Carrier Voice over IP Performance Management Operational Measurements Reference Volume 3

ATTENTION
The Carrier VoIP Performance Management Operation Measurements Reference document uses four volumes to describe operational measurements (listed alphabetically) that provide information on how to load various components of the DMS switch.

Introduction

Operational Measurements (OMs) provide information on how to load various Components of the DMS switch. Periodic scans of switch parts and activities allow you to gather OM information. Specified parameters define the collection, storage, and transmission of data. OMs provide the following types of data:

- Description
- Registers
  - — event counts. Peg counts are registers that increase each time an event occurs.
  - — usage counts. Usage counts scan or sample equipment at equal intervals. These counts increase registers when the scan detects equipment in a specific state.
- Associated OM groups

OM information can appear on 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.

For more information on how to set up an OM system, refer to the *DMS-100 Family Basic Administration Procedures*, 297-1001-300.

In this document

The OMs in an office are dynamic and depend on the switch type(s). For comprehensiveness, this document describes OMs available in an office type of OFFCOMB. The document also describes OMs that are associated with specific components and OMs that are common in Carrier VoIP and DMS.

The following table lists the OM groups alphabetically (from N to P) and whether they are associated with a component or common in Carrier VoIP and DMS. For a description of an OM group, click on the OM group name.

OM groups available in Carrier VoIP (Sheet 1 of 6)

Name	Description	Device, Manager or Application
NACDGRP1	Networked Automatic Call Distribution Group 1	Common
NACDGRP2	Networked Automatic Call Distribution Group 2	Common
NARUSAGE	Network Access Registers Usage	Common
NCMCPUST	Non-computing Module Node Central Processing Unit Status	Common
NDS0CARR	8-port 64-Kbps Non-multiplexed Digital Voice/data Carriers	Common
NETMSG	Network Message Service	Common
NIUFBUS	Network Interface Unit (NIU) Frame Transport Bus (F-bus)	Common
NIUMEMUT	Network Interface Unit Memory Use	Common
NMC	Network Module Controller Maintenance Summary	Common
NMTCLINK	Node Maintenance - Link	MG4K

OM groups available in Carrier VoIP (Sheet 2 of 6)

Name	Description	Device, Manager or Application
NMTCNODE	Node Maintenance - Node	MG4K
NMTCTYPE	Node Maintenance - Node Type	MG4K
NMTCUNIT	Node Maintenance - Unit	IW_SPM_IP
NPAPEG	Numbering Plan Area	Common
NRS	Network Resource Selector	Common
NSC	Number Services Code Call Summary	Common
NSCACG	Number Services Code Automatic Call Gapping	Common
NWMFRRCT	Network Management Flexible Reroute	Common
NWMSILC	Network Management Selective Incoming Load Control	Common
NWMTGCNT	Network Management Trunk Group Control	Common
NX25L2	NX25 Level 2	Common
NX25L3	NX25 Level 3	Common
NX25MLP	NX25 Multilink Procedures	Common
OADATCOM	Operator Services System Advanced Intelligent Network (OSSAIN) Data Communications	Common
OAFLTRIG	OSSAIN Float Triggers	Common
OAINNODE	OSSAIN Node Maintenance	Common
OAINQMS	OSSAIN Queue Management System	Common
OAINRTE	OSSAIN Route	Common
OANODEDC	OSSAIN Node Data Communications	Common
OAPCALP1	Open Automated Protocol (OAP) Call Processing 1	Common

OM groups available in Carrier VoIP (Sheet 3 of 6)

Name	Description	Device, Manager or Application
OAPCALP2	Open Automated Protocol (OAP) Call Processing 2	Common
OAPCALP3	OAP Call Processing 3	Common
OAPCALP4	OAP Call Processing 4	Common
OAPCALP5	OAP Call Processing 5	Common
OAPCALP6	OAP Call Processing 6	Common
OAPCALP7	OAP Call Processing 7	Common
OAPCALP8	OAP Call Processing 8	Common
OAPCALP9	OAP Call Processing 9	Common
OAPCP10	OAP Call Processing 10	Common
OAPMERRN	OAP Message Error - Node	Common
OAPMERRS	OAP Message Error - Session Pool	Common
OAPMTYPN	OAP Message Type - Node	Common
OAPMTYPS	OAP Message Type - Session Pool	Common
OAPNMIS	OAP node management information system	Common
OAPNMTC	OAP Node Maintenance Operations and Responses	Common
OAPSPMTC	OAP Session Pool Maintenance Operations and Responses	Common
OASNPLDC	OSSAIN Session Pool Data Communications	Common
OASNPOOL	Session Pool Inventory	Common
OASVNDCP	OSSAIN Service Node Call Processing	Common
OFF250	Offhook 250	Common

OM groups available in Carrier VoIP (Sheet 4 of 6)

Name	Description	Device, Manager or Application
OFZ	Office Traffic Summary	Common
OFZ2	Office Traffic Extension Summary	Common
OFZ2NET1	Office to Network Group 1	CS2K
OFZ2NET2	Office to Network Group 2	CS2K
OGTQMS	Outgoing trunk queue management system	Common
OHBTDTU	Off-Hook Balance Test Digital Test Unit	Common
OHBTRES	Off-hook balance testing	Common
OHBTTYPE	Off-Hook Balance Test Results per test type	Common
OHQCBQCG	Off-hook queuing and call back queuing per customer group	Common
OHQCBQR2	Off-hook queuing and call back queuing for table IBNRT2 routes	Common
OHQCBQR3	Off-hook queuing and call back queuing for table IBNRT3 routes	Common
OHQCBQR4	Off-hook queuing and call back queuing for table IBNRT4 routes	Common
OHQCBQRT	Off-hook queuing and call back queuing per route	Common
OPCHOICE	Operator Choice	Common
ONI	Operator number identification	Common
OSACCP1	OSAC Call Processing 1	Common
OSACCP2	OSAC Call Processing 2	Common
OSACND	OSAC Node Maintenance	Common
OSACSP	OSAC Session Pool Maintenance	Common

OM groups available in Carrier VoIP (Sheet 5 of 6)

Name	Description	Device, Manager or Application
OSNND	OSN Node	Common
OSNSP	OSN Session Pool	Common
OTS	Office Traffic Summary	Common
PCMCARR	CCITT DS30 digital carrier maintenance summary	Common
PCNF	Preset conference	Common
PKTMA	Packet Media Anchor	Common
PM	Peripheral Module	IW_SPM_IP
PM1	Peripheral module single-unit maintenance summary	Common
PM2	Dual-unit peripheral module maintenance summary	Common
PMMSGCNT	Peripheral module message counter	Common
PMOVLD	Peripheral module overloaded	Common
PMSTAT	Peripheral module status	Common
PMTYP	Peripheral Module Type	IW_SPM_IP
PPCO	Pre Paid Coin Overtime	Common
PRADCHL2	PRA D-channel layer 2 performance summary	Common
PRAFAC	Primary rate access facility	Common
PRASERV	Primary Rate Access Service	Common
PRIMWIC	Primary rate interface (PRI) access interface that has a Message Waiting Indicator (MWI) Control	Common
PRISVCS	PRI services	Common
PRKOM	Call park operational measurement	Common

OM groups available in Carrier VoIP (Sheet 6 of 6)

Name	Description	Device, Manager or Application
PRP	Preroute peg	Common
PSN_ERDC	Programmable Service Node (PSN) Error — Data Communication Level	Common
PSN_ERFM	PSN Error in Finite State Machine	Common
PSN_ERPS	PSN Primitive Processing Error	Common
PSN_FCTR	PSN Flow Control	Common
PSN_NOTF	PSN Notifications Sent	Common
PSN_PRIM	Programmable Service Node	Common
PSN_USAG	PSN Usage	Common

Supplementary OMs

The following documents reference OMs that do not appear in this document:

- *North American DMS-100 Operations Measurements Reference Manual*, 297-8021-814
- *Carrier VoIP SN07 OSS (ATM and IP) Advance Feature Guide*, PLN-07AT-OSS
- *Carrier VoIP Fault Management Logs Reference*, NN10275-909

NACDGRP1

Description

OM group Networked Automatic Call Distribution Group 1 (NACDGRP1) records the total ACD traffic for the NACD groups. These registers record calls that overflow from or to a NACD group because of immediate overflow or time delay overflow.

The following table lists the key and info fields associated with OM group NACDGRP1:

Key field	Info field
NACD_OM_INDEX	None

Related functional groups

There are no functional groups associated with OM group NACDGRP1.

Registers

The following table lists the registers associated with OM group NACDGRP1 and what they measure. For a detailed description of a register, click on the register name.

Registers for OM group NACDGRP1 (Sheet 1 of 2)

Register name	Measures
IMINFLCL	Immediate inflowed from a local group
IMINFQED	Immediate inflowed calls queued
IMINFREM	Immediate inflowed from a remote group
IMMTMOFL	Immediate inflowed calls overflowed
IMOFLLCL	Immediate overflows to a local group
IMOFLREM	Immediate overflows to a remote group
LOGQFULL	Logical queue is full
LOGQLCL	Logically queued caused by request from local group
NOOFLGRP	No overflow group

Registers for OM group NACDGRP1 (Sheet 2 of 2)

Register name	Measures
PHYQLOGQ	Physically queued and also logically queued at a local group
TFAILLLCL	Time overflow to a local group fails
TFAILREM	Time overflow to a remote group fails
TMANSLCL	Time overflow call answered by the local source group
TMANSREM	Time overflow call answered by the remote source group
TMINFLCL	Time inflowed from a local group
TMINFREM	Time inflowed from a remote group
TMOFLLCL	Time overflow to a local group
TMOFLREM	Time overflow to a remote group
USRABNDN	User abandons while the call is logically queued

IMINFLCL

Register type

Peg

Description

IMINFLCL increases when a call arrives at an NACD group because of the immediate overflow from a local NACD group.

Associated registers

None

Extension registers

None

Associated logs

None

IMINFQED

Register type

Peg

Description
IMINFQED increases when the system queues a call that arrived at this NACD group because of immediate overflow from a local or remote source group.

Associated registers
None

Extension registers
None

Associated logs
None

IMINFREM

Register type
Peg

Description
IMINFREM increases when a call arrives at an NACD group because of immediate overflow from a remote NACD group.

Associated registers
None

Extension registers
None

Associated logs
None

IMMTMOFL

Register type
Peg

Description
IMMTMOFL increases each time a call arrives at this NACD group because of immediate overflow. The NACD group tries to overflow the call to a local or remote overflow group. The call queues for a period of time longer than the time delay overflow time.

Associated registers
None

Extension registers
None

Associated logs

None

IMOFLLCL

Register type

Peg

Description

IMOFLLCL increases when an NACD group overflows an incoming call to a local overflow group because of exceeded queue or wait thresholds.

Associated registers

None

Extension registers

None

Associated logs

None

IMOFLREM

Register type

Peg

Description

IMOFLREM increases when an attempt to overflow an incoming call to a remote overflow group occurs. The register increases when the system marks this attempt because of exceeded queue or wait thresholds.

Associated registers

None

Extension registers

None

Associated logs

None

LOGQFULL

Register type

Peg

Description

LOGQFULL increases when a call fails to queue logically because the logical queue is full.

Associated registers

None

Extension registers

None

Associated logs

None

LOGQLCL

Register type

Peg

Description

LOGQLCL increases when a queued call is at this group. A call is logically queued while it remains queued at a local source NACD group.

Associated registers

ACDGRP_ACDTMINF, which increments each time a call is logically queued at this NACD group

Extension registers

None

Associated logs

None

NOOFLGRP

Register type

Peg

Description

NOOFLGRP increases when the system cannot find a best overflow group to overflow:

- a new incoming call
- a queued call that waited over the time delay overflow time

Associated registers

None

Extension registers

None

Associated logs

None

PHYQLOGQ

Register type

Peg

Description

PHYQLOGQ increases when a call is physically queued at this group and logically queued at a local overflow group.

Associated registers

ACDGRP_ACDTMOFL, which increases each time a call is time overflowed from this NACD group to another NACD group

Extension registers

None

Associated logs

None

TFAILLLCL

Register type

Peg

Description

TFAILLCL increases when an attempt to time overflow from this NACD group to a local overflow group fails. Register TFAILLCL increases for one of the following reasons:

- the overflow group is in Night Service or has controlled interflow (CIF) active
- all agents in the overflow group are in make set busy (MSB) mode
- the call cannot be queued logically because the logical queue exceeds the

  logical queue size or is set to zero
- the caller abandons the call
- the group of the call answers the call

Associated registers

None

Extension registers

None

Associated logs

None

TFAILREM

Register type

Peg

Description

TFAILREM increases when an attempt to time overflow a call from this NACD group (source group) to a remote overflow group fails. This register TFAILREM increases when the attempt fails for one of the following reasons:

- this NACD group cannot send an NACD Reroute Request message
- no response was received in the TCAP T1 (NCAD resend timer) duration after this NACD group cannot resends an NACD Reroute Request message
- the overflow group rejects an NACD Reroute Request message, the overflow group or the source group cancels the message

Associated registers

The following registers are associated with TFAILREM:

- NACDGRP2_CANCRECD, which increases when an NACD group receives an NACD Cancel Request message
- NACDGRP2_CANCSENT, which increases when an NACD group sends an NACD Cancel Request message to cancel an NACD Reroute Request message
- NACDGRP2_REJRECD, which increases when an NACD group receives an NACD Reject Request message.
- NACDGRP2_QRYSENT, which increases when an NACD group sends out an NACD Reroute Request message.
- TMOFLREM

Validation formulas

The following formulas relate to TRAILREM and its associated registers:

- NACDGRP2_QRYSENT = TMOFLREM + TFAILREM
- TFAILREM = NACDGRP2_CANCSENT + NACDGRP2_CANCRECD + NACDGRP2_REJRECD

Extension registers

None

Associated logs

None

TMANSLCL

Register type

Peg

Description

TMANSLCL increases when the local source NACD group answers a logically queued call.

Associated registers

The following registers are associated with TMANSLCL:

- ACDGRP_ACDTMANS, which increases each time another NACD group answers a logically queued call at this NACD group
- ACDGRP_ACDTMOFL, which increases when this NACD group time overflows to another NACD group.
- TMANSLCL

Validation formula

ACDGRP_ACDTMANS = TMANSLCL + TMANSREM + ACDGRP_ACDTMOFL

Extension registers

None

Associated logs

None

TMANSREM

Register type

Peg

Description

TMANSREM increases when a remote source group answers a queued call logically at this NACD group.

> ***Note:*** NACDGRP2_CANCRECD increases as well.

Associated registers

The following registers are associated with TMANSREM:

- ACDGRP_ACDTMANS, which increases when another NACD group answers a logically overflowed call at this NACD group
- ACDGRP_ACDTMOFL, which increases when this NACD time overflows a call to another NACD group
- TMANSLCL

Validation formula

ACDGRP_ACDTMANS = TMANSLCL + TMANSREM + ACDGRP_ACDTMOFL

Extension registers

None

Associated logs

None

TMINFLCL

Register type

Peg

Description

TMINFLCL increases when a call arrives at an NACD group because of time delay overflow from a local NACD group.

Associated registers

None

Extension registers

None

Associated logs

MS303

TMINFREM

Register type

Peg

Description

TMINFREM increases when a call arrives at an NACD group. A call arrives at an NACD group because of a time delay overflow from a remote NACD group.

Associated registers

None

Extension registers

None

Associated logs

None

TMOFLLCL

Register type

Peg

Description

TMOFLLCL increases when a queued call at this NACD group is time overflowed to a local overflow group. The register increases if the call overflows because the call waits in the queue over the time delay overflow time.

Associated registers

None

Extension registers

None

Associated logs

None

TMOFLREM

Register type

Peg

Description

TMOFLREM increases when a queued call is time overflowed to a remote overflow group. The queued call is at the associated NACD group. A queued call is overflowed because the queued call waits in the call queue longer than the time delay overflow time.

Associated registers

The following registers are associated with TMOFLREM:

- NACDGRP2_QRYSENT, which increases each time an NACD Reroute Request message is sent out from an NACD group
- TFAILREM

Validation formula

NACDGRP2_QRYSENT = TMOFLREM + TFAILREM

Extension registers

None

Associated logs

None

USRABNDN

Register type

Peg

Description

USRABNDN increases when the caller (user) abandons a logically queued call at this group.

Associated registers

None

Extension registers

None

Associated logs

None

NACDGRP2

Description

OM group Networked Automatic Call Distribution Group 2 (NACDGRP2) provides transaction capabilities application part (TCAP) message counts specific to Network Automatic Call Distribution (NACD) applications.

The following table lists the key and info fields associated with OM group NACDGRP2:

Key field	Info field
NACD_OM_INDEX	None

Related functional groups

There are no functional groups associated with OM group NACDGRP2.

Registers

The following table lists the registers associated with OM group NACDGRP2 and what they measure. For a detailed description of a register, click on the register name.

Registers for OM group NACDGRP2 (Sheet 1 of 2)

Register name	Measures
ACKRECD	Acknowledge received
ACKSENT	Acknowledge sent
CANCRECD	Cancel message received
CANCSENT	Cancel message sent
CCREPLYR	Reply to cancel message received
CCREPLYS	Reply to cancel message sent
FREERECD	Free agent message received
FREESENT	Free agent message sent
QRYRECD	Query received

Registers for OM group NACDGRP2 (Sheet 2 of 2)

Register name	Measures
QRYSENT	Query sent
REJRECD	Reject message received
REJSENT	Rejection message sent
RESENDTO	Resend timer timeout
RESRVDTO	Reservation timer timeout
RIRECD	Resource index (RI) received
RIREPLYR	Resource index (RI) reply received
RIREPLYS	Resource index (RI) reply sent
RISENT	Resource index (RI) sent
SCREPLYR	Service complete reply received
SCREPLYS	Service complete reply sent
SRVCOMPR	Service complete message received
SRVCOMPS	Service complete message sent
T4TMEOUT	Total TCAP outgoing messages
TTCAPIN	Total TCAP incoming messages
TTCAPOUT	Total TCAP outgoing messages

ACKRECD

Register type

Peg

Description

ACKRECD increases when an NACD group receives an NACD Acknowledge Request message in response to an NACD Reroute Request message.

Associated registers

The following registers are associated with ACKRECD:

- ACDGRP_ACDTMOFL, which increases when this NACD time overflows to another NACD group
- NACDGRP1_PHYQLOGQ, which increases when a call is physically queued at this group, and logically queued at a local overflow group

Validation formula

ACDGRP_ACDTMOFL = NACDGRP1_PHYQLOGQ + ACKRECD

Extension registers

None

Associated logs

None

ACKSENT

Register type

Peg

Description

ACKSENT increases when the NACD group sends an NACD Acknowledge Request message in response to an NACD Reroute Request message. The NACD Acknowledge Request message indicates that a call is logically queued at this NACD group.

Associated registers

The following registers are associated with ACKSENT:

- ACDGRP_ACDTMINF, which increases when a call is logically queued at this NACD group
- NACDGRP1_LOGQLCL, which increases when a call is logically queued at this group while the call remains queued at a local source NACD group

Validation formula

ACDGRP_ACDTMINF = NACDGRP1_LOGQLCL + ACKSENT

Extension registers

None

Associated logs

None

CANCRECD

Register type

Peg

Description

CANCRECD increases when an NACD group receives a Cancel Request message.

Associated registers

The following registers are associated with CANCRECD:

- CANCSENT, REJRECD
- TFAILREM, which increases when an attempt to time overflow a call from this NACD source group to a remote overflow group fails

Validation formula

TFAILREM = CANCSENT + CANCRECD + REJRECD

Extension registers

None

Associated logs

None

CANCSENT

Register type

Peg

Description

CANCSENT increases when an NACD group sends a Cancel Request message to cancel an NACD Reroute Request message.

The source group cancels an NACD Reroute Request message when a caller abandons a time overflow. The source group also cancels an NACD Reroute message when the original source group answers a time overflow. The overflow group cancels an NACD Reroute Request message when either the T4 duration timer or the T2 reservation timer expires.

Associated registers

The following registers are associated with CANCSENT:

- CANCRECD, REJRECD
- TFAILREM, which increases for each failed attempt to time overflow a call from this NACD source group to a remote overflow group

Validation formula

TFAILREM = CANCSENT + CANCRECD + REJRECD

Extension registers

None

Associated logs

None

CCREPLYR

Register type

Peg

Description

CCREPLYR increases when an NACD group receives a Cancel Request reply.

Associated registers

None

Extension registers

None

Associated logs

None

CCREPLYS

Register type

Peg

Description

CCREPLYS increases when an NACD group sends a Cancel Request reply.

Associated registers

None

Extension registers

None

Associated logs

None

FREERECD

Register type

Peg

Description
FREERECD increases when this register receives an NACD Agent Free message.

Associated registers
None

Extension registers
None

Associated logs
None

FREESENT

Register type
Peg

Description
FREESENT increases when an NACD group sends an NACD Free Agent message to indicate that the group reserved a free agent.

Associated registers
None

Extension registers
None

Associated logs
None

QRYRECD

Register type
Peg

Description
QRYRECD increases when an NACD group receives an NACD Reroute Request message.

Associated registers
None

Extension registers
None

Associated logs
None

QRYSENT

Register type

Peg

Description

QRYSENT increases when an NACD group sends an NACD Reroute Request message.

Associated registers

The following registers are associated with QRYSENT:

- NACDGRP1_TFAILREM, which increases when a call time overflow from this NACD group (source group) to a remote overflow group fails
- NACDGRP1_TMOFLREM, which increases when a queued call at this NACD group time overflows to a remote overflow group. The register increases when the queued call overflows because the call waited over the time delay overflow time.

Validation formula

QRYSENT = NACDGRP1_TMOFLREM + NACDGRP1_TFAILREM

Extension registers

None

Associated logs

None

REJRECD

Register type

Peg

Description

REJRECD increases when an NACD group receives an NACD Reject Request message.

Associated registers

The following registers are associated with CANCSENT:

- CANCRECD, CANCSENT
- TFAILREM, which increases for each failed attempt to time overflow a call from this NACD source group to a remote overflow group.

Validation formula

TFAILREM = CANCSENT + CANCRECD + REJRECD

Extension registers

None

Associated logs

None

REJSENT

Register type

Peg

Description

REJSENT increases when an NACD group sends an NACD Reject Request message to reject an NACD Reroute Request. An NACD group sends the reject message for one of the following reasons:

- the request message has protocol errors or contains invalid information
- the overflow group is in Night Service
- the logical queue of the overflow group is full
- no software resource is available

Associated registers

None

Extension registers

None

Associated logs

None

RESENDTO

Register type

Peg

Description

RESENDTO increases when an NACD Reroute Request message is resent but the TCAP resend timer (T1) duration does not receive a response.

Associated registers

None

Extension registers

None

Associated logs

None

RESRVDTO

Register type

Peg

Description

RESRVDTO increases when a reservation timer (T2) expires. The T2 timer starts when a free agent reserves after an NACD Reroute Request message receives.

Associated registers

None

Extension registers

None

Associated logs

None

RIRECD

Register type

Peg

Description

RIRECD increases when this register receives an NACD Status Update or Status Exchange message that contains an RI for an NACD group.

Associated registers

None

Extension registers

RIRECD2

Associated logs

None

RIREPLYR

Register type

Peg

Description

RIREPLYR increases when an NACD group receives an NACD Status Reply message that contains an RI for a NACD group.

Associated registers

None

Extension registers

None

Associated logs

None

RIREPLYS

Register type

Peg

Description

RIREPLYS increases when this register sends an NACD Status Reply message to return the RI. The group that sent an NACD Status Exchange message receives the RI.

Associated registers

None

Extension registers

None

Associated logs

None

RISENT

Register type

Peg

Description

RISENT increases when an NACD group sends an NACD Status Update or Status Exchange message. An NACD group sends a message to broadcast the RI to the remote network groups of the group.

Associated registers

None

Extension registers

RISENT2

Associated logs

None

SCREPLYR

Register type

Peg

Description

SCREPLYR increases when an NACD group receives an NACS Service Complete Reply message.

Associated registers

None

Extension registers

None

Associated logs

None

SCREPLYS

Register type

Peg

Description

SCREPLYS increases when an NACD group sends an NACD Service Complete Reply message to acknowledge arrival of the NACD Service Complete message.

Associated registers

None

Extension registers

None

Associated logs

None

SRVCOMPR

Register type

Peg

Description

SRVCOMPR increases when an NACD group receives an NACD Service Complete message.

Associated registers

None

Extension registers

None

Associated logs

None

SRVCOMPS

Register type

Peg

Description

SRVCOMPS increases when an NACD group sends an NACD Service Complete message for the following reasons:

- to show that a call is time-overflowed to a remote group
- to show that a TCAP transaction can be closed

Associated registers

None

Extension registers

None

Associated logs

None

T4TMEOUT

Register type

Peg

Description

T4TMEOUT increases when a TCAP T4 timer expires. The T4 timer starts when a call is logically queued or a free agent is reserved. The T4 timer starts when the switch receives an NACD Reroute Request message.

Associated registers

None

Extension registers

None

Associated logs

None

TTCAPIN

Register type

Peg

Description

TTCAPIN increases when an NACD group receives an NACD TCAP message. The TTCAPIN records the number of incoming TCAP messages an NACD group receives.

Associated registers

None

Extension registers

TTCAPIN2

Associated logs

None

TTCAPOUT

Register type

Peg

Description

TTCAPOUT increases when an NACD group sends an NACD TCAP message. Register TTCAPOUT records the number of outgoing TCAP messages that originate from an NACD group.

Associated registers

None

Extension registers

TTCAPOU2

Associated logs

None

NARUSAGE

Description

OM group Network Access Registers Usage (NARUSAGE) provides information on the use of network access registers (NAR). This OM group NARUSAGE counts attempts to use NARs and counts blocked NAR attempts. This OM group also provides a traffic use count for each NAR.

The NAR feature provides a more efficient method for “throttling" calls. This method involves regulating the ability of a Meridian Digital Centrex (MDC) call to terminate. The use of virtual facilities groups for simple call throttling requires retranslation, which increases DMS processing time for each call. The NAR feature does not require retranslation, which causes DMS processing time to improve.

The NAR feature is available at the customer group level, where default values for incoming and outgoing NAR groups are assigned. Each NAR group has a size that indicates the number of allowed simultaneous calls. The system checks the size of the group when a caller places a throttled call. If the NAR group receives the maximum number of simultaneous calls, the call does not continue.

The NAR feature also enables the assignment of incoming and outgoing NAR groups to network class of service (NCOS) groups, and translation selectors.

This feature enables the system to divert calls to an alternate route that provides throttling at the routing level. The system can divert calls to an alternate route where the NAR feature is active. The system can divert a call routed to a busy trunk group to an alternate route. The NAR on the alternate route can throttle the call.

The NAR cannot throttle all calls to and from the MDC customer group. The NAR can throttle calls that cannot terminate because the NAR does not have enough NAR resources. The path c call takes through translations and routing determines if the NAR can throttle the call.

Outgoing calls that the NAR can throttle use the following NET selector network types of tables IBNXLA and XLANAME:

- Direct Outward Dial (DOD) access
- Out WATS (OWT) access
- Electronic Switching Network (ESN) access
- Private (PVT) Network access

- General (GEN) Network access
- Multi-switched Business Group (MBG) access
- Location Code (LOC) for MBG access

Outgoing calls that the NAR can throttle use the following ROUTE selector types of tables IBNXLA and XLANAME:

- Location (L)
- Common Language Location Identifier (S)
- Table (T)

The new table NARDATA defines each NAR group. An NAR group may have 0 to 2047 units and provide 0 to 2047 simultaneous accesses. Each NAR group has an overflow route. This overflow route can be to another NAR group or to an MDC customer-defined treatment. The caller only goes to the treatment if the call is an outgoing call from the MDC customer group. The overflow NAR applies to both incoming calls to the customer group and outgoing calls from the customer group.

If the call needs to access an NAR group, the system checks the NAR group for available access. If an idle NAR unit is present, the call continues as normal. If NAR units are not present, the system checks the overflow route. If the overflow route shows an NAR name, the system checks the NAR group marked for available access.

If the overflow route shows a customer-defined treatment, the system routes the call to treatment. If the call is outgoing from the customer group, the overflow route uses the customer-defined treatment entered. If the call is incoming to the customer group, the system routes the call to customer group resource overflow (CGRO) treatment.

The system limit is five consecutive overflows when attempting access. The limit is five because an NAR group can identify another NAR group as an overflow route. When the system overflows the maximum number of times, the system routes the call to an office-wide treatment. The outgoing and incoming calls route to CGRO treatment.

The OM group NARUSAGE collects data on each NAR group defined in the office. Any access attempt on an NAR unit increases the NARTOTAL register. If all NAR part are not available, the NARBLCKD register also increases.

The following table lists the key and info fields associated with OM group NARUSAGE:

Key field	Info field
NAR_NAME (The field NAR_NAME is assigned to the NAR as defined in table NARDATA. This field ranges from 1-16 characters.)	NAR_SIZE (This field NAR_SIZE is the number of units or the number of simultaneous accesses to the NAR.)

Related functional groups

DMS-100 switches (provisioned with Meridian Digital Centrex and the Network Access Registers [NARS] feature) are associated with OM group MTA.

> ***Note:*** The NARS is correct for Meridian Digital Centrex (MDC), integrated services digital network (ISDN), and Residential Enhanced Services (RES) lines.

Registers

The following table lists the registers associated with OM group NARUSAGE and what they measure. For a detailed description of a register, click on the register name.

Registers for OM group NARUSAGE

Register name	Measures
NARTOTAL	NAR total number of access attempts
NARBLCKD	NAR blocked attempts
NARTRAF	NAR traffic usage count

NARTOTAL

Register type
Peg

Description
NARTOTAL increases when an attempt to access an NAR occurs.

Associated registers
NARBLCKD

Extension registers
None

Associated logs
None

NARBLCKD

Register type
Peg

Description
NARBLCKD increases when the system attempts to access an NAR but units are not available.

Associated registers
NARTOTAL

Extension registers
None

Associated logs
None

NARTRAF

Register type
Usage

Scan rate
100 seconds

Description
NARTRAF shows the amount of traffic that uses each NAR.

Associated registers
None

Extension registers
None

Associated logs
None

NCMCPUST

Description

OM group Non-computing Module Node Central Processing Unit Status (NCMCPUST) provides information about the CPU occupancy of the following non-computing module (CM) node types:

- application processing unit (APU)
- CCS7 link interface unit (LIU7)
- high-speed link interface unit (HLIU)
- high-speed link router (HSLR)
- CCS7 Server (SVR7)
- Ethernet interface unit (EIU)
- Ethernet link interface unit (ELIU)
- frame relay interface unit (FRIU)
- X.25/X.75 link interface unit (XLIU)
- voice processing unit (VPU)

NCMCPUST uses registers that record the following CPU occupancies:

- call processing class
- scheduler class
- scheduler SYSTEM6 and SYSTEM7 class
- maintenance class
- non-guaranteed background class
- idler class
- input/output interrupt class

The CPU occupancy values accumulate at the non-CM node. The CPU occupancy values update at 1 min intervals during the transfer period. The values are collected from the CPSTATUS data. The accumulated CPU occupancy values transfer to the CM at the end of the transfer period. The CM copies this information into the operational measurements (OM) registers.

The following table lists the key and info fields associated with OM group NCMCPUST:

Key field	Info field
None	LIU_type nnn; where LIU_type is EIU, ELIU, FRIU, HLIU, HSLR, LIU7, SVR7, or XLIU; and nnn is between 0 and 750

Related functional groups

The functional group Ethernet Interface Unit is associated with OM group NCMCPUST.

Registers

The following table lists the registers associated with OM group NCMCPUST and what they measure. For a detailed description of a register, click on the register name.

Registers for OM group NCMCPUST

Register name	Measures
NCMBKG	Non-CM node background class occupancy
NCMCPOCC	Non-CM node call processing class occupancy
NCMIDLE	Non-CM node idler class occupancy
NCMIO	Non-CM node input/output interrupt occupancy
NCMMAINT	Non-CM node maintenance class occupancy
NCMSCHED	Non-CM node scheduler class occupancy
NCMSYS	Non-CM node system class occupancy

NCMBKG

Register type
Peg

Description
NCMBKG records the CPU time its processes use and expresses the time as an integer. The processes are: the log system, audits, non-critical maintenance, OM accumulation and reporting.

The value NCMBKG records is the CPU background occupancy.

At the beginning of the transfer period, NCMBKG sets to zero. The CPU background occupancy values accumulate at the non-CM node and update at 1 min intervals during the transfer period. The values collects from the CPSTATUS data.

To obtain the average CPU background occupancy for 1 min, divide the holding register value by the transfer period (expressed in minutes).

Associated registers
None

Extension registers
None

Associated logs
None

NCMCPOCC

Register type
Peg

Description
NCMCPOCC records the CPU time processing uses and expresses it as an integer.

At the beginning of the transfer period, NCMCPOCC sets to zero.

The CPU call processing occupancy values accumulate at the non-CM node. The values update at 1 min intervals during the transfer period. The system collects the values from the CPSTATUS data.

To obtain the average CPU call processing occupancy for 1 min, divide the holding register value by the transfer period (expressed in minutes).

Associated registers
None

Extension registers
None

Associated logs
None

NCMIDLE

Register type

Peg

Description

NCMIDLE records the CPU time the idler processes use and memory checks and expresses the time as an integer. The value that NCMIDLE records is the CPU idler occupancy. The CPU idler occupancy consists of the time that the processes use in the SYSTEM0 scheduler class.

At the beginning of the transfer period, NCMIDLE sets to zero. The CPU idler occupancy values accumulate at the non-CM node. The CPU idler occupancy values update at 1-min intervals during the transfer period. The system collects the values from the CPSTATUS data.

To obtain the average CPU idler occupancy for 1 min, divide the holding register value by the transfer period (expressed in minutes).

Associated registers

None

Extension registers

None

Associated logs

None

NCMIO

Register type

Peg

Description

NCMIO records the CPU time that service input/output interrupts use and expresses the time as an integer. The value that NCMIO records is the CPU input/output interrupt occupancy.

At the beginning of the transfer period, NCMIO sets to zero. The CPU input/output interrupt occupancy values accumulate at the non-CM node. The values update at 1-min intervals during the transfer period. The system collects the values from the CPSTATUS data.

To obtain the average CPU input/output interrupt occupancy for 1 min, divide the holding register value by the transfer period.

Associated registers

None

Extension registers
None

Associated logs
None

NCMMAINT

Register type
Peg

Description
NCMMAINT records the CPU time that critical system maintenance processes use and expresses the time as an integer. The value that register NCMMAINT records is the CPU maintenance occupancy. The CPU maintenance occupancy consists of the time processes use in the maintenance scheduler class.

At the beginning of the transfer period, register NCMMAINT sets to zero. The CPU maintenance occupancy values accumulate at the non-CM node. The values update at 1 min intervals during the transfer period. The system collects the values from the CPSTATUS data.

To obtain the average CPU maintenance occupancy for 1 min, divide the holding register value by the transfer period.

Associated registers
None

Extension registers
None

Associated logs
None

NCMSCHED

Register type
Peg

Description
NCMSCHED records the CPU time that the scheduler is in use and expresses the time as an integer.

At the beginning of the transfer period, NCMSCHED sets to zero. The CPU scheduler occupancy values accumulate at the non-CM node. The values update at 1 min intervals during the transfer period. The system collects the values from the CPSTATUS data.

To obtain the average CPU scheduler occupancy for 1 min, divide the holding register value by the transfer period.

Associated registers

None

Extension registers

None

Associated logs

None

NCMSYS

Register type

Peg

Description

NCMSYS records the CPU time that system operations use and expresses the time as an integer. The value that NCMSYS records is the CPU system occupancy. The CPU system occupancy consists of the time processes in the SYSTEM6 and SYSTEM7 scheduler classes use.

At the beginning of the transfer period, NCMSYS sets to zero. The CPU system occupancy values accumulate at the non-CM node. The values update at 1-min intervals during the transfer period. The system collects the values from the CPSTATUS data.

To obtain the average CPU system occupancy for 1 min, divide the holding register value by the transfer period (expressed in minutes).

Associated registers

None

Extension registers

None

Associated logs

None

NDS0CARR

Description

OM group 8-port 64-Kbps Non-multiplexed Digital Voice/data Carriers (NDS0CARR) counts the errors, faults and use for each NDS0 physical carrier.

The system generates logs for error and fault conditions. These conditions indicate a change in the alarm status of the extended multiprocessor system (XMS)-based peripheral module (XPM).

The following table lists the key and info fields associated with OM group NDS0CARR:

Key field	Info field
MESSAGE_SWITCH_NUMBER is 0 or 1	NDS0OMINF

Enter the following fields in table CARRMTC: LOSRST, LOSOL, AISRST, AISOL, CLKLRST, CLKLOL, BPVLRST, BPVLOL, SLIPRST, and SLIPOL.

Related functional groups

There are no functional groups related to OM group NDS0CARR.

Registers

The following table lists the registers associated with OM group NDS0CARR and what they measure. For a detailed description of a register, click on the register name.

Registers for OM group NDS0CARR (Sheet 1 of 2)

Register name	Measures
CARCSBSY	NDS0 physical carrier CBSY usage count
CARMBSY	NDS0 physical carrier ManB usage count
CARSBSY	NDS0 physical carrier SYSB usage count
ERRAIS	AIS error count
ERRBVRX	BPVRX error count

Registers for OM group NDS0CARR (Sheet 2 of 2)

Register name	Measures
ERRBVTX	BPVTX error count
ERRCLRX	CLKRX error count
ERRCLTX	CLKTX error count
ERRLOS	LOS error counts
ERRSLRX	SLIPRX error count
ERRSLTX	SLIPTX error count
FLTAIS	AIS fault count
FLTBVRX	BPVRX fault count
FLTBVTX	BPVTX fault count
FLTCLRX	CLKRX fault count
FLTCLTX	CLKTX fault count
FLTLOS	LOS fault count
FLTSLRX	SLIPRX fault count
FLTSLTX	SLIPTX fault count

CARCSBSY

Register type

Peg

Description

ARCSBSY samples the NDS0 physical carrier state every 100 seconds. Register CARCSBSY counts the time that the carrier is in the C-side busy (CBSY) state.

Associated registers

None

Extension registers

None

Associated logs

None

CARMBSY

Register type

Peg

Description

CARMBSY samples the NDS0 physical carrier state every 100 seconds. Register CARMBSY counts the time that the carrier is in the manually busy (ManB) state.

Associated registers

None

Extension registers

None

Associated logs

None

CARSBSY

Register type

Peg

Description

CARSBSY samples the NDS0 physical carrier state every 100 seconds. Register CARSBSY counts the time that the carrier is in the system busy (SYSB) state.

Associated registers

None

Extension registers

None

Associated logs

None

ERRAIS

Register type

Peg

Description

ERRAIS counts the number of alarm indication signal (AIS) errors that occur. An AIS error occurs if a string of ones (1) is received on the receive data input.

Associated registers
None

Extension registers
None

Associated logs
None

ERRBVRX

Register type
Peg

Description
ERRBVRX counts the number of bipolar violation loss on receive (BPVRX) errors that occur. The system detects a BPVRX error if a loss of 8 kHz violation occur in the clock used to receive data.

Associated registers
None

Extension registers
None

Associated logs
None

ERRBVTX

Register type
Peg

Description
ERRBVRX counts the number of bipolar violation loss on receive (BPVRX) errors that occur. The system detects a BPVRX error if a loss of 8 kHz violation occur in the clock used to receive data.

Associated registers
None

Extension registers
None

Associated logs
None

ERRCLRX

Register type
Peg

Description
ERRCLRX counts the number of receive clock loss (CLKRX) errors that occur. A CLKRX error occurs if the system detects loss of clock on the clock used to receive data.

Associated registers
None

Extension registers
None

Associated logs
None

ERRCLTX

Register type
Peg

Description
ERRCLTX counts the number of transmit clock loss (CLKTX) errors that occur. A CLKTX error occurs if the system detects loss of clock on the clock used to transmit data.

Associated registers
None

Extension registers
None

Associated logs
None

ERRLOS

Register type
Peg

Description
ERRLOS counts the number of loss-of-signal (LOS) errors that occur. A LOS error occurs if the system receives a stream of zeros (0) on the receive data input.

Associated registers

None

Extension registers

None

Associated logs

None

ERRSLRX

Register type

Peg

Description

ERRSLRX counts the number of slip receive (SLIPRX) errors that occur. The system records an SLIPRX error. An SLIPRX error occurs when the rates at which the network transmits and receives data are different.

Associated registers

None

Extension registers

None

Associated logs

None

ERRSLTX

Register type

Peg

Description

ERRSLTX counts the number of slip transmission (SLIPTX) errors that occur. When the system processes data at different rates, the system loses or repeats transmitted data and records a SLIPTX error. Processed data transmits or receives.

Associated registers

None

Extension registers

None

Associated logs

None

FLTAIS

Register type

Peg

Description

FLTAIS counts the number of alarm indication signal (AIS) faults that occur. A fault is an error that causes the carrier to become system busy (SYSB).

FLTAIS increases when the associated carrier becomes SYSB or when the AIS steady alarm raises. Register FLTAIS also increases when the AIS hit-state alarm raises and the SETACTION field in table LTCPSINV is TRUE.

Associated registers

None

Extension registers

None

Associated logs

PM187

FLTBVRX

Register type

Peg

Description

FLTBVRX counts the number of bipolar violation loss on receive (BPVRX) faults that occur.

FLTBVRX increases when the associated carrier becomes system busy (SYSB) or when the BPVRX steady alarm raises. Register FLTBVRX also increases when the BPVRX hit-state alarm raises and the SETACTION field in table LTCPSINV is TRUE.

Associated registers

None

Extension registers

None

Associated logs

PM187

FLTBVTX

Register type

Peg

Description

FLTBVTX counts the number of bipolar violation loss on transmit (BPVTX) faults that occur.

FLTBVTX increases when the associated carrier becomes system busy (SYSB) or when the BPVTX steady alarm raises. Register FLTBVTX also increases when the BPVTX hit-state alarm raises and the SETACTION field in table LTCPSINV is TRUE.

Associated registers

None

Extension registers

None

Associated logs

PM187

FLTCLRX

Register type

Peg

Description

FLTCLRX counts the number of receive clock loss (CLKRX) faults that occur.

FLTCLRX increases when the associated carrier becomes system busy (SYSB) or when the CLKRX steady alarm raises. Register FLTCLRX also increases when the CLKRX hit-state alarm raises and the SETACTION field in table LTCPSINV is TRUE.

Associated registers

None

Extension registers

None

Associated logs

PM187

FLTCLTX

Register type

Peg

Description

FLTCLTX counts the number of transmit clock loss (CLKTX) faults that occur.

FLTCLTX increases when the associated carrier becomes system busy (SYSB) or when the CLKTX steady alarm raises. Register FLTCLTX also increases when the CLKTX hit-state alarm raises and the SETACTION field in table LTCPSINV is TRUE.

Associated registers

None

Extension registers

None

Associated logs

PM187

FLTLOS

Register type

Peg

Description

FLTLOS counts the number of loss-of-signal (LOS) faults that occur.

FLTLOS increases when the associated carrier becomes system busy (SYSB) or when the LOS steady alarm raises. Register FLTLOS also increases when the LOS hit-state alarm raises and the SETACTION field in table LTCPSINV is TRUE.

Associated registers

None

Extension registers

None

Associated logs

PM187

FLTSLRX

Register type

Peg

Description

FLTSLRX counts the number of slip receive (SLIPRX) faults that occur.

FLTSLRX increases when the associated carrier becomes system busy (SYSB) or when the SLIPRX steady alarm raises. Register FLTSLRX also increases when the SLIPRX hit-state alarm raises and the SETACTION field in table LTCPSINV is TRUE.

Associated registers

None

Extension registers

None

Associated logs

PM187

FLTSLTX

Register type

Peg

Description

FLTSLTX counts the number of slip transmission (SLIPTX) faults that occur.

FLTSLTX increases when the associated carrier becomes system busy (SYSB) or when the SLIPTX steady alarm raises. Register FLTSLTX also increases when the SLIPTX hit-state alarm raises and the SETACTION field in table LTCPSINV is TRUE.

Associated registers

None

Extension registers

None

Associated logs

PM187

NETMSG

Description

OM group Network Message Service (NETMSG) monitors the use of network message services (NMS).

The OM group NETMSG contains four registers that count:

- NMS transaction capability application part (TCAP) requests that time out
- NMS TCAP requests that receive a negative acknowledgement
- invalid addresses from a message service
- NMS requests for an empty subscriber directory number

The following table lists the key and info fields associated with OM group NETMSG:

Key field	Info field
None	None

Related functional groups

CCS7 functional group is associated with OM group NETMSG.

Registers

The following table lists the registers associated with OM group NETMSG and what they measure. For a detailed description of a register, click on the register name.

Registers for OM group NETMSG

Register name	Measures
NMSDENL	Negative acknowledgement
NMSINVAD	Invalid address
NMSTIME	Time out
NMSVACT	Vacant subscriber directory number

NMSDENL

Register type
Peg

Description

NMSDENL counts network NMS TCAP requests that receive negative acknowledgement.

A not having enough of 32-word FTRQ blocks, available at the server node, can affect register NMSDENL. The 32-word FTRQ blocks are in office parameter FTRQ32WAREAS, in table OFCENG.

Register NMSDENL increases at the host node.

Associated registers

None

Extension registers

None

Associated logs

None

NMSINVAD

Register type

Peg

Description

NMSINVAD counts addresses received from NMS that are not correct. An error can occur for two reasons. The message service agent can enter a directory number that is not correct. The NMS can generate a directory number that is not correct.

Register NMSINVAD increases at the host node.

Associated registers

None

Extension registers

None

Associated logs

NMS100

NMSTIME

Register type

Peg

Description

NMSTIME counts NMS TCAP requests that time out because the TCAP instruction disappears before it reaches the server node. This register also counts NMS TCAP requests that time out. A TCAP request times out because the TCAP acknowledgement disappears before it reaches the host node.

Register NMSTIME increases at the host node.

Associated registers

None

Extension registers

None

Associated logs

None

NMSVACT

Register type

Peg

Description

NMSVACT counts NMS requests received for a empty subscriber directory number. The vacancy occurs for two reasons. The subscriber no longer exists at the server node, or the NMS generated an address that is possible but not correct.

Register NMSVACT increases at the server node.

Associated registers

None

Extension registers

None

Associated logs

NMS101

NIUFBUS

Description

OM group Network Interface Unit (NIU) Frame Transport Bus (F-bus) (NIUFBUS) monitors transmit and receive activity between the F-buses and the NIU.

The OM group NIUFBUS contains 30 two registers that count:

- number of packets an NIU transmits on each F-bus
- number of packets an NIU receives on each F-bus
- number of transmit errors an NIU makes on each F-bus
- number of receive errors an NIU makes on each F-bus
- number of octets an NIU transmits on each F-bus
- number of octets an NIU receives on each F-bus
- number of times an NIU turns on congestion on each F-bus
- number of high priority messages an NIU transmits on each F-bus
- number of messages that require placing in queue by an NIU on each F-bus

The following table lists the key and info fields associated with OM group NIUFBUS:

Key field	Info field

None	pm_type: NIU
	pm_number: {integer}
	pm_unit: {0 or 1}

Related functional groups

SuperNode DMS switch is associated with OM group NIUFBUS.

Registers

The following table lists the registers associated with OM group NIUFBUS and what they measure. For a detailed description of a register, click on the register name.

Registers for OM group NIUFBUS

Register name	Measures
NF0RXERR	Frame transport bus 0 receive errors
NF0RXOCT	Frame transport bus 0 receive octets
NF0RXPKT	Frame transport bus 0 receive packets
NF0TXCON	F-bus 0 transmit congestion
NF0TXENQ	F-bus 0 transmit placing in queue
NF0TXERR	Frame transport bus 0 transmit errors
NF0TXOCT	Frame transport bus 0 transmit octets
NF0TXPKT	Frame transport bus 0 transmit packets
NF0TXPRI	F-bus 0 transmit priority
NF1RXERR	Frame transport bus 1 receive errors
NF1RXOCT	Frame transport bus 1 receive octets
NF1RXPKT	Frame transport bus 1 receive packets
NF1TXCON	F-bus 1 transmit congestion
NF1TXENQ	F-bus 1 transmit placing in queue
NF1TXERR	Frame transport bus 1 transmit errors
NF1TXOCT	Frame transport bus 1 transmit octets
NF1TXPKT	Frame transport bus 1 transmit packets
NF1TXPRI	F-bus 1 transmit priority

NF0RXERR

Register type
Peg

Description

NF0RXERR increases in an audit period by the number of packets that an NIU did not receive on Fbus. The NIU did not receive the packets because of an error.

Associated registers

None

Extension registers

NF0RXER2

Associated logs

None

NF0RXOCT

Register type

Peg

Description

NF0RXOCT increases by the number of octets (bytes) an NIU receives on Fbus 0.

Associated registers

None

Extension registers

NF0RXOC2

Associated logs

None

NF0RXPKT

Register type

Peg

Description

NF0RXPKT increases in an audit period by the number of packets an NIU receives from Fbus 0.

Associated registers

None

Extension registers

NF0RXPK2

Associated logs

None

NF0TXCON

Register type

Peg

Description

NF0TXCON counts the number of times the NIU turns on congestion for F-bus 0.

Associated registers

NF1TXCON

Extension registers

None

Associated logs

None

NF0TXENQ

Register type

Peg

Description

NF0TXENQ counts the number of messages on F-bus 0 that require placing in queue.

Associated registers

NF1TXENQ

Extension registers

NF0TXEN2

Associated logs

None

NF0TXERR

Register type

Peg

Description

NF0TXERR increases in an audit period by the number of packets an NIU could not send out on Fbus. The NIU could not send the packets because of an error.

Associated registers

None

Extension registers

NF0TXER2

Associated logs

None

NF0TXOCT

Register type

Peg

Description

NF0TXOCT increases the number of octets (bytes) an NIU transmits on Fbus 0.

Associated registers

None

Extension registers

NF0TXOC2

Associated logs

None

NF0TXPKT

Register type

Peg

Description

NF0TXPKT increases in an audit period by the number of packets an NIU transmits on Fbus 0.

Associated registers

None

Extension registers

NF0TXPK2

Associated logs

None

NF0TXPRI

Register type

Peg

Description
NF0TXPRI counts the number of high priority messages that are transmitted on F-bus 0.

Associated registers
NF1TXPRI

Extension registers
None

Associated logs
None

NF1RXERR

Register type
Peg

Description
NF1RXERR increases in an audit period by the number of packets an NIU did not receive on Fbus 1. The NIU did not receive the packets because of an error.

Associated registers
None

Extension registers
NF1RXER2

Associated logs
None

NF1RXOCT

Register type
Peg

Description
NF1RXOCT increases by the number of octets (bytes) an NIU receives on Fbus 1.

Associated registers
None

Extension registers
NF1RXOC2

Associated logs

None

NF1RXPKT

Register type

Peg

Description

NF1RXPKT increases in an audit period by the number of packets an NIU receives from Fbus 1.

Associated registers

None

Extension registers

NF1RXPK2

Associated logs

None

NF1TXCON

Register type

Peg

Description

NF1TXCON counts the number of times an NIU turns on congestion for F-bus 1.

Associated registers

NF0TXCON

Extension registers

None

Associated logs

None

NF1TXENQ

Register type

Peg

Description

NF1TXENQ counts the number of messages on F-bus 1 that require placing in queue.

Associated registers

NF0TXENQ

Extension registers

NF1TXEN2

Associated logs

None

NF1TXERR

Register type

Peg

Description

NF1TXERR increases in an audit period by the number of packets an NIU could not send out on Fbus 1. The NIU could not send the packets because of an error.

Associated registers

None

Extension registers

NF1TXER2

Associated logs

None

NF1TXOCT

Register type

Peg

Description

NF1TXOCT increases the number of octets (bytes) an NIU transmits on Fbus 1.

Associated registers

None

Extension registers

NF1TXOC2

Associated logs

None

NF1TXPKT

Register type

Peg

Description

NF1TXPKT increases in an audit period by the number of packets an NIU transmits on Fbus 1.

Associated registers

None

Extension registers

NF1TXPK2

Associated logs

None

NF1TXPRI

Register type

Peg

Description

NF1TXPRI counts the number of high priority messages that are transmitted on F-bus 1.

Associated registers

NF0TXPRI

Extension registers

None

Associated logs

None

NIUMEMUT

Description

OM group Network Interface Unit Memory Use (NIUMEMUT) displays data and program store information for a network interface unit (NIU).

The NIUMEMUT contains four registers that:

- hold the total data store memory
- hold the free data store memory
- hold the total program store memory
- hold the free program store memory

The following table lists the key and info fields associated with OM group NIUMEMUT:

Key field	Info field

None	PM_TYPE: NIU
	PM NUMBER: {integer}
	PM_UNIT: {0 or 1}

Related functional groups

There are no functional groups associated with OM group NIUMEMUT.

Registers

The following table lists the registers associated with OM group NIUMEMUT and what they measure. For a detailed description of a register, click on the register name.

Registers for OM group NIUMEMUT

Register name	Measures
NIUSTOT	Network interface unit total data store (DS) memory
NIUDSAVL	Network interface unit free DS memory
NIUPSTOT	Network interface unit total program store (PS) memory
NIUPSAVL	Network interface unit free PS memory

NIUSTOT

Register type

Peg

Description

NIUSTOT holds the total data store memory information in Kbytes.

Associated registers

None

Extension registers

None

Associated logs

None

NIUDSAVL

Register type

Peg

Description

NIUDSAVL holds available DS memory information in Kbytes.

Associated registers

None

Extension registers

None

Associated logs

None

NIUPSTOT

Register type

Peg

Description

NIUPSTOT holds the total PS memory information in Kbytes.

Associated registers

None

Extension registers

None

Associated logs

None

NIUPSAVL

Register type

Peg

Description

NIUPSAVL holds the available PS memory information in Kbytes.

Associated registers

None

Extension registers

None

Associated logs

None

NMC

Description

OM group Network Module Controller Maintenance Summary (NMC) counts errors and failures to recover from errors in the following:

- in-service message links between network modules and peripheral modules
- speech connections
- in-service network module controllers

The OM group NMC also records if out-of-service network modules, network module ports, and junctors are system busy or manual busy.

All the measurements in NMC refer to individual components, not paired duplicates. The failures recorded in NMC do not always indicate lost calls.

The OM group NMC contains six peg registers and six usage registers. Scan rate for the usage registers is slow: 100 seconds.

The OM group NMC used to analyze network module controller maintenance.

All DMS offices have an OM group NMC.

The following table lists the key and info fields associated with OM group NMC:

Key field	Info field
None	None

Related functional groups

There are no functional groups associated with OM group NMC.

Registers

The following table lists the registers associated with OM group NMC and what they measure. For a detailed description of a register, click on the register name.

Registers for OM group NMC

Register name	Measures
NMCERR	Network module controller errors
NMCFLT	Network module controller failure
NMJRMBU	Network module junctors manual busy usage
NMJRSBU	Network module junctors system busy usage
NMMBU	Network module manual busy usage
NMMSGER	Network module message link errors
NMMSGFL	Network module message link failures
NMPTMBU	Network module ports manual busy usage
NMPTSBU	Network module ports system busy usage
NMSBU	Network modules system busy usage
NMSPCHER	Network module speech connection errors
NMSPCHFL	Network module speech connection failure

NMCERR

Register type
Peg

Description
NMCERR counts errors that are in the in-service network module controllers.

Associated registers
NMCFLT

Extension registers
None

Associated logs
NETM128

NMCFLT

Register type
Peg

Description
NMCFLT increases when a network module controller cannot recover from an error. The controller remains system busy, pending manual maintenance or a successful system-initiated recovery.

Associated registers
NMCERR

Extension registers
None

Associated logs
NETM112, NETM128, NETM116, METM120, NETM122

NMJRMBU

Register type
Usage

Scan rate
100 seconds

Description
NMJRMBU records if network module junctors are manual busy.

Associated registers
None

Extension registers
None

Associated logs
NETM123, NETM140

NMJRSBU

Register type
Usage

Scan rate
100 seconds

Description
NMJRSBU records if network module junctors are system busy.

Associated registers
None

Extension registers
None

Associated logs
NETM122

NMMBU

Register type
Usage

Scan rate
100 seconds

Description
NMMBU records if out-of-service network modules are manual busy.

Associated registers
None

Extension registers
None

Associated logs
NETM105, NETM138

NMMSGER

Register type
Peg

Description
NMMSGER counts errors in the in-service message links between network modules and peripheral modules.

Associated registers
NMMSGFL

Extension registers
None

Associated logs
NET102, NTEM129

NMMSGFL

Register type

Peg

Description

NMMSGFL increases when a link between a network module and a peripheral module cannot recover from an error. The link remains system busy, pending manual maintenance or a successful system-initiated recovery attempt.

Associated registers

NMMSGER

Extension registers

None

Associated logs

NETM120, NETM126, NETM129

NMPTMBU

Register type

Usage

Scan rate

100 seconds

Description

NMPTMBU records if network module ports are manual busy.

Associated registers

None

Extension registers

None

Associated logs

NETM117, NETM139

NMPTSBU

Register type

Usage

Scan rate

100 seconds

Description
NMPTSBU records if network module ports are system busy.

Associated registers
None

Extension registers
None

Associated logs
NETM116, NETM129

NMSBU

Register type
Usage

Scan rate
100 seconds

Description
NMMSGFL records if out-of service network modules are system busy.

Associated registers
None

Extension registers
None

Associated logs
NETM103, NETM104

NMSPCHER

Register type
Peg

Description
NMSPCHER counts errors in speech connections located in the network.

Associated registers
NMSPCHFL

Extension registers
None

Associated logs

NET102

NMSPCHFL

Register type

Peg

Description

NMSPCHFL counts faults that in the network-resident connection memory, or in a speech path segment that is internal to the network. An accuracy failure that register NMSPCHFL recorded earlier trippers tests that detects the fault. The path segment affected is not available for call processing.

Associated registers

NMSPCHER

Extension registers

None

Associated logs

NET102, NETM120, NETM126, NETM129, NET131

NMTCLINK

Description

OM group Node Maintenance - Link (NMTCLINK) measures the performance of transport media to a node that affects the maintenance reliability of this node. The data indicates the number of system troubles and out-of-service occurrences.

The following table lists the key and info fields associated with OM group NMTCLINK.

Key field	Info field
None	INM_OM_LINK_INFO_T

Related functional groups

There are no functional groups associated with OM group NMTCLINK.

Registers

The following table lists the registers associated with OM group NMTCLINK and what they measure. For a description of a register, click on the register name.

Note: The OM group NMTCLINK provides one tuple for each node.

Registers for OM group NMTCLINK (Sheet 1 of 2)

Register name	Measures
NDMCHERR	Node maintenance message channel errors
NDMCHFLT	Node maintenance message channel faults
NDMCHMBP	Node maintenance message channel manual busy (ManB) peg
NDMCHSBP	Node maintenance message channel SYSB peg
NDPLKERR	Node maintenance physical link errors
NDPLKFLT	Node maintenance physical link faults

Registers for OM group NMTCLINK (Sheet 2 of 2)

Register name	Measures
NDPLKMBP	Node maintenance physical link manual busy (ManB) peg
NDPLKSBP	Node maintenance physical link system-busy (SysB) peg

NDMCHERR

Register type

Peg

Description

NDMCHERR counts the number of errors in all important message channels to a node.

Associated registers

None

Extension registers

None

Associated logs

None

NDMCHFLT

Register type

Peg

Description

NDMCHFLT counts the number of errors that persist after execution of diagnostics on important message channels. The register increases if the first diagnostic attempt does not clear the error. More tests of the error condition do not increase the register.

Associated registers

None

Extension registers

None

Associated logs

None

NDMCHMBP

Register type

Peg

Description

NDMCHMBP counts the times message channels become ManB.

Associated registers

None

Extension registers

None

Associated logs

None

NDMCHSBP

Register type

Peg

Description

NDMCHSBP counts the times message channels become SYSB.

Associated registers

None

Extension registers

None

Associated logs

None

NDPLKERR

Register type

Peg

Description

NDPLKERR counts the errors detected in all important physical channels to a node.

Associated registers

None

Extension registers

None

Associated logs

None

NDPLKFLT

Register type

Peg

Description

NDPLKFLT counts the errors that persist after execution of diagnostics on important physical channels. The register increases if the first diagnostic attempt does not clear the error. More tests of the error do not increase the register.

Associated registers

None

Extension registers

None

Associated logs

None

NDPLKMBP

Register type

Peg

Description

NDPLKMBP counts the times physical channels become ManB.

Associated registers

None

Extension registers

None

Associated logs

None

NDPLKSBP

Register type

Peg

Description

NDPLKSBP counts the times physical channels become SysB.

Associated registers

None

Extension registers

None

Associated logs

None

NMTCNODE

Description

OM group Node Maintenance - Node (NMTCNODE) measures the maintenance reliability performance of a node. The data shows the number of system troubles and out-of-service occurrences.

NMTCNODE is valid only for sync-matched nodes, which operate in synchronous mode. An example of this design is file processors on an SCPII. While the simplex mode is not in sync, consider the simplex mode of operation is in-service trouble (ISTb). Registers in NMTCNODE measure the amount of time the node is in this state.

The following table lists the key and info fields associated with OM group NMTCNODE.

Key field	Info field
None	INM_OM_NODE_INFO_T

Related functional groups

There are no functional groups associated with OM group NMTCNODE.

Registers

The following table lists the registers associated with OM group NMTCNODE and what they measure. For a description of a register, click on the register name.

Registers for OM group NMTCNODE (Sheet 1 of 2)

Register name	Measures
NDNERR	Node maintenance node errors
NDNFLT	Node maintenance node faults
NDNLRP	Node maintenance node loss of redundancy peg
NDNLRU	Node maintenance node loss of redundancy usage
NDNMBP	Node maintenance node manual busy (ManB) peg

Registers for OM group NMTCNODE (Sheet 2 of 2)

Register name	Measures
NDNMBU	Node maintenance node ManB usage
NDNMCRST	Node maintenance node manual cold restarts
NDNMCXFRN	Node maintenance node manual-controlled transfers
NDNMRRST	Node maintenance node manual reload restarts
NDNMWRST	Node maintenance node manual warm restarts
NDNNAP	Node maintenance node not-available peg
NDNNAU	Node maintenance node not-available usage
NDNSBP	Node maintenance node system-busy (SysB) peg
NDNSBU	Node maintenance node SysB usage
NDNSCRST	Node maintenance node system-controlled restarts
NDNSCXFR	Node maintenance node system-controlled transfers
NDNSRRST	Node maintenance node system reload restarts
NDNSUXFR	Node maintenance node system uncontrolled transfers
NDNSWERR	Node maintenance node software errors
NDNSWRST	Node maintenance node system warm restarts
NDNTRAP	Node maintenance node trap errors

NDNERR

Register type

Peg

Description

NDNERR counts the number of errors in an in-service or out-of-service node. NDNERR counts errors if more action either is or is not taken to correct the errors. The events can range from one-time hits to total failures. NDNERR increases when a node application reports an error that results from manual or system maintenance.

Associated registers

NDNSWERR, NDNTRAP

Extension registers

None

Associated logs

None

NDNFLT

Register type

Peg

Description

NDNFLT counts the number of errors that persist after diagnostics are executed. The fault register increases only when the first diagnostic attempt does not clear the error. Additional tests of the error condition do not increase the fault register.

Associated registers

None

Extension registers

None

Associated logs

None

NDNLRP

Register type

Peg

Description

NDNLRP counts the number of peripherals that have one unit in service while another unit goes out of service. A count of zero occurs in NDNLRP if all units of the node are in service.

Associated registers

NDNLRU

Extension registers

None

Associated logs

None

NDNLRU

Register type

Usage

Scan rate

100 seconds

Description

NDNLRU measures the length of time that the node has one unit in service while another unit is out of service. The count is based on a sample of the node that the system takes every 100 seconds.

Associated registers

NDNLRP

Extension registers

None

Associated logs

None

NDNMBP

Register type

Peg

Description

NDNMBP counts the number of times that a node goes into the manual busy (ManB) state.

Associated registers

NDNMBU

Extension registers

None

Associated logs

None

NDNMBU

Register type

Usage

Scan rate
100 seconds

Description
NDNMBU counts the length of time that the node is in the manual busy (ManB) state. The count is based on a sample of the node that the system takes every 100 seconds.

Associated registers
NDNMBP

Extension registers
None

Associated logs
None

NDNMCRST

Register type
Peg

Description
NDNMCRST counts the number of cold restarts that occur on a node as the result of manual action.

Associated registers
None

Extension registers
None

Associated logs
None

NDNMCXFRN

Register type
Peg

Description
NDNMCXFR counts the number of times that a node switches activity as a result of manual action (controlled switch of activity). The count is correct for sync-matched node designs only. Other node designs have a count that is always zero.

Associated registers
None

Extension registers

None

Associated logs

None

NDNMRRST

Register type

Peg

Description

NDNMRRST counts the number of reload restarts that occur on a node as a result of manual action.

Associated registers

None

Extension registers

None

Associated logs

None

NDNMWRST

Register type

Peg

Description

NDNMWRST counts the number of warm restarts that occur on a node as a result of manual action.

Associated registers

None

Extension registers

None

Associated logs

None

NDNNAP

Register type

Peg

Description

NDNNAP counts the number of times a node is isolated from the DMS.

Associated registers
NDNNAU

Extension registers
None

Associated logs
None

NDNNAU

Register type
Usage

Scan rate
100 seconds

Description
NDNNAU measures the length of time the node is isolated from the DMS. The count is based on a sample of the node that the system takes every 100 seconds.

Associated registers
NDNNAP

Extension registers
None

Associated logs
None

NDNSBP

Register type
Peg

Description
NDNSBP counts the number of times a node goes into the SysB state.

Associated registers
NDNSBU

Extension registers
None

Associated logs
None

NDNSBU

Register type

Usage

Scan rate

Not available

Description

NDNSBU measures the length of time that a node is SysB.

Associated registers

NDNSBP

Extension registers

None

Associated logs

None

NDNSCRST

Register type

Peg

Description

NDNSCRST counts the number of times a cold restart occurs on a node as the result of a system operation.

Associated registers

None

Extension registers

None

Associated logs

None

NDNSCXFR

Register type

Peg

Description

NDNSCXFR counts the number of times a node switches activity as the result of a controlled system maintenance operation. *Controlled* means that the node maintenance system is able to prepare for the switch of activity before it occurs. The count applies to sync-matched node designs only. The count for other node designs is always zero.

Associated registers

None

Extension registers

None

Associated logs

None

NDNSRRST

Register type

Peg

Description

NDNSRRST counts the number of reload restarts that occur on a node as the result of system action.

Associated registers

None

Extension registers

None

Associated logs

None

NDNSUXFR

Register type

Peg

Description

NDNSUXFR counts the number of times a node switches activity as the result of uncontrolled system maintenance action. *Uncontrolled* means that the node maintenance cannot prepare for the switch of activity before it happens. The count applies to sync-matched node designs only. The count is always zero for other node designs.

Associated registers

None

Extension registers

None

Associated logs

None

NDNSWERR

Register type

Peg

Description

NDNSWERR counts the number of times a software error occurs on a node.

Associated registers

None

Extension registers

None

Associated logs

None

NDNSWRST

Register type

Peg

Description

NDNSWRST counts the number of warm restarts that occur on a node as the result of system action.

Associated registers

None

Extension registers

None

Associated logs

None

NDNTRAP

Register type

Peg

Description

NDNTRAP counts the number of trap errors that occur on a node.

Associated registers

None

Extension registers

None

Associated logs

None

NMTCTYPE

Description

OM group Node Maintenance - Node Type (NMTCTYPE) measures the performance of the nodes in each node type. The data shows the number of system problems and out-of-service occurrences. The system uses register values in OM group NMTCNODE to generate the values in NMTCTYPE.

NMTCTYPE is correct only for sync-matched nodes, which operate in synchronous mode. An example of sync-matched nodes is file processors on an SCPII. While the simplex mode is not in sync:

- the simplex mode of operation is considered to be in-service trouble (ISTb)
- the registers in this group measure the amount of time the node spends in this state

The following table lists the key and info fields associated with OM group NMTCTYPE.

Key field	Info field
INM_NODE_CLASS_T	INM_OM_TYPE_INFO_T

Related functional groups

There are no functional groups associated with OM group NMTCTYPE.

Registers

The following table lists the registers associated with OM group NMTCTYPE and what they measure. For a description of a register, click on the register name.

> ***Note:*** OM group NMTCTYPE provides one tuple for each node type (maximum 1023).

Registers for OM group NMTCTYPE (Sheet 1 of 2)

Register name	Measures
NDTERR	Node maintenance type errors
NDTFLT	Node maintenance type faults
NDTLRP	Node maintenance type loss of redundancy peg

Registers for OM group NMTCTYPE (Sheet 2 of 2)

Register name	Measures
NDTLRU	Node maintenance type loss of redundancy usage
NDTMBP	Node maintenance type manual-busy (ManB) peg
NDTMBU	Node maintenance type ManB usage
NDTMCRST	Node maintenance type manual cold restarts
NDTMCXFR	Node maintenance type manual-controlled transfers
NDTMRRST	Node maintenance type manual reload restarts
NDTMWRST	Node maintenance type manual warm restarts
NDTNAP	Node maintenance type not-available peg
NDTNAU	Node maintenance type not-available usage
NDTSBP	Node maintenance type system-busy (SysB) peg
NDTSBU	Node maintenance type SysB usage
NDTSCRST	Node maintenance type system cold restart
NDTSCXFR	Node maintenance type system-controlled transfers
NDTSRRST	Node maintenance type system reload restarts
NDTSUXFR	Node maintenance type system uncontrolled transfers
NDTSWERR	Node maintenance type software errors
NDTSWRST	Node maintenance type system warm restarts
NDTTRAP	Node maintenance type trap errors

NDTERR

Register type

Peg

Description

NDTERR counts the number of errors detected on in-service or out-of-service nodes for each node type. NDTERR counts errors whether or not the errors receive additional action. The errors counted range from one-time hits to total failures. The register increases when an application on a node reports an error that is a result of a manual or system maintenance action.

Associated registers

NDTSWERR, NDTTRAP

Extension registers

None

Associated logs

None

NDTFLT

Register type

Peg

Description

NDTFLT counts the number of errors remaining after diagnostics. The register increases if the first diagnostic attempt does not clear the error. Additional tests on the error condition do not cause the register to increase.

Associated registers

None

Extension registers

None

Associated logs

None

NDTLRP

Register type

Peg

Description

NDTLRP counts the number of peripherals that have one unit in service while another unit goes out of service. The register counts zero if all units of the node type are in service.

Associated registers

NDTLRU

Extension registers

None

Associated logs

None

NDTLRU

Register type

Usage

Scan rate

100 seconds

Description

NDTLRU measures the length of time that each node type has one unit in service while another unit is out of service. The count is based on node samples the system takes every 100 seconds.

Associated registers

NDTLRP

Extension registers

None

Associated logs

None

NDTMBP

Register type

Peg

Description

NDTMBP counts the number of times that each node type becomes ManB.

Associated registers

NDTMBU

Extension registers

None

Associated logs

None

NDTMBU

Register type

Usage

Scan rate

100 seconds

Description

NDTMBU measures the length of time that each node type becomes ManB. The count is based on node samples taken every 100 seconds.

Associated registers

NDTMBP

Extension registers

None

Associated logs

None

NDTMCRST

Register type

Peg

Description

NDTMCRST counts the number of cold restarts that occur on each node type as a result of manual action.

Associated registers

None

Extension registers

None

Associated logs

None

NDTMCXFR

Register type

Peg

Description

NDTMCXFR counts the number of times that each node type switches activity as a result of manual action. The register classifies a manual transfer as a controlled switch. The count applies to sync-matched nodes only. For other node designs, the count is zero.

Associated registers

None

Extension registers

None

Associated logs

None

NDTMRRST

NDTMRRST counts the number of reload-restarts that occur on each node type as a result of manual action.

Register type

Peg

Description

NDTMRRST counts the number of reload-restarts that occur on each type of node because of manual operations.

Associated registers

None

Extension registers

None

Associated logs

None

NDTMWRST

Register type

Peg

Description

NDTMWRST counts the number of warm restarts that occur on each node type as a result of manual action.

Associated registers

None

Extension registers

None

Associated logs

None

NDTNAP

Register type

Peg

Description

NDTNAP counts the number of times the system isolates each node type from the DMS.

Associated registers

NDTNAU

Extension registers

None

Associated logs

None

NDTNAU

Register type

Usage

Scan rate

100 seconds

Description

NDTNAU measures the length of time that the system isolates each node type from the DMS. The count is based on node samples the system takes every 100 seconds.

Associated registers

NDTNAP

Extension registers

None

Associated logs

None

NDTSBP

Register type

Peg

Description

NDTSBP counts the number of times each node type becomes SysB.

Associated registers

NDTSBU

Extension registers

None

Associated logs

None

NDTSBU

Register type

Usage

Scan rate

Not available

Description

NDTSBU measures the length of time each node type is SysB.

Associated registers

NDTSBP

Extension registers

None

Associated logs

None

NDTSCRST

Register type

Peg

Description

NDTSCRST counts the number of times a cold restart occurs on each node type as a result of a system action.

Associated registers

None

Extension registers

None

Associated logs

None

NDTSCXFR

Register type

Peg

Description

NDTSCXFR counts the number of times each node type switches activity as a result of a controlled system maintenance action. *Controlled* means that node maintenance can prepare for the switch of activity before it occurs. The count applies to sync-matched nodes only. For other node designs, the count is zero.

Associated registers

None

Extension registers

None

Associated logs

None

NDTSRRST

Register type

Peg

Description

NDTSRRST counts the number of reload restarts that occur on each node type as a result of system action.

Associated registers

None

Extension registers

None

Associated logs

None

NDTSUXFR

Register type

Peg

Description

NDTSUXFR counts the number of times each node type switches activity as a result of an uncontrolled system maintenance action. *Uncontrolled* means that node maintenance cannot prepare for the switch of activity before it occurs. The count applies to sync-matched nodes. For other nodes, the count is zero.

Associated registers
None

Extension registers
None

Associated logs
None

NDTSWERR

Register type
Peg

Description
NDTSWERR counts the number of times a software error occurs on each node type.

Associated registers
None

Extension registers
None

Associated logs
None

NDTSWRST

Register type
Peg

Description
NDTSWRST counts the number of warm restarts that occur on each node type as a result of system action.

Associated registers
None

Extension registers
None

Associated logs
None

NDTTRAP

Register type

Peg

Description

NDTTRAP counts the number of traps that occur on each node type.

