



Succession Performance Management Operational Measurements Reference (Volume 2)

ATTENTION

The Succession Performance Management Operation Measurements Reference document uses two 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 Succession and DMS.

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

OM groups available in Succession (Sheet 1 of 7)

Name	Description	Device, Manager or Application
FBTRAFF	F-bus Platform Traffic	Common
FC	Flexible Calling	Common
FCDRALG2	Flexible Call Detail Record Algorithm (overflow for OM group FCDRALGR)	Common
FCDRALGR	Flexible Call Detail Record (FlexCDR) Algorithm	Common
FCDRTM1E	Flexible Call Detail Record Template (overflow from OM group FCDRTMP1)	Common
FCDRTM2E	Flexible Call Detail Record Template (overflow for OM group FCDRTMP2)	Common
FCDRTMP1	Flexible Call Detail Record Template (0 through 31)	Common
FCDRTMP2	Flexible Call Detail Record Template (32 through 63)	Common
FCNF	FBS Conference	Common

OM groups available in Succession (Sheet 2 of 7)

Name	Description	Device, Manager or Application
<u>FPDABM</u>	File Processor Dual-access Buffer Memory Counts	Common
<u>FPDEVICE</u>	File Processor Storage Device Counts	Common
<u>FPSCSI</u>	FP SCSI Bus Counts	Common
<u>FRSAGENT</u>	Frame Relay Service Agent	Common
<u>FRSPM</u>	Frame Relay Service Peripheral Module	Common
<u>FRT1</u>	Frame Relay T1 Carrier	Common
<u>FTAM</u>	File Transfer Access and Management	Common
<u>FTROM</u>	Feature Data Block	Common
<u>FTRQ</u>	Feature Queue Software Resources	Common
<u>FTS</u>	FAX-Thru Service	Common
<u>GIACGRP</u>	Group Intercom All Call	Common
<u>GTID</u>	Generic Logical Terminal Identifier	Common
<u>GWOVLOM</u>	Gateway Overload OM	MG 9000
<u>HDBOM</u>	History Data Block OM	Common
<u>HFPOM</u>	HFP CPU Occupancy and Layer 2 OMs	Common
<u>HPCBASIC</u>	High Probability Completion - Basic	Common
<u>HPCTRKCGP</u>	High Probability Completion Trunk Group	Common
<u>HTR</u>	Hard to Reach codes	Common
<u>HUNT</u>	Hunt (group)	Common
<u>IBNAC</u>	Integrated Business Network Attendant Console	Common
<u>IBNGRP</u>	Integrated Business Network Group	Common
<u>IBNSG</u>	Integrated Business Network Subgroup	Common

OM groups available in Succession (Sheet 3 of 7)

Name	Description	Device, Manager or Application
<u>IBNSGLDN</u>	Integrated Business Network Subgroup Listed Directory Number	Common
<u>ILDBD</u>	ISDN Line Drawer BD Channels	Common
<u>ILDBRA</u>	ISDN Line Drawer Basic Rate Access	Common
<u>ILDMSGCT</u>	ISDN Line Drawer Message Counter	Common
<u>ILDOVLD</u>	ISDN Line Drawer Overload	Common
<u>ILDSTAT</u>	ISDN Line Drawer Status	Common
<u>ILR</u>	International Line Restriction	Common
<u>ILRCLASS</u>	International Line Restrictions Class	Common
<u>ININTWRK</u>	Intelligent Network Interworking	Common
<u>INSCTP</u>	AIN (IN) messages using the Stream Control Transmission Protocol (SCTP)	Common
<u>IOC</u>	Input/output Controller Maintenance Summary	Common
<u>IOSYS</u>	Input and Output System	Common
<u>IS41TOPS</u>	IS-41 TOPS	Common
<u>ISA</u>	In-Session Activation	Common
<u>ISUPCONN</u>	Integrated Services User Part connection	Common
<u>ISUPUSAG</u>	Integrated Services User Part utilization	Common
<u>IWBM</u>	Interworking Bridge Management System	IW SPM ATM
<u>LIDBCCV</u>	Line Information Database Calling Card Information	Common
<u>LMD</u>	Line Traffic	MG 9000

OM groups available in Succession (Sheet 4 of 7)

Name	Description	Device, Manager or Application
<u>MNATM</u>	Maintenance ATM interface performance statistics	MG 4000 DPT SPM IW SPM ATM
<u>MNATMA1</u>	Maintenance interface performance statistics AAL1	DPT SPM IW SPM ATM MG 4000
<u>MNATMA5</u>	Maintenance interface performance statistics for ATM Permanent Virtual Connection (PVC) AAL5	MG 4000
<u>MNATMVC</u>	Maintenance ATM Virtual Circuits	MG 4000
<u>MULTAUTH</u>	Multiple Calls Per Authcode	Common
<u>NMTCLINK</u>	Node Maintenance - Link	Common
<u>NMTCNODE</u>	Node Maintenance - Node	Common
<u>NMTCTYPE</u>	Node Maintenance - Node Type	Common
<u>NMTCUNIT</u>	Node Maintenance - Unit	IW SPM IP
<u>NPAPEG</u>	Numbering Plan Area	Common
<u>NWMFRRCT</u>	Network Management Flexible Reroute	Common
<u>NX25L2</u>	NX25 Level 2	Common
<u>NX25L3</u>	NX25 Level 3	Common
<u>NX25MLP</u>	NX25 Multilink Procedures	Common
<u>OAPCP10</u>	Open Automated Protocol Call Processing Group 1	Common
<u>OAPNMTC</u>	Open Automated Protocol Node Maintenance Operations and Responses	Common
<u>OFF250</u>	Offhook 250	Common
<u>OFZ</u>	Office Traffic Summary (for the intended destination)	Common

OM groups available in Succession (Sheet 5 of 7)

Name	Description	Device, Manager or Application
<u>OFZ2</u>	Office Traffic Extension Summary	Common
<u>OFZ2NET1</u>	Office to Network Group 1	CS 2000
<u>OFZ2NET2</u>	Office to Network Group 2	CS 2000
<u>OPCHOICE</u>	Operator Choice	Common
<u>OTS</u>	Office Traffic Summary (for the destination where the call terminates)	Common
<u>PM</u>	Peripheral Module	IW SPM IP
<u>PMTYP</u>	Peripheral Module Type	IW SPM IP
<u>PRASERV</u>	Primary Rate Access Service	Common
<u>PSN_ERDC</u>	Programmable Service Node Error—Data Communication Level	Common
<u>PSN_ERFM</u>	Programmable Service Node Error—Finite State Machine	Common
<u>PSN_ERPS</u>	Programmable Service Node Error—Primitive Processing	Common
<u>PSN_FCTR</u>	Programmable Service Node —Flow Control	Common
<u>PSN_NOTF</u>	Programmable Service Node —Notifications Sent	Common
<u>PSN_PRIM</u>	Programmable Service Node —Primitives Received	Common
<u>PSN_USAG</u>	Programmable Service Node —Usage	Common
<u>SCA</u>	Selective Call Acceptance	Common
<u>SCAISRV4</u>	Switch/Computer Application Interface 4	Common
<u>SCF</u>	Selective Call Forwarding	Common
<u>SCPOTS</u>	Speed Calling in the POTS Environment	Common

OM groups available in Succession (Sheet 6 of 7)

Name	Description	Device, Manager or Application
<u>SCRJ</u>	Selective Call Rejection	Common
<u>SERVACT</u>	Service Activation	Common
<u>SIMRING</u>	Simultaneous Ringing User Interface	Common
<u>SITE</u>	Traffic-related counts and DTSR for site types RLM and RPM	MG 9000
<u>SITE2</u>	Traffic-related counts and DTSR for site types RCS, RCU and RDT	MG 9000
<u>SITE3</u>	Traffic and Dial Tone Speed Recording, Remote Sites 3	Common
<u>SMSTOPS</u>	Short Message Service - TOPS	Common
<u>SPMACT</u>	SPM Activity Counting	IW SPM IP
<u>SPMOVL</u>	Spectrum Overload Statistics	MG 4000
<u>SPMUSAGE</u>	SPM Universal Activity Gauging Element	IW SPM IP
<u>SPRING</u>	Subscriber Programmable Ringing	Common
<u>TC7WRLSS</u>	Traffic Operator Position System (TOPS) Common Channel Signaling System 7 - Wireless	Common
<u>TCAPERRS</u>	Transaction Capabilities Application Part Error Counts	Common
<u>TCAPUSAG</u>	Transaction Capabilities Application Part Usage Measurements	Common
<u>TDGTHRU</u>	TOPS Datagram Throughput	Common
<u>TFREE533</u>	Toll-Free 533	Common
<u>TONES</u>	Tones	Common
<u>TRK</u>	Trunk	Common
<u>TRK2</u>	Trunk Group 2	Common

OM groups available in Succession (Sheet 7 of 7)

Name	Description	Device, Manager or Application
<u>TRK2NET1</u>	Trunk to Network Group 1	CS 2000
<u>TRK2NET2</u>	Trunk to Network Group 2	CS 2000
<u>TRKQOSOM</u>	Trunk Quality of Service Operational Measurement	Common
<u>UPSNFAIL</u>	UCS PSN Failure	Common
<u>UTR</u>	Universal Tone Receiver	Common
<u>VAMPACG</u>	Variable Advanced Intelligent Network Messaging and Automatic Code Gaping	Common
<u>VOW</u>	Virtual Office Worker	Common
<u>VPTRUSAG</u>	Variable Advanced Intelligent Network Message Platform Transaction Resource Identifier Usage	Common
<u>VTAPERR</u>	Variable Advanced Intelligent Network Message Platform Transaction Capabilities Part Base Error	Common
<u>VTAPRCV</u>	Variable Advanced Intelligent Network Message Platform Transaction Capabilities Received	Common
<u>VTAPSNT</u>	Variable Advanced Intelligent Network Message Platform Transaction Capabilities Sent	Common
<u>WINTOPS</u>	Wireless Intelligent Network -TOPS	Common
<u>XPMLNK</u>	XPM Link	MG 9000
<u>XPMOCC</u>	Central Processing Unit (CPU) Occupancy	Gateway Controller
<u>XPMOVL</u>	XPM Overload	Gateway Controller

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
- *Succession SN07 OSS (ATM and IP) Advance Feature Guide*, PLN-07AT-OSS
- *Succession Fault Management Logs Reference*, NN10275-909

FBTRAFF

Description

OM group F-bus Platform Traffic (FBTRAFF) monitors traffic OMs for the following F-bus platforms in a DMS office:

- link interface unit (LIU7)
- high-speed link interface unit (HLIU)
- high-speed link router (HSLR)
- Ethernet interface unit (EIU)
- X.25 link interface unit (XLIU)
- application processing unit (APU)
- voice processing unit (VPU)
- network interface unit (NIU)
- frame relay transport unit (FRIU)

FBTRAFF registers monitor:

- total number of packets sent from the ASU to the F-bus host. Data that travels from the ASU to the F-bus host travels in the transmit direction.
- total number of packets sent from the F-bus host to the ASU. Data that travels from the F-bus host to the ASU travels in the receive direction.
- total number of octets that travel in the transmit direction.
- total number of octets that travel in the receive direction.
- percentage of total F-bus bandwidth occupied by transmit throughput.
- percentage of total F-bus bandwidth occupied by receive throughput.
- percentage of total F-bus bandwidth occupied by the sum of transmit and receive throughput.

Each item is measured separately for F-bus 0 and F-bus 1.

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

Key field	Info field
FBUS_CONTROLLERS	HOST_INFO

Related functional groups

There are no functional groups associated with OM group FBTRAFF.

Registers

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

Registers for OM group FBTRAFF

Register name	Measures
TXPK1FB0	Transmit packets 1 F-bus 0
RXPK1FB0	Received packets 1 F-bus 0
TXPK1FB1	Transmit packets 1 F-bus 1
RXPK1FB1	Received packets 1 F-bus 1
TXOC1FB0	Transmit octets 1 F-bus 0
RXOC1FB0	Received octets 1 F-bus 0
TXOC1FB1	Transmit octets 1 F-bus 1
RXOC1FB1	Received octets 1 F-bus 1
TXPCFB0	Percentage transmit on F-bus 0
RXPCFB0	Percentage received on F-bus 0
TXPCFB1	Transmitted percentage on F-bus 1
RXPCFB1	Received percentage on F-bus 1
TXRPCFB0	Transmitted and received percentage of F-bus 0
TXRPCFB1	Transmitted and received percentage of F-bus 1

TXPK1FB0**Register type**

Peg

Description

TXPK1FB0 is the first register of the total number of transmit packets that travel over F-bus 0. The F-bus host is the message switch (MS) for the single shelf link peripheral processor (SSLPP) and for the DMS SuperNode SE (SNSE). The F-bus host is the local message switch (LMS) for the link peripheral processor (LPP) or enhanced link peripheral processor (ELPP). The value range of this register is 0 to 32 767.

Associated registers

None

Extension registers

TXPK2FB0, TXPK3FB0

Associated logs

None

RXPK1FB0**Register type**

Peg

Description

RXPK1FB0 is the first register of the total number of receive packets that travel over F-bus 0. The F-bus host is the MS for the SSLPP and for the SNSE. The F-bus host is the LMS for the LPP or ELPP. The value range of this register is 0 to 32 767.

Associated registers

None

Extension registers

RXPK2FB0, RXPK3FB0

Associated logs

None

TXPK1FB1**Register type**

Peg

Description

TXPK1FB1 is the first register of the total number of transmit packets that travel over F-bus 1. The F-bus host is the MS for the SSLPP and for the SNSE. The F-bus host is the LMS for the LPP or ELPP. The value range of this register is 0 to 32 767.

Associated registers

None

Extension registers

RXPK2FB1, RXPK3FB1

Associated logs

None

RXPK1FB1**Register type**

Peg

Description

RXPK1FB1 is the first register of the total number of receive packets that travel over F-bus 1. The F-bus host is the MS for the SSLPP and for the SNSE. The F-bus host is the LMS for the LPP or ELPP. The value range of this register is 0 to 32 767.

Associated registers

None

Extension registers

RXPK2FB1, RXPK3FB1

Associated logs

None

TXOC1FB0**Register type**

Peg

Description

TXOC1FB0 is the first register of the total number of transmit octets that travel over F-bus 0. The F-bus host is the MS for the SSLPP and for the SNSE. The F-bus host is the LMS for the LPP or ELPP. The value range of this register is 0 to 32 767.

Associated registers

None

Extension registers

TXOC2FB0, TXOC3FB0

Associated logs

None

RXOC1FB0**Register type**

Peg

Description

RXOC1FB0 is the first register of the total number of receive octets that travel over F-bus 0. The F-bus host is the MS for the SSLPP and for the SNSE. The F-bus host is the LMS for the LPP or ELPP. The value range of this register is 0 to 32 767.

Associated registers

None

Extension registers

RXOC2FB0, RXOC3FB0

Associated logs

None

TXOC1FB1**Register type**

Peg

Description

TXOC1FB1 is the first register of the total number of transmit octets that travel over F-bus 1. The F-bus host is the MS for the SSLPP and for the SNSE. The F-bus host is the LMS for the LPP or ELPP. The value range of this register is 0 to 32 767.

Associated registers

None

Extension registers

TXOC2FB1, TXOC3FB1

Associated logs

None

RXOC1FB1**Register type**

Peg

Description

RXOC1FB1 is the first register of the total number of receive octets that travel over F-bus 1. The F-bus host is the MS for the SSLPP and for the SNSE. The F-bus host is the LMS for the LPP or ELPP. The value range of this register is 0 to 32 767.

Associated registers

None

Extension registers

RXOC2FB1, RXOC3FB1

Associated logs

None

TXPCFB0**Register type**

Peg

Description

TXPCFB0 monitors the percentage of total F-bus 0 bandwidth occupied by transmit traffic. The F-bus host is the MS for the SSLPP and for the SNSE. The F-bus host is the LMS for the LPP or ELPP. Total bandwidth of an ELPP is up to three times the bandwidth of an LPP. The value range of this register is 0 to 100.

Associated registers

[TXOC1FB0](#), TXOC2FB0, TXOC3FB0

Extension registers

None

Associated logs

None

RXPCFB0**Register type**

Peg

Description

RXPCFB0 monitors the percentage of total F-bus 0 bandwidth occupied by receive traffic. The F-bus host is the MS for the SSLPP and for the SNSE. The F-bus host is the LMS for the LPP or ELPP. Total bandwidth of an ELPP is up to three times the bandwidth of an LPP. The value range of this register is 0 to 100.

Associated registers

[RXOC1FB0](#), RXOC2FB0, RXOC3FB0

Extension registers

None

Associated logs

None

TXPCFB1**Register type**

Peg

Description

TXPCFB1 monitors the percentage of total F-bus 1 bandwidth occupied by transmit and receive traffic. The F-bus host is the MS for the SSLPP and for the SNSE. The F-bus host is the LMS for the LPP or ELPP. Total bandwidth of an ELPP is up to three times the bandwidth of an LPP. The value range of this register is 0 to 100.

Associated registers

[TXOC1FB1](#), TXOC2FB1, TXOC3FB1

Extension registers

None

Associated logs

None

RXPCFB1**Register type**

Peg

Description

RXPCFB1 monitors the percentage of total F-bus 1 bandwidth occupied by transmit and receive traffic. The F-bus host is the MS for the SSLPP and for the SNSE. The F-bus host is the LMS for the LPP or ELPP. Total bandwidth of an ELPP is up to three times the bandwidth of an LPP. The value range of this register is 0 to 100.

Associated registers

[RXOC1FB1](#), RXOC2FB1, RXOC3FB1

Extension registers

None

Associated logs

None

TXRPCFB0**Register type**

Peg

Description

TXRPCFB0 monitors the percentage of total F-bus 0 bandwidth occupied by transmit and receive traffic. The F-bus host is the MS for the SSLPP and for the SNSE. The F-bus host is the LMS for the LPP or ELPP. Total bandwidth of an ELPP is up to three times the bandwidth of an LPP. The value range of this register is 0 to 100.

Associated registers

[TXOC1FB0](#), TXOC2FB0, TXOC3FB0, [RXOC1FB0](#), RXOC2FB0, RXOC3FB0

Extension registers

None

Associated logs

None

TXRPCFB1**Register type**

Peg

Description

TXRPCFB1 monitors the percentage of total F-bus 1 bandwidth occupied by transmit and receive traffic. The F-bus host is the MS for the SSLPP and for the SNSE. The F-bus host is the LMS for the LPP or ELPP. Total bandwidth of an ELPP is up to three times the bandwidth of an LPP. The value range of this register is 0 to 100.

Associated registers

[TXOC1FB1](#), TXOC2FB1, TXOC3FB1, [RXOC1FB1](#), RXOC2FB1, RXOC3FB1

Extension registers

None

Associated logs

None

FC

Description

OM group Flexible Calling (FC) counts the number of attempts to use Flexible Calling to transfer a conference call.

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

Key field	Info field
customer group	None

Related functional groups

There are no functional groups associated with OM group FC.

Registers

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

Registers for OM group FC

Register name	Measures
FCXCONAT	Flexible calling transfer attempts involving a conference
FCXCONSU	Flexible calling transfer successes involving a conference
FCXCONFL	Flexible calling transfer failures involving a conference
FCXC2CAT	Flexible calling call to call transfer attempts
FCXC2CSU	Flexible calling call to call transfer successes
FCXC2CFL	Flexible calling call to call transfer failures

FCXCONAT**Register type**

Peg

Description

FCXCONAT counts the number of attempts to use Flexible Calling to transfer a conference.

Associated registers

None

Extension registers

FCXCONA2

Associated logs

None

FCXCONSU**Register type**

Peg

Description

FCXCONSU counts the number of successful Flexible Calling transfers of two 2-party calls.

Associated registers

None

Extension registers

None

Associated logs

None

FCXCONFL**Register type**

Peg

Description

FCXCONFL counts the number of times a Flexible Calling Conference transfer fails for one of the following reasons:

- different call transfer requirements between the controlling station and the transferred station
- not enough supervision on the trunks
- reference a call type that is not permitted

Associated registers

None

Extension registers

None

Associated logs

None

FCXC2CAT**Register type**

Peg

Description

FCXC2CAT counts the number of attempts to use Flexible Calling to transfer two 2-party calls.

Associated registers

None

Extension registers

FCXC2CA2

Associated logs

None

FCXC2CSU**Register type**

Peg

Description

FCXC2CSU counts the number of successful Flexible Calling transfers of two 2-party calls.

Associated registers

None

Extension registers

None

Associated logs

None

FCXC2CFL**Register type**

Peg

Description

FCXC2CFL counts the number of times a Flexible Calling transfer of two 2-party calls fails. A Flexible Calling transfer of two 2-party calls fails for one of the following reasons:

- different call transfer requirements between the controlling station and the transferred station
- not enough supervision on the trunks
- reference to call type that is not permitted

Associated registers

None

Extension registers

None

Associated logs

None

FCDRALG2

Description

FCDRALG2 is used for an overflow extension registers for OM group Flexible Call Detail Record (FlexCDR) Algorithm (FCDRALGR). FCDRALG2 is pegged only when the UBFR0008 SOC is ON.

FCDRALG2 applies only to DMS.

FCDRALGR provides OMs for counting the CDR template method used to format the CDRs. For additional information on billing, refer to the *"UCS DMS-250 Billing Records Application Guide"*.

Each register in FCDRALG2 relates to a register in FCDRALGR. When the register in FCDRALGR reaches 65535, the associated extension register in FCDRALG2 increments. The register in FCDRALG2 resets to zero (0) when it overflows. For example:

FCDRALGR; Register FIXED
FCDRALG2; Register FIXED

The following table lists the key and info fields associated with OM group FCDRALG2. FCDRALG2 provides eight (8) pre-defined tuples. A value of one (1) in the FCDRALG2 overflow register indicates 65535 pegs. A value of one (1) in the FCDRALGR register indicates one (1) peg.

Key field	Info field
None	None

Related functional groups

There are no functional groups associated with OM group FCDRALG2.

Registers

FCDRALG2 provides eight (8) registers (INTERNAL through RTEATTR). *These registers only apply to DMS.*

FCDRALGR

Description

OM group Flexible Call Detail Record (FlexCDR) Algorithm (FCDRALGR) group provides OMs for counting the CDR template method used to format the CDRs. For additional information on billing, refer to the *UCS DMS-250 Billing Records Application Guide*.

FCDRALG2 is used for register overflows from OM group FCDRALGR.

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

Key field	Info field
None	None

Related functional groups

There are no functional groups associated with OM group FCDRALGR.

Registers

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

Registers for OM group FCDRALGR

Register name	Measures
ICE	Internal CDR Format
CALLTYPE	Calltype Flexdial
SNV	Subscriber Number Validation
TRK	TRKGRP/TRKFEAT
AIN	AIN Indicator
FIXED	Fixed
BESTFIT	Best fit
RTEATTR	Table RTEATTR

ICF**Register type**

Peg

Description

ICF counts the number of times the internal formatting algorithm is used when selecting a formatting method.

Associated registers

None

Extension registers

None

Associated logs

None

CALLTYPE**Register type**

Peg

Description

CALLTYPE counts the number of times the CDR format is selected through call processing by a template provisioned using the CDRTMPLT option for the CALLTYPE collectible using the FlexDial framework.

Associated registers

None

Extension registers

None

Associated logs

None

SNV**Register type**

Peg

Description

SNV counts the number of times the CDR format is selected through call processing by a template provisioned using the CDRTMPLT option in tables AUTHCODU, AUTHCDU2, AUTHCDU3, AUTHCDU4, AUTHCDU5, or ANISCUSP.

Associated registers

None

Extension registers

None

Associated logs

None

TRK**Register type**

Peg

Description

TRK counts the number of times the CDR format is selected through call processing by a template provisioned using the CDRTMPLT option in tables TRKGRP or TRKFEAT.

Associated registers

None

Extension registers

None

Associated logs

None

AIN**Register type**

Peg

Description

This register is not pegged in the UCS06 release.

Associated registers

None

Extension registers

None

Associated logs

None

FIXED**Register type**

Peg

Description

FIXED counts the number of times a fixed CDR template is used to format the CDR.

Associated registers

None

Extension registers

None

Associated logs

None

BESTFIT**Register type**

Peg

Description

BESTFIT counts the number of times a best fit analysis is used to determine the CDR template used to format the CDR.

Associated registers

None

Extension registers

None

Associated logs

None

RTEATTR**Register type**

Peg

Description

RTEATTR counts the number of times the CDR format is selected through call processing by a template provisioned using the CDRTMPLT option in table RTEATTR.

Associated registers

None

Extension registers

None

Associated logs
None

FCDRTM1E

Description

OM group FCDRTM1E is used for register overflows from OM group Flexible Call Detail Record Template (FCDRTMP1). FCDRTM1E is pegged only when the UBFR0008 SOC is ON.

FCDRTM1E applies only to DMS.

FCDRTMP1 counts the number of times templates 0 through 31 are used to format a CDR. Each register in FCDRTM1E relates to a register in FCDRTMP1. When the register in FCDRTMP1 reaches 65535, the associated extension register in FCDRTM1E increments. The register in FCDRTMP1 resets to zero (0) when it overflows. For example:

FCDRTMP1; Register TMPLT_9
FCDRTM1E; Register TMPLT_9

The following table lists the key and info fields associated with OM group FCDRTM1E. FCDRTM1E provides 32 pre-defined tuples. A value of one (1) in the FCDRTM1E overflow register indicates 65535 pegs. A value of one (1) in the FCDRTMP1 register indicates one (1) peg.

Key field	Info field
None	None

Related functional groups

There are no functional groups associated with OM group FCDRTM1E.

Registers

FCDRTM1E provides 32 registers (TMPLT_0 through TMPLT_31). For details about the registers, refer to FCDRTMP1.

These registers only apply to DMS.

FCDRTM2E

Description

OM group FCDRTM2E is used for overflow registers from OM group Flexible Call Detail Record Template (FCDRTMP2). FCDRTM2E is pegged only when the UBFR0008 SOC is ON.

FCDRTM2E applies only to DMS.

FCDRTMP2 counts the number of times templates 32 through 63 are used to format a CDR. Each register in FCDRTM2E relates to a register in FCDRTMP2. When the register in FCDRTMP2 reaches 65535, the associated extension register in FCDRTM2E increments. The register in FCDRTMP2 resets to zero (0) when it overflows. For example:

FCDRTMP2; Register TMPLT_21
FCDRTM2E; Register TMPLT_21

The following table lists the key and info fields associated with OM group FCDRTM2E. FCDRTM2E provides 32 pre-defined tuples. A value of one (1) in the FCDRTM2E overflow register indicates 65535 pegs. A value of one (1) in the FCDRTMP2 register indicates one (1) peg.

Key field	Info field
None	None

Related functional groups

There are no functional groups associated with OM group FCDRTM2E.

Registers

FCDRTM2E provides 32 registers (TMPLT_32 through TMPLT_63). For details about the registers, refer to FCDRTMP2.

These registers only apply to DMS.

FCDRTMP1

Description

OM group Flexible Call Detail Record Template (FCDRTMP1) counts the number of times templates 0 through 31 are used to format a CDR. (Similarly, FCDRTMP2 provides counts for templates 32 through 63.) FCDRTMP1E is used for register overflows from FCDRTMP1.

The following table lists the key and info fields associated with OM group FCDRTMP1.

Key field	Info field
None	FCDR_TMPLT1_FLDS

Related functional groups

There are no functional groups associated with FCDRTMP1.

Registers

The following table lists the registers associated with OM group FCDRTMP1 and what they measure. For a description of a register, click on the register name.

Registers for OM group FCDRTMP1 (Sheet 1 of 2)

Register name	Measures
TMPLT_0	Template 0
TMPLT_1	Template 1
TMPLT_2	Template 2
TMPLT_3	Template 3
TMPLT_4	Template 4
TMPLT_5	Template 5
TMPLT_6	Template 6
TMPLT_7	Template 7
TMPLT_8	Template 8
TMPLT_9	Template 9

Registers for OM group FCDRTMP1 (Sheet 2 of 2)

Register name	Measures
<u>TMPLT_10</u>	Template 10
<u>TMPLT_11</u>	Template 11
<u>TMPLT_12</u>	Template 12
<u>TMPLT_13</u>	Template 13
<u>TMPLT_14</u>	Template 14
<u>TMPLT_15</u>	Template 15
<u>TMPLT_16</u>	Template 16
<u>TMPLT_17</u>	Template 17
<u>TMPLT_18</u>	Template 18
<u>TMPLT_19</u>	Template 19
<u>TMPLT_20</u>	Template 20
<u>TMPLT_21</u>	Template 21
<u>TMPLT_22</u>	Template 22
<u>TMPLT_23</u>	Template 23
<u>TMPLT_24</u>	Template 24
<u>TMPLT_25</u>	Template 25
<u>TMPLT_26</u>	Template 26
<u>TMPLT_27</u>	Template 27
<u>TMPLT_28</u>	Template 28
<u>TMPLT_29</u>	Template 29
<u>TMPLT_30</u>	Template 30
<u>TMPLT_31</u>	Template 31

TMPLT_0**Register type**

Peg

Description

TMPLT_0 counts the number of times the template at index 0 is used to format a CDR.

Associated registers

None

Extension registers

None

Associated logs

None

TMPLT_1**Register type**

Peg

Description

TMPLT_1 counts the number of times the template at index 1 is used to format a CDR.

Associated registers

None

Extension registers

None

Associated logs

None

TMPLT_2**Register type**

Peg

Description

TMPLT_2 counts the number of times the template at index 2 is used to format a CDR.

Associated registers

None

Extension registers

None

Associated logs

None

TMPLT_3**Register type**

Peg

Description

TMPLT_3 counts the number of times the template at index 3 is used to format a CDR.

Associated registers

None

Extension registers

None

Associated logs

None

TMPLT_4**Register type**

Peg

Description

TMPLT_4 counts the number of times the template at index 4 is used to format a CDR.

Associated registers

None

Extension registers

None

Associated logs

None

TMPLT_5**Register type**

Peg

Description

TMPLT_5 counts the number of times the template at index 5 is used to format a CDR.

Associated registers

None

Extension registers

None

Associated logs

None

TMPLT_6**Register type**

Peg

Description

TMPLT_6 counts the number of times the template at index 6 is used to format a CDR.

Associated registers

None

Extension registers

None

Associated logs

None

TMPLT_7**Register type**

Peg

Description

TMPLT_7 counts the number of times the template at index 7 is used to format a CDR.

Associated registers

None

Extension registers

None

Associated logs

None

TMPLT_8**Register type**

Peg

Description

TMPLT_8 counts the number of times the template at index 8 is used to format a CDR.

Associated registers

None

Extension registers

None

Associated logs

None

TMPLT_9**Register type**

Peg

Description

TMPLT_9 counts the number of times the template at index 9 is used to format a CDR.

Associated registers

None

Extension registers

None

Associated logs

None

TMPLT_10**Register type**

Peg

Description

TMPLT_10 counts the number of times the template at index 10 is used to format a CDR.

Associated registers

None

Extension registers

None

Associated logs

None

TMPLT_11**Register type**

Peg

Description

TMPLT_11 counts the number of times the template at index 11 is used to format a CDR.

Associated registers

None

Extension registers

None

Associated logs

None

TMPLT_12**Register type**

Peg

Description

TMPLT_12 counts the number of times the template at index 12 is used to format a CDR.

Associated registers

None

Extension registers

None

Associated logs

None

TMPLT_13**Register type**

Peg

Description

TMPLT_13 counts the number of times the template at index 13 is used to format a CDR.

Associated registers

None

Extension registers

None

Associated logs

None

TMPLT_14**Register type**

Peg

Description

TMPLT_14 counts the number of times the template at index 14 is used to format a CDR.

Associated registers

None

Extension registers

None

Associated logs

None

TMPLT_15**Register type**

Peg

Description

TMPLT_15 counts the number of times the template at index 15 is used to format a CDR.

Associated registers

None

Extension registers

None

Associated logs

None

TMPLT_16**Register type**

Peg

Description

TMPLT_16 counts the number of times the template at index 16 is used to format a CDR.

Associated registers

None

Extension registers

None

Associated logs

None

TMPLT_17**Register type**

Peg

Description

TMPLT_17 counts the number of times the template at index 17 is used to format a CDR.

Associated registers

None

Extension registers

None

Associated logs

None

TMPLT_18**Register type**

Peg

Description

TMPLT_18 counts the number of times the template at index 18 is used to format a CDR.

Associated registers

None

Extension registers

None

Associated logs

None

TMPLT_19**Register type**

Peg

Description

TMPLT_19 counts the number of times the template at index 19 is used to format a CDR.

Associated registers

None

Extension registers

None

Associated logs

None

TMPLT_20**Register type**

Peg

Description

TMPLT_20 counts the number of times the template at index 20 is used to format a CDR.

Associated registers

None

Extension registers

None

Associated logs

None

TMPLT_21**Register type**

Peg

Description

TMPLT_21 counts the number of times the template at index 21 is used to format a CDR.

Associated registers

None

Extension registers

None

Associated logs

None

TMPLT_22**Register type**

Peg

Description

TMPLT_22 counts the number of times the template at index 22 is used to format a CDR.

Associated registers

None

Extension registers

None

Associated logs

None

TMPLT_23**Register type**

Peg

Description

TMPLT_23 counts the number of times the template at index 23 is used to format a CDR.

Associated registers

None

Extension registers

None

Associated logs

None

TMPLT_24**Register type**

Peg

Description

TMPLT_24 counts the number of times the template at index 24 is used to format a CDR.

Associated registers

None

Extension registers

None

Associated logs

None

TMPLT_25**Register type**

Peg

Description

TMPLT_25 counts the number of times the template at index 25 is used to format a CDR.

Associated registers

None

Extension registers

None

Associated logs

None

TMPLT_26**Register type**

Peg

Description

TMPLT_26 counts the number of times the template at index 26 is used to format a CDR.

Associated registers

None

Extension registers

None

Associated logs

None

TMPLT_27**Register type**

Peg

Description

TMPLT_27 counts the number of times the template at index 27 is used to format a CDR.

Associated registers

None

Extension registers

None

Associated logs

None

TMPLT_28**Register type**

Peg

Description

TMPLT_28 counts the number of times the template at index 28 is used to format a CDR.

Associated registers

None

Extension registers

None

Associated logs

None

TMPLT_29**Register type**

Peg

Description

TMPLT_29 counts the number of times the template at index 29 is used to format a CDR.

Associated registers

None

Extension registers

None

Associated logs

None

TMPLT_30**Register type**

Peg

Description

TMPLT_30 counts the number of times the template at index 30 is used to format a CDR.

Associated registers

None

Extension registers

None

Associated logs

None

TMPLT_31**Register type**

Peg

Description

TMPLT_31 counts the number of times the template at index 31 is used to format a CDR.

Associated registers

None

Extension registers

None

Associated logs

None

FCDRTMP2

Description

OM group Flexible Call Detail Record Template (FCDRTMP2) counts the number of times templates 32 through 63 are used to format a CDR. (Similarly, FCDRTMP2 provides counts for templates 0 through 31.) FCDRTMP2E is used for register overflows from FCDRTMP2.

The following table lists the key and info fields associated with OM group FCDRTMP2.

Key field	Info field
None	FCDR_TMPLT1_FLDS

Related functional groups

There are no functional groups associated with OM group FCDRTMP2.

Registers

The following table lists the registers associated with OM group FCDRTMP2 and what they measure. For a description of a register, click on the register name.

Registers for OM group FCDRTMP1 (Sheet 1 of 2)

Register name	Measures
TMPLT_32	Template 32
TMPLT_33	Template 33
TMPLT_34	Template 34
TMPLT_35	Template 35
TMPLT_36	Template 36
TMPLT_37	Template 37
TMPLT_38	Template 38
TMPLT_39	Template 39
TMPLT_40	Template 40
TMPLT_41	Template 41

Registers for OM group FCDRTMP1 (Sheet 2 of 2)

Register name	Measures
<u>TMPLT_42</u>	Template 42
<u>TMPLT_43</u>	Template 43
<u>TMPLT_44</u>	Template 44
<u>TMPLT_45</u>	Template 45
<u>TMPLT_46</u>	Template 46
<u>TMPLT_47</u>	Template 47
<u>TMPLT_48</u>	Template 48
<u>TMPLT_49</u>	Template 49
<u>TMPLT_50</u>	Template 50
<u>TMPLT_51</u>	Template 51
<u>TMPLT_52</u>	Template 52
<u>TMPLT_53</u>	Template 53
<u>TMPLT_54</u>	Template 54
<u>TMPLT_55</u>	Template 55
<u>TMPLT_56</u>	Template 56
<u>TMPLT_57</u>	Template 57
<u>TMPLT_58</u>	Template 58
<u>TMPLT_59</u>	Template 59
<u>TMPLT_60</u>	Template 60
<u>TMPLT_61</u>	Template 61
<u>TMPLT_62</u>	Template 62
<u>TMPLT_63</u>	Template 63

TMPLT_32**Register type**

Peg

Description

TMPLT_32 counts the number of times the template at index 32 is used to format a CDR.

Associated registers

None

Extension registers

None

Associated logs

None

TMPLT_33**Register type**

Peg

Description

TMPLT_33 counts the number of times the template at index 33 is used to format a CDR.

Associated registers

None

Extension registers

None

Associated logs

None

TMPLT_34**Register type**

Peg

Description

TMPLT_34 counts the number of times the template at index 34 is used to format a CDR.

Associated registers

None

Extension registers

None

Associated logs

None

TMPLT_35**Register type**

Peg

Description

TMPLT_35 counts the number of times the template at index 35 is used to format a CDR.

Associated registers

None

Extension registers

None

Associated logs

None

TMPLT_36**Register type**

Peg

Description

TMPLT_36 counts the number of times the template at index 36 is used to format a CDR.

Associated registers

None

Extension registers

None

Associated logs

None

TMPLT_37**Register type**

Peg

Description

TMPLT_37 counts the number of times the template at index 37 is used to format a CDR.

Associated registers

None

Extension registers

None

Associated logs

None

TMPLT_38**Register type**

Peg

Description

TMPLT_38 counts the number of times the template at index 38 is used to format a CDR.

Associated registers

None

Extension registers

None

Associated logs

None

TMPLT_39**Register type**

Peg

Description

TMPLT_39 counts the number of times the template at index 39 is used to format a CDR.

Associated registers

None

Extension registers

None

Associated logs

None

TMPLT_40**Register type**

Peg

Description

TMPLT_40 counts the number of times the template at index 40 is used to format a CDR.

Associated registers

None

Extension registers

None

Associated logs

None

TMPLT_41**Register type**

Peg

Description

TMPLT_41 counts the number of times the template at index 41 is used to format a CDR.

Associated registers

None

Extension registers

None

Associated logs

None

TMPLT_42**Register type**

Peg

Description

TMPLT_42 counts the number of times the template at index 42 is used to format a CDR.

Associated registers

None

Extension registers

None

Associated logs

None

TMPLT_43**Register type**

Peg

Description

TMPLT_43 counts the number of times the template at index 43 is used to format a CDR.

Associated registers

None

Extension registers

None

Associated logs

None

TMPLT_44**Register type**

Peg

Description

TMPLT_44 counts the number of times the template at index 44 is used to format a CDR.

Associated registers

None

Extension registers

None

Associated logs

None

TMPLT_45**Register type**

Peg

Description

TMPLT_45 counts the number of times the template at index 45 is used to format a CDR.

Associated registers

None

Extension registers

None

Associated logs

None

TMPLT_46**Register type**

Peg

Description

TMPLT_46 counts the number of times the template at index 46 is used to format a CDR.

Associated registers

None

Extension registers

None

Associated logs

None

TMPLT_47**Register type**

Peg

Description

TMPLT_47 counts the number of times the template at index 47 is used to format a CDR.

Associated registers

None

Extension registers

None

Associated logs

None

TMPLT_48**Register type**

Peg

Description

TMPLT_48 counts the number of times the template at index 48 is used to format a CDR.

Associated registers

None

Extension registers

None

Associated logs

None

TMPLT_49**Register type**

Peg

Description

TMPLT_49 counts the number of times the template at index 49 is used to format a CDR.

Associated registers

None

Extension registers

None

Associated logs

None

TMPLT_50**Register type**

Peg

Description

TMPLT_50 counts the number of times the template at index 50 is used to format a CDR.

Associated registers

None

Extension registers

None

Associated logs

None

TMPLT_51**Register type**

Peg

Description

TMPLT_51 counts the number of times the template at index 51 is used to format a CDR.

Associated registers

None

Extension registers

None

Associated logs

None

TMPLT_52**Register type**

Peg

Description

TMPLT_52 counts the number of times the template at index 52 is used to format a CDR.

Associated registers

None

Extension registers

None

Associated logs

None

TMPLT_53**Register type**

Peg

Description

TMPLT_53 counts the number of times the template at index 53 is used to format a CDR.

Associated registers

None

Extension registers

None

Associated logs

None

TMPLT_54**Register type**

Peg

Description

TMPLT_54 counts the number of times the template at index 54 is used to format a CDR.

Associated registers

None

Extension registers

None

Associated logs

None

TMPLT_55**Register type**

Peg

Description

TMPLT_55 counts the number of times the template at index 55 is used to format a CDR.

Associated registers

None

Extension registers

None

Associated logs

None

TMPLT_56**Register type**

Peg

Description

TMPLT_56 counts the number of times the template at index 56 is used to format a CDR.

Associated registers

None

Extension registers

None

Associated logs

None

TMPLT_57**Register type**

Peg

Description

TMPLT_57 counts the number of times the template at index 57 is used to format a CDR.

Associated registers

None

Extension registers

None

Associated logs

None

TMPLT_58**Register type**

Peg

Description

TMPLT_58 counts the number of times the template at index 58 is used to format a CDR.

Associated registers

None

Extension registers

None

Associated logs

None

TMPLT_59**Register type**

Peg

Description

TMPLT_59 counts the number of times the template at index 59 is used to format a CDR.

Associated registers

None

Extension registers

None

Associated logs

None

TMPLT_60**Register type**

Peg

Description

TMPLT_60 counts the number of times the template at index 60 is used to format a CDR.

Associated registers

None

Extension registers

None

Associated logs

None

TMPLT_61**Register type**

Peg

Description

TMPLT_61 counts the number of times the template at index 61 is used to format a CDR.

Associated registers

None

Extension registers

None

Associated logs

None

TMPLT_62**Register type**

Peg

Description

TMPLT_62 counts the number of times the template at index 62 is used to format a CDR.

Associated registers

None

Extension registers

None

Associated logs

None

TMPLT_63**Register type**

Peg

Description

TMPLT_63 counts the number of times the template at index 63 is used to format a CDR.

Associated registers

None

Extension registers

None

Associated logs

None

FCNF

Description

FBS Conference (FCNF) is a separate requirement functionality that does not apply to this PCL release.

FPDABM

Description

OM group File Processor Dual-access Buffer Memory Counts (FPDABM) tracks the number of times that the dual-access buffer memory (DABM) changes state. The group counts changes of state to in-service trouble (ISTB) or system busy (SYSB). These states indicate the occurrence of errors related to the DABM and if the errors are part of normal maintenance activities.

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

Key field	Info field
FPD_SYMB_NUM	FPDABM_OM_INFO_T

Related functional groups

There are no functional groups associated with OM group FPDABM.

Registers

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

Registers for OM group FPDABM

Register name	Measures
FPDABMIT	FP DABM in-service trouble count
FPDABMRX	FP DABM system busy, caused by a routine exercise (REX) test
FPDABMSB	FP DABM system busy count

FPDABMIT

Register type

Peg

Description

FPDABMIT counts the number of times the DABM changes state to an ISTB.

Associated registers

None

Extension registers

None

Associated logs

FP552

FPDABMRX**Register type**

Peg

Description

FPDABMRX counts the number of times the DABM changes state to SYSB as a result of an REX test. This register is not active.

Associated registers

None

Extension registers

None

Associated logs

FP552

FPDABMSB**Register type**

Peg

Description

FPDABMSB counts the number of times the DABM changes state to SYSB.

Associated registers

[FPDABMRX](#)

Extension registers

None

Associated logs

FP552

FPDEVICE

Description

OM group File Processor Storage Device Counts (FPDEVICE) tracks the number of times each file processor (FP) storage device becomes:

- in-service trouble (ISTB)
- manual busy (ManB)
- not available (NA)
- resource busy (RBSY)
- system busy (SYSB)

FPDEVICE counts the number of times that use indicators specify the device activity. The following table lists the key and info fields associated with OM group FPDEVICE.

Key field	Info field
FPD_SYMB_NUM	FPDEVICE_OM_INFO_T

Related functional groups

There are no functional groups associated with OM group FBDEVICE.

Registers

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

Registers for OM group FPDEVICE (Sheet 1 of 2)

Register name	Measures
FPDEVBR	FP storage device blocks read count
FPDEVBW	FP storage device blocks written count
FPDEVIT	FP storage device ISTB state count
FPDEVITU	FP storage device ISTB state usage
FPDEVMB	FP storage device ManB state count
FPDEVMBU	FP storage device ManB state usage

Registers for OM group FPDEVICE (Sheet 2 of 2)

Register name	Measures
FPDEVNA	FP storage device NA state count
FPDEVNAU	FP storage device NA state usage
FPDEVNU	FP storage device number of usage intervals in the last transfer period
FPDEVRA	FP storage device unrecoverable block assignment count
FPDEVRAR	FP storage device recoverable block assignment count
FPDEVRB	FP storage device RBSY state count
FPDEVRBU	FP storage device RBSY state usage
FPDEVRO	FP storage device requests count
FPDEVSB	FP storage device SYSB state count
FPDEVSBU	FP storage device SYSB state usage
FPDIP0EU	FP device interface paddleboard for controller 0, enabled usage
FPDIP1EU	FP device interface paddleboard for controller 1, enabled usage

FPDEVBR**Register type**

Peg

Description

FPDEVBR counts the number of blocks that the system reads from the given storage device. The register is not active.

Associated registers[FPDEVNU](#)**Extension registers**

None

Associated logs

None

FPDEVBW**Register type**

Peg

Description

FPDEVBW counts the number of blocks that the system writes to the given storage device. The count takes into account the time interval during which the count accumulates to determine block write traffic. FPDEVBW is not active.

Associated registers

[FPDEVNU](#)

Extension registers

None

Associated logs

None

FPDEVIT**Register type**

Peg

Description

FPDEVIT increases each time the given storage device changes state to ISTB.

Associated registers

None

Extension registers

None

Associated logs

None

FPDEVITU**Register type**

Peg

Description

FPDEVITU increases every 10 seconds when the given storage device is ISTB.

Associated registers[FPDEVNU](#)**Extension registers**

None

Associated logs

None

FPDEVMB**Register type**

Peg

Description

FPDEVMB increases each time the given storage device changes state to ManB.

Associated registers

None

Extension registers

None

Associated logs

FP503

FPDEVMBU**Register type**

Peg

Description

FPDEVMBU increases every 10 seconds when the given storage device is ManB.

Associated registers[FPDEVNU](#)**Extension registers**

None

Associated logs

None

FPDEVNA**Register type**

Peg

Description

Register FPDEVNA increases each time the given storage device changes state to NA.

Associated registers

None

Extension registers

None

Associated logs

FP503

FPDEVNAU**Register type**

Peg

Description

FPDEVNAU increases every 10 seconds when the given storage device is in the NA state.

Associated registers

[FPDEVNU](#)

Extension registers

None

Associated logs

None

FPDEVNU**Register type**

Peg

Description

FPDEVNU increases every 10 seconds when the usage scan process checks usage conditions for registers in OM group FPDEVICE.

Associated registers

None

Extension registers

None

Associated logs

None

FPDEVRA**Register type**

Peg

Description

FPDEVRA counts the number of unrecoverable block reassignments. The register is not active.

Associated registers

[FPDEVNU](#)

Extension registers

None

Associated logs

None

FPDEVRRAR**Register type**

Peg

Description

FPDEVRRAR counts the number of recoverable block reassignments. The register is not active.

Associated registers

[FPDEVNU](#)

Extension registers

None

Associated logs

None

FPDEVVRB**Register type**

Peg

Description

FPDEVVRB increases each time the given storage device changes state to RBSY.

Associated registers

None

Extension registers

None

Associated logs

FP503

FPDEVSRBU**Register type**

Peg

Description

FPDEVSRBU increases every 10 seconds when the given storage device is in the RBSY state.

Associated registers

[FPDEVNU](#)

Extension registers

None

Associated logs

None

FPDEVSRQ**Register type**

Peg

Description

FPDEVSRQ counts the number of requests to the given storage device.

Associated registers

[FPDEVNU](#)

Extension registers

None

Associated logs

None

FPDEVSRB**Register type**

Peg

Description

FPDEVSRB increases each time the given storage device changes state to SYSB.

Associated registers

None

Extension registers

None

Associated logs

FP503

FPDEVSBU**Register type**

Peg

Description

FPDEVSBU increases every 10 seconds when the given storage device is in the SYSB state.

Associated registers

[FPDEVNU](#)

Extension registers

None

Associated logs

None

FPDIP0EU**Register type**

Peg

Description

FPDIP0EU increases every 10 seconds when the given SCSI device interface paddleboard (SDIP) on controller 0 is enabled.

Associated registers

[FPDEVNU](#)

Extension registers

None

Associated logs

None

FPDIP1EU**Register type**

Peg

Description

FPDIP1EU increases every 10 seconds when the given SCSI device interface paddleboard (SDIP) on controller 1 is enabled.

Associated registers

[FPDEVNU](#)

Extension registers

None

Associated logs

None

FPSCSI

Description

OM group FP SCSI Bus Counts (FPSCSI) tracks the number of times the SCSI changes state, and indicates bus activity.

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

Key field	Info field
FPD_SYMB_NUM	FPSCSI_OM_INFO_T

Related functional groups

There are no functional groups associated with OM group FPSCSI.

Registers

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

Registers for OM group FPSCSI (Sheet 1 of 2)

Register name	Measures
FPSCSIEU	FP SCSI bus enabled usage
FPSCSIIT	FP SCSI bus ISTB count
FPSCSIU	FP SCSI bus device usage
FPSCSIMB	FP SCSI bus ManB count
FPSCSINU	FP SCSI bus number of usage intervals in the last transfer period
FPSCSIRB	FP SCSI bus RBSY count
FPSCSIRS	FP SCSI bus SWEN caused by a REX test
FPSCSIRX	FP SCSI bus SYSB caused by an REX
FPSCSISB	FP SCSI bus SYSB count
FPSCSISW	FP SCSI bus SWEN count

Registers for OM group FPSCSI (Sheet 2 of 2)

Register name	Measures
FPSIPPDO	FP SCSI paddleboard processor storage device access occupancy
FPSIPPIO	FP SCSI paddleboard processor idle occupancy
FPSIPPMO	FP SCSI paddleboard processor maintenance occupancy

FPSCSIEU**Register type**

Peg

Description

FPSCSIEU increases every 10 seconds when the SCSI bus is enabled.

Associated registers[FPSCSINU](#)**Extension registers**

None

Associated logs

FP504

FPSCSIIT**Register type**

Peg

Description

FPSCSIIT increases when the SCSI bus changes state to in-service trouble (ISTB).

Associated registers

None

Extension registers

None

Associated logs

FP504

FPSCSIU**Register type**

Peg

Description

FPSCSIU increases every 10 seconds when a storage device uses the SCSI. FPSCSIU is not active.

Associated registers

[FPSCSINU](#)

Extension registers

None

Associated logs

None

FPSCSIMB**Register type**

Peg

Description

FPSCSIMB increases when the SCSI bus changes state to manual busy (ManB).

Associated registers

None

Extension registers

None

Associated logs

FP504

FPSCSINU**Register type**

Peg

Description

FPSCSINU increases every 10 seconds when the usage scan process checks usage conditions for registers in OM group FPSCSI.

Associated registers

None

Extension registers

None

Associated logs

None

FPSCSIRB**Register type**

Peg

Description

FPSCSIRB increases when the SCSI bus changes state to resource busy (RBSY).

Associated registers

None

Extension registers

None

Associated logs

FP504

FPSCSIRS**Register type**

Peg

Description

FPSCSIRS counts the number of times the SCSI bus changes state to switch enable (SWEN). The SCSI bus changes state to SWEN to switch from one bus to the other because of a routine exercise (REx) test. FPSCSIRS not active.

Associated registers

None

Extension registers

None

Associated logs

FP504

FPSCSIRX**Register type**

Peg

Description

FPSCSIRX increases when the SCSI bus changes state to SYSB as a result of a REX test. FPSCSIRX is not active.

Associated registers

None

Extension registers

None

Associated logs

FP504

FPSCSISB**Register type**

Peg

Description

FPSCSISB increases when the SCSI bus changes state to the system busy (SYSB).

Associated registers

[FPSCSIRX](#)

Extension registers

None

Associated logs

FP504

FPSCSISW**Register type**

Peg

Description

FPSCSISW counts the number of times the SCSI bus changes state to switch enable (SWEN). The SCSI bus changes state to SWEN to switch from one bus to the other. FPSCSISW is not active.

Associated registers

[FPSCSIRS](#)

Extension registers

None

Associated logs

FP504

FPSIPPDO**Register type**

Peg

Description

FPSIPPDO counts the amount of time that the SCSI processor performs device access activity. The register counts the amount in a percentage value. This value increases to the next percentage every 10 seconds. The device access processor occupancy represents the amount of time the processor does not perform maintenance activity and is not idle. FPSIPPDO is not active.

Associated registers[FPSIPPIO](#), [FPSIPPMO](#), [FPSCSINU](#)**Extension registers**

None

Associated logs

FP504

FPSIPPIO**Register type**

Peg

Description

FPSIPPIO counts the amount of time the SCSI processor is idle. The register counts the amount of time in a percentage value. This value increases to the next percentage value every 10 seconds. FPSIPPIO is not active.

Associated registers[FPSIPPMO](#), [FPSIPPDO](#), [FPSCSINU](#)**Extension registers**

None

Associated logs

FP504

FPSIPPMO**Register type**

Peg

Description

FPSIPPMO counts the amount of time the SCSI processor performs maintenance activity. The register counts the amount of time in a percentage value. This value increases to the next percentage value every 10 seconds. FPSIPPMO is not active.

Associated registers

[FPSIPPIO](#), [FPSIPPDO](#), [FPSCSINU](#)

Extension registers

None

Associated logs

FP504

FRSAGENT

Description

OM group Frame Relay Service Agent (FRSAGENT) monitors the frame relay service (FRS) on each logical channel. FRSAGENT monitors the quality of service the customer that uses a logical channel receives.

FRSAGENT contains registers that count:

- frames received from the frame transport bus (F-bus) that are sent to the T1 carrier
- frames that are received from the T1 carrier
- cyclic redundancy check (CRC) errors
- channel disconnects
- channel originations
- aborts received in the incoming frames
- frames that are too short or too long
- frames that have an invalid data-link connection identifier (DLCI)
- frames set to backward explicit correction notification (BECN) by the agent
- frames discarded at the UNI ingress channel
- frames that exceed the committed information rate for that agent
- frames discarded with the DE bit equal to zero
- frames discarded with the DE bit equal to one
- frames set to forward exact correction notification by the agent
- time-outs by the local management interface
- number of octets received
- number of octets transmitted

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

Key field	Info field
FRSAGENT	FRS_AGENT_INFO (contains the FRS device type, the device index, and the channel number associated with the FRS agent); frame relay interface unit (FRIU) number + channel number

Related functional groups

The DataSPAN operating group is associated with OM group FRSAGENT.

Registers

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

Registers for OM group FRSAGENT (Sheet 1 of 2)

Register name	Measures
ABORTS	Aborts
BECNORIG	Backward explicit correction notification (BECN) bit set on origination
CHANDISC	Channel disconnects
CHANORG	Channel originations
CIRDISC	Committed information rate discarded frames
CIREXCES	Committed information rate exceeded
DE0DISC	Discarded frames with DE = 0
DE1DISC	Discarded frames with DE = 1
FECNORIG	Forward explicit correction notification (FECN) bit origination
FRAREC	Frames received

Registers for OM group FRSAGENT (Sheet 2 of 2)

Register name	Measures
FRASENT	Frames sent
INVALEN	Invalid length
INVDLCI	Invalid data-link connection identifier
LMILOST	Local management interface timeouts
OCTREC	Number of octets received
OCTSENT	Number of octets transmitted
PTERR	Cyclic redundancy check (CRC) errors

ABORTS**Register type**

Peg

Description

ABORTS register counts aborts received in the incoming frame.

Associated registers

None

Extension registers

None

Associated logs

None

BECNORIG**Register type**

Peg

Description

BECNORIG counts the number of frames the agent sends to BECN.

Associated registers

None

Extension registers

None

Associated logs

None

CHANDISC**Register type**

Peg

Description

CHANDISC counts channel disconnects that the A/B bit signaling specifies. The register is valid for FRS agents that run at 56 kbit/s with A/B bit signaling or digital data service.

Associated registers

None

Extension registers

None

Associated logs

None

CHANORG**Register type**

Peg

Description

CHANORG counts channel originations that the A/B bit signaling specifies. The register is valid for FRS agents that run 56 kbit/s with A/B bit signaling or 56-kbit/s digital data service.

Associated registers

None

Extension registers

None

Associated logs

None

CIRDISC**Register type**

Peg

Description

CIRDISC counts the number of frames discarded at the UNI ingress channel because the number exceeds the total information rate. The

total information rate is the committed information rate (CIR) plus the total information rate (SIR = CIR + EIR). CIRDISC is uploaded to the computing module (CM) with other FRSAGENT registers every 30 minutes.

Associated registers

[CIREXCES](#)

Extension registers

None

Associated logs

None

CIREXCES**Register type**

Peg

Description

CIREXCES counts the number of frames that exceed the CIR for that agent. The register is uploaded with other registers every 30 minutes.

Associated registers

[CIRDISC](#)

Extension registers

None

Associated logs

None

DE0DISC**Register type**

Peg

Description

DE0DISC register counts the number of discarded frames, with the discard eligible (DE) bit cleared.

Associated registers

None

Extension registers

None

Associated logs

None

DE1DISC**Register type**

Peg

Description

DE1DISC counts the number of discarded frames, with the DE bit set.

Associated registers

None

Extension registers

None

Associated logs

None

FECNORIG**Register type**

Peg

Description

FECNORIG counts the number of frames the agent sends to FECN.

Associated registers

None

Extension registers

None

Associated logs

None

FRAREC**Register type**

Peg

Description

FRAREC register increments each time the FRIU receives a frame from the T1 carrier.

Associated registers

None

Extension registers

None

Associated logs

None

FRASENT**Register type**

Peg

Description

FRASENT register counts frames received from the F-bus that are sent to the T1 carrier.

Associated registers

None

Extension registers

FRASENTX

Associated logs

None

INVALEN**Register type**

Peg

Description

INVALEN increments each time the FRS agent receives a frame with an invalid length. The minimum length of the frame depends on two items. It depends if the frame is link access procedure on the D-channel (LAPD), or link access procedure balanced (LAPB). The maximum length is 2106 bytes. If the frame exceeds 2106 bytes, it cannot be routed.

The number of frames with an invalid length can be high. When the number of frames is high it indicates that the telephone operating company is not sending valid data frames to be routed. You must report the problem to the telephone operating company.

Associated registers

None

Extension registers

None

Associated logs

None

INVDLCI**Register type**

Peg

Description

INVDLCI register counts frames received from the T1 carrier that have an invalid data-link connection identifier (DLCI).

Associated registers

None

Extension registers

None

Associated logs

None

LMILOST**Register type**

Peg

Description

LMILOST increments each time the local management interface (LMI) times out. Each time a connection is lost because the number of LMI errors exceeds a preset threshold, the LMILOST register increments.

Associated registers

None

Extension registers

None

Associated logs

FRS121

OCTREC**Register type**

Peg

Description

OCTREC counts the number of octets that were received on the agent.

Associated registers

None

Extension registers

OCTRECX

Associated logs

None

OCTSENT**Register type**

Peg

Description

OCTSENT counts the number of octets transmitted on the agent.

Associated registers

None

Extension registers

OCTSENTX

Associated logs

None

PTERR**Register type**

Peg

Description

PTERR counts CRC errors. Each CRC error detected means that one frame was as a result of damage in the frame.

Associated registers

None

Extension registers

None

Associated logs

None

FRSPM

Description

OM group Frame Relay Service Peripheral Module (FRSPM) monitors traffic and faults on the frame relay service (FRS) device. FRSPM allows operating company personnel to determine the response of the FRS device to frame switching demands. To determine the quality of service that an FRS device provides, the operating company personnel use fault numbers reported by OM registers. If the device has a high number of faults, the operating company personnel can take action.

Registers in the FRSPM group count:

- faults on the FRS device
- errors on the message switch link
- cyclic redundancy check (CRC) errors
- frames sent to the T1 carrier from the frame relay interface unit (FRIU)
- frames received in the FRIU from the T1 carrier
- discarded frames received in the FRIU from the T1 carrier or the frame transport bus (F-bus)

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

Key field	Info field
None	FRS_PM_INFO is the FRS peripheral module (PM) type. The only valid FRS PM type is FRIU.

Related functional groups

The following functional groups are associated with OM group FRSPM:

- DMS-100
- DataSPAN

Registers

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

Registers for OM group FRSPM

Register name	Measures
FRMERR	Frame errors
FRREC	Frames received
FRSENT	Frames sent
MSLKERRP	Message switch link errors
PMFAULT	Frame relay device faults
PORTERR	Cyclic redundancy check errors

FRMERR

Register type

Peg

Description

FRMERR counts discarded frames received in the FRIU from the T1 carrier, for one of the following reasons:

- invalid frame length
- invalid data-link connection identifier (DLCI)

Associated registers

None

Extension registers

None

Associated logs

None

FRREC**Register type**

Peg

Description

FRREC counts frames received in the FRIU unit from the T1 carrier.

Associated registers

None

Extension registers

FRRECX

Associated logs

None

FRSENT**Register type**

Peg

Description

FRSENT counts frames sent to the T1 carrier from the FRIU.

Associated registers

None

Extension registers

FRSENTX

Associated logs

None

MSLKERRP**Register type**

Peg

Description

MSLKERRP counts errors on the message switch link. Message switch link errors include longitudinal redundancy check (LRC) errors and F-bus transmission buffer overflow errors. If the value of MSLKERRP is high, it indicates that the FRS device is overloaded and frames can be lost.

Associated registers

None

Extension registers

None

Associated logs

None

PMFAULT**Register type**

Peg

Description

PMFAULT counts faults on the FRS device. The FRS device faults include:

- the activity of the carrier is interrupted. The interruption causes a total loss of communication with customer devices.
- the activity of the channel is interrupted. The interruption causes a total loss of communication with the connected FRS device
- loss of signal. A signal that is not available causes a total loss of communication with the end device.
- a loss of synchronization between the clocks of the FRIU and the external device
- a user restarts while the FRS device is in service
- the FRS device becomes system busy (SysB)
- the FRIU overload occurs when the FRIU cannot provide service to the traffic load presented to it
- errors appear in the buffers that manage the FRS frames.

If the value of PMFAULT is high, it indicates that the level of service in the device is bad.

Associated registers

None

Extension registers

None

Associated logs

None

PORTERR**Register type**

Peg

Description

PORTERR counts cyclic redundancy check (CRC) errors across all channels in the frame relay interface unit. CRC errors are detected from the frames that enter the FRS device from the T1 carrier. If the value of PORTERR is high, a transmission problem can occur.

Associated registers

None

Extension registers

None

Associated logs

None

FRT1

Description

OM group Frame Relay T1 Carrier (FRT1) monitors the performance of a T1 carrier that the frame relay service (FRS) uses.

FRT1 registers count:

- local carrier group alarms (LCGAs) on the T1 carrier
- remote carrier group alarms (RCGAs) on the T1 carrier
- frame loss on the T1 carrier
- the number of times the bit error rate, out-of-service limit, has been reached
- errored seconds (ES) on the T1 carrier
- severely errored seconds (SES) on the T1 carrier
- unavailable seconds on the T1 carrier
- alarm indication signals on the T1 carrier

FRT1 usage registers record when a carrier is:

- system busy (SysB)
- manual busy (ManB)
- central-side (C-side) busy

The following table lists the key and info fields associated with OM group FRT1.

Key field	Info field
None	FRT1OMINF describes the T1 carrier. The FRT1OMINF field contains the frame relay interface unit (FRIU) and number.

Related functional groups

The following functional groups are associated with OM group FRT1:

- SuperNode
- DataSPAN

Registers

The following table lists the registers associated with OM group FRT1 and what they measure. For a detailed description of a register, click on the register name.

Registers for OM group FRT1

Register name	Measures
FRT1AIS	Frame relay T1 alarm indication signals
FRT1BER	Frame relay T1 bit error ratio
FRT1CBU	Frame relay T1 C-side busy usage
FRT1CRC	Frame relay T1 cyclic redundancy check
FRT1ES	Frame relay T1 errored seconds
FRT1LCGA	Frame relay T1 local carrier group alarm
FRT1LOF	Frame relay T1 loss of frame
FRT1MBU	Frame relay T1 manual busy usage
FRT1RCGA	Frame relay T1 remote carrier group alarm
FRT1SBU	Frame relay T1 system busy usage
FRT1SES	Frame relay T1 severely errored seconds
FRT1UAS	Frame relay T1 unavailable seconds

FRT1AIS

Register type

Peg

Description

FRT1AIS increments when an alarm indication signal (AIS) occurs on the T1 carrier. An AIS indicates to the downstream equipment that the local peripheral is not functioning correctly.

