Carrier VoIP

IW SPM IP Performance Management

NN10144-711

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New in this release

The following details what's new in *IW SPM IP Performance Management* for release (I)SN09U.

Features

Release (I)SN09U contains no feature updates.

Other changes

Release (I)SN09U contains no other changes.

Performance management strategy

SPM performance management parameters are configured using several data schema tables (refer to *Carrier Voice over IP Operational Configuration: Data Schema Reference Volume 1* (NN10324-509v1), *Carrier Voice over IP Operational Configuration: Data Schema Reference Volume 2* (NN10324-509v2), Operational Measurements (OMs), and Office Parameters (OParms).

Tools and utilities

Data schema tables and OMs are accessed using the MAP display commands (refer to *Carrier Voice over IP Operational Configuration: Data Schema Reference Volume 1* (NN10324-509v1), and *Carrier Voice over IP Operational Configuration: Data Schema Reference Volume 2* (NN10324-509v2).

Operational measurements

Operational measurements (OMs) are used to view performance data and are summarized in the table below.

Summary of performance management indicators

OM name	OM register	Purpose
ENETPLNK		Enet Peripheral Link (ENETPLNK) monitors the performance of enhanced network (ENET) peripheral side (P-side) links.
	ENLKERR	Increments when an error is detected on in-service links between the network and an SPM.
	ENLKFLT	Increments by 1, whenever the system try to recover a P-side link between the ENET and an SPM and the attempt fails.
	ENLKISOU	Increments every 100 seconds, if the SPM is in isolated (NA) state because of an out-of-service link.
	ENMBLKU	Increments every 100 seconds, by the number of links which are in MANB state.

OM name	OM register	Purpose
	ENMLKISO	Increments when an in-service ENET P-side link becomes MANB and cause isolation of an SPM.
	ENMLKPAR	Increments when In Service ENET P-side links become MANB while any link on the mate plane is out of service.
	ENSBLKU	Increments every 100 seconds, by the number of links which are in SYSB state.
	ENSLKISO	Increments when an in-service ENET P-side link becomes SYSB and cause isolation of an SPM.
	ENSLKPAR	Increments when in-service ENET P-side links become SYSB while any link on the mate plane is out of service.
	ENSPCHER	Increments when an error is detected on speech connections through the network.
IWBM		Counts different events on the IW Bridge Management system (IWBM). IW SPMs use the IWBM system to interact with time-division multiplexed (TDM) trunks and announcements.
	IWGBATT	Interworking get_bridge attempts. Lists the number of get_bridge attempts.
	IWGBATT2	An extension for additional IWGBATT pegs that may occur beyond the register limit.
	IWGBFAIL	Interworking get_bridge attempts failed. Lists the number of get_bridge attempts that fail as a result of queue failure. The normal cause of a queue failure is that all bridges are busy.
	IWGBABRT	Interworking get_bridge attempts aborted. Lists the number of get_bridge attempts that the system aborts as a result of incorrect data.
	IWFBATT	Interworking free_bridge attempts. Lists the number of free_bridge attempts the system makes. When an interworked call hangs up, the system makes a free_bridge attempt.
	IWFBATT2	An extension for additional IWFBATT pegs that may occur beyond the register limit.
	IWFBFAIL	Interworking free_bridge attempts failed. Lists the number of free_bridge attempts that fail.
	IWFBABRT	Interworking free_bridge attempts aborted. Lists the number of free_bridge attempts that the system aborts as a result of incorrect data.