Associated registers

None

Extension registers

None

Associated logs

None

NMTCUNIT

Description

OM group Node Maintenance - Unit (NMTCUNIT) measures the maintenance reliability performance of one unit of a node. The data shows the number of system problems and out-of-service occurrences. The group does not apply to sync-matched nodes, which operate in synchronous mode. File processors on an SCPII are examples of sync-matched nodes.

The following table lists the key and info fields associated with OM group NMTCUNIT.

Key field	Info field
None	INM_OM_UNIT_INFO_T

Related functional groups

There are no functional groups associated with OM group NMTCUNIT.

Registers

The following table lists the registers associated with OM group NMTCUNIT and what they measure. For a description of a register, click on the register name.

> ***Note:*** OM group NMTCUNIT provides two tuples for each node.

Registers for OM group NMTCUNIT (Sheet 1 of 2)

Register name	Measures
NDUERR	Node maintenance unit errors
NDUFLT	Node maintenance unit faults
NDUMBP	Node maintenance unit manual-busy (ManB) peg
NDUMBU	Node maintenance unit ManB usage
NDUMCRST	Node maintenance unit manual cold restarts
NDUMRRST	Node maintenance unit manual reload restarts
NDUMWRST	Node maintenance unit manual warm restarts

Registers for OM group NMTCUNIT (Sheet 2 of 2)

Register name	Measures
NDUNAP	Node maintenance unit not-available peg
NDUNAU	Node maintenance unit not-available usage
NDUSBP	Node maintenance unit system-busy (SysB) peg
NDUSBU	Node maintenance unit SysB usage
NDUSCRST	Node maintenance unit system-controlled restarts
NDUSRRST	Node maintenance unit system reload restarts
NDUSWERR	Node maintenance unit software errors
NDUSWRST	Node maintenance unit system warm restarts
NDUTRAP	Node maintenance unit trap errors

NDUERR

Register type

Peg

Description

NDUERR counts the number of errors on an in-service or out-of-service unit of a node. The register counts errors if the system performs additional action on these errors. The events counted range from one-time hits to total failures.

The register increases when an application on the node unit reports an error that is a result of either a manual or a system maintenance action.

Associated registers

NDUSWERR, NDUTRAP

Extension registers

None

Associated logs

None

NDUFLT

Register type

Peg

Description

NDUFLT counts the errors that remain after diagnostics. The register increases when the first diagnostic attempt does not clear the error. Additional tests of the error condition do not increase the fault register.

Associated registers

None

Extension registers

None

Associated logs

None

NDUMBP

Register type

Peg

Description

NDUMBP counts the number of times the unit becomes ManB.

Associated registers

NDUMBU

Extension registers

None

Associated logs

None

NDUMBU

Register type

Usage

Scan rate

100 seconds

Description

NUTMBU measures the length of time that a unit is ManB.

Associated registers

NDUMBP

Extension registers

None

Associated logs

None

NDUMCRST

Register type

Peg

Description

NDUMCRST counts the number of cold restarts that occur on a unit of a node as a result of manual action.

Associated registers

None

Extension registers

None

Associated logs

None

NDUMRRST

Register type

Peg

Description

NDUMRRST counts the number of reload restarts that occur on a unit as a result of manual action.

Associated registers

None

Extension registers

None

Associated logs

None

NDUMWRST

Register type

Peg

Description

NDUMWRST counts the number of warm restarts that occur on a unit as a result of manual action.

Associated registers

None

Extension registers

None

Associated logs

None

NDUNAP

Register type

Peg

Description

NDUNAP counts the number of times the system isolates a unit from the DMS.

Associated registers

NDUNAU

Extension registers

None

Associated logs

None

NDUNAU

Register type

Usage

Scan rate

100 seconds

Description

NDUNAU measures the length of time the system isolates a unit from the DMS. The system takes a sample every 100 seconds.

Associated registers

NDUNAP

Extension registers

None

Associated logs

None

NDUSBP

Register type

Peg

Description

NDUSBP counts the number of times that the system puts a unit into the system busy (SYSB) state.

Associated registers

NDUSBU

Extension registers

None

Associated logs

None

NDUSBU

Register type

Usage

Scan rate

Not available

Description

NDUSBU measures the length of time a unit is SysB.

Associated registers

NDUSBP

Extension registers

None

Associated logs

None

NDUSCRST

Register type

Peg

Description

NDUSCRST counts the number of cold restarts that occur on a unit as a result of system action.

Associated registers

None

Extension registers

None

Associated logs

None

NDUSRRST

Register type

Peg

Description

NDUSRRST counts the number of reload restarts that occur on a unit as a result of system action.

Associated registers

None

Extension registers

None

Associated logs

None

NDUSWERR

Register type

Peg

Description

NDUSWERR counts the number of software errors that occur on a unit.

Associated registers

None

Extension registers

None

Associated logs

None

NDUSWRST

Register type

Peg

Description

NDUSWRST counts the number of warm restarts that occur on a unit as a result of system action.

Associated registers

None

Extension registers

None

Associated logs

None

NDUTRAP

Register type

Peg

Description

NDUTRAP counts the number of traps that occur on a unit.

Associated registers

None

Extension registers

None

Associated logs

None

NPAPEG

Description

OM group Numbering Plan Area (NPAPEG) counts provide the ability to determine bottlenecks in the network, and to determine where new trunk groups are required.

The following table lists the key and info fields associated with OM group NPAPEG:

Key field	Info field
NPAVALS	None

Related functional groups

There are no functional groups associated with OM group NPAPEG.

Registers

The following table lists the registers associated with OM group NPAPEG and what they measure. For a detailed description of a register, click on the register name.

Registers for OM group NPAPEG

Register name	Measures
ATB	All Trunks Busy

ATB

Register type
Peg

Description
ATB increments each time an all trunks busy (ATB) condition is reached on a route or choice. It may be pegged more than once per call if the second or successive choice of trunks is also busy. ATB pegs per assigned NPA.

Associated registers
None

Extension registers
None

Associated logs

ATB100

NRS

Description

OM group Network Resource Selector (NRS) provides information on the use of network resource selectors (NRS). The modem pools (MP) are the only NRS type that the system monitors.

The following table lists the key and info fields associated with OM group NRS:

Key field	Info field
CLLI	Resource type. The only correct resource type for NRS is MP.

Related functional groups

There are no functional groups associated with OM group NRS.

Registers

The following table lists the registers associated with OM group NRS and what they measure. For a detailed description of a register, click on the register name.

Registers for OM group NRS (Sheet 1 of 2)

Register name	Measures
NRSCON	Successful connections by network resource selectors
NRSCONU	Connected usage
NRSFCON	Not complete attempts to connect a network resource selector
NRSFRES	Not complete attempts to reserve network resource selector
NRSMBU	Manual busy usage
NRSNMP	No modem pool prefix dial attempts
NRSOVFL	Network resource selector overflow

Registers for OM group NRS (Sheet 2 of 2)

Register name	Measures
NRSRES	Successful attempts to reserve network resource selector
NRSRESU	Reserved usage
NRSSBU	System busy usage

NRSCON

Register type

Peg

Description

NRSCON counts successful connections made by the network resource selector.

An attempt to connect a network resource selector is successful if a modem pool connects when a call process sets up. The attempt is also successful if a maintenance modem pool connects to the modem pool under test.

Associated registers

None

Extension registers

None

Associated logs

None

NRSCONU

Register type

Usage

Scan rate

100 seconds

Description

NRSCONU records if the units of a network resource selector group are correct.

Modem pools connect when a call is in progress. Maintenance modem pools (MMP) connect when the network connection between the MMP and the modem pool under test establishes.

Associated registers
None

Extension registers
None

Associated logs
None

NRSFCON

Register type
Peg

Description
NRSFCON counts attempts to connect a network resource selector that are not successful.

An attempt to connect a network resource selector is not successful if a modem pool fails to connect during a call setup. The attempt is also unsuccessful if a maintenance modem pool fails to connect to the modem pool under test.

Associated registers
None

Extension registers
None

Associated logs
None

NRSFRES

Register type
Peg

Description
NRSFRES counts attempts to reserve a network resource selector that are not successful.

An attempt to reserve a network resource selector is not successful if a modem pool or maintenance modem pool is not correctly removed from the free queue.

Associated registers
None

Extension registers
None

Associated logs
None

NRSMBU

Register type
Usage

Scan rate
100 seconds

Description
NRSMBU records if units of a network resource selector group are manual busy.

Associated registers
None

Extension registers
None

Associated logs
None

NRSNMP

Register type
Peg

Description
NRSNMP increases when a data unit in a network resource selector group dials the entry no modem pool (NMP) prefix. The data unit contains NRS default Outbound.

Associated registers
None

Extension registers
None

Associated logs
None

NRSOVFL

Register type

Peg

Description

NRSOVFL increases when an NRS does not have any free units. The NRS overflows to another group to find a free unit.

Associated registers

None

Extension registers

None

Associated logs

None

NRSRES

Register type

Peg

Description

NRSRES counts successful attempts to reserve a unit of a network resource selector.

An attempt to reserve a unit of a network resource selector is successful if the system removes a modem from the free queue. The system uses the modem for call processing or maintenance.

Associated registers

None

Extension registers

None

Associated logs

None

NRSRESU

Register type

Usage

Scan rate

10 seconds

Description

NRSRESU records if units of a network resource selector group are reserved.

The system reserves modem pools and maintenance modem pools when the system takes these pools off the free queue.

Associated registers

None

Extension registers

None

Associated logs

None

NRSSBU

Register type

Usage

Scan rate

100 seconds

Description

NRSSBU records if units of a network resource selector group are system busy.

Associated registers

None

Extension registers

None

Associated logs

None

NSC

Description

OM group Number Services Code Call Summary (NSC) provides summary information on number services code (NSC) calls. The NSC calls require access to service control point (SCP) databases. The OM group NSC indicates the grade of service provided by a service switching point (SSP).

The following table lists the key and info fields associated with OM group NSC:

Key field	Info field
Defines NSCORIG (NSC) code in table NSCDEFS	None

The TIMEOUT and OPTIONS information fields in NSCDEFS must contain NSC codes for NSCT2TO increases.

Related functional groups

The following functional groups are associated with OM group NSC:

- 800+
- E800
- E008
- PVN
- Common Channel Signaling 7 (CCS7)

Registers

The following table lists the registers associated with OM group NSC and what they measure. For a detailed description of a register, click on the register name.

Registers for OM group NSC (Sheet 1 of 2)

Register name	Measures
NSCABNAS	NSC call abandon before answered
NSCABNBS	NSC call abandon before the seizure of an outgoing trunk

Registers for OM group NSC (Sheet 2 of 2)

Register name	Measures
NSCATIN	NSC access tandem trunk incoming
NSCDBOVL- Canada only	NSC database overload response
NSCEIGHT- Canada only	NSC 800 number returned
NSCFLICM	NSC invalid command message
NSCFLICS	NSC invalid command sequence
NSCFPRIQ- Canada only	NSC failure before query
NSCINVY- Canada only	NSC invalid special routing code (SRC)/00Y code
NSCIVCAR	NSC call invalid carrier identification
NSCNSNPA- Canada only	NSC number of non-subscribed numbering plan area (NPA) responses
NSCORIG	NSC originated
NSCOUTSV- Canada only	NSC out-of-service responses
NSCQUERY- Canada only	NSC query
NSCSFLEA	NSC failure to receive second signaling stage on equal access trunk
NSCSFLTO	NSC signaling failure timeout
NSCT2TO	NSC T2 timeout
NSCTIOVF	NSC transaction identification not available before initial query
NSCUNSOR- Canada only	NSC unsolicited responses
NSCVACDR- Canada only	NSC vacant database responses

NSCABNAS

Register type

Peg

Description

NSCABNAS increases when the system receives an on-hook message from the calling party. The system receives this message after an SSP seizes an outgoing trunk and before the user answers the call.

Associated registers

None

Extension registers

None

Associated logs

None

NSCABNBS

Register type

Peg

Description

NSCABNBS increases when the system receives an on-hook message from the calling party before an SSP seizes an outgoing trunk.

Associated registers

None

Extension registers

None

Associated logs

None

NSCATIN

Register type

Peg

Description

NSCATIN counts NSC calls that the system receives from other offices (trunk calls) in:

- E800

  NSCATIN counts NSC calls that the system receives from other offices (trunk calls) in an access tandem/SSP system. This count increases for calls that originate from toll trunks. Examples of toll trunks are Intertoll, Supercama, and TOPS.

In an equal access end office (EAEO)/SSP system, the count is zero.

NSCATIN counts PVN calls on super-centralized automatic message accounting (Supercama) and inter-toll trunks. Register NSCATIN counts PVN calls even if the application of Automatic Call Gapping occurs.

- 800PLUS

  NSCATIN counts NSC calls that the system receives from other offices (trunk calls) in a DMS-200 or DMS-100/200 system. This count increases for calls that originate from toll trunks. Examples of toll trunks are Intertoll, Supercama, and TOPS.

  In a DMS-100 system, the count is zero.

- E008

  In a DMS system that uses E008, the count is zero.

Associated registers

None

Extension registers

None

Associated logs

None

NSCDBOVL- Canada only

Register type

Peg

Description

NSCDBOVL increases if a database returns the subsystem congestion diagnostic to an SSP. The return indicates a database overload.

The call routes to reorder (RODR) treatment.

When the system launches a query to a database using CCS7, part of the signaling-connection control part (SCCP) information specified in the query is an option field. If this option is set to RETURN TO ERROR, the database query launched by an SSP may return to the SSP by the SCP database when a routing failure occurs.

For all 800+ calls, the SCCP option is set to return a message to the database if an error occurs. Part of the message returned to the database is a diagnostic field. Possible values for the diagnostic field are subsystem failure, unequipped user, and subsystem congestion.

In a PVN, the NSCDBOVL count is zero.

Associated registers
None

Extension registers
None

Associated logs
None

NSCEIGHT- Canada only

Register type
Peg

Description
NSCEIGHT increases when an 800 number returns from the SCP database. This action indicates that the 800 number does not switch over to the SSP for 800+. The number is translated again using the INWATS tables.

In a PVN system, the NSCEIGHT count is zero.

For E008 FPS, this register indicates the number of times that the response from the SCP contains the special routing parameter set to a movement number in a routing component returned from the SCP. The call continues based on non-E008 translations.

Associated registers
None

Extension registers
None

Associated logs
None

NSCFLICM

Register type
Peg

Description
NSC invalid command message (NSCFLICM) increases when the SSP receives an undecipherable response from the SCP.

The call routes to reorder (RODR) treatment.

Associated registers
None

Extension registers
None

Associated logs
None

NSCFLICS

Register type
Peg

Description
NSCFLICS increases when the SSP receives a response from the SCP that contains not complete or not-in-sequence commands.

The call routes to reorder (RODR) treatment.

Associated registers
None

Extension registers
None

Associated logs
None

NSCFPRIQ- Canada only

Register type
Peg

Description
NSCFPRIQ counts 800+ calls that fail before a database query is launched, including calls that fail for one of the following reasons:

- invalid called number digits
- 800+ subsystem out of service (OOS)
- there are no transaction identifiers available

PVN calls that fail before a database query launches are also counted by NSCFPRIQ, including calls that fail for one of the following reasons:

- PVN subsystem OOS
- wrong PVN transaction identification
- invalid calling number digits
- global title cannot be formatted
- invalid local access and transport area (LATA) number digits
- invalid dial call type for PVN in encode data
- invalid digits in originating number on remote access call
- wrong number of digits in originating number remote access call
- invalid digits in authorization code or personal identification number (PIN)
- package encoding fails on transaction capabilities application part (TCAP) message

Associated registers

None

Extension registers

None

Associated logs

None

NSCINVY- Canada only

Register type

Peg

Description

NSCINVY counts invalid SRC/00Y codes received by the SSP from the end office. An end office may substitute an SRC/00Y code for the 800 code in the 800 + NXX + XXXX number to indicate the originating numbering plan area to the SSP. The code is considered invalid if it is not entered in table NSCSNPA.

The call routes to vacant code treatment.

Associated registers

None

Extension registers

None

Associated logs
NSC100

NSCIVCAR

Register type
Peg

Description
NSCIVCAR increases when the database returns an invalid carrier identification in the response message. A carrier identification is invalid if it is not datafilled in a correct office table of correct carrier identifiers for the number service call service.

The call routes to CCS7 application failure treatment.

Associated registers
None

Extension registers
None

Associated logs
NSC100

NSCNSNPA- Canada only

Register type
Peg

Description
NSCNSNPA increases if the database returns out of band (out of zone) as a special routing in the database response.

Use this register for the 800+ feature. In an SSP E800 office and in a PVN, the NSCNSNPA count is zero.

Associated registers
None

Extension registers
None

Associated logs
None

NSCORIG

Register type

Peg

Description

NSCORIG counts NSC line calls that reach the dial complete stage. NSC includes all NSC calls that originate from lines, attendant consoles, and PX type trunks. In addition, all NSC calls that result from call redirection (e.g. call forwarding, ACD/UCD on night service to 800, etc.) are included in this OM.

- E800

  In an EAEO/SSP system, the count is the total number of NSC calls from lines. This count includes NSC calls that result from call redirection. In a DMS-100/200 combined access tandem/SSP office, the count is the total number of NSC calls originated by collocated stations (line calls) plus NSC calls that result from call redirection.In a DMS-200 access tandem/SSP office, the count is zero.

  PVN calls on integrated business network (IBN) trunks and lines, consoles, IBNT1 trunks, and IBNT2 trunks are counted by this register.

- 800PLUS

  In a DMS-100 end office, SSP or DMS-100/200 SSP, the count is the total number of NSC calls from lines or collocated stations (line calls) plus NSC calls that result from call redirection.In a DMS-200, the count is zero.

  PVN calls on integrated business network (IBN) trunks and lines, consoles, IBNT1 trunks, and IBNT2 trunks are counted by this register.

- E008

  In a DMS-100 end office, SSP or DMS-100/200 SSP, the count is the total number of NSC calls originated by lines or collocated stations (line calls) plus NSC calls that result from call redirection plus calls originated over AISUP and ATUP (IBN type) trunks.In a DMS-200, the count is zero.

Associated registers

None

Extension registers

None

Associated logs

None

NSCOUTSV- Canada only

Register type

Peg

Description

NSC out-of-service responses (NSCOUTSV) increases if a database returns the subsystem failure diagnostic and indicates that the database is not available.

The call routes to reorder (RODR) treatment.

When a query launches to a database using CCS7, part of the signaling connection control part (SCCP) information specified in the query is an option field. If this option is set to RETURN ON ERROR, the database query launched by an SSP may return to the SSP by the SCP database when a routing failure occurs.

For all 800+ calls, the SCCP option is set to RETURN ON ERROR. Part of the message returned to the database is a diagnostic field. Possible values for the diagnostic field are subsystem failure, unequipped user, and subsystem congestion.

In a PVN, the NSCOUTSV count is zero.

Associated registers

None

Extension registers

None

Associated logs

None

NSCQUERY- Canada only

Register type

Peg

Description

NSCQUERY that counts 800 database queries and are sent by call processing uses the transaction capabilities application part (TCAP). This register also counts database queries required for PVN calls.

Associated registers

None

Extension registers

None

Associated logs

None

NSCSFLEA

Register type

Peg

Description

NSCSFLEA increases when the first stage of signaling (KP + OZZ + XXX + ST) from the EAEO indicates an NSC call or a PVN call, but either no second-stage signaling is received or the second stage is incomplete.

Associated registers

None

Extension registers

None

Associated logs

None

NSCSFLTO

Register type

Peg

Description

NSCSFLTO increases when a reply is not sent back to the SSP from the SCP within the time interval specified in table NSCDEFS.

The call routes to reorder (RODR) treatment.

This register also applies to calls on the PVN.

Associated registers

None

Extension registers

None

Associated logs

None

NSCT2TO

Register type

Peg

Description

NSCT2TO increases when the SSP sends a query to the SCP and does not receive a response message from the SCP within the T2 time interval specified in table NSCDEFS.

The T2 time interval is an optional parameter of table NSCDEFS. NSCT2TO will always be zero for keys where the corresponding tuples in table NSDEFS are not entered with the T2 timeout option.

Associated registers

None

Extension registers

None

Associated logs

None

NSCTIOVF

Register type

Peg

Description

NSCTIOVF increases when an SSP NSC call fails because the NSC transaction identification is not available in the SSP. This register also applies to PVN calls.

The call routes to reorder (RODR) treatment.

The office parameter uses NO_OF_TRANSACTION_IDS in table OFCENG to allocate the number of transaction identifiers available to the SSP for launching database queries to an SCP database.

Associated registers

None

Extension registers

None

Associated logs

None

NSCUNSOR- Canada only

Register type

Peg

Description

NSCUNSOR counts not requested responses that are received by an SSP from an SCP. Not requested responses from the database do not have a corresponding query.

Examples of not requested responses are those in which

- the transaction identification in the response is out of range (greater than the maximum number of queries)
- the transaction identification does not have a corresponding call connected to it
- a response to a database query returns after the database query has timed out

It is not correct to wait for every response beyond the timeout period, because all the transaction identifiers could be lost during the wait. The database timeout value should be set so that all normal responses (that is, the responses not involving database or network problems) can be received from the database within the timeout period. This register will generally indicate how many responses take too long.

NSCUNSOR counts false responses and late responses. The two are not distinguishable. This register also applies to the PVN system.

Associated registers

None

Extension registers

None

Associated logs

None

NSCVACDR- Canada only

Register type

Peg

Description

NSCVACDR increases if the database response indicates a vacant code. In a PVN system, the NSCVACDR count is zero.

The call is routes to vacant code (VACT) treatment.

Associated registers

None

Extension registers

None

Associated logs

None

NSCACG

Description

OM group Number Services Code Automatic Call Gapping (NSCACG) provides information on the performance of automatic call gapping (ACG) for number services code (NSC) calls. The Service Management System (SMS) uses ACG to implement network management controls.

The following table lists the key and info fields associated with OM group NSCACG:

Key field	Info field
NSC_INDEX	None

Related functional groups

The following functional groups associated with OM group NSCACG:

- Common Channel Signaling 7 (CCS7)
- 800 Plus (800+) Service
- E800 Service
- PVN

Registers

The following table lists the registers associated with OM group NSCACG and what they measure. For a detailed description of a register, click on the register name.

Registers for OM group NSCACG (Sheet 1 of 2)

Register name	Measures
NSCATMPT	NSC attempts
NSCBKMCC	NSC blocked mass calling controls
NSCBKSIC	NSC blocked by Service Management System
NSCBKSOC	NSC blocked SCP overload controls
NSCBKVC	NSC blocked vacant (VACT) codes
NSCCOMC	NSC mass calling control list overflow

Registers for OM group NSCACG (Sheet 2 of 2)

Register name	Measures
NSCCONPN	NSC non-purchased NPA control list overflow
NSCCOSCP	NSC service control point (SCP) control list overflow
NSCCOSI	NSC service management system (SMS)-initiated control list overflow
NSCCOSVC	NSC six-digit vacant (VACT) code control list overflow
NSCCOTVC	NSC ten-digit vacant (VACT) code control list overflow

NSCATMPT

Register type

Peg

Description

NSCATMPT counts line and trunk originating E800 calls that reach the SSP. The calls contain OM Registers: NSC_NSCORIG, NSC_NSCATIN, NSCACG_NSCBKVC, NSCACG_NSCBKSOC, NSCACG_NSCBKMCC, and NSCACG_NSCBKSIC.

Associated registers

NSXACG_NSCATMPT, NSC_NSCORIG, NSC_NSCATIN, NSCBKVC, NSCBKSOC, NSCBKMCC, NSCBKSIC

Extension registers

None

Associated logs

None

NSCBKMCC

Register type

Peg

Description

NSCBKMCC counts NSC calls that ACG controls for ten-digit mass calling controls block.

The system routes NSC calls blocked for mass calling controls to busy line (BUSY) treatment.

Associated registers

None

Extension registers

None

Associated logs

None

NSCBKSIC

Register type

Peg

Description

NSCBKSIC counts NSC calls that ACG controls block. The SMS initiates ACGs and forwards them through a service control point to the correct service switching point.

The system routes the NSC calls that ACG-initiated controls block to reorder (RODR) treatment.

Associated registers

None

Extension registers

None

Associated logs

None

NSCBKSOC

Register type

Peg

Description

NSCBKSOC counts NSC calls that ACG controls for SCP overloads block.

NSC calls blocked by SCP overload controls route to general no circuit (GNCT) treatment.

Associated registers

None

Extension registers

None

Associated logs

None

NSCBKVC

Register type

Peg

Description

NSCBKVC counts calls that ACG controls block. The system applies ACG controls when one of the following occurs: VACT codes receive too many calls, or too many calls are made from numbering plan areas (NPA) that are not purchased for NSCs.

The NSC calls blocked for greater than necessary calling to VACT codes that the system routes to VACT code treatment. The system routes NSC calls blocked for greater than necessary calling. The systems routes the calls that come from non-purchased NPAs and go to not authorized INWATS (UNIN) call treatment.

Associated registers

None

Extension registers

None

Associated logs

None

NSCCOMC

Register type

Peg

Description

NSCCOMC increases when an ACG control cannot apply to a code for an 800 number because the control list is full.

Associated registers

None

Extension registers

None

Associated logs

None

NSCCONPN

Register type

Peg

Description

NSCCONPN increases when an ACG control on a code is not placed because the control list for calls is full. The calls come from NPAs that are not purchased for NSC use.

The DMS-100 can control a maximum of 64 ten-digit NSCs and 256 six-digit NSCs.

Associated registers

None

Extension registers

None

Associated logs

None

NSCCOSCP

Register type

Peg

Description

NSCCOSCP increases when a required ACG control that SCP overloads is not placed on a code. The SCP overload is not placed on a code because the control list is full.

The DMS-100 can control a maximum of 64 ten-digit NSCs and 256 six-digit NSCs.

Associated registers

None

Extension registers

None

Associated logs

None

NSCCOSCP

Register type

Peg

Description

NSCCOSCP increases when a required ACG control that SCP overloads is not placed on a code. The SCP overload is not placed on a code because the control list is full.

The DMS-100 can control a maximum of 64 ten-digit NSCs and 256 six-digit NSCs.

Associated registers

None

Extension registers

None

Associated logs

None

NSCCOSI

Register type

Peg

Description

NSCCOSI increases when an ACG control that the SMS initiates is not placed on a code because the control list is full.

The DMS-100 can control a maximum of 64 ten-digit NSCs and 256 six-digit NSCs.

Associated registers

None

Extension registers

None

Associated logs

None

NSCCOSVC

Register type

Peg

Description

NSCCOSVC increases when an ACG control is not placed on a VACT six-digit code. The ACG control is not placed on a code because the control list for six-digit codes is full. The ACG control is also not placed on a code because the control list is full.

The DMS-100 can control a maximum of 64 ten-digit NSCs and 256 six-digit NSCs.

Associated registers

None

Extension registers

None

Associated logs

None

NSCCOTVC

Register type

Peg

Description

NSCCOTVC increases when an ACG control is not placed on a VACT ten-digit code. An ACG is not placed on a code because the control list for ten-digit codes is full.

The DMS-100 can control a maximum of 64 ten-digit NSCs and 256 six-digit NSCs.

Associated registers

None

Extension registers

None

Associated logs

None

NWMFRRCT

Description

OM group Network Management Flexible Reroute (NWMFRRCT) counts calls that are rerouted, and rerouted calls that fail to find an idle VIA route. The counts are made for each switch.

Calls are rerouted from an in-chain route to a VIA route. In-chain routes are trunk groups that carry calls according to the rules for routing in a hierarchical network. VIA routes are trunk groups that carry rerouted calls for which the network routing rules for the hierarchical network are ignored.

The following table lists the key and info fields associated with OM group NWMFRRCT.

Key field	Info field
None	None

Related functional groups

There are no functional groups associated with OM group NWMFRRCT.

Registers

The following table lists the registers associated with OM group NWMFRRCT and what they measure. For a detailed description of a register, click on the register name.

Registers for OM group NWMFRRCT

Register name	Measures
FRRATTCT	Flexible reroutes attempt control
FRRFLCT	Flexible reroutes failed control

FRRATTCT

Register type

Peg

Description

FRRATTCT counts calls that are rerouted to a VIA route list.

Associated registers

None

Extension registers

FRRATTC2

Associated logs

None

FRRFLCT

Register type

Peg

Description

FRRFLCT counts rerouted calls that fail to find an idle VIA route list.

Associated registers

None

Extension registers

FRRFLCT2

Associated logs

None

NWMSILC

Description

OM group Network Management Selective Incoming Load Control (NWMSILC) counts calls that the network management selective-incoming load control (SILC) blocks.

The SILC permits incoming and two-way trunk groups to limit incoming calls according to preset rate, percentage values, or both. The preset rate and percentage value are in Table NWMIDOC.

When the SILC blocks a call, the system sends a start dial signal to permit the far-end sender to out-pulse digits. The system ignores the digits and connects a tone in the peripheral module to warn the caller that the call failed. This action makes the trunk available for normal call processing after the caller disconnects.

The following table lists the key and info fields associated with OM group NWMSILC:

Key field	Info field
CLLI for the trunk group. The CLLI is the external identifier for the trunk group.	None

Related functional groups

There are no functional groups associated with OM group NWMSILC.

Registers

The following table lists the registers associated with OM group NWMSILC and what they measure. For a detailed description of a register, click on the register name.

Registers for OM group MWMSILC

Register name	Measures
TRKSILC	Trunk selective incoming load control

TRKSILC

Register type
Peg

Description

TRKSILC increases when the selective incoming load control blocks a trunk group. Load controls block a trunk group when the trunk group receives too many calls.

Associated registers

None

Extension registers

None

Associated logs

None

NWMTGCNT

Description

OM group Network Management Trunk Group Control (NWMTGCNT) counts calls that are encountered and affected by each type of network management trunk group (NWM TG) control.

NWM TG controls are classified as either expansive or protective. Expansive trunk group controls modify the available routes a call can take, thereby increasing the likelihood that a call will reach its proper destination when a network is congested. Protective trunk group controls protect the network when it is congested by preventing calls from entering the network.

The following are examples of protective trunk groups and their purpose:

- Directional reservation (DRE) gives priority to incoming calls on a controlled trunk group, rather than outgoing calls.
- Protective reservation (PRE) gives priority to direct routed calls offered to a controlled trunk group.
- Cancel-to (CANT) blocks calls that access a controlled trunk group.
- SKIP prevents calls from being offered to a controlled trunk group, thereby causing those calls to advance to the next trunk group in a route list.
- Cancel-from (CANT) blocks calls that overflow a controlled trunk group.
- Incoming trunk busy (ITB) restricts the number of incoming calls on a controlled trunk group that has the remote-make-busy capability (assigned in table TRKSGRP). This control removes from service a percentage of the trunks in a trunk group if the number of idle trunks falls below a predefined threshold.
- Selective trunk reservation (STR) blocks outgoing calls if the number of idle trunks in a trunk group falls below a predefined threshold.
- Bidirectional trunk group reservation control (BRC) blocks outgoing calls under the following condition: the number of idle trunks falls below the number of trunks reserved for incoming calls, the number of outgoing calls is greater than or equal to the number of trunks reserved for outgoing calls, and the number of priority calls is greater than or equal to the number of trunks reserved for priority calls.

The following table lists the key and info fields associated with OM group NWMTGCNT:

Key field	Info field
NWM_GRP_CONTROL. The names of the NWM TG controls make up the key to this group.	None

Related functional groups

There are no functional groups associated with OM group NWMTGCNT.

Registers

The following table lists the registers associated with OM group NWMTGCNT and what they measure. For a detailed description of a register, click on the register name.

Registers for OM group NWMTGCNT

Register name	Measures
NWMTGAFF	NWM TG affected
NWMTGATT	NWM TG attempts
BSSKIP	Bearer Service Skip
BSSNSPCH	BSS No capacity or speech
BSSN3K1	Register BSS No channels available for 3.1kHz
BSSN64K	BSS No 64kbit/s unrestricted capacity available
BSSNSPCU	BSS No capacity for speech
BSSN3K1U	BSS No channels available for 3.1kHz
BSSN64KU	BSS No channels available for 3.1kHz

NWMTGAFF

Register type
Peg

Description
NWMTGAFF counts calls that are directly affected by an NWM TG control. Depending on the control type, affected calls may be blocked, or may skip to the next trunk group in the route list.

ITB messages cannot be recorded. The entry corresponding to ITB is always zero.

NWMTGAFF increases when BRC prevents a call from accessing the trunk group to which it is routed.

Associated registers
None

Extension registers
None

Associated logs
None

NWMTGATT

Register type
Peg

Description
NWMTGATT counts calls that encounter the NWMTG control type.

ITB messages cannot be recorded. The entry corresponding to ITB is always zero.

NWMTGATT increases when BRC is active on a trunk group selected for an outgoing call.

Associated registers
None

Extension registers
None

Associated logs
None

BSSKIP

Register type
Peg

Description

BSSKIP measures the number of trunk groups that have been skipped over during routing procedure, because they have had BSSKIP control active.

Associated registers

None

Extension registers

None

Associated logs

None

BSSNSPCH

Register type

Peg

Description

BSSNSPCH counts how many No capacity for speech signals have been received from DCME.

- PEG: Y
- USAGE: N
- HIGH WATER:N
- OTHER: N/A

Associated registers

None

Extension registers

None

Associated logs

DCME105

BSSN3K1

Register type

Peg

Description

BSSN3K1 counts how many no channels available for 3.1 kHz signals have been received from DCME.

- PEG: Y
- USAGE: N

- HIGH WATER: N
- OTHER: N/A

Associated registers
None

Extension registers
None

Associated logs
DCME105

BSSN64K

Register type
Peg

Description
This usage count is accumulated as a result of a 10 second scan of ’No 64kbit/s unrestricted capacity available' signal.

- PEG: N
- USAGE: Y
- HIGH WATER: N
- OTHER: N/A

Associated registers
None

Extension registers
None

Associated logs
DCME105

BSSNSPCU

Register type
Peg

Description
This usage count is accumulated as a result of a 10 second scan of ’No capacity for speech' signal.

- PEG: N
- USAGE: Y

- HIGH WATER: N
- OTHER: N/A

Associated registers
None

Extension registers
None

Associated logs
None

BSSN3K1U

Register type
Peg

Description
This usage count is accumulated as a result of a 10 sec scan of ’No channels available for 3.1kHz' signal.

- PEG: Y
- USAGE: N
- HIGH WATER: N
- OTHER: N/A

Associated registers
None

Extension registers
None

Associated logs
DCME105

BSSN64KU

Register type
Peg

Description
This usage count is accumulated as a result of a 10 sec scan of ’No 64kbit/s unrestricted capacity available' signal.

- PEG: N
- USAGE: Y

- HIGH WATER: N
- OTHER: N/A

Associated registers

None

Extension registers

None

Associated logs

None

NX25L2

Description

OM group NX25 Level 2 (NX25L2) contains the NX25 Level 2 OMs that refer to the data links.

The following table lists the key and info fields associated with OM group NX25L2:

Key field	Info field
None	None

Related functional groups

There are no functional groups associated with OM group NX25L2.

Registers

The following table lists the registers associated with OM group NX25L2 and what they measure. For a detailed description of a register, click on the register name.

Registers for OM group NX25L2

Register name	Measures
NLINKUP	NX25 Link Up
NLINKDN	NX25 Link Down
NBSYNTRN	NX25 Busy Not Transferred
NBSYNACK	NX25 Busy Not Acknowledged

NLINKUP

Register type
Peg

Description
NLINKUP increments when an NX25 link is successfully brought into service.

Associated registers
None

Extension registers
None

Associated logs
NPAC125

NLINKDN

Register type
Peg

Description
NLINKDN increments when an NX25 link is brought down.

Associated registers
None

Extension registers
None

Associated logs
NPAC126

NBSYNTRN

Register type
Peg

Description
NBSYNTRN increments when a packet is refused because there are currently seven untransferred packets.

> ***Note:*** A packet is a group of binary digits including data and call control signals processed as a composite whole. The data, call control signals, and possible error control information are arranged in a specified format.

Associated registers
None

Extension registers
None

Associated logs
None

NBSYNACK

Register type

Peg

Description

NBSYNACK increments when a packet is refused because the last packet has not been acknowledged, and the timer has not expired.

> ***Note:*** A packet is a group of binary digits including data and call control signals processed as a composite whole. The data, call control signals, and possible error control information are arranged in a specified format.

Associated registers

None

Extension registers

None

Associated logs

None

NX25L3

Description

OM group NX25 Level 3 (NX25L3) contains the OMs that refer to the virtual channel identifiers (VCI) on the 6X91BA card.

The following table lists the key and info fields associated with OM group NX25L3:

Key field	Info field
None	None

Related functional groups

There are no functional groups associated with OM group NX25L3.

Registers

The following table lists the registers associated with OM group NX25L3 and what they measure. For a detailed description of a register, click on the register name.

Registers for OM group NX25L3

Register name	Measures
NVCIUP	NX25 Virtual Channel Identifier Up
NVCIFAIL	NX25 Virtual Channel Identifier Initialization Failed
NVCINRMT	NX25 Virtual Channel Identifier Normal Termination
NVCIABRT	NX25 Virtual Channel Identifier Aborted

NVCIUP

Register type
Peg

Description
NVCIUP increments when a VCI is successfully brought into service.

Associated registers
None

Extension registers
None

Associated logs
NPAC110

NVCIFAIL

Register type
Peg

Description
NVCIFAIL increments when a VCI initialization fails.

Associated registers
None

Extension registers
None

Associated logs
NPAC115

NVCINRMT

Register type
Peg

Description
NVCINRMT increments when a VCI terminates normally.

Associated registers
None

Extension registers
None

Associated logs
NPAC111

NVCIABRT

Register type
Peg

Description
NVCIABRT increments when a VCI is aborted.

Associated registers

None

Extension registers

None

Associated logs

NPAC116

NX25MLP

Description

OM group NX25 Multilink Procedures (NX25MLP) contains the multilink procedure (MLP)-based OMs. These OMs are pegged for the maximum number of MLP groups. Each multilink group has its own set of registers that are pegged once each time an event occurs.

The following table lists the key and info fields associated with OM group NX25MLP:

Key field	Info field
MLGID	None

Related functional groups

There are no functional groups associated with OM group NX25MLP.

Registers

The following table lists the registers associated with OM group NX25MLP and what they measure. For a detailed description of a register, click on the register name.

Registers for OM group NX25MLP

Register name	Measures
MLINKUP	Multilink Up
MLINKDN	Multilink Down
MGRPUP	Multilink Group Up
MGRPDN	Multilink Group Down
MFRMRX	Multilink Frame Retransmissions
MTIMEOUT	Multilink Timeout
MFRMLOST	Multilink Procedure Frame Lost
MWINDERR	Multilink Window Error

MLINKUP

Register type

Peg

Description

MLINKUP increments when a link in an MLP group is brought up.

Associated registers

None

Extension registers

None

Associated logs

NPAC200

MLINKDN

Register type

Peg

Description

MLINKDN increments when a link in the MLP group fails.

Associated registers

None

Extension registers

None

Associated logs

NPAC201

MGRPUP

Register type

Peg

Description

MGRPUP increments when an entire MLP group is brought into service.

Associated registers

None

Extension registers

None

Associated logs
NPAC201

MGRPDN

Register type
Peg

Description
MGRPDN increments when an entire MLP group fails and is put out of service.

Associated registers
None

Extension registers
None

Associated logs
NPAC202

MFRMRX

Register type
Peg

Description
MFRMRX is the number of MLP frame retransmissions.

> ***Note:*** A frame is one complete cycle of events in time division multiplexing. The frame usually includes a sequence of time slots for the various subchannels and extra bits for control.

Associated registers
None

Extension registers
None

Associated logs
None

MTIMEOUT

Register type
Peg

Description

MTIMEOUT register increments when the lost frame timer expires on a lost frame.

> ***Note:*** A frame is one complete cycle of events in time division multiplexing. The frame usually includes a sequence of time slots for the various subchannels and extra bits for control.

Associated registers

None

Extension registers

None

Associated logs

None

MFRMLOST

Register type

Peg

Description

MFRMLOST increments when an incoming MLP frame is lost.

> ***Note:*** A frame is one complete cycle of events in time division multiplexing. The frame usually includes a sequence of time slots for the various subchannels and extra bits for control.

Associated registers

None

Extension registers

None

Associated logs

None

MWINDERR

Register type

Peg

Description

MWINDERR increments when an MLP window error occurs.

> ***Note:*** A frame is one complete cycle of events in time division multiplexing. The frame usually includes a sequence of time slots for the various subchannels and extra bits for control.

Associated registers

None

Extension registers

None

Associated logs

None

Description

Operator Services System Advanced Intelligent Network (OSSAIN) Data Communications

OADATCOM (OSSAIN Data Communications) is created for data communications operational measurements. The following OM groups are also created for data communications operational measurements:

- OANODEDC - OSSAIN Node Data Communications
- OASNPLDC - OSSAIN Session Pool Data Communications

OM group OADATCOM provides peg counts for OSSAIN data communications messaging events. It provides counts for the total number of messages sent from the CM to other nodes and the total number of messages received by the CM from other nodes. Counts of messages are broken down into successful counts and failure counts.

OM group OADATCOM provides two tuples for each office.

Key field	Info field
0 to 1	UDP or TCP

The Info field value UDP or TCP is associated with the protocol used by the OSSAIN application. Currently call processing and maintenance use UDP, and QMS MIS uses TCP.

Related functional groups

Functional group Enhanced Services (ENSV0001) is associated with OM group OADATCOM. In release NA009, the group is changed to OSSAIN (OSAN0001).

Registers

The following table lists the registers associated with OM group OADATCOM and what they measure. For a description of a register, click on the register name.

Registers for OM group OADATCOM

Register name	Measures
OMSGRCFL	OSSAIN message receive failure
OMSGRCSC	OSSAIN message receive success
OMSGRCV	OSSAIN message received
OMSGSND	OSSAIN message send requested
OMSGSNFL	OSSAIN message send failure
OMSGSNSC	OSSAIN message send success
ORCVRTFL	OSSAIN message receive route failure
OSNDRTFL	OSSAIN message send route failure

OMSGRCFL

Register type
Peg

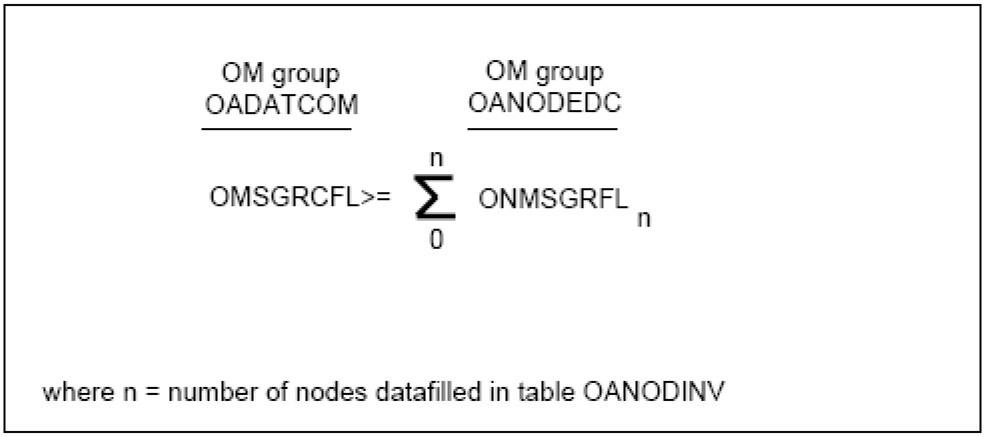
Description
OSSAIN message receive failure

This register is pegged each time data communications encounters an error while attempting to forward an external node originated message to the destination DMS process. This can be caused by a failure in the DMS switch internal messaging system or data transport interface. This register is pegged also during failures indicated by register ORCVRTFL.

> ***Note:*** Note: This register can be validated by summing the receive failed counts, register ONMSGRFL, of each node datafilled in table OANODINV.
>
> OMSGRCFL = OMSGRCV - OMSGRCSC
> OMSGRCFL >= ORCVRTFL

This register is related to OM group OANODEDC register ONMSGRFL as follows: OMSGRCFL is equal or greater than the value of

ONMSGRFL for each node, added over all nodes in table OANODINV. This calculation is represented also as follows:



$$\text{OMSGRCFL}>=\sum_{0}^{n}\text{ONMSGRFL}_{n}$$

where n = number of nodes datafilled in table OANODINV

Associated registers
OMSGRCV, OMSGRCSC, ORCVRTFL, and ONMSGRFL

Extension registers
There are no extension registers.

Associated logs
Log numbers: OAIN605 and OAIN606

OMSGRCSC

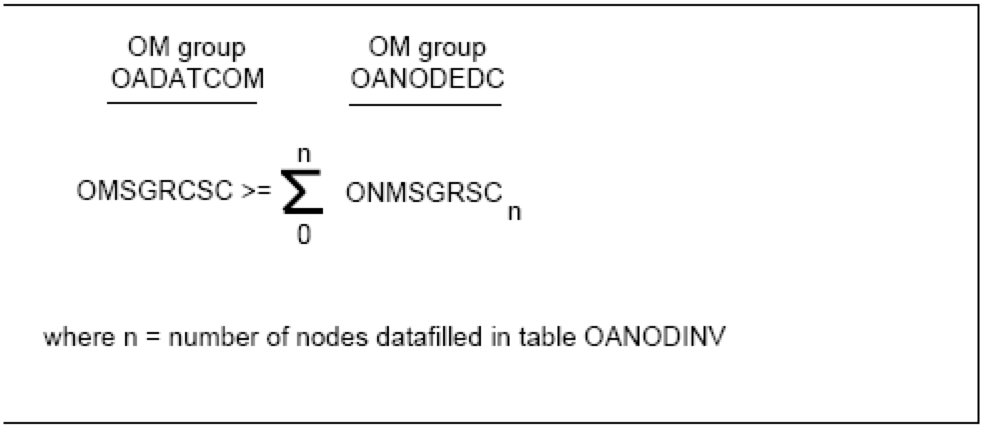
Register type
Peg

Description
OSSAIN message receive success

This register is pegged when the CM's data communications software is able to successfully process an incoming message.

> ***Note:*** Note: This register can be validated by summing the successful message receives, register ONMSGRSC, of each node datafilled in table OANODINV.
>
> OMSGRCSC = OMSGRCV - OMSGRCFL

This register is related to OM group OANODEDC as follows:



$$OMSGRCSC >= \sum_{0}^{n} ONMSGRSC_{n}$$

where n = number of nodes datafilled in table OANODINV

Associated registers
OMSGRCV, OMSGRCFL, and ONMSGRSC

Extension registers
OMSGRCS2

Associated logs
There are no associated logs.

OMSGRCV

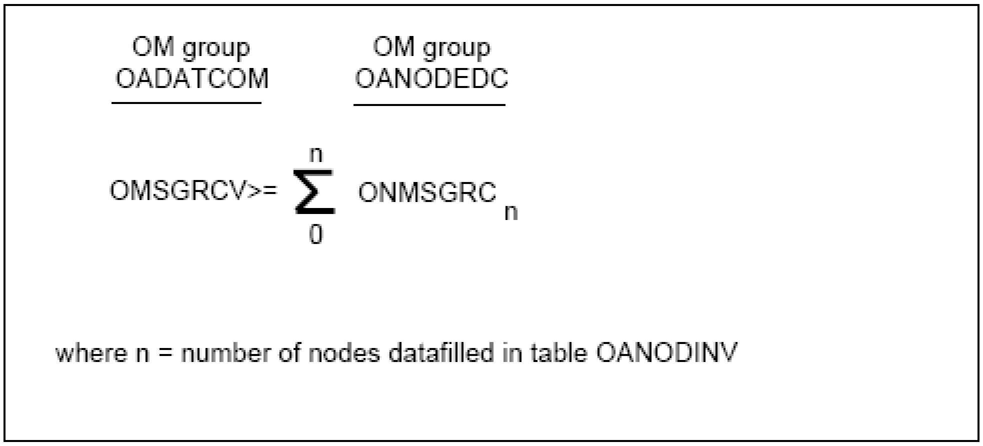
Register type
Peg

Description
OSSAIN message received

This register is pegged for a specific node each time an incoming message, originating from an external node, is received from that node. This includes both call processing and maintenance messages.

> ***Note:*** This register can be validated on a per node basis by adding the message receive success register and the message receive failure register that apply to the node of interest.
>
> OMSGRCV = OMSGRCSC + OMSGRCFL

This register is related to OM group OANODEDC as follows:



$$\mathrm{OMSGRCV} >= \sum_{0}^{n} \mathrm{ONMSGRC}_{n}$$

where n = number of nodes datafilled in table OANODINV

Associated registers

OMSGRCSC, OMSGRCFL, and ONMSGRC

Extension registers

There are no extension registers.

Associated logs

There are no associated logs.

OMSGSND

Register type

Peg

Description

OSSAIN message send requested

This register is pegged each time the data communications software is requested to send a message. This includes requests from call processing, maintenance, and Ethernet based QMS MIS messages.

> ***Note:*** This register can be validated by adding the message send success register and the message send failure register.
>
> OMSGSND = OMSGSNSC + OMSGSNFL

This register is related to OM group OANODEDC as follows:

$$\overset{\text{OM group OADATCOM}}{\text{OMSGSND}} >= \sum_{0}^{n} \overset{\text{OM group OANODEDC}}{\text{ONMSGSN}_n}$$

where n = number of nodes datafilled in table OANODINV

Associated registers
OMSGSNSC, OMSGSNFL, and OMSGSND

Extension registers
OMSGSND2

Associated logs
There are no associated logs.

OMSGSNFL

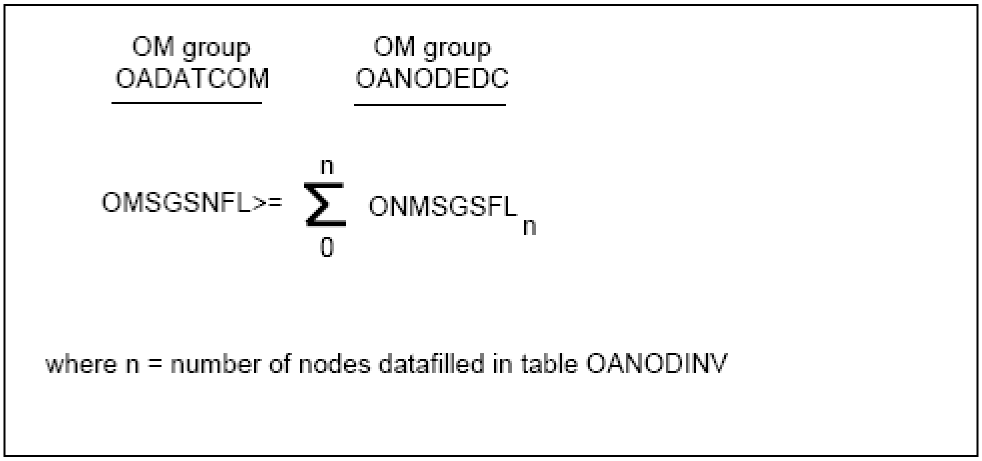
Register type
Peg

Description
OSSAIN message send failure

This register is pegged each time data communications encounters an error while attempting to send an outgoing message. This can be caused by a data transport layer failure. This register is pegged also for reasons indicated by register OMSGSRTFL.

> ***Note:*** This register can be validated by summing the failed message sends, register ONMSGSFL, of each node datafilled in table OANODINV.
>
> OMSGSNFL = OMSGSND - OMSGSNSC OMSGSNFL >= OSNDRTFL

This register is related to OM group OANODEDC as follows:



OM group OADATCOM

OM group OANODEDC

$$OMSGSNFL >= \sum_{0}^{n} ONMSGSFL_{n}$$

where n = number of nodes datafilled in table OANODINV

Associated registers
OMSGSND, OMSGSNSC, OSNDRTFL, and ONMSGSFL

Extension registers
There are no extension registers.

Associated logs
Log number: OAIN607

OMSGSNSC

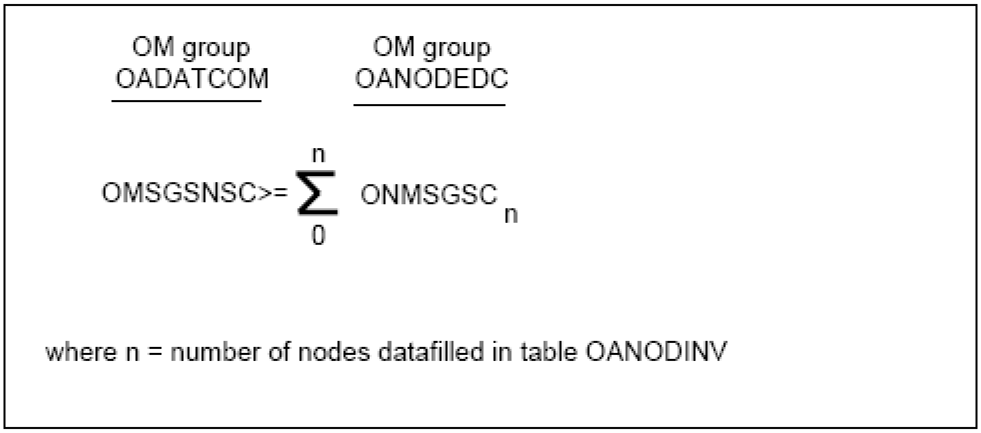
Register type
Peg

Description
OSSAIN message send success

This register is pegged when the CM data communications software is able to successfully process an outgoing message. Note that call processing and maintenance under OSSAIN uses non-guaranteed messaging, while QMS MIS uses TCP for guaranteed' messaging. Pegging this register does not indicate that the message actually arrived at the destination node.

> ***Note:*** This register can be validated by summing the successful message sends, register ONMSGSSC, of each node datafilled in table OANODINV.
>
> OMSGSNSC = OMSGSND - OMSGSNFL

This register is related to OM group OANODEDC as follows:



OM group OADATCOM

OM group OANODEDC

$$OMSGSNSC >= \sum_{0}^{n} ONMSGSC_{n}$$

where n = number of nodes datafilled in table OANODINV

Associated registers
OMSGSND, OMSGSNFL, and ONMSGSSC

Extension registers
OMSGSNS2

Associated logs
There are no associated logs.

ORCVRTFL

Register type
Peg

Description
OSSAIN message receive route failure

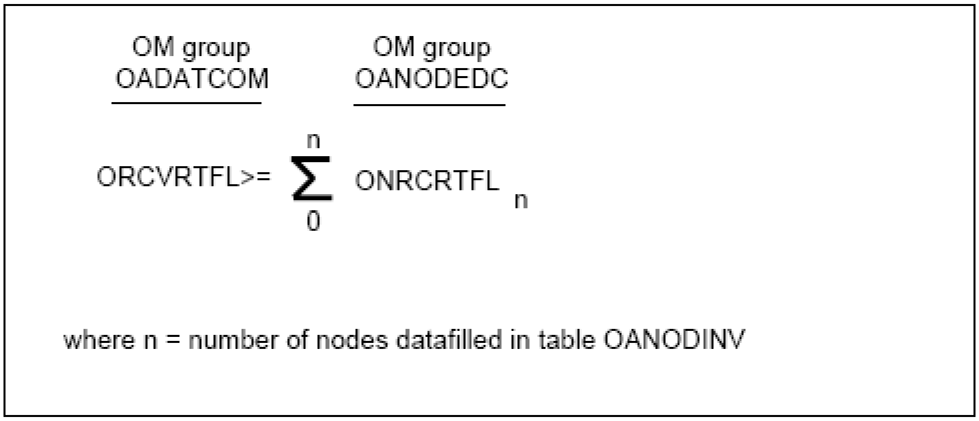
This register is pegged each time the data communications software is unable to determine the destination of an external node originated message. This can be caused by a variety of reasons including:

- invalid protocol version
- invalid class header identifier
- invalid operation offset
- invalid message length
- invalid node identifier
- invalid session pool identifier
- invalid session identifier
- invalid network address

- invalid session pool state
- invalid node pool state
- invalid message size
- pool / node identifier mis-match
- corrupted message

> ***Note:*** This register can be validated by summing the receive route failed counts, register ONRCRTFL, of each node datafilled in table OANODINV.
>
> ORCVRTFL <= OMSGRCFL

This register is related to OM group OANODEDC as follows:



OM group OADATCOM

OM group OANODEDC

$$\text{ORCVRTFL} >= \sum_{0}^{n} \text{ONRCRTFL}_{n}$$

where n = number of nodes datafilled in table OANODINV

Associated registers
OMSGRCFL and ONRCRTFL

Extension registers
There are no extension registers.

Associated logs
Log number: OAIN605 and OAIN606

OSNDRTFL

Register type
Peg

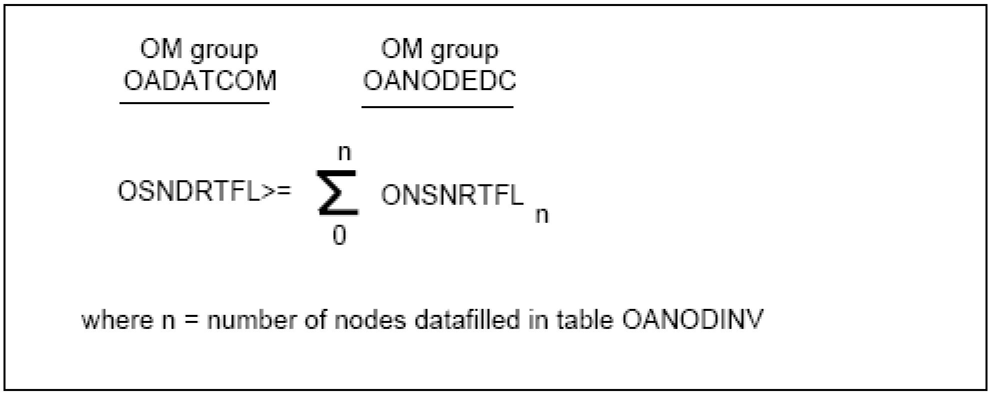
Description
OSSAIN message send route failure

This register is pegged each time the data communications software is unable to determine the destination of an outgoing message. This can be caused by the following reasons.

- invalid node identifier
- invalid session pool identifier
- invalid session identifier
- pool / node identifier mis-match
- corrupted message

> ***Note:*** This register can be validated by summing the message send route failures, register ONSNRTFL, of each node datafilled in table OANODINV.
>
> OSNDRTFL <= OMSGSNFL

This register is related to OM group OANODEDC as follows:



OM group OADATCOM | OM group OANODEDC

$$\text{OSNDRTFL} >= \sum_{0}^{n} \text{ONSNRTFL}_{n}$$

where n = number of nodes datafilled in table OANODINV

Associated registers

OMSGSNFL and ONSNRTFL

Extension registers

There are no extension registers.

Associated logs

There are no associated logs.

OAFLTRIG

Description

OM group Operator Services System Advanced Intelligent Network (OSSAIN) Float Triggers (OAFLTRIG) provides peg counts for actions related to OSSAIN float trigger processing. These measurements cover float trigger processing causing call control to transfer to an OSSAIN function or control list.

The OSSAIN call float trigger tables (OACNNPRF, OADSCPRF, OATLKPRF, OACAUPRF, and OADTFPRF) must be datafilled with trigger events and actions, and a datafilled trigger event must occur for these registers to be pegged.

The following table lists the key and info fields associated with OM group OAFLTRIG:

Key field	Info field
None	None

Related functional groups

ENSV Enhanced Services (ENSV0001) is associated with OM group OAFLTRIG.

Registers

The following table lists the registers associated with OM group OAFLTRIG and what they measure. For a detailed description of a register, click on the register name.

Registers for OM group OAFLTRIG

Register name	Measures
OAFLTCTL	OSSAIN Float to a Control List
OAFLTFUN	OSSAIN Float to a Function
OATRIGFL	OSSAIN Trigger Failure

OAFLTCTL

Register type
Peg

Description
Calls in the floated state that trigger causing call control to be successfully passed to an OSSAIN Control List (in table OACTLDEF).

> ***Note:*** For test case(s), make an OSSAIN call that performs float trigger processing to an OSSAIN Control List.

Associated registers
None

Extension registers
None

Associated logs
None

OAFLTFUN

Register type
Peg

Description
Calls in the floated state that triggered causing call control to be successfully passed to an OSSAIN Function (in table OAFUNDEF).

> ***Note:*** For test case(s), make an OSSAIN call that performs float trigger processing to an OSSAIN Function.

Associated registers
None

Extension registers
None

Associated logs
None

OATRIGFL

Register type
Peg

Description
OATRIGFL indicates a trigger failure due to calls in the floated state that trigger and attempt to pass control to a Traffic Operator Position System (TOPS) automated system. Passing call control to a TOPS automated system via trigger processing is not allowed. This can occur as a result of 1) passing control to an OSSAIN Function which is a

TOPS automated system or 2) passing control to an OSSAIN Control List in which the first OSSAIN Function is a TOPS automated system.

> ***Note:*** For test case(s), make an OSSAIN call that performs float trigger processing to an OSSAIN Function datafilled as a TOPS automated system.

Associated registers
None

Extension registers
None

Associated logs
OAIN303

OAINNODE

Description

OM group OSSAIN Node Maintenance (OAINNODE) pegs state changes for all Operator Services System Advanced Intelligent Network (OSSAIN) nodes including Operator Services Node-Maintenance (OSNM), Operator Services Node (OSN), and Operator Services Systems Advanced Intelligent Network Centralization (OSAC) nodes.

The following table lists the key and info fields associated with OM group OAINNODE:

Key field	Info field
OAINNODE can be indexed by either of the following: NODEID {0 to 767}: Key field for OANODINV.NODENAME: Name associated with NODEID.	OAINNODE_INDEX_OMINFO - This name can be up to 16 characters long.

Related functional groups

Enhanced Services (ENSV0001) is associated with OM group OAINNODE.

Registers

The following table lists the registers associated with OM group OAINNODE and what they measure. For a detailed description of a register, click on the register name.

Registers for OM group OAINNODE (Sheet 1 of 2)

Register name	Measures
NAUDFAIL	Node Audit Fail
NDINSV	Node in Service
NDISTB	Node in Service Trouble
NDMANB	Node Manual Busy
NDSYSB	Node System Busy

Registers for OM group OAINNODE (Sheet 2 of 2)

Register name	Measures
NRTSFAIL	Node RTS Fail
NTSTFAIL	Node Test Fail

NAUDFAIL

Register type
Peg

Description
NAUDFAIL is pegged when the node goes system busy due to audit failure.

Associated registers
NDSYSB

Extension registers
None

Associated logs
PM102

NDINSV

Register type
Peg

Description
NDINSV is pegged when the node is brought into service.

Associated registers
None

Extension registers
None

Associated logs
PM106

NDISTB

Register type
Peg

Description

NDISTB is pegged when the node goes ISTB due to the session pool going out of service.

Associated registers

None

Extension registers

None

Associated logs

PM128

NDMANB

Register type

Peg

Description

NDMANB is pegged when the node is manually busied from the MAP.

Associated registers

None

Extension registers

None

Associated logs

PM105

NDSYSB

Register type

Peg

Description

NDSYSB is pegged under the following conditions:

- The node goes system busy due to audit failure.
- The node goes system busy due to RTS failure.
- The node goes system busy due to a request from the remote node.

Associated registers

NAUDFAIL, NRTSFAIL

Extension registers

None

Associated logs
PM102

NRTSFAIL

Register type
Peg

Description
NRTSFAIL is pegged when the node goes system busy due to RTS failure.

Associated registers
NDSYSB

Extension registers
None

Associated logs
PM102

NTSTFAIL

Register type
Peg

Description
NTSTFAIL is pegged when the node fails a manual test.

Associated registers
None

Extension registers
None

Associated logs
PM100

OAINQMS

Description

OM group Operator Services System Advanced Intelligent Network (OSSAIN) Queue Management System (OAINQMS) provides peg counts for OSSAIN calls on a per queue basis. It provides counts for calls that request an OSSAIN session from the QMS call agent and manager (CAM) and also counts on the action taken by the CAM in response to the request.

The following table lists the key and info fields associated with OM group OAINQMS:

Key field	Info field
OSSAIN Call Queue (CQ0 - CQ254)	None

Related functional groups

ENSV Enhanced Services (ENSV0001) is associated with OM group OAINQMS.

Registers

The following table lists the registers associated with OM group OAINQMS and what they measure. For a detailed description of a register, click on the register name.

Registers for OM group OAINQMS (Sheet 1 of 2)

Register name	Measures
ABANDONC	Call Abandoned while in queue
DEFLCTCQ	Call Deflected
DENIEDCQ	Call Queuing Denied
GOTSESIM	Got Session Immediately
OVFLMXAP	Call Overflowed (No Call Queue Elements)
OVFLMXCQ	Call Overflowed (MAXSIZE exceeded)

Registers for OM group OAINQMS (Sheet 2 of 2)

Register name	Measures
QUEUEDC	Call Queued
SESRQSTD	Session Requested for OSSAIN call

ABANDONC

Register type

Peg

Description

Pegged when an OSSAIN call is abandoned by a subscriber while the call is in queue for a session.

> ***Note:*** For test case(s), make an OSSAIN call when no sessions to a service node are available and have the calling line go on hook while the call is queued.

Associated registers

None

Extension registers

None

Associated logs

None

DEFLCTCQ

Register type

Peg

Description

Pegged when a call destined for a call queue is deflected by the QMS CAM because no agent is available to serve the call, and the projected wait time for the call exceeds CDTIME datafilled for the queue in table QMSCQDEF.

> ***Note:*** For test case(s), make an OSSAIN call when no sessions to a service node are available, and ensure that the predicted wait time for the queue exceeds the CDTIME value datafilled in table QMSCQDEF for the queue.

Associated registers

SESRQSTD, QUEUEDC, GOTSESIM, OVFLMXCQ, OVFLMXAP, DENIEDCQ

Validation formula

SESRQSTD = QUEUEDC + GOTSESIM + DEFLCTCQ + OVFLMXCQ + OVFLMXAP + DENIEDCQ

Extension registers

None

Associated logs

None

DENIEDCQ

Register type

Peg

Description

Pegged when a call destined for a call queue is deflected by the QMS CAM because no agent is available to serve the call, and the QMS CAM is unable to queue the call for reasons other than those described for registers DEFLCTCQ, OVFLMXCQ, and OVFLMXAP.

> ***Note:*** There are no test case(s) for this register.

Associated registers

SESRQSTD, QUEUEDC, GOTSESIM, OVFLMXCQ, OVFLMXAP, DEFLCTCQ

Validation formula

SESRQSTD = QUEUEDC + GOTSESIM + DEFLCTCQ + OVFLMXCQ + OVFLMXAP + DENIEDCQ

Extension registers

None

Associated logs

None

GOTSESIM

Register type

Peg

Description

Pegged when a session is obtained immediately from the QMS CAM on request.

> ***Note:*** For test case(s), make an OSSAIN call and ensure that a session is immediately obtained.

Associated registers

SESRQSTD, QUEUEDC, DENIEDCQ, OVFLMXCQ, OVFLMXAP, DEFLCTCQ

Validation formula

SESRQSTD = QUEUEDC + GOTSESIM + DEFLCTCQ + OVFLMXCQ + OVFLMXAP + DENIEDCQ

Extension registers

GOTSESI2

Associated logs

None

OVFLMXAP

Register type

Usage

Description

Pegged when a call destined for a call queue is overflowed by the QMS CAM because no agent is available to serve the call, and the call queuing elements for the application have been exhausted (as specified by datafill in table QAPLNDEF).

> ***Note:*** For test case(s), make an OSSAIN call when no sessions to a service node are available. Ensure that the number of calls in queue for the OSSAIN application equals the value datafilled by field CQELEMS, in table QAPLNDEF.

Associated registers

SESRQSTD, QUEUEDC, GOTSESIM, OVFLMXCQ, DENIEDCQ, DEFLCTCQ

Validation formula

SESRQSTD = QUEUEDC + GOTSESIM + DEFLCTCQ + OVFLMXCQ + OVFLMXAP + DENIEDCQ

Extension registers

None

Associated logs

None

OVFLMXCQ

Register type

Peg

Description

Pegged when a call destined for a call queue is overflowed by the QMS CAM because no agent is available to serve the call, and the number of calls in the call queue that the call was destined for exceeds the MAXSIZE value datafilled for the queue in table QMSCQDEF.

> ***Note:*** For test case(s), make an OSSAIN call when no sessions to a service node are available. Ensure that the number of calls in queue for the OSSAIN application equals the value datafilled by field CQELEMS, in table QAPLNDEF.

Associated registers

SESRQSTD, QUEUEDC, GOTSESIM, DENIEDCQ, OVFLMXAP, DEFLCTCQ

Validation formula

SESRQSTD = QUEUEDC + GOTSESIM + DEFLCTCQ + OVFLMXCQ + OVFLMXAP + DENIEDQ

Extension registers

None

Associated logs

None

QUEUEDC

Register type

Peg

Description

Pegged when an OSSAIN call is queued for a session by the QMS CAM.

> ***Note:*** For test case(s), make an OSSAIN call that must be queued for connectivity to a service node.

Associated registers

SESRQSTD, DENIEDCQ, GOTSESIM, OVFLMXCQ, OVFLMXAP, DEFLCTCQ

Validation formula

SESRQSTD = QUEUEDC + GOTSESIM + DEFLCTCQ + OVFLMXCQ + OVFLMXAP + DENIEDCQ

Extension registers

QUEUEDC2

Associated logs

None

SESRQSTD

Register type

Peg

Description

Pegged when a session is requested by an OSSAIN call from the QMS CAM.

> ***Note:*** For test case(s), make an OSSAIN call that requires connectivity to a service node.

Associated registers

DENIEDCQ, QUEUEDC, GOTSESIM, OVFLMXCQ, OVFLMXAP, DEFLCTCQ

Validation formula

SESRQSTD = QUEUEDC + GOTSESIM + DEFLCTCQ + OVFLMXCQ + OVFLMXAP + DENIEDCQ

Extension registers

SESRQST2

Associated logs

None

OAINRTE

Description

OM group OSSAIN Route (OAINRTE) provides peg counts for obtaining sessions from session pools used for host-remote sessions or trigger event informs.

The following table lists the key and info fields associated with OM group OAINRTE:

Key field	Info field
OAINRTE can be indexed by the following: SESNPLNM: Name associated with SESNPLID.	OAINRTE_INDEX_REGISTERINFO - This name can be up to 16 characters long.

Related functional groups

Enhanced Services (ENSV0001) is associated with OM group OAINRTE.

Registers

The following table lists the registers associated with OM group OAIN-RTE and what they measure. For a detailed description of a register, click on the register name.

Registers for OM group OAINRTE

Register name	Measures
OSCGOTS	OSAC Got Session
OSCOVFL	OSAC Session Overflow
OSCSESQ	OSAC Session Request
TRGGOTS	Trigger Event Inform Got Session
TRGOVFL	Trigger Event Inform Session Overflow
TRGSESQ	Trigger Event Inform Session Request

OSCGOTS

Register type
Peg

Description
OSCGOTS is pegged each time a host-remote session is obtained.

Associated registers
OSCSESQ, OSCOVFL

Extension registers
OSCGOTS2

Associated logs
None

OSCOVFL

Register type
Peg

Description
OSCOVFL is pegged each time a host-remote session is requested but there are no sessions available.

Associated registers
OSCSESQ, OSCGOTS

Extension registers
None

Associated logs
None

OSCSESQ

Register type
Peg

Description
OSCSESQ is pegged each time a host-remote session is requested.

Associated registers
OSCGOTS, OSCOVFL

Extension registers
OSCSESQ2

Associated logs
None

TRGGOTS

Register type

Peg

Description

TRGGOTS is pegged each time a session for a trigger event inform is obtained.

Associated registers

TRGSESQ, TRGOVFL

Extension registers

TRGGOTS2

Associated logs

None

TRGOVFL

Register type

Peg

Description

TRGOVFL is pegged each time a session for a trigger event is requested but there are no sessions available.

Associated registers

TRGSESQ, TRGGOTS

Extension registers

None

Associated logs

None

TRGSESQ

Register type

Peg

Description

TRGSESQ is pegged each time a session is requested from a session pool used only for trigger event informs.

Associated registers

TRGGOTS, TRGOVFL

Extension registers

TRGSESQ2

Associated logs

None

OANODEDC

Description

OM group Operator Services System Advanced Intelligent Network (OSSAIN) Node Data Communications (OANODEDC) is created for data communications operational measurements:

- OADATCOM - OSSAIN Data Communications
- OASNPLDC - OSSAIN Session Pool Data Communications

OM group OANODEDC provides peg counts for OSSAIN data communications messaging events on a per node basis. It provides counts for the total number of messages sent from the CM to a each external node and the total number of messages received by the CM from each external node. Counts of messages are broken down into successful and failure counts.

The following table lists the key and info fields associated with OM group OANODEDC:

Key field	Info field
NODEID {0 - 31}: Key field from table OANODINV	OSSAIN_NODE_DATACOM_OMINFO

Related functional groups

ENSV Enhanced Services (ENSV0001) is associated with OM group OANODEDC.

Registers

The following table lists the registers associated with OM group OANODEDC and what they measure. For a detailed description of a register, click on the register name.

Registers for OM group OANODEDC (Sheet 1 of 2)

Register name	Measures
ONMSGRCV	OSSAIN message received per node
ONMSGRFL	OSSAIN message receive failure per node
ONMSGRSC	OSSAIN message receive success per node

Registers for OM group OANODEDC (Sheet 2 of 2)

Register name	Measures
ONMSGSFL	OSSAIN message send failure per node
ONMSGSND	OSSAIN message send requested per node
ONMSGSSC	OSSAIN message send success per node
ONRCRTFL	OSSAIN message receive route failure per node
ONSNRTFL	OSSAIN message receive route failure per node

ONMSGRCV

Register type
Peg

Description
ONMSGRCV is pegged for a specific node each time an incoming message, originating from an external node, is received from that node. This includes both call processing and maintenance messages.

Associated registers
ONMSGRSC, ONMSGRFL, OSMSGRC

Validation formula
ONMSGRCV = ONMSGRSC + ONMSGRFL

Extension registers
ONMSGRC2

Associated logs
None

ONMSGRFL

Register type
Peg

Description
ONMSGRFL is pegged for a specific node each time data communications encounters an error while attempting to forward a message originated from that node to the destination DMS process. This can be caused by a failure in the DMS internal messaging system or data transport interface. This register is also pegged during failures indicated by register ONRCRTFL.

Associated registers
ONMSGRCV, ONRCRTFL, ONMSGRSC, OSMSGRFL

Validation formulas
The following formulas relate register ONMSGRFL and its associated registers:

- ONMSGRCV = ONMSGRSC + ONMSGRFL
- ONMSGRFL >= ONRCRTFL

Extension registers
None

Associated logs
OAIN605, OAIN606

ONMSGRSC

Register type
Peg

Description
ONMSGRSC is pegged for a specific node when the CM's data communications software is able to successfully process an incoming message from the node.