Associated registers

None

Extension registers

None

Associated logs

PM110

FRT1BER**Register type**

Peg

Description

FRT1BER increments each time the bit error ratio out-of-service limit is reached on the T1 carrier. The bit error ratio out-of-service limit is defined in field BEROL in table CARRMTC. If the value of FRT1BER is high, the carrier is operating at a low quality rate.

Associated registers

None

Extension registers

None

Associated logs

PM110

FRT1CBU**Register type**

Usage

Scan rate

100 seconds

Description

FRT1CBU increments every 100 seconds if the T1 carrier is C-side busy.

Associated registers

None

Extension registers

None

Associated logs

None

FRT1CRC**Register type**

Peg

Description

FRT1CRC counts the number of CRC errors that are received on the T1 carrier for an exact FRIU.

Associated registers

None

Extension registers

None

Associated logs

None

FRT1ES**Register type**

Peg

Description

FRT1ES counts ES on the T1 carrier. ES are seconds during which at least one coding violation or one out-of-frame condition occurs. ESs are counted when the T1 carrier is available. Refer to register FRTISES, that counts SES. The ES threshold is defined in field ES of table CARRMTC. When the carrier reaches this threshold, the carrier goes out-of-service.

Associated registers

None

Extension registers

None

Associated logs

PM110

FRT1LCGA**Register type**

Peg

Description

FRT1LCGA register counts LCGA that occur on the T1 carrier. An LCGA is a severe alarm that indicates when the carrier is down and service is interrupted.

Associated registers

None

Extension registers

None

Associated logs

PM110

FRT1LOF**Register type**

Peg

Description

FRT1LOF register counts the number of times a loss of frame is detected on the T1 carrier. A repeated loss of frames causes the predetermined threshold to be exceeded and raises an alarm. A loss of frame can affect service.

Associated registers

None

Extension registers

None

Associated logs

PM110

FRT1MBU**Register type**

Usage

Scan rate

100 seconds

Description

FRT1MBU increments every 100 seconds if the T1 carrier is ManB.

Associated registers

None

Extension registers

None

Associated logs

None

FRT1RCGA**Register type**

Peg

Description

FRT1RCGA counts RCGA that occur on the T1 carrier. An RCGA is sent by the upstream equipment when it detects a problem on the link between the local office and the remote office.

Associated registers

None

Extension registers

None

Associated logs

PM110

FRT1SBU**Register type**

Usage

Scan rate

100 seconds

Description

FRT1SBU increments every 100 seconds if the T1 carrier is SysB.

Associated registers

None

Extension registers

None

Associated logs

PM109

FRT1SES**Register type**

Peg

Description

FRT1SES counts SES on the T1 carrier. SES are the seconds during which a bit error ratio of 103 occurs. SES are counted while the T1 carrier is available or as specified by the field SESCOALC.

Use the SESCASC register to identify the calculation base used. There are two calculation bases available: STD, and BERS. The STD is an SES calculation that is based on a bit rate error value of 103. BERS is an SES calculation based on the value of BERS in table CARRMTC.

The SES threshold is defined in field SES in table CARRMTC. The carrier goes out of service when this threshold is reached.

Associated registers

None

Extension registers

None

Associated logs

PM110

FRT1UAS**Register type**

Peg

Description

FRT1UAS counts unavailable seconds on the T1 carrier. Unavailable seconds start after ten consecutive SES occur, and stop when ten non-severely errored seconds occur.

Associated registers

None

Extension registers

None

Associated logs

None

FTAM

Description

OM group File Transfer Access and Management (FTAM) provides operational measurements (OM) for file transfer, access and management activities that occur in the billing server open system interface (OSI) protocol stack.

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

Key field	Info field
None	NCMNODE_INFO

Related functional groups

There are no functional groups associated with OM group FTAM.

Registers

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

Registers for OM group FTAM

Register name	Measures
FASSEFL	FTAM association failed
FASSOK	FTAM association successful
FDIRINF	FTAM directory information request
FFILOK	FTAM files successful
FKBOK	FTAM Kbytes successful
FRECAF	FTAM recovery attempt failed
FRECAS	FTAM recovery attempt successful
FRESTE	FTAM restart failed
FRESTS	FTAM restart successful
FRQDEL	Files requested for deletion

FASSFL**Register type**

Peg

Description

FASSFL increases after each FTAM association attempt failure.

Associated registers

None

Extension registers

FASSFL2

Associated logs

None

FASSOK**Register type**

Peg

Description

FASSOK increases each time an FTAM association attempt succeeds.

Associated registers

None

Extension registers

FASSOK2

Associated logs

None

FDIRINF**Register type**

Peg

Description

FDIRINF increases each time the FTAM receives a request for directory information.

Associated registers

None

Extension registers

FDIRINF2

Associated logs

None

FFILOC**Register type**

Peg

Description

FFILOC increases each time the FTAM transfers a file correctly from the DMS to a remote station.

Associated registers

None

Extension registers

FFILOC2

Associated logs

None

FKBOK**Register type**

Peg

Description

FKBOK records the number of Kbytes of data that the FTAM transfers correctly from the DMS to a remote station.

Associated registers

None

Extension registers

FKBOK2

Associated logs

None

FRECAF**Register type**

Peg

Description

FRECAF increases after each FTAM recovery attempt failure.

Associated registers

None

Extension registers

FRECAF2

Associated logs

None

FRECAS**Register type**

Peg

Description

FRECAS increases after each successful FTAM recovery.

Associated registers

None

Extension registers

FRECAS2

Associated logs

None

FRESTF**Register type**

Peg

Description

FRESTF increases after each FTAM restart failure.

Associated registers

None

Extension registers

FRESTF2

Associated logs

None

FRESTS**Register type**

Peg

Description

FRESTS increases each time the FTAM performs a successful restart.

Associated registers

None

Extension registers

FRESTD2

Associated logs

None

FRQDEL**Register type**

Peg

Description

FRQDEL increases each time the FTAM handles a request to delete a file.

Associated registers

None

Extension registers

FRQDEL2

Associated logs

None

FTROM

Description

AIN OMs for Telco Engineering (AU2731) introduces OM group Feature Data Block (FTROM). FTROM provides information to assist in switch resource engineering. It is recommended that the OM group be used only for this purpose.

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

Key field	Info field
FTR_NAME	SMALL, MEDIUM, LARGE, X_LARGE, or CRITICAL.

Total of all tuples with info field SMALL = EXTSEIZ for tuple SMALL_FEATURE_DATA

Total of all tuples with info field MEDIUM = EXTSEIZ for tuple MEDIUM_FEATURE_DATA

Total of all tuples with info field LARGE = EXTSEIZ for tuple LARGE_FEATURE_DATA

Total of all tuples with info field X_LARGE =EXTSEIZ for tuple X_LARGE_FEATURE_DATA

Total of all tuples with info field CRITICAL = EXTSEIZ for tuple CRITICAL_FEATURE_DATA

Related functional groups

There are no functional groups associated with OM group FTROM.

Registers

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

Registers for OM group FTROM

Register name	Measures
FTRHI	Register maximum number of FDBs in simultaneous use
FTRSEIZ	Register number of successful FDB allocations

FTRHI

Register type

Peg

Description

FTRHI records the maximum number of simultaneously allocated FDBs of a specific type, during an OM transfer period.

Associated registers

EXTHI

Extension registers

None

Associated logs

None

FTRSEIZ

Register type

Peg

Description

FTRSEIZ records the number of successfully allocated FDBs of a specific type, during an OM transfer period.

Associated registers

EXTSEIZ, EXTSEIZ2

Extension registers

FTRSEIZ2

Associated logs

None

FTRQ

Description

OM group Feature Queue Software Resources (FTRQ) counts the number of successful and unsuccessful requests for feature queue blocks made in an OM transfer period. The high watermark (register FTRQHI) records the maximum number of feature queue blocks to date that were in simultaneous use during a transfer period.

The data supplied by FTRQ is used to monitor the number of feature queue blocks used in an office and provides a measurement of the number of FTRQ features being used at a given time.

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

Key field	Info field
FTRQOM_TUPLE_KEY is the type of feature queue block. The possible types of feature queue blocks are FTRQAGENTS, FTRQ0WAREAS, FTRQ2WAREAS, FTRQ4WAREAS, FTRQ8WAREAS, FTRQ16WAREAS, FTRQ32WAREAS, FTRQ0WPERMS, FTRQ2WPERMS, FTRQ4WPERMS, FTRQ8WPERMS, FTRQ16WPERMS, FTRQ32WPERMS and FTRQTIMERS.	FTRQOM_INFO is the number of feature queue blocks of one type that are allocated. With the availability of dynamic memory the required number of each type of FTRQ blocks are dynamically allocated and provisioned by office parameter DYNAMIC_MEMORY_SIZE.

The following pools in table OFCENG parameter DYNAMIC_MEMORY_SIZE define the number of feature queue blocks for each block type: FTRQAGENTS, FTRQ0WAREAS, FTRQ2WAREAS, FTRQ4WAREAS, FTRQ8WAREAS, FTRQ16WAREAS, FTRQ32WAREAS, FTRQ0WPERMS, FTRQ2WPERMS, FTRQ4WPERMS, FTRQ8WPERMS, FTRQ16WPERMS, and FTRQ32WPERMS.

Related functional groups

The following functional groups are associated with OM group FTRQ:

- DMS-100 Local
- DMS-100 International
- DMS-250 Toll/Tandem
- DMS-300 Gateway
- DMS-MTX Mobile Telephone Exchange
- Meridian SL-100 PBX
- Datapath
- CCS7 Trunk Signaling

Registers

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

Registers for OM group FTRQ

Register name	Measures
FTRQHI	Feature queue high-water mark
FTRQOVFL	Feature queue overflow
FTRQSEIZ	Feature queue successful block requests

FTRQHI

Register type

Peg

Description

FTRQHI indicates the high watermark value for the highest number of successful FTRQ block requests made during a transfer period to date. When the FTRQHI peg count exceeds 65535, the register is reset to zero and extension register FTRQHI2 is incremented.

Associated registers

None

Extension registers

FTRQHI2

Associated logs

None

FTRQOVFL**Register type**

Peg

Description

FTRQOVFL counts the number of unsuccessful FTRQ block requests made during an OM transfer period. When the FTRQOVFL peg count exceeds 65535, it wraps back to zero and increments extension register FTRQOFL2. Register FTRQOVFL and its extension register FTRQOFL2 provide the total count of unsuccessful requests for FTRQ blocks made in a transfer period.

Associated registers

None

Extension registers

FTRQOFL2

Associated logs

None

FTRQSEIZ**Register type**

Peg

Description

FTRQSEIZ measures the number of successful FTRQ block requests during an OM transfer period. FTRQSEIZ is used with extension register FTRQSZ2 to provide the total number of successful FTRQ block requests. Each peg to FTRQSEIZ indicates one successful FTRQ block request in the current OM transfer period. FTRQSEIZ can peg up to 65535 successful FTRQ block requests before it wraps to zero and pegs extension register FTRQSZ2.

Associated registers

None

Extension registers

FTRQSZ2

Associated logs

None

FTS

Description

OM group FAX-Thru Service (FTS) measures the number of activations of the FTS service.

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

Key field	Info field
None	None

Related functional groups

The functional group MSA00001 is associated with OM group FTS.

Registers

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

Registers for OM group FTS

Register name	Measures
FTSACTIV	Number of FTS activations
FTSACTI2	Number of FTS activations 2
FTSBSYAC	Number of FTS Busy Case activations
FTSRNAAC	Number of FTS Ringing No-Answer activations

FTSACTIV

Register type

Peg

Description

FTSACTIV counts the number of activations of the FTS service.

Associated registers

[FTSACTI2](#)

Extension registers

None

Associated logs

None

FTSACTI2**Register type**

Peg

Description

FTSACTI2 counts the number of activations of the FTS service.

Associated registers

[FTSACTIV](#)

Extension registers

None

Associated logs

None

FTSBSYAC**Register type**

Peg

Description

FTSBSYAC counts the number of Busy Case activations of the FTS service.

Associated registers

None

Extension registers

None

Associated logs

None

FTSRNAAC**Register type**

Peg

Description

FTSRNAAC counts the number of Ringing No-Answer activations of the FTS service.

Associated registers

None

Extension registers

None

Associated logs

None

GIACGRP

Description

OM group Group Intercom All Call (GIACGRP) monitors the use of the group intercom all call (GIAC) feature. The GIAC feature allows a member of a group intercom (GIC) group to page members of the GIC group. The member can page a maximum of 29 selected members of the GIC group at the same time. The pages occur over the internal speakers of the business set of the GIAC member.

The GIACGRP contains three registers that count:

- attempts to originate a group intercom all call conference
- attempts to originate a group intercom all call conference that fail because of not enough available conference circuits
- attempts to originate a group intercom all call conference that fail because of not enough software or hardware resources

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

Key field	Info field
IBNG_INDEX (which is the customer group as defined in table CUSTHEAD)	OMIBNGINFO (which is the customer group name entered in table CUSTHEAD)

Related functional groups

The MDC functional group is associated with OM group GIACGRP.

Registers

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

Registers for OM group GIACGRP (Sheet 1 of 2)

Register name	Measures
GIACATT	Group intercom all call origination attempts

Registers for OM group GIACGRP (Sheet 2 of 2)

Register name	Measures
GIACCGRO	Group intercom all call failure-no resources
GIACNOSC	Group intercom all call failure-no conference circuits

GIACATT**Register type**

Peg

Description

GIACATT counts attempts to originate a group intercom all call conference.

Associated registers

IBNGRP_GICORIG

Extension registers

None

Associated logs

None

GIACCGRO**Register type**

Peg

Description

GIACCGRO counts attempts to originate a group intercom all call conference that fail because of not enough conference circuits. These conference circuits are assigned to the MDC customer group that contains the GIAC group. Field CONF6C in table CUSTENG contains the number of conference circuits assigned to an MDC customer group. The system routes the call to customer group resource overflow (CGRO) treatment.

Associated registers

None

Extension registers

None

Associated logs

None

GIACNOSC**Register type**

Peg

Description

GIACNOSC counts attempts to originate a group intercom all call conference that fail. The GIAC fails because not enough conference circuits are available in the office. The system routes the call to no service circuit (NOSC) treatment.

Associated registers

None

Extension registers

None

Associated logs

None

GTID

Description

OM group Generic Logical Terminal Identifier (GTID) monitors GLOGTID pools.

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

Key field	Info field
Number in the range 0-63 of the pool, followed by the name provided when the pool is registered.	Number of TIDs currently allocated to the pool.

Related functional groups

There are no functional groups associated with OM group GTID.

Registers

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

Registers for OM group GTID

Register name	Measures
GTHIGH	High water
GTHIGH2	High water
GTOVFL	GLOGTID requests from a pool
GTSEIZ	Seizure of a GLOGTID from the pool
GTSEIZ2	Seizure of a GLOGTID from the pool

GTHIGH**Register type**

Peg

Description

GTHIGH is the least significant 16 bits of a 32-bit high water register.

Associated registers

[GTHIGH2](#)

Extension registers

None

Associated logs

None

GTHIGH2**Register type**

Peg

Description

GTHIGH2 is the most significant 16 bits of a 32-bit high water register.

Associated registers

[GTHIGH](#)

Extension registers

None

Associated logs

None

GTOVFL**Register type**

Usage

Scan rate

Not available

Description

GTOVFL is a usage register and records the number of times a GLOGTID is requested from a pool, but one is not available.

Associated registers

None

Extension registers

None

Associated logs

None

GTSEIZ**Register type**

Usage

Scan rate

Not available

Description

GTSEIZ is the least significant 16 bits of a 32-bit usage register. This register records the seizure of a GLOGTID from the pool.

Associated registers[GTSEIZ2](#)**Extension registers**

None

Associated logs

None

GTSEIZ2**Register type**

Usage

Scan rate

Not available

Description

GTSEIZ2 is the most significant 16 bits of a 32-bit usage register. This register records the seizure of a GLOGTID from the pool.

Associated registers[GTSEIZ](#)**Extension registers**

None

Associated logs

None

GWOVL OM

Description

OM Group Gateway Overload OM (GWOVL OM) measures the number of connections that were denied because the MG 9000 was in overload.

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

Key field	Info field
GWOVL_OM_PM_INFO1	GWOVL_OM_TUPLE_DATA1

Related functional groups

There are no functional groups associated with OM group GWOVL OM.

Registers

The following table lists the registers associated with OM group GWOVL OM and what they measure.

Registers for OM group GWOVL OM

Register name	Measures
OVERLOAD	Denied connections

OVERLOAD

Register type

Peg

Description

OVERLOAD counts the number of connection denials when an MG 9000 is in overload.

Associated registers

None

Extension registers

None

Associated logs

None

HDBOM

Description

OM group History Data Block OM (HDBOM) tracks the seizures for history data blocks (HDBs).

Note: This OM group was introduced in NA009, but is dormant.

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

Key field	Info field
HDB_type	Contains the size of the block of each HDB type.

Related functional groups

There are no functional groups associated with OM group HDBOM.

Registers

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

Registers for OM group HDBOM

Register name	Measures
HDBSEIZ	Number of successful HDB allocations

HDBSEIZ

Register type

Peg

Description

HDBSEIZ records the number of successful HDB allocations.

Associated registers

None

Extension registers

HDBSEIZ2

Associated logs

None

HFPOM

Description

OM group HFP CPU Occupancy and Layer 2 OMs (HFPOM) monitors the HFP CPU use and frame traffic and indicate problems on XLIU channels.

The OM group HFPOM measures the CPU occupancy in the HFP for the following tasks:

- layer 1
- layer 2
- IPF interface
- maintenance
- utility
- tools
- idler
- other

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

Key field	Info field
Integer value, range 0 to total number of tuples subtract one.	Node name and number. Node name is always XLIU. Number ranges from 0 to 511.

Related functional groups

The DMS Packet Handler functional group is associated with OM group HFPOM.

Registers

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

Registers for OM group HFPOM

Register name	Measures
HFPL1	Layer 1 occupancy
HFPL2	Layer 2 occupancy
HFPIPE	IPF interface occupancy
HFPMaint	Maintenance occupancy
HFPUTIL	Utility occupancy
HFPTOOL	Tools occupancy
HFPIDLE	Idler occupancy
HFPOTHER	Other occupancy
FRAMERX	Frames received by HFP
FRAMETX	Frames transmitted from HFP
BADFRAME	Bad frames received by HFP
LINKCGST	Link Congestion
RNRCGST	Severe XLIU Congestion

HFPL1**Register type**

Peg

Description

HFPL1 monitors HFP CPU time spent processing the frame receiver task. The frame receiver task determines if the system can pass the frame to the layer 2 processing task. The system can pass the frame to the layer 2 processing task if the frame is not a bad frame.

Associated registers

None

Extension registers

None

Associated logs

None

HFPL2**Register type**

Peg

Description

HFPL2 monitors HFP CPU time spent processing layer 2 frames.

Associated registers

None

Extension registers

None

Associated logs

None

HFPIPF**Register type**

Peg

Description

HFPIPF monitors HFP CPU time spent interfacing with Integrated Processor and F-bus messaging and passing frames for layer 3 processing.

Associated registers

None

Extension registers

None

Associated logs

None

HFPMAINT**Register type**

Peg

Description

HFPMAINT monitors HFP CPU time spent processing maintenance tasks, like loopbacks.

Associated registers

None

Extension registers

None

Associated logs

None

HFPUTIL**Register type**

Peg

Description

HFPUTIL monitors HFP CPU time spent processing the timer task and running audits.

Associated registers

None

Extension registers

None

Associated logs

None

HFPTOOL**Register type**

Peg

Description

HFPTOOL monitors HFP CPU time spent running tools, like the CPU utilization and frame measurement tools.

Associated registers

None

Extension registers

None

Associated logs

None

HFIDLE**Register type**

Peg

Description

HFIDLE monitors HFP CPU time that is idle.

Associated registers

None

Extension registers

None

Associated logs

None

HFPOther**Register type**

Peg

Description

HFPOther monitors HFP CPU time spent processing a task other than the following:

- HFPL1
- HFPL2
- HFPIPF
- HFPMAINT

- HFPUTIL
- HFPTOOL
- HFPIDLE

Associated registers

None

Extension registers

None

Associated logs

None

FRAMERX**Register type**

Peg

Description

FRAMERX is the total number of frames that the HFP receives. These frames include I, RR, RNR, SABME, DM, DISC, UA, FRMR, and REJ frames. These frames also include incomplete, bad CRC, aborted, invalid length, and continuity test frames.

Associated registers

None

Extension registers

FRAMERX2. To determine the total number of frames received, multiple register FRAMERX2 by 65 536 and add FRAMERX register.

Associated logs

None

FRAMETX**Register type**

Peg

Description

FRAMETX is the total number of frames that the HFP transmits. These frames include I, RR, RNR, SABME, DM, DISC,UA, FRMR, REJ, and continuity test frames.

Associated registers

None

Extension registers

FRAMETX2. To determine the total number of frames transmitted, multiply by 65 536 and add register FRAMETX

Associated logs

None

BADFRAME**Register type**

Peg

Description

BADFRAME is the total number of incomplete, bad CRC, aborted, and incorrect length frames that the HFP receives.

Associated registers

None

Extension registers

BADFRAM2. To determine the total number of bad frames, multiply by 65 536 and add register BADFRAME.

Associated logs

None

LINKCGST**Register type**

Peg

Description

LINKCGST counts the number of times the build-up of data traffic congests a link. A build-up of data traffic occurs in the layer 2 processor output queue. The data terminal equipment (DTE) waits to receive the build-up of data traffic.

Associated registers

None

Extension registers

LINKCGS2

Associated logs

None

RNRCGST**Register type**

Peg

Description

RNRCGST counts the number of times the free buffer pools (layers 2 and 3) drop below the severe congestion threshold. This condition causes the system to send RNR messages to the DTE to stop the incoming traffic.

Associated registers

None

Extension registers

RNRCGST2

Associated logs

None

HPCBASIC

Description

OM group High Probability Completion - Basic (HPCBASIC) measures HPC call traffic. Registers in this OM group count the number of HPC call attempts on lines and trunks, and keep track of how these calls are handled.

Note: The use of HPC Network Capabilities is restricted in the United States and U.S. Territories (Puerto Rico and U.S. Virgin Islands) to National Security/Emergency Preparedness (NS/EP) users authorized by the Office of the Manager, National Communication System (OMNCS). Operating company deployment of these HPC Network Capabilities must be coordinated with the OMNCS at the following address:

Office of the Manager
National Communications System
Attn: GETS Program Office
701 South Courthouse Rd.
Arlington, VA 22204-2198
email: gets@ncs.gov

HPCBASIC measures HPC call traffic. Registers in this group count the number of HPC call attempts on lines and trunks, and keep track of how these calls are handled.

HPC is the term used to describe the Government Emergency Telecommunications Service (GETS) functionality in a DMS-100 call context. The equivalent functionality in the context of a DMS-250 call is referred to as Carrier GETS (CGETS). In a DMS-500 office that combines the functionality of the DMS-100 and DMS-250, the OMs in this group can be pegged by both HPC and Carrier GETS calls simultaneously.

HPC calls can peg all the registers in this group. Carrier GETS calls only peg selected OMs in this group as indicated in each OM description.

Note: Flowcharts indicating register hits, represent a single pass through an office. Calls can re-route within the office through call forward or AIN responses, and registers can be pegged multiple times during call processing.

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

Key field	Info field
None	None

Related functional groups

There are no functional groups associated with OM group HPCBASIC.

Registers

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

Registers for OM group HPCBASIC (Sheet 1 of 2)

Register name	Measures
LINEATT	Line attempts
TRKATT	Trunk attempts
TERMLINE	Termination - line
TERMTRK	Termination - trunk
TERMNC	Termination - no circuit
TERMIEC	Termination - IEC
TERMIECN	Termination - IEC no circuit
EXNMCTRL	Exemption from network management control
TQQATT	Trunk queuing attempts
TQQOVFL	Trunk queuing overflow
TQQABDN	Trunk queuing abandon
TQQTMRX	Trunk queuing timer expired
ACGEXMPT	AIN queries of HPC calls exempted
ACGBLOCK	AIN queries of HPC calls blocked

Registers for OM group HPCBASIC (Sheet 2 of 2)

Register name	Measures
EQQABDN	Egress queuing queue abandons
EQQATT	Egress queuing queue attempts
EQQOVFL	Egress queuing queue overflow
EQQTMREX	Egress queuing queue timeout

LINEATT**Register type**

Peg

Description

LINEATT counts the number of line origination attempts (including PX, P2, and PRI), recognized as HPC calls on lines served by the measuring switch. LINEATT is not pegged for Carrier GETS.

Associated registers

None

Extension registers

None

Associated logs

None

TRKATT**Register type**

Peg

Description

TRKATT counts the number of calls recognized as HPC calls, on incoming trunks of the measuring switch.

Note: TRKATT is pegged when an incoming call is recognized as a Carrier GETS call. TRKATT is pegged based on the CPC and only applies to incoming ISUP trunk groups.

Associated registers

None

Extension registers

None

Associated logs

None

TERMLINE**Register type**

Peg

Description

The TERMLINE counts the number of calls recognized by the measuring switch as HPC calls, whose destination is a line served by the measuring switch, including calls that have been call forwarded.

Note: TERMLINE is pegged only if the HPC call successfully terminates on the line. TERMLINE is not pegged if the terminating line is busy or if the HPC call is rejected by a feature such as Selective Call Rejection. TERMLINE is not pegged for Carrier GETS.

Associated registers

None

Extension registers

None

Associated logs

None

TERMTRK**Register type**

Peg

Description

TERMTRK counts the number of calls that complete on trunks to points outside the measuring switch, that the switch recognizes as HPC calls. TERMTRK is pegged each time an IAM message is sent from an ISUP trunk, or when the inband signaling trunk is seized.

Note 1: TERMTRK register is unpegged in the case of yielding to glare and COT failure event, if the current value is greater than 0.

Note 2: TERMTRK can be pegged following the pegging of register TERMNC, when an HPC call routes to a busy route, with the AIN Network Busy event armed. In this case TERMNC is pegged, the NB event is hit, and AIN sends a query to the SCP and receives a response of Analyze Route, or AFR trigger.

Note 3: TERMTRK is pegged when a Carrier GETS call completes on a trunk.

Associated registers

None

Extension registers

None

Associated logs

None

TERMNC**Register type**

Peg

Description

TERMNC counts the number of outgoing HPC calls that cannot be routed on a trunk to a point outside the measuring switch, because no idle trunks are available.

Note 1: For the definition of TERMNC, a Virtual Facility Group (VFG) is considered as a trunk. Therefore, TERMNC is pegged when an HPC call routes to a VFG when it reaches maximum capacity.

Note 2: GETS HPC calls can interact with features that send the call to an alternate route, and therefore, affects the pegging of TERMNC.

Examples of these calls follow:

- HPC calls with ACR or E-ACR peg TERMNC once, after all routes to carriers in the response fail to route the call
- HPC calls with NEL Network Busy peg TERMNC before AIN takes control of the call
- HPC calls incoming on ISUP that send back a release with cause message due to network busy, peg TERMNC
- HPC calls that are forwarded and cannot be routed outside the measuring switch peg TERMNC (even when CFDA returns the call to the original terminating line)

Note 1: TERMTRK can be pegged following the pegging of register TERMNC, when an HPC call routes to a busy route, with the AIN Network Busy event armed. In this case TERMNC is pegged, the NB event is hit, and AIN sends a query to the SCP and receives a response of Analyze Route, or AFR trigger.

Note 2: For Carrier GETS, TERMNC is pegged when a call cannot be routed because no idle trunks are available. The register is pegged on the second scan when the call is sent to GNCT treatment because no idle trunk members are found.

Associated registers

None

Extension registers

None

Associated logs

None

TERMIEC**Register type**

Peg

Description

TERMIEC counts the number of HPC calls intended to complete on trunks to points outside the measuring switch, and that are intended for an IEC.

Note: TERMIEC is pegged only when the trunk group is of type ATC. TERMIEC is not pegged for Carrier GETS.

Associated registers

None

Extension registers

None

Associated logs

None

TERMIECN**Register type**

Peg

Description

TERMIECN counts the number of outgoing HPC calls that cannot be routed on a trunk to a point outside the measuring switch because no idle trunks are available, and that are intended for AIN IEC (interLATA call).

Note 1: For the definition of TERMIECN a Virtual Facility Group (VFG) is considered as a trunk. Therefore, TERMNC is pegged when an HPC call is routed to a VFG when it reaches maximum capacity.

Note 2: GETS HPC calls can interact with features that send the call to an alternate route, and therefore, affects the pegging of TERMIECN. TERMIECN is not pegged for Carrier GETS.

Examples of these calls follow:

- HPC calls with ACR or E-ACR peg TERMIECN once, after all routes to carriers in the response fail to route the call
- HPC calls with NEL Network Busy peg TERMIECN before AIN takes control of the call
- HPC calls incoming on ISUP that send back a release with cause message due to network busy, peg TERMIECN
- HPC calls that are forwarded and cannot be routed outside the measuring switch peg TERMIECN (even when CFDA returns the call to the original terminating line)

Note: TERMTRK can be pegged following the pegging of register TERMNC, when an HPC call is routed to a busy route, with the AIN Network Busy event armed. In this case TERMIECN is pegged, the NB event is hit, and AIN sends a query to the SCP and receives a response of Analyze Route, or AFR trigger.

Associated registers

None

Extension registers

None

Associated logs

None

EXNMCTRL

Register type

Peg

Description

EXNMCTRL counts the number of times an HPC call is exempted from an active network management control, on the first idle trunk scan.

Note: EXNMCTRL is pegged when a Carrier GETS call bypasses an active network management control on the first idle scan.

Associated registers

None

Extension registers

None

Associated logs

None

TQQATT

Register type

Peg

Description

TQQATT counts the number of attempts to place HPC calls in all trunk group queues.

Note 1: TQQATT is only pegged when a call is placed on the trunk group queue. It is therefore assumed that the register is pegged only on the second idle trunk scan.

Note 2: TQQATT is pegged each time an attempt is made to place a GETS call in a trunk group queue.

For Carrier GETS, TQQATT is pegged for both trunk and office-wide queuing.

Associated registers

None

Extension registers

None

Associated logs

None

TQQOVFL

Register type

Peg

Description

TQQOVFL counts the number of attempts to place HPC calls in trunk group queues that fail because the queues are full.

Note 1: TQQOVFL is only pegged after a call is placed on the trunk group queue. It is therefore assumed that the register is pegged only on the second idle trunk scan.

Note 2: For Carrier GETS, TQQOVFL counts attempts to place a Carrier GETS call in a queue that fail because the queue for the trunk group is full.

Associated registers

None

Extension registers

None

Associated logs

None

TQQABDN**Register type**

Peg

Description

TQQABDN counts the number of HPC calls placed in trunk group queues, but abandoned while in the queue.

Note 1: TQQABDN is only pegged after a call is on the trunk group queue. It is therefore assumed that the register is pegged only on the second idle trunk scan.

Note 2: TQQABDN is pegged when a Carrier GETS call is in queue and the calling party abandons.

Associated registers

None

Extension registers

None

Associated logs

None

TQQTMREX**Register type**

Peg

Description

TQQTMREX counts the number of HPC calls removed from trunk group queues due to a timeout treatment.

Note 1: TQQTMREX is only pegged after a call is placed on the trunk group queue. It is therefore assumed that the register is pegged only on the second idle trunk scan.

Note 2: TQQTMREX is pegged when a Carrier GETS call is removed from queue because it timed-out waiting for an idle trunk to become available.

Associated registers

None

Extension registers

None

Associated logs

None

ACGEXMPT**Register type**

Peg

Description

ACGEXMPT counts the total number of AIN queries of all HPC calls exempted from AIN ACG controls. ACGEXMPT is not pegged for Carrier GETS.

Associated registers

None

Extension registers

None

Associated logs

None

ACGBLOCK**Register type**

Peg

Description

ACGBLOCK counts the total number of AIN queries of all HPC calls blocked by AIN ACG controls. ACBLOCK is not pegged for Carrier GETS.

Associated registers

None

Extension registers

None

Associated logs

None

EQQABDN**Register type**

Peg

Description

EQQABDN counts the number of calls placed in egress trunk group queues, but abandoned while in the queue. EQQABDN is not pegged for Carrier GETS.

Associated registers

None

Extension registers

None

Associated logs

None

EQQATT**Register type**

Peg

Description

EQQATT counts the number of attempts made to place HPC calls in egress trunk group queues. EQQATT is not pegged for Carrier GETS.

Associated registers

None

Extension registers

None

Associated logs

None

EQQOVFL**Register type**

Peg

Description

EQQOVFL counts the number of failed attempts to place HPC calls in egress trunk group queues because the queues are full. EQQOVFL is not pegged for Carrier GETS.

Associated registers

None

Extension registers

None

Associated logs

None

EQQTMREX**Register type**

Peg

Description

EQQTMREX counts the number of calls removed from egress trunk group queues due to timeout treatment. EQQTMREX is not pegged for Carrier GETS.

Associated registers

None

Extension registers

None

Associated logs

None

HPCTRKCGP

Description

OM group High Probability Completion Trunk Group (HPCTRKGP) measures HPC call traffic on a trunk group basis. Registers in this group count the number of:

- HPC call attempts on a trunk group
- HPC calls that overflowed because all members of a trunk group are busy
- trunk group queue overflows
- queued calls that encounter a timeout treatment

Note: The use of HPC Network Capabilities is restricted in the United States and U.S. Territories (Puerto Rico and U.S. Virgin Islands) to National Security/Emergency Preparedness (NS/EP) users authorized by the Office of the Manager, National Communication System (OMNCS). Operating company deployment of these HPC Network Capabilities must be coordinated with the OMNCS at the following address:

Office of the Manager
National Communications System
Attn: GETS Program Office
701 South Courthouse Rd.
Arlington, VA 22204-2198
email: gets@ncs.gov

HPC is the term used to describe the Government Emergency Telecommunications Service (GETS) functionality in a DMS-100 call context. The equivalent functionality in the context of a DMS-250 call is referred to as Carrier GETS (CGETS). In a DMS-500 office that combines the functionality of the DMS-100 and DMS-250, the OMs in this group can be pegged by both HPC and Carrier GETS calls simultaneously.

Note: Flowcharts indicating OM register hits, represent a single pass through an office. Calls can re-route within the office through call forward or AIN responses, and OM registers can be pegged multiple times during call processing.

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

Key field	Info field
COMMON_LANGUAGE_NAME	HPCTRKGPINFO

Related functional groups

There are no functional groups associated with OM group HPCTRKCGP.

Registers

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

Registers for OM group HPCTRKCGP

Register name	Measures
HPCATT	HP Call Attempts
HPCOVFL	HP Call Overflow
QUETMREX	Trunk Queuing Timer Expired
QUEOVFL	Trunk Queuing Overflow

HPCATT

Register type

Peg

Description

HPCATT counts the number of times the switch tries to access a trunk in the trunk group to serve an HPC call. The register is pegged only on the first idle trunk scan.

Note: For Carrier GETS, the HPCATT register is pegged each time a call attempts to access a trunk in the trunk group to serve a Carrier GETS call. HPCATT is pegged only on the first idle trunk scan.

Associated registers

None

Extension registers

None

Associated logs

None

HPCOVFL**Register type**

Peg

Description

HPCOVFL counts the number of times the switch tries to access a trunk in the trunk group to serve an HPC call, when all trunks are busy. This register is pegged only on the first idle trunk scan.

Note: For Carrier GETS, the HPCOVFL register is pegged when the DMS switch tries to access a trunk in the trunk group to serve a Carrier GETS call, when all trunks are busy. The register is only pegged on the first idle trunk scan.

Associated registers

None

Extension registers

None

Associated logs

None

QUETMREX**Register type**

Peg

Description

QUETMREX register counts the number of HPC calls removed from the trunk group queue due to timeout treatment. The register is only pegged when a call is put on the trunk group queue. It is therefore assumed that the register is pegged only on the second scan.

Note: For Carrier GETS, the QUETMREX register is pegged when a Carrier GETS call is removed from queue because it timed-out waiting for an idle trunk to become available.

Associated registers

None

Extension registers

None

Associated logs

None

QUEOVFL**Register type**

Peg

Description

QUEOVFL counts the number of attempts to place HPC calls in the trunk group queue that fail because the trunk group queue is full. The register is pegged only when a call is put on the trunk group queue. It is therefore assumed that the register is pegged only on the second scan.

Note: For Carrier GETS, the QUEOVFL register is pegged when a Carrier GETS call attempts to queue on the trunk group but fails because the queue is full. QUEOVFL is pegged on the second idle scan.

Associated registers

None

Extension registers

None

Associated logs

None

HTR

Description

OM group Hard To Reach (HTR) codes pegs the Answer and Bid counts for all Hard To Reach codes. A code is tagged Hard To Reach when the probability of call completion is extremely low. The Engineering and Administration Data Acquisition System (EADAS) machine uses these counts to calculate the Answer to Bid ratio.

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

Key field	Info field
None	HTR_INFO Identifies Hard To Reach call codes.

The information field contains:

- the code control type (CCODE/ACODE/NAC/PFX)
- the destination code on which the HTR code control is applied
- SNPA/STS/ALL

Related functional groups

There are no functional groups associated with OM group HTR.

Registers

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

Registers for OM group HTR

Register name	Measures
CAONHTRC	Call attempts on hard to reach codes
CCONHTRC	Call completions on hard to reach codes

CAONHTRC**Register type**

Peg

Description

CAONHTRC keeps track of the number of call attempts on a destination code tagged Hard to Reach.

Associated registers

None

Extension registers

none

Associated logs

None

CCONHTRC**Register type**

Peg

Description

CCONHTRC keeps track of the number of call completions on a destination code tagged Hard to Reach.

Associated registers

None

Extension registers

none

Associated logs

None

HUNT

Description

OM group Hunt (HUNT) provides information on the performance of each hunt group in the DMS switch. HUNT counts:

- attempts to terminate calls on lines in the hunt group
- attempts that fail to find an available line and overflow
- calls attempted again that terminate on a line and fail

A hunt group is a group of lines where an office searches for an available line to terminate a call. The hunt groups on a DMS-100 switch are:

- directory number hunt (DNH)
- distributed line hunt (DLH)
- multiline hunt (MLH)
- bridged night number (BNN)

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

Key field	Info field
None	HUNT_OM_INFO_TYPE - fields: SNPA, DN, GROUPTYPE, SIZE

The SNPA is the serving numbering plan area of the pilot line. The DN is the seven-digit directory number of the pilot line. The GROUPTYPE is the hunt group type, and SIZE is the maximum number of members.

Related functional groups

There are no functional groups associated with OM group HUNT.

Registers

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

Registers for OM group HUNT

Register name	Measures
HUNTATT	Hunt attempts
HUNTOVFL	Hunt overflow
HUNTRHNT	Hunt rehunt
HUNTTRE	Hunt traffic
HUNTMNT	Hunt maintenance

HUNTATT

Register type

Peg

Description

HUNTATT counts attempts to terminate a call on a line that is a member of a hunt group.

Associated registers

None

Extension registers

None

Associated logs

None

HUNTOVFL

Register type

Peg

Description

HUNTOVFL counts failed attempts to terminate a call on a line that is a member of a hunt group. The attempts HUNTOVFL counts fail because no line is available. The lines can be in a call processing busy state or a maintenance busy state.

If the system directs the call at a line other than the pilot line and the hunt group is not circular, overflow can occur. In this case overflow occurs on a directory number hunt (DNH) group. Overflow can occur even if hunt group members are available.

Associated registers

None

Extension registers

None

Associated logs

None

HUNTRHNT**Register type**

Peg

Description

HUNTRHNT increases if the system selects an alternate line in a hunt group because of

- a connection failure on the first line
- a ringing failure on the first line
- other problems on the first line

Associated registers

None

Extension registers

None

Associated logs

None

HUNTTRF**Register type**

Peg

Description

HUNTTRF records call processing traffic on the hunt groups in the office. Each hunt group is scanned every 100 seconds to record the call processing usage for each member. The HUNTTRF register records the number of call processing busy members during the sample time. The register will accumulate between transfer periods.

Associated registers

None

Extension registers

None

Associated logs

None

HUNTMNT**Register type**

Peg

Description

HUNTMNT records maintenance traffic on the hunt groups in the office. Each hunt group is scanned every 100 seconds to record the maintenance usage for each member. The HUNTMNT register records the number of maintenance busy members during the sample time. The register will accumulate between transfer periods.

Associated registers

None

Extension registers

None

Associated logs

None

IBNAC

Description

OM group Integrated Business Network Attendant Console (IBNAC) provides information about the number and types of calls handled by individual attendant consoles.

The types of calls IBNAC counts include listed directory number, O type, intercepted, transferred, forwarded, recalled, and a miscellaneous category for any other calls. The group also counts the number of times attendants hold, originate, and extend calls.

Usage registers record when consoles are in use, in a talking state, and in a position busy state. Supervisory personnel can use information collected in IBNAC to manage work loads, monitor productivity, and identify training requirements.

This information can be used to determine if attendant console resources are able to handle the expected number of calls. IBNAC can be used to determine the types of calls that occur most often. IBNAC can also be used to determine the time the attendant needs to handle the calls.

You can schedule IBNAC with the same method as other OM group reports. You can view the counts on the MAP at the INACOM display level. INACOM provides real-time counts on an individual attendant console basis. The ACOM and ACDYMS MAP displays provide information on a sub-group basis.

Individual register descriptions contain information on relationships between the registers and MAP displays. The MAP does not display usage counts.

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

Key field	Info field
an integer (0-254) representing an individual attendant console	customer group name defined in table IBNGRP (maximum: 256).

For OM group IBNAC:

- The subgroup number is 0-7.
- The console CLLI is defined in table ATTCONS (maximum: 255).

- The CLLI for each attendant console must be defined in table ATTCONS.
- The customer group name and subgroup number for each attendant console must be entered in table IBNGRP.

Related functional groups

The IBN Attendant Console is associated with OM group IBNAC.

Registers

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

Registers for OM group IBNAC (Sheet 1 of 2)

Register name	Measures
IACAUTH	Individual attendant console calls involving authorization codes
IACBSYDR	Individual attendant console position busy duration
IACCFW	Individual attendant console answered call forward calls
IACCTVTU	Individual attendant console activated usage
IACDIALO	Individual attendant console answered dial 0
IACEXTD	Individual attendant console extended calls
IACHLD	Individual attendant console hold calls
IACINTRP	Individual attendant console answered intercept
IACLDN	Individual attendant console listed directory number
IACLDN1	Individual attendant console listed directory number one
IACLDN2	Individual attendant console listed directory number two
IACLDN3	Individual attendant console listed directory number three

Registers for OM group IBNAC (Sheet 2 of 2)

Register name	Measures
<u>IACLDN4</u>	Individual attendant console listed directory number four
<u>IACLDN5</u>	Individual attendant console listed directory number five
<u>IACLDN6</u>	Individual attendant console listed directory number six
<u>IACLDN7</u>	Individual attendant console listed directory number seven
<u>IACLDNR</u>	Individual attendant console routed listed directory number
<u>IACORGDR</u>	Individual attendant console duration of originated calls
<u>IACORIG</u>	Individual attendant console originated calls
<u>IACPOSBY</u>	Individual attendant console position busy
<u>IACQTOTL</u>	Individual attendant console
<u>IACRECAL</u>	Individual attendant console answered timed recalls
<u>IACSPCL</u>	Individual attendant console answered miscellaneous calls
<u>IACTOTDR</u>	Individual attendant console total duration of answered calls
<u>IACXFRAT</u>	Individual attendant console answered transfer to attendant

IACAUTH**Register type**

Peg

Description

IACAUTH increases when an attendant enters an authorization code and presses an AUTH code key.

Associated registers

IBNSG_AUTHCALL (counts the same information for a subgroup)

Extension registers

None

Associated logs

None

IACBSYDR**Register type**

Usage

Scan rate

10 seconds

Description

IACBSYDR records if an attendant console is in the position busy state. The count starts when an attendant presses the position busy key and stops when position busy deactivates. To deactivate position busy, press the position busy key again if night service is not active. Press the night service key if night service is active.

Associated registers

IBNSG_ACBSYSDR (provides the same information for a subgroup)

Extension registers

None

Associated logs

None

IACCFW**Register type**

Peg

Description

IACCFW increases when an attendant answers a forwarded call.

Associated registers

IBNSG_ANSCFW (provides the same information for a subgroup)

Extension registers

None

Associated logs

None

IACCTVTU**Register type**

Usage

Scan rate

100 seconds

Description

IACCTVTU records if an attendant occupies a console. An attendant console is occupied if the headset is plugged in, even if the console is in position busy or night service mode.

Associated registers

IBNSG_ACTVTU (provides the same information for a subgroup)

Extension registers

None

Associated logs

None

IACDIAL0**Register type**

Peg

Description

IACDIAL0 increases when an attendant answers a dial 0 type call. Calls counted by IACDIAL0 include:

- all station dial 0 regardless of station type
- automatic station originations routed to the attendant
- incoming calls on attendant trunks

Associated registers

IBNSG_ANSDIAL0 (provides the same information for a subgroup)

Extension registers

None

Associated logs

None

IACEXTD**Register type**

Peg

Description

IACEXTD counts calls that an attendant extends. The register increases after the attendant dials the destination number.

Associated registers

IBNSG_EXTCALL (provides the same information for a subgroup)

Extension registers

None

Associated logs

None

IACHLD**Register type**

Peg

Description

IACHLD increases when an attendant presses the hold key or a loop key to place a call on hold while remaining active on another loop key.

Associated registers

IBNSG_HLDCALL (provides the same information for a subgroup)

Extension registers

None

Associated logs

None

IACINTRP**Register type**

Peg

Description

IACINTRP increases when an attendant answers an intercept-type call. Intercept type calls include:

- station intercept
- incoming intercepted DID
- calls incoming on intercept trunks

Associated registers

INBSG_ANSINTRP (provides the same information for a subgroup)

Extension registers

None

Associated logs

None

IACLDN**Register type**

Peg

Description

IACLDN increases when an attendant answers a call to its assigned listed directory number(s).

Associated registers

IBNSG_ANSLDN (provides the same information for a subgroup)

Extension registers

None

Associated logs

None

IACLDN1**Register type**

Peg

Description

IACLDN1 counts call attempts for a listed directory number (LDN) designated as LDN1 for separate attendant consoles. The register counts call attempts for an LDN in table WRDN if the LDNREPRT field is set to Y (yes).

Associated registers

IBNSG_LDN1 (provides the same information for a subgroup)

Extension registers

None

Associated logs

None

IACLDN2**Register type**

Peg

Description

IACLDN2 counts call attempts for a listed directory number (LDN) designated as LDN2 for separate attendant consoles. The register counts call attempts for an LDN in table WRDN if the LDNREPRT field is set to Y (yes).

Associated registers

IBNSG_LDN2 (provides the same information for a subgroup)

Extension registers

None

Associated logs

None

IACLDN3**Register type**

Peg

Description

IACLDN3 counts call attempts for a listed directory number (LDN) designated as LDN3 for separate attendant consoles. The register counts call attempts for an LDN in table WRDN if the LDNREPRT field is set to Y (yes).

Associated registers

IBNSG_LDN3 (provides the same information for a subgroup)

Extension registers

None

Associated logs

None

IACLDN4**Register type**

Peg

Description

IACLDN4 counts call attempts for a listed directory number (LDN) designated as LDN4 for separate attendant consoles. The register counts call attempts for an LDN in table WRDN if the LDNREPRT field is set to Y (yes).

Associated registers

IBNSG_LDN4 (provides the same information for a subgroup)

Extension registers

None

Associated logs

None

IACLDN5**Register type**

Peg

Description

IACLDN5 counts call attempts for a listed directory number (LDN) designated as LDN5 for separate attendant consoles. The register counts call attempts for an LDN in table WRDN if the LDNREPRT field is set to Y (yes).

Associated registers

IBNSG_LDN5 (provides the same information for a subgroup)

Extension registers

None

Associated logs

None

IACLDN6**Register type**

Peg

Description

IACLDN6 counts call attempts for a listed directory number (LDN) designated as LDN6 for separate attendant consoles. The register counts call attempts for an LDN in table WRDN if the LDNREPRT field is set to Y (yes).

Associated registers

IBNSG_LDN6 (provides the same information for a subgroup)

Extension registers

None

Associated logs

None

IACLDN7**Register type**

Peg

Description

IACLDN7 counts call attempts for a listed directory number (LDN) designated as LDN7 for separate attendant consoles. The register counts call attempts for an LDN in table WRDN if the LDNREPRT field is set to Y (yes).

Associated registers

IBNSG_LDN7 (provides the same information for a subgroup)

Extension registers

None

Associated logs

None

IACLDNR**Register type**

Peg

Description

IACLDNR counts call attempts to a routed listed directory number (LDN) that an attendant answers.

Associated registers

IBNSG_LDNR (provides the same information for a subgroup)

Extension registers

None

Associated logs

None

IACORGDR**Register type**

Usage

Scan rate

10 seconds

Description

IACORGDR records if an attendant-originated call is in the talking state. An attendant-originated call starts when an idle loop key is pressed, and stops when the hold key, release key, or other loop key is pressed while the attendant is active on a different loop.

Associated registers

IBNSG_ORIGDR (which provides the same information for a subgroup)

Extension registers

None

Associated logs

None

IACORIG**Register type**

Peg

Description

IACORIG counts calls that originate at an attendant console. The register increases each time the attendant presses an idle loop key and starts to dial.

Associated registers

IBNSG_ORIGCALL (which provides the same information for a subgroup)

Extension registers

None

Associated logs

None

IACPOSBY**Register type**

Peg

Description

IACPOSBY increases when an attendant presses the position busy key to place the attendant console in the position busy state.

Associated registers

IBNSG_ACPOSBY (which provides the same information for a subgroup)

Extension registers

None

Associated logs

None

IACQTOTL**Register type**

Peg

Description

IACQTOTL counts the calls an attendant answers. The register increases when the attendant presses a loop or incoming call identification (ICI) key. IACQTOTL increases each time one of the following registers increases:

- IACLDN
- IACINTRP
- IACDIAL0
- IACXFRAT
- IACCFW
- IACRECAL
- IACSPCL

Associated registers

IBNSG_QTOTAL (which provides the same information for a subgroup)

Validation formula
$$\text{IACQTOTAL} = \text{IACLDN} + \text{IACINTRP} + \text{IACDIAL0} + \text{IACXFRAT} + \text{IACCFW} + \text{IACRECAL} + \text{IACSPCL}$$
Extension registers

None

Associated logs

None

IACRECAL**Register type**

Peg

Description

IACRECAL increases when an attendant answers a recall that results from use of Call Waiting, Camp-on or No-Answer features.

Associated registers

IBNSG_RECALLS (which provides the same information for a subgroup)

Extension registers

None

Associated logs

None

IACSPCL**Register type**

Peg

Description

IACSPCL increases when an attendant answers a call type that any of the following registers do not count:

- IACLDN
- IACINTRP
- IACDIAL0
- IACXRAT
- IACCFW
- IACRECAL

Associated registers

IBNSG_SPCLCCT (which provides the same information for a subgroup)

Extension registers

None

Associated logs

None

IACTOTDR**Register type**

Usage

Scan rate

10 seconds

Description

IACTOTDR records if an answered call is in the talking state. The call starts when the attendant presses a loop or ICI key. The call stops when the attendant presses the hold key, release key, or other loop key while the attendant is active on a different loop.

Associated registers

IBNSG_TOTDR (which provides the same information for a subgroup)

Extension registers

None

Associated logs

None

IACXFRAT**Register type**

Peg

Description

IACXFRAT counts calls that a switch flash and dial 0 or 2 transfers from a station by switch flash and dial 0 or 2. IACXFRAT also counts calls that are recalled to the attendant over tie trunks.

Associated registers

IBNSG_ANSXERAT (which provides the same information for a subgroup)

Extension registers

None

Associated logs

None

IBNGRP

Description

OM group Integrated Business Network Group (IBNGRP) provides information about the use of Integrated Business Network (IBN) call processing by a customer group. A customer group is a set of lines that belong to a group of individuals that request special services.

Registers in this group are package dependent. The basic registers, NORIG0, NORIG1, DOD, STNSTN, NDIAL0, CXFRTOAT, CXFR, GINTRCPT, GINCATOT, and CODEBLK appear in feature package NTX100AA. The remaining registers appear only if the required feature package is present.

The group intercom feature in feature package NTX106AA allows a customer to use abbreviated dialing to call a part of a set group. Register GICORIG increases when the customer uses the group intercom feature.

The security code feature in package NTX573AA and NTX574AA allows the system to assign a code to an IBN station directory number (DN). The code allows the system to restrict feature activation for the DN. Register SECINVAL counts the invalid security codes dialed.

The ring again (RAG) feature in package NTX106AA allows a station to monitor a busy DN. The station can also notify the user when the DN becomes free. Registers SRGACMPL, RGADEACT, RGADELTN, and RGAOVWRT count successful and unsuccessful RAG completions, deactivations, deletions, and overwrites.

The permanent hold feature in package NTX106AA allows a business set to hold an active call against the DN of the business set. The business set can then retrieve the held call from the same station. Registers HLDRES, HLDSUCC, HLDRCLL, and HLDABAN, count the following calls:

- correctly held calls
- calls held without completion
- held calls that abandon
- held calls that recall

The inspect key feature in package NTXE40AA allows a business set user to display information about keys. These keys include feature keys, directory number keys, and calling numbers. Register INSPECT increases when the business set user uses the inspect key.

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

Key field	Info field
None	OMIBNGINFO, the customer group as field CUSTNAME defines in table CUSTENG. One customer name for each customer group (max. 4095). The tuple number of IBNGRP functions as the key in the OMSHOW command.

Parameter CUSTOMER_GROUP_IBNGRP_OM_COUNT in table OFCENG specifies the data store for the customer group operational measurements.

Parameter NO_OF_FTR_DATA_BLKs in table OFCENG specifies the number of feature data blocks available.

Parameter NO_OF_FTR_CONTROL_BLKs in table OFCENG specifies the number of feature control blocks available.

Parameter FTRQ2WAREAS in table OFCENG specifies the maximum number of FTRQ two-word areas the engineering interval requires.

Parameter FTRQ8WAREAS in table OFCENG specifies the maximum number of FTRQ8WAREAS blocks the ring again feature requires.

Parameter FTRQAGENTS in table OFCENG specifies the number of agents that can have the ring again feature waiting or active.

The group intercom feature is assigned in the DF field of table IBNFEAT.

The security code feature is assigned in the DF field of table IBNFEAT and the FEAT field of table KSETFEAT.

The ring again feature is assigned in the OPTLIST field of table IBNLINES and the FEAT field of table KSETLINES.

The permanent hold feature is assigned in the OPTLIST field of table IBNLINES.

The inspect key feature is assigned in the DF field of table KSETFEAT.

Related functional groups

The following functional groups are associated with OM group IBNGRP:

- Integrated Business Network (IBN)
- 500/2500 set

Registers

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

Registers for OM group IBNGRP (Sheet 1 of 2)

Register name	Measures
CODEBLK	Code blocked
DOD	Direct outward dial
GICORIG	Group intercom originations
GINCATOT	Group incoming total
GINTRCPT	Given intercept
HLDABAN	Held abandons
HLDGRES	Held call failures resources
HLDRCLL	Held recalls
HLDSECC	Held successful
INSPECT	IBN INSPECT key use
NDIAL0	Number of dial 0 attempts
NORIG0	Number of originations
RGADEACT	Ring again deactivation
RGADELTN	Ring again deletions
RGAOVWRT	Ring again overwrites
SECINVAL	Security code invalid

Registers for OM group IBNGRP (Sheet 2 of 2)

Register name	Measures
SRGACMPL	Successful ring again completions
STNSTN	Station to station

CODEBLK**Register type**

Peg

Description

CODEBLK increases when the system blocks a call because of integrated business networks (IBN) code restrictions.

Associated registers

None

Extension registers

None

Associated logs

None

DOD**Register type**

Peg

Description

DOD increases when a station or attendant places a direct outward dial (DOD) call. To dial a DOD call to the exchange network without attendant help, dial the DOD access code. After you receive a second dial tone, dial the external number. Access codes are assigned in table IBNXLA. Calls that are successful and not successful are counted.

Associated registers

None

Extension registers

None

Associated logs

None

GICORIG**Register type**

Peg

Description

GICORIG counts abbreviated dialing calls that originate from business sets and integrated business network (IBN) lines in the customer group. The group intercom (GIC) feature allows customers to use abbreviated dialing to call a member of a set group. The register increases when a station uses the GIC feature and the call is answered or not answered.

Associated registers

None

Extension registers

None

Associated logs

None

GINCATOT**Register type**

Peg

Description

GINCATOT counts incoming calls for a customer group. The register counts calls between customer groups in the same switch only when field INTRAGOUP in table IBNXL A is set to N.

Associated registers

None

Extension registers

None

Associated logs

None

GINTRCPT**Register type**

Peg

Description

GINTRCPT increases when a call is given intercept treatment. The register counts originating, terminating, and tandem class of service and code restriction problems. The register also counts attendant attempts to complete calls to denied incoming (DIN) stations.

GINTRCPT does not count calls that the system routes to announcements, tones, and attendant answers.

Associated registers

None

Extension registers

None

Associated logs

None

HLDABAN**Register type**

Peg

Description

HLDABAN counts held calls that abandon the line before the calls recall.

Associated registers

[HLDSUCC](#)

Validation formula

$\text{HLDSUCC} - \text{HLDABAN} = \text{held calls that do not abandon the line before the calls recall}$

Extension registers

None

Associated logs

None

HLDGRES**Register type**

Peg

Description

HLDGRES counts calls that the system cannot place on hold because of not enough of feature data blocks. No software resource treatment is given. Parameter NO_OF_FTR_DATA_BLKs in table OFCENG specifies the number of data blocks available.

Associated registers

TRSNOSR in OM group TRMTRS increases when no software resource treatment is given.

Extension registers

None

Associated logs

None

HLDRCCL**Register type**

Peg

Description

HLDRCCL counts calls on hold that recall. When station A has the recall option, HLDRCCL increases when that recall is to occur. The recall can be in the form of receiver off-hook (ROH) tone or ringing.

Associated registers

None

Extension registers

None

Associated logs

None

HLDSUCC**Register type**

Peg

Description

HLDSUCC counts calls that are correctly placed on hold.

Associated registers

[HLDABAN](#)

Validation formula

$\text{HLDSUCC} - \text{HLDABAN} = \text{held calls that do not abandon the line before the calls recall}$

Extension registers

None

Associated logs

None

INSPECT**Register type**

Peg

Description

INSPECT increases when the you use the inspect key on a display electronic business set. You can use the inspect key to view associated information for feature or directory number (DN) key on a business set. The inspect key also displays call information on an incoming call. The information displays even if the call is not answered.

Associated registers

None

Extension registers

None

Associated logs

None

NDIAL0**Register type**

Peg

Description

NDIAL0 increases when a station or tie trunk user dials a code to reach an attendant instead of dialing the attendant's directory number.

NDIAL0 includes:

- station dial attendant
- automatic line originations if the route is to the attendant

Note: Attempts and seizures on incoming attendant trunks do not increase.

Associated registers

None

Extension registers

None

Associated logs

None

NORIG0**Register type**

Peg

Description

NORIG0 counts calls that originated at a station or with an attendant. The register counts permanent signal partial dial calls. The register does not attendant extended calls.

Associated registers

NORIG in OFZ counts originating calls that the central controller (CC) recognizes.

Extension registers

NORIG1

Associated logs

None

RGADEACT**Register type**

Peg

Description

RGADEACT counts ring again (RAG) attempts the user deletes when the user dials the release code. RAG release occurs when a user with a pending RAG request activates RAG for another directory number.

Associated registers

None

Extension registers

None

Associated logs

None

RGADELTN**Register type**

Peg

Description

RGADELTN counts ring again (RAG) attempts that the system deletes for any of the following reasons:

- no response to RAG ringing
- lines removed from service
- RAG feature deleted from caller
- call forwarding activated

Associated registers

None

Extension registers

None

Associated logs

None

RGAOVWRT**Register type**

Peg

Description

RGAOVWRT increases when a ring again (RAG) overwrite occurs. A RAG overwrite occurs when station A has a ring again request pending to a busy station B. If station A dials another busy station and activates RAG again, the new RAG request overwrites the previous RAG request.

Associated registers

None

Extension registers

None

Associated logs

None

SECINVAL**Register type**

Peg

Description

SECINVAL increases when a user dials an invalid security code number. A security code allows a code to be assigned to an integrated business network (IBN) station directory number. The code can restrict feature activation for the directory number.

Associated registers

None

Extension registers

None

Associated logs

None

SRGACMPL**Register type**

Peg

Description

SRGACMPL counts successful ring again (RAG) attempts. RAG allows a station to monitor a busy directory number in the same customer group. Rag also allows a station to notify the user when the directory number becomes free.

Associated registers

None

Extension registers

None

Associated logs

None

STNSTN**Register type**

Peg

Description

STNSTN increases when a station dials another station within a customer group. The register does not count call transfer attempts by stations or attendant-originated calls.

Associated registers

None

Extension registers

None

Associated logs

None

IBNSG

Description

OM group Integrated Business Network Subgroup (IBNSG) provides information about the activities of customer group attendant consoles by the subgroup.

A customer group is a set of lines which belong to a group of individuals that request special services. Subgroups allow customers to have attendant-type calls that the subgroups answer locally during the day or busy hours. Subgroups centralize this function. A customer group can have up to seven subgroups. A subgroup can have up to 32 consoles.

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

Key field	Info field
None	Contains the customer group name and subgroup name. This field has an integer range (0 to 2047) and represents the 256 customer groups that can have attendant consoles and the eight possible subgroups within each customer group (256x8=2048).

Related functional groups

The following functional groups are associated with OM group IBNSG:

- Integrated Business Network (IBN)
- Attendant Consoles

Registers

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

Registers for OM group IBNSG (Sheet 1 of 3)

Register name	Measures
ABNDN	Abandoned calls to attendant
ACBSYSDR	Attendant console busy position duration

Registers for OM group IBNSG (Sheet 2 of 3)

Register name	Measures
<u>ACPOSBY</u>	Attendant console position busy
<u>ACTVTU</u>	Activated usage
<u>ANSCFW</u>	Answered call forward calls
<u>ANSDELAY</u>	Answer delay
<u>ANSDIALO</u>	Answered dial 0
<u>ANSINTRP</u>	Answer intercept
<u>ANSLDN</u>	Answered listed directory numbers
<u>ANSXFRAT</u>	Answered transfer attendant
<u>ATQDFL</u>	Attendant queue deflection
<u>AUTHCALL</u>	Authorization call
<u>CORECALL</u>	Camp-on recall
<u>CWINQU</u>	Calls waiting in queue
<u>CWRECALL</u>	Call waiting recall
<u>DARECALL</u>	Attendant answered recalls
<u>EXTDCALL</u>	Extended calls
<u>HLDCALL</u>	Held call
<u>LPHLDREC</u>	Loop held recalls
<u>LPOVFL</u>	Loop overflows
<u>LPU</u>	Loop usage
<u>NSCALLS</u>	Night service calls
<u>ORIGCALL</u>	Originated calls
<u>ORIGDR</u>	Originated duration
<u>QTOTAL</u>	Queue total

Registers for OM group IBNSG (Sheet 3 of 3)

Register name	Measures
RECALLS	Recalls
SERIALRC	Serial call recalls
SPCLCCT	Special calls accounted
TOTDR	Total duration
WRKTMU	Work time usage

ABNDN**Register type**

Peg

Description

ADNDN increases when a caller in the subgroup queue abandons the call before a console answers. The caller abandons the call as the caller listens to audible ringing.

Associated registers

None

Extension registers

None

Associated logs

None

ACBSYSDR**Register type**

Usage

Scan rate

10 seconds

Description

ACBSYSDR records if an attendant console is position busy.

Associated registers

IBNAC_IACBSYDR

Extension registers

None

Associated logs

None

ACPOSBY**Register type**

Peg

Description

ACPOSBY increases when the attendant presses the position busy key and makes the attendant console position busy.

Associated registers

IBNAC_IACPOSBY

Extension registers

None

Associated logs

None

ACTVTU**Register type**

Usage

Scan rate

100 seconds

Description

ACTVTU records if an attendant console in a customer subgroup is active. A console is active as long as a headset is plugged in. The register also counts consoles in the *position busy* or *night* state.

Associated registers

IBNAC_IACCTVTU

Extension registers

None

Associated logs

None

ANSCFW**Register type**

Peg

Description

ANSCFW increases when an attendant answers a call that comes in to a station. The register counts the call when the call forward feature is set to *forward to the attendant*. The numbers 5, 6, or 7 on the console display indicate that a call is call forwarded.

Associated registers

IBNAC_IACCFW

Extension registers

None

Associated logs

None

ANSDELAY**Register type**

Peg

Description

ANSDELAY increases when an attendant answers a call that waits in the queue longer than a specified time. The customer assigns the specified time (from four to 60 seconds) in field ANSTIME in table CUSTCONS.

Associated registers

[QTOTAL](#)

Validation formula

$\text{IBNSG\_ANSDELAY} / \text{IBNSG\_QTOTAL} \times 100 = \text{percentage of answered calls delayed more than the specified time}$

Extension registers

None

Associated logs

None

ANSDIAL0**Register type**

Peg

Description

ANSDIAL0 increases when an attendant answers an incoming call indicator (ICI) with the number 1 (ICI-1). The ICI-1 is associated with station-dialed zero calls, automatic station originations to the attendant,

and incoming calls on attendant trunks. Table IBNXLA specifies the type of call assigned to field ICI-1.

