTRQ32WPERMS	0	0	862	1%	1%

- 6 Check the preceding response for the percentage of memory allocated. Compare the percentage of memory allocated to the total amount of memory available. Compare the percentage of memory allocated to the maximum amount that the pool can have.
- 7 You must increase the size of the parameter DYNAMIC_MEMORY_SIZE in table OFCENG to clear the alarm.

Go the the next level of support. Determine the amount of store you must add to the parameter DYNAMIC_MEMORY_SIZE. Return to this point.

8 The pool memory is close to the maximum amount of pool memory. If necessary, you can reduce the size of the pool memory.

Go the the next level of support. Determine the amount of store you must add to the parameter DYNAMIC_MEMORY_SIZE. Return to this point.

9 To make sure that the amount of store added to the parameter turned OFF the alarm, type

>DMEMINFO

and press the Enter key.

Example of MAP display:

Ext CPPOOL critical (end)

	is ON			step 10				
	is OFF			step 11				
	If the alarm			Do				
		POOLS IN AL	ARM					
1	5MB	15360K	2112K	13%	240	33K	13%	
S	IZE	Total		Total	USED			
P	ARM	MEMORY IN K	BYTES		VAST 2	AREAS		
		DYNAMIC MEMORY SIZE PARM						

10 For additional help, contact the next level of support.

11 The procedure is complete.

Ext CPPOOL major

Alarm display

 CM	MS	IOD	Net	PM	CCS	Lns	Trks	Ext	APPL
	•					11	laj		

Indication

At the MTC level of the MAP display, CPPOOLMGR major appears under the CM header of the alarm banner. The CPPOOLMGR major indicates that an audit detects a fault condition when the audit detects an error condition with the pools.

Meaning

The CPPOOL major alarm occurs as a result of the following conditions:

- POOL301 occurs when the number of free areas owned by the server drops to 20% of server memory.
- POOL311 occurs when the pool uses 80% or more of the server limit of areas of that pool.

Result

This alarm indicates a potential problem because server memory runs low. If server memory is not available, call processing degrades.

Common procedures

There are no common procedures.

Action

This procedure contains a summary flowchart and a list of steps. Use the flowchart to review the procedure. Follow the steps to perform the procedure.

Ext CPPOOL major (continued)

Summary of Clearing an Ext CPPOOL major alarm



Ext CPPOOL major (continued)

Clearing an Ext CPPOOL major alarm

At the MAP terminal

1	To access the Ext level of the MAP display, type
	>MAPCI;MTC;EXT
	and press the Enter key.
2	To access pool information, type

- To access pool information, type ~
 - >CPPOOLMGR

and press the Enter key.

3 Review pool logs.

If log	Do
is POOL 301	step 4
is POOL 311	step 5

4 To determine if the memory server needs more memory, type

>DMEMINFO

and press the Enter key. Example of MAP display:

DYNAMIC MEMORY SIZE PARM

PARM	MEMORY IN KI	BYTES	VAST AREAS					
SIZE	Total	USED	Total USED					
15MB	15360K	2112К 13%	240 33К	13%				
	POOLS IN ALA	ARM						
POOL	FTRQ2WPERMS	is in alarm for	a POOL_LIMIT	alarm				
Go to step	7.							
To access pool information, type								
>POOL poolname								
and press the Enter key.								

where

5

poolname is the name of the pool

Ext CPPOOL major (continued)

Exam	ple	of	MA	Рα	disp	lay:
------	-----	----	----	----	------	------

CUI	RRENT PO	OOL INFO	ORMATION	I in BLOCKS	
POOL NAME	IN USE	HWM A	LLOC PER	CENT PERCE	NT ALARM
	BLOCKS	BLOCKS	BLOCKS	Tot MEM	Pool Max
FTRQ2WPERMS	0	69615	69615	7%	100%*
FTRQAGENTS	0	100	4681	1%	7%
FTRQOWAREAS	0	0	8191	1%	11%
FTRQ2WAREAS	0	0	5461	1%	88
FTRQ4WAREAS	0	0	4095	1%	5%
FTRQ8WAREAS	0	0	2730	18	4%
FTRQ16WAREAS	0	0	1638	18	2%
FTRQ32WAREAS	0	0	910	18	1%
FTRQOWPERMS	0	0	5461	18	88
NUMBER_OF_NCCBS_	_				
SCRATCHEXT_AREAS	5 0	0	8191	1%	2%
FTRQ4WPERMS	0	0	3276	1%	4%
FTRQ8WPERMS	0	0	2340	1%	3%
FTRQ16WPERMS	0	0	1489	1%	2%
FTRQ32WPERMS	0	0	862	1%	1%

6 Check the preceding response for the allocated percentage of memory. Compare the memory to the total amount of available memory and the maximum amount of memory available to the pool.

lf pool	Do
is close to the total memory maximum	step 7
is close to the pool maximum	step 8

7 The parameter DYNAMIC_MEMORY_SIZE in table OFCENG must increase in size to clear the alarm.

Go the the next level of support to determine the amount of store to add to the parameter DYNAMIC_MEMORY_SIZE. Return to this point.

8 The pool memory is near the maximum. Reduction of pool memory is a possible fix.

Go the the next level of support to determine the amount of store to add to the parameter DYNAMIC_MEMORY_SIZE. Return to this point.

9 To check that the amount of store added to the parameter turns the alarm OFF, type

>DMEMINFO

and press the Enter key.

Ext CPPOOL major (end)

Example of MAP display: DYNAMIC MEMORY SIZE PARM PARM MEMORY IN KBYTES VAST AREAS USED Total USED SIZE Total 15MB 15360K 2112K 13% 240 33K 13% POOLS IN ALARM If the alarm Do is OFF step 11 step 10 is ON

10 For additional help, contact the next level of support.

11 The procedure is complete.

Ext CPPOOL minor

Alarm display

 СМ	MS	IOD	Net	PM	CCS	Lns	Trks	Ext	APPL
•	•	•	•	•	•	•	11	lin	
J									

Indication

At the MTC level of the MAP display, CPPOOLMGR minor appears under the CM header of the alarm banner. The CPPOOLMGR indicates that an audit detects a fault condition when the audit detects an error condition with the pools.

Meaning

The CPPOOL minor alarm occurs as a result of these conditions:

- POOL300 report generates when the number of server-owned free areas drops to 30% of server memory
- POOL310 report generates when the pool uses 70% or more of the server limit of free areas of that pool
- POOL320 report generates when a pool reaches 90% of the absolute possible use level

Result

This alarm indicates a potential problem because server memory begins to run low. If server memory is not available, call processing degrades.

Common procedures

There are no common procedures.

Action

This procedure contains a summary flowchart and a list of steps. Use the flowchart to review the procedure. Follow the steps to perform the procedure.

Ext CPPOOL minor (continued)

Summary of Claring an Ext CPPOOL minor alarm



Ext CPPOOL minor (continued)

Clearing an Ext CPPOOL minor alarm

At the MAP terminal

- 1 To access the EXT level of the MAP display, type >MAPCI;MTC;EXT and press the Enter key.
- 2 To access pool information, type
 - >CPPOOLMGR
 - and press the Enter key.
- 3 Review pool logs.

lf log	Do
is POOL300	step 4
is POOL310	step 5
is POOL320	step 9

4 To determine if the memory server needs more memory, type

>DMEMINFO

and press the Enter key. *Example of MAP display*:

DYNAMIC MEMORY SIZE PARM

PARM	MEMORY IN K	BYTES		VAST AR	EAS	
SIZE	Total	USED		Total U	SED	
15MB	15360K	2112K	13%	240	33K	13%

POOLS IN ALARM

POOL FTRQ2WPERMS is in alarm for a POOL_LIMIT alarm

5 To verify the pool size, type

>POOL poolname

and press the Enter key.

where

poolname is the name of the pool

Example of MAP display.

Ext CPPOOL minor (continued)

CURRENT POOL INFORMATION in BLOCKS

POOL NAME	IN USE	HWM A	LLOC PER	CENT	PERCEN	T ALARM
	BLOCKS	BLOCKS	BLOCKS	Tot	MEM	Pool Max
FTRQ2WPERMS	0	69615	69615		7%	100%*
FTRQAGENTS	0	100	4681		1%	7%
FTRQOWAREAS	0	0	8191		1%	11%
FTRQ2WAREAS	0	0	5461		1%	8%
FTRQ4WAREAS	0	0	4095		1%	5%
FTRQ8WAREAS	0	0	2730		1%	4%
FTRQ16WAREAS	0	0	1638		1%	2%
FTRQ32WAREAS	0	0	910		1%	1%
FTRQOWPERMS	0	0	5461		1%	88
NUMBER_OF_NCCBS_	_					
SCRATCHEXT_AREAS	S 0	0	8191		1%	28
FTRQ4WPERMS	0	0	3276		1%	48
FTRQ8WPERMS	0	0	2340		1%	3%
FTRQ16WPERMS	0	0	1489		1%	2%
FTRQ32WPERMS	0	0	862		1%	1%

6 Check the response for the percentage of allocated memory compared to the total amount of available memory. Compare the percentage of allocated memory to the maximum amount of memory available to the pool.

lf pool	Do				
is close to the total amount of available memory	step 7				
is close to the maximum amount of available memory	step 9				
You can increase the size of the serve DYNAMIC_MEMORY_SIZE, in table C	r parameter)FCENG.				
Go to step 9.					
To check if store has enough memory	to turn off the alarm, type				
>DMEMINFO					

and press the Enter key.

7

8

Example of MAP display:

Ext CPPOOL minor (end)

is ON		step 9							
is OFF		step 10							
If the alarm	l	Do							
	POOLS IN A	LARM							
15MB	15360K	2112K 13%	240 33K	13%					
SIZE	SIZE Total USED Tota								
PARM	MEMORY IN 1	KBYTES	VAST AREAS						
	DYNAMIC ME	DYNAMIC MEMORY SIZE PARM							

9 For additional help, contact the next level of support.

10 The procedure is complete.

Ext E911_ALI major

Alarm display

ĺ	CM	MS	IOD	Net	PM	CCS	Lns	Trks	Ext	APPL
	•	•	•	•	•	•	•	•	1Maj M	•

Indication

Under the EXT subsystem header at the MTC level of the MAP display, 1Maj can indicate an E911_ALI_MAJOR alarm. The major alarm for the E911 automatic location identification (ALI) appears under the EXT header.

Meaning

An E911_ALI_MAJOR alarm means that both multiprotocol controller links to the ALI controller of an open interface failed.

Result

ALI database information is not available to line or automatic call distribution public safety answering point (PSAP) operators the database serves.

Common procedures

There are no common procedures.

Action

This procedure contains a summary flowchart and a list of steps. Use the flowchart to review the procedure. Follow the steps to perform the procedure.

Ext E911_ALI major (continued)

Summary of Clearing an Ext E911_ALI major alarm



Ext E911_ALI major (continued)

At th	e MAP displav								
1	Enter this procedure from a step in a procedure to clear system-level alarms that identify an EXT major alarm.								
2	If you must silence the alarm, type								
>MAPCI;MTC;SIL									
	and press the Enter key.								
3	To access the EXT level of the MAP, type								
	>EXT								
	and press the Enter key.								
	Example of MAP response								
	Ext Alarms Crit FSP Major Minor NoAlm 0 0 1 0 14								
4	To display all the EXT major alarms, type								
	>LIST MAJ								
	and press the Enter key.								
	If the MAP response is Do								
	E911_ALI_MAJOR step 6								
	other than listed here step 5								
5	Go to the procedures listed in the table of contents of this document for references to other alarms.								
6									
	Review any MPC908 and E911211 log reports. To access LOGUTIL, type								
	Review any MPC908 and E911211 log reports. To access LOGUTIL, type >LOGUTIL								
	Review any MPC908 and E911211 log reports. To access LOGUTIL, type >LOGUTIL and press the Enter key.								
7	Review any MPC908 and E911211 log reports. To access LOGUTIL, type >LOGUTIL and press the Enter key. To open the buffer for MPC log reports and browse any MPC908 log reports, type								
7	Review any MPC908 and E911211 log reports. To access LOGUTIL, type >LOGUTIL and press the Enter key. To open the buffer for MPC log reports and browse any MPC908 log reports, type >OPEN MPC 908								
7	 Review any MPC908 and E911211 log reports. To access LOGUTIL, type >LOGUTIL and press the Enter key. To open the buffer for MPC log reports and browse any MPC908 log reports, type >OPEN MPC 908 and press the Enter key. 								
7	 Review any MPC908 and E911211 log reports. To access LOGUTIL, type >LOGUTIL and press the Enter key. To open the buffer for MPC log reports and browse any MPC908 log reports, type >OPEN MPC 908 and press the Enter key. The switch generates a MPC908 log report when the tandem detects an MPC card in a SysB state. 								
7	 Review any MPC908 and E911211 log reports. To access LOGUTIL, type >LOGUTIL and press the Enter key. To open the buffer for MPC log reports and browse any MPC908 log reports, type >OPEN MPC 908 and press the Enter key. The switch generates a MPC908 log report when the tandem detects an MPC card in a SysB state. <i>Example of MPC908 log report</i> 								

System Action Taken

Ext E911_ALI major (continued)

8	Use the BACK command to browse through the buffer and display each MPC908 log report.								
9	Note the MPC number listed in the MPC908 log report.								
10	To open the buffer for E911 log reports and browse any E911211 log reports, type								
	>OPEN E911 211								
	and press the Enter key.								
	The switch can generate an E911211 log report without an E911210 log report. The absence of the E911210 log report indicates the tandem tried to send records to the ALI database twice. Each attempt failed.								
	Example of the E911211 log report:								
	E911211 FEB03 13:05:24 0101 ALI RECORD FAILURE SEND FAILURE								
	TWO ATTEMPTS FAILED								
	Here the DAOK compared to beyond the buffer and disclay and								
11	E911211 log report.								
12	Note the MPC number listed in the E911211 log reports.								
13	To exit LOGUTIL, type								
	>QUIT								
	and press the Enter key.								
14	To access the MTC MAP level, type								
	>MAPCI;MTC								
	and press the Enter key.								
15	To display MPC card status, type								
	<pre>>IOD;IOC 1;MPC mpc_number</pre>								
	and press the Enter key.								
	where								
	<pre>mpc_number is the ID of the MPC card identified in steps 9 and 12</pre>								
	Note: The card is in an IOC number. You do not need to know the number of the IOC that contains the card to display the MPC link status. IOC port information for IOC1 appears when the system shows link status for the MPC card. The MPC card is on the same IOC shelf or another IOC shelf.								
	Example of MAP response								

Ext E911_ALI major (end)

If links are	Do
not SysB	step 16
SysB	step 17

16 Contact the next level of support.

17 Perform MPC card maintenance. Refer to this document. Verify that the alarm cleared. If the alarm persists, contact the next level of support.

18 The procedure is complete.

Ext E911_ALI minor

Alarm display

ĺ	 СМ	MS	IOD	Net	PM	CCS	Lns	Trks	Ext	APPL
	•	•	•	•	•	•	•	•	1Min	•

Indication

Under the EXT subsystem header at the MTC level of the MAP display, 1Min can indicate an E911_ALI_MINOR alarm. The E911 automatic location identification (ALI) minor alarm appears under the EXT heading.

Meaning

An E911_ALI_MINOR alarm means one of the multiprotocol controller (MPC) links to the ALI controller of an open interface failed.

Result

Only one of two redundant links in this two-link ALI interface can operate if the E911_ALI_MINOR alarm activates.

Common procedures

There are no common procedures.

Action

This procedure contains a summary flowchart and a list of steps. Use the flowchart to review the procedure. Follow the steps to perform the procedure.
Ext E911_ALI minor (continued)

Summary of Clearing an Ext E911_ALI minor alarm



DMS-100 Family NA100 Alarm Clearing and Perform. Monitoring Proc. Volume 1 of 4 LET0015 and up

Ext E911_ALI minor (continued)

Clearing an Ext E911_ALI minor alarm

At the MAP display

- 1 Enter this procedure from a step in a procedure to clear system-level alarms that identify an EXT minor alarm.
- 2 If you must silence the alarm, type

>MAPCI;MTC;SIL

and press the Enter key.

3 To access the EXT level of the MAP, type

>EXT

and press the Enter key.

Example of MAP response

Ext Alar	ms Cri	t FS	P Majo	r Mino	r NoAlm
	0	0	0	1	14

4 To display all the EXT minor alarms, type

>LIST MIN

and press the Enter key.

If the MAP response is	Do
E911_ALI_MINOR	step 6
other than listed here	step 5

- **5** Go to the procedures listed in the table of contents of this document for references to other alarms.
- 6 Review any MPC908 and E911211 log reports. To access LOGUTIL, type >LOGUTIL

and press the Enter key.

7 To open the buffer for MPC log reports and browse any MPC908 log reports, type

>OPEN MPC 908

and press the Enter key.

The switch generates a MPC908 log report when the tandem detects an MPC card in a SysB state.

Example of the MPC908 log:

MPC908 FEB03 13:05:24 3700 MPC LINK STATUS MPC 3 LINK 3 STATUS CHANGE: ENBLIP -> SBSY System Action Taken

Ext E911_ALI minor (continued)

8	Use the BACK command to browse through the buffer and display each MPC908 log report.
9	Note the MPC number listed in the MPC908 log report.
10	To open the buffer for E911 log reports and browse any E911211 log reports, type
	>OPEN E911 211
	and press the Enter key.
	The switch can generate an E911211 log report without an E911210 log report. The absence of the E911210 log report indicates the tandem tried to send records to the ALI database twice. Each attempt failed.
	Example of the E911211 log report:
	E911211 FEB03 13:05:24 0101 ALI RECORD FAILURE SEND FAILURE
	TWO ATTEMPTSFAILEDPSAPNUM003POSNUM0012MPC1MPCLINK2
11	Use the BACK command to browse through the buffer and display each E911211 log report.
12	Note the MPC number listed in the E911211 log reports.
13	To exit LOGUTIL, type
	>QUIT
	and press the Enter key.
14	To access the MTC MAP level, type
	>MAPCI;MTC
	and press the Enter key.
15	To display MPC card status, type
	>IOD;IOC 1;MPC mpc_number
	and press the Enter key.
	where
	<pre>mpc_number is the ID of the MPC card identified in step 9 or 12</pre>
	Note: The card is in an IOC number. You do not need to know the number of the IOC that contains the card to display the MPC link status. IOC port information for IOC1 appears when the system shows link status for the MPC card. The MPC card is on the same IOC shelf or another IOC shelf.
	Example of MAP response

Ext E911_ALI minor (end)

2 3 4 5 8 IOC CARD 0 1 б 7 STAT--- .---.---TYPE CONS MPC MPC MPC MPC Card 3 Unit 17 User SYSTEM BOARD LINKO LINK1 LINK2 LINK3 Status Ready COMACT UNEQ UNEQ ENBLD SBSY WARNING: MPC 17 IS NOT ON THE DISPLAYED IOC MPC 17 IS ON IOC 3

If links are	Do
not SysB	step 16
SysB	step 17

- **16** Contact the next level of support.
- 17 Perform MPC card maintenance. Refer to this document. Verify that the alarm cleared. If the alarm persists, contact the next level of support.
- **18** The procedure is complete.

Ext E911_LDT critical

Alarm display

(CM MS OD Not PM CCS The Bd	СМ	MS	IOD	Net	PM	CCS	Lns	Trks	Ext	APPL
		•		•	•		•	•	•	1Crit	•

Indication

Under the EXT subsystem header at the MTC level of the MAP display, 1Crit can indicate an E911_LDTBSY_CRITICAL alarm.

Meaning

An E911_LDTBSY_CRITICAL alarm refers to a percentage of units of a minimum of one line appearance. The alarm indicates that the units of the line appearance are in a busy state. The busy state is any state other than CPD, IDL, or INB. The line appearance is on a hunt group for the digital trunk (LDT) of the public safety answering point (PSAP). Field CRALMPCT of option LDTPSAP in table HUNTGRP contains the entry of this percentage.

Result

An E911227 log reports the time, PSAP name, and level of the alarm condition. In this event, the alarm condition is critical. The system produces an E911227 log report during each audit. Audits occur in 3-min intervals. The system produces the log report for each LDTPSAP hunt group that meets the alarm condition. This alarm rises when a minimum of one LDTPSAP hunt group is in the alarm condition. The alarm remains in a raised state when a minimum of one LDTPSAP hunt group is in the alarm condition. The alarm remains in the alarm condition. The alarm lowers when no more LDTPSAP hunt groups are in the alarm condition. The result is that when the alarm is active, you must monitor E911227 log reports. Monitor the log reports to determine the LDTPSAPs that are in the alarm condition.

Common procedures

There are no common procedures.

Action

This procedure contains a summary flowchart and a list of steps. Use the flowchart to review the procedure. Follow the steps to perform the procedure.

Ext E911_LDT critical (continued)

Summary of Clearing an Ext E911 LDT alarm



Ext E911_LDT critical (continued)

Clearing an Ext E911_LDT alarm

At the MAP display

1 Enter this procedure from a step in an alarm clearing procedure at the system level. Enter from the step that identified an EXT critical alarm.

To clear an E911_LDTBSY_CRITICAL alarm, reverse the condition. To clear the alarm condition, return the busy lines to service or turn off the alarm through data entry.

If the following actions occur, the system automatically lowers the alarm:

- you raised one of the busy alarms for the LDTPSAP hunt group percentage
- the next audit determines that no LDTPSAP hunt groups meet the conditions for the alarm

The alarm requires a maximum of 3 min to lower after you changed the alarm condition at the PSAP hunt group.

2 To silence the alarm, type

>MAPCI;MTC;SIL

and press the Enter key.

3 To access the EXT level of the MAP, type

>MAPCI;MTC;EXT

and press the Enter key.

Example of a MAP response:

Ext Alarms	Crit	FSP	Major	Minor	NoAlm
	1	1	0	0	14

4 To display all the EXT critical alarms, type

>LIST CRIT

5 6

7

and press the Enter key.

If response on MAP display	Do
is E911_LDTBSY_CRITICAL	step 6
is other than listed here	step 5
Go to the table of contents.	
Obtain the E911227 log to find the LD alarm condition.	T PSAP hunt group(s) that are in the
To access LOGUTIL, type	
>LOGUTIL	

and press the Enter key.

Ext E911_LDT critical (end)

8 To open the E911227 log report buffer, type

>OPEN E911227

and press the Enter key.

The last E911227 log report generated will be displayed on the MAP screen.

9 Browse through the buffer to display the E911227 log report for your critical alarm (the buffer also may contain other minor or major alarms). Enter the following command as many times as needed to see your report:

>BACK

and press the Enter key.

Example of the E911227 log report for a critical alarm:

RTPB E911227 OCT12 14:21:02 1600 INFO E911 LDT PSAP PCT BUSY CONDITION PSAPNAME = POLICE ALARM = CRITICAL MEMBERS_INSV = 6 MEMBERS_OUT_OF_SERVICE = 10

The last E911 log report generated will appear on the MAP screen.

10 To exit LOGUTIL, type

>QUIT

and press the Enter key.

11 The procedure is complete.

Ext E911_LDT major

Alarm display

(CM MS OD Not PM CCS The Bat	СМ	MS	IOD	Net	PM	CCS	Lns	Trks	Ext	APPL
				•	•		•	•		1Min	•

Indication

A 1Maj can indicate an E911_LDTBSY_MAJOR alarm. The 1Maj appears under the EXT subsystem header at the MTC level of the MAP display.

Meaning

An E911_LDTBSY_MAJOR alarm refers to a percentage of members of a minimum of one line appearance. The alarm indicates that the members of the line appearance are in a busy state. The busy state is any state other than CPD, IDL, or INB. The line appearance is on a digital trunk (LDT) of a hunt group for the public safety answering point (PSAP). Field MJALMPCT of option LDTPSAP in table HUNTGRP contains the data for this percentage.

Result

An E911227 log reports the time, PSAP name, and level of the alarm condition. In this event, the alarm condition is major. The system produces an E911227 log report during each audit. An audit occurs in three minute intervals. The system produces the log report for every LDTPSAP hunt group that meets the alarm condition. This alarm rises when at least one LDTPSAP hunt group is in the alarm condition. The alarm remains in a raised state when at least one LDTPSAP hunt group is in the alarm group is in the alarm condition. The alarm condition. The alarm condition. The alarm lowers when no more LDTPSAP hunt groups are in the alarm condition. The result is that when the alarm is active, you must monitor E911227 log reports. Monitor the log reports to determine the LDTPSAPs in the alarm condition.

Common procedures

There are no common procedures.

Action

This procedure contains a summary flowchart and a list of steps. Use the flowchart to review the procedure. Follow the steps to perform the procedure.

Ext E911_LDT major (continued)

Summary of Clearing an Ext E911_LDT alarm



Ext E911_LDT major (continued)

Clearing an Ext E911_LDT alarm

At the MAP display

1 Enter this procedure from a step in an alarm clearing procedure at the system level. Enter from the step that identified an EXT major alarm.

To clear an E911_LDTBSY_MAJOR alarm, reverse the condition. To clear the alarm condition, return the busy lines to service or turn OFF the alarm through data entry.

If the following actions occur, the system lowers the alarm automatically:

- you raised one of the busy alarms for the LDTPSAP hunt group percentage
- the next audit determines that no LDTPSAP hunt groups meet the conditions for the alarm

The alarm requires a maximum of 3 min to lower after you changed the alarm condition at the PSAP hunt group.

2 If you must silence the alarm, type

>MAPCI;MTC;SIL

and press the Enter key.

3 To access the EXT level of the MAP display, type

>MAPCI;MTC;EXT

and press the Enter key.

Example of a MAP response:

Ext Alarm	s Crit	FSP	Major	Minor	NoAlm
	0	1	0	1	14

4 To display all the EXT major alarms, type

>LIST MAJ

and press the Enter key.

If response on MAP display	Do
is e911_ldtbsy_major	step 6
is other than listed here	step 5

- **5** Go to the table of contents.
- 6 Obtain an E911227 log to determine the LDT PSAP hunt group(s) that are in the alarm condition.
- 7 To access LOGUTIL, type

>LOGUTIL

and press the Enter key.

Ext E911_LDT major (end)

8 To open the E911227 log report buffer, type

>OPEN E911227

and press the Enter key.

The last E911 log report generated will be displayed on the MAP screen.

9 Browse through the buffer to display the E911227 log report for your critical alarm (the buffer also may contain other minor or major alarms). Enter the following command as many times as needed to see this report:

>BACK

and press the Enter key.

Example of the E911227 log report:

RTPB E911227 OCT12 14:21:02 1600 INFO E911 LDT PSAP PCT BUSY CONDITION PSAPNAME = POLICE ALARM = MINOR MEMBERS_INSV = 6 MEMBERS_OUT_OF_SERVICE = 10

10 To exit LOGUTIL, type

>QUIT

and press the Enter key.

11 The procedure is complete.

Ext E911_LDT minor

Alarm display

Chi MS OD Not Phi CCS This Bat	СМ	MS	IOD	Net	PM	CCS	Lns	Trks	Ext	APPL
	·		•	•		•	•		1Min	

Indication

Under the EXT subsystem header at the MTC level of the MAP display, 1Min can indicate an E911_LDTBSY_MINOR alarm.

Meaning

An E911_LDTBSY_MINOR alarm means that a certain percentage of members of at least one line appearance on digital trunk (LDT) public safety answering point (PSAP) hunt group are in a potentially undesirable busy state (that is, any state other than CPD, IDL, or INB). This percentage is datafilled in field MNALMPCT of option LDTPSAP in table HUNTGRP.

Impact

An E911227 log reports the time, PSAP name, and alarm condition which is met (in this case, minor). An E911227 log report is produced during each periodic audit (every 3 minutes) for every LDT PSAP hunt group meeting the alarm condition. This alarm is raised when at least one LDT PSAP hunt group is found to be in the alarm condition, and is not lowered until there are no more LDT PSAP hunt groups in the alarm condition. That is, the alarm is not "re-raised" when another LDT PSAP meets the alarm condition. It just stays raised as long as there is one or more LDT PSAP hunt group in the alarm condition. Therefore, when the alarm is active, E911227 log reports must be monitored to determine exactly which LDT PSAPs are in that condition.

Common procedures

Not applicable

Action

The following flowchart is only a summary of the procedure. Use the instructions in the step-action procedure that follows the flowchart to clear the alarm.

Ext E911_LDT minor (continued)

Summary of clearing an Ext E911_LDT alarm



Ext E911_LDT minor (continued)

Clearing an Ext E911_LDT alarm

At the MAP display

1 You should be entering this procedure from a step in a system-level alarm clearing procedure that identified an EXT minor alarm.

Clearing an E911_LDTBSY_MINOR alarm entails reversing the situation—that is, clear the alarm condition by returning the busy lines to service or shut the alarm off via datafill.

If one of the LDT PSAP hunt group percentage busy alarms was previously raised, and the next audit determines that there are no longer any LDT PSAP hunt groups which meet the conditions for that alarm, the system automatically lowers the alarm. It can take up to 3 minutes for the alarm to actually be lowered after the alarm condition has been fixed at the PSAP hunt group.

2 Silence the alarm, if required, by typing

>MAPCI;MTC;SIL

and pressing the Enter key.

3 Access the EXT level of the MAP display by typing

>MAPCI;MTC;EXT

and pressing the Enter key.

Example of a MAP response:

Ext A	Alarms	Crit	FSP	Major	Minor	NoAlm
		0	1	0	1	14

4 Display all the EXT minor alarms by typing

>LIST MIN

and pressing the Enter key.

If response on MAP display is	Do
E911_LDTBSY_MINOR	step 6
(anything else)	step 5

- **5** Go to the table of contents.
- 6 Obtain E911227 log to see which LDT PSAP hunt group(s) are in the alarm condition.
- 7 Access LOGUTIL by typing
 - >LOGUTIL
 - and pressing the Enter key.
- 8 Open the E911227 log report buffer by typing
 >OPEN E911227
 and pressing the Enter key.

Ext E911_LDT minor (end)

The last E911 log report generated will be displayed on the MAP screen.

9 Browse through the buffer to display the E911227 log report for your critical alarm (the buffer also may contain other minor or major alarms). Enter the following command as many times as needed to see this report:

>BACK

and press the Enter key.

Example of the E911227 log report:

RTPB E911227 OCT12 14:21:02 1600 INFO E911 LDT PSAP PCT BUSY CONDITION PSAPNAME = POLICE ALARM = MINOR MEMBERS_INSV = 6 MEMBERS_OUT_OF_SERVICE = 10

10 Exit LOGUTIL by typing

>QUIT

and pressing the Enter key.

11 You have completed this procedure.

Ext E911_OFBSR critical

Alarm display

ĺ	CM MS OD Not PM CCS The Ext LIU7	СМ	MS	IOD	Net	PM	CCS	Lns	Trks	Ext	APPL
				•	•		·	•	•	1Crit	•

Indication

Under the EXT subsystem header at the MTC level of the MAP display, 1Crit can indicate an E911_OFBSR_CRITICAL alarm.

Meaning

The E911_OFBSR_CRITICAL alarm has slightly different meanings, determined by the type of Off-Board Selective Routing (OFBSR) interface used.

For a single OFBSR interface, the E911_OFBSR_CRITICAL alarm raises when both multiprotocol controller (MPC) links to the OFBSR database become unavailable. The alarm will stay raised until at least one MPC link becomes available.

For a dual OFBSR interface, the E911_OFBSR_CRITICAL alarm raises when all multiprotocol controller (MPC) links to both databases become unavailable. The alarm will stay raised until at least one MPC link becomes available.

Impact

The OFBSR cannot route E911 calls from the unavailable MPC link. The calls will be either default routed based on the emergency service number (ESN) of the E911 trunk or routed based on the ESN retrieved from the E911SRBD table.

Common procedures

This procedure does not refer to any common procedures.

Next level of maintenance

Repeat this procedure if it is not successful when you first perform the procedure.

A problem can occur that requires the help of the local maintenance personnel. Gather all important logs, reports, and system information (that is, product

Ext E911_OFBSR critical (continued)

type and current software load) for analysis. The related logs, maintenance notes, and system information help make sure that the next level of maintenance and support can find the problem. More detail about logs appears in the *Log Report Reference Manual*.

Action

The flowchart that follows provides a summary of this procedure. Use the instructions in the step action procedure that follows the flowchart to clear the alarm.

Ext E911_OFBSR critical (continued)

Summary of Clearing an Ext E911_OFBSR_CRITICAL alarm



DMS-100 Family NA100 Alarm Clearing and Perform. Monitoring Proc. Volume 1 of 4 LET0015 and up

Ext E911_OFBSR critical (continued)

Clearing an Ext E911_OFBSR_CRITICAL alarm

At the MAP display

- 1 Enter this procedure from a step in a procedure to clear system-level alarms that identify an EXT critical alarm.
- 2 If you must silence the alarm, type

>MAPCI;MTC;SIL

and press the Enter key.

3 To access the EXT level of the MAP, type

>EXT

and press the Enter key.

Example of MAP response

Ext Alarm	ns Crit	FSI	P Major	r Mino	r NoAlm
	1	0	0	0	14

4 To display all the EXT critical alarms, type

>LIST CRIT

and press the Enter key.

If the MAP response is	Do
E911_OFBSR_CRITICAL	step 6
other than listed here	step 5

- 5 Go to the procedures listed in the table of contents of this document for references to other alarms.
- 6 Review any MPC908 and E911233 log reports. To access LOGUTIL, type >LOGUTIL

and press the Enter key.

7 To open the buffer for MPC log reports and browse any MPC908 log reports, type

>OPEN MPC 908

and press the Enter key.

The switch generates a MPC908 log report when the tandem detects an MPC card in a SysB state.

Example of MPC908 log report

MPC908 FEB 13:05:24 3700 MPC LINK STATUS MPC 3 LINK 3 STATUS CHANGE: ENBLIP -> SBSY System Action Taken

Ext E911_OFBSR critical (end)

- 8 Use the BACK command to browse through the buffer and display each MPC908 log report.
- **9** Note the MPC number listed in the MPC908 log report.
- 10 To exit LOGUTIL, type

>QUIT

and press the Enter key.

11 To access the MTC MAP level, type

>MAPCI;MTC

and press the Enter key.

12 To display MPC card status, type

>IOD;IOC 1;MPC mpc_number

and press the Enter key.

where

mpc_number

is the ID of the MPC card identified in step 9 or 12

Note: The card is in an IOC number. You do not need to know the number of the IOC that contains the card to display the MPC link status. IOC port information for IOC1 appears when the system shows link status for the MPC card. The MPC card is on the same IOC shelf or another IOC shelf.

Example of MAP response

IOC	CAR	2D 0	1	2	3	4	5	б	7	8
1	PORT	0123	0123	0123	0123	0123	0123	0123	0123	0123
	STAT		•			·				
TYI	PE CO	ONS	MPC	MPC	MPC	MPC				
Car	rd 3	Unit	ī.	17	1					
	U۶	ser	SYSTE	EM E	BOARD	LINK0	LINK	Kl LI	NK2	LINK3
	St	tatus	Re	eady	COMAC	T UNI	EQ UN	1EQ	ENBLD	SBSY
WAF	NING	: MPC	17 IS	S NOT	ON THE	DISPL	AYED I	LOC		
MPC	2 17 2	IS ON	IOC 3	3						

If links are	Do
not SysB	step 13
SysB	step 14

13 Contact the next level of support.

14 Perform MPC card maintenance. Refer to this document. Verify that the alarm cleared. If the alarm persists, contact the next level of support.

15 The procedure is complete.

Ext E911_OFBSR major

Alarm display

ĺ	CM	MS	IOD	Net	PM	CCS	Lns	Trks	Ext	APPL
	-	-	•	•	-	•	•	-	1Maj	•
									М	

Indication

Under the EXT subsystem header at the MTC level of the MAP display, 1Maj can indicate an E911_OFBSR_MAJOR alarm.

Meaning

An E911_OFBSR_MAJOR alarm means that one or more of the multiprotocol controller (MPC) links to the Off-Board Selective Routing (OFBSR) database(s) has become unavailable.

For a single OFBSR interface, the E911_OFBSR_MAJOR alarm raises when one of the multiprotocol controller (MPC) links to the OFBSR database becomes unavailable. The alarm will stay raised until all MPC links to the database become available.

For a dual OFBSR interface, the E911_OFBSR_MAJOR alarm raises when all multiprotocol controller (MPC) links to one of the OFBSR databases become unavailable. The alarm will stay raised until at least one MPC link to the affected database becomes available.

Impact

The OFBSR communication continues on available links.

For a dual OFBSR interface, communication is swithced to the secondary database. An E911234 log is generated as notification of the switch.

Common procedures

This procedure does not refer to any common procedures.

Next level of maintenance

Repeat this procedure if it is not successful when you first perform the procedure.

Ext E911_OFBSR major (continued)

A problem can occur that requires the help of the local maintenance personnel. Gather all important logs, reports, and system information (that is, product type and current software load) for analysis. The related logs, maintenance notes, and system information help make sure that the next level of maintenance and support can find the problem. More detail about logs appears in the *Log Report Reference Manual*.

Action

The flowchart that follows provides a summary of this procedure. Use the instructions in the step action procedure that follows the flowchart to clear the alarm.

Ext E911_OFBSR major (continued)

Summary of clearing alarm Ext E911_OFBSR_MAJOR alarm



Ext E911_OFBSR major (continued)

	Enterthic encoders for a starie set of the staries									
1	Enter this procedure from a step in a procedure to clear system-level alarms that identify an EXT major alarm.									
2	If you must silence the alarm, type									
	>MAPCI;MTC;SIL									
	and press the Enter key.									
3	To access the EXT level of the MAP, type									
	>EXT									
	and press the Enter key.									
	Example of MAP response									
	Ext Alarms Crit FSP Major Minor NoAlm									
4	To display all the EXT major alarms, type									
	>LIST MAJ									
	and press the Enter key.									
	If the MAP response is Do									
	E911_OFBSR_MAJOR step 10									
	other than listed here step 5									
5	Go to the procedures listed in the table of contents of this document for references to other alarms.									
6	Review any MPC908, E911233, and E911234 log reports. To access LOGUTIL, type									
	>LOGUTIL									
	and press the Enter key.									
7	To open the buffer for MPC log reports and browse any MPC908 log reports, type									
	>OPEN MPC 908									
	and press the Enter key.									
	The switch generates a MPC908 log report when the tandem detects an MPC card in a SysB state.									
	Example of MPC908 log report									
	The switch generates a MPC908 log report when the tandem detects an card in a SysB state.									

Ext E911_OFBSR major (end)

8	Use the BACK command to browse through the buffer and display each MPC908 log report.
9	Note the MPC number listed in the MPC908 log report.
10	To exit LOGUTIL, type
	>QUIT
	and press the Enter key.
11	To access the MTC MAP level, type
	>MAPCI;MTC
	and press the Enter key.
12	To display MPC card status, type
	>IOD;IOC 1;MPC mpc_number
	and press the Enter key.
	where
	<pre>mpc_number is the ID of the MPC card identified in step 9 or 13</pre>
	<i>Note:</i> The card is in an IOC number. You do not need to know the number of the IOC that contains the card to display the MPC link status. IOC port information for IOC1 appears when the system shows link status for the MPC card. The MPC card is on the same IOC shelf or another IOC shelf.
	Example of MAP response
I00 1	C CARD 0 1 2 3 4 5 6 7 8 PORT 0123 </th
m 7	STAT
Ca	rd 3 Unit 17

User SYSTEM BOARD LINKO LINK1 LINK2 LINK3 Status Ready COMACT UNEQ UNEQ ENBLD SBSY WARNING: MPC 17 IS NOT ON THE DISPLAYED IOC MPC 17 IS ON IOC 3

If links are	Do	
not SysB	step 13	
SysB	step 14	

13 Contact the next level of support.

14 Perform MPC card maintenance. Refer to this document. Verify that the alarm cleared. If the alarm persists, contact the next level of support.

15 The procedure is complete.

Ext E911_OFBSR minor

Alarm display

CM	MS	IOD	Net	PM	CCS	Lns	Trks	Ext	APPL
•	•	•	•	•	•	•	•	1Min	•

Indication

Under the EXT subsystem header at the MTC level of the MAP display, 1Min can indicate an E911_OFBSR_MINOR alarm.

Meaning

An E911_OFBSR_MINOR alarm generates only for the dual OFBSR interface. The alarm is raised when one of the multiprotocol controller (MPC) links to either of the two Off-Board Selective Routing (OFBSR) databases becomes unavailable.

Impact

OFBSR communication will continue on available links. The alarm continues until all links to both databases are available.

Common procedures

This procedure does not refer to any common procedures.

Next level of maintenance

Repeat this procedure if it is not successful when you first perform the procedure.