Associated registers
ONMSGRCV, ONMSGRFL, OSMSGRSC

Validation formula
ONMSGRSC = ONMSGRCV - ONMSGRFL

Extension registers
ONMSGRS2

Associated logs
None

ONMSGSFL

Register type
Peg

Description
ONMSGSFL is pegged for a specific node each time data communications encounters an error while attempting to send an outgoing message to the node. This can be caused by a transport layer failure. This register is also pegged for reasons indicated by register ONSNRTFL.

Associated registers

ONMSGSND, ONMSGSSC, ONSNRTFL, OSMSGSFL

Validation formulas

The following formulas relate register ONMSGSFL and its associated registers:

- ONMSGSFL = ONMSGSND + ONMSGSSC
- ONMSGSFL >= ONSNRTFL

Extension registers

None

Associated logs

OAIN607, OAIN706

ONMSGSND

Register type

Peg

Description

ONMSGSND is pegged for a specific node each time the data communications software is requested to send a message. This includes requests from call processes and maintenance processes.

Associated registers

ONMSGSSC, ONMSGSFL, OSMSGSN

Validation formula

ONMSGSND = ONMSGSSC + ONMSGSFL

Extension registers

ONMSGSN2

Associated logs

None

ONMSGSSC

Register type

Peg

Description

ONMSGSSC is pegged for a specific node when the CM's data communications software is able to successfully process an outgoing message destined for that node. Note that OSSAIN uses unguaranteed messaging. Pegging this register does not indicate that the message actually arrived at the destination node.

Associated registers
ONMSGSND, ONMSGSFL, OSMSGSSC

Validation formula
ONMSGSSC = ONMSGSND - ONMSGSFL

Extension registers
ONMSGSS2

Associated logs
None

ONRCRTFL

Register type
Peg

Description
ONRCRTFL is pegged for a specific node each time the data communications software is unable to determine the destination of a message originating from that node. This can be caused by a variety of reasons including:

- invalid protocol version
- invalid session pool identifier
- invalid session identifier
- invalid network address
- invalid session pool state
- invalid node state
- pool / node identifier mis-match
- corrupted message

Associated registers
ONMSGRFL, OSRCRTFL

Validation formula
ONRCRTFL <= ONMSGRFL

Extension registers
None

Associated logs
OAIN605, OAIN606

ONSNRTFL

Register type

Peg

Description

ONSNRTFL is pegged for a specific node each time the data communications software is unable to determine the destination of an outgoing message. This can be caused by the following reasons:

- invalid session pool identifier
- invalid session identifier
- pool/node identifier mis-match
- corrupted data

Associated registers

ONMSGSFL, OSSNRTFL

Validation formula

ONSNRTFL< = ONMSGSFL

Extension registers

None

Associated logs

None

OAPCALP1

Description

OM group Open Automated Protocol (OAP) Call Processing 1 (OAPCALP1) contains a register for each call processing and non-call processing operation and response message defined in the OAP protocol. The purpose of the registers in this OM group is to track usage of the operations and responses. These OM registers are pegged on a per session pool basis for call processing and session pool operations and are pegged on a per node basis for node maintenance operations.

The following table lists the key and info fields associated with OM group OAPCALP1:

Key field	Info field
SESNPLID {0 to 4094}: Key field for table OASESNPL	None

Related functional groups

ENSV Enhanced Services (ENSV0001) is associated with OM group OAPCALP1.

Registers

The following table lists the registers associated with OM group OAPCALP1 and what they measure. For a detailed description of a register, click on the register name.

Registers for OM group OAPCALP1 (Sheet 1 of 2)

Register name	Measures
APDAMAE	Append AMA Module Error Response
APDAMAS	Append AMA Module Success Response
APNDAMA	Append AMA Module Request
BILNUME	Billing Number Error Response
BILNUMS	Billing Number Success Response
BLNGNUM	Billing Number Request
CALDETE	Call Details Error Response

Registers for OM group OAPCALP1 (Sheet 2 of 2)

Register name	Measures
CALDETS	Call Details Success Response
CALLDET	Call Details Request
CALLEND	Call End Inform
CLSCHGE	Class Change Error Response
CLSCHGS	Class Charge Success Response
CLSCHRG	Class Charge Request
GENAMA	Generate AMA Record
GENAMAE	Generate AMA Record Error Response
GENAMAS	Generate AMA Record Success Response

APDAMAE

Register type

Peg

Description

APDAMAE is pegged each time the corresponding call processing operation or response is sent or received by the switch.

> ***Note:*** For test case(s), make a call that would require the corresponding call processing operation or response.

Associated registers

None

Extension registers

APDAMAE2

Associated logs

None

APDAMAS

Register type

Peg

Description

This register is pegged each time the corresponding call processing operation or response is sent or received by the switch.

> ***Note:*** For test case(s), make a call that would require the corresponding call processing operation or response.

Associated registers

None

Extension registers

APDAMAS2

Associated logs

None

APNDAMA

Register type

Peg

Description

This register is pegged each time the corresponding call processing operation or response is sent or received by the switch.

> ***Note:*** For test case(s), make a call that would require the corresponding call processing operation or response.

Associated registers

None

Extension registers

APNDAMA2

Associated logs

None

BILNUME

Register type

Peg

Description

BILNUME is pegged each time the corresponding call processing operation or response is sent or received by the switch.

> ***Note:*** For test case(s), make a call that would require the corresponding call processing operation or response.

Associated registers

None

Extension registers

BILNUME2

Associated logs

None

BILNUMS

Register type

Peg

Description

BILNUMS is pegged each time the corresponding call processing operation or response is sent or received by the switch.

> ***Note:*** For test case(s), make a call that would require the corresponding call processing operation or response.

Associated registers

None

Extension registers

BILNUMS2

Associated logs

None

BLNGNUM

Register type

Peg

Description

This register is pegged each time the corresponding call processing operation or response is sent or received by the switch.

> ***Note:*** For test case(s), make a call that would require the corresponding call processing operation or response.

Associated registers

None

Extension registers

BLNGNUM2

Associated logs

None

CALDETE

Register type

Peg

Description

CALDETE is pegged each time the corresponding call processing operation or response is sent or received by the switch.

> ***Note:*** For test case(s), make a call that would require the corresponding call processing operation or response.

Associated registers

None

Extension registers

CALDETE2

Associated logs

None

CALDETS

Register type

Peg

Description

CALDETS is pegged each time the corresponding call processing operation or response is sent or received by the switch.

> ***Note:*** For test case(s), make a call that would require the corresponding call processing operation or response.

Associated registers

None

Extension registers

CALDETS2

Associated logs

None

CALLDET

Register type

Peg

Description

CALLDET is pegged each time the corresponding call processing operation or response is sent or received by the switch.

> ***Note:*** For test case(s), make a call that would require the corresponding call processing operation or response.

Associated registers

None

Extension registers

CALLDET2

Associated logs

None

CALLEND

Register type

Peg

Description

CALLEND is pegged each time the corresponding call processing operation or response is sent or received by the switch.

> ***Note:*** For test case(s), make a call that would require the corresponding call processing operation or response.

Associated registers

None

Extension registers

CALLEND2

Associated logs

None

CLSCHGE

Register type

Peg

Description

CLSCHGE is pegged each time the corresponding call processing operation or response is sent or received by the switch.

> ***Note:*** For test case(s), make a call that would require the corresponding call processing operation or response.

Associated registers
None

Extension registers
CLSCHGE2

Associated logs
None

CLSCHGS

Register type
Peg

Description
CLSCHGS is pegged each time the corresponding call processing operation or response is sent or received by the switch.

> ***Note:*** For test case(s), make a call that would require the corresponding call processing operation or response.

Associated registers
None

Extension registers
CLSCHGS2

Associated logs
None

CLSCHRG

Register type
Peg

Description
CLSCHRG is pegged each time the corresponding call processing operation or response is sent or received by the switch.

> ***Note:*** For test case(s), make a call that would require the corresponding call processing operation or response.

Associated registers
None

Extension registers
CLSCHRG2

Associated logs

None

GENAMA

Register type

Peg

Description

This register is pegged each time the corresponding call processing operation or response is sent or received by the switch.

> ***Note:*** For test case(s), make a call that would require the corresponding call processing operation or response.

Associated registers

None

Extension registers

GENAMA2

Associated logs

None

GENAMAE

Register type

Peg

Description

This register is pegged each time the corresponding call processing operation or response is sent or received by the switch.

> ***Note:*** For test case(s), make a call that would require the corresponding call processing operation or response.

Associated registers

None

Extension registers

GENAMAE2

Associated logs

None

GENAMAS

Register type

Peg

Description

This register is pegged each time the corresponding call processing operation or response is sent or received by the switch.

> ***Note:*** For test case(s), make a call that would require the corresponding call processing operation or response.

Associated registers

None

Extension registers

GENAMAS2

Associated logs

None

OAPCALP2

Description

OM group Open Automated Protocol (OAP) Call Processing 2 (OAPCALP2) contains a register for each call processing and non-call processing operation and response message defined in the OAP protocol. The purpose of the registers in this OM group is to track usage of the operations and responses. These OM registers are pegged on a per session pool basis for call processing and session pool operations and are pegged on a per node basis for node maintenance operations.

The following table lists the key and info fields associated with OM group OAPCALP2:

Key field	Info field
SESNPLID {0 to 4094}: Key field for table OASESNPL	None

Related functional groups

ENSV Enhanced Services (ENSV0001) is associated with OM group OAPCALP2.

Registers

The following table lists the registers associated with OM group OAPCALP2 and what they measure. For a detailed description of a register, click on the register name.

Registers for OM group OAPCALP2 (Sheet 1 of 2)

Register name	Measures
CALFLTE	Call Float Error Response
CALFLTS	Call Float Success Response
CALLFLT	Call Float Request
CONDN	Connect DN Request
CONDNE	Connect DN Error Response
CONDNS	Connect DN Success Response
CONSTAT	Connection Status Inform

Registers for OM group OAPCALP2 (Sheet 2 of 2)

Register name	Measures
DIRNUM	Directory Number Request
DIRNUME	Directory Number Error Response
DIRNUMS	Directory Number Success Response
ENDCALE	End Call Error Response
ENDCALL	End Call Request
ENDCALS	End Call Success Response
RELSDN	Release DN Request
RELSDNE	Release DN Error Response
RELSDNS	Release DN Success Response

CALFLTE

Register type
Peg

Description
CALFLTE is pegged each time the corresponding call processing operation or response is sent or received by the switch.

> ***Note:*** For test case(s), make a call that would require the corresponding call processing operation or response.

Associated registers
None

Extension registers
CALFLTE2

Associated logs
None

CALFLTS

Register type
Peg

Description

CALFLTS is pegged each time the corresponding call processing operation or response is sent or received by the switch.

> ***Note:*** For test case(s), make a call that would require the corresponding call processing operation or response.

Associated registers

None

Extension registers

CALFLTS2

Associated logs

None

CALLFLT

Register type

Peg

Description

CALLFLT is pegged each time the corresponding call processing operation or response is sent or received by the switch.

> ***Note:*** For test case(s), make a call that would require the corresponding call processing operation or response.

Associated registers

None

Extension registers

CALLFLT2

Associated logs

None

CONDN

Register type

Peg

Description

CONDN is pegged each time the corresponding call processing operation or response is sent or received by the switch.

> ***Note:*** For test case(s), make a call that would require the corresponding call processing operation or response.

Associated registers

None

Extension registers

CONDN2

Associated logs

None

CONDNE

Register type

Peg

Description

CONDNE is pegged each time the corresponding call processing operation or response is sent or received by the switch.

> ***Note:*** For test case(s), make a call that would require the corresponding call processing operation or response.

Associated registers

None

Extension registers

CONDNE2

Associated logs

None

CONDNS

Register type

Peg

Description

CONDNS is pegged each time the corresponding call processing operation or response is sent or received by the switch.

> ***Note:*** For test case(s), make a call that would require the corresponding call processing operation or response.

Associated registers

None

Extension registers

CONDNS2

Associated logs
None

CONSTAT

Register type
Peg

Description
CONSTAT is pegged each time the corresponding call processing operation or response is sent or received by the switch.

> ***Note:*** For test case(s), make a call that would require the corresponding call processing operation or response.

Associated registers
None

Extension registers
CONSTAT2

Associated logs
None

DIRNUM

Register type
Peg

Description
CALDETS is pegged each time the corresponding call processing operation or response is sent or received by the switch.

> ***Note:*** For test case(s), make a call that would require the corresponding call processing operation or response.

Associated registers
None

Extension registers
DIRNUM2

Associated logs
None

DIRNUME

Register type
Peg

Description

DIRNUME is pegged each time the corresponding call processing operation or response is sent or received by the switch.

> ***Note:*** For test case(s), make a call that would require the corresponding call processing operation or response.

Associated registers

None

Extension registers

DIRNUME2

Associated logs

None

DIRNUMS

Register type

Peg

Description

DIRNUMS is pegged each time the corresponding call processing operation or response is sent or received by the switch.

> ***Note:*** For test case(s), make a call that would require the corresponding call processing operation or response.

Associated registers

None

Extension registers

DIRNUMS2

Associated logs

None

ENDCALE

Register type

Peg

Description

ENDCALE is pegged each time the corresponding call processing operation or response is sent or received by the switch.

> ***Note:*** For test case(s), make a call that would require the corresponding call processing operation or response.

Associated registers

None

Extension registers

ENDCALE2

Associated logs

None

ENDCALL

Register type

Peg

Description

ENDCALL is pegged each time the corresponding call processing operation or response is sent or received by the switch.

> ***Note:*** For test case(s), make a call that would require the corresponding call processing operation or response.

Associated registers

None

Extension registers

ENDCALL2

Associated logs

None

ENDCALS

Register type

Peg

Description

ENDCALS is pegged each time the corresponding call processing operation or response is sent or received by the switch.

> ***Note:*** For test case(s), make a call that would require the corresponding call processing operation or response.

Associated registers

None

Extension registers

ENDCALS2

Associated logs
None

RELSDN

Register type
Peg

Description
RELSDN is pegged each time the corresponding call processing operation or response is sent or received by the switch.

> ***Note:*** For test case(s), make a call that would require the corresponding call processing operation or response.

Associated registers
None

Extension registers
RELSDN2

Associated logs
None

RELSDNE

Register type
Peg

Description
RELSDNE is pegged each time the corresponding call processing operation or response is sent or received by the switch.

> ***Note:*** For test case(s), make a call that would require the corresponding call processing operation or response.

Associated registers
None

Extension registers
RELSDNE2

Associated logs
None

RELSDNS

Register type
Peg

Description

RELSDNS is pegged each time the corresponding call processing operation or response is sent or received by the switch.

> ***Note:*** For test case(s), make a call that would require the corresponding call processing operation or response.

Associated registers

None

Extension registers

RELSDNS2

Associated logs

None

OAPCALP3

Description

OM group Open Automated Protocol (OAP) Call Processing 3 (OAPCALP3) contains a register for each call processing and non-call processing operation and response message defined in the OAP protocol. The purpose of the registers in this OM group is to track usage of the operations and responses. These OM registers are pegged on a per session pool basis for call processing and session pool operations and are pegged on a per node basis for node maintenance operations.

The following table lists the key and info fields associated with OM group OAPCALP3:

Key field	Info field
SESNPLID {0 to 4094}: Key field for table OASESNPL	None

Related functional groups

ENSV Enhanced Services (ENSV0001) is associated with OM group OAPCALP3.

Registers

The following table lists the registers associated with OM group OAPCALP3 and what they measure. For a detailed description of a register, click on the register name.

Registers for OM group OAPCALP3 (Sheet 1 of 2)

Register name	Measures
SESNBEG	Session Begin Inform
SESNINE	Session Initiation Error Response
SESNINI	Session Initiation Request
SESNINS	Session Initiation Success Response
SPCHPTE	Speech Path Error Response
SPCHPTH	Speech Path Request
SPCHPTS	Speech Path Success Response

Registers for OM group OAPCALP3 (Sheet 2 of 2)

Register name	Measures
TRGEVT	Trigger Event Inform
TXTOPR	Text to Operator Request
TXTOPRE	Text to Operator Error Response
TXTOPRS	Text to Operator Success Response
XFRCTRE	Transfer to Control List Error Response
XFRCTRL	Transfer to Control List Request
XFRCTRS	Transfer to Control List Success Response

SESNBEG

Register type

Peg

Description

SESNBEG is pegged each time the corresponding call processing operation or response is sent or received by the switch.

> ***Note:*** For test case(s), make a call that would require the corresponding call processing operation or response.

Associated registers

None

Extension registers

SESNBEG2

Associated logs

None

SESNINE

Register type

Peg

Description

SESNINE is pegged each time the corresponding call processing operation or response is sent or received by the switch.

> ***Note:*** For test case(s), make a call that would require the corresponding call processing operation or response.

Associated registers

None

Extension registers

SESNINE2

Associated logs

None

SESNINI

Register type

Peg

Description

SESNINI is pegged each time the corresponding call processing operation or response is sent or received by the switch.

> ***Note:*** For test case(s), make a call that would require the corresponding call processing operation or response.

Associated registers

None

Extension registers

SESNINI2

Associated logs

None

SESNINS

Register type

Peg

Description

SESNINS is pegged each time the corresponding call processing operation or response is sent or received by the switch.

> ***Note:*** For test case(s), make a call that would require the corresponding call processing operation or response.

Associated registers
None

Extension registers
SESNINS2

Associated logs
None

SPCHPTE

Register type
Peg

Description
SPCHPTE is pegged each time the corresponding call processing operation or response is sent or received by the switch.

> ***Note:*** For test case(s), make a call that would require the corresponding call processing operation or response.

Associated registers
None

Extension registers
SPCHPTE2

Associated logs
None

SPCHPTH

Register type
Peg

Description
SPCHPTH is pegged each time the corresponding call processing operation or response is sent or received by the switch.

> ***Note:*** For test case(s), make a call that would require the corresponding call processing operation or response.

Associated registers
None

Extension registers
SPCHPTH2

Associated logs

None

SPCHPTS

Register type

Peg

Description

SPCHPTS is pegged each time the corresponding call processing operation or response is sent or received by the switch.

> ***Note:*** For test case(s), make a call that would require the corresponding call processing operation or response.

Associated registers

None

Extension registers

SPCHPTS2

Associated logs

None

TRGEVT

Register type

Peg

Description

TRGEVT is pegged each time the corresponding call processing operation or response is sent or received by the switch.

> ***Note:*** For test case(s), make a call that would require the corresponding call processing operation or response.

Associated registers

None

Extension registers

TRGEVT2

Associated logs

None

TXTOPR

Register type

Peg

Description

TXTOPR is pegged each time the corresponding call processing operation or response is sent or received by the switch.

> ***Note:*** For test case(s), make a call that would require the corresponding call processing operation or response.

Associated registers

None

Extension registers

TXTOPR2

Associated logs

None

TXTOPRE

Register type

Peg

Description

TXTOPRE is pegged each time the corresponding call processing operation or response is sent or received by the switch.

> ***Note:*** For test case(s), make a call that would require the corresponding call processing operation or response.

Associated registers

None

Extension registers

TXTOPRE2

Associated logs

None

TXTOPRS

Register type

Peg

Description

TXTOPRS is pegged each time the corresponding call processing operation or response is sent or received by the switch.

> ***Note:*** For test case(s), make a call that would require the corresponding call processing operation or response.

Associated registers
None

Extension registers
TXTOPRS2

Associated logs
None

XFRCTRE

Register type
Peg

Description
XFRCTRE is pegged each time the corresponding call processing operation or response is sent or received by the switch.

> ***Note:*** For test case(s), make a call that would require the corresponding call processing operation or response.

Associated registers
None

Extension registers
XFRCTRE2

Associated logs
OAIN203

XFRCTRL

Register type
Peg

Description
XFRCTRL is pegged each time the corresponding call processing operation or response is sent or received by the switch.

> ***Note:*** For test case(s), make a call that would require the corresponding call processing operation or response.

Associated registers
None

Extension registers
XFRCTRL2

Associated logs

None

XFRCTRS

Register type

Peg

Description

XFRCTRS is pegged each time the corresponding call processing operation or response is sent or received by the switch.

> ***Note:*** For test case(s), make a call that would require the corresponding call processing operation or response.

Associated registers

None

Extension registers

XFRCTRS2

Associated logs

None

OAPCALP4

Description

OM group Open Automated Protocol (OAP) Call Processing 4 (OAPCALP4) contains a register for each call processing and non-call processing operation and response message defined in the OAP protocol. The purpose of the registers in this OM group is to track usage of the operations and responses. These OM registers are pegged on a per session pool basis for call processing and session pool operations and are pegged on a per node basis for node maintenance operations.

The following table lists the key and info fields associated with OM group OAPCALP4:

Key field	Info field
SESNPLID {0 to 4094}: Key field for table OASESNPL	None

Related functional groups

ENSV Enhanced Services (ENSV0001) is associated with OM group OAPCALP4.

Registers

The following table lists the registers associated with OM group OAPCALP4 and what they measure. For a detailed description of a register, click on the register name.

Registers for OM group OAPCALP4 (Sheet 1 of 2)

Register name	Measures
CARASGN	Carrier Assignment Request
CARASNE	Carrier Assignment Error Response
CARASNS	Carrier Assignment Success Response
DTMFDIG	DTMF Digit Detected Inform
RELRCVE	Release Receiver Error Response
RELRCVR	Release Receiver Request
RELRCVS	Release Receiver Success Response

Registers for OM group OAPCALP4 (Sheet 2 of 2)

Register name	Measures
RTETRMT	Route To Treatment Request
RTETRME	Route To Treatment Error Response
RTETRMS	Route To Treatment Success Response
VCECON	Voice Connect Request
VCECONE	Voice Connect Error Response
VCECONS	Voice Connect Success Response
VCERLS	Voice Release Request
VCERLSE	Voice Release Error Response
VCERLSS	Voice Release Success Response

CARASGN

Register type

Peg

Description

CARASGN is pegged each time the corresponding call processing operation or response is sent or received by the switch.

> ***Note:*** For test case(s), make a call that would require the corresponding call processing operation or response.

Associated registers

None

Extension registers

CARASGN2

Associated logs

None

CARASNE

Register type

Peg

Description

CARASNE is pegged each time the corresponding call processing operation or response is sent or received by the switch.

> ***Note:*** For test case(s), make a call that would require the corresponding call processing operation or response.

Associated registers

None

Extension registers

CARASNE2

Associated logs

None

CARASNS

Register type

Peg

Description

CARASNS is pegged each time the corresponding call processing operation or response is sent or received by the switch.

> ***Note:*** For test case(s), make a call that would require the corresponding call processing operation or response.

Associated registers

None

Extension registers

CARASNS2

Associated logs

None

DTMFDIG

Register type

Peg

Description

DTMFDIG is pegged each time the corresponding call processing operation or response is sent or received by the switch.

> ***Note:*** For test case(s), make a call that would require the corresponding call processing operation or response.

Associated registers
None

Extension registers
DTMFDIG2

Associated logs
None

RELRCVE

Register type
Peg

Description
RELRCVE is pegged each time the corresponding call processing operation or response is sent or received by the switch.

> ***Note:*** For test case(s), make a call that would require the corresponding call processing operation or response.

Associated registers
None

Extension registers
RELRCVE2

Associated logs
None

RELRCVR

Register type
Peg

Description
RELRCVR is pegged each time the corresponding call processing operation or response is sent or received by the switch.

> ***Note:*** For test case(s), make a call that would require the corresponding call processing operation or response.

Associated registers
None

Extension registers
RELRCVR2

Associated logs
None

RELRCVS

Register type
Peg

Description
RELRCVS is pegged each time the corresponding call processing operation or response is sent or received by the switch.

> ***Note:*** For test case(s), make a call that would require the corresponding call processing operation or response.

Associated registers
None

Extension registers
RELRCVS2

Associated logs
None

RTETRMT

Register type
Peg

Description
RTETRMT is pegged each time the corresponding call processing operation or response is sent or received by the switch.

> ***Note:*** For test case(s), make a call that would require the corresponding call processing operation or response.

Associated registers
None

Extension registers
RTETRMT2

Associated logs
None

RTETRME

Register type
Peg

Description

RTETRME is pegged each time the corresponding call processing operation or response is sent or received by the switch.

> ***Note:*** For test case(s), make a call that would require the corresponding call processing operation or response.

Associated registers

None

Extension registers

RTETRME2

Associated logs

None

RTETRMS

Register type

Peg

Description

RTETRMS is pegged each time the corresponding call processing operation or response is sent or received by the switch.

> ***Note:*** For test case(s), make a call that would require the corresponding call processing operation or response.

Associated registers

None

Extension registers

RTETRMS2

Associated logs

None

VCECON

Register type

Peg

Description

VCECON is pegged each time the corresponding call processing operation or response is sent or received by the switch.

> ***Note:*** For test case(s), make a call that would require the corresponding call processing operation or response.

Associated registers

None

Extension registers

VCECON2

Associated logs

None

VCECONE

Register type

Peg

Description

VCECONE is pegged each time the corresponding call processing operation or response is sent or received by the switch.

> ***Note:*** For test case(s), make a call that would require the corresponding call processing operation or response.

Associated registers

None

Extension registers

VCECONE2

Associated logs

None

VCECONS

Register type

Peg

Description

VCECONS is pegged each time the corresponding call processing operation or response is sent or received by the switch.

> ***Note:*** For test case(s), make a call that would require the corresponding call processing operation or response.

Associated registers

None

Extension registers

VCECONS2

Associated logs

None

VCERLS

Register type

Peg

Description

VCERLS is pegged each time the corresponding call processing operation or response is sent or received by the switch.

> ***Note:*** For test case(s), make a call that would require the corresponding call processing operation or response.

Associated registers

None

Extension registers

VCERLS2

Associated logs

None

VCERLSE

Register type

Peg

Description

VCERLSE is pegged each time the corresponding call processing operation or response is sent or received by the switch.

> ***Note:*** For test case(s), make a call that would require the corresponding call processing operation or response.

Associated registers

None

Extension registers

VCERLSE2

Associated logs

None

VCERLSS

Register type

Peg

Description

VCERLSS is pegged each time the corresponding call processing operation or response is sent or received by the switch.

> ***Note:*** For test case(s), make a call that would require the corresponding call processing operation or response.

Associated registers

None

Extension registers

VCERLSS2

Associated logs

None

OAPCALP5

Description

In TOPS06, OM group Open Automated Protocol (OAP) Call Processing 5 (OAPCALP5) is added to the set of OAP message OMs. This OM group contains registers that track call processing operations and responses used with the Operator Services Systems Advanced Intelligent Network (OSSAIN) Enhancements feature.

The OSSAIN Enhancements feature provides the following capabilities:

- OSSAIN transition to Traffic Operator Position System Multipurpose (TOPS MP) position - provides Text to Operator information to a TOPS MP operator.
- OSSAIN Equal Access (EA) Enhancements - provide additional EA handling capability when the call is at an OSSAIN service node (SN).
- Open Automated Protocol Enhancements
  - — pass additional carrier information to the SN
  - — provide support for transfer to the interLATA carrier functionality
- Custom Automatic Message Accounting (AMA) Enhancements - allow custom AMA modules to be appended to the AMA record for the TOPS Charge Adjust service.
- AABS Replacement - allows the automation of 0+ 3rd, collect, and credit card calls on the OSSAIN SN platform utilizing OAP.

> ***Note:*** For more information about the OSSAIN Enhancements feature, please refer to the “OSSAIN" section of the Translations Guide.

In TOPS07, the following features add registers to OM group OAPCALP5:

- TOPS Local Number Portability (LNP) Call Processing - adds registers LNPREQ, LNPREQE, and LNPREQS with their respective extension registers. These registers track OAP Local Number Portability (LNP) request and response messages. For more information about the TOPS LNP Call Processing feature, please refer to the “TOPS LNP" section of the Translations Guide.
- OSSAIN Enhancements II - adds registers CONVTM, CONVTMS, CONVTME, RESUME, RESUMEE, and RESUMES with their respective extension registers. For more information about the

OSSAIN Enhancements II feature, please refer to the “OSSAIN Enhancements" section of the Translations Guide.

Registers CONVTM, CONVTME, and CONVTMS track OAP request and response messages relative to conversation timing information for calls. Registers RESUME, RESUMES, and RESUMEE track OAP request and response messages relative OSSAIN preprocessing.

- Branding for TOPS via SPID - adds registers SPDREQ, SPDREQS, and SPDREQE. These registers are pegged for Call Processing class message operations on a per session pool basis and adds the necessary registers for the SPID assignment request, success response, and error response messages.

The following table lists the key and info fields associated with OM group OAPCALP5:

Key field	Info field
SESNPLID {0 to 4094}: Key field for table OASESNPL	OAP_SP_INDEX_REGISTERINFO - This field contains the name associated with the SESNPLID field in table OASESNPL. This name can be up to 16 characters long.

Note: The DMS switch adds one tuple to this OM group for each SESNPLID datafilled in table OASESNPL.

Related functional groups

The following functional groups are associated with OM group OAPCALP5.

- Enhanced Services (ENSV0001)
- Operator Services Equal Access (OSEA0001)

Registers

The following table lists the registers associated with OM group OAPCALP5 and what they measure. For a detailed description of a register, click on the register name.

Registers for OM group OAPCALP5

Register name	Measures
CONVTM	Conversation Timing Request
CONVTME	Conversation Timing Error Response
CONVTMS	Conversation Timing Success Response
LNPREQ	LNP Request
LNPREQE	LNP Request Error Response
LNPREQS	LNP Request Success Response
RESUME	Call Resume Request
RESUMEE	Call Resume Request Error Response
RESUMES	Call Resume Request Response
SPDREQ	SPID Assignment Request
SPDREQE	SPID Assignment Error Response
SPDREQS	SPID Assignment Success Response
XFRCAR	Transfer to Carrier Request
XFRCARE	Transfer to Carrier Error Response
XFRCARS	Transfer to Carrier Success Response

CONVTM

Register type

Peg

Description

The DMS switch pegs register CONVTM each time it receives a conversation timing request from an active SN. An active SN initiates this request when it wants the DMS switch to start or stop conversation timing for a call.

Associated registers

None

Extension registers
CONVTM2

Associated logs
None

CONVTME

Register type
Peg

Description
The DMS switch pegs register CONVTME each time it sends a conversation timing error response to an active SN. This call processing response informs the active SN that the DMS switch could not process the conversation timing request; nor could it start or stop conversation timing for a call.

Associated registers
None

Extension registers
CONVTME2

Associated logs
None

CONVTMS

Register type
Peg

Description
The DMS switch pegs register CONVTMS each time it sends a conversation timing success response to an active SN. This call processing response informs the active SN that the DMS switch successfully processed the conversation timing request and that call timing can be successfully started or stopped.

Associated registers
None

Extension registers
CONVTMS2

Associated logs
None

LNPREQ

Register type

Peg

Description

The DMS switch pegs register LNPREQ each time it receives a LNP request from an active SN. An active SN initiates this request when it needs portability information about a directory number (DN).

Associated registers

None

Extension registers

LNPREQ2

Associated logs

None

LNPREQE

Register type

Peg

Description

The DMS switch pegs register LNPREQE each time it sends an LNP request error response to an active SN. This response informs the active SN that the LNP request failed.

Associated registers

None

Extension registers

LNPREQE2

Associated logs

None

LNPREQS

Register type

Peg

Description

The DMS switch pegs register LNPREQS each time it sends an LNP request success response to an active SN. This call processing response informs the active SN that the LNP request was processed successfully. Portability information is returned to the active SN.

Associated registers

None

Extension registers

LNPREQS2

Associated logs

None

RESUME

Register type

Peg

Description

The DMS switch pegs register RESUME each time it receives a call resume request from an active SN. An active SN initiates this request when it wants to release itself and its resources from an OSSAIN preprocessing call session, without terminating the call such that the DMS switch resumes control of the call.

Associated registers

None

Extension registers

RESUME2

Associated logs

None

RESUMEE

Register type

Peg

Description

The DMS switch pegs register RESUMEE each time it sends a call resume error response to an active SN. This call processing response informs the active SN that the DMS switch could not process the call resume request; nor could it resume control of the OSSAIN call.

Associated registers

None

Extension registers

RESUMEE2

Associated logs
None

RESUMES

Register type
Peg

Description
The DMS switch pegs register RESUMES each time it sends a call resume success response to an active SN. This call processing response informs the active SN that the DMS switch has successfully processed the call resume request and has successfully resumed control of the OSSAIN preprocessed call.

Associated registers
None

Extension registers
RESUMES2

Associated logs
None

SPDREQ

Register type
Peg

Description
SPDREQ is pegged each time the SPID Assignment Request operation is received by the switch.

Associated registers
None

Extension registers
SPDREQ2

Associated logs
None

SPDREQE

Register type
Peg

Description

SPDREQE is pegged each time the SPID Assignment Error Response is sent by the switch.

Associated registers

None

Extension registers

SPDREQE2

Associated logs

None

SPDREQS

Register type

Peg

Description

SPDREQS is pegged each time the SPID Assignment Success Response is sent by the switch.

Associated registers

None

Extension registers

SPDREQS2

Associated logs

None

XFRCAR

Register type

Peg

Description

The DMS switch pegs register XFRCAR each time it receives a transfer to carrier request from an active SN. An active SN initiates this request to request that the DMS switch release it from the call and transfer the call to the carrier.

Associated registers

None

Extension registers

XFRCAR2

Associated logs

None

XFRCARE

Register type

Peg

Description

The DMS switch pegs register XFRCARE each time it sends a transfer to carrier error response to an active SN. This call processing response informs the active SN that the DMS switch could not process the transfer to carrier request; nor could it transfer the call to the carrier or release the SN from the call.

Associated registers

None

Extension registers

XFRCARE2

Associated logs

None

XFRCARS

Register type

Peg

Description

The DMS switch pegs register XFRCARS each time it sends a transfer to carrier success response to an active SN. This call processing response informs the active SN that the DMS switch has successfully processed the transfer to carrier request, released the active SN from the call, and has transferred the call to the carrier.

Associated registers

None

Extension registers

XFRCARS2

Associated logs

None

OAPCALP6

Description

In TOPS07, OM group Open Automated Protocol (OAP) Call Processing 6 (OAPCALP6) is added to the set of OAP message OMs. This OM group contains registers that track call processing operations and responses used with the Operator Services Systems Advanced Intelligent Network (OSSAIN) simultaneous interactions feature.

The OSSAIN simultaneous interactions feature allows the attachment of two OSSAIN function providers (service node or TOPS operator) to a call simultaneously. The attachment configurations are as follows:

- service node and service node
- service node and a TOPS operator

During simultaneous interactions of a call, only one function provider may control the call. This function provider is the active agent. The other function provider is the passive agent.

> ***Note 1:*** In an OSSAIN simultaneous interaction, a service node must always be the active agent. An operator can never be the active agent when it is engaged in a simultaneous interaction with a service node.
>
> ***Note 2:*** For more information about OAP, refer to the OSSAIN Open Automated Protocol Specification, NIS: Q235-1

The following table lists the key and info fields associated with OM group OAPCALP6:

Key field	Info field
SESNPLID {0 to 4094}: Key field for table OASESNPL	OAP_SP_INDEX_REGISTERINFO - This field corresponds to the SESNPLNM field in table OASESNPL. The name can be up to 16 characters long.

> ***Note:*** The DMS switch adds one tuple to this OM group for each SESNPLID datafilled in table OASESNPL.

Related functional groups

Enhanced Services (ENSV0001) is associated with OM group OAPCALP6.

Registers

The following table lists the registers associated with OM group OAPCALP6 and what they measure. For a detailed description of a register, click on the register name.

Registers for OM group OAPCALP6

Register name	Measures
ACPCNTL	Accept Control Inform
NODEREL	Node Release Inform
PASCNTE	Pass Control Error Response
PASCNTL	Pass Control Request
PASCNTS	Pass Control Success Response
PASREQE	Passive Function Provider Error Response
PASREQS	Passive Function Provider Success Response
PASSREQ	Passive Function Provider Request
PASSTAT	Passive Node Status Inform
PASTHRU	Pass-Through Inform
RELNOD	Release Node Request
RELNODE	Release Node Request Error Response
RELNODS	Release Node Success Response
SESRECL	Session Recall Request
SESRECLE	Session Recall Return Error
SESRECLS	Session Recall Return Result

ACPCNTL

Register type
Peg

Description
The DMS switch pegs register ACPCNTL each time it sends an accept control inform message to a passive agent. This call processing

message informs the passive agent that it has become the active service agent for a call.

Associated registers
None

Extension registers
ACPCNTL2

Associated logs
None

NODEREL

Register type
Peg

Description
The DMS switch pegs register NODEREL each time it sends a node release inform message to a function provider. This call processing message informs a function provider that it is released from the call. The DMS switch sends this message under the following circumstances:

- the active agent requests release of the passive agent

  Note: If the passive agent is an operator, the DMS switch sends an OPP/ASCII call end message.

- an operator requests release of the active agent (by keying the release node function)

Associated registers
None

Extension registers
NODEREL2

Associated logs
None

PASCNTE

Register type
Peg

Description
The DMS switch pegs register PASCNTE each time it sends a pass control error response to the active agent that initiated the pass control

request. This call processing response informs the active agent that it cannot pass call control to the passive agent.

Associated registers
None

Extension registers
PASCNTE2

Associated logs
None

PASCNTL

Register type
Peg

Description
The DMS switch pegs register PASCNTL each time an active agent sends a pass control request to the DMS switch. This call processing request informs the DMS switch that the active agent wants to pass call control to the passive agent.

> ***Note:*** An operator can never be the active agent while engaged in a simultaneous interaction; therefore, the pass control capability only applies when two service nodes are attached to a call simultaneously.

Associated registers
None

Extension registers
PASCNTL2

Associated logs
None

PASCNTS

Register type
Peg

Description
The DMS switch pegs register PASCNTS each time it sends a pass control success response to the active agent that initiated the pass control request. This call processing response indicates that the active agent has passed call control to the passive agent, thus swapping the roles of the function providers.

Associated registers

None

Extension registers

PASCNTS2

Associated logs

None

PASREQE

Register type

Peg

Description

The DMS switch pegs register PASREQE each time it sends a passive function provider error response to the active agent that initiated the passive function provider request. This call processing response informs the active agent that no passive function provider could be obtained for the call.

This call processing response indicates one of the following:

- A passive agent is not connected to the call.
- The call was not queued for connection to a passive agent.

Associated registers

None

Extension registers

PASREQE2

Associated logs

None

PASREQS

Register type

Peg

Description

The DMS switch pegs register PASREQS each time it sends a passive function provider success response to the active agent that initiated the passive function provider request. This call processing response indicates one of the following:

- A passive agent is connected to the call.
- The call is in queue, waiting for the attachment of a passive agent.

Associated registers

None

Extension registers

PASREQS2

Associated logs

None

PASSREQ

Register type

Peg

Description

The DMS switch pegs register PASSREQ each time it receives a passive function provider request from the active agent. The active agent uses this call processing message to request that a passive function provider be connected to the call.

Associated registers

None

Extension registers

PASSREQ2

Associated logs

None

PASSTAT

Register type

Peg

Description

The DMS switch pegs register PASSTAT each time it sends a passive node status inform message to the active agent. This call processing message informs the active agent of changes in the status of the passive agent.

Associated registers

None

Extension registers

PASSTAT2

Associated logs

None

PASTHRU

Register type

Peg

Description

The DMS switch pegs register PASTHRU each time it sends/receives a pass-through inform message to/from a function provider. This call processing message allows the active and passive agents to communicate. These message can be initiated/received by the active agent or the passive agent. The DMS switch routes these messages between the function providers.

Associated registers

None

Extension registers

PASTHRU2

Associated logs

None

RELNOD

Register type

Peg

Description

The DMS switch pegs register RELNOD each time it receives a release node request from a function provider. A function provider uses this call processing request to request either the release of itself or another function provider from a call.

Associated registers

None

Extension registers

RELNOD

Associated logs

None

RELNODE

Register type

Peg

Description

The DMS switch pegs register RELNODE each time it sends a release node error response to a function provider that either requested to release itself or another function provider from a call. This call processing response informs the requesting function provider that the DMS switch could not release the function provider specified in the release node request.

Associated registers

None

Extension registers

RELNODE2

Associated logs

None

RELNODS

Register type

Peg

Description

The DMS switch pegs register RELNODS each time it sends a release node success response to a function provider that is either requesting to release itself or another function provider from a call. This call processing response alerts the requesting function provider that the release was successful.

This call processing response indicates one of the following:

- The specified node was released.
- The call was taken out of the queue if it was queued for a passive agent, and the release node request specified that the passive node was to be released.

Associated registers

None

Extension registers

RELNODS2

Associated logs

None

SESRECL

Register type

Peg

Description

The DMS switch pegs register SESRECL each time a session recall request is sent or received by the DMS switch. This exchange occurs between an OSSAIN node.

Associated registers

None

Extension registers

SESRECL2

Associated logs

None

SESRECLE

Register type

Peg

Description

The DMS switch pegs register SESRECLE each time a session recall return error is sent or received by the DMS switch. This exchange occurs between the switch and an OSSAIN node.

Associated registers

None

Extension registers

SESRECLE2

Associated logs

None

SESRECLS

Register type

Peg

Description

The DMS switch pegs register SESRECLS each time a session recall return result is sent or received by the DMS switch. This exchange occurs between the switch and an OSSAIN node.

Associated registers

None

Extension registers

SESRECLS2

Associated logs

None

OAPCALP7

Description

In TOPS09, OM group Open Automated Protocol (OAP) Call Processing 7 (OAPCALP7) is added to the set of OAP message OMs. This OM group contains registers that track call processing operations and responses used with the Operator Services Systems Advanced Intelligent Network (OSSAIN) simultaneous interactions feature.

The OSSAIN simultaneous interactions feature allows the attachment of two OSSAIN function providers (service node or TOPS operator) to a call simultaneously. The attachment configurations are as follows:

- service node and service node
- service node and a TOPS operator

During simultaneous interactions of a call, only one function provider may control the call. This function provider is the active agent. The other function provider is the passive agent.

> ***Note 1:*** In an OSSAIN simultaneous interaction, a service node must always be the active agent. An operator can never be the active agent when it is engaged in a simultaneous interaction with a service node.
>
> ***Note 2:*** For more information about OAP, refer to the *OSSAIN Open Automated Protocol Specification*, NIS: Q235-1

The following table lists the key and info fields associated with OM group OAPCALP7:

Key field	Info field
SESNPLID {0 to 4094}: Key field for table OASESNPL	OAP_SP_INDEX_REGISTERINFO - This field corresponds to the SESNPLNM field in table OASESNPL. The name can be up to 16 characters long.

> ***Note:*** The DMS switch adds one tuple to this OM group for each SESNPLID datafilled in table OASESNPL.

Related functional groups

ENSV Enhanced Services (ENSV0001) is associated with OM group OAPCALP7.

Registers

The following table lists the registers associated with OM group OAPCALP7 and what they measure. For a detailed description of a register, click on the register name.

Registers for OM group OAPCALP7

Register name	Measures
CNFADD	Conference Add Request
CNFADDE	Conference Add Return Error
CNFADDS	Conference Add Return Result
CNFCREMV	Conference Remove Request
CNFCREMVE	Conference Remove Request Error
CNFCREMVS	Conference Remove Request Result
CNFCRET	Conference Create Request
CNFCRETE	Conference Create Request Result Error
CNFCRETS	Conference Create Request Result
CNFDELT	Conference Details Request
CNFDELTE	Conference Details Return Error
CNFDELTS	Conference Details Return Request
CNFREL	Conference Release Request
CNFRELE	Conference Release Return Error
CNFRELS	Conference Release Return Result

CNFADD

Register type
Peg

Description
CNFADD is pegged each time the corresponding operation or response is sent or received by the switch.

Associated registers
None

Extension registers
CNFADD2

Associated logs
None

CNFADDE

Register type
Peg

Description
CNFADDE is pegged each time the corresponding operation or response is sent or received by the switch.

Associated registers
None

Extension registers
CNFADDE2

Associated logs
None

CNFADDS

Register type
Peg

Description
CNFADDS is pegged each time the corresponding operation or response is sent or received by the switch.

Associated registers
None

Extension registers
CNFADDS2

Associated logs
None

CNFCREMV

Register type
Peg

Description

CNFCREMV is pegged each time the corresponding operation or response is sent or received by the switch.

Associated registers

None

Extension registers

CNFCREMV2

Associated logs

None

CNFCREMVE

Register type

Peg

Description

CNFCREMVE is pegged each time the corresponding operation or response is sent or received by the switch.

Associated registers

None

Extension registers

CNFCREMVE2

Associated logs

None

CNFCREMVS

Register type

Peg

Description

CNFCREMVS is pegged each time the corresponding operation or response is sent or received by the switch.

Associated registers

None

Extension registers

CNFCREMVS2

Associated logs

None

CNFCRET

Register type

Peg

Description

CNFCRET is pegged each time the corresponding operation or response is sent or received by the switch.

Associated registers

None

Extension registers

CNFCRET2

Associated logs

None

CNFCRETE

Register type

Peg

Description

CNFCRETE is pegged each time the corresponding operation or response is sent or received by the switch.

Associated registers

None

Extension registers

CNFCRETE2

Associated logs

None

CNFCRETS

Register type

Peg

Description

CNFCRETS is pegged each time the corresponding operation or response is sent or received by the switch.

Associated registers

None

Extension registers
CNFCRETS2

Associated logs
None

CNFDELT

Register type
Peg

Description
CNFDELT is pegged each time the corresponding operation or response is sent or received by the switch.

Associated registers
None

Extension registers
CNFDELT2

Associated logs
None

CNFDELTE

Register type
Peg

Description
CNFDELTE is pegged each time the corresponding operation or response is sent or received by the switch.

Associated registers
None

Extension registers
CNFDELTE2

Associated logs
None

CNFDELTS

Register type
Peg

Description

CNFDELTS is pegged each time the corresponding operation or response is sent or received by the switch.

Associated registers

None

Extension registers

CNFDELTS2

Associated logs

None

CNFREL

Register type

Peg

Description

CNFREL is pegged each time the corresponding operation or response is sent or received by the switch.

Associated registers

None

Extension registers

CNFREL2

Associated logs

None

CNFRELE

Register type

Peg

Description

CNFRELE is pegged each time the corresponding operation or response is sent or received by the switch.

Associated registers

None

Extension registers

CNFRELE2

Associated logs

None

CNFRELS

Register type

Peg

Description

CNFRELS is pegged each time the corresponding operation or response is sent or received by the switch.

Associated registers

None

Extension registers

CNFRELS2

Associated logs

None

OAPCALP8

Description

In TOPS09, OM group Open Automated Protocol (OAP) Call Processing 8 (OAPCALP8) is added to the set of OAP message OMs. This OM group contains registers that track call processing operations and responses used with the Operator Services Systems Advanced Intelligent Network (OSSAIN) simultaneous interactions feature.

The OSSAIN simultaneous interactions feature allows the attachment of two OSSAIN function providers (service node or TOPS operator) to a call simultaneously. The attachment configurations are as follows:

- service node and service node
- service node and a TOPS operator

During simultaneous interactions of a call, only one function provider may control the call. This function provider is the active agent. The other function provider is the passive agent.

> ***Note 1:*** In an OSSAIN simultaneous interaction, a service node must always be the active agent. An operator can never be the active agent when it is engaged in a simultaneous interaction with a service node.
>
> ***Note 2:*** For more information about OAP, refer to the *OSSAIN Open Automated Protocol Specification*, NIS: Q235-1

The following table lists the key and info fields associated with OM group OAPCALP8:

Key field	Info field
SESNPLID {0 to 4094}: Key field for table OASESNPL	OAP_SP_INDEX_REGISTERINFO - This field corresponds to the SESNPLNM field in table OASESNPL. The name can be up to 16 characters long.

Related functional groups

ENSV Enhanced Services (ENSV0001) is associated with OM group OAPCALP8.

Registers

The following table lists the registers associated with OM group

OAPCALP8 and what they measure. For a detailed description of a register, click on the register name.

Registers for OM group OAPCALP8

Register name	Measures
CGPNRQ	Integrated Services Digital Network User Part (ISUP) calling party number update request
CGPNRQE	ISUP Calling Party Number Update Request Error Response
CGPNRQS	ISUP Calling Party Number Update Request Success Response
SVCCHG	Service Change Request
SVCCHGE	Service Change Request Error Response
SVCCHGS	Service Change Request Success Response
VCERLSI	Voice Release Inform

CGPNRQ

Register type
Peg

Description
CGPNRQ is pegged each time this operation or response is sent or received by the switch.

Associated registers
None

Extension registers
CGPNRQ2

Associated logs
None

CGPNRQE

Register type
Peg

Description
CGPNRQE is pegged each time the this operation or response is sent or received by the switch.

Associated registers
None

Extension registers
CGPNRQE2

Associated logs
None

CGPNRQS

Register type
Peg

Description
CGPNRQS is pegged each time this operation or response is sent or received by the switch.

Associated registers
None

Extension registers
CGPNRQS2

Associated logs
None

SVCCHG

Register type
Peg

Description
SVCCHG is pegged each time this operation or response is sent or received by the switch.

Associated registers
None

Extension registers
SVCCHG2

Associated logs
None

SVCCHGE

Register type
Peg

Description
SVCCHGE is pegged each time this operation or response is sent or received by the switch.

Associated registers
None

Extension registers
SVCCHGE2

Associated logs
None

SVCCHGS

Register type
Peg

Description
SVCCHGS is pegged each time this operation or response is sent or received by the switch.

Associated registers
None

Extension registers
SVCCHGS2

Associated logs
None

VCERLSI

Register type
Peg

Description
VCERLSI is pegged each time this operation or response is sent or received by the switch.

Associated registers
None

Extension registers
VCERLSI2

Associated logs
None

OAPCALP9

Description

OM group Open Automated Protocol (OAP) Call Processing 9 (OAPCALP9) contains registers that track call processing message operations and responses on an Operator Services Systems Advanced Intelligent Network (OSSAIN) session pool basis. A register is pegged each time the corresponding open automated protocol (OAP) message is sent or received by the DMS switch.

> ***Note:*** For more information about OAP, refer to the *OSSAIN Open Automated Protocol Specification*, NIS: Q235-1

The following table lists the key and info fields associated with OM group OAPCALP9:

Key field	Info field
The key field can be indexed by either of the following: SESNPLID (0-4094) - This field corresponds to the key field SESNPLID in table OASESNPL. SESNPLNM (up to 16 characters) - This field corresponds to field SESNPLNM in table OASESNPL. This field is a name associated with SESNPLID.	Call processing class message operations on a per session pool basis.

> ***Note:*** The DMS switch adds one tuple to this OM group for each SESNPLID datafilled in table OASESNPL.

Related functional groups

The following functional groups are associated with OM group OAPCALP9:

- Enhanced Services, ENSV0001
- OSSAIN, OSAN0001

Registers

The following table lists the registers associated with OM group OAPCALP9 and what they measure. For a detailed description of a register, click on the register name.

Registers for OM group OAPCALP9

Register name	Measures
CNTTMT	Connect To Treatment Request
CNTTMTE	Connect To Treatment Error
CNTTMTS	Connect To Treatment Success
ESTCHG	Estimate of Call Charges
ESTCHGE	Estimate of Call Charges Error
ESTCHGS	Estimate of Call Charges Success
PASTHRE	Pass Through Error Response
PASTHRQ	Pass Through Request
PASTHRS	Pass Through Success Response
SACTINF	Service Active Inform

CNTTMT

Register type
Peg

Description
CNTTMT is pegged each time an OAP Connect To Treatment Request operation or response is sent or received by the switch.

To test this register, send or receive the OAP message associated with this register and verify that the register is pegged.

Associated registers
None

Extension registers
CNTTMT2

Associated logs
None

CNTTMTE

Register type

Peg

Description

CNTTMTE is pegged each time an OAP Connect To Treatment Error operation or response is sent or received by the switch.

To test this register, send or receive the OAP message associated with this register and verify that the register is pegged.

Associated registers

None

Extension registers

CNTTMTE2

Associated logs

None

CNTTMTS

Register type

Peg

Description

CNTTMTS is pegged each time an OAP Connect To Treatment Success operation or response is sent or received by the switch.

To test this register, send or receive the OAP message associated with this register and verify that the register is pegged.

Associated registers

None

Extension registers

CNTTMTS2

Associated logs

None

ESTCHG

Register type

Peg

Description

ESTCHG is pegged each time an estimate of charge operation or response is sent or received by the switch.

To test this register, send an estimate of charges to the switch and ensure that this register is pegged.

Associated registers

None

Extension registers

ESTCHG2

Associated logs

None

ESTCHGE

Register type

Peg

Description

ESTCHGE is pegged each time the estimate of charges error operation or response is sent or received by the switch.

To test this register, send an estimate of charges error operation to the switch and ensure that this register is pegged.

Associated registers

None

Extension registers

ESTCHGE2

Associated logs

None

ESTCHGS

Register type

Peg

Description

ESTCHGS is pegged each time the estimate of charges success operation or response is sent or received by the switch.

To test this register, send an estimate of charges success operation to the switch and ensure that this register is pegged.

Associated registers

None

Extension registers

ESTCHGS2

Associated logs

None

PASTHRE

Register type

Peg

Description

PASTHRE is pegged when an OAP Pass Through Error Response is sent to a service node.

To test this register, send this OAP message and verify that the register is pegged.

SOC OSAN0003 must be on for this OAP message.

Associated registers

None

Extension registers

PASTHRE2

Associated logs

None

PASTHRQ

Register type

Peg

Description

PASTHRQ is pegged when an OAP Pass Through Request is received.

To test this register, receive this OAP message and verify that the register is pegged.

SOC OSAN0003 must be on for this OAP message.

Associated registers

None

Extension registers
PASTHRQ2

Associated logs
None

PASTHRS

Register type
Peg

Description
PASTHRS is pegged when an OAP Pass Through Success Response is sent to a service node.

To test this register, send this OAP message and verify that the register is pegged.

SOC OSAN0003 must be on for this OAP message.

Associated registers
None

Extension registers
PASTHRS2

Associated logs
None

SACTINF

Register type
Peg

Description
SACTINF is pegged when a Session Active Inform OAP message is received from an OSSAIN service node.

Associated registers
None

Extension registers
SACTINF2

Associated logs
None

OAPCP10

Description

OM group Open Automated Protocol (OAP) Call Processing Group 10 (OAPCP10) contains registers that track call processing message operations and responses on an Operator Services Systems Advanced Intelligent Network (OSSAIN) session pool basis. A register is pegged each time the corresponding open automated protocol (OAP) message is sent or received by the DMS switch.

> ***Note:*** For more information about OAP, refer to the OSSAIN Open Automated Protocol Specification, NIS: Q235-1.

The following table lists the key and info fields associated with OM group OAPCP10.

Key field	Info field
SESNPLID (0-4096) - This field corresponds to the key field SESNPLID in table OASESNPL	None

Related functional groups

The following functional groups are associated with OM group OAPCP10:

- OSSAIN
- OSAN0001

Registers

The following table lists the registers associated with OM group OAPCP10 and what they measure. For a detailed description of a register, click on the register name.

Registers for OM group OAPCP10 (Sheet 1 of 2)

Register name	Measures
CBNSQRE	Calling party billed number screening (BNS) query request error
CBNSQRQ	Calling party billed number screening (BNS) query request

Registers for OM group OAPCP10 (Sheet 2 of 2)

Register name	Measures
CBNSQRS	Calling party billed number screening (BNS) query request success
RETANRE	Return answer request error
RETANRQ	Return answer request
RETANRS	Return answer request success
RNUPDRE	Location routing number (LRN) update request error
RNUPDRQ	Location routing number (LRN) update request
RNUPDRS	Location routing number (LRN) update request success
SMSRQ	Number of SMS request operation messages received
SMSRE	Number of SMS error response messages sent to the SN
SMSRS	Number of SMS success response messages sent to the SN

CBNSQRE

Register type

Peg

Description

CBMSQRE is pegged when an error is received on an OAP operation from a service node to perform a BNS query on the calling number. To test this register, receive the OAP message associated with this register and verify that the register is pegged.

Associated registers

None

Extension registers

CBNSQRE2

Associated logs

None

CBNSQRQ

Register type

Peg

Description

CBNSQRQ is pegged when a request is received in an OAP operation from a service node to perform a BNS query on the calling number. To test this register, receive the OAP message associated with this register and verify that the register is pegged.

Associated registers

None

Extension registers

CBNSQRQ2

Associated logs

None

CBNSQRS

Register type

Peg

Description

CBNSQRS is pegged when an OAP operation from a service node for a BNS query on the calling number is successfully processed. To test this register, receive the OAP message associated with this register and verify that the register is pegged.

Associated registers

None

Extension registers

CBNSQRS2

Associated logs

None

RETANRE

Register type

Peg

Description

RETANRE is pegged when an error is received in a Return Answer operation from a service node. To test this register, receive the message associated with this register and verify that the register is pegged.

Associated registers

None

Extension registers

RETANRE2

Associated logs

None

RETANRQ

Register type

Peg

Description

RETANRQ is pegged when the Return Answer operation is received from a service node. To test this register, receive the message associated with this register and verify that the register is pegged.

Associated registers

None

Extension registers

RETANRQ2

Associated logs

None

RETANRS

Register type

Peg

Description

RETANRS is pegged when the Return Answer operation is received successfully from a service node. To test this register, receive the message associated with this register and verify that the register is pegged.

Associated registers

None

Extension registers

RETANRS2

Associated logs

None

RNUPDRE

Register type

Peg

Description

RNUPDRE is pegged when an error is received on an OAP operation to assign an LRN as requested by a service node. To test this register, receive the OAP message associated with this register and verify that the register is pegged.

Associated registers

None

Extension registers

RNUPDRE2

Associated logs

None

RNUPDRQ

Register type

Peg

Description

RNUPDRQ is pegged when the Assign LRN operation is received from a service node. To test this register, receive the OAP message associated with this register and verify that the register is pegged.

Associated registers

None

Extension registers

RNUPDRQ2

Associated logs

None

RNUPDRS

Register type

Peg

Description

RNUPDRS is pegged when an OAP operation to assign an LRN is successfully processed from a service node. To test this register, receive the OAP message associated with this register and verify that the register is pegged.

Associated registers

None

Extension registers

RNUPDRS2

Associated logs

None

SMSRQ

Register type

Peg

Description

SMSRQ records the number of SMS request operation messages received.

Associated registers

None

Extension registers

SMSRQ2

Associated logs

None

SMSRE

Register type

Peg

Description

SMSRE records the number of SMS error response messages sent to the SN.

Associated registers

None

Extension registers

SMSRE2

Associated logs

None

SMSRS

Register type

Peg

Description

SMSRS records the number of SMS success response messages sent to the SN.

Associated registers

None

Extension registers

SMSRS2

Associated logs

None

OAPMERRN

Description

OM group Open Automated Protocol (OAP) Message Error - Node (OAPMERRN) contains a register for the different types of errors that OAP messages can have. Each register in OM group OAPMERRN is pegged on a per node basis (OAP Node Maintenance class messages).

The following table lists the key and info fields associated with OM group OAPMERRN:

Key field	Info field
NODEID {0 to 96}: Key field for table OANODINV	None

Related functional groups

ENSV Enhanced Services, ENSV0001 is associated with OM group OAPMERRN.

Registers

The following table lists the registers associated with OM group OAPMERRN and what they measure. For a detailed description of a register, click on the register name.

Registers for OM group OAPMERRN (Sheet 1 of 2)

Register name	Measures
NERRORER	Node Return Error
NINVDFD	Node Invalid Field Value
NINVKER	Node Invoke Error
NINVOPHD	Node Invalid Operation Header ID
NMSNGDB	Node Missing Data Block
NREJCTE	Node Reject Error
NRESLTER	Node Return Result Error

Registers for OM group OAPMERRN (Sheet 2 of 2)

Register name	Measures
NUNKNDB	Node Unknown Data Block
NUNKNOP	Node Unknown Operation ID

NERRORER

Register type

Peg

Description

NERRORER is pegged each time the switch receives a node maintenance message which has an operation ID that the switch does not recognize.

> ***Note:*** For test case(s), receive an error response with an error for a node maintenance request.

Associated registers

None

Extension registers

NERRORE2

Associated logs

OAP600

NINVDFD

Register type

Peg

Description

NINDFD is pegged each time the switch receives a node maintenance message which has a field with an invalid value.

> ***Note:*** For test case(s), receive an OAP for a node maintenance message with an invalid value in a field.

Associated registers

None

Extension registers

NINDFD2

Associated logs

OAP600

NINVKER

Register type

Peg

Description

NINVKER is pegged each time the switch receives an invalid value in a field and in a node maintenance Invoke Operation Header.

> ***Note:*** Currently, this register is not testable. Register NINVKER may be pegged in a future release.

Associated registers

None

Extension registers

NINVKER2

Associated logs

OAP600

NINVOPHD

Register type

Peg

Description

NINVOPHD is pegged each time the switch receives a node maintenance message which has an invalid Operation Header ID.

> ***Note:*** For test case(s), receive a node maintenance message from a service node with an invalid operation header ID.

Associated registers

None

Extension registers

NINVOPH2

Associated logs

OAP600

NMSNGDB

Register type

Peg

Description

NMSNGDB is pegged each time the switch receives a node maintenance operation or response with a missing mandatory data block.

> ***Note:*** For test case(s), receive a node maintenance response with a missing mandatory data block.

Associated registers

None

Extension registers

NMSNGDB2

Associated logs

OAP602

NREJCTE

Register type

Peg

Description

NREJCTE is pegged each time the switch receives an invalid value in the Reject Operation Header for a node maintenance message.

> ***Note:*** For test case(s), send a message with an invalid operation ID to the service node.

Associated registers

None

Extension registers

NREJCTE2

Associated logs

OAP600

NRESLTER

Register type

Peg

Description

NRESLTER is pegged each time the switch receives an invalid value in a node maintenance Return Result Operation Header.

> ***Note:*** For test case(s), receive a success response with an invalid value in a field, in the Return Result Operation Header for a node maintenance request.

Associated registers

None

Extension registers

NRESLTE2

Associated logs

OAP600

NUNKNDB

Register type

Peg

Description

NUNKNDB is pegged each time the switch receives an operation or response with an unknown data block from a service node.

> ***Note:*** For test case(s), receive a node maintenance message response with an unknown data block.

Associated registers

None

Extension registers

NUNKNDB2

Associated logs

OAP602

NUNKNOP

Register type

Peg

Description

NUNKNOP is pegged each time the switch receives a node maintenance message which has an operation ID that the switch does not recognize.

> ***Note:*** Currently, this register is not testable. Register NINVKER may be pegged in a future release.

Associated registers

None

Extension registers

NUNKNOP2

Associated logs

OAP601

OAPMERRS

Description

OM group Open Automated Protocol (OAP) Message Error - Session Pool (OAPMERRS) contains a register for the different types of errors that OAP messages can have. Each register in OM group OAPMERRS is pegged on a per session pool basis (for example, OAP Call Processing class and OAP Session Pool Maintenance class messages).

The following table lists the key and info fields associated with OM group OAPMERRS:

Key field	Info field
SESNPLID {0 to 4094}: Key field for table OASESNPL	None

Related functional groups

ENSV Enhanced Services, ENSV0001 is associated with OM group OAPMERRS.

Registers

The following table lists the registers associated with OM group OAPMERRS and what they measure. For a detailed description of a register, click on the register name.

Registers for OM group OAPMERRS (Sheet 1 of 2)

Register name	Measures
INVDFLD	Invalid Field Value
INVKERR	Invoke Error
INVLCLL	Invalid Call ID
INVLFN	Invalid Function ID
INVLOPHD	Invalid Operation Header ID
MISNGDB	Missing Data Block
REJECTER	Reject Error

Registers for OM group OAPMERRS (Sheet 2 of 2)

Register name	Measures
RERRORER	Return Error
RRESLTER	Return Result Error
SEQERRH	Out of Sequence - High
SEQERRL	Out of Sequence - Low
UNKWNDB	Unknown Data Block
UNKWNOP	Unknown Operation ID

INVDFLD

Register type

Peg

Description

INVDFLD is pegged each time the switch receives a call processing or session pool maintenance message which has a field with an invalid value.

> ***Note:*** For test case(s), receive an OAP message with an invalid value in a field.

Associated registers

None

Extension registers

INVDFLD2

Associated logs

OAP600

INVKERR

Register type

Peg

Description
INVKERR is pegged each time the switch receives an invalid value in the Invoke Operation Header of a call processing or session pool maintenance message.

> ***Note:*** For test case(s), receive an operation request from a service node that has an invalid value in the Invoke Operation Header.

Associated registers
None

Extension registers
INVKERR2

Associated logs
OAP600

INVLCLL

Register type
Peg

Description
INVLCLL is pegged each time the switch receives a call processing class message with an invalid call ID. Session pool maintenance does not peg this register.

> ***Note:*** For test case(s), receive a message from a service node with an invalid call ID.

Associated registers
None

Extension registers
INVLCLL2

Associated logs
None

INVLFN

Register type
Peg

Description
INVLFN is pegged each time the switch receives a call processing class message with an invalid function ID. The function ID is either out

of the valid range or inconsistent with prior messages sent for this session. Session pool maintenance does not peg this register.

> ***Note:*** For test case(s), receive a message from a service node with an invalid function ID.

Associated registers
None

Extension registers
INVLFN2

Associated logs
OAP600

INVLOPHD

Register type
Peg

Description
INVLOPHD is pegged each time the switch receives a message which has an invalid operation header ID.

> ***Note:*** For test case(s), receive a message from a service node with an invalid operation header ID.

Associated registers
None

Extension registers
RERRORER2

Associated logs
OAP600

MISNGDB

Register type
Peg

Description
MISNGDB is pegged each time the switch receives a call processing, session pool maintenance message operation, or response with a missing mandatory data block.

> ***Note:*** For test case(s), receive an operation request with a missing mandatory data block.

Associated registers

None

Extension registers

MISNGDB2

Associated logs

OAP602

REJECTER

Register type

Peg

Description

REJECTER is pegged each time the switch receives an invalid value in the Reject Operation Header of a call processing or session pool maintenance message.

> ***Note:*** For test case(s), send a message with an invalid operation ID to the service node.

Associated registers

None

Extension registers

REJECTE2

Associated logs

OAP600

RERRORER

Register type

Peg

Description

RERRORER is pegged each time the switch receives an invalid value in the Return Error Operation Header of a call processing or session pool maintenance message.

> ***Note:*** For test case(s), receive an error response with an error for a session pool maintenance request.

Associated registers

None

Extension registers
NUNKNDB2

Associated logs
OAP600

RRESLTER

Register type
Peg

Description
RRESLTER is pegged each time the switch receives an invalid value in the Return Result Operation Header of a call processing or session pool maintenance message.

> ***Note:*** For test case(s), receive a success response with an error for a session pool maintenance request.

Associated registers
None

Extension registers
RRESLTE2

Associated logs
OAP600

SEQERRH

Register type
Peg

Description
SEQERRH is pegged each time the switch receives a call processing class message that is out of sequence and the sequence number is higher than what the switch is expecting. Session pool maintenance does not peg this register.

> ***Note:*** For test case(s), receive an out-of-sequence message from a service node with a higher sequence number than what the switch is expecting.

Associated registers
None

Extension registers
SEQERRH2

Associated logs
OAP600

SEQERRL

Register type
Peg

Description
SEQERRL is pegged each time the switch receives a call processing class message that is out of sequence and the sequence number is lower than what the switch is expecting. Session pool maintenance does not peg this register.

> ***Note:*** For test case(s), receive an out-of-sequence message from a service node with a lower sequence number than what the switch is expecting.

Associated registers
None

Extension registers
SEQERRL2

Associated logs
None

UNKWNDB

Register type
Peg

Description
UNKWNDB is pegged each time the switch receives a call processing, session pool maintenance message operation, or response with an unknown data block from a service node.

> ***Note:*** For test case(s), receive an operation request with an unknown data block.

Associated registers
None

Extension registers
UNKWNDB2

Associated logs
OAP602

UNKWNOP

Register type

Peg

Description

UNKWNOP is pegged each time the switch receives a call processing or session pool maintenance message that has an operation ID the switch does not recognize.

> ***Note:*** For test case(s), receive an operation request from a service node with an unknown operation ID.

Associated registers

None

Extension registers

UNKWNOP2

Associated logs

OAP601

OAPMTYPN

Description

OM group Open Automated Protocol (OAP) Message Type - Node (OAPMTYPN) contains a register for each incoming and outgoing OAP message type. OM group OAPMTYPN registers are pegged for node based messages (for example, Node Maintenance class messages) on a per node basis.

The following table lists the key and info fields associated with OM group OAPMTYPN:

Key field	Info field
NODEID {0 to 96}: Key field for table OANODINV	None

Related functional groups

ENSV Enhanced Services, ENSV0001 is associated with OM group OAPMTYPN.

Registers

The following table lists the registers associated with OM group OAPMTYPN and what they measure. For a detailed description of a register, click on the register name.

Registers for OM group OAPMTYPN

Register name	Measures
NIERROR	Node Incoming Error
NIINVOK	Node Incoming Invoke
NIREJCT	Node Incoming Reject
NIRESLT	Node Incoming Result
NOERROR	Node Outgoing Error
NOINVOK	Node Outgoing Invoke
NOREJCT	Node Outgoing Reject
NORESLT	Node Outgoing Result

NIERROR

Register type

Peg

Description

NIERROR is pegged each time the switch receives a node maintenance error response on a per node level basis.

> ***Note:*** For test case(s), receive a node maintenance response for a busy request (for example, a busy error response).

Associated registers

None

Extension registers

NIERROR2

Associated logs

None

NIINVOK

Register type

Peg

Description

NIINVOK is pegged each time the switch receives an incoming node maintenance inform or request operation on a per node level basis.

> ***Note:*** Currently, this register is not testable. Register NINVOK may be pegged in a future release.

Associated registers

None

Extension registers

NIINVOK2

Associated logs

None

NIREJCT

Register type

Peg

Description

NIREJCT is pegged each time the switch receives a node maintenance protocol violation on a per node level basis.

> ***Note:*** For test case(s), send a message to a service node with an invalid operation ID.

Associated registers

None

Extension registers

NIREJCT2

Associated logs

None

NIRESLT

Register type

Peg

Description

NIRESLT is pegged each time the switch receives a node maintenance success response on a per node level basis.

> ***Note:*** For test case(s), receive a response for a node maintenance request (for example, a busy success response).

Associated registers

None

Extension registers

NIRESLT2

Associated logs

None

NOERROR

Register type

Peg

Description

NOERROR is pegged each time the switch sends an error response for a node maintenance operation request on a per node level basis.

> ***Note:*** Currently, this register is not testable. Register NOERROR may be pegged in a future release.

Associated registers
None

Extension registers
NOERROR2

Associated logs
None

NOINVOK

Register type
Peg

Description
NOINVOK is pegged each time the switch sends a node maintenance inform or request operation on a node level basis.

> ***Note:*** For test case(s), send a maintenance request to a node (for example, a node busy).

Associated registers
None

Extension registers
NOINVOK2

Associated logs
None

NOREJCT

Register type
Peg

Description
NOREJCT is pegged each time the switch sends a node maintenance protocol violation on a per node level basis.

> ***Note:*** For test case(s), receive a message with an invalid operation ID.

Associated registers
None

Extension registers
NOREJCT2

Associated logs

OAP600, OAP601, OAP602

NORESLT

Register type

Peg

Description

NORESLT is pegged each time the switch sends a success response for a node maintenance operation request on a per node level basis.

> ***Note:*** Currently, this register is not testable. Register NOERROR may be pegged in a future release.

Associated registers

None

Extension registers

NORESLT2

Associated logs

None

OAPMTYPS

Description

OM group Open Automated Protocol (OAP) Message Type - Session Pool (OAPMTYPS) contains a register for each incoming and outgoing OAP message type. OM group OAPMTYPS registers are pegged for session pool based messages (for example, OAP Call Processing class and OAP Session Pool Maintenance class messages) on a per session pool basis.

The following table lists the key and info fields associated with OM group OAPMTYPS:

Key field	Info field
SESNPLID {0 to 4094}: Key field for table OASESNPL	None

Related functional groups

ENSV Enhanced Services, ENSV0001 is associated with OM group OAPMTYPS.

Registers

The following table lists the registers associated with OM group OAPMTYPS and what they measure. For a detailed description of a register, click on the register name.

Registers for OM group OAPMTYPS (Sheet 1 of 2)

Register name	Measures
INERROR	Incoming Error
ININVOK	Incoming Invoke
INREJCT	Incoming Reject
INRESLT	Incoming Result
OGERROR	Outgoing Error
OGINVOK	Outgoing Invoke

Registers for OM group OAPMTYPS (Sheet 2 of 2)

Register name	Measures
OGREJCT	Outgoing Reject
OGRESLT	Outgoing Result

INERROR

Register type

Peg

Description

INERROR is pegged each time the switch receives a call processing or session pool maintenance error response from a session pool.

> ***Note:*** For test case(s), receive a response for a busy request (for example, a busy error response).

Associated registers

None

Extension registers

INERROR2

Associated logs

None

ININVOK

Register type

Peg

Description

ININVOK is pegged each time the switch receives an incoming call processing, session pool maintenance request, or inform operation from a session pool.

> ***Note:*** For test case(s), make a call to a service node that requires the service node to request a voice connection.

Associated registers

None

Extension registers

ININVOK2

Associated logs
None

INREJCT

Register type
Peg

Description
INREJCT is pegged each time the switch receives a call processing or session pool maintenance protocol violation from a session pool.

> ***Note:*** For test case(s), send a message to a service node with an invalid function id.

Associated registers
None

Extension registers
INREJCT2

Associated logs
None

INRESLT

Register type
Peg

Description
INRESLT is pegged each time the switch receives a call processing or session pool maintenance success response from a session pool.

> ***Note:*** For test case(s), receive a session pool response for a maintenance request (for example, a busy success response).

Associated registers
None

Extension registers
INRESLT2

Associated logs
None

OGERROR

Register type
Peg

Description

OGERROR is pegged each time the switch sends a call processing or session pool maintenance error response for an operation request to a session pool.

> ***Note:*** For test case(s), make a call to a service node for a function that requires a voice connection. Busy all the voice links. The switch will detect that all voice links are unavailable. It will then send an error response to the service node.

Associated registers

None

Extension registers

OGERROR2

Associated logs

None

OGINVOK

Register type

Peg

Description

OGINVOK is pegged each time the switch sends a call processing, session pool maintenance request, or inform operation to a session pool.

> ***Note:*** For test case(s), send a session pool maintenance request to a session pool (for example, a session pool busy).

Associated registers

None

Extension registers

OGINVOK2

Associated logs

None

OGREJCT

Register type

Peg

Description

OGREJCT is pegged each time the switch sends a protocol violation to a session pool.

> ***Note:*** For test case(s), receive a message with an invalid operation ID.

