

297-1001-300

DMS-100 Family

Basic Administration Procedures

BASE10 and up Standard 03.08 May 2000

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Basic Administration Procedures

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About this document

This document provides information on how to set up the operational measurement (OM) system for the DMS-100 switch. Switch administrators can use this document.

How to check the version and issue of this document

Numbers indicate the version and issue of the document. An example of these numbers is 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 released in the *same* software release cycle. For example, the second release of a document in the same software release cycle is 01.02.

The release information is in *Product Documentation Directory*, 297-8991-001. Check the release information to determine the version of this document that applies to the software in your office, Check the release information to determine the arrangement of documentation for your product.

References in this document

This document refers to the following documents:

Table 1

Document	Title
297-1001-318	<p>Service Problem Analysis Administration Guide</p> <p>Provides information on analysis of service report and use data, evaluation of switch performance, identification of service problem location, and determination or coordination of corrective action. The manager or administrator in groups like facilities administration, network maintenance, network switch administration, or line support can use this document.</p>
297-1001-345	<p>Device Independent Recording Package (DIRP) Administration Guide</p> <p>Documents DIRP for administrative users.</p>
297-1001-360	<p>Basic Translations Tools Guide</p> <p>Provides basic information on table editor (TE), pending order (PO) file, TRAVER, and SERVORD. This document is in a format for novices.</p>
PLN-8991-104	<p>Provisioning Manual</p> <p>Describes the rules and guidelines for how to provision the DMS-100 family switching machines, features, and components.</p>
297-8991-824	<p>DMS-100 Family Command Reference Manual</p> <p>Documents commands that you can use or access directly from the Maintenance and Administration position (MAP).</p>
297-yyyy-350/351	<p>Translations Guide/Customer Data Schema Reference Manual</p> <p>This document describes procedures that explain how to enter data for the DMS-100 switch. This document contains descriptions of DMS-100 data designs. Data schema is a series of instructions for the switching software to program DMS-100 switching equipment. The switching software provides functional tables that contain a series of fields and subfields.</p>

Table 1

Document	Title
297-8xxx-814	<p>Operational Measurements Reference Manual</p> <p>This document contains descriptions of DMS-100 operational measurement (OM) groups. Separate sections describe each OM group. This document arranges OM groups in alphabetical order according to group name. Each module includes a group description, register pegging flowcharts, and register descriptions.</p>
297-8xxx-855	<p>Office Parameters Reference Manual</p> <p>Contains descriptions of office parameters in the DMS-100 switch. This document contains guidelines for operating company personnel responsible for the administration of office parameters.</p>

What precautionary messages mean

The types of precautionary messages used in Northern Telecom (Nortel) documents include attention boxes, and danger, warning, and caution messages.

An attention box identifies information that is necessary for the correct 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 necessary for the performance of a task

ATTENTION

Make sure the unused DS-3 ports are deprovisioned before a DS-1/VT Mapper is installed. If the unused DS-3 ports are not deprovisioned, the DS-1 traffic will not be carried through the DS-1/VT Mapper. This condition can occur even though the DS-1/VT Mapper is correctly provisioned.

DANGER

Possibility of personal injury



DANGER

Do not open the front panel of the inverter unless you removed fuses F1, F2, and F3. The inverter contains high-voltage lines. Until you remove the fuses, the high-voltage lines remain active. This condition can cause the risk of electrocution. Do not open the front panel of the inverter unless you removed fuses F1, F2, and F3.

WARNING

Possibility of equipment damage



DANGER

Damage to the backplane connector pins

Align the card before you seat the card. If you align the card, the backplane connector pins do not bend. Use your thumbs to align the card with the connectors. 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 you remove the card from the unit of the peripheral module, confirm that the card the unit is inactive. Removal of a card from the active unit causes a loss of subscriber service.

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 you enter at a MAP terminal appear in uppercase letters:

```
>BSY CTRL
```

Variables

Variables appear in lowercase letters:

```
>BSY CTRL ctrl_no
```

You must enter the letters or numbers that the variable represents. A list that follows the command string explains each variable.

Responses

Responses that correspond to the MAP display and appear in a different type:

Example of a MAP response

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

The following excerpt from a procedure shows the command syntax used in this document:

At the MAP terminal

- 1 To manually busy the CTRL on the inactive plane, type

```
>BSY CTRL ctrl_no
```

and press the Enter key.

where

ctrl_no

is the number of the CTRL (0 or 1)

Example of a MAP response:

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

1 Understanding the operational measurement system

Operational measurements (OM) provide information on how to load the components of the DMS switch. The OMs provide information on the performance of these components. Periodic scans of switch parts and activities allow operating company personnel to gather OM information. Specified parameters define the collection, storage, and transmission of data. Operating company personnel define these parameters.

The OMs provide the following types of data:

- event counts. These peg counts are registers that increase each time an event occurs.
- usage counts. These counts scan or sample equipment at equal intervals. These counts increase registers when the scan detects equipment in a specified state.

The OM information can appear at a terminal or printer. The system can transmit the information to a recording device for additional processing. To request data display at a specified output device, you can enter user commands. You can enter data in tables to schedule the output of the data in advance.

Operational measurement application

The OM information is a switch administration and maintenance tool. You can use OMs for specified switch administration activities. The following paragraphs describe these activities.

Traffic provisioning

The OMs collect information on how to load equipment. The OMs allow the calculation of the load process for each unit. A unit is a mainstation or a trunk. This data forecasts future equipment loading and determines future equipment requirements.

Service monitoring

The OMs can indicate switch service levels. If reduction in service occurs, the analysis of additional data helps to determine the corrective action. Corrective action can include equipment repair, balance again, or support. Corrective action can occur in near-real time. Network management activities are an example of corrective action that occurs in near-real time. Corrective action can occur over a long period of time.

Division of revenue

Operational measurements help operating company personnel decide how to separate traffic. The division of traffic volumes to different switch components allows the best division of revenues to occur.

Feature activation

Specified measurements provide information on how often features are active in the switch. Operating companies or subscribers can use this information to determine the requirement for additional equipment or capabilities.

Subscriber line usage studies

You can perform studies on the use of each line to assess the requirement for additional subscriber equipment.

Problem identification

The OMs display the results of machine diagnostic and testing activity. This information identifies possible problem areas in the switch.

OM terms

This section provides a summary of operational measurements. This section defines specified terms the OM system uses.

Register

A register is a memory location that stores counts. Each register has a name that contains a maximum of eight alphanumeric characters. The TFANPEG is an example of this type of register.

The following categories of registers are available:

- Peg register increases each time the event that associates with the register occurs. Most registers in the switch are peg registers.
- Usage registers increase when a scan or sample indicates that an item or resource is in a specified state. The in use state is an example of a specified state.

Group

An OM group is a logical collection that contains a maximum of 32 related OM registers. Each OM register can be in one OM group. Another name for

the registers of an OM group is fields. The software defines the OM groups and the fields. Different software versions and releases contain different sets of OM groups.

The OM group names are like field names. The OM group names contain a maximum of eight alphanumeric characters. The name LOGS is an example of an OM group name. To request registers for most OM reporting mechanisms and commands, specify the OM group to which the registers belong.

Multiple tuple OM group

The registers of many OM groups occur more than one time. Each time the register occurs, the register provides data for each agent or switch part. For example, the OM group TRK provides event counts and use information for each trunk group that is present. Each data instance is like a data schema table. Each data instance is a tuple. A tuple number identifies each tuple. Each tuple can have a key and/or info field.

Key field

A key is an optional field that associates with a tuple of an OM group. Keys normally identify the switch part that associates with the tuples of an OM group. For example, the OM group TRK has a key that identifies the trunk group with which the tuple associates. The keys of an OM group are normally different. Specified keys can be the same. The tuple numbers of an OM group are always different.

Info field

An information field is an optional item that associates with tuples of an OM group. An information field can help identify a tuple. This field can provide data to process or examine measurements. The information field of OM group TRK indicates the following information:

- the direction of the trunk group
- the total number of trunk members
- the number of trunk members available for service

Like the key field, the information field is optional. Specified OM groups can have a key and an information field. Specified OM groups can have a key or an information field. Specified OM groups do not have a key or an information field.

Class

An OM class is a collection of OM groups. An OM class contains measurements that the system collects during a specified time interval. This interval is the reporting interval. A switch can have a maximum of 32 OM classes. To provide measurements for different reporting intervals, OM groups can belong to more than one class.

An OM group can belong to more than one class. Each class maintains a set of the registers of the OM group. One of the fields of OM group LOGS is LOSTREC. The LOSTREC field increases when a log buffer overflow causes the system to lose a log report. The system maintains a separate count in field LOSTREC for each class to which that OM group LOGS belongs. This count reflects the logs the system lost during the reporting interval for the class.

The OM class names are like group and field names. These class names contain a maximum of eight alphanumeric characters.

Transfer period

The OM information must apply to a specified and consistent time period. To comply with this requirement, the system collects OM data during a specified time interval. After this interval, the system stores the collected data in a static state in holding registers. The collected data is available for reports or additional processing. The fixed time interval is the transfer period. The transfer period available in each office is 5, 15, or 30 min. The alignment of the transfer period is always to the hour. The OM reporting intervals are multiples of the transfer period.

Active and Holding classes, and OM transfer

Two OM classes are always present. These classes are Active and Holding. These classes contain the OM groups that are correct in a specified software load.

The software applications that run in the switch increase the registers in the Active class. For example, log buffer overflow can prevent the output of a log. If this condition occurs, the log system increases register LOSTREC of OM group LOGS in the Active class. This condition in other classes does not affect register LOSTREC.

At the end of each transfer period, the counts in Active class registers transfer to Holding class registers. The software applications clear (zero) the Active class registers to prepare the registers to receive pegs in the next transfer period. The Active class registers always contain counts for the current transfer period. The Holding class registers always contain counts from the previous transfer period.

After transfer to the Holding class registers, the data does not change for the duration of the transfer period. Another name for the transfer period is the holding period. The Active and Holding measurement classes appear in the Measurement classes section later in this chapter.

Accumulation classes

A maximum of 30 Accumulation (accumulating register) classes can be present in addition to the Active and Holding classes. The operating company

can configure the accumulation classes. The operating company configures the classes according to parameters like the reporting interval, and the OM groups that the accumulation class contains. The system can reserve accumulation classes for OM reporting mechanisms like the Engineering and Administrative Data Acquisition System (EADAS).

The data in Accumulation class registers is available in Holding class registers. The system copies or adds the contents of Holding class registers to Accumulation class registers at the end of each transfer period. This process is accumulation. Accumulation classes appear in the Measurement classes section later in this chapter.

Register precision

Registers in the Active and Holding classes are always 16 bit registers. These registers are single precision registers. These registers have a capacity of 65 535 or $(2^{16} - 1)$ counts.

To control the capacity of Accumulating registers, operating company personnel must set the register precision to single or double. If operating company personnel expect the accumulating register count to exceed 65 535 counts, personnel must set the register precision to double. The capacity of double precision registers is 4 294 967 295 or $2^{32} - 1$ counts.

Extension register

Nortel (Northern Telecom) provides extension registers if the operating company expects the count of a register in an Active class to exceed 65 535 in a transfer period. The maximum duration of a transfer period is 30 m. When the base register count in a transfer period exceeds 65 535, the extension register increases by one count. The active register increases from zero again. The counts from the active and extension registers must be available to determine the measurement value. Refer to the following figure for the calculation of the total register count.

$$\begin{aligned} \text{total register count} &= (\text{extension register count}) \times (65\,536) \\ &+ \text{base register count} \end{aligned}$$

For example, the TFANPEG2 register is the extension register for TFANPEG. If the count in an active register, like TFANPEG, is 19 and the associated extension register is 5, the count is

$$(5 \times 65\,536) + 19 \text{ or } 327\,699$$

The use of double precision accumulation classes does not remove the requirement for extension registers. When Accumulation class registers have double precision assigned, Active and Holding class registers in the OM group

remain single precision. If Active class register counts exceed 65 535 during a transfer period, the calculation of accurate counts requires extension registers. The behavior and limits of extension registers appears in Figure 1-3.

Scan rate

The system scans items and resources at equal intervals. Usage registers increase when the system detects that an item or resource is in a specified state. The system performs the scanning process as a background task. The system uses the following scanning intervals to collect use data:

- the slow rate provides use data. Scans that occur at an interval of 100 s determine the data.
- the fast scan rate provides use data. Scans that occur at intervals of 10 s determine the data.

Note: The slow sample counts do not always equal ten times the fast sample counts. Processes that require higher priority can delay OM processes and cause the loss of fast samples. This condition can occur in an accumulation class with a long interval.

OM reports

The OMSHOW command causes the system to print a report for OM group TRK. This report appears in the following example. The OM terms described earlier in this document appear in the following example.

Figure 1-1 TRK OM group information

```
>omshow TRK active

TRK (GROUP name)

CLASS: ACTIVE (CLASS name)
START: 1997/11/18 10:00:00 TUE; STOP: 1984/04/12 10:03:01
TUE
SLOWSAMPLES          2 ; FASTSAMPLES          18 ;
```

```
KEY (COMMON_LANGUAGE_NAME)
INFO (OM2TRKINFO)
  INCATOT      PRERTEAB      INFAIL      NATTEMPT
NOVFLATB      GLARE        OUTFAIL      DEFILDCA
  DREU         PREU         TRU         SBU
  MBU         OUTMTCHF      CONNECT     TANDEM
  AOF         ANF         TOTU
```

Note: This section identifies the location of the information and register fields for the report. In this example, the section contains the following information:

KEY The report contains information for many trunk groups. The identification requires a key field. The common language location identifier for the trunk group is the method to identify the trunk.

INFO The information fields that associate with each trunk group.

```
12 OTAWAON23CGO
   OG      2      2
   0          0          0          0
   0          0          0          0
   0          0          0          26
   0          0          0          0
   0          0          26          0
```

```
13 TOROON45CG0
   OG      3      3
   0          0          0          0
   0          0          0          0
   0          0          13         26
   0          0          0          0
   0          0          39          0
```

Note: The previous report contains actual OM data. These data correspond to the register fields that the beginning of the report identifies. These data contain key, information, and register fields.

Measurement classes

The OM information must relate to a specified and consistent time period. The measurement class determines the period during which the system collects measurements. The measurement class types are Active, Holding, History, and Accumulating. These measurement classes appear in the following paragraphs.

Active

The Active class contains the OM groups that are correct for the software load. Another name for Active class registers is active registers. Software applications that run in the DMS switch update these registers. Software applications include call processing. The data in active registers is for the current transfer period. You can set the transfer period in each office to 5, 15, or 30 m. For additional information, refer to Chapter 2, “Defining operational measurement classes”.

Computing module (CM) software increases most OM group registers. Software applications update the counts in active registers for these OM groups. Software applications perform these updates during the transfer period. Use the OMSHOW command to retrieve the current register counts at any time.

Many OM groups track events in peripheral modules (PM). To reduce messaging overhead, the memory of the PM normally contains the counts. The system sends the counts to the CM to update the affected Active class registers. The active CM register counts for OM groups that associate with the PMs are not always current. These counts are not always current because the PM memory stores the first counts. The frequency of updates to active registers in the CM depends on the transfer period. The frequency depends on the communication mechanism that the system uses to send data to the CM.

Most peripherals use the Distributed Data Manager (DDM) to send OM data to the CM. With DDM, the update of the active registers occurs during the last minute of the transfer period. You can use the OMSHOW command to view the active register counts. You can view the active register counts during the last minute of the transfer period. The active register counts are zero (0) before and after the last minute of the transfer period. For example, an update to the active registers for the 30 min transfer period can occur 14 min after each transfer period starts.

The SOS Interprocess Communication (SIPC) is another mechanism that transfers OM data from PMs. The SIPC requires the SuperNode OM infrastructure (SOS) to transfer OM data in software releases. The SIPC must transfer OM data from file processor (FP) and application processor (AP) PMs.

The system uses SOS in service control point (SCP) loads and loads that contain DMS-250 software. The SIPC allows you to use the OMSHOW command to view the active register data at any time.

Counts remain in Active class registers until the end of the transfer period. At the end of the transfer period, the system transfers the counts to Holding class registers and clears the Active class registers.

Holding

Like the Active class, holding class registers contain data for OM groups that are correct for the software load. At the end of each transfer period, the system copies the contents of the active registers to the holding registers. The system stores the data in the holding registers in a static state until the next active to holding register data transfer. Refer to Figure 1-3, "Association of register, extension register, and class," on page 1-12 for information on this procedure. The buffering behavior of the holding registers isolates the output processes from active OM data collection. This buffering provides one transfer time period for the holding register data. The system includes the holding register data in reports. Accumulation classes collect holding register data.

Accumulating

You can enter a maximum of 30 accumulation classes in the switch. Operating companies can control accumulation classes. Operating companies can control the following Accumulation class parameters:

- the accumulation class name
- the accumulation interval of a maximum of one month
- the accumulation class precision, single or double
- the OM groups in the accumulation class
- the fields and/or tuples of specified OM groups that the class contains

Accumulation class parameters can collect data over time intervals longer than the transfer period. Accumulation class parameters can select sets of OM groups for data output with different reporting mechanisms.

The system copies or adds the contents of holding registers to accumulating registers after each data transfer from active to holding registers. An accumulation class can have a reporting interval of one hour. The interval can start and end on the hour. The transfer period can have a duration of 15 min.

The data transfer from active to holding registers can occur 15 min after the start of the hour. Accumulation follows the transfer. The system can copy the holding registers for the OM groups assigned to the accumulation class to accumulating registers. Fifteen minutes after the start of the hour, the

accumulating registers can contain data collected during the first quarter of the hour.

Thirty minutes after the start of the hour, another OM data transfer/accumulation occurs. The system adds the contents of the holding registers for the OM groups assigned to the accumulation class to the accumulating registers. The same OM data transfer/accumulation occurs 45 min after the start and end of the hour.

Four OM data transfers/accumulations occur in 1 h. After 1 h, the accumulating registers contain counts collected during the previous hour. The accumulation period is complete. The system can send the accumulated data to output devices. The accumulating register counts are static for one transfer period. In this example, the transfer period is 15 min. After 15 min, the contents of the holding registers overwrite the accumulating register counts. The cycle repeats.

The accumulation process provides the same treatment to each register. The accumulation process copies or adds data in a holding class register to the associated accumulation class register. Overflow of a base register during accumulation does not cause an increase in the associated extension register. The data in registers that store high water marks accumulates. The data in these registers do not overflow to an extension register during accumulation.

History

When parameter OMHISTORYON in table OFCOPT is set to Y, the system overrides the parameter OMXFR in table OFCENG. The system starts an OM transfer period of 5 min. The setting of the OMHISTORYON parameter allows the use of History classes.

A History class is a special type of accumulation class. Normal accumulation classes store measurements for a single, fixed time interval. History classes allow the operating company to collect OM data in a series of snapshots. The operating company can select the time interval for the snapshots and the number of snapshots for each History class entered. The operating company can set the time interval for snapshots to 5, 10, 15, 20, or 30 min. A maximum of six snapshots can occur in one series. You can create a History class that provides four data segments of 15 min.

You can use History classes to examine the direction of change in the short time interval data. The system enters data in the History class register in cycles. When the system adds current data, the system removes the least current data.

You can enter a maximum of 30 accumulating classes in the switch. You can reserve specified accumulating classes for OM reporting mechanisms like EADAS. The operating company can designate the classes that remain as Accumulation or History. Each class has different data collection intervals.

Figure 1-2 OM classes

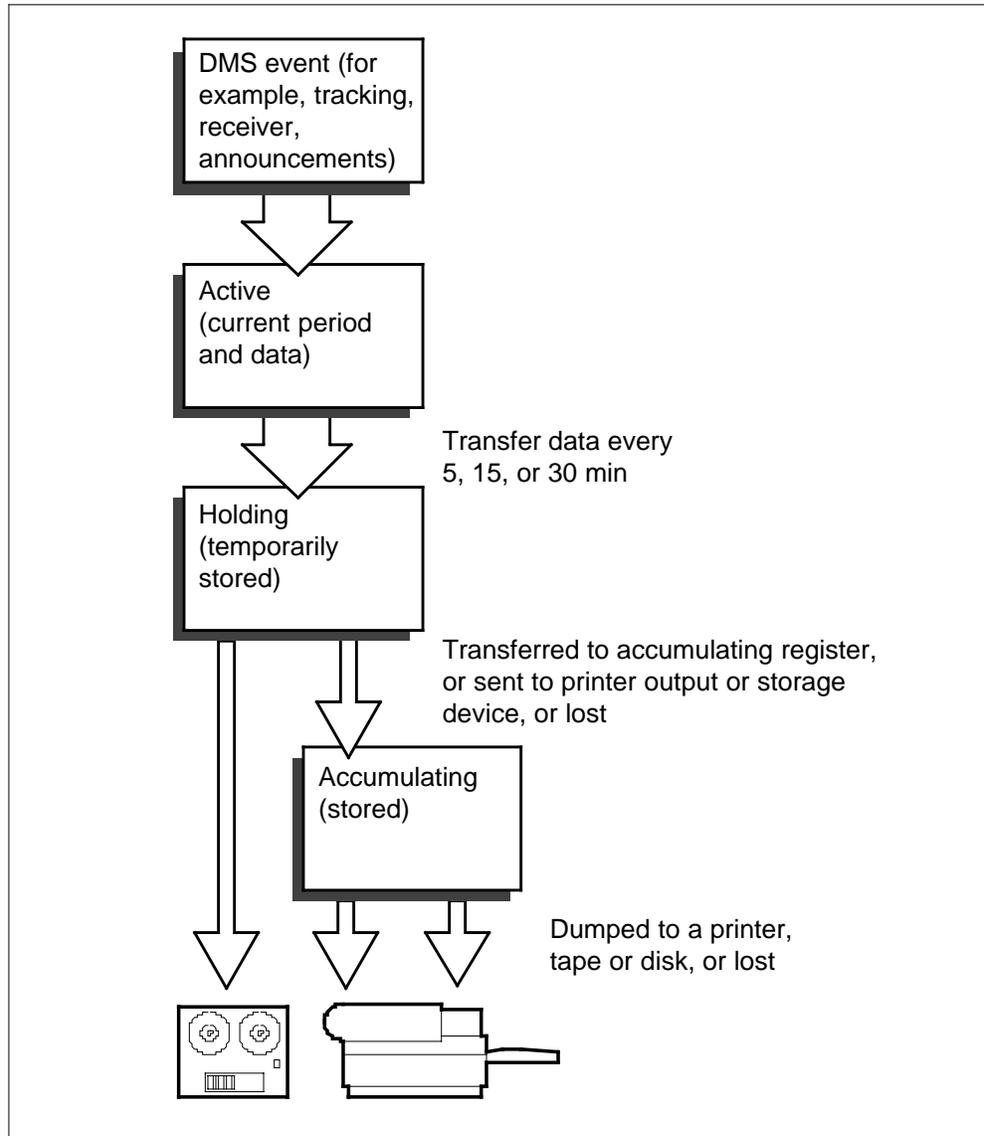
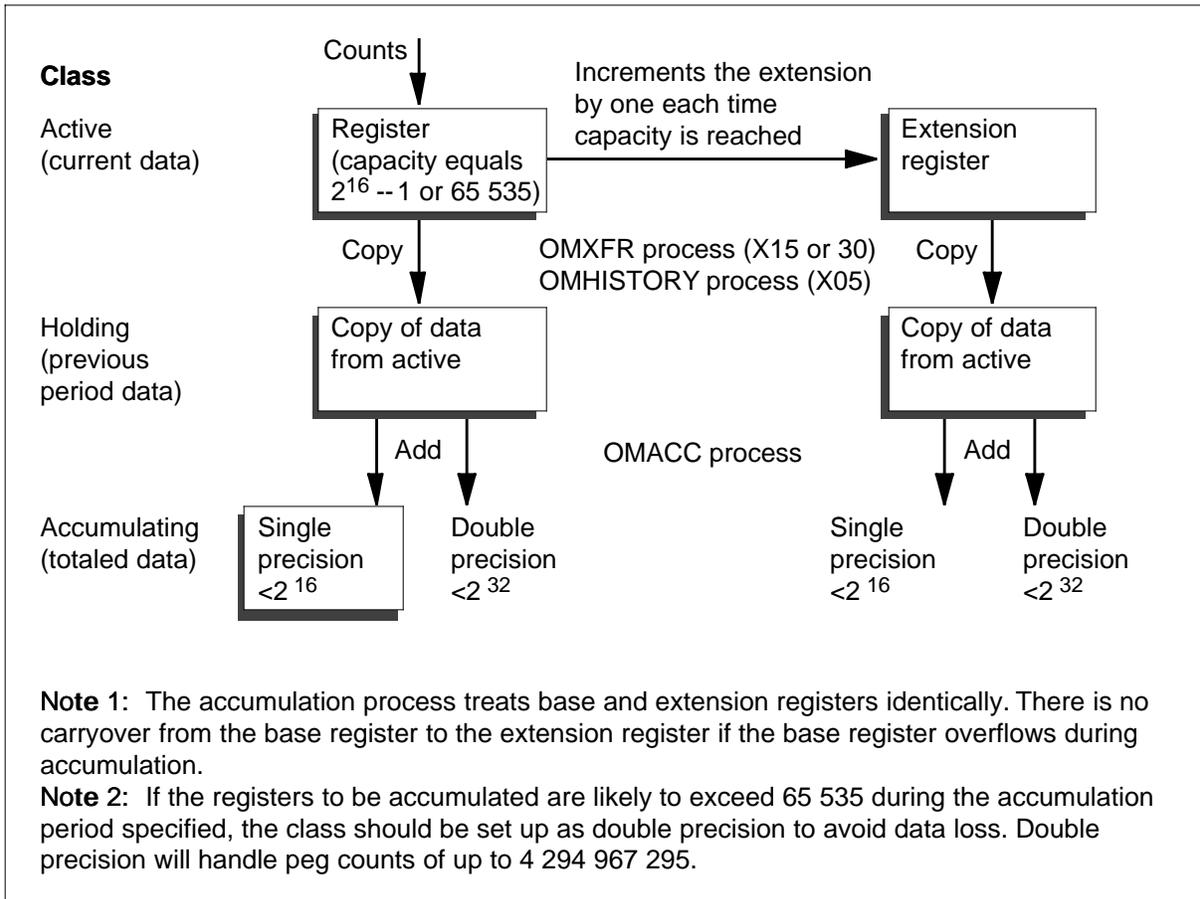


Figure 1-3 Association of register, extension register, and class



Operational measurement administration

The following activities must occur to generate OM data:

- **Measurement class definition** You must define the accumulation classes to which OM groups are assigned. Each measurement class can have different data collection parameters. Parameters can be start and stop times.
- **Measurement class assignment** You can assign the OMs to a minimum of one defined measurement class. Scheduling and output definition must occur for each class, and not for each register field or group.
- **Data scheduling** When each OM group is assigned to a measurement class, the definition of the data collection schedule must occur for each class. These schedules allow you to identify data collection start and stop times. The definition of the data transfer and report output times can occur.
- **Output device assignment** The OM data output must be assigned to a specified output device. An output device can be a terminal, printer or storage device.

- **Periodic report scheduling** The special purpose reports (OMRS series) require the use of additional commands and software tables for scheduling.
- **Report request** When the OM registers start data collection and schedule the reports, use commands at the destination I/O device to request OM information.

Note: Nortel (Northern Telecom) can set up the OM classes during commissioning of the switch. An operating company cannot delete a measurement class. You can rename or redefine a measurement class.

Operational measurement management tables

Ten management tables manage the OM configuration. These tables control the acquisition, collection, accumulation, and distribution functions of the OM system.

Operational measurement accumulation (OMACC)

Table OMACC controls the period of time over which the accumulating class registers accumulate data. Information reporting occurs when the class is enabled in table OMACC. The system allocates memory for 30 entries in the table.

Nortel (Northern Telecom) creates the following measurement classes and associated OM groups and files when commissioning of a switch occurs:

- HALFHOUR
- OFCBSYHR
- DAY
- TRUNKHR
- MONTH
- TAPE

The operating company can assign most of the 30 tuples. The operating company can rename the measurement classes that Nortel (Northern Telecom) preassigns.