OM name	OM register	Purpose
	IWONSET1	Interworking onset 1. Indicates that the number of in use IW bridges exceeds 70% of the system bridges. The system pegs this register when the number of in use bridges reaches 70%. The system must peg register IWABATE1 before pegging IWONSET1 again.
	IWONSET2	Interworking onset 2. Indicates that the number of in use IW bridges exceeds 90% of the system bridges. The system pegs this register when the number of in use bridges reaches 90%. The system must peg register IWABATE2 before pegging IWONSET2 again
	IWABATE1	Interworking bridge abate 1. Indicates that the total number of IW bridges in use is less than 65% of the total system bridges. The system pegs this register after pegging register IWONSET1 and then crosses the 65% threshold. The system must peg register IWONSET1 again before it pegs this register a second time.
	IWABATE2	Interworking bridge abate 2. Indicates that the total number of IW bridges in use is less than 85% of the total system bridges. The system pegs this register after pegging register IWONSET2 and then crosses the 85% threshold. The system must peg register IWONSET2 again before it pegs this register a second time.
	IWBTLTST	IW bridge for trunk and line test counts the number of times a packet agent uses an IW bridge for access to trunk or line test facilities present on the ENET. An example would be MTM test circuits
	IWBCNFAN	IW bridge for conference or announcement usage counts the number of times a packet agent uses an IW bridge for access to conference or announcement facilities present on the ENET. An example would be MTM service circuits.
MNGEMLNK		Multiservice Node Gigabit Ethernet Module Link Bandwidth Engineering to manage measurements of links (MNGEMLNK) provides Gigabit Ethernet Link usage statistics to assist with network bandwidth engineering.
	TXOCT	Transmitted Octets (TXOCT) counts the total number of bytes transmitted on a Gigabit Ethernet Link connected to a specific MG4K-IP/IW-IP node. The TXOCT to TXOCT2 count is represented in kilobytes (scaled by a factor of 1024).
	RXOCT	Received Octets (RXOCT) counts the total number of bytes received on a Gigabit Ethernet Link connected to a specific MG4K-IP/IW-IP node. The RXOCT to RXOCT2 count is represented in kilobytes (scaled by a factor of 1024).

OM name	OM register	Purpose
	TXPKT	Transmitted Packets (TXPKT) counts the total number of packets transmitted on a Gigabit Ethernet Link connected to a specific MG4K-IP/IW-IP node. The TXPKT to TXPKT2 count is represented in kilobytes (scaled by a factor of 1000).
	RXPKT	Received Packets (RXPKT) counts the total number of packets received on a Gigabit Ethernet Link connected to a specific MG4K-IP/IW-IP node. The RXPKT to RXPKT2 count is represented in kilobytes (scaled by a factor of 1000).
	TXEROCT	Transmitted Error Octets (TXEROCT) counts the total number of bytes transmitted in errored packets on a Gigabit Ethernet Link connected to a specific MG4K-IP/IW-IP node.
	RXEROCT	Received Error Octets (RXEROCT) counts the total number of bytes received in errored packets on a Gigabit Ethernet Link connected to a specific MG4K-IP/IW-IP node.
	TXERPKT	Transmitted Error Packets (TXERPKT) counts the total number of errored packets transmitted on a Gigabit Ethernet Link connected to a specific MG4K-IP/IW-IP node.
	RXERPKT	Received Error Packets (RXERPKT) counts the total number of errored packets received on a Gigabit Ethernet Link connected to a specific MG4K-IP/IW-IP node.
	CRCERPKT	Cyclic Redundancy Check Error Packets (CRCERPKT) provides count for the total number of packets received with CRC errors on a Gigabit Ethernet Link connected to a specific MG4K-IP/IW-IP node.
	UNDERPKT	Undersized Packets (UNDERPKT) counts the total number of undersized packets received on a Gigabit Ethernet Link connected to a specific MG4K-IP/IW-IP node.
	OVERPKT	Oversized Packets (OVERPKT) counts the total number of oversize packets received on a Gigabit Ethernet Link connected to a specific MG4K-IP/IW-IP node.
	SHORTPKT	Short Packets (SHORTPKT) counts the total number of short packets (fragments) received on a Gigabit Ethernet Link connected to a specific MG4K-IP/IW-IP node.
	LONGPKT	Long Packets (LONGPKT) counts the total number of long packets (jabber packets) received on a Gigabit Ethernet Link connected to a specific MG4K-IP/IW-IP node.