Associated registers

None

Extension registers

OGREJCT2

Associated logs

OAP600, OAP601, OAP602

OGRESLT

Register type

Peg

Description

OGRESLT is pegged each time the switch sends a call processing or session pool maintenance success response for an operation request to a session pool.

> ***Note:*** For test case(s), make a call to a service node which requires the service node to successfully request a voice connection.

Associated registers

None

Extension registers

OGRESLT2

Associated logs

None

Description

Operator services advanced intelligent network (OSSAIN) advanced protocol (OAP) node management information system This OM group is pegged for management information system (MIS) node class message types on a per node level basis.

OM group OAPNMIS provides up to 768 tuples per office. A tuple is added to this OM group for each NODEID datafilled in table OANODNAM.

Key field	Info field
NODEID	none

- Key field:
  NODEID {0 to 767}: Key field for table OANODNAM

Related functional groups

Functional group OSSAIN (OSAN0001) is associated with OM group OSACCP2.

Registers

The following table lists the registers associated with OM group OAPNMIS and what they measure. For a description of a register, click on the register name.

Registers for OM group OAPNMIS

Register name	Measures
MISOAIN	Management information system OSSAIN

MISOAIN

Register type
Peg

Description
Management information system OSSAIN (MISOAIN) Register MISOAIN is pegged each time the switch sends an MIS data buffer to a node.

Associated registers
There are no associated registers.

Extension registers

MISOAIN2

Associated logs

There are no associated logs.

OAPNMTC

Description

OM group Open Automated Protocol Node Maintenance Operations and Responses (OAPNMTC) contains a register for each call processing and non-call processing operation and response message defined in the OAP protocol. The registers track usage of the operations and responses. The registers are pegged on a per-session pool basis for call processing and session pool operations, and on a per-node basis for node maintenance operations.

The following table lists the key and info fields associated with OM group OAPNMTC. The group provides one tuple for each key value.

Key field	Info field
NODEID {0 to 767} Key field for table OANODNAM	OAP_NODE_INDEX_REGISTER INFO *(max. 16 characters)*

Related functional groups

Functional group ENSV Enhanced Services (ENSV0001) is associated with OM group OAPNMTC.

Registers

The following table lists the registers associated with OM group OAPNMTC and what they measure. For a description of a register, click on the register name.

Registers for OM group OAPNMTC (Sheet 1 of 2)

Register name	Measures
NDALARM	Node alarm operation
NDEAUDE	Node audit error response
NDEAUDS	Node audit success response
NDEBSYE	Node busy error response
NDEBSYS	Node busy success response
NDERTSE	Node return-to-service (RTS) error response
NDERTSS	Node RTS success response

Registers for OM group OAPNMTC (Sheet 2 of 2)

Register name	Measures
NDETSTE	Node test error response
NDETSTS	Node test success response
NODEAUD	Node audit request
NODEBSY	Node busy request
NODERTS	Node RTS request
NODETST	Node test request
NDLOG	Node log report operation
NODECON	Node connectivity test
NDECONS	Node connectivity success response
NDECONE	Node connectivity test error response

NDALARM

Register type

Peg

Description

NDALARM counts log report operations received for a given service node.

Associated registers

None

Extension registers

None

Associated logs

None

NDEAUDE

Register type

Peg

Description

NDEAUDE counts the number of times the switch sends or receives the corresponding node maintenance operation or response.

> ***Note:*** For test case(s), make a call that requires the corresponding node maintenance operation or response.

Associated registers

None

Extension registers

NDEAUDE2

Associated logs

None

NDEAUDS

Register type

Peg

Description

NDEAUDS counts the number of times the switch sends or receives the corresponding node maintenance operation or response.

> ***Note:*** For test case(s), make a call that requires the corresponding node maintenance operation or response.

Associated registers

None

Extension registers

NDEAUDS2

Associated logs

None

NDEBSYE

Register type

Peg

Description

NDEBSYE counts the number of times the switch sends or receives the corresponding node maintenance operation or response.

> ***Note:*** For test case(s), make a call that requires the corresponding node maintenance operation or response.

Associated registers

None

Extension registers

NDEBSYE2

Associated logs

None

NDEBSYS

Register type

Peg

Description

NDEBSYS counts the number of times the switch sends or receives the corresponding node maintenance operation or response.

> ***Note:*** For test case(s), make a call that requires the corresponding node maintenance operation or response.

Associated registers

None

Extension registers

NDEBSYS2

Associated logs

None

NDERTSE

Register type

Peg

Description

NDERTSE counts the number of times the switch sends or receives the corresponding node maintenance operation or response.

> ***Note:*** For test case(s), make a call that requires the corresponding node maintenance operation or response.

Associated registers

None

Extension registers

NDERTSE2

Associated logs

None

NDERTSS

Register type

Peg

Description

NDERTSS counts the number of times the switch sends or receives the corresponding node maintenance operation or response.

> ***Note:*** For test case(s), make a call that requires the corresponding node maintenance operation or response.

Associated registers

None

Extension registers

NDERTSS2

Associated logs

None

NDETSTE

Register type

Peg

Description

NDETSTE counts the number of times the switch sends or receives the corresponding node maintenance operation or response.

> ***Note:*** For test case(s), make a call that requires the corresponding node maintenance operation or response.

Associated registers

None

Extension registers

NDETSTE2

Associated logs

None

NDETSTS

Register type

Peg

Description

NDETSTS counts the number of times the switch sends or receives the corresponding node maintenance operation or response.

> ***Note:*** For test case(s), make a call that requires the corresponding node maintenance operation or response.

Associated registers

None

Extension registers

NDETSTS2

Associated logs

None

NODEAUD

Register type

Peg

Description

NODEAUD counts the number of times the switch sends or receives the corresponding node maintenance operation or response.

> ***Note:*** For test case(s), make a call that requires the corresponding node maintenance operation or response.

Associated registers

None

Extension registers

NODEAUD2

Associated logs

None

NODEBSY

Register type

Peg

Description

NODEBSY counts the number of times the switch sends or receives the corresponding node maintenance operation or response.

> ***Note:*** For test case(s), make a call that requires the corresponding node maintenance operation or response.

Associated registers

None

Extension registers

NODEBSY2

Associated logs

None

NODERTS

Register type

Peg

Description

NODERTS counts the number of times the switch sends or receives the corresponding node maintenance operation or response.

> ***Note:*** For test case(s), make a call that requires the corresponding node maintenance operation or response.

Associated registers

None

Extension registers

NODERTS2

Associated logs

None

NODETST

Register type

Peg

Description

NODETST counts the number of times the switch sends or receives the corresponding node maintenance operation or response.

> ***Note:*** For test case(s), make a call that requires the corresponding node maintenance operation or response.

Associated registers

None

Extension registers

NODETST2

Associated logs
None

NDLOG

Register type
Peg

Description
NDLOG counts the number of alarm operations received for the given service node.

Associated registers
None

Extension registers
None

Associated logs
None

NODECON

Register type
Peg

Description
NODECON counts the number of times the switch sends or receives a node connectivity test or response.

Associated registers
NDECONS, NDECONE

Extension registers
NODECON2

Associated logs
None

NDECONS

Register type
Peg

Description
NDECONS counts the number of times the switch sends or receives a node connectivity test success response.

Associated registers

NODECON, NDECONE

Extension registers

NDECONS2

Associated logs

None

NDECONE

Register type

Peg

Description

NDECONE counts the number of times the switch sends or receives a node connectivity test error.

Associated registers

NODECON, NDECONS

Extension registers

NDECONE2

Associated logs

None

Description

Open Automated Protocol (OAP) Session Pool Maintenance Operations and Responses

OAPSPMTC contains a register for each non-call processing operation and response message defined in the OAP protocol. The purpose of the registers in this OM group is to track usage of the operations and responses. These OM registers are pegged on a per session pool basis for non-call processing and session pool operations.

OM group OAPSPMTC provides up to 4095 tuples per office.

Key field	Info field
OASVNDCP...	OAP_SP_INDEX_REGISTERINFO

- Key field:
  OASVNDCP can be indexed by either of the following:
  - — SESNPLID {0 to 4094}: Key field for table OASESNPL.
  - — SESNPLNM: Name associated with SESNPLID.
- Info field:
  OAP_SP_INDEX_REGISTERINFO - This name can be up to 16 characters long.

Related functional groups

Functional group ENSV Enhanced Services (ENSV0001) is associated with OM group OAPSPMTC.

Registers

The following table lists the registers associated with OM group OAPSPMTC and what they measure. For a description of a register, click on the register name.

Registers for OM group OAPSPMTC

Register name	Measures
SPALARM	Register Alarm Operation
SPAUDIT	Session Pool Audit Request
SPAUDTE	Session Pool Audit Error Response

Registers for OM group OAPSPMTC

Register name	Measures
SPAUDTS	Session Pool Audit Success Response
SPBUSY	Session Pool Busy Request
SPBUSYE	Session Pool Busy Error Response
SPBUSYS	Session Pool Busy Success Response
SPCH	Register Throttle Operation
SPCHE	Register Throttle Operation Error
SPCHS	Register Throttle Operation Success
SPDRAIN	Register Drain Operation
SPLOG	Register Log Report Operation
SPRTS	Session Pool RTS Request
SPRTSE	Session Pool RTS Error Response
SPRTSS	Session Pool RTS Success Response
SPSTATE	Session Pool State Inform
SPTEST	Session Pool Test Request
SPTESTE	Session Pool Test Error Response
SPTESTS	Session Pool Test Success Response

SPALARM

Register type

Peg

Description

Register Alarm Operation

This register pegs the number of alarm operations for the given session pool.

Associated registers

There are no associated registers.

Extension registers

There are no extension registers.

Associated logs

There are no associated logs.

SPAUDIT

Register type

Peg

Description

Session Pool Audit Request

This register is pegged each time the audit request is sent or received by the switch.

Associated registers

There are no associated registers.

Extension registers

SPAUDIT2

Associated logs

There are no associated logs.

SPAUDTE

Register type

Peg

Description

Session Pool Audit Error Response

This register is pegged each time a session pool audit error response is sent or received by the switch.

Associated registers

There are no associated registers.

Extension registers

SPAUDTE2

Associated logs

There are no associated logs.

SPAUDTS

Register type

Peg

Description

Session Pool Audit Success Response

This register is pegged each time an audit success response is sent or received by the switch.

Associated registers

There are no associated registers.

Extension registers

SPAUDTS2

Associated logs

There are no associated logs.

SPBUSY

Register type

Peg

Description

Session Pool Busy Request This register is pegged each time a busy request is sent or received by the switch.

Associated registers

There are no associated registers.

Extension registers

SPBUSY2

Associated logs

There are no associated logs.

SPBUSYE

Register type

Peg

Description

Session Pool Busy Error Response

This register is pegged each time a busy error response is sent or received by the switch.

Associated registers

There are no associated registers.

Extension registers

SPBUSYE2

Associated logs

There are no associated logs.

SPBUSYS

Register type

Peg

Description

Session Pool Busy Success Response

This register is pegged each time a busy success response is sent or received by the switch.

Associated registers

There are no associated registers.

Extension registers

SPBUSYS2

Associated logs

There are no associated logs.

SPCH

Register type

Peg

Description

Register Throttle Operation

This register pegs the number of requests to change the number of active sessions in the given session pool.

Associated registers

There are no associated registers.

Extension registers

There are no extension registers.

Associated logs

There are no associated logs.

SPCHE

Register type

Peg

Description

Register Throttle Operation Error

This register pegs the number of throttle requests that sends an error response back to the requestor.

Associated registers

There are no associated registers.

Extension registers

There are no extension registers.

Associated logs

There are no associated logs.

SPCHS

Register type

Peg

Description

Register Throttle Operation Success

This register pegs the number of throttle requests that sends a success response back to the requestor.

Associated registers

There are no associated registers.

Extension registers

There are no extension registers.

Associated logs

There are no associated logs.

SPDRAIN

Register type

Peg

Description

Register Drain Operation

This register pegs the number of drain operations for the given session pool.

Associated registers

There are no associated registers.

Extension registers

There are no extension registers.

Associated logs

There are no associated logs.

SPLOG

Register type

Peg

Description

Register Log Report Operation

This register pegs the number of log report operations for the given session pool.

Associated registers

There are no associated registers.

Extension registers

There are no extension registers.

Associated logs

There are no associated logs.

SPRTS

Register type

Peg

Description

Session Pool RTS Request

This register is pegged each time an RTS request is sent or received by the switch.

Associated registers

There are no associated registers.

Extension registers

SPRTS2

Associated logs

There are no associated logs.

SPRTSE

Register type

Peg

Description

Session Pool RTS Error Response

This register is pegged each time an RTS error response is sent or received by the switch.

Associated registers

SPRTSE2

Extension registers

There are no extension registers.

Associated logs

There are no associated logs.

SPRTSS

Register type

Peg

Description

Session Pool RTS Success Response

This register is pegged each time an RTS success response is sent or received by the switch.

Associated registers

SPRTSS2

Extension registers

There are no extension registers.

Associated logs

There are no associated logs.

SPSTATE

Register type

Peg

Description

Session Pool State Inform

This register is pegged each time the switch sends an OAP Session Pool State Inform message to the service node.

Associated registers

There are no associated registers.

Extension registers

SPSTATE2

Associated logs

There are no associated logs.

SPTEST

Register type

Peg

Description

Session Pool Test Request

This register is pegged each time a Test request is sent or received by the switch.

Associated registers

There are no associated registers.

Extension registers

SPTEST2

Associated logs

There are no associated logs.

SPTESTE

Register type

Peg

Description

Session Pool Test Error Response

This register is pegged each time a Test error response is sent or received by the switch.

Associated registers

There are no associated registers.

Extension registers

SPTESTE2

Associated logs

There are no associated logs.

SPTESTS

Register type

Peg

Description

Session Pool Test Success Response

This register is pegged each time a Test success response is sent or received by the switch.

Associated registers

There are no associated registers.

Extension registers

SPTESTS2

Associated logs

There are no associated logs.

Description

Operator Services System Advanced Intelligent Network (OSSAIN) Session Pool Data Communications

OASNPLDC (OSSAIN Session Pool Data Communications) is created for data communications operational measurements. The following OM groups are also created for data communications operational measurements:

- OADATCOM - OSSAIN Data Communications
- OANODEDC - OSSAIN Node Data Communications

OM group OASNPLDC provides peg counts for OSSAIN data communications messaging events on a per session pool basis. It provides counts for the total number of messages sent from the CM to each session pool and the total number of messages received by the CM from each session pool. Counts of messages are broken down into successful and failure counts.

OM group OASNPLDC provides one tuple for each key.

Key field	Info field
SESSPLID	OSSAIN_SESNPL_DATACOM_ OMINFO

- Key field:
  SESSPLID {0 - 4094}: Key field from table OASESNPL

Related functional groups

Functional group ENSV Enhanced Services (ENSV0001) is associated with OM group OASNPLDC.

Registers

The following table lists the registers associated with OM group OASNPLDC and what they measure. For a description of a register, click on the register name.

Registers for OM group OASNPLDC

Register name	Measures
OSMSGRCV	OSSAIN message received per session pool
OSMSGRFL	OSSAIN message receive failure per session pool
OSMSGRSC	OSSAIN message receive success per session pool
OSMSGSFL	OSSAIN message send failure per session pool
OSMSGSND	OSSAIN message send requested per session pool
OSMSGSSC	OSSAIN message send success per session pool
OSRCRTFL	OSSAIN message receive route failure per session pool
OSSNRTFL	OSSAIN message receive route failure per session pool

OSMSGRCV

Register type
Peg

Description
OSSAIN message received per session pool

This register is pegged for a specific session pool each time an incoming message, originating from an external node, is received from that session pool. This includes both call processing and maintenance messages.

> ***Note:*** This register can be validated on a per session pool basis by adding the message receive success register and the message receive failure register that apply to the node of interest.

OSMSGRCV = OSMSGRSC + OSMSGRFL

Associated registers
OSMSGRSC and OSMSGRFL

Extension registers
OSMSGRC2

Associated logs
There are no associated logs.

OSMSGRFL

Register type
Peg

Description
OSSAIN message receive failure per session pool

This register is pegged for a specific session pool each time data communications encounters an error while attempting to forward a message originated from that session pool to the destination DMS process. This can be caused by a failure in the DMS internal messaging system or data transport interface. This register is also pegged for reasons indicated by register OSRCRTFL.

> ***Note:*** The validation formula for this registers follows:
>
> OSMSGRFL = OSMSGRC - OSMSGRSC
> OSMSGRFL >= OSRCRTFL

Associated registers
OSMSGRCV, OSMSGRSC, and OSRCRTFL

Extension registers
There are no extension registers.

Associated logs
There are no associated logs.

OSMSGRSC

Register type
Peg

Description
OSSAIN message receive success per session pool

This register is pegged for a specific session pool when the data communications software of the CM is able to successfully process an incoming message from the session pool.

> ***Note:*** The validation formula for this registers follows:
>
> OSMSGRSC = OSMSGRC - OSMSGRFL

Associated registers
OSMSGRCV and OSMSGRFL

Extension registers
OSMSGRS2

Associated logs
There are no associated logs.

OSMSGSFL

Register type
Peg

Description
OSSAIN message send failure per session pool

This register is pegged for a specific session pool each time data communications encounters an error while attempting to send an outgoing message to the session pool. This can be caused by a transport layer failure. This register is also pegged for reasons indicated by register OSSNRTFL.

> ***Note:*** The validation formula for this registers follows:
>
> OSMSGSFL = OSMSGSND - OSMSGSSC
> OSMSGSFL >= OSSNRTFL

Associated registers
OSMSGSND, OSMSGSSC, and OSSNRTFL

Extension registers
There are no extension registers.

Associated logs
There are no associated logs.

OSMSGSND

Register type
Peg

Description

OSSAIN message send requested per session pool

This register is pegged for a specific session pool each time the data communications software is requested to send a message. This includes requests from call processes and maintenance processes.

> ***Note:*** This register can be validated on a per session pool basis by adding the message send success register and the message send failure register that apply to the session pool of interest.
>
> OSMSGSND = OSMSGSSC + OSMSGSFL

Associated registers

OSMSGSSC and OSMSGSFL

Extension registers

OSMSGSN2

Associated logs

There are no associated logs.

OSMSGSSC

Register type

Peg

Description

OSSAIN message send success per session pool

This register is pegged for a specific session pool when the data communications software of the CM is able to successfully process an outgoing message destined for that session pool. Note that OSSAIN uses non-guaranteed messaging. Pegging this register does not indicate that the message actually arrived at the destination session pool.

> ***Note:*** The validation formula for this registers follows:
>
> OSMSGSND and OSMSGSFL

Associated registers

OSMSGSND and OSMSGSFL

Extension registers

OSMSGSS2

Associated logs

There are no associated logs.

OSRCRTFL

Register type

Peg

Description

OSSAIN message receive route failure per session pool

This register is pegged for a specific session pool each time the data communications software is unable to determine the destination of a message originating from that session pool. This can be caused by a variety of reasons including: • invalid protocol version

- invalid session identifier
- invalid network address
- invalid session pool state
- invalid node state
- pool/node identifier mis-match
- corrupted message

> ***Note:*** The validation formula for this registers follows:
>
> OSRCRTFL <= OSMSGRFL

Associated registers

OSMSGRFL

Extension registers

There are no extension registers.

Associated logs

Log number: OAIN605 and OAIN606

OSSNRTFL

Register type

Peg

Description

OSSAIN message receive route failure per session pool

This register is pegged for a specific session pool each time the data communications software is unable to determine the destination of an outgoing message. This can be caused by the following reasons:

- invalid session identifier
- pool/node identifier mis-match
- corrupted message

> ***Note:*** The validation formula for this registers follows:
>
> OSSNRTFL <= OSMSGSFL

Associated registers

OSMSGSFL

Extension registers

There are no extension registers.

Associated logs

There are no associated logs.

Description

Session Pool Inventory

This group provides the craftsperson with information regarding maintenance level activity on session pools datafilled in table OASESNPL. Specific information on maintenance detected and manual outages of a particular session pool is provided.

OMgroup OASNPOOL provides up to 4095 session pool tuples, one tuple per session pool datafilled in table OASESNPL.

Key field	Info field
None	session_pool_name

- Info field:
  (SIXTEEN_CHARS [16 Character Session Pool Name])

Related functional groups

Functional group ENSV Enhanced Services (ENSV0001) is associated with OM group OASNPOOL.

Registers

The following table lists the registers associated with OM group OASNPOOL and what they measure. For a description of a register, click on the register name.

Registers for OM group OASNPOOL

Register name	Measures
RTSFAIL	Session Pool Return-to-Service (RTS) Fail
SPCBSY	Session Pool C-Side Busy (CBSY)
SPMANB	Session Pool MANB
SPSYSB	Session Pool SYSB
TSTFAIL	Session Pool Test Fail

RTSFAIL

Register type

Peg

Description

Session Pool Return-to-Service (RTS) Fail

This register counts the number of times that a specific session pool failed to RTS—whether by audit or manual RTS.

> ***Note 1:*** This register cannot be tested from the computing module (CM). Refer to service node session pool applications documentation to disable session pool audits which would cause the CM session pool audit to fail and the session pool to be marked system busy (SYSB) at the MAP.
>
> ***Note 2:*** This test capability may not be provided by all session pool applications.

At the MAP, place the session pool in the manual busy (MANB) state and attempt to RTS the session pool by entering RTS. At the MAP, verify that the RTS fails, and that the session pool changes to the SYSB state. Also verify that an OAIN500 (DIAG FAIL) and OAIN502 (SYSB) log is produced, and that the RTSFAIL and SPSYSB OM registers are pegged.

Associated registers

SPSYSB

Extension registers

There are no extension registers.

Associated logs

OAIN500

SPCBSY

Register type

Peg

Description

Session Pool C-Side Busy (CBSY)

This register counts the number of times that a specific session pool went c-side busy.

> ***Note:*** For test case(s), with the session pool in-service, busy the service node. Using the MAP, verify that the session pool goes CBSY

> and SPCBSY and is pegged. Verify that an OAIN507 log is produced, in addition to a PM105 log. Verify that a minor alarm is generated.

Repeat above test case, but instead of setting the service node to the MANB state, MANB the Ethernet interface unit (EIU) interfaced to the service node. This action should cause the service node to change to the SYSB state. Again, using the MAP, verify that the session pool went CBSY, the SPCBSY OM register is pegged, an OAIN507 log is produced (in addition to a PM102 [SYSB] log), and a major alarm is generated.

Associated registers
INSSYSB (Count of node going from in-service to SYSB) or INSMANB (Count of node going from in-service to MANB).

Extension registers
There are no extension registers.

Associated logs
OAIN507

SPMANB

Register type
Peg

Description
Session Pool MANB

This register counts the number of times that a specific session pool went MANB.

> ***Note:*** To test this register, at a MAP terminal, post a session pool and busy (BSY) it. Verify the OM count is incremented and an OAIN505 and an PM128(ISTB) log is produced, along with a minor alarm.

Associated registers
There are no associated registers.

Extension registers
There are no extension registers.

Associated logs
OAIN505

SPSYSB

Register type

Peg

Description

Session Pool SYSB

This register counts the number of times that a specific session pool went SYSB.

> ***Note:*** This register cannot be tested from the CM. Refer to service node session pool applications documentation to disable session pool audits that would cause the session pool audit to fail and the session pool to be marked SYSB at the MAP.

Associated registers

There are no associated registers.

Extension registers

There are no extension registers.

Associated logs

OAIN502

TSTFAIL

Register type

Peg

Description

Session Pool Test Fail

This register counts the number of times that a specific session pool failed to successfully complete a diagnostic test.

> ***Note 1:*** This register cannot be tested from the CM. Refer to service node session pool applications documentation to disable session pool audit responses that would cause the CM session pool audit to fail and the session pool to be marked SYSB at the MAP.
>
> ***Note 2:*** This test capability may not be provided by all session pool applications. At the MAP, place the session pool in the MANB state and attempt to test the session pool by entering TST.

At the MAP, verify that the TST fails, and that the session pool stays MANB. Also verify that an OAIN500 (DIAG FAIL) log is produced and the TSTFAIL OM register is pegged.

Associated registers

There are no associated registers.

Extension registers

There are no extension registers.

Associated logs

There are no associated logs.

OASVNDCP

Description

Operator Services Systems Advanced Intelligent Network (OSSAIN) Service Node Call Processing

OM group OASVNDCP provides peg counts for OSSAIN calls on a per session pool basis. It provides counts for all service node or OSAC call processing activities.

OMgroup OASVNDCP provides up to 4095 tuples per office. A tuple is added for each session pool defined in table OASESNPL.

Key field	Info field
OASVNDCP...	OASVNDCP_INDEX_REGISTERINFO

- Key field: OASVNDCP
  can be indexed by either of the following:
  - — SESNPLID {0 to 4094}:
    Key field for OASESNPL.
  - — CSESNPLNM:
    Name associated with SESNPLID.
- Info field: OASVNDCP_INDEX_REGISTERINFO
  This name can be up to 16 characters long.

Related functional groups

Functional group Enhanced Services (ENSV0001) is associated with functional group OASVNDCP.

Functional group ENSV Enhanced Services (ENSV0001) introduces OM group OASVNDCP through the Operator Services AIN (ENSV0014) functionality.

Registers

The following table lists the registers associated with OM group OAASVNDCP and what they measure. For a description of a register, click on the register name.

Registers for OM group OASVNDCP

Register name	Measures
SBTIMOUT	Session Begin Time Out
NDCALERR	Call Error
NDMSGICL	Message Invalid Call
OSCCLERR	OSAC Call Error
OSCMICL	OSAC Message Invalid Call

SBTIMOUT

Register type
Peg

Description
Session Begin Time Out

Pegged when a Session Begin timer expires.

> ***Note:*** For test case(s), datafill OAFUNDEF with a Session Begin timer for a function. Route a call to that function, but do not respond to the Session Begin sent to the simulator. Verify the new OM is pegged after the timer period elapses.

Associated registers
There are no associated registers.

Extension registers
There are no extension registers.

Associated logs
There are no associated logs.

NDCALERR

Register type
Peg

Description

Call Error

Pegged when a node requests to end a call due to an unrecoverable error.

> ***Note:*** For test case(s), start by making an OSSAIN call that routes to a service node. Once at the node, perform an “End Call" and send an Abort Call datablock with the “call handling“ field set to “Error Recovery.“

Associated registers

There are no associated registers.

Extension registers

There are no extension registers.

Associated logs

There are no associated logs.

NDMSGICL

Register type

Peg

Description

Message Invalid Call

Pegged when a node attempts to send a message for an invalid call (one that the switch no longer considers active).

> ***Note:*** For test case(s), start by making an OSSAIN call that routes to a service node. Once at the node, make a call that routes to a service node, capture the calllid, then end the call. Make a subsequent request from the node which uses the previous calllid.

Associated registers

There are no associated registers.

Extension registers

There are no extension registers.

Associated logs

There are no associated logs.

OSCCLERR

Register type
Peg

Description
OSAC Call Error

This register is pegged when the OSAC Host has to end the call due to an error at the Host.

Associated registers
There are no associated registers.

Extension registers
There are no extension registers.

Associated logs
OSAC 600

OSCMICL

Register type
Peg

Description
OSAC Message Invalid Call

This register is pegged when the OSAC Remote receives a message from the Host for a call that is no longer active.

Associated registers
There are no associated registers.

Extension registers
There are no extension registers.

Associated logs
There are no associated logs.

OFF250

Description

OM group Offhook 250 (OFF250) was created for the Offhook Queuing (OHQ) feature.

The following table lists the key and info fields associated with OM group OFF250:

Key field	Info field
None	None

Related functional groups

There are no functional groups associated with OM group OFF250.

Registers

The following table lists the registers associated with OM group OFF250 and what they measure. For a detailed description of a register, click on the register name.

Registers for OM group OFF250

Register name	Measures
OHQOFFD	OHQ offered
OHQABAND	OHQ abandons
OHQCCBLM	OHQ call limit
OHQTRKLM	OHQ trunk group limit

OHQOFFD

Register type
Peg

Description
OHQOFFD increments the first time a call is offered OHQ.

Associated registers
None

Extension registers
OHQOFFD2

Associated logs
None

OHQABAND

Register type
Peg

Description
OHQABAND increments whenever a caller offered OHQ abandons the call.

Associated registers
None

Extension registers
OHQABAN2

Associated logs
None

OHQCCBLM

Register type
Peg

Description
OHQCCBLM increments every time a call is treated because the maximum number of calls in the OHQ limit is reached.

Associated registers
None

Extension registers
OHQCCBL2

Associated logs
None

OHQTRKLM

Register type
Peg

Description
OHQTRKLM increments every time a call is treated because the maximum number of calls queued for a trunk group limit is reached.

Associated registers

None

Extension registers

OHQTRKL2

Associated logs

None

OFZ

Description

OM group Office Traffic Summary (OFZ) provides information for traffic analysis using primary route scoring. OFZ counts calls for the intended destination, rather than the destination where the call terminates. OFZ records the structure of traffic that arrives at an office, the first routing, and the routing of outgoing traffic.

The system routes a call to a tone or announcement if:

- the tone or announcement is the intended destination of the call
- an error condition occurs that includes a tone or announcement as a part of its treatment

If the treatment routes the call to another tone or announcement, OFZ counts only the first tone or announcement.

The following table lists the key and info fields associated with OM group OFZ. OFZ provides one tuple for each office.

Key field	Info field
None	None

The value of OFFICETYPE in table OFCSTD controls the output of OFZ. All the registers are output in OFFICETYPEs OFF100, OFFCOMB, OFFCOMBLWW, OFFCOMBTOPS, OFF250IBN, OFF100OESD, or OFFCOMBOESD.

The following registers are output in OFFICETYPEs OFF200, OFF200TOPS, OFF200300, 0FF250, OFF300, or OFF200OESD: INANN, INLKT, INOUT, INTONE, NIN, OUTNWAT, OUTMFL, OUTRMFL, OUTOSF, OUTROSF, INABNM, INABNC.

Related functional groups

The following functional groups are related to OM group OFZ:

- DMS-100 Local
- DMS-100/200 Combined Local and Toll
- DMS-100 Wireless Combined Local and Toll with Wireless
- DMS-100/200 Combined Local and Toll with TOPS
- DMS-200 Toll

- DMS-200 Toll with TOPS
- DMS-200/300 Combined Toll and Gateway
- DMS-300 Gateway
- DMS-250 Tandem
- DMS250/SL-100 Combined Tandem and SL-100
- DMS-100 Austrian Local
- DMS-200 Austrian Toll
- DMS-100/200 Austrian Combined Local and Toll

Registers

The following table lists the registers associated with OM group OFZ and what they measure. For a description of a register, click on the register name.

Note: OM group OFZ provides one tuple for each office.

Registers for OM group OFZ (Sheet 1 of 2)

Register name	Measures
INABNC	Incoming calls abandoned by the customer
INABNM	Incoming calls abandoned by the machine
INANN	Incoming call to an announcement
INLKT	Incoming calls to lockout
INOUT	Incoming to outgoing
INTONE	Incoming call to tone
INTRM	Incoming to terminating
LNMBPC	Line manual busy peg count
NIN	Number of incoming calls
NORIG	Number of originating calls
ORIGABDN	Originating calls abandoned
ORIGANN	Originating call to announcement
ORIGLKT	Originating call to lock-out

Registers for OM group OFZ (Sheet 2 of 2)

Register name	Measures
ORIGOUT	Originating to outgoing
ORIGTONE	Originating call to tone
ORIGTRM	Originating to terminating
OUTMFL	Outgoing match failures
OUTNWAT	Outgoing network attempts
OUTOSF	Outgoing original seize failures
OUTRMFL	Outgoing retrial match failures
OUTROSF	Outgoing retrial seize failures
TRMBLK	Terminating blocks
TRMMFL	Terminating match failures
TRMNWAT	Terminating network attempts

INABNC

Register type

Peg

Description

INABNC counts incoming calls the subscriber abandons before processing. The calls do not require treatment.

Associated registers

The following registers are associated with INABNC:

- INABNM
- OFZ2NET1_ICABNC
- TRK_PRERTEAB counts incoming calls that the machine or subscriber abandons. The trunk group counts the calls.
- OTS_INCABNC counts incoming calls the subscriber abandons before the connection.

Validation formulas

The following formulas relate to INABNC and its associated registers:

- Σ TRK_PRERTEAB = OFZ_INABNM + OFZ_INABNC

  Note: This relationship does not apply to calls that originate from a mobile telephone exchange (MTX).

- OFZ_INABNC = OTS_INCABNC

Extension registers

None

Associated logs

TRK114, TRK116, TRK162

INABNM

Register type

Peg

Description

INABNM counts incoming calls the machine abandons before processing. The machine abandons calls when they time out at the upstream office while waiting for a receiver, and when an equipment problem exists.

Associated registers

The following registers are associated with INABNM:

- INABNC
- OFZ2NET1_ICABNM
- TRK_PRERTEAB counts incoming calls that the machine or subscriber abandons. The trunk group counts the calls.
- OTS_INCABNCM counts incoming calls the machine abandons before the connection.

Validation formulas

The following formulas relate to OFZ and its associated registers:

- Σ TRK_PRERTEAB = OFZ_INABNM + OFZ_INABNC

  Note: This relationship does not apply to calls that originate from a mobile telephone exchange (MTX).

- OFZ_INABNM = OTS_INCABNM

Extension registers
None

Associated logs
TRK114, TRK116, TRK162

INANN

Register type
Peg

Description
INANN counts incoming calls that the system routes to a treatment that sends the call to an announcement. The announcement is either the result of a treatment applied during inpulsing, or the intended result of the call. INANN counts the call before it attempts to get a network connection. The register counts the calls once.

Associated registers
The following registers are associated with INANN:

- ORIGANN
- OFZ2NET1_ICANN
- ANN_ANNATT counts attempts to generate announcements

Validation formula
Σ ANN_ANNATT OFZ_INANN + OFZ_ORIGANN

Extension registers
None

Associated logs
TRK138

INLKT

Register type
Peg

Description
INLKT counts incoming failed calls that the system routes to lockout. The calls fail for one of the following reasons:

- the incoming trunk loses its true identity
- the system cannot connect the call to a tone or announcement

- a forced release initiates manually
- a forced release initiates because call processing requests a delay (CP_WAITDENY counts the call)

Associated registers
The following registers are associated with INLKT:

- OFZ2NET1_ICLKT
- OTS_INCLKT counts incoming calls that fail to connect or receive treatment that routes the calls to lockout.

Validation formula
OFZ_INLKT = OTS_INCLKT - (number of calls that fail because of remote-end lockout)

Extension registers
None

Associated logs
TRK111, TRK113, TRK122, TRK123

INOUT

Register type
Peg

Description
INOUT counts incoming calls from:

- trunks
- preset conferences
- originating test lines
- auxiliary operator services system (AOSS) positions
- terminating ARTER trunk test facilities that the system routes at the start to trunks, TOPS, or AOSS positions

INOUT also counts TOPS calls that operate coin stations over trunks that use the line number method.

Associated registers
The following registers are associated with INOUT:

- OFZ2NET1_NICOG
- TRK_TANDEM counts trunk-to-trunk calls, except trunk-to-TOPS calls. The incoming trunk group counts the calls.

Validation formula

Σ TRK_TANDEM + Trunk-to-TOPS calls = OFZ_INOUT + (OFZ_INOUT2 × 65536)

Extension registers

INOUT2

Associated logs

None

INTONE

Register type

Peg

Description

INTONE counts incoming calls that the system routes to a tone. The tone is the result of a treatment applied inpulsing, or the tone is the intended result of the call. The register counts the call before it attempts to find a network connection. INTONE counts a call that the system routes to a tone once.

Associated registers

The following registers are associated with INTONE:

- ORIGTONE
- OFZ2NET1_ICTONE
- TONES_TONEATT counts attempts to attach a call to a tone.

Validation formula

Σ TONES_TONEATT OFZ_INTONE + OFZ_ORIGTONE

Extension registers

None

Associated logs

TRK138

INTRM

Register type

Peg

Description

INTRM counts incoming calls that the system routes to a line.

Associated registers

OFZ2NET1_ICTRM

Extension registers

INTRM2

Associated logs

None

LNMBPC

Register type

Peg

Description

LNMBPC counts manual busy lines. POTS lines are pegged by one when they become manual busy. Pegging of a P-phone/PSET/DATA/ISDN line depends on the number of virtual identifiers (VIDs) associated with the line when it becomes manual busy, either by LTP/BSY or maintenance action. The line can be pegged more than once.

Associated registers

OFZ2NET1_LNMBSYPC

Extension registers

None

Associated logs

None

NIN

Register type

Peg

Description

NIN counts incoming calls that the central control recognizes. The intended destination of the call is a line, trunk, announcement, or tone. NIN counts calls after a call control block and a call process are obtained. The register counts the calls before inpulsing is set up.

Associated registers

The following registers are associated with NIN:

- INABNC, INANN, INLKT, INOUT, INTRM, INABNM, INTONE
- OFZ2NET1_LNMBSYPC
- TRK_INCATOT and OTS_NINC count incoming calls. TRK counts calls by trunk group.

Validation formulas

The following formulas relate to NIN and its associated registers:

- OFZ_NIN + (OFZ_NIN2 × 65536) = Σ TRK_INCATOT
- OFZ_NIN + (OFZ_NIN2 × 65536) = OTS_NINC + (OTS_NINC2 × 65536)

Extension registers

NIN2

Associated logs

None

NORIG

Register type

Peg

Description

NORIG counts originating calls recognized by the central control. After a call condense block and a call process are obtained. NORIG counts the calls before dialing is set up. NORIG can count a single call at least once. The call is a single call only from the caller point of view. The system counts a three-way call when the flashing switch hook recognizes a correct feature origination signal. The feature origination signal is for the flashing line.

Associated registers

The following registers are associated with NORIG:

- ORIGABDN, ORIGANN, ORIGLKT, ORIGOUT, ORIGTONE, ORIGTRM
- OFZ2NET1_LINEUSG
- LMD_NORIGATT and OTS_NORG count originating calls. LMD counts calls by line module.

Validation formula

OFZ_NORIG = Σ LMD_NORIGATT = OTS_NORG

Extension registers

NORIG2

Associated logs

None

ORIGABDN

Register type

Peg

Description

ORIGABDN counts originating calls that the system abandons before the system routes the calls to a trunk, line, or treatment.

Associated registers

The following registers are associated with ORIGABDN:

- OFZ2NET1_LINEABDN
- LMD_ORIGABN and OTS_ORGABDN count originating calls that the system abandons before it routes the calls to a trunk, line, or treatment. LMD counts calls that the system does not route through an extended multiprocessor system (XMS)-based peripheral module (XPM).

Validation formula

OFZ_ORIGABDN = S LMD_ORIGABN = OTS_ORGABDN

> ***Note:*** The formula is true only if OFZ_ORIGABDN and OTS_ORGABDN are pegged at the same time.

Extension registers

None

Associated logs

LINE106, LINE108

ORIGANN

Register type

Peg

Description

ORIGANN counts originating calls that the system routes to an announcement. The announcement can be the result of a treatment during inpulsing, or the intended result of the call. The system counts the call in ORIGANN before an attempt to find a network connection occurs. In GL04, a call is not counted in ORIGANN again if it has been counted in ORIGANN or ORIGTONE.

Associated registers

The following registers are associated with ORIGANN:

- INANN
- OFZ2NET1_LINEANN
- ANN_ANNATT counts attempts to attach to announcements.

Validation formula

Σ ANN_ANNATT OFZ_INANN + OFZ_ORIGANN

Extension registers

None

Associated logs

LINE138

ORIGLKT

Register type

Peg

Description

ORIGLKT counts originating calls that fail on the destination that the system routes to lock out. The register counts the calls when they do not connect and when the system does not route the call to a treatment. The call fails for one of the following reasons:

- line load control (line is dead)
- a speech link is not available. (The call is queued until a speech link becomes available. If the caller remains off-hook, the call can be successful but ORIGLKT only increases once.)
- a Digitone receiver, or a network connection to a Digitone receiver is not available. (If the caller remains off-hook, the call clears when the problem is cleared but ORIGLKT increases once.)

Note: In GL04, ORIGLKT will be incremented when a lockout maintenance instruction is performed on an originating call as a result of a treatment. This OM will not be incremented if either ORIGANN or ORIGTONE has already been incremented.

Associated registers

The following registers are associated with ORIGLKT:

- OFZ2NET1_LINELKT
- The system counts OTS_ORGLKT originating calls that fail and that the system routes to lockout. The system counts the calls when they do not connect and route to a treatment.

Validation formula

OFZ_ORIGLKT = OTS_ORGLKT

Extension registers

None

Associated logs

LINE104, LINE105, LINE109, LINE204, NET130, OM2200

ORIGOUT

Register type

Peg

Description

ORIGOUT counts originating calls that the system routes to a trunk or a test facility.

Associated registers

OFZ2NET1_LINEOG

Extension registers

ORIGOUT2

Associated logs

None

ORIGTONE

Register type

Peg

Description

ORIGTONE counts originating calls that route to a tone. The register counts a call before it attempts to find a network connection. The tone is either the result of a treatment or the intended result of the call. ORIGTONE counts calls that the system routes to a treatment that in turn routes the call to a tone. ORIGTONE counts the call once.

Beginning in GL04, a call is not counted in register ORIGANN again if it has been counted in register ORIGANN or ORIGTONE.

Associated registers

The following registers are associated with ORIGTONE:

- INTONE
- OFZ2NET1_LINETONE
- TONES_TONEATT counts attempts to attach to tones.

Validation formula

Σ (TONES_TONEATT) OFZ_INTONE + OFZ_ORIGTONE

Extension registers

None

Associated logs

LINE138

ORIGTRM

Register type

Peg

Description

ORIGTRM counts originating calls that the system routes to a line. The register counts the call if a line is available or is not available.

Associated registers

OFZ2NET1_LINETRM

Extension registers

ORIGTRM2

Associated logs

None

OUTMFL

Register type

Peg

Description

OUTMFL counts calls that fail to find a network path to a selected outgoing or test trunk on the first attempt. A second attempt occurs to find an idle trunk and a network path.

Associated registers

The following registers are associated with OUTMFL:

- OFZ2NET1_OGMFL
- OUTMFL and SOTS_SOUTMFL count first trial match failures. SOTS_SOUTMFL counts calls that fail to find a network path from a line and that trunk to a selected outgoing or test trunk.
- TRK_OUTMTCHF counts match failures by trunk group.

Validation formulas

The following formulas relate to OUTMFL and its associated registers:

- OFZ_OUTMFL = SOTS_SOUTMFL
- Σ TRK_OUTMTCHF = OFZ_OUTMFL + OFZ_OUTRMFL

Extension registers

None

Associated logs

NET130

OUTNWAT

Register type

Peg

Description

OUTNWAT counts incoming and originating calls that are intended for an exact outgoing or test trunk. A single call can use two or more network paths to different ports of the service circuit. For example, connection by a conference circuit or digital echo suppressor requires more than one network path.

Associated registers

The following registers are associated with OUTNWAT:

- OFZ2NET1_OGNWAT
- After OUTNWAT counts the call, one of the following actions occurs:
  - — TRK_CONNECT counts a call after it connects.
  - — After a first trial failure, the system routes the call in an attempt to select another outgoing trunk. OUTMFL and TRK_OUTMTCHF count the call.
  - — After failure to get path followed by network blockage heavy traffic (NBLH) treatment, OUTMFL and TRK_OUTMTCHF count the call.

- — After failure to get a path followed by no treatment, TRK_OUTFAIL counts the call.
- — If double seizure of a trunk occurs, TRK_GLARE counts the call. The system makes a new path selection. If the system again encounters double seizure of a trunk, the call routes to a generalized no-circuit (GNCT) treatment.

- SOTS_SOUTNWT counts the attempts to find a network path from a line or trunk to a selected outgoing or test trunk.

Validation formulas

The following formulas relate to OUTNWAT and its associated registers:

- OFZ_OUTNWAT + (OFZ_OUTNWAT2 × 65536) = OFZ_OUTMFL + OFZ_OUTRMFL + Σ (TRK_CONNECT+TRK_GLARE + TRK_OUTFAIL + TRK_OUTMTCHF)
- OFZ_OUTNWAT + (OFZ_OUTNWAT2 × 65536) = SOTS_SOUTNWT + (SOTS_SOUTNWT2 × 65536)

Extension registers

OUTNWAT2

Associated logs

None

OUTOSF

Register type

Peg

Description

OUTOSF counts calls that fail to seize an outgoing trunk on the first attempt after network paths are acquired. A second attempt occurs to find an idle trunk and a network path, and to seize the trunk.

One of the following conditions causes a failure:

- a reversed trunk
- failure to receive a known start-dial
- not planned stop-dial
- timeout before expected stop-dial
- CCS7 errors

Associated registers

The following registers are associated with OUTOSF:

- OFZ2NET1_OGOSF
- SOTS_SOUTOSF counts first trial seize failures that occur after an outgoing trunk is selected and the necessary network paths acquired.

Validation formula

OFZ_OUTOSF = SOTS_SOUTOSF

Extension registers

None

Associated logs

TRK113, TRK121, TRK162, C7UP111

OUTRMFL

Register type

Peg

Description

OUTRMFL counts calls that fail on the second attempt to find a network path to a selected outgoing or test trunk. This register is not incremented in GL04.

Associated registers

The following registers are associated with OUTRMFL:

- OUTMFL
- OFZ2NET1_OGTRMFL
- OUTRMFL and SOTS_SOUTRMFL count second trial match failures.
- The system counts TRK_OUTMTCHF match failures. The trunk group counts failures.

Validation formulas

The following formulas relate to OUTRMFL and its associated registers:

- Σ TRK_OUTMTCHF = OFZ_OUTMFL + OFZ_OUTRMFL
- OFZ_OUTRMFL = SOTS_SOUTRMFL

Extension registers

None

Associated logs

None

OUTROSF

Register type

Peg

Description

OUTROSF counts calls that fail on the second attempt to seize an outgoing trunk. This attempt occurs after the network paths are acquired. One of the following conditions can cause a failure:

- a reversed trunk
- failure to receive a known start-dial
- unplanned stop-dial
- time-out before an expected stop-dial

The system disconnects the call after the second failure and the call receives start signal timeout (SSTO) treatment. An equal access call receives signal timeout BOC (STOB) or signal timeout IC/INC (STOC) treatment.

The system increases OUTROSF when a second attempt occurs to run a continuity test (COT) for an outgoing ISUP trunk. The second attempt occurs if the first COT attempt fails.

Associated registers

The following registers are associated with OUTROSF:

- OFZ2NET1_OGROSF
- SOTS_SOUTROSF counts calls that fail the second attempt to seize an outgoing trunk

Validation formula

OFZ_OUTROSF = SOTS_SOUTROSF

Extension registers

None

Associated logs

TRK113, TRK121, TRK162

TRMBLK

Register type

Peg

Description

TRMBLK counts attempts to obtain a voice path to a terminating line that fails. This failure occurs when no free channel is present between the host network and the terminating line.

The system counts more than one failed attempt if part of a hunt group directs the call. The system also counts each attempt in OFZ registers TRMMFL and TRMNWAT. The terminating line control device also counts in LMD registers NTERMATT and TERRMBLK. If no alternate line is available, the system routes the call to network blockage normal traffic (NBLN) treatment. Register TRMTRS_TRSNBLN counts the calls.

Associated registers

The following registers are associated with TRMBLK:

- OFZ2NET1_TRMBLCK
- LMD_TERMBLK counts failures in the line-to-network segment. The register counts call failures for non-XPM modules.
- SOTS_STRMBLK counts attempts to find a voice path from the network to a terminating line that fails. Failures occur when:
  - all the LM channels to the network are busy
  - the idle channels on lines to the network and line shelves that serve the terminating line are not linked

Validation formulas

The following formulas relate to TRMBLK and its associated registers:

- OFZ_TRMBLK = S LMD_TERMBLK
- OFZ_TRMBLK = SOTS_STRMBLK

Extension registers

None

Associated logs

NET130, TRK138, LINE138

TRMMFL

Register type

Peg

Description

TRMMFL counts failed attempts to find a voice path to a terminating line. The system counts more than one failed attempt if the call goes to a part of a hunt group. The system counts each attempt in OFZ register

TRMNWAT and in LMD_NTERMATT for the terminating line control device.

Failure in the path search sequence can occur if the host switch network cannot obtain a path (that is, a free channel on a link between the host switch network and the terminating line). If the network cannot find an alternate path, the system routes the call to network blockage heavy traffic (NBLH) treatment. Registers TRMBLK and TERMBLK count the failure to obtain a free channel.

If no alternate line is available, the system routes the call to network blockage normal traffic (NBLN) treatment. Register TRMTRS_TRSNBLN counts the calls.

Associated registers

The following registers are associated with TRMMFL:

- OFZ2NET1_TRMMCHFL
- SOTS_STRMMFL counts attempts to find a voice path to a terminating line that fail because a network connection is not available.

Validation formula

OFZ_TRMMFL = SOTS_STRMMFL

Extension registers

None

Associated logs

NET130, LINE138, TRK138

TRMNWAT

Register type

Peg

Description

TRMNWAT counts attempts to find a voice path to a terminating line. The complete path includes the following elements:

- a segment through the network
- a channel on the link between the line module and the network
- a matching channel on the line shelf

TRMNWAT counts a call only for each attempt. The calls count each attempt, whether it succeeds or fails.

Associated registers

The following registers are associated with TRMNWAT:

- OFZ2NET1_TRMLNAT
- LMD_NTERMATT counts intra-office calls for each line module.
- SOTS_STRMNWT counts attempts to find a voice path to a terminating line.

Validation formulas

The following formulas relate to TRMNWAT and its associated registers:

- OFZ_TRMNWAT + (OFZ_TRMNWAT2 × 65536) = Σ LMD_NTERMATT
- OFZ_TRMNWAT + (OFZ_TRMNWAT2 × 65536) = SOTS_STRMNWAT + (SOTS_STRMNWAT2 × 65536)

Extension registers

TRMNWAT2

Associated logs

None

OFZ2

Description

OM group Office Traffic Extension Summary (OFZ2) counts calls that the system routes to generalized no circuit treatment (GNCT). The system routes a call to GNCT when a trunk group is the last route in the route list and all trunks are busy.

The OM group has 13 registers. These registers give the cause of the GNCT for outgoing trunks or for the outgoing side of two-way trunks. The name of each register corresponds to an entry in the no circuit class field, NCCLS in table TRKGRP.

The following table lists the key and info fields associated with OM group OFZ2:

Key field	Info field
None	None

Related functional groups

There following functional groups are associated with OM group OFZ2:

- OFF100 Local
- OFFCOMB Combined local/toll
- OFFCOMBTOPS Combined local/toll with TOPS
- OFF200 Toll
- OFF200TOPS Toll with TOPS
- OFF200300 Combined gateway/toll
- OFF300 Gateway
- OFF250 DMS-250
- OFF250IBN DMS-250/SL-100
- OFF100OESD Austrian local
- OFF200OESD Austrian toll
- OFFCOMBOESD Austrian combined local/toll

Registers

The following table lists the registers associated with OM group OFZ2 and what they measure. For a detailed description of a register, click on the register name.

Registers for OM group OFZ2

Register name	Measures
OFZNCBN	No circuit business network trunks
OFZNCID	No circuit inward dial trunks
OFZNCIM	No circuit intermachine trunks
OFZNCIT	No circuit intertoll trunks
OFZNCLT	No circuit local tandem trunks
OFZNCOF	No circuit offnet trunks
OFZNCON	No circuit connect trunks
OFZNCOT	No circuit other trunk
OFZNCRT	No circuit trunks
OFZNCTC	No circuit toll completing trunks
OFZNOSC	No service circuit trunks
PDLM	Machine dialed partial dials
PSGM	Machine dialed permanent signal

OFZNCBN

Register type
Peg

Description
OFZNCBN counts calls the system routes to generalized no circuit treatment (GNCT). The system routes the calls to GNCT because Meridian Digital Centrex (MDC) trunk is not available.

Associated registers
TRMTRS_TRSGNCT, which counts calls that the system routes to GNCT

Validation formula

Register TRMTRS_TRSGNCT = The sum of the OFZ2 Registers, OFZNCIT, OFZNCTC, OFZNCLT, OFZNCBN, OFZNCID, OFZNOSC, OFZNCOT, OFZNCRT, OFZNCIM, OFZNCON, OFZNCOF

Extension registers

None

Associated logs

ATB100, LINE138, TRK138

OFZNCID

Register type

Peg

Description

OFZNCID counts calls the system routes to generalized no circuit treatment (GNCT). The system routes a call to GNCT when a direct inward dial or direct outward dial trunk is not available.

Associated registers

TRMTRS_TRSGNCT, which counts calls that the system routes to GNCT.

Validation formula

Register TRMTRS_TRSGNCT = The sum of the OFZ2 Registers, OFZNCIT, OFZNCTC, OFZNCLT, OFZNCBN, OFZNCID, OFZNOSC, OFZNCOT, OFZNCRT, OFZNCIM, OFZNCON, OFZNCOF

Extension registers

None

Associated logs

ATB100, LINE138, TRK138

OFZNCIM

Register type

Peg

Description

OFZNCIM counts calls that the system routes to generalized no circuit treatment (GNCT). The system routes the calls to GNCT because a circuit intermachine trunk is not available.

Associated registers

TRMTRS_TRSGNCT, which counts calls that the system routes to GNCT.

Validation formula

Register TRMTRS_TRSGNCT = The sum of the OFZ2 Registers, OFZNCIT, OFZNCTC, OFZNCLT, OFZNCBN, OFZNCID, OFZNOSC, OFZNCOT, OFZNCRT, OFZNCIM, OFZNCON, OFZNCOF

Extension registers

None

Associated logs

ATB100, LINE138, TRK138

OFZNCIT

Register type

Peg

Description

OFZNCIT counts calls that the system routes to generalized no circuit treatment (GNCT) because an intertoll trunk is not available.

Associated registers

TRMTRS_TRSGNCT, which counts calls that the system routes to GNCT

Validation formula

Register TRMTRS_TRSGNCT = The sum of the OFZ2 Registers, OFZNCIT, OFZNCTC, OFZNCLT, OFZNCBN, OFZNCID, OFZNOSC, OFZNCOT, OFZNCRT, OFZNCIM, OFZNCON, OFZNCOF

Extension registers

None

Associated logs

ATB100, LINE138, TRK138

OFZNCLT

Register type

Peg

Description

OFZNCLT counts calls that the system routes to generalized no circuit treatment (GNCT) because a local tandem trunk is not available.

Associated registers

TRMTRS_TRSGNCT, which counts calls that the system routes to GNCT.

Validation formula

Register TRMTRS_TRSGNCT = The sum of the OFZ2 Registers, OFZNCIT, OFZNCTC, OFZNCLT, OFZNCBN, OFZNCID, OFZNOSC, OFZNCOT, OFZNCRT, OFZNCIM, OFZNCON, OFZNCOF

Extension registers

None

Associated logs

ATB100, LINE138, TRK138

OFZNCOF

Register type

Peg

Description

OFZNCOF counts calls that the system routes to generalized no circuit treatment (GNCT). The system routes the calls to GNCT because circuit offnet access or direct dial trunk is not available.

Associated registers

TRMTRS_TRSGNCT, which counts calls that the system routes to GNCT.

Validation formula

Register TRMTRS_TRSGNCT = The sum of the OFZ2 Registers, OFZNCIT, OFZNCTC, OFZNCLT, OFZNCBN, OFZNCID, OFZNOSC, OFZNCOT, OFZNCRT, OFZNCIM, OFZNCON, OFZNCOF

Extension registers

None

Associated logs

ATB100, LINE138, TRK138

OFZNCON

Register type

Peg

Description

OFZNCON counts calls that the system routes to generalized no circuit treatment (GNCT). The system routes the calls to GNCT because dedicated access or mobile telephone exchange trunk is not available.

Associated registers
TRMTRS_TRSGNCT, which counts calls that the system routes to GNCT.

Validation formula
Register TRMTRS_TRSGNCT = The sum of the OFZ2 Registers, OFZNCIT, OFZNCTC, OFZNCLT, OFZNCBN, OFZNCID, OFZNOSC, OFZNCOT, OFZNCRT, OFZNCIM, OFZNCON, OFZNCOF

Extension registers
None

Associated logs
ATB100, LINE138, TRK138

OFZNCOT

Register type
Peg

Description
OFZNCOT counts calls that the system routes to generalized no circuit treatment (GNCT). The system routes the calls to GNCT because one of the following types of trunk is not available:

- test line
- test desk
- maintenance trunks
- AV101

Associated registers
TRMTRS_TRSGNCT, which counts calls that the system routes to GNCT.

Validation formula
Register TRMTRS_TRSGNCT = The sum of the OFZ2 Registers, OFZNCIT, OFZNCTC, OFZNCLT, OFZNCBN, OFZNCID, OFZNOSC, OFZNCOT, OFZNCRT, OFZNCIM, OFZNCON, OFZNCOF

Extension registers
None

Associated logs
ATB100, LINE138, TRK138

OFZNCRT

Register type

Peg

Description

OFZNCRT counts calls that the system routes to GNCT. The system routes a call to GNCT because one of the following types of trunk is not available:

- 0+/0- tandem to TOPS
- outgoing to AMR2 or CAMA
- outgoing local
- recording completing outgoing
- TOPS outgoing

Associated registers

TRMTRS_TRSGNCT, which counts calls that the system routes to GNCT.

Validation formula

Register TRMTRS_TRSGNCT = The sum of the OFZ2 Registers, OFZNCIT, OFZNCTC, OFZNCLT, OFZNCBN, OFZNCID, OFZNOSC, OFZNCOT, OFZNCRT, OFZNCIM, OFZNCON, OFZNCOF

Extension registers

None

Associated logs

ATB100, LINE138, TRK138

OFZNCTC

Register type

Peg

Description

OFZNCTC counts calls that the system routes to generalized no circuit treatment (GNCT) because toll completing trunk is not available.

Associated registers

TRMTRS_TRSGNCT, which counts calls that the system routes to GNCT

Validation formula

Register TRMTRS_TRSGNCT = The sum of the OFZ2 Registers, OFZNCIT, OFZNCTC, OFZNCLT, OFZNCBN, OFZNCID, OFZNOSC, OFZNCOT, OFZNCRT, OFZNCIM, OFZNCON, OFZNCOF

Extension registers

None

Associated logs

ATB100, LINE138, TRK138

OFZNOSC

Register type

Peg

Description

OFZNOSC counts calls the system routes to generalized no circuit treatment (GNCT). The system routes the call because automatic number announcement or automatic intercept trunk is not available.

Associated registers

TRMTRS_TRSGNCT, which counts calls that the system routes to GNCT.

Validation formula

Register TRMTRS_TRSGNCT = The sum of the OFZ2 Registers, OFZNCIT, OFZNCTC, OFZNCLT, OFZNCBN, OFZNCID, OFZNOSC, OFZNCOT, OFZNCRT, OFZNCIM, OFZNCON, OFZNCOF

Extension registers

None

Associated logs

ATB100, LINE138, TRK138

PDLM

Register type

Peg

Description

PDLM counts the machine-dialed calls that the system routes to partial dial treatment.

Associated registers

TRMTCM_TCMPDIL, which counts calls that the system routes to partial dial timeout treatment.

Extension registers

None

Associated logs

None

PSGM

Register type

Peg

Description

PSGM counts machine-dialed calls that the system routes to permanent signal treatment.

Associated registers

TRMTCM_TCMPSIG, which counts calls that the system routes to permanent signal timeout treatment.

Extension registers

None

Associated logs

TRK115, TRK117, TRK138, TRK183

OFZ2NET1

Description

OM group Office to Network Group 1 (OFZ2NET1) provides traffic analysis information for each bearer network. Using primary route scoring, the group counts calls for the intended destination rather than for the terminating destination. OFZ2NET2 contains registers that are extensions of a subset of registers in OFZ2NET1.

OFZ2NET1records the structure of traffic that arrives at an office on a particular bearer network, the first routing, and the routing of outgoing traffic. A call routes to a tone or announcement if:

- the tone or announcement is the intended destination of the call.
- an error condition occurs that includes a tone or announcement as a part of the call treatment.

> ***Note:*** The a treatment routes the call to another tone or announcement, OFZ2NET1 counts only the first tone or announcement.

OM groups OFZ and OFZ2 provide traffic analysis information office wide. OFZ2NET1 and OFZ2NET2 provide similar traffic analyses with further refinement on a per-bearer network basis for an office.

New office parameter MULTINET_DISPLAY_ACTIVE must be set to *Y* before the system can display OFZ2NET1.

The following table lists the key and info fields associated with OM group OFZ2NET1. The group provides one tuple for each bearer network datafilled in Table BEARNETS. The group structure depends on the office type of the call server.

Key field	Info field
Bearer network ID	BEARNETS_INFO

Info field BEARNETS_INFO includes:

- the bearer network ID (NET 0)
- the bearer network name (TDM_ENET)

The following table describes the relationship between incoming calls and registers in OFZ2NET1. For a complete list of registers in OFZ2NET1, refer to the section Registers.

Register name	Intended destination	Routing
NICOG	trunk	trunk
ICTRM	line	line
ICANN	trunk, line, announcement	announcement
ICTONE	trunk, line, tone	tone
ICLKT	trunk, line	lockout
ICABNC	trunk, line	customer abandon
ICABNM	trunk, line	machine abandon
TRKORIG	all	all

The following table describes the relationship between originating calls and registers in OFZ2NET1. For a complete list of registers in OFZ2NET1, refer to the section Registers.

Register name	Intended destination	Routing
LINEOG	trunk	trunk
LINETRM	line	line
LINEANN	trunk, line, announcement	announcement
LINETONE	trunk, line, tone	tone
LINELKT	trunk, line	lockout
LINEABDN	trunk, line	abandon
LINEUSG	trunk, line	all

The following table describes the relationship between terminating calls and registers in OFZ2NET1. For a complete list of registers in OFZ2NET1, refer to the section Registers.

Register name	Event
TRMMCHFL	Network blockage heavy traffic (NBLH) or Network blockage normal traffic (NBLN)
TRMBLCK	Network blockage normal traffic (NBLN)
LNMBSYPC	Line manual busy
TRMLNAT	All outgoing traffic

Office parameter OFFICETYPE in table OFCSTD controls the generation of the registers for OFZ2NET1. The following table describes the correct entries (values) for table OFCSTD. When the system reports an answer indicator to CM from the outgoing trunk, the OM Answer register for the outgoing trunk increases.

Office type values for table OFCSTD (Sheet 1 of 2)

Value (name)	Office type
NOOFFICE	Default
OFF100	Local
OFF100OESD	Austrian local
OFF100SCP	DMS-100 Service Control Point (SCP)
OFF200	Toll
OFF200AVON	DMS 100/200 local/toll with Autovon (U.S. and Canada)
OFF200OESD	Australian toll
OFF200TOPS	Toll with traffic operator position system (TOPS)
OFF200300	Combined gateway/toll
OFF250	DMS-250
OFF250IBN	DMS-250/SL-100

Office type values for table OFCSTD (Sheet 2 of 2)

Value (name)	Office type
OFF300	Gateway
OFF500	DMS-500
OFFCOMB	Combined local/toll
OFFCOMB300	Combined local/toll and gateway
OFFCOMB300ITOPS	Combined local/toll and gateway with international TOPS (ITOPS)
OFFCOMBITOPS	Combined local/toll with ITOPS
OFFCOMBLWW	Combined local/toll with wireless
OFFCOMBOESD	Australian combined local/toll
OFFCOMBTOPS	Combined local/toll with TOPS
OFFMTX100I	DMS-MTX with DMS100I

Related functional groups

The following functional groups are associated with OM group OFZNET1:

- Succession North America
- Succession International

Registers

The following table lists the registers associated with OM group OFZ2NET1 and what they measure. For a description of a register, click on the register name.

Registers for OM group OFZ2NET1 (Sheet 1 of 2)

Register name	Measures
ICANN	Incoming calls to an announcement
ICABNM	Incoming calls abandoned (by machine)
ICABNC	Incoming calls abandoned (by subscriber)
ICLKT	Incoming calls to lockout

Registers for OM group OFZ2NET1 (Sheet 2 of 2)

Register name	Measures
ICTONE	Incoming calls to tone
ICTRM	Incoming calls to terminating
LINEABDN	Originating calls abandoned
LINEANN	Originating calls to announcement
LINELKT	Originating calls to lockout
LINEOG	Originating calls to outgoing
LINETONE	Originating calls to tone
LINETRM	Originating calls to terminating
LINEUSG	Number of originating calls
LNMBSYPC	Line manual busy peg count
NICOG	Incoming to outgoing calls
OGMFL	Outgoing match failures
OGNWAT	Outgoing network attempts
OGOSF	Outgoing original seize failures
OGROSF	Outgoing retrial seize failures
OGTRMFL	Outgoing retrial match failures
TRKORIG	Number of incoming calls
TRMBLCK	Terminating blocks
TRMLNAT	Terminating network attempts
TRMMCHFL	Terminating match failures

ICABNC

Register type

Peg

Description

ICABNC counts incoming calls on the associated bearer network that the subscriber abandons before processing. The calls do not require treatment. CABNC is present in the following office types: OFF100, OFFCOMB, OFFCOMBTOPS, OFF100SCP, OFF100OESD, OFFCOMBOESD, OFF250IBN, OFFCOMBITOPS, OFFMTX100I, OFF500, OFFCOMBLWW, NOOFFICE.

Associated registers

ICABNM, OFZ_INABNC

Extension registers

None

Associated Logs

TRK114, TRK116, TRK162

ICABNM

Register type

Peg

Description

ICABNM counts incoming calls on the associated bearer network that the machine abandons before processing because:

- the call times out at the upstream office while waiting for a receiver
- an equipment problem exists

ICABNM is present in the following office types: OFF100, OFFCOMB, OFFCOMBTOPS, OFF100SCP, OFF100OESD, OFFCOMBOESD, OFF250IBN, OFFCOMBITOPS, OFFMTX100I, OFF500, OFFCOMBLWW, NOOFFICE.

Associated registers

ICABNC, OFZ_INABNM

Extension registers

None

Associated Logs

TRK114, TRK116, TRK162

ICANN

Register type

Peg

Description

ICANN counts incoming calls on the associated bearer network that the system routes to an announcement that is either the result of a treatment applied during origination or the intended result of the call. ICANN counts the call before it attempts to get network connection. The register counts calls that the system routes to a treatment that routes the call to an announcement. ICANN counts the calls once.

ICANN is present in the following office types: OFF100, OFFCOMB, OFFCOMBTOPS, OFF100SCP, OFF100OESD, OFFCOMBOESD, OFF250IBN, OFFCOMBITOPS, OFFMTX100I, OFF500, OFFCOMBLWW, NOOFFICE.

Associated registers

LINEANN, OFZ_INANN

Extension registers

None

Associated Logs

TRK138

ICLKT

Register type

Peg

Description

ICLKT counts incoming failed calls that the system routes to lockout. Calls fails because:

- the incoming trunk loses its true identity
- the system cannot connect the call to a tone or announcement
- a forced release initiates manually
- a forced release initiates because call processing requests a delay (CP_WAITDENY counts the call).

ICLKT is present in the following office types: OFF100, OFFCOMB, OFFCOMBTOPS, OFF100SCP, OFF100OESD, OFFCOMBOESD, OFF250IBN, OFFCOMBITOPS, OFFMTX100I, OFF500, OFFCOMBLWW, NOOFFICE.

Associated registers

OFZ_INLKT

Extension registers

None

Associated Logs

TRK111, TRK113, TRK123

ICTONE

Register type

Peg

Description

ICTONE counts incoming calls on the associated bearer network that route to a tone. The tone is either the result of a treatment applied during origination, or the intended result of the call. ICTONE counts the call before it attempts to find an network connection. The register counts a call once.

ICTONE is present in the following office types: OFF100, OFFCOMB, OFFCOMBTOPS, OFF100SCP, OFF100OESD, OFFCOMBOESD, OFF250IBN, OFFCOMBITOPS, OFFMTX100I, OFF500, OFFCOMBLWW, NOOFFICE.

Associated registers

LINETONE, OFZ_INTONE

Extension registers

None

Associated Logs

TRK138

ICTRM

Register type

Peg

Description

ICTRM counts incoming calls on the associated bearer network that route to a line. The register is present in the following office types: OFF100, OFFCOMB, OFFCOMBTOPS, OFF100SCP, OFF100OESD, OFFCOMBOESD, OFF250IBN, OFFCOMBITOPS, OFFMTX100I, OFF500, OFFCOMBLWW.

Associated registers

OFZ_INTRM

Extension registers

ICTRM2

Associated Logs

None

LINEABDN

Register type

Peg

Description

LINEABDN counts originating calls on the associated bearer network that the system abandons before the calls route to a trunk, line or treatment. The register is present in the following office types: OFF100, OFFCOMB, OFFCOMBTOPS, OFF100SCP, OFF100OESD, OFFCOMBOESD, OFF250IBN, OFFCOMBITOPS, OFFMTX100I, OFF500, OFFCOMBLWW.

Associated registers

OFZ_ORIGABDN

Extension registers

None

Associated Logs

LINE106, LINE108

LINEANN

Register type

Peg

Description

LINEANN counts originating calls on the associated bearer network that route to an announcement. The announcement is either the result of a treatment during origination, or the intended result of the call. The register counts a call before an attempt to find a network connection.

LINEANN is present in the following office types: OFF100, OFFCOMB, OFFCOMBTOPS, OFF100SCP, OFF100OESD, OFFCOMBOESD, OFF250IBN, OFFCOMBITOPS, OFFMTX100I, OFF500, OFFCOMBLWW.

Associated registers

ICANN, OFZ_ORIGANN

Extension registers

None

Associated Logs

LINE138

LINELKT

Register type

Peg

Description

LINELKT counts originating calls on the associated bearer network that fail on the intended destination that route to lockout. The register increments when the calls when either do not connect or do not route to treatment. Calls can fail because:

- line load control (the line is dead)
- a speech link is not available. The call is in queue until a speech link becomes available. If the caller remains off-hook, the call can be successful. LINELKT pegs one time.
- a digitone receiver, or a network connection to a digitone receiver is not available. If the caller remains off-hook, the problem clears when the call is successful. LINELKT pegs one time.

LINELKT is present in the following office types: OFF100, OFFCOMB, OFFCOMBTOPS, OFF100SCP, OFF100OESD, OFFCOMBOESD, OFF250IBN, OFFCOMBITOPS, OFFMTX100I, OFF500, OFFCOMBLWW.

Associated registers

OFZ_ORIGLKT

Extension registers

None

Associated Logs

LINE104, LINE105, LINE109, LINE204, NET130, OM2200

LINEOG

Register type

Peg

Description

LINEOG counts originating calls on the associated bearer network that route to a trunk or test facility. The register is present in the following office types: OFF100, OFFCOMB, OFFCOMBTOPS, OFF100SCP, OFF100OESD, OFFCOMBOESD, OFF250IBN, OFFCOMBITOPS, OFFMTX100I, OFF500, OFFCOMBLWW.

Associated registers
OFZ_ORIGOUT

Extension registers
LINEOG2

Associated Logs
None

LINETONE

Register type
Peg

Description
LINETONE counts originating calls on the associated bearer network that route to a tone that is either the result of a treatment, or the intended result of the call. The register counts a call before it attempts to find a network connection. LINETONE counts a call one time.

The register is present in the following office types: OFF100, OFFCOMB, OFFCOMBTOPS, OFF100SCP, OFF100OESD, OFFCOMBOESD, OFF250IBN, OFFCOMBITOPS, OFFMTX100I, OFF500, OFFCOMBLWW.

Associated registers
ICTONE, OFZ_ORIGTONE

Extension registers
None

Associated Logs
LINE138

LINETRM

Register type
Peg

Description
LINETRM counts originating calls on the associated bearer network that the system routes to a line. The register counts the call whether a line is available or not. LINETRM is present in the following office types: OFF100, OFFCOMB, OFFCOMBTOPS, OFF100SCP, OFF100OESD, OFFCOMBOESD, OFF250IBN, OFFCOMBITOPS, OFFMTX100I, OFF500, OFFCOMBLWW.

Associated registers
OFZ_ORIGTRM

Extension registers
LINETRM2

Associated Logs
None

LINEUSG

Register type
Peg

Description
LINEUSG counts originating calls on the associated bearer network that the core recognizes. The register counts a call after a call condense block (CCB) and a call process are obtained, and before dialing is set up. The call is three-way when the flashing switch hook recognizes a correct feature origination signal for the flashing line.

LINEUSG is present in the following office types: OFF100, OFFCOMB, OFFCOMBTOPS, OFF100SCP, OFF100OESD, OFFCOMBOESD, OFF250IBN, OFFCOMBITOPS, OFFMTX100I, OFF500, OFFCOMBLWW.

Associated registers
LINEABDN, LINEANN, LINELKT, LINEOG, LINETONE, LINETRM, OFZ_NORIG

Extension registers
LINEUSG2

Associated Logs
None

LNMBSYPC

Register type
Peg

Description
LNMBSYPC counts lines on the associated bearer network that are manual busy. The register pegs each POTS line by one when the line transitions to a manual busy state. How LNMBSYPC pegs each P-phone/PSET/DATA/ISDN line depends on the number of virtual identifiers (VID) associated with the line when the line becomes manual

busy by maintenance action such as the BSY command at the LTP MAPCI level. The register can peg the P-phone line more than once.

LNMBSYPC is present in the following office types: OFF100, OFFCOMB, OFFCOMBTOPS, OFF100SCP, OFF100OESD, OFFCOMBOESD, OFF250IBN, OFFCOMBITOPS, OFFMTX100I, OFF500, OFFCOMBLWW.

Associated registers

OFZ_LNMBPC

Extension registers

None

Associated Logs

None

NICOG

Register type

Peg

Description

NICOG counts incoming calls on the associated bearer network from trunks, preset conferences and originating test lines. The register is present in the following office types: OFF100, OFFCOMB, OFFCOMBTOPS, OFF100SCP, OFF100OESD, OFFCOMBOESD, OFF250IBN, OFFCOMBITOPS, OFFMTX100I, OFF500, OFFCOMBLWW, NOOFFICE.

Associated registers

OFZ_INOUT

Extension registers

NICOG2

Associated Logs

None

OGMFL

Register type

Peg

Description

OGMFL counts calls on the associated bearer network that fail to find a network path to a selected outgoing or test trunk on the first attempt. A second attempt occurs to find and idle trunk and a network path.

OGMFL is present in the following office types: OFF100, OFFCOMB, OFFCOMBTOPS, OFF100SCP, OFF100OESD, OFFCOMBOESD, OFF250IBN, OFFCOMBITOPS, OFFMTX100I, OFF500, OFFCOMBLWW, NOOFFICE.