Associated registers

None

Extension registers

None

Associated logs

None

ANSINTRP**Register type**

Peg

Description

ANSINTRP increases when an attendant answers an intercept call. The number 8 on the console display indicates an intercept call. The following intercept call categories are included:

- station intercept
- incoming intercepted DID
- extended private switched communication service (EPSCS) calls
- calls incoming on intercept trunks from other PBXs

Associated registers

IBNAC_IACINTRP

Extension registers

None

Associated logs

None

ANSLDN**Register type**

Peg

Description

ANSLDN increases when an attendant answers a call to the listed directory number (LDN). If a customer has more than one LDN, all LDN-answered calls increases this register. LDNs are in field DNNM in table WRDN.

Associated registers

IBNAC_IACLDN

Extension registers

None

Associated logs

None

ANSXFRAT**Register type**

Peg

Description

ANSXFRAT increases when an attendant answers a call a station transferred to an attendant by switch-hook flash and dialing zero. This register also increases when a station does not answer for a specified amount of time and recalls the attendant. The specified time before the station recalls the attendant is in field CWNATO in table CUSTCONS.

Associated registers

IBNAC_IACXFRAT

Extension registers

None

Associated logs

None

ATQDFL**Register type**

Peg

Description

ATQDFL increases when a call deflects from the customer subgroup queue to a busy tone or announcement. The call deflects because the attendant queue size exceeds the threshold size. Deflections do not occur for do not answer recalls, camp-on recalls, or call waiting recalls. The attendant queue threshold is in field CQDIVTHR in table SUBGRP.

Associated registers

None

Extension registers

None

Associated logs

None

AUTHCALL**Register type**

Peg

Description

AUTHCALL increases when an attendant in a customer subgroup presses the authorization validation (AUTH) key. The register increases after the attendant enters an authorization code when the attendant originates or extends a call.

Associated registers

IBNAC_IACAUTH

Extension registers

None

Associated logs

None

CORECALL**Register type**

Peg

Description

CORECALL counts camp-on recalls that an attendant answers (The number 3 on the console display indicates a camped-on recall). An attendant directs a call to a busy station and the call is camped-on to the station. When the busy station goes on-hook, the call rings and connects. If the call is not answered within a specific time, the system routes the camped-on call back to the attendant. The specified time is in field ACORECTO in table CUSTCONS.

Associated registers

None

Extension registers

None

Associated logs

None

CWINQU**Register type**

Usage

Scan rate

10 seconds

Description

CWINQU records the number of calls in the customer subgroup that wait in the attendant queue for a free attendant console. The register also records calls that are abandoned while the call waits in the queue.

Associated registers

None

Extension registers

None

Associated logs

None

CWRECALL**Register type**

Peg

Description

CWRECALL counts attendant-answered recalls from attendant-extended calls to busy stations with the call waiting feature. The number 4 on the console display indicates a call waiting recall. The register increases when the attendant does not answer the calls within a specified time. The specified time is assigned in field CWNATO in table CUSTCONS.

Associated registers

None

Extension registers

None

Associated logs

None

DARECALL**Register type**

Peg

Description

DARECALL counts calls that an attendant directs to a station and receives no answer. The number 2 on the console display indicates a recall. The system redirects unanswered calls back to the attendant, and the attendant answers the call.

Associated registers

None

Extension registers

None

Associated logs

None

EXTDCALL**Register type**

Peg

Description

EXTDCALL counts calls that attendants in a customer subgroup extend.

Associated registers

IBNAC_IACEXTD

Extension registers

None

Associated logs

None

HLDCALL**Register type**

Peg

Description

HLDCALL increases when an attendant presses the hold key or another loop key while active on a loop.

Associated registers

IBNAC_IACHLD

Extension registers

None

Associated logs

None

LPHLDREC**Register type**

Peg

Description

LPHLDREC increases when an attendant answers a recall held on a loop.

Associated registers

None

Extension registers

None

Associated logs

None

LPOVFL**Register type**

Peg

Description

LPOVFL counts loops in a subgroup attendant consoles that are busy because the loop has held and queued calls. The calls wait for an attendant console to become free. The register does not count direct console-to-console calls, or night service calls the system redirects from another subgroup.

Associated registers

None

Extension registers

None

Associated logs

None

LPU**Register type**

Usage

Scan rate

10 seconds

Description

LPU records if the customer subgroup uses attendant loops. The register counts loops on which attendants are active and loops that have held calls. The register also counts consoles in the position busy or night state with plugged in headsets.

Associated registers

None

Extension registers

None

Associated logs

None

NSCALLS**Register type**

Peg

Description

NSCALLS increases when a call requires night service treatment.

Associated registers

None

Extension registers

None

Associated logs

None

ORIGCALL**Register type**

Peg

Description

ORIGCALL counts calls that an attendant in a customer subgroup originates. This register increases when an attendant presses an idle loop key and starts to dial.

Associated registers

None

Extension registers

None

Associated logs

IBNAC_IACORIG

ORIGDR**Register type**

Usage

Scan rate

10 seconds

Description

ORIGDR records when a call that an attendant originates is in the talking state.

Associated registers

IBNAC_IACORGDR

Extension registers

None

Associated logs

None

QTOTAL**Register type**

Peg

Description

QTOTAL counts the enqueue calls of attendant consoles in a subgroup.

Associated registers

[ANSCFW](#), [ANSDIAL0](#), [ANSINTRP](#), [ANSLDN](#), [ANSXFRAT](#), [RECALLS](#), [SERIALRC](#), [SPCLCCT](#)

Validation formula
$$\text{IBNSG\_QTOTAL} = \text{IBNSG\_ANSLDN} + \text{IBNSG\_ANSINTRP} + \text{IBNSG\_ANSDIAL0} + \text{IBNSG\_ANSXFRAT} + \text{IBNSG\_RECALLS} + \text{IBNSG\_SPCLCCT} + \text{IBNSG\_ANSCFW} + \text{IBNSG\_SERIALRC}$$
Extension registers

None

Associated logs

None

RECALLS**Register type**

Peg

Description

RECALLS counts recalls in a customer subgroup.

Associated registers

[CORECALL](#), [CWRECALL](#), [DARECALL](#), [SERIALRC](#),
IBNAC_IACRECAL

Validation formula
$$\text{IBNSG\_QTOTAL} = \text{IBNSG\_ANSLDN} + \text{IBNSG\_ANSINTRP} + \text{IBNSG\_ANSDIALO} + \text{IBNSG\_ANSXFRAT} + \text{IBNSG\_RECALLS} + \text{IBNSG\_SPCLCCT} + \text{IBNSG\_ANSCFW} + \text{IBNSG\_SERIALRC}$$
Extension registers

None

Associated logs

None

SERIALRC**Register type**

Peg

Description

SERIALRC counts serial call recalls that an attendant consoles in a subgroup answers.

Associated registers

None

Extension registers

None

Associated logs

None

SPCLCCT**Register type**

Peg

Description

SPCLCCT increases when an attendant answers a call.

This register does not count the following calls:

- transfer-to-attendant
- dial zero
- recall
- call forward
- intercepted
- listed directory number

SPCLCCT also counts attendant-answered station calls that other attendant-answered registers do not count because of data entry errors. This register also counts calls with an unassigned translation selector field (ATT).

Associated registers

None

Extension registers

None

Associated logs

IBNAC_IACSPCL

TOTDR**Register type**

Usage

Scan rate

10 seconds

Description

TOTDR records if an attendant-answered call is in a talking state.

Associated registers

IBNAC_IACTOTDR

Extension registers

None

Associated logs

None

WRKTMU**Register type**

Usage

Scan rate

10 seconds

Description

WRKTMU records if attendants in a customer subgroup are active on a loop. An attendant is active on a loop when:

- an attendant answers a loop key to answer a call, originate a call, or access a call held before
- an attendant presses a loop key or an incoming call identification indicator (ICI) key to answer an ICI lamp indication
- a console is in the position busy or night state with an attached headset

Associated registers

None

Extension registers

None

Associated logs

None

IBNSGLDN

Description

OM group Integrated Business Network Subgroup Listed Directory Number (IBNSGLDN) provides separate peg counts for each listed directory number (LDN) assigned to a subgroup in a console customer group. IBNSGLDN collects measurements for up to seven LDNs in a subgroup. An eighth register counts calls the system routes from other groups or subgroups.

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

Key field	Info field
IBNSG_INDEX identifies IBN subgroup	OMIBNSGINFO identifies customer group and subgroup by name

You must enter LDNs in table WRDN (DN_SEL= 'M') to increase registers in IBNSGLDN.

Related functional groups

There are no functional groups associated with OM group IBNSGLDN.

Registers

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

Registers for OM group IBNSGLDN (Sheet 1 of 2)

Register name	Measures
LDN1	Listed directory number one calls
LDN2	Listed directory number two calls
LDN3	Listed directory number three calls
LDN4	Listed directory number four calls
LDN5	Listed directory number five calls
LDN6	Listed directory number six calls

Registers for OM group IBNSGLDN (Sheet 2 of 2)

Register name	Measures
LDN7	Listed directory number seven calls
LDNR	Routed listed directory number calls

LDN1**Register type**

Peg

Description

LDN1 counts calls that an attendant answers on LDN1.

Associated registers

IBNAC_IACLDN1

Extension registers

None

Associated logs

None

LDN2**Register type**

Peg

Description

LDN2 counts calls that an attendant answers on LDN2.

Associated registers

IBNAC_IACLDN2

Extension registers

None

Associated logs

None

LDN3**Register type**

Peg

Description

LDN3 counts calls that an attendant answers on LDN3.

Associated registers

IBNAC_IACLDN3

Extension registers

None

Associated logs

None

LDN4**Register type**

Peg

Description

LDN4 counts calls that an attendant answers on LDN4.

Associated registers

IBNAC_IACLDN4

Extension registers

None

Associated logs

None

LDN5**Register type**

Peg

Description

LDN5 counts calls that an attendant answers on LDN5.

Associated registers

IBNAC_IACLDN5

Extension registers

None

Associated logs

None

LDN6**Register type**

Peg

Description

LDN6 counts calls that an attendant answers on LDN6.

Associated registers

IBNAC_IACLDN6

Extension registers

None

Associated logs

None

LDN7**Register type**

Peg

Description

LDN7 counts calls that an attendant answers on LDN7.

Associated registers

IBNAC_IACLDN7

Extension registers

None

Associated logs

None

LDNR**Register type**

Peg

Description

LDNR counts calls that an attendant answers for routed listed directory numbers.

Associated registers

IBNAC_IACLDNR

Extension registers

None

Associated logs

None

ILDBD

Description

ATTENTION

The ISDN line drawer for remotes (ILDR) is first available for remote switching center-SONET (RSC-S) in the NA007/XPM08 timeframe. ISDN is available for remote switching center (RSC) configurations in the NA007/XPM08 timeframe. The ILDR is first available for the remote line concentrating module (RLCM), outside plant module (OPM), and outside plant access cabinet (OPAC) configurations in the NA008/XPM81 timeframe.

The first release of the ILDR product in NA007 also includes no more than two Bd-channels (used for 100% low speed packet data) for each line drawer. This engineering restriction for 100% packet data usage on the ISDN Delta channel will be removed in NA008. The delivery of feature AF6811, ILDR Overload Control will remove the restriction.

OM group Integrated Services Digital Network (ISDN) Line Drawer BD Channels (ILDBD) provides information for the ILDR Bd-channel. This information allows operating company personnel to verify normal transit of information (frames) on the links between the ILDR and the packet handler.

ILDBD contains registers that count the following ILDR Bd-channel events:

- frames that the system transmits, which the system discarded
- frames that the system received with cyclic redundancy check (CRC) errors
- frames that the system discards
- frames that the system receives or transmits from or to the packet handler

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

Key field	Info field
ILDBD_OMTYPE. This key field specifies the number of Bd-channels that can be defined in the switch (0 to MAX_ILD_BD_CHANNELS_ON_SWITCH).	ILDBD_OMINFO. This field comprises the following subfields: LINE_MODULE (specifies the location of the ILDR, for example, REM1 and the frame and unit numbers of the ILDR host) LINE_DRAWER (specifies the drawer number) BD_CHNL (specifies the Bd-channel number in the drawer [could be 1 or 2])
The maximum number of defined Bd-channels in the switch is MAX_ILD_BD_CHANNELS_ON_SWITCH.	

Related functional groups

There are no functional groups associated with OM group ILDBD.

Registers

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

Registers for OM group ILDBD

Register name	Measures
IBDXTDSC	Number of frames transmitted that were discarded
IBDCRC	Number of frames received with CRC errors
IBDRXDSC	Number of frames received that were discarded
IBDTPH	Number of frames transmitted to the packet handler
IBDRXHP	Number of correct frames received from the packet handler

IBDTXDSC**Register type**

Peg

Description

IBDTXDSC counts the Bd-channel frames destined for a packet handler that the ILDR discards because of hardware problems.

Associated registers

None

Extension registers

None

Associated logs

None

IBDCRC**Register type**

Peg

Description

IBDCRC counts the Bd-channel frames that a packet handler receives and the ILDR discards because of CRC errors.

Associated registers

None

Extension registers

None

Associated logs

None

IBDRXDSC**Register type**

Peg

Description

IBDRXDSC counts the Bd-channel frames that a packet handler receives and the ILDR discards. These packets are handled and discarded for the following reasons:

- invalid logical terminal identifiers (LTID)
- messages that are decoded
- flow control problems

- the system aborts
- hardware errors

Associated registers

None

Extension registers

None

Associated logs

None

IBDTXPH**Register type**

Peg

Description

IBDTXPH counts the Bd-channel frames that are an ILDR transmits to a packet handler. Each unit in IBDTXPH represents 100 frames.

Associated registers

None

Extension registers

None

Associated logs

None

IBDRXHP**Register type**

Peg

Description

IBDRXPH counts the Bd-channel frames that an ILDR receives from a packet handler. Each unit in IBDRXPH represents 100 frames.

Associated registers

None

Extension registers

None

Associated logs

None

ILDBRA

Description

ATTENTION

The ISDN line drawer for remotes (ILDR) is first available for remote switching center-SONET (RSC-S) in the NA007/XPM08 timeframe. The ISDN is first available for remote switching center (RSC) configurations in the NA007/XPM08 timeframe. The ILDR is first available for remote line concentrating module (RLCM), outside plant module (OPM), and outside plant access cabinet (OPAC) configurations in the NA008/XPM81 timeframe.

OM group Integrated Services Digital Network (ISDN) Line Drawer Basic Rate Access (ILDBRA) provides information related to ILDR D-channels. This information allows operating company personnel to verify normal transit of information (frames) on links between the ILDR and the NT1.

ILDBRA contains registers that count the following basic rate access D-channel events:

- SAPI 0, SAPI 16, and SAPI 63 frames the system receives and transmits
- frames with cyclic redundancy check (CRC) errors the system receives
- frames the system discards
- frames transmitted the system discarded
- link resets by an ILDR/far-end device (peer)
- reject frames the system receives and transmits
- receiver not ready (RNR) frames the system receives and transmits

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

Key field	Info field
ILDBRA_OMTYPE. This key field specifies the number of ILDRs defined in the CM (0 TO MAX_ILD_NO). The maximum number of ILDRs defined in the CM is MAX_ILD_NO.	ILDBRA_OMINFO. This field comprises the following subfields: • LINE_MODULE (specifies the location of the ILDR, for example, REM1 and the frame and unit numbers of the ILDR host) • LINE_DRAWER (specifies the drawer number)

Related functional groups

There are no functional groups associated with OM group ILDBRA.

Registers

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

Registers for OM group ILDBRA (Sheet 1 of 2)

Register name	Measures
IBRTXDSC	Number of frames transmitted that were discarded
IBRCRC	Number of frames received and discarded with CRC errors
IBRRXDSC	Number of frames received that were discarded
IBRS0TX	Number of SAPI0 frames transmitted
IBRS16TX	Number of SAPI 16 frames transmitted
IBRSATX	Number of SAPI 163 frames transmitted
IBRS0RX	Number of SAPI zero frames received
IBRS16RX	Number of SAPI 16 frames received

Registers for OM group ILDBRA (Sheet 2 of 2)

Register name	Measures
IBRSARX	Number of SAPI 63 frames received
IBRLKREI	Number of link resets by the ILDR
IBRLKREP	Number of link resets by the peer
IBRRNRI	Number of RNR frames sent to the peer
IBRRNRP	Number of RNR frames received by the ILDR
IBRREJTX	Number of reject frames transmitted
IBRREJRX	Number of received reject frames

IBRTXDSC**Register type**

Peg

Description

IBRTXDSC counts the number of frames for a packet handler but the ILDR discards because of hardware problems.

Associated registers

None

Extension registers

None

Associated logs

ISDN 200, ISDN 201

IBRCRC**Register type**

Peg

Description

IBRCRC counts the ILDR BRA D-channel frames the system receives and discards because of CRC error.

Associated registers

None

Extension registers

None

Associated logs

ISDN 200, ISDN 201

IBRRXDSC**Register type**

Peg

Description

IBRRXDSC counts the BRA D-channel frames the ILDR discards by the because of the following problems:

- a non-registered terminal endpoint identifier (TEI)
- a message that cannot be decoded
- flow control problems
- part of a message received
- sequencing errors
- an unknown SAPI

Associated registers

None

Extension registers

None

Associated logs

ISDN 200, ISDN 201

IBRS0TX**Register type**

Peg

Description

IBRS0TX counts the BRA D-channel SAPI zero frames that an ILDR transmits. The SAPI zero frames indicate a request for call control. Each unit in IBRS0TX represents 100 frames.

Associated registers

None

Extension registers

None

Associated logs

ISDN 200, ISDN 201

IBRS16TX**Register type**

Peg

Description

IBRS16TX counts BRA D-channel SAPI 16 frames an ILDR transmits. The SAPI 16 frames indicate a request for packet-switched service. Each unit in IBRS16TX represents 100 frames.

Associated registers

None

Extension registers

None

Associated logs

ISDN 200, ISDN 201

IBRSATX**Register type**

Peg

Description

IBRSATX counts the BRA D-channel SAPI 63 frames an ILDR transmits. The SAPI 63 frames indicate a request for layer two management services, like TEI management, error reporting, or physical link control.

Associated registers

None.

Extension registers

None

Associated logs

ISDN 200, ISDN 201

IBRS0RX**Register type**

Peg

Description

IBRS0RX counts the BRA D-channel SAPI zero frames an ILDR receives. The SAPI zero frames indicate a request for call control.

Associated registers

None

Extension registers

None

Associated logs

ISDN 200, ISDN 201

IBRS16RX**Register type**

Peg

Description

IBRS16RX counts the BRA D-channel SAPI 16 frames an ILDR receives. The SAPI 16 frames indicate a request for packet-switched service.

Associated registers

None

Extension registers

None

Associated logs

ISDN 200, ISDN 201

IBRSARX**Register type**

Peg

Description

IBRSARX counts the BRA D-channel SAPI 63 frames an ILDR receives. The SAPI 63 frames indicate a request for layer two management services, like TEI management, error reporting, or link control.

Associated registers

None

Extension registers

None

Associated logs

ISDN 200, ISDN 201

IBRLKREI**Register type**

Peg

Description

IBRLKREI counts the link resets by the ILDR.

Associated registers

None

Extension registers

None

Associated logs

None

IBRLKREP**Register type**

Peg

Description

IBRLKREP counts the link resets by a far-end device (peer).

Associated registers

None

Extension registers

None

Associated logs

None

IBRRNRI**Register type**

Peg

Description

IBRRNRI counts the RNR frames that an ILDR sent to a far-end device (peer).

Associated registers

None

Extension registers

None

Associated logs

None

IBRRNRP**Register type**

Peg

Description

IBRRNRP counts the RNR frames that an ILDR receives from a far-end device (peer).

Associated registers

None

Extension registers

None

Associated logs

None

IBRREJTX**Register type**

Peg

Description

IBRREJTX counts the number of reject frames an ILDR transmits. Reject frames indicate the far-end lost one of the sequenced frames.

Associated registers

None

Extension registers

None

Associated logs

None

IBRREJRX**Register type**

Peg

Description

IBRREJRX counts the number of reject frames an ILDR receives. Reject frames indicate one of the sequenced frames is missing.

Associated registers

None

Extension registers

None

Associated logs

None

ILDMSGCT

Description

ATTENTION

The ISDN line drawer for remotes (ILDR) is first available for remote switching center-SONET (RSC-S) in the NA007/XPM08 timeframe. The ISDN is first available for remote switching center (RSC) configurations in the NA007/XPM08 timeframe. The ILDR is first available for remote line concentrating module (RLCM), outside plant module (OPM), and outside plant access cabinet (OPAC) configurations in the NA008/XPM81 timeframe.

OM group Integrated Services Digital Network (ISDN) Line Drawer Message Counter (ILDMSGCT) provides information related to ILDR messages to and from the XMS-based peripheral module (XPM).

This information allows operating company personnel to:

- verify normal transit of messages on the DMSX data link between the ILDR and the XPM
- verify DMSX protocol performance on the DMSX data link between the ILDR and the XPM

ILDMSGCT contains registers that count the following data:

- wait-for-send times out on messages from the ILDR to the C-side XPM
- wait-for-acknowledgment times out on messages from the ILDR to the C-side XPM
- wait-for-link-idle messages the system receives after a negative acknowledgment on message transfer
- two registers for single and double negative acknowledgments the system receives from the C-side
- wait-for-end-of-messages times out on messages from the C-side XPM to the ILDR
- wait-for-idle messages from the C-side XPM to the ILDR after a message transfer
- messages the ILDR receives from the C-side XPM that have cyclic redundancy check (CRC) errors
- messages from the C-side XPM to the ILDR with more or fewer bytes than permitted

- null messages the system receives from the C-side XPM that are not reset messages
- spurious frame interrupts
- messages with a node number that is not correct that the ILDR receives from the C-side XPM
- two registers that count messages the ILDR correctly receives or transmits to the C-side XPM

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

Key field	Info field
ILDMSGCT_OMTYPE. This key field specifies the number of ILDR DMSX links defined in the switch (0 to MAX_ILD_DMSX_CHANNELS_ON_SWITCH). The maximum number of ILDR DMSX channels defined in the switch is MAX_ILD_DMSX_CHANNELS_ON_SWITCH.	ILDMSGCT_OMINFO. This field comprises the following subfields: LINE_MODULE (specifies the location of the ILDR, for example, REM1 and the frame and unit numbers of the ILDR host) LINE_DRAWER (specifies the drawer number) LINK_NO (specifies the DMSX link number to the XPM)

Related functional groups

There are no functional groups associated with OM group ILDMSGCT.

Registers

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

Registers for OM group ILDMSGCT (Sheet 1 of 2)

Register name	Measures
IWFSND	ISDN line drawer wait-for-send time-out
IWFAK	ISDN line drawer wait-for-acknowledgement time-out
IWFNX	ISDN line drawer wait-for-link-idle

Registers for OM group ILDMSGCT (Sheet 2 of 2)

Register name	Measures
NACK	Single negative acknowledgement
IDNACK	ISDN line drawer double negative acknowledgement
IWMSG	ISDN line drawer wait-for-end-of-message time-out
IWFNR	ISDN line drawer wait-for-idle message
CRC	Incorrect CRC
OVFL	Message with byte overflow or underflow
INULLMSG	ISDN line drawer null messages
IILDSTATE	ISDN line drawer spurious frame interrupt
IINVNODE	ISDN line drawer invalid node
IRCVDSUCC	ISDN line drawer successfully received messages
IXMITSUCC	ISDN line drawer successfully transmitted messages

IWFSND**Register type**

Peg

Description

IWFSND counts wait-for-start-of-message time-outs on messages from the C-side XPM to the ILDR.

Associated registers

None

Extension registers

None

Associated logs

None

IWFACK**Register type**

Peg

Description

IWFACK counts wait-for-acknowledgment time-outs on messages from the ILDR to the C-side XPM.

Associated registers

None

Extension registers

None

Associated logs

None

IWFNX**Register type**

Peg

Description

IWFNX counts wait-for-link-idle messages the system receives after a negative acknowledgment of a message transfer from the C-side XPM.

Associated registers

None

Extension registers

None

Associated logs

None

NACK**Register type**

Peg

Description

NACK counts single negative acknowledgment messages an ILDR from the C-side XPM receives. The system sends single negative acknowledgement messages when an ILDR has problems receiving a message from the ILDR occurs.

Associated registers

None

Extension registers

None

Associated logs

None

IDNACK**Register type**

Peg

Description

IDNACK counts double negative acknowledgment messages an ILDR receives from the C-side XPM. The system sends double negative acknowledgment messages when a second attempt by the ILDR to send a message is not complete.

Associated registers

None

Extension registers

None

Associated logs

None

IWFMSG**Register type**

Peg

Description

IWFMSG counts wait-for-end-of-message time-outs on messages from the C-side XPM to the ILDR.

Associated registers

None.

Extension registers

None

Associated logs

None

IWFNR**Register type**

Peg

Description

IWFNR counts wait-for-idle messages from C-side XPM to the ILDR after a message transfer.

Associated registers

None

Extension registers

None

Associated logs

None

CRC**Register type**

Peg

Description

CRC counts messages with incorrect CRC the ILDR receives from the C-side XPM.

Associated registers

None

Extension registers

None

Associated logs

None

OVFL**Register type**

Peg

Description

OVFL counts messages with more or fewer than the permitted number of bytes the C-side XPM sends to the ILDR.

Associated registers**Extension registers**

None

Associated logs

None

INULLMSG**Register type**

Peg

Description

INULLMSG counts null messages the ILDR receives from the C-side XPM that are not reset messages.

Associated registers

None

Extension registers

None

Associated logs

None

IILDSTATE**Register type**

Peg

Description

IILDSTATE counts spurious frame interrupts, which can occur, for example, when noise is on the line.

Associated registers

None

Extension registers

None

Associated logs

None

IINVNODE**Register type**

Peg

Description

IINVNODE counts messages with an invalid node number that an ILDR receives from the C-side XPM.

Associated registers

None

Extension registers

None

Associated logs

None

IRCVDSUCC**Register type**

Peg

Description

IRCVDSUCC counts messages from the C-side XPM the ILDR successfully receives.

Associated registers

None

Extension registers

None

Associated logs

None

IXMITSUCC**Register type**

Peg

Description

IXMITSUCC counts messages from the ILDR successfully transmits to the C-side XPM.

Associated registers

None

Extension registers

None

Associated logs

None

ILDOVLD

Description

OM group Integrated Services Digital Network (ISDN) Line Drawer Overload (ILDOVLD) measures congestion and overload in the ISDN line drawer for remotes (ILDR). ILDOVLD provides measurements for each sampling time for congestion and overload.

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

Key field	Info field
ILDBRA_OMTYPE. This key field specifies the number of ILDRs defined in the CM (0 TO MAX_ILD_NO). The MAX_ILD_NO is the maximum number of ILDRs defined in the CM.	ILDBRA_OMINFO. This field comprises the following subfields: LINE_MODULE (specifies the location of the ILDR, for example, REM1, and the frame and unit numbers of the ILDR host) DRWRNO_CHARS (specifies the drawer number)

Related functional groups

There are no functional groups associated with OM group ILDOVLD.

Registers

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

Registers for OM group ILDOVLD (Sheet 1 of 2)

Register name	Measures
ILDCENTR	ISDN line drawer congestion state entry
ILDCEXIT	ISDN line drawer congestion state exit
ILDCTIME	ISDN line drawer time in congested state
ILDOENTR	ISDN line drawer overload state entry

Registers for OM group ILDOVLD (Sheet 2 of 2)

Register name	Measures
ILDOEXIT	ISDN line drawer overload state exit
ILDOTIME	ISDN line drawer time in overload state

ILDCENTR**Register type**

Peg

Description

ILDCENTR counts the number of ILDR entries to the congestion state.

Associated registers

None

Extension registers

None

Associated logs

PM181

ILDCEXIT**Register type**

Peg

Description

ILDCEXIT counts the number of ILDR exits from the congestion state.

Associated registers

None

Extension registers

None

Associated logs

PM181

ILDCTIME**Register type**

Peg

Description

ILDCTIME counts the total time spent by ILDR in the congestion state.

Associated registers

None

Extension registers

None

Associated logs

None

ILDOENTR**Register type**

Peg

Description

ILDOENTR counts the number of ILDR entries to the overload state.

Associated registers

None

Extension registers

None

Associated logs

PM181

ILDOEXIT**Register type**

Peg

Description

ILDOEXIT counts the number of ILDR exits from the overload state.

Associated registers

None

Extension registers

None

Associated logs

PM181

ILDOTIME**Register type**

Peg

Description

ILDOTIME counts the total time spent by ILDR in the overload state.

Associated registers

None

Extension registers

None

Associated logs

None

ILDSTAT

Description

ATTENTION

ISDN line drawer for remotes (ILDR) is first available for remote switching center-SONET (RSC-S). The ILDR is also available for remote switching center (RSC) configurations in the NA007/XPM08 timeframe. The ILDR is first available for remote line concentrating module (RLCM), outside plant module (OPM), and outside plant access cabinet (OPAC) configurations in the NA008/XPM81 time frame.

OM group Integrated Services Digital Network (ISDN) Line Drawer Status (ILDSTAT) provides information for ILDR processor occupancy. This information allows the operating company personnel to measure ILDR processor performance.

ILDSTAT contains registers that count the following ILDR central processing unit (CPU) data:

- ILDR processor overhead (The system calculates this value every 24 hours for INSV/ISTB ILDRs.)
- average processor occupancy value, in percent, for the collection time interval. (The system fixes collection time interval by OMXFR and OMHISTORION office parameters. The time interval can be 5, 15, or 30 minutes.)
- average processor occupancy, in percent, that call processing uses during the collection time interval
- lowest and highest processor occupancy, in percent, over the last collection time interval
- average time, in percent, the microprocessor does not have work to do during collection time interval

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

Key field	Info field
ILD_BRA_STAT_OMTYPE. The system uses the key field to specify the number of ILDRs the switch (0 to MAX_ILD_NO) defines. MAX_ILD_NO is the maximum number of ILDRs the system can define in the switch.	ILDSTAT_OMINFO. This field comprises the following subfields: LINE_MODULE (specifies the location of the ILDR, for example, REM1 and the frame and unit numbers of the ILDR host) LINE_DRAWER (specifies the drawer number)

Related functional groups

There are no functional groups associated with OM group ILDSTAT.

Registers

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

Registers for OM group ILDSTAT

Register name	Measures
ILDOVHD	ILDR overhead
ILDAVOC	ILDR average processor occupancy
ILDAVCP	ILDR average call processing
ILDPKOC	ILDR peak occupancy
ILDLOWOC	ILDR low occupancy
ILDAVAIL	ILDR available time for processing

ILDOVHD**Register type**

Peg

Description

ILDOVHD records the amount of processor use dedicated to overhead in each collection time interval. The system uses the overhead value as a constant to calculate the average call processing (ILDAVCP).

The system uses the overhead constant over a 24-hour period. The system checks the available time value in each collection time interval. The system checks the available time value to determine if the value is the highest recorded value.

Note: Highest availability equals lowest occupancy, that is, lowest ILDAVOC. If this value is higher than any of the previous records, the value is stored. The system uses this value to obtain the overhead constant for the following 24-hour period.

Associated registers

None

Validation formula
$$\text{ILDOVHD} = 100 - \text{lowest ILDAVOC}$$
Extension registers

None

Associated logs

None

ILDAVOC**Register type**

Peg

Description

The system updates register ILDAVOC every 10 seconds. The system records the average processor occupancy, in percent, for each collection time interval.

Associated registers[ILDAVAIL](#)**Validation formula**
$$\text{ILDAVOC} = 100 - \text{ILDAVAIL}$$

Extension registers

None

Associated logs

None

ILDAVCP**Register type**

Peg

Description

The system updates register ILDAVCP every 10 seconds. The system records the average processor occupancy, in percent, used for call processing during each collection time interval.

Associated registers

[ILDAVOC](#), [ILDOVHD](#)

Validation formula

$ILDAVCP = 100 - ILDOVHD - ILDAVAIL$

Extension registers

None

Associated logs

None

ILDPKOC**Register type**

Peg

Description

ILDPKOC records the peak processor occupancy, in percent, over each collection time interval. The system takes samples every 10 seconds in each collection time interval to determine the lowest available time. The system uses the following formula to derive the peak occupancy:

$ILDPKOC = 100 - \text{lowest available time}$

Associated registers

[ILDAVOC](#), [ILDOVHD](#)

Validation formula

$ILDAVCP = 100 - ILDOVHD - ILDAVAIL$

Extension registers

None

Associated logs

None

ILDLOWOC**Register type**

Peg

Description

ILDLOWOC records the lowest processor occupancy value, in percent, over each collection time interval. The system takes samples every 10 seconds in each collection time interval to determine the highest available time. The system uses the following formula to derive the low occupancy value:

$$\text{ILDLOWOC} = 100 - \text{highest available time}$$
Associated registers

None

Extension registers

None

Associated logs

None

ILDAVAIL**Register type**

Peg

Description

The system updates register ILDAVAIL every second. The system records the average amount of time, in percent, the microprocessor does not have work to perform during each collection time interval. The availability of the ILDR is inversely proportional to the ILDR average processor occupancy of the ILDR (ILDAVOC) time.

Associated registers

None

Extension registers

None

Associated logs
None

ILR

Description

OM group International Line Restrictions (ILR) measures the performance of the International Line Restrictions feature. ILR counts customer errors and successful and unsuccessful attempts to deactivate and query of the ILR feature.

ATTENTION

Feature AOOOO1914 CEPT International Line Restriction Enhancements removes OM group ILR1 in SN07. All events formerly pegged by ILR1 are now pegged by ILR and new OM group ILRCLASS

The following table lists the key and info fields associated with OM group ILR. The group provides one tuple for each office.

Key field	Info field
None	None

Related functional groups

There are no functional groups associated with OM group ILR.

Registers

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

Registers for OM group ILR (Sheet 1 of 3)

Register name	Measures
DABEACT	Deny all but emergency activate
DABEDACT	Deny all but emergency deactivate
DABEUSGE	Deny all but emergency usage
DABLEACT	Deny all but local and emergency activate
DABLEDAC	Deny all but local and emergency deactivate

Registers for OM group ILR (Sheet 2 of 3)

Register name	Measures
<u>DABLEUSG</u>	Deny all but local and emergency usage
<u>DAIACT</u>	Deny all international activate
<u>DAIDACT</u>	Deny all international deactivate
<u>DAIUSGE</u>	Deny all international usage
<u>DANIDACT</u>	Deny all national and international direct dial activate
<u>DANIDDAC</u>	Deny all national and international direct dial deactivate
<u>DANIDUSG</u>	Deny all national and international direct dial usage
<u>DIDDACT</u>	Deny international direct dial activate
<u>DIDDDACT</u>	Deny international direct dial deactivate
<u>DIDDUUSGE</u>	Deny international direct dial usage
<u>DNIACT</u>	Deny national and international activate
<u>DNIDACT</u>	Deny national and international direct dial activate
<u>DNIDDACT</u>	Deny national and international direct dial deactivate
<u>DNIDEACT</u>	Deny national and international deactivate
<u>DNIDUSGE</u>	Deny national and international direct dial usage
<u>DNIOUSGE</u>	Deny National And International usage
<u>DSSVACT</u>	Deny special service activate
<u>DSSVDACT</u>	Deny special service deactivate
<u>DSSVUSGE</u>	Deny special service use
<u>ILRCERR</u>	International line restriction customer error
<u>ILRINTG</u>	International line restriction interrogation

Registers for OM group ILR (Sheet 3 of 3)

Register name	Measures
ILRUSGE	International line restriction usage
TEMPDAC <i>DMS only</i>	Temporary deactivation of ILR feature
TEMPUDAC <i>DMS only</i>	Unsuccessful temporary deactivation of ILR

DABEACT**Register type**

Peg

Description

DABEACT counts the times a subscriber activates the deny all but emergency calls line restriction. The subscriber receives the confirmation tone to indicate the system accepts the request.

Associated registers

None

Extension registers

None

Associated logs

FTR138

DABEDACT**Register type**

Peg

Description

DABEDACT counts the times a subscriber deactivates the deny all but emergency calls line restriction. The subscriber receives the confirmation tone to indicate the system accepts the request.

Associated registers

None

Extension registers

None

Associated logs

FTR138

DABEUSGE**Register type**

Peg

Description

DABEUSGE counts the times a subscriber attempts to make a call that is not an emergency call. The system does not allow these calls. The deny all but emergency calls line restriction prevents the attempt.

Associated registers

None

Extension registers

None

Associated logs

None

DABLEACT**Register type**

Peg

Description

DABLEACT counts the times a subscriber activates the all but local and emergency calls line restriction. The subscriber receives the confirmation tone to indicate the system accepts the request.

Associated registers

None

Extension registers

None

Associated logs

FTR138

DABLEDAC**Register type**

Peg

Description

DABLEDAC counts the times a subscriber deactivates the deny all but local and emergency calls line restriction. The subscriber receives the confirmation tone to indicate the system accepts the request.

Associated registers

None

Extension registers

None

Associated logs

FTR138

DABLEUSG**Register type**

Peg

Description

DABLEUSG counts the times a subscriber attempts to make a call that is not a local or an emergency call. The system does not allow these calls. The deny all but local and emergency calls line restriction prevents the attempt.

Associated registers

None

Extension registers

None

Associated logs

None

DAIACT**Register type**

Peg

Description

DAIACT counts the times a subscriber activates the deny all international calls line restriction. The subscriber receives the confirmation tone.

Associated registers

None

Extension registers

None

Associated logs

FTR138

DAIDACT**Register type**

Peg

Description

DAIDACT counts the times a subscriber correctly deactivates the deny all international calls line restriction. The subscriber receives the confirmation tone.

Associated registers

None

Extension registers

None

Associated logs

FTR138

DAIUSGE**Register type**

Peg

Description

DAIUSGE counts the times a subscriber attempts to make an international call which the system does not allow. The system prevents the call because the deny all international calls feature is active.

Associated registers

None

Extension registers

None

Associated logs

None

DANIDACT**Register type**

Peg

Description

DANIDACT counts the times a subscriber activates the deny all national and international direct dial calls line restriction. The subscriber receives the confirmation tone to indicate the system accepts the request.

Associated registers

None

Extension registers

None

Associated logs

FTR138

DANIDDAC**Register type**

Peg

Description

DANIDDAC counts the times a subscriber deactivates the deny all national and international direct dial calls line restriction. The subscriber receives the confirmation tone to indicate the system accepts the request.

Associated registers

None

Extension registers

None

Associated logs

FTR138

DANIDUSG**Register type**

Peg

Description

DANIDUSG counts the times a subscriber attempts to make a national or international direct dial call. The system does not allow these calls. The deny all national and international direct dial calls line restriction prevents the attempt.

Associated registers

None

Extension registers

None

Associated logs

None

DIDDACT**Register type**

Peg

Description

DIDDACT counts the times a subscriber activates the deny international direct dial line restriction. The subscriber receives the confirmation tone.

Associated registers

None

Extension registers

None

Associated logs

FTR138

DIDDDACT**Register type**

Peg

Description

DIDDDACT counts the times a subscriber deactivates the deny international direct dial line restriction. The subscriber receives the confirmation tone.

Associated registers

None

Extension registers

None

Associated logs

FTR138

DIDDUSGE**Register type**

Peg

Description

DIDDUSGE counts the times a subscriber attempts to make an international direct dial call that the system does not allow. The deny international direct dial line restriction prevents the call.

Associated registers

None

Extension registers

None

Associated logs

None

DNIACT**Register type**

Peg

Description

DNIACT counts the times a subscriber activates the deny national and all international calls line restriction. The subscriber receives the confirmation tone.

Associated registers

None

Extension registers

None

Associated logs

FTR138

DNIDACT**Register type**

Peg

Description

DNIDACT counts the times a subscriber activates the deny national and all international direct dial calls line restriction. The subscriber receives the confirmation tone.

Associated registers

None

Extension registers

None

Associated logs

FTR138

DNIDDACT**Register type**

Peg

Description

DNIDDACT counts the times a subscriber deactivates the deny national and all international direct dial calls line restriction. The subscriber receives the confirmation tone.

Associated registers

None

Extension registers

None

Associated logs

FTR138

DNIDEACT**Register type**

Peg

Description

DNIDEACT counts the times a subscriber deactivates the deny national and all international calls line restriction. The subscriber receives the confirmation tone.

Associated registers

None

Extension registers

None

Associated logs

FTR138

DNIDUSGE**Register type**

Peg

Description

DNIDUSGE counts times a subscriber attempts to make a national or international direct dial call the system does not allow. The deny national and international direct dial calls line restriction prevents the restriction.

Associated registers

None

Extension registers

None

Associated logs

None

DNIUSGE**Register type**

Peg

Description

DNIUSGE counts the times a subscriber attempts to make a national or international call that the system does not allow. The deny national and international line restriction prevents the call.

Associated registers

None

Extension registers

None

Associated logs

None

DSSVACT**Register type**

Peg

Description

DSSVACT counts the times a subscriber activates the deny special service calls line restriction. The subscriber receives the confirmation tone to indicate the system accepts the request.

Associated registers

None

Extension registers

None

Associated logs

FTR138

DSSVDACT**Register type**

Peg

Description

DSSVDACT counts the times a subscriber deactivates the deny special service calls line restriction. The subscriber receives the confirmation tone to indicate the system accepts the request.

Associated registers

None

Extension registers

None

Associated logs

FTR138

DSSVUSGE**Register type**

Peg

Description

DSSVUSGE counts the times a subscriber attempts to make a special service call the system does not allow. The deny special service calls line restriction prevents the attempt.

Associated registers

None

Extension registers

None

Associated logs

None

ILRCERR**Register type**

Peg

Description

ILRCERR counts the times a subscriber does not use the international line restriction feature correctly. The subscriber receives the reorder tone.

The following events cause this register to increase:

- the subscriber attempts to access ILR when the feature is not assigned (FNAL treatment)
- the subscriber does not dial correctly when the subscriber activates, deactivates, interrogates or programs ILR (NACK treatment)
- the subscriber uses wrong password on deactivation (NACK treatment)
- the subscriber attempts to access ILR when the system denies the feature (NACK treatment)

Associated registers

None

Extension registers

None

Associated logs

FTR138

ILRINTG**Register type**

Peg

Description

ILRINTG counts the times a subscriber queries if the system activated the ILR feature. The status determines if the subscriber receives the confirmation or negative acknowledgement tone.

Associated registers

None

Extension registers

None

Associated logs

FTR138

ILRUSGE**Register type**

Peg

Description

ILRUSGE counts the times a subscriber activates the ILR feature.

Associated registers

None

Extension registers

None

Associated logs**TEMPDAC****Register type**

Peg

Description

TEMPDAC counts the number of successful attempts to deactivate the ILR feature. *The register applies to DMS only.*

Associated registers

None

Extension registers

None

Associated logs

TEMPUDAC**Register type**

Peg

Description

TEMPUDAC counts the number of unsuccessful attempts to temporarily deactivate the ILR feature. *The register applies to DMS only.*

Associated registers

None

Extension registers

None

Associated logs

FTR138

ILRCLASS

Description

OM group International Line Restrictions Class (ILRCLASS) measures the performance of the International Line Restrictions (ILR) feature.

ILRCLASS counts usage, activation, and successful and unsuccessful attempts to deactivate the ILR feature.

ATTENTION

Feature A00001914 CEPT International Line Restriction Enhancements removes OM group ILR1 in SN07. All events formerly pegged by ILR1 are now pegged by OM groups ILRCLASS and (existing) ILR.

ILRCLASS has a flexible body that includes registers according to the ILR classes datafilled in table ILRCLASS. Each register increases for each of the following classes of restriction:

Restriction classes

Name	Description
DABE	Deny all but emergency
DABLE	Deny all but local and emergency
DAI	Deny all international
DANID	Deny all national and international direct dial
DIDD	Deny international direct dial
DNI	Deny national and international
DNID	Deny national and international direct dial
DSSV	Deny special service

The following table lists the key and info fields associated with OM group ILRCLASS. The group provides one tuple for each office.

Key field	Info field
None	None

Related functional groups

There are no functional groups associated with OM group ILRCLASS.

Registers

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

Registers for OM group ILRCLASS

Register name	Measures
ACT	Activation
DEACT	Deactivation
USAGE	Usage
UNDACT	Unsuccessful deactivation

ACT

Register type

Peg

Description

ACT counts the attempts to activate the ILR feature.

This register applies only to DMS.

Associated registers

None

Extension registers

None

Associated logs

None

DEACT**Register type**

Peg

Description

DEACT counts the number of successful attempts to deactivate the ILR feature.

This register applies only to DMS.

Associated registers

None

Extension registers

None

Associated logs

None

USAGE**Register type**

Peg

Description

USAGE measures usage of the ILR feature.

This register applies only to DMS.

Associated registers

None

Extension registers

None

Associated logs

None

UNDACT**Register type**

Peg

Description

UNDACT counts the number of unsuccessful attempts to deactivate the ILR feature.

This register applies only to DMS.

Associated registers

None

Extension registers

None

Associated logs

None

ININTWRK

Description

OM group Intelligent Network Interworking (ININTWRK) pegs the number of messages sent and received for intelligent (IN) operator backup calls. A tuple is added for every trunk group datafilled in table ISUPTRK.

To test a register, generate the appropriate ISUP message to peg the register and use OMSHOW to display the data.

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

Key field	Info field
Trunk group CLLI	The number of call processing messages sent and received for IN operator backup calls on an ISUP trunk group basis.

Related functional groups

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

Registers

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

Registers for OM group ININTWRK (Sheet 1 of 2)

Register name	Measures
FACINVK	Facility Message (FAC) Invoke
FACRERR	Facility (FAC) Return Error
FACRRSL	Facility (FAC) Return Result
FARINVK	Facility Request (FAR) Invoke
FARRERR	Facility Request (FAR) Return Error
FARRRSL	Facility Request (FAR) Return Result

Registers for OM group ININTWRK (Sheet 2 of 2)

Register name	Measures
IAMINVK	Initial Address Message (IAM) Invoke
IAMOPR	Initial Address Message (IAM) call to Operator
RELINC	Release Message (REL) Incoming without RO
RELOUT	Release Message (REL) Outgoing without RO
RELREJI	Release Message (REL) Reject Incoming
RELREJO	Release Message (REL) Reject Outgoing
RELRERR	Release Message (REL) Return Error
RELRRSL	Release Message (REL) Return Result

FACINVK**Register type**

Peg

Description

FACINVK is pegged when an ISUP FAC with an RO Invoke component is received.

Associated registers

None

Extension registers

None

Associated logs

None

FACRERR**Register type**

Peg

Description

FACRERR is pegged when an ISUP FAC with an RO ReturnError component is sent.

Associated registers

None

Extension registers

None

Associated logs

TOPS 607

FACRRSL**Register type**

Peg

Description

FACRRSL is pegged when an ISUP FAC with an RO ReturnResult component is sent.

Associated registers

None

Extension registers

None

Associated logs

None

FARINVK**Register type**

Peg

Description

FARINVK is pegged when an ISUP FAR with an RO Invoke component is received.

Associated registers

None

Extension registers

None

Associated logs

None

FARRERR**Register type**

Peg

Description

FARRERR is pegged when an ISUP FAR with an RO ReturnError component is sent.

Associated registers

None

Extension registers

None

Associated logs

TOPS 607

FARRRSL**Register type**

Peg

Description

FARRRSL is pegged when an ISUP FAR with an RO ReturnResult component is sent.

Associated registers

None.

Extension registers

None

Associated logs

None

IAMINVK**Register type**

Peg

Description

IAMINVK is pegged each time an ISUP IAM message with a remote operation (RO) Invoke component is received.

Associated registers

None

Extension registers

None

Associated logs

None

IAMOPR**Register type**

Peg

Description

IAMOPR is pegged when an ISUP IAM with an RO Invoke component is received and the call is sent to an operator terminal.

Associated registers

None

Extension registers

None

Associated logs

None

RELINC**Register type**

Peg

Description

RELINC is pegged when an ISUP REL without an RO component is received.

Associated registers**Extension registers**

None

Associated logs

None

RELOUT**Register type**

Peg

Description

RELOUT is pegged when an ISUP REL without an RO component is sent.

Associated registers

None

Extension registers

None

Associated logs

None

RELREJI**Register type**

Peg

Description

RELREJI is pegged when an ISUP REL with an RO Reject component is received.

Associated registers

None

Extension registers

None

Associated logs

TOPS 604

RELREJO**Register type**

Peg

Description

RELREJO is pegged when an ISUP REL with an RO Reject component is sent.

Associated registers

None

Extension registers

None

Associated logs

TOPS 603

RELRERR**Register type**

Peg

Description

RELRRERR is pegged when an ISUP REL with an RO ReturnError component is sent.

Associated registers

None

Extension registers

None

Associated logs

TOPS 606, 607

RELRRSL**Register type**

Peg

Description

RELRRSL is pegged when an REL with an RO ReturnResult component is sent.

Associated registers

None

Extension registers

None

Associated logs

None

INSCTP

Description

OM group INSCTP shows data for AIN (IN) messages using the Stream Control Transmission Protocol (SCTP).

The following table lists the key and info fields associated with OM group INSCTP. The group provides one tuple for each logical group.

Key field	Info field
None	None

Related functional groups

There are no functional groups associated with OM group INSCTP.

Registers

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

Registers for OM group INSCTP

Register name	Measures
MSGOUT	Outgoing Intelligent Network (IN) messages using SCTP
MSGIN	Incoming IN messages using SCTP
SENDFAIL	IN messages using SCTP for which send failed
DATAERR	IN messages that encountered errors at application data
DATARCVD	Incoming IN message decoding
MSG2BIG	IN messages that fail because of message length
BMSFAIL	Buffer errors encountered while sending IN messages over SCTP
NOTREADY (not used)	SCTP layer is not ready to process the message

MSGOUT**Register type**

Peg

Description

MSGOUT (IN SCTP msg out) counts outgoing AIN messages that use the SCTP transport.

Associated registers

None

Extension registers

None

Associated logs

None

MSGIN**Register type**

Peg

Description

MSGIN (IN SCTP msg in) counts incoming AIN messages that use the SCTP transport.

Associated registers

None

Extension registers

None

Associated logs

None

SENDFAIL**Register type**

Peg

Description

SENDFAIL (IN SCTP send failure) counts outgoing AIN messages using the SCTP transport that fail.

Associated registers

None

Extension registers

None

Associated logs

None

DATAERR**Register type**

Peg

Description

DATAERR (IN SCTP data error) counts data errors that cause a messaging failure.

Associated registers

None

Extension registers

None

Associated logs

None

MSG2BIG**Register type**

Peg

Description

MSG2BIG (IN SCTP message too big) counts outgoing messages that are not sent because they exceed the maximum message sizes for SCTP (1496 bytes as supported by current SCTP implementation).

Associated registers

None

Extension registers

None

Associated logs

None

BMSFAIL**Register type**

Peg

Description

BMSFAIL (IN SCTP BMS buffer failure) counts buffer failures that cause send or receive failures.

Associated registers

None

Extension registers

None

Associated logs

None

DATARCVD**Register type**

Peg

Description

DATARCVD (data received) pegs when the IN message is received from the SCTP stack and can be decoded.

Associated registers

None

Extension registers

None

Associated logs

None

NOTREADY**Register type**

Peg

Description

NOTREADY indicates that the SCTP layer is not ready to send or receive a message. Although the OMSHOW command displays this register, *NOTREADY is not used with the current functionality.*

Associated registers

None

Extension registers

None

Associated logs

None

IOC

Description

OM group Input/output Controller Maintenance Summary (IOC) provides information about the performance of input/output controllers (IOC). Each IOC is an interface between a maximum of 36 input/output devices and the central message controller (CMC).

IOC peg registers count:

- errors and faults in the IOCs
- device errors the system detects on P-side links

IOC usage registers record:

- system busy links and IOCs
- manually busy links and IOCs

The data that the IOC supplies is used to monitor the performance of the IOCs and the output devices that the IOCs support.

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

Key field	Info field
None	None

Related functional groups

The following functional groups are associated with OM group IOC:

- DMS-100 Local
- DMS-100/200 Local/Toll
- DMS-200 Toll
- DMS-100 Meridian
- DMS-MTX
- DMS-250 Toll/Tandem
- DMS-300
- Meridian SL-100 PBX
- DMS SuperNode

Registers

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

Registers for OM group IOC

Register name	Measures
IOCERR	Input/output controller (IOC) errors
IOCFLT	Input/output controller (IOC) faults
IOCLKERR	Input/output controller (IOC) link errors
IOCLKMBU	Input/output controller (IOC) link manually busy usage
IOCLKSBU	Input/output link system busy usage
IOCMBU	Input/output controller (IOC) manually busy usage
IOCSBU	Input/output controller (IOC) system busy usage

IOCERR

Register type

Peg

Description

IOCERR counts errors the system detects in in-service IOCs. The register counts transient errors and errors that make an IOC system busy.

Associated registers

[IOCFLT](#)

Extension registers

None

Associated logs

IOD104, IOD115, IOD118, IOD119, IOD120, IOD123, IOD124, IOD125, IOD126, IOD127

IOCFLT**Register type**

Peg

Description

IOCFLT counts faults that make an IOC system busy. The faults cause an IOC to remain system busy until manual or system intervention corrects the fault. Manual or system intervention returns the IOC to service.

Associated registers

[IOCERR](#)

Extension registers

None

Associated logs

IOD104, IOD109, IOD113, IOD116, IOD118, IOD119, IOD124, IOD125, IOD126, IOD127, IOD129

IOCLKERR**Register type**

Peg

Description

IOCLKERR counts the following device errors the system detects on the P-side links of an IOC:

- checksum
- bus overrun
- device not ready

Associated registers

None

Extension registers

None

Associated logs

IOD117, IOD129

IOCLKMBU**Register type**

Usage

Scan rate

100 seconds

Description

IOCLKMBU records if P-side input/output controller (IOC) links are manually busy.

Associated registers

None

Extension registers

None

Associated logs

IOD108, IOD112

IOCLKSBU**Register type**

Usage

Scan rate

100 seconds

Description

IOCLKSBU records if P-side IOC links are system busy.

Associated registers

None

Extension registers

None

Associated logs

IOD109, IOD113

IOCMBU**Register type**

Usage

Scan rate

100 seconds

Description

IOCMBU records if IOCs are manually busy.

Associated registers

None

Extension registers

None

Associated logs

IOD103

IOCSBU**Register type**

Usage

Scan rate

100 seconds

Description

IOCSBU records if IOCs are system busy.

Associated registers

None

Extension registers

None

Associated logs

IOD104

IOSYS

Description

OM group Input and Output System (IOSYS) counts errors that the input/output (I/O) system detects in incoming or outgoing messages. Examples of problem conditions include errors or rebounded message interrupts that originate in the central message controller (CMC).

Diagnostics determine if the errors counted by IOSYS originate in the CMC or a network message controller (NMC). If the errors originate in the CMC or NMC, groups CMC or NMC count the errors. Data supplied by IOSYS is used to monitor the performance of the I/O system.

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

Key field	Info field
None	None

Related functional groups

The following functional groups are associated with OM group IOSYS:

- 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 IOSYS and what they measure. For a detailed description of a register, click on the register name.

Registers for OM group IOSYS

Register name	Measures
IOSYSERR	Input and output system error

IOSYSERR

Register type

Peg

Description

IOSYSERR counts errors that the input/output (I/O) system detects on incoming or outgoing messages. Examples of problem conditions include errors or rebounded message interrupts that originate in the CMC.

Associated registers

None

Extension registers

None

Associated logs

None

IS41TOPS

Description

OM group IS-41 TOPS (IS41TOPS) measures application- and transport-level events for the IS-41Automated Directory Assistance Call Completion (ADACC) with release call flow.

ATTENTION

Feature A00003687 TOPS Wireless Intelligent Network Integration removes OM group IS41TOPS in SN07. The feature creates new OM group SMSTOPS, TC7WRLSS and WINTOPS. All events formerly pegged by IS41TOPS are now pegged by TC7WRLSS and WINTOPS.

The following table briefly describes the new OM groups. For a detailed description of an OM group, refer to the respective section in this document.

OM groups that replace IS41TOPS

Name	What it measures
SMSTOPS	Application-level events for the TOPS Short Message Service (SMS)
TC7WRLSS	Transport-level events such as types of TCAP messages sent and received, and SS7 errors on TOPS wireless calls for SMS, Wireless Intelligent Network (WIN), IS-41, and Global System for Mobile Communications (GSM)
WINTOPS	Application-level events for wireless ADACC with release. This group uses WIN in the name since wireless intelligent network capabilities are used to provide ADACC with release for both IS-41 and GSM.

The number of registers to record application- and transport-level events for combinations of Release Link Trunking (RLT) and SMS, and protocol standards IS-41 and GSM exceeds the maximum of 32. SMSTOPS, TC7WRLSS and WINTOPS use a key field with values IS-41 and GSM, and are used for both wireless network standards.

Related functional groups

There are no functional groups associated with OM group IS41TOPS.

Registers

The following table shows the new representations of the registers that were formerly in IS41TOPS. For a detailed description of an OM group, refer to the respective section in this document.

IS41TOPS register (SN06)	New OM group: Key: IS41 or WIN_IS41	New register (SN07)
ANINFINV	WINTOPS	WINBEGIN
ANINFIN2	WINTOPS	WINBEGI2
CONNRES	WINTOPS	REQCONN
CONNRES2	WINTOPS	REQCONN2
ANINFRR	WINTOPS	CONNECT
ANINFRR2	WINTOPS	CONNECT2
ANINFRD	WINTOPS	DISCONN
ANINFRD2	WINTOPS	DISCONN2
RESTIMR	WINTOPS	RESTIMR
RESTIMR2	WINTOPS	RESTIMR2
TLDNTIME	WINTOPS	TLDNTIME
SANTIMR	WINTOPS	SANTIMR
CFRABAN	WINTOPS	ABANDON
CFRDISC	WINTOPS	ERRDISC
CFRFAIL	WINTOPS	ERRCONN
CFRSSFT	WINTOPS	ERRSSFT
RETERRS	TC7WRLSS	RETERRS
RETERRR	TC7WRLSS	RETERRR
REJECTS	TC7WRLSS	REJECTS
REJECTR	TC7WRLSS	REJECTR
NOTLDNS	WINTOPS	NOTLDNS

IS41TOPS register (SN06)	New OM group: Key: IS41 or WIN_IS41	New register (SN07)
NODATA	WINTOPS	NODATA
RXLAFAIL	WINTOPS	RXLAFAIL
MBFULL	TC7WRLSS	MBFULL
RTFNOXLA	TC7WRLSS	RTFNOXLA
RTFNOXLS	TC7WRLSS	RTFNOXLS
RTFSUBCG	TC7WRLSS	RTFSUBCG
RTFSUBFL	TC7WRLSS	RTFSUBFL
RTFUNEQ	TC7WRLSS	RTFUNEQ
RTFNETFL	TC7WRLSS	RTFNETFL
RTFNETCG	TC7WRLSS	RTFNETCG
RTFMISCE	TC7WRLSS	RTFMISCE

SS7 operational measurements

Existing OM groups for C7 and TCAP are defined for pegging events relating to SS7 and TCAP messaging. Existing OM groups TCAPUSAG and TCAPERRS have SS7 subsystem as their key. To track TOPS IS-41 events, use subsystem name IS41TOPS as the key. To track TOPS GSM events, use subsystem name GSMTOPS as the key.

TCAPUSAG contains registers that are pegged during a wireless TOPS call in addition to the pegs in OM groups SMSTOPS, WINTOPS and TC7WRLSS. The following table maps the OM registers in TCAPUSAG to messages sent and received during a wireless TOPS call.

TCAPUSAG mapping to TOPS IS-41 and GSM ADACC events (Sheet 1 of 3)

Register name	Measures	Pegged when
TCMSGOUT, TCMSGOU2	Total TCAP messages originating on this node	IS-41 and GSM TCAP messages sent by TOPS
TCMSGIN, TCMSGIN2	Total TCAP messages terminating at this node	IS-41 and GSM TCAP messages received by TOPS

TCAPUSAG mapping to TOPS IS-41 and GSM ADACC events (Sheet 2 of 3)

Register name	Measures	Pegged when
TCUNIDIR, TCUNIDI2	Total TCAP msgs sent/rcvd w/ package type UNIDIRECTIONAL	Not pegged
TCQWPERM, TCQWPER2	Total TCAP msgs sent/rcvd w/ package type QUERY W/ PERM	- TOPS receives IS-41 ANALYZD or GSM InitialDP - TOPS sends an SMS
TCQNPERM, TCQNPER2	Total TCAP msgs sent/rcvd w/ package type QUERY W/O PERM	Not pegged
TCCWPERM, TCCWPER2	Total TCAP msgs sent/rcvd w/ package type CONV W/ PERM	- TOPS receives IS-41 CONNFAILRPT - TOPS sends one of the following GSM messages: EstablishTemporaryConnection, ResetTimer, Connect, ReleaseCall, DisconnectForwardConnection
TCCNPERM, TCCNPER2	Total TCAP msgs sent/rcvd w/ package type CONV W/O PERM	TOPS sends IS-41 CONNRES or IS-41 RESETTIMER
TCRESPNS, TCRESPN2	Total TCAP msgs sent/rcvd w/ package type RESPONSE	TOPS sends ANALYZD or receives response from message center
TCINVKL, TCINVKL2	Total components sent/rcvd of type INVOKE LAST	- TOPS sends or receives any message listed in this table for TCCWPERM and TCCWPER2, or TCCNPERM and TCCNPER2 - TOPS sends an SMS
TCINVKNL, TCINVKN2	Total components sent/rcvd of type INVOKE NOT LAST	Not pegged
TCRSLTL, TCRSLTL2	Total components sent/rcvd of type RETURN RESULT LAST	- TOPS sends IS-41 ANALYZD Return Result - TOPS receives GSM Application End or SMS response

TCAPUSAG mapping to TOPS IS-41 and GSM ADACC events (Sheet 3 of 3)

Register name	Measures	Pegged when
TCRSLTNL, TCRSLTN2	Total components sent/rcvd of type RETURN RESULT NOT LAST	Not pegged
TCRTERR, TCRTERR2	Total components sent/rcvd of type RETURN ERROR	TOPS sends or receives a RETURN ERROR
TCREJECT, TCREJEC2	Total components sent/rcvd of type REJECT	TOPS sends or receives a REJECT
TCABORT, TCABORT2	Total TCAP msgs sent/rcvd w/ package type ABORT	TOPS sends or receives an ABORT

ISA

Description

OM group In-Session Activation (ISA) measures the number of offers, acceptances, and failures of the ISA service.

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

Key field	Info field
None	OMIBNGINFO

The entry in the Info field is the customer group as defined in field CUSTNAME in table CUSTENG. This field allows only one customer name for each customer group (maximum 4095).

Related functional groups

There are no functional groups associated with OM group ISA.

Registers

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

Registers for OM group ISA (Sheet 1 of 2)

Register name	Counts
ANNFAIL	ISA announcement fail
BSYACCPT	ISA on a busy condition
BSYKEY1	Key 1 busy condition
BSYKEY2	Key 2 busy condition
BSYKEY3	Key 3 busy condition
BSYOFFER	ISA on a busy condition
ISAABDN	ISA abandoned
ISAINTER	ISA interrupt
RCVRFAIL	Receiver fail

Registers for OM group ISA (Sheet 2 of 2)

Register name	Counts
RNAACCPT	RNA Accept
RNAOFFER	RNA Offers
RNAKEY1	RNA Key 1
RNAKEY2	RNA Key 2
RNAKEY3	RNA Key 3
RSCSHORT	Resources short
XLAFAIL	Translation failure

ANNFAIL**Register type**

Peg

Description

ANNFAIL counts the times the system cannot provide an ISA announcement.

Associated registers

None

Extension registers

None

Associated logs

None

BSYACCPT**Register type**

Peg

Description

BSYACCPT counts the times the caller accepts ISA on a busy condition.

Associated registers

None

Extension registers

None

Associated logs

None

BSYKEY1**Register type**

Peg

Description

BSYKEY1 counts the times a call completion service activates when the caller that uses key 1 encounters a busy condition.

Associated registers

None

Extension registers

None

Associated logs

None

BSYKEY2**Register type**

Peg

Description

BSYKEY2 counts the times a call completion service activates when the caller that uses key 2 encounters a busy condition.

Associated registers

None

Extension registers

None

Associated logs

None

BSYKEY3**Register type**

Peg

Description

BSYKEY3 counts the times a call completion service activates when the caller that uses key 3 encounters a busy condition.

Associated registers

None

Extension registers

None

Associated logs

None

BSYOFFER**Register type**

Peg

Description

BSYOFFER counts the times the system offers ISA to the caller that encounters a busy condition.

Associated registers

None

Extension registers

None

Associated logs

None

ISAABDN**Register type**

Peg

Description

ISAABDN counts the times the caller accepts ISA and disconnects before a call completion service activates.

Associated registers

None

Extension registers

None

Associated logs

None

ISAINTER**Register type**

Peg

Description

ISAINTER counts the times the caller uses a reject key to interrupt the ISA offer of service. The register counts interruptions that occur during the first level announcement. The operating company defines the first level of announcement, in a ring/no answer (RNA) condition.

Associated registers

None

Extension registers

None

Associated logs

None

RCVRFAIL**Register type**

Peg

Description

RCVRFAIL counts the times the system does not offer ISA because not enough or no tone receivers are available.

Associated registers

None

Extension registers

None

Associated logs

None

RNAACCPT**Register type**

Peg

Description

RNAACCPT counts the times the caller accepts ISA on an RNA condition.

