Release Notes

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1 Description

This document provides information on the Prospect® 8.0 for Nortel GSM/GPRS/UMTS RP14 patch 10 (4.0.14.0.10). This is a patch release. The release adds support for counter groups due to MGW MG20 and MSC W-NMS 5.0.1/NSS 20.

This release does not change the Prospect core version or the recommended Prospect client version.

- The Prospect Base version certified against this release is 8.0.4.1.05
- The client version certified against this release is 8.0.4.0.8
- The operating system version certified against this release is Solaris 9 and Solaris 10.
- The Oracle Database version certified against this release is Oracle 9i - 9.2.0.8.

2 Supported Platforms

Complete platform support information for the current release is in the *Prospect Server Preparation Guide*. Complete client hardware and software requirements are in the *Prospect Installation Guide.*

Already Supported Vendor Software
Nortel Passport 15000 Wireless Gateway / UMTS SGSN / Aggregation Node UMTS03 3.0
Nortel Media Gateway (MGW) MGW17, MGW18, W-NMS 5.0.1/NSS 19
Nortel Passport 15000 GPRS SGSN GPRS 2.1, 3.0, 4.0, 5.0, 6.0, PC04
Nortel Shasta GGSN UMTS03 3.0, 3.2.1, 4.0, 4.1
Nortel SS7/IP Gateway – GPRS R2.1, R3.0, R4.0, UMTS03, GPRS6.0/UMTS4.0
Nortel RNC UMTS03 UA3.1, UA3.2 and UA4.0
Nortel Node B UMTS03 UA3.1, UA3.2 and UA4.0
Nortel MSC GSM13, GSM15, GSM/NSS17 (includes NSS16), GSM/NSS18, W-NMS 5.0.1/NSS 19
Nortel HLR GSM13, GSM15, GSM/NSS17 (includes NSS16), GSM/NSS18
Nortel USP 7.0, 8.1, 10.0, 12.0
Nortel SLR NSS17
Nortel Data Server NSS17
Nortel GSM/GPRS/EDGE BSS – 12.04, 12.04B, 12.04C, 12.04D, 13.02B, 14.3, 15.0, 15.1, 16.0 based on OMC-R v16.0
Nortel GPRS/EDGE PCUSN – 12.04, 12.04B, 12.04C, 12.04D, 13.02B, 14.3, 15.0, 15.1, 16.0 based on OMC-R v16.0

Added Supported Vendor Software in this release
Nortel Media Gateway (MGW) MG20
Nortel MSC W-NMS6/NSS20

3 New Features

3.1 Nortel Media Gateway (MGW)

This release modifies the performance data dictionary in Media Gateway network elements. The following list shows changes to entities

Prospect Entity	Managed Object	Counter Status	Technology
NSTA_MGW	CallStatistics Congestion	added	MGW
MGC_Interface	MediaGatewayControllerInterface	added	MGW

New counters are as below:-

Prospect Field Name	Entity Name	Heading Line 1	Heading Line 2	Datatype	Field Type	Description	Aggregator
averageA2pA2pContexts	NSTA_MGW	Avg A2p A2p	Contexts	F	C	This attribute indicates the average value of the activeA2pA2pContexts operational attribute.	A
averageA2pPktNetworkContexts	NSTA_MGW	Avg A2p PktNet	Contexts	F	C	This attribute indicates the average value of the activeA2pPktNetworkContexts operational attribute.	A
averageAPktNetworkContexts	NSTA_MGW	Avg A PktNet	Contexts	F	C	This attribute indicates the average value of the activeAPktNetworkContexts operational attribute.	A
averageCsdIwfContexts	NSTA_MGW	Avg Csd Iwf	Contexts	F	C	This attribute indicates the average value of the activeCsdIwfContexts operational attribute.	A
averageIuPktNetworkContexts	NSTA_MGW	Avg Iu PktNet	Contexts	F	C	This attribute indicates the average value of the activeIuPktNetworkContexts operational attribute.	A
averageNbPktNetworkContexts	NSTA_MGW	Avg Nb PktNet	Contexts	F	C	This attribute indicates the average value of the activeNbPktNetworkContexts operational attribute.	A
averagePktNetworkA2TdmContexts	NSTA_MGW	Avg PktNet A2Tdm	Contexts	F	C	This attribute indicates the average value of the activePktNetworkA2TdmContexts operational attribute.	A
averagePktNetworkPktNetworkCtx	NSTA_MGW	Avg PktNet PktNet	Contexts	F	C	This attribute indicates the average value of the activePktNetworkPktNetworkCntxts operational attribute.	A
averagePstnPktNetworkContexts	NSTA_MGW	Avg Pstn PktNet	Contexts	F	C	This attribute indicates the average value of the activePstnPktNetworkContexts operational attribute.	A
averageReservedContexts	NSTA_MGW	Avg Reserved	Contexts	F	C	This attribute indicates the average value of the activeReservedContexts operational attribute.	A
peakA2pA2pContexts	NSTA_MG	peak A2p A2p	Contexts	F	C	This attribute indicates the peak value of the	C

	W					activeA2pA2pContexts operational attribute.	
peakA2pPktNetworkContexts	NSTA_MGW	peak A2p PktNet	Contexts	F	C	This attribute indicates the peak value of the activeA2pPktNetworkContexts operational attribute.	C
peakAPktNetworkContexts	NSTA_MGW	peak A PktNet	Contexts	F	C	This attribute indicates the peak value of the activeAPktNetworkContexts operational attribute.	C
peakCsdIwfContexts	NSTA_MGW	peak Csd Iwf	Contexts	F	C	This attribute indicates the peak value of the activeCsdIwfContexts operational attribute.	C
peakCsdIwfLoadPercent	NSTA_MGW	peak Csd Iwf	Load %	F	C	This attribute indicates the maximum value of csdIwfLoadPercent attribute that is recorded during the collection interval.	C
peakEvrcBLoadPercent	NSTA_MGW	peak EvrcB	Load %	F	C	This attribute indicates the maximum value of evrcBLoadPercent attribute that is recorded during the collection interval.	C
peakEvrcLoadPercent	NSTA_MGW	peak Evrc	Load %	F	C	This attribute indicates the maximum value of evrcLoadPercent attribute that is recorded during the collection interval.	C
peakG729LoadPercent	NSTA_MGW	peak G729	Load %	F	C	This attribute indicates the maximum value of g729LoadPercent attribute that is recorded during the collection interval.	C
peakIuPktNetworkContexts	NSTA_MGW	peak Iu PktNet	Contexts	F	C	This attribute indicates the peak value of the activeIuPktNetworkContexts operational attribute.	C
peakMultiPartyLoadPercent	NSTA_MGW	peak Multi Party	Load %	F	C	This attribute indicates the maximum value of multiPartyLoadPercent attribute that is recorded during the collection interval.	C
peakNbPktNetworkContexts	NSTA_MGW	peak Nb PktNet	Contexts	F	C	This attribute indicates the peak value of the activeNbPktNetworkContexts operational attribute.	C
peakPktNetworkA2TdmContexts	NSTA_MGW	peak PktNet A2Tdm	Contexts	F	C	This attribute indicates the peak value of the activePktNetworkA2TdmContexts operational attribute.	C
peakPktNetworkPktNetworkContexts	NSTA_MGW	peak PktNet PktNet	Contexts	F	C	This attribute indicates the peak value of the activePktNetworkPktNetworkCntxts operational attribute.	C
peakPstnPktNetworkContexts	NSTA_MGW	peak Pstn PktNet	Contexts	F	C	This attribute indicates the peak value of the activePstnPktNetworkContexts operational attribute.	C
peakReserveContextLoadPercent	NSTA_MGW	peak Rsrv Context	Load %	F	C	This attribute indicates the maximum value of reserveContextLoadPercent attribute that is recorded during the collection interval.	C
peakReserved	NSTA	peak	Contexts	F	C	This attribute indicates the peak	C

Contexts	_MGW	Reserved				value of the activeReservedContexts operational attribute.	
peakUdiClearChannelCalls	NSTA_MGW	peak Udi	Clear Channel Calls	F	C	This attribute displays the peak number of UDI clear channel calls during the collection interval.	C
tdmTrfoConnectionsFailed	NSTA_MGW	TDM TrFO	Connections Failed	F	C	This attribute counts the number of connections lost due to TDM (Time Division Multiplex) TrFO (Transcoder Free Operation).	S
tdmTrfoConnectionsSetup	NSTA_MGW	TDM TrFO	Connections Setup	F	C	This attribute counts the number of TDM (Time Division Multiplex) TrFO (Transcoder Free Operation) connections successfully established.	S
totalA2pA2pContexts	NSTA_MGW	total A2p A2p	Contexts	F	C	This attribute counts contexts on the Media Gateway with a both-way topology between two A2P interface terminations.	S
totalA2pPktNetworkContexts	NSTA_MGW	total A2p PktNet	Contexts	F	C	This attribute counts contexts on the Media Gateway with a both-way topology between an A2P interface termination and a Packet Network interface termination.	S
totalAPktNetworkContexts	NSTA_MGW	total A PktNet	Contexts	F	C	This attribute counts contexts on the Media Gateway with a both-way topology between an A interface termination and a Packet Network interface termination.	S
totalCsdIwfContexts	NSTA_MGW	total Csd Iwf	Contexts	F	C	This attribute counts contexts on the Media Gateway with CSD IWF interface terminations.	S
totalIuPktNetworkContexts	NSTA_MGW	total Iu PktNet	Contexts	F	C	This attribute counts contexts on the Media Gateway with a both-way topology between an Iu interface termination and a Packet Network interface termination.	S
totalNbPktNetworkContexts	NSTA_MGW	total Nb PktNet	Contexts	F	C	This attribute counts contexts on the Media Gateway with a both-way topology between an Nb interface termination and a Packet Network interface termination.	S
totalPktNetworkA2TdmContexts	NSTA_MGW	total PktNet A2Tdm	Contexts	F	C	This attribute counts contexts on the Media Gateway with a both-way topology between a Packet Network interface termination and an A2Tdm interface termination.	S
totalPktNetworkPktNetworkContexts	NSTA_MGW	total PktNet PktNet	Contexts	F	C	This attribute counts contexts on the Media Gateway with a both-way topology between two Packet Network interface terminations.	S
totalPstnPktNetworkContexts	NSTA_MGW	total Pstn PktNet	Contexts	F	C	This attribute counts contexts on the Media Gateway with a both-way topology between an PSTN interface termination and a Packet Network interface termination.	S
totalReservedContexts	NSTA_MGW	total Reserved	Contexts	F	C	This attribute count conexts on the Media Gateway that are active in a Reserved Contexts Pool.	S
udiClearChanInsufResources	NSTA_MGW	udi Clear Chan	Insuf Resources	F	C	This attribute displays the number of UDI clear channel calls that failed due to insufficient resources during the collection interval.	S
udiClearChan	NSTA	udi Clear	Other	F	C	This attribute displays the number	S