A problem can occur that requires the help of the local maintenance personnel. Gather all important logs, reports, and system information (that is, product type and current software load) for analysis. The related logs, maintenance notes, and system information help make sure that the next level of maintenance and support can find the problem. More detail about logs appears in the *Log Report Reference Manual*.

Action

The flowchart that follows provides a summary of this procedure. Use the instructions in the step action procedure that follows the flowchart to clear the alarm.

Ext E911_OFBSR minor (continued)

Summary of clearing alarm Ext E911_OFBSR_MINOR alarm



Ext E911_OFBSR minor (continued)

Clearing alarm Ext E911_OFBSR_MINOR alarm

At the MAP display

- 1 Enter this procedure from a step in a procedure to clear system-level alarms that identify an EXT major alarm.
- 2 If you must silence the alarm, type

>MAPCI;MTC;SIL

and press the Enter key.

3 To access the EXT level of the MAP, type

>EXT

and press the Enter key.

Example of MAP response

Ext	Alarms	Crit	FSP	Major	Minor	NoAlm
		0	0	0	1	14

4 To display all the EXT minor alarms, type

>LIST MIN

and press the Enter key.

If the MAP response is	Do
E911_OFBSR_MINOR	step 10
other than listed here	step 5

- **5** Go to the procedures listed in the table of contents of this document for references to other alarms.
- 6 Review any MPC908, E911233, and E911234 log reports. To access LOGUTIL, type

>LOGUTIL

and press the Enter key.

7 To open the buffer for MPC log reports and browse any MPC908 log reports, type

>OPEN MPC 908

and press the Enter key.

The switch generates a MPC908 log report when the tandem detects an MPC card in a SysB state.

Example of MPC908 log report

MPC908 FEB 13:05:24 3700 MPC LINK STATUS MPC 3 LINK 3 STATUS CHANGE: ENBLIP -> SBSY System Action Taken

Ext E911_OFBSR minor (end)

MPC908 log report.	8	Use the BACK command to browse through the bul MPC908 log report.	fer and display e	ach
--------------------	---	--	-------------------	-----

- 9 Note the MPC number listed in the MPC908 log report.
- 10 To exit LOGUTIL, type

>QUIT

and press the Enter key.

11 To access the MTC MAP level, type

>MAPCI;MTC

and press the Enter key.

12 To display MPC card status, type

>IOD;IOC 1;MPC mpc_number

and press the Enter key.

where

mpc_number

is the ID of the MPC card identified in step 9 or 11.

Note: The card is in an IOC number. You do not need to know the number of the IOC that contains the card to display the MPC link status. IOC port information for IOC1 appears when the system shows link status for the MPC card. The MPC card is on the same IOC shelf or another IOC shelf.

Example of MAP response

IOC	CAF	RD 0	1	2	3	4	5	б	7	8
1	PORT	0123	0123	0123	0123	0123	0123	0123	0123	0123
	STAT									
TYI	PE CO	ONS	MPC	MPC	MPC	MPC				
Car	rd 3	Uni	t	17	1					
	U	ser	SYSTI	EM B	BOARD	LINK0	LINK	CI LI	NK2	LINK3
	S	tatus	Re	eady	COMAC	T UNI	EQ UN	JEQ	ENBLD	SBSY
WAF	RNING	: MPC	17 IS	5 NOT	ON THE	DISPL	AYED]	LOC		
MPC	2 17 2	IS ON	IOC 3	3						

If links are	Do
not SysB	step 13
SysB	step 14

13 Contact the next level of support.

14 Perform MPC card maintenance. Refer to this document. Verify that the alarm cleared. If the alarm persists, contact the next level of support.

15 The procedure is complete.

Ext E911_PSAP_OFFHK minor

Alarm display

ĺ	СМ	MS	IOD	Net	PM	CCS	Lns	Trks	Ext	APPL
	•	•	•	•	•	•	•	•	1Min	•

Indication

Under the EXT subsystem header at the MTC level of the MAP display, 1Min can indicate an E911_PSAP_OFFHK alarm. The E911 permanent lockout (PLO) or off-hook minor alarm appears under the EXT heading for SuperNode and NT40 applications.

Meaning

This alarm indicates one of the following conditions:

- A public safety answering point (PSAP) operator was off-hook after call disconnect.
- A PSAP operator was off-hook without a connection to another party for an extended period of time. The off-hook time exceeded an office parameter (E911_PSAP_OFFHK_ALARM_TIME) setting.
- Equipment failures occur. The equipment failures imitate a PSAP off-hook state.

Result

The PSAP operator cannot answer emergency calls that enter on a line. If the originator hold (ORIGHOLD) is set to Y (Yes), the originator can block network resources. If an ORIGHOLD is set to Y, the caller cannot place other calls.

Common procedures

There are no common procedures.

Action

This procedure contains a summary flowchart and a list of steps. Use the flowchart to review the procedure. Follow the steps to perform the procedure.

Ext E911_PSAP_OFFHK minor (continued)

Summary of How to clear an Ext E911_PSAP_OFFHK minor alarm



Ext E911_PSAP_OFFHK minor (continued)

Summary of How to clear an Ext E911_PSAP_OFFHK minor alarm (continued)



DMS-100 Family NA100 Alarm Clearing and Perform. Monitoring Proc. Volume 1 of 4 LET0015 and up

Ext E911_PSAP_OFFHK

minor (continued)

How to clear an Ext E911_PSAP_OFFHK minor alarm

At the MAP display

- 1 You enter this procedure from a step in a procedure to clear system-level alarms that identifies EXT alarms at the MAP display. The alarm activates for time on office parameter E911_PSAP_OFFHK_ALARM_TIME.
- 2 To access EXT level, type

>MAPCI;MTC;EXT

and press the Enter key

Example of a MAP response:

Ext Alarms Crit FSP Major Minor NoAlm 0 0 0 1 11

3 To display all the EXT minor alarms, type

>LIST MIN

and press the Enter key.

Example of a MAP response: E911_PSAP_OFFHK

4 Obtain E911204 to get the directory number (DN) and line equipment number (LEN) of the operator with the off-hook line. See *Input/Output System Reference Manual*, 297-1001-129, to use LOGUTIL and collect this information.

To access LOGUTIL, type

>LOGUTIL

and press the Enter key.

5 To open the buffer for the E911 log report, type

>OPEN E911

and press the Enter key.

6 Browse through the buffer to locate the E911204 log report. To access the previous report, type

>BACK

and press the Enter key.

Repeat the command to display the E911204 log report.

Example of a MAP response:

E911204 FEB03 13:05:24 0101 INFO PERMANENT off-hook CONDITION AT PSAP LINE EQUIPMENT NUMBER: HOST 0 0 19 06 DN: 6211234 PSAP NAME: RALPOLICE

The last generated E911 log report prints on the MAP screen.

Ext E911_PSAP_OFFHK minor (continued)

7 Exit LOGUTIL, type

>QUIT

and press the Enter key.

8 Contact PSAP operator to determine if the operator console is off-hook.

If PSAP console	Do
is off-hook	Tell the PSAP operator to go on-hook. ORIGHOLD, in table TRKGRP or VIRTGRPS, can be Y for the end office where the call rout- ed. If ORIGHOLD is Y, check E911_PSAP_DISCONNECT_TIME. See <i>Office Parameters Reference</i> <i>Manual.</i> If ORIGHOLD is N, you do not need more maintenance. Go to step 12. Originator hold and ringback are available for local access 911 calls routed through virtual facility groups with BCS34.
is on-hook	Note the DN/LEN of the operator with the off-hook line. See the E911204 log report. Go to the next step.
To access the LTP level of display, type	f the MAP display from the MTC level of the MAP
>LNS;LTP;POST L ler	1

and press the Enter key.

where

9

LEN

is the line equipment number listed in the E911204 log

Normal response on the MAP display:

LCC PTY RNGLEN.DN STA F S LTA TE RESULT IBN PSAP 00 0 00 04 621 6004 PLO

Ext E911_PSAP_OFFHK

minor (continued)

If the status of the posted line	Do
is PLO or CPB and the PSAP is a Line/ACD PSAP	Perform line and peripheral module maintenance. See this document. Verify the alarm cleared.
is PLO or CPB and the PSAP is an LDT PSAP	Perform SMU, DS-1 carrier maintenance. Refer to Subscrib- er Carrier Module-100 Urban Maintenance Manual 297-8241-550 for DS-1 carrier information and SMU mainte- nance information. Verify the alarm cleared. If necessary, per- form PSAP CPE maintenance. Refer to Trouble Locating and Clearing Procedures.
is IDL	If ORIGHOLD is Y for the end office where the call routed, check the E911_PSAP_DISCONNECT_T IME parameter. See <i>Office Pa-</i> <i>rameters Reference Manual</i> for information. If the ORIGHOLD is N, you do not need to take ad- ditional action. Go to step 12. An intermittent fault can be the cause the alarm. Monitor for E911204 log reports. Return to this procedure if the alarm oc- curs again.

Perform maintenance tasks if these events happen:

10 To clear the alarm, type >CLEAR and press the Enter key.
Ext E911_PSAP_OFFHK minor (end)

ears step 13
bes not clear step 12

Ext E911_RCER major

Alarm display

ĺ	СМ	MS	IOD	Net	PM	CCS	Lns	Trks	Ext	APPL
	•	•	•	•	•	•	•	•	1Мај м	·

Indication

Under the EXT subsystem header at the MTC level of the MAP, 1Maj can indicate an E911_RCER_MAJOR alarm. The additional feature for RCERs must exist for the 1Maj to indicate an E911_RCER_MAJOR alarm. The major alarm for the E911 remote call event record (RCER) appears under the EXT heading.

Meaning

An E911_RCER_MAJOR alarm means the multiprotocol controller (MPC) links to a remote location failed. Records of calls to an exact public safety answering point (PSAP) print at the remote location. This failure does not affect records like events, logs, and calls generated at the E911 tandem location.

Result

Line or automatic call distribution PSAP operators cannot access a printed record or information about calls at the location.

Common procedures

There are no common procedures.

Action

This procedure contains a summary flowchart and a list of steps. Use the flowchart to review the procedure. Follow the steps to perform the procedure. Note that these procedures are the same as the procedures identified for the major alarm for the E911 automatic location identification. Both procedures deal with the MPC links.

Ext E911_RCER major (continued)

Summary of Clearing an Ext E911_RCER_MAJOR major alarm



DMS-100 Family NA100 Alarm Clearing and Perform. Monitoring Proc. Volume 1 of 4 LET0015 and up

Ext E911_RCER

major (continued)

Clearing an Ext E911_RCER_MAJOR major alarm

At the MAP display

- 1 Enter this procedure from a step in a procedure to clear system-level alarms that identify an EXT major alarm.
- 2 If you must silence the alarm, type

>MAPCI;MTC;SIL

and press the Enter key.

3 To access the EXT level of the MAP, type

>EXT

and press the Enter key.

Example of MAP response

Ext Alarms	Crit	FSP	Major	Minor	NoAlm
	0	0	1	0	14

4 To display all the EXT major alarms, type

>LIST MAJ

and press the Enter key.

If the MAP response is	Do
E911_RCER_MAJOR	step 6
other than listed here	step 5

- **5** Go to the procedures listed in the table of contents of this document for references to other alarms.
- 6 Review any MPC908 and E911218 log reports. To access LOGUTIL, type >LOGUTIL

and press the Enter key.

7 To open the buffer for MPC log reports and browse any MPC908 log reports, type

>OPEN MPC 908

and press the Enter key.

The switch generates a MPC908 log report when the tandem detects an MPC card in a SysB state.

Example of MPC908 log report

MPC908 FEB 13:05:24 3700 MPC LINK STATUS MPC 3 LINK 3 STATUS CHANGE: ENBLIP -> SBSY System Action Taken

Ext E911_RCER major (continued)

- 8 Use the BACK command to browse through the buffer and display each MPC908 log report.
- 9 Note the MPC number listed in the MPC908 log report.
- **10** To open the buffer for E911 log reports and browse any E911218 log reports, type

>OPEN E911 218

and press the Enter key.

The switch generates an E911218 log report for each call to the PSAP with lost RCER information. The switch generates the report when one or more links are down.

Example of the E911218 log report:

E911218 MAR26 08:15:38 0101 RCER WAS NOT SENT REASON: No Links Up 1990/03/26 9196211235 MADISONPOLICE1234 15:10:00 15:10:02

15:10:17 15:10:25 9199211901 MADISONFIRE 15:10:19

- 11 Use the BACK command to browse through the buffer and display each E911218 log report.
- 12 Check office policy. Store or discard the E911218 log report.
- **13** To exit LOGUTIL, type

>QUIT

and press the Enter key.

14 To access the MTC MAP level, type

>MAPCI;MTC

and press the Enter key.

15 To display MPC card status, type

>IOD;IOC 1;MPC mpc_number

and press the Enter key.

where

mpc_number

is the ID of the MPC card identified in step 9

Note: The card is in an IOC number. You do not need to know the number of the IOC that contains the card to display the MPC link. IOC port information for IOC1 appears when the system shows link status for the MPC card. The MPC card is on the same IOC shelf or another IOC shelf.

Example of a MAP response:

Ext E911_RCER major (end)

8 IOC CARD 0 1 2 3 4 5 б 7 1 STAT TYPE CONS MPC MPC MPC MPC Card 3 Unit 17 User SYSTEM BOARD LINKO LINK1 LINK2 LINK3 Status Ready COMACT UNEQ UNEQ ENBLD SBSY WARNING: MPC 17 IS NOT ON THE DISPLAYED IOC MPC 17 IS ON IOC 3

If the links	Do
are not SysB	step 16
are SysB	step 17

- 16 Contact the next level of support.
- 17 Perform MPC card maintenance. Refer to this document. Complete MPC card maintenance and verify that the E911_RCER_MAJOR alarm cleared. If the alarm persists, contact the next level of support.
- **18** The procedure is complete.

Ext E911_RCER minor

Alarm display

ĺ	СМ	MS	IOD	Net	PM	CCS	Lns	Trks	Ext	APPL
	•	•	•	•	•	•		•	1Min	•

Indication

Under the EXT subsystem header at the MTC level of the MAP display, 1Min can indicate a possible E911_RCER_MINOR alarm. The additional feature for RCERs must be available for the 1Min to indicate the alarm. The E911 remote call event record (RCER) minor alarm appears under the EXT heading.

Meaning

An E911_RCER_MINOR alarm means a multiprotocol controller (MPC) link to a remote location failed. Records of calls to an exact public safety answering point (PSAP) print at the remote location.

Result

A link that sends information for call event records does not operate if the E911_RCER_MINOR alarm activates.

Common procedures

There are no common procedures.

Action

This procedure contains a summary flowchart and a list of steps. Use the flowchart to review the procedure. Follow the steps to perform the procedure.

Ext E911_RCER minor (continued)

Summary of Clearing an Ext E911-RCER minor alarm



Ext E911_RCER minor (continued)

At th	he MAP display									
1	Enter this proced that identify an E	lure from XT mino	a step i r alarm.	n a procedu	ure to clear	system-level alarms				
2	lf you must silend	ce the ala	arm, type	Э						
	>MAPCI;MTC;S	IL								
	and press the Er	iter key.								
3	To access the E>	(T level o	of the MA	AP, type						
	>EXT									
	and press the En	iter key.								
Example of MAP response										
	Ext Alarms	Crit 0	FSP 0	Major O	Minor 1	NoAlm 14				
4	To display all the	EXT mir	nor alarn	ns, type						
	>LIST MIN									
	and press the Enter key.									
	If the MAP res	ponse is	;	Do						
	E911_RCER_	_MINOR	2	step	5					
	other than liste	ed here		step	6					
5	Go to the proced references to oth	ures liste er alarm	ed in the s.	table of co	ntents of th	nis document for				
6	Review any MPC	908 and	E91121	8 log repor	rts. To acce	ess LOGUTIL, type				
	>LOGUTIL									
	and press the En	iter key.								
7	To open the buffe type	er for MP	C log rep	oorts and br	rowse any l	MPC908 log reports,				
	>OPEN MPC 908	8								
	and press the En	iter key.								
	The switch gener card in a SysB st	ates a M ate.	PC908 lo	og report wi	hen the tan	dem detects an MPC				
	Example of the N	APC908	log:							

MPC908 FEB03 13:05:24 3700 MPC LINK STATUS MPC 3 LINK 3 STATUS CHANGE: ENBLIP -> SBSY System Action Taken

Ext E911_RCER

minor (continued)

8	Use the BACK command to browse through the buffer and display each MPC908 log report.
9	Note the MPC number listed in the MPC908 log report.
10	To open the buffer for E911 log reports and browse any E911218 log reports, type
	>OPEN E911 218
	and press the Enter key.
	The switch generates an E911218 log report for each call to the PSAP with lost RCER information. The switch generates the report when one or more links are down.
	Example of E911218 log report:
	E911218 MAR26 08:15:38 0101 RCER WAS NOT SENT REASON: No Links Up 1990/03/26 9196211235 MADISONPOLICE 1234 15:10:00
	15:10:02
	15:10:17 15:10:25 9199211901 MADISONFIRE 15:10:19
11	Use the BACK command to browse through the buffer and display each E911218 log report.
12	Check office policy. Store or discard the E911218 log report.
13	To exit LOGUTIL, type
	>QUIT
	and press the Enter key.
14	To access the MTC MAP level, type
	>MATCI;MTC
	and press the Enter key.
15	To display the MPC card status, type
	>IOD;IOC 1;MPC mpc_number
	and press the Enter key.
	where
	<pre>mpc_number is the ID of the MPC card identified in step 9</pre>
	Note: You do not need to know the number of the IOC port that holds the card to display MPC link status. IOC port information for IOC 1 appears when the system shows link status for the MPC card. The MPC card is on the same IOC shelf or another IOC shelf.
	Example of a MAP response:

Ext E911_RCER minor (end)

2 3 8 IOC CARD 0 1 4 5 б 7 1 STAT--- --- .--- TYPE CONS MPC MPC MPC MPC Card 3 Unit 17 User SYSTEM BOARD LINKO LINK1 LINK2 LINK3 Status Ready COMACT UNEQ UNEQ ENBLD SBSY WARNING: MPC 17 IS NOT ON THE DISPLAYED IOC MPC 17 IS ON IOC 3

Refer to the following table. The next step depends on if card links are system busy.

If card links	Do
are not SysB	step 16
are SysB	step 17

16 Contact the next level of support.

17 Perform MPC card maintenance. Refer to this document. Complete MPC card maintenance and verify that the E911_RCER_MINOR alarm cleared. If the alarm persists, contact the next level of support.

18 This procedure is complete.

Ext E911_SRDB_MEMORY minor

Alarm display

ĺ	 СМ	MS	IOD	Net	PM	CCS	Lns	Trks	Ext	APPL
	•	•	•	•	•	•	•	•	1Min	•

Indication

Under the EXT subsystem header at the MTC level of the MAP display, 1Min can indicate a possible E911_SRDB_MEMORY alarm. The alarm occurs if table E911SRDB approaches maximum size or store is not available. The minor alarm for the E911 selective routing database (SRDB) memory appears under the EXT heading in SuperNode and NT40 applications.

Meaning

An E911_SRDB_MEMORY minor alarm means that one or more of these conditions are present:

- The SRDB uses storage that exceeds a set percentage of the total store in the switch (default percentage is 80%).
- The free memory drops below an exact value (default value is five areas).
- The number of tuples in the SRDB exceeds a set percentage (default value is 95% of the total allowable).

Result

Table E911SRDB approaches maximum size or store is not available if an E911_SRDB_MEMORY minor alarm activates. The update to table E911SRDB also stops when the alarm activates.

Common procedures

There are no common procedures.

Action

This procedure contains a summary flowchart and a list of steps. Use the flowchart to review the procedure. Follow the steps to perform the procedure.

Ext E911_SRDB_MEMORY minor (continued)

Summary of How to clear an Ext E911_SRDB_MEMORY minor alarm



DMS-100 Family NA100 Alarm Clearing and Perform. Monitoring Proc. Volume 1 of 4 LET0015 and up

Ext E911_SRDB_MEMORY minor (continued)

Summary of How to clear an Ext E911_SRDB_MEMORY minor alarm (continued)



Ext E911_SRDB_MEMORY minor (continued)

At th	he MAP display
1	Enter this procedure from a step in a procedure to clear a system-level alarm that identified an EXT minor alarm.
2	If you must silence the alarm, type
	>MAPCI;MTC;SIL
	and press the Enter key.
3	To access the EXT level of the MAP display, type
	>EXT
	and press the Enter key.
	Example of a MAP response
	Ext Alarms Crit FSP Major Minor NoAlm
	0 0 1 0 14
4	To display all the EXT minor alarms, type
	>LIST MIN
	and press the Enter key.
	If response on MAP display Do
	is E911_SRDB_MEMORY step 5
5	Obtain an E911226 log report. To access LOGUTIL, type
	>LOGUTIL
	and press the Enter key.
6	To open the buffer for E911 log reports and browse any E911226 log reports
	type,
	>OPEN E911 226
	and press the Enter key.
	An E911226 log generates when:
	 The SRDB uses storage that exceeds an exact percentage of the total store in the switch (default 80%).
	 Free memory drops below an exact value (default five areas).
	 The number of tuples in a database exceeds an exact value (default 95° of permitted total).
	• Table E911SRDB has the maximum number of permitted tuples.
	Note: Logs with the reason "Nearing maximum" will not print unless five minutes passed since the last log time. This time limit ensures that E911226 logs do not flood the system,

Ext E911_SRDB_MEMORY

minor (continued)

E911226 MAR26 08:15:38 1290 INFO SRDB MEMORY WARNING!!! REASON = --Low Available Store

Note: The E911225 log generates when tuples increase or change by an exact number (default=1000) in the database. The counter does not reset on new updates. The log always generates every 1000 changes on update sessions. The log is for information only.

Example of an E911225 log report:

E911225 MAR26 08:15:38 1289 INFO SRDB MEMORY INFORMATION SRDB COUNT 250000, SRDB STORE 81 KBytes, FREE STORE 4 VAreas

- 7 Use the BACK command to browse through the buffer and display each E911211 log report.
- 8 To exit LOGUTIL, type

>QUIT

and press the Enter key.

9 Note the reason category on the E911226 log.

If the reason	Do
is high store percentage	step 10
is low available store	step 10
is near maximum	step 11
is maximum reached	step 11
is log did not generate	contact next level of support

10 To increase the data store in the SuperNode, add memory card NT9X14BB or NT9X145DB. Refer to *Card Replacement Procedures*.

Proceed to step 12.

11 You can optimize the database in table E911SRDB. Use higher range tuples that have a key to define a range. The range can include the DN for the caller to route to an emergency service number. In an optimized state, the database allows the SRDB to serve the largest number of DNs. The database uses tuples for a range of DNs. It does not assign an exact DN to each tuple. Refer to the translations group or to the next level of control.

Proceed to step 12.

12 To change threshold values, like the maximum number of tuples, use the CI command. Type

>QSRDB

and press the Enter key.

Ext E911_SRDB_MEMORY minor (continued)

- **13** To determine:
 - the number of tuples in table E911SRDB
 - the amount of store this table uses
 - the amount of free store in the switch

type

>QSRDB MEM

and press the Enter key.

Example of a MAP response:

SRDB Count 250,000 SRDB STORE 4,032 KBytes FREE STORE 32 VAreas

14 To display the values that cause the output of store-use information or warnings on table E911SRDB, type

>QSRDB THRESH

and press the Enter key.

Example of a MAP response:

SRDB	%:	80		STORE	MINIMUM:	5	
NEAR	LIMIT:		760000	L	OG COUNT:		1000

15



WARNING

Take care when you use the Set option of the QSRDB command This option changes the threshold values that determine when an alarm or log generates. If the values are set incorrectly, a possibility is present that the system will not warn of low store access for table E911SRDB.

To set threshold values, type

>QSRDB SET <PERCENT STORE NLIMIT COUNT>

<VALUE>

and press the Enter key.

When you enter 0 for PERCENT, STORE, NLIMIT and COUNT, the parameter turns off.

If you enter the wrong parameter, the correct range of values for the parameter appears. A request to enter the command again accompanies the parameter display.

Ext E911_SRDB_MEMORY minor (end)

Example of a MAP response

THRESHOLD VALUES WILL BE: SRDB %: 85 STORE MINIMUM: 5 NEAR LIMIT: 725000 LOG COUNT: 5000 Please confirm ("YES" or "NO"): >YES SRDB THRESHOLD VALUES HAVE BEEN UPDATED

Note: If you enter the wrong parameter, the system prompts you with the correct ranges.

16 Verify that the arm cleared. If the alarm persists, contact the next level of support.

17 The procedure is complete

Ext ESR minor

Alarm display

(CM MS OD Not PM CCS The Ext	CM	MS	IOD	Net	PM	CCS	Lns	Trks	Ext	APPL
				•	•		•	•	·	1 Min.	•

Indication

Under the Ext subsystem header at the MTC level of the MAP display, 1 Min. may indicates one or more ESR minor alarms.

Meaning

A minor alarm is raised when a caller makes an emergency call to an attendant. The operating company personnel monitors the alarm and gathers the call information from a log. The call information is available to the attendant if the caller fails to complete the call.

Impact

Possible loss of life or property.

Common procedures

Not applicable

Action

The following flowchart is only a summary of the procedure. Use the instructions in the step-action procedure that follows the flowchart to clear the alarm.

Ext ESR minor (continued)

Summary of clearing an Ext ESR alarm



Ext ESR minor (continued)

Clearing an Ext ESR alarm

At your current location

1 To access the Ext level of the MAP display, type

>EXT

and press the Enter key.

Example of a MAP display. CM MS IOD Net PM CCS Lns Trks Ext APPL . . 2MPCOS . 1LIM . . 54GC 1 Min .

Ext AlarmsCritFSPMajorMinor NoAlm 0 0 0 1 10

2 To display all the Ext minor alarms, type

>LIST MIN

and press the Enter key.

If response on MAP display is	 Do
ESR ALARM	step 4
other items	step 3
Perform the appropriate alarm-clearing you have completed the procedure, g	ng procedures in this document. When go to step 11.
To access LOGUTIL, type	
>LOGUTIL	
and press the Enter key.	
To open the ESR log report buffer, ty	rpe
>OPEN ESR	
and press the Enter key.	
To browse through the buffer to displ	ay the ESR100 log report, type
>BACK ALL	
and press the Enter key.	
Example of an ESR100 log report.	
ESR100 MAY06 19:29:47 9700 INF LEN HOST 01 0 05 02 DN 47169012 FPT TRUNK: Kashiwa_Fire_1	O 23
Note the calling number, the date an and trunk (FPT) number.	d time, and the terminating fire, police
To exit LOGUTIL, type	
>QUIT	

Ext ESR			
minor (end)			

and press the Enter key.							
To clear the alarm, type							
>SETSC ESR_ALARM REL							
and press the Enter key.							
Example of a MAP display.							
Ext AlarmsCritFSPMajorMinor NoAlm 0 0 0 0 10							
setsc esr_alarm rel OK							
If the alarm	Do						
clears	step 11						
fails	step10						
Contact the part level of support							
Contact the next level of support							

Ext ESR_TIME_ALARM minor

Alarm display

ĺ	CM MS OD Not PM COS The Bot	СМ	MS	IOD	Net	PM	CCS	Lns	Trks	Ext	APPL
			·	•	•		•	•	•	1 Min	•

Indication

Under the Ext subsystem header at the MTC level of the MAP display, 1 Min may indicate one or more ESR_TIME_ALARM minor alarms.

Meaning

A minor alarm is raised within 30 sec when no attendant has answered an emergency call. The operating company personnel monitors the alarm and gathers the call information from a log. The call information is available to the attendant.

Impact

Possible loss of life or property.

Common procedures

Not applicable

Action

The following flowchart is only a summary of the procedure. Use the instructions in the step-action procedure that follows the flowchart to clear the alarm.

Ext ESR_TIME_ALARM minor (continued)

Summary of clearing an Ext ESR_TIME_ALARM alarm



Ext ESR_TIME_ALARM minor (continued)

Clearing an Ext ESR_TIME_ALARM alarm

At your current location

- 1 To access the Ext level of the MAP display, type
 - >EXT

and press the Enter key.

Example of a MAP display.

CM MS IOD Net PM CCS Lns Trks Ext APPL. . 2MPCOS . 1LIM . . 54GC 2 Min .

Ext Alarms CritFSPMajorMinor NoAlm 0 0 0 1 10

- 2 To display all the Ext minor alarms, type
 - >LIST MIN

and press the Enter key.

If response on MAP display is	Do
ESR_TIME_ALARM	step 4
anything else	step 3

- **3** Perform the appropriate alarm-clearing procedures in this document. When you have completed the procedure, go to step 11.
- 4 To access LOGUTIL, type
 - >LOGUTIL

and press the Enter key.

- 5 To open the ESR log report buffer, type
 - >OPEN ESR

and press the Enter key.

- 6 To browse through the buffer to display the ESR100 log report, type
 - >BACK ALL

and press the Enter key.

Example of an ESR100 log report.

ESR100 MAY06 19:29:47 9700 INFO LEN HOST 01 0 05 02 DN 471690123 FPT TRUNK: Kashiwa_Fire_1

7 Note the calling phone number, the date and time, and the terminating fire, police and trunk (FPT) number.

Ext ESR_TIME_ALARM minor (end)

10 6	xit LOGUTIL, type	;					
>QU	IT						
and	press the Enter ke	ey.					
To clear the alarm, type							
>SE	TSC ESR_TIME_	ALARM R	EL				
and	press the Enter ke	ey.					
Example of a MAP display.							
Ext Alarms CritFSPMajorMinor NoAlm 0 0 0 0 10							
Ext / 0 0 0	0 10	ајопишног	NOAIM				
Ext A 0 0 0 setse OK	c esr_time_alarm	rel	NOAIM				
Ext A 0 0 0 setso OK If t	c esr_time_alarm	rel	Do				
Ext / 0 0 0 setso OK If th cle	c esr_time_alarm he alarm	rel	NOAIM Do ste	p 11			

Ext FSP major

Alarm display

ĺ	 СМ	MS	IOD	Net	PM	CCS	Lns	Trks	Ext	APPL
	-	•	·		•		•		1FSP M	

Indication

At the MTC level of the MAP display, FSP (preceded by a number) appears under the Ext header of the alarm banner. The FSP indicates an Ext frame supervisory panel (FSP) alarm, or a modular supervisory panel (MSP) alarm.

Meaning

The system generates an FSP alarm when one or more frames or cabinets in the office has a power fault. The system also generates an FSP alarm for a cooling unit fault.

The number that precedes FSP is the number of equipment aisles in which the subsystem detects an FSP alarm.

Result

The impact on subscriber service depends on the type of the fault and the type of frame that contains the fault.

Common procedures

There are no common procedures.

Action

This procedure contains a flowchart and a list of steps. Use the flowchart to review the procedure. Follow the steps to perform the procedure.

Ext FSP major (continued)

Summary of Clearing an Ext FSP major alarm



Ext FSP major (end)

Clearing an Ext FSP major alarm

At the MAP terminal

1 To access the Ext level of the MAP display, type

>MAPCI;MTC;EXT

and press the Enter key.

Example of a MAP display:

Ext	Alarms	Crit	FSP	Major	Minor	NoAlm
		0	1	0	0	12

2 List the aisles in the office that have one or more frames with faults on power or cooling units. To list the aisles, type

>LIST FSP

and press the Enter key

Example of a MAP response:

FSPAISn

7 8 *Note:* In the example, n represents the aisle that contains one or more frames with a power or cooling unit fault.

- **3** Record the identity of the first aisle on the list.
- 4 In the aisle, locate the frame that has the fault on the power or cooling unit. A lit FRAME FAIL lamp identifies the frame.

Note: If a frame has an FSP alarm, the FRAME FAIL lamp at the end of the aisle of the frame illuminates.

- **5** Perform the FSP alarm clearing procedure in this document. Make sure the procedure is correct for the type of frame. Complete the procedure and return to this point.
 - If the alarmDoclearedstep 8changed to a smaller numberstep 2(for example, changed from
2FSP to 1FSP)step 7did not clearstep 7For additional help, contact the next level of support.The procedure is complete.
- 6 Determine if the FSP major alarm cleared.

Ext FSP APC cabinet major

Alarm display

	СМ	MS	IOD	Net	PM	CCS	Lns	Trks	Ext	APPL
	-	•	•		•		•		1FSP M	

Indication

At the MTC level of the MAP display, FSP (preceded by a number) appears under the EXT header of the alarm banner. The FSP indicates a major alarm for an external frame supervisory panel (FSP).

Meaning

A power fault or a cooling unit fault is present on one or more office cabinets.

The number under the EXT header of the alarm banner indicates the number of affected cabinets.

Result

The impact on subscriber service depends on the type of fault and the type of cabinet that contains the fault.

Common procedures

There are no common procedures.

Action

This procedure contains a flowchart and a list of steps. Use the flowchart to review the procedure. Follow the steps to perform the procedure.

Summary of Clearing an Ext FSP APC cabinet major alarm



Clearing an Ext FSP APC cabinet major alarm

At the APC

1 Determine if the BLOWER FAIL LED on the FSP is lit.

If the BLOWER FAIL LED	Do
is lit	step 38
is not lit	step 2
Check each converter in the cabinet. LEDs are lit.	Determine if any CONVERTER OFF
If any CONVERTER OFF LEDs	Do
are lit	step 7
are not lit	step 3
Determine if fuses 01 to 04 on the FS	SP have blown.
If a fuse	Do
has blown	step 4
has not blown	step 41

4

3

2



DANGER Risk of fire

To protect against risk of fire, replace the blown fuse with a fuse of the same type, rating (color code), and manufacturer.

Obtain a replacement fuse with the same voltage and amperage as the blown fuse.

- 5 Remove the blown fuse.
- 6 Insert the replacement fuse.

If the fuse	Do	
has blown again	step 31	

If the fuse	Do
has not blown again	step 38
Set the POWER switch on the conv	verter to ON.
If the CONVERTER OFF LED	Do
is lit	step 8
is not lit	step 37
Record the number of the shelf that CONVERTER OFF LED.	t contains the converter with the lit
Determine if the cabinet is an APC	SuperNode or an APC SuperNode SE.
If the cabinet	Do
is an APC SuperNode	step 11
is an APC SuperNode SE	step 10

10 Determine from the following table which fuse associates with the shelf with the lit CONVERTER OFF LED.

Shelf	Fuse
C0 (left side)	01
C0 (right side)	05
1 (left side)	02
1 (right side)	06
2 (left side)	03
2 (right side)	07
3 (left side)	04
3 (right side)	08

Note: Shelf numbering is from top to bottom. Shelf 0 is below the FSP. Shelf 3 is the bottom shelf. The different sides of each shelf (left and right) relate to different FSP fuses, as listed in the table.

Go to step 12.

11 Refer to the following table. Determine which fuse associates with the shelf with the lit CONVERTER OFF LED.

Shelf	Fuse
MS0 (left side)	01
MS0 (right side)	02
MS1 (left side)	03
MS1 (right side)	04
CM0 (left side)	05
CM0 (right side)	06
CM/SLM (left side)	07
CM/SLM (right side	08

12

Determine if the associated fuse is blown.

If the fuse	Do
is blown	step 13
is not blown	step 27

13



DANGER Risk of fire

To protect against risk of fire, replace the blown fuse with a fuse of the same type, rating (color code), and manufacturer.

Obtain a replacement fuse with the same voltage and amperage as the blown fuse.

- 14 Remove the blown fuse.
- **15** Insert the replacement fuse.

If the fuse	Do
has blown, and the CONVERTER OFF LED is lit	step 16

If the fuse	Do
has not blown, and the O not lit	CONVERTER OFF LED is step 39
has not blown, and the CO	ONVERTER OFF LED is lit step 29
Determine if the APC conne	cts to a power distribution center (PDC) or
If the APC	Do
If the APC connects to a PDC	Do step 17

If the fuse	Do
has blown	step 18
has not blown	step 29

Remove the fuse holder that contains the blown fuse.

18 19

16



DANGER **Risk of fire**

To protect against risk of fire, replace the blown fuse with a fuse of the same type, rating (color code), and manufacturer.

Obtain a replacement fuse with the same voltage and amperage as the blown fuse.

- 20 Replace the blown fuse.
- 21 Install the fuse holder into the PDC shelf. Go to step 24.

At the CPDC

22 Locate the circuit breaker that powers the APC shelf.

If the circuit breaker	Do	
is OFF	step 25	
is ON	step 29	

23 Set the circuit breaker to ON.

At the APC

24



DANGER Risk of fire

To protect against risk of fire, replace the blown fuse with a fuse of the same type, rating (color code), and manufacturer.

Obtain a replacement fuse with the same voltage and amperage as the blown fuse.

- **25** Remove the blown fuse.
- 26 Insert the replacement fuse.

If the CONVERTER OFF LED	Do
is lit	step 29
is not lit	step 37

27 To replace the converter card, perform the correct procedure in *Card Replacement Procedures.* Complete the procedure and return to this point.

28 Determine if the CONVERTER OFF LED for the replaced converter card is lit.

If the CONVERTER OFF LED	Do
is lit	step 41
is not lit	step 37
Locate the blown fuse.	
If the blown fuse	Do
is one of 09, 11, 14, 15, or 16	step 41

29
Ext FSP APC cabinet major (continued)

If the blown fuse	Do
is one of 10, 12, or 13	step 30

30 Determine from the following table which alarm and control card associates with the blown fuse.

Fuse number	Alarm and control card
12	slot CD1 (NT6X36KA)
13	slot CD2 (NT6X36KA)
10	slot CD3 (NT0X91KA)

31 Remove the blown fuse.

32

35



DANGER Risk of fire

To protect against risk of fire, replace the blown fuse with a fuse of the same type, rating (color code), and manufacturer.

Obtain a replacement fuse with the same voltage and amperage as the blown fuse.

- **33** To replace the alarm and control card, perform the correct procedure in *Card Replacement Procedures.* Complete the procedure and return to this point.
- 34 Insert the replacement fuse.

If the fuse	Do
has blown again	step 41
has not blown again	step 37
Determine if the FRAME FAIL lamp or	n the FSP is lit.
If the FRAME FAIL LED	Do
is lit, and step 3 is not complete	step 3
is lit, and step 3 is complete	step 41
is not lit	step 40

DMS-100 Family NA100 Alarm Clearing and Perform. Monitoring Proc. Volume 1 of 4 LET0015 and up

Ext FSP APC cabinet major (end)

36 To repair the cooling unit that has faults, perform the correct procedure in *Trouble Locating and Clearing Procedures.* Complete the procedure and return to this point.

37 Determine if the FRAME FAIL lamp on the FSP is lit.

If the FRAME FAIL LED	Do
is lit	step 2
is not lit	step 40

At the MAP terminal

38 To access the EXT level of the MAP display, type >MAPCI;MTC;EXT

and press the Enter key.

39 Determine if an FSP alarm is present.

If an FSP alarm	Do
is present, and you did not access all the cabinets with an FSP alarm	step 40
s present, and you accessed all the cabinets with an FSP alarm	step 41
s not present	step 42
erform the correct procedure in this document for the type one FSP alarm. Complete the procedure and return to this procedure and procedure a	of frame that has point.
or additional help, contact the next level of support.	

42 The procedure is complete.

40

41

Ext FSP CCC frame major

Alarm display

ĺ	 СМ	MS	IOD	Net	PM	CCS	Lns	Trks	Ext	APPL
	-		·		•			·	1FSP M	

Indication

At the MTC level of the MAP display, FSP (preceded by a number) appears under the EXT header of the alarm banner. The FSP indicates a major alarm for an external frame supervisory panel (FSP).

Meaning

A power fault or a cooling unit fault is present in one or more office frames. The number under the EXT header of the alarm banner indicates the number of affected frames.

Result

The impact on subscriber service depends on the type of fault. Subscriber service impact also depends on the type of frame of the fault.

Common procedures

There are no common procedures.

Action

This procedure contains a summary flowchart and a list of steps. Use the flowchart to review the procedure. Follow the steps to perform the procedure.

Summary of Clearing an Ext FSP CCC frame major alarm



Clearing an Ext FSP CCC frame major alarm

At the CCC frame

1 Determine if the FAN FAIL lamp on the FSP is lit.

If the FAN FAIL lamp	Do
is lit	step 39
is not lit	step 2
Determine if any CONVERTER FAIL frame contains CONVERTER FAIL L	LEDs are lit. Each converter in the EDs.
If the CONVERTER FAIL LEDs	Do
are lit	step 7
are not lit	step 3
Note any blown alarm battery supply	(ABS) fuses (05 to 08).
Note: The fuses are on the FSP.	
If a fuse	Do
has blown	step 4

- 5 Remove the blown fuse.
- 6

4

2

3



Risk of fire To protect against risk of fire, replace the blown fuse with a fuse of the same type, rating (color code), and manufacturer.

DANGER

7

8

Insert the replacement fuse.