Associated registers

None

Extension registers

None

Associated logs

None

RNAOFFER**Register type**

Peg

Description

RNAOFFER counts the times the system offers ISA to a caller that encounters an RNA condition.

Associated registers

None

Extension registers

None

Associated logs

None

RNAKEY1**Register type**

Peg

Description

RNAKEY1 counts the times a caller that uses key 1 encounters an RNA condition and activates a call completion service.

Associated registers

None

Extension registers

None

Associated logs

None

RNAKEY2**Register type**

Peg

Description

RNAKEY2 counts the times a caller that uses key 2 encounters an RNA condition and activates a call completion service.

Associated registers

None

Extension registers

None

Associated logs

None

RNAKEY3**Register type**

Peg

Description

RNAKEY3 counts the times a caller that uses key 3 encounters an RNA condition and activates a call completion service.

Associated registers

None

Extension registers

None

Associated logs

None

RSCSHORT**Register type**

Peg

Description

RSCSHORT counts the times the system does not offer ISA because not enough software resources are available. Extension blocks and FDBs are examples of software resources.

Associated registers

None

Extension registers

None

Associated logs

None

XLAFail**Register type**

Peg

Description

XLAFail counts the times a caller selects a call completion service the system cannot perform because of a translation failure. A caller selects a call completion service if the following conditions are met:

- a caller presses a key during the digit collection period for an ISA announcement
- the key the caller presses corresponds to a feature or a DN to which the system routes the call

When the access code of the feature is used or the DN to which the system routes the call cannot be translated, translation failure occurs.

Associated registers

None

Extension registers

None

Associated logs

None

ISUPCONN

Description

OM group ISUP connection (ISUPCONN) provides information on circuit availability and call attempts that are unsuccessful. This information determines how the surrounding network affects ISDN user part (ISUP) performance.

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

Key field	Info field
None	None

Related functional groups

The following functional groups are associated with OM group ISUPCONN:

- ISDN integrated services digital network
- CCS7 Common Channel Signaling 7

Registers

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

Registers for OM group ISUPCONN (Sheet 1 of 2)

Register name	Measures
ISCONBAD	ISUP bad
ISCONCOT	ISUP continuity
ISCONFAR	ISUP facility request
ISCONICC	ISUP continuity check
ISCONINR	ISUP information request
ISCONUCA	ISUP unsuccessful address
ISCONUCB	ISUP unsuccessful busy

Registers for OM group ISUPCONN (Sheet 2 of 2)

Register name	Measures
ISCONUCC	ISUP unsuccessful circuit
ISCONUCE	ISUP unsuccessful
ISCONUCF	ISUP unsuccessful faults
ISCONUCN	ISUP unsuccessful numbers
ISCONUCO	ISUP unsuccessful other
ISCONUCS	ISUP unsuccessful service

ISCONBAD**Register type**

Peg

Description

ISCONBAD counts call attempts that fail during call setup. When a call attempt fails during call setup, the originating office receives a release message instead of an address complete message.

Associated registers

None

Extension registers

ISCONBD2

Associated logs

None

ISCONCOT**Register type**

Peg

Description

ISCONCOT counts calls that fail the first continuity check test. The continuity check request (CCR) message initiates the first test. The CCR message performs an automatic recheck 10 seconds after the first continuity check failure.

Associated registers

None

Extension registers

None

Associated logs

C7UP107

ISCONFAR**Register type**

Peg

Description

ISCONFAR counts failures that occur when there is no response to the second attempt to send a facility request message.

Associated registers

None

Extension registers

None

Associated logs

C7UP108

ISCONICC**Register type**

Peg

Description

ISCONICC counts calls that receive the continuity check test. The count occurs at the office that performs the continuity check test that the initial address message requests. The register is set to zero (0).

Associated registers

None

Extension registers

ISCONIC2

Associated logs

None

ISCONINR**Register type**

Peg

Description

ISCONINR counts failures that occur when there is no response to a second attempt to send an information request message.

Associated registers

None

Extension registers

None

Associated logs

C7UP108

ISCONUCA**Register type**

Peg

Description

ISCONUCA counts call attempts that are unsuccessful because another office determines that the number either is not in a valid format or is incomplete.

Associated registers

None

Extension registers

None

Associated logs

C7UP105

ISCONUCB**Register type**

Peg

Description

ISCONUCB counts call attempts that are unsuccessful because the called party is busy.

Associated registers

None

Extension registers

ISCONUB2

Associated logs

None

ISCONUCC**Register type**

Usage

Description

ISCONUCC counts call attempts that are unsuccessful because there are no correct idle circuits in another office to handle the call.

Associated registers

None

Extension registers

ISCOUCC2

Associated logs

C7UP106

ISCONUCE**Register type**

Peg

Description

ISCONUCE counts call attempts that are unsuccessful because switching equipment in another office handles too many calls.

Associated registers

None

Extension registers

ISCOUCE2

Associated logs

C7UP106

ISCONUCF**Register type**

Peg

Description

ISCONUCF counts call attempts that are unsuccessful because of a temporary fault in the network at the far end.

Associated registers

None

Extension registers

ISCOUCF2

Associated logs

C7UP106

ISCONUCN**Register type**

Peg

Description

ISCONUCN counts call attempts that are unsuccessful because the dialed number is a blank directory number in the far-end office.

Associated registers

None

Extension registers

None

Associated logs

C7UP105

ISCONUCO**Register type**

Peg

Description

ISCONUCO counts call attempts that are not successful because of reasons other than the following:

- destination out-of-service faults
- called party busy condition
- numbers not allocated

- temporary faults
- address not complete
- circuit not available
- switching equipment congestion

The system records the reason the call attempt is not successful in the cause field of the release message to the office.

Associated registers

None

Extension registers

ISCONUO2

Associated logs

None

ISCONUCS**Register type**

Peg

Description

ISCONUCS counts call attempts that are unsuccessful because an equipment failure occurs at the far-end office. The call attempts also can fail because the directory number of the called party is either disconnected or out of service.

Associated registers

None

Extension registers

None

Associated logs

None

ISUPUSAG

Description

OM group Integrated Services User Part Utilization (ISUPUSAG) counts incoming and outgoing messages that use ISDN user part (ISUP), based on message types defined in the following standards:

- American National Standard T1.113.2 - 1987- ISUP Message Acronyms
- ITU Q.763
- ETS 300 356-1

The system counts outgoing call processing messages in the digital trunk controller for SS7 (DTC7) and the NA100 Spectrum Peripheral Module (SPM) product. The system counts outgoing maintenance messages in the central control complex (CCC). The system counts incoming call processing and maintenance messages in the message switch and buffer SS7 (MSB7). The system also counts these messages in the link interface unit SS7 (LIU7).

The ISUPUSAG monitors message volume to determine ISUP performance, activity, and stability.

Note: In GL04, OM group ISUPUSAG increases for ISUP and TUP.

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

Key field	Info field
ISUPOM_MSG_TYPE:	None

The following acronyms are counted in ISUPUSAG and are specified in the following standards:

- American National Standard T1.113.2 D 1987- ISUP Message Acronyms
- ETSI (ETS 300 356-1)
- International (ITU Q.763)

ACM

address complete

ALT

alerting message

ANM

answer

BLA

blocking acknowledgement

BLO

blocking

CCR

continuity check request

CFN

confusion

CGB

circuit group blocking

CGBA

circuit group blocking acknowledgement

CGU

circuit group blocking

CGUA

circuit group unblocking acknowledgement

CMC

call modification completed

CMRJ

call modification rejected

CMR

call modification request

CON

connect

COT

continuity

CPG

call progress message

CQM

circuit query

CQR

circuit query response

CRA

circuit reservation acknowledgement

CRG

charge information

CRM	circuit reservation
CSVR	closed user group selection and validation request
CSVS	closed user group selection and validation response
CVR	circuit validation response
CVT	circuit validation test
DRS	delayed release
EXM	exit
FAA	facility accepted
FAC	facility
FAD	facility deactivated
FAI	facility information
FAR	facility request
FRJ	facility reject
FOT	forward transfer
GRA	circuit group reset acknowledgment
GRS	circuit group reset
IAM	initial address message
IAMN1	initial address message not priority one
IDR	identification request

INF	information
INR	information request
IRS	identification response
LOP	loop prevention
LPA	loop back acknowledgement
NRM	network resource management
PAM	pass along message
PRG	progress
REL	release
RES	resume
RLC	release complete
RPM	reconfiguration progress message (also counts OLM:Overload)
RSC	reset circuit
SAM	subsequent address message
SGM	segmentation
SUS	suspend
UBA	unblocking acknowledgment
UBL	unblocking
UCIC	unequipped circuit identification code

UPA

user part available

UPT

user part available

USR

user-to-user information

The maximum number of keys is 62.

Note: For Succession Networks equipped with USPs, incoming ISUP OM messages are not pegged on the XA-Core. They are pegged on the USP. Outgoing OM messages are still displayed on the XA-Core.

Refer to the following documents for details:

- for Succession: *Succession Performance Management Operational Measurements Reference*, NN10264-709
- for DMS: *Operational Measurements Reference Manual*, 297-8021-814P3 in your SN07 (DMS) Helmsman collection
- for USP software: *Logs and Operational Measurement Descriptions*, included with the USP software on your SN07 CDs

Related functional groups

The following functional groups are associated with OM group ISUPUSAG:

- ISDN
- ISUP
- CCS7

Registers

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

Registers for OM group ISUPUSAG

Register name	Measures
ISMSGIN	integrated services digital network user part messages incoming
ISMSGOUT	integrated services digital network user part messages outgoing

ISMSGIN**Register type**

Peg

Description

ISMSGIN counts ISUP messages the office receives. These messages include incoming messages that pass through a move (tandem) office. Count each type of incoming ISUP message separately.

These measurements collect in the link interface unit for SS7 (LIU7). The system sends these messages to the central control complex (CCC) when at least one count reaches the maximum value of 65535.

Measurements also collect in the message switch and buffer for SS7 (MSB7). The system sends messages to the central control complex (CCC) every 15 seconds. The system also sends messages to the CCC when at least one count reaches the maximum value of 255.

Associated registers

None

Extension registers

ISMSGIN2

Associated logs

None

ISMSGOUT**Register type**

Peg

Description

ISMSGOUT counts ISUP messages sent from an office, including messages that pass through a move (tandem) office. Count each type of ISUP message separately. Count maintenance messages in the central control complex (CCC). Outgoing call processing messages are collected in the digital trunk controller (DTC) and sent to the CC. At least one count reaches the maximum value of 255.

Associated registers

None

Extension registers

ISMSGOT2

Associated logs
None

IWBM

Description

OM group Interworking Bridge Management (IWBM) counts events on the Interworking Bridge Management System. The Interworking Spectrum Peripheral Module (IW SPM) uses the IWBM system to interact with time-division multiplexed trunks and announcements.

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

Key field	Info field
IW SPM bridge pools	BEARER_NETBRIDGE_CLLI

Related functional groups

The the IW SPM Bridges functional group is associated with the IWBM OM group.

Registers

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

Registers for OM group IWBM

Register name	Measures
IWGBATT	IW get_bridge attempts
IWGBFAIL	IW get_bridge attempts failed
IWGBABRT	IW get_bridge attempts aborted
IWFBATT	IW free_bridge attempts
IWFBFAIL	IW free_bridge attempts failed
IWFBABRT	IW free_bridge attempts aborted
IWBTLTST	IW bridge for trunk and line test
IWONSET1	IW onset 1
IWONSET2	IW onset 2

Registers for OM group IWB

Register name	Measures
IWABATE1	IW bridge abate 1
IWABATE2	IW bridge abate 2
IWBCNFAN ¹	IW bridge for conference or announcement usage

1. Appears only if the MULTINET_DISPLAY_ACTIVE parameter in the OFCVAR table is set to Y.

IWGBATT**Register type**

Peg

Description

IWGBATT counts the number of get_bridge attempts.

Associated registers

None

Extension registers

IWGBATT2

Associated logs

None

IWGBFAIL**Register type**

Peg

Description

IWGBFAIL counts the number of get_bridge attempts that fail as a result of queue failure. A queue failure commonly occurs when all bridges are busy on the associated node.

Associated registers

None

Extension registers

None

Associated logs

None

IWGBABRT**Register type**

Peg

Description

IWGBABRT counts the number of aborted get_bridge attempts as a result of incorrect data in the request.

Associated registers

None

Extension registers

None

Associated logs

None

IWFBATT**Register type**

Peg

Description

IWFBATT counts the number of attempts to free an IW SPM bridge from an associated call. A free bridge attempt occurs when an interworked call ends.

Associated registers

None

Extension registers

IWFBATT2

Associated logs

None

IWFBFAIL**Register type**

Peg

Description

IWFBFAIL counts the number of free bridge attempt failures.

Associated registers

None

Extension registers

None

Associated logs

None

IWFABART**Register type**

Peg

Description

IWFABART counts the number of aborted free_bridge attempts as a result of incorrect data.

Associated registers

None

Extension registers

None

Associated logs

None

IWBTLTST**Register type**

Peg

Description

IWBTLTST counts the number of times a packet agent uses an IW bridge for access to trunk or line test facilities present on the ENET. An example would be MTM test circuits.

Associated registers

None

Extension registers

None

Associated logs

None

IWONSET1**Register type**

Peg

Description

IWONSET1 counts the number of times that in-use IW bridges exceed 70 percent of the associated bridge pool. Register IWABATE1 always pegs before IWONSET1 pegs again.

Associated registers

[IWONSET2](#), [IWABATE1](#)

Extension registers

None

Associated logs

None

IWONSET2**Register type**

Peg

Description

IWONSET2 counts the number of times that in use IW bridges exceed 90 percent of the associated bridge pool. Register IWABATE2 pegs before IWONSET2 pegs again.

Associated registers

[IWONSET1](#), [IWABATE2](#)

Extension registers

None

Associated logs

None

IWABATE1**Register type**

Peg

Description

IWABATE1 counts the number of times the total number of in-use interworking bridges is less than 65 percent of the associated bridge pool. IWABATE1 pegs, after register IWONSET1 has pegged, when the number of in-use IW bridges cross the 65 percent threshold. IWONSET1 must peg again before IWABATE1 pegs a second time.

Associated registers

[IWABATE2](#), [IWONSET1](#)

Extension registers

None

Associated logs

None

IWABATE2**Register type**

Peg

Description

IWABATE2 counts the number of times the total number of in-use interworking bridges is less than 85 percent of the associated bridge pool. IWABATE2 pegs, after register IWONSET2 has pegged, when the number of in-use IW bridges cross the 85 percent threshold. IWONSET2 must peg again before IWABATE2 pegs a second time.

Associated registers[IWABATE1](#), [IWONSET2](#)**Extension registers**

None

Associated logs

None

IWBCNFAN**Register type**

Peg

Description

IWBCNFAN counts the number of times a packet agent uses an IW bridge for access to conference or announcement facilities present on the ENET. An example would be MTM service circuits.

Associated registers

None

Extension registers

None

Associated logs

None

LIDBCCV

Description

OM group Line Information Database Calling Card Information (LIDBCCV) provides access to verify calling card numbers. The registers track the performance of the access by counting the number of queries and responses and classifying responses as valid access or invalid access.

LIDBCCV contains 21 registers that count the following activities:

- the number of LEC calls and/or LEC validation attempts being processed, regardless of the outcome of the call or validation
- the number of queries sent to LIDB to validate the calling card number
- the number of responses received from the CCS7 network with respect to a launched query
- the number of positive responses from the LIDB to validate the calling card number
- the number of queries that were abandoned
- the number of responses that reply with the reason "no PINS" assigned
- the number of responses that reply with the reason "calling card denial"
- the number of responses that reply with a valid response with an unrestricted PIN
- the number of responses that reply with a valid response with restricted PIN
- the number of responses that reply with a response of "threshold exceeded on PIN"
- the number of responses that reply with a response of nonpayment
- the number of messages that are returned due to unexpected component sequence
- the number of responses that indicate an unexpected data value was found (no PIN match)
- the number of messages that were returned due to unavailable network resources
- the number of responses that were returned due to a missing customer record

- the number of responses that were returned due to data unavailable
- the number of times the process waiting for the response times out
- the number of errors not specifically mentioned
- the number of times that the query could not be processed due to a database failure or congestion
- the number of times a query was returned due to an SCCP Global Title Translation failure
- the number of times a query could not be sent due to Automatic Code Gapping

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

Key field	Info field
None	None

Related functional groups

There are no functional groups associated with OM group LIDBCCV.

Registers

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

Registers for OM group LIDBCCV (Sheet 1 of 2)

Register name	Measures
LIDBTOT	LIDB Total Calls
LIDBTOTQ	LIDB Total Queries
LIDBTOTR	LIDB Total Responses
LIDBRPOS	LIDB Responses Positive
LIDBANQY	LIDB Abandon Query
LIDBNOPN	LIDB No PIN Found
LIDBCCDN	LIDB Calling Card Denial
LIDBPUN	LIDB PIN Unrestricted

Registers for OM group LIDBCCV (Sheet 2 of 2)

Register name	Measures
LIDBPRES	LIDB PIN Restricted
LIDBTHR	LIDB Threshold Exceeded
LIDBNPAY	LIDB No Payment
LIDBCOMP	LIDB Invalid Component
LIDBDATA	LIDB Unexpected Data (No PIN match)
LIDBNETR	LIDB Unavailable Network Resources
LIDBMREC	LIDB Missing Record
LIDBUNAV	LIDB Data Unavailable
LIDBTMO	LIDB Time Out
LIDBMISC	LIDB Miscellaneous
LIDBDBFC	LIDB Database Failure
LIDBSPTR	LIDB SCCP Translation Failure
LIDBACGF	LIDB Automatic Code Gap Failure

LIDBTOT**Register type**

Peg

Description

LIDBTOT counts the number of LEC calls and/or LEC validation attempts being processed by the office, regardless of the outcome of the call or validation.

Associated registers

[LIDBTOTQ](#), [LIDBACGF](#)

Validation formula

$LIDBTOT = LIDBTOTQ + LIDBACGF$

Extension registers

None

Associated logs

None

LIDBTOTQ**Register type**

Peg

Description

LIDBTOTQ counts the number of queries launched to LIDB to validate the calling card number.

Associated registers[LIDBTOT](#), [LIDBACGF](#)**Validation formula**
$$\text{LIDBTOT} = \text{LIDBTOTQ} + \text{LIDBACGF}$$
Extension registers

None

Associated logs

None

LIDBTOTR**Register type**

Peg

Description

LIDBTOTR counts the number of responses received from the CCS7 network with respect to the launched query.

Associated registers

[LIDBRPOS](#), [LIDBNOPN](#), [LIDBCCDN](#), [LIDBTHRX](#), [LIDBNPAY](#),
[LIDBCOMP](#), [LIDBDATA](#), [LIDBNETR](#), [LIDBMREC](#), [LIDBUNAV](#),
[LIDBMISC](#), [LIDBDBFC](#), [LIDBSPTR](#), [LIDBANQY](#), [LIDBTMO](#)

Validation formula
$$\begin{aligned} \text{LIDBTOTR} = & \text{LIDBRPOS} + \text{LIDBNOPN} + \text{LIDBCCDN} + \text{LIDBTHRX} + \\ & \text{LIDBNPAY} + \text{LIDBCOMP} + \text{LIDBDATA} + \text{LIDBNETR} + \text{LIDBMREC} + \\ & \text{LIDBUNAN} + \text{LIDBMISC} + \text{LIDBDBFC} + \text{LIDBSPTR} - \text{LIDBANQY} - \\ & \text{LIDBTMO} \end{aligned}$$
Extension registers

None

Associated logs

None

LIDBRPOS**Register type**

Peg

Description

LIDBRPOS counts the number of positive responses from the LIDB to validate the calling card number.

Associated registers

[LIDBTOTR](#), [LIDBNOPN](#), [LIDBCCDN](#), [LIDBTHRX](#), [LIDBNPAY](#),
[LIDBCOMP](#), [LIDBDATA](#), [LIDBNETR](#), [LIDBMREC](#), [LIDBUNAV](#),
[LIDBMISC](#), [LIDBDBFC](#), [LIDBSPTR](#), [LIDBANQY](#), [LIDBTMO](#)

Validation formula
$$\text{LIDBTOTR} = \text{LIDBRPOS} + \text{LIDBNOPN} + \text{LIDBCCDN} + \text{LIDBTHRX} + \\ \text{LIDBNPAY} + \text{LIDBCOMP} + \text{LIDBDATA} + \text{LIDBNETR} + \text{LIDBMREC} + \\ \text{LIDBUNAN} + \text{LIDBMISC} + \text{LIDBDBFC} + \text{LIDBSPTR} - \text{LIDBANQY} - \\ \text{LIDBTMO}$$
Extension registers

None

Associated logs

None

LIDBANQY**Register type**

Peg

Description

LIDBANQY counts the number of queries that were abandoned.

Associated registers

[LIDBRPOS](#), [LIDBNOPN](#), [LIDBCCDN](#), [LIDBTHRX](#), [LIDBNPAY](#),
[LIDBCOMP](#), [LIDBDATA](#), [LIDBNETR](#), [LIDBMREC](#), [LIDBUNAV](#),
[LIDBMISC](#), [LIDBDBFC](#), [LIDBSPTR](#), [LIDBTOTR](#), [LIDBTMO](#)

Validation formula
$$\text{LIDBTOTR} = \text{LIDBRPOS} + \text{LIDBNOPN} + \text{LIDBCCDN} + \text{LIDBTHRX} + \\ \text{LIDBNPAY} + \text{LIDBCOMP} + \text{LIDBDATA} + \text{LIDBNETR} + \text{LIDBMREC} + \\ \text{LIDBUNAN} + \text{LIDBMISC} + \text{LIDBDBFC} + \text{LIDBSPTR} - \text{LIDBANQY} - \\ \text{LIDBTMO}$$

Extension registers

None

Associated logs

None

LIDBNOPN**Register type**

Peg

Description

LIDBNOPN counts the number of responses that reply with the reason "no PINs assigned."

Associated registers

[LIDBRPOS](#), [LIDBTOTR](#), [LIDBCCDN](#), [LIDBTHRX](#), [LIDBNPAY](#),
[LIDBCOMP](#), [LIDBDATA](#), [LIDBNETR](#), [LIDBMREC](#), [LIDBUNAV](#),
[LIDBMISC](#), [LIDBDBFC](#), [LIDBSPTR](#), [LIDBANQY](#), [LIDBTMO](#)

Validation formula
$$\text{LIDBTOTR} = \text{LIDBRPOS} + \text{LIDBNOPN} + \text{LIDBCCDN} + \text{LIDBTHRX} + \\ \text{LIDBNPAY} + \text{LIDBCOMP} + \text{LIDBDATA} + \text{LIDBNETR} + \text{LIDBMREC} + \\ \text{LIDBUNAN} + \text{LIDBMISC} + \text{LIDBDBFC} + \text{LIDBSPTR} - \text{LIDBANQY} - \\ \text{LIDBTMO}$$
Extension registers

None

Associated logs

None

LIDBCCDN**Register type**

Peg

Description

LIDBCCDN counts the number of responses that reply with the reason "calling card denial."

Associated registers

[LIDBRPOS](#), [LIDBNOPN](#), [LIDBTOTR](#), [LIDBTHRX](#), [LIDBNPAY](#),
[LIDBCOMP](#), [LIDBDATA](#), [LIDBNETR](#), [LIDBMREC](#), [LIDBUNAV](#),
[LIDBMISC](#), [LIDBDBFC](#), [LIDBSPTR](#), [LIDBANQY](#), [LIDBTMO](#)

Validation formula
$$\text{LIDBTOTR} = \text{LIDBRPOS} + \text{LIDBNOPN} + \text{LIDBCCDN} + \text{LIDBTHRX} + \text{LIDBNPAY} + \text{LIDBCOMP} + \text{LIDBDATA} + \text{LIDBNETR} + \text{LIDBMREC} + \text{LIDBUNAN} + \text{LIDBMISC} + \text{LIDBDBFC} + \text{LIDBSPTR} - \text{LIDBANQY} - \text{LIDBTMO}$$
Extension registers

None

Associated logs

None

LIDBPUN**Register type**

Peg

Description

LIDBPUN counts the number of responses that reply with a valid response with an unrestricted PIN.

Associated registers

[LIDBTOTR](#), [LIDBNOPN](#), [LIDBCCDN](#), [LIDBTHRX](#), [LIDBNPAY](#), [LIDBCOMP](#), [LIDBDATA](#), [LIDBNETR](#), [LIDBMREC](#), [LIDBUNAV](#), [LIDBMISC](#), [LIDBDBFC](#), [LIDBSPTR](#), [LIDBANQY](#), [LIDBTMO](#)

Validation formula
$$\text{LIDBTOTR} = \text{LIDBRPOS} + \text{LIDBNOPN} + \text{LIDBCCDN} + \text{LIDBTHRX} + \text{LIDBNPAY} + \text{LIDBCOMP} + \text{LIDBDATA} + \text{LIDBNETR} + \text{LIDBMREC} + \text{LIDBUNAN} + \text{LIDBMISC} + \text{LIDBDBFC} + \text{LIDBSPTR} - \text{LIDBANQY} - \text{LIDBTMO}$$
Extension registers

None

Associated logs

None

LIDBPRE**Register type**

Peg

Description

LIDBPRE counts the number of responses that reply with a valid response with a restricted PIN.

Associated registers

[LIDBTOTR](#), [LIDBNOPN](#), [LIDBCCDN](#), [LIDBTHRX](#), [LIDBNPAY](#),
[LIDBCOMP](#), [LIDBDATA](#), [LIDBNETR](#), [LIDBMREC](#), [LIDBUNAV](#),
[LIDBMISC](#), [LIDBDBFC](#), [LIDBSPTR](#), [LIDBANQY](#), [LIDBTMO](#)

Extension registers

None

Associated logs

None

LIDBTHRX**Register type**

Peg

Description

LIDBTHRX counts the number of responses that reply with a response of "threshold exceeded on PIN."

Associated registers

[LIDBRPOS](#), [LIDBNOPN](#), [LIDBCCDN](#), [LIDBTOTR](#), [LIDBNPAY](#),
[LIDBCOMP](#), [LIDBDATA](#), [LIDBNETR](#), [LIDBMREC](#), [LIDBUNAV](#),
[LIDBMISC](#), [LIDBDBFC](#), [LIDBSPTR](#), [LIDBANQY](#), [LIDBTMO](#)

Validation formula
$$\text{LIDBTOTR} = \text{LIDBRPOS} + \text{LIDBNOPN} + \text{LIDBCCDN} + \text{LIDBTHRX} + \\ \text{LIDBNPAY} + \text{LIDBCOMP} + \text{LIDBDATA} + \text{LIDBNETR} + \text{LIDBMREC} + \\ \text{LIDBUNAN} + \text{LIDBMISC} + \text{LIDBDBFC} + \text{LIDBSPTR} - \text{LIDBANQY} - \\ \text{LIDBTMO}$$
Extension registers

None

Associated logs

None

LIDBNPAY**Register type**

Peg

Description

LIDBNPAY counts the number of responses that reply with a response of "nonpayment."

Associated registers

[LIDBRPOS](#), [LIDBNOPN](#), [LIDBCCDN](#), [LIDBTHRX](#), [LIDBTOTR](#),
[LIDBCOMP](#), [LIDBDATA](#), [LIDBNETR](#), [LIDBMREC](#), [LIDBUNAV](#),
[LIDBMISC](#), [LIDBDBFC](#), [LIDBSPTR](#), [LIDBANQY](#), [LIDBTMO](#)

Validation formula

$$\text{LIDBTOTR} = \text{LIDBRPOS} + \text{LIDBNOPN} + \text{LIDBCCDN} + \text{LIDBTHRX} +$$
$$\text{LIDBNPAY} + \text{LIDBCOMP} + \text{LIDBDATA} + \text{LIDBNETR} + \text{LIDBMREC} +$$
$$\text{LIDBUNAN} + \text{LIDBMISC} + \text{LIDBDBFC} + \text{LIDBSPTR} - \text{LIDBANQY} -$$
$$\text{LIDBTMO}$$

Extension registers

None

Associated logs

None

LIDBCOMP**Register type**

Peg

Description

LIDBCOMP counts the number of messages that are returned due to an unexpected component sequence.

Associated registers

[LIDBRPOS](#), [LIDBNOPN](#), [LIDBCCDN](#), [LIDBTHRX](#), [LIDBNPAY](#),
[LIDBTOTR](#), [LIDBDATA](#), [LIDBNETR](#), [LIDBMREC](#), [LIDBUNAV](#),
[LIDBMISC](#), [LIDBDBFC](#), [LIDBSPTR](#), [LIDBANQY](#), [LIDBTMO](#)

Validation formula

$$\text{LIDBTOTR} = \text{LIDBRPOS} + \text{LIDBNOPN} + \text{LIDBCCDN} + \text{LIDBTHRX} +$$
$$\text{LIDBNPAY} + \text{LIDBCOMP} + \text{LIDBDATA} + \text{LIDBNETR} + \text{LIDBMREC} +$$
$$\text{LIDBUNAN} + \text{LIDBMISC} + \text{LIDBDBFC} + \text{LIDBSPTR} - \text{LIDBANQY} -$$
$$\text{LIDBTMO}$$

Extension registers

None

Associated logs

None

LIDBDATA**Register type**

Peg

Description

LIDBDATA counts the number of responses that indicate an unexpected data value was found (no PIN match).

Associated registers

[LIDBRPOS](#), [LIDBNOPN](#), [LIDBCCDN](#), [LIDBTHRX](#), [LIDBNPAY](#),
[LIDBCOMP](#), [LIDBTOTR](#), [LIDBNETR](#), [LIDBMREC](#), [LIDBUNAV](#),
[LIDBMISC](#), [LIDBDBFC](#), [LIDBSPTR](#), [LIDBANQY](#), [LIDBTMO](#)

Validation formula
$$\text{LIDBTOTR} = \text{LIDBRPOS} + \text{LIDBNOPN} + \text{LIDBCCDN} + \text{LIDBTHRX} + \text{LIDBNPAY} + \text{LIDBCOMP} + \text{LIDBDATA} + \text{LIDBNETR} + \text{LIDBMREC} + \text{LIDBUNAN} + \text{LIDBMISC} + \text{LIDBDBFC} + \text{LIDBSPTR} - \text{LIDBANQY} - \text{LIDBTMO}$$
Extension registers

None

Associated logs

None

LIDBNETR**Register type**

Peg

Description

LIDBNETR counts the number of messages that were returned due to unavailable network resources.

Associated registers

[LIDBRPOS](#), [LIDBNOPN](#), [LIDBCCDN](#), [LIDBTHRX](#), [LIDBNPAY](#),
[LIDBCOMP](#), [LIDBDATA](#), [LIDBTOTR](#), [LIDBMREC](#), [LIDBUNAV](#),
[LIDBMISC](#), [LIDBDBFC](#), [LIDBSPTR](#), [LIDBANQY](#), [LIDBTMO](#)

Validation formula
$$\text{LIDBTOTR} = \text{LIDBRPOS} + \text{LIDBNOPN} + \text{LIDBCCDN} + \text{LIDBTHRX} + \text{LIDBNPAY} + \text{LIDBCOMP} + \text{LIDBDATA} + \text{LIDBNETR} + \text{LIDBMREC} + \text{LIDBUNAN} + \text{LIDBMISC} + \text{LIDBDBFC} + \text{LIDBSPTR} - \text{LIDBANQY} - \text{LIDBTMO}$$
Extension registers

None

Associated logs

None

LIDBMREC**Register type**

Peg

Description

LIDBMREC counts the number of responses that were returned due to a missing customer record.

Associated registers

[LIDBRPOS](#), [LIDBNOPN](#), [LIDBCCDN](#), [LIDBTHRX](#), [LIDBNPAY](#),
[LIDBCOMP](#), [LIDBDATA](#), [LIDBNETR](#), [LIDBTOTR](#), [LIDBUNAV](#),
[LIDBMISC](#), [LIDBDBFC](#), [LIDBSPTR](#), [LIDBANQY](#), [LIDBTMO](#)

Validation formula
$$\text{LIDBTOTR} = \text{LIDBRPOS} + \text{LIDBNOPN} + \text{LIDBCCDN} + \text{LIDBTHRX} + \text{LIDBNPAY} + \text{LIDBCOMP} + \text{LIDBDATA} + \text{LIDBNETR} + \text{LIDBMREC} + \text{LIDBUNAN} + \text{LIDBMISC} + \text{LIDBDBFC} + \text{LIDBSPTR} - \text{LIDBANQY} - \text{LIDBTMO}$$
Extension registers

None

Associated logs

None

LIDBUNAV**Register type**

Peg

Description

LIDBUNAV counts the number of responses that were returned due to data unavailable.

Associated registers

[LIDBRPOS](#), [LIDBNOPN](#), [LIDBCCDN](#), [LIDBTHRX](#), [LIDBNPAY](#),
[LIDBCOMP](#), [LIDBDATA](#), [LIDBNETR](#), [LIDBMREC](#), [LIDBTOTR](#),
[LIDBMISC](#), [LIDBDBFC](#), [LIDBSPTR](#), [LIDBANQY](#), [LIDBTMO](#)

Validation formula
$$\text{LIDBTOTR} = \text{LIDBRPOS} + \text{LIDBNOPN} + \text{LIDBCCDN} + \text{LIDBTHRX} + \text{LIDBNPAY} + \text{LIDBCOMP} + \text{LIDBDATA} + \text{LIDBNETR} + \text{LIDBMREC} + \text{LIDBUNAN} + \text{LIDBMISC} + \text{LIDBDBFC} + \text{LIDBSPTR} - \text{LIDBANQY} - \text{LIDBTMO}$$
Extension registers

None

Associated logs

None

LIDBTMO**Register type**

Peg

Description

LIDBTMO counts the number of times the process waiting for the response timed out.

Associated registers

[LIDBRPOS](#), [LIDBNOPN](#), [LIDBCCDN](#), [LIDBTHR](#)X, [LIDBNPAY](#),
[LIDBCOMP](#), [LIDBDATA](#), [LIDBNETR](#), [LIDBMREC](#), [LIDBUNAV](#),
[LIDBMISC](#), [LIDBDBFC](#), [LIDBSPTR](#), [LIDBANQY](#), [LIDBTOTR](#)

Validation formula
$$\text{LIDBTOTR} = \text{LIDBRPOS} + \text{LIDBNOPN} + \text{LIDBCCDN} + \text{LIDBTHR}X + \text{LIDBNPAY} + \text{LIDBCOMP} + \text{LIDBDATA} + \text{LIDBNETR} + \text{LIDBMREC} + \text{LIDBUNAN} + \text{LIDBMISC} + \text{LIDBDBFC} + \text{LIDBSPTR} - \text{LIDBANQY} - \text{LIDBTMO}$$
Extension registers

None

Associated logs

None

LIDBMISC**Register type**

Peg

Description

LIDBMISC accumulates all the errors not specifically mentioned.

Associated registers

[LIDBRPOS](#), [LIDBNOPN](#), [LIDBCCDN](#), [LIDBTHR](#)X, [LIDBNPAY](#),
[LIDBCOMP](#), [LIDBDATA](#), [LIDBNETR](#), [LIDBMREC](#), [LIDBUNAV](#),
[LIDBTOTR](#), [LIDBDBFC](#), [LIDBSPTR](#), [LIDBANQY](#), [LIDBTMO](#)

Validation formula
$$\text{LIDBTOTR} = \text{LIDBRPOS} + \text{LIDBNOPN} + \text{LIDBCCDN} + \text{LIDBTHR}X + \text{LIDBNPAY} + \text{LIDBCOMP} + \text{LIDBDATA} + \text{LIDBNETR} + \text{LIDBMREC} + \text{LIDBUNAN} + \text{LIDBMISC} + \text{LIDBDBFC} + \text{LIDBSPTR} - \text{LIDBANQY} - \text{LIDBTMO}$$

Extension registers

None

Associated logs

None

LIDBDBFC**Register type**

Peg

Description

LIDBDBFC counts the number of times that the query could not be processed due to a database failure or congestion.

Associated registers

[LIDBRPOS](#), [LIDBNOPN](#), [LIDBCCDN](#), [LIDBTHRX](#), [LIDBNPAY](#),
[LIDBCOMP](#), [LIDBDATA](#), [LIDBNETR](#), [LIDBMREC](#), [LIDBUNAV](#),
[LIDBMISC](#), [LIDBTOTR](#), [LIDBSPTR](#), [LIDBANQY](#), [LIDBTMO](#)

Validation formula
$$\text{LIDBTOTR} = \text{LIDBRPOS} + \text{LIDBNOPN} + \text{LIDBCCDN} + \text{LIDBTHRX} + \text{LIDBNPAY} + \text{LIDBCOMP} + \text{LIDBDATA} + \text{LIDBNETR} + \text{LIDBMREC} + \text{LIDBUNAN} + \text{LIDBMISC} + \text{LIDBDBFC} + \text{LIDBSPTR} - \text{LIDBANQY} - \text{LIDBTMO}$$
Extension registers

None

Associated logs

None

LIDBSPTR**Register type**

Peg

Description

LIDBSPTR counts the number of times a query was returned due to an SCCP Global Title Translation failure.

Associated registers

[LIDBRPOS](#), [LIDBNOPN](#), [LIDBCCDN](#), [LIDBTHRX](#), [LIDBNPAY](#),
[LIDBCOMP](#), [LIDBDATA](#), [LIDBNETR](#), [LIDBMREC](#), [LIDBUNAV](#),
[LIDBMISC](#), [LIDBDBFC](#), [LIDBTOTR](#), [LIDBANQY](#), [LIDBTMO](#)

Validation formula
$$\text{LIDBTOTR} = \text{LIDBRPOS} + \text{LIDBNOPN} + \text{LIDBCCDN} + \text{LIDBTHRX} + \text{LIDBNPAY} + \text{LIDBCOMP} + \text{LIDBDATA} + \text{LIDBNETR} + \text{LIDBMREC} + \text{LIDBUNAN} + \text{LIDBMISC} + \text{LIDBDBFC} + \text{LIDBSPTR} - \text{LIDBANQY} - \text{LIDBTMO}$$
Extension registers

None

Associated logs

None

LIDBACGF**Register type**

Peg

Description

LIDBACGF counts the number of times a query could not be sent due to Automatic Code Gapping.

Associated registers[LIDBTOTQ](#), [LIDBTOT](#)**Validation formula**
$$\text{LIDBTOT} = \text{LIDBTOTQ} + \text{LIDBACGF}$$
Extension registers

None

Associated logs

None

LMD

Description

OM group Line Traffic (LMD) is in all types of DMS offices, and provides traffic information for the following peripheral modules (PM):

- remote line modules (RLM)
- line concentrating modules (LCM)
- virtual line concentrating modules (VLCM)
- remote concentrator terminals (RCT)
- remote concentrator subscribers (RCS)
- integrated services line modules (ISLM)
- digital line modules (DLM)
- very small remote (VSR)
- enhanced line concentrating modules (ELCM)
- integrated services digital network (ISDN) line concentrating modules (LCMI)
- intelligent peripheral equipment (IPE)
- line modules (LM)

The following table lists the key and info fields that are associated with OM group LMD.

Key field	Info field
None	LMD_OMINFO (PM identifier)

The PM identifier contains the site identifier (four alphanumeric characters), and frame and unit numbers. For ISLM, the site identifier must be HOST. The frame number is a number from 0 to 511. Unit numbers appear according to the PM types in the following table.

PM types and unit numbers (Sheet 1 of 2)

PM type	Unit number
ALCM	0 - 1
DLM	0 - 1
ELCM	0 - 1

PM types and unit numbers (Sheet 2 of 2)

PM type	Unit number
FRU	0 - 1
IPE	0 - 3
ISLM	0 - 3
LCM	0 - 1
LCME	0 - 1
LCMI	0 - 1
LDT	0
LM	0 - 1
LRU	0 - 9
RCS	0 - 9
RCT	0 - 9
RCU	0 - 9
RDT	0 - 9
VLCM	0 - 1

Related functional groups

There are no functional groups associated with OM group LMD.

Registers

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

Registers for OM group LMD

Register name	Measures
LMTRU	Traffic busy use
MADNTATT	MADN secondary member terminating attempts

Registers for OM group LMD

Register name	Measures
NORIGATT	Originating call attempts that the LM reports to the central control, including three-way call (3WC) attempts
NTERMATT	Terminating attempts
ORIGABN	Originating abandons before connection
ORIGBLK	Originating failures
ORIGFAIL	Originating attempt failures
PERCLFL	Terminating call attempt failures
REVERT	Revertive call attempts
STKCOINS	Stuck coins
TERMBLK	Terminating failures

LMTRU**Register type**

Usage

Scan rate

100 seconds

Description

LMTRU records the number of lines that are call processing busy or call processing busy deluding.

Associated registers

None

Extension registers

None

Associated logs

None

MADNTATT**Register type**

Peg

Description**MADNTATT:**

- counts secondary units of MADN groups in the PM that notify the system of an incoming call
- increases for each electronic business (EBS) or ringing 500/2500 set that the system notifies. The primary termination increases in register NTERMATT
- does not count recalls of re-rings of a group unit

Note: In GL04, MADNTATT does not increase

Associated registers

None

Extension registers

None

Associated logs

None

NORIGATT**Register type**

Peg

Description

NORIGATT counts the originating call attempts, including three-way calls, that a line module (LM) reports to central control.

The register increases at the start of call processing before the system performs checks for line load control or congestion on the speech link to the networks module. If congestion is present and the originator remains off hook, the switch automatically makes several attempts at origination. Registers NORIGATT and ORIGBLK_ increase for each origination attempt.

Associated registers

The following registers are associated with NORIGATT:

- [ORIGBLK](#)
- ORG_NORIG counts start call attempts that central control recognizes
- OTS_NORG counts start call attempts that central control recognizes.

Validation formulas

The following formulas relate to NORIGATT and its associated registers:

- $\Sigma \text{LMD\_ORIGATT} = (65536 * \text{OFZ\_NORIG2}) + \text{OFZ\_NORIG line modules}$
- $\Sigma \text{LMD\_ORIGATT} = (65536 * \text{OTS\_NORG2}) + \text{OTS\_NORG line modules}$

Extension registers

None

Associated logs

None

NTERMATT**Register type**

Peg

Description

NTERMATT counts the attempts to find and available speech link from the networks module to a terminating line. This attempt occurs after call processing determines that the terminating line is available. The count includes:

- the call waited calls that ring through when the previous conversation ends
- the calls that the secondary unit of a multiple appearance directory number (MADN) group answer

Associated registers

The following registers are associated with NTERMATT:

- OFZ_TRMNWAT counts start call attempts to find a speech path to a terminating line.
- SOTS_STRMNWT counts attempts to find a speech path to a terminating line.

Validation formulas

The following formulas relate to NTERMATT and its associated registers:

- $\Sigma \text{LMD\_NTERMATT} = (65536 * \text{OFZ\_TRMNWAT2}) + \text{OFZ\_TRMNWAT line modules}$
- $\Sigma \text{LMD\_NTERMATT} = (65536 * \text{SOTS\_STRMNWT2}) + \text{SOTS\_STRMNWT line modules}$

Extension registers

None

Associated logs

None

ORIGABN**Register type**

Peg

Description

ORIGABN counts originating call attempts that the subscriber abandons before call setup completes. Large counts in ORIGABN indicate line problems in PMs.

Associated registers

The following registers are associated with ORIGABN:

- [NORIGATT](#)
- OFZ_ORIGABDN counts originating call attempts that the subscriber abandons before the system routes the call.
- OTS_ORIGABDN counts originating call attempts that the subscriber abandons before the call routes.

Validation formulas

The following formulas relate to ORIGABN and its associated registers:

- $\Sigma \text{LMD\_ORIGABN} = \text{OFZ\_ORIGABDN line modules}$
- $\Sigma \text{LMD\_ORIGABN} = \text{OFZ\_ORIGABDN line modules}$

Extension registers

None

Associated logs

LINE106, LINE108

ORIGBLK**Register type**

Peg

Description

ORIGBLK counts originating call attempts that fail because the idle speech path from the original LM to the networks module is not present. The PM originates the call for as long as the caller stays off hook.

A high count in ORIGBLK can indicate a fault condition such as RLM links that are either manually or system busy. Lower counts indicate a need either to supply more links or to reduce load.

Associated registers

The following registers are associated with ORIGBLK:

- [NORIGATT](#)
- OFZ_ORIGLKT counts originating call attempts that fail and route to lockout.
- OTS_ORIGLKT counts originating call attempts that fail and route to lockout. These calls do not connect or route to treatment.

Validation formulas

The following formulas relate to ORIGBLK and its associated registers:

- $\Sigma \text{LMD\_ORIGBLK} = \text{OFZ\_ORIGLKT line modules}$
- $\Sigma \text{LMD\_ORIGBLK} = \text{OFZ\_ORIGLKT line modules}$

Extension registers

None

Associated logs

NET130

ORIGFAIL**Register type**

Peg

Description

ORIGFAIL counts originating call attempts that fail if the system:

- does not send enough digits before a time-out occurs (partial dial)
- sends no digits before a time-out occurs (permanent signal)
- sends additional pulses or bad tones

- generates two Digitone (DT) frequencies that have more than a 6dB spread between both of the frequencies.

Note: In GL04, ORIGFAIL does not increase when the system receives two DT frequencies that have more than a 6dB spread between the frequencies.

- receives a message type that was not planned from a PM during automatic number identification (ANI) tests on recordable calls. For example, a test failure is an unplanned message type.

Note: In GL04, ORIGFAIL does not increase when this occurs.

Associated registers

The following registers are associated with ORIGFAIL:

- TRMTCM_TCMPSIG counts calls that the system routes to permanent signal time-out treatment. The system routes the call to treatment because it does not receive digits before a time-out.
- TRMTCM_TCMPDIL counts calls the system routes to partial dial time-out treatment. The system routes the call to treatment when it receives a minimum of one digit, but not all the digits required to complete the call.
- TRMTER_TERRODR counts calls that the system routes to reorder treatment when it receives distorted signals during dialing or impulsing.

Extension registers

None

Associated logs

AMAB151, LINE108, LINE109, LINE104, LINE105, LINE106, LINE138

PERCLFL

Register type

Peg

Description

PERCLFL counts calls that cannot terminate on a line because of problems with ringing the terminating line. A ringing failure on an emergency service line does not cause the call to fail and does not increase PERCLFL. The system attempts ringing until the system is successful.

When the value for office parameter PER_CALL_GND_LOOP_TEST in table OFCVAR is Y, PERCLFL includes loop faults. The system detects loop faults in attempted terminations on ground start lines.

Associated registers

TRMTER_TERSYFL counts calls that the system routes to system failure treatment because of a software or hardware failure in the switching unit.

Extension registers

None

Associated logs

LINE107, LINE110, LINE113, LINE138

REVERT**Register type**

Peg

Description

REVERT counts revertive calls initiated on an LM. The register increases when ringing starts after the caller goes on hook for the first time. REVERT does not increase in GL04.

Associated registers

None

Extension registers

None

Associated logs

LINE138

STKCOINS**Register type**

Peg

Description

STKCOINS counts attempts to collect or return coins that fail because the coins are stuck. The register increases when call processing stops an attempt to collect or return the coins. The call proceeds as if the attempt to collect or return the coin was successful. This register does not increase in GL04.

Associated registers

None

Extension registers

None

Associated logs

LINE112

TERMBLK**Register type**

Peg

Description

TERMBLK counts attempts that fail to find a speech link from the network module to a terminating line for one of the following reasons:

- no speech links are available from the network to a terminating line
- no match is present between an idle channel on the links to the network and an idle channel on the link shelf that serves the terminating line.

Associated registers

The following registers are associated with TERMBLK:

- OFZ_TRMBLK counts attempts to find a voice path from the network module to a terminating line that fail for one of the following reasons:
 - all LM channels to the network are busy
 - no match is present between an idle channel on the links to the network and an idle channel on the line shelf that serves the terminating line
- SOTS_STRMBLK counts attempts to find a voice path from the network to a terminating line that fail for one of the following reasons:
 - all LM channels to the networks are busy
 - no match is present between and idle channel on the links to the network and idle channel on the line shelf that serves the terminating line
- SOTS_STRMRBLK counts calls that the system routes to networks blockage normal (NBLN) traffic treatment because the calls fail to find a voice path from a network module to a terminating line.
- SOTS_STRMMFL counts calls that fail to find a voice path to a terminating line because a network connection is not available.

- TRMTRS_TRSNBLN counts calls that route to NBLN traffic treatment when the call aborts. The system routes these calls to treatment because of failure to get a channel in the terminating PM.
- TRMTRS_TRSNBLH counts calls that route to the network blockage heavy (NBLH) traffic treatment when the call aborts. The system routes the call to treatment because of failure to get a path through the network.

Validation formulas

The following formulas relate to TERMBLK and its associated registers:

- $\Sigma \text{LMD\_TERMBLK} = \text{OFZ\_TRMBLK}$ line modules
- $\Sigma \text{LMD\_TERMBLK} = \text{SOTS\_SRMBLK}$ line modules

Extension registers

None

Associated logs

NET130

MNATM

Description

OM group MNATM provides ATM interface performance data for the Multi-service Gateway (MG) 4000, the Interworking Spectrum Peripheral Module (IW SPM) ATM, and the Dynamic Packet Trunk (DPT) SPM.

Use the following formula to calculate the number of incoming ATM cells in an OM collection period for *one* IW SPM ATM.

Formula for *one* IW SPM ATM:

**Incoming ATM cells =
Register ICTOTAL + (Extension register ICTOTAL2 x 65,535)**

Use the following formula to calculate the number of incoming ATM cells in an OM collection period for *n* IW SPM ATM.

Formula for *n* IW SPM ATM:

**Total incoming ATM cells =
Incoming ATM cells IW SPM1 +...+ Incoming ATM cells IW SPM n**

For 64-kbyte voice streams that are carried over AAL-1 circuit emulation service, use the following formula to calculate the total carried traffic load across *all* IW SPM ATM. The formula assumes 47 bytes of voice payload for each cell and 60 minutes of OM data collection.

Formula for *all* IW SPM ATM:

**Total carried traffic in erlang =
(Total incoming ATM cells x 47 bytes/cell x 8 bits/byte) /
(64,000 bits/sec x 3600 sec/collection period)
= Total incoming ATM cells x 1.63×10^{-6}**

With the total load, an Erlang B calculator can be used to calculate the number of channels required to carry the load at the specified grade of service. This can be compared to the number of channels calculated by

the IW SPM ATM planning tool. Based on the result, the accuracy of the planning tool can be determined.

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

Key field	Info field
None	None

Related functional groups

There are no functional groups associated with OM group MNATM.

Registers

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

Registers for OM group MNATM (Sheet 1 of 2)

Register name	Measures
ICTOTAL	Incoming ATM cells
ICLP0TO	Incoming ATM cells with cell loss priority (CLP)=0
ICLP1TO (not available)	Incoming ATM cells with CLP=1
ICNC (not available)	Incoming non-compliant ATM cells
ICCLP0NC (not available)	Incoming non-compliant ATM cells with CLP=0
ICCLP1NC (not available)	Incoming non-compliant ATM cells with CLP=1
ICDISC (not available)	Incoming ATM cells discarded
ICCLP0DC (not available)	Incoming ATM cells with CLP=0 discarded
ICCLP1DC (not available)	Incoming ATM cells with CLP=1 discarded

Registers for OM group MNATM (Sheet 2 of 2)

Register name	Measures
ITAGGED (not available)	Incoming tagged ATM cells
OGTOTAL	Outgoing ATM cell
OCLP0TO	Outgoing ATM cells with CLP=0
OCLP1TO (not available)	Outgoing ATM cells with CLP=1

ICTOTAL**Register type**

Peg

Description

ICTOTAL counts incoming ATM cells.

Associated registers[OGTOTAL](#), [ICDISC](#)**Extension registers**

ICTOTAL2

Associated logs

None

ICLP0TO**Register type**

Peg

Description

ICLP0TO counts incoming ATM cells with cell loss priority (CLP)=0.

Associated registers[OCLP0TO](#), [ICCLP0DC](#)**Extension registers**

ICLP0TO2

Associated logs

None

ICLP1TO**Register type**

Peg

Description

ICLP1TO counts incoming ATM cells with CLP=1. Currently, ICLP1TO and its extension register are *not available*.

Associated registers[OCLP1TO](#), [ICCLP1DC](#)**Extension registers**

ICLP1TO2

Associated logs

None

ICNC**Register type**

Peg

Description

ICNC counts incoming non-compliant ATM cells. Non-compliant cells are those that do not meet the traffic policing requirement. Currently, ICNC and its extension register are *not available*.

Associated registers

None

Extension registers

ICNC2

Associated logs

None

ICCLP0NC**Register type**

Peg

Description

ICCLP0NC counts incoming non-compliant ATM cells with CLP=0. Currently, ICCLP0NC and its extension register are *not available*.

Associated registers

None

Extension registers

ICCLP0NC2

Associated logs

None

ICCLP1NC**Register type**

Peg

Description

ICCLP1NC counts incoming non-compliant ATM cells with CLP=1. Currently, ICCLP1NC and its extension register are *not available*.

Associated registers

None

Extension registers

ICCLP1NC2

Associated logs

None

ICDISC**Register type**

Peg

Description

ICDISC counts incoming ATM cells that are discarded. The policing hardware can discard cells that do not meet the traffic contract for a connection. Currently, ICDISC and its extension register are *not available*.

Associated registers[OGTOTAL](#), [ICTOTAL](#)**Extension registers**

ICDISC2

Associated logs

None

ICCLP0DC**Register type**

Peg

Description

ICCLP0DC counts incoming ATM cells with CLP=0 that are discarded. Currently, ICCLP0DC and its extension register are *not available*.

Associated registers

[OCLP0TO](#), [ICLP0TO](#)

Extension registers

ICCLP0DC2

Associated logs

None

ICCLP1DC**Register type**

Peg

Description

ICCLP1DC counts incoming ATM cells with CLP=1 that are discarded. Currently, ICCLP1DC and its extension register are *not available*.

Associated registers

[OCLP1TO](#), [ICLP1TO](#)

Extension registers

ICCLP1DC2

Associated logs

None

ITAGGED**Register type**

Peg

Description

ITAGGED counts incoming tagged ATM cells. Tagging occurs when the policing algorithm changes CLP from 0 to 1, which reduces the priority of the outgoing cell. Currently, ITAGGED and its extension register are *not available*.

Associated registers

None

Extension registers

ITAGGED2

Associated logs

None

OGTOTAL**Register type**

Peg

Description

OGTOTAL counts outgoing ATM cells.

Associated registers[ICTOTAL](#), [ICDISC](#)**Validation formula**
$$\text{OGTOTAL} = \text{ICTOTAL} - \text{ICDISC}$$
Extension registers

OGTOTAL2

Associated logs

None

OCLP0TO**Register type**

Peg

Description

OCLP0TO counts outgoing ATM cells with CLP=0.

Associated registers[ICLP0TO](#), [ICCLP0DC](#)**Validation formula**
$$\text{OCLP0TO} = \text{ICLP0TO} - \text{ICCLP0DC}$$
Extension registers

OCLP0TO2

Associated logs

None

OCLP1TO**Register type**

Peg

Description

OCLP1TO counts outgoing ATM cells with CLP=1.

Currently, OCLP1TO and its extension register are *not available*.

Associated registers

[ICLP1TO](#), [ICCLP1DC](#)

Validation formula

$$\text{OCLP1TO} = \text{ICLP1TO} - \text{ICCLP1DC}$$

Extension registers

OCLP1TO2

Associated logs

None

MNATMA1

Description

OM group MNATMA1 measures asynchronous transfer mode (ATM) AAL1 interface performance statistics for the Multi-service Gateway (MG) 4000, the Interworking Spectrum Peripheral ATM (IW SPM ATM), and the Dynamic Packet Trunk (DPT) SPM.

MNATMA1 provides AAL1 layer performance peg counts on an aggregate basis for each ATM interface according to the datafill in table MNATMIF (one tuple for each ATM interface on an SPM). The actual peg counts are accumulated on the peripheral and then uploaded to the OM group using the Spectrum OM Transfer System (SOTS).

The following table lists the key and info fields associated with OM group MNATMA1.

Key field	Info field
<code><spm_no></code> <i>where:</i> <code><spm_no></code> = an integer from 0 to 85	<code><class_type><spm_no><alias></code> <i>where:</i> <code><class_type></code> = DMSCP, IW, or SMG4 <code><spm_no></code> = an integer from 0 to 85, as datafilled in tables MNNODE and MNATMIF <code><alias></code> = the string name alias of the SPM as datafilled in table MNNODE

Related functional groups

There are no functional groups associated with OM group MNATMA1.

Registers

The following table lists the registers associated with OM group MNATMA1 and what they measure. For a detailed description of a register, click on the register name.

Registers for OM group MNATMA1 (Sheet 1 of 2)

Register name	Measures
ICTOTAL	Incoming ATM cells
ICDISC	Incoming ATM cells discarded

Registers for OM group MNATMA1 (Sheet 2 of 2)

Register name	Measures
OGTOTAL	Outgoing total cells
HERRCEL	Head errored cells
LATECEL	Late cells
MSINCEL	Mis-inserted cells
LOSTCEL	Lost cells
SLIPS	Slip events
OOSYNC	Out-of-sync events

ICTOTAL**Register type**

Peg

Description

ICTOTAL counts incoming ATM cells.

Associated registers[OGTOTAL](#), [ICDISC](#)**Extension registers**

ICTOTAL2

Associated logs

None

ICDISC**Register type**

Peg

Description

ICDISC counts incoming ATM cells that are discarded. The policing hardware can discard cells that do not meet the traffic contract for a connection.

Associated registers[OGTOTAL](#), [ICTOTAL](#)

Extension registers

ICDISC2

Associated logs

None

OGTOTAL**Register type**

Peg

Description

OGTOTAL counts outgoing ATM cells.

Associated registers[ICTOTAL](#), [ICDISC](#)**Validation formula**
$$\text{OGTOTAL} = \text{ICTOTAL} - \text{ICDISC}$$
Extension registers

OGTOTAL2

Associated logs

None

HERRCEL**Register type**

Peg

Description

HERRCEL counts cells that are discarded because of errors in the AAL1 payload data unit (PDU) header.

Associated registers

None

Extension registers

HERRCEL2

Associated logs

None

LATECEL**Register type**

Peg

Description

LATECEL counts cells that are received late. A cell is late when the receiving buffer becomes empty.

Associated registers

None

Extension registers

LATECEL2

Associated logs

None

MSINCEL**Register type**

Peg

Description

MSINCEL counts cells that are mis-inserted and received out of sequence. A cell is mis-inserted when the sequence number of that cell is less than the sequence number of a cell that was received previously.

Associated registers

None

Extension registers

MISINCEL2

Associated logs

None

LOSTCEL**Register type**

Peg

Description

LOSTCEL counts cells that are not received. Lost cells are detected when the sequence number of an upcoming cell increases by more than 1 from the sequence number of a cell that was received previously.

Associated registers

None

Extension registers

LOSTCEL2

Associated logs

None

SLIPS**Register type**

Peg

Description

SLIPS counts slip events (also known as buffer overflow).

Associated registers

None

Extension registers

SLIPS2

Associated logs

None

OOSYNC**Register type**

Peg

DescriptionOOSYNC counts out-of-sync events. An out-of-sync event can be either *transient* (lasting <1 second) or *persistent* (lasting >1 second).**Associated registers**

None

Extension registers

OOSYNC2

Associated logs

None

MNATMA5

Description

OM group MNATMA5 measures interface performance statistics for the Multi-service Gateway (MG) 4000 asynchronous transfer mode (ATM) permanent virtual connection (PVC) AAL5. AAL5 PVC connections are datafilled in table ATMCONN. Peg counts are accumulated on the peripheral and then uploaded to the OM group using the Spectrum OM Transfer System (SOTS).

The following table lists the key and info fields associated with OM group MNATMA5.

Key field	Info field
None	None

Related functional groups

There are no functional groups associated with OM group MNATMA5.

Registers

The following table lists the registers associated with OM group MNATMA5 and what they measure. For a detailed description of a register, click on the register name.

Registers for OM group MNATMA5

Register name	Measures
CRC32ERR	Protocol data units (PDU) that contain cyclic redundancy check-32 (CRC-32) errors
OVERSDU	PDUs discarded because of an oversized service data units (SDU)
LENViol	PDUs discarded because of length violations

CRC32ERR

Register type

Peg

Description

CRC32ERR counts the PDUs that contain CRC-32 errors.

Associated registers

None

Extension registers

None

Associated logs

ATM800

OVERSDU**Register type**

Peg

Description

OVERSDU counts the PDUs that are discarded because of oversized service data unit (SDU). An oversized SDU > 2048 bytes.

Associated registers

None

Extension registers

None

Associated logs

ATM800

LENVIOL**Register type**

Peg

Description

LENVIOL counts the PDUs discarded because of length violations.

Associated registers

None

Extension registers

None

Associated logs

ATM800

MNATMVC

Description

OM group Maintenance ATM Virtual Circuits (MNATMVC) measures interface performance statistics for the Multi-service Gateway (MG) 4000 asynchronous transfer mode (ATM) permanent virtual connection (PVC) AAL5. AAL5 PVC connections are datafilled in table ATMCONN.

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

Key field	Info field
None	None

Related functional groups

There are no functional groups associated with OM group MNATMVC.

Registers

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

Registers for OM group MNATMVC (Sheet 1 of 2)

Register name	Measures
ICTOTAL	Incoming ATM cells
ICLP0TO	Incoming ATM cells with cell loss priority (CLP)=0
ICLP1TO	Incoming ATM cells with CLP=1
ICNC	Incoming non-compliant ATM cells
ICCLP0NC	Incoming non-compliant ATM cells with CLP=0
ICCLP1NC	Incoming non-compliant ATM cells with CLP=1
ICDISC	Incoming ATM cells discarded
ICCLP0DC	Incoming ATM cells with CLP=0 discarded
ICCLP1DC	Incoming ATM cells with CLP=1 discarded

Registers for OM group MNATMVC (Sheet 2 of 2)

Register name	Measures
ITAGGED	Incoming tagged ATM cells
OGTOTAL	Outgoing ATM cell
OCLP0TO	Outgoing ATM cells with CLP=0
OCLP1TO	Outgoing ATM cells with CLP=1

ICTOTAL**Register type**

Peg

Description

ICTOTAL counts incoming ATM cells.

Associated registers[OGTOTAL](#), [ICDISC](#)**Extension registers**

ICTOTAL2

Associated logs

None

ICLP0TO**Register type**

Peg

Description

ICLP0TO counts incoming ATM cells with cell loss priority (CLP)=0.

Associated registers[OCLP0TO](#), [ICCLP0DC](#)**Extension registers**

ICLP0TO2

Associated logs

None

ICLP1TO**Register type**

Peg

Description

ICLP1TO counts incoming ATM cells with CLP=1.

Associated registers

[OCLP1TO](#), [ICCLP1DC](#)

Extension registers

ICLP1TO2

Associated logs

None

ICNC**Register type**

Peg

Description

ICNC counts incoming non-compliant ATM cells. Non-compliant cells are those that do not meet the traffic policing requirement.

Associated registers

None

Extension registers

ICNC2

Associated logs

None

ICCLP0NC**Register type**

Peg

Description

ICCLP0NC counts incoming non-compliant ATM cells with CLP=0.

Associated registers

None

Extension registers

ICCLP0NC2

Associated logs

None

ICCLP1NC**Register type**

Peg

Description

ICCLP1NC counts incoming non-compliant ATM cells with CLP=1.

Associated registers

None

Extension registers

ICCLP1NC2

Associated logs

None

ICDISC**Register type**

Peg

Description

ICDISC counts incoming ATM cells that are discarded. The policing hardware can discard cells that do not meet the traffic contract for a connection.

Associated registers[OGTOTAL](#), [ICTOTAL](#)**Extension registers**

ICDISC2

Associated logs

None

ICCLP0DC**Register type**

Peg

Description

ICCLP0DC counts incoming ATM cells with CLP=0 that are discarded.

Associated registers[OCLP0TO](#), [ICLP0TO](#)**Extension registers**

ICCLP0DC2

Associated logs

None

ICCLP1DC**Register type**

Peg

Description

ICCLP0DC counts incoming ATM cells with CLP=1 that are discarded.

Associated registers

[OCLP1TO](#), [ICLP1TO](#)

Extension registers

ICCLP1DC2

Associated logs

None

ITAGGED**Register type**

Peg

Description

ITAGGED counts incoming tagged ATM cells. Tagging occurs when the policing algorithm changes CLP from 0 to 1, which reduces the priority of the outgoing cell.

Associated registers

None

Extension registers

ITAGGED2

Associated logs

None

OGTOTAL**Register type**

Peg

Description

OGTOTAL counts outgoing ATM cells. The formula for OGTOTAL is:

Associated registers

[ICTOTAL](#), [ICDISC](#)

Validation formula
$$\text{OGTOTAL} = \text{ICTOTAL} - \text{ICDISC}$$
Extension registers

OGTOTAL2

Associated logs

None

OCLP0TO**Register type**

Peg

Description

OCLP0TO counts outgoing ATM cells with CLP=0.

Associated registers[ICLP0TO](#), [ICCLP0DC](#)**Validation formula**
$$\text{OCLP0TO} = \text{ICLP0TO} - \text{ICCLP0DC}$$
Extension registers

OCLP0TO2

Associated logs

None

OCLP1TO**Register type**

Peg

Description

OCLP1TO counts outgoing cells with CLP=1.