OtherTypeFailures	_MGW	Chan	Type Failures			of UDI clear channel calls that failed due to reasons other than insufficient resources or unsupported property failures during the collection interval.	
udiClearChannelCallsAttempted	NSTA_MGW	udi Clear Chan	Calls Attempted	F	C	This attribute displays the number of UDI clear channel calls attempted during the collection interval.	S
contextThresholdSurpassed	NSTA_MGW	context Threshold	Surpassed	F	C	This attribute indicates the number of times the contextLoadPercent attribute of the CallStatistics component has surpassed the congestionThreshold.	S
csdIwfThresholdSurpassed	NSTA_MGW	csd Iwf Threshold	Surpassed	F	C	This attribute indicates the number of times the csdIwfLoadPercent attribute of the CallStatistics component has surpassed the congestionThreshold.	S
ds0InsufficientResourceEvents	NSTA_MGW	ds0 Insufficient	Resource Events	F	C	This attribute indicates the number of times the ds0InsufficientResourceEvents attribute of the CallStatistics component has surpassed the congestionThreshold.	S
evrcBThresholdSurpassed	NSTA_MGW	evrcB Threshold	Surpassed	F	C	This attribute indicates the number of times the evrcBLoadPercent attribute of the CallStatistics component has surpassed the evrcBCongestionThreshold.	S
evrcThresholdSurpassed	NSTA_MGW	evrc Threshold	Surpassed	F	C	This attribute indicates the number of times the evrcLoadPercent attribute of the CallStatistics component has surpassed the EvrcCongestionThreshold.	S
g729ThresholdSurpassed	NSTA_MGW	g729 Threshold	Surpassed	F	C	This attribute indicates the number of times the g729LoadPercent attribute of the CallStatistics component has surpassed the g729CongestionThreshold.	S
multipartyThresholdSurpassed	NSTA_MGW	multiparty Threshold	Surpassed	F	C	This attribute indicates the number of times the multipartyLoadPercent attribute of the CallStatistics component has surpassed the congestionThreshold.	S
reserveContextInsuffResEvents	NSTA_MGW	reserve Context	Insuff Res Events	F	C	This attribute indicates the number of times the numContextsReserved attribute of the ResourceAllocation component has exceeded the current MGW capacity.	S
reserveContextThresholdSurpassed	NSTA_MGW	reserve Context	Threshold Surpassed	F	C	This attribute indicates the number of times the reserveContextILoadPercent attribute of the CallStatistics component has surpassed congestionThreshold.	S
subnetThresholdSurpassed	NSTA_MGW	subnet Threshold	Surpassed	F	C	This attribute indicates the number of times the subnetLoadPercent attribute of the CallStatistics component has surpassed the congestionThreshold.	S
throughputThr	NSTA	throughpu	Surpass	F	C	This attribute indicates the number	S

esholdSurpassed	_MGW	t Threshold	ed			of times the throughputLoadPercent attribute of the CallStatistics component has surpassed the congestionThreshold.	
totalHangtermTimerxExpiries	MGC_Interface	total Hangterm	Timerx Expiries	F	C	This attribute counts hanging termination timerx expiries. The counter is incremented every time the timerx parameter defined in the H.248.36 Hanging Termination Detection package expires on a termination. The timer value was set to either the value of the hangtermTimerxDefault provisionable attribute or it was provided by the Media Gateway Controller (MGC).	S

Retired counters are as below:-

Prospect Field Name	Entity Name	Heading Line 1	Heading Line 2	Datatype	Field Type	Description	Aggregator
resourceCongestionThresholdSurpassed	MGC_Interface	rsrcCngstThrshldSrpss	Retired in RP14P10	F	C	This attribute counts the number of times that a state of resource congestion has been entered, and thus, the number of times the MgcIf congestion alarm was set.	S
subnetCongestionThresholdSurpassed	MGC_Interface	sbntCngstThrshldSrpss	Retired in RP14P10	F	C	This attribute counts the number of times that a state of subnet congestion has been entered, and thus, the number of times that the MgcIf subnet congestion alarm was set.	S
throughputCongestionThresholdSurpassed	MGC_Interface	thrghptCngstThrshldSrpss	Retired in RP14P10	F	C	This attribute counts the number of times throughput congestion has been entered, and thus, the number of times the MgcIf throughput congestion alarm was set.	S

3.2 Nortel GSM

This release modifies the performance data dictionary in MSC network elements. The following list shows the list of new entities and also changes made to existing entity.

Prospect Entity	Managed Object	Counter Status	Technology
MSU	Bciniwfmu Castatmu Cpippmu M3uamu Msupool Ovdommsu Wudrmmu	New	MSC/MSCS
SSG	Ssg	New	MSC/MSCS
SSG_Link	Ssgmgwlk	New	MSC/MSCS
RNC_MSC	Imeitro	Added	MSC/MSCS
MSC	Bicniwf Cpipp Gsmnpi2 Gsmnpis Innpis Msccapom Msrnstat Sipcong Sipconn Siperrs Sipofcwd Sipusag Wudr	Added	MSC/MSCS

New counters are as below:-

Prospect Field Name	Entity Name	Heading Line 1	Heading Line 2	Datatype	Field Type	Description	Aggregator
SOSEIZE	MSC	CPIPP ShrtBufPl	Seized Buffer	F	C	The allocated buffer from the CPIPP short buffer pool (SOSEIZE) register counts the number of times that a buffer was allocated from the CPIPP short buffer pool.	S
SOOVFL	MSC	CPIPP ShrtBufPl	Overflow Buffer	F	C	The buffer from the CPIPP short buffer pool could not be allocated (SOOVFL) register counts the number of times that a buffer from the CPIPP short buffer pool could not be allocated.	S
SOLWMK	MSC	CPIPP ShrtBufPl	Free Buffer	F	C	The Least amount of free buffers in CPIPP short buffer pool (SOLWMK) register contains the	A

						least amount of free buffers in CPIPP short buffer pool.	
SOTOSS	MSC	CPIPP ShrtBufPl	Recv SAPI Msg Toss	F	C	The received SAPI message of cpipp_msg_priority 0 (SOTOSS) register counts the number of times that a received SAPI message of cpipp_msg_priority 0 was tossed because the number of buffers left is less than one-third of the CPIPP short buffer pools size.	S
LOSEIZE	MSC	CPIPP LgBufPl	Seized Buffer	F	C	The allocated buffer from the CPIPP long buffer pool (LOSEIZE) register counts the number of times that a buffer was allocated from the CPIPP long buffer pool.	S
LOOVFL	MSC	CPIPP LgBufPl	Overflow Buffer	F	C	The buffer from the CPIPP long buffer pool could not be allocated(LOOVFL) register counts the number of times that a buffer from the CPIPP long buffer pool could not be allocated.	S
LOLWMK	MSC	CPIPP LgBufPl	Free Buffer	F	C	The OR due to Call Forward Not Reachable (LOLWMK) register contains the least amount of free buffers in CPIPP long buffer pool.	A
LOTOSS	MSC	CPIPP LgBufPl	Recv SAPI Msg Toss	F	C	The a received SAPI message of cpipp_msg_priority 0 was tossed (LOTOSS) register counts the number of times a received SAPI message of cpipp_msg_priority 0 was tossed because the number of buffers left was less than one-third of the CPIPP long buffer pools size.	S
XLSEIZE	MSC	CPIPP ExLgBufPl	Seized Buffer	F	C	The allocated buffer from the CPIPP extra long buffer pool (XLSEIZE) register counts the number of times that a buffer was allocated from the CPIPP extra long buffer pool.	S
XLOVFL	MSC	CPIPP ExLgBufPl	Overflow Buffer	F	C	The a buffer from the CPIPP extra long buffer pool could not be allocated (XLOVFL) register counts the number of times that a buffer from the CPIPP extra long buffer pool could not be allocated.	S
XLLWMK	MSC	CPIPP ExLgBufPl	Free Buffer	F	C	The least amount of free buffers in CPIPP extra long buffer pool (XLLWMK) register contains the least amount of free buffers in CPIPP extra long buffer pool.	A
XLTOSS	MSC	CPIPP ExLgBufPl	Recv SAPI Msg Toss	F	C	The received SAPI message of cpipp_msg_priority 0 was tossed (XLTOSS) register counts the number of times that a received SAPI message of cpipp_msg_priority 0 was tossed because the number of buffers left is less than one-third of the CPIPP extra long buffer pools size.	S

HGSEIZE	MSC	CPIPP HugBufPl	Seized Buffer	F	C	The allocated buffer from the CPIPP huge buffer pool (HGSEIZE) register counts the number of times that a buffer was allocated from the CPIPP huge buffer pool.	S
HGOVFL	MSC	CPIPP HugBufPl	Overflow Buffer	F	C	The a buffer from the CPIPP huge buffer pool could not be allocated (HGOVFL) register counts the number of times a buffer from the CPIPP huge buffer pool could not be allocated.	S
HGLWMK	MSC	CPIPP HugBufPl	Free Buffer	F	C	The least amount of free buffers in CPIPP huge buffer pool (HGLWMK) register contains the least amount of free buffers in CPIPP huge buffer pool.	A
HGTOSS	MSC	CPIPP HugBufPl	Recv SAPI Msg Toss	F	C	The received SAPI message of cpipp_msg_priority 0 was tossed (HGTOSS) register counts the number of times that a received SAPI message of cpipp_msg_priority 0 was tossed because the number of buffers left is less than one-third of the CPIPP huge buffer pool's size.	S
MASEIZE	MSC	CPIPP MsvBufPl	Seized Buffer	F	C	The allocated buffer from the CPIPP massive buffer pool (MASEIZE) register counts the number of times that a buffer was allocated from the CPIPP massive buffer pool.	S
MAOVFL	MSC	CPIPP MsvBufPl	Overflow Buffer	F	C	The buffer from the CPIPP massive buffer pool could not be allocated (MAOVFL) register counts the number of times that a buffer from the CPIPP massive buffer pool could not be allocated.	S
MALWMK	MSC	CPIPP MsvBufPl	Free Buffer	F	C	The least amount of free buffers in CPIPP massive buffer pool (MALWMK) register contains the least amount of free buffers in CPIPP massive buffer pool.	A
MATOSS	MSC	CPIPP MsvBufPl	Recv SAPI Msg Toss	F	C	The received SAPI message of cpipp_msg_priority 0 was tossed (MATOSS) register counts the number of times that a received SAPI message of cpipp_msg_priority 0 was tossed because the number of buffers left is less than one-third of the CPIPP massive buffer pools size.	S
NATTMPT	MSC	Call Att	MGW IWF Call	F	C	Number of Call attempts received for MGW IWF Calls (NATTMPT) register counts the number of call attempts received for MGW IWF calls.	S
PTCNSUCC	MSC	H.248 ProcNegoSucc	MGW IWF Call	F	C	The H.248 Protocol Negotiation Successes received for MGW IWF calls (PTCNSUCC) register counts the number of successful H.248 Protocol Negotiation	S