The commands OMSHOW, OMDUMP, and OMCLASS associate with table OMACC. These commands appear in Chapter 5, “Command summary”.

The following commands have associated tables with the same name:

- OMACCGRP
- OMACCFLD
- OMACCKEY

- OMFORMAT
- OMTOTAL
- OMACCTOT

The following features introduce these tables:

- AR1340, Non-data Tables to Tables (OM)
- AR1799, Non-table Data to Tables (SOM)

An example of an OMACC table appears in the following figure.

Figure 1-4 Table OMACC

TOP	CLASS	ENABLED	PRECSN	WHEN			

MTC_DAY		Y	DPRECISION	DAILY	0	C00	23 C15
TAPE		Y	DPRECISION	HALFHOURLY		C00	
FACS_HHR		Y	DPRECISION	HALFHOURLY		C00	
CCS7_D		Y	DPRECISION	DAILY	0	C00	0 C00
MTCE_CO		Y	DPRECISION	DAILY	0	C00	23 C45
MTCE_HR		Y	DPRECISION	HOURLY		C00	
RDISTUDY		Y	DPRECISION	DAILY	8	C00	8 C00
TRK_DAY		Y	DPRECISION	DAILY	0	C00	0 C00
FACS_HR		Y	DPRECISION	HOURLY		C00	
FACS_ORP		Y	DPRECISION	DAILY	9	C00	9 C00
FACS_SLU		Y	DPRECISION	HOURLY		COO	
FACS_CDS		Y	DPRECISION	HOURLY		C00	
C7ANAL		Y	DPRECISION	DAILY	0	C00	22 C00
CMS_CRTC		Y	DPRECISION	DAILY	8	C00	22 C00
BOTTOM							

Operational measurement group order (OMGRPORD)

Table OMGRPORD allows the operating company to define the order of OM group output in each accumulating class. The operating company arranges OM output according to the priority of interest through the entry of data in table OMGRPORD. For a description of this procedure, see Chapter 2, “Defining operational measurement classes” in Section “Specifying output order of OM groups within a class”.

If an OM does not appear in the associated class in table OMGRPORD, the system outputs the OM. The system outputs these OMs after the OMs that appear in the table. If the complete class is not in the table, the system defines the order of OM group output.

Operational measurement print (OMPRT)

Table OMPRT (OMPR series) controls which accumulating or holding classes, OM groups, or groups in an OM class the system must output. The system outputs these data to a printer (or similar output device) at specified times during the calendar month. The system allocates memory for 32 report numbers.

The system activates a report number in table OMRPT before the system prints data. The class is enabled in table OMACC. To establish printing periods for data, enter the OM class in table OMACC.

The system directs output to a printer through the facilities of the DMS-100 log and routing subsystems. The log subsystem, LOGUTIL, collects output reports for each part of the DMS-100 switch. The subsystem files reports in order of log report number. For OM reports, this number associates with the accumulating class in the table OMPRT.

The system can suppress data entries of zero (0) selectively for each report. To activate this feature, set the field SUPZERO in table OMPRT to Y. If the data in a data line (tuple) is zero, the system suppresses the data line.

Operational measurement tape (OMTAPE)

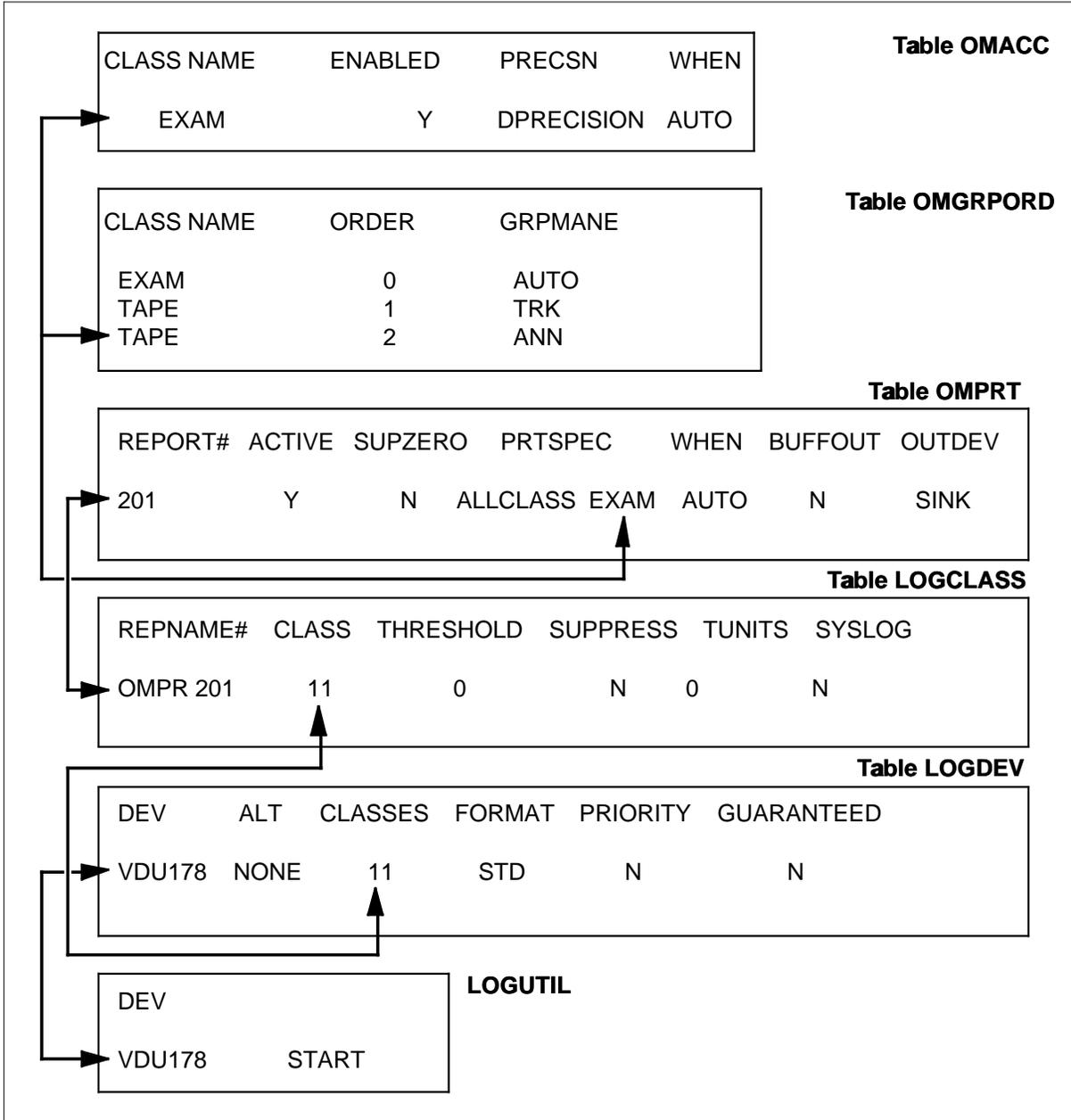
Table OMTAPE schedules the transfer of OM data to the Device Independent Recording Package (DIRP) subsystem. Through DIRP, the system can direct data to a disk drive or a magnetic tape drive.

The relationships between the management tables appear in Figure 1-5, “OM linkage flowchart”.

Operational measurement reports (OMREPORT)

Table OMREPORT schedules the output of OM special reports (OMRS). For a description of these reports, refer to *Service Problem Analysis Administration Guide*, 297-1001-318.

Figure 1-5 OM linkage flowchart



Operational measurement information output

The system can output OM information to a designated printing or terminal device through the log subsystem to control report distribution. A group of tables in the DMS switch control the designation of the output device to which the system sends OM data.

There are three categories of OM reports:

- **OMPR** (Operational Measurement Print) reports contain raw OM register readings. The report content, data quantity, and output times are variable and are defined by the operating company personnel in a group of tables.
- **OMRS** (Operational Measurement Reports System) reports contain register readings and calculations. The system derives the readings and calculations through OMs and information fields as raw data. The report format is set to accommodate a specified administrative need. Explanations of OMRS reports of interest to the administrative user appear in *Service Problem Analysis Administration Guide, 297-1001-318*.
- **OM2** (Operational Measurement 2) reports indicate the status of the OM system. The system outputs problems with data collection or report production. The system outputs these problems when the OM system detects trouble or when the number of reports exceeds a report threshold.

Operational measurement information storage through DIRP

The system can route OM information to tape or disk through the Device Independent Recording Package (DIRP). Table OMTAPE designates the OM classes that the system sends to DIRP. Downstream processors extract the raw OM data and format data for reports. The raw data contains the following types of records:

- office parameter records
- data definition records

Office parameter records

A record type selector identifies office parameter records. The record type selector is a letter character. The record type selector governs the interpretation of the remainder of the record.

The office parameter record types are:

- Type H (header record). This record contains general information that identifies the office and a description of the data structure.
- Type C (class definition record). This record defines the class from which the system takes the information. This record associates with the type P (class header).
- Type G (group definition record). This record defines the group from which the system takes information. This record associates with the type Q (group header) record.
- Type F (field definition record). This record identifies the register fields that appear in following OM records.

- Type K (key and information values record). This record identifies the key and information values for each of the tuples in an OM group. The system writes one record for each tuple.
- Type T (tape schedule record). This record identifies the classes on a tape.
- Type E (end of parameter definition record). The system uses this record at the end of a series of type K or F records.
- Type M (end of parameter modifications record). This record indicates that a change occurs, after the last report, that affects the type G, F, or K records.

Descriptions of the character allocations for each of the office parameter record types appear in Table 1-1.

Table 1-1 Structure of character allocations in office parameter records

Record type	Character number	Description	
Type H	1	Space	
	2 to 6	Record sequence number (00000 to 65535)	
	7	Space	
	8	Record type selector. For header records, the type selector is H.	
	9	Space	
	10 to 25	Recording device mounting time, this time contains:	
		Character number	Description
		10 and 13	Year (0000 to 9999)
		14	Space
		15 and 16	Month (01 to 12)
	17	Space	
	18 and 19	Day (00 to 31)	
	20	Space	
	21 and 22	Hour (00 to 23)	
	23	Space	
	24 and 25	Minute (00 to 59)	

Table 1-1 Structure of character allocations in office parameter records

Record type	Character number	Description
	26	Space
	27 to 39	Character coding scheme (ASCII, EBCDIC, ASCII_BINARY, or EBCDIC_BINARY)
	40	Space
	41 to 46	Volume name (OMDATA)
	47	Space
	48 to 63	Office identifier
	64	Space
	65 to 72	DMS-100 Family office type
	73	Space
	74	Output format (R for regular or C for condensed)
	75	Space
	76 to 92	File name
	93	Space
	94	The setting of office parameter OMTAPESUPPRESSION when the system creates the file (Y or N)
Type C	1	Space
	2 to 6	Record sequence number (00000 to 65535)
	7	Space
	8	Record type selector. For class definition records, the type selector is C.
	9	Space
	10 to 14	Class number (00000 to 65535). The system produces several types C records. Each record associates with a class number.
	15	Space
	16 to 23	Class name

Table 1-1 Structure of character allocations in office parameter records

Record type	Character number	Description																		
	24	Space																		
	25 to 50	Time specification. The time specification contains the following:																		
		<table border="1"> <thead> <tr> <th>Character number</th> <th>Description</th> </tr> </thead> <tbody> <tr> <td>25 to 32</td> <td>Time selector (X15, X30, AUTO, MONTHLY, WEEKLY, DAILY, HOURLY, HALFHOUR, DEVDAY, DEVWEEK, DAYTIME, or HISTORY)</td> </tr> <tr> <td>33</td> <td>Space</td> </tr> <tr> <td>34 and 35</td> <td>Start date (00 to 31). The system enters data in this field when the time selector value is MONTHLY, WEEKLY, DEVWEEK, or DAYTIME.</td> </tr> <tr> <td>36</td> <td>Space</td> </tr> <tr> <td>37 and 38</td> <td>Start hour (00 to 23). This field is blank when the time selector value is X15, X30, AUTO, HALFHOUR, or HISTORY.</td> </tr> <tr> <td>39</td> <td>Space</td> </tr> <tr> <td>40 and 41</td> <td>Start minute (00, 15, 30, or 45). This field is blank when the time selector value is X15, X30, AUTO, or HISTORY.</td> </tr> <tr> <td>42</td> <td>Space</td> </tr> </tbody> </table>	Character number	Description	25 to 32	Time selector (X15, X30, AUTO, MONTHLY, WEEKLY, DAILY, HOURLY, HALFHOUR, DEVDAY, DEVWEEK, DAYTIME, or HISTORY)	33	Space	34 and 35	Start date (00 to 31). The system enters data in this field when the time selector value is MONTHLY, WEEKLY, DEVWEEK, or DAYTIME.	36	Space	37 and 38	Start hour (00 to 23). This field is blank when the time selector value is X15, X30, AUTO, HALFHOUR, or HISTORY.	39	Space	40 and 41	Start minute (00, 15, 30, or 45). This field is blank when the time selector value is X15, X30, AUTO, or HISTORY.	42	Space
Character number	Description																			
25 to 32	Time selector (X15, X30, AUTO, MONTHLY, WEEKLY, DAILY, HOURLY, HALFHOUR, DEVDAY, DEVWEEK, DAYTIME, or HISTORY)																			
33	Space																			
34 and 35	Start date (00 to 31). The system enters data in this field when the time selector value is MONTHLY, WEEKLY, DEVWEEK, or DAYTIME.																			
36	Space																			
37 and 38	Start hour (00 to 23). This field is blank when the time selector value is X15, X30, AUTO, HALFHOUR, or HISTORY.																			
39	Space																			
40 and 41	Start minute (00, 15, 30, or 45). This field is blank when the time selector value is X15, X30, AUTO, or HISTORY.																			
42	Space																			

Table 1-1 Structure of character allocations in office parameter records

Record type	Character number	Description
	43 and 44	Stop date (01 to 31). The system enters data in this field when the time selector value is MONTHLY, WEEKLY, or DAYTIME.
	45	Space
	46 and 47	Stop hour (00 to 23). The system enters data in this field when the time selector value is MONTHLY, WEEKLY, DAILY, or DAYTIME.
	48	Space
	49 to 50	Stop minute (00, 15, 30, or 45). The system enters data in this field when the time selector value is MONTHLY, WEEKLY, DAILY, or DAYTIME.
	52	Register precision (S for single or D for double)
	53	Space
	54 to 181	Y or N (for each group that appears in the type G records that associate with the identified class)
<p>Note: The system produces type C records when a tape or disk file is mounted. The system produces these records even if accumulating classes are not enabled in table OMACC. If an accumulating class is enabled after a tape or disk file is mounted, a type C record is not available for that class. To guarantee that a type C record is available for the new accumulating class, close the file (tape demounted) and open a new file (new tape mounted). The system dumps the new set of type C records on the new tape.</p>		
Type G	1	Space
	2 to 6	Record sequence number (00000 to 65535)

Table 1-1 Structure of character allocations in office parameter records

Record type	Character number	Description
	7	Space
	8	Record type selector. For group definition records, the type selector is G.
	9	Space
	10 to 14	Group number (00000 to 65535). The system produces several type G records. Each record associates with a group number.
	15	Space
	16 to 23	Group name
	24	Space
	25 to 29	Group size. The number of tuples that the system allocates for this group (1 to 16 384). You can set office parameter OMTAPESUPPRESSION in table OFCENG to N. If this condition occurs, the number of D records equals the number of tuples that the system allocates for this group. If OMTAPESUPPRESSION is set to Y, the tuples in use have D records. Use the OMSHOW command to determine the number of tuples in use.
	30	Space
	31 to 35	Number of fields in the type F records of the named group (1 to 32)
	36	Space
	37 to 41	Number of information fields in the named group (0 to 4)
	42	Space
	43 to 50	Name of the first information field in the group
	51	Space
	52 to 59	First information field type (NUMBER or CHARS)
	60	Space

Table 1-1 Structure of character allocations in office parameter records

Record type	Character number	Description
Type F	61 to 68	Name of the second information field in the group, if required
	69	Space
	70 to 77	Second information field type (NUMBER or CHARS)
	78	Space
	79 to 113	Third and fourth information field names and types, if required
	1	Space
	2 to 6	Record sequence number (00000 to 65535)
	7	Space
	8	Record type selector. For field definition records, the type selector is F.
	9	Space
Type K	10 to 14	Field position number (00 to 31). The system produces several type F records in sequence. These records indicate which fields contain OM information and the position of the field in the tuple.
	15	Space
	16 to 23	Field name
	1	Space
	2 to 6	Record sequence number (00000 to 65535)
	7	Space
	8	Record type selector. For key and information values records, the type selector is K.
	9	Space
	10 to 14	Tuple number. The system produces several type K records in sequence. These records indicate which tuples contain key and information values.

Table 1-1 Structure of character allocations in office parameter records

Record type	Character number	Description
Type T	15	Space
	16 to 55	Key values
	56	Space
	57 to 64	First information field value
	65	Space
	66 to 73	Second information field value, if required
	74	Space
	75 to 82	Third information field value, if required
	83	Space
	84 to 91	Fourth information field value, if required
	1	Space
	2 to 6	Record sequence number (00000 to 65535)
	7	Space
	8	Record type selector. For tape schedule records, the type selector is T.
	9	Space
10 to 14	Class number. The number of the class (from the type C record) that associates with the tape schedule record.	
15	Space	
16 to 41	Time specification. The value TIMESPEC indicates that the system reads the time value from the time specification field in the associated type C record. The value AUTO indicates that the output to tape occurs when the transfer or accumulative period that associates with the class is complete.	
Type E	1	Space
	2 to 6	Record sequence number (00000 to 65535)

Table 1-1 Structure of character allocations in office parameter records

Record type	Character number	Description
Type M	7	Space
	8	Record type selector. For end of parameter definition records, the type selector is E.
	1	Space
	2 to 6	Record sequence number (00000 to 65535)
	7	Space
	8	Record type selector. For end of parameter modification records, the type selector is M.

Data definition records

Data definition records contain OM values that the system collects and organizes. The associated office parameter records define this process. The system associates office parameter records and data definition records. The system matches the class and OM group numbers with the associated characters in the data definition header records. These OM group numbers are in characters 10 to 14 of the type C and type G office parameter records.

Descriptions of each data definition record type are as follows:

- Type P (class data header record). This record associates the data records that follow with the correct class, as the office parameter record defines.
- Type Q (group data header record). This record associates the data records that follow with the correct group, as the office parameter record defines.
- Type D (data record). The system produces one data record for each tuple. The number of characters in each record depends on the number of defined fields. The number of characters also depends on whether the associated OM group belongs to a class. The associated OM group can belong to an active, holding, history, or accumulating class. The correct characters in the type G office parameter record specify the fields.
- Type R (restart record). The system produces this record when a restart occurs.
- Type X (clock change record). The system produces this record when a clock changes.
- Type Z (truncated report record). This record indicates that additional data are not correct because the transfer process performs overwriting.

Descriptions of the character allocations for each of the data definition record types appear in Table 1-2.

Table 1-2 Structure of character allocations in data definition records

Record type	Character number	Description
Type P	1	Space
	2 to 6	Record number. Data definition records are numbered in sequence, after the last number of the associated office parameter record.
	7	Space
	8	Record type selector. For class data header records, the type selector is P.
	9	Space
	10 to 14	Class number (corresponds to the class number in the type C record)
	15	Space
	16 to 31	Start time
	32	Space
	33 to 48	Stop time
	49	Space
	50 to 54	Number of usage scans at the slow (LOSCAN) rate
	55	Space
	56 to 60	Extension counter for usage scans at the fast rate
	61	Space
62 to 66	Number of usage scans at the fast (HISCAN) rate	
Type Q	1	Space

Table 1-2 Structure of character allocations in data definition records

Record type	Character number	Description
	2 to 6	Record number. Data definition records are numbered in sequence, after the last number of the associated office parameter record.
	7	Space
	8	Record type selector. For group data header records, the type selector is Q.
	9	Space
	10 to 14	Group number (corresponds to the group number in the type G record)
	15	Space
	16 to 20	Number of tuples - corresponds to the number entered in the number of tuples field in the associated type G office parameter record.
	21	Space
	22 to 26	Number of fields - corresponds to the number entered in the number of fields field in the associated type G office parameter record.
Type D (all)	1	Space
	2 to 6	Record number. Data definition records are numbered in sequence, after the last number of the associated office parameter record.
	7	Space
	8	Record type selector. For data records, the type selector is D.
	9	Space
Type D (single precision)	10 to 14	First data field (00000 to 65535)
	15	Space

Table 1-2 Structure of character allocations in data definition records

Record type	Character number	Description
Type D (double precision)	16 to 20	Second data field
	21	Space
	22 to 26	Third data field
	10 to 14	Extension register for first data field
	15	Space
	16 to 20	First data field register
	21	Space
	22 to 26	Extension register for second data field
	27	Space
	28 to 32	Second data field register
<p>The number of data fields matches the number of fields in the group; the number of F records.</p> <p>Note: If office parameter OMTAPESUPPRESSION in table OFCENG is set to N, the number of D records equals the group size that the G record reports. If OMTAPESUPPRESSION is set to N, tuples in use have D records. Use the OMSHOW command to determine the number of tuples in use.</p>		
Type R	1	Space
	2 to 6	Record number (00000 to 65535)
	7	Space
	8	Record type selector. For restart records, the type selector is R.
	9	Space
	10 to 25	The date and time of the recovery from the restart.
Type X	1	Space
	2 to 6	Record number (00000 to 65535)
	7	Space

Table 1-2 Structure of character allocations in data definition records

Record type	Character number	Description
	8	Record type selector. For clock change records, the type selector is X.
	9	Space
	10 to 25	The date and time on the clock before the change in the same format as characters 16 to 48 of the class header record.
	26	Space
	27 to 42	The date and time on the clock after the change. The date and time are in the same format as characters 16 to 48 of the class header record.
Type Z	1	Space
	2 to 6	Record number (00000 to 65 535)
	7	Space
	8	Record type selector. For truncation report records, the type selector is Z.

An example of the format of office parameter records appears in the following table. The associated data definition records for two OM groups appear in the following table.

Table 1-3 Example of OM output format to recording device

Character numbers:	
000000000111111111122222222223333333333344444444445555555555	12345678901234567890123456789012345678901234567890123456789
00000	H 1985 01 20 23 55 EBCDIC OMDATA
00001	C 00001 HOLDING X30 S YNNNN
00002	G 00000 TRK 00004 00003 00002 TRKDIR CHARS
00003	F 00000 INCATOT
00004	F 00001 PRERTEAB
00005	F 00002 TRU
00006	K 00000 PMBRON5201TO 2W
00007	K 00001 BENFCN5401TO 2W
00008	K 00002 SDBRON9701TO 2W
00009	K 00003 TORONTO101TO 2W
00010	G 00001 TS 00008 00009 00000
00011	F 00000 TS0
00012	F 00001 TS1
.....Other type G, F, and K records	
00025	K 00006
00026	K 00007
00027	T 00001 AUTO
00028	E
00029	P 00001 1985 01 21 00 00 1985 01 21 00 15 00009 000
00030	Q 00000 00004 00003
00031	D 01241 00605 00969
00032	D 01692 00701 01273
000000000111111111122222222223333333333344444444445555555555	12345678901234567890123456789012345678901234567890123456789

Table 1-3 Example of OM output format to recording device

Character numbers:									
00033	D	01493	00593	01121					
00034	D	01501	00688	10421					
00035	Q	00001	00008	00008					
00036	D	00029	00031	00028	00027	00025	00026	00029	00027
00037	D	00026	00028	00027	00027	00029	00029	00025	00026
.....other data definition records									

Use the Device Independent Recording Package (DIRP) to control storage activities. For additional information, refer to *DIRP Administration Guide*.

OM group totals (OMTOTAL, OMACCTOT)

The OM reports that contain raw register readings (OMPR reports) can present multiple conditions of the same OM. This process occurs when more than one equipment component of the same type is present. This condition occurs for OM groups TRK and PM. This condition is present when the system presents measurements across different service types, for example, OM group DTSR. The OMTOTAL provides the ability to add or combine similar measurements over equipment components or service types. This feature is enabled for each measurement group. When enabled, every OMPR report for that group contains an additional line of data, the total measurement. A dashed line separates the total measurement from the normal display. The system adds a totals tuple for the designated OM group and accumulating class.

Measurement totals appear for each field except where the user removes fields from the OMPR report. Use the OMACCFD command to remove fields. Totals include values in lines of data that the user omits. Use the OMACKEY command to omit values.

The OM totalling capability reduces the OMPR report volume. The OMACCTOT (feature NTX385AA) command causes the system to output measurement totals for each class.

OM thresholding feature

The OM thresholding feature allows operating company personnel to create a threshold level for separate OMs. Each tuple in table OMTHRESH refers to a specified OM register. The table contains an alarm level and threshold for each register.

Operating company personnel enter a threshold. This threshold represents the number of times an OM register increases during a scan period before the

system activates the associated alarm. Four alarm levels are available. These levels are alarm, minor, major, and critical. Log reports document the instances when the register exceeds an OM threshold. The system can route the log reports to specified output devices. When the system generates an alarm for a specified entry in table OMTHRESH, the system suppresses alarm generation. The system suppresses alarm generation for the entry for 15 min. Table OMTHRESH specifies the threshold values, scan times, and alarm levels. Descriptions of the threshold values, scan times, and alarm levels appear in *Translations Guide*.

The register feature

The register commands subset allows operating company personnel to read, or read and reset, registers. These registers are for the following types of lines:

- 1MR message rate
- INW INWATS, inward wide area telephone service
- OFS overflows
- 2WW two-way WATS, wide area telephone service

Chapter 5, “Command summary” covers the register commands, READ, READRESET, READPX, READRESETPX, READVFG, READRESETVFG, and CLRINVREG.

Report samples

The response to REGISTER level commands depends on the type of line queried.

A command input and response for each message rate line appears in the following example:

```
>READ ALL 1MR
```

Example of a MAP response:

```
613 621 1092 1MR:22  
613 621 1236 1MR: 8
```

A request for readings on an INWATS line that specifies the directory number appears in the following example. The example includes the output with data columns labeled. The number entered is part of a hunt group. The two hunt group elements appear.

```
>READ DN 621 1097
```

Example of a MAP response:

				Attempts	Completion	Overflows	Connection Time
613	621	1097	INW:	3	1	1	0:01:09
613	621	1091	INW:		1		0:01:14

In the previous example, three attempts on the INWATS hunt group occurred. One of the attempts overflowed to the second line. The other attempt did not complete. The system routed the attempt to busy tone.

The response to a request for 2WW information is like a request for INW:

Example of a MAP response:

>READ DN 621 1097

				Attempts	completion	Overflows	Connection Time
613	621	1060	2WW:	2	1	1	0:03:02
613	621	1061	2WW:		1		0:02:42

Usage measurements in erlangs

This feature converts traffic use measurements from CCS (hundred call seconds) to erlangs. The output is in deci-erlangs (tenths of erlangs).

Set parameter OMINERLANGS in table OFCOPT to Y to activate the feature. The default value is N. Activation occurs when you set the parameter.

The system converts use measurements to erlangs before the transfer from active to holding registers at the end of each accumulation period. To perform the conversion, the system multiplies the use counts (in CCS) in the active registers by 10. The system divides the result by the number of scans that occur during the measurement period. The system places these values back in the active registers, ready for transfer. Conversion to erlangs occurs when the user uses the OMSHOW to retrieve data from the Active class.

Note: The OM system adds data to the accumulating registers over several transfer periods. The value (in deci-erlangs) for each transfer period is an average value. Divide the total by the number of transfers to specify the average traffic value for the time period.

Operational Measurements Reference Manual identifies the use measurements that appear in deci-erlangs when you activate the feature.

The feature does not change the OM output format. An indication of the use measurement type does not appear in the report header. Check the parameter OMINERLANGS in table OFCOPT to determine if a request for use values in erlangs occurred.

Subscriber line usage

Subscriber line usage (SLU) OMs provide operating companies with detailed information on the use of subscriber lines. The operating company collects SLU data for marketing studies, class of service studies, and load balance studies. Originating peg count, terminating peg count, and combined use data is available on lines that use the SLU option.