Associated registers[ICLP1TO](#), [ICCLP1DC](#)**Validation formula**
$$\text{OCLP1TO} = \text{ICLP1TO} - \text{ICCLP1DC}$$
Extension registers

OCLP1TO2

Associated logs

None

MULTAUTH

Description

Multiple Calls Per Authcode (MULTAUTH) is an OM group.

The AUTHCODX tables have an option called CPACTVAL. If the option is set for a particular authcode, and if that authcode is in use simultaneously for a number of calls greater than the maximum allowed for a given node, then:

- a treatment is set
- the event is logged
- the failure action is taken for the call

For legacy agents, the MULTAUTH OM group provides the ability to determine the number of times that an authcode is used above the maximum number of times set in table AUTHCODX option CPACTVAL field LIMIT.

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

Key field	Info field
None	None

Related functional groups

There are no functional groups associated with OM group MULTAUTH.

Registers

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

Registers for OM group MULTAUTH

Register name	Measures
MULTAUTH	Multiple calls per authcode

MULTAUTH

Register type
Peg

Description

MULTAUTH counts the number of calls with authcodes in use above the maximum number of calls allowed.

Associated registers

None

Extension registers

None

Associated logs

MAUC101

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 SCP II. 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

DescriptionNDNSCXFR 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 SCP II. 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 SCP11 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 NMTUNIT (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

[NDUSB](#)

Extension registers

None

Associated logs

None

NDUSB**Register type**

Usage

Scan rate

Not available

Description

NDUSB 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

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

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 OM s 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
NVCUIP	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

NVCUIP

Register type

Peg

Description

NVCUIP 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

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
CBNSQRO	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

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 (<i>max. 16 characters</i>)

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](#), [NDECON2](#)**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

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, OFF250, OFF300, or OFF200OESD: [INANN](#), [INLKT](#), [INOUT](#), [INTONE](#), [NIN](#), [OUTNWAT](#), [OUTMFL](#), [OUTRMFL](#), [OUTOSE](#), [OUTROSE](#), [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
OUTOSE	Outgoing original seize failures
OUTRMFL	Outgoing retrial match failures
OUTROSE	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:

- $\Sigma \text{TRK\_PRERTEAB} = \text{OFZ\_INABNM} + \text{OFZ\_INABNC}$

Note: This relationship does not apply to calls that originate from a mobile telephone exchange (MTX).

- $\text{OFZ\_INABNC} = \text{OTS\_INCABNC}$

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 INABNM and its associated registers:

- $\Sigma \text{TRK\_PRERTEAB} = \text{OFZ\_INABNM} + \text{OFZ\_INABNC}$

Note: This relationship does not apply to calls that originate from a mobile telephone exchange (MTX).

- $\text{OFZ\_INABNM} = \text{OTS\_INCABNM}$

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

$\Sigma \text{ ANN\_ANNATT OFZ\_INANN} + \text{OFZ\_ORIGANN}$

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

$OFZ\_INLKT = OTS\_INCLKT - (\text{number of calls that fail because of remote-end lockout})$

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

$\Sigma \text{TRK\_TANDEM} + \text{Trunk-to-TOPS calls} = \text{OFZ\_INOUT} + (\text{OFZ\_INOUT2} \times 65536)$

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 impulsing, 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

$\Sigma \text{TONES\_TONEATT OFZ\_INTONE} + \text{OFZ\_ORIGTONE}$

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:

- $OFZ\_NIN + (OFZ\_NIN2 \times 65536) = \Sigma TRK\_INCATOT$
- $OFZ\_NIN + (OFZ\_NIN2 \times 65536) = OTS\_NINC + (OTS\_NINC2 \times 65536)$

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

$OFZ\_NORIG = \Sigma LMD\_NORIGATT = OTS\_NORG$

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

$OFZ\_ORIGABDN = S \text{ } LMD\_ORIGABN = OTS\_ORGABDN$

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

$\Sigma \text{ ANN\_ANNATT OFZ\_INANN} + \text{OFZ\_ORIGANN}$

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 ORIGINONE:

- [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:

- $OFZ\_OUTMFL = SOTS\_SOUTMFL$
- $\Sigma TRK\_OUTMTCHF = OFZ\_OUTMFL + OFZ\_OUTRMFL$

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:

- $OFZ\_OUTNWAT + (OFZ\_OUTNWAT2 \times 65536) = OFZ\_OUTMFL + OFZ\_OUTRMFL + \Sigma (TRK\_CONNECT + TRK\_GLARE + TRK\_OUTFAIL + TRK\_OUTMTCHF)$
- $OFZ\_OUTNWAT + (OFZ\_OUTNWAT2 \times 65536) = SOTS\_SOUTNWT + (SOTS\_SOUTNWT2 \times 65536)$

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:

- $\Sigma \text{TRK\_OUTMTCHF} = \text{OFZ\_OUTMFL} + \text{OFZ\_OUTRMFL}$
- $\text{OFZ\_OUTRMFL} = \text{SOTS\_SOUTRMFL}$

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 TRMNLWAT. 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:

- $OFZ\_TRMBLK = S \text{ LMD\_TERMBLK}$
- $OFZ\_TRMBLK = SOTS\_STRMBLK$

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:

- $OFZ\_TRMNWAT + (OFZ\_TRMNWAT2 \times 65536) = \Sigma LMD\_NTERMATT$
- $OFZ\_TRMNWAT + (OFZ\_TRMNWAT2 \times 65536) = SOTS\_STRMNWAT + (SOTS\_STRMNWAT2 \times 65536)$

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_TCMPIIL, 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.

OFZ2NET1 records 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 data filled 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
<u>ICTONE</u>	Incoming calls to tone
<u>ICTRM</u>	Incoming calls to terminating
<u>LINEABDN</u>	Originating calls abandoned
<u>LINEANN</u>	Originating calls to announcement
<u>LINELKT</u>	Originating calls to lockout
<u>LINEOG</u>	Originating calls to outgoing
<u>LINETONE</u>	Originating calls to tone
<u>LINETRM</u>	Originating calls to terminating
<u>LINEUSG</u>	Number of originating calls
<u>LNMBSYPC</u>	Line manual busy peg count
<u>NICOG</u>	Incoming to outgoing calls
<u>OGMFL</u>	Outgoing match failures
<u>OGNWAT</u>	Outgoing network attempts
<u>OGOSF</u>	Outgoing original seize failures
<u>OGROSF</u>	Outgoing retrial seize failures
<u>OGTRMFL</u>	Outgoing retrial match failures
<u>TRKORIG</u>	Number of incoming calls
<u>TRMBLCK</u>	Terminating blocks
<u>TRMLNAT</u>	Terminating network attempts
<u>TRMMCHFL</u>	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 a 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 an 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

[OGROSE](#), 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](#), [NICO](#), [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

TRMLNAT 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

TRMLNAT 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_TRMNBWAT

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
NCKTRI	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

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

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
<u>ORGABDN</u>	Originating, abandoned
<u>ORGFSET</u>	Originating to custom calling feature
<u>ORGLKT</u>	Originating to lockout
<u>ORGOUT</u>	Originating to outgoing connections
<u>ORGTRM</u>	Originating to terminating connections
<u>ORGTRMT</u>	Originating to treatment connections
<u>SYSABDN</u>	System originations abandoned
<u>SYSFSET</u>	System originations to custom calling features
<u>SYSLKT</u>	System originations to lockout
<u>SYSOUT</u>	System to outgoing connections
<u>SYSTRM</u>	System to terminating connections
<u>SYSTRMT</u>	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:

- $\Sigma \text{TRK\_PRERTEAB} = \text{OTS\_INCABNM} + \text{OTS\_INCABNC}$
- $\text{OTS\_INCABNC} = \text{OFZ\_INABNC}$

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:

- $\Sigma \text{TRK\_PRERTEAB} = \text{OTS\_INCABNM} + \text{OTS\_INCABNC}$
- $\text{OTS\_INCABNM} = \text{OFZ\_INABNC}$

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

$\text{OTS\_INCLKT} - (\text{number of calls that fail caused to remote-end lockout}) = \text{OFZ\_INLKT}$

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
$$\Sigma \text{ ANN\_ANNATT} + \Sigma \text{ TONES\_TONEATT} \text{ OTS\_INCTRMT} + \text{OTS\_ORGTRMT} + \text{OTS\_SYSTRMT}$$
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
$$(65536 \times \text{NINC2}) + \text{NINC} = (65536 \times \text{INCTRM2}) + \text{INCTRM} + (65536 \times \text{INCOUT2}) + \text{INCOUT} + \text{INCTRMT} + \text{INCABNM} + \text{INCABNC} + \text{INCLKT} + \text{INCFSET}$$
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
$$(65536 \times \text{NORG2}) + \text{NORG} = (65536 \times \text{ORGTRM2}) + \text{ORGTRM} + (65536 \times \text{ORGOUT2}) + \text{ORGOUT} + \text{ORGTRMT} + \text{ORGABDN} + \text{ORGLKT} + (65536 \times \text{ORGFSET}) + \text{ORGFSET}$$
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

$(65536 \times \text{NSYS2}) + \text{NSYS} = \text{SYSTRM} + \text{SYSOUT} + \text{SYSTRMT} + \text{SYSABDN} + \text{SYSLKT} + \text{SYSFSET}$

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

$\text{OTS\_ORGABDN} = \text{OFZ\_ORGABDN}$ 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
$$\Sigma \text{ ANN\_ANNATT} + \Sigma \text{ TONES\_TONEATT} \text{ OTS\_INCTRMT} + \text{OTS\_ORGTRMT} + \text{OTS\_SYSTRMT}$$
Extension registers

None

Associated logs

TRK138

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
<u>PMDRSBU</u>	PM drawer system busy (SysB) usage
<u>PMERR</u>	PM error
<u>PMFLT</u>	PM fault
<u>PMINTEG</u>	PM accuracy failures
<u>PMMBP</u>	PM changes to manual busy
<u>PMMBTCO</u>	PM manual-busy terminals cut off
<u>PMMCXFR</u>	PM manual cold transfers
<u>PMMMBU</u>	PM manual busy usage
<u>PMMSBU</u>	PM system busy usage
<u>PMMWXFR</u>	PM manual warm transfers
<u>PMPSEERR</u>	PM peripheral-side errors
<u>PMPSFLT</u>	PM peripheral-side faults
<u>PMRGERR</u>	PM ringing generator errors while in service
<u>PMRGFLT</u>	PM ringing generator faults while in service
<u>PMSBP</u>	PM changes to system busy
<u>PMSBTCO</u>	PM system-busy terminals cut off
<u>PMSCXFR</u>	PM system cold transfers
<u>PMSWXFR</u>	PM system warm transfers
<u>PMUMBU</u>	Peripheral module unit manual-busy use
<u>PMUSBU</u>	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

PMPSEERR**Register type**

Peg

Description

PMPSEERR 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

PMPSEERR increases if the error affects service or if it results in additional maintenance action. XPMs include the line concentrating module (LCM).

Associated registers

[PMPSEFLT](#)

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

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 PMTYP (Sheet 1 of 2)

Register name	Measures
PMTCTDGD	PM total circuit diagnostics run
PMTCTDGL	PM total circuit diagnostics failed
PMTCTDGP	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:

- [PMTCCTEL](#)
- PM_PMTCCTDG counts system-initiated diagnostics for each PM.

Extension registers

None

Associated logs

PM110, TRK106

PMTCCCTFL**Register type**

Peg

Description

PMTCCCTFL 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

PMTCCCTFL counts these events for a group of PMs of the same type. The faults that cause the count of PMTCCCTFL to increase are different for each PM.

For digital carrier modules, PMTCCCTFL increases when:

- a card is removed
- a transmission error causes a carrier group alarm

For line modules, PMTCCCTFL increases when diagnostics show:

- a fault in a PM, card, or facility
- a missing or wrong card

PMTCCCTFL 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 PMTCCCTFL:

- [PMTCCCTDG](#)
- 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

PMTCCCTOP**Register type**

Peg

Description

PMTCCCTOP 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 PMTCCCTOP to increase vary with PM types. The register increases only the first time the system detects a fault. PMTCCCTOP does not increase if the system detects the same fault when tests are run again.

For the digital carrier module and the trunk module, PMTCCCTOP increases when the signaling-test system at a switching office detects a fault. PMTCCCTOP detects a fault on a trunk circuit between the register and a far-end office. For example, PMTCCCTOP 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, PMTCCCTOP increases when system diagnostics detect a fault on a line circuit outside the switching office.

For extended multiprocessor system (XMS)-based peripheral modules (XPM), PMTCCCTOP 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_PMTERR counts errors on in-service PMs that have node numbers.
- PM2_PMTERR 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_PMTINTEG 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_PMTMBP 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](#)
- PMPSEERR counts errors on the P-side interface of an XPM or an LIM F-bus.
- PM_PMPSEERR counts errors for PMs that have node numbers.
- PM2_PM2PSEERR 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

PMTUSB**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_PMUSB and PM2_PM2USB record if a separate PM is system busy. PM_PMUSB provides a count for PMs that have node numbers. PM2_PM2USB provides counts for PMs without node numbers.

Extension registers

None

Associated logs

CCS234, PM102, PM128, PM170, PM183, PM190, PM192

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
COMMON_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

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
OFRPARAM	Out Of Range Parameter
PRMUSRMS	Primitive-User Class Mismatch
MBPRDCC	Mail Box Problem — Data Communication
MBPRPSA	Mail Box Problem Primitive Server Audit
AUDPSE	Audit Fails To Receive Port Status
AUDPSM	SCU Port Status Mismatch
PSNRTEL	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
INSERVICE	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

TONEDT**Register type**

Peg

Description

TONEDT 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
QURYPOR	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

QURYPOR**Register type**

Peg

Description

QURYPOR 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
MSGSENT	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

SCA

Description

OM group Selective Call Acceptance (SCA) monitors the use of the SCA feature. You can obtain this feature alone or as part of the universal access group of features.

SCA contains registers that count:

- SCA universal access attempts, activations, deactivations and denials
- requests for off-board service updates or changes. With the Off-board Service Control feature, off-board service updates peg certain 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.

- attempts to access the screening list editing (SLE) function for SCA
- attempts to access SLE for SCA that the system denies because the system did not assign or activate the feature
- attempts to access SLE for SCA that the system denies because system resources are not available
- activations of SCA
- deactivations of SCA
- terminating calls that attempt to access SCA
- attempts to access SCA that the system denies
- attempts to access SCA that the system blocks because the system cannot access the screening list
- calls that SCA rejects
- calls that SCA accepts

SCF contains one usage register that records if a line uses SCA SLE.

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

Key field	Info field
None	None

Related functional groups

The MDC functional group is associated with OM group SCA.

Registers

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

Registers for OM group SCA (Sheet 1 of 2)

Register name	Measures
SCAACT	SCA activation
SCAAUNV	SCA activations universal
SCADACT	SCA deactivations
SCADENY	SCA denials universal
SCADUNV	SCA deactivations universal
SCAEATT	SCA editing attempts
SCAEDEN	SCA editing denied
SCAEOVF	SCA editing overflow
SCAEUSG	SCA editing use
SCASAT	SCA screening attempt
SCASBLK	SCA screening blocked
SCASDEN	SCA screening denied
SCASRJT	SCA call screening rejected

Registers for OM group SCA (Sheet 2 of 2)

Register name	Measures
<u>SCASTRM</u>	SCA call screening termination
<u>SCAUNIV</u>	SCA universal access attempts

SCAACT**Register type**

Peg

Description

SCAACT counts activations of the SCA feature by subscribers.

For DMS only: Similar to operations performed by service access code controlled activation, SCAACT is pegged for each occurrence of an off-board service update activation request.

Associated registers

None

Extension registers

None

Associated logs

None

SCAAUNV**Register type**

Peg

Description

SCAAUNV counts successful activations of the SCA feature by a universal user.

Associated registers

None

Extension registers

None

Associated logs

None

SCADACT**Register type**

Peg

Description

SCADACT counts deactivations of the SCA feature by subscribers.

For DMS only: Similar to the operations performed by service access code controlled activation, SCADACT is pegged for each occurrence of an off-board service update deactivation request.

Associated registers

None

Extension registers

None

Associated logs

None

SCADENY**Register type**

Peg

Description

SCADENY counts the number of times the system denies the SCA feature to a universal user. The system denies the SCA feature to a universal user because the DENYSCA option is in effect.

For DMS only: SCADENY is pegged for the following off-board service update request attempts:

- The DOR option is present on the SCA subscriber line.
- The SCA is enabled office wide, and the DENY SCA option is present on the subscriber line.

Associated registers

[SCAEDEN](#)

Extension registers

None

Associated logs

None

SCADUNV**Register type**

Peg

Description

SCADUNV counts deactivations of the SCA feature by a universal user.

Associated registers

None

Extension registers

None

Associated logs

None

SCAEATT**Register type**

Peg

Description

SCAEATT counts attempts to enter the screening list editing (SLE) function for the SCA.

For DMS only: The register is pegged each time a subscriber uses an edit session to update SCA programmed data. Similar to the operations performed in a service access code controlled edit session, SCAEATT is pegged for off-board service update requests to do one of the following:

- add or delete a DN to a subscriber SCA list
- delete all DNs in a subscriber SCA list
- delete all anonymous or private entries in a subscriber SCA list

Associated registers

None

Extension registers

None

Associated logs

None

SCAEDEN**Register type**

Peg

Description

SCAEDEN counts attempts to access SLE for the SCA feature. The register counts attempts that the system denies for one of the following reasons:

- The system does not assign the SCA feature to the line.
- The system does not activate the SCA feature in the office
- The system denies a universal access attempt because the DENYSCA option is on the line

The system routes the call to feature not allowed (FNAL) treatment.

For DMS only: The register is pegged when a subscriber attempts to update SCA programmed data using an edit session, and the attempt is denied. SCAEDEN is pegged when the following is true for a given SCA off-board service update request:

- SLE is not enabled in table CUSTSTN.
- SCF is not enabled in table RESOFC.

Associated registers

None

Extension registers

None

Associated logs

None

SCAEOVF**Register type**

Peg

Description

SCAEOVF counts denied attempts to access SLE for the SCA feature. The system denies the attempts because the required system resources are not available. When the required announcement circuits for SLE for SCA are not available, the call routes to no service circuit (NOSC) treatment. The system denies the SLE for SCA when other limits are present, like list data you cannot access. The system routes the call to no software resource (NOSR) treatment.

Associated registers

None

Extension registers

None

Associated logs

None

SCAEUSG**Register type**

Usage

Scan rate

10 seconds

Description

SCAEUSG records if a line uses SLE for the SCA feature.

Associated registers

None

Extension registers

None

Associated logs

None

SCASAT**Register type**

Peg

Description

SCASAT counts terminating calls that attempt to access the SCA feature.

Associated registers

None

Extension registers

SCASAT2

Associated logs

None

SCASBLK**Register type**

Peg

Description

SCASBLK counts blocked attempts to the SCA feature. The system blocks the attempts because the system cannot access the screening list. When the system blocks SCA screening, the call proceeds as if the system screened and rejected the call.

Associated registers

None

Extension registers

None

Associated logs

None

SCASDEN**Register type**

Peg

Description

SCASDEN counts denied attempts to use the SCA feature. When the system denies a call, the call proceeds as if the system screened and rejected the call.

Associated registers

None

Extension registers

None

Associated logs

None

SCASRJT**Register type**

Peg

Description

SCASRJT counts calls that the SCA feature rejects. The system routes the call to SCA treatment.

Associated registers

None

Extension registers

SCASRJT2

Associated logs

None

SCASTRM**Register type**

Peg

Description

SCASTRM count calls that the SCA feature accepts.

Associated registers

None

Extension registers

None

Associated logs

None

SCAUNIV**Register type**

Peg

Description

SCAUNIV counts the number of times a universal user attempts to access the SCA feature.

Associated registers[SCAEATT](#)**Extension registers**

None

Associated logs

None

SCAISRV4

Description

OM group Switch/Computer Application Interface 4 (SCAISRV4) has OM registers for the dv-Call-Held-U, dv-Set-Feature, dv-Reassign-Agent, dv-Controller-Released-U, dv-Noncontroller-Released-U, dv-Call-Progress-U and dv-Toggle-Call messages. The OM group SCAISRV4 contains registers that provide OM data on Switch/Computer Application Interface (SCAI) service use.

The following table lists the key and info fields associated with OM group SCAISRV4.

Key field	Info field
scai_group	None

The key field identifies the SCAI group name as defined in Table SCAIGRP. The SCAI group name is a character string with a maximum length of 16 characters.

Related functional groups

There are no functional groups associated with OM group SCAISRV4.

Registers

The following table lists the registers associated with OM group SCAISRV4 and what they measure. For a detailed description of a register, click on the register name.

Registers for OM group SCAISRV4 (Sheet 1 of 2)

Register name	Measures
HELDU	Call held (unsolicited)
CHFCERE	Change force, return error
CHFCERR	Change force, return result
CHWRAPRE	Change wrap, return error
CHWRAPRR	Change wrap, return result
REAGNRE	Reassign agent, return error

Registers for OM group SCAISRV4 (Sheet 2 of 2)

Register name	Measures
REAGNRR	Reassign agent, return result
CNTRLREL	Controller released
NCTRLREL	Non-Controller released
CPGBUSYU	Call progress busy (unsolicited)
CPGCONNU	Call progress connected (unsolicited)
CPGDIGCU	Call progress digit collection (unsolicited)
CPGMUSCU	Call progress music (unsolicited)
CPGRANU	Call progress ran (unsolicited)
CPGRINGU	Call progress ringback (unsolicited)
CPGSILU	Call progress silence (unsolicited)
CPGTRTU	Call progress treatment
TOGCLLRR	Toggle call - return result
TOGCLLRE	Toggle call - return error

HELDU**Register type**

Peg

Description

HELDU is pegged when the SCAI application on the switch sends the call event message DV_CALL_HELD_U to the host application.

This register applies only to DMS.

Associated registers

None

Extension registers

None

Associated logs

None

CHFCERE**Register type**

Peg

Description

The switch sends out a Return Error message and pegs register CHFCERE in response to the dv-Set-Feature Chgforce message.

This register applies only to DMS.

Associated registers

None

Extension registers

None

Associated logs

None

CHFCERR**Register type**

Peg

Description

The switch sends out a Return Result message and pegs register CHFCERR in response to the dv-Set-Feature Chgforce message.

This register applies only to DMS.

Associated registers

None

Extension registers

None

Associated logs

SCAI502

CHWRAPRE**Register type**

Peg

Description

The switch sends a Return Error message and pegs register CHWRAPRE in response to the dv-Set-Feature Chavwrap message.

This register applies only to DMS.

Associated registers

None

Extension registers

None

Associated logs

None

CHWRAPRR**Register type**

Peg

Description

The switch sends a Return Result and pegs CHWRAPRR in response to the dv-Set-Feature Chavwrap message.

This register applies only to DMS.

Associated registers

None

Extension registers

None

Associated logs

SCAI501

REAGNRE**Register type**

Peg

Description

The switch sends out a Return Error and pegs register REAGNRE in response to the dv-Reassign-Agent message.

This register applies only to DMS.

Associated registers

None

Extension registers

None

Associated logs

None

REAGNRR**Register type**

Peg

Description

The switch produces log SCAI500 when the host computer sends a dv-Reassign-Agent.

This register applies only to DMS.

Associated registers

None

Extension registers

None

Associated logs

SCAI500

CNTRLREL**Register type**

Peg

Description

The switch sends a Controller Released message and pegs CNTRLREL in response to the dv-Controller-Released-U message.

This register applies only to DMS.

Associated registers

None

Extension registers

None

Associated logs

None

NCTRLREL**Register type**

Peg

Description

The switch sends a Non-Controller Released message and pegs NCTRLREL in response to the dv-Noncontroller-Released-U message.

This register applies only to DMS.

Associated registers

None

Extension registers

None

Associated logs

None

CPGBUSYU**Register type**

Peg

Description

The switch sends a dv-Call-Progress-U message with the tag CPG_BUSY_FUNCTION, and pegs register CPGBUSYU.

This register applies only to DMS.

Associated registers

[CPGCONNU](#), [CPGDIGCU](#), [CPGMUSCU](#), [CPGRANU](#), [CPGRINGU](#), [CPGSILU](#)

Extension registers

None

Associated logs

None

CPGCONNU**Register type**

Peg

Description

The switch sends a dv-Call-Progress-U message with the tag CPG_CONNECTED_FUNCTION, and pegs register CPGCONNU.

This register applies only to DMS.

Associated registers

[CPGBUSYU](#), [CPGDIGCU](#), [CPGMUSCU](#), [CPGRANU](#), [CPGRINGU](#), [CPGSILU](#)

Extension registers

None

Associated logs

None

CPGDIGCU**Register type**

Peg

Description

The switch sends a dv-Call-Progress-U message with the tag CPG_DIGCOLL_FUNCTION, and pegs register CPGDIGCU.

This register applies only to DMS.

Associated registers

[CPGBUSYU](#), [CPGCONNU](#), [CPGMUSCU](#), [CPGRANU](#), [CPGRINGU](#), [CPGSILU](#)

Extension registers

None

Associated logs

None

CPGMUSCU**Register type**

Peg

Description

The switch sends a dv-Call-Progress-U message with the tag CPG_MUSIC_FUNCTION, and pegs register CPGMUSCU.

This register applies only to DMS.

Associated registers

[CPGBUSYU](#), [CPGCONNU](#), [CPGDIGCU](#), [CPGRANU](#), [CPGRINGU](#), [CPGSILU](#)

Extension registers

None

Associated logs

None

CPGRANU**Register type**

Peg

Description

The switch sends a dv-Call-Progress-U message with the tag CPG_RAN_FUNCTION, and pegs register CPGRANU.

This register applies only to DMS.

Associated registers

[CPGBUSYU](#), [CPGCONNU](#), [CPGDIGCU](#), [CPGMUSCU](#), [CPGRINGU](#), [CPGSILU](#)

Extension registers

None

Associated logs

None

CPGRINGU**Register type**

Peg

Description

The switch sends a dv-Call-Progress-U message with the tag CPG_RINGBACK_FUNCTION, and pegs register CPGRINGU.

This register applies only to DMS.

Associated registers

[CPGBUSYU](#), [CPGCONNU](#), [CPGDIGCU](#), [CPGMUSCU](#), [CPGRANU](#), [CPGSILU](#)

Extension registers

None

Associated logs

None

CPGSILU**Register type**

Peg

Description

The switch sends a dv-Call-Progress-U message with the tag CPG_SILENCE_FUNCTION, and pegs register CPGSILU.

This register applies only to DMS.

Associated registers

[CPGBUSYU](#), [CPGCONNU](#), [CPGDIGCU](#), [CPGMUSCU](#), [CPGRANU](#), [CPGRINGU](#)

Extension registers

None

Associated logs

None

CPGTRTU**Register type**

Peg

Description

CPGTRTU is pegged each time the switch sends a dv-Call-progress-U message with the tag CPG_TRTMT_FUNCTION.

This register applies only to DMS.

Associated registers

[CPGBUSYU](#), [CPGCONNU](#), [CPGDIGCU](#), [CPGRINGU](#), [CPGRANU](#), [CPGMUSCU](#), [CPGSILU](#)

Extension registers

None

Associated logs

None

TOGCLLRR**Register type**

Peg

Description

TOGCLLRR is pegged when the switch returns a RETURN-RESULT to the host computer in response to a dv-Toggle-Call message.

This register applies only to DMS.

Associated registers

None

Extension registers

None

Associated logs

None

TOGCLLRE**Register type**

Peg

Description

TOGCLLRE is pegged when the switch returns a RETURN-ERROR to the host computer in response to a dv-Toggle-Call message.

This register applies only to DMS.

Associated registers

None

Extension registers

None

Associated logs

None

SCF

Description

OM group Selective Call Forwarding (SCF) monitors the use of the SCF feature. This feature can be obtained alone or as part of the universal access group of features.

SCF contains peg registers that count:

- common access attempts, activations, deactivations, and denials
- requests for off-board service updates or changes. With the Off-board Service Control feature, off-board service updates peg certain 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.

- attempts to enter the screening list editing function for SCF
- attempts to access SLE for SCF that are denied either because SCF has not been assigned or activated or because of lack of system resources
- activations and deactivations of SCF
- calls forwarded through the base station by SCF
- calls routed to an SCF base station when SCF is active
- calls that attempt to use SCF that fail because of feature interactions
 - feature interactions
 - system resources or system failure are not available
 - the maximum number of simultaneous SCF calls has been reached

- calls that attempt to use SCF but are not screened because either the incoming directory number or the screening list is not available

SCF contains one usage register that records if a line uses SCF SLE.

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

Key field	Info field
None	None

Related functional groups

There are no functional groups associated with OM group SCF.

Registers

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

Registers for OM group SCF (Sheet 1 of 2)

Register name	Measures
SCFACT	SCF successful activations
SCFAUNV	SCF activations universal
SCFDACT	SCF successful deactivations
SCFDENY	SCF denials universal
SCFDUNV	SCF deactivations universal
SCFEATT	SCF editing attempts
SCFEDEN	SCF editing denial
SCFEOVF	SCF editing overflow
SCFEUSG	SCF editing usage
SCFFAIL	SCF failure
SCFFWD	SCF forwarded calls
SCFOVFL	SCF overflow

Registers for OM group SCF (Sheet 2 of 2)

Register name	Measures
SCFSAT	SCF screening attempt
SCFSBLK	SCF screening blocking
SCFSDEN	SCF screening denials
SCFSOVFL	SCF simultaneous overflow
SCFUNIV	SCF universal access attempts

SCFACT**Register type**

Peg

Description

SCFACT counts calls that correctly activate the SCF feature by subscribers.

For DMS only: Similar to operations performed by service access code controlled activation, SCFACT is pegged for each occurrence of an off-board service update activation request.

Associated registers

None

Extension registers

None

Associated logs

None

SCFAUNV**Register type**

Peg

Description

SCFAUNV counts correct activations by a universal user of the SCF feature.

Associated registers

None

Extension registers

None

Associated logs

None

SCFDACT**Register type**

Peg

Description

SCFDACT counts the number of times a subscriber deactivates SCF service.

For DMS only: Similar to the operations performed by service access code controlled activation, SCFDACT is pegged for each occurrence of an off-board service update deactivation request.

Associated registers

None

Extension registers

None

Associated logs

None

SCFDENY**Register type**

Peg

Description

SCFDENY increases when a subscriber attempts to update SCF programmed data using an edit session, and the attempt is denied because the DENY option is in effect.

For DMS only: SCFDENY is pegged for each of the following off-board service update request attempts:

- The DOR option is present on the SCF subscriber line
- SCF is enabled office wide, and the DENY SCF option is present on the subscriber line

Associated registers

[SCFEDEN](#)

Extension registers

None

Associated logs

None

SCFDUNV**Register type**

Peg

Description

SCFDUNV counts deactivations of the SCF feature by a universal user.

Associated registers

None

Extension registers

None

Associated logs

None

SCFEATT**Register type**

Peg

Description

SCFEATT counts attempts to access SLE for the SCF feature.

For DMS only: The register is pegged each time a subscriber uses an edit session to update SCF programmed data. Similar to the operations performed in a service access code controlled edit session, SCFEATT is pegged for off-board service update requests to:

- add or delete a DN to a subscriber SCF list
- delete all DNs in a subscriber SCF list
- delete all anonymous or private entries in a subscriber SCF list
- set or clear the forwarding DN

Associated registers

None

Extension registers

None

Associated logs

None

SCFEDEN**Register type**

Peg

Description

SCFEDEN counts attempts to access SLE for the SCF feature that are denied. Attempts are denied for one of the following reasons:

- the SCF feature is not assigned to the line, or is not activated in the office
- a universal access attempt is denied because the DENYSCF option is on the line

The system routes the call to FNAL treatment.

For DMS only: SCFEDEN is pegged when a subscriber attempts to update SCF programmed data using an edit session, and the attempt is denied. SCFEDEN is pegged when the following is true for a given SCF off-board service update request.

- SLE is not enabled in table CUSTSTN.
- SCF is not enabled in table RESOFC.

Associated registers

None

Extension registers

None

Associated logs

LINE138

SCFEOVF**Register type**

Peg

Description

SCFEOVF counts attempts to access SLE for the SCF feature that fail because of lack of system resources. If the attempt fails because of lack of hardware resources, the system routes the call to no service circuit (NOSC) treatment. If the attempt fails because of lack of software resources, the system routes the call to no software resource (NOSR) treatment.

Associated registers

None

Extension registers

None

Associated logs

LINE138

SCFEUSG**Register type**

Usage

Scan rate

10 seconds

Description

SCFEUSG records if a line uses SLE for the SCF feature.

Associated registers

None

Extension registers

None

Associated logs

None

SCFFAIL**Register type**

Peg

Description

SCFFAIL counts calls that attempt to forward. Calls that attempt to forward use the SCF feature but fail because of the following feature interactions:

- a call forwarding chain that exceeds five forwarding base stations
- call forwarding routing that fails or results in routing to an incorrect route
- detection of a call forwarding loop
- an attendant console involved in the call routes to a destination that requires a database query
- forwarding to a preset or meet-me conference call
- a verification call that results in forwarding

The system routes the call to busy (BUSY) treatment.

Associated registers

None

Extension registers

None

Associated logs

None

SCFFWD**Register type**

Peg

Description

SCFFWD counts calls that the SCF feature forwards through a base station.

Associated registers

None

Extension registers

SCFFWD2

Associated logs

None

SCFOVFL**Register type**

Peg

Description

SCFOVFL counts calls that attempt to forward. Calls that attempt to forward use the SCF feature but fail because of lack of system resources or because of system failure. If the attempt fails because of lack of hardware resources, the system routes the call to NOSC treatment. If the attempt fails because of lack of software resources, the system routes the call to NOSR treatment.

Associated registers

None

Extension registers

None

Associated logs
LINE138, TRK138

SCFSAT

Register type
Peg

Description
SCFSAT counts calls that the system routes to a base station when the SCF feature is active on the station.

Associated registers
None

Extension registers
SCFSAT2

Associated logs
None

SCFSBLK

Register type
Peg

Description
SCFSBLK counts calls that attempt to forward. Calls that attempt to forward use the SCF feature but are not screened because the screening list is not available.

Associated registers
None

Extension registers
None

Associated logs
None

SCFSDEN

Register type
Peg

Description
SCFSDEN counts calls that attempt to forward. Calls that attempt to forward use the SCF feature but are not screened because the incoming directory number is not available.

Associated registers

None

Extension registers

None

Associated logs

None

SCFSOVFL**Register type**

Peg

Description

SCFSOVFL counts attempts to forward that use the SCF feature that fail. Attempts to forward can fail because the maximum number of simultaneous calls that can use SCF has been reached. The system routes the call to negative acknowledgement (NACK) treatment.

Associated registers

None

Extension registers

None

Associated logs

None

SCFUNIV**Register type**

Peg

Description

SCFUNIV counts the number of times a universal user attempts to access the SCF feature.

Associated registers[SCFEATT](#)**Extension registers**

None

Associated logs

None

SCPOTS

Description

OM group Speed Calling in the POTS Environment (SCPOTS) counts attempts and failures to use Speed Calling. The system uses SCPOTS to determine how often a subscriber uses Speed Calling and if hardware and software resources are correctly provisioned. The subscriber can program speed call numbers through the telephone, or through entries in table SCALLTAB.

SCPOTS tracks requests for off-board service updates or changes. With the Off-board Service Control feature, off-board service updates peg certain 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.

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

Key field	Info field
Short list tuple-sc1_tuple. Long list tuple-sc2_tuple.	None

Related functional groups

All DMS offices with the POTS Speed Calling feature are associated with OM group SCPOTS.

Registers

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

Registers for OM group SCPOTS

Register name	Measures
SCPAATT	Attempt to program speed call cell
SCPADENY	Failure to program or erase speed call cell, invalid speed call cell number
SCPAOVFL	Failure to program speed call cell-lack of software resources
SCPFATT	Attempt to use speed call cell
SCPFDENY	Failure of speed call attempt, empty cell

SCPAATT

Register type

Peg

Description

SCPAATT counts attempts to add or delete a speed call cell. An attempt to add a speed call cell consists of:

- dialing the activation code for either SC1 or SC2
- dialing a cell number
- dialing a complete correct directory number (DN)

An attempt to delete a speed call cell consists of dialing the activation code and a cell number.

For DMS only: SCPAATT is pegged when the Speed Call Update message successfully adds or changes a speed call DN (off-board service update).

Associated registers

None

Extension registers

None

Associated logs

None

SCPADENY**Register type**

Peg

Description

SCPADENY counts attempts to program or erase a speed call cell that fail because the cell code is out of range.

For DMS only: SCPADENY is pegged when the Speed Call Update (off-board service update) message fails to program or erase a speed call cell because the speed call cell number is invalid.

Associated registers

None

Extension registers

None

Associated logs

LINE138

SCPAOVFL**Register type**

Peg

Description

SCPAOVFL counts attempts to program a speed call cell that fails because of a lack of HEAP memory in reserve for speed calling. This failure occurs when the system attempts to program a cell with a directory number that is greater than 8 digits. If a lack of reserved store for speed calling occurs in table HEAPTAB, SCPAOVFL increases. The MAXSTORE field of entry GENDIG in table HEAPTAB controls the store reserved for speed calling.

For DMS only: SCPAOVFL is pegged when the Speed Call Update (off-board service update) message fails to program the speed call cell because of insufficient software resources.

Associated registers

None

Extension registers

None

Associated logs
EXT106, LINE138

SCPFATT

Register type
Peg

Description
SCPFATT counts attempts to use a speed calling cell when the system dials a correct 1-digit cell number for SC1. The register also counts attempts to use a speed calling cell when the system dials a correct 2-digit cell number for SC2.

Associated registers
None

Extension registers
None

Associated logs
None

SCPFDENY

Register type
Peg

Description
SCPFDENY counts attempts to use speed calling that fail because the speed call cell is empty.

Associated registers
None

Extension registers
None

Associated logs
LINE138

SCRJ

Description

OM group Selective Call Rejection (SCRJ) provides information on the Selective Call Rejection (SCRJ) feature. The subscriber can obtain this feature alone or as part of the universal access group of features.

The peg registers count:

- common access attempts, activations, deactivations, and denials
- requests for off-board service updates or changes. With the Off-board Service Control feature, off-board service updates peg certain 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.

- attempts to enter the screening list editing function for the SCRJ feature
- attempts to enter the screening list editing function for the SCRJ feature that fail because
 - the system does not assign or activate the feature in the office
 - the system fails
 - there is a lack of hardware or software resources
- successful activations and deactivations of the SCRJ feature
- calls that attempt to screen when the SCRJ feature is active
- calls not screened because either the calling directory number or the screening list is not available
- calls that are rejected by selective call rejection screening

Usage register [SCRJEUSG](#) records if a line uses the selective call rejection screening list editing facility.

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

Key field	Info field
None	None

Related functional groups

All DMS offices with the Selective Call Rejection (SCR) feature are associated with OM group SCRJ.

Registers

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

Registers for OM group SCRJ

Register name	Measures
SCRJACT	SCRJ activation
SCRJAUNV	SCRJ activation universal
SCRJDACT	SCRJ deactivation
SCRJDENY	SCRJ universal access denial
SCRJDUNV	SCRJ deactivation universal
SCRJEATT	SCRJ editing attempts
SCRJEDEN	SCRJ editing denied
SCRJEOVF	SCRJ editing overflow
SCRJEUSG	SCRJ editing usage
SCRJSAT	SCRJ screening attempt
SCRJSBLK	SCRJ screening blocked
SCRJSDEN	SCRJ screening denial
SCRJSRJT	SCRJ call screening rejected
SCRJUNIV	SCRJ universal access attempts

SCRJACT**Register type**

Peg

Description

SCRJACT counts successful attempts to activate the Selective Call Rejection (SCRJ) feature by subscribers.

For DMS only: Similar to operations performed by service access code controlled activation, SCRJACT is pegged for each occurrence of an off-board service update activation request.

Associated registers

None

Extension registers

None

Associated logs

None

SCRJAUNV**Register type**

Peg

Description

SCRJAUNV counts successful attempts to activate the Selective Call Rejection (SCRJ) feature by a common user.

Associated registers

None

Extension registers

None

Associated logs

None

SCRJDACT**Register type**

Peg

Description

SCRJDACT counts successful attempts to deactivate the Selective Call Rejection (SCRJ) feature by subscribers.

For DMS only: Similar to the operations performed by service access code controlled activation, SCRJDACT is pegged for each occurrence of an off-board service update deactivation request.

Associated registers

None

Extension registers

None

Associated logs

None

SCRJDENY**Register type**

Peg

Description

SCRJDENY increases when a universal subscriber attempts to update SCRJ programmed data using an edit session, and the attempt is denied because the DENY option is in effect.

For DMS only: SCRJDENY is pegged for each of the following off-board service update request attempts:

- The DOR option is present on the SCRJ subscriber line.
- The SCRJ is enabled office wide, and the DENY SCRJ option is present on the subscriber line.

Associated registers

[SCRJEDEN](#)

Extension registers

None

Associated logs

None

SCRJDUNV**Register type**

Peg

Description

SCRJDUNV counts successful attempts to deactivate the Selective Call Rejection (SCRJ) feature by a common user.

Associated registers

None

Extension registers

None

Associated logs

None

SCRJEATT**Register type**

Peg

Description

SCRJEATT counts attempts to invoke a selective call rejection screening list editing session.

For DMS only: The register is pegged each time a subscriber uses an edit session to update SCRJ programmed data. Similar to the operations performed in a service access code controlled edit session, SCRJEATT is pegged for off-board service update requests to do the following:

- add or delete a DN to a subscriber SCRJ list
- delete all DNs in a subscriber SCRJ list
- delete all anonymous or private entries in a subscriber SCRJ list

Associated registers

None

Extension registers

None

Associated logs

None

SCRJEDEN**Register type**

Peg

Description

SCRJEDEN counts attempts to invoke a selective call rejection screening list editing session that fail for the following reasons:

- the Selective Call Rejection (SCRJ) feature is not assigned to the line, or is not activated in the office

- the system denies a common attempt because the DENYSCRJ option is on the line

The system routes the call to feature not allowed (FNAL) treatment.

For DMS only: The register is pegged when a subscriber attempts to update SCRJ programmed data using an edit session, and the attempt is denied. SCRJEDEN is pegged when the following is true for a given SCRJ off-board service update request:

- SLE is not enabled in table CUSTSTN.
- SCRJ is not enabled in table RESOFC.

Associated registers

None

Extension registers

None

Associated logs

LINE138

SCRJEOVF**Register type**

Peg

Description

SCRJEOVF counts attempts to invoke a selective call rejection screening list editing session that fail for the following reasons:

- system failure
- lack of hardware or software resources

When SCRJEOVF increases because of not enough hardware resources, the system routes the call to no service circuits (NOSC) treatment. When SCRJEOVF increases because of lack of software resources, the system routes the call to no software resources (NOSR) treatment.

Associated registers

None

Extension registers

None

Associated logs

LINE138

SCRJEUSG**Register type**

Usage

Scan rate

10 seconds

Description

SCRJEUSG records if a line uses the selective call rejection screening list editing facility.

Associated registers

None

Extension registers

None

Associated logs

None

SCRJSAT**Register type**

Peg

Description

SCRJSAT counts calls that terminate on a line on which the SCRJ feature is active.

Associated registers

None

Extension registers

SCRJSAT2

Associated logs

None

SCRJSBLK**Register type**

Peg

Description

SCRJSBLK counts selective call rejection attempts that the system blocks because the screening list is not available. The call continues as if the SCFJ feature screened the call.

Associated registers

None

Extension registers

None

Associated logs

None

SCRJSDEN**Register type**

Peg

Description

SCRJSDEN counts calls that the SCRJ feature does not screen because the incoming directory number is not available. The call continues as if the system feature screened the call.

Associated registers

None

Extension registers

None

Associated logs

None

SCRJSRJT**Register type**

Peg

Description

SCRJSRJT counts calls that the SCRJ feature screens and rejects. The system routes the call to selective call rejection (SCRJ) treatment.

Associated registers

TRMTFR_TTFRSCRJ, which counts calls that receive the SCRJ treatment because the SCRJ feature screens and rejects the call

Validation formula
$$\text{SCRJ\_SCRJSRJT} = \text{TRMTFR\_TTFRSCRJ}$$
Extension registers

None

Associated logs

LINE138

SCRJUNIV**Register type**

Peg

Description

SCRJUNIV increases when a universal user attempts to access the Selective Call Rejection (SCRJ) feature.

Associated registers[SCRJEATT](#)**Extension registers**

None

Associated logs

None

SERVACT

Description

The Service Activation (SERVACT) tracks the number of services on ISUP FGD and ISUP IMT trunks. The call processing software for the UCS DMS-250 switch pegs this OM group when the service is activated regardless of whether a call completes or not.

The SERVACT OM group pegs activation of the following services:

- Announcements
- Mechanized Calling Card Services (MCCS)
- Reorigination
- RLT (ISUP and PRI)
- Route Advance
- Subscriber Dialing Plans

This feature does not support AXCESS ISUP trunks.

Extension register (names ending with 2) increment once each time the regular register overflows. When an overflow occurs, the regular register is reset to 0. To calculate the total for each type of register, multiply the extension register value by 65535, then add the value of the regular register.

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

Key field	Info field
None	None

Related functional groups

There are no functional groups associated with OM group SERVACT.

Registers

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

Registers for OM group SERVACT

Register name	Measures
SERVANNC	Service Announcement
SRVMCCS	Service MCCS
SRVRA	Service Route Advance
SRVRLT	Service Release Link Trunk
SRVREORG	Service Reorigination
SRVSBDP	Service Subscriber Dialing Plan

SERVANNC

Register type

Peg

Description

SERVANNC counts the number of times an ISUP FGD or ISUP IMT originator connects to a voice prompt, branding announcement, or treatment announcement.

Associated registers

None

Extension registers

SRVANNC2

Associated logs

None

SRVMCCS

Register type

Peg

Description

SRVMCCS counts the number of times a call is identified as a MCCS call and the originating trunk is an ISUP FGD or ISUP IMT.

Associated registers

None

Extension registers

SRVMCCS2

Associated logs

None

SRVRA**Register type**

Peg

Description

SRVRA counts the number of times route advance is invoked for calls originating on ISUP FGD or ISUP IMT trunks.

Associated registers

None

Extension registers

SRVRA2

Associated logs

None

SRVRLT**Register type**

Peg

Description

SRVRLT counts the number of times RLT bridging service for third-party interaction or ESP-initiated call back is activated and the originating trunk of call 1 or the terminating trunk of call 2 is an ISUP FGD or ISUP IMT trunk. For RLT Redirect and Transfer activation, this register is pegged when the originating trunk is an ISUP FGD or ISUP IMT trunk. This register is also pegged for PRI RLT calls.

Associated registers

None

Extension registers

SRVRLT2

Associated logs

None

SRVREORG**Register type**

Peg

Description

SRVREORG counts the number of times Reorigination is activated on an ISUP FGD or ISUP IMT originating trunk.

Associated registers

None

Extension registers

SRVREOR2

Associated logs

None

SRVSBDP**Register type**

Peg

Description

SRVSBDP counts the number of times a call requires subscriber dialed digits on an ISUP FGD or ISUP IMT originating trunk.

Associated registers

None

Extension registers

SRVSBDP2

Associated logs

None

SIMRING

Description

OM group RES Simultaneous Ringing User Interface (SIMRING) measures the number of:

- subscriber attempts to activate and deactivate the Simultaneous Ringing (SIMRING) feature
- requests for off-board service updates or changes. With the Off-board Service Control feature, off-board service updates peg certain 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.

- SIMRING list editing acceptances and failures
- failed attempts to establish a call between the SIMRING group pilot directory number (PDN) and non-pilot member DNs (NPMDN)

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

Key field	Info field
None	None

Related functional groups

There are no functional groups associated with OM group SIMRING.

Registers

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

Registers for OM group SIMRING

Register name	Measures
SIMRACT	SIMRING activation
SIMRDACT	SIMRING deactivation
SIMREATT	SIMRING editing attempts
SIMREDEN	SIMRING editing denied attempts
SIMREOVF	SIMRING editing overflow
SIMRFAIL	SIMRING call failure
SIMRINV	SIMRING invalid NPMDN entered

SIMRACT

Register type

Peg

Description

SIMRACT counts subscriber attempts to activate the SIMRING feature. This register increments at the end of the editing session when the SIMRING state

- is inactive when the subscriber enters the editing session.
- changes to active when the subscriber exits the editing session.

For DMS only: SIMRACT counts the number of times a subscriber activates SIMRING service. Similar to the operations performed in a service access code controlled edit session, the register is pegged for each occurrence of an off-board service update activation request.

Associated registers

None

Extension registers

None

Associated logs

None

SIMRDACT**Register type**

Peg

Description

SIMRDACT counts subscriber attempts to deactivate the SIMRING feature. This register increments at the end of the editing session when the SIMRING state

- is active when the subscriber enters the editing session.
- changes to inactive when the subscriber exits the editing session.

For DMS only: SIMRDACT counts the number of times a subscriber deactivates SIMRING service. Similar to the operations performed in a service access code controlled edit session, the register is pegged for each occurrence of an off-board service update activation request.

Associated registers

None

Extension registers

None

Associated logs

None

SIMREATT**Register type**

Peg

Description

SIMREATT counts subscriber attempts to start the SIMRING user interface.

For DMS only: SIMREATT is pegged each time a subscriber uses an edit session to update SIMRING programmed data. Similar to the operations performed in a service access code controlled edit session, SIMREATT is pegged for each off-board service update request to do the following:

- add a DN to a subscriber SIMRING list
- delete a DN from a subscriber SIMRING list

Associated registers

None

Extension registers

None

Associated logs

None

SIMREDEN**Register type**

Peg

Description

SIMREDEN counts subscriber attempts to start SIMRING list editing sessions that fail because:

- the line does not have the SIMRING feature assigned.
- the SLE tuple does not exist, or the SLE tuple exists but the customer group does not have SLE enabled.

The call routes to the feature not allowed (FNAL) treatment.

For DMS only: SIMREDEN is pegged when a subscriber attempts to update SIMRING programmed data using an edit session, and the attempt is denied. SIMREDEN is pegged when the following is true for a given SIMRING off-board service update request:

- SLE is not enabled in table CUSTSTN.
- SCF is not enabled in table RESOFC.

Associated registers

None

Extension registers

None

Associated logs

None

SIMREOVF**Register type**

Peg

Description

SIMREOVF counts attempts to start SIMRING list editing sessions that fail because

- SIMRING cannot start digit collection while collecting the user input (adding a new NPMDN through the user interface).
- SIMRING cannot play announcements (at any point during the user interface session).
- System failures occur or not enough resources are available (at any point during the user interface session).
- The number of Screening List Editing (SLE) sessions exceeds the allowed limit (SLE_MAX_PROGRAMMERS in table OFCENG) while starting a new session.

If SIMREOVF increments because of the lack of hardware resources, the call routes to no service circuits (NOSC) treatment. If SIMREOVF increments because of the lack of software resources, the call routes to no software resources (NOSR) treatment.

Associated registers

None

Extension registers

None

Associated logs

None

SIMRFAIL**Register type**

Peg

Description

SIMRFAIL counts attempts to establish PDN-to-NPMDN call legs that fail because not enough clone virtual identifiers (CVID) are available.

Associated registers

None

Extension registers

None

Associated logs

None

SIMRINV**Register type**

Peg

Description

SIMRINV counts attempts to add an invalid NPMDN (for example, an intraswitch POTS DN) during an editing session.

Associated registers

None

Extension registers

None

Associated logs

None

SITE

Description

OM group SITE provides information about traffic-related counts and dial-tone speed recording (DTSR). The operating company uses DTSR to measure the ability of the switch to return a dial-tone within three seconds.

The DTSR test sends commands on two separate line concentrating module (LCM)-based remotes at each site every 4 seconds. These two commands cause LCM-based remote sites to send messages to central control (CC). These messages appear to originate from a dial pulse and a Digitone line in the sequence given. For each call, the central processor uses the processing code to find the following paths:

- through the originating LCM-based remote
- to an available dual-tone multi frequency (DTMF) receiver

The CC sends LCM-based remote a message indicating that setup is complete. The LCM-based remote returns a message that indicates more than 3 seconds elapse before the dial-tone passes to the target line. If the CC does not receive this message by the next test run, the CC increases the delay count register. The CC also increases the delay count register when a message shows a delay of more than 3 seconds.

The system cancels DTSR if a switch experiences receiver queue overflow on Digitone receivers. The system disables DTSR during degradation conditions if office parameter DTSR_AUTO_DEACTIVATION_ENABLE in table OFCENG equals TRUE. If this parameter equals FALSE, the system does not disable DTSR during degradation conditions.

DPTESTC, DPDELAY, DTTESTC, and DTDELAY apply to offices with remote line modules (RLM) only. All other registers apply to offices with remote lines on new peripherals that connect by the line group controller (LGC) or subscriber module remote (SMR).

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

Key field	Info field
SITE_INDEX	SITE_MODULE_COUNT
SITE_INDEX is the site index and external identifier. The range of this field is 1 to 255. The system automatically assigns a value when you enter a tuple in table SITE.	SITE_MODULE_COUNT is the number of peripheral modules assigned the SITE name.

Note: The system deactivates DTSR under degraded conditions if parameter DTSR_AUTO_DEACTIVATION_ENABLE in table OFCENG equals TRUE.

Related functional groups

There are no functional groups associated with OM group SITE.

Registers

OM group SITE contains registers for RLMs and remote peripheral modules (RPM). The following table lists the registers by type, including extension registers.

RLM and RPM registers in OM group SITE (Sheet 1 of 2)

Registers for RLMs	Registers for RPMs
INTRASIT	INTRASIT
INTERSIT	INTERSIT
RORIGOUT	RORIGOUT
INRTERM	INRTERM
DPTESTC	LMDP_T
DPDELAY	LMDP_D
DTTESTC	LMDT_T
DTDELAY	LMDT_D
	LCMDP_T

RLM and RPM registers in OM group SITE (Sheet 2 of 2)

Registers for RLMs	Registers for RPMs
	LCMDP_T2
	LCMDP_D
	LCMDP_D2
	LCMDT_T
	LCMDT_T2
	LCMDT_D
	LCMDT_D2
	LCMKS_T
	LCMKS_T2
	LCMKS_D
	LCMKS_D2
	RCTDP_T
	RCTDP_T2
	RCTDP_D
	RCTDP_D2
	RCTDT_T
	RCTDT_T2
	RCTDT_D
	RCTDT_D2
	DLMKS_T
	DLMKS_T2
	DLMKS_D
	DLMKS_D2

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

Note: OM group SITE contains one tuple for each site up to a maximum of 255 tuples. The HOST index is zero (0), but does not have a tuple in this OM group.

Registers for OM group SITE (Sheet 1 of 2)

Register name	Measures
DLMKS_D	Digital line module key driven set delay
DLMKS_T	Digital line module key driven set total
DPDELAY	Dial pulse delay
DPTESTC	Dial pulse test calls
DTDELAY	Digitone delay
DTTESTC	Digitone test calls
INRTERM	Incoming routed to terminating
INTERSIT	Intersite
INTRASIT	Intrasite
LCMDP_D	Line concentrating module dial pulse delay
LCMDP_T	Line concentrating module dial pulse total
LCMDT_D	Line concentrating module digitone delay
LCMDT_T	Line concentrating module digitone total
LCMKS_D	Line concentrating module key-driven delay
LCMKS_T	Line concentrating module key-driven set total
LMDP_D	Line module dial pulse delay
LMDP_T	Line module dial pulse test
LMDT_D	Line module digitone delay
LMDT_T	Line module digitone total

Registers for OM group SITE (Sheet 2 of 2)

Register name	Measures
RCTDP_D	Remote concentrating terminal dial pulse delay
RCTDP_T	Remote concentrating terminal dial pulse total
RCTDT_D	Remote concentrating terminal digitone delay
RCTDT_T	Remote concentrating terminal digitone total
RORIGOUT	Remote originating to outgoing

DLMKS_D**Register type**

Peg

Description

DLMKS_D counts calls for which dial-tone delays exceed 3 seconds for key-driven set lines on digital line modules. The system updates this register every 15 minutes before the OM transfer process.

Associated registers

None

Extension registers

DLMKS_D2

Associated logs

None

DLMKS_T**Register type**

Peg

Description

DLMKS_T counts test calls on key-driven set lines on digital line modules. The system updates this register every 15 minutes before the OM transfer process.

Associated registers

None

Extension registers

DLMKS_T2

Associated logs

None

DPDELAY**Register type**

Peg

Description

DPDELAY counts DTSR test calls on dial pulse lines that have one of the following conditions:

- a dial tone delay that exceeds 3 seconds
- a previous DTSR test that is still in progress on the remote line module (RLM)

The system initiates a test on an RLM at each site every 4 seconds. A high count in this register indicates either high switch use, trouble on the RLM, or a blocked channel.

Associated registers

None

Extension registers

None

Associated logs

None

DPTESTC**Register type**

Peg

Description

DPTESTC counts DTSR test calls that are on dial pulse lines. The register increases after the system determines the test result.

Associated registers

None

Extension registers

None

Associated logs

None

DTDELAY**Register type**

Peg

Description

DTDELAY counts DTSR test calls on Digitone lines that experience one of the following conditions:

- a dial tone delay that exceeds 3 seconds
- a DTMF receiver queue overflow
- a previous DTSR test still in progress on the RLM

The system initiates a test on an RLM at each site every 4 seconds. A high count in the register indicates either high switch use, trouble on the RLM, a blocked channel, or not enough available DTMF receivers.

Associated registers

None

Extension registers

None

Associated logs

None

DTTESTC**Register type**

Peg

Description

DTTESTC counts DTSR test calls that are on Digitone lines. The register increases after the system determines the test result.

Associated registers

None

Extension registers

None

Associated logs

None

INRTERM**Register type**

Peg

Description

INRTERM counts incoming calls that the system first routes to a line at a remote site.

Associated registers

OFZ_NIN, OFZ_INTRM, TRK_INCATOT. These registers count incoming calls.

Extension registers

None

Associated logs

None

INTERSIT**Register type**

Peg

Description

INTERSIT counts calls that the system routes to a line at another site. These calls originate at the following locations:

- a remote line module (RLM)
- a remote line concentrating module (RLCM)
- a remote switching center (RSC)
- a remote concentrating terminal (RCT)

INTERSIT increases:

- before the system makes an attempt to set up network connections between the two lines
- before the originating office determines if the called line is busy or unavailable

Associated registers

OFZ_NORIG, OFZ_ORIGTRM, and LMD_NORIGATT. These registers count calls that originate on an RLM.

Extension registers

None

Associated logs

None

INTRASIT**Register type**

Peg

Description

INTRASIT counts calls that originate on an RLM, RLCM, RSC, or RCT. The system routes to another line at the same remote site. INTRASIT increases:

- before the system makes an attempt to set up network connections between the two lines
- before the originating office determines if the called line is busy or unavailable

Associated registers

OFZ_NORIG, OFZ_ORIGTRM, LMD_NORIGATT, LMD_REVERT.
These registers count calls that originate on an RLM.

Extension registers

None

Associated logs

None

LCMDP_D**Register type**

Peg

Description

LCMDP_D counts calls that experience dial-tone delays that exceed 3 seconds for dial pulse lines on LCM-based remote sites. The system updates this register every 15 minutes before the OM transfer process. A high count in this register indicates either high switch use, trouble on LCM-based remote sites, or a blocked channel.

Associated registers

None

Extension registers

LCMDP_D2

Associated logs

None

LCMDP_T**Register type**

Peg

Description

LCMDP_T counts calls on dial pulse lines on LCM-based remotes. The system updates this register every 15 minutes before the OM transfer process.

Associated registers

None

Extension registers

LCMDP_T2

Associated logs

None

LCMDT_D**Register type**

Peg

Description

LCMDT_D counts calls for Digitone lines on LCM-based remotes that experience either a dial tone delay that exceeds 3 seconds or a DTMF receiver queue overflow.

The system updates this register every 15 minutes before the OM transfer process. A high count in this register indicates either high switch use, trouble on LCM-based remotes, a blocked channel, or not enough DTMF receivers.

Associated registers

None

Extension registers

LCMDT_D2

Associated logs

None

LCMDT_T**Register type**

Peg

Description

LCMDT_T counts calls for Digitone lines on LCM-based remotes. The system updates this register every 15 minutes before the OM transfer process.

Associated registers

None

Extension registers

LCMDT_T2

Associated logs

None

LCMKS_D**Register type**

Peg

Description

LCMKS_D counts calls for key-driven set lines (for example, business sets and data units) on LCM-based remote sites that experience a dial-tone delay that exceeds 3 seconds.

The system updates this register every 15 minutes before the OM transfer process. A high count in this register indicates either high switch use, trouble on the LCM-based remote, or a blocked channel.

Associated registers

None

Extension registers

LCMKS_D2

Associated logs

None

LCMKS_T**Register type**

Peg

Description

LCMKS_T counts test calls on key-driven set lines on LCM-based remotes. The system updates this register every 15 minutes before the OM transfer process.

Associated registers

None

Extension registers

LCMKS_T2

Associated logs

None

LMDP_D**Register type**

Peg

Description

LMDP_D counts DTSR test calls for dial pulse lines on the remote line module (RLM) that experience one of the following conditions:

- a dial tone delay that exceeds 3 seconds
- a previous DTSR test is still in progress on the RLM

The system initiates a test on an RLM at the site every 4 seconds. A high number of delayed calls indicates either high switch use, trouble on the RLM, or a blocked channel.

Associated registers

None

Extension registers

None

Associated logs

None

LMDP_T**Register type**

Peg

Description

LMDP_T counts DTSR test calls on RLM dial pulse lines. This register increases after the test result.

Associated registers

None

Extension registers

None

Associated logs

None

LMDT_D**Register type**

Peg

Description

LMDT_D counts DTSR test calls for Digitone lines on RLMs that experience one of the following conditions:

- a dial tone delay that exceeds 3 seconds
- a DTMF receiver queue overflow
- a previous DTSR test still in progress on the RLM

The system initiates a test on an RLM at the site every 4 seconds. A high number of delayed calls indicates either high switch use, trouble on the RLM, or a blocked channel.

Associated registers

None

Extension registers

None

Associated logs

None

LMDT_T**Register type**

Peg

Description

LMDT_T counts DTSR test calls for Digitone lines on the RLM. This register increases after the system determines the test result.

Associated registers

None

Extension registers

None

Associated logs

None

RCTDP_D**Register type**

Peg

Description

RCTDP_D counts calls for dial pulse lines on RCTs that experience a dial tone delay that exceeds 3 seconds. A high count in this register indicates either high switch use, trouble on the RCT, or a blocked channel.

Associated registers

None

Extension registers

RCTDP_D2

Associated logs

None

RCTDP_T**Register type**

Peg

Description

RCTDP_T counts calls on dial pulse lines on RCTs. The system updates this register every 15 minutes before the OM transfer process.

Associated registers

None

Extension registers

RCTDP_T2

Associated logs

None

RCTDT_D**Register type**

Peg

Description

RCTDT_D counts calls for Digitone lines on RCT that experience a dial tone delay that exceeds 3 seconds or a DTMF receiver queue overflow. A high count in this register indicates either high switch use, trouble on the RCT, a blocked channel, or not enough available receivers.

Associated registers

None

Extension registers

RCTDT_D2

Associated logs

None

RCTDT_T**Register type**

Peg

Description

RCTDT_T and RCTDT_T2 count calls on Digitone lines on RCTs. The system updates this register every 15 minutes before the OM transfer.

Associated registers

None

Extension registers

RCTDT_T2

Associated logs

None

RORIGOUT**Register type**

Peg

Description

RORIGOUT counts calls that originate on an RLM, RLCM, RSC, or RCT that the system routes to a trunk.

Associated registers

OFZ_NORIG, OFZ_ORIGOUT, LMD_NORIGATT, TRK_NATTMPT. These registers count calls that originate on an RLM for the specified line module and trunk group.

Extension registers

None

Associated logs

None

SITE2

Description

OM group SITE2 provides information about traffic-related counts and dial-tone speed recording (DTSR). This information is available for offices with lines connected to the following site types:

- remote concentrator SLC-96 (RCS)
- remote carrier urban (RCU)
- remote digital terminal (RDT)

For each site, separate registers keep statistics for the Digitone, dial pulse, and key set line types.

OM group DTSR provides information on the ability of the switch to return a dial tone within 3 seconds. The system disables DTSR if a switch detects queue overflows on dual tone multi frequency (DTMF) receivers. The system disables DTSR during degraded conditions if office parameter DTSR_AUTO_DEACTIVATION_ENABLE in table OFCENG equals TRUE. If this parameter equals FALSE, the system does not disable DTSR during degraded conditions.

The following table lists the key and info fields associated with OM group SITE2.

Key field	Info field
SITE_INDEX	SITE_MODULE_COUNT
SITE_INDEX is the site index and external identifier. The range of this field is 1 to 255. The system automatically assigns a value when you enter a tuple in table SITE.	SITE_MODULE_COUNT is the number of peripheral modules assigned the SITE name.

Note: The system deactivates DTSR under degraded conditions if parameter DTSR_AUTO_DEACTIVATION_ENABLE in table OFCENG equals TRUE.

Related functional groups

The subscriber module DMS 1 urban (SMU) functional group is associated with OM group SITE2.

Registers

The following table lists the registers associated with OM group SITE2 and what they measure. For a description of a register, click on the register name.

Note: OM group SITE2 has a maximum of 255 tuples.