						Result Events received for MGW IWF Calls.	
PTCNFAIL	MSC	H.248 ProcNegoFail	MGW IWF Call	F	C	The H.248 Protocol Negotiation failures received for MGW IWF calls (PTCNFAIL) register counts the number of H.248 Protocol Negotiation Failures received for MGW IWF calls (for instance time-out or failures received from the MGW).	S
RESUNAVL	MSC	Res Unavl Fail	MGW IWF Call	F	C	The resource unavailable failures for MGW IWF calls (RESUNAVL) register counts the number of times MGW IWF call resource is requested but no resource is available on MGW.	S
SIMSGIN_SIP_OM_INVITE	MSC	SIP Msg IN	INVITE	F	C	The SIP Message Incoming (SIMSGIN) register counts SIP messages that are received at the office, including incoming messages passing through a transit (tandem) office. Each type of incoming SIP message is counted separately. All provisional responses are counted together, as are final responses and unsupported methods. (SIP_OM_INVITE)	S
SIMSGIN_SIP_OM_REINVITE	MSC	SIP Msg IN	REINVITE	F	C	The SIP Message Incoming (SIMSGIN) register counts SIP messages that are received at the office, including incoming messages passing through a transit (tandem) office. Each type of incoming SIP message is counted separately. All provisional responses are counted together, as are final responses and unsupported methods. (SIP_OM_REINVITE)	S
SIMSGIN_SIP_OM_ACK	MSC	SIP Msg IN	ACK	F	C	The SIP Message Incoming (SIMSGIN) register counts SIP messages that are received at the office, including incoming messages passing through a transit (tandem) office. Each type of incoming SIP message is counted separately. All provisional responses are counted together, as are final responses and unsupported methods. (SIP_OM_ACK)	S
SIMSGIN_SIP_OM_BYE	MSC	SIP Msg IN	BYE	F	C	The SIP Message Incoming (SIMSGIN) register counts SIP messages that are received at the office, including incoming messages passing through a transit (tandem) office. Each type of incoming SIP message is counted separately. All provisional responses are counted together, as are final responses and unsupported methods. (SIP_OM_BYE)	S

SIMSGIN_SIP_OM_CANCEL	MSC	SIP Msg IN	CANCEL	F	C	The SIP Message Incoming (SIMSGIN) register counts SIP messages that are received at the office, including incoming messages passing through a transit (tandem) office. Each type of incoming SIP message is counted separately. All provisional responses are counted together, as are final responses and unsupported methods. (SIP_OM_CANCEL)	S
SIMSGIN_SIP_OM_OPTIONS	MSC	SIP Msg IN	OPTIONS	F	C	The SIP Message Incoming (SIMSGIN) register counts SIP messages that are received at the office, including incoming messages passing through a transit (tandem) office. Each type of incoming SIP message is counted separately. All provisional responses are counted together, as are final responses and unsupported methods. (SIP_OM_OPTIONS)	S
SIMSGIN_SIP_OM_INFO	MSC	SIP Msg IN	INFO	F	C	The SIP Message Incoming (SIMSGIN) register counts SIP messages that are received at the office, including incoming messages passing through a transit (tandem) office. Each type of incoming SIP message is counted separately. All provisional responses are counted together, as are final responses and unsupported methods. (SIP_OM_INFO)	S
SIMSGIN_SIP_OM_PRACK	MSC	SIP Msg IN	PRACK	F	C	The SIP Message Incoming (SIMSGIN) register counts SIP messages that are received at the office, including incoming messages passing through a transit (tandem) office. Each type of incoming SIP message is counted separately. All provisional responses are counted together, as are final responses and unsupported methods. (SIP_OM_PRACK)	S
SIMSGIN_SIP_OM_UPDATE	MSC	SIP Msg IN	UPDATE	F	C	The SIP Message Incoming (SIMSGIN) register counts SIP messages that are received at the office, including incoming messages passing through a transit (tandem) office. Each type of incoming SIP message is counted separately. All provisional responses are counted together, as are final responses and unsupported methods. (SIP_OM_UPDATE)	S
SIMSGIN_SIP_OM_UNSUPPORTED	MSC	SIP Msg IN	UNSUPPORTED	F	C	The SIP Message Incoming (SIMSGIN) register counts SIP messages that are received at the office, including incoming messages passing through a	S

						transit (tandem) office. Each type of incoming SIP message is counted separately. All provisional responses are counted together, as are final responses and unsupported methods. (SIP_OM_UNSUPPORTED)	
SIMSGIN_SIP_OM_PROVRESP	MSC	SIP Msg IN	PROVRESP	F	C	The SIP Message Incoming (SIMSGIN) register counts SIP messages that are received at the office, including incoming messages passing through a transit (tandem) office. Each type of incoming SIP message is counted separately. All provisional responses are counted together, as are final responses and unsupported methods. (SIP_OM_PROVRESP)	S
SIMSGIN_SIP_OM_FINRESP	MSC	SIP Msg IN	FINRESP	F	C	The SIP Message Incoming (SIMSGIN) register counts SIP messages that are received at the office, including incoming messages passing through a transit (tandem) office. Each type of incoming SIP message is counted separately. All provisional responses are counted together, as are final responses and unsupported methods. (SIP_OM_FINRESP)	S
SIMSGOT_SIP_OM_INVITE	MSC	SIP Msg OG	INVITE	F	C	The SIP Message Outgoing (SIMSGOT) register counts SIP messages that are sent from the office. Each type of outgoing SIP message is counted separately. All provisional responses are counted together, as are final responses and unsupported methods. (SIP_OM_INVITE)	S
SIMSGOT_SIP_OM_REINVITE	MSC	SIP Msg OG	REINVITE	F	C	The SIP Message Outgoing (SIMSGOT) register counts SIP messages that are sent from the office. Each type of outgoing SIP message is counted separately. All provisional responses are counted together, as are final responses and unsupported methods. (SIP_OM_REINVITE)	S
SIMSGOT_SIP_OM_ACK	MSC	SIP Msg OG	ACK	F	C	The SIP Message Outgoing (SIMSGOT) register counts SIP messages that are sent from the office. Each type of outgoing SIP message is counted separately. All provisional responses are counted together, as are final responses and unsupported methods. (SIP_OM_ACK)	S
SIMSGOT_SIP_OM_BYE	MSC	SIP Msg OG	BYE	F	C	The SIP Message Outgoing (SIMSGOT) register counts SIP messages that are sent from the office. Each type of outgoing SIP	S

						message is counted separately. All provisional responses are counted together, as are final responses and unsupported methods. (SIP_OM_BYE)	
SIMSGOT_SIP_OM_CANCEL	MSC	SIP Msg OG	CANCEL	F	C	The SIP Message Outgoing (SIMSGOT) register counts SIP messages that are sent from the office. Each type of outgoing SIP message is counted separately. All provisional responses are counted together, as are final responses and unsupported methods. (SIP_OM_CANCEL)	S
SIMSGOT_SIP_OM_OPTIONS	MSC	SIP Msg OG	OPTIONS	F	C	The SIP Message Outgoing (SIMSGOT) register counts SIP messages that are sent from the office. Each type of outgoing SIP message is counted separately. All provisional responses are counted together, as are final responses and unsupported methods. (SIP_OM_OPTIONS)	S
SIMSGOT_SIP_OM_INFO	MSC	SIP Msg OG	INFO	F	C	The SIP Message Outgoing (SIMSGOT) register counts SIP messages that are sent from the office. Each type of outgoing SIP message is counted separately. All provisional responses are counted together, as are final responses and unsupported methods. (SIP_OM_INFO)	S
SIMSGOT_SIP_OM_PRACK	MSC	SIP Msg OG	PRACK	F	C	The SIP Message Outgoing (SIMSGOT) register counts SIP messages that are sent from the office. Each type of outgoing SIP message is counted separately. All provisional responses are counted together, as are final responses and unsupported methods. (SIP_OM_PRACK)	S
SIMSGOT_SIP_OM_UPDATE	MSC	SIP Msg OG	UPDATE	F	C	The SIP Message Outgoing (SIMSGOT) register counts SIP messages that are sent from the office. Each type of outgoing SIP message is counted separately. All provisional responses are counted together, as are final responses and unsupported methods. (SIP_OM_UPDATE)	S
SIMSGOT_SIP_OM_UNSUPPORTED	MSC	SIP Msg OG	UNSUPPORTED	F	C	The SIP Message Outgoing (SIMSGOT) register counts SIP messages that are sent from the office. Each type of outgoing SIP message is counted separately. All provisional responses are counted together, as are final responses and unsupported methods. (SIP_OM_UNSUPPORTED)	S
SIMSGOT_SIP_OM_PROVRESP	MSC	SIP Msg OG	PROVRESP	F	C	The SIP Message Outgoing (SIMSGOT) register counts SIP messages that are sent from the office. Each type of outgoing SIP	S

						message is counted separately. All provisional responses are counted together, as are final responses and unsupported methods. (SIP_OM_PROVRESP)	
SIMSGOT_SIP_OM_FINRESP	MSC	SIP Msg OG	FINRESP	F	C	The SIP Message Outgoing (SIMSGOT) register counts SIP messages that are sent from the office. Each type of outgoing SIP message is counted separately. All provisional responses are counted together, as are final responses and unsupported methods. (SIP_OM_FINRESP)	S
SICONBAD	MSC	SIP-I Cll	Attmpt Fail	F	C	The SIP Bad (SICONBAD) register counts SIP-I 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.	S
SICONUCA	MSC	SIP-I Call Att Uncess	# invalid frmt	F	C	The SIP Unsuccessful Address (SICONUCA) register counts SIP-I call attempts that are not successful due to another office determining the called number is not in a valid format or the called number is not complete.	S
SICONUCB	MSC	SIP-I Call Att Uncess	B-party busy	F	C	The SIP Unsuccessful Busy released by audit (SICONUCB) register counts SIP-I call attempts that are not successful because the called party is busy.	S
SICONUCC	MSC	SIP-I Call Att Uncess	No idle Circuit	F	C	The SIP Unsuccessful Circuit (SICONUCC) counts call attempts that are not successful because there are no correct idle circuits.	S
SICONUCE	MSC	SIP-I Call Att Uncess	High Traffic	F	C	The SIP Unsuccessful Equipment (SICONUCE) register counts call attempts that are not successful because switching equipment in another office is experiencing high traffic.	S
SICONUCF	MSC	SIP-I Call Att Uncess	Temp Fault	F	C	The SIP Unsuccessful Faults (SICONUCF) register counts SIP-I call attempts that are not successful due to a temporary fault in the network at the far end.	S
SICONUCN	MSC	SIP-I Call Att Uncess	# blank	F	C	The SIP Unsuccessful Numbers (SICONUCN) register counts SIP-I call attempts that are not successful because the dialed number is a blank directory number in the far-end office	S
SICONUCS	MSC	SIP-I Call Att Uncess	Eqp Fail	F	C	The SIP Unsuccessful Service (SICONUCS) register counts SIP-I call attempts that are not successful due to an equipment failure that occurs at the far-end office or the directory number of the called party is disconnected	S

