UAS Performance Management

Performance measurements (PMs) are statistics collected about the system through audio server component MIB-based counters and gauges. Counters are set to zero at system initialization and are incremented over time. When the maximum value allowed for the counter is reached, 4294967295, the counter returns to zero. Gauges are similar to counters, but can also be decremented. All counters and gauges are MIB-based objects, whose values are queried through the CS 2000 Management Tools.

The UAS performance measurements are defined in the NORTEL-UAS-MIB file, under the syntax attributes "Counter32" and "Gauge32." The following table contains a description of each of the UAS performance measurement MIB objects applicable to the current release and to the previous three releases.

Beginning in Succession release SN05, the Performance Monitoring for NES feature introduces an SNMP-based PM poller that collects performance attributes from several Succession-based network elements, including the UAS. In the following table the performance measurements from the NORTEL-UAS-MIB file that are collected by the PM poller are indicated by the table entry, "In PM Poller CSV file: yes."

UAS Performance Measurements (Sheet 1 of 37)

MIB Objects	Attributes
norUasCurrentNumberOfPlays	Object type: Scalar
	Syntax: Gauge32
	OID: norUasIVRServiceObjects(2).1
	EM Screen Name: IVR Service
	EM PM Name: **Current Number of Plays**
	Products: UAS IP, UAS ATM
	Capabilities: IVR
	History: added in UAS03
	Description: The number of play operations that are currently in progress. For the total number of play operations, see norUasAudioSegmentPlayed.
	In PM Poller CSV file: no
norUasCurrentNumberOfPlayCollects	Object type: Scalar
	Syntax: Gauge32
	OID: norUasIVRServiceObjects(2).2
	EM Screen Name: IVR Service
	EM PM Name: **Current Number of Play Collects**
	Products: UAS IP, UAS ATM
	Capabilities: IVR
	History: added in UAS03
	Description: The number of play collect operations that are currently in progress.
	In PM Poller CSV file: no

UAS Performance Measurements (Sheet 2 of 37)

MIB Objects	Attributes
norUasNumberOfPlayRecords	Object type: Scalar
	Syntax: Counter32
	OID: norUasIVRServiceObjects(2).3
	EM Screen Name: IVR Service
	EM PM Name: **Number of Play Records**
	Products: UAS IP, UAS ATM
	Capabilities: IVR
	History: added in UAS05
	Description: The total number of play record operations.
	In PM Poller CSV file: yes
norUasCurrentNumberOfPlayRecords	Object type: Scalar
	Syntax: Gauge32
	OID: norUasIVRServiceObjects(2).4
	EM Screen Name: IVR Service
	EM PM Name: **Current Number of Play Records**
	Products: UAS IP, UAS ATM
	Capabilities: IVR
	History: added in UAS05
	Description: The number of play record operations that are currently in progress.
	In PM Poller CSV file: no

UAS Performance Measurements (Sheet 3 of 37)

MIB Objects	Attributes
norUasNumberOfPlayRecordErrors	Object type: Scalar
	Syntax: Counter32
	OID: norUasIVRServiceObjects(2).5
	EM Screen Name: IVR Service
	EM PM Name: **Number of Play Record Errors**
	Products: UAS IP, UAS ATM
	Capabilities: IVR
	History: added in UAS05
	Description: The total number of failed play record operations.
	In PM Poller CSV file: yes

UAS Performance Measurements (Sheet 4 of 37)

MIB Objects	Attributes
norUasNumDupsForCompletedTransactions	Object type: Scalar
	Syntax: Counter32
	OID: norUasCallAgentConnectionObjects(4).13
	EM Screen Name: Call Engine
	EM PM Name: **Duplicates for Completed Transactions**
	Products: UAS IP, UAS ATM, PRI
	Capabilities: All
	History: added in UAS04
	Description: The number of times a duplicate transaction request was received after the initial transaction had already been completed. In this case, the gateway resends the response for this transaction.
	In PM Poller CSV file: yes