Registers for OM group SITE2

Register name	Measures
RCSDP_D	RCS dial pulse delay
RCSDP_T	RCS dial pulse total
RCSDT_D	RCS digitone delay
RCSDT_T	RCS digitone total
RCUDP_D	RCU dial pulse delay
RCUDP_T	RCU dial pulse total
RCUDT_D	RCU digitone delay
RCUDT_T	RCU digitone total
RCUKS_D	RCU key set delays
RCUKS_T	RCU key set total
RDTDP_D	RDT dial pulse delay
RDTDP_T	RDT dial pulse total
RDTDT_D	RDT digitone delay
RDTDT_T	RDT digitone total
RDTKS_D	RDT key set delay
RDTKS_T	RDT key set total

RCSDP_D

Register type

Peg

Description

RCSDP_D counts test calls on RCS lines for a dial tone delay greater than 3 seconds. A high number of delayed calls means either high switch use, trouble on the RCS, or a blocked channel.

Associated registers

None

Extension registers

RCSDP_D2

Associated logs

None

RCSDP_T**Register type**

Peg

Description

RCSDP_T counts test calls on RCS lines. The system updates this register every 15 minutes before the OM transfer process.

Associated registers

None

Extension registers

RCSDP_T2

Associated logs

None

RCSDT_D**Register type**

Peg

Description

RCSDT_D counts test calls on RCS Digitone lines that have one of the following conditions:

- a dial tone delay exceeds 3 seconds
- DTMF receiver queue overflow
- DTMF receivers are not available

Associated registers

None

Extension registers

RCSDT_D2

Associated logs

None

RCSDT_T**Register type**

Peg

Description

RCSDT_T counts test calls on RCS Digitone lines. The system updates this register every 15 minutes before the OM transfer process.

Associated registers

None

Extension registers

RCSDT_T2

Associated logs

None

RCUDP_D**Register type**

Peg

Description

RCUDP_D counts test calls on RCU dial pulse lines for dial tone delay greater than 3 seconds. A high number of delayed calls means either high switch use, trouble on the RCU, or a blocked channel.

Associated registers

None

Extension registers

RCUDP_D2

Associated logs

None

RCUDP_T**Register type**

Peg

Description

RCUDP_T counts test calls on RCU dial pulse lines. The system updates this register every 15 minutes before the OM transfer process.

Associated registers

None

Extension registers

RCUDP_T2

Associated logs

None

RCUDT_D**Register type**

Peg

Description

RCUDT_D counts test calls on RCU Digitone lines that have one of the following conditions:

- a dial tone delay that exceeds 3 seconds
- a DTMF receiver queue overflow

A high number of delayed calls means either high switch use, trouble on the RCU, channel congestion, or not enough available receivers.

Associated registers

None

Extension registers

RCUDT_D2

Associated logs

None

RCUDT_T**Register type**

Peg

Description

RCUDT_T counts test calls on RCU Digitone lines. The system updates this register every 15 minutes before the OM transfer process.

Associated registers

None

Extension registers

RCUDT_T2

Associated logs

None

RCUKS_D**Register type**

Peg

Description

RCUKS_D counts dial tones that exceed 3 seconds on Meridian business set (MBS) lines that are attached to an RCU. A high number of delayed calls means either high switch use, trouble on the RCU, or a blocked channel.

Associated registers

None

Extension registers

RCUKS_D2

Associated logs

None

RCUKS_T**Register type**

Peg

Description

RCUKS_T counts the dial tones that the system applies to MBS lines attached to an RCU. The system updates this register every 15 minutes before the OM transfer process.

Associated registers

None

Extension registers

RCUKS_T2

Associated logs

None

RDTDP_D**Register type**

Peg

Description

RDTDP_D counts calls that the system samples on RDT dial pulse lines when dial tone delay exceeds 3 seconds.

Associated registers

None

Extension registers

RDTDP_D2

Associated logs

None

RDTDP_T**Register type**

Peg

Description

RDTDP_T counts calls that the system samples on RDT dial pulse lines. The system updates this register every 15 minutes before the OM transfer process.

Associated registers

None

Extension registers

RDTDP_T2

Associated logs

None

RDTDT_D**Register type**

Peg

Description

RDTDT_D counts calls that the system samples on RDT Digitone lines when the dial tone delay exceeds 3 seconds.

Associated registers

None

Extension registers

RDTDT_D2

Associated logs

None

RDTDT_T**Register type**

Peg

Description

RDTDT_T counts calls that the system samples on RDT Digitone lines. The system updates this register every 15 minutes before the OM transfer process.

Associated registers

None

Extension registers

RDTDT_T2

Associated logs

None

RDTKS_D**Register type**

Peg

Description

RDTKS_D counts calls that the system samples on RDT key set signaling when the dial tone delay exceeds 3 seconds.

Associated registers

None

Extension registers

RDTKS_D2

Associated logs

None

RDTKS_T**Register type**

Peg

Description

RDTKS_T counts calls that the system samples on RDT key set signaling. The system updates this register every 15 minutes before the OM transfer process.

Associated registers

None

Extension registers

RDTKS_T2

Associated logs

None

SITE3

Description

OM group Traffic and Dial Tone Speed Recording, Remote Sites 3 (SITE3) provides statistics for dial tone speed recording (DTSR) on intelligent peripheral equipment (IPE) for analog and digital lines. SITE3 contains 12 registers that count

- the number of calls sampled on IDE dial pulse (DP) lines
- the number of calls sampled on IPE DP lines when the dial tone delay is more than 3 seconds
- the number of calls sampled on IPE digitone (DT) lines
- the number of calls sampled on IPE DT lines when the dial tone delay is more than 3 seconds
- the number of calls sampled on IPE key set (KS) lines
- the number of calls sampled on IPE KS lines when the dial tone delay is more than 3 seconds

The following table lists the key and info fields associated with OM group SITE3:

Key field	Info field
SITE_INDEX	SITE_MODULE_COUNT

Related functional groups

The following functional groups are associated with OM group SITE3:

- DMS-100
- Meridian SL-100
- Meridian Digital Centrex

Registers

The following table lists the registers associated with OM group SITE3 and what they measure. For a detailed description of a register, click on the register name.

Registers for OM group SITE3

Register name	Measures
IPEDP_T	Intelligent Peripheral Equipment Dial Pulse total
IPEDP_D	IPE DP delay
IPEDT_T	IPE Digitone (DT) total
IPEDT_D	IPE DT delay
IPEKS_T	IPE Key Set (KS) total
IPEKS_D	IPE KS delay

IPEDP_T

Register type

Peg

Description

IPEDT_T counts the number of DTSR calls sampled on IPE DT lines.

Associated registers

None

Extension registers

IPEDP_T2

Associated logs

None

IPEDP_D

Register type

Peg

Description

IPEDT_D counts the number of DTSR calls sampled on IPE DT lines for which the dial-tone delay is more than 3 seconds.

Associated registers

None

Extension registers

IPEDP_D2

Associated logs

None

IPEDT_T**Register type**

Peg

Description

IPEDT_T counts the number of DTSR calls sampled on IPE DT lines.

Associated registers

None

Extension registers

IPEDT_T2

Associated logs

None

IPEDT_D**Register type**

Peg

Description

IPEDT_D counts the number of DTSR calls sampled on IPE DT lines for which the dial-tone delay is more than 3 seconds.

Associated registers

None

Extension registers

IPEDT_D2

Associated logs

None

IPEKS_T**Register type**

Peg

Description

IPEKS_T counts the number of DTSR calls sampled on IPE KS lines.

Associated registers

None

Extension registers

IPEKS_T2

Associated logs

None

IPEKS_D**Register type**

Peg

Description

IPEKS_D counts the number of DTSR calls sampled on IPE KS lines for which the dial-tone delay is more than 3 seconds.

Associated registers

None

Extension registers

IPEKS_D2

Associated logs

None

SMSTOPS

Description

OM group Short Message Service - TOPS (SMSTOPS) records application-level events for the Traffic Operator Position System (TOPS) short message service (SMS). SMSTOPS records SMS events previously recorded in OM group IS41TOPS, which is deleted in SN07. For details, refer to the section for OM group IS41TOPS.

The following table lists the key and info fields associated with OM group SMSTOPS. The group provides one tuple for each wireless network type.

Key field	Info field
IS41, GSM	None

Related functional groups

There are no functional groups associated with OM group SMSTOPS.

Registers

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

Registers for OM group SMSTOPS

Register name	Measures
SMSENT	SMS sent
SMSSUCC	SMS success
SMSFAIL	SMS failure
SMSTIME	SMS time-out
SMSNETWK	SMS network failure
SMSTERM	SMS terminal (cell phone) failure
SMSRADIO	SMS radio interface failure
SMSMISC	SMS miscellaneous failure

Every SMS attempt pegs SMSSSENT plus one of the other SMSTOPS registers. If an acknowledgement arrives after the specified time period, SMSSUCC and SMSTIME are pegged.

The value of SMSSSENT should be close to the value of SMSSUCC. Period boundaries cause minor differences in the values. Major differences between the values indicate failures either at the TOPS, in the SS7 network, or at the message center.

SMSSSENT

Register type

Peg

Description

SMSSSENT increments when the TOPS sends an SMS to a message center.

Associated registers

None

Extension registers

SMSSSENT2

Associated logs

None

SMSSUCC

Register type

Peg

Description

SMSSUCC increments when the TOPS receives a successful acknowledgement from a message center after an SMS attempt.

Associated registers

None

Extension registers

SMSSUCC2

Associated logs

None

SMSFAIL

Register type

Peg

Description

SMSFAIL increments when the TOPS receives a negative acknowledgement from the message center after an SMS attempt.

Associated registers

None

Extension registers

SMSFAIL2

Associated logs

TOPS131, TCAP100

SMSTIME**Register type**

Peg

Description

SMS increments when the TOPS does not receive acknowledgement from a message center after an SMS attempt in a specific time period. The time period is datafilled in parameter SMS_TIMEOUT in table TOPSPARM.

Associated registers

None

Extension registers

SMSTIME2

Associated logs

TOPS131

SMSNETWK**Register type**

Peg

Description

SMSNETWK increments when the TOPS receives a negative acknowledgement from a message center indicating that the message could not be delivered because of a network failure.

Associated registers

None

Extension registers

None

Associated logs

TOPS131

SMSTERM**Register type**

Peg

Description

SMSTERM increments when the TOPS receives a negative acknowledgement from the message center indicating that the message could not be delivered because of a terminal (cell phone) failure.

Associated registers

None

Extension registers

None

Associated logs

TOPS131

SMSRADIO**Register type**

Peg

Description

SMSRADIO increments when the TOPS receives a negative acknowledgement from the message center indicating that the message could not be delivered because of a radio interface failure.

Associated registers

None

Extension registers

None

Associated logs

TOPS131

SMSMISC**Register type**

Peg

Description

SMSMISC increments when the TOPS receives a negative acknowledgement from the message center indicating that the message could not be delivered because of a failure other than a network, terminal, or radio interface failure.

Associated registers

None

Extension registers

None

Associated logs

TOPS131

SPMACT

Description

OM group SPM Activity Counting (SPMACT) provides information about CEM processor occupancy. It also provides information about origination and termination counts that display real-time in the CEM processor. This OM group is provided for all types of DMS offices.

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

Key field	Info field
nil_type_id	SOTS_NODE_INFO_TYPE

Related functional groups

There are no functional groups associated with OM group SPMACT.

Registers

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

Registers for OM group SPMACT (Sheet 1 of 2)

Register name	Measures
AVGCEMAP	CEM average application class occupancy (AVGCEMAP)
AVGCEMBK	CEM average background class occupancy (AVGCEMBK)
AVGCEMSY	CEM average system class occupancy (AVGCEMSY)
AVGORIG	Average originations (AVGORIG)
AVGTERM	Average terminations (AVGTERM)
CAPINDEX	Capacity Index (CAPINDEX)
CEMAPPHI	CEM application occupancy high watermark (CEMAPPHI)

Registers for OM group SPMACT (Sheet 2 of 2)

Register name	Measures
CEMBAKHI	CEM background class high watermark (CEMBAKHI)
CEMSYSHI	CEM system class occupancy high watermark (CEMSYSHI)
NUMREPTS	Number of reports (NUMREPTS)
ORIGHI	Originations high watermark (ORIGHI)
TERMHI	Terminations high watermark (TERMHI)
TOTLORIG	Total originations (TOTLORIG)
TOTLTERM	Total terminations (TOTLTERM)

AVGCCEMAP**Register type**

Peg

Description

AVGCCEMAP displays the average application class occupancy of the CEMs per time interval.

Associated registers

None

Extension registers

None

Associated logs

None

AVGCCEMBK**Register type**

Peg

Description

AVGCCEMBK displays the average background class occupancy of the CEMs per time interval.

Associated registers

None

Extension registers

None

Associated logs

None

AVGCEMSY**Register type**

Peg

Description

AVGCEMSY displays the average system class occupancy of the CEMs per time interval.

Associated registers

None

Extension registers

None

Associated logs

None

AVGORIG**Register type**

Peg

Description

AVGORIG displays the average number of originations per time interval.

Associated registers

None

Extension registers

None

Associated logs

None

AVGTERM**Register type**

Peg

Description

AVGTERM displays the average number of terminations per time interval.

Associated registers

None

Extension registers

None

Associated logs

None

CAPINDEX**Register type**

Index. CAPINDEX is not a typical peg or usage register.

Description

CAPINDEX indicates the capacity level that is running on the SPM. Possible values are 0, 1, or 2. These values correspond to regular, enhanced, and premium capacities.

Associated registers

None

Extension registers

None

Associated logs

None

CEMAPPHI**Register type**

Peg

Description

CEMAPPHI displays the largest value of samples taken during the collection interval.

Associated registers

None

Extension registers

None

Associated logs

None

CEMBAKHI**Register type**

Peg

Description

CEMBAKHI displays the largest value of samples taken during the collection interval.

Associated registers

None

Extension registers

None

Associated logs

None

CEMSYSHI**Register type**

Peg

Description

CEMSYSHI displays the largest value of samples taken during the collection interval.

Associated registers

None

Extension registers

None

Associated logs

None

NUMREPTS**Register type**

Peg

Description

NUMREPTS counts the number of reports received.

Associated registers

None

Extension registers

None

Associated logs

None

ORIGHI**Register type**

Peg

Description

ORIGHI displays the largest value of samples taken during the collection interval.

Associated registers

None

Extension registers

None

Associated logs

None

TERMHI**Register type**

Peg

Description

TERMHI displays the largest value of samples taken during the collection interval.

Associated registers

None

Extension registers

None

Associated logs

None

TOTLORIG**Register type**

Peg

Description

TOTLORIG is a summary of the total originations data collected during the time interval.

Associated registers

None

Extension registers

None

Associated logs

None

TOTLTERM**Register type**

Peg

Description

TOTLTERM is a summary of the total terminations data collected during the time interval.

Associated registers

None

Extension registers

None

Associated logs

None

SPMOVLD

Description

OM group Spectrum Overload Statistics (SPMOVLD) measures peak traffic levels of the NTLX82BA CEM card that are in excess of the SPM engineering limit. CEM enhanced processing increases card performance to approximately twice that of an NTLX82AA card. Premium processing increases performance by approximately three times.

The following components control the number of calls handled by an SPM-based node:

- System overload control (SOC) subsystem
- SPM flow control system

All system overload control component registers start with an 'S'; all other registers apply to the flow control system.

The CAPINDEX register in the SPMACT OM group provides the SPM node capacity level which is used for determining overload conditions.

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

Key field	Info field
spm_no Range: (0 to 85)	SOTS_NODE_INFO_TYPE

Peg and usage counts accumulate on the SPM node and upload to the OM group using the Spectrum OM Transfer System (SOTS).

Related functional groups

There are no functional groups associated with OM group SPMOVLD.

Registers

The following table lists the SPMOLVD OM group registers.

Registers for the SPMOLVD OM group

Register name	Measures
<u>OVLNUM</u>	Overload number
<u>OVLDPNUM</u>	Overload pending number
<u>OVLUSG</u>	Overload usage
<u>OVLDPUSG</u>	Overload pending usage
<u>CLSDLYD</u>	Calls delayed
<u>CLSDND</u>	Calls denied
<u>CLSPTQ</u>	Calls per terminal queue
<u>CLSABDN</u>	Calls abandoned
<u>CLSMSC</u>	Calls miscellaneous
<u>SOVLNUM</u>	SOC Overload number
<u>SOVLUSG</u>	SOC overload usage
<u>SCLSDLYD</u>	SOC calls delayed
<u>SCLSDND</u>	SOC calls denied
<u>SCLSABDN</u>	SOC calls abandoned
<u>SNUMORIG</u>	SOC number of originations
<u>SMSGLOST</u>	SOC messages lost
<u>SMSGPTQ</u>	SOC message PTQ
<u>SHDROVFL</u>	SOC header overflow

OVLDPNUM**Register type**

Peg

Description

OVLDPNUM counts the number of times the node entered overload due to the flow control component.

Associated registers

None

Extension registers

None

Associated logs

SPM399

OVLDPNUM**Register type**

Peg

Description

OVLDPNUM counts the number of times the node entered 'overload pending' due to the flow control component

Associated registers

None

Extension registers

None

Associated logs

SPM399

OVLDPUSG**Register type**

Usage

Scan rate

Not applicable

Description

OVLDPUSG measures the number of seconds the node was in overload due to the flow control component.

Associated registers

None

Extension registers

None

Associated logs

None

OVLDPUSG**Register type**

Usage

Scan rate

Not applicable

Description

OVLDPUSG measures the number of seconds the node was in 'overload pending' due to the flow control component.

Associated registers

None

Extension registers

None

Associated logs

None

CLSDLYD**Register type**

Peg

Description

CLSDLYD counts the number of calls delayed by the node due to the flow control component.

Associated registers

None

Extension registers

None

Associated logs

None

CLSDND**Register type**

Peg

Description

CLSDND counts the number of calls that were denied caused by too many calls in the flow control component.

Associated registers

None

Extension registers

None

Associated logs

None

CLSPTQ**Register type**

Peg

Description

CLSPTQ counts the number of calls denied caused by too many messages on a per terminal queue in the flow control component.

Associated registers

None

Extension registers

None

Associated logs

None

CLSABDN**Register type**

Peg

Description

CLSABDN counts the number of calls that were abandoned by the node in the flow control component.

Associated registers

None

Extension registers

None

Associated logs

None

CLSMSC**Register type**

Peg

Description

CLSMSC counts the number of calls lost to miscellaneous resource failures in the flow control component.

Associated registers

None

Extension registers

None

Associated logs

None

SOVLDNUM**Register type**

Peg

Description

SOVLDNUM counts the number of times the node entered overload (the CEM is in a beyond capacity state).

Associated registers

None

Extension registers

None

Associated logs

None

SOVLDUSG**Register type**

Peg

Description

SOVLDUSG counts the number of messages that were processed by the system overload component while the CEM was in a beyond capacity state.

Associated registers

None

Extension registers

None

Associated logs

None

SCLSDLYD**Register type**

Peg

Description

SCLSDLYD counts the number of calls delayed by the system overload component.

Associated registers

None

Extension registers

None

Associated logs

None

SCLSDND**Register type**

Peg

Description

SCLSDND counts the number of calls that were lost for any reason. The register includes origination messages counted in registers [MSGPTQ](#) and [SHDROVFL](#).

Associated registers

None

Extension registers

None

Associated logs

None

SCLSABDN**Register type**

Peg

Description

SCLSABDN counts the number of calls that were abandoned due to the system overload component.

Associated registers

None

Extension registers

None

Associated logs

None

SNUMORIG**Register type**

Peg

Description

SNUMORIG counts the number of originations passing through the system overload component whether or not they were delayed.

Associated registers

None

Extension registers

None

Associated logs

None

SMSGLOST**Register type**

Peg

Description

SMSGLOST the number of messages that were of messages lost because of system overload control limits. The register includes messages counted in registers [SMSGPTQ](#) and [SHDROVFL](#).

Associated registers

None

Extension registers

None

Associated logs

None

SMSGPTQ**Register type**

Peg

Description

SMSGPTQ counts the number of messages of any type that were lost due to PTQ overflow.

Associated registers

None

Extension registers

None

Associated logs

None

SHDROVFL**Register type**

Peg

Description

SHDROVFL counts the number of messages of any type that were lost due to system overload control header array overflow.

Associated registers

None

Extension registers

None

Associated logs

None

SPMUSAGE

Description

OM group SPM Universal Activity Gauging Element (SPMUSAGE) provides information on call processing events that occur in the SPM. This OM group is provided for all types of DMS offices.

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

Key field	Info field
<code>nil_type_id</code>	<code>SOTS_NODE_INFO_TYPE</code>

Related functional groups

There are no functional groups associated with OM group SPMUSAGE.

Registers

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

Registers for SPMUSAGE

Register name	Measures
ABDN	Call processing (Callp) abandon messages (ABDN)
CONF	Callp confusion messages (CONF)
EXIT	Callp exit messages (EXIT)
NETFND	Callp network integrity found (NETFND)
NETINTG	Callp integrity lost (NETINTG)
NETNFND	Callp network integrity found (NETFND)
NETPAR	Callp parity errors (NETPAR)
NUMREPTS	Number of Reports (NUMREPTS)

Registers for SPMUSAGE

Register name	Measures
RELCAL	Callp release call messages (RELCAL)
TXFAIL	Callp deny messages (TXFAIL)

ABDN**Register type**

Peg

Description

ABDN counts the average number of Callp abandon messages per time interval.

Associated registers

None

Extension registers

None

Associated logs

None

CONF**Register type**

Peg

Description

CONF counts the average number of Callp confusion messages per time interval.

Associated registers

None

Extension registers

None

Associated logs

None

EXIT**Register type**

Peg

Description

EXIT counts the average number of Callp exit messages per time interval.

Associated registers

None

Extension registers

None

Associated logs

None

NETNFND**Register type**

Peg

Description

NETFND counts the average Callp network integrity found per time interval.

Associated registers

None

Extension registers

None

Associated logs

None

NETINTG**Register type**

Peg

Description

NETINTG counts the average Callp network integrity lost per time interval.

Associated registers

None

Extension registers

None

Associated logs

None

NETFND**Register type**

Peg

Description

NETFND counts the average Callp network integrity found per time interval.

Associated registers

None

Extension registers

None

Associated logs

None

NETPAR**Register type**

Peg

Description

NETPAR counts the average number of Callp parity errors per time interval.

Associated registers

None

Extension registers

None

Associated logs

None

NUMREPTS**Register type**

Peg

Description

NUMREPTS counts the number of reports that are received.

Associated registers

None

Extension registers

None

Associated logs

None

RELCAL**Register type**

Peg

Description

RELCAL counts the average number of Callp release call messages per time interval.

Associated registers

None

Extension registers

None

Associated logs

None

TXFAIL**Register type**

Peg

Description

TXFAIL counts the average number of Callp deny messages per time interval.

Associated registers

None

Extension registers

None

Associated logs

None

SPRING

Description

OM group Subscriber Programmable Ringing (SPRING) for Call Forwarding Don't Answer (CFDA) on residential (RES) lines measures:

- the number of attempts to dial the access code to invoke the SPRING feature
- the number of attempts to dial the SPRING directory number (DN) to remotely invoke the SPRING feature
- the number of times the user dials the access code and invokes the SPRING feature
- the number of times the user dials the SPRING DN and invokes the SPRING feature
- the number of times that SPRING access is denied to end users because of not enough resources
- the number of requests for off-board service updates or changes. With the Off-board Service Control feature, off-board service updates peg certain 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.

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

Key field	Info field
None	None

Related functional groups

The RES functional group is associated with the OM group SPRING.

Registers

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

Registers for OM group SPRING

Register name	Measures
RCTRLLA	Ring control local activation
RCTRLRA	Ring control remote activation
RCTRLSLA	Ring control successful local activation
RCTRLSRA	Ring control successful remote activation
RCTRLFA	Ring control failed activation

RCTRLLA

Register type

Peg

Description

RCTRLLA increases every time an end user dials the SPRING access code.

For DMS only: RCTRLLA is pegged if a CFDVT update request is received (off-board service update request).

Associated registers

None

Extension registers

None

Associated logs

None

RCTRLRA**Register type**

Peg

Description

This register increases every time an end user dials the SPRING remote access DN.

Associated registers

None

Extension registers

None

Associated logs

None

RCTRLSLA**Register type**

Peg

Description

RCTRLSLA increases every time an end user dials the SPRING access code and causes local activation of the SPRING feature. Successful SPRING activation does not mean that the ring count changes. For example, an end-user can enter invalid data and cause SPRING to abort the session. The ring count does not change, but a successful SPRING activation occurs.

For DMS only: RCTRLSLA is pegged when a subscriber is given access to update the CFDVT data (off-board service update). The register is pegged regardless of whether the data is successfully altered.

Associated registers

None

Extension registers

None

Associated logs

None

RCTRLSRA**Register type**

Peg

Description

RCTRLSRA increases every time an end user dials the SPRING remote access DN and remotely activates SPRING. Successful SPRING activation does not imply that the ring count changed. For example, a subscriber can enter invalid data and cause SPRING to abort the session. The ring count does not change, but a successful SPRING activation occurs.

Associated registers

None

Extension registers

None

Associated logs

None

RCTRLFA**Register type**

Peg

Description

RCTRLFA increases when the system denies an end user local or remote access to the SPRING feature because resources are not available.

For DMS only: RCTRLFA is pegged when a subscriber off-board service update request to access the SPRING feature is denied because resources are unavailable.

Associated registers

None

Extension registers

None

Associated logs

None

TC7WRLSS

Description

OM group Traffic Operator Position System (TOPS) - Common Channel Signaling System 7 - Wireless (TC7WRLSS) measures transport-level events such as types of TCAP messages sent and received, and SS7 errors on TOPS wireless calls. The group measures events for:

- Short Message Service (SMS)
- Wireless Intelligent Network (WIN)
- Interim Standard 41 (IS-41)
- global system for mobile communications (GSM)

These events were previously recorded in OM group IS41TOPS, which is deleted in SN07. For details, refer to the section for OM group IS41TOPS.

The following table lists the key and info fields associated with OM group TC7WRLSS. The group provides one tuple for each combination of wireless network type and TOPS wireless application.

Key field	Info field
SMS_IS41, SMS_GSM WIN_IS41, WIN_GSM	None

Related functional groups

There are no functional groups associated with OM group TC7WRLSS.

Registers

The following table lists the registers associated with OM group TC7WRLSS and what they measure. For a description of a register, click on the register name.

Registers for OM group TC7WRLSS (Sheet 1 of 2)

Register name	Measures
ABORTR	Abort received
ABORTS	Abort sent
GTTFAIL	Global title translation failure

Registers for OM group TC7WRLSS (Sheet 2 of 2)

Register name	Measures
<u>INVOKER</u>	INVOKE received
<u>INVOKES</u>	INVOKE sent
<u>MBFULL</u>	Mailbox full
<u>NOTRIDS</u>	No transaction identifiers
<u>REJECTR</u>	REJECT received
<u>REJECTS</u>	REJECT sent
<u>RETERRR</u>	RETURN ERROR received
<u>RETERRS</u>	RETURN ERROR sent
<u>RETRESR</u>	RETURN RESULT received
<u>RETRESS</u>	RETURN RESULT sent
<u>RTFMISCE</u>	SCCP routing failure: miscellaneous error
<u>RTFNETCG</u>	SCCP routing failure: network congestion
<u>RTFNETFL</u>	SCCP routing failure: network failure
<u>RTFNOXLA</u>	SCCP routing failure: no translation of this nature
<u>RTFNOXLS</u>	SCCP routing failure: no translation for this specific address
<u>RTFSUBCG</u>	SCCP routing failure: subsystem congestion
<u>RTFSUBFL</u>	SCCP routing failure: subsystem failure
<u>RTFUNEQ</u>	SCCP routing failure: unequipped user

For SMS TOPS calls:

- [INVOKES](#) pegs when TOPS sends a short message into the SS7 network.
- [RETRESR](#) pegs when TOPS receives a positive or negative acknowledgement from the message center (MC). Registers in OM

group SMSTOPS count SMS failures. For more information about specific TOPS SMS events, refer to [SMSTOPS](#).

- Registers [GTTFail](#) and [NOTRIDS](#) are pegged when SMS messages are not being sent because of failure at TOPS. Route failure (RTF) registers are pegged when failures occur in the SS7 network before the SMS arrives at the MC.

For WIN TOPS calls:

- A successful call pegs only [INVOKES](#), [INVOKER](#), and [RETRESS](#).
- [GTTFail](#) and [NOTRIDS](#) are pegged when WIN TOPS messages are being sent because of failure at TOPS. RTF registers are pegged when failures occur in the SS7 network before the TOPS message arrives at the MSC.

ABORTR

Register type

Peg

Description

ABORTR increments when TOPS receives a TCAP ABORT.

Associated registers

None

Extension registers

None

Associated logs

TCAP100, TOPS131

ABORTS

Register type

Peg

Description

ABORTS increments when TOPS sends a TCAP ABORT.

Associated registers

None

Extension registers

None

Associated logs

TCAP100

GTTFAIL**Register type**

Peg

Description

GTTFAIL increments when TOPS cannot look up GTT information for a destination number. GTT information is datafilled in tables C7GTTYPE and C7GTT. When TOPS cannot obtain the information, it cannot send the SMS into the network. The operator or automated node receives a failure indication. A TOPS131 log is generated containing the destination number that caused the failure. Table C7GTT must be updated to include the destination number.

Associated registers

None

Extension registers

None

Associated logs

TOPS131 containing the destination number that caused the failure.

INVOKER**Register type**

Peg

Description

INVOKER increments when TOPS receives a TCAP INVOKE.

Associated registers

None

Extension registers

INVOKER2

Associated logs

None

INVOKES**Register type**

Peg

Description

INVOKES increments when TOPS sends a TCAP INVOKE.

Associated registers

None

Extension registers

INVOKES2

Associated logs

None

MBFULL**Register type**

Peg

Description

MBFULL increments when a TOPS IS-41 or GSM TCAP message arrives at the TOPS service control point (SCP) interrupt handler but cannot be sent to the TOPS SCP because of a heavy switch load. This indicates that TOPS is receiving more IS-41 or GSM traffic than it can handle. On wireless directory assistance (DA) calls, the incoming message is ignored and routes to treatment in the MSC.

Note: It is not anticipated that TOPS IS-41 or GSM messaging will ever be high enough to peg MBFULL. If the register is pegged, contact Nortel Networks to increase the number of internal mailboxes available to the TOPS is-41 SCP application.

Associated registers

None

Extension registers

None

Associated logs

None. Log generation when the mailbox is full would further degrade switch performance.

NOTRIDS**Register type**

Peg

Description

NOTRIDS increments when TOPS attempts to send an IS-41 or GSM TCAP message but cannot because no transaction identifiers (TRIDS)

are available. Each TCAP operation requires a TRID to process a response. The switch automatically allocates TRIDS.

Note: The switch automatically allocates TRIDS. If NOTRIDS is pegged, contact Nortel Networks.

Associated registers

None

Extension registers

None

Associated logs

TOPS131

REJECTR

Register type

Peg

Description

REJECTR increments when TOPS receives a TCAP REJECT from the MSC or MC, which indicates that a problem with the TCAP message sent by TOPS. Contact Nortel Networks.

Associated registers

None

Extension registers

None

Associated logs

TCAP100

REJECTS

Register type

Peg

Description

REJECTS increments when TOPS sends a TCAP REJECT to the MSC, which indicates a problem with the TCAP message sent by the MSC. Contact the MSC vendor.

Associated registers

None

Extension registers

None

Associated logs

TCAP100

RETERRR**Register type**

Peg

Description

RETERRR increments when TOPS receives a TCAP RETURN ERROR from the MSC, which could indicate a problem on the MSC or TOPS switches. Logs at both switches should be investigated.

Associated registers

None

Extension registers

None

Associated logs

TCAP100

RETERRS**Register type**

Peg

Description

RETERRS increments when TOPS sends a TCAP RETURN ERROR to the MSC, which could indicate a problem on the MSC or TOPS switches. Logs at both switches should be investigated.

Associated registers

None

Extension registers

None

Associated logs

TCAP100

RETRESR**Register type**

Peg

Description

RETRESR increments when TOPS receives a TCAP RETURN RESULT from the MC.

Associated registers

None

Extension registers

RETRESR2

Associated logs

None

RETRESS**Register type**

Peg

Description

RETRESS increments when TOPS sends a TCAP RETURN RESULT to the MSC.

Associated registers

None

Extension registers

RETRESS2

Associated logs

None

RTFMISCE**Register type**

Peg

Description

RTFMISCE increments when the TOPS IS-41 SCP process receives a UDTs message containing a diagnostic value other than the diagnostic values provided by [RTFNETCG](#), [RTFNETFL](#), [RTFNOXLA](#), [RTFNOXLS](#), [RTFSUBCG](#), [RTFSUBFL](#), or [RTFUNEQ](#).

Associated registers

None

Extension registers

None

Associated logs

TCAP101 containing the incoming unitdata service (UDTS) message

RTFNETCG**Register type**

Peg

Description

RTFNETCG increments when the TOPS IS-41 or GSM SCP process receives a UDTS message containing a diagnostic that indicates *network congestion*.

Associated registers

None

Extension registers

None

Associated logs

TCAP101 containing the incoming UDTS message

RTFNETFL**Register type**

Peg

Description

RTFNETFL increments when the TOPS IS-41 or GSM SCP process receives a UDTS message containing a diagnostic that indicates *network failure*.

Associated registers

None

Extension registers

None

Associated logs

TCAP101 containing the incoming UDTS message

RTFNOXLA**Register type**

Peg

Description

RTFNOXLA increments when the TOPS IS-41 or GSM SCP process receives a UDTs message containing a diagnostic that indicates *no translation of such nature*.

Associated registers

None

Extension registers

None

Associated logs

TCAP101 containing the incoming UDTs message

RTFNOXLS**Register type**

Peg

Description

RTFNOXLS increments when the TOPS IS-41 or GSM SCP process receives a UDTs message containing a diagnostic that indicates *no translation for this specific address*.

Associated registers

None

Extension registers

None

Associated logs

TCAP101 containing the incoming UDTs message

RTFSUBCG**Register type**

Peg

Description

RTFSUBCG increments when the TOPS IS-41 or GSM SCP process receives a UDTs message containing a diagnostic that indicates *subsystem congestion*.

Associated registers

None

Extension registers

None

Associated logs

TCAP101 containing the incoming UDTs message

RTFSUBFL**Register type**

Peg

Description

RTFSUBFL increments when the TOPS IS-41 or GSM SCP process receives a UDTs message containing a diagnostic that indicates *subsystem failure*.

Associated registers

None

Extension registers

None

Associated logs

TCAP101 containing the incoming UDTs message

RTFUNEQ**Register type**

Peg

Description

RTFUNEQ increments when the TOPS IS-41 or GSM SCP process receives a UDTs message containing a diagnostic that indicates *unequipped user*.

Associated registers

None

Extension registers

None

Associated logs

TCAP101 containing the incoming UDTs message

TCAPERRS

Description

OM group Transaction Capabilities Application Part Error Counts (TCAPERRS) counts protocol errors the system detects by the transaction capabilities application part (TCAP) for each subsystem.

The TCAP provides a common protocol to format messages, content rules, and exchange procedures across the Common Channel Signaling 7 (CCS7) network. Application processes like the Enhanced 800 Service (E800), which performs operations on remote network nodes, use TCAP.

The TCAP messages are constructed with data elements. Each data element consists of three parts: identifier, length of contents, and content. The TCAP message identifier identifies the TCAP message. The TCAP message identifier contains the information that identifies the transaction. The transaction is the transaction part of the TCAP message. In ANSI, the TCAP message identifier is the package type identifier. In ITV, the TCAP message identifier is the message type identifier.

The TCAP message consists of three layers. The transaction layer associates the message with a unique transaction. The dialogue layer facilitates the dialogue information exchange. The component layer consists of minimum of one TCAP component. There are four types of TCAP components, as follows:

- invoke components initiate an operation on a remote node
- result components report the successful completion of an invoked operation
- error components report attempts to perform an invoked operation, that are not successful
- reject components reject the transaction

Two types of errors can occur within the component portion: message format errors and state change errors. Format errors include data values that are not recognized, and data that is not correct or missing. Format errors can also include data that is not reflected. State change errors include messages that do not conform to normal state changes. When the system detects a format error or state change error, TCAP rejects the message. The system sends a reject component to the message originator.

The OM group TCAPERRS registers are grouped into the following allocations and components:

- The transaction allocation registers are TCTPEUPT, TCTPEITP, TCTPESTP, and TCTPEUTI.
- The communication allocation registers are TCDPEUID, TCDPEBDP, TCDPEMDP, and TCDPEIDP.
- The component portion registers are TCCPEUCT, TCCPEICP, and TCCPESCP.
- The invoke component registers are TCICEDII, TCICEUOC, TCICEUXP, and TCICEUCI.
- The return result component registers are TCRCEUCI, TCRCEXRR, and TCRCEUXP.
- The return error component registers are TCECEUCI, TCECEXEC, TCECEUPC, TCECEXPC, and TCECEIP.

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

Key field	Info field
(C7_SUBSYSTEM_NAME) for each tuple is the subsystem name: one of TUP, ISDNUP, OAM, E800, ACCS, N00, TCN, BNS, SCPE800, SCPACCS, SCPBNS, AUTHSS, ACCTSS, CMS-Canada only, PVN, NETRAG, CLASS, INTERWRK, MAPMSC, MAPLR, NMS, DOC, LEC, MAPMTX, GF0-GF9, GFNTTEST, HLRMTX, VLRMTX, MSCMTX, NCS800, NCS900, and NCSCC.	None

Related functional groups

The following functional groups are associated with OM group TCAPERRS:

- Automatic Calling Card Service (ACCS)
- Common Calling Signaling 7 (CCS7)
- Enhanced 800 Service (E800)

Registers

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

Registers for OM group TCAPERRS (Sheet 1 of 2)

Register name	Measures
TCCPEICP	TCAP component portion error wrong component portion
TCCPESCP	TCAP component portion error badly structured component portion
TCCPEUCT	System card TCAP component portion error unrecognized component type
TCDPEBDP	TCAP communication allocations error: bad dialogue portions
TCDPEIDP	TCAP communication allocation error: inconsistent dialogue portions
TCDPEMPD	TCAP communication allocation error: dialogue portions with missing mandatory parts
TCDPEUID	TCAP dialogue portion error: bad dialogue portion identifiers
TCECEIP	TCAP return error component error incorrect parameter
TCECEUCI	TCAP return error component error unrecognized correlation identification
TCECEUPC	TCAP return error component error unrecognized problem code
TCECEXEC	TCAP return error component error unexpected return error component
TCECEXPC	TCAP return error component error not planned problem code
TCICEDI	TCAP invoke component error duplicate invoke identification

Registers for OM group TCAPERRS (Sheet 2 of 2)

Register name	Measures
<u>TCICEUCI</u>	TCAP invoke component error unrecognized correlation identification
<u>TCICEUOC</u>	TCAP invoke component error unrecognized operation code
<u>TCICEUXP</u>	TCAP invoke component error not defined or not planned parameter
<u>TCRCEUCI</u>	TCAP return result component error unrecognized correlation identification
<u>TCRCEUXP</u>	TCAP return result component error not defined or not planned parameter
<u>TCRCEXRR</u>	TCAP return result component error unexpected return result
<u>TCTPEITP</u>	TCAP transaction portion error incorrect transaction portion
<u>TCTPESTP</u>	TCAP transaction portion error incorrectly structured transaction portion
<u>TCTPEUPT</u>	TCAP transaction portion error unrecognized package type
<u>TCTPEUTI</u>	TCAP transaction allocation error unrecognized transaction identification

TCCPEICP**Register type**

Peg

Description

TCCPEICP counts received components that contain an identifier that is not correct.

Associated registers

None

Extension registers

None

Associated logs

None

TCCPESCP**Register type**

Peg

Description

TCCPESCP counts components that the system receives that contain a dangerous coding problem, for example a length that is not correct.

Associated registers

None

Extension registers

None

Associated logs

None

TCCPEUCT**Register type**

Peg

Description

TCCPEUCT counts messages that the system receives that contain a wrong component type.

Associated registers

None

Extension registers

None

Associated logs

None

TCDPEBDP**Register type**

Peg

Description

TCDPEBDP counts incoming messages that contain bad dialogue portions.

Associated registers

None

Extension registers

None

Associated logs

None

TCDPEIDP**Register type**

Peg

Description

TCDPEIDP counts incoming messages that contain dialogue portions that are not consistent.

Associated registers

None

Extension registers

None

Associated logs

None

TCDPEMPD**Register type**

Peg

Description

TCDPEMPD counts incoming messages that contain dialogue portions that are missing required information.

Associated registers

None

Extension registers

None

Associated logs

None

TCDPEUID**Register type**

Peg

Description

TCDPEUID counts incoming TCAP messages that contain bad dialogue portion IDs.

Associated registers

None

Extension registers

None

Associated logs

None

TCECEIP**Register type**

Peg

Description

TCECEIP counts return error components that contain a parameter that is not correct.

Associated registers

None

Extension registers

None

Associated logs

None

TCECEUCI**Register type**

Peg

Description

TCECEUCI counts return error components that contain a correlation identification that does not reflect an operation in progress.

Associated registers

None

Extension registers

None

Associated logs

None

TCECEUPC**Register type**

Peg

Description

TCECEUPC counts return error components that contain a problem code that is not correct.

Associated registers

None

Extension registers

None

Associated logs

None

TCECEXEC**Register type**

Peg

Description

TCECEXEC counts return error components that do not report failure of the invoked operation.

Associated registers

None

Extension registers

None

Associated logs

None

TCECEXPC**Register type**

Peg

Description

TCECEXPC counts return error components that contain a problem code that is not applicable to the invoked operation.

Associated registers

None

Extension registers

None

Associated logs

None

TCICEDII**Register type**

Peg

Description

TCICEDII counts invoke components that contain an invoke identification that the system assigns to another operation in progress.

Associated registers

None

Extension registers

None

Associated logs

None

TCICEUCI**Register type**

Peg

Description

TCICEUCI counts invoke components that contain a correlation identification that does not reflect an operation in progress.

Associated registers

None

Extension registers

None

Associated logs

None

TCICEUOC**Register type**

Peg

Description

TCICEUOC counts invoke components that contain an operation code that is not correct.

Associated registers

None

Extension registers

None

Associated logs

None

TCICEUXP**Register type**

Peg

Description

TCICEUXP counts invoke components that contain a parameter that is not correct.

Associated registers

None

Extension registers

None

Associated logs

None

TCRCEUCI**Register type**

Usage

Description

TCRCEUCI counts return result components that contain a correlation identification that does not indicate an operation in progress.

Associated registers

None

Extension registers

None

Associated logs

None

TCRCEUXP**Register type**

Peg

Description

TCRCEUXP counts return result components that contain a parameter that is not correct.

Associated registers

None

Extension registers

None

Associated logs

None

TCRCEXRR**Register type**

Peg

Description

TCRCEXRR counts return result components that occur in response to invoked operations that did not require a return result component.

Associated registers

None

Extension registers

None

Associated logs

None

TCTPEITP**Register type**

Peg

Description

TCTPEITP counts received messages that contain an identifier that is not correct in the transaction portion.

Associated registers

None

Extension registers

None

Associated logs

None

TCTPESTP**Register type**

Peg

Description

TCTPESTP counts received messages that have an encoding problem in the transaction portion, for example, a length that is not correct.

Associated registers

None

Extension registers

None

Associated logs

None

TCTPEUPT**Register type**

Peg

Description

TCTPEUPT counts received messages that contain package types that are not correct.

Associated registers

None

Extension registers

None

Associated logs

None

TCTPEUTI**Register type**

Peg

Description

TCTPEUTI counts received messages that contain a transaction identification that is not correct.

Associated registers

None

Extension registers

None

Associated logs

None

TCAPUSAG

Description

OM group Transaction Capabilities Application Part Usage Measurements (TCAPUSAG) records the use of the transaction capabilities application part (TCAP) for each subsystem. Examples of transaction capabilities are: messages, transactions and components.

The TCAP provides a common protocol for message formats, content rules, and exchange procedures across the Common Channel Signaling 7 (CCS7) network. Application processes like the Enhanced 800 Service (E800), which performs operations on remote network nodes, use the TCAP.

The TCAP messages are constructed with data elements. Each data element consists of three parts: identifier, length of contents, and content. The TCAP message identifier is the package type identifier. The package type identifier identifies the TCAP message and contains the information that identifies the transaction. The transaction is the transaction part of the TCAP message.

The TCAP message contents field can have up to three data elements:

- transaction identification, which is needed to associate the message with a unique transaction
- dialogue portions which the system uses to facilitate dialogue information exchange
- data element, which contains a minimum of one component

The component portion of a message consists of a sequence of a minimum of one TCAP component. There are four TCAP components:

- invoke components initiate an operation on a remote node
- result components report the successful completion of an invoked operation
- error components report attempts to invoke operations, that are not successful
- reject components reject the transaction

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

Key field	Info field
(C7_SUBSYSTEM_NAME) for each tuple is the subsystem name: one of TUP, ISDNUP, OAM, E800, ACCS, N00, TCN, BNS, SCPE800, SCPACCS, SCPBNS, AUTHSS, ACCTSS, CMS-Canada only, PVN, NETRAG, CLASS, INTERWRK, MAPMSC, MAPLR, NMS, DOC, LEC, MAPMTX, GF0-GF9, GFNTTEST, HLRMTX, VLRMTX, MSCMTX, NCS800, NCS900, and NCSCC.	None

Related functional groups

The following functional groups are associated with OM group TCAPUSAG:

- Automatic Calling Card Service (ACCS)
- Common Calling Signaling 7 (CCS7)
- Enhanced 800 Service (E800)

Registers

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

Registers for OM group TCAPUSAG (Sheet 1 of 2)

Register name	Measures
TCABORT	Total number of TCAP messages sent or received with package type Abort
TCCNPERM	Total number of TCAP messages sent or received with package type Conversation Without Permission
TCCWPERM	Total number of TCAP messages sent or received with package type Conversation With Permission
TCDPUSE	Total number of TCAP messages sent or received that contain a dialogue position

Registers for OM group TCAPUSAG (Sheet 2 of 2)

Register name	Measures
<u>TCFORCED</u>	Total number of forced transmission terminations
<u>TCINVKL</u>	Total number of components sent or received of type Invoke Last
<u>TCINVKNL</u>	Total number of components sent or received of type Invoke Not Last
<u>TCMSGIN</u>	Total TCAP messages terminating at this node
<u>TCMSGOUT</u>	Total TCAP messages originating on this node
<u>TCNORMAL</u>	Total number of transactions terminated normally
<u>TCQNPPerm</u>	Total number of TCAP message sent or received with package type Query Without Permission
<u>TCQWPerm</u>	Total number of TCAP messages sent or received with package type Query With Permission
<u>TCREJECT</u>	Total number of components sent or received of type Reject
<u>TCRESPNS</u>	Total number of TCAP messages sent or received with package type Response
<u>TCRSLTL</u>	Total number of components sent or received of type Return Result Last
<u>TCRSLTNL</u>	Total number of components sent or received of type Return Result Not Last
<u>TCRTERR</u>	Total number of components sent or received of type Return Error
<u>TCTRANS</u>	Total number of TCAP transactions
<u>TCUNIDIR</u>	Total number of TCAP messages sent or received with package type one directional

TCABORT**Register type**

Peg

Description

TCABORT counts the TCAP messages sent or received that contain the package type Abort.

Associated registers

None

Extension registers

TCABORT2

Associated logs

None

TCCNPERM**Register type**

Peg

Description

TCCNPERM counts the TCAP messages that the system sends or receives that contain the package type Conversation Without Permission. A message with this package type continues a transaction. The message informs the receiving node that the node cannot end the transaction normally. Each message contains one TCAP package. Conversation packages always associate with a transaction.

Associated registers

None

Extension registers

TCCNPER2

Associated logs

None

TCCWPERM**Register type**

Peg

Description

TCCWPERM counts TCAP messages that the system sends or receives that contain package type Conversation With Permission. A message with this package type continues a transaction. The message informs the receiving node that the node may end the transaction normally. Each message contains one TCAP package. Conversation packages always associate with a transaction.

Associated registers

None

Extension registers

TCCWPER2

Associated logs

None

TCDPUSE**Register type**

Peg

Description

TCDPUSE counts incoming and outgoing TCAP messages that contain a dialogue portion.

Associated registers

None

Extension registers

TCDPUSE2

Associated logs

None

TCFORCED**Register type**

Peg

Description

TCFORCED counts forced transmission terminations. A forced termination means that the remote node sent a response package without permission. A forced termination can also mean that the local application cancelled a transaction without permission.

Associated registers

None

Extension registers

None

Associated logs

None

TCINVKL**Register type**

Peg

Description

TCINVKL counts Invoke Last components that the system sends or receives. An Invoke component initiates an operation on a remote node. Invoke Last indicates that additional replies do not follow. There can be several components in each package.

Associated registers

None

Extension registers

TCINVKL2

Associated logs

None

TCINVKNL**Register type**

Peg

Description

TCINVKNL counts Invoke Not Last components that the system sends or receives. An Invoke component initiates an operation on a remote node. An Invoke Not Last component indicates that additional replies follow. There can be several components in each package.

Associated registers

None

Extension registers

TCINVKN2

Associated logs

None

TCMSGIN**Register type**

Peg

Description

TCMSGIN counts the transactions that terminate at the remote network. The system can terminate a transaction without receiving a message. Not all received messages associate with a transaction.

Associated registers

None

Extension registers

TCMSGIN2

Associated logs

None

TCMSGOUT**Register type**

Peg

Description

TCMSGOUT counts TCAP messages. Each transaction consists of a minimum of one message that the system sends to a remote network node. Not all sent messages associate with a transaction.

Associated registers

None

Extension registers

TCMGSOU2

Associated logs

None

TCNORMAL**Register type**

Peg

Description

TCNORMAL counts transactions that terminate normally. A normal termination means that the remote node had permission to terminate and sent a response package. A normal termination also means the local application had permission and terminated the transaction.

Associated registers

None

Extension registers

None

Associated logs

None

TCQNPERM**Register type**

Peg

Description

TCQNPERM counts TCAP messages that the system sends or receives, that have the package type Query Without Permission. This package type initiates a transaction and informs the destination node that the node may not terminate the transaction normally. Each message has one TCAP package. Outgoing query packages associate with a transaction. Incoming packages do not associate with a transaction.

Associated registers

None

Extension registers

None

Associated logs

None

TCQWPERM**Register type**

Peg

Description

TCQWPERM counts TCAP messages that the system sends or receives, that have package type Query With Permission. This package type initiates a transaction and informs the destination node that the node can end the transaction normally. Each message contains one TCAP package. Outgoing query packages associate with a transaction. Incoming query packages do not associate with a transaction.

Associated registers

None

Extension registers

TCQWPER2

Associated logs

None

TCREJECT**Register type**

Peg

Description

TCREJECT counts Reject components that the system sends or receives. The system sends the Reject component in reply to a message or component that contains a protocol error. There can be several components in each package.

Associated registers

None

Extension registers

TCREJEC2

Associated logs

None

TCRESPNS**Register type**

Peg

Description

TCRESPNS counts TCAP messages that the system sends or receives that contain the package type Response. This package type ends the transaction normally. Each message contains one TCAP package. Response packages always associate with a transaction.

Associated registers

None

Extension registers

TCRESPN2

Associated logs

None

TCRSLTL**Register type**

Peg

Description

TCRSLTL counts Return Result Last components that the system sends or receives. The system sends a Return Result component in reply to an Invoke component whose operation is completed. Return Result Last indicates that no additional result components follow.

Associated registers

None

Extension registers

TCRSLTL2

Associated logs

None

TCRSLTNL**Register type**

Peg

Description

TCRSLTNL counts Return Result Not Last components that the system sends or receives. The system sends a result component in reply to an Invoke component whose operations complete. Return Result Not Last indicates that no additional replies follow.

Associated registers

None

Extension registers

TCRSLTN2

Associated logs

None

TCRTERR**Register type**

Peg

Description

TCRTERR counts components of type Return Error that the system sends or receives. The system sends an error component in reply to an Invoke component that has an operation that failed. There can be several components in each package.

Associated registers

None

Extension registers

TCRTERR2

Associated logs

None

TCTRANS**Register type**

Peg

Description

TCTRANS counts transactions that all applications initiate on this remote network node using the TCAP.

Associated registers

None

Extension registers

None

Associated logs

None

TCUNIDIR**Register type**

Usage

Description

TCUNIDIR counts TCAP messages that the system sends or receives that contain a one directional package type. A message with a one directional package type flows in one direction only. Each message has one TCAP.

Associated registers

None

Extension registers

TCUNIDI2

Associated logs

None

TDGTHRU

Description

OM group TOPS Datagram Throughput (TDGTHRU) measures the number of messages in a specific size range that a TOPS application sent or received during the reporting period. The numbers in the register names indicate size ranges (buckets).

The registers provide information that is useful for estimating the resources that TOPS applications need for User Datagram Protocol (UDP) messaging. Depending on what resources are being studied, it may or may not be necessary to consider various headers that are added and stripped during message processing. Message sizes used to peg registers in this group include only the TOPS application payload part of the message.

The following table lists the key and info fields associated with OM group TDGTHRU. The group provides one tuple for each key value.

Key field	Info field
TOPS_DGRAM_IDX Specifies the TOPS application and data path to which peg counts in the tuple apply.	None

The key field specifies the TOPS application and data path to which peg counts in the tuple apply. The following table lists the fixed key values associated with the key field.

Fixed key values for TOPS_DGRAM_IDX

Value	Description
OA_EIU	OSSAIN application using Ethernet interface unit
OA_XAETHR	OSSAIN application using XA-Core Ethernet interface
POS_IPXPM	TOPS position application using IP-XPM
OC_IPXPM	Operator centralization application using IP-XPM

Related functional groups

There are no functional groups associated with OM group TDGTHRU.

Registers

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

Registers for OM group TDGTHRU

Register name	Measures
SND48	Send 48 bytes
SND96	Send 96 bytes
SND160	Send 160 bytes
SND224	Send 224 bytes
SND296	Send 296 bytes
SND368	Send 368 bytes
SND512	Send 512 bytes
SNDLG	Send large
RCV48	Receive 48 bytes
RCV96	Receive 96 bytes
RCV160	Receive 160 bytes
RCV224	Receive 224 bytes
RCV296	Receive 296 bytes
RCV368	Receive 368 bytes
RCVLG	Receive large

SND48

Register type

Peg

Description

SND48 counts the number of messages of size ≤ 48 bytes sent from the core.

Associated registers

None

Extension registers

SND48X

Associated logs

None

SND96**Register type**

Peg

Description

SND96 counts the number of messages of size > 48 bytes ≤ 96 bytes sent from the core.

Associated registers

None

Extension registers

SND96X

Associated logs

None

SND160**Register type**

Peg

Description

SND160 counts the number of messages of size > 96 bytes ≤ 160 bytes sent from the core.

Associated registers

None

Extension registers

SND160X

Associated logs

None

SND224**Register type**

Peg

Description

SND224 counts the number of messages of size > 160 bytes <= 224 bytes sent from the core.

Associated registers

None

Extension registers

SND224X

Associated logs

None

SND296**Register type**

Peg

Description

SND296 counts the number of messages of size > 224 bytes <= 296 bytes sent from the core.

Associated registers

None

Extension registers

SND296X

Associated logs

None

SND368**Register type**

Peg

Description

SND368 counts the number of messages of size > 296 bytes <= 368 bytes sent from the core.

Associated registers

None

Extension registers
SND368X

Associated logs
None

SND512

Register type
Peg

Description
SND512 counts the number of messages of size > 368 bytes <= 512 bytes sent from the core.

Associated registers
None

Extension registers
SND512X

Associated logs
None

SNDLG

Register type
Peg

Description
SNDLG counts the number of messages of size > 512 bytes sent from the core.

Associated registers
None

Extension registers
SNDLGX

Associated logs
None

RCV48

Register type
Peg

Description

RCV48 counts the number of messages of size ≤ 48 bytes received by the core.

Associated registers

None

Extension registers

RCV48X

Associated logs

None

RCV96**Register type**

Peg

Description

RCV96 counts the number of messages of size > 48 bytes ≤ 96 bytes received by the core.

Associated registers

None

Extension registers

RCV96X

Associated logs

None

RCV160**Register type**

Peg

Description

RCV160 counts the number of messages of size > 96 bytes ≤ 160 bytes received by the core.

Associated registers

None

Extension registers

RCV160X

Associated logs

None

RCV224**Register type**

Peg

Description

RCV224 counts the number of messages of size > 160 bytes <= 224 bytes received by the core.

Associated registers

None

Extension registers

RCV224X

Associated logs

None

RCV296**Register type**

Peg

Description

RCV296 counts the number of messages of size > 224 bytes <= 296 bytes received by the core.

Associated registers

None

Extension registers

RCV296X

Associated logs

None

RCV368**Register type**

Peg

Description

RCV368 counts the number of messages of size > 296 bytes <= 368 bytes received by the core.

Associated registers

None

Extension registers

RCV368X

Associated logs

None

RCVLG**Register type**

Peg

Description

RCVLG counts the number of messages of size > 368 bytes received by the core.

Associated registers

None

Extension registers

RCVLGX

Associated logs

None

TFREE533

Description

Toll-Free 533 (TFREE533) supports the Bellcore TR-NWT-000533 specifications for the switch.

The following table lists the key and info fields associated with OM group TFREE533:

Key field	Info field
None	None

Related functional groups

There are no functional groups associated with OM group TFREE533.

Registers

The following table lists the registers associated with OM group TFREE533 and what they measure. For a detailed description of a register, click on the register name.

Registers for OM group TFREE533 (Sheet 1 of 2)

Register name	Measures
N00CALL	N00 Call Queries
NOMATCHT	TOLLFREE Trigger Table accesses without a match
IGNOREDT	TOLLFREE Trigger Table trigger actions of IGNORE
BLOCKEDT	TOLLFREE Trigger Table trigger actions of BLOCK
LECRROUTE	LEC Routing attempts
IXCROUTE	IXC Routing attempts
PLAYANN	Play Announcement Responses Received
NOTIFREQ	Request Notification Responses Received
VACTBLK	ACG Vacant Codes Blocked

Registers for OM group TFREE533 (Sheet 2 of 2)

Register name	Measures
OOBBLK	ACG Out Of Band Codes Blocked
SOVLDBLK	ACG SCP Overload Blocked
MASSBLK	ACG SCP Mass Calling Blocked
SMSBLK	ACG SMS Initiated Blocked
VACTOVFL	ACG 10-digit Vacant Code Control List Overflow
VAC6OVFL	ACG 6-digit Vacant Code Control List Overflow
OOBOVFL	ACG Out of Band Control List Overflow
MASSOVFL	ACG Mass Calling Control List Overflow
SMSOVFL	ACG SMS Initiated Control List Overflow
SCPOVFL	ACG SCP Overload Control List Overflow
SPAREBLK	Spare Block
SPAROVFL	Spare Overflow

N00CALL**Register type**

Peg

Description

N00CALL is used to indicate the number of toll-free calls attempted.

Associated registers

CAINMSGSGS-register TR533S and CAINMSGR-register TR533R.

Extension registers

N00CALL2

Associated logs

None

NOMATCHT**Register type**

Peg

Description

NOMATCHT is used to indicate the number of toll-free calls which access the TOLLFREE trigger table without locating a matching tuple.

Associated registers

CAINMSGGS-register TR533S and CAINMSGR-register TR533R.

Extension registers

None

Associated logs

None

IGNOREDT**Register type**

Peg

Description

The IGNOREDT is used to indicate the number of toll-free calls which access the TOLLFREE trigger table with an action of IGNORE.

Associated registers

CAINMSGGS-register TR533S and CAINMSGR-register TR533R.

Extension registers

None

Associated logs

None

BLOCKEDT**Register type**

Peg

Description

BLOCKEDT is used to indicate the number of toll-free calls which access the TOLLFREE trigger table with an action of BLOCK.

Associated registers

CAINMSGGS-register TR533S and CAINMSGR-register TR533R.

Extension registers

None

Associated logs

None

LECRROUTE**Register type**

Peg

Description

LECRROUTE is used to indicate the number of toll-free call routing responses that indicate LEC routing is used.

Associated registers

CAINMSGSGS-register TR533S and CAINMSGGR-register TR533R.

Extension registers

LECROUT2

Associated logs

None

IXCROUTE**Register type**

Peg

Description

IXCROUTE register is used to indicate the number of toll-free call routing responses that indicate IXC routing is used.

Associated registers

CAINMSGSGS-register TR533S and CAINMSGGR-register TR533R.

Extension registers

IXCROUT2

Associated logs

None

PLAYANN**Register type**

Peg

Description

PLAYANN is used to indicate the number of toll-free call Play Announcement responses that are received.

Associated registers

CAINMSGSGS-register TR533S and CAINMSGGR-register TR533R.

Extension registers

None

Associated logs

None

NOTIFREQ**Register type**

Peg

Description

NOTIFREQ is used to indicate the number of toll-free call requests for termination information components that are received.

Associated registers

CAINMSGGS-register TR533S and CAINMSGR-register TR533R.

Extension registers

None

Associated logs

None

VACTBLK**Register type**

Peg

Description

VACTBLK is used to indicate the number of toll-free call attempts that are blocked due to ACG controls for vacant codes (control cause =#01).

Associated registers

CAINMSGGS-register TR533S and CAINMSGR-register TR533R.

Extension registers

None

Associated logs

None

OOBBLK**Register type**

Peg

Description

OBBLK is used to indicate the number of toll-free call attempts that are blocked due to ACG controls for nonpurchased NPAs (control cause =#02).

Associated registers

CAINMSGSG-register TR533S and CAINMSGR-register TR533R.

Extension registers

None

Associated logs

None

SOVLDBLK**Register type**

Peg

Description

SOVLDBLK is used to indicate the number of toll-free call attempts that are blocked due to ACG controls for SCP overload controls (control cause = #03).

Associated registers

CAINMSGSG-register TR533S and CAINMSGR-register TR533R.

Extension registers

None

Associated logs

None

MASSBLK**Register type**

Peg

Description

MASSBLK is used to indicate the number of toll-free call attempts that are blocked due to ACG controls for mass calling controls (control cause =#04).

Associated registers

CAINMSGSG-register TR533S and CAINMSGR-register TR533R.

Extension registers

None

Associated logs

None

SMSBLK**Register type**

Peg

Description

SMSBLK is used to indicate the number of toll-free call attempts that are blocked due to ACG controls for SMS initiated controls (control cause=#05).

Associated registers

CAINMSGSGS-register TR533S and CAINMSGGR-register TR533R.

Extension registers

None

Associated logs

None

VACTOVFL**Register type**

Peg

Description

VACTOVFL is used to indicate the number of toll-free call attempts that are to be blocked due to ACG controls for 10-digit vacant codes, but cannot due to ACG control list overflow.

Associated registers

CAINMSGSGS-register TR533S and CAINMSGGR-register TR533R.

Extension registers

None

Associated logs

None

VAC6OVFL**Register type**

Peg

Description

VAC6OVFL is used to indicate the number of toll-free attempts that are blocked due to ACG controls for 6-digit vacant codes, but cannot due to ACG control list overflow.

Associated registers

CAINMSGGS-register TR533S and CAINMSGR-register TR533R.

Extension registers

None

Associated logs

None

OBOVFL**Register type**

Peg

Description

OBOVFL is used to indicate the number of toll-free call attempts that are to be blocked due to ACG controls for nonpurchased NPAs, but cannot due to ACG control list overflow.

Associated registers

CAINMSGGS-register TR533S and CAINMSGR-register TR533R.

Extension registers

None

Associated logs

None

MASSOVFL**Register type**

Peg

Description

MASSOVFL is used to indicate the number of toll-free call attempts that are to be blocked due to ACG SMS initiated controls, but cannot due to ACG control list overflow.

Associated registers

CAINMSGGS-register TR533S and CAINMSGR-register TR533R.

Extension registers

None

Associated logs

None

SMSOVFL**Register type**

Peg

Description

SMSOVFL is used to indicate the number of toll-free call attempts that are to be blocked due to ACG SMS initiated controls, but cannot due to ACG control list overflow.

Associated registers

CAINMSGGS-register TR533S and CAINMSGR-register TR533R.

Extension registers

None

Associated logs

None

SCPOVFL**Register type**

Peg

Description

SCPOVFL is used to indicate the number of toll-free call attempts that are to be blocked due to ACG SCP overload controls, but cannot be blocked due to ACG control list overflow.

Associated registers

CAINMSGGS-register TR533S and CAINMSGR-register TR533R.

Extension registers

None

Associated logs

None

SPAREBLK**Register type**

Peg

Description

SPAREBLK counts the total number of query attempts blocked due to ACG spare value control.

Associated registers

None

Extension registers

None

Associated logs

VAMP301

SPAROVFL**Register type**

Peg

Description

SPAROVFL counts the total number of messages containing a ACG spare control that overflow.

Associated registers

None

Extension registers

None

Associated logs

VAMP305

TONES

Description

OM group Tones (TONES) measures traffic for tone generators. The following table lists the key and info fields associated with OM group TONES.

Key field	Info field
CLLI is the common language location identifier for the tone generator.	None

The following table lists the standard CLLIs used for OM group TONES. The customer defines other CLLI.