						or out of service.	
SICONUCO	MSC	SIP-I Call Att Uncess	Other reasons	F	C	The SIP Unsuccessful Other (SICONUCO) register counts SIP-I call attempts that are not successful because of reasons not counted by other SIPCONN registers.	S
SIERRCAN	MSC	SIP CANCEL Mthd	Req not ack	F	C	The SIP Error CANCEL (SIERRCAN) register counts the number of times a CANCEL method request is not acknowledged by the far end office.	S
SIERRBYE	MSC	SIP BYE Mthd	Req not ack	F	C	The SIP Error BYE (SIERRBYE) register counts the number of times a BYE method request is not acknowledged by the far end office.	S
SIERRSEP	MSC	SIP-I session	Tmr Expire Rel	F	C	The SIP Error Session Timer Expiration released by audit (SIERRSEP) register counts the number of times a Session Timer expires indicating a stale SIP-I session.	S
SIERRIAF	MSC	SIP INFO Mthd	Signal Resto Fail	F	C	The SIP Error Info Audit Failure register counts the number of times the signaling restoration fails, triggering the INFO audit.	S
SIERRHOP	MSC	SIP Hop	Counter Exp	F	C	The SIP error Hop Counter Expiration (SIERRHOP) register counts the number of times the Hop Counter expires.	S
ACCDFIL	MSC	Auto Conges	Contrl Datafill	F	C	The Automatic Congestion Control Datafill (ACCDFIL) register counts the number of times a trunk group detected ACL but could not apply network management controls because of missing datafill in table FQDNPPLN.	S
TRY100OG	MSC	IN int INVITE	100 Try Msg Sent	F	C	The Outgoing 100 Trying (TRY100OG) register tracks when a 100 Trying message is sent in response to an incoming initial INVITE. This register is not pegged for 100 Trying retransmissions.	S
RETROG	MSC	OG SIP Msg	Retransmi ssions	F	C	The Outgoing Retransmissions (RETROG) register counts the number of times a SIP request or response message is retransmitted.	S
RETRIC	MSC	IN SIP Msg	Retransmi ssions	F	C	The Incoming Retransmissions register counts the number of times the MSCS receives a retransmitted SIP request of response message.	S
FLACKIC	MSC	IN Fail	ACKs	F	C	The Incoming Failure ACKs (FLACKIC) register counts the number of initial ACK messages sent following an incoming failure final response. This register is pegged for both INVITE and re-INVITE transmissions. This	S

						register is not pegged for ACK retransmissions.	
FLACKOG	MSC	OG Fail	ACKs	F	C	The Outgoing Failure ACKs (FLACKOG) register counts the number of initial ACK messages received in response to an outgoing failure final response. This register is pegged for both INVITE and re-INVITE transmissions. This register is not pegged for ACK retransmissions.	S
SYSUTIL	MSC	% Sys Payld Util	met GOS	F	C	The System level peak payload utilization over the entire transfer period (SYSUTIL) register indicates the percentage of system level call processing capacity used within the engineering recommendation for which the grade of service specifications are met since the last report.	A
SYSPUTIL	MSC	Sys Payld Util	MO CM Serv Req	F	C	The system level peak payload utilization over the entire transfer period (SYSPUTIL) register counts the number of CM Service Request for Short Message for a mobile origination. It is pegged as soon as CM Service Request for Short Message is received on MSCS.	A
UTILMAJ	MSC	MSU Util in Sec	>mjr <crtl thrshld	F	C	The average MSU's utilization greater than major threshold but less than critical threshold (UTILMAJ) register tracks how many seconds the average MSUs utilization is greater than the major threshold but less than the critical threshold.	A
UTILCRIT	MSC	MSU Util in Sec	>crtcl thrshld	F	C	The average MSU's utilization is larger than the critical threshold. (UTILCRIT) register tracks how many seconds the average MSUs utilization is larger than the critical threshold.	A
CallPOVD	MSC	CA CallP in Sec	cc_beyond_capacity	F	C	The number of seconds CA CallP overload state is cc_beyond_capacity (CallPOVD) register indicates the number of seconds CA CallP overload state is cc_beyond_capacity.	S
CallPNER	MSC	CA CallP in Sec	cc_near_capacity	F	C	The number of seconds CA CallP overload state is cc_near_capacity (CallPNER) register indicates the number of seconds CA CallP overload state is cc_near_capacity.	S
CPIPPOVD	MSC	CA CPIPP in Sec	cc_beyond_capacity	F	C	The number of seconds CA CPIPP overload state is cc_beyond_capacity (CPIPPOVD) register indicates the number of seconds the CA CPIPP overload state is cc_beyond_capacity.	S
CPIPNEAR	MSC	CA CPIPP	cc_near_c	F	C	The SSG Recovery (CPIPNEAR)	S

		in Sec	apacity			register indicates the number of seconds CA CPIPP overload state is cc_near_capacity.	
MSUPLOVD	MSC	MSUPool ovrld in Sec	cc_beyond_capacity	F	C	The number of seconds the MSU pool overload state is cc_beyond_capacity (MSUPLOVD) register indicates the number of seconds the MSUpool overload state is cc_beyond_capacity.	S
MSUPLNER	MSC	MSUPool ovrld in Sec	cc_near_capacity	F	C	The number of seconds the MSU pool overload state is cc_near_capacity (MSUPLNER) register indicates the number of seconds the MSUpool overload state is cc_near_capacity.	S
ORIGATMT	RNC_MSC	Orig Call Att	TrFO SOC Actv	F	C	The Origination Call attempted (ORIGATMT) register counts the number of origination attempts made when the TrFO SOC is active. The origination attempt is pegged irrespective of old/new/homer/roamer mobiles.	S
ORIGESTD	RNC_MSC	Orig Call Succ	TrFO SOC Actv	F	C	The Origination Call established (ORIGESTD) register counts the number of successful originations made when the TrFO SOC is active. The origination established register is pegged irrespective of old/new/homer/roamer mobiles.	S
ORMSATMT	RNC_MSC	Rm Sub Orig Call Att	TrFO SOC Actv	F	C	The Roaming Subscriber Origination Call attempted (ORMSATMT) register counts the number of origination attempts made by a roamer mobile when the TrFO SOC is active. The origination attempt is pegged only for roamer mobiles.	S
ORMSESTD	RNC_MSC	Rm Sub Orig Call Succ	TrFO SOC Actv	F	C	The Roaming Subscriber Origination Call established (ORMSESTD) register counts the number of successful origination made by a roamer mobile when the TrFO SOC is active. The origination established register is pegged only for roamer mobiles.	S
OHMSATMT	RNC_MSC	Hm Sub Orig Call Att	TrFO SOC Actv	F	C	The Homing Subscriber Origination attempted from mobiles capable of supporting lower rates (OHMSATMT) register counts the number of origination attempts made by a homer mobile when the TrFO SOC is active. The origination attempt register is pegged only for homer mobiles supporting lower rates.	S
OHMSESTD	RNC_MSC	Hm Sub Orig Call Succ	TrFO SOC Actv	F	C	The Homing Subscriber Origination established from mobiles supporting lower rates register counts the number of successful originations made by a homer mobile when the TrFO	S

						SOC is active.	
TERMATMT	RNC_MSC	Trm Call Att	TrFO SOC Actv	F	C	The Termination Call attempted (TERMATMT) register counts the number of termination attempts made when the TrFO SOC is active. The termination attempt is pegged irrespective of old/new/homer/roamer mobiles.	S
TERMESTD	RNC_MSC	Trm Call Succ	TrFO SOC Actv	F	C	The Termination Call established (TERMESTD) register counts the number of successful terminations made when the TrFO SOC is active. The termination established register is pegged irrespective of old/new/homer/roamer mobiles.	S
TRMSATMT	RNC_MSC	Rm Sub Trm Call Att	TrFO SOC Actv	F	C	The Roaming Subscriber Termination Call attempted (TRMSATMT) register counts the number of termination attempts made by a roamer mobile when the TrFO SOC is active. The termination attempt is pegged only for roamer mobiles.	S
TRMSESTD	RNC_MSC	Rm Sub Trm Call Succ	TrFO SOC Actv	F	C	The Roaming Subscriber Termination Call established (TRMSESTD) register counts the number of successful termination made by a roamer mobile when the TrFO SOC is active. The termination established register is pegged only for roamer mobiles.	S
THMSATMT	RNC_MSC	Hm Sub Trm Call Att	TrFO SOC Actv	F	C	The Homing Subscriber Termination attempted to mobiles supporting lower rates (THMSATMT) register counts the number of termination attempts made by a homer mobile when the TrFO SOC is active. The termination attempt register is pegged only for homer mobiles supporting lower rates.	S
THMSESTD	RNC_MSC	Hm Sub Trm Call Succ	TrFO SOC Actv	F	C	The Homing Subscriber Termination established to mobiles supporting lower rates (THMSESTD) register counts the number of successful origination made by a homer mobile when the TrFO SOC is active. The origination established register is pegged only for homer mobiles which support lower rates.	S
T122ENF	RNC_MSC	Trm Call Att 12.2Kbps	TrFO SOC Actv	F	C	The Termination Call attempt when 12.2 Kbps is enforced (T122ENF) register counts the number of termination attempts made by a mobile when the TrFO SOC is active. The termination attempted register is pegged only for mobiles for which rate of 12.2 Kbps is enforced. This enforcement is done only if Nb is set to 12.2.	S

SSGFAIL	SSG	SSG	Fail	F	C	The SSG Failure (SSGFAIL) register counts the number of times the audit detects a loss of communication to the SSG.	S
SSGRCVR	SSG	SSG	Recovery	F	C	The SSG Recovery (SSGRCVR) register counts the number of times the audit detects communication is restored to a SSG.	S
LINKOOS	SSG_Link	SSG Link	Out of Servc	F	C	The SSG H.248/M3UA/SCTP Link Out Of Service (LINKOOS) register counts the number of times the CA or MSU receives a notification that a SSG H.248/M3UA/SCTP link has been taken out of service.	S
LKINSV	SSG_Link	SSG Link	In Servc	F	C	The SSG H.248/M3UA/SCTP Link In Service (LKINSV) register counts the number of times the audit detects communication is restored to a SSG.	S
H248OUT	SSG_Link	H.248 OG	Msg	F	C	The H.248 Outgoing messages (H248OUT) register counts the number of outgoing H.248 messages to a specific SSG H.248/M3UA/SCTP link.	S
H248IN	SSG_Link	H.248 IN	Msg	F	C	The H.248 Incoming messages (H248IN) register counts the number of incoming H.248 messages from a specific SSG H.248/M3UA/SCTP link to the CA/MSU.	S
CRICPBLO	MSU	MSU Util in Sec	>crtl thrshld & cc_below_capacity	F	C	The Utilization Is Greater Than Critical Threshold But Overload State Is cc_below_capacity (CRICPBLO) register counts the number of seconds each MSUs utilization is greater than critical threshold but its overload state is cc_below_capacity.	S
CRITUTIL	MSU	MSU Util in Sec	>crtl thrshld	F	C	The Utilization Greater Than Critical Threshold (CRITUTIL) register counts the number of seconds each MSUs utilization is greater than the critical threshold.	S
BEYONDCR	MSU	MSU Util in Sec	<crtl thrshld & cc_beyond_capacity	F	C	The Overload State Is cc_beyond_capacity But Utilization Is Less Than Critical Threshold (BEYONDCR) register tracks how many seconds each MSUs overload state is cc_beyond_capacity but its utilization is less than critical threshold.	S
BEYONDLM	MSU	MSU Util in Sec	<mjr thrshld & cc_beyond_capacity	F	C	The Overload State Is cc_beyond_capacity But Utilization Is Less Than Major Threshold(BEYONDLM) register counts how many seconds each MSUs overload state is cc_beyond_capacity but its utilization is less than major threshold.	S
BEYONDST	MSU	MSU Util in	cc_beyon	F	C	The Overload State	S