If a fuse	Do
has blown	step 44
has not blown	step 38
Determine if the POWER switch on the converter is ON or OFF.	
If the POWER switch	Do
is ON	step 9
is OFF	step 8
Turn the POWER switch on the converter ON.	
If the CONVERTER FAIL LED	Do
is lit	step 9
is not lit	step 38

9 Record the number of the shelf that contains the converter with the lit CONVERTER FAIL LED.

10 Examine the following table. Determine the number of the fuse for the shelf with the lit CONVERTER FAIL LED.

Shelf	Fuse
65	51
51	32
32	18
18	04

Note: The fuses are on the FSP.

11 Determine if the fuse for the shelf blows.

If the fuse	Do
has blown	step 12
has not blown	step 18

12 Obtain a replacement fuse with the same voltage and amperage as the blown fuse.

13



WARNING

Static electricity damage Wear a wrist strap that connects to the wrist-strap grounding point of a frame supervisory panel (FSP) to handle ENAB and DACT switches. The wrist strap protects against static electricity damage.

Set the ENAB switch on the NT1X48 card in a vertical position.

Note: The NT1X48 card is in the CPU.

14 Set the DACT switch on the NT1X48 card toward the right.

Note: The NT1X48 card is in the CPU.

15 Remove the blown fuse.

16



DANGER Risk of fire

To protect against risk of fire, replace the blown fuse with a fuse of the same type, rating (color code), and manufacturer.

Insert the replacement fuse.

17 Press and release the RESET button on the converter.

If the fuse	Do
has blown, and the CONVERTER FAIL LED is lit	step 21
has not blown, and the CONVERTER FAIL LED is not lit	step 38
has not blown, and the CONVERTER FAIL LED is lit	step 31

18



WARNING

Static electricity damage

Wear a wrist strap that connects to the wrist-strap grounding point on the frame supervisory panel (FSP) to handle ENAB and DACT switches. The wrist strap protects against static electricity damage.

Set the ENAB switch on the NT1X48 card toward the top.

Note: The NT1X48 card is in the CPU.

- Set the DACT switch on the NT1X48 card toward the right.*Note:* The NT1X48 card is in the CPU.
- 20 Press and release the RESET button on the converter.

If the CONVERTER FAIL LEDs	Do
are lit	step 21
are not lit	step 38

21 Record the number of the shelf and frame that contain the converter with the lit CONVERTER FAIL LED.

At the PDC frame

22 Determine if the fuse that powers the shelf in the CCC frame blows.

step 23
step 31

- **23** Remove the fuse holder that contains the blown fuse.
- 24 Replace the cartridge fuse inside the fuse holder.
- 25



To protect against risk of fire, replace the blown fuse with a fuse of the same type, rating (color code), and manufacturer.

Replace the blown fuse.

26 Install the fuse holder back on the PDC frame.

At the CCC frame

- 27 Obtain a replacement fuse with the same voltage and amperage as the blown fuse.
- 28 Remove the blown fuse.
- 29

31

32

33



DANGER Risk of fire

To protect against risk of fire, replace the blown fuse with a fuse of the same type, rating (color code), and manufacturer.

Insert the replacement fuse.

30 Press and release the RESET button on the converter.

If the CONVERTER FAIL LED	Do				
is lit	step 31				
is not lit	step 38				
To replace the converter, perform the correct procedure in <i>Card Replacement Procedures.</i> When the procedure is complete, return to this point.					
Determine if the CONVERTER FAIL LED for the replaced converter is lit.					
If the CONVERTER FAIL LED	Do				
is lit	step 33				
is not lit	step 38				
Determine if short-circuited or bent pins are present on the backplane of the shelf.					
If short-circuited or bent pins	Do				
are present	step 46				

34 Record the number of the shelf that contains the converter with the I CONVERTER FAIL LED.

35 Examine the following table. Determine which alarm and control card corresponds to the shelf with the converter and the lit CONVERTER FAIL LED.

Shelf number		Alarm and control card
	18 or 51	slot 1 (NT0X36AB)
	32 or 65	slot 2 (NT0X36AB)

- **36** Record the CMC and CPU numbers on the frame.
- **37** To replace the alarm and control card, perform the correct procedure in *Card Replacement Procedures*. When the procedure is complete, return to this point.
- **38** Determine if the FRAME FAIL lamp on the FSP is lit.

If the FRAME FAIL lamp	Do
is lit, and more blown fuses are present	step 3
is lit, and no more blown fuses are present	step 46
is not lit	step 41
To repair the cooling unit that has fau <i>Trouble Locating and Clearing Proce</i> complete, return to this point.	Ilts, perform the correct procedure in <i>dures</i> . When the procedure is
Determine if the FRAME FAIL lamp of	on the FSP is lit.
If the FRAME FAIL lamp	Do
is lit	step 2
is not lit	step 41

At the MAP terminal

41 To access the EXT level of the MAP display, type

>MAPCI;MTC;EXT

and press the Enter key.

Ext FSP CCC frame major (end)

If an FSP alarm	Do
is present, and you did not access all the frames with an FSP alarm	step 43
is present, and you accessed all the frames with an FSP alarm	step 46
is not present	step 47

44



DANGER Risk of electrocution

Some terminals inside the FSP have an electrical potential of -48V dc to -60V dc. Do not touch any terminals inside the FSP.

Open the FSP panel from the left-hand side.

- **45** Determine if the supply wiring for the alarm battery of the MSP is short-circuited. The next level of support can request this information.
- 46 For additional help, contact the next level of support.
- 47 The procedure is complete.

Ext FSP CDSN cabinet with an MSP shelf major

Alarm display

	СМ	MS	IOD	Net	PM	CCS	Lns	Trks	Ext	APPL
	-	•	•	•	•	•	•	•	1FSP M	•
)									

Indication

At the MTC level of the MAP display, FSP (preceded by a number) appears under the EXT header of the alarm banner. The FSP indicates a major alarm for an external frame supervisory panel (FSP).

Meaning

A power fault or a cooling unit fault is present in one or more office cabinets. The number under the EXT header of the alarm banner indicates the number of cabinets affected.

Result

The impact on subscriber service depends on the type of fault and the type of cabinet that contains the fault.

Common procedures

There are no common procedures.

Action

This procedure contains a summary flowchart and a list of steps. Use the flowchart to review the procedure. Follow the steps to perform the procedure.

Ext FSP CDSN cabinet with an MSP shelf major (continued)

Summary of Clearing an Ext FSP CDSN cabinet with an MSP shelf major alarm



Ext FSP CDSN cabinet with an MSP shelf major (continued)

Clearing an Ext FSP CDSN cabinet with an MSP shelf major alarm

At the CDSN

2

3

1 Determine if the FAN FAIL lamp on the MSP is lit.

If the FAN FAIL lamp	Do				
is lit	step 30				
is not lit	step 2				
Check each converter in the cabinet. Determine if any CONVERTER FAIL _EDs are lit.					
If CONVERTER FAIL LEDs	Do				
are lit	step 7				
are not lit	step 3				
Determine if any fuses on the MSP are blown.					
If a fuse	Do				
has blown	step 4				
has not blown	step 35				

- 4 Obtain a replacement fuse with the same voltage and amperage as the blown fuse.
- 5 Remove the blown fuse.
- 6



DANGER Risk of fire

To protect against risk of fire, replace the blown fuse with a fuse of the same type, rating (color code), and manufacturer.

Insert the replacement fuse.

If the fuse	Do
has blown	step 35

Ext FSP

If the fuse	Do	
has not blown	step 29	
Determine if the POWER switch on the second	ne converter is ON or (OFF.
If the POWER switch	Do	
is ON	step 9	
is OFF	step 8	
Set the POWER switch on the conve	rter to ON.	
If the CONVERTER FAIL LED	Do	
is lit	step 9	
is not lit	step 29	
Record the number of the shelf that of	contains the lit CONVE	RTER FAIL LED
<i>Note:</i> The shelf numbers are on t	he right side of the cat	pinet.
Identify the circuit breaker on the MS contains the Iit CONVERTER FAIL LI	P that associates with ED.	the shelf that
<i>Note:</i> The labels for the circuit bre identification, the equipment shelf, example, CB02-47-01 is circuit bre position number 01.	eakers contain number and the circuit pack pe eaker 02 for shelf 47 ar	s for the breaker osition. For nd circuit pack
Determine if the circuit breaker is ON	l or OFF.	
If the circuit breaker	Do	
is ON	step 12	
is OFF	step 13	
Set the circuit breaker to OFF.		
Press and hold the RESET button or breaker to ON.	the converter while yo	ou set the circuit
Release the RESET button.		
		Do
If the circuit breaker		
If the circuit breaker turns OFF, and the CONVERTE lit	ER FAIL LED stays	step 15

CDSN cabinet with an MSP shelf major (continued)

Ext FSP CDSN cabinet with an MSP shelf major (continued)

	If the circuit breaker	Do		
	remains ON, and the CONVERTE	step 21		
15	Record the numbers of the cabinet and shelf with the lit CONVERTER FAIL LED.			
At the	CPDC			
16	Locate the circuit breaker that powers the CDSN shelf.			
17	Determine if the circuit breaker is ON or OFF.			
	If the circuit breaker	Do		
	is OFF	step 18		
	is ON	step 21		
18	Set the circuit breaker to ON.			
At the	CDSN			
19	Press and hold the RESET button on the converter while you set the circuit breaker to ON.			
20	Release the RESET button.			
	If the circuit breaker		Do	
	turns OFF, and the CONVERTER FAIL LED stays step 24 lit			
	remains ON, and the CONVERTER FAIL LED is step 29 not lit			
	remains ON, and the CONVERTER FAIL LED is lit step 22			
21	Set the circuit breaker to OFF.			
22	To replace the converter card, perform the correct procedure in <i>Card Replacement Procedures.</i> Complete the procedure and return to this point.			
23	Determine the state of the converter that you replaced. Determine the state of the associated circuit breaker.			
	If the circuit breaker		Do	
	turns OFF, and the CONVERTER lit	R FAIL LED stays	step 24	
	remains ON, and the CONVERTER FAIL LED is step 29 not lit			

Ext FSP

CDSN cabinet v	with an N	MSP shelf	major	(continued)
-----------------------	-----------	------------------	-------	-------------

	If the circuit breaker	Do
	remains ON, and the CONVERTH	ER FAIL LED is lit step 25
24	Determine if the backplane of the shell	f has any short-circuited or bent pins.
	of the cabinet.	
	If the backplane of the shelf	Do
	has short-circuited or bent pins	step 35
	does not have short-circuited or bent pins	step 25
25	Set the circuit breaker to OFF.	
26	To replace the alarm module (NTRX41 <i>Card Replacement Procedures.</i> Com point.	IAA), perform the correct procedure in plete the procedure and return to this
27	Press and hold the RESET button on breaker to ON.	the converter while you set the circuit
28	Release the RESET button.	
	If the CONVERTER FAIL LED	Do
	is lit	step 35
	is not lit	step 29
29	Determine if the FRAME FAIL lamp or	n the MSP is lit.
	If the FRAME FAIL lamp	Do
	is lit, and more blown fuses are present	step 3
	is lit, and no more blown fuses are present	step 35
	is not lit	step 32
30	To repair the damaged cooling unit, pe <i>Locating and Clearing Procedures</i> . C this point.	erform the correct procedure in <i>Trouble</i> omplete the procedure and return to
31	Determine if the FRAME FAIL lamp or	n the MSP is lit.
	If the FRAME FAIL lamp	Do
	is lit	step 2

Ext FSP CDSN cabinet with an MSP shelf major (end)

	If the FRAME FAIL lamp	Do				
	is not lit	step 32				
e l	MAP terminal					
	To access the EXT level of the MAP of	lisplay, type				
	>MAPCI;MTC;EXT					
	and press the Enter key.					
	Determine if an FSP alarm is present.					
	If an FSP alarm		Do			
	is present, and you did not account with an FSP alarm	ess all the cabinets	step 34			
	is present, and you accessed all t FSP alarm	he cabinets with an	step 35			
	is not present		step 37			

At the back of the CDSN

35



DANGER

Risk of electrocution

Some terminals inside the MSP have an electrical potential of -48V dc to -60V dc. Do not touch any terminals inside the MSP.

Determine if the alarm battery supply wiring of the MSP is short-circuited. The next level of support can request this information.

- **36** For additional help, contact the next level of support.
- **37** The procedure is complete.

Ext FSP CIOE cabinet with an MSP shelf major

Alarm display

СМ	MS	IOD	Net	PM	CCS	Lns	Trks	Ext	APPL
-	•	•	•	•		•	•	1FSP M	

Indication

At the MTC level of the MAP display, FSP (preceded by a number) appears under the EXT header of the alarm banner. The FSP indicates a major alarm for an external frame supervisory panel (FSP).

Meaning

A power fault or a cooling unit fault exists in one or more office cabinets. The number under the EXT header of the alarm banner indicates the number of cabinets affected.

Result

The result on subscriber service depends on the type of fault and the type of cabinet that contains the fault.

Common procedures

There are no common procedures.

Action

This procedure contains a summary flowchart and a list of steps. Use the flowchart to review the procedure. Follow the steps to perform the procedure.

Ext FSP CIOE cabinet with an MSP shelf major (continued)

Summary of Clearing an Ext FSP CIOE cabinet with an MSP shelf major alarm



Ext FSP CIOE cabinet with an MSP shelf major (continued)

Clearing an Ext FSP CIOE cabinet with an MSP shelf major alarm

At the CIOE

1 Check each converter in the cabinet. Determine if any CONVERTER FAIL LEDs are lit.

If CONVERTER FAIL LEDs	Do
are lit	step 6
are not lit	step 2
Determine if any blown fuses exist	on the MSP.
If a fuse	Do
has blown	sten 3

- 3 Obtain a replacement fuse with the same voltage and amperage as the blown fuse.
- 4 Remove the blown fuse.

has not blown

5

6

2



DANGER Risk of fire

To protect against risk of fire, replace the blown fuse with a fuse of the same type, rating (color code), and manufacturer.

step 29

Insert the replacement fuse.

If the fuse	Do			
has blown	step 29			
has not blown	step 25			
Determine if the POWER switch on the converter is ON or OFF.				
	<u> </u>			

If the POWER switch	Do
is ON	step 8

7

Ext FSP CIOE cabinet with an MSP shelf major (continued)

If the POWER switch	Do
is OFF	step 7
Set the POWER switch on the conve	erter to ON.
If the CONVERTER FAIL LED	Do
is lit	step 8
is not lit	step 25
<i>Note:</i> The shelf numbers are on Determine if any blown fuses are pro	the right side of the cabinet. esent on the MSP.
has blown	step 10
	1
has not blown	step 13
has not blown Obtain a replacement fuse with the s fuse.	step 13 ame voltage and amperage as the blow



DANGER Risk of fire

To protect against risk of fire, replace the blown fuse with a fuse of the same type, rating (color code), and manufacturer.

Insert the replacement fuse.

13 Press and release the RESET button on the converter.

If the fuse	Do
has blown again, and the CONVERTER FAIL LED remains lit	step 14
does not protrude, and the CONVERTER FAIL LED is not lit	step 25

Ext FSP

If the fuse	Do		
does not protrude, and the CONV is lit	e CONVERTER FAIL LED step 20		
Record the numbers of the cabinet ar FAIL LED.	nd shelf that contain the lit CONVI		
CPDC			
Locate the circuit breaker that power	s the CIOE shelf.		
Determine if the circuit breaker is ON	l or OFF.		
If the circuit breaker	Do		
is OFF	step 17		
is ON	step 19		
Sot the circuit breaker to ON			
Set the chould bleaker to ON.			
CIOE Press and hold the RESET button or breaker to ON.	n the converter while you set the		
CIOE Press and hold the RESET button or breaker to ON. Set the circuit breaker to OFF.	n the converter while you set the		
CIOE Press and hold the RESET button or breaker to ON. Set the circuit breaker to OFF. To replace the converter card, perfor <i>Replacement Procedures</i> . Complete	n the converter while you set the m the correct procedure in <i>Card</i> e the procedure and return to this		
CIOE Press and hold the RESET button or breaker to ON. Set the circuit breaker to OFF. To replace the converter card, perfor <i>Replacement Procedures.</i> Complete Determine if the CONVERTER FAIL replaced is lit.	n the converter while you set the m the correct procedure in <i>Card</i> the procedure and return to this LED for the converter card that y		
CIOE Press and hold the RESET button or breaker to ON. Set the circuit breaker to OFF. To replace the converter card, perfor <i>Replacement Procedures.</i> Complete Determine if the CONVERTER FAIL replaced is lit.	n the converter while you set the m the correct procedure in <i>Card</i> the procedure and return to this LED for the converter card that y Do		
CIOE Press and hold the RESET button or breaker to ON. Set the circuit breaker to OFF. To replace the converter card, perfor <i>Replacement Procedures.</i> Complete Determine if the CONVERTER FAIL replaced is lit. If the CONVERTER FAIL LED is lit	the converter while you set the m the correct procedure in <i>Card</i> the procedure and return to this LED for the converter card that y Do step 22		
CIOE Press and hold the RESET button or breaker to ON. Set the circuit breaker to OFF. To replace the converter card, perfor <i>Replacement Procedures.</i> Complete Determine if the CONVERTER FAIL replaced is lit. If the CONVERTER FAIL LED is lit is not lit	the converter while you set the m the correct procedure in <i>Card</i> the procedure and return to this LED for the converter card that y Do step 22 step 25		
CIOE Press and hold the RESET button or breaker to ON. Set the circuit breaker to OFF. To replace the converter card, perfor <i>Replacement Procedures.</i> Complete Determine if the CONVERTER FAIL replaced is lit. If the CONVERTER FAIL LED is lit is not lit Determine if the backplane of the sh	the converter while you set the m the correct procedure in <i>Card</i> the procedure and return to this LED for the converter card that y Do step 22 step 25 elf has any short-circuited or ber		
CIOE Press and hold the RESET button or breaker to ON. Set the circuit breaker to OFF. To replace the converter card, perfor <i>Replacement Procedures.</i> Complete Determine if the CONVERTER FAIL replaced is lit. If the CONVERTER FAIL LED is lit is not lit Determine if the backplane of the sh <i>Note:</i> The backplane is at the real	the converter while you set the m the correct procedure in <i>Card</i> the procedure and return to this LED for the converter card that y Do step 22 step 25 elf has any short-circuited or ber ar of the cabinet.		
CIOE Press and hold the RESET button or breaker to ON. Set the circuit breaker to OFF. To replace the converter card, perfor <i>Replacement Procedures</i> . Complete Determine if the CONVERTER FAIL replaced is lit. If the CONVERTER FAIL LED is lit is not lit Determine if the backplane of the sh <i>Note:</i> The backplane is at the rea If short-circuited or bent pins	n the converter while you set the m the correct procedure in <i>Card</i> e the procedure and return to this LED for the converter card that y Do step 22 step 25 elf has any short-circuited or ber ar of the cabinet. Do		
CIOE Press and hold the RESET button or breaker to ON. Set the circuit breaker to OFF. To replace the converter card, perfor <i>Replacement Procedures</i> . Complete Determine if the CONVERTER FAIL replaced is lit. If the CONVERTER FAIL LED is lit is not lit Determine if the backplane of the sh <i>Note:</i> The backplane is at the rea If short-circuited or bent pins are present	n the converter while you set the m the correct procedure in <i>Card</i> e the procedure and return to this LED for the converter card that y Do step 22 step 25 elf has any short-circuited or ber ar of the cabinet. Do step 29		

CIOE cabinet with an MSP shelf major (continued)

Ext FSP CIOE cabinet with an MSP shelf major (continued)

Press and release the RESET button on the converter.						
If the CONVERTER FAIL LED	Do					
is lit	step 29					
is not lit	step 25					
Determine if the FRAME FAIL LED or	n the MSP is lit.					
If the FRAME FAIL LED	Do					
is lit, and more blown fuses are present	step 2					
is lit, and more blown fuses are step 29 not present						
is not lit	step 26					
MAP terminal						
To access the EXT level of the MAP display, type						
>MAPCI;MTC;EXT						
and press the Enter key.						
Determine if an FSP alarm is present						
If an FSP alarm		Do				
is present, and you did not access all the cabinets with an FSP alarm						
is present, and you accessed all t	he cabinets with an	step 29				
FSP alarm						

Ext FSP CIOE cabinet with an MSP shelf major (end)

At the back of the CIOE

29



DANGER Risk of electrocution

Some terminals inside the FSP have an electrical potential of -48V dc to -60V dc. Do not touch any terminals inside the FSP.

Determine if the supply wiring for the alarm battery in the MSP is short-circuited. The next level of support can ask for this information.

- **30** For additional help, contact the next level of support.
- **31** The procedure is complete.

Ext FSP CIPE cabinet with an MSP shelf major

Alarm display

 СМ	MS	IOD	Net	PM	CCS	Lns	Trks	Ext	APPL
•	•	•	·	•	•	•	•	1FSP M	

Indication

At the MTC level of the MAP display, FSP (preceded by a number) appears under the EXT header of the alarm banner. The FSP indicates a major alarm for an external frame supervisory panel (FSP).

Meaning

A power fault or a cooling unit fault exists in one or more office cabinets. The number under the EXT header of the alarm banner indicates the number of cabinets affected.

Result

The impact on subscriber service depends on the type of fault and the type of cabinet that contains the fault.

Common procedures

There are no common procedures.

Action

This procedure contains a summary flowchart and a list of steps. Use the flowchart to review the procedure. Follow the steps to perform the procedure.

Ext FSP CIPE cabinet with an MSP shelf major (continued)

Summary of Clearing an Ext FSP CIPE cabinet with an MSP shelf major alarm



DMS-100 Family NA100 Alarm Clearing and Perform. Monitoring Proc. Volume 1 of 4 LET0015 and up

Ext FSP CIPE cabinet with an MSP shelf major (continued)

Clearing an Ext FSP CIPE cabinet with an MSP shelf major alarm

At the CIPE

2

3

1 Determine if the FAN FAIL LED on the MSP is lit.

If the FAN FAIL LED	Do
is lit	step 30
is not lit	step 2
Check each converter in the cabinet. LEDs are lit.	Determine if any CONVERTER FAIL
If CONVERTER FAIL LEDs	Do
are lit	step 7
are not lit	step 3
Determine if any blown fuses are pre-	sent on the MSP.
If a fuse	Do
has blown	step 4
has not blown	step 35

- 4 Obtain a replacement fuse with the same voltage and amperage as the blown fuse.
- 5 Remove the blown fuse.
- 6



DANGER Risk of fire

To protect against risk of fire, replace the blown fuse with a fuse of the same type, rating (color code), and manufacturer.

Insert the replacement fuse.

If the fuse	Do
has blown again	step 35

Ext FSP

If the fuse	Do
has not blown again	step 29
Determine if the POWER swite	ch on the converter is ON or OFF.
If the POWER switch	Do
is ON	step 9
is OFF	step 8
Set the POWER switch on the	converter to ON.
If the CONVERTER FAIL LE	D Do
is lit	step 9
is not lit	step 29
Record the number of the shelf	with the lit CONVERTER FAIL LED. The shell
numbers are on the right side	of the cabinet.
numbers are on the right side Identify the circuit breaker on t contains the lit CONVERTER I	of the cabinet. he MSP that associates with the shelf that FAIL LED.
numbers are on the right side Identify the circuit breaker on t contains the lit CONVERTER I Note: Labels for the circuit identification, the equipmen example, CB02-47-01 is CE pack position.	of the cabinet. he MSP that associates with the shelf that FAIL LED. breakers contain numbers for the breaker t shelf, and the circuit pack position. For 3 02 for shelf 47 and number 01 for the circuit
numbers are on the right side Identify the circuit breaker on t contains the lit CONVERTER I Note: Labels for the circuit identification, the equipmen example, CB02-47-01 is CE pack position. Determine if the circuit breake	of the cabinet. he MSP that associates with the shelf that FAIL LED. breakers contain numbers for the breaker t shelf, and the circuit pack position. For 3 02 for shelf 47 and number 01 for the circuit r is ON or OFF.
numbers are on the right side Identify the circuit breaker on t contains the lit CONVERTER I Note: Labels for the circuit identification, the equipmen example, CB02-47-01 is CE pack position. Determine if the circuit breake	of the cabinet. the MSP that associates with the shelf that FAIL LED. breakers contain numbers for the breaker t shelf, and the circuit pack position. For 3 02 for shelf 47 and number 01 for the circuit r is ON or OFF. Do
numbers are on the right side Identify the circuit breaker on t contains the lit CONVERTER I <i>Note:</i> Labels for the circuit identification, the equipmen example, CB02-47-01 is CE pack position. Determine if the circuit breake If the circuit breaker is ON	of the cabinet. the MSP that associates with the shelf that FAIL LED. breakers contain numbers for the breaker t shelf, and the circuit pack position. For 3 02 for shelf 47 and number 01 for the circuit r is ON or OFF. Do step 12
numbers are on the right side Identify the circuit breaker on t contains the lit CONVERTER I <i>Note:</i> Labels for the circuit identification, the equipmen example, CB02-47-01 is CE pack position. Determine if the circuit breake If the circuit breaker is ON is OFF	of the cabinet. he MSP that associates with the shelf that FAIL LED. breakers contain numbers for the breaker t shelf, and the circuit pack position. For 3 02 for shelf 47 and number 01 for the circuit r is ON or OFF. Do step 12 step 13
numbers are on the right side Identify the circuit breaker on t contains the lit CONVERTER I <i>Note:</i> Labels for the circuit identification, the equipmen example, CB02-47-01 is CE pack position. Determine if the circuit breake If the circuit breaker is ON is OFF Set the circuit breaker to OFF.	of the cabinet. he MSP that associates with the shelf that FAIL LED. breakers contain numbers for the breaker t shelf, and the circuit pack position. For 3 02 for shelf 47 and number 01 for the circuit r is ON or OFF. Do step 12 step 13
numbers are on the right side Identify the circuit breaker on t contains the lit CONVERTER I <i>Note:</i> Labels for the circuit identification, the equipmen example, CB02-47-01 is CE pack position. Determine if the circuit breake If the circuit breaker is ON is OFF Set the circuit breaker to OFF. Press and hold the RESET bu breaker to ON.	of the cabinet. he MSP that associates with the shelf that FAIL LED. breakers contain numbers for the breaker t shelf, and the circuit pack position. For 3 02 for shelf 47 and number 01 for the circuit r is ON or OFF. Do step 12 step 13 tton on the converter while you set the circuit
numbers are on the right side Identify the circuit breaker on t contains the lit CONVERTER I <i>Note:</i> Labels for the circuit identification, the equipmen example, CB02-47-01 is CE pack position. Determine if the circuit breake If the circuit breaker is ON is OFF Set the circuit breaker to OFF. Press and hold the RESET bu breaker to ON. Release the RESET button.	of the cabinet. he MSP that associates with the shelf that FAIL LED. breakers contain numbers for the breaker t shelf, and the circuit pack position. For 8 02 for shelf 47 and number 01 for the circuit r is ON or OFF. Do step 12 step 13 tton on the converter while you set the circuit
numbers are on the right side Identify the circuit breaker on t contains the lit CONVERTER I <i>Note:</i> Labels for the circuit identification, the equipmen example, CB02-47-01 is CE pack position. Determine if the circuit breake If the circuit breaker is ON is OFF Set the circuit breaker to OFF. Press and hold the RESET bu breaker to ON. Release the RESET button. If the circuit breaker	of the cabinet. he MSP that associates with the shelf that FAIL LED. breakers contain numbers for the breaker t shelf, and the circuit pack position. For 3 02 for shelf 47 and number 01 for the circuit r is ON or OFF. Do step 12 step 13 tton on the converter while you set the circuit Do
numbers are on the right side Identify the circuit breaker on t contains the lit CONVERTER I <i>Note:</i> Labels for the circuit identification, the equipmen example, CB02-47-01 is CE pack position. Determine if the circuit breake If the circuit breaker is ON is OFF Set the circuit breaker to OFF. Press and hold the RESET but breaker to ON. Release the RESET button. If the circuit breaker turns OFF, and the CONV lit	of the cabinet. the MSP that associates with the shelf that FAIL LED. breakers contain numbers for the breaker t shelf, and the circuit pack position. For 3 02 for shelf 47 and number 01 for the circuit r is ON or OFF. Do step 12 step 13 tton on the converter while you set the circuit Do TERTER FAIL LED stays step 15

CIPE cabinet with an MSP shelf major (continued)

Ext FSP CIPE cabinet with an MSP shelf major (continued)

	If the circuit breaker		Do			
	remains ON, and the CONVERTER FAIL LED is lit step 21					
15	Record the numbers of the cabinet and shelf with the lit CONVERTER FAIL LED.					
At the	CPDC					
16	Locate the circuit breaker that powers the equipment (CIPE) shelf.	he cabinetized internat	ional peripheral			
17	Determine if the circuit breaker is ON	or OFF.				
	If the circuit breaker	Do				
	is OFF	step 18				
	is ON	step 21				
18	Set the circuit breaker to ON.					
At the	CIPE					
19	Press and hold the RESET button on the breaker to ON.	the converter while you	u set the circuit			
20	Release the RESET button.					
	If the circuit breaker		Do			
	turns OFF again, and the CONVE is lit	ERTER FAIL LED	step 24			
	remains ON, and the CONVERT not lit	TER FAIL LED is	step 29			
	remains ON, and the CONVERTE	ER FAIL LED is lit	step 22			
21	Set the circuit breaker to OFF.					
22	To replace the converter card, perform <i>Replacement Procedures</i> . Complete t	the correct procedure the procedure and retu	in <i>Card</i> Irn to this point.			
23	Determine the state of the converter c fuse.	ard you replaced, and	the associated			
	If the fuse		Do			
	has blown again, and the CONVE is lit	ERTER FAIL LED	step 24			
	does not protrude, and the CONVI is not lit	ERTER FAIL LED	step 29			

Ext FSP

If the fuse	Do
does not protrude, and the CONV is lit	ERTER FAIL LED step 25
Determine if the backplane of the she backplane is at the rear of the cabine	If has short-circuited or bent pins. t.
If short-circuited or bent pins	Do
are present	step 36
are not present	step 25
Set the circuit breaker to OFF.	
To replace the alarm module (NTRX4 <i>Card Replacement Procedures</i> . Con point.	1AA), perform the correct procedure and return to
Press and hold the RESET button on breaker to ON.	the converter while you set the cire
Release the RESET button.	
If the CONVERTER FAIL LED	Do
is lit	step 35
is not lit	step 29
Determine if the FRAME FAIL LED of	n the MSP is lit.
If the FRAME FAIL LED	Do
is lit and more blown fuses are present	step 3
is lit and no more blown fuses are present	step 35
is not lit	step 32
To repair the damaged cooling unit, p Locating and Clearing Procedures. C this point.	erform the correct procedure in <i>Tro</i> Complete the procedure and return
Determine if the FRAME FAIL LED or	n the MSP is lit.
If the FRAME FAIL LED	Do
• 1•	stop 2
18 lit	step 2

CIPE cabinet with an MSP shelf major (continued)

DMS-100 Family NA100 Alarm Clearing and Perform. Monitoring Proc. Volume 1 of 4 LET0015 and up

At 32

33

Ext FSP CIPE cabinet with an MSP shelf major (end)

If the FRAME FAIL LED	Do	
is not lit	step 32	
MAP terminal		
To access the EXT level of the	ne MAP display, type	
>MAPCI;MTC;EXT		
and press the Enter key.		
Determine if an FSP alarm is	s present.	
If an FSP alarm		Do
is present, and you did with an FSP alarm	not access all the cabinets	step 34
is present, and you acces	sed all the cabinets with an	step 35
FSP alarm		

At the back of the CIPE

35

34



DANGER

Risk of electrocution

Some terminals inside the FSP have an electrical potential of -48V dc to -60V dc. Do not touch any terminals inside the FSP.

Determine if the supply wiring of the alarm battery in the MSP is short-circuited. The next level of support can ask for this information.

- **36** For additional help, contact the next level of support.
- **37** The procedure is complete.

Ext FSP CISM, CMTA, and CTME cabinet with an MSP shelf major

Alarm display

СМ	MS	IOD	Net	PM	CCS	Lns	Trks	Ext	APPL
•	•	•	·	•	·	·	•	1FSP M	•

Indication

At the MTC level of the MAP display, a number and FSP appear under the Ext header of the alarm banner.

The FSP indicates a major alarm for the external frame supervisory panel (FSP).

This procedure applies to:

- integrated services module (CISM) cabinets
- metallic test access (CMTA) cabinets
- trunk module equipment (CTME) cabinets
- services module equipment (ISME) frames

Meaning

One or more cabinets in the office has a power fault or a cooling unit fault.

The number under the EXT header of the alarm banner indicates the number of cabinets affected.

Result

The impact on subscriber service depends on the type of fault and the type of cabinet that contains the fault.

Common procedures

There are no common procedures.

Action

This procedure contains a summary flowchart and a list of steps. Use the flowchart to review the procedure. Follow the steps to perform the procedure.

Ext FSP CISM, CMTA, and CTME cabinet with an MSP shelf major (continued)

Summary of Clearing an Ext FSP CISM, CMTA, and CTME cabinet with an MSP shelf major alarm



Ext FSP

CISM, CMTA, and CTME cabinet with an MSP shelf major (continued)

Clearing an Ext FSP CISM, CMTA, and CTME cabinet with an MSP shelf major alarm

At the CISM, CMTA ,CTME cabinets or ISME frame

1 Check each converter in the cabinet. Determine if any CONVERTER FAIL LEDs are lit.

If CONVERTER FAIL LEDs	Do
are lit	step 6
are not lit	step 2

Determine if the MSP has any blown fuses.

If a fuse	Do
has blown	step 3
has not blown	step 32

3 Obtain a replacement fuse with the same voltage and amperage as the blown fuse.

Note: The ISME frame and CISM cabinet can have an input/output module (IOM). An IOM occupies slot positions 2 and 3 of the integrated services module (ISM). Fuses in MSP fuse positions 71-07, 71-08 and 71-09 control IOM slots.

- 4 Remove the blown fuse.
- 5



DANGER Risk of fire

To protect against fire, replace the blown fuse with a fuse of the same type, rating (color code), and manufacturer.

Insert the replacement fuse.

If the fuse	Do
has blown again	step 32
has not blown again	step 28

Ext FSP CISM, CMTA, and CTME cabinet with an MSP shelf major (continued)

Determine if the POWER switch	h on the converter is ON or C)FF.
If the POWER switch	Do	
is ON	step 8	
is OFF	step 7	
Turn the POWER switch on the	converter to ON.	
If the CONVERTER FAIL LED	D Do	
is lit	step 8	
is not lit	step 28	
Record the number of the shelf v numbers are on the right side o	with the lit CONVERTER FAIL of the cabinet.	LED. The shelf
Identify the circuit breaker on th CONVERTER FAIL LED.	ne MSP for the shelf that cont	ains the lit
<i>Note:</i> A label for a circuit bro identification, equipment she CB02-47-01 is CB 02 for she position.	eaker contains numbers for b If and circuit pack position. F If 47 and number 01 for the c	oreaker For example, circuit pack
Determine if the circuit breaker	is ON or OFF.	
If the circuit breaker	Do	
is ON	step 11	
is OFF	step 12	
Set the circuit breaker to OFF.		
Press and hold the RESET butt breaker to ON.	ton on the converter while yo	u set the circuit
<i>Note:</i> The shelf can contain LEDs. When both converters hold the RESET button on the button while you set the circu converter, press the RESET	two converters with lit CON s have lit CONVERTER FAIL L e inner converter. Press and it breaker to ON (up). After y button to reset the outer con	/ERTER FAIL EDs, press and hold the RESET ou set the inner verter.
Release the RESET button.		
If the circuit breaker		Do
turns OFF, and the CONVE	ERTER FAIL LED is lit	step 14
remains ON, and the CON not lit	WERTER FAIL LED is	step 28
Ext FSP

CISM, CMTA, and CTME cabinet with an MSP shelf major (continued)

	If the circuit breaker		Do	
	remains ON, and the CONVERTE	ER FAIL LED is lit	step 21	
14	Record the numbers of the cabinet and shelf with the lit CONVERTE LED.			
At the	CPDC			
15	Locate the circuit breaker that powers	the CISM, CMTA or C	TME shelf.	
16	Determine if the circuit breaker is ON or OFF.			
	If the circuit breaker	Do		
	is OFF	step 17		
	is ON	step 20		
17	Set the circuit breaker to ON.			
At the	CISM, CMTA ,CTME cabinets or ISME	E frame		
18	Press and hold the RESET button on the converter while you set the circuit breaker to ON.			
19	Release the RESET button.			
	If the circuit breaker		Do	
	turns OFF again, and the CONVE is lit	ERTER FAIL LED	step 23	
	remains ON, and the CONVERT not lit	TER FAIL LED is	step 28	
	remains ON, and the CONVERTE	ER FAIL LED is lit	step 21	
20	Set the circuit breaker to OFF.			
21	To replace the converter card, perform <i>Replacement Procedures</i> . Complete t	the correct procedure the procedure and ret	e in <i>Card</i> urn to this point.	
22	Determine the state of the converter the of the associated circuit breaker.	hat you replaced. Dete	ermine the state	
	If the circuit breaker		Do	
	turns OFF, and the CONVERTER lit	R FAIL LED stays	step 23	
	remains ON, and the CONVERT not lit	TER FAIL LED is	step 28	

Ext FSP CISM, CMTA, and CTME cabinet with an MSP shelf major (continued)

If the circuit breaker		Do			
remains ON, and the CONVERT	ER FAIL LED is lit	step 24			
Determine if the backplane of the shelf has short-circuited or bent pins. <i>Note:</i> The backplane is at the rear of the cabinet.					
If short-circuited or bent pins	Do				
are present	step 32				
are not present	step 24				
Make sure that the circuit breaker is C)FF.				
To replace the alarm module (NTRX4 Card Replacement Procedures. Com point.	1AA), perform the correption of the correspondence of the procedure and the procedur	ect procedure in nd return to this			
Press and hold the RESET button on associated circuit breaker to ON.	the converter while yo	u set the			
Note: The shelf can contain two c LEDs. When both converters have hold the RESET button on the inner button while you set the circuit brea converter, press the RESET buttor	onverters with lit CON lit CONVERTER FAIL I converter. Press and aker to ON. After you to reset the outer con	VERTER FAIL LEDs, press and hold the RESET reset the inner verter.			
Release the RESET button.					
If the CONVERTER FAIL LED	Do				
is lit	step 32				
is not lit	step 28				
Determine if the FRAME FAIL lamp on the MSP is lit.					
If the FRAME FAIL lamp	Do				
is lit, and more blown fuses exist	step 2				
is lit, and more blown fuses do not exist	step 35				
is not lit	step 29				
MAP terminal					

>MAPCI;MTC;EXT

and press the Enter key.

Ext FSP CISM, CMTA, and CTME cabinet with an MSP shelf major (end)

30 Determine if an FSP alarm is present.

If an FSP alarm	Do
is present, and you did not access all the cabinets with an FSP alarm	step 31
is present, and you accessed all the cabinets with an FSP alarm	step 35
is not present	step 36

31 Perform the correct procedure for the type of frame that has the FSP alarm. Complete the procedure and return to this point.

At the CISM, CMTA ,CTME cabinets or ISME frame

32



DANGER Risk of electrocution

Some terminals inside the FSP have an electrical potential of -48 V dc to -60 V dc. Do not touch any terminals inside the FSP.

Determine if the supply wiring for an alarm battery in the MSP is short-circuited. The next level of support can ask for this information.

If the alarm battery	Do
has short-circuited	step 35
has not short-circuited (IOM)	step 33

At the CISM cabinet or ISME frame

- **33** To replace the NTFX30 IOM controller card, perform the correct procedure in *Card Replacement Procedures*. Complete the procedure and return to this point.
- 34 Insert another replacement fuse

If the fuse	Do	
has blown again	step 35	
has not blown again	step 28	

- **35** For additional help, contact the next level of support.
- **36** The procedure is complete.

Ext FSP CPDC cabinet major

Alarm display

ĺ	 СМ	MS	IOD	Net	PM	CCS	Lns	Trks	Ext	APPL
	•		·		•		•		nFSP M	

Indication

At the MTC level of the MAP display, FSP (preceded by a number) appears under the EXT header of the alarm banner. The FSP indicates a major alarm for an external frame supervisory panel (FSP).

Meaning

A power fault or a cooling unit fault is present in one or more office cabinets. The number under the EXT header of the alarm banner indicates the number of cabinets affected.

Result

The impact on subscriber service depends on the type of fault and the type of cabinet that contains the fault.

Common procedures

There are no common procedures.

Action

This procedure contains a flowchart and a list of steps. Use the flowchart to review the procedure. Follow the steps to perform the procedure.