OM name	OM register	Purpose
MNGEMTRF		Multiservice Node Gigabit Ethernet Module Traffic Engineering to manage measurements of traffic (MNGEMTRF) provides statistics of nodal traffic usage
	TOTCONN	Total Connections (TOTCONN) counts the total number of connections handled by a specific MG4K-IP/IW-IP node.
	TXRTPPK	Transmitted RTP Packets (TXRTPPK) counts the total number of RTP bytes transmitted by a specific MG4K-IP/IW-IP node.
	RXRTPPK	Received RTP Packets (RXRTPPK) counts the total number of RTP bytes received by a specific MG4K-IP/IW-IP node.
	G711MUCN	G.711 MuLaw Connections (G711MUCN) counts the total number of G.711 MuLaw codec connections by a specific MG4K-IP/IW-IP node.
	G711ACN	G.711 A-Law Connections (G711ACN) counts the total number of G.711 A-Law codec connections by a specific MG4K-IP/IW-IP node.
	TXG711PK	Transmitted G.711 Connection Packets (TXG711PK) counts the total number of RTP packets transmitted for G.711 connections handled by a specific MG4K-IP/IW-IP node.
	RXG711PK	Received G.711 Connection Packets (TXG711PK) counts the total number of RTP packets received for G.711 connections handled by a specific MG4K-IP/IW-IP node.
	G729CN	G.729 Connections (G729CN) counts the total number of G.729 connections handled by a specific MG4K-IP/IW-IP node.
	TXG729PK	Transmitted G.729 Connection Packets (TXG729PK) counts the total number of RTP packets transmitted for G.729 connections handled by a specific MG4K-IP/IW-IP node.
	RXG729PK	Received G.729 Connection Packets (RXG729PK) counts the total number of RTP packets received for G.729 connections handled by a specific MG4K-IP/IW-IP node.
	CCDCN	Clear Channel Data Connections (CCDCN) counts the total number of 64K Clear Channel Data (CCD) connections handled by a specific MG4K-IP/IW-IP node.
	TXCCDPK	Transmitted Clear Channel Data Connection Packets (TXCCDPK) counts the total number of RTP packets transmitted for Clear Channel Data (CCD) connections handled by a specific MG4K-IP/IW-IP node.

OM name	OM register	Purpose
	RXCCDPK	Received Clear Channel Data Connection Packets (TXCCDPK) counts the total number of RTP packets received for Clear Channel Data (CCD) connections handled by a specific MG4K-IP/IW-IP node.
	VBDCN	Voice Band Data Connections (VBDCN) counts the total number of Voice Band Data (VBD) connections handled by a specific MG4K-IP/IW-IP node.
	TXVBDPK	Transmitted Voice Band Data Connection Packets (TXVBDPK) counts the total number of packets transmitted for Voice Band Data (VBD) connections handled by a specific MG4K-IP/IW-IP node.
	RXVBDPK	Received Voice Band Data Connection Packets (RXVBDPK) counts the total number of packets received for Voice Band Data (VBD) connections handled by a specific MG4K-IP/IW-IP node.
	T38CN	T.38 Connections (T38CN) counts the total number of T.38 connections handled by a specific MG4K-IP/IW-IP node.
	TXT38PK	Transmitted T.38 Connection Packets (TXT38PK) counts the total number of packets transmitted forT.38 connections handled by a specific MG4K-IP/IW-IP node.
	RXT38PK	Received T.38 Connection Packets (RXT38PK) counts the total number of packets received forT.38 connections handled by a specific MG4K-IP/IW-IP node.
	RF2833CN	RFC2833 Connections (RF2833CN) counts the total number of RF2833 connections handled by a specific MG4K-IP/IW-IP node.
	SLSUPCN	Silence Suppression Connections (SLSUPCN) counts the total number of Silence Suppression connections handled by a specific MG4K-IP/IW-IP node.
NMTCUNIT		Node Maintenance Unit Measurements (NMTCUNIT) measures the overall maintenance reliability performance of one unit of a node. The data provides an indication of the number of system troubles and out-of-service occurrences.