Standard CLLIs for OM group TONES (Sheet 1 of 2)

CLLI	Description
BVTONE	Busy Verification Tone
CWT	Call Waiting Tone
DISTCWT	Distinctive Call Waiting Tone
EBOT	Executive Busy Override Warning Tone
ENHCWT1	Enhanced Call Waiting Tone for the First Secondary Directory Number
ENHCWT2	Enhanced Call Waiting Tone for the Second Secondary Directory
Number	Number
ERWT	Expensive Route Warning Tone
IEBOT	International Executive Busy Override Tone (UK Switches)
OHQT	Off Hook Queuing Tone
PCNOR	Preset Conference Normal Notification Tone
ROH	Receiver Off Hook

Standard CLLIs for OM group TONES (Sheet 2 of 2)

CLLI	Description
SVDTMF	Digitone Outpulsing Circuit
SVMFC R2	Interregister Signaling Circuit
SVOBSV	Service Observing Circuit

The following tables lists the tables that must be datafilled.

Tables to be datafilled for OM group TONES

Table name	Description
TONES	Tones defines tones the system generates at the line or trunk peripheral.
STN	Special Tone defines tones the system generates on cards on a TM or MTM.
SVRCKT	Service Circuit defines: • Digitone outpulsing • R2 inter-register signaling • service-observing circuits

Related functional groups

There are no functional groups associated with OM group TONES.

Registers

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

Registers for OM group TONES

Register name	Measures
TONENATT	Tone attempts
TONEOVFL	Tone overflow

TONENATT**Register type**

Peg

Description

TONENATT counts calls the system routes to each tone generator. The register increases before the system determines if the call can connect to the tone. If the maximum permitted number of calls uses the tone, the call routes again to the next entry in the routing list.

Associated registers

The following registers are associated with TONES:

- **OFZ_INTONE** counts calls that originate on a trunk and first route to a tone.
- **OFZ_ORIGTONE** counts calls that originate on a line and first route to a tone.
- **OFZ_INTONE and OFZ_ORIGTONE** do not count calls that route to a tone after another location.

The following group of registers are also associated with TONES:

- **OTS_ORGTRMT** counts calls that originate on a line and connect to a tone or an announcement.
- **OTS_INCTRMT** counts calls that originate on a trunk and connect to a tone or an announcement.
- **ANN_ANNATT** counts attempts to connect to an announcement.

Validation formulas

The following formulas relate to TONENATT and its associated registers:

- $\Sigma (\text{TONES\_TONENATT}) \text{ OFZ\_INTONE} + \text{OFZ\_ORIGTONE}$
TONES
- $\Sigma (\text{ANN\_ANNATT}) + (\text{TONES\_TONENATT})$
greater than and equal to $(\text{OTS\_ORGTRMT}) + (\text{OTS\_INCTRMT})$

Extension registers

TONENAT2

Associated logs

None

TONEOVFL**Register type**

Peg

Description

TONEOVFL counts calls the system routes to a tone generator that do not connect because the maximum number of calls are already connected or the generator is maintenance busy. The register does not count calls that overflow because of network blockage.

Associated registers

None

Extension registers

None

Associated logs

LINE138, TRK138

TRK

Description

OM group Trunk group (TRK) provides information on trunk traffic for each trunk group.

The registers in TRK count the following:

- routing attempts
- seizure attempts
- seize failures
- total trunk use
- busy state use

The OM groups OFZ and OTS provide office-wide traffic summaries for trunks.

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

Key field	Info field
COMMON_LANGUAGE_NAME	OM2TRKINFO has 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: 2-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.

You must datafill tables TRKNAME and OFCSTD.

You enter the administrative number in field AONUM in table TRKNAME. The administrative number associates with a trunk group.

The office parameter OFFICETYPE in table OFCSTD specifies the type of office. The value of OFFICETYPE controls the generation of TRK registers. Correct entries for OFFICETYPE appear below:

- OFF100 Local
- OFFCOMB Combined local/toll
- OFFCOMBLWW Combined local/toll with wireless
- OFFCOMBTOPS Combined local/toll with traffic operator position system (TOPS)
- OFF200 Toll
- OFF200TOPS Toll with TOPS
- OFF200300 Combined gateway/toll
- OFF250 DMS-250
- OFF300 Gateway
- OFF250IBN DMS-250/SL-100
- OFF500 DMS-500
- OFF100OESD Austrian local
- OFF200OESD Austrian toll
- OFFCOMBOESD Austrian combined local/toll
- OFFCOMBITOPS Combined local/toll with international TOPS (ITOPS)
- OFFMTX100I DMS-MTX with DMS-100I capabilities
- OFFCOMB300 Combined local/toll and gateway
- OFFCOMB300ITOPS Combined local/toll and gateway with ITOPS

The office type parameters appear in table OFCSTD.

When the system reports an answer indication to CM from the outgoing trunk, the OM Answer register for the outgoing trunk increases.

Related functional groups

The following functional groups are associated with OM group TRK:

- OFF100 Local
- OFFCOMB Combined local/toll
- OFFCOMBLWW Combined local/toll with wireless
- OFFCOMBTOPS Combined local/toll with traffic operator position system (TOPS)

- OFF200 Toll
- OFF200TOPS Toll with TOPS
- OFF200300 Combined gateway/toll
- OFF250 DMS-250
- OFF300 Gateway
- OFF250IBN DMS-250/SL-100
- OFF500 DMS-500
- OFF100OESD Austrian local
- OFF200OESD Austrian toll
- OFFCOMBOESD Austrian combined local/toll
- OFFCOMBITOPS Combined local/toll with international TOPS (ITOPS)
- OFFMTX100I DMS-MTX with DMS-100I capabilities
- OFFCOMB300 Combined local/toll and gateway
- OFFCOMB300ITOPS Combined local/toll and gateway with ITOPS

The office type parameters appear in table OFCSTD.

When the system reports an answer indication to CM from the outgoing trunk, the OM Answer register for the outgoing trunk increases.

Registers

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

Registers for OM group TRK (Sheet 1 of 3)

Register name	Measures
ACCCONG	Automatic congestion control
ANF	Invalid or no automatic number identification (ANI) signals
ANSU	Answered calls usage register
ANSWER	Answer supervisions
AOF	Automatic number identification (ANI) office failure

Registers for OM group TRK (Sheet 2 of 3)

Register name	Measures
<u>BLKCTRK</u>	Blocked calls on trunk
<u>CONGEST</u>	Congestion signals
<u>CONNECT</u>	Successful connections
<u>DEFLDCA</u>	Network management (NWM) reroute
<u>DREU</u>	Directional reservation (DRE) usage
<u>FA</u>	Fangen
<u>FBUSY</u>	Far-end busy
<u>FCONG</u>	Far-end congestion
<u>FV</u>	Fangen vorbereitet
<u>GLARE</u>	Glare
<u>INANSWER</u>	Answer messages sent and received on incoming trunk
<u>INANSU</u>	Answer messages received and sent usage on incoming trunk
<u>INCATOT</u>	Incoming attempts total
<u>INFAIL</u>	Incoming failures
<u>INTRMLU</u>	Incoming terminal traffic
<u>INTRNSU</u>	Incoming transit traffic
<u>INVAUTH</u>	Invalid authorization code
<u>MAXBU</u>	Maximum busy circuits
<u>MBU</u>	Maintenance busy usage
<u>MTRPULS</u>	Metering pulses
<u>NANS</u>	Number of answered calls
<u>NATTMPT</u>	Number of attempts

Registers for OM group TRK (Sheet 3 of 3)

Register name	Measures
<u>NCTFAIL</u>	Network call transfer fail
<u>NCTPASS</u>	Network call transfer pass
<u>NOANSWER</u>	No Answer on trunk [Timed out]
<u>NOVFLATB</u>	Number of overflows, all trunks busy
<u>OUTANSU</u>	Answer message received and sent usage on an outgoing trunk
<u>OUTFAIL</u>	Outgoing failures
<u>OUTMTCHF</u>	Outgoing matching failure
<u>OUTTRMLU</u>	Outgoing terminal traffic
<u>OUTTRNSU</u>	Outgoing transit traffic
<u>PRERTEAB</u>	Preroute abandon
<u>PREU</u>	Protective reservation (PRE) usage
<u>Q33FLT</u>	Q33 fault
<u>SBU</u>	System busy usage
<u>TANDEM</u>	TANDEM
<u>TOTU-U.S. and Australia only</u>	Total usage
<u>TRU</u>	Traffic busy usage
<u>TRU2WIN</u>	Incoming two-way trunk usage

ACCCONG**Register type**

Peg

Description

ACCCONG counts the number of times that a trunk group enters Automatic Congestion Control (ACC) congestion.

Associated registers

None

Extension registers

None

Associated logs

None

ANF**Register type**

Peg

Description

ANF counts incoming centralized-automatic message accounting (CAMA) or TOPS calls for which:

- the system receives invalid ANI signaling
- the system did not receive ANI signaling
- the numbering plan area code (N0/1X) or the central office code (NNX) of the calling number for the incoming trunk group is not correct

Register ANF increases when the system attaches the necessary receiver to the call.

The system generates this register for the following office types:

- OFF200
- OFFCOMB
- OFFCOMBLWW
- OFFCOMBTOPS
- OFF200TOPS
- OFF200300
- OFF250
- OFF250IBN

For DMS-MTX switches and DMS-250 switches, this register increases when the DMS switch receives a calling number with a central office code. The code for the incoming CAMA trunk group concerned is not correct.

Associated registers

None

Extension registers

None

Associated logs

TRK120

ANSU**Register type**

Usage

Scan rate

Not applicable

Description

ANSU provides a usage measurement of answered calls for each trunk group on a DMS-100I. This register increases when the extended multiprocessor system (XMS)-based peripheral module (XPM) detects an answer line signal from the outgoing trunk. The register decreases when the XPM detects an exit message from the outgoing trunk.

The system generates this register for office types OFF100, OFF200, OFFCOMB, and OFFCOMBITOPS. This register is optional for office type OFFCOMB and is only present if the system loads package NTXB22AA (OM Enhancements).

Associated registers[NANS](#)**Extension registers**

None

Associated logs

None

ANSWER**Register type**

Peg

Description

When an incoming line/trunk originates a call and an outgoing trunk reports an answer indication to the computer module (CM), register ANSWER increases. This register is the answer register for the outgoing trunk. Table 1 shows the interworking supported for releases

LEC0011 and above. Table 2 shows the interworking supported for release EUR004 and above.

This register only generates for the following office types:

- OFF100
- OFF200
- OFF200/300
- OFF250
- OFF300
- OFFCOMB
- OFFCOMBLWW
- OFFCOMBITOPS
- OFF200TOPS
- OFFCOMBTOPS
- OFF250IBN
- OFF100OESD
- OFF200OESD
- OFFCOMBOESD

For DMS-MTX switches and DMS-250 switches, this register counts hardware or audio answer supervisions received on the trunk group.

For the DMS-100EUR switch, the only valid value for office parameter OFFICETYPE is OFF100.

The table [Interworking supported by OM TRK Answer Register for release LEC0011 and above](#) shows the interworking supported for releases LEC0011 and above. The table [Interworking Supported by OM TRK Answer Register for UK release EUR004 and above](#) shows the interworking supported for release EUR004 and above.

Interworking supported by OM TRK Answer Register for release LEC0011 and above

Originating/ Incoming Agents (see note)	Terminating / Outgoing Agents			
	ISUP Trunk	PTS Trunk	PRI Trunk (see note)	PX Trunk
Line	Yes	Yes	Yes	Yes
ISUP Trunk	Yes	Yes	Yes	Yes
PTS Trunk	Yes	Yes	Yes	Yes
PRI Trunk (see note)	Yes	Yes	Yes	Yes
PX Trunk	Yes	Yes	Yes	Yes
Note: Only Northern American PRI trunks.				

Interworking Supported by OM TRK Answer Register for UK release EUR004 and above

Incoming Agents	Outgoing Agents								
	ISUP	C7N UP	DPM SS	AC15	DC5	R1	PRI	EC	LD
BRI Line	No	Yes	No	No	No	No	No	No	No
IBN Line	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
ISUP	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
C7NUP	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
NPNSS	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
AC15	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
DC5	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes

Interworking Supported by OM TRK Answer Register for UK release EUR004 and above

Incoming Agents	Outgoing Agents								
	ISUP	C7N UP	DPM SS	AC15	DC5	R1	PRI	EC	LD
R1	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
PRI	Yes	Yes	No	Yes	Yes	Yes	Yes	No	No
EC	Yes	Yes	Yes	Yes	Yes	Yes	No	Yes	Yes
LD	Yes	Yes	Yes	Yes	Yes	Yes	No	Yes	Yes
Note: Supported in EUR003									

Associated registers

None

Extension registers

None

Associated logs

None

AOF**Register type**

Peg

Description

AOF counts incoming calls for which the originating office detects an ANI failure. Failure can be detected despite correct key pulse and signaling terminal control signals. The missing information digits, missing category code or the complete lack of digits indicates an ANI failure.

AOF generates for office types OFF100, OFFCOMB, OFFCOMBLWW, OFFCOMBTOPS, OFF200TOPS, OFF200300, OFF250, and OFF250IBN.

For DMS-MTX switches and DMS-250 switches, this register increases when an information digit 2 or 5 is received from the local office.

Associated registers

None

Extension registers

None

Associated logs

TRK118, TRK119

BLKCTRK**Register type**

Peg

Description

BLKCTRK counts the number of times the following events occur:

- an associated trunk group for a call is a dedicated access line or primary rate access
- the trunk is the last available route in the route list
- the call receives general no-circuit (GNCT) treatment or busy (BUSY) treatment

BLKCTRK only appears in DMS-250 switches and OFFCOMBLWW offices.

Associated registers

None

Extension registers

None

Associated logs

TRK138

CONGEST**Register type**

Peg

Description

CONGEST counts congestion signals received on the outgoing number 5 or number 6 trunk group.

This register generates only in office types OFF300 and OFF200300.

Associated registers

None

Extension registers

None

Associated logs

None

CONNECT**Register type**

Usage

Scan rate

Not applicable

Description

CONNECT counts outgoing seizure attempts on the trunk group that appear to result in successful connection.

CONNECT increases before the system knows if the seizure is successful. The count reduces by 1 (decreases) if an indication of glare or seize failure is received. This register generates for all correct office types.

For office type OFF300, this register decreases on number 5 trunks, number 6 trunks and number 7 trunks.

Associated registers

The following registers are associated with the CONNECT register as well as with each other:

- [GLARE](#), [OUTFAIL](#)
- OFZ_OUTMFL, which counts calls that fail on the first attempt to find a network path to a selected outgoing or test trunk
- OFZ_OUTNWAT, which counts attempts to find a network path from a line or trunk to a selected outgoing or test trunk
- OFZ_OUTRMFL, which counts calls that fail on the second attempt to find a network path to a selected outgoing or test trunk.

The following group of registers are also associated with the CONNECT register as well as with each other:

- [GLARE](#), [OUTFAIL](#)
- SOTS_SOUTMFL, which counts calls that fail on the first attempt to find a network path to a selected outgoing or test trunk
- SOTS_SOUTNWAT, which counts attempts to find a network path from a line or trunk to a selected outgoing or test trunk
- SOTS_SOUTRMFL, which counts calls that fail on the second attempt to find a network path to a selected outgoing or test trunk.

Validation formulas

The following formulas relate to CONNECT and its associated registers:

- $OFZ\_OUTNWAT + (OFZ\_OUTNWAT2 \times 65536) - OFZ\_OUTMFL - OFZ\_OUTRMFL = \Sigma (CONNECT + GLARE + OUTFAIL)$
- $SOTS\_SOUTNWAT + (SOTS\_SOUTNWAT2 \times 65536) - SOTS\_SOUTMFL - SOTS\_SOUTRMFL = \Sigma (CONNECT + GLARE + OUTFAIL)$

Extension registers

None

Associated logs

None

DEFLDCA**Register type**

Peg

Description

DEFLDCA counts calls that the system prevents from accessing the trunk group. The system routes the calls to this trunk group. The system denies access by the calls because of the action of network management controls.

DEFLDCA counts calls that the system denies for the activity of any of the following NWM controls:

- SKIP control is in effect
- the number of trunks qualified for incoming calls is at or below the directional reservation (DRE) level
- the number of idle trunks is at or below the protective reservation (PRE) level for calls that have been alternate-routed to the group
- time assignment speech interpolation (TASI) control is in effect
- selective trunk reservation (STR) control is in effect
- cancel to (CANT) control is in effect
- bidirectional trunk group reservation control (BRC) is in effect

If the control is SKIP, DRE, PRE, or TASI, the system routes the call. If cancel from (CANF) control is in effect, the system sends the call to treatment.

If the control is STR or CANT the system sends the call to treatment.

The system this register for all correct office types.

Associated registers

None

Extension registers

None

Associated logs

NWM100, NWM101, NWM102, NWM103, NWM104, NWM106, NWM108

DREU**Register type**

Usage

Scan rate

100 s

Description

The system scans the trunk group and DREU records if DRE activates for a two-way trunk group.

The system generates DREU for all correct office types.

Associated registers

None

Extension registers

None

Associated logs

NWM100

FA**Register type**

Peg

Description

FA increases when "fangen" (seizure) occurs on the trunk group.

The system generates this register in office types OFF100OESD, OFF200OESD, and OFFCOMBOESD.

Associated registers

None

Extension registers

None

Associated logs

None

FBUSY**Register type**

Peg

Description

FBUSY increases when information about a call result from the far end indicates one of the following conditions:

- directory number changed
- subscriber line busy
- subscriber line on intercept
- subscriber line seized
- out of service

The system generates this register in office type OFF300.

Associated registers

None

Extension registers

None

Associated logs

None

FCONG**Register type**

Peg

Description

FCONG increases when information about the call result from the far end indicates one of the following conditions:

- congestion
- DMS-300 international congestion
- timeout

The system generates this register in office type OFF300.

Associated registers

None

Extension registers

None

Associated logs

None

FV**Register type**

Peg

Description

FV counts "fangen vorbereitet" (seizure ready) states that occur on a trunk group.

The system generates this register in office types OFF100OESD, OFF200OESD, and OFFCOMBOESD.

Associated registers

None

Extension registers

None

Associated logs

None

GLARE**Register type**

Peg

Description

GLARE increases when the system drops a trunk that the system selects at an earlier time. The system drops this trunk because the PM detects an origination before the PM can seize the trunk. The operating company gives information that indicates that outgoing calls give way to simultaneous incoming calls (glare).

The system attempts a new selection. If the system encounters glare again, the system routes the call to generalized no-circuit (GNCT) treatment. Register GLARE increases again. The system generates this register for office types that are correct.

Associated registers

The following registers are associated with the GLARE register as well as with each other:

- [CONNECT](#), [OUTFAIL](#)
- OFZ_OUTMFL, which counts calls that fail on the first attempt to find a network path to a selected outgoing or test trunk
- OFZ_OUTNWAT, which counts attempts to find a network path from a line or trunk to a selected outgoing or test trunk
- OFZ_OUTRMFL, which counts calls that fail on the second attempt to find a network path to a selected outgoing or test trunk.

The following group of registers are also associated with the CONNECT register as well as with each other:

- [CONNECT](#), [OUTFAIL](#)
- SOTS_SOUTMFL, which counts calls that fail on the first attempt to find a network path to a selected outgoing or test trunk
- SOTS_SOUTNWAT, which counts attempts to find a network path from a line or trunk to a selected outgoing or test trunk
- SOTS_SOUTRMFL, which counts calls that fail on the second attempt to find a network path to a selected outgoing or test trunk.

Validation formulas

The following formulas relate to GLARE and its associated registers:

- $OFZ\_OUTNWAT + (OFZ\_OUTNWAT2 \times 65536) - OFZ\_OUTMFL - OFZ\_OUTRMFL = \Sigma (CONNECT + GLARE + OUTFAIL)$
- $SOTS\_SOUTNWAT + (SOTS\_SOUTNWAT2 \times 65536) - SOTS\_SOUTMFL - SOTS\_SOUTRMFL = \Sigma (CONNECT + GLARE + OUTFAIL)$

Extension registers

None

Associated logs

TRK113, TRK121

INANSWER**Register type**

Peg

Description

INANSWER counts the answered calls for incoming traffic for each incoming or two-way trunk.

Associated registers

None

Extension registers

None

Associated logs

None

INANSU**Register type**

Usage

Scan rate

100 seconds

Description

INANSU shows the number of answered calls on incoming trunk calls. This register measures traffic in the answered state for each incoming or two-way trunk. The register measures the occupancy in Erlangs.

The value of register INANSU increases every 100 seconds according to the number of trunks occupied with answered calls.

Associated registers

None

Extension registers

None

Associated logs

None

INCATOT**Register type**

Peg

Description

INCATOT counts incoming seizures on a trunk group, including seizures that fail or that the system abandons before routing. The system generates this register for all office types that are correct.

For DMS-MTX switches, this register increases when the system attempts to originate on an MTX trunk group. The system attempt includes handoff attempts for an originating mobile. This system can assign a maximum of eight MTX trunk groups to a cell site. The register

can increase a maximum of eight times for a single origination, one time for each group.

Associated registers

The following registers are associated with INCATOT:

- OFZ_NIN, which counts incoming calls
- OFZ_NINC, which counts incoming call attempts

Validation formulas

The following formulas relate to INCATOT and its associated registers:

- $\Sigma \text{TRK\_INCATOT} = \text{OFZ\_NIN} + (\text{OFZ\_NIN}^2 \times 65535)$
- $\Sigma \text{TRK\_INCATOT} = \text{OFZ\_NINC} + (\text{OFZ\_NIN}^2 \times 65535)$

Extension registers

None

Associated logs

None

INFAIL**Register type**

Peg

Description

INFAIL increases when any one of the following events occurs on a trunk that has originated a call or appears to have originated a call:

- permanent signal
- partial dial timeouts and false starts
- bad digits, including bad signaling terminal (ST) digit
- any originations on one-way outgoing trunks
- lost integrity on the network path while connected to a service circuit or to another trunk before answer
- failure to attach a receiver after two attempts
- receiver queue overflow
- receiver queue wait time-out
- failure to time-out after 30 seconds while waiting for a multifrequency receiver
- progress message of a type not expected in the current call environment
- force-release before connection

These events can indicate a need for maintenance action. These events can result in call failure if a call was in progress. This register generates for office types that are correct.

Associated registers

The following registers are associated with register INFALL:

- OFZ_INANN, which counts incoming calls that the system routes to an announcement
- OTS_INCLKT, which counts incoming calls that fail and that the system routes to lockout
- OTS_INCTRMT, which counts incoming calls that the system routes to a tone or an announcement
- OFZ_INLKT, which counts incoming calls that the system routes to lockout
- OFZ_INTONE, which counts incoming calls that the system routes to a tone
- OFZ_INLKT and OFZ_INTONE or OFZ_INANN, or OTS_INCLKT, and OTS_INCTRMT, which can also count calls that fail

Extension registers

None

Associated logs

TRK111, TRK114, TRK115, TRK116, TRK117, TRK138, TRK182, TRK183, TRK213

INTRMLU**Register type**

Peg

Description

INTRMLU counts incoming terminal calls for which the first digit received is key pulse (KP) or KP1.

The system generates this register in office types OFF200300 and OFF300.

Associated registers

None

Extension registers

None

Associated logs

None

INTRNSU**Register type**

Peg

Description

INTRNSU counts incoming transit calls for which the first digit received is KP2.

The system generates this register in office types OFF200300 and OFF300.

Associated registers

None

Extension registers

None

Associated logs

None

INVAUTH**Register type**

Peg

Description

INVAUTH counts authorization codes that are not correct.

The system generates register INVAUTH in office types OFF250, OFF250IBN, OFFMTX100I, OFF500, OFFCOMBLWN and OFFCOMB300. However the register is primarily pegged when the office type is set to OFF250IBN.

Associated registers

None

Extension registers

None

Associated logs

None

MAXBU**Register type**

Usage

Scan rate

100 seconds

Description

Every 100 seconds the system scans the trunk group. MAXBU increases if the number of busy circuits exceeds the maximum number that the system recorded at an earlier time.

The system generates register MAXBU only in DMS-250 offices.

Associated registers

None

Extension registers

None

Associated logs

None

MBU**Register type**

Usage

Scan rate

100 seconds

Description

Every 100 seconds the system scans the trunk group. MBU records if a trunk is in one of the following states:

- manual busy
- seized
- network management busy

The system generates register MBU for office types that are correct.

Associated registers

None

Extension registers

None

Associated logs

None

MTRPULS**Register type**

Peg

Description

MTRPULS counts metering pulses that the system generates for the trunk group.

The system generates this register in office types OFF200OESD and OFFCOMBOESD.

Associated registers

None

Extension registers

MTRPULS2

Associated logs

None

NANS**Register type**

Peg

Description

NANS counts the number of answered calls for each trunk group on a DMS-100I. This register increases when the extended multiprocessor system (XMS)-based peripheral module (XPM) detects an answer line signal from the outgoing trunk.

The system generates register NANS in office types OFF100, OFF200, OFFCOMB, and OFFCOMBITOPS. This register is optional for office type OFFCOMB and is only present if the system loads package NTXB22AA.

Associated registers

[ANSU](#)

Extension registers

None

Associated logs

None

NATTMPT**Register type**

Peg

Description

NATTMPT increases when the system routes an outgoing call to a trunk group.

NATTMPT increases before network management controls increase. This register increases before an idle trunk and a network connection to the trunk are available. The system generates this register for office types that are correct.

For DMS-MTX switches, this register counts attempts to terminate on an MTX trunk group. These attempts include handoff attempts for a terminating mobile.

The system can assign up to eight MTX trunk groups to a cell site. Register MTX can increase up to eight times for a single termination, one time for each group.

Associated registers

None

Extension registers

None

Associated logs

None

NCTFAIL**Register type**

Peg

Description

NCTFAIL records the total number of failed network call transfers (NCT). Register NCTFAIL is not available to all customers. Contact Nortel Support about NCTFAIL for your switch.

NCTFAIL is visible in offices where OFFICETYPE is OFFCOMBLWW, OFF250, OFFMTX100I, or OFF250IBN.

Associated registers

None

Extension registers

None

Associated logs

None

NCTPASS**Register type**

Peg

Description

NCTPASS records the total number of completed network call transfers (NCT).

NCTPASS is visible only in offices where OFFICETYPE is OFFCOMBLWW, OFF250, OFFMTX100I, or OFF250IBN. Register NCTPASS is not available to all customers. Contact Nortel Support about NCTPASS for your switch.

Associated registers

None

Extension registers

None

Associated logs

None

NOANSWER**Register type**

Peg

Description

NOANSWER counts the number of times a call has been taken down after a specified time-out value has been reached, as part of Black Box Fraud prevention (BBFP). The time-out value is implemented on a trunk-group basis and can be set to either one, two, three, four, or five minute intervals. Upon expiration of the timer, the NOANSWER register is pegged.

NOANSWER is displayed for the following office types: OFF100, OFF200, OFFCOMB, OFF200TOPS, OFFCOMBITOPS, OFFCOMBTOPS, OFF250, OFF250IBN, OFFMTX100I, OFF500, OFFCOMBLWW, NOOFFICE. In office types OFF250, OFF250IBN and OFFMTX100I, register NOANSWER is displayed but not incremented because they are tandem offices, and the BBFP feature is

supported only for end offices. However, in the OM code, the NOANSWER field had to be included in all end-office types; therefore, some non-end-office types also pick up the field.

NOANSWER functionality is activated and deactivated via the DLYFWDXMT option datafill of table TRKOPTS on a trunk-group basis.

NOANSWER is pegged when the black box fraud timer or DLYFWDXMT timer expires before an answer supervision signal is received. The timeout value is datafilled in table TRKOPTS.

Associated registers

None

Extension registers

None

Associated logs

TRK610

NOVFLATB**Register type**

Peg

Description

NOVFLATB increases when a call with access to the trunk group overflows the group. The system routes the call because an idle trunk is not available. A call can access the same group more than one time. Overflow can occur only one time. Overflow occurs if the system cannot use the first trunk because of seize fail, glare or network blockage. Register NOVFLATB increases when the system cannot find an idle trunk on the first or any of the following access attempts. This register generates for office types that are correct.

For DMS-MTX switches, this register increases when an attempt to terminate on an MTX trunk group fails. This register increases when an attempt to handoff a terminating mobile to an MTX trunk group fails. Failure occurs because an idle trunk is not available. The system can assign up to eight MTX trunk groups to a cell site. This register can increase up to eight times for a single termination, one time for each group.

Associated registers

None

Extension registers

ATB100

Associated logs

None

OUTANSU**Register type**

Usage

Scan rate

100 seconds

Description

OUTANSU shows the number of answered calls on outgoing trunk calls. This register measures traffic in the answered state for each outgoing or two-way trunk. The register measures the occupancy in Erlangs.

The value of register OUTANSU increases every 100 seconds according to the number of trunks occupied with answered calls.

Associated registers

None

Extension registers

None

Associated logs

None

OUTFAIL**Register type**

Peg

Description

OUTFAIL counts attempts to seize an outgoing trunk in the trunk group that fail because of following:

- signaling problems
- loss of accuracy
- outgoing failures
- seizure failures

The system releases the trunk. The system performs a maximum of two attempts to seize a trunk. The system counts each failed attempt in OUTFAIL. If a second attempt to seize a trunk fails, the system routes the call to treatment.

The system can generate a log message. Generation of a log message depends on the cause of the failure.

The system generates register OUTFAIL for office types that are correct.

Associated registers

The following registers are associated with the OUTFAIL register as well as with each other:

- [GLARE](#), [CONNECT](#)
- OFZ_OUTMFL, which counts calls that fail on the first attempt to find a network path to a selected outgoing or test trunk
- OFZ_OUTNWAT, which counts attempts to find a network path from a line or trunk to a selected outgoing or test trunk
- OFZ_OUTOSF, which counts calls that fail on the first attempt to seize an outgoing trunk.
- OFZ_OUTROSF, which counts calls that fail on the second attempt to seize an outgoing trunk.

Note: The system counts each failure to seize an outgoing trunk in OUTFAIL. The system also counts the first failed attempt in OFZ_OUTOSF. The system also counts the second failed attempt in OFZ_OUTROSF.

- OFZ_OUTRMFL, which counts calls that fail on the second attempt to find a network path to a selected outgoing or test trunk.

The following registers are also associated with the OUTFAIL register as well as with each other:

- [GLARE](#), [CONNECT](#)
- SOTS_SOUTMFL, which counts calls that fail on the first attempt to find a network path to a selected outgoing or test trunk
- SOTS_SOUTNWAT, which counts attempts to find a network path from a line or trunk to a selected outgoing or test trunk
- SOTS_SOUTRMFL, which counts calls that fail on the second attempt to find a network path to a selected outgoing or test trunk.

Validation formulas

The following formulas relate to OUTFAIL and its associated registers:

- $OFZ\_OUTNWAT + (OFZ\_OUTNWAT2 \times 65536) - OFZ\_OUTMFL - OFZ\_OUTRMFL = \Sigma (CONNECT + GLARE + OUTFAIL)$
- $SOTS\_SOUTNWAT + (SOTS\_SOUTNWAT2 \times 65536) - SOTS\_SOUTMFL - SOTS\_SOUTRMFL = \Sigma (CONNECT + GLARE + OUTFAIL)$

Extension registers

None

Associated logs

TRK113, TRK121, TRK122, TRK162, TRK213

OUTMTCHF**Register type**

Peg

Description

OUTMTCHF counts attempts to find a path from an incoming trunk or originating line to a selected trunk that fail. Failure occurs as a result of network blockage.

If the system blocks an outgoing call, the call again attempts to select a trunk. If the system blocks this attempt, OUTMTCHF counts the call again. The system routes the call to NBLH treatment.

The system generates this register for office types that are correct.

Associated registers

The following registers are associated with the OUTMTCHF register as well as with each other:

- OFZ_OUTMFL, which counts calls that fail on the first attempt to find a network path to a selected outgoing or test trunk
- OFZ_OUTNWAT, which counts incoming or originating calls intended for a specified outgoing or test trunk.
- OFZ_OUTNWAT, which counts attempts to access a network path from an incoming trunk or an originating line. The system sends the network path to a selected trunk.
- OFZ_OUTRMFL counts calls that fail on the second attempt to find a network path to a selected outgoing or test trunk.
- OUTMTCHF and OFZ_OUTMFL count first-trial failures.
- OUTMTCHF and OFZ_OUTRMFL count second-trial failures.

The following group of registers are also associated with the OUTMTCHF register as well as with each other:

- OTS_SOUTNWT, which counts attempts to access a network path from an incoming trunk or an originating line. The system sends the network path to a selected trunk.
- OUTMTCHF and OTS_SOUTMFL count first-trial failures.
- OUTMTCHF and SOTS_SOUTRMFL count second-trial failures.
- SOTS_SOUTMFL, which counts calls that fail on the first attempt to find a network path to a selected outgoing or test trunk.
- SOTS_SOUTNWT, which counts incoming or originating calls intended for a specified outgoing or test trunk.
- SOTS_SOUTRMFL, which counts calls that fail on the second attempt to find a network path to a selected outgoing or test trunk.

Validation formulas

The following formulas relate to OUTMTCHF and its associated registers:

- $\Sigma \text{TRK\_OUTMTCHF} = \text{OFZ\_OUTMFL} + \text{OFZ\_OUTRMFL}$
- $\Sigma \text{TRK\_OUTMTCHF} = \text{OTS\_SOUTMFL} + \text{SOTS\_SOUTRMFL}$

Extension registers

None

Associated logs

NET130

OUTTRMLU**Register type**

Peg

Description

OUTTRMLU counts outgoing terminal calls for which the first digit received is KP or KP1.

The system generates this register in office types OFF200300 and OFF300.

Associated registers

None

Extension registers

None

Associated logs

None

OUTTRNSU**Register type**

Peg

Description

OUTTRNSU counts outgoing transit calls for which the first digit received is KP2. The system generates this register in office types OFF200300 and OFF300.

Associated registers

None

Extension registers

None

Associated logs

None

PRERTEAB**Register type**

Peg

Description

PRERTEAB counts incoming attempts the system abandons before the system can complete routing. The system generates this register for all office types that are correct.

The system generates this register in office types OFF100OESD, OFF200OESD, and OFFCOMBOESD.

Associated registers

The following registers are associated with the PRERTEAB register as well as with each other:

- OFZ_INABNC, which counts incoming calls the subscriber abandons
- OFZ_INABNM, which counts incoming calls the switch abandons

The following registers are also associated with the PRERTEAB register as well as with each other:

- OTS_INABNC, which counts incoming calls the subscriber abandons
- OTS_INABNM, which counts incoming calls the switch abandons

Validation formulas

The following formulas relate to PRERTEAB and its associated registers:

- $\Sigma \text{TRK\_PRERTEAB} = \text{OFZ\_INABNM} + \text{OFZ\_INABNC}$

Note: This relationship does not apply to calls that originate from a mobile telephone exchange (MTX).

- $\Sigma \text{TRK\_PRERTEAB} = \text{OTS\_INCABNM} + \text{OTS\_INCABNC}$

Note: This relationship does not apply to calls originating from a Mobile telephone.

Extension registers

None

Associated logs

TRK113, TRK116,

PREU**Register type**

Usage

Scan rate

100 seconds

Description

Every 100 seconds the system scans the trunk group. This register records if the system turns the PRE on for a two-way trunk group.

The system generates this register for office types that are correct.

Associated registers

None

Extension registers

None

Associated logs

NWM101

Q33FLT**Register type**

Peg

Description

Q33FLT counts Q33 circuit failures that occur on a given trunk. Datafill for this trunk appears in table TRKSGRP with the Q33SUP option. These faults occur when AB bits of time slot 16 are set to 11.

Associated registers

None

Extension registers

None

Associated logs

TRK149

SBU**Register type**

Usage

Scan rate

100 seconds

Description

Every 100 seconds the system scans the trunk group. This register records if a trunk is in one of the following states:

- remote busy
- peripheral module busy
- system busy
- carrier fail
- deloaded

The system generates this register for office types that are correct.

Associated registers

None

Extension registers

None

Associated logs

TRK106, TRK109

TANDEM**Register type**

Peg

Description

TANDEM counts incoming calls on a trunk group that first routes to an outgoing trunk group. Register TANDEM increases before the system determines if the outgoing trunk group is busy, or if a junctor path is available. The system generates this register for office types that are correct, except OFF300.

Associated registers

OFZ_INOUT, which counts incoming calls that first route to other trunks, TOPS, AOSS, and terminating test lines.

Validation formula

$$\text{OFZ\_INOUT} + (\text{OFZ\_INOUT2} \times 65536) - (\text{trunk-to-TOPS calls}) = \Sigma \text{TRK\_TANDEM}$$

Extension registers

None

Associated logs

None

TOTU-U.S. and Australia only**Register type**

Usage

Scan rate

100 seconds

Description

Every 100 seconds the system scans the trunk group and register TOTU records if any trunk in the group is busy.

The system generates register TOTU in the following office types:

- OFF100
- OFF100G
- OFFCOMB
- OFFCOMBLWW
- OFFCOMBTOPS
- OFF200
- OFF200TOPS
- OFF250
- OFF100OESD

- OFF200OESD
- OFFCOMBOESD

Associated registers

[MBU](#), [SBU](#), [TRU](#)

Validation formula

TOTU = TRU + SBU + MBU

Extension registers

None

Associated logs

None

TRU**Register type**

Peg

Description

Every 100 seconds the system scans the trunk group. This register records if a trunk in the group is in one of the following states:

- call processing busy (TK_CP_BUSY)
- call processing busy deload (TK_CP_BUSY_DELOAD)
- lockout (TK_LOCKOUT)

The system generates this register for office types that are correct.

Associated registers

None

Extension registers

None

Associated logs

None

TRU2WIN**Register type**

Usage

Scan rate

100 seconds

Description

Every 100 seconds the system scans the trunk group. TRU2WINr records if a two-way trunk in a group is in one of the following states:

- call processing busy (TK_CP_BUSY)
- call processing busy deload (TK_CP_BUSY_DELOAD)
- lockout (TK_LOCKOUT)

The system generates register TRU2WIN for office type DMS250.

Associated registers

[TRU](#)

Extension registers

None

Associated logs

None

TRK2

Description

OM group Trunk group 2 (TRK2) is a continuation of TRK, and provides more information on trunk traffic.

The following table lists the key and info fields associated with OM group TRK2:

Key field	Info field
COMMON_LANGUAGE_NAME	OM2TRKINFO

OM2TRKINFO is made up of three parts: TRKDIR, NCCT, and NWCCT. TRKDIR is the trunk group direction. The fixed TRKDIR for TRK are:

- IC: incoming trunk
- OG: outgoing trunk
- 2W: 2-way trunk

NCCT is the total number of trunk circuits in the group. NWCCT is the number of trunk circuits that are available for service at the end of the reporting period.

Tables TRKNAME and OFCSTD must be datafilled. The administrative number associated with a trunk group is datafilled in field ADNUM in table TRKNAME.

Related functional groups

There are no functional groups associated with OM group TRK2.

Registers

The following table lists the registers associated with OM group TRK2 and what they measure. For a detailed description of a register, click on the register name.

Registers for OM group TRK2 (Sheet 1 of 2)

Register name	Measures
ANSSZG	Answer to seizure ratio
AVHOLD	Average trunk holding time

Registers for OM group TRK2 (Sheet 2 of 2)

Register name	Measures
<u>NALRTET</u>	Number of alternated routed calls on trunk
<u>NALRTETU</u>	Number of alternately routed calls
<u>NBSY</u>	Number of busy calls
<u>NINCTRM</u>	Number of incoming to terminating (trunk to line) connections
<u>NINCTRMC</u>	Number of incoming to terminating (trunk to line) conversations
<u>NINCTRMU</u>	Number of incoming to terminating (trunk to line) answered calls
<u>NORGOUT</u>	Number of originating to outgoing (line to trunk) connections
<u>NORGOUTC</u>	Number of originating to outgoing (line to trunk) conversations
<u>NORGOUTU</u>	Number of originating to outgoing (line to trunk) answered calls
<u>NUNA</u>	Number of unanswered calls
<u>RINGING</u>	Ringing
<u>TANDEMC</u>	Tandem conversations
<u>TANDEMU</u>	Tandem answered calls

ANSSZG**Register type**

Peg

Description

ANSSZG measures the ratio of answer to seizure as a percentage for each trunk group.

Associated registers

ANSWER, INANSWER, CONNECT, and INCATOT in OM group TRK.

Validation formula

$$\text{ANSSZG} = [(\text{ANSWER} + \text{INANSWER}) \times 100] / (\text{CONNECT} + \text{INCATOT})$$

Extension registers

None

Associated logs

None

AVHOLD**Register type**

Peg

Description

AVHOLD counts the average trunk holding time for each trunk group.

Associated registers

TRU, NATTMPT, INCATOT, and NOVFLATB in OM group TRK.

Validation formula

$$\text{AVHOLD} = (\text{TRU} \times 100) / (\text{NATTMPT} + \text{INCATOT} - \text{NOVFLATB})$$

Extension registers

None

Associated logs

None

NALRTET**Register type**

Peg

Description

NALRTET counts the number of calls for each trunk group that are routed to an alternate trunk because of trunk overflows. NALRTET counts rerouted calls, but not reattempted calls.

Associated registers

None

Extension registers

None

Associated logs

None

NALRTETU**Register type**

Usage

Scan rate

Not available

Description

NALRTETU shows the trunk usage for each trunk group for calls that are successfully routed to an alternate trunk.

Use the command **OMSHOW TRK class TOTAL** at CI level to display the office-wide value for this register.

Associated registers

None

Extension registers

None

Associated logs

None

NBSY**Register type**

Peg

Description

NBSY counts the number of busy calls for each trunk group. NBSY increases when a busy tone or signal is received on a trunk group to indicate that the called party's line is busy.

NBSY counts only outgoing ISUP and R2 calls, and increases when the busy tone is received.

Associated registers

None

Extension registers

None

Associated logs

None

NINCTRM**Register type**

Peg

Description

NINCTRM counts the number of incoming calls on a trunk group that are initially routed to a terminating line. NINCTRM is incremented before it is known if the terminating line is busy, or if a junctor path is available.

Use the command OMSHOW TRK class TOTAL at CI level to display the office-wide value for this register.

Associated registers

None

Extension registers

None

Associated logs

None

NINCTRMC**Register type**

Peg

Description

NINCTRMC counts the number of incoming answered calls on a trunk group that are routed to a terminating line. NINCTRMC is incremented when an answer line signal is received from the terminating line after the incoming to terminating call connection.

Associated registers

None

Extension registers

None

Associated logs

None

NINCTRMU**Register type**

Usage

Scan rate

Not available

Description

NINCTRMU shows the number of trunk to line answered calls for each trunk group. NINCTRMU measures traffic in the answered state for each trunk group.

Use the command **OMSHOW TRK class TOTAL** at CI level to display the office-wide value for this register.

Associated registers

None

Extension registers

None

Associated logs

None

NORGOUT**Register type**

Peg

Description

NORGOUT counts the number of outgoing calls on a trunk group that are received from an originating line.

Use the command **OMSHOW TRK class TOTAL** at CI level to display the office-wide value for this register.

Associated registers

None

Extension registers

None

Associated logs

None

NORGOUTC**Register type**

Peg

Description

NORGOUTC counts the number of outgoing answered calls on a trunk group that are received from an originating line. NORGOUTC is incremented when an answer signal is received from the outgoing trunk after the call connection from originating to outgoing.

Associated registers

None

Extension registers

None

Associated logs

None

NORGOUTU**Register type**

Usage

Scan rate

Not available

Description

NORGOUTU shows the number of line to trunk answered calls for each trunk group. NORGOUTU measures traffic in the answered state for each trunk group.

Use the command **OMSHOW TRK class TOTAL** at CI level to display the office-wide value for this register.

Associated registers

None

Extension registers

None

Associated logs

None

NUNA**Register type**

Peg

Description

NUNA counts the number of unanswered calls for each trunk group. NUNA increases when no answer signal is received after call connection on a trunk group.

NUNA counts only ISUP trunk calls, and increases if no answer message is received after the Address Complete Message (ACM).

Associated registers

None

Extension registers

None

Associated logs

None

RINGING**Register type**

Peg

Description

RINGING counts the number of connected calls used for measurement of the outgoing trunk (CISUP or CTUP). RINGING is incremented only when the ACM message is received on tandem in a non-fast answer call.

RINGING is updated properly only when the following office parameters are turned on:

- ACTIVATE_OMEF in table OFCVAR
- ISDN_ACCIND in table AMAOPTS

Associated registers

TRMTCM_TCMPSIG, which counts calls that the system routes to permanent signal timeout treatment.

Extension registers

None

Associated logs

None

TANDEMC**Register type**

Peg

Description

TANDEMC counts incoming answered calls on a trunk group that are routed to an outgoing trunk group. TANDEMC is incremented when an answer signal is received from the outgoing trunk group after the call connection from incoming to outgoing.

Associated registers

None

Extension registers

None

Associated logs

None

TANDEMU**Register type**

Usage

Scan rate

Not available

Description

TANDEMU is a usage register that shows the number of trunk to trunk answered calls for each trunk group. TANDEMU measures traffic in the answered state for each trunk group.

Use the command **OMSHOW TRK class TOTAL** at CI level to display the office-wide value for this register.

Associated registers

None

Extension registers

None

Associated logs

None

TRK2NET1

Description

OM group Trunk to Network Group 1 (TRK2NET1) measures trunk group traffic for each bearer network. Registers in TRK2NET1 measure the following events for each trunk group:

- routing and seizure attempts
- seize failures
- total trunk use
- busy state use

TRK2NET2 contains registers that are extensions of a subset of registers in TRK2NET1. OM groups TRK and TRNK2 provide traffic data summaries on a per-trunk group basis for all trunk groups in an office. TRK2NET1 and TRK2NET2 provide similar traffic data summaries with further refinement on a per-bearer network basis for each trunk group for all trunks groups in an office.

Set new office parameter MULTINET_DISPLAY_ACTIVE to Y to display TRK2NET1. Use the following syntax for the OMSHOW command for TRK2NET1:

```
> omshow trk2net1 active '<TRUNK_GROUP_NAME> <NETWORK_ID>'
```

where:

<TRUNK_GROUP_NAME> = the name of the trunk group as defined in table CLLI
<NETWORK_ID> = the NETIDX key field of table BEARNETS
(examples: NET 0, NET 1)

Example command:

```
> omshow trk2net1 active 'TRI1ITOGS7 NET 0'
```

To enter the OMSHOW command successfully:

- the trunk group name and network id must be entered in ALL CAPITAL LETTERS
- both the trunk group *and* network id must be included and enclosed in the same set of single quotes (' ')
- only one network id can be specified in a single command

If the command is not entered correctly, the system displays the following error message: Invalid KEY NAME for this node.

The following table lists the key and info fields associated with OM group TRK2NET1. The group provides one tuple for each trunk group and each bearer network in which the trunk group has members provisioned.

Key field	Info field
None	OM2TRKINFO

Info field OM2TRKINFO includes:

- CLLI
- bearer network ID (NET 0)
- bearer network name (TDM_ENET)
- trunk group direction. Values:
IC = incoming trunk
OG = outgoing trunk
2W = two-way trunk
- total number of trunk circuits in the group in the associated bearer network
- number of trunk circuits in the associated bearer network available for service at the end of the report period

Office parameter OFFICETYPE in table OFCSTD controls the generation of the registers for TRK2NET1. The following table describes the correct entries (values) for table OFCSTD.

Office type values for table OFCSTD (Sheet 1 of 2)

Value (name)	Office type
NOOFFICE	Default
OFF100	Local
OFF100OESD	Austrian local
OFF200	Toll
OFF200OESD	Australian toll
OFF200TOPS	Toll with traffic operator position system (TOPS)
OFF200300	Combined gateway/toll

Office type values for table OFCSTD (Sheet 2 of 2)

Value (name)	Office type
OFF250	DMS-250
OFF250IBN	DMS-250/SL-100
OFF300	Gateway
OFFCOMB	Combined local/toll
OFFCOMBLWW	Combined local/toll with wireless
OFFCOMBOESD	Australian combined local/toll
OFFCOMBTOPS	Combined local/toll with TOPS

Related functional groups

The following functional groups are associated with OM group TRK2NET1:

- Succession North America
- Succession International

Registers

The following table lists the registers associated with OM group TRK2NET1 and what they measure. For a description of a register, click on the register name.

Registers for OM group TRK2NET1

Register name	Measures
ANIOFCFL	Automatic number identification office failure
ANSUFIN	Answer message usage on an incoming trunk
CNCTAT	Successful connection attempts
GLARE1	Glare
INCAATT	Incoming attempts total
INVATHCD	Invalid authorization code
MAXBSY	Maximum busy circuits

Registers for OM group TRK2NET1

Register name	Measures
<u>MBSYU</u>	Maintenance busy usage
<u>NACCCNG</u>	Automatic congestion control
<u>NANF</u>	No automatic number identification signals
<u>NANSWER</u>	Answer supervisions
<u>NATMPT</u>	Number of attempts
<u>NINANSWER</u>	Answer messages on an incoming trunk
<u>NINFAIL</u>	Incoming failures
<u>NOANSWR</u>	No answer on trunk (timed out)
<u>NVFLATB</u>	Number of overflows, all trunks busy
<u>OUTANSWR</u>	Answer message usage on an outgoing trunk
<u>OUTFL</u>	Outgoing failures
<u>PRERTEA1</u>	Pre-route abandon
<u>SBSYU</u>	System busy usage
<u>TNDMATT</u>	Tandem attempts
<u>TOTBSYU</u>	Total usage
<u>TRFCU</u>	Traffic busy usage
<u>TRKNWBLK</u>	Outgoing matching failure

ANIOFCFL**Register type**

Peg

Description

ANIOFCFL counts incoming calls for which the originating office detects an ANI failure. The office can detect a failure even when the key pulse and signaling terminal control signals are correct. Missing or no information digits or a missing category code indicates an ANI failure.

ANIOFCFL is present in the following office types: OFF100, OFF200, OFFCOMB, OFFCOMBITOPS, OFF200TOPS, OFFCOMBTOPS, OFF200TOPS, OFFCOMBTOPS, OFF500, OFFCOMBLWW, OFFCOMB300, NOOFFICE.

Associated registers

TRK_AOF

Extension registers

None

Associated logs

TRK118, TRK119

ANSUFIN**Register type**

Usage

Scan rate

100 seconds

Description

ANSUFIN records the number of answered calls on incoming trunk calls for each two-way trunk. The register measures occupancy in Erlangs. The value of ANSUFIN increases every 100 seconds according to the number of trunks occupied with answered calls.

ANSUFIN is present in the following office types: OFF100, OFF200, OFFCOMB, OFFCOMBITOPS, OFF200TOPS, OFFCOMBTOPS, NOOFFICE.

Note: This register is not pegged in the current load, and will be removed in a future release.

Associated registers

TRK_INANSU

Extension registers

None

Associated logs

None

CNCTAT**Register type**

Peg

Description

CNCTAT counts outgoing seizure attempts on the trunk group that appear to result in successful connection. The register increases before the system recognizes whether the seizure is successful. A glare or seizure failure decreases the count decreases by 1.

CNCTAT is present in the following office types: OFF100, OFF200, OFFCOMB, OFFCOMBITOPS, OFF200TOPS, OFFCOMBTOPS, OFF250, OFF250IBN, OFFMTX100I, OFF500, OFFCOMBLWW, OFF300, OFF200AVON, OFF100SCP, OFF100OESD, OFF200OESD, OFFCOMBOESD, OFFCOMB300, NOOFFICE.

Associated registers

The following registers are associated with CNCTAT:

- [GLARE1](#) increases when the system drops an earlier selected trunk because the peripheral module detects an origination before it can seize the trunk.
- TRK_CONNECT

Extension registers

TRK2NET2_CNCTAT2

Associated logs

None

GLARE1**Register type**

Peg

Description

GLARE1 increases when the system drops a trunk that the system previously selected when the PM detects an origination before it can seize the trunk. The operating company indicates that outgoing calls give way to simultaneous incoming calls (glare). If glare occurs again when the system attempts to select a new trunk, the calls routes to generalized no-circuit (GNCT) treatment and GLARE1 increases again.

GLARE1 is present in the following office types: OFF100, OFF200, OFFCOMB, OFFCOMBITOPS, OFF200TOPS, OFFCOMBTOPS, OFF250, OFF250IBN, OFFMTX100I, OFF500, OFFCOMBLWW, OFF300, OFF200AVON, OFF100SCP, OFF100OESD, OFF200OESD, OFFCOMBOESD, OFFCOMB300, NOOFFICE.

Associated registers

[CNCTAT](#), [OUTFL](#), TRK_GLARE

Extension registers

None

Associated logs

TRK113, TRK121

INCAATT**Register type**

Peg

Description

INCAATT counts incoming seizures on a trunk group, including seizures that fail or that the system abandons before routing.

INCAATT is present in the following office types: OFF100, OFF200, OFFCOMB, OFFCOMBITOPS, OFF200TOPS, OFFCOMBTOPS, OFF250, OFF250IBN, OFFMTX100I, OFF500, OFFCOMBLWW, OFF300, OFF200AVON, OFF100SCP, OFF100OESD, OFF200OESD, OFFCOMBOESD, OFFCOMB300, NOOFFICE.

Associated registers

TRK_INCATOT

Extension registers

TRK2NET2_INCAATT2

Associated logs

None

INVATHCD**Register type**

Peg

Description

INVATHCD counts authorization codes that are not correct. The register is pegged against the CLLI and bearer network of the originator.

Although INVATHCD is pegged primarily when the office type is set to OFF250IBN, the register is present also in the following office types: OFF250, OFFMTX100I, OFF500, OFFCOMBLWW and OFFCOMB300.

Associated registers

TRK_INVAUTH

Extension registers

None

Associated logs

None

MAXBSY**Register type**

Usage

Scan rate

100 seconds

Description

MAXBSY scans the trunk group and increases if the number of busy circuits exceeds the maximum number that the system recorded earlier.

The register is present in the following office types: OFF250, OFF250IBN, OFFMTX100I, OFF500, OFFCOMBLWW, OFFCOMB300.

Note: MAXBSY will always be set to zero for DPT trunks.

Associated registers

TRK_MAXBU

Note: TRK_MAXBU will always be set to zero for DPT trunks.

Extension registers

None

Associated logs

None

MBSYU**Register type**

Usage

Scan rate

100 seconds

Description

MBSYU records if a trunk is manual busy, network management busy, or seized.

MBSYU is present in the following office types: OFF100, OFF200, OFFCOMB, OFFCOMBITOPS, OFF200TOPS, OFFCOMBTOPS, OFF250, OFF250IBN, OFFMTX100I, OFF500, OFFCOMBLWW, OFF300, OFF200AVON, OFF100SCP, OFF100OESD, OFF200OESD, OFFCOMBOESD, OFFCOMB300, NOOFFICE.

Associated registers

TRK_MBU

Extension registers

None

Associated logs

None

NACCCNG**Register type**

Peg

Description

NACCCNG counts the number of times that a trunk group enters automatic congestion control (ACC) congestion.

NACCCNG is present in the following office types: OFF100, OFF200, OFFCOMB, OFFCOMBITOPS, OFF200TOPS, OFFCOMBTOPS, OFF250, OFF250IBN, OFFMTX100I, OFF500, OFFCOMBLWW, NOOFFICE.

Associated registers

TRK_ACCCONG

Extension registers

None

Associated logs

None

NANF**Register type**

Peg

Description

NANF counts incoming centralized automatic message accounting (CAMA) or TOPS calls for which:

- the system receives either invalid automatic number identification (ANI) signaling, or no ANI signaling
- the numbering plan area code (N0/1X) or the central office code (NNX) of the calling number for the incoming trunk group is not correct. NANF increases when the system attaches the necessary receiver to the call.

NANF is present in the following office types: off100, OFF200, OFFCOMB, OFFCOMBITOPS, OFF200TOPS, OFFCOMBTOPS, OFF200TOPS, OFFCOMBTOPS, OFF500, OFFCOMBLWW, OFFCOMB300, NOOFFICE.

Associated registers

TRK_ANF

Extension registers

None

Associated logs

TRK120

NANSWER**Register type**

Peg

Description

NANSWER counts all line/trunk-to-trunk answered calls, and is the answer register for the outgoing trunk. The system generates NANSWER for the following office types: OFF100, OFF200, OFFCOMB, OFFCOMBITOPS, OFF200TOPS, OFFCOMBTOPS, OFF250, OFF250IBN, OFFMTX100I, OFF300, OFFCOMB300, OFF100OESD, OFF200OESD, OFFCOMBOESD, NOOFFICE.

Associated registers

TRK_ANSWER

Extension registers

TRK2NET2_NANSWER2

Associated logs

None

NINANSWER**Register type**

Peg

Description

NINANSWER counts the answered calls for incoming traffic on each incoming or two-way trunk. The register is present in the following office types: OFF100, OFF200, OFFCOMB, OFFCOMBITOPS, OFF200TOPS, OFFCOMBTOPS, NOOFFICE.

Note: This register is not pegged in the current load, and will be removed in a future release.

Associated registers

TRK_INANSWER

Extension registers

None

Associated logs

None

NINFAIL**Register type**

Peg

Description

NINFAIL increases when one of the following events occurs on a trunk that has originated a call or appears to have originated a call:

- permanent signal
- partial dial time-outs and false starts
- bad digits, including bad signaling terminal (ST) digits
- originations on one-way outgoing trunks
- lost integrity on the network path while connected to a service circuit or to another trunk before answer
- failure to attach a receiver after two attempts
- receiver queue overflow
- receiver queue wait time-out
- failure to time-out after 30 seconds while waiting for a multi frequency receiver

- progress message of a type not expected in the current call environment
- force-release before connection

NINFAIL is present in the following office types: OFF100, OFF200, OFFCOMB, OFFCOMBITOPS, OFF200TOPS, OFFCOMBTOPS, OFF250, OFF250IBN, OFFMTX100I, OFF500, OFFCOMBLWW, OFF300, OFF200AVON, OFF100SCP, OFF100OESD, OFF200OESD, OFFCOMBOESD, OFFCOMB300, NOOFFICE.

Associated registers

TRK_INFAIL

Extension registers

None

Associated logs

TRK111, TRK114, TRK115, TRK116, TRK117, TRK138, TRK182, TRK183, TRK213

NATMPT**Register type**

Peg

Description

NATMPT counts the number of system attempts to route an outgoing call to a trunk group. The register increases before an idle trunk and a network connection to the trunk are available.

NATMPT is present in the following office types: OFF100, OFF200, OFFCOMB, OFFCOMBITOPS, OFF200TOPS, OFFCOMBTOPS, OFF250, OFF250IBN, OFFMTX100I, OFF500, OFFCOMBLWW, OFF300, OFF200AVON, OFF100SCP, OFF100OESD, OFF200OESD, OFFCOMBOESD, OFFCOMB300, NOOFFICE.

Associated registers

TRK_NATMPT

Extension registers

TRK2NET2,_NATMPT2

Associated logs

None

NOANSWR**Register type**

Peg

Description

NOANSWR counts the number of times a call is taken down after a specified time-out, as part of Black Box Fraud prevention (BBFP). The time-out value for each trunk-group can be set in table TRKOPTS in one- to five-minute intervals.

NOANSWR increases when the timer expires before an answer supervision signal is received. To activate or deactivate the NOANSWR functionality, datafill option DLYFWDXMT in table TRKOPTS for each trunk group.

NOANSWR is present in the following office types: OFF100, OFF200, OFFCOMB, OFFCOMBITOPS, OFF200TOPS, OFFCOMBTOPS, OFF250, OFF250IBN, OFFMTX100I, OFF300, OFFCOMB300, OFF100OESD, OFF200OESD, OFFCOMBOESD, NOOFFICE.

Associated registers

TRK_NOANSWER

Extension registers

None

Associated logs

TRK610

NVFLATB**Register type**

Peg

Description

NVFLATB increases when a call with access to the trunk group overflows the group. The system routes the call because an idle trunk is not available. A call can access the same group more than one time. Overflow can occur only one time. Overflow occurs if the system cannot use the first trunk because of seize fail, glare or network blockage. NVFLATB increases when the system cannot find an idle trunk on first or subsequent access attempts.

NVFLATB is present in the following register types: OFF100, OFF200, OFFCOMB, OFFCOMBITOPS, OFF200TOPS, OFFCOMBTOPS, OFF250, OFF250IBN, OFFMTX100I, OFF500, OFFCOMBLWW,

OFF300, OFF200AVON, OFF100SCP, OFF100OESD,
OFF200OESD, OFFCOMBOESD, OFFCOMB300, NOOFFICE.

Associated registers

TRK_NOVFLATB

Extension registers

None

Associated logs

ATB100

OUTANSWR**Register type**

Usage

Scan rate

100 seconds

Description

OUTANSWR records the number of answered calls on outgoing trunk calls. The register measures (in Erlangs) traffic in the answered state for each outgoing or two-way trunk. The OUTANSWR value increases according to the number of trunks occupied with answered calls.

OUTANSWR is present in the following office types: OFF100, OFF200, OFFCOMB, OFFCOMBITOPS, OFF200TOPS, OFFCOMBTOPS, NOOFFICE.

Note: This register is not pegged in the current load, and will be removed in a future release.

Associated registers

TRK_OUTANSU

Extension registers

None

Associated logs

None

OUTFL**Register type**

Peg

Description

OUTFL counts attempts to seize an outgoing trunk in the trunk group that fail because of:

- signaling problems
- loss of accuracy
- outgoing or seizure failures

The system releases the trunk, performs two attempts (maximum) to seize a trunk, and counts each failed attempt in OUTFL. If a second attempt to seize a trunk fails, the system routes the call to treatment. A log message can be generate, depending on the cause of failure.

OUTFL is present in the following office types: OFF100, OFF200, OFFCOMB, OFFCOMBITOPS, OFF200TOPS, OFFCOMBTOPS, OFF250, OFF250IBN, OFFMTX100I, OFF500, OFFCOMBLWW, OFF300, OFF200AVON, OFF100SCP, OFF100OESD, OFF200OESD, OFFCOMBOESD, OFFCOMB300, NOOFFICE.

Associated registers

[CNCTAT](#), [GLARE1](#), TRK_OUTFAIL

Extension registers

None

Associated logs

TRK113, TRK121, TRK122, TRK162, TRK213

PRERTEA1**Register type**

Peg

Description

PRERTEA1 counts incoming attempts that the system abandons before it can complete routing.

PRERTEA1 is present in the following office types: OFF100, OFF200, OFFCOMB, OFFCOMBITOPS, OFF200TOPS, OFFCOMBTOPS, OFF250, OFF250IBN, OFFMTX100I, OFF500, OFFCOMBLWW, OFF300, OFF200AVON, OFF100SCP, OFF100OESD, OFF200OESD, OFFCOMBOESD, OFFCOMB300, NOOFFICE.

Associated registers

TRK_PRERTEAB

Extension registers

None

Associated logs

TRK113, TRK116,

SBSYU**Register type**

Usage

Register type

100 seconds

Description

SBSYU records if a trunk is in one of the following states:

- remote busy
- peripheral module busy
- system busy
- carrier fail
- deloaded

SBSYU is present in the following office types: OFF100, OFF200, OFFCOMB, OFFCOMBITOPS, OFF200TOPS, OFFCOMBTOPS, OFF250, OFF250IBN, OFFMTX100I, OFF500, OFFCOMBLWW, OFF300, OFF200AVON, OFF100SCP, OFF100OESD, OFF200OESD, OFFCOMBOESD, OFFCOMB300, NOOFFICE.

Associated registers

TRK_SBU

Extension registers

TRK2NET2_SBSYU2

Associated logs

TRK106, TRK109

TNDMATT**Register type**

Peg

Description

TNDMATT counts incoming calls on a trunk group that first route to an outgoing trunk group. The register increases before the system

determines if the outgoing trunk group is busy, or if a junctor path is available.

TNDMATT is present in the following office types: OFF100, OFF200, OFFCOMB, OFFCOMBITOPS, OFF200TOPS, OFFCOMBTOPS, OFF250, OFF250IBN, OFFMTX100I, OFF500, OFFCOMBLWW, OFF300, OFF100SCP, OFF100OESD, OFF200OESD, OFFCOMBOESD, OFFCOMB300, NOOFFICE.

Associated registers

TRK_TANDEM

Extension registers

TRK2NET2_TNDMATT2

Associated logs

None

TOTBSYU**Register type**

Usage

Scan rate

100 seconds

Description

TOTBSYU records if any trunk in the group is busy.

TOTBSYU is present in the following office types: OFF100, OFF200, OFFCOMB, OFFCOMBITOPS, OFF200TOPS, OFFCOMBTOPS, OFF250, OFF250IBN, OFFMTX100I, OFF500, OFFCOMBLWW, OFFCOMB300, OFF100OESD, OFF200OESD, OFFCOMBOESD, NOOFFICE.

Associated registers

The following registers are associated with TOTBSYU:

- [MBSYU](#), [SBSYU](#), [TRFCU](#)

$TOTBSYU = MBSYU + SBSYU + TRFCU$

- TRK_TOTU (U.S. and Australia only)

TRK_TOTU = the sum of all the TOTBSYU for all bearer networks in the trunk group

Extension registers

TRK2NET2_TOTBSYU2

Associated logs

None

TRFCU**Register type**

Usage

Scan rate

100 seconds

Description

TRFCU records if a trunk in a trunk group is in one of the following states:

- call processing busy (TK_CP_BUSY)
- call processing busy deload (TK_CP_BUSY_DELOAD)
- lockout (TK_LOCKOUT)

TRFCU is present in the following office types: OFF100, OFF200, OFFCOMB, OFFCOMBITOPS, OFF200TOPS, OFFCOMBTOPS, OFF250, OFF250IBN, OFFMTX100I, OFF500, OFFCOMBLWW, OFF300, OFF200AVON, OFF100SCP, OFF100OESD, OFF200OESD, OFFCOMBOESD, OFFCOMB300, NOOFFICE.