Summary of Clearing an Ext FSP CPDC cabinet major alarm



DMS-100 Family NA100 Alarm Clearing and Perform. Monitoring Proc. Volume 1 of 4 LET0015 and up

3

4

Clearing an Ext FSP CPDC cabinet major alarm

At the CPDC cabinet

1 The alarm LEDs are on the right sides of the breaker panels. Determine if any of the alarm LEDs are lit.

	_
If alarm LEDs	Do
are lit	step 2
are not lit	step 3
Locate any breaker panel that indi	cates an alarm. Determine if one or more

2 Locate any breaker panel that indicates an alarm. Determine if one or more circuit breakers are OFF.

	Do	
one or more circuit breakers are OFF	step 4	
all circuit breakers are ON	step 3	
Determine if the alarm battery supply	(ABS) fuse on the FS	P has blown.
If the ABS fuse	Do	
has blown	step 21	
has not blown	step 44	
	reaker creatives the o	
<i>Note:</i> The label under the circuit b circuit breaker supplies.		ement that t
Note: The label under the circuit breaker supplies.		ement that t
Note: The label under the circuit breaker supplies. If the circuit breaker supplies talk battery to an LCE fr	ame	Do step 6
Note: The label under the circuit breaker supplies. If the circuit breaker supplies talk battery to an LCE for does not supply talk battery to an	rame	ement that t Do step 6 step 5

6 Record the numbers of the LCE frame and shelf that associate with the circuit breaker.

5

At the LCE frame

7 Locate the ten talk battery fuses above the shelves. Remove the ten talk battery fuses (five for each shelf).

Note: Talk battery A powers the first and third shelves from the bottom of the LCE. Talk battery B powers the second and fourth shelves.

8 Obtain a capacitor forming tool.

Note 1: A capacitor forming tool consists of a 100-W 120-V light bulb in a socket without insulation-ended twisted wires. The without insulation-ended twisted wires must have spring-type alligator clips on each end.

Note 2: You can insert a new tool with the tool number T000655, CPC number NTA0600512, into the fuse holder instead of the light bulb. You can insert the new tool in the same method that you insert a fuse.

9



DANGER

Risk of electrocution

The fuse holder contacts on the filter panel faceplate have high voltages. Do not touch the probes of the capacitor forming tool to the faceplate of the filter panel. Do not let the probes of the capacitor forming tool touch each other.

Connect the leads of the capacitor forming tool across the circuit breaker to charge the capacitors.

IfAfter 5 s, if the light bulb	Do
is lit	step 10
is not lit	step 16

At the LCE frame

- **10** Label the lead positive terminal of the capacitor as + (positive). Label the lead of the negative terminal of the capacitor as (negative).
- 11 Disconnect the leads from the short-circuited capacitor.
- **12** Remove the capacitor.
- **13** Install a replacement capacitor.
- 14 Connect the + (positive) lead to the positive terminal of the capacitor.
- Connect the (negative) lead to the negative terminal of the capacitor.Go to step 9 to charge the capacitors again.

At the back of the CPDC

16 Remove the capacitor forming tool.

At the front of the CPDC

17 Immediately set the circuit breaker to ON.

At the LCE frame

- **18** Insert the ten talk battery fuses that you removed in step 7, one at a time. Pause between each fuse.
- **19** Depress the indicator on one of the talk battery fuses to determine if a talk battery is present.

If the FRAME FAIL LED	Do
is lit or ON	step 39
is not lit or OFF	step 20

At the CPDC

20 Determine if the circuit breaker is ON or OFF.

If the circuit breaker	Do	
is OFF	step 44	
is ON	step 39	

- 21 Obtain a replacement fuse that has the same voltage and amperage as the blown ABS fuse.
- 22 Remove the blown ABS fuse.
- 23



DANGER

Risk of electrocution

To protect against electrocution, replace the blown fuse with a fuse of the same type, rating (color code), and manufacturer.

Insert the replacement ABS fuse.

If the fuse	Do
has blown again	step 43
has not blown again	step 39

24 Make sure that the circuit breaker for the capacitor remains OFF.

At the back of the CPDC

25 Obtain a capacitor forming tool and a voltmeter.

Note 1: A capacitor forming tool consists of a 100-W 120-V light bulb in a socket without insulation-ended twisted wires. The without insulation-ended twisted wires must have spring-type alligator clips on each end.

Note 2: You can insert a new tool with the tool number T000655, CPC number NTA0600512, into the fuse holder instead of the light bulb. You can insert the new tool in the same method that you insert a fuse.

- **26** Label the lead positive terminal of the capacitor as + (positive). Label the lead negative terminal of the capacitor as (negative).
- 27 Connect one lead of the capacitor forming tool to a ground stud. Connect the lead to the ground stud on the ground plate for the battery return (L+) of the breaker panel.
- **28** Connect the other lead of the capacitor forming tool to the bottom post of the circuit breaker that powers the short-circuited capacitor.
- **29** Use the voltmeter to make sure that no voltage is present across the terminals of the capacitor.
- **30** Use the voltmeter to make sure that no voltage is present between either terminal of the capacitor and the battery return.
- 31



DANGER Risk of electrocution

The terminals at the back of the CPDC have an electrical potential of -48V dc to -60V dc. Use the voltmeter to detect voltage. Do not attempt to replace the capacitor.

Make sure that the capacitor forming tool remains in place. Disconnect the leads from the short-circuited capacitor.

- 32 Remove the capacitor.
- **33** Install a replacement capacitor.
- 34 Connect the positive lead to the positive terminal of the capacitor. Connect the negative lead to the negative terminal of the capacitor.
- **35** Remove the capacitor forming tool.
- **36** To allow the capacitor to recharge, wait 3 to 5 min.

At the front of the CPDC

37 Set the circuit breaker for the capacitor to ON.

38	Determine if the circuit breaker is ON or OFF.					
	If the circuit breaker	Do				
	is OFF	step 44				
	is ON	step 39				
39	Determine if the FRAME FAIL LED on	the FSP is lit.				
	If the FRAME FAIL LED	Do				
	is lit, and more circuit breakers are OFF	step 4				
	is lit, and no more circuit break- ers are OFF	step 43				
	is not lit	step 40				
At the	e MAP terminal					
40	To access the EXT level of the MAP terminal, type					
	>MAPCI;MTC;EXT					
	and press the Enter key.					
41	Determine if an FSP alarm is present.					
	If an FSP alarm		Do			
	is present, and you did not acce with an FSP alarm	ess all the cabinets	step 42			
	is present, and you accessed all the FSP alarm	he cabinets with an	step 44			
	is not present		step 45			
42	Perform the correct procedure in this c the FSP alarm. Complete the proced	locument for the type our of the type of type of the type of the type of type of the type of type	of frame that has point.			

Ext FSP CPDC cabinet major (end)

At the back of the CPDC

43



DANGER Risk of electrocution

Some terminals inside the FSP have an electrical potential of -48V dc to -60V dc. Do not touch any terminals inside the FSP.

Determine if the ABS wiring inside the FSP is short-circuited. The next level of support can ask for this information.

- 44 For additional help, contact the next level of support.
- 45 The procedure is complete.

Ext FSP DCE frame major

Alarm display

ĺ	 СМ	MS	IOD	Net	РМ	CCS	Lns	Trks	Ext	APPL
	•	•	·	•	•		•		1FSP M	·

Indication

At the MTC level of the MAP display, FSP (preceded by a number) appears under the Ext header of the alarm banner. The FSP indicates a major alarm for an external frame supervisory panel (FSP).

Meaning

A power fault or a cooling unit fault is present in an office frame. The number under the Ext header of the alarm banner indicates the number of cabinets affected.

Result

The impact on subscriber service depends on the type of fault and the type of frame that contains the fault.

Common procedures

There are no common procedures.

Action

This procedure contains a summary flowchart and a list of steps. Use the flowchart to review the procedure. Follow the steps to perform the procedure.

Summary of Clearing an Ext FSP DCE frame major alarm



Clearing an Ext FSP DCE frame major alarm

At the DCE frame

1 Check each converter in the frame. Determine if any CONVERTER FAIL LEDs are lit.

If CONVERTER FAIL LEDs	Do
are lit	step 6
are not lit	step 2

2 Determine if any of the alarm battery supply (ABS) fuses (01 to 05) on the FSP are blown.

If a fuse	Do	
has blown	step 3	
has not blown	step 37	

- **3** Obtain a replacement fuse with the same voltage and amperage as the blown fuse.
 - Remove the blown fuse.
- 4 5



DANGER Risk of fire

To protect against risk of fire, replace the blown fuse with a fuse of the same type, rating (color code), and manufacturer.

Insert the replacement fuse.

If the fuse	Do			
has blown again	step 37			
has not blown again	step 33			
Determine if the POWER switch on the converter is ON or OFF.				

If the POWER switch	Do	
is ON	step 8	

6

If the POWER switch	Do				
is OFF	step 7				
Set the POWER switch on the converter to ON.					
If the CONVERTER FAIL LED	Do				
is lit	step 8				
is not lit	step 33				

8 Record the number of the shelf that contains the converter with the lit CONVERTER FAIL LED.

9 Use the following table to identify the circuit breaker for the shelf that contains the converter with the lit CONVERTER FAIL LED. The circuit breaker is on the FSP.

If Shelf number is	Do Circuit breaker number
65	CB1
51	CB2
32	CB3
18	CB4
04	CB5

10 Determine if the associated circuit breaker is ON or OFF.

If the circuit breaker	Do
is ON	step 11
is OFF	step 12

11 Set the identified circuit breaker to OFF.

7

12 Press and hold the RESET button on the converter while you set the circuit breaker to ON.

Note: The shelf can contain two converters with lit CONVERTER FAIL LEDs. When both converters have lit CONVERTER FAIL LEDs, press and hold the RESET button on the innermost converter. Press and hold the RESET button on the innermost converter while you set the circuit breaker to ON (up). After you reset the innermost converter, press the RESET button to reset the outermost converter.

13 Release the RESET button.

If the circuit breaker

Do

step 14

remains ON, and the CONVERTER FAIL LED is step 33 not lit

turns OFF, and the CONVERTER FAIL LED is lit

remains ON, and the CONVERTER FAIL LED is lit step 25

14 Record the numbers of the frame and shelf with the lit converter FAIL LED.

At the PDC frame

- **15** Locate the fuse that powers the shelf in the data communications equipment (DCE) frame.
- 16 Determine if the fuse is blown.

If the fuse	Do	
has blown	step 17	
has not blown	step 21	

- 17 Remove the fuse holder that contains the blown fuse.
- **18** Replace the cartridge fuse inside the fuse holder.
- 19



DANGER Risk of fire

To protect against risk of fire, replace the blown fuse with a fuse of the same type, rating (color code), and manufacturer.

Replace the blown fuse.

- 20 Install the fuse holder on the PDC frame.
- 21 Locate the fuse for the battery filter.
- 22 Determine if the fuse has blown.

If the fuse	Do
has blown	step 17
has not blown	step 26

At the DCE frame

23 Press and hold the RESET button on the converter while you set the circuit breaker to ON.

Note: The shelf can contain two converters with lit CONVERTER FAIL LEDs. When both converters have lit CONVERTER FAIL LEDs, press and hold the RESET button on the innermost converter. Press and hold the RESET button on the innermost converter while you set the circuit breaker to ON (up). After you reset the innermost converter, press the RESET button to reset the outermost converter.

24 Release the RESET button.

If the circuit breaker		Do
turns OFF, and the CONVER	TER FAIL LED is lit	step 26
remains ON, and the CONV not lit	ERTER FAIL LED is	step 33
remains ON, and the CONVE	RTER FAIL LED is lit	step 25
Set the associated circuit breaker	to OFF.	
To replace the converter, perform t <i>Procedures</i> . Complete the proce	the correct procedure in <i>C</i> dure and return to this po	<i>ard Replacemen</i> int.
Determine if the CONVERTER FA	AIL LED for the replaced o	converter is lit.
If the converter FAIL LED	Do	
is lit	step 28	
is not lit	step 33	
Determine if the backplane of the	shelf has any short-circu	ited or bent pins.
If the backplane of the shelf		Do
has short-circuited or bent pir	18	step 40
does not have short-circuited	or bent pins	step 29
Record the number of the shelf th	at contains the converter	with the lit

CONVERTER FAIL LED.

30 Use the table and diagram to identify the alarm and control card for the shelf with the lit CONVERTER FAIL LED.

Shelf number	Alarm and control card	Card position
04	slot CD1 (NT0X91AA)	back
32 and 65	slot CD2 (NT0X91AB)	center
18 and 51	slot CD3 (NT0X91AD)	front



31 Note the PM type, PM number, and unit number in each of the shelves controlled by the alarm and control card. You identified the alarm and control card in the previous step.

32 To replace the alarm and control card, perform the correct procedure in *Card Replacement Procedures*. Complete the procedure and return to this point.

33 Determine if the FRAME FAIL lamp on the FSP is lit.

If the FRAME FAIL lamp	Do
is lit, and more blown fuses are present	step 2
is lit, and more blown fuses are not present	step 40
is not lit	step 34

At the MAP terminal

34 To access the Ext level of the MAP display, type

>MAPCI;MTC;EXT

and press the Enter key.

35 Determine if an FSP alarm is present.

If an FSP alarm	Do
is present, and you did not access all the frames with an FSP alarm	step 36
is present, and you accessed all the frames with an FSP alarm	step 40
is not present	step 41

36 Perform the correct procedure for the type of frame that has the FSP alarm. This document contains a list of steps. Complete the procedure and return to this point.

At the DCE frame

37



DANGER

Risk of electrocution Some terminals inside the FSP have an electrical potential of -48V dc to -60V dc. Do not touch any terminals inside the FSP.

Unscrew the slotted nut to the left of the FSP.

- **38** Open the FSP panel.
- **39** Determine if the supply wiring for the alarm battery of the MSP is short-circuited. The next level of support can request this information.

Ext FSP DCE frame major (end)

- **40** For additional help, contact the next level of support.
- 41 The procedure is complete.

Ext FSP DPCC cabinet major

Alarm display

 СМ	MS	IOD	Net	PM	CCS	Lns	Trks	Ext	APPL
•	·	•	•	·	•	•	•	1FSP M	·

Indication

At the MTC level of the MAP display, FSP (preceded by a number) appears under the EXT header of the alarm banner. The FSP indicates a major alarm for an external frame supervisory panel (FSP).

Meaning

A power fault or a cooling unit fault is present in one or more office cabinets.

The number under the EXT header of the alarm banner indicates the number of cabinets affected.

Result

The impact on subscriber service depends on the type of fault and the type of cabinet that contains the fault.

Common procedures

There are no common procedures.

Action

This procedure contains a flowchart and a list of steps. Use the flowchart to review the procedure. Follow the steps to perform the procedure.

Summary of Clearing an Ext FSP DPCC cabinet major alarm



Clearing an Ext FSP DPCC cabinet major alarm

At the DPCC

1 Determine if the BLOWER FAIL LED on the FSP is lit.

step 38 step 2 . Determine if any of the CONVERTER
step 2 . Determine if any of the CONVERTER
Determine if any of the CONVERTER
Do
20
step 7
step 3
1 to 16 on the FSP have blown.
Do
step 4

- 4 Obtain a replacement fuse with the same voltage and amperage as the blown fuse.
- 5 Remove the blown fuse.

has not blown

6

2

3



DANGER Risk of fire

To protect against risk of fire, replace the blown fuse with a fuse of the same type, rating (color code), and manufacturer.

step 43

7



DANGER Risk of fire

To protect against risk of fire, replace the blown fuse with a fuse of the same type, rating (color code), and manufacturer.

Insert the replacement fuse.

If the fuse	Do		
has blown	step 31		
has not blown	step 37		
Set the POWER switch on the converter to ON.			
If the CONVERTER OFF LED	Do		

	20
is lit	step 8
is not lit	step 37

8 Record the number of the shelf that contains the converter with the lit CONVERTER OFF LED.

9 Determine if the cabinet is a DPCC SuperNode or a DPCC SuperNode SE.

If the cabinet	Do	
is a DPCC SuperNode	step 11	
is a DPCC SuperNode SE	step 10	

10 Use the following table to identify the fuse for the shelf that contains the lit CONVERTER OFF LED:

(Sheet 1 of 2)

Shelf	Fuse
0 (left side)	01
0 (right side)	05
1 (left side)	02
1 (right side)	06
2 (left side)	03

(Sheet 2 of 2)

Shelf	Fuse
2 (right side)	07
3 (left side)	04
3 (right side)	08

Note: This document numbers the shelves from top to bottom. Shelf 0 is below the FSP. Shelf 3 is the bottom shelf. The different sides of each shelf (left and right) relate to different FSP fuses, as listed in the previous table.

Go to step 12.

11 Use the following table to identify the fuse for the shelf that contains the lit CONVERTER OFF LED:

Shelf	Fuse
MS0 (left side)	01
MS0 (right side)	02
MS1 (left side)	03
MS1 (right side)	04
CM0 (left side)	05
CM0 (right side)	06
CM/SLM (left side)	07
CM/SLM (right side)	08

12 Determine if the associated fuse is blown.

If the fuse	Do	
has blown	step 13	
has not blown	step 29	

13 Obtain a replacement fuse with the same voltage and amperage as the blown fuse.

14 Remove the blown fuse.

15

16

17 18



DANGER **Risk of fire** To protect against risk of fire, replace the blown fuse with a fuse of the same type, rating (color code), and manufacturer.

Insert the replacement fuse.

	If the fuse	Do					
	has blown, and the CONVERT	step 16					
	has not blown, and the CONVI not lit	step 39					
	has not blown, and the CONVE	RTER OFF LED is lit	step 29				
16	Determine if the DPCC connects to a PDC or CPDC.						
	If the DPCC	Do					
	connects to a PDC	step 17					
	connects to a CPDC						
At the	e PDC						
7	Locate the fuse that powers the DPCC shelf.						
8	Determine if the fuse has blown.						
	If the fuse	Do					
	has blown	step 19					
	has not blown	step 29					

19 Remove the fuse holder that contains the blown fuse.

20 Obtain a replacement fuse.

21



DANGER Risk of fire

To protect against risk of fire, replace the blown fuse with a fuse of the same type, rating (color code), and manufacturer.

Replace the blown fuse.

22 Install the fuse holder back into the PDC shelf. Go to step 26.

At the CPDC

- 23 Locate the circuit breaker that powers the DPCC shelf.
- 24 Determine if the circuit breaker is ON or OFF.

If the circuit breaker	Do
is OFF	step 25
is ON	step 29

25 Set the circuit breaker to ON.

At the DPCC

- 26 Obtain a replacement fuse with the same voltage and amperage as the blown fuse.
- 27 Remove the blown fuse.
- 28



DANGER Risk of fire

To protect against risk of fire, replace the blown fuse with a fuse of the same type, rating (color code), and manufacturer.

Insert the replacement fuse.

If the CONVERTER OFF LED	Do
is lit	step 29
is not lit	step 37

31

- **29** To replace the converter card, perform the correct procedure in *Card Replacement Procedure*. Complete the procedure and return to this point.
- **30** Determine if the CONVERTER OFF LED for the converter card that you replaced is lit.

If the CONVERTER OFF LED	Do		
is lit	step 43		
is not lit	step 37		
Determine which fuse is blown.	Do		
Determine which fuse is blown. If the blown fuse is one of 09, 11, 14, 15, or 16	Do step 43		

32 Use the following table to identify the alarm and control card that associate with the blown fuse:

Fuse number	Alarm and control card
12	slot CD1 (NT6X36KA)
13	slot CD2 (NT6X36KA)
10	slot CD3 (NT0X91KA)

- **33** Remove the blown fuse.
- **34** Obtain a replacement fuse with the same voltage and amperage as the blown fuse.
- **35** To replace the alarm and control card, perform the correct procedure in *Card Replacement Procedures.* Complete the procedure and return to this point.
- 36



DANGER Risk of fire

Replace the blown fuse with a fuse of the same type, rating (color code), and manufacturer. This procedure protects against the risk of fire.

If the fuse	Do				
has blown again	step 43				
has not blown again	step 37				
Determine if the FRAME FAIL lamp on the FSP is lit.					
If the FRAME FAIL LED		Do			
is lit, and more blown fuses are p	resent	step 3			
is lit, and more blown fuses are n	ot present	step 43			
is not lit		step 40			
To repair the damaged cooling unit, pe Locating and Clearing Procedures. C this point.	erform the correct proc omplete the procedure	edure in <i>Tre</i> e and retur			
Determine if the FRAME FAIL lamp of	n the FSP is lit.				
If the FRAME FAIL LED	Do				
is lit	step 2				
	step 2				
is not lit	step 40				
is not lit IAP terminal	step 40				
is not lit <i>IAP terminal</i> To access the EXT level of the MAP d	step 40				
is not lit IAP terminal To access the EXT level of the MAP d >MAPCI;MTC;EXT	step 40 isplay, type				
is not lit IAP terminal To access the EXT level of the MAP d MAPCI ; MTC ; EXT and press the Enter key.	step 40				
is not lit IAP terminal To access the EXT level of the MAP d MAPCI;MTC;EXT and press the Enter key. Determine if an FSP alarm is present.	step 40 isplay, type				
is not lit IAP terminal To access the EXT level of the MAP d MAPCI ; MTC ; EXT and press the Enter key. Determine if an FSP alarm is present. If an FSP alarm	step 40 isplay, type				
is not lit MAP terminal To access the EXT level of the MAP d MAPCI ; MTC ; EXT and press the Enter key. Determine if an FSP alarm is present. If an FSP alarm is present, and you did not ac- cess all the cabinets with an FSP alarm	step 40 isplay, type Do step 42				
is not lit MAP terminal To access the EXT level of the MAP de >MAPCI ; MTC ; EXT and press the Enter key. Determine if an FSP alarm is present. If an FSP alarm is present, and you did not ac- cess all the cabinets with an FSP alarm is present, and you accessed all the cabinets with an FSP alarm	step 40 isplay, type Do step 42 step 43				

12 Perform the correct procedure for the type of frame that has the FSP alarm. Complete the procedure and return to this point.

Ext FSP DPCC cabinet major (end)

- **43** For additional help, contact the next level of support.
- 44 The procedure is complete.

Ext FSP DSNE frame or CDSN cabinet major

Alarm display

ĺ	 СМ	MS	IOD	Net	PM	CCS	Lns	Trks	Ext	APPL
	•	•	·	·	•	•	•	•	1FSP M	•

Indication

At the MTC level of the MAP display, FSP (preceded by a number) appears under the EXT header of the alarm banner. The FSP indicates a major alarm for an external frame supervisory panel (FSP).

Meaning

A power fault or a cooling unit fault exists on one or more office frames. The number under the EXT header of the alarm banner indicates the number of frames affected.

Result

The impact on subscriber service depends on the type of fault and the type of frame that contains the fault.

Common procedures

There are no common procedures.

Action

This procedure contains a summary flowchart and a list of steps. Use the flowchart to review the procedure. Follow the steps to perform the procedure.

Note: This procedure applies to a double shelf network equipment (DSNE) frame and a cabinetized dual-shelf network (CDSN) that has an FSP. The term DSNE also refers to this type of CDSN, unless otherwise specified.

Ext FSP DSNE frame or CDSN cabinet major (continued)

Summary of Clearing an Ext FSP DSNE frame or CDSN cabinet major alarm



Ext FSP DSNE frame or CDSN cabinet major (continued)

Clearing an Ext FSP DSNE frame or CDSN cabinet major alarm

At the DSNE frame

1 Determine if the FAN FAIL lamp on the FSP is lit.

If the FAN FAIL lamp	Do
is lit	step 33
is not lit	step 2
Check each converter in the frame. LEDs are lit.	Determine if any CONVERTER FAIL
If CONVERTER FAIL LEDs	Do
are lit	step 7
are not lit	step 3
	1
Determine if any of the alarm batter FSP have blown.	ry supply (ABS) fuses (01 to 04) on th
Determine if any of the alarm batter FSP have blown. If a fuse	ry supply (ABS) fuses (01 to 04) on th
Determine if any of the alarm batter FSP have blown. If a fuse has blown	ry supply (ABS) fuses (01 to 04) on th Do step 4

- 5 Remove the blown fuse.
- 6

4

2

3



DANGER Risk of electrocution

Some terminals inside the FSP have an electrical potential of -48V dc to -60V dc. Do not touch any terminals inside the FSP.

Insert the replacement fuse.

If the fuse	Do	
has blown again	step 38	

Ext FSP DSNE frame or CDSN cabinet major (continued)

If the fuse	Do
has not blown again	step 32
Determine if the POWER switch on	the converter is ON or OFF.
If the POWER switch	Do
is ON	step 9
is OFF	step 8
Set the POWER switch on the conv	erter to ON.
If the CONVERTER FAIL LED	Do
is lit	step 9
	stop 22
is not lit Record the number of the shelf that CONVERTER FAIL LED. Use the following table to identify w shelf that contains the converter wit circuit breaker is on the FSP.	t contains the converter with the lit hich circuit breaker associates with the th the lit CONVERTER FAIL LED. The
is not lit Record the number of the shelf that CONVERTER FAIL LED. Use the following table to identify w shelf that contains the converter wit circuit breaker is on the FSP.	t contains the converter with the lit hich circuit breaker associates with the th the lit CONVERTER FAIL LED. The Do Circuit breaker number
is not lit Record the number of the shelf that CONVERTER FAIL LED. Use the following table to identify w shelf that contains the converter wit circuit breaker is on the FSP. If Shelf number is 65	t contains the converter with the lit hich circuit breaker associates with the th the lit CONVERTER FAIL LED. The Do Circuit breaker number CD1
is not lit Record the number of the shelf that CONVERTER FAIL LED. Use the following table to identify w shelf that contains the converter wit circuit breaker is on the FSP. If Shelf number is 65 51	t contains the converter with the lit hich circuit breaker associates with the th the lit CONVERTER FAIL LED. The Do Circuit breaker number CD1 CD2
is not lit Record the number of the shelf that CONVERTER FAIL LED. Use the following table to identify w shelf that contains the converter wit circuit breaker is on the FSP. If Shelf number is 65 51 18	t contains the converter with the lit hich circuit breaker associates with the th the lit CONVERTER FAIL LED. The Do Circuit breaker number CD1 CD2 CD4
is not lit Record the number of the shelf that CONVERTER FAIL LED. Use the following table to identify w shelf that contains the converter wit circuit breaker is on the FSP. If Shelf number is 65 51 18 32	t contains the converter with the lit hich circuit breaker associates with the th the lit CONVERTER FAIL LED. The Do Circuit breaker number CD1 CD2 CD4 CD5
is not lit Record the number of the shelf that CONVERTER FAIL LED. Use the following table to identify w shelf that contains the converter wit circuit breaker is on the FSP. If Shelf number is 65 51 18 32 Determine if the associated circuit to	t contains the converter with the lit hich circuit breaker associates with the th the lit CONVERTER FAIL LED. The Do Circuit breaker number CD1 CD2 CD4 CD5 preaker is ON or OFF.
is not lit Record the number of the shelf that CONVERTER FAIL LED. Use the following table to identify w shelf that contains the converter wit circuit breaker is on the FSP. If Shelf number is 65 51 18 32 Determine if the associated circuit to If the circuit breaker	t contains the converter with the lit hich circuit breaker associates with the th the lit CONVERTER FAIL LED. The Do Circuit breaker number CD1 CD2 CD4 CD5 breaker is ON or OFF. Do
is not lit Record the number of the shelf that CONVERTER FAIL LED. Use the following table to identify w shelf that contains the converter wit circuit breaker is on the FSP. If Shelf number is 65 51 18 32 Determine if the associated circuit k If the circuit breaker is ON	step 32 contains the converter with the lit hich circuit breaker associates with the th the lit CONVERTER FAIL LED. The Do Circuit breaker number CD1 CD2 CD4 CD5 preaker is ON or OFF. Do step 12

Press and hold the RESET button on the converter while you set the circuit breaker to ON.

Do

Ext FSP DSNE frame or CDSN cabinet major (continued)

14 Release the RESET button.

If the circuit breaker

turns OFF, and the CONVERTER FAIL LED is lit step 15 remains ON, and the CONVERTER FAIL LED is step 32 not lit

remains ON, and the CONVERTER FAIL LED is lit step 24

15 Record the numbers of the frame and shelf that contain the converter with the lit CONVERTER FAIL LED.

At the PDC frame

- 16 Locate the fuse that powers the shelf in the DSNE frame.
- **17** Determine if the fuse has blown.

If the fuse	Do
has blown	step 18
has not blown	step 25

- **18** Remove the fuse holder that contains the blown fuse.
- **19** Replace the cartridge fuse inside the fuse holder.
- 20



DANGER

Risk of electrocution

Some terminals inside the FSP have an electrical potential of -48V dc to -60V dc. Do not touch any terminals inside the FSP.

Replace the blown fuse.

21 Install the fuse holder on the PDC frame.

At the DSNE frame

- 22 Press and hold the RESET button on the converter while you set the circuit breaker to ON.
- 23 Release the RESET button.

If the circuit breaker	Do
turns OFF, and the CONVERTER FAIL LED is lit	step 25

Ext FSP DSNE frame or CDSN cabinet major (continued)

If the circuit breaker		Do
remains ON, and the CONVERT not lit	TER FAIL LED is	step 32
remains ON, and the CONVERTE	ER FAIL LED is lit	step 24
Set the associated circuit breaker to C	PFF.	
To replace the converter, perform the converter, perform the converter procedures. Complete the procedure	orrect procedure in <i>Ca</i> and return to this poir	<i>rd Replacement</i> nt.
Determine if the CONVERTER FAIL L	ED on the replaced co	onverter is lit.
If the CONVERTER FAIL LED	Do	
is lit	step 27	
is not lit	step 32	
Determine if the backplane of the shel	f has any short-circuit	ed or bent pins.
If the backplane of the shelf	Do	
has short-circuited or bent pins	step 41	
does not have short-circuited or bent pins	step 28	
Record the number of the shelf that co	ontains the converter v	vith the lit
Use the table and diagram to identify w	hich alarm and control	card associates
	remains ON, and the CONVERT not lit remains ON, and the CONVERTE Set the associated circuit breaker to C To replace the converter, perform the cr <i>Procedures</i> . Complete the procedure Determine if the CONVERTER FAIL LE If the CONVERTER FAIL LED is lit is not lit Determine if the backplane of the shelf has short-circuited or bent pins does not have short-circuited or bent pins Record the number of the shelf that co CONVERTER FAIL LED.	remains ON, and the CONVERTER FAIL LED is not lit remains ON, and the CONVERTER FAIL LED is lit Set the associated circuit breaker to OFF. To replace the converter, perform the correct procedure in <i>Ca</i> <i>Procedures</i> . Complete the procedure and return to this poin Determine if the CONVERTER FAIL LED on the replaced co If the CONVERTER FAIL LED Do is lit step 27 is not lit step 32 Determine if the backplane of the shelf has any short-circuit If the backplane of the shelf Do has short-circuited or bent pins step 41 does not have short-circuited or step 28 bent pins Record the number of the shelf that contains the converter w CONVERTER FAIL LED.

Shelf number	Alarm and control card	Card position
65 and 51	slot CD1 (NT0X91AA)	back
32 and 18	slot CD2 (NT0X91AE)	front
Card holder NTOX91AA card in slot CD1 NTOX91AE card in slot CD2 View of the state o

Ext FSP DSNE frame or CDSN cabinet major (continued)

- **30** Record the numbers of the network plane and the network module for the shelves that the alarm and control card control. You identified the alarm and control card in the previous step.
- **31** To replace the alarm and control card, perform the correct procedure in *Card Replacement Procedures.* Complete the procedure and return to this point.

At the DSNE frame

32 Determine if the FRAME FAIL lamp on the FSP is lit.

If the FRAME FAIL lamp	Do
is lit, and more blown fuses is present	step 3

Ext FSP DSNE frame or CDSN cabinet major (continued)

	If the FRAME FAIL lamp	Do	
	is lit, and more blown fuses is	step 41	
	not present		
	is not lit	step 35	
33	To repair the damaged cooling unit, pe <i>Locating and Clearing Procedures</i> . C this point.	erform the correct proc omplete the procedure	edure in <i>Trouble</i> e and return to
34	Determine if the FRAME FAIL lamp or	n the FSP is lit.	
	If the FRAME FAIL lamp	Do	
	is lit	step 2	
	is not lit	step 35	
At th	e MAP terminal		
35	To access the EXT level of the MAP d	isplay, type	
	>MAPCI;MTC;EXT		
	and press the Enter key.		
36	Determine if an FSP alarm is present.		
	If an FSP alarm		Do
	is present, and you did not access an FSP alarm	all the frames with	step 37
	is present, and you accessed all FSP alarm	the frames with an	step 41
	is not present		step 42
37	Perform the correct procedure for the This document contains a list of proce return to this point.	type of frame that has edures. Complete the	the FSP alarm. procedure and

Ext FSP DSNE frame or CDSN cabinet major (end)

At the DSNE frame

38



DANGER Risk of electrocution

Some terminals inside the FSP have an electrical potential of -48V dc to -60V dc. Do not touch any terminals inside the FSP.

Unscrew the slotted nut to the left of the FSP.

- **39** Open the FSP panel.
- **40** Determine if the alarm battery supply wiring inside the FSP is short-circuited. The next level of support can request this information.
- 41 For additional help, contact the next level of support.
- 42 The procedure is complete.

Ext FSP DTE or IDTE frame major

Alarm display

ĺ	 СМ	MS	IOD	Net	PM	CCS	Lns	Trks	Ext	APPL
	•	•	•	•	•	•	•	•	1FSP M	

Indication

At the MTC level of the MAP display, FSP (preceded by a number) appears under the EXT header of the alarm banner. The FSP indicates a major alarm for an external frame supervisory panel (FSP).

Meaning

A power fault or a cooling unit fault exists in one or more office frames. The number under the EXT header of the alarm banner indicates the number of frames affected.

Result

The impact on subscriber service depends on the type of fault and the type of frame that contains the fault.

Common procedures

There are no common procedures.

Action

This procedure contains a summary flowchart and a list of steps. Use the flowchart to review the procedure. Follow the steps to perform the procedure.

Note: This procedure applies to a digital trunk equipment (DTE) frame and an international digital trunk equipment (IDTE) frame. The word DTE also refers to IDTE, unless otherwise specified.

Summary of Clearing an Ext FSP DTE or IDTE frame major alarm



Clearing an Ext FSP DTE or IDTE frame major alarm

At the DTE frame

1 Determine if the FAN FAIL lamp on the FSP is lit.

If the FAN FAIL lamp	Do
is lit	step 35
is not lit	step 2
Check each converter in the frame LEDs are lit.	e. Determine if any CONVERTER FAIL
If CONVERTER FAIL LEDs	Do
are lit	step 7
are not lit	step 3
Determine if any of the alarm batte FSP have blown.	ery supply (ABS) fuses (01 to 08) on the
If a fuse	Do
If a fuse has blown	Do step 4

- 5 Remove the blown fuse.

fuse.

6

4

2

3



DANGER Risk of fire

To protect against the risk of fire, replace the blown fuse with a fuse of the same type, rating (color code), and manufacturer.

Insert the replacement fuse.

If the fuse	Do	
has blown again	step 40	

If the fuse	Do
has not blown again	step 34
Determine if the POWER switch on	the converter is ON or OFF.
If the POWER switch	Do
is ON	step 9
is OFF	step 8
Set the POWER switch on the conv	erter to ON.
If the CONVERTER FAIL LED	Do
is lit	step 9
is not lit	step 34
Record the number of the shelf that CONVERTER FAIL LED. Use the following table to identify w	contains the converter with the lit
Record the number of the shelf that CONVERTER FAIL LED. Use the following table to identify w shelf with the lit CONVERTER FAIL	contains the converter with the lit hich circuit breaker associates with th LED. The circuit breaker is on the F Do Circuit breaker number
Record the number of the shelf that CONVERTER FAIL LED. Use the following table to identify w shelf with the lit CONVERTER FAIL If Shelf number is 65	contains the converter with the lit hich circuit breaker associates with th LED. The circuit breaker is on the F Do Circuit breaker number CD1
Record the number of the shelf that CONVERTER FAIL LED. Use the following table to identify w shelf with the lit CONVERTER FAIL If Shelf number is 65 32	contains the converter with the lit hich circuit breaker associates with th LED. The circuit breaker is on the FS Do Circuit breaker number CD1 CD2
Record the number of the shelf that CONVERTER FAIL LED. Use the following table to identify w shelf with the lit CONVERTER FAIL If Shelf number is 65 32 51	contains the converter with the lit hich circuit breaker associates with th LED. The circuit breaker is on the FS Do Circuit breaker number CD1 CD2 CD4
Record the number of the shelf that CONVERTER FAIL LED. Use the following table to identify w shelf with the lit CONVERTER FAIL If Shelf number is 65 32 51 18	contains the converter with the lit hich circuit breaker associates with th LED. The circuit breaker is on the F Do Circuit breaker number CD1 CD2 CD4 CD5
Record the number of the shelf that CONVERTER FAIL LED. Use the following table to identify w shelf with the lit CONVERTER FAIL If Shelf number is 65 32 51 18 Determine if the associated circuit to	contains the converter with the lit hich circuit breaker associates with th LED. The circuit breaker is on the FS Do Circuit breaker number CD1 CD2 CD4 CD5 preaker is ON or OFF.
Record the number of the shelf that CONVERTER FAIL LED. Use the following table to identify w shelf with the lit CONVERTER FAIL If Shelf number is 65 32 51 18 Determine if the associated circuit to If the circuit breaker	contains the converter with the lit hich circuit breaker associates with the LED. The circuit breaker is on the FS Do Circuit breaker number CD1 CD2 CD4 CD5 preaker is ON or OFF. Do
Record the number of the shelf that CONVERTER FAIL LED. Use the following table to identify w shelf with the lit CONVERTER FAIL If Shelf number is 65 32 51 18 Determine if the associated circuit to If the circuit breaker is ON	contains the converter with the lit hich circuit breaker associates with the LED. The circuit breaker is on the FS Do Circuit breaker number CD1 CD2 CD4 CD5 preaker is ON or OFF. Do step 12

7

Press and hold the RESET button on the converter while you set the circuit breaker to ON. 13

14 Release the RESET button.

	preaker	Do
turns OFF, a ER FAIL LE	nd the CONVERT- D is lit	step 15
remains ON VERTER FA	I, and the CON- AIL LED is not lit	step 34
remains ON VERTER FA	I, and the CON- AIL LED is lit	step 26
Record the num	bers of the frame and a R FAIL LED.	shelf that contain the converter with t
PDC frame		
Locate the fuse	that powers the shelf	in the DTE frame.
Determine if the	e fuse has blown.	
If the fuer		Do
if the fuse		
has blown		step 18
has blown has not blow	n	step 18 step 22

Replace the cartridge fuse inside the fuse holder.

- 20 Replace the blown fuse.
- 21 Install the fuse holder on the PDC frame.
- 22 Locate the battery filter fuse.
- 23 Determine if the fuse has blown.

If the fuse	Do	
has blown	step 18	

	If the fuse	Do	
	has not blown	step 27	
At th	ne DTE frame		
24	Press and hold the RESET button o breaker to ON.	on the converter while yo	ou set the circu
25	Release the RESET button.		
	If the circuit breaker		Do
	turns OFF, and the CONVERT	ER FAIL LED is lit	step 27
	remains ON, and the CONVEI not lit	RTER FAIL LED is	step 34
	remains ON, and the CONVER	FER FAIL LED is lit	step 26
26	Set the associated circuit breaker to	OFF.	
27	To replace the converter, perform the Replacement Procedures. Complete	ne correct procedure in (te the procedure and ret	<i>Card</i> urn to this poir
28	Determine if the CONVERTER FAIL	LED for the replaced co	onverter is lit.
	If the CONVERTER FAIL LED	Do	
	is lit	step 29	
	is not lit	step 34	
29	Determine if the backplane of the sh	nelf has any short-circuit	ed or bent pine
	If short-circuited or bent pins	Do	
	are present	step 43	

31 Use the table and diagram to identify the alarm and control card for the shelf with the lit CONVERTER FAIL LED.

Shelf number	Alarm and control card	Card position
18 and 51	slot CD1 (NT0X91AA)	rear
65 and 32	slot CD2 (NT0X91AE)	front



32 Record the PM type, number, and unit number of each of the shelves that the alarm and control card control. You identified the alarm and control card in the previous step.

- **33** To replace the alarm and control card, perform the correct procedure in *Card Replacement Procedures.* Complete the procedure and return to this point.
- 34 Determine if the FRAME FAIL lamp on the FSP is lit.