OM name	OM register	Purpose
	NDUERR	Increments when any of the following happens. • Link300 logs are generated due to faults in links connected to a unit of SPM. • A valid WAI message is received for a unit of SPM. • A restart report is received for a unit of an SPM. • A Unit of SPM goes down to SYSB state from INSV or ISTB state. • A NDUFLT is incremented for a unit.
	NDUFLT	Increments when either one of the following happens: The node goes to ISTB state from INSV. The node goes to SYSB from ISTB or INSV.
	NDUMBP	Increments when a Unit of an SPM goes to MANB state from any other state.
	NDUMBU	Increments every 100 seconds if a Unit of an SPM remains in MANB state.
	NDUMRRST	Increments by 1, when a reload restart is initiated on a Unit by manual maintenance actions. For example, if a loadmod command on a unit completes successfully, this register increments.
	NDUNAP	Increments when a Unit of an SPM goes to Not Available (NA) state.
	NDUNAU	Increments every 100 seconds if a Unit of an SPM is in NA state.
	NDUSBP	Increments when a Unit of an SPM goes to SYSB state from INSV or ISTB state.
	NDUSBU	Increments every 100 seconds if a Unit of an SPM remains in SYSB state.
	NDUSRRST	Increments by 1, when a reload restart is initiated on a Unit by the system. For example, if a system loadmod happens on a unit, this register increments by 1.
	NDUSWERR	Increments when a SPM 311 logs is generated for a Unit in an SPM.
	NDUTRAP	Increments when a SPM 312 logs is generated for a Unit in an SPM.

OM name	OM register	Purpose
PM		Peripheral Module (PM) OM Group counts the number of errors, faults and maintenance state transitions for DMS peripheral modules (PM) with node number.
	PMERR	Increments when one of the following happens: • Link300 logs are generated due to faults in links connected to the active unit. • A valid WAI message is received for the active unit. • A restart report is received for the active unit. • The SPM goes down to SYSB state from INSV or ISTB state. • PMFLT is incremented for a node.
	PMFLT	Increments when either of the following happens: • The node goes to ISTB state from INSV. • The node goes to SYSB from ISTB or INSV.
	PMINTEG	Increments when an integrity fault occurs and ENCP 101 log is generated.
	PMMBP	Increments by 1 whenever a node goes to MANB state from any other state.
	PMMCXFR	Increments by 1 whenever a force prot switching completes successfully.
	PMMMBU	Increments by 1, if a node remains in MANB state for 100 seconds.
	PMMSBU	Increments by 1 if a node remains in SYSB state for 100 seconds.
	PMMWXFR	Increments by 1 whenever a manual prot switching completes successfully.
	PMSBP	Increments by 1 whenever a node goes to SYSB state from any other state.
	PMUMBU	Increments by 1, if any of the units in the node remains in MANB state for 100 seconds.
	PMUSBU	Increments by 1, if any of the units in the node remains in SYSB state for 100 seconds.
PMTYP		PMTYP is used to assess the performance of a group of PMs of the same type.

OM name	OM register	Purpose
	PMTERR	Increments whenever the OM register PM:PMERR is incremented for any of the SPMs in a switch.
	PMTFLT	Increments whenever the OM register PM:PMFLT is incremented for any of the SPMs in a switch.
	PMTINTEG	Increments whenever the OM register PM:PMINTEG is incremented for any of the SPMs in a switch.
	PMTMBP	Increments whenever the OM register PM:PMMBP is incremented for any of the SPMs in a switch.
	PMTMMBU	Increments every 100 seconds by the number of SPMs which are in MANB state.
	PMTMSBU	Increments every 100 seconds by the number of SPMs which are in SYSB state.
	PMTMWXFR	Increments whenever the OM register PM:PMMWXFR is incremented for any of the SPMs in a switch.
	PMTMCXFR	Increments whenever the OM register PM:PMMCXFR is incremented for any of the SPMs in a switch.
	PMTSBP	Increments whenever the OM register PM:PMSBP is incremented for any of the SPMs in a switch.
	PMTUMBU	Increments every 100 seconds by the number of SPMs with at least one unit in MANB state.
	PMTUSBU	Increments every 100 seconds by the number of SPMs with at least one unit in SYSB state.
SPMACT		SPM Activity contains CEM occupancy and MG 4000 call rate information. Add the AVGCEMAP and AVGSEMSY registers, and divide the total by the NUMREPTS register to determine the Call Processing Occupancy Percent which should not exceed the engineering limit of 65%. Add the TOTLORIG and TOTLTERM registers to determine the Half Call Attempts for the node.
	AVGCEMAP	Measures the average CEM occupancy used by the application class over a transfer period.
	AVGCEMSY	Measures the average CEM occupancy used by the system class over a transfer period.
	AVGCEMBK	Measures the average CEM occupancy used by the background class over a transfer period.