UAS Performance Measurements (Sheet 5 of 37)

MIB Objects	Attributes
norUasNumDupsForOutstanding Transactions	Object type: Scalar
	Syntax: Counter32
	OID: norUasCallAgentConnectionObjects(4).14
	EM Screen Name: Call Engine
	EM PM Name: **Duplicates for Outstanding Transactions**
	Products: UAS IP, UAS ATM, PRI
	Capabilities: All
	History: added in UAS04
	Description: The number of times a duplicate transaction request was received while the initial transaction was outstanding, that is, still in progress. In this case, the gateway ignores the duplicate request.
	In PM Poller CSV file: yes

UAS Performance Measurements (Sheet 6 of 37)

MIB Objects	Attributes
norUasUdpSocketSuccesses	Object type: Scalar
	Syntax: Counter32
	OID: norUasCallAgentConnectionObjects(4).15
	EM Screen Name: Call Engine
	EM PM Name: **Successful Call Control Messages**
	Products: UAS IP, UAS ATM, PRI
	Capabilities: All
	History: added in UAS07
	Description: Number of times there was a success in sending or receiving a call control (MGCP, H.248) message. Call control messages are sent and received using the system's socket library. This counter tracks successes in using the local send and receive socket service. It does not track successes in end-to-end message transfer between the gateway and the call agent. Errors are tracked with these counters: norUasUdpSendErrors and norUasUdpReceiveErrors.
	In PM Poller CSV file: no

UAS Performance Measurements (Sheet 7 of 37)

MIB Objects	Attributes
norUasProtocolSyntaxErrors	Object type: Scalar
	Syntax: Counter32
	OID: norUasCallEngineObjects(3).2
	EM Screen Name: Call Engine
	EM PM Name: **Incoming Message Syntax Errors**
	Products: UAS IP, UAS ATM, PRI
	Capabilities: All
	History: added in UAS02
	Description: Number of syntax errors detected in incoming call control (MGCP, H.248) messages.
	In PM Poller CSV file: yes
norUasProtocolMessageValidationErrors	Object type: Scalar
	Syntax: Counter32
	OID: norUasCallEngineObjects(3).3
	EM Screen Name: Call Engine
	EM PM Name: **Incoming Message Validation Errors**
	Products: UAS IP, UAS ATM, PRI
	Capabilities: All
	History: added in UAS02
	Description: Number of times an incoming call control (MGCP, H.248) message had valid syntax, but failed validation.
	In PM Poller CSV file: yes

UAS Performance Measurements (Sheet 8 of 37)

MIB Objects	Attributes
norUasUdpSendErrors	Object type: Scalar
	Syntax: Counter32
	OID: norUasCallEngineObjects(3).4
	EM Screen Name: Call Engine
	EM PM Name: **UDP Datagram Send Failures**
	Products: UAS IP, UAS ATM, PRI
	Capabilities: All
	History: added in UAS02
	Description: Number of times there was a failure in sending a call control (MGCP, H.248) message. The message is sent via a datagram using the system's socket library. Normally a failure on a socket send operation would be attributed to an internal system problem. Successes are tracked with this counter: norUasUdpSocketSuccesses.
	In PM Poller CSV file: yes

UAS Performance Measurements (Sheet 9 of 37)

MIB Objects	Attributes
norUasUdpReceiveErrors	Object type: Scalar
	Syntax: Counter32
	OID: norUasCallEngineObjects(3).5
	EM Screen Name: Call Engine
	EM PM Name: **UDP Datagram Receive Failures**
	Products: UAS IP, UAS ATM, PRI
	Capabilities: All
	History: added in UAS02
	Description: Number of times there was a failure in receiving a call control (MGCP, H.248) message. Call control messages are received using the system's socket library. A failure on the socket receive operation can be attributed to an internal system problem or with the call agent sending a message larger than what is supported by the gateway. Successes are tracked with this counter: norUasUdpSocketSuccesses.
	In PM Poller CSV file: yes