Activating subscriber line usage

To obtain SLU data, use software package NTX082AA or NTX082AB. To activate SLU, set the field OPTIONAL_SLU_FEATURE in table OFCOPT to Y.

Collecting use and peg count data

The SLU OM groups are assigned to accumulating classes in the same way as other OM groups. Data can go to downstream processing systems or be output to a printer.

The system scans each monitored line at a scan interval to collect use measurements. Entries in the office parameters table (OFCVAR) select these lines. For additional information, refer to *Translations Guide*. The system defines the SLU scan rate in multiples of the fast scan (10 s). Scan rates are set at the time of first input. Operating companies use the table editor (TE) commands to check and change these rates.

Four parameters in table OFCVAR are set to establish the scan rates of the traffic use registers:

- ENG640M1_SCAN_RATE
- ENG125M1_SCAN_RATE
- ENG125M2_SCAN_RATE
- ENG250M1_SCAN_RATE

Peg count registers record originating and terminating call attempts on selected lines when the system adds the SLU option to the lines. The system does not collect overflow data. For procedures to set up collection of usage and peg count data, refer to Chapter 4, “Subscriber line usage”.

Identifying lines for study

Use SLU to study individual lines, business sets, hunt groups, or a peripheral module (PM). Directory number (DN), or originating equipment (OE) in line equipment number (LEN) format identify separate lines. The DN or OE of the pilot number, and the DN of the other lines in the group, identify business sets. The DN of the pilot number of the group identifies hunt groups. The OE specifies separate lines in a hunt group. Attempts to assign SLU to a MADN (multiple appearance directory number), single or multiple call arrangement

flag as an error. On a business set, a primary MADN member can use SLU if assigned as the primary DN (key 1). The DN identifies party lines.

If you study the working lines on a peripheral module, the primary DN of business sets on that PM are studied. The primary DN is studied because DN, not OE, identifies secondary numbers.

You can study hunt groups that employ line hunt overflow to a directory number (LOD), or line overflow to a route (LOR). To study these hunt groups, include the pilot number of each hunt group when you set up the study. Include the pilot numbers so you can collect enough data to understand how the groups function.

SLU option incompatibility

Check table OPTOPT, option to option incompatibility before you attempt to add the SLU option to a line. Features on a line that are not compatible with SLU, allow you to use SLU to study the line.

Samples of SLU data on separate lines and on a hunt group appear in Figure 1-6 and 1-7.

Figure 1-6 SLU data on individual lines

```

TRA125M1

CLASS:ACTIVE START:1998/02/16 16:30:00 MON; STOP:
1998/02/16 16:47:04 MON; SLOWSAMPLES: 11; FASTSAMPLES: 102;

INFO (SLU_OM_INFO)

      TBU2   ORIG2   TERM2           BUSY2
0  D 675 5050 HOST 00 0 11 12 19980470758    16
      0           0           0           0
1  D 675 5050 HOST 00 0 11 14 19980470758    15
      0           0           0           0

```

Note: Register TBU records increases in use measurements. Register ORIG and TERM record pegs of originating and terminating calls, in that order. The data in the far right-hand column, which does not have a column heading, is cumulative use.

Figure 1-7 SLU data on a hunt group

```

TRA125M1

CLASS: ACTIVE START:1998/02/16 16:30:00 MON; STOP:
1998/02/16 16:47:04 MON; SLOW SAMPLES 36; FASTSAMPLES: 360;

INFO (SLU_OM_INFO)

      TBU2      ORIG2      TERM2      BUSY2
2   D3939616  HOST 01 0 01 1319901002106  0
      0
3 HNT   343  1 HOST 04 0 11 11 1319901002106  0
      0
4 HNT   343  2 HOST 02 0 00 26 1319901002106  0
      0
5 HNT   343  3 HOST 04 1 12 26 1319901002106  8
      0
6 HNT   343  4 HOST 02 1 00 10 1319901002106 32
      0
7   D3933777  HOST 07 1 24 1319901002106 1687
      7
8 HNT   228  1 HOST 06 1 10 25 1319901002106 666
      1
9 HNT   228  2 HOST 08 0 00 24 1319901002106 195
      0
10 HNT  228  3 HOST 07 0 10 25 1319901002106 39
      0
11 HNT  228  4 HOST 06 1 00 25 1319901002106  9
      0
12 HNT  228  5 HOST 07 1 10 25 1319901002106  2
      0
13 HNT  228  6 HOST 07 0 00 25 1319901002106 00
      0
14 HNT  228  7 HOST 07 1 11 25 1319901002106 00
      0
15 HNT  228  8 HOST 07 1 00 25 1319901002106 00
      0
16 HNT  228  9 HOST 06 1 10 26 1319901002106 00
      0

-----
      8          0          10          0
    
```

Note: The members of the group precede the pilot number of the hunt group in succeeding tuples. The members of the group appear in the format group number (343, 228) and precede hunt line number (1, 2, 3, etc.).

The following problems can occur if the installation of a line or group of lines does not occur after the procedure *Subscriber line usage*. Chapter 4 describes this procedure.

- Originating or terminating calls are pegged, and use measurements do not increase in TBU or accumulate in SLU_OM_INFO.

REASON: The addition of the line to the input table occurred before the addition of the SLU option to the line.

- Usage or peg counts do not increase.

REASON: The SLU_INSTALL table name was not entered for the table.

Collecting overflow data

If you require an overflow peg count, use OM group HUNT. The DN is assigned as a directory number hunt (DNH) group with a size of one. The DN is not assigned in this way if the DN is already part of a hunt group. Remove the DNH option from the line after the study is complete to prevent problems in the future. The procedure for how to set up the collection of overflow data through OM group HUNT appears in Chapter 4, “Subscriber line usage”. A sample output appears in Figure 1-8 and 1-9.

Figure 1-8 Overflow data on an individual line, through the OM group HUNT

```

HUNT
CLASS:  ACCUM

START: 1991/06/12 09:00:00 WED; STOP: 1991/06/12 10:00:00 WED:
SLOWSAMPLES:      36;  FASTSAMPLES:      360

      INFO (HUNT_OM_INFO_TYPE)

      HUNTATT      HUNTOVFL      HUNTRHNT

0  919  514  8324993  DLH      1
      15      4      0

Note: The 919 is the hunt group number assigned to the line. The system
generates this hunt group number. This hunt group number is assigned to the
line when: the user adds option HUNT to a line, and the line becomes a
directory number hunt group of size 1.

```

Figure 1-9 Overflow data on a hunt group, through OM group HUNT

```

HUNT

CLASS:  ACCUM

START:  1991/06/12 09:00:00 WED; STOP:  1991/06/12 10:00:00 WED:
SLOWSAMPLES:      36;  FASTSAMPLES:      360

      INFO (HUNT_OM_INFO_TYPE)

            HUNTATT      HUNTOVFL      HUNTRHNT

0  343  514  3933777  MLH      15
              1              1              0
0  228  514  3939616  MLH      5
              10             0              0

```

Note: The 343 and 228 are hunt group numbers that the system generates.

The HUNTATT (hunt attempts) is the number of attempts that terminate on the hunt group. For a DNH group, this number includes attempts for lines other than the pilot line. If you use LOD or LOR to chain hunt groups together, each hunt group in the chain can register one attempt for each call.

The HUNTOVFL (hunt overflow) is the number of attempts to terminate on this hunt group that fail. These attempts fail because a member is not available for termination. Overflow can occur on a DNH group. Overflow can occur when the members are available. Overflow occurs if the call is for a line other than the pilot line, and the hunt group is not circular.

The HUNTRHNT (hunt rehunt) is the number of attempts to terminate on the hunt group that must rehunt. The hunt group must select an alternate terminator and continue down the list of members in the hunt group. The hunt group must select an alternate terminator because of connection or ringing failure or other problems. The rehunt does not cause another peg in HUNTATT. The rehunt can cause a peg in HUNTOVFL if the rehunt fails to find an alternate terminator.

SLU data on peripheral modules

Use SLU to study the following peripheral modules:

- line modules (LM)
- remote line modules (RLM)
- line concentrating modules (LCM)
- remote concentrator terminals (RCT)
- remote concentrator subscribers (RCS)

- integrated services line modules (ISLM)
- digital line modules (DLM)
- very small remotes (VSR)
- enhanced line concentrating modules (ELCM)
- ISDN line concentrating modules (LCMI)
- intelligent peripheral equipment (IPE)

Use the SLU_LMINSTALL command to set up studies. For additional information, refer to the procedure *Setting up SLU on an entire peripheral module* in Chapter 4.

SLU user interface command directory

The SLU OM groups are compatible with general OM groups. The system schedules and displays the SLU OM groups in the same way. The SLU OM feature has a separate command directory.

Access to SLU commands is through the CI subset SLU. Enter the Q SLU command to obtain a summary of SLU commands.

The SLU CIDIR (Command Interpreter Directory) commands are:

- SLUADD
- SLUDEL
- SLU_TEST
- SLU_INSTALL
- SLU_LMINSTALL
- SLU_DEINSTALL
- SLU_TABLE_STATUS
- SLUFINDI
- SLUFINDO
- SLUSET
- SLUDUMP

The procedures for SLU in Chapter 4, “Subscriber line usage” use these commands. Chapter 5, “Command summary” includes these commands.

SLU tables and groups

The system uses SLU input tables and OM groups to collect SLU OM data. The SLU input tables allow operating company personnel to set up a list of

lines that the system must monitor. The associated OM groups record the measurements.

The available SLU input tables and associated OM groups appear in Table 1-4.

Table 1-4 SLU input tables and associated OM groups

SLU input table name	SLU OM group name	Maximum number of entries
ENG640I1	ENG640M1	640
TRA250I1	TRA250M1	250
TRA125I1	TRA125M1	125
TRA125I2	TRA125M2	125

The numbers in the center of the table/group names: 640, 250, and 125, indicate the number of lines that you can study in the table/group.

Descriptions of these OM groups appear in *Operational Measurements Reference Manual*.

To set up a SLU study on a line, use **SERVORD** to add the SLU option to the line. (See the *Translations Guide*) The user adds the line to one of the input tables. To activate OMs, the system copies the contents of the input table to the associated OM group. The lines you enter in the input table replace the lines in the associated OM group. Use SLU OM user interface commands to activate OMs. Procedures for the addition of the SLU feature to a line, addition of lines to an input table, and installation of the input table in an OM group appear in Chapter 4, “Subscriber line usage”.

The system copies the contents of a SLU input table to an associated OM group. When this action occurs, the OM group monitors the specified lines. The system can copy a list of lines in a SLU input table to an OM group. Until this process occurs, the contents of the table do not have an effect on the measurements in the OM registers. Use the **SLU_INSTALL** command to initiate this process. The SLU input tables are an assembly area store. These tables check the line identifiers of the lines that the OM group must monitor. The SLU input tables do not record the SLU OM data.

SLU input table format

Each SLU input table has the same format. This format includes a key field (line identifier) and two information fields. The user enters the key field information. The system generates the other fields. Each entry (tuple) in a table represents one subscriber line. The tuple number corresponds to the **XREF** field in the SLU input table. When the line identifier is the pilot number of a

hunt group, the members of the hunt group follow the line identifier in succeeding tuples. The system generates the hunt group members. When the line identifier is a pilot number of a hunt group, install the SLU input table with the SLU_INSTALL command. Install the SLU input table immediately after the SLUADD command to obtain consecutive tuple or XREF numbers on the table. Hunt group numbers appear in the format group number (0-8191) and hunt line number (0-255). The first information field provides a validity check on the line identifier. The second information indicates the tuple number of the corresponding entry in the OM group table.

Note: The system cannot disconnect a line with the SLU option, or in a SLU OM table. Add the SLU option to each line you must study before a SLU study starts. Use the service order procedure to add the SLU option. Remove the SLU option from each line after the study is complete. Use the service order procedure to remove the option. Clear each line from the OM table at the end of a study. To clear the lines, install a new input table with new lines you must study. You can install an empty input table if additional studies must not occur after the current study.

Figure 1-10 Example of a SLU input table

	NUMBER7D	ERROR7D	
	XREF		
	D 393 9616	NO_ERROR	2
HNT	343 1	NO_ERROR	3
HNT	343 2	NO_ERROR	4
HNT	343 3	NO_ERROR	5
HNT	343 4	NO_ERROR	6
	D 393 3777	NO_ERROR	7
HNT	228 1	NO_ERROR	8
HNT	228 2	NO_ERROR	9
HNT	228 3	NO_ERROR	10
HNT	228 4	NO_ERROR	11
HNT	228 5	NO_ERROR	12
HNT	228 6	NO_ERROR	13
HNT	228 7	NO_ERROR	14
HNT	228 8	NO_ERROR	15
HNT	228 9	NO_ERROR	16
BOTTOM			

2 Defining operational measurement classes

Where to find a procedure

The names of all the procedures in this chapter appear in the following list.

Procedure	Go to page
Specifying OM transfer period	2-3
Designing an accumulating class	2-5
Setting up history registers	2-7
Specifying single or double precision for classes	2-11
Assigning OM groups to an accumulating class	2-13
Deleting OM groups from an accumulating class	2-15
Deleting OM registers from an accumulating class	2-17
Adding OM registers to an accumulating class	2-21
Selecting specified tuples for output	2-25
Specifying output order of OM groups within a class	2-28
Enabling a class	2-32

How the procedures are organized

This chapter contains procedures to define operational measurement (OM) classes. Each procedure in this chapter contains:

- an introductory page.
- step-action instructions.

First page

The following headings appear on the first page of each procedure:

- application
- requirements

The information under these headings explains:

- what the procedure does
- requirements to perform the task.
- additional information you require to complete the procedure

Step-action instructions

The step-action instructions describe how to set up operational measurements. Follow the steps in the order they appear. The step can require you to return to a previous step and to repeat a sequence. Make sure you repeat all the steps in the sequence.

The step-action instructions provide the command syntax and machine output you use or that appear when you perform a procedure. The front section of this document lists Nortel publications that provide more information on DMS systems commands or output.

Specifying OM transfer period

Application

Use this procedure to change the interval for data transfer from active and holding registers.

Requirements

Most operating companies use a data transfer interval of 30 min.

When this procedure is complete, a cold restart is necessary for the change to take effect.

Specifying OM transfer period from data accumulation

ATTENTION

A restart or a maintenance SWACT is required to activate the OMXFR tuple change described in this procedure. The OMHISTORYON command overwrites the OMXFR tuple setting and activates a five minute transfer period.

At the MAP terminal

- 1 To access table OFCENG, type

```
>TABLE OFCENG
```

and press the Enter key.
MAP response

```
TABLE: OFCENG
```
- 2 To determine if the OMXFR parameter is set to the time you require, type

```
>POS OMXFR
```

and press the Enter key.

where

OMXR

is the OM data transfer parameter

Example of MAP response

```
OMXFR x15
```

Note: The value x15 is the current setting for data transfer time.

If the data transfer time is	Do
not correct	Procedure 3
correct	Procedure 5

Specifying OM transfer period (end)

- 3** To access the data transfer time tuple, type
>CHA
and press the Enter key.
Example of MAP response
PARMVAL: x15
- 4** To enter the OM transfer period, type
>Xnumber
and press the Enter key.
where
number
is the time you require for the transfer period in minutes (15 or 30)
Example input
>X30
Example of MAP response
OMXFR x30
Enter Y to confirm, N to reject or E to edit.
- 5** To confirm the command, type
>Y
and press the Enter key.
Example of MAP response
TUPLE CHANGED
WRITTEN TO JOURNAL FILE AS JF NUMBER 579.
- 6** To quit table OFCENG, type:
QUIT
and press the Enter key.
- 7** This procedure is complete.
Note: Refer to the *Translations Guide* for additional information about table editor commands.

Designating an accumulating class

Application

Use this procedure to list the available accumulating classes and to rename a current accumulating class.

Requirements

There are no requirements.

Designating an accumulating class

At the MAP terminal

- 1 To access table OMACC, type

```
>TABLE OMACC
```

and press the Enter key.

MAP response

```
TABLE: OMACC
```

- 2 To list the available accumulating classes, type

```
>LIST ALL
```

and press the Enter key.

Example of a MAP response

TOP CLASS	ENABLED	PRECSN	WHEN
-----	-----	-----	-----
HALFHOURL	N	DPRECISION	AUTO
OFCBSYHR	N	DPRECISION	AUTO
DAY	N	DPRECISION	AUTO
WEEK	N	DPRECISION	AUTO
MONTH	N	DPRECISION	AUTO
SPECIAL1	Y	DPRECISION	AUTO
SPECIAL2	N	DPRECISION	AUTO
SPECIAL3	N	DPRECISION	AUTO
SPECIAL4	N	DPRECISION	AUTO
SPECIAL5	N	DPRECISION	AUTO
SPECIAL6	N	DPRECISION	AUTO
SPECIAL7	N	DPRECISION	AUTO
SPECIAL8	N	DPRECISION	AUTO
SPECIAL9	N	DPRECISION	AUTO
BOTTOM			

- 3 To start the procedure for the accumulating class, type

```
>OMCLASS
```

and press the Enter key.

Example of a MAP response

```
Next par is: <class name> STRING
```

```
ENTER: <class name> <precision/function>
```

- 4 To enter the accumulating class name, type

```
>class_name
```

Designating an accumulating class (end)

and press the Enter key.

where

class_name

is the name of the accumulating class to rename.

Example of a MAP response

```
Next par is: <precision/function>{SINGLE
                                   DOUBLE
                                   HOLDING
                                   RENAME} new class
                                             name
                                   HISTORY
                                             <snapshots>
                                             <transfer>
```

Enter: <precision/function>

- 5** To enter the function, type

>**RENAME**

and press the Enter key.

Example of a MAP response

```
Next par is: <new class name> STRING
ENTER: <new class name>
```

- 6** To enter the new accumulating class name, type

>**new_class_name**

and press the Enter key.

where

new_class_name

is the new name for the accumulating class.

Example of a MAP response

OM class renamed.

- 7** To verify the change, type

>**LIST ALL**

and press the Enter key.

- 8** To quit table OMACC, type

>**QUIT**

and press the Enter key.

- 9** This procedure is complete.

Setting up history registers

Application

Use this procedure to define the parameters for the transfer of data to history registers.

Requirements

Engineering and Administrative Data Acquisition System (EADAS) users must check local policies before these users set the OMHISTORYON parameter to Y in table OFCOPT.

If OMHISTORYON is set to Y, the system suppresses parameter OMXFR in table OFCENG. If OMHISTORYON is set to Y, a 5 min OM transfer period occurs.

You can configure a maximum of 30 accumulating and history classes.

When this procedure is complete, a cold restart is necessary for the change to take effect.

Setting up history registers

ATTENTION

You require a restart to activate the changes described in this procedure.

At the MAP terminal

- 1 To access table OFCOPT, type

```
>TABLE OFCOPT
```

and press the Enter key.
Example of a MAP response

```
TABLE: OFCOPT
```
- 2 To determine if the OMHISTORYON parameter is set to Y, type

```
>POS OMHISTORYON
```

and press the Enter key.
Example of a MAP response

```
OMHISTORYON N
```

If the OMHISTORYON parameter is set to	Do
N	Procedure 3

Setting up history registers (continued)

	If the OMHISTORYON parameter is set to	Do
	Y	Procedure 6
3	To access the OMHISTORYON parameter, type >CHA and press the Enter key. <i>Example of a MAP response</i> PARMVAL: N	
4	To set the parameter to Y, type >Y and press the Enter key. <i>Example of a MAP response</i> OMHISTORYON Y Enter Y to confirm, N to reject or E to edit.	
5	To confirm the command, type >Y and press the Enter key. <i>Example of a MAP response</i> TUPLE CHANGED WRITTEN TO JOURNAL FILE AS JF NUMBER 579.	
6	To quit table OFCOPT, type >QUIT and press the Enter key.	
7	Access table OMACC. Type: >TABLE OMACC Press the Enter key <i>MAP response</i> TABLE: OMACC	
8	To list the available accumulating classes, type >LIST ALL and press the Enter key.	

Setting up history registers (continued)

Example of a MAP response

```

TOP CLASSENABLEDPRECSNWHEN
-----
HALFHOURL      N      DPRECISION      AUTO
OFCBSYHR       N      DPRECISION      AUTO
DAY             N      DPRECISION      AUTO
WEEK           N      DPRECISION      AUTO
MONTH          N      DPRECISION      AUTO
SPECIAL1       Y      DPRECISION      AUTO
SPECIAL2       N      DPRECISION      AUTO
SPECIAL3       N      DPRECISION      AUTO
SPECIAL4       N      DPRECISION      AUTO
SPECIAL5       N      DPRECISION      AUTO
SPECIAL6       N      DPRECISION      AUTO
SPECIAL7       N      DPRECISION      AUTO
SPECIAL8       N      DPRECISION      AUTO
SPECIAL9       N      DPRECISION      AUTO
BOTTOM

```

- 9 To start the procedure to setup history registers, type

```
>OMCLASS
```

and press the Enter key.

Example of a MAP response

```

Next par is: <class name > STRING AUTO
ENTER: <class name > <precision/function>

```

- 10 To enter the accumulating class name, type

```
>class_name
```

and press the Enter key.

where

class_name

is the name of the accumulating class for which you must define the parameters.

Example of a MAP response

```

Next par is: <precision/function> single
DOUBLE
HOLDING
RENAME new class
      name
HISTORY
      snapshots
      transfer
Enter: <precision/function>

```

- 11 To enter the register function, type

```
>HISTORY
```

and press the Enter key.

Example of a MAP response

```

Next par is: STRING
Enter: <snapshots>

```

Setting up history registers (end)

- 12 To enter the number of history registers for each measurement, type
>snapshots
and press the Enter key.
where
snapshots
is the number of history registers (1 to 6) for each measurement
Example of a MAP response
Next par is:
Enter: <transfer>
- 13 To enter the time interval that the history register collects data, type
>transfer
and press the Enter key.
where
transfer
is the time in minutes a history register collects data. For example, if
the value is 5, data accumulates every 5 min. The possible entries are
5, 10, 20, or 30.
MAP response
OK
- 14 To quit table OMACC, type
>QUIT
and press the Enter key.
- 15 This procedure is complete.
Note: Refer to the *Basic Translations Tools Guide* for additional
information about table editor commands.

Specifying single or double precision for classes

Application

Use this procedure to change accumulating register precision. If an accumulating register count exceeds 65 536, assign double precision to the accumulating class that contains the register.

Requirements

You must verify that double precision registers are compatible with downstream data processing systems (for example, DOMUS, EADAS).

Specifying single or double precision for classes

At the MAP terminal

- 1 To start the procedure to determine register precision, type

```
>OMDUMP CLASS
```

and press the Enter key.

Example of a MAP response

```
Next par is: <class>
Enter: <class>
<function>
```

- 2 To specify the accumulating class, type

```
>class
```

and press the Enter key.

where

class

is the name of the accumulating class. Specify the precision for the class.

Example of a MAP response

```
Next par is: <function> COMMANDS
FORMAT
Enter: <function>
```

- 3 To specify the parameter COMMANDS, type

```
>COMMANDS
```

and press the Enter key

Example of a MAP response

```
OMCLASS SPECIAL DOUBLE
```

If the register precision	Do
is set correctly	Procedure 8
is not set correctly	Procedure 4

Specifying single or double precision for classes (end)

- 4** To start the procedure for how to specify precision, type
>OMCLASS
and press the Enter key.
Example of a MAP response
Next par is: <class name> STRING
Enter: <class name> <precision/function>
- 5** To specify the accumulating class, type
>class
and press the Enter key.
where
class
is the name of the accumulating class. Specify the precision for the class.
Example of a MAP response
Next par is: lt;precision/function> SINGLE
DOUBLE
HOLDING
RENAME new class
name
HISTORY
 <snapshots>
 <transfer>
Enter: <precision/function>
- 6** To set the precision, type
>precision
and press the Enter key.
where
precision
is single or double
Example of a MAP response
OK
- 7** Repeat Procedure 2 through 3 to verify the change to the precision.
- 8** The procedure is complete.

Assigning OM groups to an accumulating class

Application

Use this procedure to assign operational measurement groups to an accumulating class.

Requirements

Before you start this procedure, make sure a designated accumulating class is present.

Assigning OM groups to an accumulating class

At the MAP terminal

- 1 To list the correct operational measurement parameters, type

```
>Q OMSHOW
```

 and press the Enter key
Example of a MAP response

```
Parms: <group> {CP,
                  EXT,
                  CP2,
                  PCMCARR
                  PM2
                  -
                  -
                  -
                  SCPOTS
                  TWCPOTS
                  CWTPTS}
```
- 2 To start the procedure to add the OM group to an accumulating class, type

```
>OMACCGRP
```

 and press the Enter key
Example of a MAP response

```
Next par is: <class>
Enter: <class> <function> <groups>
```
- 3 To specify the accumulating class, type

```
>class
```

 and press the Enter key
where

```
class
```

 is the name of the accumulating class of the assigned OM.
Example of a MAP response

```
Next par is: <function> (ADD
                    DELETE
Enter: <function> <groups>
```

Assigning OM groups to an accumulating class (end)

- 4 To specify the function, type
>ADD
and press the Enter key
Example of a MAP response
Next par is: <group>
Enter: <group>
- 5 To specify the OM group, type
>GROUP group
and press the Enter key
where
group
is the added OM group
Example of a MAP response
OK
- 6 To start the procedure to verify the assignment of the OM group to the accumulating class, type
>OMDUMP CLASS
and press the Enter key
Example of a MAP response
Next par is: <class>
Enter: <class>
<function>
- 7 To specify the accumulating class, type
>class
and press the Enter key
where
class
is the name of the accumulating class of the assigned OM.
Example of a MAP response
Next par is: <function> (COMMANDS
FORMAT
Enter: <function>
- 8 To specify the parameter FORMAT, type
>FORMAT
and press the Enter key
Example of a MAP response
HOUR
LMD NTERMATT NORIGATT LMTRU TERMBLK
LMD ORIGFAIL PERCLFL STKCOINS REVERT
LMD MADNTATT ORIGBLK ORIGABN LMD
- 9 The procedure is complete.

Deleting OM groups from an accumulating class

Application

Use this procedure to delete operational measurement groups from an accumulating class.

Requirements

There are no requirements.

Deleting OM groups from an accumulating class

At the MAP terminal

- 1 To start the procedure to determine the OM groups associated with the accumulating class, type

```
>OMDUMP CLASS
```

and press the Enter key

Example of a MAP response

```
Next par is: <class>
Enter: <class>
      <function>
```

- 2 To specify the accumulating class, type

```
>class
```

and press the Enter key

Where

class

is the name of the accumulating class of the deleted OM.

Example of a MAP response

```
Next par is: <function> {COMMANDS,
                        FORMAT}
Enter: <function>
```

- 3 To specify the parameter FORMAT, type

```
>FORMAT
```

and press the Enter key

Example of a MAP response

```
SPECIAL1
LMD NTERMATT NORIGATT LMTRU TERMBLK
LMD ORIGFAIL PERCLFL STKCOINS REVERT
LMD MADNTATT ORIGBLK ORIGABN
LMD
OFZ INANN INKLT INOUT INOUT2
OFZ INTONE NIN NIN2 OUTNWAT
```

- 4 To start the procedure to delete the OM group, type

```
>OMACGRP
```

and press the Enter key

Deleting OM groups from an accumulating class (end)

Example of a MAP response

Next par is: <class>
Enter: <class> <function> <group>

- 5 To specify the accumulating class, type
>class
and press the Enter key

Where

class

is the name of the accumulating class from which the OM group is to be deleted.

Example of a MAP response

Next par is: <function> {ADD,
DELETE}
Enter: <function> <groups>

- 6 To enter the delete command, type
>DELETE
and press the Enter key

Example of a MAP response

Next par is: <group>
Enter: <group>

- 7 To specify the OM group to delete, type
>GROUP group
and press the Enter key

Where

group

is the OM group to delete

Example of a MAP response

OK.

- 8 Repeat steps 1 through 3 to verify the deletion of the OM group.
9 The procedure is complete.

Deleting OM registers from an accumulating class

Application

Use this procedure to delete operational measurement registers from an accumulating class.

Requirements

Before you begin this procedure, designate an accumulating class. Assign to the class the operational measurement group where the register belongs.