	If the FRAME FAIL lamp	Do				
	is lit, and more blown fuses are present	are step 3 are step 43				
	is lit, and more blown fuses are not present					
	is not lit	step 37				
	To repair the cooling unit that has faul <i>Trouble Locating and Clearing Proces</i> return to this point.	ts, perform the correct procedure in <i>dures</i> . Complete the procedure and				
	Determine if the FRAME FAIL lamp or	n the FSP is lit.				
	If the FRAME FAIL lamp	Do				
	is lit	step 2				
	is not lit	step 37				
the	MAP terminal					
	To access the EXT level of the MAP display, type					
	>MAPCI;MTC;EXT					
	and press the Enter key.					
	Determine if an FSP alarm is present.					
	If an FSP alarm	Do				
	is present, and you did not ac- cess all the frames with an FSP alarm	step 39				
	is present, and you accessed all the frames with an FSP alarm	step 43				
	is not present	step 44				

39 Perform the correct procedure for the type of frame that has the FSP alarm. This document contains a list of procedures. Complete the procedure and return to this point.

Ext FSP DTE or IDTE frame major (end)

At the DTE frame

40



DANGER Risk of electrocution

Some terminals inside the FSP have an electrical potential of -48V dc to -60V dc. Do not touch any terminals inside the FSP.

Unscrew the slotted nut to the left of the FSP.

- 41 Open the FSP panel.
- 42 Determine if the supply wiring of the alarm inside the FSP is short-circuited. The next level of support can request this information.
- **43** For additional help, contact the next level of support.
- 44 The procedure is complete.

Ext FSP IOE frame and CIOE cabinet major

Alarm display

(СМ	MS	IOD	Net	PM	CCS	Lns	Trks	Ext	APPL
	-	•	·		•	•	•	·	1FSP M	

Indication

At the MTC level of the MAP display, FSP (preceded by a number) appears under the Ext header of the alarm banner. The FSP indicates a major alarm for an external frame supervisory panel (FSP).

Meaning

A power fault or a cooling unit fault is present in one or more office cabinets.

The number under the Ext header of the alarm banner indicates the number of frames affected.

Result

The impact on subscriber service depends on the type of fault and the type of frame that contains the fault.

Common procedures

There are no common procedures.

Action

This procedure contains a flowchart and a list of steps. Use the flowchart to review the procedure. Follow the instructions to perform the procedure.

Note: This procedure applies to an input/output equipment (IOE) frame and cabinetized input/output equipment (CIOE) that has an FSP. In this procedure, IOE also refers to this type of CIOE, unless the procedure specifies otherwise.

Summary of Clearing an Ext FSP IOE frame and CIOE cabinet major alarm



Clearing an Ext FSP IOE frame and CIOE cabinet major alarm

At the IOE frame

1 Check each converter in the frame. Determine if any of the CONVERTER FAIL LEDs are lit.

If any CONVERTER FAIL LEDS	Do
are lit	step 6
are not lit	step 2
Lesste the classe better seven by (AD)	2 the set (05 to 00) and the 50D

2 Locate the alarm battery supply (ABS) fuses (05 to 08) on the FSP. Determine if any of the ABS fuses are blown.

If a fuse	Do	
has blown	step 3	
has not blown	step 39	

- 3 Obtain a replacement fuse with the same voltage and amperage as the blown fuse.
 - Remove the blown fuse.
- 4 5

6



DANGER Risk of fire

To protect against risk of fire, replace the blown fuse with a fuse of the same type, rating (color code), and manufacturer.

Insert the replacement fuse.

If the fuse	Do
has blown again	step 39
has not blown again	step 35
Determine if the POWER switc	h on the converter is ON or OFF.
If the POWER switch	Do

DMS-100 Family NA100 Alarm Clearing and Perform. Monitoring Proc. Volume 1 of 4 LET0015 and up

7

Ext FSP IOE frame and CIOE cabinet major (continued)

If the POWER switch	Do
is OFF	step 7
Sat the DOWER switch on the conve	rtor to ON
Set the POWER Switch on the conve	
Ifif the CONVERTER FAIL LED	Do
Ifif the CONVERTER FAIL LED	Do step 8

8 Record the number of the shelf that contains the converter with the lit CONVERTER FAIL LED.

9 Locate the fuses on the FSP. Use the following table to identify which fuse associates with the shelf that contains the lit CONVERTER FAIL LED.

Shelf number	Fuse Number
32	01
18	02
04	03

10

Determine if the associated fuse has blown.

If the fuse	Do
has blown	step 11
has not blown	step 14

- 11 Obtain a replacement fuse with the same voltage and amperage as the blown fuse.
- 12



DANGER

Risk of fire

To protect against risk of fire, replace the blown fuse with a fuse of the same type, rating (color code), and manufacturer.

Remove the blown fuse.

13 Insert the replacement fuse.

- **14** Press the RESET button on the converter.
- **15** Release the RESET button.

If the fuse	Do
has blown, and the CONVERTER FAIL LED is lit	step 16
has not blown, and the CONVERTER FAIL LED is not lit	step 35
has not blown, and the CONVERTER FAIL LED is lit	step 28

16 Record the numbers of the frame and shelf that contain the converter with the lit CONVERTER FAIL LED.

At the PDC frame

- 17 Locate the fuse that powers the shelf in the IOE frame.
- **18** Determine if the fuse has blown.

If the fuse	Do
has blown	step 19
has not blown	step 28

- **19** Remove the fuse holder with the blown fuse.
- 20 Replace the cartridge fuse inside the fuse holder.
- 21



DANGER

Risk of fire To protect against risk of fire, replace the blown fuse with a

fuse of the same type, rating (color code), and manufacturer.

Replace the blown fuse.

22 Install the fuse holder back on the PDC frame.

At the IOE frame

- 23 Obtain a replacement fuse with the same voltage and amperage as the blown fuse.
- 24 Remove the blown fuse.

25



DANGER

Risk of fire To protect against risk of fire, replace the blown fuse with a fuse of the same type, rating (color code), and manufacturer.

Insert the replacement fuse.

- 26 Press the RESET button on the converter.
- 27 Release the RESET button.

If the CONVERTER FAIL LED	Do
is lit	step 28
is not lit	step 35

- **28** To replace the converter, perform the correct procedure in *Card Replacement Procedures*. Complete the procedure and return to this point.
- 29 Determine if the CONVERTER FAIL LED for the replaced converter is lit.

If the CONVERTER FAIL LED	Do
is lit	step 30
is not lit	step 35
Determine if the backplane of the sh	elf has short-circuited or bent pins.
Determine if the backplane of the sh If short-circuited or bent pins	helf has short-circuited or bent pins.
Determine if the backplane of the sh If short-circuited or bent pins are present	belf has short-circuited or bent pins. Do step 42

31 Record the number of the shelf that contains the converter with the lit CONVERTER FAIL LED.

30

32 Use the following table and diagram. Identify which alarm and control card associates with the shelf with the lit CONVERTER FAIL LED.

Shelf number	Alarm and control card	Card position
18	slot 2 (NT0X36AB)	left
04 and 32	slot 2 (NT0X36AB)	right



- **33** Record the input/output controller (IOC) number, and the disk drive unit (DDU) number. Record the numbers in each of the shelves controlled by the alarm and control card that you identified.
- **34** To replace the alarm and control card, perform the correct procedure in *Card Replacement Procedures.* Complete the procedure and return to this point.

At the IOE frame

35 Determine if the FRAME FAIL lamp on the FSP is lit.

If the FRAME FAIL lamp	Do
is lit, and more blown fuses are present	step 2
is lit, and no more blown fuses are present	step 42
is not lit	step 36

At the MAP terminal

36 To access the EXT level of the MAP display, type

>MAPCI;MTC;EXT

and press the Enter key.

37 Determine if an FSP alarm is present.

If an FSP alarm	Do
is present, and you did not access all the frames with an FSP alarm	step 38
is present, and you accessed all the frames with an FSP alarm	step 42
is not present	step 43

38 Perform the correct procedure in this document for the type of frame that has the FSP alarm. Complete the procedure and return to this point.

At the IOE frame

39



DANGER

Risk of electrocution

Some terminals inside the FSP have an electrical potential of -48V dc to -60V dc. Do not touch any terminals inside the FSP.

Unscrew the slotted nut to the left of the FSP.

40 Open the FSP panel.

- **41** Determine if the alarm battery supply wiring inside the FSP is short-circuited. The next level of support can request this information.
- 42 For additional help, contact the next level of support.
- **43** The procedure is complete.

Ext FSP LME frame (with fuses only) major

Alarm display

ĺ	 СМ	MS	IOD	Net	PM	CCS	Lns	Trks	Ext	APPL
	•	·	•	•	·	•	•	•	1FSP M	•

Indication

At the MTC level of the MAP display, FSP preceded by a number appears under the Ext header of the alarm banner, and indicates an external frame supervisory panel (FSP) major alarm.

Meaning

One or more frames in the office has a power fault or a cooling unit fault.

The number that precedes FSP is the number of frames with an FSP alarm.

Impact

The impact on subscriber service depends on the nature of the fault and the type of frame in which the fault is located.

Common procedures

Checking the electronic fuse unit in an LME or RLM frame is referenced in this procedure.

Action

The following flowchart is a summary of this procedure. Use the instructions in the step-action table that follows the flowchart to perform the procedure.

Note: This procedure applies to a remote line module (RLM) frame.

Summary of clearing a/an Ext FSP alarm



DMS-100 Family NA100 Alarm Clearing and Perform. Monitoring Proc. Volume 1 of 4 LET0015 and up

2

3

4

5

Ext FSP LME frame (with fuses only) major (continued)

Clearing a/an Ext FSP alarm

At the LME frame

1 Check the CONVERTER FAIL LED on each NT2X05 converter in the frame.

If	Do
any NT2X05 converters have a lit CONVERTER FAIL LED	step 31
no NT2X05 converters have a lit CONVERTER FAIL LED	step 2
Check the CONVERTER FAIL LED of	on the NT2X70 converter in the frame.
If the CONVERTER FAIL LED is	Do
lit	step 27
not lit	step 3
Check the line drawer fuses (04 to 23	3), which are located on the FSP.
lf	Do
a fuse is blown	step 8
no fuses are blown	step 4
Check the alarm battery supply (ABS the FSP.) fuses (24 to 27), which are located on
lf	Do
a fuse is blown	step 5

6 Remove the blown fuse.

7



DANGER Risk of fire

For continued protection against risk of fire, replace blown fuse with a fuse of the same type, rating (color code), and manufacturer.

Insert the replacement fuse.

If the fuse	Do	
blows again	step 65	
does not blow	step 61	

- Obtain a replacement fuse with the same voltage as the blown fuse.
- Remove the blown fuse.

9 10

8



DANGER Risk of fire

For continued protection against risk of fire, replace blown fuse with a fuse of the same type, rating (color code), and manufacturer.

Insert the replacement fuse

If the fuse	Do
blows (prorudes) again	step 11
does not blow	step 61

11 Use the following table to determine which drawer is associated with the blown fuse.

If Fuse number	Do Drawer number
04, 14	0, 1
06, 16	2, 3
08, 18	4, 5

If Fuse number	Do Drawer number
10, 20	6, 7
12, 22	8,9
05, 15	10, 11
07, 17	12, 13
09, 19	14, 15
11, 21	16, 17
13, 23	18, 19

Note: The drawers are not numbered on the frame. The numbering scheme used in this table is to facilitate the identification of the drawers. The numbering is from left to right and bottom to top, that is, drawer 0 is the bottom left-hand drawer and drawer 19 is the top right-hand drawer.

12 Pull out the line drawer you have just identified.

13



DANGER Personal injury

Do not touch the line feed resistors on the line cards. The line feed resistors generate enough heat to burn you.



CAUTION Loss of service

Carry out this procedure during periods of low traffic.

Unseat all the line cards in the drawer

Note: Just unseat the line cards; do not remove them from the drawer.

- 14 Obtain a replacement fuse with the same voltage and amperage as the blown fuse.
- **15** Remove the blown fuse.

16



DANGER

Risk of fire For continued protection against risk of fire, replace blown fuse with a fuse of the same type, rating (color code), and manufacturer.

Insert the replacement fuse.

If the fuse	Do	
blows again	step 17	
does not blow	step 18	

17 Check the drawer for loose or short-circuited wires.

If there are	Do
loose or short-circuited wires	step 68
no loose or short-circuited wires	step 65

18 Reseat the line cards one at a time, and check the fuse after reseating each line card.

If after reseating	Do
a line card, the fuse blows again	step 19
all the line cards, the fuse does	step 26

19



not blow

DANGER Personal injury

Do not touch the line feed resistors on the line cards. The line feed resistors generate enough heat to burn you.

Remove the line card from the drawer.

20 Obtain a replacement line card. Ensure that the replacement card has the same product engineering code (PEC), including the suffix, as the card being removed.

- 21 Insert the replacement line card into the drawer.
- 22 Obtain a replacement fuse with the same voltage and amperage as the blown fuse.
- 23 Remove the blown fuse.
- 24



DANGER Risk of fire

For continued protection against risk of fire, replace blown fuse with a fuse of the same type, rating (color code), and manufacturer.

Insert the replacement fuse

If the fuse	Do
blows again	step 68
does not blow	step 25

- 25 Reseat all the other line cards in the drawer.
- 26 Push the drawer back in, and go to step 61.
- 27 Note the number of the LM in the frame.

At the MAP terminal

- 28 Access the PM level of the MAP by typing >MAPCI;MTC;PM and pressing the Enter key.
- 29 Post the PM level of the MAP by typing
 - >POST LM bay_no pair_no
 - and pressing the Enter key.
 - where
 - bay no is the number of the LM bay (0 to 511)
 - pair no
 - is the number of the LM in the bay (0 or 1)
- **30** Busy the LM by typing
 - >BUSY

and pressing the Enter key.

At the LME frame

32

33

34

31 Check the POWER switch on the converter.

If the POWER switch is	Do
ON	step 33
OFF	step 32
Set the POWER switch on the conve	rter to ON.
If the CONVERTER FAIL LED is	Do
lit	step 33
not lit	step 61
Use the following table to identify whi associated with the converter that ha	ch fuse, located on the FSP, is s a lit CONVERTER FAIL LED. DoFuse number
Use the following table to identify whi associated with the converter that ha IfConverter NT2X05 slot 1 (leftmost)	ch fuse, located on the FSP, is s a lit CONVERTER FAIL LED. DoFuse number 01
Use the following table to identify whi associated with the converter that ha IfConverter NT2X05 slot 1 (leftmost) NT2X05 slot 5	ch fuse, located on the FSP, is s a lit CONVERTER FAIL LED. DoFuse number 01 03
Use the following table to identify whi associated with the converter that ha IfConverter NT2X05 slot 1 (leftmost) NT2X05 slot 5 NT2X70 slot 23	ch fuse, located on the FSP, is s a lit CONVERTER FAIL LED. DoFuse number 01 03 02
Use the following table to identify whi associated with the converter that ha IfConverter NT2X05 slot 1 (leftmost) NT2X05 slot 5 NT2X70 slot 23 Check the associated fuse	ch fuse, located on the FSP, is s a lit CONVERTER FAIL LED. DoFuse number 01 03 02
Use the following table to identify whi associated with the converter that ha IfConverter NT2X05 slot 1 (leftmost) NT2X05 slot 5 NT2X70 slot 23 Check the associated fuse If the fuse is	ch fuse, located on the FSP, is s a lit CONVERTER FAIL LED. DoFuse number 01 03 02 Do
Use the following table to identify whi associated with the converter that ha IfConverter NT2X05 slot 1 (leftmost) NT2X05 slot 5 NT2X70 slot 23 Check the associated fuse If the fuse is blown	ch fuse, located on the FSP, is s a lit CONVERTER FAIL LED. DoFuse number 01 03 02 Do step 35

- **35** Obtain a replacement fuse with the same voltage and amperage as the blown fuse.
- **36** Remove the blown fuse from the FSP.
- 37



DANGER Risk of fire

For continued protection against risk of fire, replace blown fuse with a fuse of the same type, rating (color code), and manufacturer.

Insert the replacement fuse.

- **38** Press the RESET button on the converter.
- **39** Release the RESET button.

If the fuse		Do RTER step 40 CON- step 61 ot lit step 61					
blows and FAIL LED is	the CONVERTER						
does not blo VERTER FA	ow and the CON- AIL LED is not lit						
does not blo VERTER FA	ow and the CON- AIL LED is lit	step 49					
Note the number of the frame with the lit CONVERTER FAIL LED.							
oower distribut	ion center (PDC) fran	ne					
Locate the fuse	that powers the LME	frame					
If the fuse is		Do					
blown		step 42					
010 10 11		1					
not blown		step 46					
not blown Remove the fus	e holder that contains	step 46 the blown fuse.					
not blown Remove the fus Replace the cal	e holder that contains	step 46 the blown fuse. fuse holder.					
not blown Remove the fus Replace the cal	e holder that contains	step 46 the blown fuse. fuse holder.					

If the fuse is	Do
blown (protruding)	step 42
not blown	step 49

RLM frame						
Press the RESET button on the conv	erter.					
Release the RESET button						
If the CONVERTER FAIL LED is	Do					
lit	step 49					
not lit	step 61					
Perform the appropriate procedure in Lines, Trunks, and Peripherals Card Replacement Procedures to replace the converter. When you have completed the procedure, return to this point.						
Proceed as follows according to the	converter you have just replaced.					
If you have just replaced an	Do					
NT2X05 converter	step 57					
NT2X70 converter	step 51					
Check the CONVERTER FAIL LED for	or the converter you have just replaced.					
If the CONVERTER FAIL LED is	Do					
If the CONVERTER FAIL LED is lit	Do step 52					

52 Check the electronic fuse unit (EFU), which is located at the rear of the frame (see illustration below).



53 Check the LEDs on the EFU.

Note: The EFU is operating correctly when only the green LED is lit.

lf	Do
only the green LED is lit	step 59
neither of the LEDS are lit	step 54
both the LEDs are lit	step 54
only the red LED is lit	step 54

- **54** Perform the procedure "Checking the electronic fuse unit in an LME or RLM frame" in this document. When you have completed the procedure, return to this point.
- 55 Press the RESET button on the NT2X70 converter.
- 56 Release the RESET button

If the CONVERTER FAIL LED is	Do
lit	step 59
not lit	step 61

57 Determine if the CONVERTER FAIL LED for the converter you have just replaced is lit.

If the CONVERTER FAIL LED is	Do step 58					
lit						
not lit	step 61					
Determine if there are bent or short-circuited pins on the backplane of the shelf						
If there are	Do					

no bent or short-circuited pins step 59

58

59 Use the following table to identify the alarm and control card associated with the converter that has a lit CONVERTER FAIL LED.

Converter, Fuse number	Alarm and control panel
NT0X205 slot 1/01	slot 1 (NT0X36AB)
NT2X05 slot 5/03 and NT2X70 slot 23/02	slot 2 (NT0X36AB)



At the MAP

63 Access the EXT level of the MAP to determine whether an FSP alarm is present by typing

>MAPCI;MTC;EXT

and pressing the Enter key.

If an FSP alarm is	Do
present, and you have not ac- cessed all the frames with an FSP alarm	step 64
present, and you have accessed all the frames with an FSP alarm	step 68
not present	step 69

64 Perform the appropriate procedure for the type of frame that has the FSP alarm. When you have completed the procedure, return to this point.

At the RLM frame

65



DANGER Risk of electrocution

Some terminals inside the FSP have an electrical potential of -48 V dc to -60 dc. do not touch any terminals inside the FSP.

Unscrew the slotted nut on the left-hand side of the FSP.

- 66 Open the FSP pane.
- 67 Determine if the alarm battery supply wiring inside the FSP is short-circuited. the personnel at the next level of support may request this information.
- **68** For further assistance, contact the personnel responsible for the next level of support.
- 69 You have completed this procedure.

Ext FSP LPP cabinet major

Alarm display

ſ	 СМ	MS	IOD	Net	PM	CCS	Lns	Trks	Ext	APPL
	•	•	•	·	•	·	•	•	1FSP M	•

Indication

At the MTC level of the MAP display, a number and FSP appear under the EXT header of the alarm banner. The FSP indicates an external frame supervisory panel (FSP) major alarm.

Meaning

One or more cabinets in the office has a power fault or a cooling unit fault. The number under the EXT header of the alarm banner indicates the number of cabinets affected.

Result

The impact on subscriber service depends on the type of fault and the type of frame that contains the fault.

Common procedures

There are no common procedures.

Action

This procedure contains a summary flowchart and a list of steps. Use the flowchart to review the procedure. Follow the steps to perform the procedure.
Summary of Clearing an Ext FSP LPP cabinet major alarm



DMS-100 Family NA100 Alarm Clearing and Perform. Monitoring Proc. Volume 1 of 4 LET0015 and up

2

3

4

5

Clearing an Ext FSP LPP cabinet major alarm

At the LPP

1 Determine if the BLOWER FAIL LED on the FSP is lit.

If the BLOWER FAIL LED	Do
is lit	step 31
is not lit	step 2
Check each power converter in the c CONVERTER FAIL LEDs are lit.	cabinet. Determine if any of the
If CONVERTER OFF LEDs	Do
are lit	step 3
are not lit	step 20
Set the POWER switch on the conve	erter to ON.
If the CONVERTER OFF LED	Do
is lit	step 4
is not lit	step 32
Record the number of the shelf that CONVERTER OFF LED.	contains the converter with the lit
Record the number of the shelf that of CONVERTER OFF LED. Use the following table to identify the CONVERTER FAIL LED.	contains the converter with the lit
Record the number of the shelf that of CONVERTER OFF LED. Use the following table to identify the CONVERTER FAIL LED. If Shelf number is	contains the converter with the lit e fuse for the shelf that has the lit Do Fuse
Record the number of the shelf that of CONVERTER OFF LED. Use the following table to identify the CONVERTER FAIL LED. If Shelf number is 39 (left side)	contains the converter with the lit e fuse for the shelf that has the lit Do Fuse 01
Record the number of the shelf that of CONVERTER OFF LED. Use the following table to identify the CONVERTER FAIL LED. If Shelf number is 39 (left side) 39 (right side)	contains the converter with the lit e fuse for the shelf that has the lit Do Fuse 01 02
Record the number of the shelf that of CONVERTER OFF LED. Use the following table to identify the CONVERTER FAIL LED. If Shelf number is 39 (left side) 39 (right side) 26 (left side)	contains the converter with the lit e fuse for the shelf that has the lit Do Fuse 01 02 03
Record the number of the shelf that of CONVERTER OFF LED. Use the following table to identify the CONVERTER FAIL LED. If Shelf number is 39 (left side) 39 (right side) 26 (left side) 26 (right side)	contains the converter with the lit e fuse for the shelf that has the lit Do Fuse 01 02 03 04
Record the number of the shelf that of CONVERTER OFF LED. Use the following table to identify the CONVERTER FAIL LED. If Shelf number is 39 (left side) 39 (right side) 26 (left side) 26 (right side) 13 (left side)	contains the converter with the lit e fuse for the shelf that has the lit Do Fuse 01 02 03 04 05
Record the number of the shelf that of CONVERTER OFF LED. Use the following table to identify the CONVERTER FAIL LED. If Shelf number is 39 (left side) 39 (right side) 26 (left side) 26 (right side) 13 (left side) 13 (right side)	contains the converter with the lit e fuse for the shelf that has the lit Do Fuse 01 02 03 04 05 06
Record the number of the shelf that of CONVERTER OFF LED. Use the following table to identify the CONVERTER FAIL LED. If Shelf number is 39 (left side) 39 (right side) 26 (left side) 26 (right side) 13 (left side) 13 (right side) 00 (left side)	contains the converter with the lit e fuse for the shelf that has the lit Do Fuse 01 02 03 04 05 06 07

If Shelf number is	Do Fuse	
00 (right side)	08	
Determine if the associated fuse	e has blown.	
If the fuse	Do	
has blown	step 7	
has not blown	step 14	

7 Obtain a replacement fuse with the same voltage and amperage as the blown fuse.

8 Remove the blown fuse.

9

6



DANGER Risk of fire

To protect against fire, replace the blown fuse with a fuse of the same type, rating (color code), and manufacturer.

Insert the replacement fuse.

	If the fuse	Do
	has blown, and the CONVERTER OFF LED is lit	step 10
	has not blown, and the CONVERTER OFF LED is not lit	step 32
	has not blown, and the CONVERTER OFF LED is lit	step 18
	Record the number of the shelf with the lit CONVERTER OFF numbers are on the right side of the cabinet.	LED. The shelf
? (CPDC	

At the CPDC

10

- 11 Locate the circuit breaker that powers the LPP shelf.
- 12 Determine if the circuit breaker is ON or OFF.

If the circuit breaker	Do	
is OFF	step 13	
is ON	step 18	

13 Set the circuit breaker to ON.

At the LPP

- 14 To replace the converter card, perform the correct procedure in *Card Replacement Procedures.* Complete the procedure and return to this point.
- **15** Obtain a replacement fuse with the same voltage and amperage as the blown fuse.
- 16 Remove the blown fuse.
- 17



DANGER Risk of fire

To protect against fire, replace the blown fuse with a fuse of the same type, rating (color code), and manufacturer.

Insert the replacement fuse.

Go to step step 19.

- **18** To replace the converter card, perform the correct procedure in *Card Replacement Procedures.* Complete the procedure and return to this point.
- **19** Determine if the CONVERTER OFF LED for the power converter card you replaced is lit.

If the CONVERTER OFF LED is	Do
is lit	step 36
is not lit	step 32
Determine if any of fuses 01 to 04 on	the FSP have blown.
Determine if any of fuses 01 to 04 on	the FSP have blown.
Determine if any of fuses 01 to 04 on If a fuse has blown	the FSP have blown. Do step 21

21 Obtain a replacement fuse with the same voltage and amperage as the blown fuse.

22 Remove the blown fuse.

20

23

24



DANGER

Risk of fire To protect against fire, replace the blown fuse with a fuse of the same type, rating (color code), and manufacturer.

Insert the replacement fuse.

If the fuse	Do
has blown again	step 24
has not blown again	step 30
Determine the fuse that has blown.	
If the blown fuse	Do
is one of 09, 11, 14, 15, or 16	step 36
is one of 10, 12, or 13	step 25

25 Use the following table to identify the alarm and control card that associates with the blown fuse.

If Fuse number is	Do Alarm and control card
12	slot CD1 (NT6X36KA)
13	slot CD2 (NT6X36KA)
10	slot CD3 (NT0X91KA)

26 To replace the alarm and control card, perform the correct procedure in *Card Replacement Procedures.* Complete the procedure and return to this point.

27 Remove the blown fuse.

28 Obtain a replacement fuse with the same voltage and amperage as the blown fuse.

29

30

31

32



DANGER Risk of fire To protect against fire, replace the blown fuse with a fuse of the same type, rating (color code), and manufacturer.

Insert the replacement fuse.

If the fuse	Do
has blown again	step 36
has not blown again	step 30
Determine if the FRAME FAIL lamp or	n the FSP is lit.
If the FRAME FAIL LED	Do
is lit, and more blown fuses are present	step 20
is lit, and more blown fuses are not present	step 36
is not lit	step 33
To repair the damaged cooling unit, pe Locating and Clearing Procedures. C this point.	erform the correct procedure in <i>Trouble</i> complete the procedure and return to
Determine if the FRAME FAIL lamp or	n the FSP is lit.
If the FRAME FAIL LED	Do
is lit	step 2
is not lit	step 33

At the MAP terminal

33 To access the EXT level of the MAP display, type

MAPCI;MTC;EXT

and press the Enter key.

Ext FSP LPP cabinet major (end)

34	Determine if an FSP alarm exists.	
	If an FSP alarm	Do
	is present, and you did not access all the cabinets with an FSP alarm	step 35
	is present, and you accessed all the cabinets with an FSP alarm	step 36
	is not present	step 37
35	Perform the correct procedure for the type of frame that has	the FSP alarm.
36	For additional help, contact the next level of support.	
37	The procedure is complete.	

DMS-100 Family NA100 Alarm Clearing and Perform. Monitoring Proc. Volume 1 of 4 LET0015 and up

Ext FSP MEX frame major

Alarm display

ĺ	 СМ	MS	IOD	Net	PM	CCS	Lns	Trks	Ext	APPL
	-		·		•		•		1FSP M	

Indication

At the MTC level of the MAP display, FSP (preceded by a number) appears under the Ext header of the alarm banner. The FSP indicates a major alarm for an external frame supervisory panel (FSP).

Meaning

A power fault or a cooling unit fault is present in one or more office frames. The number under the Ext header of the alarm banner indicates the number of cabinets affected.

Result

The impact on subscriber service depends on the type of fault and the type of frame that contains the fault.

Common procedures

There are no common procedures.

Action

This procedure contains a summary flowchart and a list of steps. Use the flowchart to review the procedure. Follow the steps to perform the procedure.

Summary of Clearing an Ext FSP MEX frame major alarm



2

3

Clearing an Ext FSP MEX frame major alarm

At the MEX frame

1 Determine if the FRAME FAIL lamp on the FSP is lit.

If the FAN FAIL lamp	Do
is it	step 75
is not lit	step 2
Check each converter in the frame. LEDs are lit.	Determine if any CONVERTER FAIL
If CONVERTER FAIL LEDs	Do
are lit	step 7
are not lit	step 3
Determine if any of the alarm batter	v supply (ABS) fuses (05 to 08) on the
FSP have blown.	
FSP have blown. If a fuse	Do
FSP have blown. If a fuse has blown	Do step 4

- 5 Remove the blown fuse.
- 6

4



DANGER Risk of fire

To protect against fire, replace the blown fuse with a fuse of the same type, rating (color code), and manufacturer.

Insert the replacement fuse.

If the fuse	Do	
blows again	step 80	

If the fuse	Do
does not blow	step 74
Determine if the POWER switch on	the converter is ON or OFF.
If the POWER switch	Do
is ON	step 9
is OFF	step 8
Set the POWER switch on the conv	erter to ON.
If the CONVERTER FAIL LED	Do
is lit	step 9
	stop 74

9 Record the number of the shelf that contains the converter with the lit CONVERTER FAIL LED.

10 Use the following table to identify the FSP fuse for the shelf with the lit CONVERTER FAIL LED.

Shelf number	Fuse number
65	01
51	02
32	03
18	04

11 Determine if the associated fuse has blown.

7

8

If the fuse	Do
has blown	step 12
has not blown	step 33

12 Record the number of the data store (DS) in the shelf that associates with the blown fuse.

Note: The DS number is 0 or 1.

At the MAP terminal

13 To access the CC level of the MAP display, type

>MAPCI;MTC;CC

and press the Enter key.

- 14 Record the number of the active central processing unit (CPU) and inactive CPU.
- 15 Your next step depends on the DS number that you noted in step 12. Your next step also depends on the CPU that you noted as active in step 14.

If the DS number	Do
is 0 and the active CPU is 1	step 19
is 0 and the active CPU is 0	step 16
is 1 and the active CPU is 1	step 16
is 1 and the active CPU is 0	step 19

At the MAP terminal

- 16 To access the CC level of the MAP display, type
 - >MAPCI;MTC;CC

and press the Enter key.

17 To switch CPU activity, type

>SWACT

and press the Enter key.

Note: The CPU must be inactive. The CPU is in the frame that contains the alarm and control card you want to replace.

18 To confirm the SWACT command, type

>YES

and press the Enter key.

At the CCC frame

19 Go to the CCC frame that contains the inactive CPU.

20



WARNING

Static electricity damage Wear a wrist strap that connects to a wrist-strap grounding point of a frame supervisory panel (FSP) to handle the ENAB and DACT switches. The wrist strap protects the switches against static electricity damage.

Set the ENAB switch on the NT1X48 card toward the top.

Note: The NT1X48 card is in the CPU. The CPU is in the CCC frame.

21 Set the DACT switch on the NT1X48 card toward the right.

Note: The NT1X48 card is in the CPU. The CPU is in the CCC frame.

22 Note the number of the CMC in the CCC frame that contains the inactive CPU.

At the MAP terminal

23 To access the CMC level of the MAP display, type

>MAPCI;MTC;CMC

and press the Enter key.

24 To manually busy the CMC, type

>BSY

and press the Enter key.

25 To access the clock level of the MAP display, type

>SYNCLK

and press the Enter key.

26 Determine if the clock for the inactive CCC frame is active.

Do	
step 27	
step 28	
Do	
step 28	
_	step 27 step 28 Do step 28

If the SWACT command	Do
fails	step 83

At the MEX frame

- **28** Obtain a replacement fuse with the same voltage and amperage as the blown fuse.
- 29 Remove the blown fuse.
- 30



DANGER Risk of fire

To protect against fire, replace the blown fuse with a fuse of the same type, rating (color code), and manufacturer.



DANGER

Briefly state reasons for the danger Enter the reasons the danger: a danger alerts the reader to a risk of personal injury or death.

Insert the replacement fuse.

- 31 Press the RESET button on the converter.
- **32** Release the RESET button.

If the fuse		Do
has blown, and the CONVERT	ER FAIL LED is lit	step 34
has not blown, and the CONVE not lit	ERTER FAIL LED is	step 74
has not blown, and the CONVE lit	ERTER FAIL LED is	step 58
Press and release the RESET butto CONVERTER FAIL LED.	n on the converter with	the lit
If the CONVERTER FAIL LED	Do	

33

	If the CONVERTER FAIL LED	Do
	is not lit	step 74
34	Record the numbers of the frame an FAIL LED.	d shelf that contain the lit CONVERTER
At the	PDC frame	
35	Locate the fuse that powers the she	If in the MEX frame.
36	Determine if the fuse has blown.	
	If the fuse	Do
	has blown	step 37
	has not blown	step 42
37	Remove the fuse holder that contain	ns the blown fuse.

- **38** Replace the cartridge fuse inside the fuse holder.
- 39

42



DANGER Risk of fire

To protect against fire, replace the blown fuse with a fuse of the same type, rating (color code), and manufacturer.

Replace the blown fuse.

40 Install the fuse holder into the PDC frame.

At the MEX frame

41 Press and release the RESET button on the converter.

If the fuse	Do
has blown, and the CONVERTER FAIL LED is lit	step 42
has not blown, and the CONVERTER FAIL LED is not lit	step 59
has not blown, and the CONVERTER FAIL LED is lit	step 42
Note the number of the DS in the shelf that associates with	the blown fuse.
<i>Note:</i> The DS number is 0 or 1.	

At the MAP terminal

43 To access the CC level of the MAP display, type >MAPCI;MTC;CC

and press the Enter key.

- 44 Record the number of the active CPU and inactive CPU.
- 45 Your next step depends on the DS number that you noted in step 42. Your next step also depends on the CPU that you noted as active in step 44.

If the DS number	Do
is 0 and the active CPU is 1	step 48
is 0 and the active CPU is 0	step 46
is 1 and the active CPU is 1	step 46
is 1 and the active CPU is 0	step 48

At the MAP terminal

46 To access the CC level of the MAP display, type

>MAPCI;MTC;CC

and press the Enter key.

47 To switch CPU activity, type

>SWACT

and press the Enter key.

Note: The CPU must be inactive. The CPU is in the frame that contains the alarm and control card you want to replace.

48 To confirm the SWACT command , type

>YES

and press the Enter key.

At the CCC frame

- 49 Go to the CCC frame that contains the inactive CPU.
- 50



WARNING

Static electricity damage

Wear a wrist strap that connects to the wrist-strap grounding point of a frame supervisory panel (FSP) to handle the ENAB and DACT switches. The wrist strap protects the switches against static electricity damage.

	Set the ENAB switch on the NT1X	(48 card toward the top.	
	<i>Note:</i> The NT1X48 card is in t	he CPU. The CPU is in th	e CCC frame.
51	Set the DACT switch on the NT1X	48 card toward the right.	
	<i>Note:</i> The NT1X48 card is in t	he CPU. The CPU is in th	e CCC frame.
52	Note the number of the CMC in th CPU.	e CCC frame that contain	s the inactive
At the	MAP terminal		
53	To access the CMC level of the M	AP display, type	
	>MAPCI;MTC;CMC		
	and press the Enter key.		
54	To manually busy the CMC, type		
	>BSY		
	and press the Enter key.		
55	Determine if the clock for the inac	tive CCC frame is active.	
	If the clock	Do	
	is active	step 56	
	is not active	step 57	
56	To switch clock activity, type		
	>SWACT		
	and press the Enter key.		
	If the SWACT command	Do	
	passes	step 57	
	fails	step 83	
57	Press and release the RESET but	tton on the converter.	
	If the fuse		Do
	has blown, and the CONVER	TER FAIL LED is lit	step 34
	has not blown, and the CONV not lit	/ERTER FAIL LED is	step 74
	has not blown, and the CONV lit	/ERTER FAIL LED is	step 58
58	To replace the converter, perform Replacement Procedures. Comp	the appropriate procedure lete the procedure and ret	e in <i>Card</i> turn to this point.

60

59 Determine the state of the converter that you replaced and the associated fuse.

If the fuse		Do
has blown, and the CONVERT	ER FAIL LED is lit	step 60
has not blown, and the CONVE not lit	ERTER FAIL LED is	step 74
has not blown, and the CONVE lit	ERTER FAIL LED is	step 60
Determine if the backplane of the sl	nelf has short-circuited o	r bent pins.
If short-circuited or bent pins	Do	
are present	step 83	

61 Use the table and diagram to identify the alarm and control card for the shelf with the lit CONVERTER FAIL LED.

Shelf Number	Alarm and control card
18 and 51	slot 1 (NT0X36AB)
32 and 65	slot 2 (NT0X36AB)



62 Use the following table to identify fuses for the shelves controlled by the alarm and control card you want to replace. The fuses are on the FSP.

Shelf number	Fuse number
65	01
51	02
32	03
18	04

63

Remove the two identified fuses.

64



DANGER

Risk of electrocution Some terminals inside the FSP have an electrical potential of -48V dc to -60V dc. Do not touch any terminals inside the FSP.

Obtain a replacement alarm and control card. Make sure that the replacement card has the same Product engineering code (PEC) and PEC suffix as the card you remove.

- 65 Unscrew the slotted nut to the left of the FSP.
- 66 Open the FSP panel.

67



WARNING

Loss of service

Make sure that the alarm and control card you remove is the card that controls the PMs that you busied. Loss of service results if you move the wrong card.

Remove the alarm and control card.

- 68 Insert the replacement card.
- 69 Close the FSP panel.
- **70** Tighten the slotted nut on the FSP.
- 71 Insert the two fuses removed in step 63.
- 72 The replaced alarm and control card controls shelves. Use the following steps to reset the converter in each shelf the card controls.
- 73 Press and release the RESET button on the converter.

If the CONVERTER FAIL LED	Do
is lit	step 83
is not lit	step 74
Determine if the FRAME FAIL lamp or	n the FSP is lit.
If the FRAME FAIL lamp	Do
is lit, and more blown fuses exist	step 3

74

	If the FRAME FAIL lamp	Do	
	is lit, and more blown fuses do not exist	step 83	
	is not lit	step 77	
75	To replace the converter, perform the operation of the procedures. Complete the procedure	correct procedure in <i>C</i> and return to this poir	ard replacement
76 Determine if the FRAME FAIL lamp on the FSP is lit.			
	If the FRAME FAIL lamp	Do	
	is lit	step 2	
	is not lit	step 77	
At the	e MAP terminal		
77	To access the EXT level of the MAP d	isplay, type	
	>MAPCI;MTC;EXT		
	and press the Enter key.		
78	Determine if an FSP alarm is present.		
	If an FSP alarm		Do
	is present, and you did not access an FSP alarm	all the frames with	step 79
	is present, and you accessed all FSP alarm	the frames with an	step 83
	is not present		step 84
79	Perform the correct procedure for the This document contains a list of proce return to this point.	type of frame that has dures. Complete the	the FSP alarm. procedure and
At the	e MEX frame		
80	Unscrew the slotted nut to the left of th	he FSP.	

Ext FSP MEX frame major (end)

81



DANGER

Risk of electrocution Some terminals inside the FSP have an electrical potential of -48V dc to -60V dc. Do not touch any terminals inside the FSP.

Open the FSP panel.

- 82 Determine if the supply wiring for the alarm battery in the FSP is short-circuited. The next level of support can ask for this information.
- 83 For additional help, contact the next level of support.
- 84 The procedure is complete.

Ext FSP MS7E frame major

Alarm display

СМ	MS	IOD	Net	PM	CCS	Lns	Trks	Ext	APPL
-	•	•		•		•	•	1FSP M	•
ļ									

Indication

At the MTC level of the MAP display, FSP (preceded by a number) appears under the Ext header of the alarm banner. The FSP indicates a major alarm for an external frame supervisory panel (FSP).

Meaning

A power fault or a cooling unit fault is present in one or more office frames. The number under the Ext header of the alarm banner indicates the number of frames affected.

Result

The impact on subscriber service depends on the type of fault and the type of frame that contains the fault.

Common procedures

There are no common procedures.

Action

This procedure contains a summary flowchart and a list of steps. Use the flowchart to review the procedure. Follow the steps to perform the procedure.