OM name	OM register	Purpose
	CEMAPPHI	Measures the high water mark CEM occupancy reached by the application class. The high water mark is the highest one-minute average over a transfer period.
	CEMSYSHI	Measures the high water mark CEM occupancy reached by the system class.
	CEMBAKHI	Measures the high water mark CEM occupancy reached by the background class.
	AVGORIG	Measures the average call origination rate (calls per minute) over a transfer period.
	AVGTERM	Measures the average call termination rate (calls per minute) over a transfer period.
	TOTLORIG	Measures the total call originations for a transfer period.
	TOTLTERM	Measures the total call terminations for a transfer period.
	ORIGHI	Measures the high water mark call origination rate (calls per minute).
	TERMHI	Measures the high water mark call termination rate (calls per minute).
	NUMREPTS	Contains the number of reports (in an accumulation period. The number of reports depends on the duration of the accumulation period.
	CAPINDEX	Capacity Index contains one of the following CEM capacity levels: • 0 - Standard • 1 - Enhanced (applies to DMSCP nodes only) • 2 - Premium
SPMUSAGE		SPM Usage contains SPM call failure counts per minute.
	ABDN	Counts the number of call processing (callp) abandon messages.
	EXIT	Counts the number of callp exit messages.
	CONF	Counts the number of callp confusion messages.
	RELCAL	Counts the number of callp release call messages.
	TXFAIL	Counts the number of callp deny messages.
	NETPAR	Counts the number of callp parity errors.
	NETINTG	Counts the number of callp integrity loses.
	NETFND	Counts the number of callp network integrity found.
	NETNFND	Counts the number of callp network integrity not found.

OM name	OM register	Purpose
	NUMREPTS	Contains the number of reports (OM transfer periods). The number of reports depends on the duration of the accumulation period.
SPMOVLD		The Spectrum Overload Statistics (SPMOVLD) Operational Measurement (OM) group contains eighteen registers that provide SPM flow control and system overload control component metrics. All system overload control registers start with an 'S'; all other registers apply to the flow control system.
	OVLDNUM	Overload Number counts the number of times the node entered overload due to the flow control component.
	OVLDPNUM	Overload Pending Number counts the number of times the node entered 'overload pending' due to the flow control component
	OVLDUSG	Overload Usage measures the number of seconds the node was in overload due to the flow control component.
	OVLDPUSG	Overload Pending Usage measures the number of seconds the node was in 'overload pending' due to the flow control component.
	CLSDLYD	Calls Delayed counts the number of calls delayed by the node due to the flow control component.
	CLSDND	Calls Denied counts the number of calls that were denied caused by too many calls in the flow control component.
	CLSPTQ	Calls Per Terminal Queue counts the number of calls denied caused by too many messages on a Per Terminal Queue in the flow control component.
	CLSABDN	Calls Abandoned counts the number of calls that were abandoned by the node in the flow control component.
	CLSMSC	Calls Miscellaneous counts the number of calls lost to miscellaneous resource failures in the flow control component.
	SOVLDNUM	SOC Overload Number counts the number of times the node entered overload (the CEM is in a beyond capacity state).
	SOVLDUSG	SOC Overload Usage counts the number of messages that were processed by the system overload component while the CEM was in a beyond capacity state.
	SCLSDLYD	SOC Calls Delayed counts the number of calls delayed by the system overload component.