Associated registers
OGTRMFL, OFZ_OUTMFL

Extension registers
None

Associated Logs
NET130

OGNWAT

Register type
Peg

Description
OGNWAT counts incoming and outgoing calls on the associated bearer network that are intended for a specific outgoing or test trunk. A call can use two or more network paths to different ports for the service circuit. For example, connection by a conference circuit requires more than one network path.

OGNWAT is present in the following office types: OFF100, OFFCOMB, OFFCOMBTOPS, OFF100SCP, OFF100OESD, OFFCOMBOESD, OFF250IBN, OFFCOMBITOPS, OFFMTX100I, OFF500, OFFCOMBLWW, NOOFFICE.

Associated registers
OFZ_OUTNWAT

Extension registers
OGNWAT2

Associated Logs
None

OGOSF

Register type
Peg

Description
OGOSF counts calls on the associated bearer network that fail to seize an outgoing trunk on the first attempt after network paths are acquired.

A second attempt occurs to find an idle trunk and a network path, and to seize the trunk. One of the following conditions causes a failure:

- a reversed trunk
- failure to receive a known start-dial
- an unplanned stop-dial
- a time-out before an expected stop-dial
- CCS7 errors

OGOSF is present in the following office types: OFF100, OFFCOMB, OFFCOMBTOPS, OFF100SCP, OFF100OESD, OFFCOMBOESD, OFF250IBN, OFFCOMBITOPS, OFFMTX100I, OFF500, OFFCOMBLWW, NOOFFICE.

Associated registers
OGROSF, OFZ_OUTOSF

Extension registers
None

Associated Logs
TRK113, TRK121, TRK162, C7UP111

OGROSF

Register type
Peg

Description
OGROSF counts calls on the associated bearer network that fail on the second attempt to seize an outgoing trunk. This attempt occurs after the network paths have been acquired. One of the following conditions causes a failure:

- a reversed trunk
- failure to receive a known start-dial
- an unplanned stop-dial
- a time-out before an expected stop-dial
- CCS7 errors

The system disconnects the call after the second failure and the call receives start signal timeout IC/INC (STOC) treatment. An equal access call receives signal.

The system increments OGRSOF when a second attempt occurs to run a continuity test (COT) for an outgoing ISUP trunk. The second attempt occurs if the first COT attempt fails.

The register is present in the following office types: OFF100, OFFCOMB, OFFCOMBTOPS, OFF100SCP, OFF100OESD, OFFCOMBOESD, OFF250IBN, OFFCOMBITOPS, OFFMTX100I, OFF500, OFFCOMBLWW, NOOFFICE.

Associated registers
OGOSF, OFZ_OUTROSF

Extension registers
None

Associated Logs
TRK113, TRK121, TRK162, C7UP111

OGTRMFL

Register type
Peg

Description
OGTRMFL counts calls on the associated bearer network that fail on the second attempt to find a network path to a selected outgoing or test trunk. The register is present in the following offices: OFF100, OFFCOMB, OFFCOMBTOPS, OFF100SCP, OFF100OESD, OFFCOMBOESD, OFF250IBN, OFFCOMBITOPS, OFFMTX100I, OFF500, OFFCOMBLWW, NOOFFICE.

Associated registers
OGMFL, OFZ_OUTRMFL

Extension registers
None

Associated Logs
None

TRKORIG

Register type
Peg

Description
TRKORIG counts incoming calls on the associated bearer network that the core recognizes. The intended destination for these calls can be a

line, trunk, announcement or tone. TRKORIG counts calls after a call control block and call process are obtained. The register can count a call before all incoming digits are received.

TRKORIG is present in the following office types: OFF100, OFFCOMB, OFFCOMBTOPS, OFF100SCP, OFF100OESD, OFFCOMBOESD, OFF250IBN, OFFCOMBITOPS, OFFMTX100I, OFF500, OFFCOMBLWW, NOOFFICE.

Associated registers
ICABNC, ICABNM, ICANN, ICLKT, NICOG, ICTONE, ICTRM, OFZ_NIN

Extension registers
TRKORIG2

Associated Logs
None

TRMBLCK

Register type
Peg

Description
TRMBLK counts attempts to obtain a voice path to a terminating line on the associated bearer network that fail because no free channel is present between the host network and the terminating line. The register counts more than one failed attempt if part of a hunt group directs the call. If no alternate line is available, the system routes the call to network blockage normal traffic (NBLN) treatment.

TRMBLK is present in the following office types: OFF100, OFFCOMB, OFFCOMBTOPS, OFF100SCP, OFF100OESD, OFFCOMBOESD, OFF250IBN, OFFCOMBITOPS, OFFMTX100I, OFF500, OFFCOMBLWW.

Associated registers
TRMMCHFL, TRMLNAT, OFZ_TRMBLK

Extension registers
None

Associated Logs
LINE138, NET 130, TRK138

TRMLNAT

Register type

Peg

Description

TRNLNAT counts attempts to find a voice path on the associated bearer network to a terminating line. A complete path includes:

- a segment through the network
- a channel on the link between the line module and the network
- a matching channel on the line shelf

TRNLNAT counts a call for each failed or successful attempt. The register is present in the following office types: OFF100, OFFCOMB, OFFCOMBTOPS, OFF100SCP, OFF100OESD, OFFCOMBOESD, OFF250IBN, OFFCOMBITOPS, OFFMTX100I, OFF500, OFFCOMBLWW.

Associated registers

TRMBLCK, TRMMCHFL, OFZ_TRMNWAT

Extension registers

TRMLNAT2

Associated Logs

None

TRMMCHFL

Register type

Peg

Description

TRMMCHFL counts calls on the associated bearer network that fail to find a network path to a terminating line. The register counts more than one failed attempt if the call goes to a part of a hunt group. Failure in the path search sequence occurs when:

- the host switch network cannot obtain a path. The call routes to network blockage heavy traffic (NBLH) treatment
- a free channel on a link between the host switch network and the terminating line cannot be obtained.

If no alternate path is available, the call routes to network blockage normal traffic (NBLN) treatment.

TRMMCHFL is present in the following office types: OFF100, OFFCOMB, OFFCOMBTOPS, OFF100SCP, OFF100OESD, OFFCOMBOESD, OFF250IBN, OFFCOMBITOPS, OFFMTX100I, OFF500, OFFCOMBLWW.

Associated registers

TRMBLCK, TRMLNAT, OFZ_TRMMFL

Extension registers

None

Associated Logs

LINE138, NET130, TRK138

OFZ2NET2

Description

OM group Office to Network Group 2 (OFZ2NET2) provides traffic analysis information for each bearer network. Registers in the group count calls that route to generalized no circuit treatment (GNCT) when a trunk group is the last route in the route list and all trunks are busy.

OFZ2NET2 registers with the prefix *NCKT* count the number of calls by the trunk or call types routed to GNCT for outgoing trunks or for the outgoing side of two-way trunks. Register names correspond to an entry in field No Circuit Class (NCCLS) which is datafilled for each trunk defined in table TRKGRP.

To display OFZ2NET2, set new office parameter MULTINET_DISPLAY_ACTIVE to *Y*.

The following table lists the key and info fields associated with OM group OFZ2NET2. The group provides one tuple for each bearer network datafilled in table BEARNETS. The group structure depends on the office type of the call server.

Key field	Info field
Bearer network ID	BEARNETS_INFO

Info field BEARNETS_INFO includes:

- the bearer network ID (NET 0)
- the bearer network name (TDM_ENET)

Office parameter OFFICETYPE in table OFCSTD controls the generation of the registers for OFZ2NET2. The following table describes the correct entries (values) for table OFCSTD. When the system reports an answer indicator to CM from the outgoing trunk, the OM Answer register for the outgoing trunk increases. These registers will be displayed for the office types in the following table.

Office type values for table OFCSTD (Sheet 1 of 2)

Value (name)	Office type
NOOFFICE	Default
OFF100	Local

Office type values for table OFCSTD (Sheet 2 of 2)

Value (name)	Office type
OFF100OESD	Austrian local
OFF200	Toll
OFF200OESD	Australian toll
OFF200TOPS	Toll with traffic operator position system (TOPS)
OFF200300	Combined gateway/toll
OFF250	DMS-250
OFF250IBN	DMS-250/SL-100
OFF300	Gateway
OFFCOMB	Combined local/toll
OFFCOMB300ITOPS	Combined local/toll and gateway with international TOPS (ITOPS)
OFFCOMBOESD	Australian combined local/toll
OFFCOMBTOPS	Combined local/toll with TOPS

Related functional groups

The following functional groups are associated with OM group OFZ2NET2:

- Succession North America
- Succession International

Registers

The following table lists the registers associated with OM group OFZ2NET2 and what they measure. For a description of a register, click on the register name.

Registers for OM group OFZ2NET2

Register name	Measures
DPTRC	Dynamic packet trunk (DPT) reservation control
MDPD	Machine-dialed partial dials
MDPSIG	Machine-dialed permanent signal
NCKTBN	No circuit business network trunks
NCKTID	No circuit inward dial trunks
NCKTIM	No circuit inter-machine trunks
NCKTIT	No circuit inter-toll trunks
NCKTLT	No circuit local tandem trunks
NCKTOF	No circuit off-net trunks
NCKTON	No circuit connect trunks
NCKTOSC	No service circuit trunks
NCKTOT	No circuit other trunk
NCKTRT	No circuit trunks
NCKTTC	No circuit toll completing trunks

NCKTBN

Register type
Peg

Description
NCKTBN counts calls on the associated bearer network that route to GNCT because a Meridian Digital Centrex (MDC) is not available.

Associated registers
None

Extension registers
None

Associated logs
ATB100, LINE138, TRK138

NCKTID

Register type
Peg

Description
NCKTID counts calls on the associated bearer network that route to GNCT because a direct inward dial or direct outward dial trunk is not available.

Associated registers
None

Extension registers
None

Associated logs
ATB100, LINE138, TRK138

NCKTIM

Register type
Peg

Description
NCKTIM counts calls on the associated bearer network that route to GNCT because a circuit inter-machine trunk is not available.

Associated registers
None

Extension registers
None

Associated logs
ATB100, LINE138, TRK138

NCKTIT

Register type
Peg

Description
NCKTIT counts calls on the associated bearer network that the system routes to GNCT because an inter-toll trunk is not available.

Associated registers
None

Extension registers
None

Associated logs
ATB100, LINE138, TRK138

NCKTLT

Register type
Peg

Description
NCKTLT counts calls on the associated bearer network that the system routes to GNCT because a local tandem trunk is not available.

Associated registers
None

Extension registers
None

Associated logs
ATB100, LINE138, TRK138

NCKTOF

Register type
Peg

Description
NCKTOF counts calls on the associated bearer network that route to GNCT because an off-net or direct dial trunk is not available.

Associated registers
None

Extension registers
None

Associated logs
ATB100, LINE138, TRK138

NCKTON

Register type

Peg

Description

NCKTON counts calls on the associated bearer network that route to GNCT because a dedicated access or mobile telephone exchange trunk is not available.

Associated registers

None

Extension registers

None

Associated logs

ATB100, LINE138, TRK138

NCKTOT

Register type

Peg

Description

NCKTOT counts calls on the associated bearer network that route to GNCT because one of the following trunk types is not available:

- test line or desk
- maintenance trunks
- AV101

Associated registers

None

Extension registers

None

Associated logs

ATB100, LINE138, TRK138

NCKTRT

Register type

Peg

Description

NCKTRT counts calls on the associated bearer network that route to GNCT because one of the following trunk types is not available:

- 0+/0- tandem to TOPS
- outgoing to AMR2 or CAMA
- outgoing local
- recording completing outgoing
- TOPS outgoing

Associated registers

None

Extension registers

None

Associated logs

ATB100, LINE138, TRK138

NCKTTC

Register type

Peg

Description

NCKTTC counts calls on the associated bearer network that route to GNCT because a toll completing trunk is not available.

Associated registers

None

Extension registers

None

Associated logs

ATB100, LINE138, TRK138

NCKTOSC

Register type

Peg

Description

NCKTOSC counts calls on the associated bearer network that route to GNCT because automatic number announcement or automatic intercept trunk is not available.

Associated registers

None

Extension registers

None

Associated logs

ATB100, LINE138, TRK138

MDPD

Register type

Peg

Description

MDPD counts calls on the associated bearer network that route to partial dial treatment.

Associated registers

None

Extension registers

None

Associated logs

TRK114, TRK116, TRK138, TRK182

MDPSIG

Register type

Peg

Description

MDPSIG counts machine-dialed calls on the associated bearer network that route to permanent signal treatment.

Associated registers

None

Extension registers

None

Associated logs

TRK115, TRK117, TRK138, TRK183

DPTRC

Register type

Peg

Description

DPTRC counts the number of dynamic packet trunk (DPT) terminal requests that are blocked because of DPT bandwidth reservation.

Associated registers

None

Extension registers

DPTRC2

Associated logs

None

OGTQMS

Description

Outgoing trunk queue management system (QMS)

OGTQMS records the number of times an operator enters outgoing trunk (OGT) keystroke actions.

The following table lists the key and info fields associated with OM group OGTQMS.

Key field	Info field
none	key type {OT, CT4Q, ASST, LANG, DUALLANG} and key label as datafilled in table TQOGTKEY

Related functional groups

The QMS functional group is associated with OM group OGTQMS.

Registers

The following table lists the registers associated with OM group OGTQMS and what they measure. For a description of a register, click on the register name.

Registers for OM group OGTQMS

Register name	Measures
KEYHITS	OGTQMS key hits

KEYHITS

Register type
Peg

Description
OGTQMS key hits

KEYHITS is incremented each time the operator enters OGT keystroke actions.

Associated registers
There are no associated registers.

Extension registers

There are no extension registers.

Associated logs

There are no associated logs.

Description

Off-Hook Balance Test Digital Test Unit (OHBTDTU)

The OM group OHBTDTU monitors the following:

- the number of digital test units (DTU) available at midnight
- the number of DTUs available at the time of any OMSHOW request
- the number of DTU seizures after midnight

The OM group OHBTDTU provides one tuple. The following table lists the key and info fields associated with OM group OHBTDTU.

Key field	Info field
none	none

Related functional groups

The Base Line Maintenance functional group associates with the OM group OHBTDTU.

Registers

The following table lists the registers associated with OM group OHBTDTU and what they measure. For a description of a register, click on the register name.

Registers for OM group OHBTDTU

Register name	Measures
DTUMID	Total DTUs available at midnight (DTUMID)
DTUNOW	Total DTUs available now (DTUNOW)
DTUSZD	Total DTU seizures in the day (DTUSZD)

DTUMID

Register type
Peg

Description
Total DTUs available at midnight (DTUMID)

Register DTUMID has one field. This register increases at midnight to give the number of available DTUs at midnight in the OHBTADMN DTU list.

Associated registers
There are no associated registers.

Extension registers
There are no extension registers.

Associated logs
There are no associated logs.

DTUNOW

Register type
Peg

Description
Total DTUs available now (DTUNOW)

Register DTUNOW has one field. This register increases each time a DTU is deleted or a DTU is added to the available list in table OHBTADMN. When the user makes an OMSHOW request, the register gives the number of available DTUs.

Associated registers
There are no associated registers.

Extension registers
There are no extension registers.

Associated logs
There are no associated logs.

DTUSZD

Register type
Peg

Description
Total DTU seizures in the day (DTUSZD)

Register DTUSZD has one field. This register increases when the system seizes a DTU for an OHBT.

Associated registers

The associated registers for DTUSZD are as follows:

- Registers ORIG, TOA and TOS in OM OHBTTYPE increase when the system performs an OHBT and seizes a DTU. The number of seizures in register DTUTOTAL will equal the number of test performed fields of these three registers.
- Register DTUSZD in OM OHBTRES increases when the system seizes a DTU within the hour.

Extension registers

There are no extension registers.

Associated logs

There are no associated logs.

Description

Off-hook balance testing (OHBT)

The OHBT digital test unit (DTU) resource utilization (OHBTRES) OM group monitors the following:

- the number of completed OHBT tests
- the number of OHBT tests that failed to complete because of a lack of DTU availability

The OM group OHBTRES provides 24 tuples. The following table lists the key and info fields associated with OM group OHBTRES.

Key field	Info field
none	none

Related functional groups

BASE Line Maintenance

Registers

The following table lists the registers associated with OM group OHBTRES and what they measure. For a description of a register, click on the register name.

Registers for OM group OHBTRES

Register name	Measures
DTUSZD	Total DTU seizures in the day (DTUSZD)
SZDFAIL	Seize failed (SZFAIL)

DTUSZD

Register type
Peg

Description
Total DTU seizures in the day (DTUSZD)

The DTUSZD register increases if the OHBT test seized a DTU in the hour.

Associated registers

Registers ORIG, TOA and TOS in OM group OHBTTYPE increase when an OHBT test seizes a DTU. The seizures in register DTUTOTAL equal the number of tests that the system performs for these three registers.

Register SZDFAIL increases when a DTU is not available to be seized.

Extension registers

There are no extension registers.

Associated logs

There are no associated logs.

SZDFAIL

Register type

Peg

Description

Seize failed (SZFAIL)

Register SZDFAIL increases every hour in the correct field when an OHBT cannot seize the DTU. The hour of the day determines the field that increases.

Associated registers

Registers ORIG, TOA and TOS in OMOHBTTYPE increase when an OHBT does not recommend a balance network configuration.

Register DTUSZD increases when an OHBT seizes a DTU.

Extension registers

There are no extension registers.

Associated logs

The system generates log number 602 when an OHBT cannot seize the DTU.

Description

Off-Hook Balance Test Results per test type (OHBTTYPE)

The OM group OHBTTYPE monitors the following:

- the number of Off-Hook Balance Tests (OHBT) that the system performs
- the number of OHBTs that fail to complete

The OM group OHBTTYPE provides two tuples. The following table lists the key and info fields associated with OM group OHBTTYPE.

Key field	Info field
none	none

Related functional groups

The Base Line Maintenance functional group associates with the OM group OHBTTYPE.

Registers

The following table lists the registers associated with OM group OHBTTYPE and what they measure. For a description of a register, click on the register name.

Registers for OM group OHBTTYPE

Register name	Measures
ORIG	Originating OHBT (ORIG)
TOA	Terminating test on answer OHBT (TOA)
TOS	Terminating test on silence (TOS)

ORIG

Register type
Peg

Description
Originating OHBT (ORIG)

Register ORIG register has two fields.

- The first field increases when the system performs an originating OHBT.
- The second field increases when an OHBT does not recommend a network balance configuration.

Associated registers

The associated registers for ORIG are as follows:

- Register DTUSZD in OM group OHBTRES increases if an OHBT seized a DTU in the hour.
- Register DTUTOTAL in OM group OHBTDTU increases if an OHBT seized a DTU.
- Register SZDFAIL in OM group OHBTRES increases if an OHBT failed to seize a DTU because no DTU was available.

Extension registers

There are no extension registers.

Associated logs

The associated logs for ORIG are as follows:

- The system generates log 600 when an OHBT recommends the current network balance configuration.
- The system generates log 601 when an OHBT recommends a new network balance configuration.
- The system generates log 602 when an OHBT fails to complete and does not recommend a network balance configuration.

TOA

Register type

Peg

Description

The associated registers for TOA are as follows:

- Register DTUTOTAL in OM group OHBTDTU increases if an OHBT seized a DTU.
- Register DTUSZD in OM group OHBTRES increases if an OHBT seized a DTU in the hour.
- Register SZDFAIL in OM group OHBTRES increases if an OHBT failed to seize a DTU because no DTU was available.

Associated registers

There are no associated registers.

Extension registers

There are no extension registers.

Associated logs

The associated logs for TOA are as follows:

- The system generates log 600 when an OHBT recommends the current network balance configuration.
- The system generates log 601 when an OHBT recommends a new network balance configuration.
- The system generates log 602 when an OHBT fails to complete and does not recommend a network balance configuration.

TOS

Register type

Peg

Description

Terminating test on silence (TOS)

Register TOS has two fields. The first field increases when the system performs a terminating OHBT. The second field increases when an OHBT does not recommend a network balance configuration.

Associated registers

The associated registers for TOS are as follows:

- Register DTUTOTAL in OM group OHBTDTU increases if an OHBT seized a DTU.
- Register DTUSZD in OM group OHBTRES increases if an OHBT seized a DTU in the hour.
- Register SZDFAIL in OM group OHBTRES increases if an OHBT does not seize a DTU because no DTU was available.

Extension registers

There are no extension registers.

Associated logs

The associated logs for TOS are as follows:

- The system generates log 600 when an OHBT recommends the current network balance configuration
- The system generates log 601 when an OHBT recommends a new network balance configuration.
- The system generates log 602 when an OHBT fails to complete and does not recommend a network balance configuration.

OHQCBQCG

Description

Off-hook queuing and call back queuing per customer group (OHQCBQCG)

The OM group OHQCBQCG provides information about the following integrated business network (IBN) features for a customer group:

- Off-hook Queuing (OHQ)
- Call Back Queuing (CBQ)

If the system cannot complete a call from a station or an incoming trunk, the calling party can wait off-hook for an idle trunk. The system cannot complete the call because an idle outgoing trunk in the route set is not available. The system gives the caller off-hook queue tone. The system places the caller in a queue that associates with the outgoing trunk group. When an idle outgoing trunk becomes available, the system completes the call.

The CBQ feature activates when a caller encounters an all-trunks-busy (ATB) condition. The system places the call in a queue that associates with the trunk group. The system informs the caller when a trunk becomes available. The system uses the number dialed earlier to complete the call.

The OHQ and CBQ features are assigned in table NCOS.

Use of either OHQ or CBQ features can indicate that more trunks than necessary are on a specified route.

The OM group OHQCBQCG provides one tuple for each customer group. The following table lists the key and info fields associated with OM group OHQCBQCG.

Key field	Info field
none	OMIBNGINGO identifies the CUSTNAME of the customer group in table CUSTENG.

Parameter AVG_#_TGS_PER_OHCBQCALL in table OFCENG specifies the average number of trunk groups that are involved in OHQ and CBQ.

Parameter NUMOHCBQTRANSBLKS in table OFCENG specifies the number of transaction blocks in use for OHQ and CBQ.

Parameter NO_OF_FTR_CONTROL_BLKS in table OFCENG specifies the number of feature control blocks in use for OHQ and CBQ.

Parameter NO_OF_FTR_DATA_BLKS in table OFCENG specifies the number of FTRQ2 feature data blocks in use for OHQ and CBQ.

Parameter FTRQAGENTS in table OFCENG specifies the number of agents that can have the CBQ feature at any given time.

Parameter FTRQ2WAREAS in table OFCENG specifies the number of FTRQ2 word areas required for the engineering interval that associates with CBQ.

Related functional groups

The OM group OHQCBQCG associates with the IBN Integrated Business Network functional group.

Registers

The following table lists the registers associated with OM group OHQCBQCG and what they measure. For a description of a register, click on the register name.

Registers for OM group OHQCBQCG

Register name	Measures
CBQDEACT	Call back queuing deactivations
CBQDELT	Call back queuing deletions
CBQOK	Call back queuing okay
CBQOVFL	Call back queuing overflows
CBQOVWRT	Call back queuing overwrites
CBQPPT	Call back queuing priority promotion timer
CBQRAT	Call back queuing route advance timer
OHQABN	Off-hook queuing abandons
OHQBLOCK	Off-hook queuing blockages

Registers for OM group OHQCBQCG

Register name	Measures
OHQOFFER	Off-hook queuing offers
OHQOVFL	Off-hook queuing overflows

CBQDEACT

Register type

Peg

Description

Call back queuing deactivations (CBQDEACT)

Register CBQDEACT increases when the system cancels a CBQ request. To cancel the CBQ request the subscriber dials the CBQ deactivation code while the CBQ is active. To cancel the CBQ request the subscriber can also press the CBQ key on a business set while CBQ is active.

Associated registers

Register OHQCBQRT_RTCBQDEA increases when the system cancels a CBQ request. To cancel the CBQ request the subscriber dials the CBQ deactivation code while the CBQ is active. To cancel the CBQ request, the subscriber can also press the CBQ key on a business set while CBQ is active.

Extension registers

There are no extension registers.

Associated logs

There are no associated logs.

CBQDELT

Register type

Peg

Description

Call back queuing deletions (CBQDELT)

Register CBQDELT increases when the system deletes a CBQ request.

The system deletes the request for one of the following reasons:

- the originator did not answer the recall
- the system removes the line from service
- the system cancels the CBQ option.

Associated registers
Registers OHQCBQRT_RTCBQDELT counts deletions of CBQ for each route.

Extension registers
There are no extension registers.

Associated logs
There are no associated logs.

CBQOK

Register type
Peg

Description
Call back queuing okay (CBQOK)

Register CBQOK increases when the system completes a CBQ request and the originator answers the recall ringback.

Associated registers
Register OHQCBQRT_RTCBQOK counts successful completions of CBQ for each route.

Extension registers
There are no extension registers.

Associated logs
There are no associated logs.

CBQOVFL

Register type
Peg

Description
Call back queuing overflows (CBQOVFL)

Register CBQOVFL increases when the system cannot complete a CBQ request because of not enough software resources.

Parameter NUMOHCBQTRANSBLKS in table OFCENG specifies the number of transaction blocks used in an office for both OHQ and CBQ. Parameter AVG_#_TGS_PER_OHCBQCALL in table OFCENG specifies the average number of trunk groups involved in an OHQ/CBQ call.

If transaction blocks are not available during a CBQ request, the system denies the request.

Associated registers

Register OHQCBQRT_RTCBQOVF counts CBQ requests for each route that the system cannot complete because there are not enough software resources.

Extension registers

There are no extension registers.

Associated logs

The system generates LINE138 and TRK138 when the system routes a call to treatment after being call processing busy.

CBQOVWRT

Register type

Peg

Description

Call back queuing overwrites (CBQOVWRT)

Register CBQOVWRT increases when other CBQ or ring again (RAG) requests overwrite a CBQ request. This procedure occurs when the caller has a CBQ request pending and the caller activates CBQ on another call. The caller must activate CBQ on this call before completion of the original request.

To overwrite a CBQ request on a business set, cancel a remaining CBQ request. Cancellation of the CBQ request must occur before activation of the feature can occur on a different call.

Associated registers

Register OHQCBQRT_RTCBQOVW counts CBQ requests for each route that other CBQ or RAG requests overwrite.

Extension registers

There are no extension registers.

Associated logs

There are no associated logs.

CBQPPT

Register type

Peg

Description

Call back queuing priority promotion timer (CBQPPT)

Register CBQPPT increases when the CBQ priority promotion timer for a call ends and the CBQ priority promotion of the call occurs.

The queue priority promotion time is the maximum time a station queues at a specified level in the priority ordered queue. The CBQ starting priority can be one of four levels. The CBQ maximum priority is the highest level the station can achieve in the priority-ordered queue. The request qualifies for priority promotion when the starting priority is less than the maximum priority. When the priority promotion tone expires, the starting priority is less than the maximum priority.

The CBQ priority promotion timer appears in table CUSTSTN. The CBQ starting priority and maximum priority are in table NCOS.

Associated registers

Register OHQCBQRT_RTCBQPPT increases when the CBQ priority promotion timer for a call ends and the CBQ priority promotion of the call occurs.

Extension registers

There are no extension registers.

Associated logs

There are no associated logs.

CBQRAT

Register type

Peg

Description

Call back queuing route advance timer (CBQRAT)

Register CBQRAT increases when the CBQ route advance timer for a CBQ request ends. Qualify the CBQ request for CBQ route advance timing.

The CBQ route advance timer prevents long delays during heavy traffic periods. At the start, a request to queue a call back on a route with a lower cost occurs. When the timer expires, the CBQ request qualifies for completion on routes with both higher and lower costs.

To apply this feature to stations in a customer group, enter the field CBQRAT in table CUSTSTN.

Associated registers

Register OHQCBQRT_RTCBQRAT increases when the CBQ route advance timer for a CBQ request ends.

Extension registers

There are no extension registers.

Associated logs

There are no associated logs.

OHQABN

Register type

Peg

Description

Off-hook queuing abandons (OHQABN)

Register OHQABN increases when the calling party abandons the OHQ attempt before the system can complete the request. This register counts calls that one of the following methods abandons:

- go on-hook to terminate the OHQ attempt
- flash and going on-hook to activate CBQ
- activate the CBQ feature on a business set and going on-hook

Associated registers

Register OHQCBQRT_RTOHQABN increases when the calling party abandons the OHQ attempt before the system completes the request.

Extension registers

There are no extension registers.

Associated logs

Log LINE106 increases when the system encounters problems during dial pulse reception.

Log LINE108 increases when the system encounters problems during Digitone reception.

Log TRK114 increases when the following events occur:

- the system encounters problems during dial pulse reception for an incoming call over a trunk
- the system does not determine the call destination Log

TRK116 increases when the following events occur:

- the system encounters problems during multi frequency reception for an incoming call over a trunk
- the system does not determine the call destination

Log TRK162 increases when the system encounters problems during outpulsing of a trunk-to-trunk or line-to-line call. The outpulsing occurs while digital multi frequency signaling is in use.

OHQBLOCK

Register type

Peg

Description

Off-hook queuing blockages (OHQBLOCK)

Register OHQBLOCK increases when the system blocks an OHQ request because the system cannot complete the request before a specified wait timeout. Entries for the wait timeout appear in table IBNRTE.

Register OHQBLOCK increases when a likelihood test fails. The likelihood test decides if a call can be assigned an idle trunk within the wait timeout.

Associated registers

Register TRMT1_GNCT increases when the system routes a call that failed the likelihood test to the treatment.

For each route, register OHQCBQRT_RTOHQBLOCK increases when the system blocks an OHQ request. The system blocks the OHQ request because the system cannot complete the request in a specified timeout period.

Extension registers

There are no extension registers.

Associated logs

The system generates ATB100 when the system blocks an attempt to seize a trunk to a specified numbering plan area (NPA). The system generatesATB100 when the system blocks an attempt to seize a trunk to a specified central office (CO). The call advances to another route.

OHQOFFER

Register type

Peg

Description

Off-hook queuing offers (OHQOFFER)

Register OHQOFFER increases when the system offers OHQ to a user because trunks are not available on the preferred route.

Associated registers

Register OHQCBQRT_RTOHQOFR increases when the system blocks an OHQ request because the system cannot complete the request in a specified timeout period. The register increases for each route.

Extension registers

There are no extension registers.

Associated logs

The system generates ATB100 when the system blocks an attempt to seize a trunk to a specified NPA or CO. The call advances to another route.

OHQOVFL

Register type

Peg

Description

Off-hook queuing overflows (OHQOVFL)

Register OHQOVFL increases when the system cannot complete an OHQ request because of not enough software resources.

Parameter AVG_#_TGS_PER_OHCBQCALL in table OFCENG specifies the average number of trunk groups that will be involved in an OHQ or CBQ call.

Parameter NUMOHCBQTRANSBLKS in table OFCENG specifies the number of transaction blocks that an office can use for OHQ and CBQ.

Associated registers

For each route, register OHQCBQRT_RTOHQOVFL increases when the system cannot complete an OHQ request because of not enough software resources.

Extension registers

There are no extension registers.

Associated logs

Logs LINE138 and TRK138 increase when the system routes a call to a treatment because a log is call-processing busy.

Description

Off-hook queuing and call back queuing for table IBNRT2 routes (OHQCBCR2)

The OM group OHQCBCR2 provides information for each group in table IBNRT2 on the following:

- Meridian Digital Centrex (MDC) features
- off-hook queuing (OHQ)
- all back queuing (CBQ)

If the system cannot complete a call from a station or an incoming trunk, the calling party can wait off-hook for an idle trunk. The system cannot complete the call because of an idle outgoing trunk in the route set is not available. The system gives the caller an off-hook queue tone. The system places the caller in a queue that associates with the outgoing trunk group. The system completes the call when an idle outgoing trunk becomes available.

The CBQ feature becomes active when a caller encounters an all-trunks-busy (ATB) condition. The system places the call in a queue that associates with the trunk group. The system informs the caller when a trunk becomes available. The system uses the number dialed earlier to complete the call.

The OHQ and CBQ features are assigned in table NCOS.

The OHQCBQR2 contains 11 registers that count:

- the CBQ requests that the system cancels
- the CBQ requests that the system delete
- the CBQ requests that the system completes
- the CBQ requests that the system cannot complete because of not enough software resources
- the CBQ requests that other CBQ or ring again requests overwrite
- the times the CBQ priority promotion timer for a call comes to an end and the times the CBQ priority promotion occurs
- the number of times the CBQ route advance timer for a CBQ request comes to an end
- the OHQ attempts that the calling party abandons

- the OHQ requests that the system blocks
- the number of times the system offers OHQ to a user because trunks are not available on the desired route
- the OHQ requests that the system cannot complete because of not enough software resources

The OM group OHQCBQR2 provides one tuple for each route in table IBNRT2. The following table lists the key and info fields associated with OM group OHQCBQR2.

Key field	Info field
none	OM_IBN_RT2_INFO. The route number appears in table IBNRT2.

Related functional groups

There are no related functional groups.

Registers

The following table lists the registers associated with OM group OHQCBQR2 and what they measure. For a description of a register, click on the register name.

Registers for OM group OHQCBQR2

Register name	Measures
R2CBQDEA	Route call back queuing deactivations
R2CBQDEL	Route call back queuing deletions
R2CBQOK	Route call back queuing okay
R2CBQOVF	Route call back queuing overflows
R2CBQOWR	Route call back queuing overwrites
R2CBQPPT	Route call back queuing priority promotion timer
R2CBQRAT	Route call back queuing route advance timer
R2CHQABN	Route off-hook queuing abandons

Registers for OM group OHQCBQR2

Register name	Measures
R2CHQBLK	Route off-hook queuing blockages
R2CHQOFR	Route off-hook queuing offers
R2CHQOVF	Route off-hook queuing overflows

R2CBQDEA

Register type

Peg

Description

Route call back queuing deactivations (R2CBQDEA)

Register R2CBQDEA counts CBQ requests that the system cancels. The system cancels these requests when the subscriber dials the CBQ deactivation code.

Associated registers

For a customer group, register OHQCBQCG_CBQDEACT counts CBQ requests that the system cancels. The system cancels these requests when the subscriber dials the CBQ deactivation code while CBQ is active. The system also cancels these requests when the subscriber presses the CBQ key on a business set while CBQ is active.

Extension registers

There are no extension registers.

Associated logs

There are no associated logs.

R2CBQDEL

Register type

Peg

Description

Route call back queuing deletions (R2CBQDEL)

Register R2CBQDEL counts CBQ requests that the system deletes.

The system deletes the request for one of the following reasons:

- the originator does not answer the recall
- the system removes the line from service

- the system deactivates the CBQ option
- the system removes the CBQ option from the line

Associated registers
For a customer group, register OHQCBQCG_CBQDELT counts CBQ requests that the system deletes.

Extension registers
There are no extension registers.

Associated logs
There are no associated logs.

R2CBQOK

Register type
Peg

Description
Route call back queuing okay (R2CBQOK)

Register R2CBQOK increases when the system completes a CBQ request and the originator answers the recall ringback.

Associated registers
For a customer group, register OHQCBQCG_CBQOK increases when the system completes a CBQ request and the originator answers the recall ringback.

Extension registers
There are no extension registers.

Associated logs
There are no associated logs.

R2CBQOVF

Register type
Peg

Description
Route call back queuing overflows (R2CBQOVF)

Register R2CBQOVF counts CBQ requests that the system cannot complete. The system cannot complete the requests because of not enough software resources.

Parameter NUMOHCBQTRANSBLKS in table OFCENG specifies the number of transaction blocks that can be used in an office for OHQ and CBQ.

Parameter AVG_#_TGS_PER_OHCBQCALL in table OFCENG specifies the average number of trunk groups involved in an OHQ/CBQ call.

If transactions are not available during a CBQ request, the system denies the request.

Associated registers
For a customer group, register OHQCBQCG_CBQOVFL counts CBQ requests that the system cannot complete because of not enough software resources.

Extension registers
There are no extension registers.

Associated logs
The system generates LINE138 and TRK138 when the system routes a call to a treatment after being call processing busy.

R2CBQOWR

Register type
Peg

Description
Route call back queuing overwrites (R2CBQOWR)

Register R2CBQOWR counts CBQ requests that other CBQ or ring again (RAG) requests overwrite. This procedure occurs when the following occur:

- the caller has a CBQ request that is pending
- the caller activates CBQ on another call before the system completes the original request

Register R2CBQOWR increases when a single line set dials an access code.

Associated registers
For a customer group, register OHQCBQCG_CBQOVWRT counts CBQ requests that other CBQ or RAG requests overwrite.

Extension registers
There are no extension registers.

Associated logs

There are no associated logs.

R2CBQPPT

Register type

Peg

Description

Route call back queuing priority promotion timer (R2CBQPPT)

Register R2CBQPPT increases when the CBQ priority promotion timer for a call comes to an end. Register R2CBQPPT increases when CBQ priority promotion of the call occurs.

The queue priority promotion time is the maximum time a station will be queued at a specified level in the priority-ordered queue. The CBQ starting priority can be one of four levels. The CBQ maximum priority is the highest level the station can reach in the priority-ordered queue. The request qualifies for priority promotion when the starting priority is less than the maximum priority. When the priority promotion timer expires, the starting priority is less than the maximum priority.

Associated registers

For a customer group, register OHQCBQCG_CBQPPT increases when the CBQ0 priority promotion timer for a call comes to an end. This register increases when CBQ priority promotion of the call occurs.

Extension registers

There are no extension registers.

Associated logs

There are no associated logs.

R2CBQRAT

Register type

Peg

Description

Route call back queuing route advance timer (R2CBQRAT)

Register R2CBQRAT increases when the CBQ route advance timer for a CBQ request comes to and end. Qualify the CBQ request for CBQ route advance timing.

The system uses the CBQ route advance timer to prevent delays during heavy traffic periods. At the start, the system makes a request to queue a call back on a route with a lower cost. When the timer expires, the system can complete the CBQ request on routes with higher and lower costs.

Entries for the field CBQRAT must appear in table CUSTSTN for this feature to apply to stations.

Associated registers

For a customer group, register OHQCBQCG_CBQRATRT increases when the CBQ route advance timer for a CBQ request comes to an end.

Extension registers

There are no extension registers.

Associated logs

There are no associated logs.

R2CHQABN

Register type

Peg

Description

Route off-hook queuing abandons (R2CHQABN)

Register R2CHQABN increases when the calling party abandons an OHQ attempt before the system completes the procedure.

Register R2OHQABN counts calls that one of the following methods abandons:

- go on-hook to terminate the OHQ attempt
- dial call back queue access code
- flash switch-hook, dialing CBQ access code, and go on-hook to activate CBQ
- activate the CBQ feature on a business set and go on-hook

Associated registers

For a customer group, register OHQCBQCG_OHQABN increases when the calling party abandons an OHQ attempt before the system completes the procedure.

Extension registers

There are no extension registers.

Associated logs

There are no associated logs.

R2CHQBLK

Register type

Peg

Description

Route off-hook queuing blockages (R2CHQBLK)

Register R2CHQBLK increases when the system blocks an OHQ request. The system blocks the request because the system cannot complete the OHQ request before a specified wait timeout occurs. Entries for the timeout period are in table INBRTE2.

Register R2CHQBLK also increases when a likelihood test fails. A likelihood test determines the assignment of a call to an idle trunk within the wait timeout period.

Associated registers

For a customer group, register OHQCBQCG_OHQBLOCK increases when the system blocks an OHQ request. The system blocks the request because the system cannot complete the OHQ request before a specified wait timeout period.

Extension registers

There are no extension registers.

Associated logs

The system generates ATB100 when the system blocks an attempt to seize a trunk to a exact numbering plan area (NPA). The system also blocks an attempt to seize a trunk to a exact central office (CO). The call advances to another route.

R2CHQOFR

Register type

Peg

Description

Route off-hook queuing offers (R2CHQOFR)

Register R2CHQOFR increases when the system offers OHQ to a user because trunks are not available on the desired route.

Associated registers

Register OHQCBQCG_OHQOFFER increases when the system offers OHQ to a user because trunks are not available on the desired route. The register increases for a customer group.

Extension registers

There are no extension registers.

Associated logs

The system generates ATB100 when the system blocks an attempt to seize a trunk to a specified numbering plan area (NPA). The system generates this log when the system blocks an attempt to seize a trunk to a specified central office (CO). The call advances to another route.

R2CHQOVF

Register type

Peg

Description

Route off-hook queuing overflows (R2CHQOVF)

Register R2CHQOVF counts OHQ requests that the system cannot complete because of not enough software resources.

Parameter AVG_#_TGS_PER_OHBCQCALL in table OFCENG specifies the average number of trunk groups that are involved in an OHQ or CBQ call. Parameter NUMOHCBQTRANSBLKS in table OFCENG specifies the number of transaction blocks that can be used in an office for OHQ and CBQ.

Associated registers

For a customer group, register OHQCBQCG_OHQOVFL counts OHQ requests that the system cannot complete because of not enough software resources.

Extension registers

There are no extension registers.

Associated logs

The system generates LINE138 and TRK138 when the system routes a call to a treatment after being call processing busy.

Description

Off-hook queuing and call back queuing for table IBNRT3 routes (OHQCBQR3)

The OM group OHQCBQR3 provides information for each route in table IBNRT3 on the following:

- Meridian Digital Centrex (MDC) features
- off-hook queuing (OHQ)
- call back queuing (CBQ)

If the system cannot complete a call from a station or an incoming trunk, the calling party can wait off-hook for an idle trunk. The system cannot complete a call because an idle outgoing trunk in the route set is not available. The system gives the caller an off-hook queue tone. The system places the caller in a queue that associates with the outgoing trunk group. When an idle outgoing trunk becomes available, the system completes the call.

The CBQ feature activates when a caller encounters an all-trunks-busy (ATB) condition. The system places the call in a queue that associates with the trunk group. When a trunk becomes available, the system informs the caller when a trunk becomes available. The system uses the number dialed earlier to complete the call.

OHQ and CBQ features are assigned in table NCOS. OHQCBQR3 contains 11 registers that count:

- the CBQ requests that the system cancels
- the CBQ requests that the system deletes
- the CBQ requests that the system completes
- the CBQ requests that the system cannot complete because there are not enough software resource
- the CBQ requests that are other CBQ or ring again requests overwrite
- the times the CBQ priority promotion timer for a call elapses and the CBQ priority promotion of the call occurs
- the times the CBQ route advance timer for a CBQ request elapses
- the OHQ attempts that the calling party abandons
- the OHQ requests that the system blocks

- the times the system offers OHQ to a user because trunks are not available on the desired route
- the OHQ requests that cannot be completed because of not enough software resources

The OM group OHQCBQR3 provides one tuple for each route in table IBNRT3. The following table lists the key and info fields associated with OM group OHQCBQR3.

Key field	Info field
none	OM_IBN_RT3_INFO the route number appears in table IBNRT3.

Related functional groups

There are no related functional groups.

Registers

The following table lists the registers associated with OM group OHQCBQR3 and what they measure. For a description of a register, click on the register name.

Registers for OM group OHQCBQR3

Register name	Measures
R3CBQDEA	Route call back queuing deactivations
R3CBQDEL	Route call back queuing deletions
R3CBQOK	Route call back queuing okay
R3CBQOVF	Route call back queuing overflows
R3CBQOWR	Route call back queuing overwrites
R3CBQPPT	Route call back queuing priority promotion timer
R3CBQRAT	Route call back queuing route advance timer
R3CHQABN	Route off-hook queuing abandons
R3CHQBLK	Route off-hook queuing blockages

Registers for OM group OHQCBQR3

Register name	Measures
R3CHQOFR	Route off-hook queuing offers
R3CHQOVF	Route off-hook queuing overflows

R3CBQDEA

Register type

Peg

Description

Route call back queuing deactivations (R3CBQDEA)

Register R3CBQDEA counts the subscriber requests. These cancellations occur when the subscriber dials the CBQ deactivation code.

Associated registers

For a customer group, register OHQCBQCG_CBQDEACT counts CBQ requests that the system cancels. These cancellations occur when the subscriber dials the CBQ deactivation code while CBQ is active. These cancellations can also occur when the subscriber presses the CBQ key on a business set while CBQ is active.

Extension registers

There are no extension registers.

Associated logs

There are no associated logs.

R3CBQDEL

Register type

Peg

Description

Route call back queuing deletions (R3CBQDEL)

Register R3CBQDEL counts CBQ requests that the system deletes.

The system deletes the request for one of the following reasons:

- the originator does not answer the recall • the system removes the line
- the system deactivates the CBQ option
- the system removes CBQ option from the line

Associated registers

For a customer group, register OHQCBQCG_CBQDELT counts CBQ requests that the system deletes.

Extension registers

There are no extension registers.

Associated logs

There are no associated logs.

R3CBQOK

Register type

Peg

Description

Route call back queuing okay (R3CBQOK)

Register R3CBQOK counts the number of times a CBQ request that the system completes. The register counts the times the originator answers the recall ringback.

Associated registers

Register OHQCBQCG_CBQOK counts the times a customer group completes a CBQ request. This register also counts the number of times the originator answers the recall ringback.

Extension registers

There are no extension registers.

Associated logs

There are no associated logs.

R3CBQOVF

Register type

Peg

Description

Route call back queuing overflows (R3CBQOVF)

Register R3CBQOVF counts CBQ requests that the system cannot complete because there are not enough software resources.

Parameter NUMOHCBQTRANSBLKS in table OFCENG specifies the number of transaction blocks that can be used in an office for both OHQ and CBQ.

Parameter AVG_#_TGS_PER_OHCBQCALL in table OFCENG specifies the average number of trunk groups involved in an OHQ/CBQ call.

If transaction blocks are not available during a CBQ request, the system denies the request.

Associated registers

For a customer group, register OHQCBQCG_CBQOVFL counts CBQ requests that cannot complete because there are not enough software resources.

Extension registers

There are no extension registers.

Associated logs

The system generates LINE138 and TRK138 when the system routes call to a treatment after being call processing busy.

R3CBQOWR

Register type

Peg

Description

Route call back queuing overwrites (R3CBQOWR)

Register R3CBQOWR counts CBQ requests that other CBQ or RAG requests overwrite. This procedure occurs when the caller has a CBQ request pending and activates CBQ on another call. The caller must activate before the system completes original request.

Register R3CBQOWR increases when the subscriber dials an access code on a single line set.

Associated registers

For a customer group, register OHQCBQCG_CBQOVWRT counts CBQ requests that other CBQ or RAG requests overwrite.

Extension registers

There are no extension registers.

Associated logs

There are no associated logs.

R3CBQPPT

Register type

Peg

Description

Route call back queuing priority promotion timer (R3CBQPPT)

Register R3CBQPPT counts the times the CBQ priority promotion timer for a call ends. This register also counts the times the CBQ priority promotion of the call occurs.

The queue priority promotion time is the maximum time a station will be queued at a specified level in the priority-ordered queue. The CBQ starting priority can be one of four levels. The CBQ maximum priority is the highest level that the station can reach in the priority-ordered queue. The request qualifies for priority promotion when the starting priority is less than the maximum priority. When the promotion timer expires, the starting priority is less than the maximum penalty.

Associated registers

For a customer group, register OHQCBQCG_CBQPPT increases when the CBQ priority promotion timer for a call ends. This register also increases when the CBQ promotion of the call occurs.

Extension registers

There are no extension registers.

Associated logs

There are no associated logs.

R3CBQRAT

Register type

Peg

Description

Route call back queuing route advance timer (R3CBQRAT)

Register R3CBQRAT increases when the CBQ route advance timer for a CBQ request elapses. Qualify the CBQ request for CBQ route advance timing.

The system uses the CBQ route advance timer to prevent delays during heavy traffic periods. The system makes a request to queue a call back on an inexpensive route. The system can make the CBQ request on both inexpensive and expensive routes when the timer expiries.

Entries for the field CBQRAT must appear in table CUSTSTN for this feature to apply to stations.

Associated registers
For a customer group, register OHQCBQCG_CBQRATRT increases when the CBQ route advance timer for a CBQ request ends.

Extension registers
There are no extension registers.

Associated logs
There are no associated logs.

R3CHQABN

Register type
Peg

Description
Route off-hook queuing abandons (R3CHQABN)

Register R3CHQABN counts the times that the calling party abandons an OHQ attempt. This occurs before the system completes the request.

Register R3CHQABN counts calls that one of the following methods abandons:

go on-hook to terminate the OHQ attempt

flash the switch hook, dials the call back queue access code, and go on-hook to activate CBQ

activate the CBQ feature on a business set and going on-hook

Associated registers
For a customer group, register OHQCBQCG_OHQABN counts the number of times that the calling party abandons an OHQ attempt before the attempt is complete.

Extension registers
There are no extension registers.

Associated logs
There are no associated logs.

R3CHQBLK

Register type

Peg

Description

Route off-hook queuing blockages (R3CHQBLK)

Register R3CHQBLK counts the times the system blocks an OHQ request. Blockage occurs when the system did not complete the OHQ request before a specified wait timeout period. The entries for the wait timeout period appear in table INBRTE2.

Register R3CHQBLK increases when a likelihood test fails. The likelihood test determines if the system can assign a call to an idle trunk within the wait timeout period.

Associated registers

Register OHQCBQCG_OHQBLOCK counts the times a customer group blocks an OHQ request. The blockage happens because the system cannot complete the OHQ request before a specified wait timeout period.

Extension registers

There are no extension registers.

Associated logs

The system generates ATB100 when the system blocks an attempt to seize a trunk to a specified numbering plan area (NPA). The system also blocks an attempt to seize a trunk to a specified central office (CO). The system advances the call to another route.

R3CHQOFR

Register type

Peg

Description

Route off-hook queuing offers (R3CHQOFR)

Register R3CHQOFR counts the times that the system offers OHQ to a user. The system advances occurs because trunks are not available on the desired route.

Associated registers

For a customer group, register OHQCBQCG_OHQOFFER counts the times the system offers OHQ to a user. The system offers OHQ to a user because trunks are not available on the desired route.

Extension registers

There are no extension registers.

Associated logs

The system generates log ATB100 when the system blocks an attempt to seize a trunk to a given NPA. The system also blocks an attempt to seize a trunk to a given central office (CO). The call advances to another route.

R3CHQOVF

Register type

Peg

Description

Route off-hook queuing overflows (R3CHQOVF)

Register R3CHQOVF counts OHQ requests that the system cannot complete because there are not enough software resources.

Parameter AVG_#_TGS_PER_OHBCQCALL in table OFCENG specifies the average number of trunk groups that the system will involve in an OHQ or CBQ call. Parameter NUMOHCBQTRANSBLKS in table OFCENG specifies the transaction blocks that the system can use in an office for both OHQ and CBQ.

Associated registers

For a customer group, register OHQCBQCG_OHQOVFL counts OHQ requests that the system cannot complete because there are not enough software resources.

Extension registers

There are no extension registers.

Associated logs

The system generates logs LINE138 and TRK138 when the system routes a call to a treatment after being call processing busy.

Description

Off-hook queuing and call back queuing for table IBNRT4 routes (OHQCBCR4)

For each route in table IBNRT4, the OM group OHQCBCR4 provides information on the following:

- Meridian Digital Centrex (MDC) features
- off-hook queuing
- call back queuing (CBQ)

If a call from either a station or an incoming trunk cannot be completed the calling party may wait off-hook for an idle trunk. These calls are not completed because an idle outgoing trunk in the route set is not available. The caller first receives an off-hook queue tone. The system places the tone in a queue that the outgoing trunk group associates with. The call completes when an idle outgoing trunk becomes available.

The CBQ feature aestivates when a caller encounters an all trunks busy (ATB) condition. A queue associated with the trunk group places the call. The system informs the caller when a trunk becomes available and the call is completed using the number dialed earlier.

The OHQ and CBQ features are assigned in table NCOS.

OHQCBQR4 contains 11 registers that count:

- the CBQ requests that the system cancels
- the CBQ requests that the system deletes
- the CBQ requests that the system completes
- the CBQ requests that the system cannot complete because there are not enough software resources
- the CBQ requests all back queuing requests that other CBQ or ring again requests overwrite
- the times the CBQ priority promotion timer for a call ends and the priority promotion of the call occurs
- the times the CBQ route advance timer for a CBQ request ends
- off-hook queuing attempts that are abandoned by the calling part
- the OHQ requests that the system blocks

- the times the system offers OHQ to a user because trunks are not available on the desired route
- the OHQ requests that the system cannot complete because there are not enough software resources

The OM group OHQCBQR4 provides one tuple for each route in table IBNRT4. The following table lists the key and info fields associated with OM group OHQCBQR4.

Key field	Info field
none	OM_IBM RT4 INFO. Table IBNRT4 assigns the route number.

Related functional groups

There are no related functional groups.

Registers

The following table lists the registers associated with OM group OHQCBQR4 and what they measure. For a description of a register, click on the register name.

Registers for OM group OHQCBQR4

Register name	Measures
R4CBQDEA	Route call back queuing deactivations
R4CBQDEL	Route call back queuing deletions
R4CBQOK	Route call back queuing okay
R4CBQOVF	Route call back queuing overflows
R4CBQOWR	Route call back queuing overwrites
R4CBQPPT	Route call back queuing priority promotion timer
R4CBQRAT	Route call back queuing route advance time
R4CHQABN	Route off-hook queuing abandons
R4CHQBLK	Route off-hook queuing blockages

Registers for OM group OHQCBQR4

Register name	Measures
R4CHQOFR	Route off-hook queuing offers
R4CHQOVF	Route off-hook queuing overflows

R4CBQDEA

Register type

Peg

Description

Route call back queuing deactivations (R4CBQDEA) Register R4CBQDEA counts CBQ requests that the system cancels. Cancellation occurs when the subscriber dials the CBQ deactivation code.

Associated registers

For a customer group, register OHQCBQCG_CBQDEACT counts CBQ requests that the system cancels when the subscriber dials the CBQ deactivation code. When the subscriber presses the CBQ key on a business set while CBQ is active, the system can cancel CBQ requests.

Extension registers

There are no extension registers.

Associated logs

There are no associated logs.

R4CBQDEL

Register type

Peg

Description

Route call back queuing deletions (R4CBQDEL)

Registers R4CBQDEL counts CBQ requests that the system deletes.

The system can delete the request for one of the following reasons:

- the originator does not answer the recall
- the system removes the line
- the system deactivates the CBQ option
- the system removes the CBQ option from the line

Associated registers

For a customer group, register OHQCBQCG_CBQDELT counts CBQ requests that the system deletes.

Extension registers

There are no extension registers.

Associated logs

There are no associated logs.

R4CBQOK

Register type

Peg

Description

Route call back queuing okay (R4CBQOK)

Register R4CBQOK counts the times that the system completes a CBQ request and the originator answers the recall ringback.

Associated registers

For a customer group, register OHQCBQCG_CBQOK counts the number of times that the system completes a CBQ request and the originator answers the recall ringback.

Extension registers

There are no extension registers.

Associated logs

There are no associated logs.

R4CBQOVF

Register type

Peg

Description

Route call back queuing overflows (R4CBQOVF)

Register R4CBQOVF counts CBQ requests that the system cannot complete because there are not enough software resources.

Parameters NUMOHCBQTRANSBLKS in table OFCENG specifies transaction blocks that can be used in an office because of both OHQ and CBQ.

The average number of trunk groups involved in an OHQ/CBQ call is specified by Parameter AVG_#_TGS_PER_OHCBQCALL in table OFCENG.

The system denies the request if transaction blocks are not available during a CBQ request.

Associated registers

For a customer group, register OHQCBQCG_CBQOVFL counts CBQ requests that the system cannot complete because there are not enough software resources.

Extension registers

There are no extension registers.

Associated logs

The system generates LINE138 and TRK138 when the system routes a call to a treatment after being call processing busy.

R4CBQOWR

Register type

Peg

Description

Route call back queuing overwrites (R4CBQOWR)

Register R4CBQOWR counts the requests that other CBQ or ring again RAG requests overwrite. This occurs when the caller has a CBQ request that is pending. The caller activates CBQ on another call before the system completes the original request.

Register R4CBQOWR increases when a single line set dials an access code.

Associated registers

For a customer group, register OHQCBQCG_CBQOVWRT counts the CBQ or RAG requests that other CBQ or RAG requests overwrite.

Extension registers

There are no extension registers.

Associated logs

There are no associated logs.

R4CBQPPT

Register type

Peg

Description

Route call back queuing priority promotion timer (R4CBQPPT)

Register R4CBQPPT increases when the CBQ priority promotion timer for a call ends and the CBQ priority promotion of the call occurs.

The queue priority promotion time is the maximum time a station will be queued at a given level in the priority-ordered queue. The CBQ starting priority can be one of four levels. The CBQ maximum priority is the highest level that the station can reach in the priority-ordered queue. The request qualifies for priority promotion when the starting priority is less than the maximum priority. When the priority promotion time expires, the starting priority is less than the maximum priority.

Associated registers

For customer group, register OHQCBQCG_CBQPPT increases when the CBQ priority promotion timer for a call ends. This register also increases when the CBQ priority promotion of the call occurs.

Extension registers

There are no extension registers.

Associated logs

There are no associated logs.

R4CBQRAT

Register type

Peg

Description

Route call back queuing route advance time (R4CBQRAT)

Route call back queuing route advance timer (R4CBQRAT) increases when the call back queuing (CBQ) route advance timer for a CBQ request ends. Qualify the CBQ request for CBQ route advance timing.

The system uses the CBQ route advance timer to prevent delays during heavy traffic periods. At the start, the system makes a request to queue a call back on an inexpensive route. The CBQ request can be completed on inexpensive routes when the timer expires.

Entries for the field CBQRAT appear in table CUSTSTN for stations to apply this feature.

Associated registers

For a customer group, register OHQCBQCG_CBQRATRT increases when the CBQ route advance timer for a CBQ request ends.

Extension registers

There are no extension registers.

Associated logs

There are no associated logs.

R4CHQABN

Register type

Peg

Description

Route off-hook queuing abandons (R4CHQABN)

Register R4CHQABN counts the times the calling party abandons an OHQ attempt before the system completes the attempt.

Register R4CHQABN counts calls that one of the following methods abandons:

- go on-hook to terminate the OHQ attempt
- flash the switch hook, dial the call back queue access code, and going on-hook to activate CBQ
- activate the CBQ feature on a business set and going on-hook

Associated registers

For a customer group, register OHQCBQCG_OHQABN counts the times the calling party abandons an OHQ attempt before the system completes the attempt.

Extension registers

There are no extension registers.

Associated logs

There are no associated logs.

R4CHQBLK

Register type

Peg

Description

Route off-hook queuing blockages (R4CHQBLK)

Register R4CHQBLK counts the times that the system blocks an OHQ request. This occurs because the system cannot complete the OHQ before a specified wait timeout period. Entries for the wait timeout are in table INBRTE2.

Register R4CHQBLK also increases when a likelihood test fails. The likelihood test determines if the system can assign an idle trunk to a call in the wait timeout period.

Associated registers

For a customer group, register OHQCBQCG_OHQBLOCK counts the times that an OHQ blocks a request. The blockage occurs because the system cannot complete the request before a specified wait timeout period.

Extension registers

There are no extension registers.

Associated logs

The system generates ATB100 when the system blocks an attempt to seize a trunk to a given numbering plan area (NPA). The system also blocks an attempt to seize a trunk to a given central office (CO). The system advances the call to another route.

R4CHQOFR

Register type

Peg

Description

Route off-hook queuing offers (R4CHQOFR)

Register R4CHQOFR counts the times the system offers OHQ to a user. the system offers OHQ because trunks are not available on the desired route.

Associated registers

For a customer group, register OHQCBQCG_OHQOFFER counts the number of times the system offers OHQ. The system offers OHQ because trunks are not available on the desired route.

Extension registers

There are no extension registers.

Associated logs

The system generates ATB100 when the system blocks an attempt to seize a trunk for one of the following:

- a given numbering plan area (NPA)
- or central office (CO)

The call advances to another route.

R4CHQOVF

Register type

Peg

Description

Route off-hook queuing overflows (R4CHQOVF)

Route off-hook queuing overflows (R4CHQOVF) counts OHQ requests that the system cannot because there are not enough software resources.

Parameter AVG_#_TGS_PER_OHBCQCALL in table OFCENG specifies the average number of trunk groups that will be involved in an OHQ or CBQ call. Parameter NUMOHCBQTRANSBLKS in table OFCENG specifies the transaction blocks that can be used in an office for both OHQ and CBQ.

Associated registers

For a customer group, register OHQCBQCG_OHQOVFL counts OHQ requests that the system cannot complete because there are not enough software resources.

Extension registers

There are no extension registers.

Associated logs

The system generates LINE138 and TRK138 when the system routes a call to a treatment after being call processing busy.

Description

Off-hook queuing and call back queuing per route (OHQCBQRT)

For each route, the OM group OHQCBQRT provides information on the integrated business network (IBN) features off-hook queuing (OHQ) and call back queuing (CBQ).

If the system cannot complete a call from a station or an incoming trunk, the calling party can wait off-hook for an idle trunk. The system cannot complete the call because an idle outgoing trunk in the route set is not available. The system caller gives an off-hook queue tone. The system places the call in a queue that associates with the outgoing trunk group. When an idle outgoing trunk becomes available, the system completes the call.

If a caller encounters an all trunks busy (ATB) condition, the call back queuing (CBQ) feature can be activated. The call is placed in a queue associated with the trunk group. When a trunk becomes available, the caller is informed and the call is completed using the number dialed earlier.

The OHQ and CBQ features are assigned in table NCOS.

If the registers show little use of either OHQ or CBQ features, there may be more trunks provided than necessary on a route.

The OM group OHQCBQRT provides information about the integrated business network (IBN) features off-hook queuing (OHQ) for a customer group. This OM group also provides information about the call back queuing (CBQ) for a customer group.

The following table lists the key and info fields associated with OM group OHQCBQRT.

Key field	Info field
none	OM_IBN_RTE_INFO. Table IBNRTE assigns the route number.

Parameter AVG_NUM_TGS_PER_OHCBQCALL in table OFCENG specifies the average number of trunk groups that involve OHQ and CBQ.

Parameter NUMOHCBQTRANSBLKS in table OFCENG specifies the number of transaction blocks in use for OHQ and CBQ.

Parameter NO_OF_FTR_CONTROL_BLKS in table OFCENG specifies the number of feature control blocks in use for OHQ and CBQ.

Parameter NO_OF_FTR_DATA_BLKS in table OFCENG specifies the number of feature data blocks in use for OHQ and CBQ.

Parameter FTRQAGENTS in table OFCENG specifies the number of agents that can have the CBQ feature at a time.

Parameter FTRQ2WAREAS in table OFCENG specifies the number of FTRQ2 word areas requires the engineering interval associated with CBQ.

Related functional groups

The IBN Integrated Business Network operating group associates with OM group OHQCBQRT.

Registers

The following table lists the registers associated with OM group OHQCBQRT and what they measure. For a description of a register, click on the register name.

Registers for OM group OHQCBQRT

Register name	Measures
RTCBQDEA	Route call back queuing deactivations
RTCBQDEL	Route call back queuing deletions
RTCBQOK	Route call back queuing okay
RTCBQOVF	Route call back queuing overflows
RTCBQOWR	Route call back queuing overwrites
RTCBQPPT	Route call back queuing priority promotion timer
RTCBQRAT	Route call back queuing route advance timer
RTOHQABN	Route off-hook queuing abandons
RTOHQBLK	Route off-hook queuing blockages

Registers for OM group OHQCBQRT

Register name	Measures
RTOHQOFR	Route off-hook queuing offers
RTOHQOVF	Route off-hook queuing overflows

RTCBQDEA

Register type

Peg

Description

Route call back queuing deactivations (RTCBQDEA)

Register RTCBQDEA increases when the subscriber cancels a call back queuing (CBQ) request. To cancel a CBQ request the caller can dial the CBQ deactivation code. Press the CBQ key on a business set while CBQ is active.

Associated registers

The system increases OHQCBQCG_CBQDEACT for a customer group when the user cancels a call back queuing (CBQ) request. To cancel the request, dial the CBQ deactivation code or press the CBQ key on a business set while CBQ is active.

Extension registers

There are no extension registers.

Associated logs

There are no associated logs.

RTCBQDEL

Register type

Peg

Description

Route call back queuing deletions (RTCBQDEL)

Register RTCBQDEL increases when the system deletes a call back queuing (CBQ) request.

The system can delete the request for one of the following reasons:

- the originator did not answer the recall
- the system line removed from service
- the system canceled CBQ option

Associated registers

For a customer group, OHQCBQCG_CBQDELT increases when the system deletes a call back queuing (CBQ) request.

Extension registers

There are no extension registers.

Associated logs

There are no associated logs.

RTCBQOK

Register type

Peg

Description

Route call back queuing okay (RTCBQOK)

Register RTCBQOK increases when a call back queuing (CBQ) request completes correctly and the originator answers the recall ringback.

Associated registers

For a customer group, OHQCBQCG_CBQOK increases when a call back queuing (CBQ) request completes correctly and the originator answers recall ringback.

Extension registers

There are no extension registers.

Associated logs

There are no associated logs.

RTCBQOVF

Register type

Peg

Description

Route call back queuing overflows (RTCBQOVF)

Register RTCBQOVF increases when a call back queuing (CBQ) request cannot complete because there are not enough software resources.

Parameter NUMOHCBQTRANSBLKS in table OFCENG specifies the number of transaction blocks that an office can use for OHQ and CBQ.

Parameter AVG_NUM_TGS_PER_OHCBQCALL in table OFCENG specifies the average number of trunk groups an OHQ/CBQ call involves.

The system denies the request if no transaction blocks are available during a CBQ request.

Associated registers

For a customer group, registers OHQCBQCG_CBQOVFL increases when a call back queuing (CBQ) request cannot complete. The request cannot complete because there are not enough software resources.

Extension registers

There are no extension registers.

Associated logs

The system generates LINE138 and TRK138 when the system routes a call to a treatment after the call was processing busy.

RTCBQOWR

Register type

Peg

Description

Route call back queuing overwrites (RTCBQOWR)

Register RTCBQOWR increases when a call back queuing (CBQ) request or ring again (RAG) request overwrites a CBQ request. This overwrite occurs when the caller has a CBQ request pending and activates CBQ on another call. The caller activates CBQ before the original request completes.

To overwrite a CBQ request on a business set, cancel the CBQ request that remains before you activate the feature on a different call.

Associated registers

Register OHQCBQCG_CBQOVWRT increases for a customer group when a CBQ request or a ring again (RAG) request overwrites a call back queuing (CBQ) request.

Extension registers

There are no extension registers.

Associated logs

There are no associated logs.

RTCBQPPT

Register type

Peg

Description

Route call back queuing priority promotion timer (RTCBQPPT)

Register RTCBQPPT increases when the call back queuing (CBQ) priority promotion timer for a call ends. Call back queuing priority promotion of the call occurs.

The queue priority promotion time is the maximum time a station can remain queued at a level in the priority ordered queue. The CBQ starting priority can be one of four levels. The CBQ maximum priority is the highest level in the priority ordered queue. If the starting priority is less than the maximum priority, the request qualifies for priority promotion when the timer ends.

Associated registers

For customer group, register OHQCBQCG_CBQPPT increases when the call back queuing (CBQ) priority promotion timer for a call finishes. Call back queuing priority promotion of the call must occur for the register to increase.

Extension registers

There are no extension registers.

Associated logs

There are no associated logs.

RTCBQRAT

Register type

Peg

Description

Route call back queuing route advance timer (RTCBQRAT)

Register RTCBQRAT increases when the call back queuing (CBQ) route advance timer for a CBQ request finishes. The CBQ request must qualify for CBQ route advance timing.

The CBQ route advance timer prevents delays in heavy traffic periods. The system makes a request to queue a call back on a low cost route. Qualify the CBQ request to complete on inexpensive and expensive routes when the timer expires.

Enter the field CBQRAT in table CUSTSTN to apply this feature to stations.

Associated registers

For a customer group, register OHQCBQCG_CBQRATRTCBQRAT increases when the call back queuing (CBQ) route advance timer for a CBQ request finishes.

Extension registers

There are no extension registers.

Associated logs

There are no associated logs.

RTOHQABN

Register type

Peg

Description

Route off-hook queuing abandons (RTOPHQABN)

Register RTOHQABN increases when the calling party abandons an off-hook queuing (OHQ) attempt before the attempt completes. This register counts calls that the system abandons by one of the following methods:

- user goes on-hook to terminate the OHQ attempts
- user flashes and goes on-hook to activate CBQ
- user activates the CBQ feature on a business set and goes on-hook

Associated registers

For a customer group, register OHQCBQCG_OHQABN increases when the calling party abandons an off-hook queuing (OHQ) attempt before completion.

Extension registers

There are no extension registers.

Associated logs

The system generates LINE106 when dial pulse reception on a line has problems.

The system generates LINE108 when Digitone reception on a line has problems.

The system generates TRK114 when dial pulse reception for an incoming call over a trunk has problems. The system did not determine the call destination.

The system generates TRK116 when a multi-frequency reception for an incoming call over a trunk has problems. The system can not determine the call destination.

The system generates TRK162 when transmission of either a trunk-to-trunk has problems. The system also generates this log when a line-to-line call uses digital multi-frequency signaling.

RTOHQBLK

Register type

Peg

Description

Route off-hook queuing blockages (RTOHQBLK)

Register RTOHQBLK increases when the system blocks an off-hook queuing (OHQ) request because it cannot complete before a specified wait timeout. The wait timeout appears in table IBNRTE.

Register RTOHQBLK increases when a likelihood test fails. The likelihood test determines if the system can assign a call to an idle trunk within the wait timeout.

Associated registers

For a customer group, register OHQCBQCG_OHQBLOCK increases for a customer when the system blocks an off-hook queuing (OHQ). The system blocks the request because the request cannot complete before a specified wait timeout.

Extension registers

There are no extension registers.

Associated logs

The system generates the ATB100 when the system blocks an attempt to seize a trunk to an exact numbering plan area (NPA) or central office (CO). The call advances to another route.

RTOHQOFR

Register type

Peg

Description

Route off-hook queuing offers (RTOHQOFR)

Register RTOHQOFR increases when the system offers off-hook queuing (OHQ) to a user because trunks are not available on the desired route.

Associated registers

For a customer group, register OHQCBQCG_OHQOFFER increases when the system offers off-hook queuing (OHQ) to a user. The system offers OHQ to the user because no available trunks are present on the desired route.

Extension registers

There are no extension registers.

Associated logs

The system generates ATB100 when the system blocks an attempt to seize a trunk to an exact numbering plan area (NPA) or central office (CO). The call advances to another route.

RTOHQOVF

Register type

Peg

Description

Route off-hook queuing overflows (RTOHQOVF)

Register RTOHQOVF increases when an off-hook queuing (OHQ) request cannot complete because there are not enough software resources.

Parameter AVG_NUM_TGS_PER_OHCBQCALL in table OFCENG specifies the average number of trunk groups the system involves in an OHQ or CBQ call. Parameter NUMOHCBQTRANSBLKS in table OFCENG specifies the number of transaction blocks an office can use for both OHQ and CBQ.

Associated registers

For a customer group, register OHQCBQCG_OHQOVFL RTOHQOVF increase for a customer group when an off-hook queuing (OHQ) request cannot complete. The request cannot complete when there are not enough software resources.

Extension registers

There are no extension registers.

Associated logs

The system generates LINE138 and TRK138 when the system routes a call to a treatment after being call processing busy.

ONI

Description

Operator number identification (ONI)

The ONI provides information about centralized automatic message accounting (CAMA) calls that use operator number identification (ONI).

The ONI allows a CAMA operator on the line to receive the calling number. The CAMA operator enters the calling number in the CAMA equipment for billing purposes.

The OM group ONI provides one tuple for each office. The following table lists the key and info fields associated with OM group ONI.

Key field	Info field
none	CPOS_OM_INFO. Number of CAMA positions software-defined for the office.

Related functional groups

The Traffic Operator Position (TOPS) operating group associates with the OM group ONI.

Registers

The following table lists the registers associated with OM group ONI and what they measure. For a description of a register, click on the register name.

Registers for OM group ONI

Register name	Measures
ONIATT	Operator number identification attempts
ONICHDLU	Operator number identification calls handled use
ONIDELGT	Operator number identification delegation
ONIFDISC	Operator number identification forced disconnect

Registers for OM group ONI

Register name	Measures
ONIMBU	Operator number identification manual busy use
ONIMTCHC	Operator number identification match check
ONIOCCU	Operator number identification occupied
ONIOVFL	Operator number identification overflow
ONIQABAN	Operator number identification queue abandon
ONIQOCC	Operator number identification queue occupied
ONIQOVFL	Operator number identification queue overflow
ONIQTOUT	Operator number identification queue timed out
ONISBU	Operator number identification system busy
ONISZRS	Operator number identification seizures
ONIWRGCA	Operator number identification wrong code added

ONIATT

Register type
Peg

Description
Operator number identification attempts (ONIATT)

Register ONIATT counts calls the system routes to CAMA positions that use ONI. Register ONIATT counts calls the system routes to CAMA positions that use remote operator number identification (RONI).

Associated registers
Register ONIQABAN counts calls abandoned in the CAMA call waiting queue.

Register ONIQOVFL counts CAMA calls the system routes to no service circuit (NOSC) treatment.

Register ONIQTOUT counts calls that wait in the CAMA call waiting queue. The system routes calls to a treatment after enough time.

Register ONISZRS counts calls that connect to a CAMA position. The operator at the position acknowledges the calls.

Register ONIATT contains the following:

- ONISZRS
- ONIQOVFL
- ONIQABAN
- ONIQTOUT
- calls assigned to a position

Calls are abandoned while waiting for operator acknowledgment.

Extension registers

There are no extension registers.

Associated logs

There are no associated logs.

ONICHDLU

Register type

Peg

Description

Operator number identification calls handled use (ONICHDLU) Register ONICHDLU is a use register. The scan rate is 10 s. Register ONICHDLU records if CAMA positions that use ONI are assigned to calls.

Associated registers

There are no associated registers.

Extension registers

There are no extension registers.

Associated logs

There are no associated logs.

ONIDELGT

Register type

Peg

Description

Operator number identification delegation (ONIDELGT)

Register ONIDELGT counts calls that wait in the CAMA call waiting queue for enough time for a register to increase.

Field MAZQ_BEFORE_OM in table CPOSTIME contains the maximum amount of time a call can wait in queue before a register increases.

Associated registers
There are no associated registers.

Extension registers
There are no extension registers.

Associated logs
There are no associated logs.

ONIFDISC

Register type
Peg

Description
Operator number identification forced disconnect (ONIFDISC)

Register ONIFDISC increases when a CAMA operator disconnects a call from the CAMA position.

The system routes disconnected calls to disconnect time-out (DISC) treatment.

Associated registers
There are no associated registers.

Extension registers
There are no extension registers.

Associated logs
There are no associated logs.

ONIMBU

Register type
Peg

Description
Operator number identification manual busy use (OMIBU)

Register ONIMBU is a use register. The scan rate is 10 s. Register ONIMBU records if CAMA positions that use ONI are manual busy or seized. Register ONIMBU records if CAMA positions that use RONI are manual busy or seized.