		Sec	d_capacity			cc_beyond_capacity (BEYONDST) register tracks the number of seconds each MSUs overload state is cc_beyond_capacity.	
MAJCPBLO	MSU	MSU Util in Sec	>mjr thrshld & cc_below_capacity	F	C	The Utilization Is Greater Than Major Threshold But Overload State Is cc_below_capacity (MAJCPBLO) register counts the number of seconds each MSUs utilization is greater than major threshold but its overload state is cc_below_capacity.	S
MAJUTIL	MSU	MSU Util in Sec	>mjr <crtl thrshld	F	C	The Utilization Greater Than Major Threshold (MAJUTIL) register tracks the number of seconds each MSU's utilization is greater than major threshold but less than critical threshold.	S
LOCSUB	MSU	IN Trans Sub	Existing to MSU	F	C	The Local Subscribers (LOCSUB) register counts incoming transactions of subscribers that already exist on the MSU.	S
NEWSUB	MSU	IN Trans Sub	New to VLR or MSU	F	C	The New Subscriber (NEWSUB) register counts the number of transactions of new subscribers that do not exist in the Master VLR or MSUs.	S
UNKWTMSI	MSU	IN Trans Sub	Unrecog TMSI	F	C	The Unknown TMSI (UNKWTMSI) register counts the number of incoming transactions of subscribers with unrecognized TMSI.	S
REDIR	MSU	MSU redirect	Trans to CA	F	C	The Redirect (REDIR) register counts the number of times the MSU redirects the transaction to the CA.	S
SURNDR	MSU	Surrender Msg	MSU to CA	F	C	The Surrender (SURNDR) register counts the number of times the CA receives surrender messages from MSU.	S
SELNODE	MSU	Transaction	Handle by MSU	F	C	The Select node (SELNODE) register counts the number of times an MSU is selected to handle a transaction.	S
MSERVREQ	MSU	MM Servc Req	CA to MSU	F	C	The Mobile Service Request (MSERVREQ) register counts the number of times the CA assigns the service request of mobility management to the MSU.	S
PSERVREQ	MSU	PSTN Servc Req	CA to MSU	F	C	The PSTN Service Request (PSERVREQ) register counts the number of times the CA assigns the service request of PSTN calls to the MSU.	S
MAPNOSID	MSU	No Sub data	In UDT MAP	F	C	The MAP no subscriber data (MAPNOSID) register counts the number of times that when there is no subscriber data in the UDT MAP begin package or the first segment of the XUDT BEGIN package, the message is	S

						delivered to a selected MSU.	
MVDATAIN	MSU	Sub Tuple	Move to CA	F	C	The Move Data In (MVDATAIN) register counts the number of times that a subscribers tuple was moved into the CA.	S
MVDATOUT	MSU	Sub Tuple move	VLR to MSU	F	C	The Move Data Out (MVDATOUT) register counts the number of times the CA had to move the subscriber tuple out from the Master VLR and send it to one of the MSUs.	S
DELOAD	MSU	MSU Trans	Deloaded state	F	C	The MSU Deload (DELOAD) register counts the number of times that MSU transitions to deloaded state.	S
AVAIL	MSU	MSU state	Change to Avail	F	C	The MSU available (AVAIL) register counts the number of times that MSU state changes to available.	S
PAVAIL	MSU	MSU state	Change to part Avail	F	C	The MSU Partial available (UNAVAIL) register counts the number of times MSU state changes to partial available.	S
UNAVAIL	MSU	MSU state	Change to unavail	F	C	The MSU unavailable (register) register counts the number of times the MSU state changes to unavailable.	S
MSUUTIL	MSU	% MSU Call Cap use	met GOS	F	C	The percentage of per-MSU call processing capacity used within the engineering recommendation (MSUUTIL) register indicates the percentage of per-MSU call processing capacity used within the engineering recommendation for which grade of service specs are met.	A
MSUPUTIL	MSU	MSU Payld Util	MO CM Serv Req	F	C	The CM Service Request for Short Msg for MS origination Message (MSUPUTIL) register indicates the per-MSU peak payload utilization over the entire transfer period.	A
MSUCMPLX	MSU	RT Payld Usage	MicroSeconds	F	C	The payload usage of real-time per unit of throughput (microseconds) (per MSU). (MSUCMPLX) register indicates payload usage of real-time per unit of throughput (microseconds per 1 unit of throughput). However, this OM register counts per MSU value.	A
MSUSCHED	MSU	Schedule overhead	reltv to exptd Cap	F	C	The Ratio of scheduling overhead relative to expected at capacity (per MSU) (MSUSCHED) register indicates the ratio of scheduling overhead relative to expected at capacity. However, this OM register shows per-MSU counts.	A
MSUFORE	MSU	Schedule overhead	reltv to foregrd Cap	F	C	The ratio of operating system overhead relative to foreground at capacity (per MSU) (MSUFORE) register indicates the ratio of scheduling overhead	A

						relative to expected at capacity per MSU.	
MSUMAINT	MSU	Maint Util	reltv to allocated Cap	F	C	The ratio of maintenance utilization relative to what has been allocated (per MSU) (MSUMAINT) register indicates the ratio of maintenance utilization relative to what has been allocated per MSU.	A
MSUDNC	MSU	NOSFT Util	reltv to allocated Cap	F	C	The Ratio of NOSFT class utilization relative to what has been allocated (per MSU). (MSUDNC) register indicates the ratio of scheduling overhead relative to expected at capacity pre MSU.	A
MSUOM	MSU	OM Util	reltv to allocated Cap	F	C	The Ratio of OM class usage relative to what has been allocated (per MSU) (MSUOM) register indicates the ratio of OM class usage relative to what has been allocated per MSU.	A
MSUGTERM	MSU	GTERM Util	reltv to office paramtr	F	C	The ratio of GTERM class utilization to the Guaranteed_Terminal_Cpu_Share office parm per MSU (MSUGTERM) register indicates the ratio of GTERM class utilization relative to the Guaranteed_Terminal_Cpu_Share office parameter.	A
MSUBKG	MSU	Backgrd Usage	reltv to allocated Cap	F	C	The ratio of background classes usage to what has been allocated per MSU (MSUBKG) register indicates the ratio of background classes usage relative to what has been allocated per MSU.	A
MSUIDLE	MSU	MSU IDLE	In minutes	F	C	The number of minutes during which there was some IDLE time per MSU (MSUIDLE) register indicates the number of minutes during which there was some IDLE time per MSU.	S
MSUAUXCP	MSU	AUXCP Usages	reltv to office paramtr	F	C	The Ratio of AUXCP class usage relative to Auxcp_Cpu_Share office parm per MSU. (MSUAUXCP) register indicates the ratio of Ratio of AUXCP class usage relative to the Auxcp_Cpu_Share office parm per MSU.	A
MSUNETM	MSU	NETMTC Usage	reltv to allocated Cap	F	C	The ratio of NETMTC class usage relative to what is allocated per MSU (MSUNETM) register indicates the ratio of ratio of NETMTC class usage relative to what has been allocated per MSU.	A
MSUSNIP	MSU	SNIP Usage	reltv to allocated Cap	F	C	The Ratio of SNIP class usage relative to what is allocated per MSU (MSUSNIP) register indicates the ratio of SNIP class usage relative to what has been	A

						allocated per MSU.	
MSUNXFR	MSU	# transfer period	accumulation	F	C	The number of transfer periods accumulated in this OM report per MSU (MSUNXFR) register indicates the number of transfer periods accumulated in this OM transfer report per MSU.	S
MSUOVER	MSU	CALLP Util	> 100% in min.	F	C	The number of one minute intervals during which CALLP utilization was greater than 100 percent (per MSU) per MSU (MSUOVER) register indicates the number of one minute intervals during which CALLP utilization was greater than 100% per MSU.	S
MSUOTHLD	MSU	# util exceed	Office thrsld paramtr	F	C	The number of times that the utilization exceeds the office parameter CC_ENGLEVEL_WARNING_THRESHOLD per MSU (MSUOTHLD) register indicates the number of times that the utilization exceeds the office parameter CC_ENGLEVEL_WARNING_THRESHOLD per MSU counts.	S
TXMSGMU	MSU	M3UA	Trans Msg	F	C	The M3UA transmit message per MSU (TXMSGMU) register counts m3ua transmit messages.	S
RXMSGMU	MSU	M3UA	Recv Msg	F	C	The M3UA receive message per MSU (RXMSGMU) register counts m3ua receive message.	S
LOSTMGMU	MSU	M3UA	Lost Msg	F	C	The M3UA lost message per MSU (LOSTMGMU) register counts M3UA lost messages.	S
SOSZMU	MSU	CPIPP ShrtBufPl	Seized Buffer MSU	F	C	The allocated buffer from the CPIPP short buffer pool on the MSU (SOSZMU) register counts the number of times that a buffer was allocated from the CPIPP short buffer pool on the MSU.	S
SOOVFLMU	MSU	CPIPP ShrtBufPl	Overflow Buffer MSU	F	C	The buffer from the CPIPP short buffer pool on the MSU could not be allocated (SOOVFLMU) register counts the number of times that a buffer from the CPIPP short buffer pool on the MSU could not be allocated.	S
SOLWMKMU	MSU	CPIPP ShrtBufPl	Free Buffer MSU	F	C	The least amount of free buffers in CPIPP short buffer pool on the MSU (SOLWMKMU) register contains the least amount of free buffers in CPIPP short buffer pool on the MSU.	A
SOTOSSMU	MSU	CPIPP ShrtBufPl	Recv SAPI Msg Toss MSU	F	C	The received SAPI message of cpipp_msg_priority 0 was tossed (SOTOSSMU) register counts the number of times a received SAPI message of cpipp_msg_priority 0 was tossed because the number of buffers left is less than one-third of the CPIPP short buffer pools size on	S

						the MSU.	
LOSZMU	MSU	CPIPP LgBufPl	Seized Buffer MSU	F	C	The allocated buffer from the CPIPP long buffer pool on the MSU (LOSZMU) register counts the number of times that a buffer was allocated from the CPIPP long buffer pool on the MSU.	S
LOOVFLMU	MSU	CPIPP LgBufPl	Overflow Buffer MSU	F	C	The buffer from the CPIPP long buffer pool on the MSU could not be allocated (LOOVFLMU) register counts the number of times a buffer from the CPIPP long buffer pool on the MSU could not be allocated.	S
LOLWMKMU	MSU	CPIPP LgBufPl	Free Buffer MSU	F	C	The least amount of free buffers in CPIPP long buffer pool on the MSU (LOLWMKMU) register contains the least amount of free buffers in CPIPP long buffer pool on the MSU.	A
LOTOSSMU	MSU	CPIPP LgBufPl	Recv SAPI Msg Toss MSU	F	C	The received SAPI message of cpipp_msg_priority 0 was tossed (LOTOSSMU) register counts the number of times that a received SAPI message of cpipp_msg_priority 0 was tossed because the number of buffers left is less than one-third of the CPIPP long buffer pools size on the MSU.	S
XLSZMU	MSU	CPIPP ExLgBufPl	Seized Buffer MSU	F	C	The allocated buffer from the CPIPP extra long buffer pool on the MSU (XLSZMU) register counts the number of times that a buffer was allocated from the CPIPP extra long buffer pool on the MSU.	S
XLOVFLMU	MSU	CPIPP ExLgBufPl	Overflow Buffer MSU	F	C	The buffer from the CPIPP extra long buffer pool on the MSU could not be allocated (XLOVFLMU) register counts the number of times that a buffer from the CPIPP extra long buffer pool on the MSU could not be allocated.	S
XLLWMKMU	MSU	CPIPP ExLgBufPl	Free Buffer MSU	F	C	The least amount of free buffers in CPIPP extra long buffer pool on the MSU (XLLWMKMU) register contains the least amount of free buffers in CPIPP extra long buffer pool on the MSU.	A
XLTOSSMU	MSU	CPIPP ExLgBufPl	Recv SAPI Msg Toss MSU	F	C	The received SAPI message of cpipp_msg_priority 0 was tossed (XLTOSSMU) register counts the number of times that a received SAPI message of cpipp_msg_priority 0 was tossed because the number of buffers left is less than one-third of the CPIPP extra long buffer pools size on the MSU.	S
HGSZMU	MSU	CPIPP HugBufPl	Seized Buffer	F	C	The allocated buffer from the CPIPP huge buffer pool on the	S