OM name	OM register	Purpose
	SCLSDND	SOC Calls Denied counts the number of calls that were lost for any reason. This register includes origination messages counted in registers SMSGPTQ and SHDROVFL.
	SCLSABDN	SOC Calls Abandoned counts the number of calls that were abandoned due to the system overload component.
	SNUMORIG	SOC Number of Originations counts the number of originations passing through the system overload component whether or not they were delayed.
	SMSGLOST	SOC Messages Lost counts the number of messages that were of messages lost because of system overload control limits.This register includes messages counted in registers SMSGPTQ and SHDROVFL.
	SMSGPTQ	SOC Message PTQ counts the number of messages of any type that were lost due to PTQ overflow.
	SHDROVFL	OC Header Overflow counts the number of messages of any type that were lost due to system overload control header array overflow.

Office parameters

Office parameters (OParms) that can be modified are summarized in the table below.

Summary of office parameters

OParm	Data Schema Table	Purpose
DPT_MAX_PORTS	OFCVAR	Defines the maximum number of VToA and VToIP DPT ports that are available for use by the Call Server at any given time.
ENABLE_METERING	OFCENG	Deactivates/activates all of the following: • line/trunk software metering • feature metering • SPM/COIN hardware metering ENABLE_METERING can be set to N (deactivated) or Y (activated), with a default of N.

OParm	Data Schema Table	Purpose
		If the NCW_MOG tuple in table MTRSYSPM is set to DISALLOWED, then setting ENABLE_METERING from Y to N is not allowed.
FDCP_MFC_EDTK_ON (Flexible Digital Cas Platform Multi frequency Compelled Event Driven Trunk Call Processing ON)	OFCENG	controls the Intelligent Network (IN) triggers from FDCP MFC trunks. The FDCP_MFC_EDTK_ON oparm needs to be datafilled as Y in order to have IN triggers from FDCP MFC trunks. For offices which do not require IN triggering from FDCP MFC trunks, this parameter needs to be set to N.
MAX_CCNTLRX_XLA_PER_CALL (maximum call control re-translate translations per call)	OFCVAR	controls the maximum number of allowed re-translations per single call that can be triggered by the CCNTLRX selector. The range is 0-7 (with a default of 3). A value of 0 disables the CCNTLRX selector.

Retrieving and viewing current performance data

OM data can be viewed using the OMSHOW command. Both active and holding counts can be viewed. Counts remain in active registers until the end of the holding period. At the end of the holding period, the counts are transferred to the holding registers.

The following procedure illustrates the use of the OMSHOW command for active IWBM counts.

Retrieving and viewing performance data

Step	Action

At the MAP level

1 View OM counts by typing

>OMSHOW <om_name> <class>

and pressing the Enter key.

where

om_name is the name of the OM (IWBM)
class is the name of the class to appear (ACTIVE or HOLDING)

Example of a MAP screen:

```
>OMSHOW IWBM ACTIVE
IWBM
CLASS: ACTIVE
START:2001/08/16 13:30:00 THU; STOP: 2001/08/16 13:57:47 THU;
SLOWSAMPLES: 3; FASTSAMPLES: 26;


   IWGBATT  IWGBATT2   IWGBFAIL    IWGBABRT
   IFBATT   IWFBATT2   IWFBFAIL    IWFBABRT
   IWONSET1 IWONSET2   IWABATE1    IWABATE2

0
          0         0         0         0
          0         0         0         0
          0         0         0         0
```

—End—

Viewing IWS layer performance statistics

Use the following procedure to view Interworking SPM (IWS) Layer performance statistics from a MAP display. The displayed data represents the current 15 minute time interval.

Viewing IWS layer performance statistics

Step	Action

At the MAP terminal

1 Access the IWS Connection MAP level by typing

```
>MAPCI;MTC;PM;POST SPM <spm_no>;IWSCONN
```

and pressing the Enter key.

where

<spm_no> is the number of the SPM (0 to 85)

2 View IWS layer performance monitoring statistics for the active IWS RM by typing

```
>PMSTAT
```

and pressing the Enter key.