Deleting OM registers from an accumulating class

At the MAP terminal

- 1 To start the procedure to determine the OM groups and registers associated with the accumulating class, type

```
>OMDUMP CLASS
```

and press the Enter key

Example of a MAP response

```
Next par is: <class>
```

```
Enter: <class>
```

```
<function>
```

- 2 To specify the accumulating class, type

```
>class
```

and press the Enter key

where

class

is the name of the accumulating class of the deleted OM register.

Example of a MAP response

```
Next par is: <function> {COMMANDS,
                        FORMAT}
```

```
Enter: <function>
```

- 3 To specify the parameter FORMAT, type

```
>FORMAT
```

and press the Enter key

Deleting OM registers from an accumulating class (continued)

Example of a MAP response

```
SPECIAL1
  LMD  NTERMATT  NORIGATT  LMTRU   TERMBLK
  LMD  ORIGFAIL  PERCLFL   STKCOINS REVERT
  LMD  MADNTATT  ORIGBLK   ORIGABN
  LMD
  OFZ  INANN     INKLT    INOUT   INOUT2
  OFZ  INTONE    NIN      NIN2    OUTNWAT
```

If	Do
you want to delete one register from the OM group	Procedure 4
you want to delete all registers from the OM group	Procedure 9

4 To start the deletion of the OM register, type

```
>OMACCFLD
```

and press the Enter key

Example of a MAP response

```
Next par is: <class>
Enter: <class> <group> <function> <fields>
```

5 To specify the accumulating class, type

```
>class
```

and press the Enter key

where

class

is the name of the accumulating class of the deleted OM register.

Example of a MAP response

```
Next par is: <group> <function> <fields>
Enter: <group> <function> <fields>
```

6 To specify the OM group, type

```
>group
```

and press the Enter key

where

group

is the name of the OM group that contains the register to delete

Example of a MAP response

```
Next par is: <function> <fields>
Enter: <function>
```

7 To enter the delete command, type

```
>DELETE
```

and press the Enter key

Deleting OM registers from an accumulating class (continued)

Example of a MAP response

Next par is: <fields>
Enter: <fields>

- 8 To specify the register to delete, type

>FIELD field

and press the Enter key

where

field

is the name of the register to delete

Example of a MAP response

OK

Go to Procedure 15.

- 9 To start the procedure for deletion of registers, type

>OMACCFLD

and press the Enter key

Example of a MAP response

Next par is: <class>
Enter: <class> <group> <function> <fields>

- 10 To specify the accumulating class, type

>class

and press the Enter key

where

class

is the name of the accumulating class where the registers to delete are

Example of a MAP response

Next par is: <group> <function> <fields>
Enter: <group> <function> <fields>

- 11 To specify the OM group, type

>group

and press the Enter key

where

group

is the name of the OM group that contains the registers to delete

Example of a MAP response

Next par is: <function> <fields>
Enter: <function>

- 12 To enter the delete command, type

>DELETE

and press the Enter key

Deleting OM registers from an accumulating class (end)

Example of a MAP response

Next par is: <fields>

Enter: <fields>

- 13** To specify that all registers in the group are to delete, type

>ALL

and press the Enter key

Example of a MAP response

OK.

- 14** Repeat Procedure 1 through 3 to verify the deletion of the registers.

- 15** The procedure is complete.

Adding OM registers to an accumulating class

Application

Use this procedure to assign operational measurement registers to an accumulating class.

Requirements

Before you start this procedure, designate an accumulating class and assign to the class the operational measurement group where the register belongs. To add selected registers from an operational measurement group to a report, first delete all the fields and add separate fields. You can delete the fields that are not needed one at a time.

Adding OM registers to an accumulating class

At the MAP terminal

- 1 To start the procedure to determine the OM groups and registers assigned to the accumulating class, type

```
>OMDUMP CLASS
```

and press the Enter key

Example of a MAP response

```
Next par is: <class>
```

```
Enter: <class>
      <function>
```

- 2 To specify the accumulating class, type

```
>class
```

and press the Enter key

where

class

is the name of the accumulating class you are adding a register to.

Example of a MAP response

```
Next par is: <function> {COMMANDS,
                        FORMAT}
```

```
Enter: <function>
```

- 3 To enter the format parameter, type

```
>FORMAT
```

and press the Enter key

Adding OM registers to an accumulating class (continued)

Example of a MAP response

```
SPECIAL1
  LMD  NTERMATT NORIGATT LMTRU TERMBLK
  LMD  ORIGFAIL PERCLFL STKCOINS REVERT
  LMD  MADNTATT ORIGBLK ORIGABN
  LMD
  OFZ  INANN     INKLT   INOUT   INOUT2
  OFZ  INTONE   NIN     NIN2   OUTNWAT
```

If	Do
the addition is one register from the OM group	Procedure 4
the addition is all registers from the OM group	Procedure 9

4 To start the procedure for register addition, type

>OMACCFLD

and press the Enter key

Example of a MAP response

```
Next par is: <class>
Enter: <class> <group> <function> <fields>
```

5 To specify the accumulating class, type

>class

and press the Enter key

where

class

is the name of the accumulating class you are adding a register to

Example of a MAP response

```
Next par is: <group> <function> <fields>
Enter: <group> <function> <fields>
```

6 To specify the OM group, type

>group

and press the Enter key

where

group

is the name of the OM group that contains the register

Example of a MAP response

```
Next par is: <function> <fields>
Enter: <function>
```

7 To enter the add command, type

>ADD

and press the Enter key

Adding OM registers to an accumulating class (continued)

Example of a MAP response

Next par is: <fields>
Enter: <fields>

- 8** To specify the register for addition, type

>FIELD field

and press the Enter key

where

field

is the name of the register for addition

Example of a MAP response

OK.

Go to Procedure 15.

- 9** To start the procedure for addition of registers, type

>OMACCFLD

and press the Enter key

Example of a MAP response

Next par is: <class>
Enter: <class> <group> <function> <fields>

- 10** To specify the accumulating class, type

>class

and press the Enter key

where

class

is the name of the accumulating class you are adding a register to

Example of a MAP response

Next par is: <group> <function> <fields>
Enter: <group> <function> <fields>

- 11** To specify the OM group, type

>group

and press the Enter key

where

group

is the name of the OM group that contains the registers

Example of a MAP response

Next par is: <function> <fields>
Enter: <function>

- 12** To enter the add command, type

>ADD

and press the Enter key

Adding OM registers to an accumulating class (end)

Example of a MAP response

Next par is: <fields>

Enter: <fields>

- 13** To specify that all registers in the OM group are added, type

>ALL

and press the Enter key

Example of a MAP response

OK.

- 14** Repeat Procedure 1 to 3 to verify the addition of the registers.
- 15** The procedure is complete.

Selecting specified tuples for output

Application

Use this procedure to select for output exact tuples in a named group and class.

Requirements

Before you start this procedure, designate an accumulating class.

EADAS users must check with an EADAS co-ordinator before these users select exact tuples for output.

Selecting specified tuples for output

At the MAP terminal

- 1 To start the deletion of tuples from the requested class and group, type
>OMACCKEY
 and press the Enter key
Example of a MAP response
 Next par is: <class>
 Enter: <class> <group> <function> <keys>
- 2 To specify the accumulating class, type
>class
 and press the Enter key
where
 class
 is the name of the accumulating class you are displaying information for
Example of a MAP response
 Next par is: <group>
 Enter: <group> <function> <keys>
- 3 To specify the OM group, type
>group
 and press the Enter key
where
 group
 is the name of the OM group where the registers identified by an exact tuple appear
Example of a MAP response
 Next par is: <function>
 Enter: <function> <keys>
- 4 To enter the delete command, type
>DELETE

Selecting specified tuples for output (continued)

and press the Enter key

Example of a MAP response

```
Next par is: <keys>
Enter: <keys> {ALL
        KEY [<key> {0 to 9999}]
        [<key> STRING}
```

- 5 To specify the deletion of all tuples in the OM group, type

>ALL

and press the Enter key

Example of a MAP response

OK.

- 6 To start the addition of the new tuples, type

>OMACCKEY

and press the Enter key

Example of a MAP response

```
Next par is: <class>
Enter: <class> <group> <function> <keys>
```

- 7 To specify the accumulating class, type

>class

and press the Enter key

where

class

is the name of the accumulating class you are displaying information for

Example of a MAP response

```
Next par is: <group>
Enter: <group> <function> <keys>
```

- 8 To specify the OM group, type

>group

and press the Enter key

where

group

is the name of the OM group where the registers identified by an exact tuple are

Example of a MAP response

```
Next par is: <function>
Enter: <function> <keys>
```

- 9 To enter the ADD command, type

>ADD

and press the Enter key

Selecting specified tuples for output (end)

Example of a MAP response

```
Next par is: <keys>
Enter:      <keys> (ALL
            KEY [<keys> {0 to 9999}]
            [<keys> STRING]
```

- 10** To specify the tuple to add, type

>KEY keynum or keyname

and press the Enter key

where

keynum

is the number of the tuple to add. The range is 0 to 9999.

keyname

is the name of the tuple to add. The range is eight characters. The characters must begin with a letter.

Example of a MAP response

OK.

- 11** The procedure is complete.

Specifying output order of OM groups within a class

Application

Use this procedure to change the output order for operational measurement (OM) groups in an accumulating class.

If table OMGRPORD is empty, OM groups in an accumulating class are output according to a default order. The system generates this default order.

Requirements

To change the output order for an OM group, delete the existing tuple for the group. Overwrite the tuple for the OM group that contains the desired group order number. Use datafill for the deleted OM group to overwrite this tuple. You must enter the remaining tuples in the accumulating class with the required output order.

For additional information on datafilling in table OMGRPORD, refer to *DMS-100 Customer Data Schema Reference Manual*. 297-yyyy-351.

Specifying output order of OM groups within a class

At the MAP terminal

- 1 To access table OMGRPORD, type

```
>TABLE OMGRPORD
```

and press the Enter key

Example of a MAP response

```
TABLE: OMGRPORD
```

- 2 To determine the type (established, not established) of the desired group order, type

```
>LIST ALL
```

and press the Enter key

Example of a MAP response

```
TOP
CLASS-ORDER-GRPNAME
-----
HALFHOUR-1-OFZ
HALFHOUR-2-TRKS
HALFHOUR-3-LMD
HALFHOUR-5-ANNS
BOTTOM
```

If the OM groups	Do
are in the wrong order	Procedure 3
are in the correct order	Procedure 18

Specifying output order of OM groups within a class (continued)

3 Record the order number and group name entered for each tuple in the accumulating class.

4 To change the position on the tuple, type

```
>POS class order_number
```

and press the Enter key

where

class

is the name of the accumulating class affected

order_number

is the order number of the tuple changes

Example input

```
>POS HALFHOUR 4
```

5 To delete the tuple, type

```
>DEL
```

and press the Enter key

6 To confirm the command, type

```
>Y
```

and press the Enter key

7 To confirm the deletion of the tuple, type

```
>LIST ALL
```

and press the Enter key

Example of a MAP response

```
TOP
CLASSORDERGRPNAME
-----
HALFHOUR-1-OFZ
HALFHOUR-2-TRKS
HALFHOUR-3-LMD
HALFHOUR-4-TONES
HALFHOUR-5-ANNS
BOTTOM
```

8 To position on the tuple that contains the desired group order number, type

```
>POS class order_number
```

and press the Enter key

where

class

is the name of the accumulating class

order_number

is the desired group order number

Example input

```
>POS halfhour 2
```

Specifying output order of OM groups within a class (continued)

- 9 To change the tuple, type
>CHA
 and press the Enter key
Example of a MAP response
 Next par is: (group)
 Enter: (group)
- 10 To enter the new group name for the tuple, type
>group
 and press the Enter key
where
group
 is the OM group for which output order changes, TONES for example
Example of a MAP response
 Tuple changes:
 HALFHOUR 2 TONES
 Enter Y to confirm, N to reject or E to edit.
- 11 To ensure the datafill is correct and to confirm the command, type
>Y
 and press the Enter key
Example of a MAP response
 Tuple changed
 Written to journal file as JF number 68
- 12 Determine if the output order for other OM groups in the accumulating class changes.
- | If the output order | Do |
|---------------------|--------------|
| is changed | Procedure 17 |
| is not changed | Procedure 13 |
- 13 To overwrite the tuples following the overwritten tuple, repeat Procedure 8 to 11 for each of the tuples. Do not repeat Procedure 8 to 11 for the last tuple in the accumulating class.
Note 1: You recorded the required tuple information in Procedure 3.
Note 2: You must enter the tuples in order from the lowest to the highest group number.
- 14 To add the last tuple to the accumulating class, type
>ADD class order_number group
 and press the Enter key
where
class
 is the accumulating class

Specifying output order of OM groups within a class (end)

order_number

is the order number for the last tuple that you recorded in Procedure 3

group

is the group name for the last tuple that you recorded in Procedure 3

Example input

```
>ADD HALFHOUR 5 ANNS
```

and press the Enter key

Example of a MAP response

Tuple to be changed:

```
HALFHOUR 2 TONES
```

Enter Y to confirm, N to reject or E to edit.

- 15 To confirm, type
>Y
and press the Enter key
- 16 Go to Procedure 18.
- 17 Repeat Procedure 4 to 11 to for for each of the OM groups you want to change the output order for.
- 18 To quit from table OMGRPORD, type
>QUIT
and press the Enter key
- 19 The procedure is complete.

Enabling a class

Application

Use this procedure to enable an accumulating class. This procedure initiates data accumulation for the specified time period.

Requirements

Perform this procedure after the arrangement of OM group order.

Enabling the class

At the MAP terminal

- 1 To access table OMACC, type
`>TABLE OMACC`
and press the Enter key

Example of a MAP response

TABLE: OMACC

- 2 To determine if the class is enabled, type
`>POS class`
and press the Enter key

where

class

is the name of the accumulating class to be enabled

Example of a MAP response

CLASS	ENABLED	PRECSN	WHEN
SPECIAL	N	DPRECISION	AUTO

If the class	Do
--------------	----

is not enabled	Procedure 3
----------------	-------------

is enabled	Procedure 7
------------	-------------

- 3 To start the procedure to enable the class, type
`>CHA`
and press the Enter key

Example of a MAP response

ENABLED: N

- 4 To confirm the command, type
`>Y`
and press the Enter key

Enabling a class (continued)

Example of a MAP response

REP: AUTO

- 5 To specify the collection interval, type

>interval

and press the Enter key

where

interval is one of the following:

HALFHOURLY

specifies half hourly OM data accumulation is made. This time also depends on on OMXFR

HOURLY

specifies hourly OM data accumulation is made. This time also depends on on OMXFR

MONTHLY

specifies required OM data accumulation on a monthly base

DAYTIME

specifies that OM data accumulates for selected days on a weekly base

DAILY

specifies required that one accumulation of OM data each day of the week

WEEKLY

specifies required accumulation of OM data each week

DEVWEEK

indicates that OM data accumulates on a specified day of the week, at a specified hour and minute

AUTO

specifies that the accumulating period is set by OMXFR in table OFCENG. This field is for holding classes only. This field cannot change. This field can only be read.

Note: Some parameter values display subfields that you must enter. For additional information, refer to *Translations Guide*.

Example of a MAP response

Tuple to be changed:

TEST Y AUTO

Enter Y to confirm, N to reject or E to edit.

- 6 To confirm the command, type

>Y

and press the Enter key

Example of a MAP response

TUPLE CHANGED

WRITTEN TO JOURNAL FILE AS JF NUMBER 579.

- 7 To quit table OMACC, type

>QUIT

Enabling a class (end)

and press the Enter key

- 8 The procedure is complete.

Note: For additional information on table editor commands, refer to the *Basic Translations Tools Guide*.

3 Scheduling and routing reports

Where to find a procedure

The following list contains the names of the procedures in this chapter.

Procedure	Go to page
Scheduling reports	page 3-3
Routing reports to DIRP	page 3-7
Assigning a class number to a report	page 3-11
Setting OM total for all classes	page 3-14
Setting OM total for a specific group and class	page 3-16
Specifying reports and the format of the report	page 3-18
Starting or stopping the device	page 3-24
Print OM files with OMPRDUMP	page 3-26

How the procedures are organized

This chapter contains procedures to schedule and route reports. Each procedure in this chapter has:

- an introductory page
- step-action instructions

First page

The following headings appear on the first page of each procedure:

- application
- requirements

The information under these headings explains:

- what the user accomplishes through completion of the procedure.
- what the user requires to perform the task.
- any information the user requires to complete the procedure.

Step-action instructions

The step-action instructions describe how to schedule and route reports. Follow the steps in the order the steps appear. The step can require a return to a previous step and repetition of a sequence. Make sure you repeat all the steps in the sequence.

The step-action instructions provide the command syntax and machine output for use or which appears when you perform a procedure. Refer to the correct Nortel Networks publication for additional information about DMS system commands or output. The front section of this document lists these publications.

Scheduling reports

Application

Use this procedure to associate a class name with a report number. Use this procedure to determine which operational measurement (OM) information you must route to the output device.

Requirements

Before you begin this procedure, you must have an assigned report number. The report number must be a number between 200 and 231.

Press the Enter key if the parameters do not require an adjustment.

Scheduling reports

At the MAP terminal

- 1 To access table OMPRT, type

```
>TABLE OMPRT
```

and press the Enter key.

Example of a MAP response

```
TABLE: OMPRT
```

- 2 To determine if the data associated with a report is correct, type

```
>POS report_number
```

and press the Enter key.

where

report_number

is the number of the OM report

Example of a MAP response

REPNO	ACTIVE	SUPZERO	WHEN	BUFFOUT	PRTSPEC OUTDEV
200	Y	N	AUTO	ALLCLASS N	HALFHOURLY SINK

If the data associated with the report number	Do
is not correct	Procedure 3
is correct	Procedure 12

- 3 To start the procedure to change the datafill associated with the report number, type

```
>CHA
```

and press the Enter key.

Scheduling reports (continued)

- 4 To indicate if the report must be active or inactive, type
>Y or N
and press the Enter key.
where
Y
specifies that the report is active.
N
specifies that the report is inactive.
Example of a MAP response
SUPZERO: N
- 5 To specify if zero suppression is active, type
>Y or N
and press the Enter key.
where
Y
specifies that only tuples that contain values other than zero are output
N
all tuples are output
Example of a MAP response
ID: ALLCLASS
- 6 To specify the type of output report (field PRTSPEC, subfield ID), type
>ALLGROUP group, ALLCLASS class, ONETAB group class, or ALL.
and press the Enter key.
where
ALLGROUP
specifies that data for all registers in the specified OM group is output
group
indicates specific OM group
ALLCLASS
specifies that all data is output for OM groups in the specified class
class
is the specified accumulating or history class
ONETAB
specifies that data is output for one OM group in the specified accumulating class
group
is the specified OM group
class
is the specified accumulating or history class
ALL
specifies that data for all OMs is output

Scheduling reports (continued)

Example of a MAP response

REP: AUTO

- 7** To specify when the report is output (field WHEN, subfield REP), type
>when
 and press the Enter key.
where
 when is one of the following

AUTO	schedules reports to be output when the holding registers are updated or when the accumulating period table that OMACC ends.
HALFHOURLY	schedules reports to be output each half-hour. Commences at the time that refinement STARTUP defines.
HOURLY	Schedules reports to be output each hour. Commences at the time you define in refinement STARTUP.
DAILY	Schedules reports to be output each day during the time period that you define in refinements FROMTIME and TOTIME.
WEEKLY	Schedules reports to be output each week during the period that you define in refinements FROMDAYOFM, FROMTIME, TODAYOFM, and TOTIME.
MONTHLY	Schedules reports to be output each month during the period that you define in refinements FROMDAYOFM, FROMTIME, TODAYOFM, and TOTIME.
DEVDAY	Schedules reports to be output each day at the time that you define in refinement WHEN. If associated with a weekly accumulating class, DEVDAY provides a daily display of the accumulating count for OMs in the class during the period set in table OMACC.
DAYTIME	Schedules reports to be output each day of the block of days that that you define in refinements FROMDAYOFW and TODAYOFW. This output occurs during the period that refinements FROMTIME and TOTIME defines.
DEWEEK	Schedules reports to be output each week at the time that refinements DOW and WHEN define. If associated with a monthly accumulating class, DEVDAY provides a weekly display of the accumulating count. The display is for OMs in the class during the period set in table OMACC.

Note: The table OMPRT in

Scheduling reports (end)

Translations Guide

. provides additional descriptions of the datafill of the subfields for the above parameters.

Example of a MAP response

BUFFOUT: N

- 8** To specify if the report must be buffered on disk (field BUFFOUT), type **>Y or N**

and press the Enter key.

where

Y specifies that the report is buffered on disk

N specifies that the report is not buffered on disk (default value)

Example of a MAP response

OUTDEV: SINK

- 9** To specify the output device, type **>SINK or OUTDEV**

and press the Enter key.

where

SINK

is the null device. Enter only if field BUFFOUT was set to Y (default value)

OUTDEV

is the output device entered earlier in table OMDEV. Enter only if field BUFFOUT is set to Y.

Example of a MAP response

```
TUPLE TO BE CHANGED:
 200      Y  N      ALLCLASS      ALL
                AUTO      N      SINK
Enter Y to confirm, N to reject, or E to edit.
```

- 10** To confirm the tuple changes, type **>Y**

and press the Enter key.

Example of a MAP response

```
TUPLE CHANGED
WRITTEN TO JOURNAL FILE AS JF NUMBER 637
```

- 11** To quit table OMPRT, type **>QUIT**

and press the Enter key.

- 12** This procedure is complete.

Note: Refer to the *Basic Translations Tools Guide* for additional information about table editor commands.

Routing reports to DIRP

Application

Use this procedure to schedule the transfer of operational measurement (OM) data to the device independent recording package (DIRP) or another recording device.

Requirements

Before you begin this procedure, use the OMACCGRP command to designate a measurement class and assign the OM group to the class that contains the data for transfer.

You must activate each tape number in table OMTAPE to transfer the data. To complete this process correctly, enable the class in table OMACC. To establish the periods for transfer of data, consider the periods already set in table OMACC.

Press the Enter key if the parameters do not require an adjustment.

Routing reports to DIRP

At the MAP terminal

- 1 To access table OMTAPE, type

```
>TABLE OMTAPE
```

and press the Enter key.

Example of a MAP response

```
TABLE: OMTAPE
```

- 2 To verify if the data associated with a tape schedule is correct, type

```
>POS tape schedule number
```

and press the Enter key.

where

tape schedule number

is a number from 0 to 19. There are 20 tuples available for each table. Each tuple has a tape schedule number and a class assigned to it.

Example of a MAP response

```
15N      SPECIAL1      MONTHLY  1      0  C00  1  0  C00
```

If the data

Do

associated with tape schedule is not correct Procedure 3

associated with a tape schedule is correct Procedure 10

Routing reports to DIRP (continued)

- 3 To verify the correct output times on the virtual display unit (VDU), type
>RAN WHEN
 and press the Enter key.

Example of a MAP response

```

4 WHEN          OMTIMESPEC
  TYPE IS       OMTOMESPEC    MULTIPLE WITH
                                OMREPSELECTO RREFINEMENTS:
                                OMTOMEAUTO
                                MULTIPLE WITH
                                {1TO 6}
                                {T10, T15, T20,T30}
                                MULTIPLE WITH
                                {C00 C15, C30, C45}
-
-
-
                                {DEVDAY}
                                WHEN
                                HR
                                MIN
                                MULTIPLE WITH
                                MULTIPLE WITH
                                {0 TO 23}
                                {C15, C30, C45}
  
```

- 4 To change the data associated with a tape schedule, type
>CHA
 and press the Enter key.

Example of a MAP response

Enter Y to continuing processing or N to quit:

- 5 To continue the process, type
>Y
 and press the Enter key.

Example of a MAP response

ACTIVE: Y

where

active

indicates if the report is active or inactive. A Y indicates data accumulation for a specified class occurs each transfer period.

N

indicates data accumulation does not occur.

- 6 To continue the process, type
>Y or N
 and press the Enter key.

- 7 To display the class information, type
>class name
 and press the Enter key.

Routing reports to DIRP (continued)

Example of a MAP response

CLASS:

where

class

specifies to display information that relates to only one accumulating class

- 8** To enter the time frame, type

>**timeframe**

and press the Enter key.

where

HALFHOURLY

schedules OM data to be output every half hour

HOURLY

schedules OM data to be output every hour

DAILY

specifies that OM data is output each day of the week

DAYTIME

specifies that OM data is output for selected days each week

WEEKLY

specifies that OM data is output once each week

DEVWEEK

schedules OM data to be output on a specified day of the week, at a specified hour and minute

AUTO

specifies that OMXFR in table OFCENG sets the schedule period. Use this field for holding classes only.

Note: Some parameter values will display subfields that require data entry.

Example of a MAP response

TUPLE TO BE CHANGED:

15Y SPECIAL1 DAILY
Enter Y to confirm, N to reject, or E to edit.

- 9** To confirm the tuple changes, type

>**Y**

and press the Enter key.

Example of a MAP response

TUPLE CHANGED

WRITTEN TO JOURNAL FILE AS JF NUMBER 579

- 10** To quit from table OMTAPE, type

>**QUIT**

Routing reports to DIRP (end)

and press the Enter key.

- 11 The procedure is complete.

Note: Refer to the *Basic Translations Tools Guide*. for additional information about table editor commands.

Assigning a class number to a report

Application

Use this procedure to assign a log utility (logutil) class number to the report that table OMPRT defines.

Requirements

Before you begin this procedure, complete the *Scheduling reports* procedure. Define the report number in table OMPRT. You must identify the report name and the class number to complete this procedure.

Note: The log utility system can direct outputs to a printer or a device like a printer. Not all parameters of the log utility system can establish output reports. If parameters do not require adjustment, press the Enter key.

Assigning a class number to a report

At the MAP terminal

- 1 To access table LOGCLASS, type

```
TABLE LOGCLASS
```

and press the Enter key.

Example of a MAP response

```
TABLE: LOGCLASS
```

- 2 To verify if the class number belongs to the report, type

```
LIST ALL
```

and press the Enter key.

Example of a MAP response

```
TOP
REPNAME  CLASS  THRESHOLD  SUPPRESS  TUNITS  SYSLOG
```

```
-----
OMPR    200     10         0 N        0 N
OMPR    201     11         0 N        0 N
OMPR    202     12         0 N        0 N
OMPR    203     13         0 N        0 N
.
.
.
OMPR    231     31         0 N        0 N
BOTTOM
```

If the class number	Do
is not assigned to the report	Procedure 3
is assigned to the report	Procedure 12

Assigning a class number to a report (continued)

- 3 To add the class number to a report, type
ADD
and press the Enter key.
Example of a MAP response
Enter Y to continue processing, N to quit
- 4 To continue the process, type
>Y
and press the Enter key.
Example of a MAP response
REPNAME :
- 5 To enter the report name, type
>OMPR <200-231>
and press the Enter key.
where
repname
is the report name defined earlier in table OMPRT. The value is
OMPR <200-231>
Example of a MAP response
CLASS :
- 6 To enter the logutil class number, type
>0-31
and press the Enter key.
where
class
is a logutil class number that has a value from 0 to 31. The use of class
0 is not recommended because 0 is the default class number.
Example of a MAP response
THRESHOLD :
- 7 To enter the threshold value, type
>0-255
and press the Enter key.
where
threshold
is a value from 0 to 255. Assignment of a class number to a report does
not require this parameter. Set to 0.
Example of a MAP response
SUPPRESS :

Assigning a class number to a report (end)

- 8** To continue the process, type
>Y or N
 and press the Enter key.
where
suppress
 allows the user to suppress the report. Assignment of a class number to a report does not require this parameter. Set to N.
Example of a MAP response
 TUNITS:
- 9** To enter the traffic units that identify the reset time, type
>0000-9999
 and press the Enter key.
where
tunits
 are traffic units that identify the reset time for thresholds. Assignment of a class number to a report does not require this parameter. Set to 0.
Example of a MAP response
 SYSLOG:
- 10** To continue the process, type
>Y or N
 and press the Enter key.
where
syslog
 allows the user to specify if a system log must generate if a count exceeds a threshold. This parameter is not used for OM input. Set to N.
Example of a MAP response
 TUPLE TO BE ADDED: OMPR 231 31 0 N 0 N
 ENTER Y TO CONFIRM, N TO REJECT OR E TO EDIT.
- 11** To confirm the tuple changes, type
>Y
 and press the Enter key.
Example of a MAP response
 TUPLE ADDED
 WRITTEN TO JOURNAL FILE AS JF NUMBER 71
- 12** To quit from table LOGCLASS, type
QUIT
 and press the Enter key.
- 13** This procedure is complete.
Note: Refer to the *Basic Translations Tools Guide* for additional information about table editor commands.