Associated registers

TRK_TRU

Extension registers

TRK2NET2_TRFCU2

Associated logs

None

TRKNWBLK**Register type**

Peg

Description

TRKNWBLK counts attempts to find a path from an incoming trunk or originating line to a selected trunk that fail because of network blockage. If the system blocks an outgoing call, the call attempts to select a trunk again. If the system blocks the second attempt, TRKNWBLK counts the call again. The call routes to network blockage heavy traffic (NBLH) treatment.

TRKNWBLK is present in the following office types: OFF100, OFF200, OFFCOMB, OFFCOMBITOPS, OFF200TOPS, OFFCOMBTOPS, OFF250, OFF250IBN, OFFMTX100I, OFF500, OFFCOMBLWW, OFF300, OFF200AVON, OFF100SCP, OFF100OESD, OFF200OESD, OFFCOMBOESD, OFFCOMB300, NOOFFICE.

Associated registers

TRK_OUTMTCHF

Extension registers

None

Associated logs

NET130

TRK2NET2

Description

OM group Trunk to Network Group 2 (TRK2NET2) measures trunk group traffic for each bearer network. The group contains registers that are extensions of a subset of registers in TRK2NET1.

As with OM group TRK2NET1, set new office parameter MULTINET_DISPLAY_ACTIVE to Y to display TRK2NET2. Use the following syntax for the OMSHOW command for TRK2NET2:

```
> omshow trk2net2 active '<TRUNK_GROUP_NAME> <NETWORK_ID>'
```

where:

<TRUNK_GROUP_NAME> = the name of the trunk group as defined in table CLLI
<NETWORK_ID> = the NETIDX key field of table BEARNETS
(examples: NET 0, NET 1)

Example command:

```
> omshow trk2net2 active 'TRI1ITOGS7 NET 0'
```

To enter the OMSHOW command successfully:

- the trunk group name and network id must be entered in ALL CAPITAL LETTERS
- both the trunk group *and* network id must be included and enclosed in the same set of single quotes (' ')
- only one network id can be specified in a single command

If the command is not entered correctly, the system displays the following error message: Invalid KEY NAME for this node.

The following table lists the key and info fields associated with OM group TRK2NET2. The group provides one tuple for each trunk group and each bearer network in which the trunk group has members provisioned.

Key field	Info field
None	OM2TRKINFO

Info field OM2TRKINFO includes:

- CLLI
- bearer network ID (NET 0)
- bearer network name (TDM_ENET)
- trunk group direction. Values:
IC = incoming trunk
OG = outgoing trunk
2W = two-way trunk
- total number of trunk circuits in the group in the associated bearer network
- number of trunk circuits in the associated bearer network available for service at the end of the report period

Office parameter OFFICETYPE in table OFCSTD controls the generation of the registers for TRK2NET2. The following table describes the correct entries (values) for table OFCSTD.

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
OFF300	Gateway

Office type values for table OFCSTD (Sheet 2 of 2)

Value (name)	Office type
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 TRK2NET2:

- Succession North America
- Succession International

Registers

The following table lists the registers associated with OM group TRK2NET2 and what they measure. For a description of a register, click on the register name.

Registers for OM group TRK2NET2 (Sheet 1 of 2)

Register name	Measures
CNCTAT2	Successful connection attempts
INCAATT2	Incoming attempts
NANSWER2	Answer supervisions
NATMPT2	Number of attempts
SBSYU2	System busy usage

Registers for OM group TRK2NET2 (Sheet 2 of 2)

Register name	Measures
TNDMATT2	Tandem attempts
TOTBSYU2	Total usage
TRFCU2	Traffic busy usage

CNCTAT2**Register type**

Peg

Description

CNCTAT2 counts outgoing seizure attempts on the trunk group that appear to result in successful connection. The register increases before the system recognizes whether the seizure is successful. A glare or seize failure decreases the count by 1.

CNCTAT2 is present in the following office types: OFF100, OFF200, OFFCOMB, OFFCOMBITOPS, OFF250, OFF250IBN, OFFMTX100I, OFF500, OFFCOMBLWW, OFF300, OFFCOMB300, OFF200AVON, OFF100SCP, OFF100OESD, OFF200OESD, OFFCOMBOESD, NOOFFICE.

Associated registers

TRNK2_CONNECT2, TRK2NET1_CNCTAT

Extension registers

None

Associated logs

None

INCAATT2**Register type**

Peg

Description

INCAATT2 counts incoming seizures on a trunk group, including seizures that fail or that the system abandons before routing.

The register is present in the following office types: OFF100, OFF200, OFFCOMB, OFFCOMBITOPS, OFF250, OFF250IBN, OFFMTX100I, OFF500, OFFCOMBLWW, OFF300, OFFCOMB300, OFF200AVON,

OFF100SCP,OFF100OESD, OFF200OESD, OFFCOMBOESD,
NOOFFICE.

Associated registers

TRNK2_INCATOT2, TRK2NET1_INCAATT

Extension registers

None

Associated logs

None

NANSWER2**Register type**

Peg

Description

NANSWER2 counts all line/trunk-to-trunk answered calls, and is the answer register for the outgoing trunk. The register is present in the following office types: OFF100, OFF200, OFFCOMB, OFFCOMBITOPS, OFF250, OFF250IBN, OFFMTX100I, OFF500, OFFCOMBLWW, OFF300, OFFCOMB300, OFF100OESD, OFF200OESD, OFFCOMBOESD.

Associated registers

TRNK2_ANSWER2, TRK2NET1_NANSWER

Extension registers

None

Associated logs

None

NATMPT2**Register type**

Peg

Description

NATMPT2 counts the number of system attempts to route an outgoing call to a trunk group. The register increases before an idle trunk and a network connection to the trunk are available.

The register is present in the following office types: OFF100, OFF200, OFFCOMB, OFFCOMBITOPS, OFF250, OFF250IBN, OFFMTX100I, OFF500, OFFCOMBLWW, OFF300, OFFCOMB300, OFF200AVON,

OFF100SCP, OFF100OESD, OFF200OESD, OFFCOMBOESD, NOOFFICE.

Associated registers

TRNK2_NATMPT2, TRK2NET1_NATMPT

Extension registers

None

Associated logs

None

SBSYU2**Register type**

Usage

Register type

100 seconds

Description

SBSYU2 records if a trunk is in one of the following states:

- remote busy
- peripheral module busy
- system busy
- carrier fail
- deloaded

The register is present in the following office types: OFF100, OFF200, OFFCOMB, OFFCOMBITOPS, OFF250, OFF250IBN, OFFMTX100I, OFF500, OFFCOMBLWW, OFF300, OFFCOMB300, OFF200AVON, OFF100SCP, OFF100OESD, OFF200OESD, OFFCOMBOESD, NOOFFICE.

Associated registers

TRNK2_SBU2, TRK2NET1_SBSYU

Extension registers

None

Associated logs

TRK106, TRK109

TNDMATT2**Register type**

Peg

Description

TNDMATT2 counts incoming calls on a trunk group that first route to an outgoing trunk group. The register increases before the system determines if the outgoing trunk group is busy, or if a junctor path is available. The register is present in the following office types: OFF100, OFF200, OFFCOMB, OFFCOMBITOPS, OFF250, OFF250IBN, OFFMTX100I, OFF500, OFFCOMBLWW, OFF300, OFFCOMB300, OFF100SCP, OFF100OESD, OFF200OESD, OFFCOMBOESD, NOOFFICE.

Associated registers

TRNK2_TANDEM2, TRK2NET1_TNDMATT

Extension registers

None

Associated logs

None

TOTBSYU2**Register type**

Usage

Scan rate

100 seconds

Description

TOTBSYU2 records if any trunk in the group is busy. The register is present in the following office types: OFF100, OFF200, OFFCOMB, OFFCOMBITOPS, OFF250, OFF250IBN, OFFMTX100I, OFF500, OFFCOMBLWW, OFFCOMB300, OFF100OESD, OFF200OESD, OFFCOMBOESD, NOOFFICE.

Associated registers

[SBSYU2](#), [TRFCU2](#), TRK2NET1_TOTBSYU, TRNK2_TOTU2 (U.S. and Australia only)

TRNK2_TOTU2 = the sum of all of the TOTBSYU2 for all bearer networks in the trunk group

Extension registers

None

Associated logs

None

TRFCU2**Register type**

Usage

Scan rate

100 seconds

Description

TRFCU2 records if a trunk in a trunk group is in one of the following states:

- call processing busy (TK_CP_BUSY)
- call processing busy deload (TK_CP_BUSY_DELOAD)
- lockout (TK_LOCKOUT)

The register is present in the following office types: OFF100, OFF200, OFFCOMB, OFFCOMBITOPS, OFF250, OFF250IBN, OFFMTX100I, OFF500, OFFCOMBLWW, OFF300, OFFCOMB300, OFF200AVON, OFF100SCP, OFF100OESD, OFF200OESD, OFFCOMBOESD, NOOFFICE.

Associated registers

TRNK2_TRU2, TRK2NET1_TRFCU

Extension registers

None

Associated logs

None

TRKQOSOM

Description

OM group Trunk Quality of Service Operational Measurement (TRKQOSOM) presents QOS threshold crossing counts on a per trunk group basis. The counts presented are JITTER, DELAY, and PKTLOSS (packet loss).

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

Key field	Info field
Common Language Name (CLLI) A value corresponding to the entries in table CLLI for which GWC members have been datafilled.	None

Related functional groups

There are no functional groups associated with OM group TRKQOSOM.

Registers

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

Registers for OM group TRKQOSOM

Register name	Measures
JITTER	Jitter threshold exceeded
DELAY	Delay threshold exceeded
PKTLOSS	Loss threshold exceeded

JITTER**Register type**

Peg

Description

JITTER indicates that the jitter QOS statistic for a call has exceeded the datafilled JITTER threshold. The threshold is defined in office parameter PACKET_QOS_OM_THRESHOLDS in table OFCVAR.

Associated registers[DELAY](#), [PKTLOSS](#)**Extension registers**

None

Associated logs

None

DELAY**Register type**

Peg

Description

DELAY indicates that the delay QOS statistic for a call has exceeded the datafilled DELAY threshold. The threshold is defined in office parameter PACKET_QOS_OM_THRESHOLDS in table OFCVAR.

Associated registers[JITTER](#), [PKTLOSS](#)**Extension registers**

None

Associated logs

None

PKTLOSS**Register type**

Peg

Description

PKTLOSS is a peg register used to indicate that the packet loss QOS statistic for a call has exceeded the datafilled LOSS threshold. The threshold is defined in office parameter PACKET_QOS_OM_THRESHOLDS in table OFCVAR.

Associated registers

[JITTER](#), [DELAY](#)

Extension registers

None

Associated logs

None

UPSNFAIL

Description

The switch uses the UCS PSN Failure (UPSNFAIL) OMs to record the number of Call processing class primitives that it denies because of SOC option UPSN0001.

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

Key field	Info field
NIL	None

Related functional groups

There are no functional groups associated with OM group UPSNFAIL.

Registers

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

Registers for OM group UPSNFAIL

Register name	Measures
PRIMFAIL	Primitive failure

PRIMFAIL

Register type

Peg

Description

The switch pegs register PRIMFAIL every time it denies a call processing class primitive due to SOC option UPSN0001.

Associated registers

None

Extension registers

None

Associated logs

UPSN100

UTR

Description

OM group Universal Tone Receiver (UTR) counts and records call processing requests from lines and trunks to UTRs and the activities in request-wait queues.

Digitone and multifrequency calls request UTRs for digit collection. If a UTR is not available, the system places the request in a queue until a channel is available. A UTR has 32 channels and is in an XMS-based peripheral module (XPM).

The receiver attachment delay recording (RADR) measurement calculates the time the request for a UTR channel remains in the queue. Registers UTRRADA, UTRLDLYP, and UTRUDLYP report these measurements.

The XPM counts the UTR registers and transfers the registers to the central control every 5 minutes. Under heavy load conditions, this process can take more than 5 min. To provide an accurate example of a 10-second time period, the system updates register UTRSAMPL when 10 seconds pass. A time stamp at the call processing level determines when 10 seconds pass. The system moves the time stamp forward 10 seconds. The system adds the count of UTRs in use and the current count of UTR requests in the queue to UTRTRU and UTRQOCC.

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

Key field	Info field
None	UTR_OMINFO

The information field contains:

- the peripheral module (PM) name and number
- the fields defined
- the number of UTRs that have software for each PM

The field refers to each UTR tuple by a number. Field ADNUM in tables LTCINV and RCCINV identifies peripherals. The field uses the ADNUM identification that corresponds to the UTR equipped peripheral to refer to each UTR tuple. When the ADNUM field does not identify peripherals, the system numbers the UTR tuples from 0 to a maximum of 255.

- Tuple RADTESTC contains the total of the UTRRADA registers for all XPMs with UTR.
- Tuple RADLDLYP contains the total of the UTRLDLYP registers for all XPMs with UTR.
- Tuple RADUDLYP contains the total of the UTRUDLYP registers for all XPMs with UTR.

When the operating company sets office parameter OMINERLANGS in table OFCOPT to Y (yes), usage registers UTRQOCC and UTRTRU store in deci-erlangs.

Related functional groups

The functional group Universal Tone Receiver is associated with OM group UTR.

Registers

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

Registers for OM group UTR (Sheet 1 of 2)

Register name	Measures
UTRLDLYP	UTR lower delay peg
UTROVLFL	UTR overflow
UTRQABAN	UTR queue abandon
UTRQOCC	UTR queue occupied
UTRQOVFL	UTR queue overflow
UTRRADA	UTR receiver attachment delay
UTRSAMPL	UTR samples
UTRSZRS	UTR seizures

Registers for OM group UTR (Sheet 2 of 2)

Register name	Measures
UTRTRU	UTR available
UTRUDLYP	UTR upper delay peg

UTRLDLYP**Register type**

Peg

Description

UTRLDLYP counts requests for a UTR that are in the queue for a minimum of 3 seconds. Register UTRLDLYP counts the requests that the system denies and requests the system abandons after a minimum of 3 seconds.

UTRUDLYP and UTRLDLYP increase when a request waits in the queue for a minimum of 7 seconds. When the system denies the request for a UTR, both registers increase.

Associated registers[UTRUDLYP](#)**Extension registers**

None

Associated logs

None

UTROVLFL**Register type**

Peg

Description

UTROVLFL increases if receivers are not available when the system requests a receiver. The count in this register represents the number of attempts to secure a position in the wait queue for the UTR. The number of calls that enter the queue equals UTROVLFL subtracted from UTRQOVFL.

Associated registers

None

Extension registers

None

Associated logs

None

UTRQABAN**Register type**

Peg

Description

UTRQABAN increases when the system deletes a UTR request from the wait queue. The system deletes the request because the calling party abandons the call or because the incoming trunk times out.

Associated registers

None

Extension registers

None

Associated logs

None

UTRQOCC**Register type**

Usage

Scan rate

10 seconds

Description

UTRQOCC records if requests for UTRs are present in the wait queue. The operating company can set office parameter OMINERLANGS in table OFCOPT to Y. When OMINERLANGS is set to Y, the system stores the register count in deci-erlangs, not in hundred call seconds (CCS).

Associated registers[UTRSAMPL](#)**Extension registers**

None

Associated logs

None

UTRQOVFL**Register type**

Peg

Description

UTRQOVFL increases when the system denies a UTR request a position in the wait queue because the queue is full. The wait queue can hold the same number of requests as the number of available UTR channels. Each UTR has 32 channels.

Associated registers

TRK_INFAIL, which increases when register UTRQOVFL increases

Extension registers

None

Associated logs

None

UTRRADA**Register type**

Peg

Description

UTRRADA counts requests for a UTR channel on which the system performs receiver attachment delay record (RADR) measurements. Not all call processing and diagnostic requests are in the queue. The system cannot include these requests in UTRRADDA. The number of RADR calls correspond to the number of requests that call processing makes for UTR channels.

Associated registers

None

Extension registers

None

Associated logs

None

UTRSAMPL**Register type**

Peg

Description

UTRSAMPL increases when the system takes samples of queue occupancy and the number of receivers in use. The system takes these samples every 10 seconds. The call processing time stamp determines when 10 seconds passes.

When the system takes a sample, the system adds the current count of UTRs in use to UTRTRU. The system also adds the current count of UTR requests in the queue to UTRQOCC.

Associated registers

[UTRTRU](#), [UTRQOCC](#)

Extension registers

None

Associated logs

None

UTRSZRS**Register type**

Peg

Description

UTRSZRS increases each time the system supplies a UTR to a call in response to a request.

Associated registers

None

Extension registers

UTRSZRS2

Associated logs

None

UTRTRU**Register type**

Usage

Scan rate

10 seconds

Description

UTRTRU records the number of universal tone receivers in use. The operating company can set the office parameter OMINERLANGS in

table OFCOPT to Y. When OMINERLANGS is Y, the system stores the register counts in deci-erlangs. The system does not store the register counts in hundred call seconds (CCS).

Associated registers

[UTRSAMPL](#)

Extension registers

None

Associated logs

None

UTRUDLYP**Register type**

Peg

Description

UTRUDLYP counts requests for a UTR that are in the queue for a minimum of 7 seconds. The register also counts the number of requests that the system denies. This register also counts requests that the system abandoned after a minimum of 7 seconds.

UTRLDLYP increases when a request waits in the queue for a minimum of 7 seconds. If the system denies the request for a UTR, registers UTRUDLYP and UTRLDLYP increase.

Associated registers

[UTRLDLYP](#)

Extension registers

None

Associated logs

None

VAMPACG

Description

The Variable Advanced Intelligent Network Messaging and Automatic Code Gaping (VAMPACG) measures the use of the VAMPACG control system for applications in table Variable Advanced Intelligent Network Messaging Platform Transaction ID (VAMPTRID).

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

Key field	Info field
VAMP_MSGSET	None

Related functional groups

There are no functional groups associated with OM group VAMPACG.

Registers

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

Registers for OM group VAMPACG

Register name	Measures
VACGADD	VAMP ACG control Added
VACGEXP	VAMP ACG Expired
VACGREM	VAMP ACG Removed
VACGUPD	VAMPACG Updated
VACGQCAC	VAMP ACG Queries Checked Against Control
VACGBLK	VAMP ACG Queries Blocked
VACGREST	VAMP ACG Control Systems Reset

VACGADD

Register type

Peg

Description

VACGADD measures ACG controls that have been added to the control list for the application.

Associated registers

None

Extension registers

None

Associated logs

VAMP302

VACGEXP**Register type**

Peg

Description

VACGEXP measures ACG controls that have expired on the duration timer.

Associated registers

None

Extension registers

None

Associated logs

VAMP302

VACGREM**Register type**

Peg

Description

VACGREM measures the ACG controls that have been removed from the duration timer.

Associated registers

None

Extension registers

None

Associated logs

VAMP 302

VACGUPD**Register type**

Peg

Description

VACGUPD measures the ACG controls that have been updated. A control is updated when VAMP receives an ACG message that contains a control that already exists in the control list for that application.

Associated registers

None

Extension registers

None

Associated logs

VAMP302

VACGQCAC**Register type**

Peg

Description

VACGQCAC measures queries for an application that have been checked against the ACG controls in the controls list.

Associated registers

None

Extension registers

None

Associated logs

None

VACGBLK**Register type**

Peg

Description

VACGBLK measures an applications queries that have been blocked by an ACG control in the control list.

Associated registers

None

Extension registers

None

Associated logs

VAMP 301

VACGREST**Register type**

Peg

Description

VACGRSET measures ACG Global Control Restore messages received by VAMP for an application.

Associated registers

None

Extension registers

None

Associated logs

VAMP 303

VOW

Description

OM group Virtual Office Worker (VOW) tracks VOW usage for the MSL-100.

The following table lists the key and info fields associated with OM group VOW. The group provides one tuple for each logical group.

Key field	Info field
CUSTOMER_GROUP	NIL_TYPE_ID

Related functional groups

There are no functional groups associated with OM group VOW.

Registers

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

Registers for OM group VOW

Register name	Measures
INPASS	VOWIN pass
INFAIL	VOWIN fail
OUTPASS	VOWOUT pass
OUTFAIL	VOWOUT fail
CINPASS	VOW CKLN/CLN login pass
CINFAIL	VOW CKLN/CLN login fail
COUTPASS	VOW CKLN/CLN logout pass
COUTFAIL	VOW CKLN/CLN logout fail
PCCPASS	VOWPCC pass code change pass
PCCFAIL	VOWPCC pass code change fail
AUDPASS	VOW audit logout pass

Registers for OM group VOW

Register name	Measures
AUDFAIL	VOW audit logout fail
ROUTPASS	VOWROUT pass
ROUTFAIL	VOWROUT fail

INPASS**Register type**

Peg

Description

INPASS counts successful VOWIN attempts.

Associated registers[INFAIL](#)**Validation formula**
$$\text{INPASS} + \text{INFAIL} = \text{Total VOWIN attempts}$$
Extension registers

None

Associated logs

VOW501

INFAIL**Register type**

Peg

Description

INFAIL counts failed VOWIN attempts.

Associated registers[INPASS](#)**Validation formula**
$$\text{INPASS} + \text{INFAIL} = \text{Total VOWIN attempts}$$
Extension registers

None

Associated logs

VOW502

OUTPASS**Register type**

Peg

Description

OUTPASS counts successful VOWOUT attempts.

Associated registers[OUTFAIL](#)**Validation formula**
$$\text{OUTPASS} + \text{OUTFAIL} = \text{Total VOWOUT attempts}$$
Extension registers

None

Associated logs

VOW501

OUTFAIL**Register type**

Peg

Description

OUTFAIL counts failed VOWOUT attempts.

Associated registers[OUTPASS](#)**Validation formula**
$$\text{OUTPASS} + \text{OUTFAIL} = \text{Total VOWOUT attempts}$$
Extension registers

None

Associated logs

VOW502

CINPASS**Register type**

Peg

Description

CINPASS counts successful VOW login attempts using CKLN/CLN.

Associated registers

[CINFAIL](#)

Validation formula

$\text{CINPASS} + \text{CINFAIL} = \text{Total CKLN/LN login attempts}$

Extension registers

None

Associated logs

VOW501

CINFAIL**Register type**

Peg

Description

CINFAIL counts failed VOW login attempts using CKLN/CLN.

Associated registers

[CINPASS](#)

Validation formula

$\text{CINPASS} + \text{CINFAIL} = \text{Total CKLN/LN login attempts}$

Extension registers

None

Associated logs

VOW502

COUTPASS**Register type**

Peg

Description

COUTPASS counts successful VOW logout attempts using CKLN/CLN.

Associated registers

[COUTFAIL](#)

Validation formula

COUTPASS + COUTFAIL = Total CDLN/LN logout attempts

Extension registers

None

Associated logs

VOW501

COUTFAIL**Register type**

Peg

Description

COUTFAIL counts failed VOW logout attempts using CKLN/CLN.

Associated registers

[COUTPASS](#)

Validation formula

COUTPASS + COUTFAIL = Total CDLN/LN logout attempts

Extension registers

None

Associated logs

VOW502

PCCPASS**Register type**

Peg

Description

PCCPASS counts successful VOW pass code changes.

Associated registers

[PCCFAIL](#)

Validation formula

PCCPASS + PCCFAIL = Total VOWPCC attempts

Extension registers

None

Associated logs

VOW501

PCCFAIL**Register type**

Peg

Description

PCCFAIL counts failed VOW pass code changes.

Associated registers[PCCPASS](#)**Validation formula**
$$\text{PCCPASS} + \text{PCCFAIL} = \text{Total VOWPCC attempts}$$
Extension registers

None

Associated logs

VOW502

AUDPASS**Register type**

Peg

Description

AUDPASS counts successful VOW logouts through the VOW audit.

Associated registers[AUDFAIL](#)**Validation formula**
$$\text{AUDPASS} + \text{AUDFAIL} = \text{Total AUDIT logout attempts}$$
Extension registers

None

Associated logs

VOW501, VOW601

AUDFAIL**Register type**

Peg

Description

AUDFAIL counts failed VOW logouts through the VOW audit.

Associated registers[AUDPASS](#)**Validation formula**
$$\text{AUDPASS} + \text{AUDFAIL} = \text{Total AUDIT logout attempts}$$
Extension registers

None

Associated logs

VOW502, VOW601

ROUTPASS**Register type**

Peg

Description

ROUTPASS counts successful VOWROUT attempts.

Associated registers[ROUTFAIL](#)**Validation formula**
$$\text{ROUTPASS} + \text{ROUTFAIL} = \text{Total VOWROUT attempts}$$
Extension registers

None

Associated logs

VOW501

ROUTFAIL**Register type**

Peg

Description

ROUTFAIL counts failed VOWROUT attempts.

Associated registers[ROUTPASS](#)**Validation formula**
$$\text{ROUTPASS} + \text{ROUTFAIL} = \text{Total VOWROUT attempts}$$
Extension registers

None

Associated logs

VOW502

VPTRUSAG

Description

OM group Variable AIN Message Platform Transaction Resource Identifier Usage (VPTRUSAG) measures the use of VAMP resources as provisioned for Carrier Advanced Intelligent Network (CAIN) applications in table VAMPTRID; assists in engineering these resources and the T1 response timer.

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

Key field	Info field
None	None

Related functional groups

There are no functional groups associated with OM group VPTRUSAG.

Registers

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

Registers for OM group VPTRUSAG (Sheet 1 of 2)

Register name	Measures
TRIDSEIZ	TRIDs seized
TRIDUSED	max TRIDs in use
TRIDOVFL	TRID seize failures
TRIDCMPS	max COMPs per TRID
TRIDMSGs	max MESGs per TRID
COMPSEIZ	COMPs seized
COMPUSED	max COMPs in use
COMPOVFL	COMP seize failures
COMPT1TM	T1 timer requests

Registers for OM group VPTRUSAG (Sheet 2 of 2)

Register name	Measures
COMPT1T0	T1 timeouts
MMSGSEIZ	MESGs seized
MMSGUSED	max MESGs in use
MMSGOVFL	MESG seize failures

TRIDSEIZ**Register type**

Peg

Description

TRIDSEIZ measures seizures of transaction ID blocks (TRID).

Associated registers[TRIDOVFL](#)**Validation formula**

TRIDSEIZ + TRIDOVFL = the number of queries attempted requiring a TRID block

Extension registers

TRIDSEI2

Associated logs

None

TRIDUSED**Register type**

Peg

Description

TRIDUSED tracks the highest number of TRID blocks in use at one time.

Associated registers

None

Extension registers

None

Associated logs

VAMP201, VAMP203

TRIDOVFL**Register type**

Peg

Description

TRIDOVFL measures failed attempts to seize TRID blocks.

Associated registers[TRIDSEIZ](#)**Validation formula**

TRIDSEIZ + TRIDOVFL = the number of queries attempted requiring a TRID block

Extension registers

None

Associated logs

VAMP202

TRIDCMPS**Register type**

Peg

Description

TRIDCMPS tracks the highest number of component identifier (COMP) blocks allocated against a single TRID block.

Associated registers

None

Extension registers

None

Associated logs

None

TRIDMSGGS**Register type**

Peg

Description

TRIDMSG tracks the highest number of message buffers (MESG) allocated against a single TRID block.

Associated registers

None

Extension registers

None

Associated logs

None

COMPSEIZ**Register type**

Peg

Description

COMPSEIZ measures seizures of COMP blocks.

Associated registers

[COMPOVFL](#)

Validation formula

$\text{COMPSEIZ} + \text{COMPOVFL}$ = number of queries attempted requiring a COMP block

Note: Every query message requiring a TRID block, requires at least one COMP block.

Extension registers

None

Associated logs

None

COMPUSED**Register type**

Peg

Description

COMPUSED tracks highest number of COMP blocks in use at any one time.

Associated registers

None

Extension registers

None

Associated logs

VAMP201, VAMP203

COMPOVFL**Register type**

Peg

Description

COMPOVFL measures failed attempts to seize COMP blocks.

Associated registers

[COMPSEIZ](#)

Validation formula

$\text{COMPSEIZ} + \text{COMPOVFL} = \text{number of queries attempted requiring a COMP block}$

Note: Every query message requiring a TRID block, requires at least one COMP block.

Extension registers

None

Associated logs

VAMP202

COMPT1TM**Register type**

Peg

Description

COMPT1TM measures number of COMP blocks for which T1 timing was requested.

Associated registers

[COMPT1T0](#)

Validation formula

$\text{COMPT1T0} \leq \text{COMPT1TM}$

Extension registers

COMPT1T2

Associated logs

None

COMPT1T0**Register type**

Peg

Description

COMPT1T0 measures number of COMP blocks for which T1 timer timed out without a receiving a response.

Associated registers[COMPT1TM](#)**Validation formula**
$$\text{COMPT1TO} \leq \text{COMPT1TM}$$
Extension registers

None

Associated logs

None

MESGSEIZ**Register type**

Peg

Description

MESGSEIZ measures seizures of MESG blocks.

Associated registers[MESGOVFL](#)**Validation formula**

$$\text{MESGSEIZ} + \text{MESGOVFL} = \text{number of queries attempted requiring a MESG block}$$

Extension registers

MESGSEI2

Associated logs

None

MESGUSED**Register type**

Peg

Description

MESGUSED tracks highest number of MESG blocks in use at any one time.

Associated registers

None

Extension registers

None

Associated logs

VAMP201, VAMP203

MESGOVFL**Register type**

Peg

Description

MESGOVFL measures failed attempts to seize MESG blocks.

Associated registers

[MESGSEIZ](#)

Validation formula

$\text{MESGSEIZ} + \text{MESGOVFL} = \text{number of queries attempted requiring a MESG block}$

Extension registers

None

Associated logs

VAMP202

VTCAPERR

Description

OM group Variable AIN Messaging Platform Transaction Capabilities Part Base Error (VTCAPERR) counts the number of protocol errors detected in TCAP messages, packages, and components received using VAMP TCAP.

Note: One exception is Register VTCAPERR which counts the number of undeliverable network messages sent and returned.

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

Key field	Info field
VAMP_MSGSET	None

Related functional groups

There are no functional groups associated with OM group VTCAPERR.

Registers

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

Registers for OM group VTCAPERR (Sheet 1 of 2)

Register name	Measures
VTETPBAD	VAMP TCAP Bad/Incorrect Transaction Portion
VTETPPKG	VAMP TCAP Unrecognized Package Type
VTETPPRM	VAMP TCAP Permission-to-Release Error
VTETPUCS	VAMP TCAP Unexpected Component Sequence
VTETPUID	VAMP TCAP Unrecognized Transaction ID
VTETPNID	VAMP TCAP Missing Respond ID
VTEDPBAD	VAMP TCAP Bad/incorrect Dialog Portion

Registers for OM group VTCAPERR (Sheet 2 of 2)

Register name	Measures
<u>VTEDPDLG</u>	VAMP TCAP Unrecognized Dialog ID
<u>VTEDPINC</u>	VAMP TCAP Inconsistent/missing Dialog Portion
<u>VTECPBAD</u>	VAMP TCAP Bad/incorrect Component Portion
<u>VTECPCMP</u>	VAMP TCAP Unrecognized Component Type
<u>VTECPDID</u>	VAMP TCAP Duplicate Invoke ID
<u>VTECPCID</u>	VAMP TCAP Unrecognized Correlation ID
<u>VTECPOPC</u>	VAMP TCAP Unrecognized Operation/Error Code
<u>VTECPUPS</u>	VAMP TCAP Unexpected Parameter set/sequence
<u>VTETPBAD</u>	VAMP TCAP Bad or incorrect parameter
<u>VTETMPID</u>	VAMP TCAP Unrecognized parameter ID
<u>VTETPMND</u>	VAMP TCAP Missing mandatory parameter
<u>VTETPMCND</u>	VAMP TCAP Missing Conditional parameter
<u>VTETPMERR</u>	VAMP TCAP Erroneous parameter data
<u>VTETUCOMM</u>	VAMP TCAP Unexpected communication
<u>VTETNETWK</u>	VAMP TCAP Network error on send
<u>VTETNRSRC</u>	VAMP TCAP Resource unavailable/decoding software error
<u>VTETOTHER</u>	VAMP TCAP Other errors

VTETPBAD**Register type**

Peg

Description

VTETPBAD counts the number of bad or incorrect transaction portion errors.

Associated registers

None

Extension registers

None

Associated logs

None

VTETPPKG**Register type**

Peg

Description

VTETPPKG counts the number of unrecognized package type errors.

Associated registers

None

Extension registers

None

Associated logs

None

VTETPPRM**Register type**

Peg

Description

VTETPPRM counts the number of ``permission to release" errors when transactions are terminated. This OM groups' peg count also includes query or last conversation package errors sent ``without permission."

Note: This error applies only to ANSI TCAP and is not detectable by VAMP.

Associated registers

None

Extension registers

None

Associated logs

None

VTETPUCS**Register type**

Peg

Description

VTETPUCS counts the number of unexpected component sequence errors.

Associated registers

None

Extension registers

None

Associated logs

None

VTETPUID**Register type**

Peg

Description

VTETPUID counts the number of unrecognized transaction ID errors.

Associated registers

None

Extension registers

None

Associated logs

None

VTETPNID**Register type**

Peg

Description

VTETPNID counts the number of missing respond ID errors.

Associated registers

None

Extension registers

None

Associated logs

None

VTEDPBAD**Register type**

Peg

Description

VTEDPBAD counts the number of bad or incorrect dialog portion errors.

Associated registers

None

Extension registers

None

Associated logs

None

VTEDPDLG**Register type**

Peg

Description

VTEDPDLG counts the number of unrecognized dialog ID errors.

Associated registers

None

Extension registers

None

Associated logs

None

VTEDPINC**Register type**

Peg

Description

VTEDPINC counts the number of inconsistent or missing dialog portion errors.

Associated registers

None

Extension registers

None

Associated logs

None

VTECPBAD**Register type**

Peg

Description

VTECPBAD counts the number of bad or incorrect component portion errors.

Associated registers

None

Extension registers

None

Associated logs

None

VTEPCMP**Register type**

Peg

Description

VTEPCMP counts the number of unrecognized component errors.

Associated registers

None

Extension registers

None

Associated logs

None

VTECPDID**Register type**

Peg

Description

VTECPDID counts the number of duplicate invoke ID errors.

Associated registers

None

Extension registers

None

Associated logs

None

VTECPCID**Register type**

Peg

Description

VTECPCID counts the number of unrecognized correlation ID errors.

Associated registers

None

Extension registers

None

Associated logs

None

VTECPOPC**Register type**

Peg

Description

VTECPOPC counts the number of unrecognized operation or code errors.

Associated registers

None

Extension registers

None

Associated logs

None

VTECPUPS**Register type**

Peg

Description

VTECPUPS counts the number of unexpected parameter set/sequence errors.

Associated registers

None

Extension registers

None

Associated logs

None

VTEPMBAD**Register type**

Peg

Description

VTEPMBAD counts the number of bad or incorrect parameter errors.

Associated registers

None

Extension registers

None

Associated logs

None

VTEPMPID**Register type**

Peg

Description

VTEPMPID counts the number of unrecognized parameter ID errors.

Associated registers

None

Extension registers

None

Associated logs

None

VTEPMMND**Register type**

Peg

Description

VTEPMMND counts the number of missing mandatory parameter errors.

Associated registers

None

Extension registers

None

Associated logs

None

VTEPMCND**Register type**

Peg

Description

VTEPMCND counts the number of missing conditional parameter errors.

Associated registers

None

Extension registers

None

Associated logs

None

VTEPMERR**Register type**

Peg

Description

VTEPMERR counts the number of incorrect parameter data errors.

Associated registers

None

Extension registers

None

Associated logs

None

VTEUCOMM**Register type**

Peg

Description

VTEUCOMM counts the number of unexpected communication errors.

Associated registers

None

Extension registers

None

Associated logs

VAMP301

VTENETWK**Register type**

Peg

Description

VTENETWK counts the number of network errors, when an undeliverable VAMP message is returned.

Associated registers

None

Extension registers

None

Associated logs

None

VTENRSRC**Register type**

Peg

Description

VTENRSRC counts the number of lack of resources or decoding software errors using VAMP TCAP.

Associated registers

None

Extension registers

None

Associated logs

None

VTEOTHER**Register type**

Peg

Description

VTEOTHER counts the number of other including internal or miscellaneous errors including internal errors.

Associated registers

None

Extension registers

None

Associated logs

None

VTCAPRCV

Description

OM group Variable AIN Messaging Platform Transaction Capabilities Received (VTCAPRCV) is pegged when TCAP messages, packages, and components are received using VAMP TCAP.

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

Key field	Info field
VAMP_MSGSET	None

Related functional groups

There are no functional groups associated with OM group VTCAPRCV.

Registers

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

Registers for OM group VTCAPRCV (Sheet 1 of 2)

Register name	Measures
VTRMESGS	VAMP TCAP Received Messages
VTRQWPRM	VAMP TCAP Received Query without Permission Package or ITU-T
VTRQWOPM	VAMP TCAP Received Query without Permission Package
VTRCWPRM	VAMP TCAP Received Conversation with Permission Packages or ITU-T Continue Package
VTRCWOPM	VAMP TCAP Received Conversation without Permission
VTRRESPN	VAMP TCAP Received Response Package or ITU-T
VTRUNIDR	VAMP TCAP Received Unidirectional Package

Registers for OM group VTCAPRCV (Sheet 2 of 2)

Register name	Measures
VTRPABRT	VAMP TCAP Received P-Abort Packages
VTRUABRT	VAMP TCAP Received U-Abort Packages
VTRINVKL	VAMP TCAP Received Invoke Last Component
VTRINVNL	VAMP TCAP Received Invoke Non-Last or ITU-T Invoke Component
VTRRTRSL	VAMP TCAP Received Return Result Last Component
VTRRTRNL	VAMP TCAP Received Return Result Non-Last Component
VTRERROR	VAMP TCAP Received Return Error Component
VTRREJCT	VAMP TCAP Received Reject Component
VTRDLOGP	VAMP TCAP Received Dialog Portions

VTRMESGS**Register type**

Peg

Description

VTRMESGS counts all TCAP messages received using VAMP TCAP regardless of transport mechanism.

Associated registers

None

Validation formula

$VTSMESGS = \text{sum of all package-type OM fields in OM group VTCAPSNT}$

Extension registers

VTRMSG2

Associated logs

None

VTRQWPRM**Register type**

Peg

Description

VTRQWPRM counts the number of TCAP packages received with ANSI Query with Permission or ITU-T Begin.

Associated registers

None

Extension registers

VTRQWPM2

Associated logs

None

VTRQWOPM**Register type**

Peg

Description

VTRQWOPM counts the number of TCAP packages received using ANSI Query without permission.

Associated registers

None

Extension registers

VTRQWOP2

Associated logs

None

VTRCWPRM**Register type**

Peg

Description

VTRCWPRM counts the number of TCAP packages received that contain package type ANSI Conversation with Permission or ITU-T Continue.

Associated registers

None

Extension registers

VTRCWPM2

Associated logs

None

VTRCWOPM**Register type**

Peg

Description

VTRCWOPM counts the number of TCAP packages received using ANSI Conversation without permission.

Associated registers

None

Extension registers

VTRCWOP2

Associated logs

None

VTRRESPN**Register type**

Peg

Description

VTRRESPN counts the number of TCAP packages received containing package type ANSI Response or ITU-T End.

Associated registers

None

Extension registers

VTRRESP2

Associated logs

None

VTRUNIDR**Register type**

Peg

Description

VTRUNIDR counts the number of TCAP packages received with package type ANSI or ITU-T Unidirectional.

Associated registers

None

Extension registers

VTRUNID2

Associated logs

None

VTRPABRT**Register type**

Peg

Description

VTRPABRT counts the number of TCAP packages received with ANSI or ITU-T Abort with P-Abort cause.

Associated registers

None

Extension registers

VTRPABT2

Associated logs

None

VTRUABRT**Register type**

Peg

Description

VTRUABRT counts the number of TCAP packages received with ANSI or ITU-T Abort with U-Abort cause.

Associated registers

None

Extension registers

VTRUABT2

Associated logs

None

VTRINVKL**Register type**

Peg

Description

VTRINVKL counts the number of TCAP components received with ANSI Invoke (Last).

Associated registers

None

Extension registers

VTRINV2

Associated logs

None

VTRINVNL**Register type**

Peg

Description

VTRINVNL counts the number of TCAP components with ANSI Invoke (Non-Last) or ITU-T.

Associated registers

None

Extension registers

VTRINV2

Associated logs

None

VTRRTRSL**Register type**

Peg

Description

VTRRTRSL counts the number of TCAP components with ANSI or ITU-T Return Result (Last).

Associated registers

None

Extension registers

VTRRTRL2

Associated logs

None

VTRRTRNL**Register type**

Peg

Description

VTRRTRNL counts the number of TCAP components with ANSI or ITU-T Return Result (Non-Last).

Associated registers

None

Extension registers

VTRRRNL2

Associated logs

None

VTRERROR**Register type**

Peg

Description

VTRERROR counts the number of TCAP components with ANSI or ITU-T Return Error.

Associated registers

None

Extension registers

VTRERRR2

Associated logs

None

VTRREJCT**Register type**

Peg

Description

VTRREJCT counts the number of TCAP components with ANSI or ITU-T Reject.

Associated registers

None

Extension registers

VTRREJT2

Associated logs

None

VTRDLOGP**Register type**

Peg

Description

VTRDLOGP counts the number of TCAP components containing a TCAP dialog portion.

Associated registers

None

Extension registers

VTRDLOG2

Associated logs

None

VTCAPSNT

Description

OM group Variable AIN Messaging Platform Transaction Capabilities Sent (VTCAPSNT) is pegged when TCAP messages, packages, and components sent using VAMP TCAP.

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

Key field	Info field
VAMP_MSGSET	None

Related functional groups

There are no functional groups associated with OM group VTCAPSNT.

Registers

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

Registers for OM group VTCAPSNT (Sheet 1 of 2)

Register name	Measures
VTSMESGS	Variable AIN Messaging Platform Transaction Capabilities Message Sent
VTSQWPRM	Variable AIN Messaging Platform Transaction Capabilities Query without Permission Package or ITU-T
VTSQWOPM	Variable AIN Messaging Platform Transaction Capabilities Query without Permission Package Sent
VTSCWPRM	Variable AIN Messaging Platform Transaction Capabilities Conversation with Permission Packages or ITU-T Continue Package
VTSCWOPM	Variable AIN Messaging Platform Transaction Capabilities Conversation without Permission Sent

Registers for OM group VTCAPSNT (Sheet 2 of 2)

Register name	Measures
<u>VTSRESPN</u>	Variable AIN Messaging Platform Transaction Capabilities Response Package Sent or ITU-T
<u>VTSUNIDR</u>	Variable AIN Messaging Platform Transaction Capabilities Unidirectional Package Sent
<u>VTSPABRT</u>	Variable AIN Messaging Platform Transaction Capabilities P-Abort Packages Sent
<u>VTSUABRT</u>	Variable AIN Messaging Platform Transaction Capabilities U-Abort Packages Sent
<u>VTSINVKL</u>	Variable AIN Messaging Platform Transaction Capabilities Invoke Last Component Sent
<u>VTSINVNL</u>	Variable AIN Messaging Platform Transaction Capabilities Invoke Non-Last or ITU-T Invoke Component Sent
<u>VTSRTRSL</u>	Variable AIN Messaging Platform Transaction Capabilities Return Result Last Component Sent
<u>VTSRTRNL</u>	Variable AIN Messaging Platform Transaction Capabilities Return Result Non-Last Component Sent
<u>VTSErrorR</u>	Variable AIN Messaging Platform Transaction Capabilities Return Error Component Sent
<u>VTSREJCT</u>	Variable AIN Messaging Platform Transaction Capabilities Reject Component Sent
<u>VTSDLOGP</u>	Variable AIN Messaging Platform Transaction Capabilities Dialog Portions Sent

VTSMESGS**Register type**

Peg

Description

VTSMESGS counts all TCAP messages using VAMP TCAP regardless of transport mechanism.

Associated registers

None

Validation formula

VTSMESGS = sum of all package-type OM fields in OM group
VTCAPSNT

Extension registers

VTSMGS2

Associated logs

None

VTSQWPRM**Register type**

Peg

Description

VTSQWPRM counts the number of TCAP packages sent containing ANSI Query with Permission or ITU-T Begin.

Associated registers

None

Extension registers

VTSQWPM2

Associated logs

None

VTSQWOPM**Register type**

Peg

Description

VTSQWOPM counts the number of TCAP packages sent using ANSI Query without permission.

Associated registers

None

Extension registers

VTSQWOP2

Associated logs

None

VTSCWPRM**Register type**

Peg

Description

VTSCWPRM counts the number of TCAP packages sent that contain package type ANSI Conversation with Permission or ITU-T Continue.

Associated registers

None

Extension registers

VTSCWPM2

Associated logs

None

VTSCWOPM**Register type**

Peg

Description

VTSCWOPM counts the number of TCAP packages sent using ANSI Conversation without permission.

Associated registers

None

Extension registers

VTSCWOP2

Associated logs

None

VTSRESPN**Register type**

Peg

Description

VTSRESPN counts the number of TCAP packages sent containing package type ANSI Response or ITU-T End.

Associated registers

None

Extension registers
VTSRESP2

Associated logs
None

VTSUNIDR

Register type
Peg

Description
VTSUNIDR counts the number of TCAP packages sent with package type ANSI or ITU-T Unidirectional.

Associated registers
None

Extension registers
VTSUNID2

Associated logs
None

VTSPABRT

Register type
Peg

Description
VTSPABRT counts the number of TCAP packages sent with ANSI or ITU-T Abort with P-Abort cause.

Associated registers
None

Extension registers
VTSPABT2

Associated logs
None

VTSUABRT

Register type
Peg

Description

VTSUABRT counts the number of TCAP packages sent with ANSI or ITU-T Abort with U-Abort cause.

Associated registers

None

Extension registers

VTSUABT2

Associated logs

None

VTSINVKL**Register type**

Peg

Description

VTSINVKL counts the number of TCAP components sent with ANSI Invoke (Last).

Associated registers

None

Extension registers

VTSINVL2

Associated logs

None

VTSINVNL**Register type**

Peg

Description

VTSINVNL counts the number of TCAP components sent with ANSI Invoke (Non-Last) or ITU-T.

Associated registers

None

Extension registers

VTSINVN2

Associated logs

None

VTSRTRSL**Register type**

Peg

Description

VTSRTRSL counts the number of TCAP components sent with ANSI or ITU-T Return Result (Last).

Associated registers

None

Extension registers

VTSRTRL2

Associated logs

None

VTSRTRNL**Register type**

Peg

Description

VTSRTRNL counts the number of TCAP components sent with ANSI or ITU-T Return Result (Non-Last).

Associated registers

None

Extension registers

VTSRRNL2

Associated logs

None

VTSEERROR**Register type**

Peg

Description

VTSEERROR counts the number of TCAP components sent with ANSI or ITU-T Return Error.

Associated registers

None

Extension registers

VTSERRR2

Associated logs

None

VTSREJCT**Register type**

Peg

Description

VTSREJCT counts the number of TCAP components sent with ANSI or ITU-T Reject.

Associated registers

None

Extension registers

VTSREJT2

Associated logs

None

VTSDLOGP**Register type**

Peg

Description

VTSDLOGP counts the number of TCAP components sent containing a TCAP dialog portion.

Associated registers

None

Extension registers

VTSDLOG2

Associated logs

None

WINTOPS

Description

OM group Wireless Intelligent Network -TOPS (WINTOPS) measures application-level events for wireless Automated Directory Assistance Call Completion (ADACC) with release. WIN provides ADACC with release for both IS-41 and global system for mobile communications (GSM).

WINTOPS records IS-41 and GSM events previously recorded in OM group IS41TOPS, which is deleted in SN07. For details, refer to the section for OM group IS41TOPS.

The following table lists the key and info fields associated with OM group WINTOPS. The group provides one tuple for each wireless network type.

Key field	Info field
IS41, GSM	None

The tuples in WINTOPS are for:

- IS-41 WIN
- GSM Customized Applications For Mobile Network Enhanced Logic (CAMEL)

Related functional groups

There are no functional groups associated with OM group WINTOPS.

Registers

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

Registers for OM group WINTOPS (Sheet 1 of 2)

Register name	Measures
ABANDON	Abandon
CONNECT	Connect
DISCONN	Disconnect

Registers for OM group WINTOPS (Sheet 2 of 2)

Register name	Measures
ERRCONN	Error connect
ERRDISC	Error disconnect
ERRSFT	Error service switching function timer
NODATA	No TCAP data
NOTLDNS	No temporary local directory numbers
REQCONN	Request connection
RESTIMR	Reset timer
RXLAFAIL	Retranslation failure
SANTIMR	[TOPS] Sanity timer expiration
TLDNTIME	Temporary local directory number (TLDN) time-out
WINBEGIN	Wireless Intelligent Network Begin
WINEND	Wireless Intelligent Network End

Note the following patterns for WINTOPS registers:

- Every WIN call flow (successful or unsuccessful) peps [WINBEGIN](#).
- A successful IS-41 or GSM WIN call flow peps [WINBEGIN](#), [REQCONN](#), and [CONNECT](#).
- A successful GSM CAMEL call flow peps [DISCONN](#) and [WINEND](#).
- [ABANDON](#) and [RESTIMR](#) are pegged under normal circumstances and do not indicate problems.
- [DISCONN](#) on an IS-41 WIN call does not indicate a problem necessarily. In IS-41, DISCONN peps with the following registers that also indicate a problem: [ERRCONN](#), [ERRDISC](#) and [ERRSFT](#).
- The following registers indicate problems: [ERRCONN](#), [ERRDISC](#), [ERRSFT](#), [NODATA](#), [NOTLDNS](#), [RXLAFAIL](#), [SANTIMR](#) and [TLDNTIME](#)

ABANDON**Register type**

Peg

Description

ABANDON increments on a WIN call when the caller disconnects before receiving ADACC with release. The caller can hang up:

- while in queue for the operator
- because the operator cannot find a listing
- without accepting call completion

Associated registers

None

Extension registers

None

Associated logs

None

CONNECT**Register type**

Peg

Description

CONNECT increments when TOPS directs the mobile switching center (MSC) to connect to the requested number. In IS-41, this occurs when TOPS sends the AnalyzedInformation RETURN RESULT. In GSM, this occurs when TOPS sends the Connect.

Associated registers

None

Extension registers

CONNECT2

Associated logs

None

DISCONN**Register type**

Peg

Description

DISCONN incremented when TOPS directs the MSC release the trunk to TOPS. In IS-41, this occurs when TOPS sends the AnalyzedInformation RETURN RESULT with an Action Code of *disconnect call*. In GSM, this is when TOPS sends the DisconnectForwardConnection.

The register pegs on all successful GSM wireless ADACC with release calls. DISCONN does not usually peg on an IS-41 call. When it does, it indicates the caller did not receive ADACC with release.

Associated registers

None

Extension registers

DISCONN2

Associated logs

TOPS131, TCAP100

ERRCONN**Register type**

Peg

Description

ERRCONN increments on a WIN call when the MSC cannot connect to TOPS using the TLDN provided by TOPS. Translation or circuit failures at the MSC or in the network can cause the error.

Associated registers

None

Extension registers

None

Associated logs

TOPS131

ERRDISC**Register type**

Peg

Description

ERRDISC increments on a WIN call when TOPS unexpectedly releases its trunk to the MSC. The register pegs only on an IS-41 call.

On a GSM call, registers [WINBEGIN](#), [REQCONN](#), and [WINEND](#) are pegged, but not [DISCONN](#) and [CONNECT](#).

Associated registers

None

Extension registers

None

Associated logs

TOPS131

ERRSSFT**Register type**

Peg

Description

ERRSSFT increments on a WIN call when the MSC SSFT timer expires. The timer ensures TOPS does not take too long to process the WIN call. TOPS can reset this timer using the ResetTimer message, which is controlled by datafill in table ISUPTRK.

Associated registers

None

Extension registers

None

Associated logs

TOPS131

NODATA**Register type**

Peg

Description

NODATA increments when TOPS cannot locate an IS-41 or GSM TCAP data in the temporary table for a call.

Associated registers

Register [RXLAFAIL](#) pegs with NODATA because the original called number cannot be determined, and a default of 411 is used.

Extension registers

None

Associated logs

TOPS131

NOTLDNS**Register type**

Peg

Description

NOTLDNS increments when TOPS cannot obtain an idle temporary local directory number (TLDN) from table TOPSTLDN.

Associated registers

None

Extension registers

None

Associated logs

TOPS131

REQCONN**Register type**

Peg

Description

REQCONN increments when TOPS sends an IS-41 ConnectResource or GSM EstablishTemporaryConnection to the MSC.

Associated registers

None

Extension registers

REQCONN2

Associated logs

None

RESTIMR**Register type**

Peg

Description

RESTIMR increments when TOPS sends an IS-41 or GSM ResetTimer to the MSC.

Associated registers

None

Extension registers

RESTIMR2

Associated logs

None

RXLAFail**Register type**

Peg

Description

RXLAFail increments when a TOPS IS-41 or GSM call arrives, but TOPS cannot find the original called number and must use a default of 411. The register can peg with [NODATA](#) if the original called number cannot be found because there is no extension block.

Associated registers

None

Extension registers

None

Associated logs

TOPS131 when 411 is used because the TCAP data is not found.

SANTIMR**Register type**

Peg

Description

SANTIMR increments when the TOPS IS-41 or GSM call end sanity timer expires. TOPS starts the timer after sending the IS-41 AnalyzedInformation RETURN RESULT or GSM Connect to the MSC. If the MSC does not release the trunk and ends the TOPS call before the timer expires, TOPS ends its call and frees resources.

Associated registers

None

Extension registers

None

Associated logs

TOPS131

TLDNTIME**Register type**

Peg

Description

TLDNTIME increments when the TOPS IS-41 or GSM SCP process finds a TLDN that has been allocated for more than 30 seconds. The TLDN is idled, then selected by the next TOPS IS-41 or GSM call. The TLDN list is cleaned up if some MSC calls end before routing to TOPS.

Associated registers

None

Extension registers

None

Associated logs

None

WINBEGIN**Register type**

Peg

Description

WINBEGIN increments when TOPS receives an IS-41 AnalyzedInformation or a GSM InitialDP from an MSC, which indicates the beginning of the WIN TOPS call.

Associated registers

None

Extension registers

WINBEG12

Associated logs

None

WINEND**Register type**

Peg

Description

WINEND increments when TOPS receives a GSM Application End from the MSC, which indicates the end of a successful WIN TOPS call. The message is not used in the IS-41 call flow, so the register does not peg for IS-41 TOPS calls.

Register DARLT in group TOPSISUP also can count instances of successful ADACC with RLT.

Associated registers

None

Extension registers

WINEND2

Associated logs

None

XPMLNK

Description

OM group XPM Link (XPMLNK) records one-way and two-way link blockage. It is used in all extended multiprocessor system (XMS)-based peripheral modules (XPM) with switched lines.

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

Key field	Info field
PM_TYPE PM_NO	XPMLNK_OM_KEY XPMLNK_OM_KEY consist of the following parts: • OM registers • XPM type and number • OM registers count

Related functional groups

The peripheral module functional group is associated with OM group XPMLNK.

Registers

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

Registers for OM group XPMLNK (Sheet 1 of 2)

Register name	Measures
CSLAA	C-side link allocation attempts
CSLBLK	C-side link blockage
CSLCBU	C-side link call busy usage
CSLMU	C-side link maintenance busy use
PSLAA	P-side link allocation attempts
PSLBLK	P-side link blockage

Registers for OM group XPMLNK (Sheet 2 of 2)

Register name	Measures
PSLMU	P-side link maintenance busy use
PSLCBU	P-side link call busy use

CSLAA**Register type**

Peg

Description

CSLAA increases when the network attempts to allocate a channel to the XPM.

Associated registers

None

Extension registers

None

Associated logs

None

CSLBLK**Register type**

Peg

Description

CSLBLK increases for each failed attempt to allocate a channel between the network and the XPM.

Associated registers

None

Extension registers

None

Associated logs

None

CSLCBU**Register type**

Peg

Description

CSLCBU records the time in hundred call seconds (CCS) that C-side links are busy because of call processing.

Associated registers

LMD_LMTRU, RSCIS_RSCISCBU, RLCDIS_ISTOTTRU

Extension registers

None

Associated logs

None

CSLMU**Register type**

Peg

Description

CSLMU records the time in CCS that C-side links are not available for call processing.

Associated registers

None

Extension registers

None

Associated logs

None

PSLAA**Register type**

Peg

Description

PSLAA increases when the system allocates a channel between an XPM and the subtending nodes.

Associated registers

LMD_NTERMATT, LMD_NORIGATT

Extension registers

None

Associated logs

None

PSLBLK**Register type**

Peg

Description

PSLBLK increases for each attempt that fails to allocate a channel between the XPM and one of the subtending nodes.

Associated registers

LMD_PMTRMBLK

Extension registers

None

Associated logs

None

PSLMU**Register type**

Peg

Description

PSLMU records the time in CCS that links between the XPM and subtending nodes are not available for call processing.

Associated registers

None

Extension registers

None

Associated logs

None

PSLCBU**Register type**

Peg

Description

PSLCBU records the time in CCS that P-side links are busy because of call processing.

Associated registers

None

Extension registers

None

Associated logs

None

XPMOCC

Description

OM group Central Processing Unit (CPU) occupancy (XPMOCC) provides processor occupancy measurements for all extended multiprocessor system (XMS)-based peripheral modules (XPM).

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

Key field	Info field
None	XPMOCC_OM_KEY

OM group XPMOCC provides one tuple for occupancy information on the unified processor (UP). The system provides an additional tuple for processors with an enhanced ISDN signaling pre-processor (EISP) that reside on the EISP.

Related functional groups

The following functional groups are associated with OM group XPMOCC:

- 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 XPMOCC and what they measure. For a description of a register, click on the register name.

Registers for OM group XPMOCC

Register name	Measures
AVGCPOCC	Average call processing occupancy
AVGLPOCC	Average low occupancy processing
CPUCP30	CPU call processing 30
CPUCP40	CPU call processing 40
CPUCP50	CPU call processing 50
CPUCP60	CPU call processing 60
CPUCP70	CPU call processing 70
CPUCP80	CPU call processing 80
CPUCP85	CPU call processing 85
CPUCP90	CPU call processing 90
CPUCP95	CPU call processing 95
CPUCP100	CPU call processing 100
CPUTOTL	CPU total
NUMRPTS	Number reports
PMORIGS	Total call origination attempts
PMTERMS	PM terminations

AVGCPOCC

Register type

Usage

Scan rate

Not available

Description

AVGCPOCC measures average call processing occupancy.

Associated registers

None

Extension registers

None

Associated logs

None

AVGLPOCC**Register type**

Usage

Scan rate

Not available

Description

AVGLPOCC is a usage register for UPs, and measures average low priority occupancy. AVGLPOCC always contain a zero for EISP tuples.

Associated registers

None

Extension registers

None

Associated logs

None

CPUCP30**Register type**

Peg

Description

CPUCP30 counts the number of times call processing occupancy is in the 0% to 30% range.

Associated registers

None

Extension registers

None

Associated logs

None

CPUCP40**Register type**

Peg

Description

CPUCP40 counts the number of times call processing occupancy is in the 31% to 40% range.

Associated registers

None

Extension registers

None

Associated logs

None

CPUCP50**Register type**

Peg

Description

CPUCP50 counts the number of times call processing occupancy is in the 41% to 50% range.

Associated registers

None

Extension registers

None

Associated logs

None

CPUCP60**Register type**

Peg

Description

CPUCP60 counts the number of times call processing occupancy is in the 51% to 60% range.

Associated registers

None

Extension registers

None

Associated logs

None

CPUCP70**Register type**

Peg

Description

CPUCP70 counts the number of times call processing occupancy is in the 61% to 70% range.

Associated registers

None

Extension registers

None

Associated logs

None

CPUCP80**Register type**

None

Description

CPUCP80 counts the number of times call processing occupancy is in the 71% to 80% range.

Associated registers

None

Extension registers

None

Associated logs

None

CPUCP85**Register type**

Peg

Description

CPUCP85 counts the number of times call processing occupancy is in the 81% to 85% range.

Associated registers

None

Extension registers

None

Associated logs

None

CPUCP90**Register type**

Peg

Description

CPUCP90 counts the number of times call processing occupancy is in the 86% to 90% range.

Associated registers

None

Extension registers

None

Associated logs

None

CPUCP95**Register type**

Peg

Description

CPUCP95 counts the number of times call processing occupancy is in the 91% to 95% range.

Associated registers

None

Extension registers

None

Associated logs

None

CPUCP100**Register type**

Peg

Description

CPUCP100 counts the number of times call processing occupancy is in the 96% to 100% range.

Associated registers

None

Extension registers

None

Associated logs

None

CPUTOTL**Register type**

Peg

Description

CPUTOTL accumulates the totals in registers [CPUCP30](#), [CPUCP40](#), [CPUCP50](#), [CPUCP60](#), [CPUCP70](#), [CPUCP80](#), [CPUCP85](#), [CPUCP85](#), [CPUCP90](#), [CPUCP95](#), and [CPUCP100](#).

Associated registers

None

Extension registers

None

Associated logs

None

NUMRPTS**Register type**

Peg

Description

NUMRPTS counts the number of 15-minute reports added to accumulation registers to normalize [AVGCPOCC](#) and [AVGLPOCC](#).

Associated registers

None

Extension registers

None

Associated logs

None

PMORIGS**Register type**

Peg

Description

PMORIGS counts the total call origination attempts and reports on an XPM-by-XPM basis. This register contains a value only for tuples that associate with the UP. PMORIGS always contains a zero for EISP tuples.

Associated registers

None

Extension registers

None

Associated logs

None

PMTERMS**Register type**

Peg

Description

PMTERMS counts the total call termination attempts and reports on an XPM-by-XPM basis. This register contains a value only for tuples that associate with the UP. PMTERMS always contains a zero for EISP tuples.

Associated registers

None

Extension registers

None

Associated logs

None

XPMOVL

Description

OM group XPM Overload (XPMOVL) reports on the number of terminations and delays for extended multiprocessor system (XMS)-based peripheral modules (XPM). Although XPMOVL monitors the same events as PMOVL, XPMOVL provides several new categories of overload indicator classes.

OM group XPMOVL increases the amount of information on:

- XPM call processing overload events
- The severity of XPM call processing overload events

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

Key field	Info field
None	None

This group provides one tuple for each office.

Related functional groups

The following functional groups are associated with OM group XPMOVL:

- 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 XPMOVL and what they measure. For a description of a register, click on the register name.

Registers for OM group XPMOVL

Register name	Measures
PMSGIPC	PM message IPC buffer congestion
PORGDLY	Number of originations delayed
PORGIPC	PM origination IPC buffer congestion
PORGLCM	PM origination line concentrating module
PORGMISC	PM origination miscellaneous
PORGMSG	PM origination messages lost
PORGPTQ	PM origination terminal quota
PORGSLLC	PM origination site line load control
PTRMDLY	Number of terminations delayed
PTRMMISC	PM termination miscellaneous
PTRMMSG	PM termination lost
PTRMPTQ	PM termination terminal quota

PMSGIPC

Register type

Peg

Description

PMSGIPC counts the number of messages lost as a result of Inter-process Communication (IPC) buffer congestion. The register counts messages instead of originations.

Associated registers

None

Extension registers

None

Associated logs

None

PORGDLY**Register type**

Peg

Description

PORGDLY counts the number of delayed originations.

Associated registers

None

Extension registers

None

Associated logs

None

PORGIPC**Register type**

Peg

Description

PORGIPC counts the number of originations lost from IPC buffer congestion.

Associated registers

None

Extension registers

None

Associated logs

None

PORGLCM**Register type**

Peg

Description

PORGLCM counts the number of originations lost from line concentrating module overload.

Associated registers

None

Extension registers

None

Associated logs

None

PORGMISC**Register type**

Peg

Description

PORGMISC counts the number of originations lost; for example, an IPC buffer index is incorrect.

Associated registers

None

Extension registers

None

Associated logs

None

PORGMSG**Register type**

Peg

Description

PORGMSG counts the number of originations lost; for example, too many messages appear in the flow control system.

Associated registers

None

Extension registers

None

Associated logs

None

PORGPTQ**Register type**

Peg

Description

PORGPTQ counts the number of originations lost. This occurs when the limit has been reached on the number of messages that appear in the flow control system.

Associated registers

None

Extension registers

None

Associated logs

None

PORGSLLC**Register type**

Peg

Description

PORGSLLC counts the number of originations lost as a result of site line load control.

Associated registers

None

Extension registers

None

Associated logs

None

PTRMDLY**Register type**

Peg

Description

PTRMDLY counts the number of terminations delayed.

Associated registers

None

Extension registers

None

Associated logs

None

PTRMMISC**Register type**

Peg

Description

PTRMMISC counts the number of terminations lost; for example, an IPC buffer index is incorrect.

Associated registers

None

Extension registers

None

Associated logs

None

PTRMSG**Register type**

Peg

Description

PTRMSG counts the number of terminations lost; for example, too many messages appear in the flow control system.

Associated registers

None

Extension registers

None

Associated logs

None

PTRMPTQ**Register type**

Peg

Description

PTRMPTQ counts the number of terminations lost. This occurs when the limit has been reached on the number of messages that appear in the flow control system.

Associated registers

None

Extension registers

None

Associated logs

None