Associated registers

There are no associated registers.

Extension registers

There are no extension registers.

Associated logs

There are no associated logs.

ONIMTCHC

Register type

Peg

Description

Operator number identification match check (ONIMTCHC)

Register ONIMTCHC increases when a CAMA operator enters a called number. The CAMA operator enters the called number in place of the calling number.

Associated registers

There are no associated registers.

Extension registers

There are no extension registers.

Associated logs

There are no associated logs.

ONIOCCU

Register type

Peg

Description

Operator number identification occupied (ONIOCCU)

Register ONIOCCU is a use register. The scan rate is 10 s. Register ONIOCCU records if CAMA positions that use ONI are assigned to or are available to handle calls. Register ONIOCCU records if CAMA positions that use ONI are available to handle calls. Register ONIOCCU also records if CAMA positions that use RONI are assigned to or are available to handle calls. Register ONIOCCU records if CAMA positions that use RONI are available to handle calls.

Associated registers

There are no associated registers.

Extension registers

There are no extension registers.

Associated logs

There are no associated logs.

ONIOVFL

Register type

Peg

Description

Operator number identification overflow (ONIOVFL)

Register ONIOVFL increases when a call attempts to enter the CAMA call waiting queue.

The call attempts to enter the CAMA call waiting queue when CAMA position is not available.

Associated registers

Register ONIQOVFL counts CAMA calls that the system routes to no service circuit (NOSC) treatment.

ONIOVFL - ONIQOVFL = number of calls that enter the CAMA call waiting queue.

Extension registers

There are no extension registers.

Associated logs

There are no associated logs.

ONIQABAN

Register type

Peg

Description

Operator number identification queue abandon (ONIQABAN)

Register ONIQABAN counts calls abandoned in the CAMA call waiting queue.

Associated registers

There are no associated registers.

Extension registers

There are no extension registers.

Associated logs

There are no associated logs.

ONIQOCC

Register type

Peg

Description

Operator number identification queue occupied

Register ONIQOCC is a use register. The scan rate is 10 s. Register ONIQOCC records if calls wait for assignment to CAMA positions that use ONI. Register ONIQOCC records if calls wait for assignment to CAMA positions that use RONI.

Associated registers

There are no associated registers.

Extension registers

There are no extension registers.

Associated logs

There are no associated logs.

ONIQOVFL

Register type

Peg

Description

Operator number identification queue overflow (ONIQOVFL)

Register ONIQOVFL counts CAMA calls that route to no service circuit (NOSC) treatment.

The system routes calls to NOSC treatment because the CAMA call waiting queue maximum length exceeds the limit. Field DEFLECT in table CAMACSW contains the maximum CAMA call waiting queue length.

Associated registers
There are no associated registers.

Extension registers
There are no extension registers.

Associated logs
There are no associated logs.

ONIQTOUT

Register type
Peg

Description
Operator number identification queue timed out (ONIQTOUT)

Register ONIQTOUT counts calls that wait in the CAMA. The system routes calls to a treatment after a specified time.

Field MAXQ_BEFORE_TRTMT in table CPOSTIME contains the time-out period. The system routes calls to NOSC treatment.

Associated registers
There are no associated registers.

Extension registers
There are no extension registers.

Associated logs
There are no associated logs.

ONISBU

Register type
Peg

Description
Operator number identification system busy (ONISBU)

Register ONISBU is a use register. The scan rate is 10 s. Register ONISBU records if CAMA positions that use ONI are system busy or peripheral module busy. Register ONUSBU records if CAMA positions that use RONI are system busy or peripheral module busy.

Associated registers
There are no associated registers.

Extension registers

There are no extension registers.

Associated logs

There are no associated logs.

ONISZRS

Register type

Peg

Description

Operator number identification seizures (ONISZRS) Register ONISZRS counts calls that connect to a CAMA position. The operator at the position acknowledges the calls.

Associated registers

There are no associated registers.

Extension registers

There are no extension registers.

Associated logs

There are no associated logs.

ONIWRGCA

Register type

Peg

Description

Operator number identification wrong code added (ONIWRGCA)

Register ONIWRGCA increases when the system rejects the entry that the CAMA operator makes.

The CAMA operator can enter NXX codes, trouble codes, or digits. The DMS-100 system rejects the following:

- NXX codes that are not correct
- trouble codes that are not correct
- digits that the system does not recognize

When the system detects digits that are not known, the system begins automatic testing procedures.

Associated registers

There are no associated registers.

Extension registers

There are no extension registers.

Associated logs

There are no associated logs.

OPCHOICE

Description

OM group Operator Choice (OPCHOICE) count enables you to determine the number of calls using each OPCHIDX. The OPCHIDX OM contains 255 tuples (one tuple for each OPCHIDX, 1-255). There is no tuple for OCHIDX 0. All tuples in the OPCHOICE OM group are present at all times, regardless of whether OPCHIDX is datafilled in table OPCHOICE.

The following table lists the key and info fields associated with OM group OPCHOICE:

Key field	Info field
OPCHOICE Index	None

Related functional groups

There are no functional groups associated with OM group OPCHOICE.

Registers

The following table lists the registers associated with OM group OPCHOICE and what they measure. For a detailed description of a register, click on the register name.

Registers for OM group OPCHOICE

Register name	Measures
OPCHRTE	OPCHOICE calls routed

OPCHRTE

Register type
Peg

Description
The switch increments register OPCHRTE (OPCHOICE calls routed) each time it routes a 0-, 0+, or 01+ call using the OPCHOICE index (OPCHIDX). OPCHRTE pegs according to OPCHIDX. For cases where route advancing occurs, the switch only pegs the OPCHRTE register once (OPCHRTE is the register for the OPCHOICE index that was used to route the call.)

Associated registers

None

Extension registers

None

Associated logs

None

OSACCP1

Description

OSAC Call Processing 1

This OM group pegs a register for each Operator Services Systems Advanced Intelligent Network Centralization (OSAC) call processing operation and response on a per session pool basis. This group is pegged each time the switch sends or receives an OSAC call processing message.

OM group OSACCP1 provides up to 4095 tuples per office. The following table lists the key and info fields associated with OM group OSACCP1.

Key field	Info field
OSACCP1 can be indexed by either of the following: • SESNPLID {0 to 4094}: Key field for OASESNPL. • SESNPLNM: Name associated with SESNPLID. Only session pools defined as OSAC session pools can be indexed for OSACCP1. Datafilled in table OASESNPL with Orig Type = OSACORIG or OSACTERM.	OSAC_SP_INDEX_REGISTERINFO - This name can be up to 16 characters long.

Related functional groups

Functional group Enhanced Services (ENSV0001) is associated with OM group OSACCP1.

Registers

The following table lists the registers associated with OM group OSACCP1 and what they measure. For a description of a register, click on the register name.

Registers for OM group OSACCP1

Register name	Measures
ENDSESN	Register End Session Inform
GOTSESN	Register Got Session Inform
RELSENE	Register Release Session Error Response
RELSENS	Register Release Session Success Response
RELSESN	Register Release Session Request
RELSNI	Register Release Session Inform
SESBRQ	Register Session Begin Request
SESBRQE	Register Session Begin Request Error Response
SESBRQS	Register Session Begin Request Success Response
SIVERE	Register Session Initiation Verification Error Response
SIVERRQ	Register Session Initiation Verification Request
SIVERS	Register Session Initiation Verification Success Response

ENDSESN

Register type
Peg

Description
Register End Session Inform (ENDSESN)

Register ENDSESN is pegged each time the corresponding operation or response is sent or received by the switch.

Associated registers
There are no associated registers.

Extension registers

ENDSESN2

Associated logs

There are no associated logs.

GOTSESN

Register type

Peg

Description

Register Got Session Inform (GOTSESN)

Register GOTSESN is pegged each time the corresponding operation or response is sent or received by the switch.

Associated registers

There are no associated registers.

Extension registers

GOTSESN2

Associated logs

There are no associated logs.

RELSENE

Register type

Peg

Description

Register Release Session Error Response (RELSENE)

Register RELSENE is pegged each time the corresponding operation or response is sent or received by the switch.

Associated registers

There are no associated registers.

Extension registers

RELSENE2

Associated logs

There are no associated logs.

RELSENS

Register type

Peg

Description

Register Release Session Success Response (RELSENS) Register RELSENS is pegged each time the corresponding operation or response is sent or received by the switch.

Associated registers

There are no associated registers.

Extension registers

RELSENS2

Associated logs

There are no associated logs.

RELSESN

Register type

Peg

Description

Register Release Session Request (RELSESN)

Register RELSESN is pegged each time the corresponding operation or response is sent or received by the switch.

Associated registers

There are no associated registers.

Extension registers

There are no extension registers.

Associated logs

There are no associated logs.

RELSNI

Register type

Peg

Description

Register Release Session Inform (RELSNI)

Register RELSNI is pegged each time the corresponding operation or response is sent or received by the switch.

Associated registers

There are no associated registers.

Extension registers

RELSNI2

Associated logs

There are no associated logs.

SESBRQ

Register type

Peg

Description

Register Session Begin Request (SESBRQ)

Register SESBRQ is pegged each time the corresponding operation or response is sent or received by the switch.

Associated registers

There are no associated registers.

Extension registers

SESBRQ2

Associated logs

There are no associated logs.

SESBRQE

Register type

Peg

Description

Register Session Begin Request Error Response (SESBRQE)

Register SESBRQE is pegged each time the corresponding operation or response is sent or received by the switch.

Associated registers

There are no associated registers.

Extension registers

SESBRQE2

Associated logs

There are no associated logs.

SESBRQS

Register type

Peg

Description

Register Session Begin Request Success Response (SESBRQS)

Register SESBRQS is pegged each time the corresponding operation or response is sent or received by the switch.

Associated registers

There are no associated registers.

Extension registers

SESBRQS2

Associated logs

There are no associated logs.

SIVERE

Register type

Peg

Description

Register Session Initiation Verification Error Response (SIVERE)

Register SIVERE is pegged each time the corresponding operation or response is sent or received by the switch.

Associated registers

There are no associated registers.

Extension registers

SIVERE2

Associated logs

There are no associated logs.

SIVERRQ

Register type

Peg

Description

Register Session Initiation Verification Request (SIVERRQ)

Register SIVERRQ is pegged each time the corresponding operation or response is sent or received by the switch.

Associated registers

There are no associated registers.

Extension registers

SIVERRQ2

Associated logs

There are no associated logs.

SIVERS

Register type

Peg

Description

Register Session Initiation Verification Success Response (SIVERS)

Register SIVERS is pegged each time the corresponding operation or response is sent or received by the switch.

Associated registers

There are no associated registers.

Extension registers

SIVERS2

Associated logs

There are no associated logs.

Description

OSAC Call Processing 2

This OM group pegs a register for each Operator Services Systems Advanced Intelligent Network Centralization (OSAC) call processing operation and response on a per session pool basis. This group is pegged each time the switch sends or receives an OSAC call processing message.

OM group OSACCP2 provides up to 4095 tuples per office. A tuple is added to this OM group for each OSAC session pool defined in table OASESNPL.

The following table lists the key and info fields associated with OM group OSACCP2.

Key field	Info field
OSACCP2 can be indexed by either of the following: • SESNPLID {0 to 4094}: Key field for OASESNPL. • SESNPLNM: Name associated with SESNPLID. Only session pools defined in table OASESNPL with ORIGTYPE of OSACORIG or OSACTERM can be indexed for OSACCP2.	OSAC_SP_INDEX_REGISTERINFO - This name can be up to 16 characters long.

Related functional groups

Functional group Enhanced Services (ENSV0001) is associated with OM group OSACCP2. ENSV is changed to OSAN in TOPS09.

Registers

The following table lists the registers associated with OM group OSACCP2 and what they measure. For a description of a register, click on the register name.

Registers for OM group OSACCP2

Register name	Measures
MISUPDT	Management information system update inform
VCCONN	Register Voice Connect Request
VCCONNE	Register Voice Connect Error Response
VCCONNS	Register Voice Connect Success Response
VCRELS	Register Voice Release Request
VCRELSE	Register Voice Release Error Response
VCRELSS	Register Voice Release Success Response

MISUPDT

Register type
Peg

Description
Management information system update inform (MISUPDT)

Register MISUPDT is pegged each time the MIS Update Inform operation is sent by the switch.

Associated registers
There are no associated registers.

Extension registers
MISUPDT2

Associated logs
There are no associated logs.

VCCONN

Register type
Peg

Description
Register Voice Connect Request (VCCONN)

Register VCCONN is pegged each time the corresponding operation or response is sent or received by the switch.

Associated registers
There are no associated registers.

Extension registers
VCCONN2

Associated logs
There are no associated logs.

VCCONNE

Register type
Peg

Description
Register Voice Connect Error Response (VCCONNE)

Register VCCONNE is pegged each time the corresponding operation or response is sent or received by the switch.

Associated registers
There are no associated registers.

Extension registers
There are no extension registers.

Associated logs
There are no associated logs.

VCCONNS

Register type
Peg

Description
Register Voice Connect Success Response (VCCONNS)

Register VCCONNS is pegged each time the corresponding operation or response is sent or received by the switch.

Associated registers
There are no associated registers.

Extension registers
VCCONNS2

Associated logs
There are no associated logs.

VCRELS

Register type
Peg

Description
Register Voice Release Request (VCRELS)

Register VCRELS is pegged each time the corresponding operation or response is sent or received by the switch.

Associated registers
There are no associated registers.

Extension registers
VCRELS2

Associated logs
There are no associated logs.

VCRELSE

Register type
Peg

Description
Register Voice Release Error Response (VCRELSE) Register VCRELSE is pegged each time the corresponding operation or response is sent or received by the switch.

Associated registers
There are no associated registers.

Extension registers
VCRELSE2

Associated logs
There are no associated logs.

VCRELSS

Register type
Peg

Description

Register Voice Release Success Response (VCRELSS) Register VCRELSS is pegged each time the corresponding operation or response is sent or received by the switch.

Associated registers

There are no associated registers.

Extension registers

VCRELSS2

Associated logs

There are no associated logs.

OSACND

Description

OSAC Node Maintenance

This OM group pegs a register for each Operator Services Systems Advanced Intelligent Network Centralization (OSAC) Node Class operation and response on a per node basis. This group is pegged each time the switch sends or receives an OSAC Node Class message.

OM group OSACND provides up to 768 tuples per office. The following table lists the key and info fields associated with OM group OSACND.

Key field	Info field
OSACND can be indexed by either of the following: • NODEID {0 to 767}: Key field for table OANODINV. • NODENAME: Name associated with NODEID. Only nodes defined as OSAC nodes can be indexed for OSACND. Datafilled in table OANODINV with PM Type of OSAC.	OSAC_NODE_INDEX_REGISTERINFO - This name can be up to 16 characters long.

Related functional groups

Functional group Enhanced Services (ENSV0001) is associated with OM group OSACND.

Registers

The following table lists the registers associated with OM group OSACND and what they measure. For a description of a register, click on the register name.

Registers for OM group OSACND

Register name	Measures
NDAUD	Register Node Audit Request
NDAUDE	Register Node Audit Error Response

Registers for OM group OSACND

Register name	Measures
NDAUDS	Register Node Audit Success Response
NDBSY	Register Node Busy Request
NDBSYE	Register Node Busy Error Response
NDBSYS	Register Node Busy Success Response
NDRTS	Register Node RTS Request
NDRTSE	Register Node RTS Error Response
NDRTSS	Register Node RTS Success Response
NDTST	Register Node Test Request
NDTSTE	Register Node Test Error Response
NDTSTS	Register Node Test Success Response

NDAUD

Register type

Peg

Description

Register Node Audit Request (NDAUD)

Register NDAUD is pegged when the corresponding operation or response is sent or received by the switch.

Associated registers

There are no associated registers.

Extension registers

NDAUD2

Associated logs

There are no associated logs.

NDAUDE

Register type

Peg

Description

Register Node Audit Error Response (NDAUDE)

Register NDAUDE is pegged when the corresponding operation or response is sent or received by the switch.

Associated registers

There are no associated registers.

Extension registers

NDAUDE2

Associated logs

There are no associated logs.

NDAUDS

Register type

Peg

Description

Register Node Audit Success Response (NDAUDS)

Register NDAUDS is pegged when the corresponding operation or response is sent or received by the switch.

Associated registers

There are no associated registers.

Extension registers

NDAUDS2

Associated logs

There are no associated logs.

NDBSY

Register type

Peg

Description

Register Node Busy Request (NDBSY)

Register NDBSY is pegged when the corresponding operation or response is sent or received by the switch.

Associated registers

There are no associated registers.

Extension registers

NDBSY2

Associated logs

There are no associated logs.

NDBSYE

Register type

Peg

Description

Register Node Busy Error Response (NDBSYE)

Register NDBSYE is pegged when the corresponding operation or response is sent or received by the switch.

Associated registers

There are no associated registers.

Extension registers

NDBSYE2

Associated logs

There are no associated logs.

NDBSYS

Register type

Peg

Description

Register Node Busy Success Response (NDBSYS)

Register NDBSYS is pegged when the corresponding operation or response is sent or received by the switch.

Associated registers

There are no associated registers.

Extension registers

NDBSYS2

Associated logs

There are no associated logs.

NDRTS

Register type

Peg

Description

Register Node RTS Request (NDRTS)

Register NDRTS is pegged when the corresponding operation or response is sent or received by the switch.

Associated registers

There are no associated registers.

Extension registers

NDRTS2

Associated logs

There are no associated logs.

NDRTSE

Register type

Peg

Description

Register Node RTS Error Response (NDRTSE)

Register NDRTSE is pegged when the corresponding operation or response is sent or received by the switch.

Associated registers

There are no associated registers.

Extension registers

NDRTSE2

Associated logs

There are no associated logs.

NDRTSS

Register type

Peg

Description

Register Node RTS Success Response (NDRTSS)

Register NDRTSS is pegged when the corresponding operation or response is sent or received by the switch.

Associated registers
There are no associated registers.

Extension registers
NDRTSS2

Associated logs
There are no associated logs.

NDTST

Register type
Peg

Description
Register Node Test Request (NDTST)

Register NDTST is pegged when the corresponding operation or response is sent or received by the switch.

Associated registers
There are no associated registers.

Extension registers
There are no extension registers.

Associated logs
There are no associated logs.

NDTSTE

Register type
Peg

Description
Register Node Test Error Response (NDTSTE)

Register NDTSTE is pegged when the corresponding operation or response is sent or received by the switch.

Associated registers
There are no associated registers.

Extension registers
NDTSTE2

Associated logs

There are no associated logs.

NDTSTS

Register type

Peg

Description

Register Node Test Success Response (NDTSTS)

Register NDTSTS is pegged when the corresponding operation or response is sent or received by the switch.

Associated registers

There are no associated registers.

Extension registers

NDTSTS2

Associated logs

There are no associated logs.

Description

OSAC Session Pool Maintenance

This OM group pegs a register for each Operator Services Systems Advanced Intelligent Network Centralization (OSAC) Session Pool operation and response on a per session pool basis. This group is pegged each time the switch sends or receives an OSAC Session Pool Class message.

OM group OSACSP provides up to 4095 tuples per office. The following table lists the key and info fields associated with OM group OSACSP.

Key field	Info field
OSACSP can be indexed by either one of the following: • SESNPLID {0 to 4094}: Key field for table OASESNPL. • SESNPLNM: Name associated with SESNPLID. Only session pools defined as OSAC session pools can be indexed for OSACSP. Datafilled in table OASESNPL with Orig Type = OSACORIG or OSACTERM.	OSAC_SP_INDEX_REGISTERINFO - This name can be up to 16 characters long.

Related functional groups

Functional group Enhanced Services (ENSV0001) is associated with OM group OSACSP.

Registers

The following table lists the registers associated with OM group OSACSP and what they measure. For a description of a register, click on the register name.

Registers for OM group OSACSP

Register name	Measures
SPLAUD	Register Session Pool Audit Request
SPLAUDE	Register Session Pool Audit Error Response
SPLAUDS	Register Session Pool Audit Success Response
SPLBSY	Register Session Pool Busy Request
SPLBSYE	Register Session Pool Busy Error Response
SPLBSYS	Register Session Pool Busy Success Response
SPLDRN	Register Session Pool Drain Request
SPLRTS	Register Session Pool RTS Request
SPLRTSE	Register Session Pool RTS Error Response
SPLRTSS	Register Session Pool RTS Success Response
SPLTST	Register Session Pool Test Request
SPLTSTE	Register Session Pool Test Error Response
SPLTSTS	Register Session Pool Test Success Response

SPLAUD

Register type
Peg

Description
Register Session Pool Audit Request (SPLAUD)

Register SPLAUD is pegged each time the corresponding operation or response is sent or received by the switch.

Associated registers
There are no associated registers.

Extension registers

SPLAUD2

Associated logs

There are no associated logs.

SPLAUDE

Register type

Peg

Description

Register Session Pool Audit Error Response (SPLAUDE)

Register SPLAUDE is pegged each time the corresponding operation or response is sent or received by the switch.

Associated registers

There are no associated registers.

Extension registers

SPLAUDE2

Associated logs

There are no associated logs.

SPLAUDS

Register type

Peg

Description

Register Session Pool Audit Success Response (SPLAUDS)

Register SPLAUDS is pegged each time the corresponding operation or response is sent or received by the switch.

Associated registers

There are no associated registers.

Extension registers

SPLAUDS2

Associated logs

There are no associated logs.

SPLBSY

Register type

Peg

Description

Register Session Pool Busy Request (SPLBSY)

Register SPLBSY is pegged each time the corresponding operation or response is sent or received by the switch.

Associated registers

There are no associated registers.

Extension registers

SPLBSY2

Associated logs

There are no associated logs.

SPLBSYE

Register type

Peg

Description

Register Session Pool Busy Error Response (SPLBSYE)

Register SPLBSYE is pegged each time the corresponding operation or response is sent or received by the switch.

Associated registers

There are no associated registers.

Extension registers

SPLBSYE2

Associated logs

There are no associated logs.

SPLBSYS

Register type

Peg

Description

Register Session Pool Busy Success Response (SPLBSYS)

Register SPLBSYS is pegged each time the corresponding operation or response is sent or received by the switch.

Associated registers
There are no associated registers.

Extension registers
SPLBSYS2

Associated logs
There are no associated logs.

SPLDRN

Register type
Peg

Description
Register Session Pool Drain Request (SPLDRN)

Register SPLDRN is pegged each time the corresponding operation or response is sent or received by the switch.

Associated registers
There are no associated registers.

Extension registers
SPLDRN2

Associated logs
There are no associated logs.

SPLRTS

Register type
Peg

Description
Register Session Pool RTS Request (SPLRTS)

Register SPLRTS is pegged each time the corresponding operation or response is sent or received by the switch.

Associated registers
There are no associated registers.

Extension registers
SPLRTS2

Associated logs

There are no associated logs.

SPLRTSE

Register type

Peg

Description

Register Session Pool RTS Error Response (SPLRTSE)

Register SPLRTSE is pegged each time the corresponding operation or response is sent or received by the switch.

Associated registers

There are no associated registers.

Extension registers

SPLRTSE2

Associated logs

There are no associated logs.

SPLRTSS

Register type

Peg

Description

Register Session Pool RTS Success Response (SPLRTSS)

Register SPLRTSS is pegged each time the corresponding operation or response is sent or received by the switch.

Associated registers

There are no associated registers.

Extension registers

SPLRTSS2

Associated logs

There are no associated logs.

SPLTST

Register type

Peg

Description

Register Session Pool Test Request (SPLTST)

Register SPLTST is pegged each time the corresponding operation or response is sent or received by the switch.

Associated registers

There are no associated registers.

Extension registers

SPLTST2

Associated logs

There are no associated logs.

SPLTSTE

Register type

Peg

Description

Register Session Pool Test Error Response (SPLTSTE)

Register SPLTSTE is pegged each time the corresponding operation or response is sent or received by the switch.

Associated registers

There are no associated registers.

Extension registers

SPLTSTE2

Associated logs

There are no associated logs.

SPLTSTS

Register type

Peg

Description

Register Session Pool Test Success Response (SPLTSTS)

Register SPLTSTS is pegged each time the corresponding operation or response is sent or received by the switch.

Associated registers

There are no associated registers.

Extension registers

SPLTSTS2

Associated logs

There are no associated logs.

Description

OSN Node

This OM group pegs a register for each Operator Services Node (OSN) Node Class operation and response on a per node basis. This group is pegged each time the switch sends or receives an OSN Node Class message.

OM group OSNND provides up to 768 tuples per office. The following table lists the key and info fields associated with OM group OSNND.

Key field	Info field
OSNND can be indexed by either of the following: • NODEID {0 to 767}: Key field for table OANODINV. • NODENAME: Name associated with NODEID. Datafilled in table OANODINV with PM Type of OSAC.	OSAC_NODE_INDEX_REGISTERINFO - This name can be up to 16 characters long.

Related functional groups

Functional group Enhanced Services (ENSV0001) is associated with OM group OSNND.

Registers

The following table lists the registers associated with OM group OSNND and what they measure. For a description of a register, click on the register name.

Registers for OM group OSNND

Register name	Measures
ONDBSYI	OSN Node Busy Inform
ONDDFL	OSN Node Datafill Check Request
ONDDFLE	OSN Node Datafill Check Error Response

Registers for OM group OSNND

Register name	Measures
ONDDFLS	OSN Node Datafill Check Success Response
ONDRTSI	OSN Node RTS Inform

ONDBSYI

Register type

Peg

Description

Register OSN Node Busy Inform (ONDBSYI)

Register ONDBSYI is pegged when the corresponding operation or response is sent or received by the switch.

Associated registers

There are no associated registers.

Extension registers

ONDBSYI2

Associated logs

There are no associated logs.

ONDDFL

Register type

Peg

Description

Register OSN Node Datafill Check Request (ONDDFL)

Register ONDDFL is pegged when the corresponding operation or response is sent or received by the switch.

Associated registers

There are no associated registers.

Extension registers

ONDDFL2

Associated logs

There are no associated logs.

ONDDFLE

Register type

Peg

Description

Register OSN Node Datafill Check Error Response (ONDDFLE)

Register ONDDFLE is pegged when the corresponding operation or response is sent or received by the switch.

Associated registers

There are no associated registers.

Extension registers

ONDDFLE2

Associated logs

There are no associated logs.

ONDDFLS

Register type

Peg

Description

Register OSN Node Datafill Check Success Response (ONDDFLS)

Register ONDDFLS is pegged when the corresponding operation or response is sent or received by the switch.

Associated registers

There are no associated registers.

Extension registers

ONDDFLS2

Associated logs

There are no associated logs.

ONDRTSI

Register type

Peg

Description

Register OSN Node RTS Inform (ONDRTSI)

Register ONDRTSI is pegged when the corresponding operation or response is sent or received by the switch.

Associated registers

There are no associated registers.

Extension registers

ONDRTSI2

Associated logs

There are no associated logs.

OSNSP

Description

OSN Session Pool

This OM group pegs a register for each Operator Services Node (OSN) Session Pool Class operation and response on a per node session pool basis. This group is pegged each time the switch sends or receives an OSN Session Pool Class message.

OM group OSNSP provides up to 4095 tuples per office. The following table lists the key and info fields associated with OM group OSNSP.

Key field	Info field
OSNSP can be indexed by either of the following: • NODEID {0 to 767}: Key field for table OANODINV. • NODENAME: Name associated with NODEID. Datafilled in table OANODINV with PM Type of OSAC.	OSAC_NODE_INDEX_REGISTERINFO - This name can be up to 16 characters long.

Related functional groups

Functional group Enhanced Services (ENSV0001) is associated with OM group OSNSP.

Registers

The following table lists the registers associated with OM group OSNSP and what they measure. For a description of a register, click on the register name.

Registers for OM group OSNSP

Register name	Measures
OSPBSYI	OSN Session Pool Busy Inform
OSPDFL	OSN Session Pool Datafill Check Request
OSPDFLE	OSN Session Pool Datafill Check Error Response

Registers for OM group OSNSP

Register name	Measures
OSPDFLS	OSN Session Pool Datafill Check Success Response
OSPRTSI	OSN Session Pool RTS Inform

OSPBSYI

Register type

Peg

Description

Register OSN Session Pool Busy Inform (OSPBSYI)

Register OSPBSYI is pegged when the corresponding operation or response is sent or received by the switch.

Associated registers

There are no associated registers.

Extension registers

OSPBSYI2

Associated logs

There are no associated logs.

OSPDFL

Register type

Peg

Description

Register OSN Session Pool Datafill Check Request (OSPDFL)

Register OSPDFL is pegged when the corresponding operation or response is sent or received by the switch.

Associated registers

There are no associated registers.

Extension registers

OSPDFL2

Associated logs

There are no associated logs.

OSPDFLE

Register type

Peg

Description

Register OSN Session Pool Datafill Check Error Response (OSPDFLE)

Register OSPDFLE is pegged when the corresponding operation or response is sent or received by the switch.

Associated registers

There are no associated registers.

Extension registers

OSPDFLE2

Associated logs

There are no associated logs.

OSPDFLS

Register type

Peg

Description

Register OSN Session Pool Datafill Check Success Response (OSPDFLS)

Register OSPDFLS is pegged when the corresponding operation or response is sent or received by the switch.

Associated registers

There are no associated registers.

Extension registers

OSPDFLS2

Associated logs

There are no associated logs.

OSPRTSI

Register type

Peg

Description

Register OSN Session Pool RTS Inform (OSPRTSI)

Register OSPRTSI is pegged when the corresponding operation or response is sent or received by the switch.

Associated registers

There are no associated registers.

Extension registers

OSPRTSI2

Associated logs

There are no associated logs.

OTS

Description

OM group Office Traffic Summary (OTS) counts calls by source and destination. Sources can be trunk, line, or system generated. Each register in OTS is divided into three categories: originating traffic, incoming traffic, and system-generated traffic.

Originating traffic registers are: NORG, ORGTRM, ORGOUT, ORGTRMT, ORGABDN, ORGLKT and ORGFSET. Registers ORGTRMT and ORGFSET count requests for off-board service updates or changes. With the Off-board Service Control feature, off-board service updates peg the registers when subscribers do one of the following from an off-board application:

- query the status and/or programmed information of corresponding subscribed-to services
- generate a request to activate, deactivate or change the services

For more information about the Off-board Service Control feature, refer to *Advanced Intelligent Network Essentials Service Implementation Guide*, 297-5161-021, and the *Advanced Intelligent Network Essentials Service Enablers*, 297-5161-022.

The Off-board Service Control feature applies only to DMS.

Incoming traffic registers are: NINC, INCTRM, INCOUT, INCTRMT, INCABNM, INCABNC, INCLKT and INCFSET.

System-generated traffic registers are: NSYS, SYSTRM, SYSOUT, SYSTRMT, SYSABDN, SYSLKT and SYSFSET.

OTS indicates the traffic load on the switch. The sum of the incoming calls represents the external traffic load on the switch. The sum of the originating and system-generated calls represents the internal traffic load on the switch. The sum of the internal and external traffic load is the total traffic load. The group also indicates the quality of service that the switch provides.

OTS contains information on the following types of calls offered to a DMS-100, DMS-200, or combined DMS-100/200 plain ordinary telephone service (POTS) office, except for common channel interoffice signaling, circuit-switched digital data service, and equal access:

- originating
- incoming
- system generated
- terminating
- outgoing
- other

Originating calls consist of line origination attempts.

Incoming calls consist of incoming attempts, including trunk, local test desk, remote office test line (ROTL), local collocated (operator) switchboard, toll collocated (operator) switchboard, and trunk test line (TTL) calls.

System-generated calls consist of call attempts that the system generates internally by the switch. System-generated calls include progressions or continuations of originating or incoming traffic, and calls that are not subscriber generated. For example, calls established by the alarm sending system or the service analysis DIALBACK system are not subscriber generated.

Terminating calls are calls that end on lines in the office.

Outgoing calls terminate on the following:

- outgoing trunks
- foreign potential test
- local test desks
- silent switchman
- centralized automatic message accounting (CAMA) positions
- test lines
- station ringer
- alarm checking feature

For terminating or outgoing traffic, registers increase when the network connection of the call is complete. When the terminating party is busy, the network connection does not complete. The system applies a tone and the line or trunk termination register increases.

The following calls do not use network module connections, but for OTS these calls are traffic calls:

- revertive calls
- service analysis dialback to line
- alarm sending to trunk
- line to station ringer
- line to silent switchman

Other traffic consists of calls that connect to tones or announcements (caused by error conditions), activations and deactivations of custom calling features, and abandoned or locked-out calls.

The following table lists the key and info fields associated with OM group OTS.

Key field	Info field
None	None

The office parameter OFFICETYPE in table OFCSTD specifies the type of office. The value of OFFICETYPE controls the output of the office traffic summary group (OTS). The correct entries for OFFICETYPE are:

- OFF100
- OFF200
- OFFCOMB
- OFFCOMBLWW
- OFFCOMBITOPS

All registers are output in offices whose OFFICETYPE is OFF100, OFFCOMB, OFFCOMBLWW, and OFFCOMBITOPS.

The following registers are output in offices whose OFFICETYPE is OFF200: NINC, INCOUT, INCTRMT, INCABNM, INCABNC, INCLKT, INCFSET, NSYS, SYSOUT, SYSTRMT, SYSABDN, SYSLKT and SYSFSET.

Related functional groups

The following functional groups are associated with functional groups for OM group OTS:

- DMS-100 Local
- DMS-200 Toll
- DMS 100/200 Combined local/toll

Registers

The following table lists the registers associated with OM group OTS and what they measure. For a detailed description of a register, click on the register name.

Registers for OM group OTS (Sheet 1 of 2)

Register name	Measures
INCABNC	Incoming abandoned by the customer
INCABNM	Incoming abandoned by the machine
INCFSET	Incoming to custom calling features
INCLKT	Incoming to lockout
INCOUT	Incoming to outgoing connections
INCTRM	Incoming to terminating connections
INCTRMT	Incoming to a treatment
NDCACT	NDC activation
NDCDACT	NDC deactivation
NDCINTG	NDC interrogation
NDCCEER	NDC errors
NDCUSGE	NDC usage
NDCFSET	Originating feature set
NINC	Incoming attempts
NORG	Originating attempts
NSYS	System origination

Registers for OM group OTS (Sheet 2 of 2)

Register name	Measures
ORGABDN	Originating, abandoned
ORGFSET	Originating to custom calling feature
ORGLKT	Originating to lockout
ORGOUT	Originating to outgoing connections
ORGTRM	Originating to terminating connections
ORGTRMT	Originating to treatment connections
SYSABDN	System originations abandoned
SYSFSET	System originations to custom calling features
SYSLKT	System originations to lockout
SYSOUT	System to outgoing connections
SYSTRM	System to terminating connections
SYSTRMT	System to treatment

INCABNC

Register type

Peg

Description

INCABNC counts incoming call attempts abandoned by the customer (subscriber). The calls are abandoned before they connect to a terminating line, outgoing trunk, tone, announcement, lockout status, or feature activation or deactivation.

Associated registers

The following registers are associated with INCABNC:

- INCABNM
- TRK_PRERTEAB counts incoming calls abandoned by the machine or the subscriber. Calls are counted by trunk group.

  Note: This relationship does not apply to calls that originate from a mobile telephone exchange (MTX).

- OFZ_INABNC counts incoming calls abandoned by the subscriber before being processed.

Validation formulas

The following formulas relate to INCABNC and its associated registers:

- Σ TRK_PRERTEAB = OTS_INCABNM + OTS_INCABNC
- OTS_INCABNC = OFZ_INABNC

Extension registers

None

Associated logs

TRK114, TRK116, TRK162

INCABNM

Register type

Peg

Description

INCABNM counts incoming call attempts abandoned by the machine. The calls are abandoned before they connect to terminating traffic, outgoing traffic, a tone, an announcement, lockout status, or feature activation or deactivation.

Associated registers

The following registers are associated with INCABNM:

- INCABNC
- TRK_PRERTEAB counts incoming calls abandoned by the machine or the subscriber. Calls are counted by trunk group.

  Note: This relationship does not apply to calls that originate from a mobile telephone exchange (MTX).

- OFZ_INABNM counts incoming calls that come in from a trunk and are abandoned by the machine before they are processed.

Validation formulas

The following formulas relate to INCABNM and its associated registers:

- Σ TRK_PRERTEAB = OTS_INCABNM + OTS_INCABNC
- OTS_INCABNM = OFZ_INABNC

Extension registers

None

Associated logs

TRK114, TRK116, TRK162

INCFSET

Register type

Peg

Associated registers

None

Extension registers

None

Associated logs

None

INCLKT

Register type

Peg

Description

INCLKT counts incoming call attempts that fail to connect or receive a treatment. The call routes to lockout.

Associated registers

OFZ_INLKT counts incoming calls that fail and route to lockout.

Validation formula

OTS_INCLKT - (number of calls that fail caused to remote-end lockout) = OFZ_INLKT

Extension registers

None

Associated logs

TRK111, TRK113, TRK122, TRK123

INCOUT

Register type

Peg

Description

INCOUT counts incoming call attempts that connect to an outgoing trunk.

Associated registers

None

Extension registers

INCOUT2

Associated logs

None

INCTRM

Register type

Peg

Description

INCTRM counts incoming call attempts that terminate to a line. The connection of a busy tone when a line is busy is a line termination. Register INCTRM counts line terminations.

Associated registers

None

Extension registers

INCTRM2

Associated logs

None

INCTRMT

Register type

Peg

Description

INCTRMT counts incoming call attempts that route to a tone or an announcement because of an error condition.

Associated registers

The following registers are associated with INCTRMT:

- ORGTRMT
- SYSTRMT
- ANN_ANNATT counts calls that route to announcements.
- TONES_TONEATT counts calls that route to tones.

Validation formula

Σ ANN_ANNATT + Σ TONES_TONEATT OTS_INCTRMT + OTS_ORGTRMT + OTS_SYSTRMT

Extension registers

None

Associated logs

TRK138

NDCACT

Register type

Peg

Description

NDCACT counts the number of times a subscriber activates INDC.

Associated registers

None

Extension registers

None

Associated logs

None

NDCDACT

Register type

Peg

Description

NDCDACT counts the number of times a subscriber deactivates INDC.

Associated registers

None

Extension registers

None

Associated logs

None

NDCINTG

Register type

Peg

Description

NDCINTG counts the number of times a subscriber interrogates the status of INDC.

Associated registers

None

Extension registers

None

Associated logs

None

NDCCEER

Register type

Peg

Description

NDCCEER counts the number of times a subscriber does not use INDC correctly. When a subscriber attempts to activate, deactivate or interrogate INDC without an assignment, the subscriber is not using INDC correctly.

Associated registers

None

Extension registers

None

Associated logs

None

NDCUSGE

Register type

Peg

Description

NDCUSGE counts the times a Call Waiting (CW) or Toll Break-in (TBI) call attempts to reach an INDC subscriber engaged in a call. The system prevents the interruption because INDC is active.

Associated registers

None

Extension registers

None

Associated logs

None

NDCFSET

Register type

Peg

Description

NDCFSET counts the originating call attempts that activate or deactivate INDC.

Associated registers

NDCFSET2

Extension registers

None

Associated logs

None

NINC

Register type

Peg

Description

NINC counts incoming call attempts recognized by the central control. The intended destination of the call is a line, a trunk, an announcement, or a tone.

Associated registers

OTS_NINC counts incoming calls. The following registers count each call according to its destination: INCTRM, INCOUT, INCTRMT, INCABNM, INCABNC, INCLKT, INCFSET

Validation formula
(65536 x NINC2)+ NINC = (65536 x INCTRM2) + INCTRM + (65536 x INCOUT2) + INCOUT + INCTRMT + INCABNM + INCABNC + INCLKT + INCFSET

Extension registers
NINC2

Associated logs
None

NORG

Register type
Peg

Description
NORG counts originating call attempts recognized by the central control. The intended destination of the call is a line, a trunk, an announcement, or a tone. Register NORG also counts originating call attempts that go immediately to lockout (caused by line load control). The system recognizes and counts a line involved in a call that flashes to attempt to initiate a three-way call.

Associated registers
ORGTRM, ORGOUT, ORGTRMT, ORGABDN, ORGLKT, ORGFSET.

Validation formula
(65536 × NORG2) + NORG = (65536 × ORGTRM2) + ORGTRM + (65536 × ORGOUT2) + ORGOUT + ORGTRMT + ORGABDN + ORGLKT + (65536 × ORGFSET) + ORGFSET

Extension registers
NORG2

Associated logs
None

NSYS

Register type
Peg

Description
NSYS counts calls that the central control (CC) recognizes as system-generated calls. System-generated calls include originations that are not included in NORG or NINC.

Associated registers
SYSTRM, SYSOUT, SYSTRMT, SYSABDN, SYSLKT, SYSFSET.

Validation formula
(65536 × NSYS2) + NSYS = SYSTRM + SYSOUT + SYSTRMT + SYSABDN + SYSLKT + SYSFSET

Extension registers
NSYS2

Associated logs
None

ORGABDN

Register type
Peg

Description
ORGABDN counts originating call attempts that the subscriber abandons before they route to a terminating line, outgoing trunk, tone, announcement, lockout status, or feature activation or deactivation. If the line is on a line module, the system counts the flash of the switch hook that occurs when the caller dials.

Associated registers
OFZ_ORIGABDN counts line originations of calls the caller abandons before the calls route to a trunk, line, or treatment.

Validation formula
OTS_ORGABDN = OFZ_ORIGABDN when both registers are pegged at the same time. The OTS group was created after the OFZ group and some older applications do not account for the newer OTS registers.

Extension registers
None

Associated logs
LINE106, LINE108, LINE138

ORGFSET

Register type
Peg

Description
ORGFSET counts originating call attempts that activate or deactivate a custom calling feature.

For DMS only: ORGFSET is pegged when a user successfully programs a Speed Call feature by using the Speed Call Update message (off-board service update).

Associated registers
None

Extension registers
ORGFETS2

Associated logs
None

ORGLKT

Register type
Peg

Description
ORGLKT counts originating call attempts that fail, route to lockout without connecting or going to treatment.

Associated registers
OFZ_ORIGLKT counts originating call attempts that fail, route to lockout without connecting or going to treatment.

Validation formula
OTS_ORGLKT = OFZ_ORIGLKT

Extension registers
None

Associated logs
LINE104, LINE105, LINE109, LINE204, LINE138, NET130, OM2200

ORGOUT

Register type
Peg

Description
ORGOUT counts originating call attempts that connect to an outgoing trunk.

Associated registers
None

Extension registers

ORGOUT2

Associated logs

None

ORGTRM

Register type

Peg

Description

ORGTRM counts originating call attempts that connect to terminating traffic and connection to busy tone terminations.

Associated registers

None

Extension registers

ORGTRM2

Associated logs

None

ORGTRMT

Register type

Peg

Description

ORGTRMT counts originating call attempts that connect to a tone or an announcement because of an error condition. The register also counts tones that are applied to indicate error conditions and are not determined to be a DMS treatment (for example, a three-way call activation error resulting in an error tone to a line).

For DMS only: ORGTRMT is pegged when the Speed Call Update (off-board service update) message fails to program the Speed Call feature because of an error condition.

Associated registers

None

Extension registers

None

Associated logs

None

SYSABDN

Register type

Peg

Description

SYSABDN counts system-generated calls that are abandoned before they connect to a terminating line, outgoing trunk, tone, announcement, lockout status, or feature activation or deactivation.

Associated registers

None

Extension registers

None

Associated logs

TRK114, TRK116, TRK162

SYSFSET

Register type

Peg

Description

SYSFSET counts system-generated calls that activate or deactivate a custom calling feature.

> ***Note:*** This register does not increase in DMS-300 international offices.

Associated registers

None

Extension registers

None

Associated logs

None

SYSLKT

Register type

Peg

Description

SYSLKT counts system-generated calls that fail to connect or receive a treatment and that route to lockout.

Associated registers
None

Extension registers
None

Associated logs
TRK111, TRK113, TRK122, TRK123

SYSOUT

Register type
Peg

Description
SYSOUT counts system-generated calls that connect to an outgoing trunk.

Associated registers
None

Extension registers
None

Associated logs
None

SYSTRM

Register type
Peg

Description
SYSTRM counts system-generated calls that terminate to a line, and connection to busy tone terminations.

Associated registers
None

Extension registers
None

Associated logs
None

SYSTRMT

Register type

Peg

Description

SYSTRMT counts system-generated calls that route to a tone or an announcement because of an error condition.

Associated registers

The following registers are associated with SYSTRMT:

- INCTRMT
- ORGTRMT
- ANN_ANNATT counts calls that route to announcements.
- TONES_TONEATT counts calls that route to tones.

Validation formula

Σ ANN_ANNATT + Σ TONES_TONEATT OTS_INCTRMT + OTS_ORGTRMT + OTS_SYSTRM

Extension registers

None

Associated logs

TRK138

Description

Consultative Committee on International Telegraphy and Telephony (CCITT) DS30 digital carrier maintenance summary (PCMCARR)

The OM group PCMCARR provides information on pulse code modulated (PCM30) carriers. The PCM30 is a transmission standard that defines the characteristics of international digital trunks and transmission links.

The PCM30 trunks interface with international digital trunk controllers (IDTC). The PCM30 links provide voice and signaling channels between the very small remote (VSR) and the international line group controller (ILGC).

The OM group PCMCARR has 24 peg registers that count the following errors and faults:

- local loss of frame alignment (LLFA)
- local loss of multiframe alignment (LLMA)
- remote frame alarm indication (RFAI)
- remote multiframe alarm indication (RMAI)
- alarm indication signal (AIS)
- bit error rate (BER)
- frame slip (SLIP)
- signaling channel (SIGL)

The OM group PCMCARR has four usage registers that record the following PCM30 carrier states:

- system busy
- central side (C-side) busy
- peripheral side (P-side) busy
- manual busy

The OM group PCMCARR supplies the data to monitor the performance of PCM30 carriers.

The OM group PCMCARR provides two tuples for each PCM30 carrier. The following table lists the key and info fields associated with OM group PCMCARR.

Key field	Info field
none	D30OMINF is a structure

The D30OMINF structure contains the following information:

- SITE name of the program model (PM)
- PM name and external number
- D30 CIRCUIT number (0-31)
- CARRIER DIRECTION (C or P) that indicates if PM port is to the C-side or P-side of the carrier

Table CARRMTC defines PM maintenance data, out-of-service limits for alarms, maintenance limit for each D30 alarm type and system return-to-service information.

Field ACTION in table LTCPSINV specifies a PCM30 carrier is system busy when it reaches an out-of-service limit.

Related functional groups

The associated functional groups for the OM group PCMCARR are:

- DMS-100 International
- DMS-300 International
- D30 carrier links

Registers

The following table lists the registers associated with OM group PCMCARR and what they measure. For a description of a register, click on the register name.

Registers for OM group PCMCARR

Register name	Measures
AIS16ERR	Alarm indication signal (AIS) in channel 16 error
AIS16FLT	AIS in channel 16 fault
AISERR	AIS error

Registers for OM group PCMCARR

Register name	Measures
AISFLT	AIS fault
BERERR	Bit error rate (BER) error
BERFLT	BER fault
CARRCBSY	Carrier C-side busy usage
CARRMANB	Carrier manual busy usage
CARRPBSY	Carrier P-side busy usage
CARRSYSB	Carrier system busy usage
CRC4ERR	Cyclic redundancy check 4 (CRC4) procedure error
CRC4FLT	Cyclic redundancy check 4 (CRC4) procedure fault
CREERR	Cyclic redundancy check 4 (CRC4) remote reporting enable
CREFLT	Cyclic redundancy check 4 (CRC4) remote reporting fault
LLCMAERR	Cyclic redundancy check 4 (CRC4) remote reporting fault
LLCMAFLT	Loss of local CRC4 multiframe alignment (LLCMA) fault
LLFAERR	Local loss of frame alignment (LLFA) error
LLFAFLT	Local loss of frame alignment (LLFA) fault
LLMAERR	Local loss of multiframe alignment (LLMA) error
LLMAFLT	Local loss of multiframe alignment (LLMA) fault
RFAIERR	Remote frame alarm indication (RFAI) error
RFAIFLT	Remote frame alarm indication (RFAI) fault
RMAIERR	Remote multiframe alarm indication (RMAI) error

Registers for OM group PCMCARR

Register name	Measures
RMAIFLT	Remote multiframe alarm indication (RMAI) fault
SIGLERR	Signaling channels error
SIGFLT	Signaling channels fault
SLIPERR	Slip error
SLIPFLT	Slip fault

AIS16ERR

Register type
Peg

Description
Alarm indication signal (AIS) in channel 16 error (AIS16ERR)

Register AIS16ERR increases when the system detects an AIS16 error on the carrier.

Associated registers
AIS16FLT

Extension registers
There are no extension registers.

Associated logs
There are no associated logs.

AIS16FLT

Register type
Peg

Description
AIS in channel 16 fault (AIS16FLT)

Register AIS16FLT increases when an AIS16 error causes the D30 link to become busy. The error depends on the AIS16OST and AIS16OL limits set in table CARRMTC.

Associated registers

Register AIS16ERR increases when the carrier reports an AIS16 error when the threshold value is AIS16ML. The system raises the alarm when the maintenance limit (ML) threshold exceeds its maximum. The ML threshold data is in table CARRMTC.

Extension registers

There are no extension registers.

Associated logs

There are no associated logs.

AISERR

Register type

Peg

Description

AIS error (AISERR)

Register AISERR increases when a PCM30 carrier receives a continuous stream of ones (111...), which indicates an AIS error.

Associated registers

Register AISFLT counts AIS faults that make a PCM30 carrier system busy.

Extension registers

There are no extension registers.

Associated logs

There are no associated logs.

AISFLT

Register type

Peg

Description

AIS fault (AISFLT)

Register AISFLT counts AIS faults that cause a PCM30 carrier to become system busy. AISFLT increases

- for each continuous AIS error
- when AIS errors that are not continuous reach the out-of-service limit (AISOL) and data are in table LTCPSINV to make the carrier system busy

A continuous AIS error persists long enough time to reach the out-of-service time limit (AISOST). The PM maintains an error count that is not continuous and resets it every 5 min.

Associated registers
Register AISERR increases when a PM30 carrier receives a continuous stream of ones (111...), which indicates an AIS error.

Extension registers
There are no extension registers.

Associated logs
The system generates PM110 when the system receives carrier alarms.

The system generates PM111 when a carrier returns to service from a system busy state.

The system generates PM180 either because the software executes improperly or because a hardware problem affects software execution.

The system generates PM186 when a carrier returns to service.

The system generates PM187 when a carrier is system busy.

BERERR

Register type
Peg

Description
Bit error rate (BER) error (BERERR)

BERERR increases when the system detects a BER error on a PCM30 carrier.

Associated registers
Register BERFLT counts BER faults that make a PCM30 carrier system busy.

Extension registers
There are no extension registers.

Associated logs
There are no associated logs.

BERFLT

Register type

Peg

Description

BER fault (BERFLT)

Register BERFLT counts BER faults that make a PCM30 carrier system busy.

Register BERFLT increases when the system detects BER errors on a PCM30 carrier. These errors reach the BER out-of-service limit (BEROL). The system enters data in table LTCPSINV to make the carrier system busy.

Associated registers

Register BERERR increases when the system detects a BER error in a PCM30 carrier.

Extension registers

There are no extension registers.

Associated logs

There are no associated logs.

CARRCBSY

Register type

Usage

Description

Carrier C-side busy usage (CARRCBSY)

Register CARRCBSY is a usage register. Every 100 s the system scans the PCM30 carriers. Register CARRCBSY records if a carrier is C-side busy because the C-side peripheral module (IDTC) is not in service.

Associated registers

Register CARRSYSB records if a PCM30 carrier is system busy because of a fault.

Register CARRPBSY records if a PCM30 carrier is P-side busy because the P-side peripheral (VSR) is not in service.

Register CARRMANB records if a PCM30 carrier is manual busy.

Extension registers

There are no extension registers.

Associated logs

The system generates PM110 it receives when carrier alarms.

The system generates PM111 when a carrier returns to service from a system busy state.

The system generates PM180 because of improper software execution or because a hardware problem affects software execution.

The system generates PM186 when a carrier returns to service.

The system generates PM187 when a carrier is system busy.

CARRMANB

Register type

Usage

Description

Carrier manual busy usage (CARRMANB)

Register CARRMANB is a usage register. Every 100 s the system scans the PCM30 carriers, and register CARRMANB records if a carrier is manually busy.

Associated registers

Register CARRSYSB records if a PCM30 carrier is system busy because of a fault.

Register CARRCBSY records if a PCM30 carrier is C-side busy because the C-side PM (IDTC) is not in service.

Register CARRPBSY records if a PCM30 carrier is P-side busy because the P-side peripheral VSR is not in service.

Extension registers

There are no extension registers.

Associated logs

The system generates PM110 when it receives carrier alarms.

The system generates PM111 when a carrier returns to service from a system busy state.

The system generates PM180 because of improper software executions or because a hardware problem affects software execution.

The system generates PM186 when a carrier returns to service.

The system generates PM187 when a carrier is system busy.

CARRPBSY

Register type

Usage

Description

Carrier P-side busy usage (CARRPBSY)

Register CARRPBSY is a usage register. Every 100 s the system scans the PCM30 carriers, and CARRPBSY records if a PCM30 carrier is P-side busy.

The PCM30 can be busy as a result of the P-side peripheral VSR not being in service.

Associated registers

Register CARRSYSB records if a PCM30 carrier is system busy because of a fault.

Register CARRCBSY records if a PCM30 carrier is C-side busy because the C-side PM (IDTC) is not in service.

Register CARRMANB records if a PCM30 carrier is manual busy.

Extension registers

There are no extension registers.

Associated logs

The system generates PM110 when it receives carrier alarms.

The system generates PM111 when a carrier returns to service from a system busy state.

The system generates PM180 either because software executes improperly or because a hardware problem is affecting software execution.

The system generates PM186 when a carrier returns to service.

The system generates PM187 when a carrier is system busy.

CARRSYSB

Register type

Usage

Description

Carrier system busy usage (CARRSYSB)

Register CARRSYSB is a usage register. Every 100 s the system scans the PCM30 carriers, and register CARRSYSB records if a carrier is system busy because of a fault.

Associated registers

Register CARRCBSY records if a PCM30 carrier is C-side busy because the C-side PM (IDTC) is not in service.

Register CARRPBSY records if a PCM30 carrier is P-side busy because the P-side peripheral (VSR) is not in service.

Register CARRMANB records if a PCM30 carrier is manual busy.

Extension registers

There are no extension registers.

Associated logs

The system generates PM110 when the system receives carrier alarms.

The system generates PM111 when a carrier returns to service from a system busy state.

The system generates PM180 because of improper software executions or because a hardware problem affects software execution.

The system generates PM186 when a carrier returns to service.

The system generates PM187 when a carrier is system busy.

CRC4ERR

Register type

Peg

Description

Cyclic redundancy check 4 (CRC4) procedure error (CRC4ERR)

Register CRC4ERR increases when the system detects a CRC4 error on the carrier.

Associated registers

There are no associated registers.

Extension registers

There are no extension registers.

Associated logs

There are no associated logs.

CRC4FLT

Register type

Peg

Description

Cyclic redundancy check 4 (CRC4) procedure fault (CRC4FLT)

Register CRC4FLT increases when a CRC4 error causes the link to become system busy. The CRC4OL and CRC4OST limits in table CARRMTC and the state of the set action boolean on CRC4OL define the error level.

Associated registers

Register CRC4ERR increases when the carrier reports a CRC4 error and the threshold value is CRC4ML.

Extension registers

There are no extension registers.

Associated logs

The system generates PM187 when a carrier link is system busy.

CREERR

Register type

Peg

Description

Cyclic redundancy check 4 (CRC4) remote reporting enable (CREERR)

Register CREERR counts the number CRC4 errors the system detects on the remote end where the threshold value is CRC4ML.

Associated registers

CREFLT

Extension registers

There are no extension registers.

Associated logs

There are no associated logs.

CREFLT

Register type

Peg

Description

Cyclic redundancy check 4 (CRC4) remote reporting fault (CREFLT)

Register CREFLT increases if a CRC4 error causes the link to become system busy. The CRC4 out-of-service limit (CRC4OL) in table CARRMTC defines the error level.

Associated registers

CREERR

Extension registers

There are no extension registers.

Associated logs

The system generates PM187 when a carrier link becomes system busy.

LLCMAERR

Register type

Peg

Description

Loss of local CRC4 multiframe alignment (LLCMA) error (LLCMAERR)

Register LLCMAERR counts the number of times the system detects an LLCMA error on the carrier.

Associated registers

LLCMAFLT

Extension registers

There are no extension registers.

Associated logs

There are no associated logs.

LLCMAFLT

Register type

Peg

Description

Loss of local CRC4 multiframe alignment (LLCMA) fault (LLCMAFLT)

Register LLCMAFLT increases when an LLCMA error causes the D30 link to become system busy. The CRC4 out-of-service time limit (CRC4OST) in table CARRMTC defines the error level.

Associated registers

LLCMAERR

Extension registers

There are no extension registers.

Associated logs

The PM subsystem generates PM187 when a carrier link becomes system busy.

LLFAERR

Register type

Peg

Description

Local loss of frame alignment (LLFA) error (LLFAERR)

Register LLFAERR increases when the system detects an error in three or four consecutive frame alignment patterns of a PCM30 carrier.

Associated registers

Register LLFAFLT counts frame alignment faults that make a PCM30 carrier system busy.

Register LLMAERR increases when the system detects an error in two consecutive multiframe alignment patterns of a PCM30 carrier.

Extension registers

There are no extension registers.

Associated logs

There are no associated logs.

LLFAFLT

Register type

Peg

Description

Local loss of frame alignment (LLFA) fault (LLFAFLT)

Register LLFAFLT counts frame alignment faults that cause a PCM30 carrier to become system busy. LLFAFLT increases:

- for each continuous LLFA error
- when LLFA errors that are not continuous reach the out-of-service limit (LLFAOL) and important data are in table LTCPSINV make the carrier system busy.

A continuous LLFA error is an error that persists long enough to reach the out-of-service time limit (LLFAOST). The error count for errors that are not continuous is in the peripheral module (PM). The error count resets every 5 min.

Associated registers

Register LLFAERR increases when the system detects an error in three or four consecutive frame alignment patterns of a PCM30 carrier.

Extension registers

There are no extension registers.

Associated logs

The system generates PM110 when the system receives carrier alarms.

The system generates PM111 when a carrier returns to service from a system busy state.

The system generates PM180 either because of improper software executions or because a hardware problem affects software execution.

The system generates PM186 when a carrier returns to service.

The system generates PM187 when a carrier is system busy.

LLMAERR

Register type

Peg

Description

Local loss of multiframe alignment (LLMA) error (LLMAERR)

Register LLMAERR increases when the system detects an error in two consecutive multiframe alignment patterns in a PCM30 carrier.

Associated registers

Register LLFAERR increases when the system detects an error in three or four consecutive frame alignment patterns.

Register LLMAFLT counts multiframe alignment faults (LLMA) that make a PCM30 carrier system busy.

Extension registers

There are no extension registers.

Associated logs

The system generates PM110 when the system receives carrier alarms.

The system generates PM111 when a carrier returns to service from a system busy state.

The system generates PM180 because of improper software executions or because a hardware problem affects software execution.

The system generates PM186 when a carrier returns to service.

The system generates PM187 when a carrier is system busy.

LLMAFLT

Register type

Peg

Description

Local loss of multiframe alignment (LLMA) fault (LLMAFLT)

Register LLMAFLT counts LLMA faults that cause a PCM30 carrier to be system busy. LLMAFLT increases

- for each continuous LLMA error
- when LLMA errors that are not continuous reach the out-of-service limit (LLMAOL) and important data are in table LTCPSINV to allow the carrier to become system busy

A continuous LLMA error is an error that persists for enough time to reach the out-of-service time limit (LLMAOST). The error count for errors that are not continuous is in the peripheral module (PM). The error count is reset every 5 min.

Associated registers

Register LLMAERR increases when the system detects an error in two consecutive multiframe alignment patterns of a PCM30 carrier.

Extension registers

There are no extension registers.

Associated logs

The system generates PM110 when the system receives carrier alarms.

The system generates PM111 when a carrier returns to service from a system busy state.

The system generates PM180 because of improper software executions or because a hardware problem affects software execution.

The system generates PM186 when a carrier returns to service.

The system generates PM187 when a carrier is system busy.

RFAIERR

Register type

Peg

Description

Remote frame alarm indication (RFAI) error (RFAIERR)

Register RFAIERR increases when remote equipment reports a frame-level error, an equipment failure, or both in a PCM30 carrier.

Associated registers

Register RFAIFLT counts frame alarm indication faults that make a PCM30 carrier system busy.

Register RMAIERR increases when remote equipment reports a multiframe-level error, an equipment failure, or both in a PCM30 carrier.

Extension registers

There are no extension registers.

Associated logs

There are no associated logs.

RFAIFLT

Register type

Peg

Description

Remote frame alarm indication (RFAI) fault (RFAIFLT)

Register RFAIFLT counts RFAI faults that cause a PCM30 carrier to become system busy. RFAIFLT increases

- for each continuous RFAI error
- when RFAI errors that are not continuous reach the out-of-service limit (RFAIOL) and important data are in table LTCPSINV to allow the carrier to become system busy
- for remote PM equipment failures

A continuous RFAI error is an error that persists for enough time to reach the out-of-service time limit (RFAIOST). The error count for errors that are not continuous is in the peripheral module (PM). The error count is reset every 5 min.

Associated registers

Register PCMCARR_RFAIERRincreases when remote equipment reports a frame-level error, an equipment failure, or both in a PCM30 carrier.

Extension registers

There are no extension registers.

Associated logs

The system generates PM110 when the receives carrier alarms.

The system generates PM111 when a carrier returns to service from a system busy state.

The system generates PM180 either because of improper software executions or because a hardware problem affects software execution.

The system generates PM186 when a carrier returns to service.

The system generates PM187 when a carrier is system busy.

RMAIERR

Register type

Peg

Description

Remote multiframe alarm indication (RMAI) error (RMAIERR)

Register RMAIERR increases when remote equipment reports a multiframe-level error, an equipment failure, or both in a PCM30 carrier.

Associated registers

Register RFAIERR increases when remote equipment reports a frame-level error, an equipment failure, or both in a PCM30 carrier.

Register RMAIFLT counts multiframe alarm indication faults that make a PCM30 carrier system busy.

Extension registers

There are no extension registers.

Associated logs

There are no associated logs.

RMAIFLT

Register type

Peg

Description

Remote multiframe alarm indication (RMAI) fault (RMAIFLT)

Register RMAIFLT counts RMAI faults that cause a PCM30 carrier to become system busy. RMAIFLT increases

- for each continuous RMAI error
- when RMAI errors that are not continuous reach the out-of-service limit (RMAIOL) and important data are in table LTCPSINV to make the carrier system busy
- for remote PM equipment failures

A continuous RMAI error is an error that persists for enough time to reach the out-of-service time limit (RMAIOST). The error count for errors that are not continuous is in the peripheral module (PM). Error count is reset every 5 min.

Associated registers

Register PCMCARR_RMAIERR increases when remote equipment reports a multiframe level error, an equipment failure, or both in a PCM30 carrier.

Extension registers

There are no extension registers.

Associated logs

The system generates PM110 when the system receives carrier alarms.

The system generates PM111 when a carrier returns to service from a system busy state.

The system generates PM180 either because of improper software executions or because a hardware problem affects software execution.

The system generates PM186 when a carrier returns to service.

The system generates PM187 when a carrier becomes system busy.

SIGLERR

Register type

Peg

Description

Signaling channels error (SIGLERR)

Register SIGLERR increases when the system detects a transient change in the supervisory signaling channels of a PCM30 carrier.

Associated registers

Register SIGFLT counts transient change faults that the system detects in the supervisory signaling channels of a PCM30 carrier. The transient change faults make the carrier system busy.

Extension registers

There are no extension registers.

Associated logs

There are no associated logs.

SIGFLT

Register type

Peg

Description

Signaling channels fault (SIGFLT)

Register SIGLFLT counts transient change faults the system detects in the supervisory signaling channels. The transient change faults cause a PCM30 carrier to become system busy.

A PCM30 carrier becomes system busy if the transient changes detected in the supervisory signaling channels reach the out-of-service limit (SIGLOL). Table LTCPSINV must have data entered that allow the PCM30 carrier to become system busy.

Associated registers

Register SIGLERR increases when the system detects a transient change in the supervisory signaling channels of a PCM30 carrier.

Extension registers

There are no extension registers.

Associated logs

The system generates PM110 when the system receives carrier alarms.

The system generates PM111 when a carrier returns to service from a system busy state.

The system generates PM180 because of improper software executions or because a hardware problem affects software execution.

The system generates PM186 when a carrier returns to service.

The system generates PM187 when a carrier is system busy.

SLIPERR

Register type

Peg

Description

Slip error (SLIPERR)

Register SLIPERR increases when the system detects a frame slip in a PCM30 carrier.

Associated registers

Register SLIPFLT counts frame slip faults that make a PCM30 system busy.

Extension registers

There are no extension registers.

Associated logs

There are no associated logs.

SLIPFLT

Register type

Peg

Description

Slip fault (SLIPFLT)

Register SLIPFLT counts frame slip faults that cause a PCM30 carrier to become system busy.

A PCM30 carrier becomes system busy if its frame slips reach the out-of-service limit (SLIPOL in table CARRMTC). Table LTCPSINV must have data entered that allow PCM30 carrier to become system busy.

Associated registers

Register SLIPERR increases when the system detects a frame slip in a PCM30 carrier.

Extension registers

There are no extension registers.

Associated logs

The system generates PM110 when the system receives carrier alarms.

The system generates PM111 when a carrier returns to service from a system busy state.

The system generates PM180 because of improper software executions or because a hardware problem affects software execution.

The system generates PM186 when a carrier returns to service.

The system generates PM187 when a carrier is system busy.

Description

Preset conference (PCNF)

The PCNF counts preset conferencing attempts on the integrated business network (IBN).

To initiate a conference with preset conferencing, the subscriber dials a preset number. The preset number causes the stations of preset conference members to ring at the same time. The preset dialing list holds a maximum of 25 conference members.

An attempt to dial a preset conference number that is not authorized triggers one of the following actions:

- The attendant intercepts if an IBN agent is the originator.
- The system routes the call to a tone or announcement.

The OM group PCNF provides one tuple for each conference. The following table lists the key and info fields associated with OM group PCNF.

Key field	Info field
preset conference number in table PRECONF.	PCNF_CF6P_REQD is the number of six-port conference circuits required for each preset conference.

Related functional groups

There are no related functional groups.

Registers

The following table lists the registers associated with OM group PCNF and what they measure. For a description of a register, click on the register name.

Registers for OM group PCNF

Register name	Measures
PCNFATT	Preset conference attempt

PCNFATT

Register type

Peg

Description

Preset conference attempt (PCNFATT)

Register PCNFATT counts the attempts to activate the preset conference list.

Associated registers

There are no associated registers.

Extension registers

There are no extension registers.

Associated logs

There are no associated logs.

PKTMA

Description

The Packet Media Anchor (PKTMA) OM group provides statistical information for PKTMA resources:

- anchored call attempts
- failed anchored call attempts
- maximum anchored call attempts (high water mark)

The following table lists the key and info fields associated with OM group PKTMA.

Key field	Info field
Integer	PKTMA anchor number (derived from datafill order)
PKTMA_OM_INFO	GWC number and maximum number of anchored calls supported by GWC resources

Example:

```
1    GWC    20       125
```

Related functional groups

There are no functional groups associated with OM group PKTMA.

Registers

The following table lists the registers associated with OM group PKTMA and what they measure. For a description of a register, click on the register name.

Registers for OM group PKTMA

Register name	Measures
PMAREQST	number of anchored call attempts
PMAFLNR	number of failed call attempts due to unavailable resources
PMAHWM	maximum number of simultaneous anchored calls (high water mark)

PMAREQST

Register type

Peg

Description

Packet Media Anchor Requests (PMAREQST) counts the number of anchored call attempts.

Associated registers

None

Extension registers

None

Associated logs

None

PMAFLNR

Register type

Peg

Description

Packet Media Anchor Failed No Resources (PMAFLNR) counts the number of failed anchored call attempts due to the unavailability of resources.

Associated registers

None

Extension registers

None

Associated logs

Log XPKT340 is generated for failed anchored call attempts.

PMAHWM

Register type

Peg

Description

Packet Media Anchor High Water Mark (PMAHWM) indicates the maximum number of simultaneous anchored call attempts.

Associated registers

None

Extension registers

None

Associated logs

None

PM

Description

OM group Peripheral Module (PM) counts errors, faults, and maintenance state changes for DMS PMs with node numbers. PM performs separate counts for each PM that associates with a DMS switch. The data show the performance of PMs.

The following table lists the key and info fields associated with OM group PM.

Key field	Info field
There is no key field	PM_OM_INFO_TYPE includes PM node type, internal number of the node, and optional asterisk. Refer to Info field values and PM types for OM group PM for the correct PM types.

The following table lists the info field values and PM types for OM group PM.

Info field values and PM types for OM group PM (Sheet 1 of 7)

Value	PM type
ADTC	Austrian digital trunk controller
ALCM	Austrian line concentrating module
ALGC	Austrian line group controller
AP	Application processor
APU	Application processing unit
ARCC	Austrian remote cluster controller
CFI	Channel frame interface
CFP	Channel frame processor
CSC	Cell site controller
STM	Conference trunk module

Info field values and PM types for OM group PM (Sheet 2 of 7)

Value	PM type
DA	Directory assistance database
DCA	Austrian digital carrier module
DCM	Digital carrier module
DCM250	Digital carrier module DMS-250
DES	Digital echo suppressor
DFI	Direct fiber interface
DLM	Digital line module
DTC	Digital trunk controller
DTC7	CCS7 Digital trunk controller
DTCI	Digital trunk controller for ISDN
DTCO	Digital trunk controller offshore
DTM	Digital trunk module
EIU	Ethernet interface unit
ELCM	Enhanced line concentrating module
ESA	Emergency stand-alone
EXND	External node
FRCC	Force (download) remote cluster controller
FRIU	Frame relay interface unit
FILP	File processor
GIC	Generic interface controller
HFT	HDLC frame transceiver
HSI	High speed interface
HSI2	High speed interface series 2

Info field values and PM types for OM group PM (Sheet 3 of 7)

Value	PM type
HSIE	High speed interface extended
IAC	ISDN access controller
ICP	Integrated cellular peripheral
ICRM	Integrated cellular remote module
IDT	Integrated digital terminal
IDTC	International digital trunk controller
ILCM	International line concentrating module
LGC	International line group controller
LTC	International line trunk controller
XLCM	International extended line concentrating module
IPE	Intelligent peripheral equipment
ITAC	International TATS access controller
LCM	Line concentrating module
LCME	Enhanced line concentrating module
LCMI	ISDN line concentrating module
LCOM	LIU-COM (link interface unit data communication)
LDT	Line appearance on a digital trunk
LGC	Line group controller
LGCI	Line group controller ISDN
LGCO	Line group controller offshore
LIM	Link interface module
LIU	Link interface unit

Info field values and PM types for OM group PM (Sheet 4 of 7)

Value	PM type
LIU7	CCS7 link interface unit
HLIU	High-speed link interface unit
HSLR	High-speed link router
LM	Line module
LRU	Line resource unit
LTC	Line trunk controller
LTCI	Line trunk controller ISDN
MMA	Austrian maintenance trunk module
MSB6	Message switch buffer for CCIS6
MSB7	Message switch buffer for CCIS7
MTM	Maintenance trunk module
NIU	Network interface unit
OAU	Office alarm unit
OPM	Outside plant module
ORDB	Operator reference database
PDTC	PCM30 digital trunk controller
PLGC	PCM30 line group controller
PND	PNODE
PRCC	PCM30 remote cluster controller
PSP	Programmable signal processor
PTM	Packaged trunk module
RCC	Remote cluster controller
RCC2	Compact remote cluster controller

Info field values and PM types for OM group PM (Sheet 5 of 7)

Value	PM type
RCCI	ISDN remote cluster controller
RSCO2	Remote switching center offshore 2
RCS	Remote concentrator SLC-96
RCT	Remote concentrator terminal
RCU	Remote carrier urban
RLC	Remote line controller
RLCM	Remote line concentrating module
RLM	Remote line module
RMM	Remote maintenance module
RMSC	Remote mobile switching center
RSC	Remote switching center
RSCO	Remote switching center offshore
RSM	Remote service module
SCM	Subscriber carrier module
SMA	Subscriber module access
SMR	Subscriber carrier module-100 rural
SMS	Subscriber carrier module-100S
SMSR	Subscriber carrier module-100S remote
SMU	Subscriber carrier module-100 urban
SPM	Service peripheral module
SRCC	SONET remote cluster controller
SRU	Small remote unit (ISDN LCM)
STCM	Signal terminal controller module

Info field values and PM types for OM group PM (Sheet 6 of 7)

Value	PM type
STM	Service trunk module
STS	Standardized traffic statistics
SVR7	CCS7 server
T8A	Trunk module for CCITT circuits
TACC	TATS access controller
TAN	Test access network
TDTC	MOC DTC (MOC is an NT licensee)
TLGC	MOC LGC (MOC is an NT licensee)
TLTC	MOC LTC (MOC is an NT licensee)
TM	Trunk module
TM2	Trunk module—two-wire
TM4	Trunk module—four-wire
TM8	Trunk module ATT testing
TMA	Trunk module Austria
TMS	TOPS message switch
TPC	TOPS position controller
TRCC	MOC RCC (MOC is a NT licensee)
VLCM	Virtual line concentrating module
VPU	Voice processing unit
VSR	Very small remote
VSROM	Very small remote
XLCM	Expanded memory line concentrating module

Info field values and PM types for OM group PM (Sheet 7 of 7)

Value	PM type
XLIU	X.25/X.75 link interface unit
XRLCM	Extended remote line concentrating module

Related functional groups

The following functional groups are associated with OM group PM:

- DMS-100 local office
- DMS-100/200 combined local/toll office
- DMS-100/200 combined local/toll office with TOPS
- DMS-200 toll office
- DMS-200 with TOPS
- DMS-100 Meridian
- DMS-MTX mobile telephone exchange
- DMS-250 toll/tandem switch
- DMS-300 gateway
- Meridian 1 (options 111-211) PABX

Registers

The following table lists the registers associated with OM group PM and what they measure. For a description of a register, click on the register name.