Summary of Clearing an Ext FSP MS7E frame major alarm



Clearing an Ext FSP MS7E frame major alarm

At your current location

1 Determine if the FAN FAIL lamp on the FSP is lit.

If the FAN FAIL lamp	Do
is lit	step 32
is not lit	step 2
Check each converter in the frame FAIL LEDs are lit.	e. Determine if any of the CONVERTER
If CONVERTER FAIL LEDs	Do
are lit	step 7
are not lit	step 3
Determine if any of the alarm batte FSP, have blown.	ery supply (ABS) fuses (05 to 09), on th
Determine if any of the alarm batte FSP, have blown. If a fuse	ery supply (ABS) fuses (05 to 09), on th
Determine if any of the alarm batters FSP, have blown. If a fuse has blown	bery supply (ABS) fuses (05 to 09), on th

- 5 Remove the blown fuse.
- 6

4

2

3



DANGER Risk of fire

To protect against risk of fire, replace the blown fuse with a fuse of the same type, rating (color code), and manufacturer.

Insert the replacement fuse.

If the fuse	Do	
has blown again	step 37	

7

8

If the fuse	Do
has not blown again	step 31
Determine if the POWER switch on	the converter is ON or OFF.
If the POWER switch	Do
is ON	step 9
is OFF	step 8
Set the POWER switch on the conv	erter to ON.
If the CONVERTER FAIL LED	Do
	stan 0
is lit	step 9

9 Note the number of the shelf that contains the converter with the lit CONVERTER FAIL LED. Note the half of the shelf (left or right) that contains the converter with the lit CONVERTER FAIL LED.

10 Check the table that follows. Identify the circuit breaker on the FSP for the shelf that contains the converter with the lit CONVERTER FAIL LED.

Shelf number	Circuit breaker number
51 (left side)	CD1
18 (left side)	CD2
18 (right side)	CD3
51 (right side)32 (left side)32 (right side)	CD4CD5CD6

Note: Each circuit breaker associates with one half of a shelf. The preceding table indicates if the circuit breaker associates with the left side or with the right side.

11 Determine if the associated circuit breaker is ON or OFF.

If the fuse	Do	
is ON	step 12	
is OFF	step 13	

12 Set the circuit breaker that you identified to OFF.

- **13** Press and hold the RESET button on the converter while you set the circuit breaker to ON.
- 14 Release the RESET button

If the circuit breaker	Do
turns OFF, and the CONVERTER FAIL LED is lit	step 15
remains ON, and the CONVERTER FAIL LED is not lit	step 31

remains ON, and the CONVERTER FAIL LED is lit step 26

15 Record the numbers of the frame and the shelf that contain the converter with the lit CONVERTER FAIL LED.

At the PDC frame

- 16 Locate the fuse that powers the shelf in the MS7E frame.
- **17** Determine if the fuse has blown.

If the fuse	Do
has blown	step 18
has not blown	step 22

- **18** Remove the fuse holder that contains the blown fuse.
- 19



DANGER Risk of fire

To protect against risk of fire, replace the blown fuse with a fuse of the same type, rating (color code), and manufacturer.

Replace the cartridge fuse inside the fuse holder.

- 20 Replace the blown fuse.
- 21 Install the fuse holder back on the PDC frame.
- 22 Locate the battery filter fuse.
- 23 Determine if the fuse has blown.

If the fuse	Do	
has blown	step 18	

26 27

If the fuse	Do
has not blown	step 27

At the MS7E frame

- 24 Press and hold the RESET button on the converter while you set the circuit breaker to ON.
- **25** Release the RESET button.

If the circuit breaker	Do
turns OFF, and the CONVERTER FAIL LED is lit	step 27
remains ON, and the CONVERTER FAIL LED is not lit	step 31
remains ON, and the CONVERTER FAIL LED is lit	step 26
Set the associated circuit breaker to OFF.	
To replace the converter, perform the correct procedure in <i>Ca</i> <i>Procedures</i> . Complete the procedure and return to this poir	<i>ard Replacement</i> nt.

28 Examine the following table and diagram. Identify which alarm and control card associates with the shelf with the lit CONVERTER FAIL LED.

Shelf number	Alarm and control card	Card position
18 and 32 right side	slot CD1 (NT0X91AA)	rear
18 left side and 51 right side	slot CD2 (NT0X91AE)	front
32 and 51 left side	slot CD3 (NT0X91AE)	front



32 To repair the cooling unit that has faults, perform the correct procedure in *Routine Maintenance Procedures*. Complete the procedure and return to this point.

33 Determine if the FRAME FAIL lamp on the FSP is lit.

If the FRAME FAIL lamp	Do
is lit	step 2
is not lit	step 34

At the MAP terminal

34 To access the EXT level of the MAP display, type >MAPCI;MTC;EXT

and press the Enter key.

35 Determine if an FSP alarm is present.

If an FSP alarm	Do	
is present, and you did not access all the frames with an FSP alarm	step 36	
is present, and you accessed all the frames with an FSP alarm	step 40	
is not present	step 41	
Perform the procedure in this document that is correct for the type of frame that has the FSP alarm. Complete the procedure and return to this point.		

At the MS7E frame

37

36



DANGER Risk of electrocution

Some terminals inside the FSP have an electrical potential of -48V dc to -60V dc. Do not touch any terminals inside the FSP.

Unscrew the NUT that has slots on the left-hand side of the FSP.

- 38 Open the FSP panel.
- **39** Determine if the alarm battery supply wiring inside the FSP is short-circuited. Perform this procedure if the next level of support requests this information.
- **40** For additional help, contact the next level of support.

Ext FSP MS7E frame major (end)

41 This procedure is complete.

DMS-100 Family NA100 Alarm Clearing and Perform. Monitoring Proc. Volume 1 of 4 LET0015 and up

Ext FSP NET0 or NET1 frame (circuit breakers and fuses) major

Alarm display

(СМ	MS	IOD	Net	PM	CCS	Lns	Trks	Ext	APPL
	•		·		•		•		1FSP M	

Indication

At the MTC level of the MAP display, FSP (preceded by a number) appears under the Ext header of the alarm banner. The FSP indicates a major alarm for an external frame supervisory panel (FSP).

Meaning

One or more frames in the office have a power fault or a cooling unit fault.

The number under the Ext header of the alarm banner indicates the number of frames affected.

Result

The impact on subscriber service depends on the type of fault and the type of cabinet that contains the fault.

Common procedures

There are no common procedures.

Action

This procedure contains a summary flowchart and a list of steps. Use the flowchart to review the procedure. Follow the steps to perform the procedure.

Ext FSP NET0 or NET1 frame (circuit breakers and fuses) major (continued)

Summary of Clearing an Ext FSP NET0 or NET1 frame (circuit breakers and fuses) major alarm



Ext FSP NET0 or NET1 frame (circuit breakers and fuses) major (continued)

Clearing an Ext FSP NET0 or NET1 frame (circuit breakers and fuses) major alarm

At the NET0 or NET1 frame

1 Determine if the FAN FAIL lamp on the FSP is lit.

If the FAN FAIL lamp	Do
is lit	step 33
is not lit	step 2
Check each converter in the fra	ame. Determine if any CONVERTER FAIL

If CONVERTER FAIL LEDs	Do		
are lit	step 7	_	
are not lit	step 3		

3 Check the alarm battery supply (ABS) fuses (01 to 05) on the FSP. Determine if any ABS fuses are blown.

If a fuse	Do
is blown	step 4
is not blown	step 38

- 4 Obtain a replacement fuse with the same voltage and amperage as the blown fuse.
- 5 Remove the blown fuse.
- 6

2



DANGER Risk of fire

To protect against risk of fire, replace the blown fuse with the same type, rating (color code), and manufacturer.

Ext FSP

NET0 or NET1 frame (circuit breakers and fuses) major (continued)

Insert the replacement fuse.

7

8

If the fuse	Do
is blown again	step 38
is not blown again	step 32
Determine if the POWER switch on the converter is ON or OFF.	
If the POWER switch	Do
is ON	step 9
is OFF	step 8
Set the POWER switch on the conve	erter to ON.
If the CONVERTER FAIL LED	Do
is lit	step 9
is not lit	step 32

9 Record the number of the shelf that contains the converter with the lit CONVERTER FAIL LED.

10 Refer to the following table. Identify the circuit breaker located on the FSP that associates with the shelf with the lit CONVERTER FAIL LED.

Shelf number	Circuit breaker number
65	CB1
32	CB2
51	CB4
18	CB5

11 Determine if the associated circuit breaker is ON or OFF.

If the circuit breaker	Do	
is ON	step 12	
is OFF	step 13	

12 Set the circuit breaker you identified to OFF.

Ext FSP NET0 or NET1 frame (circuit breakers and fuses) major (continued)

- **13** Press and hold the RESET button on the converter. Set the circuit breaker to ON.
- **14** Release the RESET button.

If the circuit breaker	Do
turns OFF, and the CONVERTER FAIL LED is lit	step 15
remains ON, and the CONVERTER FAIL LED is not lit	step 32
remains ON, and the CONVERTER FAIL LED is lit	step 24

15 Record the numbers of the frame and shelf that contain the converter with the lit CONVERTER FAIL LED.

At the PDC frame

- 16 Locate the fuse that powers the shelf in the NET0 or NET1 frame.
- **17** Determine if the fuse is blown.

If the fuse	Do
is blown	step 18
is not blown	step 25

- **18** Remove the fuse holder that contains the blown fuse.
- **19** Replace the cartridge fuse inside the fuse holder.
- 20



DANGER

Risk of fire To protect against risk of fire, replace the blown fuse with a

fuse of the same type, rating (color code), and manufacturer.

Replace the blown fuse.

21 Install the fuse holder on the PDC frame.

At the NET0 or NET1 frame

22 Press and hold the RESET button on the converter. Set the circuit breaker to ON.
Ext FSP

Do

NET0 or NET1 frame (circuit breakers and fuses) major (continued)

23 Release the RESET button.

If the circuit breaker

turns OFF, and the CONVERTER FAIL LED is lit	step 25
remains ON, and the CONVERTER FAIL LED is not lit	step 32

remains ON, and the CONVERTER FAIL LED is lit step 24

24 Set the associated circuit breaker to OFF.

- **25** To replace the converter, perform the correct procedure in *Card Replacement Procedures*. Complete the procedure and return to this point.
- 26 Determine if the CONVERTER FAIL LED for the converter that you replaced is lit.

If the CONVERTER FAIL LED	Do
is lit	step 27
is not lit	step 32

27 Determine if short-circuited or bent pins are present on the backplane of the shelf.

If short-circuited or bent pins	Do
are present	step 41
are not present	step 28

²⁸ Record the number of the shelf that contains the converter with the lit CONVERTER FAIL LED.

²⁹ Refer to the following table and diagram. Identify the alarm and control card that associates with the shelf with the lit CONVERTER FAIL LED:

Shelf number	Alarm and control card	Card position
18 and 51	slot CD1 (NT0X91AA)	rear
32 and 65	slot CD2 (NT0X91AE)	front

Ext FSP NET0 or NET1 frame (circuit breakers and fuses) major (continued)



If the FRAME FAIL lamp	Do
is lit, and more blown fuses are present	step 3
is lit, and no more blown fuses are present	step 41

Ext FSP

NET0 or NET1 frame (circuit breakers and fuses) major (continued)

If the FRAME FAIL lamp		Do
is not lit		step 35
To repair the cooling unit that has fault <i>Trouble Locating and Clearing Procedu</i> return to this point.	s, perform the correct <i>ures.</i> Complete the p	procedur rocedure a
Determine if the FRAME FAIL lamp on	the FSP is lit.	
If the FRAME FAIL lamp	Do	
is lit	step 2	
is not lit	step 35	
MAP terminal		
To access the Ext level of the MAP dis	play, type	
>MAPCI;MTC;EXT		
and press the Enter key.		
Determine if an FSP alarm is present.		
If an FSP alarm		Do
is present, and you did not access	all the frames with	step 37
an FSP alarm		
an FSP alarm is present, and you accessed all t FSP alarm	he frames with an	step 41
an FSP alarm is present, and you accessed all t FSP alarm is not present	he frames with an	step 41 step 42



DANGER Risk of electrocution

Some terminals inside the FSP have an electrical potential of -48V dc to -60V dc. Do not touch any terminals inside the FSP.

Unscrew the slotted nut on the left side of the FSP.

39 Open the FSP panel.

Ext FSP NET0 or NET1 frame (circuit breakers and fuses) major (end)

- **40** Determine if the alarm battery supply wiring inside the FSP is short-circuited. The next level of support can request this information.
- 41 For additional help, contact the next level of support.
- 42 This procedure is complete.

Ext FSP NET0 or NET1 frame (with fuses only) major

Alarm display

СМ	MS	IOD	Net	PM	CCS	Lns	Trks	Ext	APPL
-	•	•	•	·		•	•	1FSP M	•

Indication

At the MTC level of the MAP display, FSP (preceded by a number) appears under the EXT header of the alarm banner. The FSP indicates a major alarm for the external frame supervisory panel (FSP).

Meaning

A power or a cooling unit fault is present in one or more office frames.

The number under the EXT header of the alarm banner indicates the number of frames affected.

Result

The impact on subscriber service depends on the type of fault and the type of frame that contains the fault.

Common procedures

There are no common procedures.

Action

This procedure contains a summary flowchart and a list of steps. Use the flowchart to review the procedure. Follow the steps to perform the procedure.

Summary of Clearing an Ext FSP NET0 or NET1 frame (with fuses only) major alarm



Clearing an Ext FSP NET0 or NET1 frame (with fuses only) major alarm

At the NET0 or NET1 frame

2

3

4

5 6

1 Determine if the FAN FAIL lamp on the FSP is lit.

If the FAN FAIL lamp	Do
is lit	step 34
is not lit	step 2
Check each converter in the frame. D LEDs are lit.	etermine if any CONVERTER FAI
lf	Do
any CONVERTER FAIL LEDs are lit	step 7
no CONVERTER FAIL LEDs are lit	step 3
Determine if any of the alarm battery su The ABS fuses are on the FSP.	upply (ABS) fuses (05 to 09) are blow
lf	Do
a fuse is blown	step 4
	step 39
no fuses are blown	
Obtain a replacement fuse with the sar fuse. Remove the blown fuse.	ne voltage and amperage as the bl



Risk of fire To protect against risk of fire, replace the blown fuse with a fuse of the same type, rating (color code), and manufacturer.

Insert the replacement fuse.

If the fuse	Do	
blows again	step 39	

7

8

Ext FSP NET0 or NET1 frame (with fuses only) major (continued)

Do
step 33
ne converter is ON or OFF.
Do
step 9
step 8
rter to ON.
Do
step 9
step 33

9 Use the following table to identify the fuse on the FSP for the shelf with the lit CONVERTER FAIL LED.

Shelf number	Fuse number
65	01
51	02
32	03
18	04

10

Determine if the associated fuse is blown.

If the fuse	Do
is blown	step 11
is not blown	step 14

11 Obtain a replacement fuse with the same voltage and amperage as the blown fuse.

12 Remove the blown fuse.

13



DANGER

Risk of fire To protect against risk of fire, replace the blown fuse with a fuse of the same type, rating (color code), and manufacturer.

Insert the replacement fuse.

14 Press and release the RESET button on the converter.

If the fuse	Do
is blown, and the CONVERTER FAIL LED is lit	step 15
is not blown, and the CONVERTER FAIL LED is not lit	step 33
is not blown, and the CONVERTER FAIL LED is lit	step 26

15 Record the numbers of the frame and shelf that contain the converter with the lit CONVERTER FAIL LED.

At the PDC frame

- 16 Locate the fuse that powers the shelf in the NET0 or NET1 frame.
- 17 Determine if the fuse is blown.

If the fuse	Do	
is blown	step 18	
is not blown	step 26	

- **18** Remove the fuse holder that contains the blown fuse.
- **19** Replace the cartridge fuse inside the fuse holder.
- 20



DANGER Risk of fire

To protect against risk of fire, replace the blown fuse with a fuse of the same type, rating (color code), and manufacturer.

Replace the blown fuse.

21 Install the fuse holder on the PDC frame.

At the NET0 or NET1 frame

- 22 Obtain a replacement fuse with the same voltage and amperage as the blown fuse.
- 23 Remove the blown fuse.
- 24



DANGER Risk of fire

To protect against risk of fire, replace the blown fuse with a fuse of the same type, rating (color code), and manufacturer.

Insert the replacement fuse.

25 Press and release the RESET button on the converter.

If the CONVERTER FAIL LED	Do
is lit	step 26
is not lit	step 33

- **26** To replace the converter, perform the correct procedure in *Card Replacement Procedures*. Complete the procedure and return to this point.
- 27 Determine if the CONVERTER FAIL LED for the converter that you replaced is lit.

If the CONVERTER FAIL LED	Do
is lit	step 28
is not lit	step 33
etermine if the backplane of the shel	If has any short-circuited or bent pins.
If the backplane of the shelf	Do
has short-circuited or bent pins	step 42
does not have short-circuited or	step 29

28

29

30 Use the table and diagram to identify the alarm and control card for the shelf with the lit CONVERTER FAIL LED.

Shelf number	Alarm and control card	Card position
18 and 51	slot CD1 (NT0X91AA)	rear
32 and 65	slot CD2 (NT0X91AE)	front



- **31** Record the numbers of the network plane and the network module for the shelves that the alarm and control card control. You identified the alarm and control card in the previous step.
- **32** To replace the alarm and control card, perform the correct procedure in *Card Replacement Procedures.* Complete the procedure and return to this point.
- 33 Determine if the FRAME FAIL lamp on the FSP is lit.

If the FRAME FAIL lamp		Do
is lit, and more blown fu	step 3	
is lit, and no more blow	n fuses are present	step 42
is not lit		step 36
To repair the cooling unit the <i>Trouble Locating and Clear</i> return to this point.	at has faults, perform the correct ing Procedures. Complete the p	procedure in rocedure and
Determine if the FRAME FA	IL lamp on the FSP is lit.	
If the FRAME FAIL lamp	Do	
is lit	step 2	
is not lit	step 36	
MAP terminal		
To access the EXT level of	the MAP display, type	
>MAPCI;MTC;EXT		
and press the Enter key.		
Determine if an FSP alarm	is present.	
If an FSP alarm		Do
is present, and you did n an FSP alarm	ot access all the frames with	step 38
is present, and you according FSP alarm	essed all the frames with an	step 42
is not present		step 43
Perform the correct procedu the FSP alarm. Complete t	re in this document for the type of the procedure and return to this return to th	of frame that has point.

At the NET0 or NET1 frame

39



DANGER Risk of electrocution

Some terminals inside the FSP have an electrical potential of -48V dc to -60V dc. Do not touch any terminals inside the FSP.

Unscrew the slotted nut on the left side of the FSP.

- 40 Open the FSP panel.
- 41 Determine if the alarm battery supply wiring inside the FSP is short-circuited. The next level of support can ask for this information.
- 42 For additional help, contact the next level of support.
- 43 The procedure is complete.

Ext FSP NETC frame major

Alarm display

ĺ	 СМ	MS	IOD	Net	PM	CCS	Lns	Trks	Ext	APPL
	-	•	·	•	•	•	•	•	1FSP M	

Indication

At the MTC level of the MAP display, FSP (preceded by a number) appears under the EXT header of the alarm banner. The FSP indicates a major alarm for an external frame supervisory panel (FSP).

Meaning

One or more frames in the office have a power fault or a cooling unit fault.

The number under the EXT header of the alarm banner indicates the number of frames affected.

Result

The impact on subscriber service depends on the type of fault and the type of frame that contains the fault.

Common procedures

There are no common procedures.

Action

This procedure contains a summary flowchart and a list of steps. Use the flowchart to review the procedure. Follow the steps to perform the procedure.

Summary of Clearing an Ext FSP NETC frame major alarm



2

3

Clearing an Ext FSP NETC frame major alarm

At the NETC frame

1 Determine if the FAN FAIL lamp on the FSP is lit.

If the FAN FAIL lamp	Do
is lit	step 33
is not lit	step 2
Check each converter in the frame. E FAIL LEDs are lit.	Determine if any of the CONVERTER
If any CONVERTER FAIL LEDs	Do
are lit	step 7
are not	step 3
Check the alarm battery supply (ABS) if any of the ABS fuses are blown.	fuses (01 to 05) on the FSP. Determine
If any fuses	Do
are blown	step 4
are not blown	step 38

- 4 Obtain a replacement fuse with the same voltage and amperage as the blown fuse.
- 5 Remove the blown fuse.
- 6



DANGER Risk of fire

To protect against risk of fire, replace the blown fuse with a fuse of the same type, rating (color code), and manufacturer.

Insert the replacement fuse.

If the fuse	Do	
is blown again	step 38	

If the fuse	Do
is not blown again	step 32
Determine if the POWER switch on	the converter is ON or OFF.
If the POWER switch	Do
is ON	step 9
is OFF	step 8
Set the POWER switch on the conv	erter to ON.
If the CONVERTER FAIL LED	Do
is lit	step 9
•	stan 22

9 Record the number of the shelf that contains the converter with the lit CONVERTER FAIL LED.

10 Refer to the following table. Identify the circuit breaker on the FSP that associates with the shelf with the lit CONVERTER FAIL LED.

Shelf number	Circuit breaker number
65	CB1
32	CB2
51	CB4
18	CB5

11 Determine if the associated circuit breaker is ON or OFF.

If the circuit breaker	Do	
is ON	step 12	
is OFF	step 13	

12 Set the identified circuit breaker to OFF.

7

8

13 Press and hold the RESET button on the converter while you set the circuit breaker to ON.

14 Release the RESET button.

If the circuit breaker

turns OFF, and the CONVERTER FAIL LED is lit step 15 remains ON, and the CONVERTER FAIL LED is step 32 not lit

Do

remains ON, and the CONVERTER FAIL LED is lit step 24

15 Record the number of the frame and shelf that contain the converter with the lit CONVERTER FAIL LED.

At the PDC frame

- 16 Locate the fuse that powers the shelf in the NETC frame.
- **17** Determine if the fuse is blown.

If the fuse	Do
is blown	step 18
is not blown	step 25

- **18** Remove the fuse holder that contains the blown fuse.
- **19** Replace the cartridge fuse inside the fuse holder.
- 20



DANGER Risk of fire

To protect against risk of fire, make sure you replace the blown fuse with a fuse of the same type, rating (color code), and manufacturer.

Replace the blown fuse.

21 Install the fuse holder on the PDC frame.

At the NETC frame

- 22 Press and hold the RESET button on the converter. Set the circuit breaker to ON.
- 23 Release the RESET button.

If the circuit breaker	Do
turns OFF, and the CONVERTER FAIL LED is lit	step 25

TER FAIL LED is ER FAIL LED is lit DFF. correct procedure in <i>Ca</i> and return to this poir .ED for the converter th	step 32 step 24 and Replacement. nat you replace
ER FAIL LED is lit DFF. correct procedure in <i>Ca</i> and return to this poir .ED for the converter th	step 24 ard Replacement. nat you replace
DFF. correct procedure in <i>Ca</i> and return to this poir .ED for the converter th	nd Replaceme ht. hat you replac
correct procedure in <i>Ca</i> and return to this poir ED for the converter th	n <i>d Replaceme</i> nt. nat you replac
ED for the converter th	nat you replac
Do	
step 27	
step 32	
ns are present on the b	backplane of t
Do	
step 41	
step 28	
ontains the converter v	vith the lit
m. Identify the alarm a lit CONVERTER FAIL	and control ca _ LED.
	step 27 step 32 ns are present on the to Do step 41 step 28 ontains the converter v im. Identify the alarm a lit CONVERTER FAIL

Shelf number	Alarm and control card	Card position
51 and 65	slot CD1 (NT0X91AA)	rear
18 and 32	slot CD2 (NT0X91AE)	front



If the FRAME FAIL lamp	Do
is lit, and more blown fuses are present	step 3
is lit, and no more blown fuses are present	step 41

			step 55
33	To repair the cooling unit that has <i>Trouble Locating and Clearing Pro</i> return to this point.	faults, perform the correct ocedures. Complete the pr	procedure rocedure a
34	Determine if the FRAME FAIL lan	וף on the FSP is lit.	
	If the FRAME FAIL lamp	Do	
	is lit	step 2	
	is not lit	step 35	
At the	e MAP terminal		
35	To access the EXT level of the MA	AP display, type	
	>MAPCI;MTC;EXT		
	and press the Enter key.		
36	Determine if an FSP alarm is pres	sent.	
	If an FSP alarm		Do
	is present, and you did not acc an FSP alarm	cess all the frames with	step 37
	is present, and you accessed FSP alarm	all the frames with an	step 41
	are not present		step 42
37	Perform the correct procedure in t the FSP alarm. Complete the pro	his document for the type o ocedure and return to this p	of frame that the soint.
At th	e NETC frame		

Some terminals inside the FSP have an electrical potential of -48V dc to -60V dc. Do not touch any terminals inside the FSP.

Unscrew the slotted nut on the left side of the FSP.

39 Open the FSP panel.

Ext FSP NETC frame major (end)

- **40** Determine if the alarm battery supply wiring inside the FSP is short-circuited. The next level of support can request this information.
- 41 For additional help, contact the next level of support.
- 42 This procedure is complete.

Ext FSP PDC frame major

Alarm display

СМ	MS	IOD	Net	PM	CCS	Lns	Trks	Ext	APPL
	•	•	•	•	·	•	·	nFSP M	

Indication

At the MTC level of the MAP display, FSP (preceded by a number) appears under the Ext header of the alarm banner. The FSP indicates a major alarm for an external frame supervisory panel (FSP).

Meaning

A power fault or a cooling unit fault is present on one or more office frames.

The number under the Ext header of the alarm banner indicates the number of affected frames.

Result

The impact on subscriber service depends on the type of fault. Subscriber service impact also depends on the type of frame of the fault.

Common procedures

There are no common procedures.

Action

This procedure contains a summary flowchart and a list of steps. Use the flowchart to review the procedure. Follow the steps to perform the procedure.

Summary of Clearing an Ext FSP PDC frame major alarm



Clearing an Ext FSP PDC frame major alarm

At the PDC frame

1 The FA lamps are on the left side of each distribution panel. Determine if any FA lamps are lit.

If an FA lamp	Do
is lit	step 2
is not lit	step 3

2 The fuses are on the distribution panel. Note any blown fuses that associate with the lit FA lamp.

If a fuse	Do	
has blown	step 25	
has not blown	step 21	

3 The FA A and FA B lamps are on the filter panel at the bottom of the frame. Determine if either of the FA A and FA B lamps are lit.

lf	Do
the FA A or FA B lamp is lit	step 5
neither the FA A nor the FA B lamp is lit	step 4

4 Alarm battery supply (ABS) fuses are on the FSP. Note any blown ABS fuses.

If a fuse	Do
has blown	step 47
has not blown	step 56

- 5 Remove the fuse holder nearest the lit lamp (FA A or FA B).
- 6 Obtain a replacement fuse with the same voltage and amperage as the blown fuse.
- 7 Replace the cartridge fuse that is inside the fuse holder.
- 8 Replace the guard fuse that is on the fuse holder.
- 9 Obtain a capacitor forming tool.

Note: A capacitor forming tool consists of a 100-W 120-V light bulb that screws into a socket without insulation-ended twisted wires. The without

insulation-ended twisted wires must have spring-type alligator clips on each end. You can insert a new tool with the tool number T000655, CPC number NTA0600512, into the fuse holder instead of the light bulb. You can insert the new tool in the same method that you insert a fuse.

10 Connect the leads of the capacitor forming tool across the connectors in the fuse holder slot to charge the capacitors.

IfAfter 3 s, if the light bulb	Do
is lit, and you did not replace the capacitor	step 11
is lit, and you replaced the ca- pacitor	step 56
is not lit	step 19

12 Obtain a voltmeter.

At the back of the PDC frame

- **13** Use the voltmeter to make sure that no voltage is present across the terminals of the capacitors. Use the voltmeter to make sure that no voltage is present between either terminal of the capacitor and the battery return.
- 14

11



DANGER

FSP.

Risk of electrocution Some terminals inside the FSP have an electrical potential of -48V dc to -60V dc. Do not touch any terminals inside the

Label the leads that go to the positive terminal of the capacitor as + and the negative terminal as -.

- **15** Disconnect the leads from the short-circuited capacitor.
- **16** Remove the capacitor.
- 17 Install the replacement capacitor.
- **18** Connect the lead with the label + to the positive terminal of the capacitor. Connect the lead with the label - to the negative terminal of the capacitor. Go to step 10.

At the PDC frame

19 Remove the capacitor forming tool and immediately insert the fuse holder back into the PDC frame.

20 The FA A and FA B lamps are on the filter panel at the bottom of the frame. Determine if any FA A or FA B lamps are lit.

	lf	Do			
	the lamp that was lit in the be- ginning, remains lit	step 56			
	neither lamp is lit	step 50			
21	For each fuse on the distribution panel, record the number of the frame and shelf that associates with the frame.				
22	Go to the next frame that you recorde	d in step 21.			
At the	e recorded frame				
22	Determine if the EDAME FALL lemme	a tha ECD ia lit			

23 Determine if the FRAME FAIL lamp on the FSP is lit.

If the FRAME FAIL lamp	Do			
is lit	step 25			
is lit, and the frame is an LCE	step 24			
is not lit, and the frame is not an LCE	step 22			
Press the indicator on the A -48V talk battery OFF fuse. Press the indicator				

24 Press the indicator on the A -48V talk battery QFF fuse. Press the indicator on the B -48V talk battery QFF fuse.

Note: These fuses are above the LCE shelf.

If the FRAME FAIL lamp	Do
is lit, and you checked each frame	step 56
is lit, and you did not check each frame	step 22
is not lit	step 25

At the PDC frame

25 Determine if the blown fuse supplies -48V Talk Battery to an LCE frame. *Note:* The information is on the label under the blown fuse.

If the fuse	Do
supplies -48V talk battery to an LCE frame	step 26

	If the fuse	Do
-	does not supply -48V talk bat- tery to an LCE frame	step 42
F	Remove the fuse holder that contains	the blown fuse.
(f	Obtain a replacement fuse with the sam	ne voltage and amperage as the blowr
F	Replace the cartridge fuse that is insid	le the fuse holder.
	Note: Do not insert the fuse holder	back into the PDC frame.

- 30 Remove the ten -48V talk battery fuses that are above the shelves. Talk battery A powers the first and third shelves from the bottom of the LCE. Talk battery B powers the second and fourth shelves.
- 31 Obtain a capacitor forming tool.

Note: A capacitor forming tool consists of a 100-W 120-V light bulb that screws into a socket without insulation-ended twisted wires. You can insert a new tool with the tool number T000655 and CPC number NTA0600512. Insert the new tool into the fuse holder instead of the light bulb. You can insert the new tool in the same method that you insert a fuse.

32



DANGER

Risk of electrocution

High voltages are present at the contacts for the fuse holder on the faceplate of the filter panel. Do not let the probes of the capacitor forming tool touch the faceplate of the filter panel. Do not let the probes of the capacitor forming tool touch together.

Connect the leads of the capacitor forming tool across the connectors in the fuse holder slot to charge the capacitors.

IfAfter 3 s, if the light bulb	Do
is lit, and you have not replaced the capacitor	step 33
is lit, and you replaced the ca- pacitor	step 56
is not lit	step 38

At the LCE frame from which you just removed the fuses

- **33** Label the leads that go to the positive terminal of the capacitor as + and the negative terminal as -.
- **34** Disconnect the leads from the short-circuited capacitor.
- **35** Remove the capacitor.
- **36** Install a replacement capacitor.
- **37** Connect the lead with the label + to the positive terminal of the capacitor. Connect the lead with the label - to the negative terminal of the capacitor. Go to step 32.

At the PDC frame

38 Remove the capacitor forming tool and immediately insert the fuse holder back into the PDC frame.

At the LCE frame from which you just removed the fuses

39 Insert the ten -48V talk battery fuses that you removed in step 30. Insert each fuse one at a time. Pause between each fuse.

At the PDC frame

40 Determine if any of the fuses that you replaced are blown fuses.

If any fuses	Do
have blown	step 56
have not blown	step 41

At the LCE frame from which you just replaced the fuses

41 Press the indicator on one of the -48V QFF fuses for the talk battery that you replaced. Use this procedure to determine if the talk battery is present.

If the FRAME FAIL lamp	Do
is lit	step 51
is not lit	step 56

At the PDC frame

- 42 Obtain a replacement fuse with the same voltage and amperage as the blown fuse.
- 43 Remove the fuse holder that contains the blown fuse.
- 44 Replace the cartridge fuse that is inside the fuse holder.
- 45 Replace the guard fuse that is on the fuse holder.

If the fuse	Do	Do			
has blown	step 56				
has not blown	step 50				
Obtain a replacement fuse that I blown fuse.	nas the same voltage and amp	berag			
Remove the blown fuse.					
Insert the replacement fuse.					
If the fuse	Do				
has blown again	step 54				
has not blown again	step 50				
Determine if the FRAME FAIL lamp on the FSP is lit.					
If the FRAME FAIL lamp	Do				
is lit	step 1				
is not lit	step 51				
To access the Ext level of the M	AP display, type				
>MAPCI;MTC;EXT					
and press the Enter key.					
Determine if an FSP alarm is pre	esent.				
If an FSP alarm	[Do			
is present, and you did not a an FSP alarm	ccess all the frames with s	step 5			
is not present, and you acce an FSP alarm	ssed all the frames with s	step 5			
is not present		ten 5			

Ext FSP PDC frame major (end)

At the PDC frame 54



DANGER Risk of electrocution

Some terminals inside the FSP have an electrical potential of -48V dc to -60V dc. Do not touch any terminals inside the FSP.

Open the FSP panel.

- **55** Determine if the supply wiring for the alarm battery inside the FSP is shortcircuited. The next level of support can request this information.
- 56 For additional help, contact the next level of support.
- 57 The procedure is complete.

Ext FSP RLCE frame major

Alarm display

ĺ	СМ	MS	IOD	Net	PM	CCS	Lns	Trks	Ext	APPL
		•			•		•		1FSP M	

Indication

At the MTC level of the MAP display, FSP preceded by a number appears under the Ext header of the alarm banner, and indicates an external frame supervisory panel (FSP) major alarm.

Meaning

One or more frames in the office has a power fault or a cooling unit fault.

The number that precedes FSP is the number of frames with an FSP alarm.

Impact

The impact on subscriber service depends on the nature of the fault and the type of frame in which the fault is located.

Common procedures

None

Action

The following flowchart is a summary of this procedure. Use the instructions in the step-action table that follows the flowchart to perform the procedure.

Note: This procedure applies to a remote line concentrating equipment (RLCE) frame.

Summary of clearing a/an Ext FSP alarm



DMS-100 Family NA100 Alarm Clearing and Perform. Monitoring Proc. Volume 1 of 4 LET0015 and up

Clearing a/an Ext FSP alarm

At the RLCE frame

1 Check the CONVERTER FAIL LED on each converter in the frame.

lf	Do
any CONVERTER FAIL LED	step 52
no CONVERTER FAIL LED	step 2

2 Check the ringing generator (RG) FAIL LED on both RGs, which are located at the top of the frame.

Note: The FAIL LED is located behind the front panel of the RG.

lf	Do
any FAIL LEDs are lit	step 39
no FAIL LEDs are lit	step 3

3 Check the line drawer fuses (01 to 15, and RA and RB), which are located on the fuse panel above each unit in the frame.

lf	Do
a fuse is blown	step 8
no fuses are blown	step 4

4 Check the alarm battery supply (ABS) fuses (01 to 08), which are located on the FSP.

lf	Do
a fuse is blown	step 5
no fuses are blown	step 102

5 Obtain a replacement fuse wit the same voltage and amperage as the blown fuse.

6 Remove the blown fuse.

7

8



DANGER Risk of fire

For continued protection against risk of fire, replace blown fuse with a fuse of the same type, rating (color code), and manufacturer.

Insert the replacement fuse.

If the fuse	Do
blows again	step 102
does not blow	step 98

Determine which fuse is blown.

Note: Fuses 01 to 05 each supply +5 V, fuses 06 to 10 each supply +15V, and fuses 11 to 15 each supply -48V.

If the blown fuse is any one of	Do
01 to 05	step 13
06 to 15	step 9
RA to RB	step 13

9 Use the following table to determine which +15V fuse (06 through 10) is associated with which -48V fuse (11 through 15).

If -48V fuse number	Do +15V fuse number
11	06
12	07
13	08
14	09
15	10

10 Remove the blown fuse and its associated fuse. For example, if the blown fuse is 06, then remove fuse 11 as well.

11 Obtain a replacement fuse wit the same voltage and amperage as the blown fuse.

12 lı	nsert the -48V	fuse, then	the +15 fuse.
-------	----------------	------------	---------------

If the fuse	Do	
blows again	step 16	
does not blow	step 98	

- **13** Obtain a replacement fuse wit the same voltage and amperage as the blown fuse.
- 14 Remove the blown fuse.

15



DANGER

Risk of fire For continued protection against risk of fire, replace blown fuse with a fuse of the same type, rating (color code), and manufacturer.

Insert the replacement fuse

If the fuse	Do
blows again	step 18
does not blow	step 98

- 16 Remove the blown fuse and its associated fuse. For example, if the blown fuse is 06, then remove fuse 11 as well.
- 17 Obtain a replacement fuse wit the same voltage and amperage as the blown fuse.
- **18** Use the following table to determine which drawer in the shelf below the fuse panel is associated with the blown fuse.

If Fuse number	Do Drawer number
01, 06, 11	1 (leftmost)
02, 07, 12	2,
03, 08, 13	3
04, 09, 14	4
05, 10, 15	5

Note: The RA and RB fuses supply ringing voltage to all five drawers in the shelf.
19 Pull out the line drawer you have just identified.

Note: When dealing with a blown RA or RB fuse, begin with the leftmost drawer.

20



DANGER Personal injury

Do not touch the line feed resistors on the line cards. The line feed resistors generate enough heat to burn you.



CAUTION Loss of service Carry out this procedure during periods of low traffic.

Unseat all the line cards in the drawer.

Note: Just unseat the line cards; do not remove them from the drawer.

If you are dealing with	Do
any one of fuses 01 to 05	step 22
any one of fuses 06 to 15	step 21
any RA or RB fuse	step 22

21 Insert the -48V fuse, then the +15 fuse.

If the fuse	Do
blows again	step 25
does not blow	step 27

22 Obtain a replacement fuse with the same voltage and amperage as the blown fuse.

23 Remove the blown fuse.

24



DANGER Personal injury Do not touch the line feed resistors on the line cards. The line feed resistors generate enough heat to burn you.

Insert the replacement fuse

If the fuse	Do	
blows again	step 25	
does not blow	step 27	

25

26

27

Check the drawer for loose or short-circuited wires.

If there are		Do
loose or short-circuited wires	se or short-circuited wires	
no loose or short-circuited wires, and the fuse you are step 26 dealing with is a ringing voltage fuse (RA or RB) and you have not done all five drawers in the shelf.		
no loose or short-circuited wires, the fuse you are step 105 dealing with is a ringing voltage fuse (RA or RB) and you have done all five drawers in the shelf.		
no loose or short-circuited wires, and the fuse you are step 105 dealing with is one of the line drawer fuses (01 to 15)		step 105
Reseat all the line cards in the drawer a lrawer.	and repeat steps 19 ar	d 20 for the next
Reseat the line cards one at a time, ar ine card.	nd check the fuse after	reseating each
If after reseating	Do	
a line card, the fuse blows again	step 28	
all the line cards, the fuse does not blow	step 98	

28



DANGER

Personal injury Do not touch the line feed resistors on the line cards. The line feed resistors generate enough heat to burn you.

Remove the line card from the drawer

29 Obtain a replacement line card. Ensure that the replacement card has the same product engineering code (PEC), including the suffix, as the card being removed.

30 Insert the replacement line card into the drawer

If you are dealing with	Do
any one of fuses 01 to 05	step 34
any one of fuses 06 to 15	step 31
any RA or RB fuse	step 34

- 31 Obtain a replacement fuse with the same voltage and amperage as the blown fuse.
- **32** Remove the blown fuse and its associated fuse. For example, if the blown fuse is 06, then remove fuse 11 as well.
- **33** Insert the -48V fuse, then the +15 fuse.

If the fuse	Do
blows again	step 105
does not blow	step 37

- **34** Obtain a replacement fuse with the same voltage and amperage as the blown fuse.
- **35** Remove the blown fuse.
- 36



DANGER Risk of fire

For continued protection against risk of fire, replace blown fuse with a fuse of the same type, rating (color code), and manufacturer.

Insert the replacement fuse.