Setting OM total for all classes

Application

Use this procedure to generate an operational measurement OM total for a named OM group for all accumulating classes.

Requirements

Feature package NTX445AB provides this feature.

When the OMTOTAL feature is on, a totals tuple to the end of the designated measurement group for all accumulating classes.

To complete totals, the operational measurement group you are requesting must have multiple appearances.

Setting OM total for all classes

At the MAP terminal

- 1 To activate the OM total feature, type

>OMTOTAL

and press the Enter key.

Example of a MAP response

GROUP :

- 2 To continue the process, type

>group

and press the Enter key.

where

group

specifies the OM group for which you require a total (or for which you no longer require a total)

Example of a MAP response

ON or OFF

- 3 To continue the process, type

>ON or OFF

and press the Enter key.

where

ON

turns the OM total feature on for a specified OM group

OFF

turns the OM total feature off for a specified OM group

Example of a MAP response

OK.

Setting OM total for all classes (end)

- 4 The procedure is complete.

Setting OM total for a specific group and class

Application

Use this procedure to control operational measurement (OM) totals for a specific OMPR report.. When the OMACCTOT is set to ON the system prints the total tuple for the selected OM group and measurement class.

Requirements

Feature package NTX385AA provides this feature.

Before you begin this procedure, select an accumulating class and assign the OM group to the accumulating class for which you are requesting a total to that class. Use the procedure "Designating an accumulating class" in chapter two of this manual.

Note: The OM group total feature must be ON for this capability to work. See the procedure "Setting OM total for all classes" in this chapter.

To generate OM group totals for a selected OM group, use the procedure "Setting OM total for all classes" in this chapter.

Note: This procedure does not affect the output of the OMSHOW command. Add the keyname TOTAL to the OMSHOW to display the total tuple for the selected OM group and measurement class.

Setting OM total for a specified group and class

At the MAP terminal

- 1 To activate the OM total feature for an OM group and an accumulating class, type

```
>OMACCTOT
```

and press the Enter key.

MAP response

```
CLASS :
```

- 2 To enter the class name, type

```
>class
```

and press the Enter key.

where

```
class
```

is the name of the accumulating class

Example of a MAP response

```
GROUP :
```

Setting OM total for a specific group and class (end)

- 3** To continue the process, type
>group
and press the Enter key.
where
group
identifies the OM group for which the total only option is active or inactive
Example of a MAP response
ON or OFF
- 4** To continue the process, type
>ON or OFF
and press the Enter key.
where
ON
turns the total tuple only feature on for the selected OM group in the selected class
OFF
turns the total tuple only feature off for the selected OM group in the selected class
Example of a MAP response
OK.
- 5** The procedure is complete.

Specifying reports and the format of the report

Application

Use this procedure to add a device to the LOGDEV table and to change specifications about the report.

Requirements

Before you begin this procedure, identify the device name to which you must route the report. Identify the class number assigned in table LOGCLASS.

Press the Enter key if a parameter does not require adjustment.

Specifying reports and the format of the report

At the MAP terminal

- 1 To access table LOGDEV, type

```
>TABLE LOGDEV
```

and press the Enter key.

MAP response

```
TABLE: LOGDEV
```

- 2 To verify the data associated with a report, type

```
>LIST ALL
```

and press the Enter key.

Example of a MAP response

```
TOP
DEV  ALT  CLASSES
FORMAT  PRIORITY
-----
TRM2  NIL  (0,31)
>STD   N   PRT2  NIL  (0, 3-9)
STD   N   MAP   NIL  (4)
STD   N
TRAF1  NIL(5)
STD   N
BOTTOM
```

If the device	Do
is not present in the table	Procedure 3
is present in the table but the data associated with the report is not correct	Procedure 12

Specifying reports and the format of the report (continued)

If the device	Do
	is present in the table and the data associated with the report is correct
3	<p>To add the device name to table LOGDE, type</p> <p>>ADD</p> <p>and press the Enter key.</p> <p><i>Example of a MAP response</i></p> <p>Enter Y to continue processing or N to quit</p>
4	<p>To confirm the table adjustment, type</p> <p>>Y</p> <p>and press the Enter key.</p> <p><i>Example of a MAP response</i></p> <p>DEV:</p> <p><i>where</i></p> <p style="padding-left: 40px;">dev</p> <p style="padding-left: 80px;">is the device to which the report must route</p>
5	<p>To enter the device name, type</p> <p>>device name</p> <p>and press the Enter key.</p> <p><i>Example of a MAP response</i></p> <p>ALT:</p> <p><i>where</i></p> <p style="padding-left: 40px;">alt</p> <p style="padding-left: 80px;">allows the user to specify an alternate device name. Type nil or press return.</p>
6	<p>To continue the process, type</p> <p>>NIL</p> <p>and press the Enter key.</p> <p><i>Example of a MAP response</i></p> <p>CLASSES:></p> <p><i>where</i></p> <p style="padding-left: 40px;">classes</p> <p style="padding-left: 80px;">is a number from 0 to 31. Use the same number that belongs to the OMPR report in table LOGCLASS. This parameter identifies the LOGUTIL class number that associated with the output device.</p>

Specifying reports and the format of the report (continued)

- 7 To enter the LOGUTIL class number, type
>(class number)
and press the Enter key.
Example of a MAP response
FORMAT:
where
format
identifies the report to be STD or SCC2. The SCC2 format modifies the formula for polling by downstream devices. The STD format outputs in the standard Nortel format.
- 8 To specify the report formula required, type
>STD
or
SCC2
and press the Enter key.
Example of a MAP response
PRIORITY:
where
priority
must be set to N to indicate that you require in order output. If this parameter is set to Y, the user indicates that output for this log class must relate to alarm levels. This feature is not associated with standard OM report output.
- 9 To continue the process, type
>NIL
and press the Enter key.
Example of a MAP response
GUARANTEED:
where
guaranteed
must be set to N to make sure the output of logs to this device occurs at times when only priority outputs can occur.
- 10 To set the guaranteed, type
>N
and press the Enter key.

Specifying reports and the format of the report (continued)

Example of a MAP response

```
TUPLE TO BE ADDED:
NWM1  NIL
STD   N   (6)
ENTER Y TO CONFIRM, N TO REJECT OR E TO EDIT.
```

- 11 The confirm the tuple adjustment, type

>Y

and press the Enter key.

Example of a MAP response

```
WRITTEN TO JOURNAL FILE AS JF NUMBER 947.
```

- 12 To change the data associated with a report, type

>CHA

and press the Enter key.

Example of a MAP response

```
Enter Y to continue processing or N to quit
```

- 13 To continue the process, type

>Y

and press the Enter key.

Example of a MAP response

```
DEV:
```

where

dev

is the device to which the report will route.

- 14 To enter the device name, type

>device name

and press the Enter key.

Example of a MAP response

```
ALT:
```

where

alt

allows the user to specify an alternate device name. Type nil or press return.

- 15 To continue the process, type

>NIL

and press the Enter key.

Example of a MAP response

```
>CLASSES:
```

where

Specifying reports and the format of the report (continued)

- classes**
is a number from 0 to 31. Use the same number that belongs to the OMPR report in table LOGCLASS. This parameter identifies the LOGUTIL class number that associates with the output device.
- 16** To enter the class number, type
>(class number)
and press the Enter key.
Example of a MAP response
FORMAT:
where
- format**
identifies the report to be STD or SCC2. The SCC2 format modifies the format for polling by downstream devices. The STD format outputs in the standard Nortel formula.
- 17** To enter the report formula, type
>STD
or
SCC2
and press the Enter key.
Example of a MAP response
PRIORITY:
where
- priority**
is set to N to indicate that you require in order output. If this parameter is set to Y, the user indicates that output for this log class must relate to alarm levels. This feature is not associated with standard OM report output.
- 18** To continue the process, type
>NIL
and press the Enter key.
Example of a MAP response
GUARANTEED:
where
- guaranteed**
is set to N to make sure the output of logs to this device occurs at times when only priority outputs are allowed.
- 19** To set the guaranteed, type
>N

Specifying reports and the format of the report (end)

and press the Enter key.

Example of a MAP response

```
TUPLE TO BE ADDED:
  NWM1  NIL
STD     N   (6)
ENTER Y TO CONFIRM, N TO REJECT OR E TO EDIT.
```

- 20** To confirm the tuple change, type

>Y

and press the Enter key.

Example of a MAP response

```
WRITTEN TO JOURNAL FILE AS JF NUMBER 948.
```

- 21** To quit from table LOGDEV, type

>QUIT

and press the Enter key.

- 22** The procedure is complete.

Note: Refer to the *Basic Translations Tools Guide* for additional information about table editor commands.

Starting or stopping the device

Application

Use this procedure to activate the output device to which the reports are routed. This procedure also demonstrates how to stop an active output device.

Requirements

Before you begin this procedure, identify the device and format the report in table LOGDEV.

Start or stopping the device

At the MAP terminal

- 1 To access the LOGUTIL utility, type

>LOGUTIL

and press the Enter key.

MAP response

LOGUTIL:

- 2 To verify if the output device where the report routes is active, type

>LISTDEVS

and press the Enter key.

Example of a MAP response

NUMBER	DEVICE	STATUS	REROUTED	FORMAT
0	MAPPRT0	INACTIVE	NO	STD
1	VDU031	ACTIVE	NO	STD
2	VDU031	ACTIVE	NO	STD
3	VDU032	INACTIVE	NO	STD
4	VDU133	INACTIVE	NO	STD
5	VDU140	INACTIVE	NO	STD
6	VDU033	ACTIVE	NO	STD
7	VDU043	INACTIVE	NO	STD
8	VDU041	INACTIVE	NO	STD
9	VDU130	INACTIVE	NO	STD
10	VDU040	INACTIVE	NO	STD
11	NETWORK	INACTIVE	NO	STD

-End of devices-

To	Do
activate the device	Procedure 3
stop the device	Procedure 4

- 3 To activate the output device, type

>STARTDEV device name

and press the Enter key.

Starting or stopping the device (end)

Example of a MAP response

Log device VDU032 has been started.
Number of devices started: 1

Go to Procedure 5.

- 4** To stop the output device, type

>STOPDEV device name

and press the Enter key.

Example of a MAP response

Log device VDU032 has been stopped.
Number of devices stopped: 1

- 5** Repeat Procedure 2 to verify if the device is active or inactive.

- 6** To quit from the LOGUTIL utility, type

>QUIT

and press the Enter key.

- 7** The procedure is complete.

Print OM files with OMPRDUMP

Application

Use this procedure to print operational measurement (OM) information using OMPRDUMP.

For more information on OMPRDUMP and other commands, refer to the chapter, "Command summary" in this document.

Requirements

Before you begin this procedure, make sure table OMTAPE has CLASS active and is data filled with classes.

Scheduling reports

At the MAP terminal

- 1 To activate the disk utility, type

>DSKUT

and press the Enter key.

Example of a MAP response

DSKUT :

Note: To display help for all the commands type **>Q DSKUT** and press the enter key.

- 2 To display information on all volumes on the disk, type

>DISPLAYVOLS disk number

and press the Enter key.

where

disk number

is the number of the disk.

Example of a MAP response

VolumeName	NumberOfFiles	VolumeSize	FreeSpace
unallocd	45724	65535	0
JF	566	10000	165
AMA	74	10000	386
DLOG	78	20000	716
OM	34	20000	113
:			
SMDR	258	10000	443

- 3 To list all files on a disk volume, type

>LISTVOL diskvol ALL

and press the Enter key.

where

Print OM files with OMPRDUMP (continued)

diskvol

is the name of the disk volume.

An example of diskvol is **d010jf** where **1** is the disk number and **jf** is the volume name.

Example of a MAP response

```
566 files in the volume
ListVol command may take up 284 seconds.
P980625003265JF
:
p981229160909JF
```

- 4** To enter the OMPRDUMP directory and access it's commands, type

```
>OMPRDUMP
```

and press the Enter key.

- 5** To display the file you want to dump, type

```
>OMGETGD filename
```

and press the Enter key.

where

filename

is the name of the file defined in DIRP, where the OM information is located.

Example of a MAP response

```
Classes scheduled to tape are:
DAILYOM
MONDAY
TUESDAY
```

The first class found on file is:

```
Class name   : DAILYOM
Start time  : 1999 07 06 00 00
Stop time   : 1999 07 07 00 00
```

- 6** To print the OMPRSPEC report for a given class and the OM groups that belong to the class, type

```
>OMPRTREP CLASS classname ALLGROUP
```

and press the Enter key.

where

class name

is the name of the class for which you want the report

Example of a MAP response

```
Specified time period ignored for this class
```

```
Class and group data must be retrieved in sequential
order. Use OMDUMP or table OMGRPORD to check group
ordering. Do you wish to continue?
Please confirm ("YES", "Y", "NO", or "N")
```

Print OM files with OMPRDUMP (continued)

7 To continue the report generation, type

>YES

and press the Enter key.

Example of a MAP response

OMPRSPEC 1999/07/12 16:36:12 (from OMTAPE format)

Class: DAILYOM

Start:1999/07/10 00:00; Stop: 1999/07/11 00:00;

Slowsamples: 864; Fastsamples 8640;

TRK

Key (Common_Language_Name)

INFO (OM2TRKINFO)

INCATOT	PRERTEAB	INFAIL	NATTMPT
NOVGLATB	GLARE	OUTFAIL	DEFLDCA
:	:	:	:
ACCCONG	NOANSWER		

ATTAMA

AMORIGS	AMTRMT	AMNOTRMT	AMANS
:	:	:	:
AMRC555	AML7555	AMED555	AMNA555
249431	39923	0	0
:	:	:	:
0	0	0	0

END OF FILE REACHED.
 GROUP DESCRIPTION DATABASE DEALLOCATED.
 {CONTINUE OR LOGOUT}

8 To logout, type

>QUIT ALL

and press the Enter key.

9 Determine the next action.

If	Do
you are satisfied with the report	step 10
you want to assign OM groups to an accumulating class or to see which groups are assigned to an accumulating class	procedure Assigning OM groups to an accumulating class in this chapter
you want to add all fields in the group to a class or determine which groups are in a class	procedure Adding OM registers to an accumulating class in this chapter
set the time or date for report generation	OMPRTSET in the chapter "Command summary" in this document

Print OM files with OMPRDUMP (end)

10 This procedure is complete.

4 Subscriber line usage

Where to find a procedure

The names of all the procedures in this chapter appear in the following list.

Procedure	Go to page
Setting up SLU on an individual line or hunt group	page 4-3
Activating the SLU input/output for ten-digit DNs	page 4-15
Setting up SLU on an entire peripheral module	page 4-35
Stopping the collection of SLU data	page 4-36
Collecting overflow data using OM group HUNT	page 4-40

How the procedures are organized

This chapter contains procedures to administer SLU studies. A description of each procedure in this chapter appears as follows:

- introductory page
- step–action instructions

Introductory page

The following headers appear on the first page of each procedure:

- application
- requirements

The information under the headers explains:

- what the procedure accomplishes
- requirements to perform the task
- additional information to complete the procedure

Step–action instructions

The step–action instructions tell you how to conduct SLU studies. Follow the steps in the order they appear. A step can require you to return to an earlier step and to repeat a sequence. If this type of step occurs, make sure that you repeat each step in the sequence.

The step–action instructions provide the command syntax and machine output you use or see when you perform a procedure. Refer to the correct Nortel Networks publication about DMS system commands or output.

Setting up SLU on an individual line or hunt group

Application

Use this procedure to establish the collection of use and increase count data on separate lines or hunt groups. Use the directory number or originating equipment as identification.

For a hunt group, the use of SLUADD is only for the hunt group pilot. The system automatically adds all of the group members. Use command SLU_INSTALL after the addition of each hunt group pilot to obtain consecutive tuples or XREF numbers on the table.

Requirements

Before you start this procedure, identify directory numbers or originating equipment in line equipment number design of the lines you will study. Prior to the establishment of the study, use the QDN or QLEN command to verify each DN or OE. This check prevents problems that can occur in step 7 of the procedure. The system automatically verifies each DN or OE as the system adds DN or OE to the specified input table. A query of any entry that the system cannot verify will occur.

To set up a study on a hunt group, input a table that can handle the number of lines in the group.

Establishing SLU on an separate line or hunt group

At the MAP terminal

- 1 To add the SLU option to the lines which require the SLU study, type
>SERVORD
 and press the Enter key
Example of a MAP response
 SO:
- 2 To assign the number as a directory number hunt group with a group size of 1, type
>ADO
 and press the Enter key
Example of a MAP response
 SONUMBER: NOW 91 2 12 PM
- 3 To continue the process, press the Enter key
Example of a MAP response
 DN_OR_LEN:
- 4 To enter the directory or orginating equipment number, type
>dn or len

Setting up SLU on an individual line or hunt group (continued)

and press the Enter key

where

dn

is a seven digit directory number, without a space between the third and fourth digits, for example, 2234132

or

dn

is a ten-digit directory number, with no space between the third and fourth, and the sixth and seventh digits, for example, 6132234132

Setting up SLU on an individual line or hunt group (continued)

len

is the originating equipment number entered in the form

vvvv www x yy zz, where:

vvvv

= the 4-character site name

www

= the frame number, 0 to 511

x

= the unit, group, or shelf number based on the peripheral type

yy

= the drawer, line subgroup, or shelfnumber based on the peripheral type

zz

= the circuit slot based on the peripheral type

x

= 1 digit,

LM	UNIT	0 to 1
LCM	UNIT	0 to 1
RCT	UNIT	0 to 9
RCS	UNIT	0 to 9
RCU	UNIT	0 to 9
SVR	GROUP	0 to 3
DLM	SHELF	0 to 1
LCMI	UNIT	0 to 1
LRU	UNIT	0 to 9
ELCM	UNIT	0 to 1
LDT	UNIT	0
ALCM	UNIT	0 to 1
LCME	UNIT	0 to 1
SRU	UNIT	0 to 1
IPE	SHELF	0 to 3
RDT	UNIT	0 to 9

yy

= 2 digits,

LM	DRAWER	0 to 19
LCM	LINE SUBGROUP	0 to 19
RCT	LINE SUBGROUP	0 to 7
RCS	LINE SUBGROUP	0 to 3

Setting up SLU on an individual line or hunt group (continued)

RCU	LINE SUBGROUP	0 to 18
SVR	LINE SUBGROUP	0 to 19
DLM	LINE SUBGROUP	0 to 9
ELCM	LINE SUBGROUP	0 to 7, 10 to 17
LDT	LINE SUBGROUP	0
ALCM	LINE SUBGROUP	0 to 19
LRU	LINE SUBGROUP	0 to 1
IPE	LINE SUBGROUP	0 to 15
LCMI	LINE SUBGROUP	0 to 23
LCME	LINE SUBGROUP	0 to 15
SRU	LINE SUBGROUP	0 to 7
RDT	RCU LSG	0 to RDTINV
	def max	
RFT	SHELF	2 to RDTINV
	def max	
GENCSC	SHELF	1 to RDTINV
	def max	
GENTMC	SHELF	1 to RDTINV

Setting up SLU on an individual line or hunt group (continued)

def max

zz
= 2 digits,

LM	CIRCUIT	0 to 31
LCM	CIRCUIT	0 to 31
RCT	CIRCUIT	0 to 31
RCS	CIRCUIT	0 to 23
RCU	CIRCUIT	0 to 31
SVR	CIRCUIT	0 to 31
DLM	CIRCUIT	0 to 31
ELCM	CIRCUIT	0 to 31
LDT	CIRCUIT	0 to 23
ALCM	CIRCUIT	0 to 31
LRU	CIRCUIT	0 to 29
IPE	CIRCUIT	0 to 31
LCMI	CIRCUIT	0 to 15
LCME	CIRCUIT	0 to 31
SRU	CIRCUIT	0 to 31
RDT	RCU LSG to RDTINV	
	def max	
RFT	SHELF 2 to RDTINV	
	def max	
	GENCSC SHELF 1 to RDTINV	
	def max	
	GENTMC SHELF 1 to RDTINV	
	def max	

Example of a MAP response

OPTION:

- 5** To continue the process, type

>SLU

and press the Enter key

MAP response

OPTION:

- 6** To terminate the list of options, type

>\$

and press the Enter key

Setting up SLU on an individual line or hunt group (continued)

where

\$
terminates the list of options

Example of a MAP response

```
COMMAND AS ENTERED:  
ADO NOW 90 12 16 PM 6211234 (SLU) $  
ENTER Y TO CONFIRM, N TO REJECT OR E TO EDIT
```

7 To confirm, type

>Y

and press the Enter key

8 To enter the SLU system, type

>SLU

and press the Enter key

Example of a MAP response

```
SLU_CIDIR:
```

9 To review the status of the SLU input tables, type

>SLU_TABLE_STATUS

and press the Enter key

Example of a MAP response

```
** INACTIVE TABLES **  
ENG640I1  
ENG640I1  
TRA125I2  
** ACTIVE TABLES **  
TRA125I1
```

10 Select an inactive table.

If an inactive table	Do
is not present	Procedure 11
is present	Procedure 12

11 To select an input table and make the table inactive, type

>SLU_DEINSTALL **table_name**

and press the Enter key

where

table_name
is the name of the desired input table, for example, TRA125I2

Example of a MAP response

```
** ACTIVE TABLE DEINSTALLED **
```

12 To set the default table name to the required inactive input table, type

>SLUSET

Setting up SLU on an individual line or hunt group (continued)

and press the Enter key

Example of a MAP response

TRA250I1

- 13** To enter the desired inactive table name, type

>table_name

where

table_name

is the name of the desired inactive table, for example, TRA125I2

Example of a MAP response

COMMAND AS ENTERED SETTAB TRA125I2
ENTER Y TO CONFIRM, N TO REJECT OR E TO EDIT

- 14** To confirm, type

>Y

Example of a MAP response

WAS...: TRA250I1
IS...: TRA125I2

- 15** To construct an input table that contains each line to be monitored, type

>SLUADD

and press the Enter key

Example of a MAP response

CLASS:

- 16** To enter the directory number or line identifier, type

>D or OE

where

D

designates the use of directory number as the line identifier

D10

designates the use of a ten-digit directory number as the line identifier

OE

designates the use of the OE as the line identifier

- 17** To enter the directory number, type

>number

where

number

is seven digit directory number with a space between the third and fourth digits, for example, 621 1234

or

number

is a ten digit directory number with no space between the third and fourth, and sixth and seventh digits, for example 6132234132

Setting up SLU on an individual line or hunt group (continued)

or

OE is the originating equipment entered in the form

vvvv www x yy zz, where:

vvvv

= the 4 character site name

www

= the frame number, 0 to 511

x

= the unit, group, or shelf number based on the peripheral type

yy

= the drawer, line subgroup, or shelfnumber based on the peripheral type

zz

= the circuit slot based on the peripheral type

x

= 1 digit, LM UNIT 0 to 1

LCM UNIT 0 to 1

RCT UNIT 0 to 9

RCS UNIT 0 to 9

RCU UNIT 0 to 9

SVR GROUP 0 to 3

DLM SHELF 0 to 1

LCMI UNIT 0 to 1

LRU UNIT 0 to 9

ELCM UNIT 0 to 1

LDT UNIT 0

ALCM UNIT 0 to 1

LCME UNIT 0 to 1

SRU UNIT 0 to 1

IPE SHELF 0 to 3

RDT UNIT 0 to 9

yy

= 2 digits, LM DRAWER 0 to 19

LCM LINE SUB GROUP 0 to 19

RCT LINE SUBGROUP 0 to 7

RCS LINE SUBGROUP 0 to 3

Setting up SLU on an individual line or hunt group (continued)

RCU LINE SUBGROUP 0 to 18
SVR LINE SUBGROUP 0 to 19
DLM LINE SUB GROUP 0 to 9
ELCM LINE SUB GROUP 0 to 7, 10 to 17
LDT LINE SUBGROUP 0
ALCM LINE SUBGROUP 0 to 19
LRU LINE SUBGROUP 0 to 1
IPE LINE SUBGROUP 0 to 15
LCMI LINE SUBGROUP 0 to 23
LCME LINE SUBGROUP 0 to 15
SRU LINE SUBGROUP 0 to 7
RDT RCU LSG 0 to RDTINV
def max
RFT SHELF 2 to RDTINV
def max
GENCSC SHELF 1 to RDTINV
def max
GENTMC SHELF 1 to RDTINV

Setting up SLU on an individual line or hunt group (continued)

def max

zz
= 2 digits, LM CIRCUIT 0 to 31
LCM CIRCUIT 0 to 31
RCT CIRCUIT 0 to 31
RCS CIRCUIT 0 to 23
RCU CIRCUIT 0 to 31
SVR CIRCUIT 0 to 31
DLM CIRCUIT 0 to 31
ELCM CIRCUIT 0 to 31
LDT CIRCUIT 0 to 23
ALCM CIRCUIT 0 to 31
LRU CIRCUIT 0 to 29
IPE CIRCUIT 0 to 31
LCMI CIRCUIT 0 to 15
LCME CIRCUIT 0 to 31
SRU CIRCUIT 0 to 31
RDT RCU LSG 0 to RDTINV
def max
RFT SHELF 2 to RDTINV
def max
GENCSC SHELF 1 to RDTINV
def max
GENTMC SHELF 1 to RDTINV
def max

Example of a MAP response

TABLE_NAME: DEFAULT

18 Press the Enter key

Example of a MAP response

COMMAND AS ENTERED
INPUT D 621 1234 DEFAULT
ENTER Y TO CONFIRM, N TO REJECT OR E TO EDIT

19 To confirm, type

>Y

Note 1: When you enter business set identification, use D or OE for the primary number. Only D identifies secondary appearances

Setting up SLU on an individual line or hunt group (continued)

Note 2: Use the D of the pilot number in a hunt group as identification. The system automatically adds all of the group numbers.

Note 3: When you initiate the addition of a hunt group pilot, the system generates the following message:

Example of a MAP response

```
**WARNING**HUNT GROUP PILOT COULD CAUSE TABLE OVERFLOW ON
EXPANSION
```

Note: Use the command SLU_INSTALL after each hunt group pilot addition.

If the SLU only studies particular lines in a hunt group, OE identifies these lines.

- 20 To check that all line entries in the input table are correct, type

```
>SLU_TEST table_name
```

and press the Enter key

where

table_name

is the name of the input table in use

Example of a MAP response

```
** INPUT TABLE OK **
```

- 21 To activate the associated OM group to commence OM measurements, type

```
>SLU_INSTALL
```

and press the Enter key.

Example of a MAP response

```
Next par is: table name STRING
ENTER table name
```

- 22 To enter the name of the input table, type

```
>table_name
```

where

table_name

is the name of the input table, for example, TRA125I2

Example of a MAP response

```
** INPUT TABLE OK **
** TABLE INSTALLED **
```

- 23 To verify that the OM group is active, type

```
>OMSHOW table_name ACTIVE
```

and press the Enter key

where

table_name

is the name of the OM table, for example, TRA125M2

Setting up SLU on an individual line or hunt group (end)

Example of a MAP response

```
TRA125M2  
CLASS: ACTIVE
```

Note: After this response, the machine lists all lines installed in the table by identifier and prints the OM data fields associated with the lines.

- 24** This procedure is complete.

Activating the SLU input/output for ten-digit DNs

Application

Use the following commands to activate SLU input and output for 10-digit directory numbers (DN). This information supplements the procedures described above, "Setting up SLU on an individual line or hunt group". The procedures described in the previous section remain valid.

Requirements

Feature AU2586 (SLU 10 DIGIT DN) introduces the use of seven-digit or ten-digit DNs in SLU commands and SLU-related OAM functions. This feature requires the office parameter SLU_7DIGIT_DN in table OFCVAR to control the number of digits in a DN. SLU_7DIGIT_DN allows operating company personnel to select seven-digit or ten-digit DNs.