			MSU			MSU (HGSZMU) register counts the number of times that a buffer was allocated from the CPIPP huge buffer pool on the MSU.	
HGOVFLMU	MSU	CPIPP HugBufPl	Overflow Buffer MSU	F	C	The buffer from the CPIPP huge buffer pool on the MSU could not be allocated (HGOVFLMU) register counts the number of times that a buffer from the CPIPP huge buffer pool on the MSU could not be allocated.	S
HGLWMKMU	MSU	CPIPP HugBufPl	Free Buffer MSU	F	C	The least amount of free buffers in CPIPP huge buffer pool on the MSU (HGLWMKMU) register contains the least amount of free buffers in CPIPP huge buffer pool on the MSU.	A
HGTOSSMU	MSU	CPIPP HugBufPl	Recv SAPI Msg Toss MSU	F	C	The received SAPI message of cpipp_msg_priority 0 was tossed (HGTOSSMU) register counts the number of times that a received SAPI message of cpipp_msg_priority 0 was tossed because the number of buffers left is less than one-third of the CPIPP huge buffer pools size on the MSU.	S
MASZMU	MSU	CPIPP MsvBufPl	Seized Buffer MSU	F	C	The allocated buffer from the CPIPP massive buffer pool (MASZMU) register counts the number of times that a buffer was allocated from the CPIPP massive buffer pool on the MSU.	S
MAOVFLMU	MSU	CPIPP MsvBufPl	Overflow Buffer MSU	F	C	The buffer from the CPIPP massive buffer pool on the MSU could not be allocated (MAOVFLMU) register counts the number of times that a buffer from the CPIPP massive buffer pool on the MSU could not be allocated.	S
MALWMKMU	MSU	CPIPP MsvBufPl	Free Buffer MSU	F	C	The least amount of free buffers in CPIPP massive buffer pool on the MSU (MALWMKMU) register contains the least amount of free buffers in CPIPP massive buffer pool on the MSU.	A
MATOSSMU	MSU	CPIPP MsvBufPl	Recv SAPI Msg Toss MSU	F	C	The received SAPI message of cpipp_msg_priority 0 was tossed (MATOSSMU) register counts the number of times that a received SAPI message of cpipp_msg_priority 0 was tossed because the number of buffers left is less than one-third of the CPIPP massive buffer pools size on the MSU.	S
NATMTMU	MSU	Call Att	MGW IWF Call at MSU	F	C	The number of Call attempts received for MGW IWF Calls per MSU (NATMTMU) register counts the number of call attempts received for MGW IWF calls.	S
PNSUCMU	MSU	H.248	MGW IWF	F	C	The H.248 Protocol Negotiation	S

		ProcNegoSucc	Call at MSU			Successes (PNSUCMU) register counts the number of successful H.248 Protocol Negotiation Result Events received for MGW IWF Calls on a per-MSU basis.	
PNFAIMU	MSU	H.248 ProcNegoFail	MGW IWF Call at MSU	F	C	The Protocol Negotiation failures received for MGW IWF calls per MSU (PNFAIMU) register counts the number of H.248 Protocol Negotiation Failures received for MGW IWF calls (for instance time-out or failures received from MGW) on a per-MSU basis).	S
REUNAMU	MSU	Res Unavl Fail	MGW IWF Call at MSU	F	C	The resource unavailable failures for MGW IWF calls per MSU (REUNAMU) register counts the number of instances where an ErrorDescriptor is returned with the error code of InsufficientResources from the MGW in response to the request for IWF resources on a per-MSU basis.	S
WUODRAMU	MSU	WPS UMTS Call Att	Drect Retry HO GSM	F	C	The WUODRAMU is pegged every time an originating WPS UMTS call attempts a directed retry handover to the GSM network. This OM register is pegged in the MSCS on receipt of Relocation Required message (cause=Directed Retry) from the RNC.	S
WUODRSMU	MSU	WPS UMTS Call Succ	Drect Retry HO GSM	F	C	This register is pegged every time whenever an originating WPS UMTS call performs a successful directed retry handover to the GSM network.	S
NUTDRAMU	MSU	NS/EP UMTS Call Att	Drect Retry HO GSM	F	C	The NUTDRAMU is pegged when a terminating NS/EP UMTS call attempts a directed retry handover to the GSM network. NUTDRAMU is pegged in the MSCS on the receipt of Relocation Required message (cause=Directed Retry) from the RNC.	S
NUTDRSMU	MSU	NS/EP UMTS Call Succ	Drect Retry HO GSM	F	C	The NUTDRSMU is pegged every time whenever a terminating WPS UMTS call performs a successful directed retry handover to the GSM network.	S
BLATTMPT	MSC	MSRN Att	Blist GMSC	F	C	The MSRN attempts from Blacklisted GMSC (BLATTMPT) register shows the number of MSRN requests made from the GMSC blacklisted using the BLKLIST tool.	S
AUDREL	MSC	MSRN	Rel by Audit	F	C	The MSRN released by audit (AUDREL) register shows the number of MSRNs cleared by MSRN audit. This register is pegged every time an hung MSRN is moved from the	S

						assigned queue back to the free queue by audit.	
BLAUDREL	MSC	MSRN alloc blist Rel	Rel by Audit	F	C	The MSRN allocated for blacklisted GMSC released by audit (BLAUDREL) register shows the number of MSRNs allocated to the blacklisted GMSC which were cleared by audit. This register is pegged every time a hung MSRN cleared by audit belongs to the blacklisted GMSC.	S
NORMAL	MSC	MSRN Rel	Succ	F	C	The number of successful terminations (NORMAL) register shows the number of MSRNs that were released normally. This register is pegged every time an MSRN is successfully terminated on and is released to the free queue.	S
BLNORMAL	MSC	MSRN Rel Succ	Blist GMSC	F	C	The number of successful terminations from the blacklisted GMSC (BLNORMAL) register shows the number of MSRNs released normally that belong to the blacklisted GMSC. This register is pegged every time an MSRN allocated to the blacklisted GMSC is successfully terminated on and is released to the free queue.	S
BLREJECT	MSC	PRN reject	Blist GMSC	F	C	The number of PRNs rejected from blacklisted GMSC (BLREJECT) register shows the number of PRN requests coming from the blacklisted GMSC which are rejected. This register is pegged every time a PRN request coming from the blacklisted GMSC is rejected.	S
REUSED	MSC	MSRN	Reused	F	C	The number of MSRNs re-used (REUSED) register shows the number of MSRNs which have been re-used. This register is pegged every time call processing allocates an MSRN from the assigned queue.	S
BLOCKED	MSC	PRN Req Reject	MSRN Exhaust	F	C	The number of MSRNs failed due to exhaustion (BLOCKED) register shows the number of PRN requests that have been rejected due to MSRN exhaustion. This register is pegged every time the a PRN request is rejected because no MSRNs are available.	S
WUODRATT	MSC	WPS UMTS Call Att	Drect Retry HO GSM	F	C	The WUODRATT is pegged every time an originating WPS UMTS call attempts a directed retry handover to the GSM network. This OM register is pegged in the MSCS upon receipt of the Relocation Required message	S

						(cause=Directed Retry) from the RNC.	
WUODRSUC	MSC	WPS UMTS Call Succ	Drect Retry HO GSM	F	C	This register is pegged when an originating WPS UMTS call performs a successful directed retry handover to the GSM network.	S
NUTDRATT	MSC	NS/EP UMTS Call Att	Drect Retry HO GSM	F	C	The NUTDRATT is pegged when a terminating NS/EP UMTS call attempts a directed retry handover to the GSM network. NUTDRATT is pegged in the MSCS on the receipt of Relocation Required message (cause=Directed Retry) from the RNC.	S
NUTDRSUC	MSC	NS/EP UMTS Call Succ	Drect Retry HO GSM	F	C	This register is pegged when a terminating WPS UMTS call performs a successful directed retry handover to the GSM network.	S
CMSRMO	MSC	CM Servc Req	MO Call	F	C	The CM Service Request for MS originated calls (CMSRMO) register counts the number of CM Service Requests for mobile originated calls. It is pegged as soon as a CM Service Request for mobile originated calls is received on the MSCS.	S
CMSRSMMO	MSC	CM Servc Req	MO Msg	F	C	The CM Service Request for Short Msg for MS origination Message (CMSRSMMO) register counts the number of CM Service Request for Short Message for a mobile origination. It is pegged as soon as CM Service Request for Short Message is received on MSCS.	S
LUREQNRM	MSC	Normal LOC	Update Req	F	C	The Normal Location Update Requests (LUREQNRM) register counts the number of Normal Location Updates Requests received by the MSCS. It is pegged as soon as Normal Location Update request is received by the MSCS.	S
LUREQPER	MSC	Periodic LOC	Update Req	F	C	The Periodic Location Update Requests (LUREQPER) register counts the number of Periodic Location Updates Requests received by the MSCS. It is pegged as soon as the Periodic Location Update request is received by the MSCS.	S
LUREQATT	MSC	IMSI Attach LOC	Update Req	F	C	The IMSI Attached Location Update Requests (LUREQATT) register counts the number of IMSI Attach Location Updates Requests received by the MSCS. It is pegged as soon as IMSI Attach Location Update request is received by MSCS.	S
ORCFNRY	MSC	Optimal Routing	Call Fwd No Reply	F	C	The OR due to Call Forward No Reply (ORCFNRY) register	S