Example of a MAP screen:

```
PmStat
IWS layer PM Statistics on SPM 3
Period: 2002/02/25 11:00 - 11:14  Data is Valid
        Incoming Cells  Outgoing Cells
AAL1            39648               0
AAL5           192860           18421
Other               0            3622
Total          196449           22043
Discarded           0
```

3 You have completed this procedure. Return to the CI level of the MAP screen by typing

```
>QUIT ALL
```

and pressing the Enter key.

—End—

Checking CEM call processing capacity

This procedure describes a tool used to determine the call processing capacity for the common equipment module (CEM) in an SPM-based node.

DMSCP class call processing capacity information is taken from the MNNODE table. Supported capacities for this class are Standard, Enhanced, and Premium.

Software Optionality Codes control the number of DMSCP class SPM nodes that can support Enhanced (SPM0020SOC) and Premium (SPM0028SOC) call processing capacities.

MG 4000 and IW SPM class SPM call processing capacity information is taken from the MNCKTPAK table. Supported capacities for this class are Standard and Premium. If a CEM is not datafilled in the MNCKTPAK table for either of these classes then it displays as Standard capacity.

The table below, "CEM call processing capacity" (page 20), lists and defines the CEM call processing capacity values.

CEM call processing capacity

Value	Definition
Standard	Call processing capacity equal to that of the NTLX82AA.
Enhanced	Call processing capacity approximately equal to two times that of the NTLX82AA
Premium	Call processing capacity approximately equal to three times that of the NTLX82AA

The following table contains variable definitions used in this procedure.

Variable abbreviations

Abbreviation	Options	Definition
capcty_val	All Standard Enhanced Premium	the type of CEM call processing capacity

Abbreviation	Options	Definition
node_type	All MG4K IW DMSCP	the type of SPM-based node in the office. Options consist of: • All SPM-based nodes in the office • MG 4000 nodes only • IW SPM and DPT SPM nodes only • DMSCP SPM nodes only
spm_no	0 - 85	the number of the SPM-based node

During this procedure press the Enter key after typing a command.

Checking CEM call processing capacity

Step Action

At the MAP terminal

1 Run the SPMCPCAP tool based on the desired option.

If aligning by	Do
node class	step 2
call processing capacity	step 3
node number (single)	step 4

2 List the call processing capacity values by SPM class by typing

```
>SPMCPCAP CAPACITY  node_type
```

Example

```
>spmcpcap class IW
-------------------------------------------------------------
  SPM No  Capacity                          Remarks
-------------------------------------------------------------
    1     Standard                          None
    9     Standard                          None

>spmcpcap class all
DMSCP:
-------------------------------------------------------------
  SPM No  Capacity                          Remarks
-------------------------------------------------------------
    20    Standard                          None
    26    Standard                          None
-------------------------------------------------------------

IW:
-------------------------------------------------------------
  SPM No  Capacity                          Remarks
-------------------------------------------------------------
    1     Standard                          None
    9     Standard                          None
-------------------------------------------------------------

MG4K:
-------------------------------------------------------------
  SPM No  Capacity                          Remarks
-------------------------------------------------------------
    31    Premium                           None
    33    Premium                           None
-------------------------------------------------------------
```

Go to step 5.

3 List the call processing capacity values capacity type by typing

`>SPMCPCAP CAPACITY  capcty_val`

Example

```
>spmcpcap capacity premium
-------------------------------------------------------------
  SPM No  Capacity                          Remarks
-------------------------------------------------------------
    31    Premium                           None
    33    Premium                           None

>spmcpcap capacity all
-------------------------------------------------------------
  SPM No  Capacity                          Remarks
-------------------------------------------------------------
    1     Standard                          None
    9     Standard                          None
    20    Standard                          None
    26    Standard                          None
    31    Premium                           None
    33    Premium                           None
```

Go to step 5.

4 List the call processing capacity for a specific SPM-based node by typing

`>SPMCPCAP SPM  spm_no`

Example

```
>spmcpcap spm 9
-----------------------------------------------------------------
  SPM No  Capacity                      Remarks
-----------------------------------------------------------------
      9    Standard                      None
-----------------------------------------------------------------
```

5 This procedure is complete.

—End—

Carrier VoIP

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