SLU 10 DIGIT DN also introduces modifications to the following CI commands in directory SLU_CIDIR:

- SLUADD
- SLUDEL
- SLUFINDI
- SLUFINDO
- SLUDUMP
- OMSHOW

The following pages contain examples of the modified SLU commands. For additional information on SLU commands, see the "Command summary" in Appendix A of this document.

Activating the SLU input/output for ten-digit DNs (continued)

Using SLU ten-digit DN commands**Examples**

The following table provides examples of the SLUADD command.

Examples of the SLUADD command

Task	Sample command and output
Example 1: Enter a full 10-digit DN with office parameter SLU_7DIGIT_DN set to 'N'	<pre>>SLUADD CLASS: >D10 NUM10D: >613 621 0001 TABLE_NAME: DEFAULT >TRA125I2 COMMAND AS ENTERED INPUT D10 613 621 0001 TRA125I2 ENTER Y TO CONFIRM, N TO REJECT OR E TO EDIT >Y</pre>
Example 2: Enter a full 10-digit DN with office parameter SLU_7DIGIT_DN set to 'Y'	

Activating the SLU input/output for ten-digit DNs (continued)

Examples of the SLUADD command

Task	Sample command and output
	<pre>>SLUADD CLASS: >D10 NUM10D: >613 621 0001 TABLE_NAME: DEFAULT >TRA125I2 COMMAND AS ENTERED INPUT D10 613 621 0001 TRA125I2 ENTER Y TO CONFIRM, N TO REJECT OR E TO EDIT >Y THE DN ENTERED IS NOT ALLOWED, PLEASE USE D, OE OR SET SLU_7DIGIT_DN IN OFCVAR TO ENTER D10 CLASS</pre>
Example 3: Enter a unique 7-digit DN	

Activating the SLU input/output for ten-digit DNs (continued)

Examples of the SLUADD command

Task	Sample command and output
	<pre>>SLUADD CLASS: >D NUM7D: >621 0001 TABLE_NAME: DEFAULT >TRA125I1 COMMAND AS ENTERED INPUT D 621 0001 TRA125I1 ENTER Y TO CONFIRM, N TO REJECT OR E TO EDIT >Y</pre>

Activating the SLU input/output for ten-digit DNs (continued)

Examples of the SLUADD command

Task	Sample command and output
Example 4: Enter an ambiguous 7-digit DN	<pre>>SLUADD CLASS: >D NUM7D: >621 0001 TABLE_NAME: DEFAULT >TRA125I2 COMMAND AS ENTERED INPUT D 621 0001 TRA125I2 ENTER Y TO CONFIRM, N TO REJECT OR E TO EDIT >Y AMBIGUOUS DN. PLEASE ADD BY LEN USING: SLUADD OE , OR: SLUADD D10</pre>

Activating the SLU input/output for ten-digit DNs (continued)

Examples

The following table provides examples of the SLUDEL command.

Examples of the SLUDEL command

Task	Sample command and output
Example 1: Enter a full 10-digit DN office parameter with SLU_7DIGIT_DN set to 'N'	<pre>>SLUDEL CLASS: >D10 NUM10D: >613 621 0001 TABLE_NAME: DEFAULT >TRA125I2 COMMAND AS ENTERED DELETE D10 613 621 0001 TRA125I2 ENTER Y TO CONFIRM, N TO REJECT OR E TO EDIT >Y</pre>
Example 2: Enter a full 10-digit DN with office parameter SLU_7DIGIT_DN set to 'Y'	

Activating the SLU input/output for ten-digit DNs (continued)

Examples of the SLUDEL command

Task	Sample command and output
	<pre>>SLUDEL CLASS: >D10 NUM10D: >613 621 0001 TABLE_NAME: DEFAULT >TRA125I2 COMMAND AS ENTERED DELETE D10 613 621 0001 TRA125I2 ENTER Y TO CONFIRM, N TO REJECT OR E TO EDIT >Y THE DN ENTERED IS NOT ALLOWED, PLEASE USE D, OE OR SET SLU_7DIGIT_DN IN OFCVAR TO ENTER D10 CLASS</pre>
Example 3: Enter a unique 7-digit DN	

Activating the SLU input/output for ten-digit DNs (continued)

Examples of the SLUDEL command

Task	Sample command and output
	<pre>>SLUDEL CLASS: >D NUM7D: >621 0001 TABLE_NAME: DEFAULT >TRA125I1 COMMAND AS ENTERED DELETE D 621 0001 TRA125I1 ENTER Y TO CONFIRM, N TO REJECT OR E TO EDIT >Y</pre>

Activating the SLU input/output for ten-digit DNs (continued)

Examples of the SLUDEL command

Task	Sample command and output
Example 4: Enter an ambiguous 7-digit DN	<pre>>SLUDEL CLASS: >D NUM7D: >621 6666 TABLE_NAME: DEFAULT >TRA125I2 COMMAND AS ENTERED DELETE D 621 6666 TRA125I2 ENTER Y TO CONFIRM, N TO REJECT OR E TO EDIT >Y AMBIGUOUS DN. PLEASE USE D10 CLASS</pre>

Activating the SLU input/output for ten-digit DNs (continued)

Examples

The following table provides examples of the SLUFINDI command.

Examples of the SLUFINDI command

Task	Sample command and output
Example 1: Enter a full 10-digit DN with office parameter SLU_7DIGIT_DN set to 'N'	<pre>>SLUFINDI CLASS: >D10 NUM10D: >406 951 9151 TABLE_NAME: DEFAULT >TRA125I2 THE INPUT TABLE TUPLE(S): - : D10 406 951 9151 NO_ERROR 1 - : HNT 1101 1 NO_ERROR 2</pre>
Example 2: Enter a full 10-digit DN with office parameter SLU_7DIGIT_DN set to 'Y'	

Activating the SLU input/output for ten-digit DNs (continued)

Examples of the SLUFINDI command

Task	Sample command and output
	<pre>>SLUFINDI CLASS: >D10 NUM10D: >406 951 9151 TABLE_NAME: DEFAULT >TRA125I2 COMMAND AS ENTERED FINDI D10 406 951 9151 TRA125I2 ENTER Y TO CONFIRM, N TO REJECT OR E TO EDIT >Y THE DN ENTERED IS NOT ALLOWED, PLEASE USE D, OE OR SET SLU_7DIGIT_DN IN OFCVAR TO ENTER D10 CLASS</pre>
Example 3: Enter a unique 7-digit DN	

Activating the SLU input/output for ten-digit DNs (continued)

Examples of the SLUFINDI command

Task	Sample command and output
	<pre data-bbox="383 499 688 856">>SLUFINDI CLASS: >D NUM7D: >951 9151 TABLE_NAME: DEFAULT</pre>
	<pre data-bbox="383 898 781 1129">>TRA125I1 This MAP response instructs operating company personnel to use the old DN output format. THE INPUT TABLE TUPLE(S): - : D 951 9151 NO_ERROR 1 - : HNT 1101 1 NO_ERROR 2</pre>
	<pre data-bbox="383 1155 1386 1339">This MAP response instructs operating company personnel to use the new DN output format. THE INPUT TABLE TUPLE(S): - : D10 406 951 9151 NO_ERROR 1 - : HNT 1101 1 NO_ERROR 2</pre>

Activating the SLU input/output for ten-digit DNs (continued)

Examples of the SLUFINDI command

Task	Sample command and output
Example 4: Enter an ambiguous 7-digit DN	<pre>>SLUFINDI CLASS: >D NUM7D: >621 6666 TABLE_NAME: DEFAULT >TRA125I1 COMMAND AS ENTERED FINDI D 621 6666 TRA125I1 ENTER Y TO CONFIRM, N TO REJECT OR E TO EDIT >Y AMBIGUOUS DN. PLEASE USE D10 CLASS</pre>

Activating the SLU input/output for ten-digit DNs (continued)

Examples

The following table provides examples of the SLUFINDO command.

Examples of the SLUFINDO command

Task	Sample command and output
Example 1: Enter a full 10-digit DN with office parameter SLU_7DIGIT_DN set to 'N'	<pre> >SLUFINDO CLASS: >D10 NUM10D: >406 951 9151 TABLE_NAME: DEFAULT >TRA12502 THE OM_GROUP TUPLE(S): - : D10 406 951 9151 HOST 00 1 08 25 19970491658 0 0 0 0 - : HNT 1101 1 HOST 00 1 08 25 19970491658 0 0 0 0 </pre>
Example 2: Enter a full 10-digit DN with office parameter SLU_7DIGIT_DN set to 'Y'	

Activating the SLU input/output for ten-digit DNs (continued)

Examples of the SLUFINDO command

Task	Sample command and output
	<pre>>SLUFINDO CLASS: >D10 NUM10D: >406 951 9151 TABLE_NAME: DEFAULT >TRA125O2 COMMAND AS ENTERED FINDO D10 406 951 9151 TRA125M2 ENTER Y TO CONFIRM, N TO REJECT OR E TO EDIT >Y THE DN ENTERED IS NOT ALLOWED, PLEASE USE D, OE OR SET SLU_7DIGIT_DN IN OFCVAR TO ENTER D10 CLASS</pre>
Example 3: Enter a unique 7-digit DN	

Activating the SLU input/output for ten-digit DNs (continued)

Examples of the SLUFINDO command

Task	Sample command and output
	<pre>>SLUFINDO CLASS: >D NUM7D: >951 9151 TABLE_NAME: DEFAULT >TRA12501 This MAP response instructs operating company personnel to use the old DN output format. THE OM_GROUP TUPLE(S): - : D 951 9151 HOST 00 1 08 25 19970491658 0 0 0 0 - : HNT 1101 1 HOST 00 1 08 25 19970491658 0 0 0 0 This MAP response instructs operating company personnel to use the new DN output format. THE OM_GROUP TUPLE(S): - : D10 406 951 9151 HOST 00 1 08 25 19970491658 0 0 0 0 - : HNT 1101 1 HOST 00 1 08 25 19970491658 0 0 0 0</pre>

Activating the SLU input/output for ten-digit DNs (continued)

Examples of the SLUFINDO command

Task	Sample command and output
Example 4: Enter an ambiguous 7-digit DN	<pre>>SLUFINDO CLASS: >D NUM7D: >621 6666 TABLE_NAME: DEFAULT >TRA12501 COMMAND AS ENTERED FINDO D 621 6666 TRA125M1 ENTER Y TO CONFIRM, N TO REJECT OR E TO EDIT >Y AMBIGUOUS DN. PLEASE USE D10 CLASS</pre>

Activating the SLU input/output for ten-digit DNs (continued)

Examples

The following table provides examples of the SLUDUMP command.

Examples of the SLUDUMP command

Task	Sample command and output
Example 1: Enter command with office parameter SLU_7DIGIT_DN set to "Y"	<pre> >SLUDUMP This MAP response instructs operating company personnel to use the old DN output format. SLU SLUADD D 550 1337 TRA250I1 Y SLUADD D 621 0002 TRA250I1 Y SLU_INSTALL TRA250I1 SLUADD D 550 1336 TRA125I1 Y SLUADD D 621 0000 TRA125I1 Y SLU_INSTALL QUIT </pre>
Example 2: Enter command with office parameter SLU_7DIGIT_DN set to "N"	<pre> >SLUDUMP This MAP response instructs operating company personnel to use the new DN output format. SLU SLUADD D10 406 550 1337 TRA250I1 Y SLUADD D10 613 621 0002 TRA250I1 Y SLU_INSTALL TRA250I1 SLUADD D10 406 550 1336 TRA125I1 Y SLUADD D10 613 621 0000 TRA125I1 Y SLU_INSTALL QUIT </pre>

Activating the SLU input/output for ten-digit DNs (continued)

Examples

The following table provides examples of the OMSHOW command.

Examples of the OMSHOW command

Task	Sample command and output
Example 1: Enter command with office parameter SLU_7DIGIT_DN set to "Y"	<p>This MAP response instructs operating company personnel to use the old DN output format.</p> <p>>OMSHOW TRA125M1 ACTIVE 1 3</p> <p>and pressing the Enter key.</p> <pre> TRA125M1 CLASS: ACTIVE START:1997/04/01 16:00:00 TUE; STOP:1997/04/01 16:09:37 TUE; SLOWSAMPLES: 6; FASTSAMPLES: 58; INFO (SLU_OM_INFO) TBU2ORIG2 TERM2BUSY2 1D 621 0000 RCUTRAF 1 19970651818 0 0 0 0 1D 621 0001 RCUTRAF 2 19970651818 0 0 0 0 1D 621 0002 RCUTRAF 3 19970651818 0 0 0 0 </pre>

Activating the SLU input/output for ten-digit DNs (end)

Examples of the OMSHOW command

Task	Sample command and output
Example 2: Enter command with office parameter SLU_7DIGIT_DN set to "N"	<p><i>This MAP response instructs operating company personnel to use the new DN output format.</i></p> <p>>OMSHOW TRA125M1 ACTIVE 1 3</p> <p>and pressing the Enter key.</p> <p>TRA125M1</p> <pre> CLASS: ACTIVE START:1997/04/01 16:00:00 TUE; STOP:1997/04/01 16:09:37 TUE; SLOWSAMPLES: 6; FASTSAMPLES: 58; INFO (SLU_OM_INFO) TBU2 ORIG2 TERM2 BUSY2 1 D10 613 621 0000 RCUTRAF 1 19970651818 0 0 0 0 1 D10 613 621 0001 RCUTRAF 2 19970651818 0 0 0 0 1 D10 613 621 0002 RCUTRAF 3 19970651818 0 0 0 0 </pre>

Setting up SLU on an entire peripheral module

Application

Use this procedure to establish the collection of use data that relate on a complete peripheral module (PM).

Requirements

Before you begin this procedure, you must know the PM identification.

Establishing SLU on an complete peripheral module

At the MAP

- 1 To enter the SLU system, type
 >SLU
 and press the Enter key
 MAP response
 SLU_CIDIR:
- 2 To activate an OM group for the selected PM, type
 >SLU_LMINSTALL
 and press the Enter key
 MAP response
 Next par is: frame (0 to 511)
 ENTER: frame unit
- 3 To enter the frame unit number, type
 >frame unit
 where
 frame
 is the frame number (0 to 511)
 unit
 is the unit number (0 or 1)
 Example of a MAP response
 ** TABLE WAS NOT PREVIOUSLY INSTALLED **
 ** TABLE INSTALLED **
- 4 The procedure is complete.

Stopping the collection of SLU data

Application

Use this procedure to perform the following:

- stop the collection of SLU data
- empty the input table
- install the table
- removes the SLU feature from the lines studied

Do not empty the input table if a new study requires the use of this table.

The three methods to stop the collection of SLU data on a complete peripheral module (PM) follow.

- Use the command `SLU_LMINSTALL` to install a new PM. Refer to the procedure *Setting up a SLU study on an entire peripheral module* in this chapter.
- Use the command `SLU_INSTALL` to install the associated input table, `ENG640I1`. Refer to the procedure *Setting up SLU on an individual line or hunt group*, in this chapter. Data collection does not occur because this table is empty. The system responds:

```
**INPUT TABLE IS EMPTY**  
**TABLE INSTALLED**
```

- Use the `SLU_DEINSTALL` command to deactivate the group. Refer to the procedure *Stopping the collection of SLU data* in this chapter.

Requirements

Before this procedure starts, identify the name of the input table and the DNs or the OE for use as line identifiers in the study.

Limits apply to the performance of Service Order (SERVORD) commands on any line that an SLU measurement table includes. Examples are `ENG640I1`, `TRA125I1`, `TRA250I1` and `TRA125I2`. The type of SERVORD commands these limits include are `OUT`, `CLN`, `CHA` and `DEL`. The lines that this limit affects include `POTS`, `Multi-party` and `Hunt Group`.

Stopping the collection of SLU data (continued)

Stopping the collection of SLU data

At the MAP terminal

- 1 To enter the SLU system, type
>SLU
 and press the Enter key.
Example of a MAP response
 SLU_CIDIR:
- 2 To delete the directory number or OE from the input table, type
>SLUDEL
 and press the Enter key.
Example of a MAP response
 CLASS:
- 3 To continue the process, type
>d or l
where
 d means the directory number will be used as the line identifier
 l means originating equipment will be used as the line identifier
Example of a MAP response
 NUM7D:
where
 NUM7D
 is the seven digit directory number with a space between the third and fourth digits, for example, 621 0661
- 4 To enter the seven digit directory number, type
>621 0661
Example of a MAP response
 TABLE NAME: DEFAULT
 Press the Enter key.
- 5 Press the Enter key.
Example of a MAP response
 COMMAND AS ENTERED
 DELETE D 621 0661 DEFAULT
 ENTER Y TO CONFIRM, N TO REJECT OR E TO EDIT
- 6 To confirm the entry by type
>Y

Stopping the collection of SLU data (continued)

Example of a MAP response

TUPLE DELETED

- 7 To delete the active table, type
>**SLU_DEINSTALL** **table_name**
and press the Enter key
where

table_name

is the name of the input table used to install the lines/numbers to study

Example of a MAP response

.. ACTIVE TABLE DEINSTALLED ..

Note: To uninstall a complete peripheral module, enter ENG64011 for table_name.

- 8 To install the empty input table, type
>**SLU_INSTALL** **table name**
and press the Enter key
where

table name

is the name of the input table used to install the lines/numbers to study

Example of a MAP response

** INPUT TABLE IS EMPTY **
** TABLE INSTALLED **

- 9 To delete the SLU option from the lines studied through the use of a service order, type
>**SERVORD**
and press the Enter key

Example of a MAP response

SO:

- 10 To continue the process, type
>**DEO**

Example of a MAP response

SONUMBER: NOW 91 2 12 PM

- 11 Press Enter key.
Example of a MAP response

DN_OR_LEN:

- 12 To enter the directory or len number, type
>**dn or len**
where

dn

is directory number

Stopping the collection of SLU data (end)

len
is line equipment number

Example of a MAP response

OPTION:

where

option
is an option on the line which you wish to remove, for example SLU or HUNT

13 To continue the process, type

>\$

Example of a MAP response

COMMAND AS ENTERED:

DEO NOW 91 02 16 PM 3620050 (SLU) \$

ENTER Y TO CONFIRM, N TO REJECT OR E TO EDIT

14 To confirm the entry, type

>Y

15 The procedure is complete.

Collecting overflow data using OM group HUNT

Application

This procedure uses the OM group HUNT to collect overflow data because overflow data is not available from an SLU study.

After this procedure, QDN the DN or QLEN the OE to obtain the hunt group number. The system assigns this number to the hunt group that is created. The hunt group number that the system generates corresponds with the key number in OM group HUNT where the overflow data will be found. An example of the design of the report is in chapter 1 *Understanding the operational measurement system*.

Requirements

Before this procedure starts, identify the DN or the LEN of the line that requires study.

If the line that requires study is already part of a hunt group, this procedure is not necessary.

Collecting overflow data using OM group HUNT

At the MAP terminal

- 1 To access the service order utility, type
>SERVORD
and press the Enter key.
Example of a MAP response
SO:
- 2 To assign the number as a directory number hunt group with a group size of 1, type
>ADO
and press the Enter key.
Example of a MAP response
SONUMBER: NOW 91 2 12 PM
- 3 Press the Enter key.
MAP response
DN_OR_LEN:
- 4 To enter the seven digit directory or originating equipment number, type
>dn or len
and press the Enter key.

Collecting overflow data using OM group HUNT (continued)

where

dn is the seven digit directory number, without space between the third and fourth digits, for example, 3620050
 len is the originating equipment in LEN design, for example, 01 1 4 19

Example of a MAP response

OPTION:

- 5** To continue the process, type

>SLU

and press the Enter key.

Example of a MAP response

OPTION:

- 6** To continue the process, type

>DNH

and press the Enter key.

Example of a MAP response

LINKDN:

- 7** To enter the seven- or ten-digit directory number, type

>dn

and press the Enter key.

where

dn is the seven-digit directory number without space between the third and fourth digits, for example 3620050

or

dn is the ten-digit directory number without space between the third and fourth, and sixth and seventh digits, for example 6133620050

Example of a MAP response

GROUPSIZE:

- 8** To continue the process, type

>1

Example of a MAP response

OPTION:

- 9** To continue the process, type

>\$

where

\$ terminates the list of options

Collecting overflow data using OM group HUNT (end)

Example of a MAP response

```
COMMAND AS ENTERED:  
  ADO NOW 91 1 16 PM 3620050 (SLU) (DNH 3620050 1)$  
  ENTER Y TO CONFIRM, N TO REJECT OR E TO EDIT
```

- 10** To confirm the process, type
>Y
- 11** The procedure is complete.

5 Command summary

This chapter contains the commands used with operational measurements (OM) and subscriber line usage (SLU) studies. Other commands contained are registers associated with message rate (1MR), inwats (INW), overflows (OFS) and two-way WATS (2WW) lines.

The commands are in alphabetical order.

CLRINVREG

Function

The CLRINVREG command clears invalid inward wide area telephone service (INWATS) register readings after a restart. Use this command before you attempt to read, or read and reset INWATS registers after a restart.

CLRINVREG command parameters and variables

Command	Parameters and variables
CLRINVREG	There are no parameters and variables.

OMACCFLD**Function**

The OMACCFLD command assigns or deletes separate OM fields to accumulating classes. You can designate an OM class. You can use the OMACCGRP command to assign the group to the class.

OMACCFLD command parameters and variables

Command	Parameters and variables			
OMACCFLD	class	group	ADD	ADD
			DELETE	FIELD field
Parameters	ADD	adds the identified fields to the accumulating class.		
	ALL	add or delete all fields in the identified OM group.		
	DELETE	deletes the identified fields from the accumulating class.		
	FIELD	add or delete separate register fields.		
Variables	class	add or delete the name of the accumulating class to the OM fields.		
	group	is the name of the OM group that contains the identified fields.		
	field	add or delete the name of the field. For a complete list of OM fields refer to the <i>Operational Measurements Reference Manual</i> .		

OMACCGRP

Function

The OMACCGRP command assigns or deletes OM groups to or from classes the OMCLASS command earlier defined.

OMACCGRP command parameters and variables

Command	Parameters and variables		
OMACCGRP	class	ADD	ALL
		DELETE	GROUP group
Parameters	ADD	if used with the parameter ALL, adds all OM groups to the named class. If used with the GROUP parameter, adds the specified OM group to the named class.	
	ALL	adds or deletes all OM groups.	
	DELETE	if used with parameter ALL, deletes all OM groups from the named class. If used with a named OM group, deletes the designated group from the named class. For switches with the OMGRPORD feature, first delete the group from the Table OMGRPORD. Delete an OM group from an accumulating class.	
Variables	GROUP	adds or deletes a specified OM group.	
	class	adds or deletes the name of the class to or from the OM groups.	
	group	specifies the OM group that you assign to, or delete from, a class. Descriptions of all OM groups are in the <i>Operational Measurements Reference Manual</i> . You can use the Q OMSHOW command to obtain a list of OM groups.	

OMACCKEY**Function**

The OMACCKEY command selects specified tuples in a named group and class for printout. This command does not select all the tuples in an OM group. This command eliminates the long print time of an OM scheduled output and monitors select OMs, like trunk groups. Before this command is used, an OM class is assigned and command OMACCGRP is used to assign the group to the class.

This command does not affect the output of the OMSHOW command.

Note: Use the DELETE ALL parameter to delete all tuples from the requested class and group before you output select specified tuples.

OMACCKEY command parameters and variables

Command	Parameters and variables				
OMACCFLD	class	group	ADD	ALL	
			DELETE	KEY	keynum keyname
Parameters	ADD	adds a tuple, or tuples.			
	ALL	adds or deletes all tuples in the group and class.			
	DELETE	deletes a tuple, or tuples.			
	KEY	adds or deletes a separate tuple.			
Variables	class	adds or deletes the name of the OM class to or from tuples.			
	group	the specified tuple identifies the name of the OM group in the registers.			
	keynum	adds the number of the tuple. Range is 0 to 9999.			
	keyname	adds key identification of the tuple. Range is eight characters. The characters start with a letter.			

OMACCTOT

Function

The OMACCTOT command indicates that OM group totals are required or are not required for a specified OM group and class. Before you use this command, assign the OM class. The OMACCGRP command assigns the group to the class. This command generates the OM group totals and include the values OM group keynum or keyname datafill the OMACCKEY command deleted.

This command does not affect the output of the OMSHOW command.

Note: The OM group totals feature must be ON for this ability to function. See the OMTOTAL command.

OMACCFLD command parameters and variables

Command	Parameters and variables		
OMACCTOT	class	group	ON OFF
Parameters	ON		turns the total only capability on.
	OFF		turns the total only capability off.
Variables	class		is the name of the OM class for which OM totals are required.
	group		is the name of the OM group for which OM totals are required.

OMCLASS**Function**

The OMCLASS command defines a new measurement class of accumulating registers. This command adds the tuples that correspond to Table OMACC. When the command defines a class, you cannot delete a class name. The class name can be renamed. For a class name to have meaning, the OMACCFLD or OMACCGRP commands must assign registers or register groups to the class.

OMCLASS command parameters and variable

Command	Parameters and variables	
OMACCFLD	class	SINGLE DOUBLE HOLDING RENAME class HISTORY snapshots transfer
Parameters	SINGLE	<p>specifies that registers assigned to the class are single precision, capacity 65 535 ($2^{16} - 1$) counts.</p> <p>The data accumulated can exceed 65 536 counts during the proposed accumulating period set in Table OMACC. If the data exceeds the counts, you must use a double precision accumulating register. Accumulating registers do not overflow to an extension register.</p> <p>To change a class precision, use the command OMACCGRP to delete all OM groups from the class.</p>
	DOUBLE	<p>specifies that registers assigned to the class are to be double precision with a capacity of 4 294 967 295 ($2^{32} - 1$) counts.</p> <p>To change a class precision, use the OMACCGRP command to delete all OM groups from the class.</p>
	HOLDING	<p>indicates that output comes from the holding registers. The period of transfer of data must be set to AUTO (table OMACC).</p>

OMCLASS (end)

OMCLASS command parameters and variable

Command	Parameters and variables	
	RENAME	indicates you must assign a new name to a current class.
	HISTORY	defines a history class of registers. History classes can be defined if the switch has the OM Transfer Period and History Class Enhancements feature, NTX099AA.
Variables	class	is the name to assign to a class of accumulating registers. You can define a maximum of 30 class names. This condition does not include active and holding which are already defined. The name must have meaning and reflect the purpose of the class.
	snapshots	specifies the number of history registers for each measurement. Range is 1 to 6. Use the OMCLASS command to set the parameters snapshots and transfer. The system enters the related read-only fields in table OMACC. Table editor commands cannot change the fields in table OMACC.
	transfer	specifies the time, in minutes, that a history register is current. For example, if the value is 5, the history registers are cycled each 5 min. Range is 5, 10, 15, 20, or 30.

OMDUMP**Function**

The OMDUMP command displays assignment information about selected OM groups and classes.

OMDUMP command parameters and variables

Parameters	OMDUMP	ALL	
		CLASS	class
			COMMANDS
			FORMAT
		GROUP	group
		ALL	specifies that the commands or format for all accumulating classes and all groups must appear.
		CLASS	specifies that information that relates to one accumulating class must appear.
Variables		COMMANDS	displays a list of commands important to the specified group or class. When used with ALL, a list of recent commands for all classes and groups appear. The commands displayed are not always the same as those entered at the MAP terminal. The commands displayed indicate one possible way to achieve the current configuration.
		FORMAT	when used with CLASS, displays a list of the group and field names of registers in the specified CLASS. When used with GROUP, requests a display of a list of the field names of registers in the specified group in all classes that include that group. When used with ALL, displays a list of all OM groups and field names in the OM system. Active and holding classes are not displayed.
		GROUP	specifies that assignment information that relates to a specified OM group must appear.
		class	is the name of the accumulating class for which information must appear.
		group	is the name of the OM group for which information must appear.

OMGETGD

Function

ATTENTION

Use the OMPRDUMP command only to process OM DIRP files created on the same switch and with the same software release. If you attempt to process OM DIRP files associated with an earlier software release or from another switch, incorrect results or software errors can occur.