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MIB Objects	Attributes
norUasMgcpMessageRetransmissions	Object type: Scalar
	Syntax: Counter32
	OID: norUasCallEngineObjects(3).6
	EM Screen Name: Call Engine
	EM PM Name: MGCP Retransmissions (before UAS05), **Control Protocol Retransmissions** (UAS05 and after). "MGCP" in the MIB object name refers to a generic media gateway control protocol, which may be the MGCP or H.248 protocol.
	Products: UAS IP, UAS ATM, PRI
	Capabilities: All
	History: added in UAS02
	Description: Number of retransmissions of media gateway control protocol messages. Media gateway control protocol is used in here in a generic sense to include both MGCP and H.248.
	In PM Poller CSV file: yes

UAS Performance Measurements (Sheet 11 of 37)

MIB Objects	Attributes
norUasMgcpMessageRetransmissionFailures	Object type: Scalar
	Syntax: Counter32
	OID: norUasCallEngineObjects(3).7
	EM Screen Name: Call Engine
	EM PM Name: MGCP Retransmission Failures (before UAS05), **Control Protocol Retransmission Failures** (UAS05 and after). "MGCP" in the MIB object name refers to a generic media gateway control protocol, which may be the MGCP or H.248 protocol.
	Products: UAS IP, UAS ATM, PRI
	Capabilities: All
	History: added in UAS02
	Description: Number of times a retransmitted media gateway control protocol message was not acknowledged. Media gateway control protocol is used in here in a generic sense to include both MGCP and H.248.
	In PM Poller CSV file: yes

UAS Performance Measurements (Sheet 12 of 37)

MIB Objects	Attributes
norUasAudioSegmentPlayed	Object type: Scalar
	Syntax: Counter32
	OID: norUasCallEngineObjects(3).8
	EM Screen Name: Call Engine
	EM PM Name: **Successful Audio Segment Plays**
	Products: UAS IP, UAS ATM
	Capabilities: IVR
	History: added in UAS02
	Description: Number of audio segments played successfully. For the current number of play attempts, see norUasCurrentNumberOfPlays.
	In PM Poller CSV file: yes

UAS Performance Measurements (Sheet 13 of 37)

MIB Objects	Attributes
norUasAudioSegmentFailed	Object type: Scalar
	Syntax: Counter32
	OID: norUasCallEngineObjects(3).9
	EM Screen Name: Call Engine
	EM PM Name: **Failed Audio Segment Plays**
	Products: UAS IP, UAS ATM
	Capabilities: IVR
	History: added in UAS02
	Description: Number of audio segments which failed to be played. A single announcement can consist of one or more audio segments. Failures can occur for the following reasons: call agent sent a bad audio segment id; the audio segment is not provisioned; there was an internal program error. Examine the logs to determine the exact nature of the failure.
	In PM Poller CSV file: yes

UAS Performance Measurements (Sheet 14 of 37)

MIB Objects	Attributes
norUasAckfail	Object type: Scalar
	Syntax: Counter32
	OID: norUasCallEngineObjects(3).10
	EM Screen Name: Call Engine
	EM PM Name: **Negative Acknowledgements Received**
	Products: UAS IP, UAS ATM, PRI
	Capabilities: All
	History: added in UAS02
	Description: Number of negative acknowledgements (nacks) received. Nacks can be sent by the call agent in response to RSIP or NTFY messages.
	In PM Poller CSV file: yes
norUasTimeout	Object type: Scalar
	Syntax: Counter32
	OID: norUasCallEngineObjects(3).11
	EM Screen Name: Call Engine
	EM PM Name: **Call Engine Timeouts**
	Products: UAS IP, UAS ATM, PRI
	Capabilities: All
	History: added in UAS02
	Description: Number of times the call engine timed out waiting for an acknowledgement from the call agent.
	In PM Poller CSV file: yes