						counts the number of Optimal Routing (OR) due to Call Forward No Reply (CFNRY).It is pegged at VMSC only before sending RCH to GMSC for Call Forward No Reply (CFNRY).	
ORCFNRC	MSC	Optimal Routing	Call Fwd No Reach	F	C	The OR due to Call Forward Not Reachable (ORCFNRC) register counts the number of Optimal Routing (OR) due to Call Forward Not Reachable (CFNRC).It is pegged at VMSC only before sending RCH to GMSC for Call Forward Not Reachable (CFNRC).	S
TRKNPI	MSC	LO Call	Attempt	F	C	The Trunk Originated Call Attempt (TRKNPI) register counts the number of Land Originated (LO) Calls Attempts.	S
ABNRMREL	MSC	Abnormal Rel	Actv Mobile Call	F	C	The Abnormal Releases for Active Mobile Calls (ABNRMREL) register counts the number of Abnormal Releases for Active Mobile Calls. It is pegged if call is released from mobile side and cause of release is other than NORMAL.	S
NORMREL	MSC	Normal Rel	Actv Mobile Call	F	C	The Normal Releases for Active Mobile Calls (NORMREL) register counts the number of CM Service Requests for mobile originated calls. It is pegged when a call is released with a normal cause.	S
CFNRYIMO	MSC	MO Call Fwd	No Reply invoke	F	C	The CM Service Request for MS originated calls (CFNRYIMO) register counts the number of Mobile Originated Call Forward No Reply (CFNRY) Invokes.	S
CFNRYILO	MSC	LO Call Fwd	No Reply invoke	F	C	The Trunk Originated Call Forward No Reply (CFNRY) Invoke (CFNRYILO) register counts the number of Land Originated Call Forward No Reply (CFNRY) Invokes.	S
RCHSUCMO	MSC	MO OR Resume	Call Handling Succ	F	C	The Mobile Originated OR Resume Call Handling Success (RCHSUCMO) register counts the number of successful Optimal Routing (OR) Resume Call Handling (RCH) for mobile origination is pegged before sending RCH_ACK to VMSC.	S
RCHSUCLO	MSC	TO OR Resume	Call Handling Succ	F	C	The Trunk Originated or Resume Call Handling Success (RCHSUCLO) register counts the number of successful Optimal Routing (OR) Resume Call Handling (RCH) for trunk origination. It is pegged before sending RCH_ACK to the VMSC.	S
CFBUDIMO	MSC	MO UDUB	Call Fwd invoke	F	C	The Mobile Originated User Defined User Busy (UDUB) Call Forward Invoke (CFBUDIMO)	S

						register counts the number of User defined User Busy (UDUB) Call Forward Invokes for Mobile Origination. It is pegged when redirection cause is UDUB for a call forward scenario.	
CFBUDILO	MSC	TO UDUB	Call Fwd invoke	F	C	The Trunk Originated User Defined User Busy (UDUB) Call Forward Invoke (CFBUDILO) register counts the number of User defined User Busy (UDUB) Call Forward Invokes for Trunk Origination. It is pegged when redirection cause is UDUB for a call forward scenario.	S
ORCFNDUB	MSC	OR NDUB	Call Fwd Busy	F	C	The OR due to Network Determined User Busy (NDUB) Call Forward Busy (ORCFNDUB) register counts the number of Optimal Routing (OR) due to Network Determined User Busy (UDUB) Call Forward Busy (CFB). It is pegged at VMSC only before sending RCH to GMSC for Call Forward Busy (CFB).	S
ORCFUDUB	MSC	OR UDUB	Seconds	F	C	The OR due to User Determined User Busy (UDUB) Call Forward Busy (ORCFUDUB) register counts the number of Optimal Routing (OR) due to User Determined User Busy (UDUB) Call Forward Busy (CFB). It is pegged at VMSC only before sending RCH to GMSC for Call Forward Busy (CFB).	S
MOETCAT	MSC	MO ETC	Attempt	F	C	The MS Originated Establish-Temporary Connection (ETC) Attempt (MOETCAT) register counts the number of Establish Temporary Connection (ETC) Attempt for mobile originated calls.It is pegged when MSC receives ETC message from SCP.	S
MOCTRAT	MSC	MO CTR	Attempt	F	C	The MS Originated Connect-to-Resource(CTR) Attempt (MOCTRAT) register counts the number of Connect To Resource (CTR) Attempt for mobile originated calls.It is pegged when MSCS receives CTR message from SCP.	S
MOCONAT	MSC	MO Connect	Attempt	F	C	MS Originated Connect Attempt. (MOCONAT) register counts the number of Connect Attempt for mobile originated calls.It is pegged when the MSCS receives a CONNECT message from SCP.	S
MORGBAT	MSC	MO Ringback	Attempt	F	C	The Mobile Originated Ringback Attempt (MORGBAT) register counts the number of Ringback Attempts for mobile originated calls. The register is pegged	S

						when MSCS receives a CONNECT message from SCP with a ringback service request.	
TOETCAT	MSC	TO ETC	Attempt	F	C	The Trunk Originated ETC Attempt (TOETCAT) register counts the number of Establish Temporary Connection (ETC) Attempt for Trunk originated calls. It is pegged when the MSCS receives an ETC message from SCP.	S
TOCTRAT	MSC	TO CTR	Attempt	F	C	The Trunk Originated Connect-to-Resource Attempt (TOCTRAT) register counts the number of Connect To Resource (CTR) Attempts for trunk originated calls. It is pegged when MSCS receives a CTR message from SCP.	S
TOCONAT	MSC	TO Connect	Attempt	F	C	The Trunk Originated Connect Attempt .(TOCONAT) register counts the number of Connect Attempt for trunk originated calls. It is pegged when MSC receives CONNECT message from SCP.	S
TORGBAT	MSC	TO Ringback	Attempt	F	C	The Trunk Originated Ringback Attempt (TORGBAT) register counts the number of Ringback Service Attempts for trunk originated calls. It is pegged when MSCS receives a connect from an SCP with ringback service request.	S

Outstanding Issues :-

- The following Managed Objects of MSCS NSS20 are not supported in Prospect due to either missing sample data and/or vendor docs are not clear on its instance formation: IMEIDBOM, TRFOCT and CODECTI
- The following Managed Objects of MSCS NSS20 are missing in the sample data received for MSCS NSS20, however are supported in Prospect with assumption the instance id (i.e. <moid> tag) will follow the similar format of other OMs that are supported in given Prospect reporting entity: SIPCONG, SIPOFCWD, MSRNSTAT, GSMNPI2 and BCNIWFMU.

4 Known Problems

Please refer to the release notes for NortelGGU RP14 (4.0.14.0.0) for known issues

5 Upgrade Instructions

5.1 Prerequisites

This release requires a Prospect system running NortelGGU RP14 (4.0.14.0.0)

5.1.1 Network Timeouts

If your system has a security policy in place such that a session is disconnected after a lengthy period of apparent inactivity, you should disable it during this upgrade. The upgrade can take a few hours to run and requires no user input during the majority of the upgrade. This can make the upgrade session appear idle. If timeouts are not disabled, the upgrade terminal could be disconnected during the upgrade.

5.1.2 Disk Space and Table Space Requirements

Check the disk space under /u01 for sufficient space.The installation of the patch requires additional 17 MB disk space under `/u01` file system.

The install script also requires that at least 10% of total tablespace size is available for each tablespace. Please contact customer support if there is less than 10% of total tablespace available for any of the tablespaces.

5.1.3 XDK

The Oracle Database must have XDK installed. Log into the database using SQL*Plus:

```
$ sqlplus $DB_CONNECT
```

Please use the following sql statement to check if the XDK is installed accordingly. Oracle XDK for Java should be there in the result. The version must be 9.2.0.x.

```
SQL>  SELECT comp_id, comp_name, version FROM dba_registry;

COMP_ID     COMP_NAME                      VERSION
-------------------------------------------------------------
“
“
XML         Oracle XDK for Java            9.2.0.10.0
“
```

5.1.4 Perl Version

Make sure that /usr/bin/env perl is version 5.6.1. Type the following command:

```
$ /usr/bin/env perl -v


This is perl, v5.6.1 ...
```

If either version is wrong, especially if it is earlier than required, some scripts might not run, or might produce incorrect results.

5.1.5 Java Version

Make sure that the java is version 1.4.2 and above. Type the following command to check the java version.

```
$ java -version
```

```
java version "1.4.2_05"
Java(TM) 2 Runtime Environment, Standard Edition (build
1.4.2_05-b04)
Java HotSpot(TM) Client VM (build 1.4.2_05-b04, mixed mode)
```

If either version is wrong, especially if it is earlier than required, some scripts might not run, or might produce incorrect results.

5.1.6 Checking Environment Variables

Execute the following command to verify that the environment variables LOG and OK are NOT set to anything:

```
$ echo $LOG $OK
$                <- default setting should be empty
```

If the above environment variables are set, please unset the environment variables as below:

```
$ unset LOG
$ unset OK
$ echo $LOG $OK

$              <- it should show null value
```

5.1.7 Baseline Requirements

The base environment that this release will be applied against:

- Prospect® 8.0 for Nortel GSM/GPRS/UMTS 4.0.14.0.0.2 (either a fresh install or an upgrade from an earlier release)

You can check this by running the following command as the Prospect UNIX user:

```
$ show_installed
```

The output will look something like this(Base is 4.0.14.0.0.2 fresh install):-

```
COMPONENT                                 INSTALL_TY INSTALL_DATE
----------------------------------------- ---------- ------------------
CORE Prospect rev 8.0.4.1 b5              INSTALL    07-MAR-06 17:57:53
VENDOR NorGPRS_Core rev 4.0.14.0.0 b2     INSTALL    07-MAR-06 19:16:36
VENDOR NorGPRS_Radio rev 4.0.14.0.0 b2    INSTALL    07-MAR-06 19:23:52
VENDOR NorGSM rev 4.0.14.0.0 b2           INSTALL    07-MAR-06 18:31:09
VENDOR NorHLR_Univity rev 4.0.14.0.0 b2   INSTALL    07-MAR-06 20:06:02
VENDOR NorUMTS_RAN rev 4.0.14.0.0 b2      INSTALL    07-MAR-06 19:44:44
```

The versions (rev) of CORE Prospect and VENDOR module must be greater than or equal to those shown. The build number (b1) and install type (INSTALL or UPGRADE) for each component is unimportant. The install dates will be different from those shown.

Important! *It is critical that you apply this patch to an environment at the correct patch level. Please verify the environment carefully. For more information, please contact customer support.*

5.2 Installation Privileges Required

The following privileges are required for an upgrade.

Privilege	***Required***
UNIX flexpm user in DBA group	Yes
Root privilege required	No
Oracle sys user password set to default (change_on_install)	Yes

5.3 Pre-Installation Instructions

5.3.1 System Backup

This patch cannot be uninstalled. This upgrade involves updates to the database and the metadata; therefore recovery from backup is the only way to reverse the changes made by this upgrade. You must perform a full system backup before installing this upgrade. If needed, please refer to the "Backing up the Database" section of the *Prospect Administration Guid*e. Please contact customer support if you require further support.

5.3.2 Note schedule_maint Settings

If the server is down for an extended period of time the script `schedule_maint` could display some jobs as not scheduled. Thus the jobs will not run and the system will fail.

Before the upgrade, run `schedule_maint` to get a list of the current schedule settings. Make a note of the next run time of each job.

5.3.3 Note Partition Maintenance Settings

During the upgrade a number of new tables are added to the Prospect system. Occasionally this can cause the script `past_part_maint.sh` to display data retention settings as "Unlimited."

Before the upgrade, run `past_part_maint.sh` to get a list of the current data retention settings.

5.3.4 Oracle Sys Account Access

Prospect 8.0 requires that all logins using the `sys` account must be qualified as `sysdba`. The following Oracle changes may be required.

1. Telnet to Prospect server from a remote system to verify if the change is needed. After connect to Prospect server, try to log in using `sqlplus`:

   ```
   $ sqlplus /nolog
   SQL> connect sys/change_on_install@flexpm as sysdba
   ```

   If you can log in, you can skip the rest of this procedure.