Registers for OM group PM (Sheet 1 of 2)

Register name	Measures
PMCCTDG	PM circuit diagnostics run
PMCCTFL	PM circuit tests failed
PMCCTOP	PM circuit test outside plant
PMDRERR	PM drawer error
PMDRFLT	PM drawer faults
PMDRMBU	PM drawer manual busy (ManB) use

Registers for OM group PM (Sheet 2 of 2)

Register name	Measures
PMDRSBU	PM drawer system busy (SysB) usage
PMERR	PM error
PMFLT	PM fault
PMINTEG	PM accuracy failures
PMMBP	PM changes to manual busy
PMMBTCO	PM manual-busy terminals cut off
PMMCXFR	PM manual cold transfers
PMMMBU	PM manual busy usage
PMMSBU	PM system busy usage
PMMWXFR	PM manual warm transfers
PMPSERR	PM peripheral-side errors
PMPSFLT	PM peripheral-side faults
PMRGERR	PM ringing generator errors while in service
PMRGFLT	PM ringing generator faults while in service
PMSBP	PM changes to system busy
PMSBTCO	PM system-busy terminals cut off
PMSCXFR	PM system cold transfers
PMSWXFR	PM system warm transfers
PMUMBU	Peripheral module unit manual-busy use
PMUSBU	Peripheral module unit system-busy use

PMCCTDG

Register type

Peg

Description

PMCCTDG counts system-initiated diagnostic tests of line or trunk cards. The tests examine problems that recur during call processing. Maintenance conditions that cause PMCCTDG to increase are different for each PM type.

For the digital carrier module (DCM), PMCCTDG counts the tests of a trunk interface card. The tests scan for removal of a DS-1 interface card and for a frame loss that causes a local or remote-carrier-group alarm state.

For the line module or the digital line module, PMCCTDG counts system-initiated tests of a line card.

For the trunk module (TM), PMCCTDG counts tests of any trunk interface card or service circuit. The TM tests:

- check that cards of the right type are present on the shelf
- test relay operation
- operation and release of signal distribution points and analysis of scan results
- transmission loss in looparound mode

For the extended multiprocessor system (XMS)-based peripheral modules (XPM), PMCCTDG increases when a system-initiated test runs on a line or trunk. The test runs because of repeated problems during call processing.

Associated registers

PMCCTFL

Extension registers

None

Associated logs

PM110, TRK106

PMCCTFL

Register type

Peg

Description

PMCCTFL increases when a system-initiated test finds a PM maintenance problem caused by a fault condition. Faults that increase the register differ for each PM type.

For the digital carrier module (DCM), PMCCTFL increases when tests show a fault caused by:

- the removal of a card
- a transmission error that results in a carrier group alarm

For the line module, PMCCTFL increases when tests reveal a maintenance problem caused by a PM, card or facility fault, or a wrong or missing card.

For the trunk module (TM), the digital carrier module (DCM), and XPM, PMCCTFL increases when tests detect a wrong card, or a missing or faulty card.

Associated registers

PMCCTDG

Extension registers

None

Associated logs

PM109, PM183, TRK106

PMCCTOP

Register type

Peg

Description

PMCCTOP increases when system tests detect a fault on a line or trunk circuit located outside the switching office. Conditions that increase PMCCTOP vary with PM types. PMCCTOP increases the first time the fault appears, with all PM types. The register does not increase if the fault appears after new tests.

For the digital carrier module (DCM) and the trunk module (TM), PMCCTOP increases when the signaling-test system at a switching office detects a fault on a trunk circuit that is between the circuit and a far-end office. For example, PMCCTOP increases when an originating office does not receive a start-dial or wink signal. The far-end office sends these signals to the originating office in response to an off-hook signal.

For the line module, PMCCTOP increases when system tests detect a fault on a line circuit located outside the switching office.

For extended multiprocessor system (XMS)-based peripheral modules (XPM), PMCCTOP is incremented when system tests detect a fault on a line or trunk that is located outside the switching office.

Associated registers

None

Extension registers

None

Associated logs

None

PMDRERR

Register type

Peg

Description

PMDRERR counts errors in a line drawer that cause the drawer to become in-service trouble.

Associated registers

PMDRFLT

Extension registers

None

Associated logs

PM102, PM181

PMDRFLT

Register type

Peg

Description

PMDRFLT counts faults in a line drawer that cause the drawer to become system busy.

Associated registers

PMDRERR

Extension registers

None

Associated logs

PM102, PM181

PMDRMBU

Register type

Usage

Scan rate

100 seconds

Description

PMDRMBU is a usage register. Every 100 seconds, the system scans the line drawers in a PM and PMDRMBU records manual busy line drawers.

Associated registers

PMDRSBU

Extension registers

None

Associated logs

PM102, PM128

PMDRSBU

Register type

Usage

Scan rate

100 seconds

Description

PMDRSBU is a use register. Every 100 seconds, the system scans line drawers in the PM, and PMDRSBU records system-busy line drawers.

Associated registers

PMDRMBU

Extension registers

None

Associated logs

PM102, PM128

PMERR

Register type

Peg

Description

PMERR counts errors in an in-service PM. The error conditions that cause PMERR to increase vary by PM type.

For Series-1 PMs, like line modules, digital carrier modules, and trunk modules, PMERR counts:

- command protocol violations
- RAM parity failures
- firmware errors
- controller message congestion
- test failures during a routine or initialization audit
- failures to respond to a message over either plane

For extended multiprocessor system (XMS)-based peripheral modules (for example, line concentrating modules, line group controllers, and line trunk controllers), PMERR counts:

- errors that only result in the generation of a log
- errors that result in additional maintenance action
- accuracy failures
- errors that result in who-am-I (WAI) messages
- changes from in-service to central-side (C-side) busy or system busy
- restart reports
- an event that causes a fault and increases register PMFLT

Associated registers

PMFLT

Extension registers

None

Associated logs

CCS231, CCS236, DDM101, DDM102, DDM104, DLC101, DPAC103, LOST108, LOST 109, LOST111, MPC906, NET102, NPAC210, PM101, PM108, PM113, PM115, PM116, PM117, PM118, PM119, PM121, PM122, PM124, PM125, PM126, PM128, PM150, PM160, PM180, PM181, PM194, PM198, TRK123, UTR100

PMFLT

Register type

Peg

Description

PMFLT counts faults that make a PM or one of its units system busy. PMFLT does not count the same fault again when repeated system tests attempt to clear the fault. Conditions that increase PMFLT differ between PMs and XPM.

For in-service trouble PMs, like line modules, trunk modules, and digital carrier modules, PMFLT counts errors that make the PM system busy. PMFLT counts these errors while the PM waits for manual or system recovery.

For XPMs like line concentrating modules, line group controllers, and line trunk controllers, PMFLT increases if:

- a complete PM or a single unit of a PM becomes system busy
- a central-side (C-side) node or link becomes manual busy, then returns to service. This condition results in a state change from C-side busy to system busy because the return to service tests failed during a system audit

Associated registers

PMERR

Extension registers

None

Associated logs

DLC102, DPAC104, MPC904, NPAC211, PM100, PM101, PM102, PM114, PM117, PM127, PM151, PM161, PM162, PM164, PM180, PM181, PM185, PM199

PMINTEG

Register type

Peg

Description

PMINTEG increases when the PM reports an accuracy failure to the central control.

Associated registers

None

Extension registers

None

Associated logs

NET101, NET102, PM108, PM113, PM118, PM119, PM122, PM124, PM180, PM181, PM185, TRK122

PMMBP

Register type

Peg

Description

PMMBP increases when a PM becomes manual busy from an in-service or in-service trouble state. PMMBP increases when an LM becomes manual busy during manually requested warm and cold takeovers.

Associated registers

PMSBP

Extension registers

None

Associated logs

PM182, PM191

PMMBTCO

Register type

Peg

Description

PMMBTCO counts subscriber calls (terminals) that the system cuts off when a PM becomes manual busy. These calls associate with lines or trunks that are either call processing busy or call processing deloading.

Associated registers

PMSBTCO

Extension registers

None

Associated logs

None

PMMCXFR

Register type

Peg

Description
PMMCXFR increases when a manual action causes an XPM to perform a cold switch of activity (SWACT). Execution of the SWACT command at the MAP terminal can trigger a cold SWACT. A manual request that makes the active unit manual busy (while the inactive unit is in service) can also trigger a cold SWACT.

Associated registers
PMSCXFR

Extension registers
None

Associated logs
PM128, PM180

PMMMBU

Register type
Usage

Scan rate
100 seconds

Description
PMMMBU is a usage register. Every 100 seconds, the system scans the PM and PMMMBU records manual-busy PMs.

Associated registers
PMUMBU

Extension registers
None

Associated logs
CCS218, CCS233, PM105, PM128, PM170, PM182, PM191

PMMSBU

Register type
Usage

Scan rate
100 seconds

Description
PMMSBU is a usage register. Every 100 seconds, the system scans the PMs and PMMSBU records system-busy PMs. For dual-unit PMs,

PMMSBU increases one time if both units are system busy. PMMSBU also increases if one unit is system busy and the other unit is not in service. The hardware or software problems that make the PM system busy vary by PM type.

For a digital carrier module (DCM) or trunk module (TM), the following problems make the PM system busy:

- the DCM or TM fails a routine audit
- message paths are not available to the DCM or TM
- the DCM or TM sends more than 200 not requested trouble reports within one 10-minute audit period

For a line module (LM), any of the following problems make the PM system busy:

- the LM is not accessible
- the control section of the LM fails an audit
- the LM reports more than 200 controller errors or line errors between audits

Associated registers
PMUSBU

Extension registers
None

Associated logs
CCS219, CCS234, PM102, PM128, PM170, PM183, PM190, PM192

PMMWXFR

Register type
Peg

Description
PMMWXFR increases if manual maintenance forces a dual-unit PM to perform a transfer of activity. A transfer that consists of either a warm SWACT or a unit takeover increases this register. The type of activity transfer depends on the type of PM that the manual request acts upon. PMMWXFR increases if:

- a manual request forces an XPM, like a line group controller or a line trunk controller, to perform a warm SWACT
- a manual request forces a line concentrating module (LCM) to perform a takeover of one unit by the other

To force an LCM to perform a takeover, make one unit of the LCM manual-busy while the mate unit is in service. PMMWXFR counts a takeover of one unit of an LCM by the other unit, but not a takeback of activity.

Examples of manual actions that can force an XPM to perform a warm SWACT are:

- the execution of the SWACT command at the MAP terminal
- a manual request that makes the active unit of an XPM manual busy while the inactive unit is in service

Associated registers

PMSWXFR

Extension registers

None

Associated logs

PM128, PM180

PMPSERR

Register type

Peg

Description

PMPSERR counts errors on the P-side interface of an XPM, or on a link interface module (LIM) frame transport bus (F-bus).

The register counts:

- errors in interface cards that terminate lines, trunks, or links
- errors in lines trunks or links
- F-bus errors

PMPSERR increases if the error affects service or if it results in additional maintenance action. XPMs include the line concentrating module (LCM).

Associated registers

PMPSFLT

Extension registers

None

Associated logs

PM110, PM181, PM183

PMPSFLT

Register type

Peg

Description

PMPSFLT counts faults on the P-side interface of an XPM or on the LIM frame transport bus (F-bus). The faults affect service and require more maintenance. The XPMs include the line concentrating module (LCM). PMPSFLT counts:

- faults in P-side interface cards that terminate trunks, lines, or links
- faults in lines, trunks, and links serviced by the interface cards
- faults in the F-bus

Associated registers

PMPSERR

Extension registers

None

Associated logs

PM109, PM181, PM183

PMRGERR

Register type

Peg

Description

PMRGERR counts errors in the ringing generators that supply ringing and automatic number identification (ANI) coin functions to the line concentrating module (LCM). PMRGERR counts all ringing generator errors, even if the ringing generator is not in service at the time of the error. The LCM must be in service at the time of the error.

A single ringing generator can service both LCMs in the same frame. The register can count one ringing generator error four times. The count notes each of the two line concentrating arrays in each of the two LCMs.

Associated registers

PMRGFLT

Extension registers
None

Associated logs
PM160

PMRGFLT

Register type
Peg

Description
PMRGFLT counts service-affecting faults detected in the ringing generators that supply ringing and ANI coin functions to the LCM. The ringing generator must be in service for PMRGFLT to increase.

On Meridian SL-100 switches, the Intelligent Peripheral Equipment (IPE) counts analog phone ring failures that are due to an overloaded ring generator.

Associated registers
PMRGERR

Extension registers
None

Associated logs
PM161, PM162, PM163, PM189

PMSBP

Register type
Peg

Description
PMSBP increases when the an in-service or in-service trouble PM becomes system busy. A PM usually becomes central-side (C-side) busy before system busy. If the PM returns to service from the C-side busy state and does not become system busy, PMSBP does not increase.

For line modules (LM), PMSBP increases when the LM becomes system busy during both warm and cold takeovers.

Associated registers
PMSBP

Extension registers

None

Associated logs

PM107, PM183, PM190, PM192

PMSBTCO

Register type

Peg

Description

PMSBTCO counts subscriber calls (terminals) cut off when the PM becomes system busy. Conditions that increase PMSBTCO vary with different PMs. The register counts subscriber calls for lines or trunks that are call-processing busy or call-processing deloading.

PMSBTCO counts subscriber calls cut off when the PM state changes to central-side (C-side) busy from in-service or in-service trouble. PMSBTCO counts the calls for the digital carrier module and the trunk module. C-side busy is an intermediate state that occurs before the PM becomes system busy.

PMSBTCO counts the subscriber calls cut off when a LM becomes system busy. An LM can recover from the C-side busy state and become system busy when the mate LM becomes system busy.

PMSBTCO for the recovered LM increases by the number of subscriber calls that the system busy mate cuts off. The increase occurs when an LM performs a cold takeover. The LM becomes responsible for the calls of the mate LM but cannot preserve these calls through the takeover.

If a warm takeover occurs when an LM becomes system busy, calls are not cut off and PMSBTCO does not increase. PMSBTCO increases when an LM returns to service from system busy. As the LM returns to service, the LM performs a warm takeback of control of its line drawers. The increase is equal to the number of calls that the original change to system busy cutoff.

For XPMs, PMSBTCO counts the subscriber calls cut off when the PM becomes system busy. PMSBTCO increases when a call in the talking state is cut off.

Associated registers

PMMBTCO

Extension registers

None

Associated logs

None

PMSCXFR

Register type

Peg

Description

PMSCXFR increases when a system action causes an XPM to perform a cold SWACT. Examples of system actions that trigger a cold SWACT:

- an XPM forced to perform a cold SWACT
- when the active unit of an XPM becomes system busy
- when the central-side (C-side) links to the active unit of an XPM becomes system busy

Associated registers

PMMCXFR

Extension registers

None

Associated logs

PM128, PM179, PM180, PM181

PMSWXFR

Register type

Peg

Description

PMSWXFR increases if system maintenance forces a dual-unit PM to perform a transfer of activity (warm SWACT or a unit takeover). The activity transfer depends on the type of PM that the system request acts on. PMSWXFR increases when:

- the system forces an XPM, such as a line group controller or line trunk controller, to perform a warm SWACT
- the system forces an LCM to perform a takeover of one unit by the other

PMSWXFR counts a takeover of one unit of the LCM by the other unit. The register does not count a takeback of activity in the LCM.

Associated registers

None

Extension registers
None

Associated logs
PM128, PM179, PM180, PM181

PMUMBU

Register type
Usage

Scan rate
100 seconds

Description
PMUMBU is a use register. Every 100 seconds, the system scans the PMs and PMUMBU records the number of times a PM unit is manual busy. The register increases when a PM unit is set to manual busy and in each of the next scan intervals when the unit remains manual busy.

Associated registers
PMUSBU, PMMMBU, PMMSBU

Extension registers
None

Associated logs
PM105, PM128

PMUSBU

Register type
Usage

Scan rate
100 seconds

Description
PSUMBU is a use register. Every 100 seconds, the system scans the PMs and PMUSBU records the number of times a PM unit is system busy. The register increases when a PM unit is set to system busy, and in each of the next scan intervals when the unit remains system busy.

Associated registers
PMUMBU, PMMMBU, PMMSBU

Extension registers
None

Associated logs

PM102, PM128

Description

Peripheral module single-unit maintenance summary (PM1)

The OM group PM1 provides information on the following: errors, faults, and system- and manual-busy use for single-unit peripheral modules (PM) without node numbers.

The OM group PM1 supplies the data that shows the performance of PM groups.

The OM group PM1 provides one tuple for each PM type defined in the key field.The following table lists the key and info fields associated with OM group PM1.

Key field	Info field
PM1_OMTYPE. This field consists of any of the following values: ST6OM, ST7OM, DCHOM, PH1OM, LIU7OM,DCHBX02OM, FRIUOM, EIUOM, APUOM, LCOMOM,XLIUOM, VPUOM, CAUOM, CIUOM, CAVUOM	PM1_OMINFO. This field contains the number of peripherals of the type identified in the key field.

Related functional groups

The following are the associated functional groups for OM group PM1:

- Automated Directory Assistance Service (ADAS)
- DMS-100 local office
- DMS-100/200 combined local/toll office
- DMS-100/200 combined local/toll office with TOPS
- DMS-200 toll office
- DMS-200 with TOPS
- DMS-100 Meridian
- DMS-MTX mobile telephone exchange
- DMS-250 toll/tandem switch
- DMS-300 gateway
- Meridian 1 (options 111-211) PABX

Registers

The following table lists the registers associated with OM group PM1 and what they measure. For a description of a register, click on the register name.

Registers for OM group PM1

Register name	Measures
PM1ERR	PM single-unit errors
PM1FLT	PM single-unit fault
PM1INITS	PM single-unit initializations
PM1LOAD	PM single-unit reload required
PM1MBU	PM single-unit manual-busy usage
PM1PSERR	PM single-unit P-side errors
PM1PSFLT	PM single-unit P-side faults
PM1PSMBU	PM single-unit P-side manual-busy usage
PM1PSSBU	PM single-unit P-side system-busy usage
PM1SBU	PM single-unit system-busy usage

PM1ERR

Register type
Peg

Description
PM single-unit errors (PM1ERR)

Register PM1ERR counts system-detected errors that an in-service PM reports. The PM1 increases when one of the following events occurs:

- a PM sends an unsolicited message that indicates a correct fault condition
- system-requested diagnostics remove the PM from service

Associated registers
There are no associated registers.

Extension registers
There are no extension registers.

Associated logs

Log PM190 appears in two formats. The first format appears when a system request makes a signaling terminal controller (STC) system busy. As a result, the signaling terminal (ST) that the log report identifies becomes system busy. The second format appears when a fault in the D-channel handler (DCH) makes the DCH system busy. The ISDN service group (ISG) defines the services that switch to a spare DCH, if a DCH is available, to prevent loss of service.

The system generates PM198 when an STC or a D-channel handler (DCH) sends an unsolicited message that indicates a legitimate fault condition. The fault condition does not affect service. System action should resolve the condition.

The system generates PM199 when an STC or a DCH ends a system-initiated diagnostic test. The result of the diagnostic test appears in the log.

PM1FLT

Register type

Peg

Description

PM single-unit fault (PM1FLT)

Register PM1FLT increases when the system removes a PM from service because of a continuing fault that system-initiated diagnostics detect.

Register PM1FLT counts the faults for all PM cards except P-side and C-side interface cards. The register counts each fault one time.

Associated registers

There are no associated registers.

Extension registers

There are no extension registers.

Associated logs

Log PM190 appears in two formats. The first format appears when a system request makes a signaling terminal controller (STC) system busy. As a result, the signaling terminal (ST) that the log report identifies becomes system busy. The second format appears when a fault in the D-channel handler (DCH) makes the DCH system busy. The ISG defines the services that switch to a spare DCH, if a DCH is available, to prevent loss of service.

Log PM192 appears in two formats. The first format appears when the STC becomes manual busy, and the C-side node (the ISDN access controller [IAC]) goes out of service. The second format appears when the IAC of the DCH goes out of service.

The system generates PM194 when an STC or DCH:

- detects conditions that are not normal. The conditions are not hardware-related or are not linked to a hardware fault
- changes from an in-service state to an in-service trouble state

Log PM198 appears when an ST or a DCH sends an unsolicited message that indicates a correct fault condition. The fault condition does not affect service. System action should resolve the condition.

PM199 appears when either an STC or a DCH ends a system-initiated diagnostic test. The result of the diagnostic test appears in the log.

PM1INITS

Register type

Peg

Description

PM single-unit initializations (PM1INITS)

The system does not support PM1INITS. The value is always zero.

Associated registers

There are no associated registers.

Extension registers

There are no extension registers.

Associated logs

There are no associated logs.

PM1LOAD

Register type

Peg

Description

PM single-unit reload required (PM1LOAD)

Register PM1LOAD is not supported. The value is always zero.

Associated registers

There are no associated registers.

Extension registers

There are no extension registers.

Associated logs

There are no associated logs.

PM1MBU

Register type

Usage

Description

PM single-unit manual-busy usage (PM1MBU)

Register PM1MBU is a usage register. Every 10 s, the system scans the PMs and PM1MBU records manual-busy PMs.

Associated registers

There are no associated registers.

Extension registers

There are no extension registers.

Associated logs

Log ISDN104 appears when the Bd channel goes out of service because of a loss of synchronization. The loss of synchronization occurs when:

- the D-channel handler goes out of service
- the DS-1 link goes out of service
- a problem occurs with the packet handler

Log PM191 appears in two formats. The first format appears when a manual request changes an STC to manual busy. As a result, the ST identified in PM191 becomes manual busy. The second format appears when a manual request changes the DCH to manual busy. The ISG field in PM191 identifies the services that this action affects.

PM1PSERR

Register type

Peg

Description

PM single-unit P-side errors (PM1PSERR)

Register PM1PSERR is inactive.

Associated registers
There are no associated registers.

Extension registers
There are no extension registers.

Associated logs
There are no associated logs.

PM1PSFLT

Register type
Peg

Description
PM single-unit P-side faults (PM1PSFLT)

Register PM1PSFLT is inactive.

Associated registers
There are no associated registers.

Extension registers
There are no extension registers.

Associated logs
There are no associated logs.

PM1PSMBU

Register type
Peg

Description
PM single-unit P-side manual-busy usage (PM1PSMBU)

Register PM1PSMBU is not active.

Associated registers
There are no associated registers.

Extension registers
There are no extension registers.

Associated logs
There are no associated logs.

PM1PSSBU

Register type

Peg

Description

PM single-unit P-side system-busy usage

Register PM1PSSBU is not active.

Associated registers

There are no associated registers.

Extension registers

There are no extension registers.

Associated logs

There are no associated logs.

PM1SBU

Register type

Peg

Description

PM single-unit system-busy usage (PM1SBU)

Register PM1SBU is a usage register. Every 10 s, the system scans the PMs, and PM1SBU records system-busy PMs.

Associated registers

There are no associated registers.

Extension registers

There are no extension registers.

Associated logs

Log ISDN104 appears when the Bd channel goes out of service because of a loss of synchronization. The loss of synchronization occurs when

- the D-channel handler goes out of service
- the DS-1 link goes out of service
- a problem occurs with the packet handler

Log PM190 appears in two formats. The first format appears when a system requests changes an STC to system busy. As a result, the ST identified in the log report becomes system busy. The second format appears when a fault in the DCH makes the DCH system busy. The ISG defines the services that switch to a spare DCH, if a DCH is available, to prevent loss of service.

Description

Dual-unit peripheral module maintenance summary (PM2)

The OM group PM2 provides information on the performance of dual-unit peripheral modules (PM) of type IPML (without node numbers). The PM2 also collects data for the single-unit very small remote (VSR) PMs.

The PM2 has 20 registers that count the following events:

- PM errors and faults
- unit initializations
- unit reloads
- control transfers
- emergency control transfers
- system- or manual-busy lines
- line errors and faults
- manual and system warm and cold control transfers
- terminals cut off by manual- or system-busy PMs
- peripheral side (P-side) errors and faults
- ringing generator errors and faults

PM2 has four usage registers that record when

- a PM unit is manual or system busy
- a PM is manual or system busy

The data from PM2 show the performance of dual-unit PMs and the single-unit VSR.

The OM group PM2 provides one tuple for each key. The following table lists the key and info fields associated with OM group PM2.

Key field	Info field
PM2_OMTYPE is a field that consists of any of the following values: ADTC, ALGC, ARCC, DFI, DLM, DTC, DTCI, ELCM, ESA, GIC, HSI2, IAC, ICP, IDTC, ILCM, ILGC, ILTC, IPML, LCM, LGC, LTC, MSB6, MSB7, PDTC, PLGC, PRCC, RC02, RCC, RCC2, RCS, RCT, SMS, SMSR, SMU, SRCC, SRM, TDTC, TLGC, TMS, TRCC	PM2_OMINFO is a value that indicates the number of PMs of the type defined by the key.

Related functional groups

The following are associated functional groups for OM group PM2:

- DMS-100 local
- DMS-100/200
- DMS-100/200 TOPS
- DMS-200 toll
- DMS-200 TOPS
- DMS-MTX
- DMS-250
- DMS-300
- Meridian 1 (options 111-211) PBX

Registers

The following table lists the registers associated with OM group PM2 and what they measure. For a description of a register, click on the register name.

Registers for OM group PM2

Register name	Measures
PM2CCTER	Peripheral module dual-unit circuit error
PM2CCTFL	Peripheral module dual-unit circuit fault
PM2CCTMB	Peripheral module dual-unit circuit manual busy

Registers for OM group PM2

Register name	Measures
PM2CCTSB	Peripheral module dual-unit circuit system busy
PM2CXFR	Peripheral module dual-unit control transfer
PM2ECXFR	Peripheral module dual-unit emergency control transfer
PM2ERR	Peripheral module dual-unit errors
PM2FLT	Peripheral module dual-unit faults
PM2INITS	Peripheral module dual-unit initializations
PM2LOAD	Peripheral module dual-unit load
PM2MBTCO	Peripheral module dual-unit manual-busy terminals cut off
PM2MCXFR	Peripheral module dual-unit manual cold transfers
PM2MMBU	Peripheral module dual-unit module manual-busy use
PM2MSBU	Peripheral module dual-unit module system-busy usage
PM2MWXFR	Peripheral module dual-unit manual warm transfers
PM2PSERR	Peripheral module dual-unit peripheral-side errors
PM2PSFLT	Peripheral module dual-unit peripheral-side faults
PM2RGERR	Peripheral module dual-unit ringing generator errors
PM2RGFLT	Peripheral module dual-unit ringing generator fault
PM2SBTCO	Peripheral module dual-unit system-busy terminals cut off

Registers for OM group PM2

Register name	Measures
PM2SCXFR	Peripheral module dual-unit system cold transfers
PM2SWXFR	Peripheral module dual-unit system warm transfer
PM2UMBU	Peripheral module dual-unit manual-busy usage
PM2USBU	Peripheral module dual-unit system-busy usage

PM2CCTER

Register type

Peg

Description

Peripheral module dual-unit circuit error (PM2CCTER)

Register PM2CCTER increases when an error appears in a PM terminal (line card).

Associated registers

There are no associated registers.

Extension registers

There are no extension registers.

Associated logs

There are no associated logs.

PM2CCTFL

Register type

Peg

Description

Peripheral module dual-unit circuit fault (PM2CCTFL)

Register PM2CCTFL increases when a fault appears in a PM terminal (line card).

Associated registers

There are no associated registers.

Extension registers
There are no extension registers.

Associated logs
There are no associated logs.

PM2CCTMB

Register type
Peg

Description
Peripheral module dual-unit circuit manual busy (PM2CCTMB)

PM2CCTMB increases when a PM terminal (line card) becomes manual busy.

Associated registers
There are no associated registers.

Extension registers
There are no extension registers.

Associated logs
There are no associated logs.

PM2CCTSB

Register type
Peg

Description
Peripheral module dual-unit circuit system busy (PM2CCTSB)

Register PM2CCTSB increases when a PM terminal (line card) becomes system busy.

Associated registers
There are no associated registers.

Extension registers
There are no extension registers.

Associated logs
There are no associated logs.

PM2CXFR

Register type

Peg

Description

Peripheral module dual-unit control transfer (PM2CXFR)

Register PM2CXFR increases when a PM unit changes activity from active to inactive for any reason. The mate unit takes control of the lines for the complete PM.

Associated registers

There are no associated registers.

Extension registers

There are no extension registers.

Associated logs

There are no associated logs.

PM2ECXFR

Register type

Peg

Description

Peripheral module dual-unit emergency control transfer (PM2ECXFR)

Register PM2ECXFR increases when a PM unit changes activity from active to inactive because of a fault or a manual uncontrolled transfer. The mate unit takes control of the lines for the complete PM.

Associated registers

There are no associated registers.

Extension registers

There are no extension registers.

Associated logs

There are no associated logs.

PM2ERR

Register type

Peg

Description

Peripheral module dual-unit errors (PM2ERR)

Register PM2ERR increases when an error occurs in either unit of an in-service PM. The error can cause additional maintenance action for the register to increase. Register PM2ERR counts the following events

- errors that only result in the generation of a log
- errors that result in additional maintenance action
- accuracy failures for PMs (except the line concentrating module)
- errors resulting in who-am-I (WAI) messages
- state changes from in-service to central-side (C-side) busy or in-service to system busy
- restart reports from the central control
- any event that causes a fault and increments PM2FLT

Associated registers

Register PM2FLT increases when a fault in either unit of an in-service PM makes the unit or the PM system busy.

Register PMTYP_PMTERR counts the total errors that the system detects in a group of PMs of the same type. This count applies to very small remotes, and enhanced line concentrating modules.

Extension registers

There are no extension registers.

Associated logs

Log PM179 appears after detection of loss of talk battery on an LCM shelf.

Log PM180 appears when a software exception occurs.

PM2FLT

Register type

Peg

Description

Peripheral module dual-unit faults (PM2FLT)

Register PM2FLT increases when a fault in either unit of an in-service PM makes the unit or the PM system busy. Register PM2FLT increases when:

- a PM or PM unit becomes system busy
- a central-side (C-side) node or link becomes manual busy and returns to service. The result is a change from C-side busy to system busy

Associated registers

There are no associated registers.

Register PM2ERR increases when an error occurs in either unit of an in-service PM.

Register PMTYP_PMFLT counts the PM faults detected in a group of PMs of the same type. This count applies to very small remotes and enhanced line concentrating modules.

Extension registers

There are no extension registers.

Associated logs

Log PM181 appears when a PM exception occurs.

PM2INITS

Register type

Peg

Description

Peripheral module dual-unit initializations (PM2INITS)

Register PM2INITS increases when an in-service PM unit resets without a warning.

Associated registers

There are no associated registers.

Extension registers

There are no extension registers.

Associated logs

There are no associated logs.

PM2LOAD

Register type

Peg

Description

Peripheral module dual-unit load (PM2LOAD)

Register PM2LOAD increases when an in-service PM unit requires a reload that the central control did not request.

Associated registers

There are no associated registers.

Extension registers

There are no extension registers.

Associated logs

There are no associated logs.

PM2MBTCO

Register type

Peg

Description

Peripheral module dual-unit manual-busy terminals cut off (PM2MBTCO)

Register PM2MBTCO counts the subscriber calls (terminals) cut off when a PM becomes manual busy. The register only counts subscriber calls that associate with a line or trunk that is call-processing-busy or call-processing-deloading.

Register PM2MBTCO increases one time for two-port calls.

Associated registers

Register PM2SBTCO counts the subscriber calls (terminals) cut off when a PM becomes system busy.

Register PMTYP_PMTMBTCO counts the subscriber calls cut off when a PM becomes manual busy. Register PMTYP_PMTMBTCO collects data for a group of PMs of the same type. This count applies to very small remotes and enhanced line concentrating modules.

Extension registers

There are no extension registers.

Associated logs

There are no associated logs.

PM2MCXFR

Register type

Peg

Description

Peripheral module dual-unit manual cold transfers (PM2MCXFR)

Register PM2MCXFR increases when a manual request causes an extended multiprocessor system (XMS)-based peripheral module (XPM) to perform a cold switch of activity (SWACT). This action results from either of the following events:

- execution of the SWACT command at the MAP terminal
- the active unit becomes manual busy when the inactive unit is in service

Associated registers

Register PM2SCXFR increases when a system request causes an XPM to perform a cold SWACT.

Extension registers

There are no extension registers.

Associated logs

There are no associated logs.

PM2MMBU

Register type

Usage

Description

Peripheral module dual-unit module manual-busy use (PM2MMBU)

Register PM2MMBU is a usage register. Every 10 s, the system scans the PMs and PM2MMBU records manual-busy PMs.

Register PM2UMBU can detect a PM that is manually- busy, because of the sampling rate.

Associated registers

Register PM2MSBU records system-busy PMs.

Register PMTYP_PMTMSBU records when a group of PMs of the same type is manually-busy. This count applies to very small remotes and enhanced line concentrating modules.

Extension registers

There are no extension registers.

Associated logs

There are no associated logs.

PM2MSBU

Register type

Usage

Description

Peripheral module dual-unit module system-busy usage (PM2MSBU)

Register PM2MSBUis a usage register. Every 10 s, the system scans the PMs. The PM2MSBU records when both units of the PM are system busy. The register also records when one unit is system busy while the mate unit is out of service.

Register PM2UMBU can detect a PM that is system busy, because of the sampling rate.

Associated registers

Register PM2MMBU records manual-busy PMs.

Register PMTYP_PM2MSBU records when a group of PMs of the same type is system busy. This count applies to very small remotes and enhanced line concentrating modules.

Extension registers

There are no extension registers.

Associated logs

Log PM102 appears when a PM becomes system busy.

Log PM128 appears when a PM changes to in-service trouble because of system or manual action.

PM2MWXFR

Register type

Peg

Description

Peripheral module dual-unit manual warm transfers (PM2MWXFR)

PM2MWXFR increases when manual interruption causes either:

- an XPM to perform a warm SWACT, or
- an LCM to perform a takeover

The following manual activities cause an XPM to perform a warm SWACT:

- execution of the SWACT command
- the active unit becomes manual busy while the mate is in service

If one unit of an LCM becomes manual busy while the mate is in service, a takeover occurs. Register PM2MWXFR does not increase if an LCM takeback of activity occurs.

Associated registers

Register PM2SWXFR increases when system maintenance causes a warm transfer.

Register PMTYP_PMTMWXFR increases when manual maintenance causes a dual-unit PM in a group of PMs of the same type to perform a SWACT. This count applies to enhanced line concentrating modules.

Extension registers

There are no extension registers.

Associated logs

There are no associated logs.

PM2PSERR

Register type

Peg

Description

Peripheral module dual-unit peripheral-side errors (PM2PSERR)

Register PM2PSERR counts errors detected on the P-side interface of a PM

Register PM2PSERR increases when one of the following errors occurs:

- errors that originate in interface cards that terminate P-side lines, trunks, or links, or
- P-side line, trunk, or link errors

Associated registers

Register PM2PSFLT counts errors detected on the P-side interface of a PM.

Register PMTYP_PMTPSERR increases when an error appears on the P-side interface of a PM. Register PMTYP_PMTPSERR collects data for a group of PMs of the same type. This count applies to very small remotes and enhanced line concentrating modules.

Extension registers

There are no extension registers.

Associated logs

There are no associated logs.

PM2PSFLT

Register type

Peg

Description

Peripheral module dual-unit peripheral-side faults (PM2PSFLT)

Register PM2PSFLT counts errors detected on the P-side interface of a PM.

Register PM2PSFLT increases when one of the following faults occur:

- faults that originate in P-side interface cards that terminate lines, trunks, or links
- P-side line, trunk, or link faults

Associated registers

Register PM2PSERR counts errors that the system detects on the P-side interface of a PM.

Register PMTYP_PMTPSFLT increases when a fault appears on the P-side interface of a PM. The PMTYP_PMTPSFLT collects data for a group of PMs of the same type. This count applies to very small remotes and enhanced line concentrating modules.

Extension registers

There are no extension registers.

Associated logs

There are no associated logs.

PM2RGERR

Register type

Peg

Description

Peripheral module dual-unit ringing generator errors (PM2RGERR)

Register PM2RGERR counts errors that the system detects in ringing generators. Ringing generators supply ringing and automatic number identification (ANI) coin functions to an in-service PM. The state of the ringing generator is not important.

A single ringing generator can service two line concentrating modules (LCM) in the same frame. Register PM2RGERR counts one ringing generator error four times if the operator services two modules. The register counts one time for each of the two line concentrating arrays in each LCM.

Associated registers

Register PM2RGFLT counts faults that the system detects in ringing generators that supply ringing and ANI coin functions to a PM.

Register PMTYP_PMTRGERR counts errors in the ringing generators that supply ringing and ANI coin functions to a PM. Register PMTYP_PMTRGERR collects data for a group of PMs of the same type. This count applies to very small remotes.

Extension registers

There are no extension registers.

Associated logs

There are no associated logs.

PM2RGFLT

Register type

Peg

Description

Peripheral module dual-unit ringing generator fault (PM2RGFLT)

Register PM2RGFLT counts faults in ringing generators that supply ringing and ANI coin functions to a PM. Register PM2RGFLT only counts faults in-service ringing generators.

Associated registers

Register PM2RGERR counts errors in ringing generators that supply ringing and ANI coin functions to an in-service PM.

Register PMTYP_PMTRGFLT counts service-affecting faults in the ringing generators that supply ringing and ANI coin functions to a PM. The PMTYP_PMTRGFLT collects data for a group of PMs of the same type. This count applies to very small remotes.

Extension registers

There are no extension registers.

Associated logs

There are no associated logs.

PM2SBTCO

Register type

Peg

Description

Peripheral module dual-unit system-busy terminals cut off (PM2SBTCO)

Register PM2SBTCO counts subscriber calls (terminals) cut off when a PM becomes system busy. The register counts subscriber calls that associate with a line or trunk that is call processing busy or call processing deloading.

Register PM2MBTCO increases one time for two-port calls.

Associated registers

Register PM2MBTCO counts the subscriber calls (terminals) cut off when a PM becomes manual busy.

Register PMTYP_PMTSBTCO counts the subscriber calls (terminals) cut off when a PM becomes system busy. Register PMTYP_PMTSBTCO collects data for a group of PMs of the same type. This count applies to very small remotes and enhanced line concentrating modules.

Extension registers

There are no extension registers.

Associated logs

There are no associated logs.

PM2SCXFR

Register type

Peg

Description

Peripheral module dual-unit system cold transfers (PM2SCXFR)

Register PM2SCXFR increases when a system request causes an XPM to perform a cold SWACT through any of the following activities:

- the system requests a SWACT
- the active unit becomes system busy when the inactive unit is in service
- central-side (C-side) links to the active unit close while the inactive unit is in service

Associated registers

Register PM2MCXFR increases when a manual request causes an XPM to perform a cold SWACT.

Extension registers

There are no extension registers.

Associated logs

There are no associated logs.

PM2SWXFR

Register type

Peg

Description

Peripheral module dual-unit system warm transfer (PM2SWXFR)

Register PM2SWXFR increases when system maintenance causes an XPM to perform a warm SWACT or an LCM to perform a takeover.

The system causes a warm SWACT in an XPM by one of the following actions:

- the system requests a warm SWACT
- the active unit becomes system busy
- central side (C-side) links to the active unit close while the inactive unit is in service

The system causes a takeover of a unit in an LCM in two ways. One unit becomes system busy while the mate is in service. A unit can become busy while C-side links to one unit close while the mate is in service.

Register PM2SWXFR does not increase if an LCM takeback of activity occurs.

Associated registers

Register PM2MWXFR increases when manual maintenance causes a warm transfer.

Register PMTYP_PMTSWXFR increases when a system action causes a PM in a group of PMs of the same type to perform a SWACT. This count applies to enhanced line concentrating modules.

Extension registers

There are no extension registers.

Associated logs

There are no associated logs.

PM2UMBU

Register type

Usage

Description

Peripheral module dual-unit manual-busy usage (PM2UMBU)

Register PM2UMBU is a usage register. Every 10 s, the system scans the PMs and PM2UMBU records manual-busy PM units.

Register PM2UMBU increases twice if both units of a PM are manual busy. Register PM2UMBU can detect a unit that is manual busy, because of the sampling rate.

Associated registers

Register PM2USBU records system-busy PM units.

Register PMTYP_PMTMMBU records when a group of PMs of the same type are manual busy. This count applies to the enhanced line concentrating module.

Extension registers

There are no extension registers.

Associated logs

Log PM105 appears when a PM becomes manual busy.

Log PM128 appears when a PM changes to in-service trouble because of system or manual action.

PM2USBU

Register type

Usage

Description

Peripheral module dual-unit system-busy usage (PM2USBU)

Register PM2USBU is a usage register. Every 10 s, the system scans the PMs and PM2USBU records system-busy PM units.

Problems that make a PM unit system busy include:

- test failure
- too many unsolicited messages
- auto unit resets

Register PM2USBU increases twice if both units of a PM are system busy. Register PM2USBU can detect a unit that is system busy because of the sampling rate.

Associated registers

Register PM2UMBU records when a PM unit is manual busy.

Register PTMTY_PMTUSBU records when the units of a group of PMs of the same type are system busy. This count applies to the enhanced line concentrating modules.

Extension registers

There are no extension registers.

Associated logs

Log PM102 appears when a PM becomes system busy.

Log PM128 appears when a PM changes to in-service trouble because of system or manual action.

Description

Peripheral module message counter (PMMSGCNT)

The PMMSGCNT provides information from the maintenance counters in the line concentrating module (LCM).

The maintenance counters count the following:

- messages from the LCM or the remote LCM (RLCM) to the host XMS-based peripheral module (XPM)
- messages from the host XPM to the LCM or RLCM
- information on the performance of the DMSX protocol

To show the contents of the counters at the peripheral module (PM) level of the MAP display, post an LCM and issue the QUERYPM command.

The user polls the LCMs and collects the information contained in the LCM maintenance counters. The uses can also output the information in the OM group PMMSGCNT.

The PMMSGCNT contains 19 registers that count the following:

- wait-for-send timeouts on messages from the LCM to the C-side XPM
- wait-for-acknowledgement timeouts on messages from the LCM to the C-side XPM
- wait for link idle messages that the system receives after a negative acknowledgement on message transfer
- single negative acknowledgements that the system receives from the C-side XPM
- double negative acknowledgements that the system receives from the C-side XPM
- wait-for-start-of-message timeouts on messages from the C-side XPM to the LCM
- wait-for-idle messages from the C-side XPM to the LCM after a message transfer
- messages the LCM receives from the C-side XPM that have wrong cyclic redundancy check (CRC)

- messages from the C-side XPM to the LCM with more bytes than the system permits
- null messages the system receives from the C-side XPM that are not reset messages
- spurious frame interrupts
- messages the LCM receives from the C-side XPM that have an invalid node number
- messages that the LCM receives from the C-side XPM
- messages that the LCM transmits to the C-side XPM
- negative acknowledgements that the inter-unit communication (IUC) link receives
- negative acknowledgements that the IUC link receives because of invalid characters
- negative acknowledgements that the IUC link receives because of invalid byte counts
- negative acknowledgements that the IUC link receives because of wrong checksums
- negative acknowledgements that the IUC link receives because of invalid messages

The OM group PMMSGCNT provides one tuple for each line concentrating module unit. The following table lists the key and info fields associated with OM group PMMSGCNT.

Key field	Info field
none	PM_MSG_OMINFO is the LCM identifier.

The LCM identifier consists of the site name, the frame number, the bay number, and the unit number.

The site name consists of four alphanumeric characters. An example is HOST.

- The frame number is zero to 99.
- The bay number is zero to 99.
- The unit number is 0 or 1.

Office parameter LCM_PM_MSG_CNT in table OFCOPT is set to Y (yes). This office parameter is set to Y to activate the process of polling the LCMs for the maintenance counters. This office parameter is also set to Y to output OM group PMMSGCNT.

Related functional groups

The functional group LCM associates with OM group PMMSGCNT.

Registers

The following table lists the registers associated with OM group PMMSGCNT and what they measure. For a description of a register, click on the register name.

Registers for OM group PMMSGCNT

Register name	Measures
DNACK	Double negative acknowledgements
IDLSTATE	Spurious frame interrupts
IINVBYTE	Invalid byte
IINVCHAR	Invalid character
IINVCKSM	Invalid checksum
IINVMSG	Invalid message
INACK	Inter unit communication link negative acknowledgements
INVNODE	Invalid node
NULLMSG	Null messages
PMCRC	Not correct cyclic redundancy check
PMNACK	Single negative acknowledgement
PMOVFL	Byte overflow
RCVDSUCC	Correctly received messages
WFACK	Wait-for-acknowledgement timeout
WFMSG	Wait-for-start-of-message timeouts
WFNR	Wait-for-idle message
WFNX	Wait-for-link idle

Registers for OM group PMMSGCNT

Register name	Measures
WFSND	Wait-for-send timeout
XMITSUCC	Correctly transmitted messages

DNACK

Register type

Peg

Description

Double negative acknowledgements (DNACK)

Register DNACK counts double negative acknowledgement messages that the IUC link receives from the C-side XPM.

The C-side XPM sends double negative acknowledgement messages when the LCM tries again but fails to send a message.

This register holds the contents of LCM maintenance counter DNACK.

Associated registers

There are no associated registers.

Extension registers

There are no extension registers.

Associated logs

There are no associated logs.

IDLSTATE

Register type

Peg

Description

Spurious frame interrupts (IDLSTATE)

Register IDLSTATE counts spurious frame interrupts that can occur. For example, spurious frame interrupts can occur when noise is on the line.

This register holds the contents of LCM maintenance counter IDL_STATE.

Associated registers

There are no associated registers.

Extension registers

There are no extension registers.

Associated logs

There are no associated logs.

IINVBYTE

Register type

Peg

Description

Invalid byte (IINVBYTE)

Register IINVBYTE counts negative acknowledgement messages that the IUC link receives. The IUC receives these messages when a message has a byte count that is not correct. This message transmits from one LCM unit to the mate unit of this LCM.

Each message includes message length. The byte count is not always correct. The count is not correct if an LCM unit receives a message that contains more bytes than the given message length.

This register holds the contents of LCM maintenance counter IUC_INVD_BYTE.

Associated registers

There are no associated registers.

Extension registers

There are no extension registers.

Associated logs

There are no associated logs.

IINVCHAR

Register type

Peg

Description

Invalid character (IINVCHAR)

Register IINVCHAR counts negative acknowledgement messages that the IUC link receives. The IUC receives these messages when a message contains characters that are not correct. This message transmits from one LCM unit to the mate unit of this LCM.

This register holds the contents of LCM maintenance counter IUC_INVD_CHAR.

Associated registers
There are no associated registers.

Extension registers
There are no extension registers.

Associated logs
There are no associated logs.

IINVCKSM

Register type
Peg

Description
Invalid checksum (IINVCKSM)

Register IINVCKSM counts negative acknowledgement messages that the IUC link receives. The IUC receives these messages when a message has a checksum that is not correct. This message transmits from one LCM unit to the mate unit of this LCM.

A checksum in a message from one unit of the LCM is not correct if the checksum differs from the calculated checksum. The mate of this LCM calculates the checksum. The calculated checksum receives the message.

This register holds the contents of LCM maintenance counter IUC_INVD_CHKSUM.

Associated registers
There are no associated registers.

Extension registers
There are no extension registers.

Associated logs
There are no associated logs.

IINVMSG

Register type

Peg

Description

Invalid message (IINVMSG)

Register IINVMSG counts negative acknowledgement messages that the IUC link receives. The IUC receives these messages when a message is not correct. This message transmits from one LCM unit to the mate unit of this LCM.

This register holds the contents of LCM maintenance counter IUC_INVD_MSG.

Associated registers

There are no associated registers.

Extension registers

There are no extension registers.

Associated logs

There are no associated logs.

INACK

Register type

Peg

Description

Inter unit communication link negative acknowledgements (INACK)

Register INACK counts negative acknowledgement messages that the IUC link receives. The IUC receives these messages when a message from one unit of the LCM to the mate unit has one of the following:

- a character that is not correct
- a byte count that is not correct
- a checksum that is not correct
- a message that is not correct

This register holds the contents of LCM maintenance counter IUC_LINK_NACK.

Associated registers

There are no associated registers.

Extension registers

There are no extension registers.

Associated logs

There are no associated logs.

INVNODE

Register type

Peg

Description

Invalid node (INVNODE)

Register INVNODE counts messages the LCM receives from the C-side XPM that have a node number that is not correct.

An LCM node number in a message is not always correct. The number is not correct if the number is not the node number assigned to the LCM that receives the message.

This register holds the contents of LCM maintenance counter INV_NODE.

Associated registers

There are no associated registers.

Extension registers

There are no extension registers.

Associated logs

There are no associated logs.

NULLMSG

Register type

Peg

Description

Null messages (NULLMSG)

Register NULLMSG counts null messages the IUC link receives from the C-side XPM that are not reset messages.

This register contains the contents of LCM maintenance counter NULL_MSG_RCVD.

Associated registers

There are no associated registers.

Extension registers

There are no extension registers.

Associated logs

There are no associated logs.

PMCRC

Register type

Peg

Description

Not correct cyclic redundancy check (PMCRC)

Register PMCRC counts messages the LCM receives from the C-side XPM that have cyclic redundancy check (CRC).

The CRC in a message from the C-side XPM is not correct if the CRC differs from the calculated CRC. The LCM that receives the message calculates this CRC.

The LCM can send a negative acknowledgement in response to a CRC that is not correct. If the LCM sends this response, the C-side XPM attempts a second transmission of the message.

This register contains the contents of LCM maintenance counter CRC.

Associated registers

There are no associated registers.

Extension registers

There are no extension registers.

Associated logs

There are no associated logs.

PMNACK

Register type

Peg

Description

Single negative acknowledgement (PMNACK)

Register PMNACK counts single negative acknowledgement messages that the IUC link receives from the C-side XPM. These negative acknowledgement messages indicate a problem with the reception of a message from the LCM.

The LCM attempts to transmit the message again.

This register contains the contents of LCM maintenance counter NACK.

Associated registers
There are no associated registers.

Extension registers
There are no extension registers.

Associated logs
There are no associated logs.

PMOVFL

Register type
Peg

Description
Byte overflow (PMOVFL)

Register PMOVFL counts messages from the C-side XPM to the LCM that have more than the permitted number of bytes.

This register holds the contents of LCM maintenance counter OVFL.

Associated registers
There are no associated registers.

Extension registers
There are no extension registers.

Associated logs
There are no associated logs.

RCVDSUCC

Register type
Peg

Description
Correctly received messages (RCVDSUCC)

Register RCVDSUCC counts messages from the C-side XPM that the LCM receives.

This register holds the contents of LCM maintenance counter RCVD_SUCC.

Associated registers
There are no associated registers.

Extension registers
There are no extension registers.

Associated logs
There are no associated logs.

WFACK

Register type
Peg

Description
Wait-for-acknowledgement timeout (WFACK)

Register WFACK counts wait-for-acknowledgement timeouts on messages from the LCM to the C-side XPM.

This register holds the contents of LCM maintenance counter WFACK.

Associated registers
There are no associated registers.

Extension registers
There are no extension registers.

Associated logs
There are no associated logs.

WFMSG

Register type
Peg

Description
Wait-for-start-of-message timeouts (WFMSG)

Register WFMSG counts wait-for-start-of-message timeouts on messages from the C-side XPM to the LCM.

This register holds the contents of LCM maintenance counter WFMSG.

Associated registers
There are no associated registers.

Extension registers
There are no extension registers.

Associated logs
There are no associated logs.

WFNR

Register type
Peg

Description
Wait-for-idle message (WFNR)

Register WFNR counts wait-for-idle messages from C-side XPM to the LCM after a message transfer.

This register holds the contents of LCM maintenance counter WFNR.

Associated registers
There are no associated registers.

Extension registers
There are no extension registers.

Associated logs
There are no associated logs.

WFNX

Register type
Peg

Description
Wait-for-link idle (WFNX)

Register WFNX counts wait-for-link idle messages received after a negative acknowledgement of a message transfer from the C-side XPM.

This register holds the contents of LCM maintenance counter WFNX.

Associated registers

There are no associated registers.

Extension registers

There are no extension registers.

Associated logs

There are no associated logs.

WFSND

Register type

Peg

Description

Wait-for-send timeout (WFSND)

Register WFSND counts wait-for-send timeouts on messages from the LCM to the C-side XPM.

This register holds the contents of LCM maintenance counter WFSND.

Associated registers

There are no associated registers.

Extension registers

There are no extension registers.

Associated logs

There are no associated logs.

XMITSUCC

Register type

Peg

Description

Correctly transmitted messages (XMITSUCC)

Register XMITSUCC counts messages transmitted from the LCM to the C-side XPM.

This register holds the contents of LCM maintenance counter XMIT_SUCC.

Associated registers

There are no associated registers.

Extension registers

There are no extension registers.

Associated logs

There are no associated logs.

Description

Peripheral module overloaded (PMOVLD)

Register PMOVLD counts originations and terminations that the extended mulitprocessor system (XMS)-based peripheral modules (XPM) denies. The line trunk controller (LTC), the line group controller (LGC), and digital trunk controller (DTC) are examples of XPMs. Register PMOVLD counts denied originations for the following international XPMs: international LGC (ILGC) and international DTC (IDTC).

The system denies originations in order to reduce the processing load of an overloaded peripheral module (PM). The system also denies originations to make sure that calls in progress complete without degradation of service. The system denies terminations if no originations that the system can deny are present.

An overload condition occurs when a PM resource for processing becomes exhausted. The following conditions can cause the PM to overload:

- a hardware failure on the peripheral side (P-side) of the overloaded PM
- a network hardware failure
- entry changes that result in extensive messaging to the PM
- an overconfigured PM

For lines, registers PORGDENY and PTRMDENY increase with the line concentrating module (LCM) that owns the line. For trunks, the same registers increase with the XPM that owns the trunk.

The system uses the data that PMOVLD supplies to monitor the performance of XPMs. The system also uses the data to determine if the XPMs are over configured.

The OM group PMOVLD provides one tuple for each XPM that is in-service (InSv) or in-service trouble (ISTb). The following table lists the key and info fields associated with OM group PMOVLD.

Key field	Info field
none	PMOVLD_INFO_TYPE consists of the PM name (for example, LCM or LGC) and the internal PM number. The PM name is the name used to post the PM at the MAP.

Related functional groups

The following functional groups associate with the OM group PMOVLD:

- DMS-100 Local
- DMS-100/200 Local/Toll
- DMS-100/200 Local/Toll with TOPS
- DMS-200 Toll
- DMS-200 with TOPS
- DMS-100 Meridian
- DMS-MTX Mobile Telephone Exchange
- DMS-250 Toll/Tandem
- DMS-300 Gateway
- Meridian SL-100 PBX

Registers

The following table lists the registers associated with OM group PMOVLD and what they measure. For a description of a register, click on the register name.

Registers for OM group PMOVLD

Register name	Measures
PORGDENY	Peripheral origination denied
PTRMDENY	Peripheral terminations denied

PORGDENY

Register type

Peg

Description

Peripheral origination denied (PORGDENY)

For North American XPMs, PORGDENY counts each line or trunk origination that an in-service PM denies. An in-service PM can deny a line or trunk origination because of an overload condition.

The overloaded PM does not process a denied trunk origination. To originate the call again, the caller must go on hook and try again. The overloaded PM does not give any treatment. A guaranteed dial tone (GDT) handles a denied line origination.

The XPM sets the internal overload indicator if the XPM increases PORGDENY for more than 2% of its originations. The system calculates this figure from a minimum sample size of 100 originations. The XPM also sets the internal overload indicator if the system delays a trunk origination by more than 4 s. When the overload indicator passes to the CC in a maximum of one minute, the following events occur

- a minor alarm sounds
- the XPM state changes to in-service trouble (ISTB)
- the system generates PM128

For North American XPMs, PORGDENY counts denied trunk originations for the line trunk controller, remote cluster controller, and digital trunk controller. Only trunk types that use winks need trunk overload control. An example of a wink is a multifrequency wink that signals when the system receives far-end off-hook signals. Register PORGDENY does not count trunk types that use immediate dial pulse after off-hook signals do not have overload protection.

For international XPMs (ILGC and IDTC), central control overload conditions guarantee a dial tone. Register PORGDENY does not increase for line originations. Register PORGDENY increases when the flow control queue is full and the system cannot guarantee a dial tone. Register PORGDENY counts either of the following two events

- an origination message remains on a flow control queue for a minimum of 3 s
- more than three origination messages from one terminal are on the flow control queue

Associated registers

Register CP_ORIGDENY counts call originations that the central control denies.

Extension registers

There are no extension registers.

Associated logs

Log PM106 indicates when an XPM operates after the XPM was in an overload condition. Log PM106 also indicates when the PM is in service after the PM was in-service trouble.

For North American XPMs, PM106 also indicates the system no longer denies originations or terminations.

For international X series-2 PMs, PM106 indicates that a maximum of 2% of the last 1000 originations remain on the flow control queue for more than 3 s.

The system generates PM128 when a PM changes state from in service to in-service trouble because of an overload condition.

For North American XPMs, PM128 indicates that the PM is overloaded and that the system denies call originations or terminations. Refer to PM106 for required action.

For international XPMs, the system generates PM128 if a minimum of 2% of the last 1000 originations remain on the flow control queue. The system generates PM128 if a minimum of 2% of the last 1000 originations remain in the flow control queue for more than 3 s. Refer to PM106 for required action.

If the system generates logs PM106 and PM128, record the following information to help determine the cause of the overload condition:

- hardware failures on the switch
- manual action performed on the overloaded PM
- OMs that groups PMOVLD and CP generated in the overload period
- data that relates to the overloaded PM and its peripheral-side (P-side) nodes

PTRMDENY

Register type

Peg

Description

Peripheral terminations denied (PTRMDENY)

Register PTRMDENY counts terminations that North American XPMs deny because of an overload condition. The PM must be in service before the overload condition occurs for PTRMDENY to count terminations.

A PM denies terminations when the incoming flow control queue reaches the upper limit and the PM cannot deny originations. After the PM denies a termination, the PM sends the central control a Problem message, and the system brings the call down.

Register PTRMDENY does not increase for international XPMs.

Associated registers

There are no associated registers.

Extension registers

There are no extension registers.

Associated logs

Log PM106 indicates that an XPM operates after the XPM was in an overload condition. Log PM106 also indicates that the PM is in service after the PM was in-service trouble.

For North American XPMs, PM106 also indicates that the system does not deny originations or terminations.

For International XPMs, PM106 indicates that a maximum of 2% of the last 1000 originations remain. The last 1000 originations do not remain on the flow control queue for more than 3 s.

The system generates PM128 when a PM changes state from in-service to in-service trouble because of an overload condition.

For North American XPMs, PM128 indicates that the PM is overloaded and that the system denies call originations or terminations. Refer to PM106 for required action.

For international XPMs, the system generates PM128 if a minimum of 2% of the last 1000 originations remain on the flow control queue for more than 3 s. See PM106 for required action.

If the system generates logs PM106 and PM128, record the following information to help determine the cause of the overload condition:

- hardware failures on the switch
- manual action performed on the overloaded PM
- OMs groups PMOVLD and CP generated in the overload period
- all data that relates to the overloaded PM and its peripheral side (P-side) nodes

Description

Peripheral module status (PMSTAT)

The OM group PMSTAT records statistics for each unit of the extended line concentrating module (XLCM) family of peripheral modules (PM). This OM group records statistics on microprocessor occupancy. Occupancy is the amount of time in each 10 s period that a microprocessor performs work. This OM group records the following about the XLCM:

- overhead constant
- total processor occupancy
- call processing occupancy
- peak occupancy
- low occupancy
- available time of the XLCM

The OM group PMSTAT provides two tuples for each line concentrating module (LCM). The following table lists the key and info fields associated with OM group PMSTAT.

Key field	Info field
PMSTAT_OM_KEY	none

Related functional groups

The XLCM peripherals functional groups associate with OM group PMSTAT.

Registers

The following table lists the registers associated with OM group PMSTAT and what they measure. For a description of a register, click on the register name.

Registers for OM group PMSTAT

Register name	Measures
PMAVAIL	PM available
PMAVCP	PM average call processing

Registers for OM group PMSTAT

Register name	Measures
PMAVOC	PM average occupancy
PMLOWOC	PM low occupancy (low-water mark)
PMOVHEAD	PM overhead
PMPEAKOC	PM peak occupancy (high-water mark)

PMAVAIL

Register type

Usage

Description

PM available (PMAVAIL)

Register PMAVAIL updates every 10 s to record the average time the microprocessor does not have work to perform. This register records the time that the microprocessor does not have work to perform as a percentage. Register PMAVAIL records the average time in 15 min intervals or 30 min intervals. The data in table OFCENG determines the period of the interval. The available time of the PM is inversely proportional to the average occupancy time of the PM (PMAVOC).

Associated registers

There are no associated registers.

Extension registers

There are no extension registers.

Associated logs

There are no associated logs.

PMAVCP

Register type

Usage

Description

PM average call processing (PMAVCP)

Register PMAVCP updates every 10 s to record the average processor occupancy (in percent) used for call processing. This register records the average processor occupancy as a percentage. Register PMAVCP records the average processor occupancy in 15 min intervals or 30 min intervals. The data in table OFCENG determines the period of the interval.

To predict average occupancy, you must gather high-water marks for the busiest hours of the busiest days of the year. Follow the High-Day Busy Hour or the Extreme Value Engineering supply concept. Use this data to calculate and adjust supply of processor occupancy. Northern Telecom recommends that the average occupancy of LCM processors is not over 70%.

Associated registers
PMAVCP = PMAVOC - PMOVHEAD

Register PMAVOC updates every 10 s to record the average processor occupancy. This register records the average processor occupancy as a percentage. Register PMAVOC records the average processor occupancy in 15 min intervals and 30 min intervals. The data in table OFCENG determines the period of the interval.

Register PMOVHEAD

Extension registers
There are no extension registers.

Associated logs
There are no associated logs.

PMAVOC

Register type
Usage

Description
PM average occupancy (PMAVOC)

Register PMAVOC updates every 10 s to record the average processor occupancy (in percent). This register records the average processor occupancy as a percentage. Register PMAVOC records the average processor occupancy in 15 min intervals or 30 min intervals. The data in table OFCENG determines the period of the interval.

Associated registers
PMAVOC = 100 - PMAVAIL

Register PMAVAIL updates every 10 s to record average amount of time the microprocessor does not have work to perform. This register records the average amount of time as a percentage. Register PMAVOC records the average amount of time in 15 min intervals or 30 min intervals. The data in table OFCENG determines the period of the interval.

Extension registers

There are no extension registers.

Associated logs

There are no associated logs.

PMLOWOC

Register type

Usage

Description

PM low occupancy (low-water mark) (PMLOWOC)

Register PMLOWOC records the lowest processor occupancy value. This register records the lowest processor occupancy value as a percentage. This register records the lowest processor occupancy value in 15 min intervals or 30 min intervals. The data in table OFCENG determines the period of the interval. The system takes samples every 10 s in each 15 min interval or 30 min interval. The system takes samples to determine the highest available time. The following equation calculates the low occupancy value:

PMLOWOC = 100 - highest available time

To predict lowest use accurately, gather low-water marks. Gather low-water marks for the least busy hours of the least busy days of the year. Use this data to calculate and adjust the supply of processor occupancy. Make sure the processor occupancy is not less than 20% use during the least busy times.

Associated registers

There are no associated registers.

Extension registers

There are no extension registers.

Associated logs

There are no associated logs.

PMOVHEAD

Register type

Usage

Description

PM overhead (PMOVHEAD)

Register PMOVHEAD records the amount of processor use the system dedicates to overhead. This register records the amount of processor use the system dedicates to overhead in 15 min intervals or 30 min intervals. The data in table OFCENG determines the period of the interval. Use the overhead value as a constant to calculate the average call processor use (PMAVCP).

Use the overhead constant over a 24-hr period. During this time, the system checks the available time value. This register checks the available time value in 15 min intervals or 30 min intervals. The data in table OFCENG determines the period of the interval. The system determines if the available time value is the highest recorded value. (Note: highest availability = lowest occupancy.) If this value is higher than any of the previous records, the system stores the value. The system can use the value to obtain the overhead constant for the following 24 hr period. This method allows for a calculation of overhead. The calculation takes into account configuration changes and additional services allocated in the past 24 hr period.

Associated registers

Register PMOVHEAD = The lowest PMAVOC over 24 hr period

Extension registers

There are no extension registers.

Associated logs

There are no associated logs.

PMPEAKOC

Register type

Usage

Description

PM peak occupancy (high-water mark) (PMSTAT)

Register PMPEAKOC records peak processor occupancy as a percentage. This register records peak processor occupancy in 15 min intervals or 30 min intervals. The data in table OFCENG determines the period of the interval. The system takes samples every 10 s in each 15 min interval or 30 min interval. The system takes samples to determine the lowest available time. The following equation derives peak occupancy:

PMPEAKOC = 100 - lowest available time

Register PMPEAKOC registers the highest occupancy the system scans during the reporting period. Tasks of high activity and short duration cause register PMPEAKOC to report high values. An example of a task of high activity and short duration is internal system maintenance. Internal system maintenance runs continuously. At this time, current call processing is small or none. These high values can create a false belief that LCMs are near full capacity when the LCMs are in established engineering guidelines. Northern Telecom recommends that you must not use register PMPEAKOC to evaluate the supply and setup of LCM. Northern Telecom provides register PMAVCP for that purpose.

Associated registers
There are no associated registers.

Extension registers
There are no extension registers.

Associated logs
There are no associated logs.

PMTYP

Description

Registers in OM group Peripheral Module Type (PMTYP) count peripheral module (PM) errors, faults, and state changes for all PMs of the same type (for example, all line group controllers).

Table PMEXCEPT must contain the node number of each PM excluded from group PMTYP totals, including commissioned modules and modules in test. If the office parameter OMINERLANGS in table OFCOPT is set to Y (yes), the output from the following usage registers is in deci-erlangs: PMTMSBU, PMTUSBU, PMTMMBU, PMTUMBU, PMTDRMBU, and PMTDRSBU.

The following table lists the key and field info associated with OM group PMTYP.

Key field	Info field
PM_TYPE accesses the tuple. Table Field values and PM types for OM group PMTYP lists the values for the key field and the PMs that correspond to these values.	PMTYP_OM_INFO_TYPE includes the total number of PMs of the same type on the switch. The total contained in this field does not include PMs with node numbers entered in table PMEXCEPT.

Field values and PM types for OM group PMTYP (Sheet 1 of 7)

Value	PM type
ADTC	Austrian digital trunk controller
ALCM	Austrian line concentrating module
ALGC	Austrian line group controller
AP	Application processor
APU	Application processing unit
ARCC	Austrian remote cluster controller
CFI	Channel frame interface
CFP	Channel frame processor

Field values and PM types for OM group PMTYP (Sheet 2 of 7)

Value	PM type
CSC	Cell site controller
STM	Conference trunk module
DA	Directory assistance database
DCA	Austrian digital carrier module
DCM	Digital carrier module
DCM250	Digital carrier module DMS-250
DES	Digital echo suppressor
DFI	Direct fiber interface
DLM	Digital line module
DTC	Digital trunk controller
DTC7	CCS7 Digital trunk controller
DTCI	Digital trunk controller for ISDN
DTCO	Digital trunk controller offshore
DTM	Digital trunk module
EIU	Ethernet interface unit
ELCM	Enhanced line concentrating module
ESA	Emergency stand-alone
EXND	External node
FRCC	Force (download) remote cluster controller
FRIU	Frame relay interface unit
FILP	File processor
GIC	Generic interface controller
HFT	HDLC frame transceiver

Field values and PM types for OM group PMTYP (Sheet 3 of 7)

Value	PM type
HSI	High speed interface
HSI2	High speed interface series 2
HSIE	High speed interface extended
IAC	ISDN access controller
ICP	Integrated cellular peripheral
ICRM	Integrated cellular remote module
IDT	Integrated digital terminal
IDTC	International digital trunk controller
ILCM	International line concentrating module
LGC	International line group controller
LTC	International line trunk controller
XLCM	International extended line concentrating module
IPE	Intelligent peripheral equipment
ITAC	International TATS access controller
LCM	Line concentrating module
LCME	Enhanced line concentrating module
LCMI	ISDN line concentrating module
LCOM	LIU-COM (link interface unit data communication)
LDT	Line appearance on a digital trunk
LGC	Line group controller
LGCI	Line group controller ISDN
LGCO	Line group controller offshore

Field values and PM types for OM group PMTYP (Sheet 4 of 7)

Value	PM type
LIM	Link interface module
LIU	Link interface unit
LIU7	CCS7 link interface unit
HLIU	High-speed link interface unit
HSLR	High-speed link router
LM	Line module
LRU	Line resource unit
LTC	Line trunk controller
LTCI	Line trunk controller ISDN
MMA	Austrian maintenance trunk module
MSB6	Message switch buffer for CCIS6
MSB7	Message switch buffer for CCIS7
MTM	Maintenance trunk module
NIU	Network interface unit
OAU	Office alarm unit
OPM	Outside plant module
ORDB	Operator reference database
PDTC	PCM30 digital trunk controller
PLGC	PCM30 line group controller
PND	PNODE
PRCC	PCM30 remote cluster controller
PSP	Programmable signal processor
PTM	Packaged trunk module

Field values and PM types for OM group PMTYP (Sheet 5 of 7)

Value	PM type
RCC	Remote cluster controller
RCC2	Compact remote cluster controller
RCCI	ISDN remote cluster controller
RSCO2	Remote switching center offshore 2
RCS	Remote concentrator SLC-96
RCT	Remote concentrator terminal
RCU	Remote carrier urban
RLC	Remote line controller
RLCM	Remote line concentrating module
RLM	Remote line module
RMM	Remote maintenance module
RMSC	Remote mobile switching center
RSC	Remote switching center
RSCO	Remote switching center offshore
RSM	Remote service module
SCM	Subscriber carrier module
SMA	Subscriber module access
SMR	Subscriber carrier module-100 rural
SMS	Subscriber carrier module-100S
SMSR	Subscriber carrier module-100S remote
SMU	Subscriber carrier module-100 urban
SPM	Service peripheral module
SRCC	SONET remote cluster controller

Field values and PM types for OM group PMTYP (Sheet 6 of 7)

Value	PM type
SRU	Small remote unit (ISDN LCM)
STCM	Signal terminal controller module
STM	Service trunk module
STS	Standardized traffic statistics
SVR7	CCS7 server
T8A	Trunk module for CCITT circuits
TACC	TATS access controller
TAN	Test access network
TDTC	MOC DTC (MOC is an NT licensee)
TLGC	MOC LGC (MOC is an NT licensee)
TLTC	MOC LTC (MOC is an NT licensee)
TM	Trunk module
TM2	Trunk module—two wire
TM4	Trunk module—four wire
TM8	Trunk module ATT testing
TMA	Trunk module Austria
TMS	TOPS message switch
TPC	TOPS position controller
TRCC	MOC RCC (MOC is a NT licensee)
VLCM	Virtual line concentrating module
VPU	Voice processing unit
VSR	Very small remote
VSROM	Very small remote

Field values and PM types for OM group PMTYP (Sheet 7 of 7)

Value	PM type
XLCM	Expanded memory line concentrating module
XLIU	X.25/X.75 link interface unit
XRLCM	Extended remote line concentrating module

Related functional groups

The following functional groups associate with OM group PMTYP:

- DMS-100 Local Office
- DMS-100/200 Combined Local/Toll office
- DMS-100/200 Combined Local/Toll Office with TOPS
- DMS-200 Toll Office
- DMS-200 with TOPS
- DMS-MTX Mobile Telephone Exchange
- DMS-250 Toll/Tandem Switch
- DMS-300 Gateway
- Meridian SL-100 PBX

Registers

The following table lists the registers associated with OM group PMTYP and what they measure. For a description of a register, click on the register name.

> ***Note:*** The OM group PMTYP provides one tuple for each PM type.

Registers for OM group PMTYPE (Sheet 1 of 2)

Register name	Measures
PMTCCTDG	PM total circuit diagnostics run
PMTCCTFL	PM total circuit diagnostics failed
PMTCCTOP	PM total circuit diagnostics outside plant
PMTDRERR	PM total drawer error
PMTDRFLT	PM total drawer faults

Registers for OM group PMTYPE (Sheet 2 of 2)

Register name	Measures
PMTDRMBU	PM total drawer manual busy use
PMTDRSBU	PM drawer system busy use
PMTERR	PM total errors
PMTFLT	PM total faults
PMTINTEG	PM total integrity failures
PMTMBP	PM total transitions to manual busy
PMTMBTCO	PM total manual busy terminals cut off
PMTMCXFR	PM total manual cold transfers
PMTMMBU	PM total module manual busy use
PMTMSBU	Peripheral module total module system busy use
PMTMWXFR	PM total manual warm transfers
PMTPSERR	PM total peripheral side (P-side) errors
PMTPSFLT	PM total peripheral side (P-side) faults
PMTRGERR	PM total ringing generator errors while in service
PMTRGFLT	PM total ringing generator faults while in service
PMTSBP	PM total transitions to system busy
PMTSBTCO	PM total system busy terminals cut off
PMTSCXFR	PM total system cold transfers
PMTSWXFR	PM total system warm transfers
PMTUMBU	PM total unit manual busy use
PMTUSBU	PM total unit system busy use

PMTCCTDG

Register type

Peg

Description

PMTCCTDG counts system-initiated tests run on line or trunk cards because of recurring problems during call processing. PMTCCTDG counts this type of maintenance event for a group of PMs of the same type. Maintenance conditions that cause PMTCCTDG to increase vary by PM type.

For digital carrier modules, PMTCCTDG counts tests run on a trunk interface card because of problems during call processing. The diagnostics determine if:

- a DS-1 interface card was removed
- loss of the systems ability to frame caused a local or remote-carrier group alarm state

For line modules and digital line modules, PMTCCTDG increases when system-initiated diagnostics are run on line cards.

For trunk modules, PMTCCTDG increases when the following diagnostics are run on any trunk interface card or service circuit:

- a check that the right card types are on the shelf
- test relay operation
- operation and release of signal distribution points and analysis of scan results
- a check for transmission loss in looparound mode

For extended multiprocessor system (XMS)-based peripheral modules (XPM), PMTCCTDG increases when a system-initiated diagnostic runs on lines or trunks. The diagnostic is run because recurring problems during call processing.

Associated registers

The following registers are associated with PMTCCTDG:

- PMTCCTFL
- PM_PMTCCTDG counts system-initiated diagnostics for each PM.

Extension registers

None

Associated logs

PM110, TRK106

PMTCCTFL

Register type

Peg

Description

PMTCCTFL increases when system-initiated diagnostics determine the cause of a PM maintenance problem is one of the following:

- a card fault
- a missing or wrong card
- other fault conditions

PMTCCTFL counts these events for a group of PMs of the same type. The faults that cause the count of PMTCCTFL to increase are different for each PM.