	If the fuse	Do	
	blows again	step 105	
	does not blow	step 37	
	Reseat all the other line cards in the d	rawer.	
Push the drawer back in, and go to step 98.			
Use the following table to identify which circuit breaker located on the F associated with RG that has a lit FAIL LED.		h circuit breaker located on the FSP is LED.	
	IfRG number	DoCircuit breaker number	
	RG0 (leftmost)	CB5	
	RG1	CB6	
	Check the associated circuit breaker		
	If the circuit breaker is	Do	
	ION	step 49	
	OFF	step 41	
	Set the circuit breaker to ON		
	If the circuit breaker	Do	
	turns OFF and the FAIL LED on the RG is lit	step 42	
	remains ON and the FAIL LED on the RG is not lit	step 98	
	remains ON and the FAIL LED	step 49	

If the fuse is	Do	
blown	step 43	
not blown	step 47	

43

44 Replace the cartridge fuse inside the fuse holder.

45



DANGER Risk of fire

For continued protection against risk of fire, replace blown fuse with a fuse of the same type, rating (color code), and manufacturer.

Replace the blown fuse.

- 46 Install the fuse holder back onto the PDC frame.
- **47** Locate battery filter fuses.

If the fuse is	Do
blown (protruding)	step 43
not blown	step 50

At the RLCE frame

48 Set the circuit breaker to ON.

erals Card mpleted the

If the converter is	Do
an NT6X53	step 53
not an NT6X53	step 56
Use the following table to identify who associated with the shelf with the lit C	h circuit breaker located on the ONVERTER FAIL LED.
If Shelf number	Do Circuit breaker number
04	CB6
18	CB7
Check the associated circuit breaker	
If the circuit breaker is	DoCircuit breaker number
ON	step 73
OFF	step 55
Set the circuit breaker you have just i	dentified to ON.
If the circuit breaker	Do
turns OFF and the RG FAIL LED is lit.	step 63
remains ON and the RG FAIL LED is lit	step 73
remains ON and the RG FAIL LED is not lit	step 98
Check the POWER switch on the con	verter.
If the POWER switch is	Do
ON	step 58
OFF	step 57
Set the POWER switch on the conver	ter to ON
If the CONVERTER FAIL LED is	Do

	If the CONVERTER FAIL LED is	Do	
	not lit	step 98	
58	Use the following table to identify whc associated with the shelf with the lit C	h circuit breaker located on the FSP is ONVERTER FAIL LED.	
	If Shelf number	Do Circuit breaker number	
	32 (NT2X70 in slot 22)	CB1	
	32 (NT2X70 in slot 25)	CB4	
	51	CB5	
59	Check the associated circuit breaker		
	If the circuit breaker is	Do	
	ON	step 60	
	OFF	step 61	
0	Set the circuit breaker you have just identified to OFF.		
61	Press and hold the RESET button on the converter while setting the circuit breaker to ON.		
62	Release the RESET button.		
	If the circuit breaker	Do	
	turns OFF and the CONVERT- ER FAIL LED is lit	step 63	
	remains on and the CONVERT- ER FAIL LED is not lit	step 98	
	remains on and the CONVERT- ER FAIL LED is lit	step 73	
63	Record the numbers of the frame and shelf with the lit CONVERTER FAIL LED.		
At the	e power distribution center (PDC) fran	ne	
64	Locate the fuse that powers the shelf in the RLCE frame.		
	If the fuse is	Do	
	blown	step 65	

DMS-100 Family NA100 Alarm Clearing and Perform. Monitoring Proc. Volume 1 of 4 LET0015 and up

Do
step 74

- 66 Replace the cartridge fuse inside the fuse holder.
- 67

65



DANGER Risk of fire

For continued protection against risk of fire, replace blown fuse with a fuse of the same type, rating (color code), and manufacturer.

Replace the blown fuse.

68 Install the fuse holder back onto the PDC frame.

At the RLCE frame

69 Proceed as follows depending on which converter had a lit CONVERTER FAIL LED.

If the converter is	Do
an NT6X53	step 72
not an NT6X53	step 70

- **70** Press and hold the RESET button on the converter while setting the circuit breaker to ON.
- 71 Release the RESET button.

If the circuit breaker	Do
turns OFF and the CONVERTER FAIL LED is lit	step 74
remains ON and the CONVERTER FAIL LED is not lit	step 98
remains ON and the CONVERTER FAIL LED is lit	step 73
Set the circuit breaker to ON.	
If the circuit breaker	Do
turns OFF and the CONVERTER FAIL LED is lit	step 74

72

If the circuit breaker		Do
remains ON and the CONVERTE lit	ER FAIL LED is not	step 98
remains ON and the CONVERT	ER FAIL LED is lit	step 73
Set the circuit breaker to OFF.		
Perform the appropriate procedure in Replacement Procedures to replace to completed the procedure, return to the completed the procedure.	Lines, Trunks, and Pe he converter. When y is point.	ripherals Card ou have
Proceed as follows depending on the	converter you have ju	st replaced.
If the converter you have just replaced is	Do	
an NT6X53	step 77	
not an NT6X53	step 76	
Check the CONVERTER FAIL LED fo	r the converter you hav	ve just replaced
If the CONVERTER FAIL LED is	Do	
lit	step 93	
not lit	step 98	
Check the converter you have just rep breaker.	laced, as well as the a	ssociated circu
If the circuit breaker		Do
turns OFF and the CONVERTER	R FAIL LED is lit	step 79
remains ON and the CONVERTE lit	ER FAIL LED is not	step 98
remains ON and the CONVERT	ER FAIL LED is lit	step 78
Set the circuit breaker to OFF.		
Remove the NT6X51 and NT6X52 ca CONVERTER FAIL LED.	rds from the shelf with	the lit
Set the circuit breaker to ON.		
If the CONVERTER FAIL LED is	Do	
lit	step 93	

If the CONVERTER FAIL LED is Do	
not lit step 81	
Set the circuit breaker to OFF.	
Inserr the NT6X51 card back into the shelf.	
Set the circuit breaker to ON.	
If the circuit breaker	Do
turns OFF and the CONVERTER FAIL LED is lit	step 85
remains ON and the CONVERTER FAIL LED is not lit	step 87
remains ON and the CONVERTER FAIL LED is lit	step 84
Set the circuit breaker to OFF.	
Perform the appropriate procedure in Lines, Trunks, and Pe Replacement Procedures to replace the NT6X51 card. Who completed the procedure, return to this point.	ripherals Card en you have
Set the circuit breaker to ON.	
If the circuit breaker	Do
turns OFF and the CONVERTER FAIL LED is lit	sten 91
turns of 1 and the COTVERTER THE EED is in	step >1
remains ON and the CONVERTER FAIL LED is not lit	step 87
remains ON and the CONVERTER FAIL LED is int lit remains ON and the CONVERTER FAIL LED is lit	step 91 step 87 step 90
remains ON and the CONVERTER FAIL LED is not lit remains ON and the CONVERTER FAIL LED is lit Set the circuit breaker to OFF.	step 91 step 87 step 90
remains ON and the CONVERTER FAIL LED is int it remains ON and the CONVERTER FAIL LED is lit Set the circuit breaker to OFF. Insert the NT6X52 card back into the shelf.	step 91 step 87 step 90
remains ON and the CONVERTER FAIL LED is int remains ON and the CONVERTER FAIL LED is not lit remains ON and the CONVERTER FAIL LED is lit Set the circuit breaker to OFF. Insert the NT6X52 card back into the shelf. Set the circuit breaker to ON.	step 91 step 87 step 90
remains ON and the CONVERTER FAIL LED is int remains ON and the CONVERTER FAIL LED is not lit remains ON and the CONVERTER FAIL LED is lit Set the circuit breaker to OFF. Insert the NT6X52 card back into the shelf. Set the circuit breaker to ON. If the circuit breaker	step 91 step 87 step 90 Do
remains ON and the CONVERTER FAIL LED is int remains ON and the CONVERTER FAIL LED is not lit Set the circuit breaker to OFF. Insert the NT6X52 card back into the shelf. Set the circuit breaker to ON. If the circuit breaker turns OFF and the CONVERTER FAIL LED is lit	step 91 step 87 step 90 Do step 91
remains ON and the CONVERTER FAIL LED is int remains ON and the CONVERTER FAIL LED is not lit Set the circuit breaker to OFF. Insert the NT6X52 card back into the shelf. Set the circuit breaker to ON. If the circuit breaker turns OFF and the CONVERTER FAIL LED is lit remains ON and the CONVERTER FAIL LED is not lit	step 91 step 87 step 90 Do step 91 step 98
remains ON and the CONVERTER FAIL LED is int remains ON and the CONVERTER FAIL LED is not lit remains ON and the CONVERTER FAIL LED is lit Set the circuit breaker to OFF. Insert the NT6X52 card back into the shelf. Set the circuit breaker to ON. If the circuit breaker turns OFF and the CONVERTER FAIL LED is lit remains ON and the CONVERTER FAIL LED is not lit remains ON and the CONVERTER FAIL LED is not	step 91 step 87 step 90 Do step 91 step 98 step 90
remains ON and the CONVERTER FAIL LED is int remains ON and the CONVERTER FAIL LED is not lit remains ON and the CONVERTER FAIL LED is lit Set the circuit breaker to OFF. Insert the NT6X52 card back into the shelf. Set the circuit breaker to ON. If the circuit breaker turns OFF and the CONVERTER FAIL LED is lit remains ON and the CONVERTER FAIL LED is not lit Set the circuit breaker to OFF.	step 91 step 90 Do step 91 step 98 step 90

Perform the appropriate procedure in Lines, Trunks, and Peripherals Card Replacement Procedures to replace the NT6X52 card. When you have 91 completed the procedure, return to this point. 92 Set the circuit breaker to ON. If the CONVERTER FAIL LED is Do lit step 95 not lit step 98 93 Determine if there are bent or short-circuited pins on the backplane of the shelf If there are Do bent or short-circuited pins step 105 no bent or short-circuited pins, and the converter you step 94 are dealing with is an NT6X53 no bent or short-circuited pins, and the converter you step95 are dealing with is not an NT6X53 94 Insert the NT6X51 and the NT6X52 cards back into the shelf. 95

Use the following table to identify which alarm and control card is associated with the shelf with the lit CONVERTER FAIL LED.

Shelf number	Alarm and control card	Card position
04 and 18	slot CD1 (NT6X36AA)	right
32 (2X70 in slot 25)	slot CD2 (NT0X91AA)	left
32 (2X70 in slot 22) and 51	slot CD3 (NT0X91AE)	middle



Ext FSP RLCE frame major (end)

At the MAP

100 Access the Ext level of the MAP to determine whether an FSP alarm is present by typing

>MAPCI;MTC;EXT

and pressing the Enter key.

If an FSP alarm is	Do	
present, and you have not accessed all the frames with an FSP alarm	step 101	
present, and you have accessed all the frames with an FSP alarm	step 105	
not present	step 106	
Perform the appropriate procedure for the type of frame that has the FSP alarm When you have completed the procedure, return to this point.		

At the RLCE frame

102

101



DANGER Risk of electrocution

Some terminals inside the FSP have an electrical potential of -48 V dc to -60 V dc. Do not touch any terminals inside the FSP.

Unscrew the slotted nut on the left-hand side of the FSP.

- **103** Open the FSP panel.
- **104** Determine if the alarm battery supply wiring inside the FSP is short-circuited. The personnel at the next level of support may request this information.
- **105** For further assistance, contact the personnel responsible for the next level of support.
- **106** You have completed this procedure.

Ext FSP RLM frame (with fuses only) major

Alarm display

	СМ	MS	IOD	Net	PM	CCS	Lns	Trks	Ext	APPL
	•	•		•	•		•	•	1FSP M	

Indication

At the MTC level of the MAP display, FSP preceded by a number appears under the Ext header of the alarm banner, and indicates an external frame supervisory panel (FSP) major alarm.

Meaning

One or more frames in the office has a power fault or a cooling unit fault.

Impact

The impact on subscriber service depends on the nature of the fault and the type of frame in which the fault is located.

Common procedures

Checking the electronic fuse unit in an LME or RLM frame is referenced in this procedure.

Action

Note: This procedure applies to a remote line module (RLM) frame.

Summary of clearing a/an Ext FSP alarm



DMS-100 Family NA100 Alarm Clearing and Perform. Monitoring Proc. Volume 1 of 4 LET0015 and up

Clearing a/an Ext FSP alarm

At the RLM frame

1 Check the CONVERTER FAIL LED on each NT2X05 converter in the frame.

lf	Do		
any NT2X05 converters have a lit CONVERTER FAIL LED	step 31		
no NT2X05 converters have a lit CONVERTER FAIL LED	step 2		
Check the CONVERTER FAIL LED or	the NT2X70 converter in the frame.		
If the CONVERTER FAIL LED is	Do		
lit	step 27		
not lit	step 3		
Check the alarm battery supply (ABS) the FSP.	fuses (24 to 27), which are located or		
lf	Do		
If a fuse is blown	Do step 4		
If a fuse is blown no fuses are blown	Do step 4 step 7		
If a fuse is blown no fuses are blown Obtain a replacement fuse wit the sam fuse.	Do step 4 step 7 ne voltage and amperage as the blown		

5 6

4

2

3



DANGER

Risk of fire For continued protection against risk of fire, replace blown fuse with a fuse of the same type, rating (color code), and manufacturer.

Insert the replacement fuse.

If the fuse	Do
blows again	step 65
does not blow	step 61
heck the line drawer fuses ((04 to 23), which are located on the FS
heck the line drawer fuses (If	(04 to 23), which are located on the FS Do
heck the line drawer fuses (If a fuse is blown	(04 to 23), which are located on the FS Do step8

- 8 Obtain a replacement fuse with the same voltage and amperage as the blown fuse.
- 9 Remove the blown fuse.
- 10

7



DANGER Risk of fire

For continued protection against risk of fire, replace blown fuse with a fuse of the same type, rating (color code), and manufacturer.

Insert the replacement fuse

If the fuse	Do
a fuse is blown	step 11
no fuses are blown	step 61

11 Use the following table to determine which drawer is associated with the blown fuse.

If Fuse number	Do Drawer number	
04, 14	0, 1	
06, 16	2, 3	
08, 18	4, 5	
10, 20	6, 7	

Ext FSP	
RLM frame (with fuses only) major (continued)	

If Fuse number	Do Drawer number
12, 22	8,9
05, 15	10, 11
07, 17	12, 13
09, 19	14, 15
11, 21	16, 17
13, 23	18, 19

Note: The drawers are not numbered on the frame. The numbering scheme used in this table is to facilitate the identification of the drawers. The numbering is from left to right and bottom to top, that is, drawer 0 is the bottom left-hand drawer and drawer 19 is the top right-hand drawer.

12 Pull out the line drawer you have just identified.

13



DANGER Personal injury

Do not touch the line feed resistors on the line cards. The line feed resistors generate enough heat to burn you.



CAUTION

Loss of service Carry out this procedure during periods of low traffic.

Unseat all the line cards in the drawer

- 14 Obtain a replacement fuse with the same voltage and amperage as the blown fuse.
- **15** Remove the blown fuse.

16



DANGER

Risk of fire For continued protection against risk of fire, replace blown fuse with a fuse of the same type, rating (color code), and manufacturer.

Insert the replacement fuse.

If the fuse	Do	
blows again	step 17	
does not blow	step 18	

17 Check the drawer for loose or short-circuited wires.

If there are	Do
loose or short-circuited wires	step 68
no loose or short-circuited wires	step 65

18 Reseat the line cards one at a time, and check the fuse after reseating each line card.

If after reseating	Do
a line card, the fuse blows again	step 19
all the line cards, the fuse does	step 26

19



not blow

DANGER Personal injury

Do not touch the line feed resistors on the line cards. The line feed resistors generate enough heat to burn you.

Remove the line card from the drawer.

20 Obtain a replacement line card. Ensure that the replacement card has the same product engineering code (PEC), including the suffix, as the card being removed.

- 21 Insert the replacement line card into the drawer.
- 22 Obtain a replacement fuse with the same voltage and amperage as the blown fuse.
- 23 Remove the blown fuse.
- 24



DANGER Risk of fire

For continued protection against risk of fire, replace blown fuse with a fuse of the same type, rating (color code), and manufacturer.

Insert the replacement fuse

If the fuse	Do
blows again	step 68
does not blow	step 25

- 25 Reseat all the other line cards in the drawer.
- 26 Push the drawer back in, and go to step 61.
- 27 Note the number of the LM in the frame.

At the MAP terminal

- 28 Access the PM level of the MAP by typing >MAPCI;MTC;PM and pressing the Enter key.
- **29** Post the PM level of the MAP by typing
 - >POST LM bay_no pair_no
 - and pressing the Enter key.
 - where
 - bay no is the number of the LM bay (0 to 511)
 - pair no
 - is the number of the LM in the bay (0 or 1)
- **30** Busy the LM by typing

>BUSY

and pressing the Enter key.

If the POWER switch is	Do
ON	step 33
OFF	step 32
Set the POWER switch on the conve	rter to ON.
If the CONVERTER FAIL LED is	Do
lit	step 33
not lit	step 61
Use the following table to identify whi	ich fuse (01, 02, or 03), located (
FSP, is associated with the NT2X05 (FAIL LED.	converter that has a lit CONVER
FSP, is associated with the NT2X05 (FAIL LED. IfConverter	DoFuse number
FSP, is associated with the NT2X05 (FAIL LED. IfConverter NT2X05 slot 1 (leftmost)	DoFuse number
FSP, is associated with the N12X05 of FAIL LED. IfConverter NT2X05 slot 1 (leftmost) NT2X05 slot 5	DoFuse number 01 03
FSP, is associated with the N12X05 of FAIL LED. IfConverter NT2X05 slot 1 (leftmost) NT2X05 slot 5 NT2X70 slot 23	DoFuse number 01 03 02
FSP, is associated with the N12X05 of FAIL LED. IfConverter NT2X05 slot 1 (leftmost) NT2X05 slot 5 NT2X70 slot 23 Check the associated fuse	DoFuse number 01 03 02
FSP, is associated with the NT2X05 of FAIL LED. IfConverter NT2X05 slot 1 (leftmost) NT2X05 slot 5 NT2X70 slot 23 Check the associated fuse If the fuse is	DoFuse number 01 03 02 Do
FSP, is associated with the NT2X05 of FAIL LED. IfConverter NT2X05 slot 1 (leftmost) NT2X05 slot 5 NT2X70 slot 23 Check the associated fuse If the fuse is blown	DoFuse number 01 03 02 Do step 35

36 Remove the blown fuse from the FSP.

37



DANGER Risk of fire

For continued protection against risk of fire, replace blown fuse with a fuse of the same type, rating (color code), and manufacturer.

Insert the replacement fuse.

- **38** Press the RESET button on the converter.
- **39** Release the RESET button.

	If the fuse		Do					
	blows and the FAIL LED is	he CONVERTER lit	step 40					
	does not blo VERTER FA	w and the CON- IL LED is not lit	step 61					
	does not blo VERTER FA	w and the CON- IL LED is lit	step 49					
40	Record the fram CONVERTER F	e number that contain AIL LED.	s the converter with the lit					
At the	e power distributio	on center (PDC) fran	ne					
41	Locate the fuse that is associated with the frame and the converter you have just noted.							
	If the fuse is		Do					
	blown		step 42					
	not blown		step 46					
42	Remove the fuse	e holder that contains	the blown fuse.					
43	Replace the cart	tridge fuse inside the f	use holder.					
44								
		DANGER Risk of fire For continued protecti fuse with a fuse of the	on against risk of fire, replace blown same type, rating (color code), and					

Replace the blown fuse.

- 45 Install the fuse holder back onto the PDC frame.
- **46** Locate battery filter fuses.

If the fuse is	Do
blown (protruding)	step 42

If the fuse is Do not blown step 49 At the RLM frame 47 Press the RESET button on the converter. 48 Release the RESET button If the CONVERTER FAIL LED is Do lit step 49 not lit step 61 Perform the appropriate procedure in Lines, Trunks, and Peripherals Card Replacement Procedures to replace the converter. When you have completed the procedure, return to this point. 49 50 Proceed as follows according to the converter you have just replaced. If you have just replaced an Do NT2X05 converter step 57 NT2X70 converter step 51 51 Check the CONVERTER FAIL LED for the converter you have just replaced. If the CONVERTER FAIL LED is Do lit step 52 not lit step 61

Ext FSP RLM frame (with fuses only) major (continued)

52 Check the electronic fuse unit (EFU), which is located at the rear of the frame (see illustration below).



57 Determine if the CONVERTER FAIL LED for the converter you have just replaced is lit.

If the CONVERTER FAIL LED is	Do
lit	step 58
not lit	step 61
Determine if there are bent or short-c shelf	ircuited pins on the backplane of the
If there are	Do
bent or short-circuited pins	step 68
no bent or short-circuited pins	step 59
Use the following table to identify the the converter that has a lit CONVERT	alarm and control card associated wi ER FAIL LED.
IfConverter, Fuse number	DoAlarm and control card
NT0X205 slot 1/01	slot 1 (NT0X36AB)
NT2X05 slot 5/03 and	slot 2 (NT0X36AB)
NT2X70 slot 23/02	
Perform the appropriate procedure in Replacement Procedures to replace t have completed the procedure, returr	Lines, Trunks, and Peripherals Card he alarm and control card. When yo to this point.
Perform the appropriate procedure in Replacement Procedures to replace t have completed the procedure, returr Determine if the FRAME FAIL lamp o	Lines, Trunks, and Peripherals Card he alarm and control card. When yo to this point. n the FSP is lit.
Perform the appropriate procedure in Replacement Procedures to replace to have completed the procedure, return Determine if the FRAME FAIL lamp o	Lines, Trunks, and Peripherals Card he alarm and control card. When yo to this point. n the FSP is lit. Do
Perform the appropriate procedure in Replacement Procedures to replace to have completed the procedure, return Determine if the FRAME FAIL lamp on If the FRAME FAIL lamp is lit, and you have not completed steps 2 or 3 in this procedure	Lines, Trunks, and Peripherals Card he alarm and control card. When yo to this point. n the FSP is lit. Do step 62
Perform the appropriate procedure in Replacement Procedures to replace to have completed the procedure, return Determine if the FRAME FAIL lamp on If the FRAME FAIL lamp is lit, and you have not completed steps 2 or 3 in this procedure lit, and you have completed steps 2 and 3 in this procedure	Lines, Trunks, and Peripherals Card he alarm and control card. When yo to this point. n the FSP is lit. Do step 62 step 68

At the MAP

63 Access the Ext level of the MAP to determine whether an FSP alarm is present by typing

>MAPCI;MTC;EXT

and pressing the Enter key.

If an FSP alarm is	Do
present, and you have not ac- cessed all the frames with an FSP alarm	step 64
present, and you have accessed all the frames with an FSP alarm	step 68
not present	step 69

64 Perform the appropriate procedure for the type of frame that has the FSP alarm When you have completed the procedure, return to this point.

At the RLM frame

65



DANGER Risk of electrocution

Some terminals inside the FSP have an electrical potential of -48 V dc to -60 dc. do not touch any terminals inside the FSP.

Unscrew the slotted nut on the left-hand side of the FSP.

- 66 Open the FSP panel.
- 67 Determine if the alarm battery supply wiring inside the FSP is short-circuited. the personnel at the next level of support may request this information.
- **68** For further assistance, contact the personnel responsible for the next level of support.
- 69 You have completed this procedure.

Ext FSP TME frame or CTME cabinet with FSP shelf major

Alarm display

ĺ	 СМ	MS	IOD	Net	PM	CCS	Lns	Trks	Ext	APPL
	-								1FSP M	

Indication

At the MTC level of the MAP display, FSP (preceded by a number) appears under the Ext header of the alarm banner. The FSP indicates a major alarm for an external frame supervisory panel (FSP).

Note: This procedure applies only to trunk module equipment (TME) frames and cabinetized trunk module equipment (CTME) frames provisioned with an FSP. The Ext FSP alarm clearing procedure for CTME provisioned with an MSP is in another procedure. This procedure is "Ext FSP in CISM, CMTA, and CTME cabinets with an MSP shelf major".

Meaning

A power fault or a cooling unit fault is present in one or more office frames or cabinets. The number that precedes the FSP in the alarm banner indicates the number of frames or cabinets affected.

Result

The impact on subscriber service depends on the type of the fault. The impact on subscriber service also depends on the types of subsystems provisioned in the frame or cabinet.

Common procedures

There are no common procedures.

Action

This procedure contains a summary flowchart and a list of steps. Use the flowchart to review the procedure. Follow the steps to perform the procedure.

Summary of Clearing an Ext FSP TME frame or CTME cabinet with FSP shelf major alarm



Clearing an Ext FSP TME frame or CTME cabinet with FSP shelf major alarm

At the TME frame or CTME cabinet

1 Determine if any of the CONVERTER FAIL LEDs on power converters are lit.

If CONVERTER FAIL LEDs	Do
are lit	step 6
are not lit	step 2

2 Determine if any of the alarm battery supply (ABS) or cooling unit fuses on the FSP are blown.

Note: In the TME FSP, the ABS fuse numbers are 01 to 03. In the CTME FSP, the ABS fuse numbers are 7 to 10. In the CTME FSP, the cooling unit fuse numbers are 11 and 14.

If a fuse	Do
has blown	step 3
has not blown	step 39

- **3** Obtain a replacement fuse with the same voltage and amperage rating as the blown fuse.
- 4 Remove the blown fuse.
- 5



DANGER Risk of fire

To protect against risk of fire, replace the blown fuse with a fuse of the same type, rating (color code), and manufacturer.

Insert the replacement fuse.

If the fuse	Do
has blown again	step 39
has not blown again	step 46

7

Ext FSP TME frame or CTME cabinet with FSP shelf major (continued)

6 Determine if the POWER switch on the converter is set to OFF.

If the POWER switch	Do
is OFF	step 7
is ON	step 8
et the POWER switch on the powe	er converter to ON.
et the POWER switch on the powe	er converter to ON. Do
et the POWER switch on the powe	er converter to ON. Do step 8

8 Record the number of the cabinet and shelf that contain the power converter with the CONVERTER FAIL LED lit.

lf you	Do
work on a TME frame	step 9
work on a CTME cabinet	step 14

9 Use the table to identify the circuit breaker that controls the power to the shelf with the lit CONVERTER FAIL LED. The FSP holds the circuit breaker.

Circuit breaker number	Shelf number
01	65
02	51
03	32
04	18
05	04

10

0 Determine if the associated breaker is set to OFF.

If the circuit breaker	Do	
is set to OFF	step 11	
is set to ON	step 12	

11 Set the circuit breaker to ON.

12 Press the RESET button on the power converter.

Ext FSP

Do

TME frame or CTME cabinet with FSP shelf major (continued)

13 Release the RESET button.

If the circuit breaker

trips again, and the CONVERTER FAIL LED is lit	step 21
does not trip, and the CONVERTER FAIL LED is lit	step 38
does not trip, and the CONVERTER FAIL LED is	step 46
not lit	

14 Use the table to identify the fuse on the FSP for the shelf with the lit CONVERTER FAIL LED.

IfFuse number	DoShelf number
01	05
02	33
04	19
05	47

15 Determine if the fuse that controls power to the shelf has blown.

If the fuse	Do
has blown	step 16
has not blown	step 19

- 16 Obtain a replacement fuse with the same voltage and amperage rating as the blown fuse.
- 17



DANGER Risk of fire

To protect against risk of fire, replace the blown fuse with a fuse of the same type, rating (color code), and manufacturer.

Remove the blown fuse.

- **18** Insert the replacement fuse.
- **19** Press the RESET button on the power converter.

20 Release the RESET button.

If the fuse		Do
has blown, and the CO	NVERTER FAIL LED is lit	step 21
has not blown, and the lit	CONVERTER FAIL LED is	step 38
has not blown, and the not lit	CONVERTER FAIL LED is	step 46
The next step depends on or a cabinetized PDC (CPI	if the office has a power distribution DC).	on center (PDC)
If the office	Do	
has a PDC	step 22	
has a CPDC	step 28	

At the PDC

21

- 22 Locate the fuse that powers the shelf in the TME or CTME.
- 23 Determine if the fuse has blown.

If the fuse	Do
has blown	step 24
has not blown	step 38

- 24 Remove the fuse holder that contains the blown fuse.
- 25 Replace the cartridge fuse inside the fuse holder.
- 26



DANGER Risk of fire

Replace the blown fuse with a fuse of the same type, rating (color code), and manufacturer. This procedure protects against the risk of fire.

Replace the blown fuse.

Ext FSP

TME frame or CTME cabinet with FSP shelf major (continued)

	Install the fuse holder back on the PDC frame.				
	lf you	Do			
	work on a TME frame	step 32			
	work on a CTME cabinet	step 35			
the	CPDC				
	Locate the circuit breaker that powers the shelf in the TME frame or CTME cabinet.				
9	Determine if the circuit breaker is set to OFF.				
	If the circuit breaker	Do			
	is OFF	stan 20			
	13 011	step 50			
	is ON	step 38			
	is ON Set the circuit breaker to ON.	step 38			
	is ON Set the circuit breaker to ON. The next step depends on the type	step 38 e of frame that you work on.			
	is ON Set the circuit breaker to ON. The next step depends on the type If you	step 38 e of frame that you work on.			
	is ON Set the circuit breaker to ON. The next step depends on the type If you work on a TME frame	step 30 step 38 e of frame that you work on. Do step 32			

- **32** Obtain a replacement fuse with the same voltage and amperage as the blown fuse.
- **33** Remove the blown fuse.
- 34



DANGER Risk of fire

To protect against risk of fire, replace the blown fuse with a fuse of the same type, rating (color code), and manufacturer.

Insert the replacement fuse. Go to step 36.

At the CTME cabinet

35 Set the circuit breaker to ON.

At the	TME frame or CTME cabinet				
36	Press the RESET button on the power converter.				
37	Release the RESET button.				
	If the CONVERTER FAIL LED	Do			
	is lit	step 38			
	is not lit	step 46			
38	To replace the power converter, perform the correct procedure in <i>Card Replacement Procedures</i> . Complete the procedure and return to this point				
39	Determine if the CONVERTER FAIL LED for the power converter that you replaced is lit.				
	If the CONVERTER FAIL LED	Do			
	is lit	step 40			
	is not lit	step 46			
40	Determine if the backplane of the shelf has any short-circuited or bent pins.				
	If the backplane of the shelf	Do			
	has short-circuited or bent pins	step 53			
	does not have short-circuited or bent pins	step 41			
41	The next step depends on the type of frame that you work on.				
	lf you	Do			
	work on a TME frame	step 42			
	work on a CTME cabinet	step 44			

At the TME frame

42 Use the table and diagram to identify the drive and alarm card for the shelf with the lit CONVERTER FAIL LED.

Drive and alarm card	FSP card position	FSP circuit breakers	Shelf position
NT0X91AA	CD1	CB5	04
NT0X91AB	CD2	CB3	32
		CB1	65
NT0X91AD	CD3	CB4	18
		CB2	51



43 Go to step 45.

At the CTME cabinet

44 Use the table and diagram to identify the alarm and control card for the shelf with the lit CONVERTER FAIL LED.

Power and alarm card slot	FSP fuse number	Shelf position
PWR ALM 1	01	05
	02	33
PWR ALM 2	04	19
PWR ALM 3	05	47



45 To replace the alarm and control card, perform the correct procedure in *Card Replacement Procedures.* Complete the procedure and return to this point.
Ext FSP

TME frame or CTME cabinet with FSP shelf major (continued)

At the TME frame or CTME cabinet

46 Determine if the FRAME FAIL lamp on the FSP is lit.

If the FRAME FAIL lamp	Do
is lit, and more fuses that have blown are present	step 2
is lit, and more blown fuses that have not blown are present	step 53
is not lit	step 47

At the MAP terminal

47 To access the EXT level of the MAP display, type

>MAPCI;MTC;EXT

and press the Enter key.

48 Determine if an FSP alarm is present.

If an FSP alarm	Do
is present, and you did not correct the power faults on all the frames with an FSP alarm	step 49
is present, and you corrected the power faults on all the frames with an FSP alarm	step 53
is not present	step 54

49 Determine the type of frame that has the FSP alarm. Perform the correct procedure in this NTP to clear the alarm. Complete the procedure and go to step 48.

At the TME frame or CTME cabinet

- 50 Unscrew the slotted nut to the left of the FSP.
- **51** Open the FSP panel.
- 52

DANGER

Risk of electrocution

Some terminals inside the FSP have an electrical potential of -48V dc to -60V dc. Do not touch any terminals inside the FSP.

Ext FSP TME frame or CTME cabinet with FSP shelf major (end)

Determine if the ABS wiring inside the FSP has short-circuited. The next level of support can request this information.

- 53 For additional help, contact the next level of support.
- 54 The procedure is complete.

Ext HIGH_MEM_BLOCKING critical

Alarm display

(СМ	MS	IOD	Net	PM	CCS	Lns	Trks	Ext	APPL
	_		-				-		•	1Crit	:.

Indication

At the MTC level of the MAP display, 'Crit' preceded by a number appears under the Ext header of the MAP alarm banner. This indicates a critical external alarm.

Meaning

A high memory blocking condition has been detected in the system. If the office remains in this condition for a sustained period of time, engineered capacity will be reduced and system stability may be impacted.

Result

Log EXT108 is generated when the alarm is raised. The alarm message 'High Memory Blocking' is shown in log EXT108. For every minute that the alarm is active, an XACP300 log is generated. When the alarm is cleared, an EXT108 is generated that indicates that the memory blocking level is normal. An XACP500 log is generated (once only) when the memory blocking level returns to normal.

Common procedures

There are no common procedures.

Action

Inform your supervisor. Supervisors in operating companies should contact Nortel support for a memory blocking assessment.

Ext JESCALL minor

Alarm display

(CM MS OD Not PM CCS The Bd	CM	MS	IOD	Net	PM	CCS	Lns	Trks	Ext	APPL
		·	·	•	•		•	•	•	1 Min.	•

Indication

Under the Ext subsystem header at the MTC level of the MAP display, 1 Min. can indicate one or more JESCALL minor alarms.

Meaning

When a caller makes an emergency call to an attendant, a minor alarm occurs. The operating company personnel monitor the alarm and gather the call information from a log. The call information is available to the attendant if the caller fails to complete the call.

Impact

The subscriber can access the emergency service bureau.

Common procedures

Not applicable

Action

The following flowchart is only a summary of the procedure. Use the instructions in the step-action procedure that follows the flowchart to clear the alarm.

Ext JESCALL minor (continued)

Summary of clearing an Ext JESCALL alarm



Ext JESCALL minor (continued)

Clearing an Ext JESCALL alarm

At the MAP terminal

1 To access the Ext level of the MAP display, type

>EXT

and press the Enter key.

Example of a MAP display. CM MS IOD Net PM CCS Lns Trks Ext APPL . . 2MPCOS . 1LIM . . 54GC 1 Min . Ext Alarms Crit FSP Major Minor NoAlm 0 0 0 1 10

2 To display all the Ext minor alarms, type

>LIST MIN

3

4

5

6

and press the Enter key.

Note: You must set field Report in table SFWALARM to yes. This datafill ensures that EXT logs with the time of day are recorded for the JESCALL alarm. This information identifies which EVS100 log corresponds to which JESCALL alarm.

If response on MAP display is	Do
JESCALL	step 4
other items	step 3
Perform the correct alarm-clearing pro have completed the procedure go to s	ocedure in this document. When you step 11.
To access LOGUTIL, type	
>LOGUTIL	
and press the Enter key.	
To open the ESV log report buffer, typ	e
>OPEN ESV	
and press the Enter key.	
To display the ESV100 log report, type	e
>BACK ALL	
and press the Enter key.	
<i>Example of an ESV100 log report.</i> ESV100 APR22 18:53:03 9800 INFO TRACE	JAPAN EMERGENCY SERVICE
CALLING PARTY NUMBER : CALLING PARTY : HOST 02 0 0 OUTGOING TRUNK : CKT I	347701235 1 01 DN 7701235 DN0347700020 FPTPLC1 3

Ext JESCALL minor (end)

Note the calling number, the date and til trunk (FPT) number.	me, and the terminating fire and police
To exit LOGUTIL, type	
>QUIT	
and press the Enter key.	
To clear the alarm, type	
>jesclear JESCALL	
and press the Enter key.	
Example of a MAP display. Ext Alarms Crit FSP Major Min 0 0 0 0 10 jesclear JESCALL JESCALL alarm cleared	or NoAlm
If the alarm	Do
clears	step 11
fails	sten10

11 You have completed this procedure.

Ext JESUNANS minor

Alarm display

1	CM MS OD Not PM CCS The Bd LUU7	CM	MS	IOD	Net	PM	CCS	Lns	Trks	Ext	APPL
		•	•	•	•		•	•	•	1 Min.	•

Indication

Under the Ext subsystem header at the MTC level of the MAP display, 1 Min. can indicate one or more JESUNANS minor alarms.

Meaning

When no attendant answers an emergency call within the datafilled time, a minor alarm occurs. The operating company personnel monitor the alarm and gather the call information from a log. The call information is available to the attendant.

Impact

The subscriber cannot access the emergency service bureau.

Common procedures

Not applicable

Action

The following flowchart is only a summary of the procedure. Use the instructions in the step-action procedure that follows the flowchart to clear the alarm.

Ext JESUNANS minor (continued)

Summary of clearing an Ext JESUNANS alarm



Ext JESUNANS minor (continued)

Clearing an Ext JESUNANS alarm

At the MAP terminal

1 To access the Ext level of the MAP display, type

>EXT

and press the Enter key.

Example of a MAP display. CM MS IOD Net PM CCS Lns Trks Ext APPL . . 2MPCOS . 1LIM . . 54GC 1 Min . Ext Alarms Crit FSP Major Minor NoAlm 0 0 0 1 10

2 To display all the Ext minor alarms, type

>LIST MIN

3

4

5

6

and press the Enter key.

Note: You must set field Report in table SFWALARM to yes. This datafill ensures that EXT logs with the time of day are recorded for the JESUNANS alarm. This information identifies which EVS100 log corresponds to which JESUNANS alarm.

If response on MAP display is	Do
JESUNANS	step 4
anything else	step 3
Perform the correct alarm-clearing pro- have completed the procedure go to st	cedure in this document. When you ep 11.
To access LOGUTIL, type	
>LOGUTIL	
and press the Enter key.	
To open the ESV log report buffer, type	9
>OPEN ESV	
and press the Enter key.	
To display the ESV100 log report, type	
>BACK ALL	
and press the Enter key.	
Example of an ESV100 log report. ESV100 APR22 18:53:03 9800 INFO TRACE	JAPAN EMERGENCY SERVICE
CALLING PARTY NUMBER : CALLING PARTY : HOST 02 0 01 OUTGOING TRUNK : CKT F	347701235 01 DN 7701235 DN0347700020 PTPLC1 3

Ext JESUNANS minor (end)

7	Note the calling number, the date and trunk (FPT) number.	nd time, and the terminating fire and police
8	To exit LOGUTIL, type	
	>QUIT	
	and press the Enter key.	
9	To clear the alarm, type	
	>JESCLEAR	
	and press the Enter key.	
	Example of a MAP display. Ext Alarms Crit FSP Major M 0 0 0 0 1 jesclear JESUNANS JESUNANS alarm cleared	Minor NoAlm 10
	If the alarm	Do
	clears	step 11
	fails	step10
10	Contact the next level of support.	

11 You have completed this procedure.

Ext MALO Major

Alarm display

(CM MS OD Not PM CCS The list	СМ	MS	IOD	Net	РМ	CCS	Lns	Trks	Ext	APPL
		•	·	•	•		•	•	•	1Maj.	•

Indication

Under the Ext subsystem header at the Ext level of the MAP display, 1 Maj. may indicate one or more malicious call originating (MALO) major alarms.

Meaning

A MALO alarm is raised in the originating office. The alarm is generated each time a call attempts to terminate to a subscriber with the MALO service active.

When the MALO alarm is generated, the operating company can check call information from a log. The operating company can decide on the correct action, based on this information

Impact

Failure to trace malicious calls.

Common procedures

Not applicable

Action

The following flowchart is only a summary of the procedure. Use the instructions in the step-action procedure that follows the flowchart to clear the alarm.

Ext MALO Major (continued)

Summary of clearing an Ext MALO alarm



Ext MALO Major (continued)

Clearing an Ext MALO alarm

At your current location

- 1 To access the Ext level of the MAP display, type
 - >EXT

and press the Enter key.

Example of a MAP display.

CM MS IOD Net PM CCS Lns Trks Ext APPL. . 2MPCOS . 1LIM . . 54GC 1 Maj .

Ext Alarms CritFSPMajorMinor NoAlm 0 0 1 1 12

- 2 To display all the Ext major alarms, type
 - >LIST MAJ

and press the Enter key.