The OMGETGD command processes the header (H), class (C), group (G), field (F) and key (K) records. The records are stored at the beginning of the data file. This command causes a translation database to be built. The translation database stores information on data record processing and report printing. Close the requested file in DIRP before issuing this command.

Access the OMGETGD command from the OMPRDUMP command directory.

OMGETGD command parameters and variables

Command	Parameters and variables	
OMGETGD	filename	
Parameters	none	
Variables	filename	specifies the name of the file defined in DIRP, where the required OM information is located.

OMGETGD command responses

The following table describes the responses to the OMGETGD command.

Responses for the OMGETGD command

MAP output	Meaning and action
After successful completion of OMGETGD only OMPRTSET, OMPRTREP and ZEROSUP are valid commands.	<p>Meaning The command OMGETGD is entered.</p> <p>Action QUIT from OMPRDUMP and enter again. Enter the OMGETGD command again.</p>
No input file found.	

OMGETGD (continued)**Responses for the OMGETGD command**

MAP output	Meaning and action
	<p>Meaning The requested input data file is missing.</p> <p>Action Verify the name of the input file in DIRP.</p> <p>Cannot open data file.</p>
	<p>Meaning The requested input data file cannot be opened.</p> <p>Action Verify the input file is closed in DIRP.</p>
	<p>Unable to allocate changed key and info table</p> <p>Unable to allocate tuple description table</p> <p>Unable to allocate group description table</p> <p>Unable to allocate class description table</p> <p>Unable to allocate key and info file directory</p> <p>Unable to allocate store to hold group included info</p> <p>No space to store K records</p>
	<p>Meaning Previous error messages indicate that the database used to translate the OM records cannot be built. The database cannot be built because not enough dynamic memory is available. The OMGETGD command fails.</p> <p>Action There is no action.</p>
	<p>Error creating key and info file on disk</p> <p>Meaning An error occurs when you created the file on disk.</p> <p>Action Use the SETDBDEV command to check the disk device.</p>
	<p>Unsuccessful building of group description database.</p> <p>Meaning The group description cannot be built because of reasons identified that other error messages identify.</p> <p>Action There is no action required.</p>
	<p>Group description database successfully built.</p> <p>Meaning The OMGETGD command is processed.</p> <p>Action Continue with the remainder of the report request commands.</p>

OMGETGD (continued)

Responses for the OMGETGD command

MAP output	Meaning and action
<pre>Classes scheduled to tape are: Class name 1 Class name 2 Class name n The first class found on file is: Class name : class Start time : yyyy mm dd hh mm Stop time : yyyy mm dd hh mm</pre>	<p>where</p> <p>class name is the name of the OM class that has been scheduled to tape</p> <p>yyyy is the year</p> <p>mm is the month</p> <p>dd is the day</p> <p>hh is the hour</p> <p>mm is the minute</p> <p>Meaning Indicates the classes scheduled to tape and the transfer period of the first class on file.</p> <p>Action There is no action required.</p>
<pre>Unable to locate first data description record</pre>	<p>Meaning A data description record in the data file is not available. The OMGETGD command is not processed.</p> <p>Action There is no action required.</p>
<pre>Error reading fil....aborted End of file reached Blank block encountered - EOF assumed Bad record found in data file</pre>	<p>Meaning Error messages are output if the system cannot read data from the file. The OMGETGD command is not processed.</p> <p>Action There is no action required.</p>

OMGETGD (continued)**Responses for the OMGETGD command**

MAP output	Meaning and action
Unable to retrieve class number in P record	
CLASS NUMBER class number found in P record is out of range	
Unable to retrieve class number in C record	
CLASS NUMBER class number found in C record is out of range	
Unable to get group number in G record	
GROUP NUMBER group number found is out of range	
Unable to get number of info field for GROUP group name	
Unable to get number of F records for GROUP group name	
Unable to get number of tuple for GROUP group name	
Unable to extract tuple number from K record	
Unable to retrieve class number in T record	
CLASS NUMBER class number found in T record is out of range	
where	
Unable to locate H record	
X record: Illegal record encountered	
M record: Expected	
Unexpected M record encountered	
Too many F records for GROUP group number	
Meaning Messages are output if errors are encountered as the system reads the data field. The OMGETGD command is not processed. In these messages:	
<ul style="list-style-type: none"> • class number is the class number that must be associated with the C or P record that is read • group number is the internal group number the OM system assigns • group name is the name of the OM group associated with the record that is read • x is the designation of an illegal record type encountered when data file is read 	
Action There is no action required.	
Unable to allocate storage for key and info values. Key and info values can be stored on disk by using SETDBDEV	

OMGETGD (end)

Responses for the OMGETGD command

MAP output	Meaning and action
	<p>Meaning Not enough dynamic data store is available to hold the KEY and INFO values. The OMGETGD command is not processed.</p> <p>Action Use the command SETDBDEV to allocate storage for KEY and INFO values on a disk.</p>
Unable to get space to store field name	<p>Meaning Not enough dynamic data store is available to hold the changed field names. The OMGETGD command is not processed.</p> <p>Action There is no action required.</p>

OMFORMAT

Function

The OMFORMAT command displays the output format of an OMPR report for a selected OM group.

OMFORMAT command parameters and variables

Command	Parameters and variables	
OMFORMAT	group	
Variables	group	is the name of the OM group for which you require a view of the output format.

OMPRDUMP

Function

The OMPRDUMP command enters the OMPRDUMP command directory. Enter other commands as required.

OMPRDUMP command parameters and variables

Command	Parameters and variables
OMPRDUMP	none
Parameters	none
Variables	none

OMPRDUMP command responses

The following table provides an explanation of the responses to the OMPRDUMP command.

Responses for the OMPRDUMP command	
MAP output	Meaning and action
Failure to allocate OMPRDUMP command directory	<p>Meaning The system fails to allocate the CI directory. You cannot enter OMPRDUMP command environment.</p> <p>Action There is no action required.</p>
Failure to extend the ST	<p>Meaning The symbol table for the commands cannot be extended to add the OMPRDUMP series.</p> <p>Action There is no action required.</p>

OMPRTREP**Function**

The OMPRTREP command requests the printing of the OMPRSPEC report.

OMPRTREP command parameters and variables

Command	Parameters and variables	
OMPRTREP	CLASS	classname
	ALLCLASS	
	GROUP	groupname
	GROUPS	groupnames
	ALLGROUPS	
Parameters	CLASS	identifies that a report the system prints for a given class.
	ALLCLASS	identifies that the system prints all classes of data for the requested time period.
	GROUP	identifies that a data request occurs for one group only.
	GROUPS	identifies that a data request occurs for a series of groups.
	ALLGROUP	identifies that OM groups that belong to the class the system reports at the requested time.
Variables	classname	identifies the name of the class for which you want a report.
	groupname	identifies the name of the OM group for which you request data.
	groupnames	identifies the names of the OM groups for which you request the report. Blanks separate the group names.

OMPRTREP (continued)

OMPRTREP command responses

The following table describes the responses to the OMPRTREP command.

Responses for the OMPRTREP command	
MAP output	Meaning and action
OMGETGD must be successfully completed before OMPRTREP can take place. Request aborted.	<p>Meaning You issued the command before the translation database was created.</p> <p>Action Enter the OMGETGD command first.</p>
CLASS NAME is unknown	<p>Meaning</p> <p>Action Verify the class names assigned.</p>
Class name has not been scheduled in OMTAPE.	<p>Meaning A requested class name is valid. The class name is not scheduled for tape or disk storage.</p> <p>Action Verify the storage schedule of the named class in the Table OMTAPE. Make sure you activate the schedule.</p>
Group name is unknown.	<p>Meaning The system does not recognize the requested OM group.</p> <p>Action There is no action required.</p>
Group name is not included in class	<p>Meaning The OM group is not assigned to the identified class.</p> <p>Action Verify the class assignments with the OMDUMP command.</p>
No group selected. Command aborted.	<p>Meaning You issued the command with the groups parameter. You did not identify a group.</p> <p>Action Enter the command again. Select a minimum of one OM group.</p>
Class and group data must be retrieved in sequential order. Use OMDUMP or table OMGRPORD to check group ordering. Do you wish to continue?	

OMPRTREP (continued)

Meaning You must request class and group data in the order in which the data appear on the tape.

Action Answer YES to continue report generation. Answer NO to abort the report request.

This warning does not apply and does not print if you select the ALLCLASS parameter.

Specified time period ignored for this class

Meaning A class defined in Table OMACC where you requested the WHEN parameter of HALFHOURLY, HOURLY, or AUTO. The system ignores the time period the OMPRTSET command specifies.

Action There is no action required.

Group description database update unsuccessful

Meaning An error occurs when you update the translation database. The OMPRTREP command is terminated. The OMGETGD command you entered earlier failed.

Action There is no action required.

Unable to retrieve class number in Q record
 Q records's group number is out of range
 Cannot locate number of fields in Q record
 Unable to retrieve class number in P record
 CLASS NUMBER class found in P record is out of range
 Unable to get day in P record
 Unable to get month in P record
 Unable to get year in P record
 Unable to get fast samples extension in P record
 Unable to get fastsamples in P record
 Unable to get slowsamples in P record
 Unable to get class number in P record
 Unable to get from time in P record
 Unable to get to time in P record

Meaning Messages appear when errors are encountered as the system reads P and Q records from the data file. The OMGETGD command you entered earlier failed. The OMPRTREP command is terminated.

Action There is no action required.

OMPRTREP (end)

Error reading file...aborted
End of file reached
Blank block encountered - EOF assumed
Bad record found in data file

Meaning Messages appear when the system cannot read the input data file. The OMPRTREP command is terminated. The OMGETGD command you entered earlier failed.

Action There is no action required.

Group description database deallocated

Meaning The system deallocates the group description database the OMGETGD created when the following occurs:

- the system reaches the end of the file
- the system detects an error during the OMPRTREP process

Action There is no action required.

System restarted at this point

Meaning Appears when the data of one group prints when the system reads a restart (R) record.

Action There is no action required.

Requested class is already skipped by previous OMPRTREP(S)

Meaning The requested class in the requested time period passes when the system reads the tape.

Action There is no action required.

OMPRTSET**Function**

The OMPRTSET command sets or queries the time and date parameters for report generation.

OMPRTSET command parameters and variables

Command	Parameters and variables	
OMPRTSET	QUERY	
	TIME	fromhr frommin tohour tomin
	DATE	day month year
Parameters	QUERY	queries the TIME and DATE parameters that are set.
	TIME	identifies that the following parameters are TIME parameters.
	DATE	identifies that the following parameters are DATE parameters. Use this parameter if data from one day or more is available on the file that is read. Enter the date in the form dd mm yyyy. If date parameters are not given, the print defaults to the date on the first data record read when you entered the OMPRTREP command.
Variables	GROUPS	identifies that a data request is present for a series of groups.
	ALLGROUP	identifies that operational measurements (OM) groups that belong to the class are to be reported for the requested time.
	fromhr frommin	is the start time for which reports are requested. The range for the FROMHR parameter is 0 to 23. The range for the FROMMIN parameter is 0 to 59. The default value for both parameters is 0.
	tohour tomin	is the finish time for which reports are requested. The range for the TOHOUR parameter is 0 to 23. The range for the TOMIN parameter is 0 to 59. The default value for the TOHOUR parameter is 24. If you do not enter time parameters, the system prints the data for the whole day. The TOMIN parameter default value is 0.
	dd	is the day (range 1–31)
	mm	is the month (range 1–12)
	yyyy	is the year

OMPRTSET (end)**OMPRTSET command responses**

The responses to the OMPRTSET command appear in the following table.

Responses for the OMPRTSET command	
MAP output	Meaning and action
Date parameters : DAY dd, MONTH mm, Year yyyy Reporting time period is from hh:mm TO hh:mm	<p>Meaning Response to the QUERY parameter of the command.</p> <p>Action There is no action required.</p>
Day is out of range Month is out of range Year is out of range From HR is out of range From MIN is out of range To HR is out of range To MIN is out of range	<p>Meaning Messages appear if the identified parameter is out of range.</p> <p>Action Verify the parameters and enter the command again.</p>
Error : Date parameters not changed Error : Time parameters not changed	<p>Meaning The symbol table for the commands cannot extend to include the OMPRDUMP series.</p> <p>Action There is no action required.</p>
To time specified is less than from time	<p>Meaning The TO TIME parameter is less than the FROM TIME parameter.</p> <p>Action There is no action required.</p>

OMSHOW**Function**

The OMSHOW command displays the key structure, additional information and the contents of all or part of the group and class named in the parameters.

The system updates active register counts for peripheral modules (PM) during the last minute of the holding period. This update only occurs for PMs that use communication mechanisms other than SIPC. An example of a communication mechanism other than SIPC is the Distributed Data Manager (DDM). The OMSHOW command can indicate these register counts in the last minute of the holding period. The active register count for OM groups on these PMs is 0 until the final update of the holding period. This update occurs in the last minute of the holding period. Nodes that do not support SIPC include all Series 2 peripherals (XPMs) and Series 3 peripherals. Peripherals that are not included with the Series 2 and 3 peripherals are application processors (APs) and file processors (FPs). Examples of other peripherals are EIUs, FRIUs, LIU7s and XLIUs.

There are specified PMs that support SuperNode operational measurements (SOM) SIPC communications software. Use the OMSHOW command during the holding period to view the active register counts for these PMs. The computing module (CM), AP and FP nodes support the SIPC.

Counts remain in active registers until the end of the holding period. At the end of this period, the counts transfer to holding registers.

OMSHOW command parameters and variables

Command	Parameters and variables	
OMSHOW	group	class
		[from_keynum] [to_keynum]
		[from_keyname] [to_keyname]
Variables	group	is the name of the OM group to appear. For a list of correct group names, use the Q OMSHOW command. If you enter an invalid group name, the switch responds with a list of all correct OM group names.
	class	is the name of the class to appear: ACTIVE, HOLDING, or a name the operating company defines. For a list of correct classes, use the Q OMACCGRP or the Q OMACCFD command.

OMSHOW (end)

OMSHOW command parameters and variables

Command	Parameters and variables
from_keynum	is the tuple (key) number specifying the first of a sequence of fields to appear (Notes 1 and 2).
to_keynum	is the tuple (key) number specifying the last of a sequence of fields to appear (Notes 1 and 2).
from_keyname	is the key identification specifying the first of a sequence of fields to appear (Notes 1 and 2). If from_keyname is TOTAL and to_keyname is not specified, total readings appear. This action occurs if totalling is ON for the group. Refer to the OMTOTAL command.
to_keyname	is the key identification specify the last of a sequence of fields to appear (Notes 1 and 2).
Notes:	
1	The switch does not prompt for the tuple (key) numbers. Enter the numbers with the class name. If you make a from_keynum datafill (no to_keynum datafill) that tuple appears. Where the OM group is arranged by a multipart key, the information field is used as a pseudo-key. In this event, from_keyname and to_keyname must be in quotes. All characters with the quotes must be in uppercase.
2	To determine the tuple (key) number for Intergrated Business Network (IBN) subgroups, use command interpreter (CI) command IBNSGKEY.
3	If key is TOTAL and totalling is not turned on for the group, the response is Invalid Key.
4	If a range of tuples is not given, all tuples and the total readings, appear.

OMTOTAL

Function

The OMTOTAL command turns the OM totalling feature on or off for a specified OM group. When the feature is on, OMPR and OMSHOW reports include group total measurements.

OMTOTAL command parameters and variables

Command	Parameters and variables	
OMTOTAL	group	ON OFF
Parameters	ON	turns the OM totalling feature ON for the specified OM group.
	OFF	turns the OM totalling feature OFF for the specified OM group.
Variables	Group	is the name of the OM group for which OM totalling is desired or not required any longer.

Q OMSHOW

Function

The Q OMSHOW command provides a list of all valid OM groups and classes the OMCLASS command establishes.

Q OMSHOW command parameters and variables

Command	Parameters and variables
Q OMSHOW	none

Q SLU

Function

The Q SLU command provides a list of all commands in the subscriber line usage (SLU) command directory.

OMGETGD command parameters and variables

Command	Parameters and variables
Q SLU	none

QUIT

Function

The QUIT command allows the user to leave the OMPRDUMP directory and return to the command interpreter (CI) level.

QUIT command parameters and variables

Command	Parameters and variables
QUIT	none

READ**Function**

The READ command interrogates register content for specified lines and displays the information. Access this command from the REGISTER command directory.

READ command parameters and variables

Command	Parameters and variables			
READ	DN	dn		
	LEN	len		
	ALL	attribute		
	NXX	office_code		
Parameters	DN	Specifies that a directory number (DN) identifies a line.		
	LEN	Specifies that a line equipment number (LEN) identifies a line.		
	ALL	Specifies that the command must read registers for all lines with the following designated option.		
	NXX	Specifies that that the command must read registers for all lines with the following designated option and office code.		
Variables	dn	is the directory number you enter as a string of seven or ten characters.		
	len	is an original equipment number you enter in the form vvvv www x yy zz, where:		
		vvvv= the 4 character site name		
		www= the frame number, 0 to 511		
		x	= 1 digit,	LM UNIT 0 to 1
				LCM UNIT 0 to 1
				RCT UNIT 0 to 9
				RCS UNIT 0 to 9
				RCU UNIT 0 to 9
				SVR GROUP 0 to 3
			DLM SHELF 0 to 1	

READ (continued)**READ command parameters and variables**

Command	Parameters and variables			
			LCMI UNIT	0 to 1
			LRU UNIT	0 to 9
Variables (continued)	len (cont)	x (cont)	ELCM UNIT	0 to 1
			LDT UNIT	0
			ALCM UNIT	0 to 1
			LCME UNIT	0 to 1
			SRU UNIT	0 to 1
			IPE SHELF	0 to 3
			RDT UNIT	0 to 9
		yy = 2 digits	LM DRAWER	0 to 19
			LCM LINE SUBGROUP	0 to 19
			RCT LINE SUBGROUP	0 to 7
			RCS LINE SUBGROUP	0 to 3
			RCU LINE SUBGROUP	0 to 18
			SVR LINE SUBGROUP	0 to 19
			DLM LINE SUBGROUP	0 to 9
			ELCM LINE SUBGROUP	0 to 7, 10 to 17
			LDT LINE SUBGROUP	0
			ALCM LINE SUBGROUP	0 to 19
			LRU LINE SUBGROUP	0 to 1
			IPE LINE SUBGROUP	0 to 15
			LCMI LINE SUBGROUP	0 to 23
			LCME LINE SUBGROUP	0 to 15

READ (continued)

READ command parameters and variables

Command		Parameters and variables			
				SRU	LINE SUBGROUP 0 to 7
				RDT	RCU LSG 0 to RDTINV def max
					RFT SHELF 2 to RDTINV def max
					GENCSC SHELF 1 to RDTINV def max
Variables (continued)	len (cont)	yy (cont)		RDT (cont)	GENTMC SHELF 1 to RDTINV def max
		zz	= 2 digits	LM	CIRCUIT 0 to 31
				LCM	CIRCUIT 0 to 31
				RCT	CIRCUIT 0 to 31
				RCS	CIRCUIT 0 to 23
				RCU	CIRCUIT 0 to 31
				SVR	CIRCUIT 0 to 31
				DLM	CIRCUIT 0 to 31
				ELCM	CIRCUIT 0 to 31
				LDT	CIRCUIT 0 to 23
				ALCM	CIRCUIT 0 to 31
				LRU	CIRCUIT 0 to 29
				IPE	CIRCUIT 0 to 31
				LCMI	CIRCUIT 0 to 15
				LCME	CIRCUIT 0 to 31
				SRU	CIRCUIT 0 to 31

READ (end)

READ command parameters and variables

Command	Parameters and variables												
	<table> <tr> <td>RDT</td> <td>RCU CIRCUIT</td> <td>0 to RDTINV def MAX</td> </tr> <tr> <td></td> <td>RFT SLOT</td> <td>1 to RDTINV def MAX</td> </tr> <tr> <td></td> <td>GENCSC SLOT</td> <td>1 to RDTINV def MAX</td> </tr> <tr> <td></td> <td>GENTMC SLOT</td> <td>1 to RDTINV def MAX</td> </tr> </table> <p>attribute is the option: 1MR, INW, OFS, or 2WW office_code is the office code (0 to 999)</p>	RDT	RCU CIRCUIT	0 to RDTINV def MAX		RFT SLOT	1 to RDTINV def MAX		GENCSC SLOT	1 to RDTINV def MAX		GENTMC SLOT	1 to RDTINV def MAX
RDT	RCU CIRCUIT	0 to RDTINV def MAX											
	RFT SLOT	1 to RDTINV def MAX											
	GENCSC SLOT	1 to RDTINV def MAX											
	GENTMC SLOT	1 to RDTINV def MAX											

READPX**Function**

The READPX command interrogates INWATS registers associated with the options INW and 2WW for PX trunks and display the information.

Access this command from the REGISTER command directory.

READPX command parameters and variables

Command	Parameters and variables	
READPX	DN	dn
	ALL	attribute
	CLLI	trunk_name
Parameters	DN	specifies that a directory number (DN) identifies a PX trunk.
	ALL	specifies that the command must read registers for all PX trunks with the following designated option.
	CLLI	specifies that a common language location identifier (CLLI) identifies a PX trunk.
Variables	dn	is the directory number you enter as a string of seven characters. The DN is the group DN for the PX trunk group specified in Table TRKGP.
	attribute	is the option, INW or 2WW.
	trunk_name	is the PX trunk CLLI.

READRESET

Function

The READRESET command interrogates registers for specified lines, displays the information, and resets the registers to zero.

Access this command from the REGISTER command directory.

READRESET command parameters and variables

Command	Parameters and variables																	
READRESET	DN	dn																
	LEN	len																
	ALL	attribute																
	NXX	office_code																
Parameters	DN	specifies that a directory number (DN) identifies a line.																
	LEN	specifies that a line equipment number (LEN) identifies a line.																
	ALL	specifies that a LEN identifies a line.																
	NXX	specifies that the command must read registers for all lines with the following designated option and office code.																
Variables	dn	is the DN you enter as a string of seven or ten characters.																
	len	is an originating equipment number you enter in the form yyyy www x yy zz, where: vvvv= the 4 character site name www= the frame number, 0 to 511 <table data-bbox="760 1570 1279 1806"> <tr> <td>x = 1 digit</td> <td>LM</td> <td>UNIT</td> <td>0 to 1</td> </tr> <tr> <td></td> <td>LCM</td> <td>UNIT</td> <td>0 to 1</td> </tr> <tr> <td></td> <td>RCT</td> <td>UNIT</td> <td>0 to 9</td> </tr> <tr> <td></td> <td>RCS</td> <td>UNIT</td> <td>0 to 9</td> </tr> </table>		x = 1 digit	LM	UNIT	0 to 1		LCM	UNIT	0 to 1		RCT	UNIT	0 to 9		RCS	UNIT
x = 1 digit	LM	UNIT	0 to 1															
	LCM	UNIT	0 to 1															
	RCT	UNIT	0 to 9															
	RCS	UNIT	0 to 9															

READRESET (continued)**READRESET command parameters and variables**

Command	Parameters and variables					
Variables (continued)	len (cont)	x (cont)	RCU	UNIT	0 to 9	
			SVR	GROUP	0 to 3	
			DLM	SHELF	0 to 1	
			LCMI	UNIT	0 to 1	
			LRU	UNIT	0 to 9	
			ELCM	UNIT	0 to 1	
			LDT	UNIT	0	
			ALCM	UNIT	0 to 1	
			LCME	UNIT	0 to 1	
			SRU	UNIT	0 to 1	
			IPE	SHELF	0 to 3	
			RDT	UNIT	0 to 9	
			yy = 2 digits	LM	DRAWER	0 to 19
			LCM	LINE SUBGROUP	0 to 19	
			RCT	LINE SUBGROUP	0 to 7	
			RCS	LINE SUBGROUP	0 to 3	
			RCU	LINE SUBGROUP	0 to 18	
			SVR	LINE SUBGROUP	0 to 19	
			DLM	LINE SUBGROUP	0 to 9	
			ELCM	LINE SUBGROUP	0 to 7, 10 to 17	

READRESET (continued)**READRESET command parameters and variables**

Command		Parameters and variables			
			LDT	LINE SUBGROUP	0
Variables (continued)	len (cont)	x (cont)	ALCM	LINE SUBGROUP	0 to 19
			LRU	LINE SUBGROUP	0 to 1
			IPE	LINE SUBGROUP	0 to 15
			LCMI	LINE SUBGROUP	0 to 23
			LCME	LINE SUBGROUP	0 to 15
			SRU	LINE SUBGROUP	0 to 7
			RDT	RCU LSG	0 to RDTINV def max
				RFT SHELF	2 to RDTINV def max
				GENCSC SHELF	1 to RDTINV def max
				GENTMC SHELF	1 to RDTINV def max
		zz = 2 digits	LM	CIRCUIT	0 to 31
			LCM	CIRCUIT	0 to 31
			RCT	CIRCUIT	0 to 31
			RCS	CIRCUIT	0 to 23
			RCU	CIRCUIT	0 to 31
			SVR	CIRCUIT	0 to 31
			DLM	CIRCUIT	0 to 31

READRESET (end)

READRESET command parameters and variables

Command	Parameters and variables				
			ELCM	CIRCUIT	0 to 31
			LDT	CIRCUIT	0 to 23
			ALCM	CIRCUIT	0 to 31
Variables (continued)	len (cont)	zz (cont)	LRU	CIRCUIT	0 to 29
			IPE	CIRCUIT	0 to 31
			LCMI	CIRCUIT	0 to 15
			LCME	CIRCUIT	0 to 31
			SRU	CIRCUIT	0 to 31
			RDT	RCU CIRCUIT	0 to RDTINV def MAX
				RFT SLOT	1 to RDTINV def MAX
				GENCSC SLOT	1 to RDTINV def MAX
				GENTMC SLOT	1 to RDTINV def MAX
		attribut e	is the option: 1MR, INW, OFS, or 2WW.		
		office_ code	is the office code (0 to 999).		

READRESETPX

Function

The READRESETX command interrogates and resets INWATS registers associated with the options INW and 2WW for PX trunks and displays the information. After the system displays the register information, the registers reset to 0:00:00.

Access this command from the REGISTER command directory.

READRESETPX command parameters and variables

Command	Parameters and variables	
READRSETPX	DN	dn
	ALL	attribute
	CLLI	trunk_name
Parameters	DN	specifies that a directory number (DN) identifies a PX trunk.
	ALL	specifies that the command must read registers for all PX trunks with the following designated option.
	CLLI	specifies that a common language location identifier (CLLI) identifies a PX trunk for the CLLI.
Variables	dn	is the DN you enter as a string of seven characters. The DN is the group DN for the PX trunk group specified in Table TRKGP.
	attribute	is the option, INW or 2WW.
	trunk_name	is the PX trunk CLLI.

READVFG**Function**

The READRESETVFG command interrogates an INWATS attempt and overflow registers on virtual facility groups (VFG). The VFG routes INWATS calls to integrated business network (IBN) stations.

Access this command from the REGISTER command directory.

READVFG command Parameters and variables

Command	Parameters and variables	
READVFG	ALL	
	KEY	VFG_name
	DN	billing_number
	Parameters	ALL
Parameters	KEY	identifies that data from a separate VFG, that VFG_name identifies, appears.
	DN	specifies that data from a separate VFG, billing_number identifies, appears.
	Variables	VFG_name
Variables	billing_number	is the billing number associated with the VFG.

READRESETVFG

Function

The READRESETVFG command interrogates and resets INWATS attempt and overflow registers on virtual facility groups (VFG). The VFG routes INWATS calls to integrated business network (IBN) stations. After the data appears, the registers reset to zero.

READVFG command parameters and variable

Command	Parameters and variables		
READRESETVFG	ALL		
	KEY	VFG_name	
	DN	billing_number	
	Parameters	ALL	specifies that the command must read all VFG registers. Attempts and overflows appear.
		KEY	identifies that data from an separate VFG, identified by VFG_name, appears.
	DN	specifies that data from an separate VFG, identified by billing_number, appears.	
Variables	VFG_name	is the name associated with the VFG.	
	billing_number	is the billing number associated with the VFG.	