   If you get an error concerning privileges, then you need to continue with the following steps.

2. Set the `remote_login_passwordfile` parameter in the `init<sid>.ora` file. On most Prospect systems the sid is `flexpm`. Log in as the oracle user, and then enter the following command.

   ```
   $ cd $ORACLE_BASE/admin/flexpm/pfile
   ```

3. Edit the `init<sid>.ora` file (for example, `initflexpm.ora`) and add the following line.

```
remote_login_passwordfile=EXCLUSIVE
```

4. Create the Oracle password file to allow remote `sys` access. While still logged in as the oracle user verify that `$ORACLE_HOME` and `$ORACLE_SID` are correct, then enter the following command.

```
$ orapwd file=${ORACLE_HOME}/dbs/orapw${ORACLE_SID} \
password=change_on_install entries=10
```

5. Bounce the database so that the parameter and password file take effect. If you get an error concerning the password file, verify that it is in the `dbs` directory and that the filename is `orapwflexpm`.

6. To verify that the changes have taken effect, repeat step 1.

5.4 Installation Instructions

1. If this Prospect system is associated with a Prospect Web system, it is advisable to use the Prospect Web Administration Tool to disable the datasource associated with this Prospect system. See the Prospect Web Administration Guide for more information.

2. Log in as user flexpm

3. Stop the middleware before installing the patch.

```
$ ps-mgr stop all
$ ps-mgr halt
```

4. Download and copy the TAR package to be installed on to the appropriate Prospect Server into a staging directory, for example,

```
$ mkdir -p /var/tmp/4.0.14.0-TIV-PROSPECT-NORGGU-IF0010
```

5. cd to the staging directory

```
$ cd /var/tmp/4.0.14.0-TIV-PROSPECT-NORGGU-IF0010
```

6. Untar the TAR package using the following command:

```
$ tar -xvf 4.0.14.0-TIV-PROSPECT-NORGGU-IF0010.tar
```

7. Check the environment setting for WM_PRODUCT. The WM_PRODUCT variable should be pointing to PROSPECT.

```
$ env|grep WM_PRODUCT
WM_PRODUCT=PROSPECT
```

If the value is different,add the below statement to the .profile

```
export  WM_PRODUCT
WM_PRODUCT="${WM_PRODUCT:=${wm_product}}";
```

Logout from the terminal and login as flexpm user again.Grep the `WM_PRODUCT` variable again and it should be pointing to `PROSPECT`.

8. Run the installation tool preview option by typing the following command, examine the log for any abnormal message. Please contact customer support if you need any help.

```
$ ./wminstall -b $FLEXPM_BASE -i ProspectBase -portbase
$PORT_GROUP -d $DB_CONNECT -core_spec core.spec.9i -v -preview
```

9. The output of the command line should be same as the following. You should check the line that have **UPGRADE** word:

```
+-------------------------------------------------------------
|    Vendor Tarball   :
|          Module - NorGPRS_Core, version - 4.0.14.0.10.4 : All prerequisites
met
|          FlexPM-NorGPRS_Core_4014010.tgz          : UPGRADE - VENDOR -
4.0.14.0.10.4
+-------------------------------------------------------------
|    Vendor Tarball   :
|          Module - NorGSM, version - 4.0.14.0.10.4 : All prerequisites met
|          FlexPM-NorGSM_4014010.tgz                : UPGRADE - VENDOR -
4.0.14.0.10.4
+-------------------------------------------------------------
```

   If the output from the preview contains no errors, install the application by running the same command again, but without the -preview option.

```
$ ./wminstall -b $FLEXPM_BASE -i ProspectBase -portbase
$PORT_GROUP -d $DB_CONNECT -core_spec core.spec.9i -v
```

10. A license agreement is displayed. Use the scroll bar to read the complete text if it does not display in the window. Enter `yes` (case sensitive) to continue with the installation. The installation aborts if you do not enter `yes`.

    Note:

    The installation of the upgrade might take a while to complete, the log file (with filename like `<YYYY>__<MM>__<DD>__<HH>__<MM>__<SS>`) under /var/tmp can be viewed from another console during the installation for the installation progress. The date changes as each module installs.

    After wminstall is completed, examine the detail.log under the directory `$FLEXPM_HOME/audit/<YYYY>__<MM>__<DD>__<HH>__<MM>__<SS>__<running_number>` for any error messages.

5.5 Post-Installation Instructions

5.5.1 Re-source the Profile

After the install finishes, log out and log back in as `flexpm`, if you have not done so already.

5.5.2 Check for invalid objects

After an upgrade finishes, it is useful to check for any invalid objects in the database. Log into the database using SQL*Plus:

```
$ sqlplus $DB_CONNECT
SQL> select object_type, object_name from user_objects where
status='INVALID' and object_type<>'VIEW';
```

This should produce the output:

```
no rows selected
```

If the above SELECT statement outputs some rows, please recompile the schema. Use the correct value for *schema_name* if it differs from below:

```
SQL> execute dbms_utility.compile_schema('schema_name',FALSE);
```

If your schema_name is FLEXPM, you can use the command as below:-

```
SQL> execute dbms_utility.compile_schema('FLEXPM',FALSE);
```

5.5.3 Installed Version Verification

It is helpful to run show_installed, to confirm that everything is installed correctly.

The following registered entries will be updated and shown as:

```
COMPONENT                                INSTALL_TY INSTALL_DATE
---------------------------------------- ---------- -----------------
"
"
VENDOR NorGPRS_Core rev 4.0.14.0.10 b4   UPGRADE    08-JUN-18 14:29:57
VENDOR NorGSM rev 4.0.14.0.10 b4         UPGRADE    08-JUN-18 14:39:58
```

The VENDOR modules for NorGPRS_Core and NorGSM should be at 4.0.14.0.10 b4 respectively.

The version numbers (rev) should be the same as those shown. The install type (INSTALL, PATCH or UPGRADE) is not important. The install dates and times will be different from those shown.

5.5.4 Configure Time Zone Region

For further information on Time Zone Regions please refer to the Prospect Administration Guide.

This can be configured as follows:

1. Review your current Time Zone Region. If your time zone information is correct, skip to 5.5.5.

   ```
   $ set_tzr.sh -t
   Connected.
   Greenwich Mean Time
   ```

2. Review the list of available Time Zone Regions:

   ```
   $ timezoneregion.sh -t
   Connected.
   America/Anchorage    -540 [1] First Sunday on or after Mar 8 at
   02:00 ... First Sunday in Nov at 02:00, 60 minutes
   America/Buenos Aires -180
   America/Caracas      -240
   America/Chicago      -360 [1] First Sunday on or after Mar 8 at
   02:00 ... First Sunday in Nov at 02:00, 60 minutes
   America/Denver       -420 [1] First Sunday on or after Mar 8 at
   02:00 ... First Sunday in Nov at 02:00, 60 minutes
   America/Honolulu     -600
   America/Indianapolis -300
   ```

```
America/Lima Peru    -300
America/Mexico City  -480 [1] First Sunday on or after Mar 8 at
02:00 ... First Sunday in Nov at 02:00, 60 minutes
America/New York     -300 [1] First Sunday on or after Mar 8 at
02:00 ... First Sunday in Nov at 02:00, 60 minutes
America/Noronha      -120
...
```

3. Set your Time Zone Region using one of the existing options:

```
$ set_tzr.sh -n "America/Seattle"
Connected.
OK: America/Seattle
```

5.5.5 Start the Middleware

Once the installation has been completed, you should start the middleware so that data can be loaded and the system can be used.

1. Log in as user `flexpm`, if you are not already logged in.
2. Start the middleware.

```
$ ps-mgr init
```

5.5.6 Check schedule settings

After the middleware has been restarted, run `schedule_maint` to check the next run time of the scheduled jobs. If any of the jobs display the next run time as "job not scheduled," then run `schedule_maint` and update the values to an appropriate future time based on the settings you recorded in Section 5.3.2.

For example, to set the `pm_daily job` to run at 1:00 am on 1 May 2006.

```
schedule_maint pm_daily 20060501 0100
```

***Note**: Remember to enter a time in the future. If unsure of appropriate times then please contact customer support*

5.5.7 Check partition settings

Run `past_part_maint.sh` to get a list of the current data retention settings. If any of the number displays is different that settings you recorded in Section 5.3.3, then run past_part_maint.sh to update the values.

For example, to have 30 days data retention for traffic table types.

```
past_part_maint.sh traffic 30
```

5.5.8 Enable Datasource in Prospect Web

If this Prospect system is associated with a Prospect Web system and you disabled the datasource in section 5.4 step 1, then use the Prospect Web Administration Tool to enable the datasource with this Prospect system.

5.6 Uninstallation Procedure

This patch cannot be uninstalled. It involves updates to the database or the metadata, therefore recovery from backup is the only way to reverse the changes made by this release/patch. You must perform a full system backup before installing this patch. If needed, please refer to the "Backing up the Database" section of the *Prospect Administration Guide*. Please contact customer support if you require further support.

6 Useful Hints

6.1 Prospect Client/Server Compatibility

The Prospect client is backward compatible with older Prospect servers. If you try to use an older client with newer server, the results are undefined.

6.2 Prospect Single Client

This release features a single, uniform client for all vendor versions.

Users of the Prospect system have expressed the need to connect to all of their Prospect servers with a single client. Several customers have installed multiple Prospect servers, which cover several different vendor technologies. Two key benefits to the single client are:

- Reduced number of clients that your IT department need to install
- Reduced confusion among users over which Prospect client should be used with which Prospect server.

The single Prospect client supports Prospect servers co-released with the client and a defined number of server versions released before the client. Prospect servers released after the client are not supported (that is, the Prospect client is not forward-compatible). Contact your Vallent customer support representative to identify the server versions that your client supports.

This feature removes support for two or more Prospect clients installed on the same PC. Side-by-side installations were originally supported because the Prospect client was not backward compatible with older versions of the server. Full support for backward compatibility removes the need for side-by-side support.

6.3 Ports Used by the Prospect Client

The Prospect client uses two ports to connect to the Prospect server:

- **FX port** — Most queries from the Prospect client, status monitor, Auto Downloader, and DSMonitor (DSMonitor is a process that registers for updates from the DataServer) use this port. By default the FX port number is the base port plus four (4). For example, if the base port is 6440, the FX port would be 6444.
- **Event port** — DSMonitor and Prospect Alarm use this port. By default the Event port number is the base port plus three (3). For example, if the base port is 6440, the Event port would be 6443.

If you have closed the ports required by the Prospect client for security reasons, or if you are using these ports for other services, you need to either re-open or re-assign them to the Prospect FX and Event ports. Otherwise, the ability for the Prospect client to be able to communicate with the Prospect server is compromised.

To determine which port numbers are required for your system, log on as `flexpm` and run the following commands:

```
$ echo $FX_DS_PORT
$ echo $EVENT_PORT
```

6.4 add_filetype_timeout.sh

The add_filetype_timeout.sh script is not recommended to be used for checking the data file if it does not arrive as expected. If used, user will have to wait for a very long period of time as the add_filetype_timeout.sh script increases the time to clean up the schedule table when the middleware is started up.

7 Customer Support

Contact customer support if a problem is encountered during the installation of this patch or release.

8 Manifest

Please refer to manifest.txt in the staging directory.

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