If response on MAP display is	Do
MALOALARM	step 4
anything else	step 3

- **3** Perform the appropriate alarm-clearing procedures in this document. When you have completed the procedure, go to step 12.
- 4 To access LOGUTIL, type
 - >LOGUTIL

and press the Enter key.

- 5 To open the MALO log report buffer, type
 - >OPEN MALO

and press the Enter key.

6 To browse through the buffer to display the MALO100 or 101 log reports, type >BACK ALL

and press the Enter key.

If the log is	Do
MALO100	step 7
MALO101	step 7

7 Note the date and time, the calling party LEN, the forwarding party LEN, and the called party DN.

Go to step 9.

Ext MALO Major (end)

1	8	Note the date and time, the incoming t	runk ID, the forwarding party LEN, and					
9	9	To exit LOGUTIL, type						
		>QUIT						
		and press the Enter key.						
10		To clear the alarm, type						
		>SETSC MALO_ALARM REL						
	and press the Enter key.							
		Example of a MAP display.						
		Ext AlarmsCritFSPMajorMinor NoAlm 0 0 0 0 10						
		setsc esr_time_alarm rel OK						
		If the alarm	Do					
		clears	step 12					
		fails	step11					
	11	Contact the next level of support.						

12 You have completed this procedure.

Ext MALT Major

Alarm display

Í	CM MB OD Not PM CCS The Est	СМ	MS	IOD	Net	PM	CCS	Lns	Trks	Ext	APPL	
				•	•		•	•	•	1Maj.	·	

Indication

Under the Ext subsystem header at the Ext level of the MAP display, 1 Maj. may indicate one or more malicious call terminating (MALT) major alarms.

Meaning

A MALT alarm is raised in the originating office. The alarm is generated each time a call attempts to terminate to a subscriber with the MALT service active.

When the MALT alarm is generated, the operating company can check call information from a log. The operating company can decide on the correct action, based on this information

Impact

Failure to trace malicious calls.

Common procedures

Not applicable

Action

The following flowchart is only a summary of the procedure. Use the instructions in the step-action procedure that follows the flowchart to clear the alarm.

Ext MALT Major (continued)

Summary of clearing an Ext MALT alarm



Ext MALT Major (continued)

Clearing an Ext MALT alarm

At your current location

1 To access the Ext level of the MAP display, type

>EXT and press the Enter key. Example of a MAP display.

CM MS IOD Net PM CCS Lns Trks Ext APPL . 2MPCOS . 1LIM . . 54GC 1 Maj . Ext Alarms Crit FSP Major Minor NoAlm

0110		inajoi	14111101	1 10/ 111
0	0	1	1	12

2 To display all the Ext major alarms, type

>LIST MAJ

3

4

5

6

and press the Enter key.

If response on MAP display is	Do
MALTALARM	step 4
anything else	step 3
Perform the appropriate alarm-clear you have completed the procedure,	ing procedures in this document. When go to step 11.
To access LOGUTIL, type	
>LOGUTIL	
and press the Enter key.	
To open the MALT log report buffer,	type
>OPEN MALT	
and press the Enter key.	
To browse through the buffer to disp	lay the MALT100 or 101 log reports, type
>BACK ALL	
and press the Enter key.	
If the log is	Do
MALT100	step 7
MALT101	step 8

DMS-100 Family NA100 Alarm Clearing and Perform. Monitoring Proc. Volume 1 of 4 LET0015 and up

Ext MALT Major (end)

7	Note the date and time, the called party DN, the called party LEN, and the calling party DN.				
	Go to step 9.				
8	Note the date and time, the called party DN, the called party LEN, and the incoming trunk ID.				
9	To exit LOGUTIL, type				
	>QUIT				
	and press the Enter key.				
10	To clear the alarm, type				
	>SETSC MALT_ALARM REL				
	and press the Enter key.				
	Example of a MAP display.				
	Ext Alarms Crit FSP Major Minor NoAlm 0 0 0 0 10				
	setsc esr_time_alarm rel OK				
	If the alarm Do				
	clears step 12				
	fails step11				
11	Contact the next level of support.				

12 You have completed this procedure.

Index

Α

Activating CCS7 links Vol. 4, 4-16 Activity switch with memory match Vol. 4, 4-26 alarm clearing APPL CallP major Vol. 1, 1-3 CCS LK minor Vol. 1, 2-24 CCS LKM major Vol. 1, 1-7, Vol. 1, 1-11, Vol. 1, 2-52 CCS LSSM major Vol. 1, 2-78 CCS PC minor Vol. 1, 2-87 CCS PCC critical Vol. 1, 2-91 CCS RSC critical Vol. 1, 2-95 CCS RSM major Vol. 1, 2-101 CCS RSSC critical Vol. 1, 2-106 CCS RTRC critical Vol. 1, 2-115 CCS RTRM major Vol. 1, 2-124 CM AutoLd minor Vol. 1, 3-3 CM CBsyMC major Vol. 1, 3-6 CM ClkFlt major Vol. 1, 3-14 CM CMFlt major Vol. 1, 3-21 CM CMTrap major Vol. 1, 3-34

CM E2A minor Vol. 1, 3-37 CM EccOn minor Vol. 1, 3-41 CM IMAGE critical Vol. 1, 3-46 CM Image minor Vol. 2, 4-125 CM JInact minor Vol. 1, 3-49 CM LowMem critical Vol. 1, 3-52 CM LowSpr major Vol. 1, 3-60 minor Vol. 1, 3-68 CM MBsyMC major Vol. 1, 3-76 CM MC Tbl minor Vol. 1, 3-84 CM MemCfg minor Vol. 1, 3-96 CM MemCor Major Vol. 1, 3-109 minor Vol. 1, 3-115 CM MemFlt minor Vol. 1, 3-118 CM MemLim minor Vol. 1, 3-123 CM NoBrst minor Vol. 1, 3-139 CM NoOvr minor Vol. 1, 3-146 CM NoSYNC major Vol. 1, 3-153 CM NoTOD critical Vol. 1, 3-159 **CM PMCFlt** major Vol. 1, 3-166

CM PMCTbl minor Vol. 1, 3-176 CM PrcOpt major Vol. 1, 3-185 CM RExFlt major Vol. 1, 3-188 CM RExSch minor Vol. 1, 3-191 CM RExTst minor Vol. 1, 3-197 CM SBsyMC major Vol. 1, 3-202 CM SLMLIM major Vol. 1, 3-213 CM SLMLim minor Vol. 1, 3-216 CM SRAMFL major Vol. 1, 3-219 CM SramFl minor Vol. 1, 3-226 E911_LDT_CRITICAL critical Vol. 1, 4-67 E911_LDT_MAJOR major Vol. 1, 4-71 Ext CPPOOL critical Vol. 1, 4-42 major Vol. 1, 4-47 Ext Crit critical Vol. 1, 4-3 EXT E911_ALI_MAJOR Major Vol. 1, 4-57 EXT E911_ALI_MINOR Minor Vol. 1, 4-62 EXT E911_PSAP_OFFHK minor Vol. 1, 4-93 EXT E911_RCER minor alarm Vol. 1, 4-105 EXT E911_RCER_MAJOR Major Vol. 1, 4-100 EXT E911_SRDB_MEMORY Minor Vol. 1, 4-110 Ext FSP APC cabinet major Vol. 1, 4-128 CCC frame major Vol. 1, 4-137 CDSN cabinet major Vol. 1, 4-201 CDSN cabinet with MSP shelf major Vol. 1. 4-146 CIOE cabinet major Vol. 1, 4-219

CIOE cabinet with MSP shelf major Vol. 1. 4-153 CIPE cabinet with MSP shelf major Vol. 1, 4-160 CISM, CMTA and CTME cabinet with an MSP shelf major Vol. 1, 4-167 CPDC cabinet major Vol. 1, 4-174 DCE frame major Vol. 1, 4-182 DPCC cabinet major Vol. 1, 4-191 DSNE frame major Vol. 1, 4-201 DTE frame major Vol. 1, 4-210 IDTE frame major Vol. 1, 4-210 IOE frame major Vol. 1, 4-219 LPP cabinet major Vol. 1, 4-242 major Vol. 1, 4-125 MEX frame major Vol. 1, 4-250 MS7E frame major Vol. 1, 4-265 NET0, NET1 (circuit breakers and fuses) major Vol. 1, 4-274 NET0, NET1 frame (fuses only) major Vol. 1, 4-283 NETC frame major Vol. 1, 4-292 PDC frame major Vol. 1, 4-301 Ext FSP major CTME cabinet with FSP Vol. 1, 4-341 TME frame Vol. 1, 4-341 Ext Maj major Vol. 1, 4-12 Ext Min minor Vol. 1, 4-34 IOD DDUOS on an IOM major or minor Vol. 2, 1-178 IOD DEVBnn critical, major, or minor Vol. 2, 1-76 IOD DMNTnn minor Vol. 2, 1-79 IOD HOLDnn minor Vol. 2, 1-85 IOD ITOC critical Vol. 2, 1-88 minor Vol. 2, 1-95 IOD KEEPn minor Vol. 2, 1-103 IOD MPCLNK minor Vol. 2, 1-106 IOD MTDOS in an IOC minor Vol. 2, 1-235 IOD nCKEr minor Vol. 2, 1-126

IOD nCKOS major or minor Vol. 2, 1-142 IOD nDDUOS major or minor Vol. 2, 1-164 IOD nDPCOS minor Vol. 2, 1-191 IOD nIOCOS major or minor Vol. 2, 1-196 IOD nMPCOS major or minor Vol. 2, 1-211 IOD nMPCOS on an IOM major or minor Vol. 2, 1-222 IOD nnAMA critical, major, or minor Vol. 2, 1-260 IOD nnJF critical, major, or minor Vol. 2, 1-264 IOD nnOM critical, major, or minor Vol. 2, 1-268 IOD NO AMA on device type DISK critical Vol. 2, 1-272 IOD NO AMA on device type TAPE critical Vol. 2, 1-281 IOD NO ssys on device type DISK critical, major, or minor Vol. 2, 1-295 IOD NO ssys on device type TAPE critical Vol. 2, 1-304 IOD nSVC critical Vol. 2, 1-317 IOD PnnVnn minor Vol. 2, 1-323 IOD POOLnn minor Vol. 2, 1-333 IOD SENDn minor Vol. 2, 1-344 IOD SLMbsv major Vol. 2, 1-349 minor Vol. 2, 1-355 IOD SLMoff minor Vol. 2, 1-361 IOD SLMtbl minor Vol. 2, 1-367 IOD ssys B minor Vol. 2, 1-373, Vol. 2, 1-374 IOD ssys E minor Vol. 2, 1-377 IOD ssys F minor Vol. 2, 1-381 IOD ssys 1 minor Vol. 2, 1-384

IOD ssys MP critical Vol. 2, 1-389 IOD ssys P critical Vol. 2, 1-389 IOD XMITn minor Vol. 2, 1-398 LCM ringing generator (LRG) critical Vol. 3, 1-645 Lns DF in a remote oscillator shelf Vol. 2, 2-3 Lns DIAG in a remote oscillator shelf Vol. 2, 2-7 Lns FAC in a remote oscillator shelf Vol. 2. 2-11 Lns HZD in a remote oscillator shelf Vol. 2, 2-15 Lns IMAJ in a remote oscillator shelf Vol. 2. 2-19 Lns IMIN in a remote oscillator shelf Vol. 2, 2-23 Lns LCARD in a remote oscillator shelf Vol. 2, 2-27 Lns LSET in a remote oscillator shelf Vol. 2, 2-31 Lns MCARD in a remote oscillator shelf Vol. 2, 2-35 Lns MSET in a remote oscillator shelf Vol. 2, 2-39 Lns NDIAG in a remote oscillator shelf Vol. 2, 2-43 Lns OMAJ critical, major, or minor Vol. 2, 2-47 Lns OMIN critical, major, or minor Vol. 2, 2-51 Lns PSDF in a remote oscillator shelf Vol. 2, 2-55 Lns PSPD in a remote oscillator shelf Vol. 2, 2-59 Lns QDIAG in a remote oscillator shelf Vol. 2, 2-63 Lns SDIAG in a remote oscillator shelf Vol. 2. 2-67 Lns TCM in a remote oscillator shelf Vol. 2, 2-71 Monitoring system maintenance PM Vol. 4, 4-139 MS CLOCK major Vol. 2, 3-8

MS CMIC minor Vol. 2, 3-11 MS DDM major Vol. 2, 3-24 MS IMSL minor Vol. 2, 3-35 MS ISTB minor Vol. 2, 3-43 MS ManB major Vol. 2, 3-57 MS MaxPt minor Vol. 2, 3-61 MS MBCD minor Vol. 2, 3-64 MS MBCH minor Vol. 2, 3-73 MS MBCL minor Vol. 2, 3-82 MS MbFb minor Vol. 2, 3-91 MS MBPT minor Vol. 2, 3-96 MS MbTp minor Vol. 2, 3-101 MS MSpair critical Vol. 2, 3-114 MS NOIMSL major Vol. 2, 3-106 MS REx minor Vol. 2, 3-117 MS RExByp minor Vol. 2, 3-121 MS RExFlt minor Vol. 2, 3-134 MS SBCD minor Vol. 2, 3-141 MS SBCH minor Vol. 2, 3-150 MS SBCL minor Vol. 2, 3-158 MS SbFb major Vol. 2, 3-168 MS SBPT minor Vol. 2, 3-173 MS SbTp major Vol. 2, 3-182 MS SPAN minor Vol. 2, 3-187

MS SysB major Vol. 2, 3-191 MS TRIstb minor Vol. 2, 3-203 MS TROOS major Vol. 2, 3-206 Net Bsy minor Vol. 2, 4-3 Net CBsy major Vol. 2, 4-9 Net CdPr critical Vol. 2, 4-22 Net CSLk minor Vol. 2, 4-27 Net ISTb minor Vol. 2, 4-40 Net Istb minor Vol. 2, 4-37 Net Istb (on a crosspoint card) minor Vol. 2, 4-46 Net Istb (on a link) minor Vol. 2, 4-51 Net Istb (on a system card) minor Vol. 2, 4-58 Net JcTr minor Vol. 2, 4-63 Net Link minor Vol. 2, 4-71 Net LOAD minor Vol. 2, 4-82 Net MBCd minor Vol. 2, 4-94 Net MBsy minor Vol. 2, 4-100 Net Pair critical Vol. 2, 4-105 Net PSLk minor Vol. 2, 4-111 Net REx minor Vol. 2, 4-122 Net RExOff minor Vol. 2, 4-128 Net RExSch minor Vol. 2, 4-131 Net SBCd major Vol. 2, 4-137 Net SBsy major Vol. 2, 4-143

Net Shlv critical Vol. 2, 4-148 Net SysB minor Vol. 2, 4-152 PM APU critical Vol. 3, 1-111 major Vol. 3, 1-134 minor Vol. 3, 1-153 PM CBSY major Vol. 3, 1-178 PM DCH major Vol. 3, 1-182 minor Vol. 3, 1-192 PM DCH (in a TMS) major Vol. 3, 1-211 PM DCH (in a TMS)) minor Vol. 3, 1-220 PM DTC critical Vol. 3, 1-229 major Vol. 3, 1-249 minor Vol. 3, 1-270 PM EIU critical Vol. 3, 1-283 major Vol. 3, 1-310 minor Vol. 3, 1-334 PM ETMS OCDL OOS major Vol. 4, 1-251 PM EXND minor Vol. 3, 1-360 PM FP CPUFlt minor Vol. 3, 1-380 critical Vol. 3, 1-365 device-related fault minor Vol. 3, 1-387 JInact minor Vol. 3, 1-402 LowMem minor Vol. 3, 1-405 major Vol. 3, 1-371 MemCor minor Vol. 3, 1-413 MemFlt minor Vol. 3, 1-419 MMThrs minor Vol. 3, 1-425 NoOvr minor Vol. 3, 1-428 NoSync minor Vol. 3, 1-434 PrtFlt minor Vol. 3, 1-440 PrtTbl minor Vol. 3, 1-445 Trap minor Vol. 3, 1-454 PM FRIU major on an LPP Vol. 3, 1-470 minor (on an SSLPP) Vol. 3, 1-517 minor on an LPP Vol. 3, 1-482 PM HLIU critical Vol. 3, 1-528

PM HSLR critical Vol. 3, 1-542 PM IPML major Vol. 3, 1-560 minor Vol. 3, 1-560 PM ISTb minor Vol. 3, 1-568 minor (in an OSNM) Vol. 3, 1-579 PM LCM critical Vol. 3, 1-585 major Vol. 3, 1-600 minor Vol. 3, 1-613 PM LCME major Vol. 3, 1-633 PM LGC critical Vol. 3, 1-656 major Vol. 3, 1-676 minor Vol. 3, 1-698 PM LIM critical Vol. 3, 1-713 major Vol. 3, 1-725 minor Vol. 3, 1-739 PM LIMF critical Vol. 3, 1-749 major Vol. 3, 1-758 PM LIMREX minor Vol. 3, 1-766 PM LIU7 critical Vol. 3, 1-767 major Vol. 3, 1-783, Vol. 4, 1-19 minor Vol. 3, 1-797, Vol. 4, 1-33 PM LMDrwr major Vol. 3, 1-816 minor Vol. 3, 1-816 PM LMPr critical Vol. 3, 1-821 PM LMRex minor Vol. 3, 1-830 PM LMRGen major Vol. 3, 1-834 minor Vol. 3, 1-834 PM LTC critical Vol. 3, 1-838 major Vol. 3, 1-858 minor Vol. 3, 1-879 PM LTCI critical Vol. 3, 1-892 major Vol. 3, 1-892 minor Vol. 3, 1-892

PM MSB6, MSB7 critical Vol. 4, 1-52 major Vol. 4, 1-52 minor Vol. 4, 1-52 PM NIU critical Vol. 4, 1-82 major Vol. 4, 1-101 minor Vol. 4, 1-116 PM PMLOAD minor Vol. 4, 1-145 PM SDM major Vol. 1, 1-5 minor Vol. 1, 1-6 PM STC major Vol. 4, 1-156 minor Vol. 4, 1-156 PM SysB major Vol. 4, 1-168 Major (in an OSNM) Vol. 4, 1-182 PM TMS critical Vol. 4, 1-209 major Vol. 4, 1-227 minor Vol. 4, 1-240 PM TPC critical Vol. 4, 1-267 PM TPC (integrated for MP and virtual for MPX-IWS) minor Vol. 4, 1-332 PM TPC (integrated for MP) critical Vol. 4, 1-292 PM TPC (virtual for MPX-IWS) major Vol. 4, 1-310 PM VLCM minor Vol. 4, 1-381 PM VPU critical Vol. 4, 1-385 major Vol. 4, 1-410 minor Vol. 4, 1-432 PM XLIU critical Vol. 4, 1-458 major Vol. 4, 1-472 minor Vol. 4, 1-485 talk battery minor Vol. 4, 1-198 Talk battery (TB) critical Vol. 4, 1-186 Trks C minor Vol. 4, 2-49

Trks CB critical, major, or minor Vol. 4, 2-55 Trks CC critical Vol. 4, 2-61 Trks CE critical, major, or minor Vol. 4, 2-69 Trks CG minor Vol. 4, 2-74 Trks CM major Vol. 4, 2-81 Trks CR C and CR M critical Vol. 4, 2-88 Trks CS critical, major, or minor Vol. 4, 2-96 Trks EX critical, major, or minor Vol. 4, 2-102 Trks GC, GM, and G critical, major, or minor Vol. 4, 2-106 Trks MB critical, major, or minor Vol. 4, 2-115 Trks MJ C and MJ M critical or major Vol. 4, 2-120 Trks MN C and MN M critical or major Vol. 4, 2-128 Trks SB critical, major, or minor Vol. 4, 2-137 Allocating a volume Vol. 4, 4-34 APPL CallP major clearing Vol. 1, 1-3

C

C7BERT Running Vol. 4, 4-211 cable, temporary fiber connecting ENET to MS Vol. 4, 4-91 connecting ENET to PM Vol. 4, 4-80 connecting MS to SSLPP Vol. 4, 4-69 card replacement common procedures Correcting a load mismatch Vol. 4, 4-103 CCS LK minor clearing Vol. 1, 2-24 CCS LKM major clearing Vol. 1, 1-7, Vol. 1, 1-11, Vol. 1, 2-52 CCS LSSM major clearing Vol. 1, 2-78 CCS PC minor clearing Vol. 1, 2-87 CCS PCC critical clearing Vol. 1, 2-91 CCS RSC critical clearing Vol. 1, 2-95 CCS RSM major clearing Vol. 1, 2-101 CCS RSSC critical clearing Vol. 1, 2-106 CCS RTRC critical clearing Vol. 1, 2-115 CCS RTRM major clearing Vol. 1, 2-124 CM AutoLd minor clearing Vol. 1, 3-3 CM CBsyMC major clearing Vol. 1, 3-6 CM ClkFlt major clearing Vol. 1, 3-14 CM CMFlt major clearing Vol. 1, 3-21 CM CMTrap major clearing Vol. 1, 3-34 CM E2A minor clearing Vol. 1, 3-37 CM EccOn minor clearing Vol. 1, 3-41 CM IMAGE critical clearing Vol. 1, 3-46

CM Image minor clearing Vol. 2, 4-125 CM JInact minor clearing Vol. 1, 3-49 CM LowMem critical clearing Vol. 1, 3-52 CM LowSpr maior clearing Vol. 1, 3-60 minor clearing Vol. 1, 3-68 CM MBsyMC major clearing Vol. 1, 3-76 CM MC Tbl minor clearing Vol. 1, 3-84 CM MemCfg minor clearing Vol. 1, 3-96 CM MemCor Maior clearing Vol. 1, 3-109 minor clearing Vol. 1, 3-115 CM MemFlt minor clearing Vol. 1, 3-118 CM MemLim minor clearing Vol. 1, 3-123 CM NoBrst minor clearing Vol. 1, 3-139 CM NoOvr minor clearing Vol. 1, 3-146 **CM NoSYNC** major clearing Vol. 1, 3-153 CM NoTOD critical clearing Vol. 1, 3-159 **CM PMCFlt** major clearing Vol. 1, 3-166 CM PMCTbl minor clearing Vol. 1, 3-176 CM PrcOpt major clearing Vol. 1, 3-185 CM RExFlt maior clearing Vol. 1, 3-188 CM RExSch minor clearing Vol. 1, 3-191 CM RExTst minor clearing Vol. 1, 3-197 CM SBsyMC major clearing Vol. 1, 3-202 CM SLMLIM major clearing Vol. 1, 3-213 CM SLMLim minor clearing Vol. 1, 3-216 CM SRAMFL major clearing Vol. 1, 3-219 CM SramFl minor clearing Vol. 1, 3-226 common procedures Activating CCS7 links Vol. 4, 4-16 Activity switch with memory match Vol. 4. 4-26 Allocating a volume Vol. 4, 4-34 cable, temporary fiber connecting ENET to MS Vol. 4, 4-91 connecting ENET to PM Vol. 4, 4-80 connecting MS to SSLPP Vol. 4, 4-69 critical Clearing PM C-side faults Vol. 4, 4-47 Deallocating a volume Vol. 4, 4-118 Failure to switch clock mastership Vol. 4, 4-122

LCM

Clearing ringing generator faults Vol. 4, 4-63 LME frame checking the fuse unit Vol. 4, 4-38 major Clearing PM C-side faults Vol. 4, 4-47 minor Clearing PM C-side faults Vol. 4, 4-47 PM Loading Vol. 4, 4-131 Resetting a volume Vol. 4, 4-150 Restoring LIM unit cross links Vol. 4, 4-43 RLM frame checking the fuse unit Vol. 4, 4-38 XSG moving to a spare XLIU Vol. 4, 4-144 critical Clearing PM C-side faults Vol. 4, 4-47

D

Deallocating a volume Vol. 4, 4-118

Ε

E911_LDT_CRITICAL critical clearing Vol. 1, 4-67 E911_LDT_MAJOR major clearing Vol. 1, 4-71 Ext CPPOOL critical clearing Vol. 1, 4-42 major clearing Vol. 1, 4-47 Ext Crit critical clearing Vol. 1, 4-3 EXT E911_ALI_MAJOR Major clearing Vol. 1, 4-57 EXT E911_ALI_MINOR Minor clearing Vol. 1, 4-62 EXT E911_PSAP_OFFHK minor clearing Vol. 1, 4-93

EXT E911_RCER minor alarm clearing Vol. 1, 4-105 EXT E911_RCER_MAJOR Major clearing Vol. 1, 4-100 EXT E911 SRDB MEMORY Minor clearing Vol. 1, 4-110 Ext FSP APC cabinet major clearing Vol. 1, 4-128 CCC frame major clearing Vol. 1, 4-137 CDSN cabinet major clearing Vol. 1, 4-201 CDSN cabinet with MSP shelf major clearing Vol. 1, 4-146 CIOE cabinet major clearing Vol. 1, 4-219 CIOE cabinet with MSP shelf major clearing Vol. 1, 4-153 CIPE cabinet with MSP shelf major clearing Vol. 1, 4-160 CISM, CMTA and CTME cabinet with an MSP shelf major clearing Vol. 1, 4-167 CPDC cabinet major clearing Vol. 1, 4-174 DCE frame major clearing Vol. 1, 4-182 DPCC cabinet major clearing Vol. 1, 4-191 DSNE frame major clearing Vol. 1, 4-201 DTE frame major clearing Vol. 1, 4-210 IDTE frame major clearing Vol. 1, 4-210 IOE frame major clearing Vol. 1, 4-219 LPP cabinet major clearing Vol. 1, 4-242 major clearing Vol. 1, 4-125 MEX frame major clearing Vol. 1, 4-250

MS7E frame major clearing Vol. 1, 4-265 NET0, NET1 (circuit breakers and fuses) major clearing Vol. 1, 4-274 NET0, NET1 frame (fuses only) major clearing Vol. 1, 4-283 NETC frame major clearing Vol. 1, 4-292 PDC frame major clearing Vol. 1, 4-301 Ext Maj major clearing Vol. 1, 4-12 Ext Min minor clearing Vol. 1, 4-34

F

Failure to switch clock mastership Vol. 4, 4-122

IOD DDUOS on an IOM major or minor clearing Vol. 2, 1-178 IOD DEVBnn critical, major, or minor clearing Vol. 2, 1-76 IOD DMNTnn minor clearing Vol. 2, 1-79 IOD HOLDnn minor clearing Vol. 2, 1-85 IOD ITOC critical clearing Vol. 2, 1-88 minor clearing Vol. 2, 1-95 IOD KEEPn minor clearing Vol. 2, 1-103 IOD MPCLNK minor clearing Vol. 2, 1-106

IOD MTDOS in an IOC minor clearing Vol. 2, 1-235 IOD nCKEr minor clearing Vol. 2, 1-126 IOD nCKOS major or minor clearing Vol. 2, 1-142 IOD nDDUOS major or minor clearing Vol. 2, 1-164 IOD nDPCOS minor clearing Vol. 2, 1-191 IOD nIOCOS major or minor clearing Vol. 2, 1-196 IOD nMPCOS major or minor clearing Vol. 2, 1-211 IOD nMPCOS on an IOM major or minor clearing Vol. 2, 1-222 IOD nnAMA critical, major, or minor clearing Vol. 2, 1-260 IOD nnJF critical, major, or minor clearing Vol. 2, 1-264 IOD nnOM critical, major, or minor clearing Vol. 2, 1-268 IOD NO AMA on device type DISK critical clearing Vol. 2, 1-272 IOD NO AMA on device type TAPE critical clearing Vol. 2, 1-281 IOD NO ssys on device type DISK critical, major, or minor clearing Vol. 2, 1-295 IOD NO ssys on device type TAPE critical clearing Vol. 2, 1-304 IOD nSVC critical clearing Vol. 2, 1-317

IOD PnnVnn minor clearing Vol. 2, 1-323 IOD POOLnn minor clearing Vol. 2, 1-333 IOD SENDn minor clearing Vol. 2, 1-344 IOD SLMbsy maior clearing Vol. 2, 1-349 minor clearing Vol. 2, 1-355 IOD SLMoff minor clearing Vol. 2, 1-361 **IOD SLMtbl** minor clearing Vol. 2, 1-367 IOD ssys B minor clearing Vol. 2, 1-373, Vol. 2, 1-374 IOD ssys E minor clearing Vol. 2, 1-377 IOD ssys F minor clearing Vol. 2, 1-381 IOD ssys 1 minor clearing Vol. 2, 1-384 IOD ssys MP critical clearing Vol. 2, 1-389 IOD ssys P critical clearing Vol. 2, 1-389 IOD XMITn minor clearing Vol. 2, 1-398

L LCM

Clearing ringing generator faults Vol. 4, 4-63 LCM ringing generator (LRG) critical clearing Vol. 3, 1-645 LME frame checking the fuse unit Vol. 4, 4-38 Lns DF in a remote oscillator shelf clearing Vol. 2, 2-3 Lns DIAG in a remote oscillator shelf clearing Vol. 2, 2-7 Lns FAC in a remote oscillator shelf clearing Vol. 2, 2-11 Lns HZD in a remote oscillator shelf clearing Vol. 2, 2-15 Lns IMAJ in a remote oscillator shelf clearing Vol. 2, 2-19 Lns IMIN in a remote oscillator shelf clearing Vol. 2, 2-23 Lns LCARD in a remote oscillator shelf clearing Vol. 2, 2-27 Lns LSET in a remote oscillator shelf clearing Vol. 2, 2-31 Lns MCARD in a remote oscillator shelf clearing Vol. 2, 2-35 Lns MSET in a remote oscillator shelf clearing Vol. 2, 2-39 Lns NDIAG in a remote oscillator shelf clearing Vol. 2, 2-43 Lns OMAJ critical, major, or minor clearing Vol. 2, 2-47 Lns OMIN critical, major, or minor clearing Vol. 2, 2-51 Lns PSDF in a remote oscillator shelf clearing Vol. 2, 2-55 Lns PSPD in a remote oscillator shelf clearing Vol. 2, 2-59

Lns QDIAG in a remote oscillator shelf clearing Vol. 2, 2-63 Lns SDIAG in a remote oscillator shelf clearing Vol. 2, 2-67 Lns TCM in a remote oscillator shelf clearing Vol. 2, 2-71

Μ

major Clearing PM C-side faults Vol. 4, 4-47 minor Clearing PM C-side faults Vol. 4, 4-47 Monitoring system maintenance PM clearing Vol. 4, 4-139 MS CLOCK major clearing Vol. 2, 3-8 MS CMIC minor clearing Vol. 2, 3-11 MS DDM major clearing Vol. 2, 3-24 MS IMSL minor clearing Vol. 2, 3-35 MS ISTB minor clearing Vol. 2, 3-43 MS ManB major clearing Vol. 2, 3-57 MS MaxPt minor clearing Vol. 2, 3-61 MS MBCD minor clearing Vol. 2, 3-64 MS MBCH minor clearing Vol. 2, 3-73 MS MBCL minor clearing Vol. 2, 3-82

MS MbFb minor clearing Vol. 2, 3-91 MS MBPT minor clearing Vol. 2, 3-96 MS MbTp minor clearing Vol. 2, 3-101 MS MSpair critical clearing Vol. 2, 3-114 MS NOIMSL major clearing Vol. 2, 3-106 MS REx minor clearing Vol. 2, 3-117 MS RExByp minor clearing Vol. 2, 3-121 MS RExFlt minor clearing Vol. 2, 3-134 MS SBCD minor clearing Vol. 2, 3-141 MS SBCH minor clearing Vol. 2, 3-150 MS SBCL minor clearing Vol. 2, 3-158 MS SbFb major clearing Vol. 2, 3-168 MS SBPT minor clearing Vol. 2, 3-173 MS SbTp major clearing Vol. 2, 3-182 MS SPAN minor clearing Vol. 2, 3-187 MS SysB major clearing Vol. 2, 3-191

MS TRIstb minor clearing Vol. 2, 3-203 MS TROOS major clearing Vol. 2, 3-206

Ν

Net Bsy minor clearing Vol. 2, 4-3 Net CBsy major clearing Vol. 2, 4-9 Net CdPr critical clearing Vol. 2, 4-22 Net CSLk minor clearing Vol. 2, 4-27 Net ISTb minor clearing Vol. 2, 4-40 Net Istb minor clearing Vol. 2, 4-37 Net Istb (on a crosspoint card) minor clearing Vol. 2, 4-46 Net Istb (on a link) minor clearing Vol. 2, 4-51 Net Istb (on a system card) minor clearing Vol. 2, 4-58 Net JcTr minor clearing Vol. 2, 4-63 Net Link minor clearing Vol. 2, 4-71 Net LOAD minor clearing Vol. 2, 4-82 Net MBCd minor clearing Vol. 2, 4-94

297-8021-543 Standard 14.02 May 2001

Net MBsy minor clearing Vol. 2, 4-100 Net Pair critical clearing Vol. 2, 4-105 Net PSLk minor clearing Vol. 2, 4-111 Net REx minor clearing Vol. 2, 4-122 Net RExOff minor clearing Vol. 2, 4-128 Net RExSch minor clearing Vol. 2, 4-131 Net SBCd major clearing Vol. 2, 4-137 Net SBsy major clearing Vol. 2, 4-143 Net Shlv critical clearing Vol. 2, 4-148 Net SysB minor clearing Vol. 2, 4-152

Ρ

PM Loading Vol. 4, 4-131 PM APU critical clearing Vol. 3, 1-111 major clearing Vol. 3, 1-134 minor clearing Vol. 3, 1-153 PM CBSY major clearing Vol. 3, 1-178 PM DCH major clearing Vol. 3, 1-182

minor clearing Vol. 3, 1-192 PM DCH (in a TMS) major clearing Vol. 3, 1-211 minor clearing Vol. 3, 1-220 PM DTC critical clearing Vol. 3, 1-229 major clearing Vol. 3, 1-249 minor clearing Vol. 3, 1-270 PM EIU critical clearing Vol. 3, 1-283 major clearing Vol. 3, 1-310 minor clearing Vol. 3, 1-334 PM ETMS_OCDL_OOS major clearing Vol. 4, 1-251 PM EXND minor clearing Vol. 3, 1-360 PM FP **CPUFlt** minor clearing Vol. 3, 1-380 critical clearing Vol. 3, 1-365 device-related fault minor clearing Vol. 3, 1-387 JInact minor clearing Vol. 3, 1-402 LowMem minor clearing Vol. 3, 1-405 major clearing Vol. 3, 1-371 MemCor minor clearing Vol. 3, 1-413 MemFlt minor clearing Vol. 3, 1-419 MMThrs minor clearing Vol. 3, 1-425 NoOvr minor clearing Vol. 3, 1-428

NoSync minor clearing Vol. 3, 1-434 PrtFlt minor clearing Vol. 3, 1-440 PrtTbl minor clearing Vol. 3, 1-445 Trap minor clearing Vol. 3, 1-454 PM FRIU major on an LPP clearing Vol. 3, 1-470 minor (on an SSLPP) clearing Vol. 3, 1-517 minor on an LPP clearing Vol. 3, 1-482 PM HLIU critical clearing Vol. 3, 1-528 PM HSLR critical clearing Vol. 3, 1-542 PM IPML major clearing Vol. 3, 1-560 minor clearing Vol. 3, 1-560 PM ISTb minor clearing Vol. 3, 1-568 minor (in an OSNM) clearing Vol. 3, 1-579 PM LCM critical clearing Vol. 3, 1-585 major clearing Vol. 3, 1-600 minor clearing Vol. 3, 1-613 PM LCME major clearing Vol. 3, 1-633 PM LGC critical clearing Vol. 3, 1-656 major clearing Vol. 3, 1-676 minor clearing Vol. 3, 1-698

PM LIM critical clearing Vol. 3, 1-713 major clearing Vol. 3, 1-725 minor clearing Vol. 3, 1-739 PM LIMF critical clearing Vol. 3, 1-749 major clearing Vol. 3, 1-758 PM LIMREX minor clearing Vol. 3, 1-766 PM LIU7 critical clearing Vol. 3, 1-767 major clearing Vol. 3, 1-783, Vol. 4, 1-19 minor clearing Vol. 3, 1-797, Vol. 4, 1-33 PM LMDrwr major clearing Vol. 3, 1-816 minor clearing Vol. 3, 1-816 PM LMPr critical clearing Vol. 3, 1-821 PM LMRex minor clearing Vol. 3, 1-830 PM LMRGen major clearing Vol. 3, 1-834 minor clearing Vol. 3, 1-834 PM LTC critical clearing Vol. 3, 1-838 major clearing Vol. 3, 1-858 minor clearing Vol. 3, 1-879 PM LTCI critical clearing Vol. 3, 1-892

major clearing Vol. 3, 1-892 minor clearing Vol. 3, 1-892 PM MSB6, MSB7 critical clearing Vol. 4, 1-52 major clearing Vol. 4, 1-52 minor clearing Vol. 4, 1-52 PM NIU critical clearing Vol. 4, 1-82 major clearing Vol. 4, 1-101 minor clearing Vol. 4, 1-116 PM PMLOAD minor clearing Vol. 4, 1-145 PM SDM major clearing Vol. 1, 1-5 minor clearing Vol. 1, 1-6 PM STC major clearing Vol. 4, 1-156 minor clearing Vol. 4, 1-156 PM SysB major clearing Vol. 4, 1-168 Major (in an OSNM) clearing Vol. 4, 1-182 PM TMS critical clearing Vol. 4, 1-209 major clearing Vol. 4, 1-227 minor clearing Vol. 4, 1-240 PM TPC critical clearing Vol. 4, 1-267

PM TPC (integrated for MP and virtual for MPX-IWS) minor clearing Vol. 4, 1-332 PM TPC (integrated for MP) critical clearing Vol. 4, 1-292 PM TPC (virtual for MPX-IWS) major clearing Vol. 4, 1-310 PM VLCM minor clearing Vol. 4, 1-381 PM VPU critical clearing Vol. 4, 1-385 major clearing Vol. 4, 1-410 minor clearing Vol. 4, 1-432 PM XLIU critical clearing Vol. 4, 1-458 major clearing Vol. 4, 1-472 minor clearing Vol. 4, 1-485

R

Resetting a volume Vol. 4, 4-150 Restoring LIM unit cross links Vol. 4, 4-43 RLM frame checking the fuse unit Vol. 4, 4-38

Т

talk battery minor clearing Vol. 4, 1-198 Talk battery (TB) critical clearing Vol. 4, 1-186 Trks C minor clearing Vol. 4, 2-49 Trks CB critical, major, or minor clearing Vol. 4, 2-55 Trks CC critical clearing Vol. 4, 2-61 Trks CE critical, major, or minor clearing Vol. 4, 2-69 Trks CG minor clearing Vol. 4, 2-74 Trks CM major clearing Vol. 4, 2-81 Trks CR C and CR M critical clearing Vol. 4, 2-88 Trks CS critical, major, or minor clearing Vol. 4, 2-96 Trks EX critical, major, or minor clearing Vol. 4, 2-102 Trks GC, GM, and G critical, major, or minor clearing Vol. 4, 2-106 Trks MB critical, major, or minor clearing Vol. 4, 2-115 Trks MJ C and MJ M critical or major clearing Vol. 4, 2-120 Trks MN C and MN M critical or major clearing Vol. 4, 2-128 Trks SB critical, major, or minor clearing Vol. 4, 2-137

X

XSG moving to a spare XLIU Vol. 4, 4-144
DMS-100 Family North American DMS-100

Alarm Clearing and Performance Monitoring Procedures Volume 1 of 4

Product Documentation - Dept. 3423 Nortel Networks P.O. Box 13010 RTP, NC 27709-3010 Telephone: 1-877-662-5669 email: cits@nortelnetworks.com

Copyright © 1996-2001 Nortel Networks, All Rights Reserved

NORTEL NETWORKS CONFIDENTIAL: The

information contained herein is the property of Nortel Networks and is strictly confidential. Except as expressly authorized in writing by Nortel Networks, the holder shall keep all information contained herein confidential, shall disclose the information only to its employees with a need to know, and shall protect the information, in whole or in part, from disclosure and dissemination to third parties with the same degree of care it uses to protect its own confidential information, but with no less than reasonable care. Except as expressly authorized in writing by Nortel Networks, the holder is granted no rights to use the information contained herein.

Information is subject to change without notice. Nortel Networks reserves the right to make changes in design or components as progress in engineering and manufacturing may warrant. Changes or modification to the DMS-100 without the express consent of Nortel Networks may void its warranty and void the user's authority to operate the equipment.

Nortel Networks, the Nortel Networks logo, the Globemark, How the World Shares Ideas, Unified Networks, DMS, DMS-100, Helmsman, MAP, Meridian, Nortel, Northern Telecom, NT, Supernode, and TOPS are trademarks of Nortel Networks.

Publication number: 297-8021-543 Product release: LET0015 and up Document release: Standard 14.02 Date: May 2001 Printed in the United States of America