For digital carrier modules, PMTCCTFL increases when:

- a card is removed
- a transmission error causes a carrier group alarm

For line modules, PMTCCTFL increases when diagnostics show:

- a fault in a PM, card, or facility
- a missing or wrong card

PMTCCTFL increases when diagnostics detect a wrong card, no card, or a bad card for:

- trunk modules
- digital carrier modules
- extended multiprocessor system (XMS)-based peripheral modules (XPM)

Associated registers

The following registers are associated with PMTCCTFL:

- PMTCCTDG
- PM_PMCCTFL increases when a system-initiated diagnostic determines the cause of a PM maintenance problem by a fault condition. PM_PMCCTFL increases for a separate PM.

Extension registers

None

Associated logs

PM109, PM183, TRK106

PMTCCTOP

Register type

Peg

Description

PMTCCTOP increases when system diagnostics detect a fault on a line or trunk circuit outside a switching office. The register counts the fault for a group of PMs of the same type.

Conditions that cause PMTCCTOP to increase vary with PM types. The register increases only the first time the system detects a fault. PMTCCTOP does not increase if the system detects the same fault when tests are run again.

For the digital carrier module and the trunk module, PMTCCTOP increases when the signaling-test system at a switching office detects a fault. PMTCCTOP detects a fault on a trunk circuit between the register and a far-end office. For example, PMTCCTOP increases when an originating office does not receive a start-dial or wink signal from the far-end office in response to the off-hook signal the originating office sent.

For the line module, PMTCCTOP increases when system diagnostics detect a fault on a line circuit outside the switching office.

For extended multiprocessor system (XMS)-based peripheral modules (XPM), PMTCCTOP increases when system diagnostics detect a fault on a line or trunk outside the switching office.

Associated registers

PM_PMCCTOP increases when system diagnostics detect a fault on a line or trunk circuit outside the switching office.

Extension registers

None

Associated logs

None

PMTDRERR

Register type

Peg

Description

PMTDRERR increases when an error in a line drawer causes the drawer to become in-service trouble. PMTDRFLT counts this type of fault for a group of PMs of the same type.

Associated registers

The following registers are associated with PMTDRERR:

- PMTDRFLT
- PM_PMDRERR counts errors in a line drawer that cause the drawer to become in-service trouble.

Extension registers

None

Associated logs

PM102, PM181

PMTDRFLT

Register type

Peg

Description

PMTDRFLT counts the faults in a line drawer that cause the drawer to become system busy. PMTDRFLT counts this type of fault for a group of PMs of the same type.

Associated registers

The following registers are associated with PMTDRFLT:

- PMTDRERR
- PM_PMDRFLT counts faults in a line drawer that cause the drawer to become system busy.

Extension registers

None

Associated logs

PM102, PM181

PMTDRMBU

Register type

Usage

Scan rate

100 seconds

Description

PMTDRMBU records if the line drawers in a group of PMs of the same type are manual busy.

Associated registers

The following registers are associated with PMTDRMBU:

- PMTDRSBU
- PM_PMDRMBU records if a line drawer in a PM is manual busy.

Extension registers

None

Associated logs

PM102, PM128

PMTDRSBU

Register type

Usage

Scan rate

100 seconds

Description

PMTDRSBU records if the line drawers in a group of PMs of the same type are system busy.

Associated registers

The following registers are associated with PMTDRSBU:

- PMTDRMBU
- PM_PMDRSBU records if a line drawer in the PM is system busy.

Extension registers

None

Associated logs

PM102, PM128

PMTERR

Register type

Peg

Description

PMTERR counts errors in a group of PMs of the same type that are in service. The errors do not have to result in additional maintenance action for the system to count them.

For single-unit PMs (line, digital carrier, maintenance trunk, and trunk modules), PMTERR counts:

- command protocol violations
- RAM parity failures
- firmware errors
- controller message congestion
- test failures during the use of routine or initialization audits
- failure to respond to a message over either plane of a network

For two-unit XPMs (line concentrating modules, line group and line trunk controllers), PMTERR increases if one of the following maintenance events occur in either unit of the PM:

- errors that only result in the generation of a log
- errors resulting in more maintenance action
- integrity failures
- errors resulting in Who-Am-I messages
- changes in a unit from in service to central-side (C-side) or system busy
- restart reports
- any event that causes a fault and increases register PMTFLT

Associated registers

The following registers are associated with PMTERR:

- PMTFLT
- PM_PMERR counts errors on in-service PMs that have node numbers.
- PM2_PM2ERR counts the same errors for PMs that do not have node numbers.

Extension registers

None

Associated logs

CCS231, CCS236, DDM101, DDM102, DDM104, DLC101, DPAC103, LOST108, LOST109, LOST111, MPC906, NET102, NPAC210, PM101, PM102, PM107, PM108, PM113, PM115, PM116, PM117, PM118, PM119, PM121, PM122, PM124, PM125, PM126, PM128, PM150, PM160, PM179, PM180, PM194, PM198, TRK123

PMTFLT

Register type

Peg

Description

PMFLT counts PM faults the system detects in a group of PMs of the same type that cause the entire PM or one unit of the PM to become system busy.

The register does not count the same fault in a following test when system diagnostics attempts to clear the fault. Conditions that cause PMTFLT to increase differ between single-unit PMs and XPMs.

For single unit PMs (line modules, digital carrier modules, and trunk modules), PMTFLT counts all errors that cause the PM to become system busy while the PM waits for either manual or system recovery.

For XPMs (line concentrating modules, line group and line trunk controllers), PMTFLT increases if:

- the system makes a PM or a single unit of a PM system busy.
- the system makes a C-side node or link manual busy and return it to service, which results in a change from C-side busy to system busy.

Associated registers

The following registers are associated with PMFLT:

- PMTERR
- PM_PMFLT and PM2_PM2FLT count faults that cause the system to make a PM or one unit of PM system busy. PM_PMFLT counts faults for PMs that have node numbers. PM2_PM2FLT counts the same faults for PMs without node numbers.

Extension registers

None

Associated logs

DLC102, DPAC104, MPC904, NPAC211, PM100, PM101, PM102, PM107, PM114, PM117, PM127, PM151, PM161, PM162, PM164, PM179, PM180, PM181, PM185, PM199

PMTINTEG

Register type

Peg

Description

PMTINTEG increases when the PM detects an integrity failure and reports it to the central control (CC). PMTINTEG counts integrity failures for a group of PMs of the same type.

Associated registers

PM_PMINTEG increases when the PM reports an integrity failure to the CC.

Extension registers

None

Associated logs

NET101, NET102, PM108, PM113, PM118, PM119, PM122, PM124, PM180, PM181, PM185, TRK122

PMTMBP

Register type

Peg

Description

PMTMBP increases when an in-service or in-service trouble PM becomes manual busy. The register counts the state change for a group of PMs of the same type. For line modules, PMTMBP increases when the LM becomes manual busy during manual warm and cold takeovers.

Associated registers

The following registers are associated with PMTMBP:

- PMTSBP
- PM_PMMBP increases when an in-service or in-service trouble PM becomes manual busy.

Extension registers

None

Associated logs

PM182, PM191

PMTMBTCO

Register type

Peg

Description

PMTMBTCO counts calls (terminals) cut off when a PM becomes manual busy. The register counts call-processing busy (CPB) and call-processing deloading (CPD) calls that are cut off for a group of PMs of the same type. Conditions that cause PMTMBTCO to increase vary by PM.

For digital carrier, line, and trunk modules, PMTMBTCO counts the subscriber calls cut off. Calls are cut off when the PM changes to manual busy from in service or in-service trouble.

A warm takeover can occur after the line module becomes manual busy. For line modules, subscriber calls in the talking state are not cut off. If a takeover does not occur, PMTMBTCO increases once for each subscriber call the system cuts off. If warm takeback occurs after the LM becomes manual busy, PMTMBTCO increases once for each subscriber call the system cuts off.

For extended multiprocessor system (XMS)-based peripheral modules (XPM), PMTMBTCO counts the subscriber calls cut off when the PM becomes manual busy. Subscriber calls must be call-processing busy or call-processing deloading for the PMTMBTCO to count the calls. PMTMBTCO increases once when the systems cuts off a call in the talking state.

Associated registers

The following registers are associated with PMTMBTCO:

- PMTSBTCO
- PM_PMMBTCO and PM2_PM2MBTCO count the subscriber calls (terminals) cut off when a PM becomes manual busy.

Extension registers

None

Associated logs

None

PMTMCXFR

Register type

Peg

Description

PMTMCXFR increases when a manual action causes an extended multiprocessor system (XMS)-based peripheral module (XPM) to perform a cold switch of activity (SWACT). PMTMCXFR counts manually initiated cold SWACTS for a group of PMs of the same type.

Examples of manual actions that can trigger a cold SWACT are:

- the execution of the SWACT command at the MAP terminal
- a manual request that sets the active unit manual busy while the inactive unit is in service

Associated registers

The following registers are associated with PMTMCXFR:

- PMTSCXFR
- PM_PMMCXFR and PM2_PM2MCXFR count manually initiated cold SWACTS for separate PMs. PM_PMMCXFR counts manually initiated cold SWACTS for PMs that have node numbers. PM2_PM2MCXFR counts manually initiated cold SWACTS for PMs that do not have node numbers.

Extension registers

None

Associated logs

PM128, PM180

PMTMMBU

Register type

Usage

Scan rate

100 seconds

Description

PMTMMBU records if PMs of the same type are manual busy.

Associated registers

The following registers are associated with PMTMMBU:

- PMTUMBU
- PM_PMMMBU and PM2_PM2MMBU record if a separate PM is manual busy. PM_PMMMBU provides a use count for PMs that have node numbers. PM2_PM2MMBU provides a use count for PMs without node numbers.

Extension registers

None

Associated logs

CCS218, CCS233, PM105, PM128, PM170, PM182, PM191

PMTMSBU

Register type

Usage

Scan rate

100 seconds

Description

PMTMSBU records if PMs in an identical group are system busy. Hardware or software problems that cause the PM to become system busy vary with the PM type.

For digital carrier or trunk modules, the PM can become system busy because:

- the DCM or TM fails a routine audit
- message paths are not available to the DCM or TM
- The DCM or TM sends more than 200 non-requested trouble reports in one 10-minute audit period

For line modules, the PM can become system busy because:

- the system cannot reach the LM
- the control section of the LM did not pass an audit
- the LM reported more than 200 controller or line errors between audits

Associated registers

The following registers are associated with PMTMSBU:

- PMTUSBU
- PM_PMMSBU and PM2_PM2MSBU record if a separate PM is system busy. PM_PMMSBU provides use counts for PMs that have node numbers. PM2_PM2MSBU provides use counts for PMs without node numbers.

Extension registers

None

Associated logs

CCS234, PM102, PM128, PM170, PM183, PM190, PM192,

PMTMWXFR

Register type

Peg

Description

PMTMWXFR increases when manual maintenance forces a two-unit PM to switch activity (SWACT) or a take over a unit. PMTMWXFR counts this type of activity transfer for a group of PMs of the same type. The type of PM that the manual request acts on determines the activity transfer that occurs. PMTMWXFR increases if:

- a manual request forces an XPM (such as a line group controller or a line trunk controller) to perform a warm SWACT.
- a manual request forces one unit of a line concentrating module (LCM) to take over the other unit.

The system can force an LCM to perform a takeover. Takeover occurs when the system makes one unit of the LCM manual busy while the mate unit is in service. A takeback of activity does not increase PMTMWXFR.

Examples of manual actions that force an XPM to perform a warm SWACT are:

- the execution of the SWACT command at the MAP (maintenance and administration position) terminal
- the active unit of an XPM is made manual busy when the inactive unit is in service

Associated registers

The following registers are associated with PMTMWXFR:

- PMTSWXFR
- PM_PMMWXFR and PM2_PM2MWXFR count activity transfers for separate PMs. PM_PMMWXFR counts transfers for PMs that have node numbers. PM2_PM2MWXFR counts transfers for PMs without node numbers.

Extension registers

None

Associated logs

PM128, PM180

PMTPSERR

Register type

Peg

Description

PMTPSERR counts errors on:

- the P-side interface of an XMS-based XPM
- a link interface module (LIM) frame transport bus (F-bus) for a group of PMs of the same type

PMTPSERR increases with:

- line, trunk or link errors
- errors in interface cards that terminate lines, trunks, or links
- F-bus errors

Associated registers

The following registers are associated with PMTPSERR:

- PMTPSFLT
- PMPSERR counts errors on the P-side interface of an XPM or an LIM F-bus.
- PM_PMPSERR counts errors for PMs that have node numbers.
- PM2_PM2PSERR counts errors for PMs without node numbers.

Extension registers

None

Associated logs

PM110

PMTPSFLT

Register type

Peg

Description

PMTPSFLT counts faults on the P-side interface of an XMS-based XPM or on the LIM F-bus for a group of PMs of the same type. The faults affect service and require more maintenance action.

PMTPSFLT increases when faults occur in:

- P-side interface cards that terminate trunks, lines, or links
- lines, trunks, and links serviced by the interface cards
- the F-bus

Associated registers

The following registers are associated with PMTPSFLT:

- PMTPSERR
- PM_PMPSFLT and PM2_PM2PSFLT count faults on the P-side interface of an XPM or faults on the LIM F-bus. PM_PMPSFLT counts faults on the P-side interface of PMs that have node numbers. PM2_PM2PSFLT counts faults for PMs without node numbers.

Extension registers

None

Associated logs

PM109, PM181, PM183

PMTRGERR

Register type

Peg

Description

PMTRGERR counts errors in ringing generators. The generators provide ringing and automatic number identification (ANI) coin functions to line concentrating modules or very small remotes (VSR). PMTRGERR counts the errors for a group of PMs of the same type.

PMTRGERR increases if the ringing generator is in or out of service at the time of the error. The LCM or VSR must be in service at the time of the error. A single ringing generator can service both LCMs in the same frame. The system can count one ringing generator error four times, one time for each of the two line concentrating arrays in each of the two LCMs.

Associated registers

The following registers are associated with PMTRGERR:

- PMTRGFLT
- PM_PMRGERR and PM2_PM2RGERR count ringing generator errors for separate PMs.

Extension registers

None

Associated logs

PM160

PMTRGFLT

Register type

Peg

Description

PMTRGFLT counts service-affecting faults in ringing generators. The generators provide ringing and automatic number identification (ANI) coin functions to line concentrating modules (LCM) and to very small remotes (VSR) group of PMs of the same type. The ringing generator must be in service for PMTRGFLT to increase.

Associated registers

The following registers are associated with PMTRGFLT:

- PM_PMRGFLT and PM2_PM2RGFLT count ringing generator faults for separate PMs.
- PM_PMRGFLT counts faults for PMs that have node numbers.
- PM2_PM2RGFLT counts faults for PMs without node numbers.

Extension registers

None

Associated logs

PM161, PM162, PM163

PMTSBP

Register type

Peg

Description

PMTSBP increases when an in-service or in-service trouble PM module becomes system busy. The register counts the state change for a group of PMs of the same type.

The PM normally changes to central side (C-side) busy before the PM becomes system busy. If the PM correctly returns to service from C-side busy before the PM becomes system busy, PMTSBP does not increase. For line modules, PMTSBP increases when the LM becomes system busy during warm or cold takeovers.

Associated registers

The following registers are associated with PMTSBP:

- PMTMBP
- PM_PMTSBP increases when a separate PM becomes system busy from an in-service or in-service trouble state.

Extension registers

None

Associated logs

DLC102, DPAC104, MPC904, NPAC211, PM107, PM183, PM190, PM192

PMTSBTCO

Register type

Peg

Description

PMTSBTCO counts subscriber calls (terminals) cut off when a PM becomes system busy. The register counts subscriber calls that the system drops for a group of PMs of the same type. Conditions that cause PMTSBTCO to increase vary by PM type.

For digital carrier module and trunk modules, PMTSBTCO counts subscriber calls that are cut when the state of an in-service or in-service trouble PM changes to C-side busy. Subscriber calls must be call-processing busy or call-processing deloading for PMTSBTCO to increase. C-side busy is an intermediate state that occurs before the PM becomes system busy.

For the line module (LM), PMTSBTCO counts subscriber calls that are cut when the line module becomes system busy. The calls must be call-processing busy or call-processing deloading for PMTSBTCO to increase.

If the line module recovers from C-side busy before it becomes system busy and the mate line module becomes system busy, associated register PMTSBTCO increases. PMTSBTCO increases by the number of subscriber calls the system busy mate drops. This increase occurs because the LM that performs the cold takeover is responsible for the calls of the mate LM. The LM cannot preserve these calls through the takeover.

If a warm takeover occurs when an LM becomes system busy, calls are not cut off and PMTSBTCO does not increase. An LM can perform a warm takeback of control of the line drawers in the LM after the system returns the LM to service from system busy. PMTSBTCO increases by the number of calls that the original system busy state change drops.

For XMS-based XPMs, PMTSBTCO counts subscriber calls cut when the PM becomes system busy. The subscriber calls must be call-processing busy or call-processing deloading for PMTSBTCO to increase. PMTSBTCO increases one time when the system drops a call in the talking state.

Associated registers

The following registers are associated with PMTSBTCO:

- PMTMBTCO
- PM_PMSBTCO and PM2_PM2SBTCO count calls that are cut when a separate PM becomes system busy.

Extension registers

None

Associated logs

None

PMTSCXFR

Register type

Peg

Description

PMTSCXFR increases when a system action causes an XMS-based XPM to perform a cold SWACT for a group of PMs of the same type. A cold SWACT occurs when the system:

- forces an XPM to perform a cold SWACT
- makes the active unit of an XPM system busy
- makes the central-side (C-side) links to the active unit of an XPM system busy

Associated registers

The following registers are associated with PMTSCXFR:

- PMTMCXFR
- PM_PMSCXFR and PM2_PM2SCXFR count system-initiated cold SWACTS for separate PMs.
- PM_PMSCXFR counts cold SWACTS for PMs that have node numbers. PM2_PM2SCXFR counts the same SWACTS for PMs without node numbers.

Extension registers

None

Associated logs

PM128, PM179, PM180, PM181

PMTSWXFR

Register type

Peg

Description

PMTSWXFR increases when system maintenance forces a two-unit PM to perform a warm SWACT or a unit takeover for a group of PMs of the same type. The activity transfer that the system performs varies by PM type. PMTSWXFR increases when:

- a system request forces an XMS-based XPM (such as a line controller or line group controller) to perform a warm SWACT.
- a system request forces one unit of a line concentrating module (LCM) to take over the other. Takeback of activity in the LCM does not increase PMTSWXFR.

A warm SWACT occurs when:

- the system forces an XPM to perform a warm SWACT
- the active unit of an XPM becomes system busy
- the C-side links to the active unit of an XPM become busy

An LCM can perform a takeover when:

- the system makes one unit of the LCM system busy while the mate unit is in service
- the system makes the C-side links to either LCM unit busy while the mate unit is in service

Associated registers

The following registers are associated with PMTSWXFR:

- PMTMWXFR
- PM_PMSWXFR and PM2_PM2SWXFR count activity transfers for separate PMs. PM_PMSWXFR counts activity transfers for PMs that have node numbers. PM2_PM2SWXFR counts transfers for PMs without node numbers.

Extension registers

None

Associated logs

PM128, PM179, PM180, PM181

PMTUMBU

Register type

Usage

Scan rate

100 seconds

Description

PMTUMBU records if PMs in a group of the same type are manual busy. The system determines if both units of an XMS-based XPM are manual busy. The register increases twice after each scan interval, once for each unit.

Associated registers

The following registers are associated with PMTUMBU:

- PMTMMBU
- PM_PMUMBU and PM2_PM2UMBU record if a separate PM is manual busy. PM_PMUMBU provides a count for PMs that have node numbers. PM2_PM2UMBU provides the count for PMs without node numbers.

Extension registers

None

Associated logs

CCS218, CCS233, PM105, PM128, PM182, PM191

PMTUSBU

Register type

Usage

Scan rate

100 seconds

Description

PMTUSBU records if units of a group of identical PMs are system busy. If both units of an XMS-based XPM are system busy, PMTUSBU increases twice. The register increases after each scan interval, one time for each unit. For single-unit PMs such as line, digital carrier, and trunk modules, PMTUSBU increases once. Events that can cause one unit of an XPM to become system busy are:

- diagnostic failures
- excessive unsolicited messages
- auto unit resets

Associated registers

The following registers are associated with PMTUSBU:

- PMTMSBU
- PM_PMUSBU and PM2_PM2USBU record if a separate PM is system busy. PM_PMUSBU provides a count for PMs that have node numbers. PM2_PM2USBU provides counts for PMs without node numbers.

Extension registers

None

Associated logs

CCS234, PM102, PM128, PM170, PM183, PM190, PM192

PPCO

Description

Pre Paid Coin Overtime (PPCO) measures certain Pre-Paid Coin Overtime Statistics.

OM group PPCO provides one tuple. The following table lists the key and info fields associated with OM group PPCO.

Key field	Info field
none	none

Related functional groups

Functional group ENSV Pre Paid Coin (ENSV0001) is associated with OM group PPCO:

Registers

The following table lists the registers associated with OM group PPCO and what they measure. For a description of a register, click on the register name.

Registers for OM group PPCO

Register name	Measures
PPCOINI	Pre-Paid Coin Overtime Initial
PPCOOVT	Pre-Paid Coin Overtime
PPCODISC	Pre-Paid Coin Overtime Disconnects

PPCOINI

Register type
Peg

Description
Pre-Paid Coin Overtime Initial

PPCOINI is incremented when a sent-paid call uses PPCO. It keeps track of how many coin calls are made using trunks which are datafilled as pre-pay.

Associated registers
There are no associated registers.

Extension registers
There are no extension registers.

Associated logs
There are no associated logs.

PPCOOVT

Register type
Peg

Description
Pre-Paid Coin Overtime

PPCOOVT is incremented when the caller pays for their first overtime period. It keeps track of the amount of users who pay for at least the first overtime period.

Associated registers
There are no associated registers.

Extension registers
There are no extension registers.

Associated logs
There are no associated logs.

PPCODISC

Register type
Peg

Description
Pre-Paid Coin Overtime Disconnects

PPCODISC keeps track of disconnects which occur when a caller fails to deposit any funds for the next overtime period and after the necessary ACTS prompts and time-outs have occurred.

Associated registers
There are no associated registers.

Extension registers
There are no extension registers.

Associated logs

There are no associated logs.

Description

PRA D-channel layer 2 performance summary (PRADCHL2)

The operational measurements (OM) group PRADCHL2 monitors the layer 2 (Q.921) traffic that travels over the primary rate access (PRA) D channels in the integrated services digital network (ISDN) peripherals. Examples of ISDN peripherals are ISDN digital trunk controller (DTCI), line trunk controller (LTC), and Spectrum Peripheral Module (SPM).

The system increases the OMs in the ISDN digital trunk controller. The system collects OMs from the peripheral. This event occurs before the OM transfer from the active to the holding registers.

The PRADCHL2 peg registers record the following 1-minute collections:

- discarded transmit frames
- received frames with cyclic redundancy check (CRC) error
- received frames discarded that other errors cause
- correctly transmitted-service access point identifier (SAPI) 0 frames
- correctly received SAPI 0 frames
- link resets the ISDN signaling processor (ISP) causes
- link resets the far end device causes
- receiver not ready (RNR) frames the ISP to the far-end device transmits
- RNR frames received from the far-end device signaling channel (SIGL)
- reject (REJ) frames the ISP transmits
- REJ frames received from the far-end device
- PRA Q.931 messages the PRA flow control system discards

The OM group PRADCHL2 provides one tuple for each D channel. The PRADCHL2 peg registers record the following 15-minute collections:

- layer 2 service disruptions
- layer 3 service disruptions

The following table lists the key and info fields associated with OM group PRADCHL2.

Key field	Info field
EXTERNAL_DCH-CKT identifies a single, primary, or backup D channel.	L2_OMINFO is the DTCI/LTCI number, circuit number, and time slot.

Related functional groups

Operating group ISDN associates with OM group PRADCHL2.

Registers

The following table lists the registers associated with OM group PRADCHL2 and what they measure. For a description of a register, click on the register name.

Registers for OM group PRADCHL2

Register name	Measures
PRDCRC	Cyclic redundancy check (CRC) errors
PRDDISCR	Received frames discarded
PRDDISCT	Transmit frames discarded
PRDREJRX	Reject (REJ) frames received
PRDREJTX	Reject frames (REJ) transmitted
PRDRNRRX	Receiver not ready (RNR) frames received
PRDRNRTX	Receiver not ready (RNR) frames transmitted
PRDS0RX	Correctly received service access point identifier (SAPI) 0 frames
PRDS0TX	Correctly transmitted service access point identifier (SAPI) 0 frames
PRDSBMRX	Link resets, far-end device
PRDSBMTX	Link resets, ISDN signaling processor
PRFLSHED	Primary rate access (PRA) flow shed

Registers for OM group PRADCHL2

Register name	Measures
PRDL2SVD	PRI D-channel layer 2 service disruptions
PRDL3SVD	PRI D-channel layer 3 service disruptions

PRDCRC

Register type

Peg

Description

Cyclic redundancy check (CRC) errors

Register PRDCRC is the 1-minute collection of the number of frames with CRC errors the system receives.

Associated registers

There are no associated registers.

Extension registers

There are no extension registers.

Associated logs

There are no associated logs.

PRDDISCR

Register type

Peg

Description

Received frames discarded (PRDDISCR)

Register PRDDISCR is the 1-minute collection of the number frames the system receives frames that the system discards because of errors other than CRC errors.

Associated registers

There are no associated registers.

Extension registers

There are no extension registers.

Associated logs

There are no associated logs.

PRDDISCT

Register type

Peg

Description

Transmit frames discarded (PRDDISCT)

Register PRDDISCT is the 1-minute collection of the number of transmit frames that the system discards.

Associated registers

There are no associated registers.

Extension registers

There are no extension registers.

Associated logs

There are no associated logs.

PRDREJRX

Register type

Peg

Description

Reject (REJ) frames received (PRDREJRX)

Register PRDREJRX is the 1-minute collection of the number of REJ frames the system receives from the far end.

Associated registers

There are no associated registers.

Extension registers

There are no extension registers.

Associated logs

There are no associated logs.

PRDREJTX

Register type

Peg

Description

Reject frames (REJ) transmitted (PRDREJTX)

Register PRDREJTX is the 1-minute collection of the number of REJ frames the ISDN signaling processor transmits.

Associated registers

There are no associated registers.

Extension registers

There are no extension registers.

Associated logs

There are no associated logs.

PRDRNRRX

Register type

Peg

Description

Receiver not ready (RNR) frames received (PRDRNRRX)

Register PRDRNRRX is the 1-minute collection of the number of frames the system from the far-end device receives.

Associated registers

There are no associated registers.

Extension registers

There are no extension registers.

Associated logs

There are no associated logs.

PRDRNRTX

Register type

Peg

Description

Receiver not ready (RNR) frames transmitted (PRDRNRTX)

Register PRDRNRTX is the 1-minute collection of the number of RNR frames the ISDN signaling processor transmits.

Associated registers

There are no associated registers.

Extension registers

There are no extension registers.

Associated logs

There are no associated logs.

PRDS0RX

Register type

Peg

Description

Correctly received service access point identifier (SAPI) 0 frames (PRDSORX)

Register PRDS0RX is the 1-minute collection of the number of SAPI 0 frames the system correctly receives.

Associated registers

There are no associated registers.

Extension registers

There are no extension registers.

Associated logs

There are no associated logs.

PRDS0TX

Register type

Peg

Description

Correctly transmitted service access point identifier (SAPI) 0 frames (PRDSOTX)

Register PRDS0TX is the 1-minute collection of the number of SAPI 0 frames that transmit correctly.

Associated registers

There are no associated registers.

Extension registers

There are no extension registers.

Associated logs

There are no associated logs.

PRDSBMRX

Register type

Peg

Description
Link resets, far-end device (PRDSBMRX)

Register PRDSBMRX is the 1-minute collection of the number of link resets the far-end device causes.

Associated registers
There are no associated registers.

Extension registers
There are no extension registers.

Associated logs
There are no associated logs.

PRDSBMTX

Register type
Peg

Description
Link resets, ISDN signaling processor (PRDSBMRX)

Register PRDSBMRX is the 1-minute collection of the number of link resets the ISDN signaling processor causes.

Associated registers
There are no associated registers.

Extension registers
There are no extension registers.

Associated logs
There are no associated logs.

PRFLSHED

Register type
Peg

Description
Primary rate access (PRA) flow shed (PRFLSHED)

Register PRFLSHED is the 1-minute collection of the number of PRA Q.931 messages the PRA flow control system discards. The system discards a PRA Q.931 message when PRA overload controls are turned on. The system also discards a message when the peripheral module has excessive numbers of messages that queue in the PRA flow control system.

Associated registers

There are no associated registers.

Extension registers

There are no extension registers.

Associated logs

There are no associated logs.

PRDL2SVD

Register type

Peg

Description

PRI D-channel layer 2 service disruptions

Register PRDL2SVD is the 15 min collection of the number of PRA Q.921 layer 2 service disruptions that occur on PRI interfaces. This register monitors the following error conditions:

- link resets occurring on layer 2
- overflow of received frame buffer area

The system detects these disruptions at the ISDN signaling processor and reports the disruptions to the computing module (CM). The counts are valid only for Northern Telecom National ISDN (NTNI) PRA D channels.

Register PRDL2SVD is 16-bit. When this register reaches it capacity, the register remains pegged until the system resets the register. The system resets the register at 00:00 and 00:30 minutes every hour.

Associated registers

Register PRDL2SVD is the sum of the link reset occurrences on layer 2 and the overflow of the received frame buffer area. The existing registers, PRDSBMTX and PRDSBMRX, provide the link resets associated with the ISDN signal processor and the far-end device, respectively.

Extension registers

There are no extension registers.

Associated logs

There are no associated logs.

PRDL3SVD

Register type

Peg

Description

PRI D-channel layer 3 service disruptions

Register PRDL3SVD is the 15 min collection of the number of PRA Q.931 layer 3 service disruptions that occur on PRI interfaces. This register monitors the following error conditions:

receipt of messages with invalid protocol discriminator

receipt of messages less than three octets in length

receipt of SETUP messages with call reference flag incorrectly set to 1

receipt of SETUP messages with missing or invalid mandatory information elements (IE)

receipt of messages other than SETUP messages containing an unallocated call reference value

These error conditions are Q.931 messaging errors that are not associated with the call. The system detects these disruptions at the uniform processor (UP) and reports the disruptions to the CM. The counts are valid only for NTNI PRA D-channels.

Register PRDL2SVD is 16-bit. When this register reaches it capacity, the register remains pegged until the system resets the register. The system resets the register at 00:00 and 00:30 minutes every hour.

Associated registers

There are no associated registers.

Extension registers

There are no extension registers.

Associated logs

There are no associated logs.

Description

Primary rate access facility

Primary rate access facility (PRAFAC) measures message traffic that is generated by network ring again (NRAG) on primary rate access (PRA) D channels. NRAG on PRA uses connectionless signaling on PRA, that is, no call is present.

Message traffic that is measured in PRAFAC includes origination, termination, and tandem messages. Counts are made for facility messages that are used to transfer high-layer protocols and for facility reject messages, which are sent when a facility message cannot be routed.

PRAFAC data can help identify network problems by measuring facility and facility reject messages from switch to switch.

OM group PRAFAC provides one tuple for each PRA trunk group. The following table lists the key and info fields associated with OM group PRAFAC.

Key field	Info field
COMMON_LANGUAGE_NAME identifies trunk CLLI	none

Related functional groups

The ISDN functional group is associated with OM group PRAFAC.

Registers

The following table lists the registers associated with OM group PRAFAC and what they measure. For a description of a register, click on the register name.

Registers for OM group PRAFAC

Register name	Measures
DISCNGST	Facility messages discarded due to switch congestion
DISNORTX	Facility messages discarded due to no routing translation

Registers for OM group PRAFAC

Register name	Measures
DISRTUNA	Discarded facility messages due to route unavailable
FACMSGOR	Facility messages originated
FACMSGTM	Facility messages terminated
FACMSGTR	Facility messages transmitted
REJCNGST	Facility reject messages originated due to switch congestion
REJMSGDS	Facility reject messages discarded
REJMSGOR	Facility reject messages originated
REJMSGTM	Facility reject messages terminated
REJMSGTR	Facility reject messages transmitted
REJNORTX	Facility reject messages originated due to no routing translation
REJRTUNA	Facility reject messages originated due to route unavailable

DISCNGST

Register type

Peg

Description

Facility messages discarded due to switch congestion

Facility messages discarded due to switch congestion (DISCNGST) counts facility messages that are discarded because of congestion in the DMS.

Associated registers

There are no associated registers.

Extension registers

There are no extension registers.

Associated logs

There are no associated logs.

DISNORTX

Register type

Peg

Description

Facility messages discarded due to no routing translation

Facility messages discarded due to no routing translation (DISNORTX) counts facility messages that are discarded because no route list was found in table MSGRTE.

Associated registers

There are no associated registers.

Extension registers

There are no extension registers.

Associated logs

There are no associated logs.

DISRTUNA

Register type

Peg

Description

Discarded facility messages due to route unavailable

Discarded facility messages due to route unavailable (DISRTUNA) counts facility messages that are discarded because the D channel route is not available.

Associated registers

There are no associated registers.

Extension registers

There are no extension registers.

Associated logs

There are no associated logs.

FACMSGOR

Register type

Peg

Description

Facility messages originated

Facility messages originated (FACMSGOR) counts facility messages that are created and sent on a primary rate access (PRA) D channel.

Associated registers

There are no associated registers.

Extension registers

There are no extension registers.

Associated logs

There are no associated logs.

FACMSGTM

Register type

Peg

Description

Facility messages terminated

Facility messages terminated (FACMSGTM) counts received facility messages that terminate at the DMS.

Associated registers

There are no associated registers.

Extension registers

There are no extension registers.

Associated logs

There are no associated logs.

FACMSGTR

Register type

Peg

Description

Facility messages transmitted

Facility messages transmitted (FACMSGTR) counts facility messages that are received at a tandem switch and are transmitted to another switch. Both incoming and outgoing trunk groups are incremented.

Associated registers

There are no associated registers.

Extension registers

There are no extension registers.

Associated logs

There are no associated logs.

REJCNGST

Register type

Peg

Description

Facility reject messages originated due to switch congestion

Facility reject messages originated due to switch congestion (REJCNGST) counts facility reject messages that originate at the DMS because of congestion at the DMS. Facility reject messages are sent back to the originators whenever it is not possible to route that facility message.

Associated registers

There are no associated registers.

Extension registers

There are no extension registers.

Associated logs

There are no associated logs.

REJMSGDS

Register type

Peg

Description

Facility reject messages discarded

Facility reject messages discarded (REJMSGDS) counts facility reject messages that are discarded by the DMS whenever the message cannot be routed.

Associated registers

There are no associated registers.

Extension registers

There are no extension registers.

Associated logs

There are no associated logs.

REJMSGOR

Register type

Peg

Description

Facility reject messages originated

Facility reject messages originated (REJMSGOR) counts facility reject messages that are created and sent on a primary rate access (PRA) D channel.

Associated registers

There are no associated registers.

Extension registers

There are no extension registers.

Associated logs

There are no associated logs.

REJMSGTM

Register type

Peg

Description

Facility reject messages terminated

Facility reject messages terminated (REJMSGTM) counts received facility reject messages that terminate at the DMS.

Associated registers

There are no associated registers.

Extension registers

There are no extension registers.

Associated logs

There are no associated logs.

REJMSGTR

Register type

Peg

Description

Facility reject messages transmitted

Facility reject messages transmitted (REJMSGTR) counts facility reject messages that do not terminate at the DMS but are transmitted to another switch. Both incoming and outgoing trunk groups are incremented.

Associated registers

There are no associated registers.

Extension registers

There are no extension registers.

Associated logs

There are no associated logs.

REJNORTX

Register type

Peg

Description

Facility reject messages originated due to no routing translation

Facility reject messages originated due to no routing translation (REJNORTX) counts facility reject messages that originate at the DMS because no translation was found for the destination address.

Associated registers

There are no associated registers.

Extension registers

There are no extension registers.

Associated logs

There are no associated logs.

REJRTUNA

Register type

Peg

Description

Facility reject messages originated due to route unavailable

Facility reject messages originated due to route unavailable (REJRTUNA) counts facility reject messages that originate at the DMS due to network failure.

Associated registers

There are no associated registers.

Extension registers

There are no extension registers.

Associated logs

There are no associated logs.

PRASERV

Description

OM group Primary Rate Access Service (PRASERV) provides an overview of the message traffic generated on the PRI D channel of each trunk group by connectionless signaling on PRI. Specifically, it shows the number of times ANI delivery was attempted during an all trunks busy (ATB) condition. It has a single register, ANIATBDA (ANI all trunks busy delivery attempted).

The following table lists the key and info fields associated with OM group PRASERV:

Key field	Info field
COMMMON_LANGUAGE_NAME identifies a trunk CLLI.	None

Related functional groups

There are no functional groups associated with OM group PRASERV.

Registers

The following table lists the registers associated with OM group PRASERV and what they measure. For a detailed description of a register, click on the register name.

Registers for OM group PRASERV

Register name	Measures
ANIATBDA	ANI all trunks busy delivery attempted

ANIATBDA

Register type
Peg

Description
Each occurrence of ANI delivery attempted during an ATB condition causes the ANIATBDA peg to increment.

Associated registers
None

Extension registers

None

Associated logs

None

Description

PRIMWIC is a multiple tuple operational measurement (OM) group that collects and displays counts for every primary rate interface (PRI) access interface that has a Message Waiting Indicator (MWI) Control feature provisioned. The PRIMWIC OM group is maintained on a 30-minute basis.

The following table lists the key and info fields associated with OM group PRIMWIC.

Key field	Info field
Logical terminal identifier (LTID) for PRI interface	none

Related functional groups

NI0-PRI Message Services (Functional Group NI-00037) is associated with OM group PRIMWIC.

Registers

The following table lists the registers associated with OM group PRIMWIC and what they measure. For a description of a register, click on the register name.

Registers for OM group PRIMWIC

Register name	Measures
ACTATT	message waiting indication [MWI] activation attempts
DEACTATT	MWI deactivation attempts
UNSUCACT	unsuccessful MWI activation attempts
UNSUCDAC	unsuccessful MWI deactivation attempts
TASKRFSD	MWI control task refused
TMREXPRD	MWI control timer expired
NOTFUNAV	notification unavailable to destination DN

Registers for OM group PRIMWIC

Register name	Measures
RESUNAV	resource unavailable
INVARG	invalid argument

ACTATT

Register type

Peg

Description

Register ACTATT (message waiting indication [MWI] activation attempts) is the total number of MWI activation attempts received from message storage and retrieval (MSR) using the MWI Control feature.

Associated registers

There are no associated registers.

Extension registers

There are no extension registers.

Associated logs

There are no associated logs.

DEACTATT

Register type

Peg

Description

Register DEACTATT (MWI deactivation attempts) is the total number of MWI deactivation attempts received from an MSR using the MWI Control feature.

Associated registers

There are no associated registers.

Extension registers

There are no extension registers.

Associated logs

There are no associated logs.

UNSUCACT

Register type

Peg

Description

Register UNSUCACT (unsuccessful MWI activation attempts) is the total number of MWI unsuccessful activation attempts received from an MSR using the MWI Control feature.

Associated registers

There are no associated registers.

Extension registers

There are no extension registers.

Associated logs

There are no associated logs.

UNSUCDAC

Register type

Peg

Description

Register UNSUCDAC (unsuccessful MWI deactivation attempts) is the total number of MWI unsuccessful deactivation attempts received from an MSR using the MWI Control feature.

Associated registers

There are no associated registers.

Extension registers

There are no extension registers.

Associated logs

There are no associated logs.

TASKRFSD

Register type

Peg

Description

Register TASKRFSD (MWI control task refused) is pegged when the signaling system 7 (SS7) network is either currently overloaded or cannot handle the request.

Associated registers

There are no associated registers.

Extension registers

There are no extension registers.

Associated logs

There are no associated logs.

TMREXPRD

Register type

Peg

Description

Register TMREXPRD (MWI control timer expired) is pegged when timer MWI-T1 (i.e. OFCENG parameter NMS_ACKNOWLEDGEMENT_TIMEOUT) expires before indicating a successful or unsuccessful completion of attempt.

Associated registers

There are no associated registers.

Extension registers

There are no extension registers.

Associated logs

There are no associated logs.

NOTFUNAV

Register type

Peg

Description

Register NOTFUNAV (notification unavailable to destination DN) is pegged when notification cannot be provided to the destination DN for some short term reason, such as when a line is temporarily out of service.

Associated registers

There are no associated registers.

Extension registers

There are no extension registers.

Associated logs

There are no associated logs.

RESUNAV

Register type

Peg

Description

Register RESUNAV (resource unavailable) is pegged when the PRI with MWI Control subscription exceeds the number of simultaneously allowable unacknowledged MWI control requests.

Associated registers

There are no associated registers.

Extension registers

There are no extension registers.

Associated logs

There are no associated logs.

INVARG

Register type

Peg

Description

Register INVAARG (invalid argument) is pegged when an argument, such as control type, destination DN, or MSR ID, provided in the MWI control request is invalid.

Associated registers

There are no associated registers.

Extension registers

There are no extension registers.

Associated logs

There are no associated logs.

Description

PRI services (PRISVCS)

The OM group PRISVCS records information on PRI SERVICES. Two-B-channel transfer (TBCT) associates with the ISDN NI-2-PRI interface. The TBCT uses this OM group. NI-2 PRI interfaces can terminate on the following:

- Intelligent Peripherals (IP)
- Private Branch Exchanges (PBX)
- Customer Premises Equipment (CPE)

TBCT allows a user on a NI-2-PRI interface to request the SSP to connect two calls on the interface that are not related. The SSP releases the B-channels to the NI-2-PRI interface after the SSP directly connects the two users with a speech path. The NI-2 PRI B-channels that the SSP releases are available for other calls.

For each LTID (NI-2-PRI trunk group) supplied in table LTDATA, with the TBCT option, the system creates two OM registers.

The OM group PRISVCS contains two registers that count the following NI-2 PRI services events:

- One register counts the total number of TBCT attempts.
- One register counts the total number of TBCT successes.

The following table lists the key and info fields associated with OM group PRISVCS.

Key field	Info field
<COMMON_LANGUAGE_NAME (CLLI)>	Contains three parts: TRKDIR, NCCT, and NWCCT.

The TRKDIR is the trunk group direction. The fixed TRKDIR for TRK are as follows:

- IC—incoming trunk
- OG—outgoing trunk
- 2W—two-way trunk

The NCCT is the total number of trunk circuits in the group.

The NWCCT is the number of trunk circuits available for service at the end of the reporting period.

Related functional groups

There are no related functional groups.

Registers

The following table lists the registers associated with OM group PRISVCS and what they measure. For a description of a register, click on the register name.

Registers for OM group PRISVCS

Register name	Measures
TBCTATT	Two-B-Channel Transfer (TBCT) attempts
TBCTSUCC	Two-B-Channel Transfer (TBCT) successful connections

TBCTATT

Register type
Peg

Description
Two-B-Channel Transfer (TBCT) attempts (TBCTATT)

Register TBCTATT stores the number of TBCT attempts the SSP recognizes.

Associated registers
TBCTSUCC

Extension registers
There are no extension registers.

Associated logs
There are no associated logs.

TBCTSUCC

Register type
Peg

Description

Two-B-Channel Transfer (TBCT) successful connections (TBCTSUCC)

Register TBCTSUCC stores the total number of successful TBCT connections and next B-channel releases.

Associated registers

TBCTATT

Extension registers

There are no extension registers.

Associated logs

There are no associated logs.

Description

Call park operational measurement

PRKOM provides information on feature usage, traffic measurements, and failures due to software and hardware resource provisioning for the integrated business network (IBN) station features Call Park (CPK) and Directed Call Park (DCPK).

Call Park allows a 500/2500 set or a directory number (DN) appearance on a business set to park calls against its own DN. The parked calls can be retrieved from any station by dialing the call park retrieve access code, or by activating the call park key and dialing the DN against which the call is parked.

Registers CPKSUCC, CPKFLIM, CPKRCLL, and CPKABAN are incremented for each subscriber group. CPKFEXT and CPKFOVF are incremented for the system.

Directed Call Park allows 500/2500 and business sets to park calls against any valid IBN station DN. The assignment of a security code to a DN prevents retrieval of calls that are parked against that DN unless a valid security code is entered. IBNGRP_SECINVAL counts the number of invalid security codes that are dialed.

On business sets, the recall is always presented to the DN that parked the call. A recall to a busy station causes the recall timer to be reset.

The party attempting to retrieve a parked call must be in the same subscriber group as the party against which the call was originally parked. An invalid attempt to retrieve a parked call is routed to reorder treatment. Invalid attempts include:

- parked party abandoned before retrieval attempt
- entry of invalid security codes
- resources unavailable (network connection, for example)

A parked call may still be retrieved during the recall to the parking party, provided the recall remains unanswered.

Multiple Appearance Directory Number (MADN) group members with either Single Call Arrangement (SCA) or Multiple Call Arrangement (MCA) have access to DCPK. Since all members of a MADN group share the same DN, only one call may be parked for each MADN group at any time. DCPK recall rings only the station of the MADN member that originally parked the call. For SCA members, the recall occurs only if the group is idle.

The registers for CPK, except CPKSUCC, also monitor the events in DCPK. When a call is successfully parked by DCPK, DCPKSUCC is incremented.

OM group PRKOM provides one tuple for each subscriber group. The following table lists the key and info fields associated with OM group PRKOM.

Key field	Info field
none	OMIBNGINFO identifies the name of the subscriber group, as defined in field CUSTNAME of table CUSTHEAD.

Call Park is implemented through option OPTLIST in table IBNLINES, or when the field FEAT is assigned PRK in table KSETFEAT.

Directed Call Park is implemented through option OPTLIST in table IBNLINES, or when the field FEAT is assigned DCPK in table KSETFEAT.

The number of agents that can use this feature at one time is specified by parameter FTRQAGENTS in table OFCENG.

The number of call process wakeups in the system is specified by parameter NUMCPWAKE in table OFCENG.

Related functional groups

The following functional groups are associated with OM group PRKOM:

- IBN Integrated Business Network
- 500/2500 Business Set

Registers

The following table lists the registers associated with OM group PRKOM and what they measure. For a description of a register, click on the register name.

Registers for OM group PRKOM

Register name	Measures
CPKABAN	Call park abandon
CPKFLIM	Call park failure limit
CPKRCLL	Call park recall
CPKSUCC	Call park successful
DCPKSUCC	Directed call park successful

CPKABAN

Register type
Peg

Description
Call park abandon

CPKABAN is incremented when a parked call is abandoned before it is retrieved or before the recall is answered.

Associated registers
There are no associated registers.

Extension registers
There are no extension registers.

Associated logs
There are no associated logs.

CPKFLIM

Register type
Peg

Description
Call park failure limit

CPKFLIM counts calls that cannot be parked because the maximum number of calls are already parked. Calls that are counted by CPKFLIM are routed to subscriber group overflow treatment.

The maximum number of calls is specified in field CPKMAXNO in table CUSTHEAD.

Associated registers

TRMT3_GCGRO is incremented when a call is routed to the subscriber group overflow treatment.

Extension registers

There are no extension registers.

Associated logs

There are no associated logs.

CPKRCLL

Register type

Peg

Description

Call park recall

CPKRCLL is incremented when a station receives a recall from a parked call.

- The station is recalled for one of two reasons:
- the no-answer recall timer expired before the call was retrieved

the parked party flashed, forcing a recall even though the timer had not expired

The no-answer timer is set in field CPKRECTO in table CUSTSTN.

Associated registers

IBNSG_DARECALL is incremented when an attendant parks and recalls a call.

Extension registers

There are no extension registers.

Associated logs

There are no associated logs.

CPKSUCC

Register type

Peg

Description

Call park successful

CPKSUCC is incremented when a call is successfully parked in the subscriber group.

The value for this register is zero unless feature package NTX414AA or NTX571AA is present.

Associated registers

There are no associated registers.

Extension registers

There are no extension registers.

Associated logs

There are no associated logs.

DCPKSUCC

Register type

Peg

Description

Directed call park successful

DCPKSUCC counts calls that are successfully parked against any directory number, using the Direct Call Park feature.

This register will read zero unless feature package NTX414AA or NTX517AA are present.

Associated registers

There are no associated registers.

Extension registers

There are no extension registers.

Associated logs

There are no associated logs.

Description

Preroute peg PRP counts call attempts to specific codes. PRP provides network management statistics that are used for traffic studies. PRP registers indicate when code block (CBK) controls should be implemented.

OM group PRP provides one tuple for each active preroute control. The maximum number of active network management controls is 256.

The following table lists the key and info fields associated with OM group PRP.

Key field	Info field
none	PRP_OMINFO consists of the following parts: CT, DR, and SNPA, or STS.

CT is the code type. The fixed CT for PRP are as follows:

- CCODE Country code
- ACODE Area code
- NAC Non-area digits
- PFX Prefix digits

DR is the digit register, the called number code for which the control is effective.

SNPA is the serving number plan area or serving translation scheme that is the origin of calls that are to be monitored by the control. If the code type is CCODE, then SNPA is set to 999.

Related functional groups

There are no related functional groups.

Registers

The following table lists the registers associated with OM group PRP and what they measure. For a description of a register, click on the register name.

Registers for OM group PRP

Register name	Measures
PRPCNT	Preroute peg count

PRPCNT

Register type
Peg

Description
Preroute peg count

PRPCNT counts calls that originated in the SNPA and were directed to the destination code to which PRPCNT applies.

Associated registers
There are no associated registers.

Extension registers
There are no extension registers.

Associated logs
NWM111 is generated when preroute peg controls are activated or deactivated.

PSN_ERDC

Description

OM group Programmable Service Node (PSN) Error — Data Communication Level (PSN_ERDC) records the number of errors reported by the PSN data communication layer.

The following table lists the key and info fields associated with OM group PSN_ERDC:

Key field	Info field
None	None

Related functional groups

There are no functional groups associated with OM group PSN_ERDC.

Registers

The following table lists the registers associated with OM group PSN_ERDC and what they measure. For a detailed description of a register, click on the register name.

Registers for OM group PSN_ERDC

Register name	Measures
MSGSIZE	Service Control Unit (SCU) Message Size Exceeded Maximum Size
HBFAIL	Heartbeat Failure
NOSCOMM	No Service Control Unit (SCU) Communication
DCOMHDR	Data Communication Header Error
UAPPLMBS	User Application Mail Box Problem
MSGDROP	Data Communication Drop Internal Message
EMSGDROP	Data Communication Drop External Message

MSGSIZE

Register type
Peg

Description

MSGSIZE is pegged when the PSN detects that an SCU message exceeded the maximum size.

Associated registers

None

Extension registers

None

Associated logs

PSN101

HBFAIL

Register type

Peg

Description

HBFAIL is pegged when the PSN fails to receive a heartbeat from the SCU.

Associated registers

None

Extension registers

None

Associated logs

PSN100

NOSCOMM

Register type

Peg

Description

NOSCOMM is pegged when the PSN is unable to establish SCU communication.

Associated registers

None

Extension registers

None

Associated logs

PSN100

DCOMHDR

Register type

Peg

Description

DCOMHDR is pegged when the PSN rejects a message from the SCU when it discovers an error in the message header.

Associated registers

None

Extension registers

None

Associated logs

PSN101

UAPPLMBS

Register type

Peg

Description

UAPPLMBS is pegged when the data communication of the PSN encounters a problem sending a message to a user application.

Associated registers

None

Extension registers

PSN102

Associated logs

None

MSGDROP

Register type

Peg

Description

MSGDROP is pegged when the data communication level of the PSN drops a message sent to it from another PSN source.

Associated registers

None

Extension registers

None

Associated logs

PSN102

EMSGDROP

Register type

Peg

Description

EMSGDROP is pegged when the data communication of the PSN drops a message sent to it from an outside source.

Associated registers

None

Extension registers

None

Associated logs

PSN101

PSN_ERFM

Description

OM group Programmable Service Node (PSN) Error in Finite State Machine (PSN_ERFM) records the number of errors reported by the PSN finite state machine.

The following table lists the key and info fields associated with OM group PSN_ERFM:

Key field	Info field
None	None

Related functional groups

There are no functional groups associated with OM group PSN_ERFM.

Registers

The following table lists the registers associated with OM group PSN_ERFM and what they measure. For a detailed description of a register, click on the register name.

Registers for OM group PSN_ERFM (Sheet 1 of 2)

Register name	Measures
SCUTMOUT	SCU Time Out
UNEXPENF	Unexpected Error Message — Nonfatal
UNEXPEF	Unexpected Error Message — Fatal
NOUTR	Universal Tone Receiver (UTR) Unavailable
NOSTR	Specialized Tone Receiver (STR) Unavailable
NOCNF	Conference Port Unavailable
UNSUPTRK	Unsupported Trunk Type
BCINCOMP	Bearer Capability Incompatible
PRMEXTUN	Primitive Extension Block Not Available
SCREXTUN	Scratchpad Extension Block Not Available

Registers for OM group PSN_ERFM (Sheet 2 of 2)

Register name	Measures
DIGCOLFL	Digit Collection Failed
AGNAVAIL	Agent Not Available
PRIMSTFL	Primitive Invalid For Current Port State
PROMPTFL	Prompt Failure
NOIDLMSG	No Idle Message
MSGFL	Message Failure
SFTWERRv	Software Error
UNSIGTYP	Unsupported Signaling Type
BADAGST	Bad Agent State
DUPMSG	Duplicate Siginfo Message Received
AGNDTKGP	Agent Not Datafilled in Table TRKGRP
MMSIPARM	Missing Mandatory SigInfo Parameter

SCUTMOUT

Register type

Peg

Description

SCUTMOUT is pegged when the SCU new call timer has expired due to no response from the SCU on a new call event.

Associated registers

None

Extension registers

None

Associated logs

PSN201

UNEXPENF

Register type

Peg

Description
UNEXPENF is pegged when the PSN encounters a non-fatal unexpected peripheral message.

Associated registers
None

Extension registers
None

Associated logs
PSN204

UNEXPEF

Register type
Peg

Description
UNEXPEF is pegged when the PSN receives a fatal unexpected peripheral message.

Associated registers
None

Extension registers
None

Associated logs
PSN204

NOUTR

Register type
Peg

Description
NOUTR is pegged when the PSN encounters the problem that the UTR is not available for digit collection.

Associated registers
None

Extension registers
None

Associated logs
PSN206

NOSTR

Register type

Peg

Description

NOSTR is pegged when the PSN encounters the problem that the STR is not available for tone monitoring.

Associated registers

None

Extension registers

PSN206

Associated logs

None

NOCNF

Register type

Peg

Description

NOCNF is pegged when the PSN finds no conference port available for bridging.

Associated registers

None

Extension registers

None

Associated logs

PSN206

UNSUPTRK

Register type

Peg

Description

UNSUPTRK is pegged when the destination trunk in a Connect primitive is not a supported type for PSN.

Associated registers

None

Extension registers
None

Associated logs
PSN208

BCINCOMP

Register type
Peg

Description
BCINCOMP is pegged when PSN tries to connect/reconnect two trunks where the bearer capability of the two trunks is incompatible.

Associated registers
None

Extension registers
None

Associated logs
PSN208

PRMEXTUN

Register type
Peg

Description
PRMEXTUN is pegged when the PSN finds no primitive extension block available, a software resources problem.

Associated registers
None

Extension registers
None

Associated logs
PSN205

SCREXTUN

Register type
Peg

Description

SCREXTUN is pegged when the PSN finds no scratchpad extension block available, a software resources problem.

Associated registers

None

Extension registers

None

Associated logs

PSN205

DIGCOLFL

Register type

Peg

Description

DIGCOLFL is pegged when PSN fails to start/stop digit collection on a port.

Associated registers

None

Extension registers

None

Associated logs

PSN208

AGNAVAIL

Register type

Peg

Description

AGNAVAIL is pegged when PSN cannot terminate to an agent due to no idle members.

Associated registers

None

Extension registers

None

Associated logs

PSN208

PRIMSTFL

Register type
Peg

Description
PRIMSTFL is pegged when the PSN receives a primitive that is invalid for the current port state.

Associated registers
None

Extension registers
None

Associated logs
PSN203

PROMPTFL

Register type
Peg

Description
PROMPTFL is pegged when PSN cannot play a prompt.

Associated registers
None

Extension registers
None

Associated logs
PSN208

NOIDLMSG

Register type
Peg

Description
NOIDLMSG is pegged when PSN tries to play a message when there are no idle messages available.

Associated registers
None

Extension registers
None

Associated logs

PSN206

MSGFL

Register type

Peg

Description

MSGFL is pegged when PSN cannot play a message.

Associated registers

None

Extension registers

None

Associated logs

PSN208

SFTWERR

Register type

Peg

Description

SFTWERR is pegged when the PSN encounters an internal error during the processing of a primitive.

Associated registers

None

Extension registers

None

Associated logs

PSN208

UNSIGTYP

Register type

Peg

Description

UNSIGTYP is pegged when the signaling information parameter is sent to a PSN Agent that is not supported for that signaling type.

Associated registers

None

Extension registers

None

Associated logs

PSN208

BADAGST

Register type

Peg

Description

BADAGST is pegged when the PSN receives a primitive that is not supported for the current agent state.

Associated registers

None

Extension registers

None

Associated logs

PSN208

DUPMSG

Register type

Peg

Description

DUPMSG is pegged when a PSN Agent receives multiple IAMs or SETUPs.

Associated registers

None

Extension registers

None

Associated logs

PSN208

AGNDTKGP

Register type

Peg

Description

AGNDTKGP is pegged when a PSN Agent is not datafilled in table TRKGRP.

Associated registers

None

Extension registers

None

Associated logs

PSN208

MMSIPARM

Register type

Peg

Description

MMSIPARM is pegged when the signaling information parameter that is sent to a PSN Agent is missing.

Associated registers

None

Extension registers

None

Associated logs

PSN208

PSN_ERPS

Description

OM group Programmable Service Node (PSN) Primitive Processing Error (PSN_ERPS) record the number of errors reported by the PSN primitive processor.

The following table lists the key and info fields associated with OM group PSN_ERPS:

Key field	Info field
None	None

Related functional groups

There are no functional groups associated with OM group PSN_ERPS.

Registers

The following table lists the registers associated with OM group PSN_ERPS and what they measure. For a detailed description of a register, click on the register name.

Registers for OM group PSN_ERPS (Sheet 1 of 2)

Register name	Measures
MSMPARM	Missing Mandatory Parameter
OFRPARM	Out Of Range Parameter
PRMUSRMS	Primitive-User Class Mismatch
MBPRDCC	Mail Box Problem — Data Communication
MBPRPSA	Mail Box Problem Primitive Server Audit
AUDPSF	Audit Fails To Receive Port Status
AUDPSM	SCU Port Status Mismatch
PSNRTFL	Port Not In PSNROUTE
AGNACT	Agent Not Active In PSN Call
MAXBREX	Maximum Ports To Bridge Exceeded

Registers for OM group PSN_ERPS (Sheet 2 of 2)

Register name	Measures
MANDPDEF	Mandatory Parameter Decode Failure
OPPRMDEF	Optional Parameter Decode Failure
NMINNOBP	Not Minimum Number Of Ports To Bridge
PSNMSGFL	Message Index Not in Table PSNMSGIX
PTDNRS	Port Taken Down Due To Reset Switch Primitive
PDRESTWM	Port Down Due To Warm Restart
DECODEFL	Header Decode Failure
BADMACRT	Bad Macro Tag
MAXPMEXC	Maximum Primitives Exceeded

MSMPARM

Register type
Peg

Description
MSMPARM is pegged when the PSN detects a Missing Mandatory Parameter error condition from the primitive sent by the SCU.

Associated registers
None

Extension registers
None

Associated logs
PSN202

OFRPARM

Register type
Peg

Description
OFRPARM is pegged when the PSN detects an Out Of Range error condition from the primitive sent by the SCU.

Associated registers

None

Extension registers

None

Associated logs

PSN202

PRMUSRMS

Register type

Peg

Description

PRMUSRMS is pegged when the PSN receives a primitive that does not belong to the user class.

Associated registers

None

Extension registers

None

Associated logs

PSN207

MBPRDCC

Register type

Peg

Description

MBPRDCC is pegged when the PSN encounters a problem sending an internal message to the data communication mail box.

Associated registers

None

Extension registers

None

Associated logs

None

MBPRPSA

Register type

Peg

Description

MBPRPSA is pegged when the PSN Audit encounters the problem of unavailable mail box resources.

Associated registers

None

Extension registers

None

Associated logs

None

AUDPSF

Register type

Peg

Description

AUDPSF is pegged when the PSN Audit fails to receive Port Status from the SCU.

Associated registers

None

Extension registers

None

Associated logs

PSN400

AUDPSM

Register type

Peg

Description

AUDPSM is pegged when the PSN Audit encounters mismatched Port Status from the SCU and mismatched status of the agent on the PSN.

Associated registers

None

Extension registers

None

Associated logs

PSN400

PSNRTFL

Register type

Peg

Description

PSNRTFL is pegged when the PSN receives a destination trunk in the Connect primitive that is not found in table PSNROUTE.

Associated registers

None

Extension registers

None

Associated logs

PSN207

AGNACT

Register type

Peg

Description

AGNACT is pegged when the PSN receives a primitive for an agent that is not active in a PSN call.

Associated registers

None

Extension registers

None

Associated logs

PSN207

MAXBREX

Register type

Peg

Description

MAXBREX is pegged every time the PSN encounters a bridge primitive with more than the maximum number of ports to bridge.

Associated registers

None

Extension registers
None

Associated logs
PSN207

MANDPDEF

Register type
Peg

Description
MANDPDEF is pegged every time the PSN encounters mandatory parameter decoding failure.

Associated registers
None

Extension registers
None

Associated logs
PSN202

OPPRMDEF

Register type
Peg

Description
OPPRMDEF is pegged when the PSN encounters an optional parameter decoding failure.

Associated registers
None

Extension registers
None

Associated logs
PSN202

NMINNOBP

Register type
Peg

Description
This register is pegged when the PSN encounters too few ports to bridge in the bridge primitive.

Associated registers
None

Extension registers
None

Associated logs
PSN207

PSNMSGFL

Register type
Peg

Description
PSNMSGFL is pegged when the PSN encounters a primitive with a message index not datafilled in table PSNMSGIX.

Associated registers
None

Extension registers
None

Associated logs
PSN207

PTDNRS

Register type
Peg

Description
PTDNRS is pegged when a PSN port is taken down due to a reset switch primitive.

Associated registers
None

Extension registers
None

Associated logs
PSN401

PDRESTWM

Register type

Peg

Description

PDRESTWM is pegged when a port is taken down due to a warm restart.

Associated registers

None

Extension registers

None

Associated logs

None

DECODEFL

Register type

Peg

Description

DECODEFL is pegged when the PSN detects a header decode failure in a primitive received.

Associated registers

None

Extension registers

None

Associated logs

PSN202

BADMACRT

Register type

Peg

Description

BADMACRT is pegged when the PSN detects a bad macro tag in a macro received.

Associated registers

None

Extension registers

None

Associated logs

PSN202

MAXPMEXC

Register type

Peg

Description

MAXPMEXC is pegged when the PSN receives a macro with the number of primitives exceeding the maximum allowed.

Associated registers

None

Extension registers

None

Associated logs

PSN209

PSN_FCTR

Description

OM group PSN Flow Control (PSN_FCTR) record the number of calls blocked by the PSN under flow control.

The following table lists the key and info fields associated with OM group PSN_FCTR:

Key field	Info field
None	None

Related functional groups

There are no functional groups associated with OM group PSN_FCTR.

Registers

The following table lists the registers associated with OM group PSN_FCTR and what they measure. For a detailed description of a register, click on the register name.

Registers for OM group PSN_FCTR

Register name	Measures
SCUCDROP	ANI all trunks busy delivery attempted

SCUCDROP

Register type
Peg

Description
SCUCDROP is pegged every time a call is blocked by the PSN under flow control initiated by SCU.

Associated registers
None

Extension registers

None

Associated logs

None

PSN_NOTF

Description

OM group Programmable Service Node (PSN) Notifications Sent (PSN_NOTF) are pegged each time the PSN sends an event notification message to the service control unit (SCU). One PSN_NOTF register exists for each event notification.

The following table lists the key and info fields associated with OM group PSN_NOTF:

Key field	Info field
None	None

Related functional groups

There are no functional groups associated with OM group PSN_NOTF.

Registers

The following table lists the registers associated with OM group PSN_NOTF and what they measure. For a detailed description of a register, click on the register name.

Registers for OM group PSN_NOTF (Sheet 1 of 2)

Register name	Measures
DIGCOL	Digits Collected
ERRDET	Error Detected
INSTCMPL	Instruction Completed
MSGPLY	Message Played
NEWCALL	New Call
OFFHOOK	Off Hook
ONHOOK	On Hook
PORTSTAT	Port Status
RTEUNAV	Route Not Available
RTESEL	Route Selected

Registers for OM group PSN_NOTF (Sheet 2 of 2)

Register name	Measures
SIGEVENT	Signaling Event
TONEDET	Tone Detected
CURTMDY	Current Time of the Day
INSERVCE	In Service
QRYPORT	Query Port

DIGCOL

Register type
Peg

Description
DIGCOL is pegged every time the PSN sends a Digits Collected event notification to the SCU.

Associated registers
None

Extension registers
None

Associated logs
None

ERRDET

Register type
Peg

Description
ERRDET is pegged every time the PSN sends an Error Detected event notification to the SCU.

Associated registers
None

Extension registers
None

Associated logs
None

INSTCMPL

Register type
Peg

Description
INSTCMPL is pegged every time the PSN sends an Instruction Completed event notification to the SCU.

Associated registers
None

Extension registers
None

Associated logs
None

MSGPLY

Register type
Peg

Description
MSGPLY is pegged every time the PSN sends a Message Played event notification to the SCU.

Associated registers
None

Extension registers
None

Associated logs
None

NEWCALL

Register type
Peg

Description
NEWCALL is pegged every time the PSN sends a New Call event notification to the SCU.

Associated registers
None

Extension registers
None

Associated logs
None

OFFHOOK

Register type
Peg

Description
OFFHOOK is pegged every time the PSN sends an Off-Hook event notification to the SCU.

Associated registers
None

Extension registers
None

Associated logs
None

ONHOOK

Register type
Peg

Description
ONHOOK is pegged every time the PSN sends an On-Hook event notification to the SCU.

Associated registers
None

Extension registers
None

Associated logs
None

PORTSTAT

Register type
Peg

Description

PORTSTAT is pegged every time the PSN sends a Port Status event notification to the SCU.

Associated registers

None

Extension registers

None

Associated logs

None

RTEUNAV

Register type

Peg

Description

RTEUNAV is pegged every time the PSN sends a Route Not Available event notification to the SCU.

Associated registers

None

Extension registers

None

Associated logs

None

RTESEL

Register type

Peg

Description

RTESEL is pegged every time the PSN sends a Route Selected event notification to the SCU.

Associated registers

None

Extension registers

None

Associated logs

None

SIGEVENT

Register type

Peg

Description

SIGEVENT is pegged every time the PSN sends a Signaling Event event notification to the SCU.

Associated registers

None

Extension registers

None

Associated logs

None

TONEDET

Register type

Peg

Description

TONEDET is pegged every time the PSN sends a Tone Detected event notification to the SCU.

Associated registers

None

Extension registers

None

Associated logs

None

CURTMDY

Register type

Peg

Description

CURTMDY is pegged every time the PSN sends a Current Time of the Day event notification to the SCU.

Associated registers

None

Extension registers

None

Associated logs

None

INSERVCE

Register type

Peg

Description

INSERVCE is pegged every time the PSN sends an In Service event notification to the SCU.

Associated registers

None

Extension registers

None

Associated logs

None

QRYPORT

Register type

Peg

Description

QRYPORT is pegged every time the PSN sends a Query Port event notification to the SCU.

Associated registers

None

Extension registers

None

Associated logs

None

PSN_PRIM

Description

OM group Programmable Service Node (PSN) Primitives Received (PSN_PRIM) records the number of each service control unit (SCU) primitive received by the PSN.

The following table lists the key and info fields associated with OM group PSN_PRIM:

Key field	Info field
None	None

Related functional groups

There are no functional groups associated with OM group PSN_PRIM.

Registers

The following table lists the registers associated with OM group PSN_PRIM and what they measure. For a detailed description of a register, click on the register name.

Registers for OM group PSN_PRIM (Sheet 1 of 2)

Register name	Measures
CDRPT	Collect Digits and Report
CNECT	Connect
DISCNECT	Disconnect
HOLD	Hold
MONITOR	Monitor
MUTE	Mute
PLAYMSG	Play Message
PPCDRPT	Play Prompt, Collect Digits, and Report
QURYPORT	Query Port
RECNECT	Reconnect

Registers for OM group PSN_PRIM (Sheet 2 of 2)

Register name	Measures
RSETSWCH	Reset Switch
SETBLREC	Set Billing Record
STOPMSG	Stop Message
XSIGINFO	Transmit Signal Information
BRIDGE	Bridge
NCALLACC	New Call Accepted
NCALLREJ	New Call Rejected
HEARTBT	Heartbeat
ERRDETP	Error Detected
QURYMDY	Query Time of Day
SETIPADD	Set IP Address
PRTSTAT	Port Status
FLOWCTRL	Flow Control

CDRPT

Register type

Peg

Description

CDRPT is pegged each time the PSN receives a Collect Digits and Report primitive from the SCU.

Associated registers

None

Extension registers

None

Associated logs

None

CNECT

Register type

Peg

Description

CNECT is pegged every time the PSN receives a Connect primitive from the SCU.

Associated registers

None

Extension registers

None

Associated logs

None

DISCNECT

Register type

Peg

Description

DISCNECT is pegged every time the PSN receives a Disconnect primitive from the SCU.

Associated registers

None

Extension registers

None

Associated logs

None

HOLD

Register type

Peg

Description

HOLD is pegged every time the PSN receives a Hold primitive from the SCU.

Associated registers

None

Extension registers
None

Associated logs
None

MONITOR

Register type
Peg

Description
MONITOR is pegged every time the PSN receives a Monitor primitive from the SCU.

Associated registers
None

Extension registers
None

Associated logs
None

MUTE

Register type
Peg

Description
MUTE is pegged every time the PSN receives a Mute primitive from the SCU.

Associated registers
None

Extension registers
None

Associated logs
PSN400

PLAYMSG

Register type
Peg

Description

PLAYMSG is pegged every time the PSN receives a Play Message primitive from the SCU.

Associated registers

None

Extension registers

None

Associated logs

None

PPCDRPT

Register type

Peg

Description

PPCDRPT is pegged every time the PSN receives a Play Prompt, Collect Digits, and Report primitive from the SCU.

Associated registers

None

Extension registers

None

Associated logs

None

QURYPORT

Register type

Peg

Description

QURYPORT is pegged every time the PSN receives a Query Port primitive from the SCU.

Associated registers

None

Extension registers

None

Associated logs

None

RECNECT

Register type

Peg

Description

RECNECT is pegged every time the PSN receives a Reconnect primitive from the SCU.

Associated registers

None

Extension registers

None

Associated logs

None

RSETSWCH

Register type

Peg

Description

RSETSWCH is pegged every time the PSN receives a Reset Switch primitive from the SCU.

Associated registers

None

Extension registers

None

Associated logs

None

SETBLREC

Register type

Peg

Description

SETBLREC is pegged every time the PSN receives a Set Billing Record primitive from the SCU.

Associated registers

None

Extension registers

None

Associated logs

None

STOPMSG

Register type

Peg

Description

STOPMSG is pegged every time the PSN receives a Stop Message primitive from the SCU.

Associated registers

None

Extension registers

None

Associated logs

None

XSIGINFO

Register type

Peg

Description

XSIGINFO is pegged every time the PSN receives a Transmit Siginfo primitive from the SCU.

Associated registers

None

Extension registers

None

Associated logs

None

BRIDGE

Register type

Peg

Description

BRIDGE is pegged every time the PSN receives a Bridge primitive from the SCU.

Associated registers

None

Extension registers

None

Associated logs

None

NCALLACC

Register type

Peg

Description

NCALLACC is pegged every time the PSN receives a New Call Accepted primitive from the SCU.

Associated registers

None

Extension registers

None

Associated logs

None

NCALLREJ

Register type

Peg

Description

NCALLREJ is pegged every time the PSN receives a New Call Rejected primitive from the SCU.

Associated registers

None

Extension registers

None

Associated logs

None

HEARTBT

Register type

Peg

Description

HEARTBT is pegged every time the PSN receives a Heartbeat primitive from the SCU.

Associated registers

None

Extension registers

None

Associated logs

None

ERRDETP

Register type

Peg

Description

ERRDETP is pegged every time the PSN receives an Error Detected primitive from the SCU.

Associated registers

None

Extension registers

None

Associated logs

PSN200

QURYMDY

Register type

Peg

Description

QURYMDY is pegged every time the PSN receives a Query Time of the Day primitive from the SCU.

Associated registers

None

Extension registers

None

Associated logs

None

SETIPADD

Register type

Peg

Description

SETIPADD is pegged every time the PSN receives a Reset Switch primitive from the SCU.

Associated registers

None

Extension registers

None

Associated logs

None

PRTSTAT

Register type

Peg

Description

PRTSTAT is pegged every time the PSN receives a Port Status primitive from the SCU.

Associated registers

None

Extension registers

None

Associated logs

None

FLOWCTRL

Register type

Peg

Description

FLOWCTRL is pegged every time the PSN receives a Flow Control primitive from the SCU.

Associated registers

None

Extension registers

None

Associated logs

None

PSN_USAG

Description

OM group Programmable Service Node (PSN) Usage (PSNUSAG) records the number of service control unit (SCU) messages received by the PSN, the number of messages the PSN sends to the SCU, and the number of SCU macros received by the PSN.

The following table lists the key and info fields associated with OM group PSN_USAG:

Key field	Info field
None	None

Related functional groups

There are no functional groups associated with OM group PSN_USAG.

Registers

The following table lists the registers associated with OM group PSN_USAG and what they measure. For a detailed description of a register, click on the register name.

Registers for OM group PSN_USAG

Register name	Measures
SMSGRCVD	Service Control Unit Primitive Message Received
SMSGSENT	Service Control Unit Event Notification Sent
SMACRCVD	Service Control Unit Macro Received

SMSGRCVD

Register type
Peg

Description
SMSGRCVD is pegged for every message the PSN receives from the SCU.

Associated registers
None

Extension registers

None

Associated logs

None

SMSGSENT

Register type

Peg

Description

SMSGSENT is pegged when the PSN sends a message to the SCU.

Associated registers

None

Extension registers

None

Associated logs

None

SMACRCVD

Register type

Peg

Description

SMACRCVD is pegged for every macro the PSN receives from the SCU. A macro is a set of primitives.

Associated registers

None

Extension registers

None

Associated logs

None