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MIB Objects	Attributes
norUasProterror	Object type: Scalar
	Syntax: Counter32
	OID: norUasCallEngineObjects(3).12
	EM Screen Name: Call Engine
	EM PM Name: **Protocol Errors**
	Products: UAS IP, UAS ATM, PRI
	Capabilities: All
	History: added in UAS02
	Description: Number of call control protocol errors detected. Typical reasons for these errors are: duplicate parameter; invalid range of parameter; mandatory parameter missing.
	In PM Poller CSV file: yes

UAS Performance Measurements (Sheet 16 of 37)

MIB Objects	Attributes
norUasRestart	Object type: Scalar
	Syntax: Counter32
	OID: norUasCallEngineObjects(3).13
	EM Screen Name: Call Engine
	EM PM Name: **Call Processing Restart**
	Products: UAS IP, UAS ATM, PRI
	Capabilities: All
	History: added in UAS02
	Description: Number of abnormal restarts of one of two critical threads in the call processing process. The two threads are the event state machine thread and the maintenance state machine thread. Examine the logs to determine which thread failed.
	In PM Poller CSV file: yes

UAS Performance Measurements (Sheet 17 of 37)

MIB Objects	Attributes
norUASComperror	Object type: Scalar
	Syntax: Counter32
	OID: norUasCallEngineObjects(3).14
	EM Screen Name: Call Engine
	EM PM Name: **Call Agent Message Validation Errors**
	Products: UAS IP, UAS ATM, PRI
	Capabilities: All
	History: added in UAS02
	Description: The number of times the call engine failed to build a response to a call agent message. Examine the logs to determine the exact nature of the failure.
	In PM Poller CSV file: yes

UAS Performance Measurements (Sheet 18 of 37)

MIB Objects	Attributes
norUasConndeleted	Object type: Scalar
	Syntax: Counter32
	OID: norUasCallEngineObjects(3).15
	EM Screen Name: Call Engine
	EM PM Name: **Bad Connection IDs Received**
	Products: UAS IP, UAS ATM, PRI
	Capabilities: All
	History: added in UAS02
	Description: Number of times that the call engine receives a bad connection id from the call agent. This is normally a result of the call agent sending a message for a connection that has already been deleted.
	In PM Poller CSV file: yes

UAS Performance Measurements (Sheet 19 of 37)

MIB Objects	Attributes
norUasCallControlMessageSend Failures	Object type: Scalar
	Syntax: Counter32
	OID: norUasCallEngineObjects(3).18
	EM Screen Name: Call Engine
	EM PM Name: **Control Message Resend Count Exceeds**
	Products: UAS IP, UAS ATM, PRI
	Capabilities: All
	History: added in UAS03
	Description: Number of times the call control message maximum retransmission count was exceeded. The UAS attempted several times to send a message to the call agent, but each time an ack was not received. A failure of this type results in a failed call and is usually an indication that subsequent calls will fail. This problem is typically a result of the call agent being down or a result of a network problem.
	In PM Poller CSV file: yes

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MIB Objects	Attributes
norUasEndpointsInUse	Object type: Scalar
	Syntax: Gauge32
	OID: norUasCallEngineObjects(3).19
	EM Screen Name: Call Engine
	EM PM Name: **Number of Endpoints in Use**
	Products: UAS IP, UAS ATM, PRI
	Capabilities: All
	History: added in UAS03
	Description: Number of endpoints that the call engine is currently using for all packet network-related functions (conferencing, plays, etc.).
	In PM Poller CSV file: yes
norUasRequestCount	Object type: Columnar
	Syntax: Counter32
	OID: norUasResourceManagerObjects(5).1.1.2
	EM Screen Name: Resource Manager
	EM PM Name: **Request Count** (column heading)
	Products: UAS IP, UAS ATM, PRI
	Capabilities: All
	History: added in UAS02
	Description: The number of requests for endpoints that have been made on this pool.
	In PM Poller CSV file: no