SERVORD

Function

The SERVORD command accesses the service order utility.

SERVORD command parameters and variables

Command	Parameters and variables
SERVORD	none

SETDBDEV

Function

The SETDBDEV command designates a disk file for the storage of KEY and INFO values read from the input data file.

SETDBDEV command parameters and variables

Command	Parameters and variables
SETDBDEV	DEVICE
Parameters	none
Variables	DEVICE specifies the device that Table TERMDEV identifies to which the information is directed

SETDBDEV command responses

The following table describes the responses to the SETDBDEV command.

Responses for the SETDBDEV command	
SETDBDEV can be only issued before OMGETGD	
Successfully built the database	<p>Meaning Issue the command before the OMGETGD command.</p> <p>Action Use the QUIT command from the OMPRDUMP level and enter again. Enter the SETDBDEV command again.</p>
Device not found	<p>Meaning The specified device is missing.</p> <p>Action Verify the device name in Table TERMDEV</p>
OK	<p>Meaning The command is performed.</p> <p>The specified device must support a random-access disk file.</p> <p>Action There is no action required.</p>

SLU

Function

The SLU command accesses the SLU system.

SLU command parameters and variables

Command	Parameters and variables
SLU	none

SLUADD

Function

The SLUADD command adds a line identifier to an SLU input table. The new line datafill becomes the bottom datafill in the table. The datafill is assigned the next available number.

SLUADD command parameters and variables

Command	Parameters and variables		
SLUADD	D	num7d	table_name
SLUADD	D10	num10d	table_name
	OE	oe7d	table_name
Parameters	D	specifies that the line identifier is a seven-digit directory number.	
Parameters	D10	specifies that the line identifier is a ten-digit directory number.	
	OE	specifies that the line identifier is an originating equipment number. Does not apply to business set secondary DN appearances.	
Variables	num7d	<p>is a DN of seven digits you enter in the form yyy zzzz where: yyy = 3 characters selected from N,1,2,3,4,5,6,7,8,9,0,B,C,D,E,F zzzz= 4 characters selected from N,1,2,3,4,5,6,7,8,9,0,B,C,D,E,F. Used with class D line identifiers.</p>	
	num10d	<p>is a DN of ten digits entered in the form xxx yyy zzzz, where: xxx = three characters selected from N,1,2,3,4,5,6,7,8,9,0,B,C,D,E,F yyy = three characters selected from N,1,2,3,4,5,6,7,8,9,0,B,C,D,E,F zzzz = four characters selected from N,1,2,3,4,5,6,7,8,9,0,B,C,D,E,F. Used with class D10 line identifiers.</p>	
	table_name	<p>is a SLU input table, one of ENG640I1, TRA250I1, TRA125I1 or TRA125I2. Defaults to a default table_name the SLUSET command specified. When an input is made in the no-prompt mode, a \$ character can specify the default table. In the prompt mode, enter a carriage return to specify the default table.</p>	

SLUADD (continued)**SLUADD command parameters and variables**

Command	Parameters and variables				
	oe7d	is an original equipment number you enter in the form vvvv www x yy zz where: vvvv= the 4 character site name www= the frame number, 0 to 511 x = the unit, group, or shelf number based on the peripheral type yy = the drawer, line subgroup, or shelf number based on the peripheral type zz = the circuit slot based on the peripheral type			
Variables (continued)	oe7d (cont)	x = 1 digit	LM	UNIT	0 to 1
		x (cont)	LCM	UNIT	0 to 1
			RCT	UNIT	0 to 9
			RCS	UNIT	0 to 9
			RCU	UNIT	0 to 9
			SVR	GROUP	0 to 3
			DLM	SHELF	0 to 1
			LCMI	UNIT	0 to 1
			LRU	UNIT	0 to 9
			ELCM	UNIT	0 to 1
			LDT	UNIT	0
			ALCM	UNIT	0 to 1
			LCME	UNIT	0 to 1
			SRU	UNIT	0 to 1
			IPE	SHELF	0 to 3
	RDT	UNIT	0 to 9		

SLUADD (continued)**SLUADD command parameters and variables**

Command	Parameters and variables			
		yy = 2 digits	LM	DRAWER 0 to 19
			LCM	LINE SUBGROUP 0 to 19
			RCT	LINE SUBGROUP 0 to 7
			RCS	LINE SUBGROUP 0 to 3
			RCU	LINE SUBGROUP 0 to 18
			SVR	LINE SUBGROUP 0 to 19
			DLM	LINE SUBGROUP 0 to 9
			ELCM	LINE SUBGROUP 0 to 7, 10 to 17
			LDT	LINE SUBGROUP 0
			ALCM	LINE SUBGROUP 0 to 19
Variables (continued)	oe7d (cont)	yy (cont)	LRU	LINE SUBGROUP 0 to 1
			IPE	LINE SUBGROUP 0 to 15
			LCMI	LINE SUBGROUP 0 to 23
			LCME	LINE SUBGROUP 0 to 15
			SRU	LINE SUBGROUP 0 to 7
			RDT	RCU LSG 0 to RDTINV def max
				RFT SHELF 2 to RDTINV def max
				GENCSC SHELF 1 to RDTINV def max

SLUADD (continued)**SLUADD command parameters and variables**

Command	Parameters and variables				
				GENTMC SHELF	1 to RDTINV def max
		zz = 2 digits	LM	CIRCUIT	0 to 31
			LCM	CIRCUIT	0 to 31
			RCT	CIRCUIT	0 to 31
			RCS	CIRCUIT	0 to 23
			RCU	CIRCUIT	0 to 31
			SVR	CIRCUIT	0 to 31
			DLM	CIRCUIT	0 to 31
			ELCM	CIRCUIT	0 to 31
			LDT	CIRCUIT	0 to 23
			ALCM	CIRCUIT	0 to 31
			LRU	CIRCUIT	0 to 29
Variables (continued)	oe7d (cont)	zz (cont)	IPE	CIRCUIT	0 to 31
			LCMI	CIRCUIT	0 to 15
			LCME	CIRCUIT	0 to 31
			SRU	CIRCUIT	0 to 31
			RDT	RCU CIRCUIT	0 to RDTINV def MAX
				RFT SLOT	1 to RDTINV def MAX

SLUADD (end)

SLUADD command parameters and variables

Command	Parameters and variables
	GENCSC SLOT 1 to RDTINV def MAX
	GENTMC SLOT 1 to RDTINV def MAX

SLU_DEINSTALL

Function

The SLU_DEINSTALL stops all OMs on lines in the specified OM group. This command does not affect datafill in the associated input table.

SLU_DEINSTALL command parameters and variables

Command	Parameters and variables
SLU_DEINSTALL	table_name
Variables	table_name is a SLU input table, one of ENG640I1, TRA250I1, TRA125I1 or TRA125I2.

SLUDEL

Function

The SLUDEL command deletes a line_identifier from an SLU input table. The line number is removed and does not appear until the table is reconstituted.

SLUDEL command parameters and variables

Command	Parameters and variables		
SLUDEL	D	num7d	table_name
	D10	num10d	table_name
	OE	oe7d	table_name
Parameters	D	specifies that the line identifier is a directory number (DN).	
	D10	specifies that the line identifier is a ten DN	
	OE	specifies that the line identifier class is an originating equipment number. Does not apply to business set secondary DN appearances.	
Variables	num7d	is a DN of seven digits you enter in the form yyy zzzz where: yyy = 3 characters selected from N,1,2,3,4,5,6,7,8,9,0,B,C,D,E,F zzzz= 4 characters selected from N,1,2,3,4,5,6,7,8,9,0,B,C,D,E,F. Used with D line identifiers.	

SLUDEL (continued)**SLUDEL command parameters and variables**

Command	Parameters and variables																				
num10d	<p>is a DN of ten digits entered in the form xxx yyy zzzz, where: xxx = three characters selected from N,1,2,3,4,5,6,7,8,9,0,B,C,D,E,F yyy = three characters selected from N,1,2,3,4,5,6,7,8,9,0,B,C,D,E,F zzzz = four characters selected from N,1,2,3,4,5,6,7,8,9,0,B,C,D,E,F. Used with class D10 line identifiers.</p>																				
table_ name	<p>is a SLU input table, one of ENG64011, TRA25011, TRA12511 or TRA12512. Defaults to a default table_name the SLUSET command specified. When an input is made in the no-prompt mode, a \$ character can specify the default table. In the prompt mode, enter a carriage return to specify the default table.</p>																				
oe7d	<p>is an originating equipment number entered in the form vvvv www x yy zz, where: vvvv= the 4 character site name www= the frame number, 0 to 511 x = the unit, group, or shelf number based on the peripheral type yy = the drawer, line subgroup, or shelf number based on the peripheral type zz = the circuit slot based on the peripheral type</p> <table> <tbody> <tr> <td>x = 1 digit</td> <td>LM</td> <td>UNIT</td> <td>0 to 1</td> </tr> <tr> <td></td> <td>LCM</td> <td>UNIT</td> <td>0 to 1</td> </tr> <tr> <td></td> <td>RCT</td> <td>UNIT</td> <td>0 to 9</td> </tr> <tr> <td></td> <td>RCS</td> <td>UNIT</td> <td>0 to 9</td> </tr> <tr> <td></td> <td>RCU</td> <td>UNIT</td> <td>0 to 9</td> </tr> </tbody> </table>	x = 1 digit	LM	UNIT	0 to 1		LCM	UNIT	0 to 1		RCT	UNIT	0 to 9		RCS	UNIT	0 to 9		RCU	UNIT	0 to 9
x = 1 digit	LM	UNIT	0 to 1																		
	LCM	UNIT	0 to 1																		
	RCT	UNIT	0 to 9																		
	RCS	UNIT	0 to 9																		
	RCU	UNIT	0 to 9																		

SLUDEL (continued)**SLUDEL command parameters and variables**

Command	Parameters and variables			
	SVR	GROUP	0 to 3	
	DLM	SHELF	0 to 1	
	LCMI	UNIT	0 to 1	
	LRU	UNIT	0 to 9	
	ELCM	UNIT	0 to 1	
	LDT	UNIT	0	
	ALCM	UNIT	0 to 1	
	LCME	UNIT	0 to 1	
	SRU	UNIT	0 to 1	
	IPE	SHELF	0 to 3	
	RDT	UNIT	0 to 9	
	yy = 2 digits	LM	DRAWER	0 to 19
	LCM	LINE SUBGROUP	0 to 19	
	RCT	LINE SUBGROUP	0 to 7	
	RCS	LINE SUBGROUP	0 to 3	
	RCU	LINE SUBGROUP	0 to 18	
	SVR	LINE SUBGROUP	0 to 19	
	DLM	LINE SUBGROUP	0 to 9	
	ELCM	LINE SUBGROUP	0 to 7, 10 to 17	
	LDT	LINE SUBGROUP	0	
	ALCM	LINE SUBGROUP	0 to 19	
	LRU	LINE SUBGROUP	0 to 1	
	IPE	LINE SUBGROUP	0 to 15	

SLUDEL (continued)**SLUDEL command parameters and variables**

Command	Parameters and variables		
	LCMI	LINE SUBGROUP	0 to 23
	LCME	LINE SUBGROUP	0 to 15
	SRU	LINE SUBGROUP	0 to 7
	RDT	RCU LSG	0 to RDTIN V def max
		RFT SHELF	2 to RDTIN V def max
		GENCSC SHELF	1 to RDTIN V def max
		GENTMC SHELF	1 to RDTIN V def max
	zz = 2 digits	LM	CIRCUIT 0 to 31
		LCM	CIRCUIT 0 to 31
		RCT	CIRCUIT 0 to 31
		RCS	CIRCUIT 0 to 23
		RCU	CIRCUIT 0 to 31
		SVR	CIRCUIT 0 to 31
		DLM	CIRCUIT 0 to 31
		ELCM	CIRCUIT 0 to 31
		LDT	CIRCUIT 0 to 23
		ALCM	CIRCUIT 0 to 31

SLUDEL (end)

SLUDEL command parameters and variables

Command	Parameters and variables		
	LRU	CIRCUIT	0 to 29
	IPE	CIRCUIT	0 to 31
	LCMI	CIRCUIT	0 to 15
	LCME	CIRCUIT	0 to 31
	SRU	CIRCUIT	0 to 31
	RDT	RCU CIRCUIT	0 to RDTIN V def MAX
		RFT SLOT	1 to RDTIN V def MAX
		GENCSC SLOT	1 to RDTIN V def MAX
		GENTMC SLOT	1 to RDTIN V def MAX

SLUDUMP

Function

The SLUDUMP command prints a list of recent commands made against each SLU input table, except deinstall. The printout includes the tables installed earlier.

SLUDUMP command parameters and variables

Command	Parameters and variables
SLUDUMP	

SLUFINDI

Function

The SLUFINDI command finds the specified line identifier in the specified SLU input table. The command displays all information associated with the specified line. If a hunt group associates with a line identifier, information on all members of the hunt group appears.

SLUFINDI

Command	Parameters and variables		
SLUFINDI	D	num7d	table_ name
	D10	num10d	table_ name
	OE	oe7e	table_ name
Parameters	D	specifies that the line identifier is a seven-digit directory number.	
	D10	specifies that the line identifier is a ten-digit directory number.	
	OE	specifies that the line identifier is an originating equipment number. Does not apply to business set secondary DN appearances.	
Variables	num7d	is a DN of seven digits you enter in the form yyy zzzz, where: yyy = three characters selected from N,1,2,3,4,5,6,7,8,9,0,B,C,D,E,F zzzz= four characters selected from N,1,2,3,4,5,6,7,8,9,0,B,C,D,E,F. Used with class D line identifiers.	

SLUFINDI (continued)**SLUFINDI**

Command	Parameters and variables																												
num10d	<p>is a DN of ten digits entered in the form xxx yyy zzzz, where: xxx = three characters selected from N,1,2,3,4,5,6,7,8,9,0,B,C,D,E,F yyy = three characters selected from N,1,2,3,4,5,6,7,8,9,0,B,C,D,E,F zzzz = four characters selected from N,1,2,3,4,5,6,7,8,9,0,B,C,D,E,F. Used with class D10 line identifiers.</p>																												
table_name	<p>is a SLU input table, one of ENG640I1, TRA250I1, TRA125I1, or TRA125I2. Defaults to a table_name the SLUSET command specifies. When an input is made in the no-prompt mode, a \$ character can specify the default table. In the prompt mode, enter a carriage return to specify the default table.</p>																												
oe7d	<p>is an originating equipment number you enter in the form vvvv www x yy zz, where: vvvv = the four character site name www = the frame number, 0 to 511 x = the unit, group, or shelf number based on the peripheral type yy = the drawer, line subgroup, or shelf number based on the peripheral type zz = the circuit slot based on the peripheral type</p> <table> <tbody> <tr> <td>x = one digit</td> <td>LM</td> <td>UNIT</td> <td>0 to 1</td> </tr> <tr> <td></td> <td>LCM</td> <td>UNIT</td> <td>0 to 1</td> </tr> <tr> <td></td> <td>RCT</td> <td>UNIT</td> <td>0 to 9</td> </tr> <tr> <td></td> <td>RCS</td> <td>UNIT</td> <td>0 to 9</td> </tr> <tr> <td></td> <td>RCU</td> <td>UNIT</td> <td>0 to 9</td> </tr> <tr> <td></td> <td>SVR</td> <td>GROUP</td> <td>0 to 3</td> </tr> <tr> <td></td> <td>DLM</td> <td>SHELF</td> <td>0 to 1</td> </tr> </tbody> </table>	x = one digit	LM	UNIT	0 to 1		LCM	UNIT	0 to 1		RCT	UNIT	0 to 9		RCS	UNIT	0 to 9		RCU	UNIT	0 to 9		SVR	GROUP	0 to 3		DLM	SHELF	0 to 1
x = one digit	LM	UNIT	0 to 1																										
	LCM	UNIT	0 to 1																										
	RCT	UNIT	0 to 9																										
	RCS	UNIT	0 to 9																										
	RCU	UNIT	0 to 9																										
	SVR	GROUP	0 to 3																										
	DLM	SHELF	0 to 1																										

SLUFINDI (continued)**SLUFINDI**

Command	Parameters and variables		
	LCMI	UNIT	0 to 1
	LRU	UNIT	0 to 9
	ELCM	UNIT	0 to 1
	LDT	UNIT	0
	ALCM	UNIT	0 to 1
	LCME	UNIT	0 to 1
	SRU	UNIT	0 to 1
	IPE	SHELF	0 to 3
	RDT	UNIT	0 to 9
	yy =two digits	LM	DRAWER 0 to 19
	LCM	LINE SUBGRO UP	0 to 19
	RCT	LINE SUBGRO UP	0 to 7
	RCS	LINE SUBGRO UP	0 to 3
	RCU	LINE SUBGRO UP	0 to 18
	SVR	LINE SUBGRO UP	0 to 19
	DLM	LINE SUBGRO UP	0 to 9

SLUFINDI (continued)

SLUFINDI

Command	Parameters and variables		
	ELCM	LINE SUBGRO UP	0 to 7, 10 to 17
	LDT	LINE SUBGRO UP	0
	ALCM	LINE SUBGRO UP	0 to 19
	LRU	LINE SUBGRO UP	0 to 1
	IPE	LINE SUBGRO UP	0 to 15
	LCMI	LINE SUBGRO UP	0 to 23
	LCME	LINE SUBGRO UP	0 to 15
	SRU	LINE SUBGRO UP	0 to 7
	RDT	RCU LSG	0 to RDTINV def max
		RFT SHELF	2 to RDTINV def max
		GENCSC SHELF	1 to RDTINV def max
		GENTMC SHELF	1 to RDTINV def max
	zz = two digits	LM	CIRCUIT 0 to 31
		LCM	CIRCUIT 0 to 31

SLUFINDI (end)**SLUFINDI**

Command	Parameters and variables		
	RCT	CIRCUIT	0 to 31
	RCS	CIRCUIT	0 to 23
	RCU	CIRCUIT	0 to 31
	SVR	CIRCUIT	0 to 31
	DLM	CIRCUIT	0 to 31
	ELCM	CIRCUIT	0 to 31
	LDT	CIRCUIT	0 to 23
	ALCM	CIRCUIT	0 to 31
	LRU	CIRCUIT	0 to 29
	IPE	CIRCUIT	0 to 31
	LCMI	CIRCUIT	0 to 15
	LCME	CIRCUIT	0 to 31
	SRU	CIRCUIT	0 to 31
	RDT	RCU CIRCUIT	0 to RDTINV def MAX
		RFT SLOT	1 to RDTINV def MAX
		GENCSC SLOT	1 to RDTINV def MAX
		GENTMC SLOT	1 to RDTINV def MAX

SLUFINDO**Function**

The SLUFINDO command finds the specified line identifier in the specified OM group. This command outputs the counts in all registers associated with the line identifier. This command works if the OM group is inactive. The inactive OM group holds the counts in the registers at the time of the SLU_DEINSTALL command.

SLUFINDO

Command	Parameters and variables		
SLUFINDO	D	num7d	table_name
	D10	num10d	table_name
	OE	oe7e	table_name
Parameters	D	specifies that the line identifier is a seven-digit directory number (DN).	
	D10	specifies that the line identifier is a ten-digit directory number.	
	OE	specifies that the line identifier class is an originating equipment number. Does not apply to business set secondary DN appearances.	
Variables	num7d	is a DN of seven digits you enter in the form yyy zzzz, where: yyy = three characters selected from N,1,2,3,4,5,6,7,8,9,0,B,C,D,E,F zzzz = four characters selected from N,1,2,3,4,5,6,7,8,9,0,B,C,D,E,F. Used with D line identifiers	

SLUFINDO (continued)

SLUFINDO

Command	Parameters and variables															
	num10d	<p>is a DN of ten digits entered in the form xxx yyy zzzz, where: xxx = three characters selected from N,1,2,3,4,5,6,7,8,9,0,B,C,D,E,F yyy = three characters selected from N,1,2,3,4,5,6,7,8,9,0,B,C,D,E,F zzzz = four characters selected from N,1,2,3,4,5,6,7,8,9,0,B,C,D,E,F. Used with class D10 line identifiers.</p>														
Variables	table_name	<p>is a SLU input table, one of ENG64011, TRA25011, TRA12511, or TRA12512. Defaults to a table_name that the SLUSET command specified. When you make an input in the no-prompt mode, a \$ character can specify the default table. In the prompt mode, enter a carriage return to specify the default table.</p>														
	oe7d	<p>is an originating equipment number you enter in the form vvvv www x yy zz, where: vvvv= the four character site name www= the frame number, 0 to 511 x = the unit, group, or shelf number based on the peripheral type yy = the drawer, line subgroup, or shelf number based on the peripheral type zz = the circuit slot based on the peripheral type</p> <table border="0"> <tr> <td>x = one digit</td> <td>LM</td> <td>UNIT</td> <td>0 to 1</td> </tr> <tr> <td></td> <td>LCM</td> <td>UNIT</td> <td>0 to 1</td> </tr> <tr> <td></td> <td>RCT</td> <td>UNIT</td> <td>0 to 9</td> </tr> </table>			x = one digit	LM	UNIT	0 to 1		LCM	UNIT	0 to 1		RCT	UNIT	0 to 9
x = one digit	LM	UNIT	0 to 1													
	LCM	UNIT	0 to 1													
	RCT	UNIT	0 to 9													
RCS	UNIT	0 to 9														

SLUFINDO (continued)**SLUFINDO**

Command	Parameters and variables		
RCU	UNIT		0 to 9
SVR	GROUP		0 to 3
DLM	SHELF		0 to 1
LCMI	UNIT		0 to 1
LRU	UNIT		0 to 9
		ELCM	UNIT 0 to 1
		LDT	UNIT 0
		ALCM	UNIT 0 to 1
		LCME	UNIT 0 to 1
		SRU	UNIT 0 to 1
		IPE	SHELF 0 to 3
		RDT	UNIT 0 to 9
		LM	DRAWER 0 to 19
			yy = two digits
		LCM	LINE SUBGROUP 0 to 19
		RCT	LINE SUBGROUP 0 to 7
		RCS	LINE SUBGROUP 0 to 3
		RCU	LINE SUBGROUP 0 to 18
		SVR	LINE SUBGROUP 0 to 19
		DLM	LINE SUBGROUP 0 to 9
		ELCM	LINE SUBGROUP 0 to 7, 10 to 17
		LDT	LINE SUBGROUP 0
		ALCM	LINE SUBGROUP 0 to 19
		LRU	LINE SUBGROUP 0 to 1

SLUFINDO (continued)**SLUFINDO**

Command	Parameters and variables		
	IZE	LINE SUBGROUP	0 to 15
	LCMI	LINE SUBGROUP	0 to 23
	LCME	LINE SUBGROUP	0 to 15
	SRU	LINE SUBGROUP	0 to 7
	RDT	RCU LSG	0 to RDTINV def max
		RFT SHELF	2 to RDTINV def max
		GENCSC SHELF	1 to RDTINV def max
		GENTMC SHELF	1 to RDTINV def max
	zz =two digits	LM	CIRCUIT 0 to 31
		LCM	CIRCUIT 0 to 31
		RCT	CIRCUIT 0 to 31
		RCS	CIRCUIT 0 to 23
		RCU	CIRCUIT 0 to 31
		SVR	CIRCUIT 0 to 31
		DLM	CIRCUIT 0 to 31
		ELCM	CIRCUIT 0 to 31
		LDT	CIRCUIT 0 to 23
		ALCM	CIRCUIT 0 to 31
		LRU	CIRCUIT 0 to 29
		IZE	CIRCUIT 0 to 31

SLUFINDO (end)**SLUFINDO**

Command	Parameters and variables		
	LCMI	CIRCUIT	0 to 15
	LCME	CIRCUIT	0 to 31
	SRU	CIRCUIT	0 to 31
	RDT	RCU CIRCUIT	0 to RDTINV def MAX
RFT SLOT	1 to RDTINV def MAX		
		GENCSC SLOT	1 to RDTINV def MAX
		GENTMC SLOT	1 to RDTINV def MAX

SLU_INSTALL

Function

The SLU_INSTALL command examines the specified SLU input table for errors. If errors are not discovered, this command fills the associated OM group with new datafill. The OM counts are zeroed on lines not installed earlier. The OM counts on installed lines are retained.

SLU_INSTALL

Command	Parameters and variables
SLU_INSTALL	table_name
Variables	table_name is a SLU input table, one of ENG640I1, TRA250I1, TRA125I1, or TRA125I2.

SLU_LMINSTALL

Function

The command SLU_LMINSTALL creates an OM group, ENG640M1, of all the lines connected to the specified line module (LM). This command removes all existing entries from group ENG640M1, but does not affect SLU input table ENG640I1.

Note: For business sets, the OE number (LEN of the line) can only be used to identify the station's primary DN appearance. Therefore, when the SLU_LMINSTALL command is used only the primary DN appearances of business set stations located on the line are added to the ENG640M1 OM group.

SLU_LMINSTALL

Command	Parameters and variables		
SLU_LMINSTALL	site	frame	unit
Variables	site	is the site name. Valid Input: four alphanumeric characters. Defaults to HOST.	
	frame	the number of the frame in which the LM is located. Valid Inputs: 0 through 99.	
	unit	the number of the bay of the LME frame in which the LM is located. Valid inputs: 0 or 1.	

SLUSET

Function

The SLUSET command establishes a default table_name for the commands SLUADD, SLUDEL, SLUFINDI and SLUFINDO. If a SLU input table name is specified and you use the SLUFINDO command, the associated OM group is the default. Use of the following commands and a specified OM group cause the associated SLU input table to be the default:

- SLUADD
- SLUDEL
- SLUFINDI

SLUSET

Command	Parameters and variables
SLUSET	table_name
Variables	table_name is any valid SLU input table or OM group name.

SLU_TABLE_STATUS

Function

The SLU_TABLE_STATUS command displays a list of active and a list of inactive tables.

SLU_TABLE_STATUS command parameters and variables

Command	Parameters and variables
SLU_TABLE_STATUS	none

SLU_TEST

Function

The SLU_TEST command checks each datafill in the specified SLU input table. This command checks datafill to confirm that you can enter the command SLU_INSTALL later without errors present. Changes do not occur in the associated OM group.

SLU_TEST command parameters and variables

Command	Parameters and variables
SLU_TEST	table_name
Variables	table_name is a SLU input table, one of ENG640I1, TRA250I1, TRA125I1 or TRA125I2

ZEROSUP

Function

The ZEROSUP command turns the zero suppression on or off. This command is part of the OMPRDUMP command directory.

ZEROSUP command parameters and variables

Command	Parameters and variables	
ZEROSUP	ON	
	OFF	
Parameters	ON	turns the zero suppression ability on.
	OFF	turns the zero suppression ability off.
Variables	There are no variables.	

ZEROSUP command responses

The following table describes the responses to the ZEROSUP command.

Responses for the ZEROSUP command

MAP output	Meaning and action
Zero suppression is turned on.	<p>Meaning The zero suppression ability is turned on. The command processed successfully.</p> <p>Action There is no action required.</p>
Zero suppression is turned off.	<p>Meaning The zero suppression capability is turned off. The command processed successfully.</p> <p>Action There is no action required.</p>
Parameter error - zero suppression is turned off.	<p>Meaning An error occurred when reading the command parameter. Zero suppression is turned off.</p> <p>Action There is no action required.</p>

List of terms

CCS	Hundred call-seconds
DIRP	Device independent recording package
DLM	Digital line modules
DMS	Digital multiplex system
DN	Directory number
EADAS	Engineering and data acquisition system
ELCM	Enhanced line concentrating modules
INWATS	Inward wide area telephone service
LEN	Line equipment number
LM	Line module
LOD	Line hunt overflow to a directory number
LOR	Line overflow to a route

MADN

Multiple appearance directory number

MAP

Maintenance and administration position

OE

Originating equipment

OM

Operational measurement

PM

Peripheral module

RCS

Remote concentrator subscriber

SLU

Subscriber line usage

SIPC

SOS Interprocess Communication

TE

Table editor

VSR

Very small remote

WATS

Wide area telephone service

DMS-100 Family

Basic Administration Procedures

Electronic mail: cits@nortelnetworks.com

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