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MIB Objects	Attributes
norUasRequestsFailed	Object type: Columnar
	Syntax: Counter32
	OID: norUasResourceManagerObjects(5).1.1.3
	EM Screen Name: Resource Manager
	EM PM Name: **Failed** (column heading)
	Products: UAS IP, UAS ATM, PRI
	Capabilities: All
	History: added in UAS02
	Description: The number of resource requests for endpoints on this pool that failed.
	In PM Poller CSV file: yes
norUasRequestsGranted	Object type: Columnar
	Syntax: Counter32
	OID: norUasResourceManagerObjects(5).1.1.4
	EM Screen Name: Resource Manager
	EM PM Name: **Granted** (column heading)
	Products: UAS IP, UAS ATM, PRI
	Capabilities: All
	History: added in UAS02
	Description: The number of resource requests for endpoints on this pool that were granted.
	In PM Poller CSV file: no

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MIB Objects	Attributes
norUasConfTotal	Object type: Scalar
	Syntax: Counter32
	OID: norUasConfServiceObjects(9).2
	EM Screen Name: Conferencing Service
	EM PM Name: **Total Conferences**
	Products: UAS IP
	Capabilities: Conferencing
	History: added in UAS03
	Description: The total number of conferences processed since the last application restart.
	In PM Poller CSV file: yes
norUasConfAutoDeleteTerminations	Object type: Scalar
	Syntax: Counter32
	OID: norUasConfServiceObjects(9).3
	EM Screen Name: Conferencing Service
	EM PM Name: **Auto-delete Terminations**
	Products: UAS IP
	Capabilities: Conferencing
	History: added in UAS03
	Description: The number of conferences terminated via the auto-delete feature since the last application restart. An auto-delete conference is terminated when the last party leaves the conference.
	In PM Poller CSV file: no

UAS Performance Measurements (Sheet 23 of 37)

MIB Objects	Attributes
norUasConfGWCTerminations	Object type: Scalar
	Syntax: Counter32
	OID: norUasConfServiceObjects(9).4
	EM Screen Name: Conferencing Service
	EM PM Name: **Gateway Terminations**
	Products: UAS IP
	Capabilities: Conferencing
	History: added in UAS03
	Description: The number of conferences terminated because of a command from the gateway controller since the last application restart.
	In PM Poller CSV file: no
norUasConfLackOfResourceRejections	Object type: Scalar
	Syntax: Counter32
	OID: norUasConfServiceObjects(9).5
	EM Screen Name: Conferencing Service
	EM PM Name: **Lack of Resource Rejections**
	Products: UAS IP
	Capabilities: Conferencing
	History: added in UAS03
	Description: The number of times a conference request was rejected due to lack of resources since the last application restart.
	In PM Poller CSV file: yes

UAS Performance Measurements (Sheet 24 of 37)

MIB Objects	Attributes
norUasConfPlays	Object type: Scalar
	Syntax: Counter32
	OID: norUasConfServiceObjects(9).6
	EM Screen Name: Conferencing Service
	EM PM Name: **Total Plays**
	Products: UAS IP
	Capabilities: Conferencing
	History: added in UAS03
	Description: The total number of plays made into conferences since the last application restart.
	In PM Poller CSV file: yes
norUasConfCurrent	Object type: Scalar
	Syntax: Gauge32
	OID: norUasConfServiceObjects(9).7
	EM Screen Name: Conferencing Service
	EM PM Name: **Conferences in Progress**
	Products: UAS IP
	Capabilities: Conferencing
	History: added in UAS03
	Description: The number of conferences currently in progress.
	In PM Poller CSV file: no

UAS Performance Measurements (Sheet 25 of 37)

MIB Objects	Attributes
norUasConfPorts	Object type: Scalar
	Syntax: Gauge 32
	OID: norUasConfServiceObjects(9).8
	EM Screen Name: Conferencing Service
	EM PM Name: **Currently Reserved Ports**
	Products: UAS IP
	Capabilities: Conferencing
	History: added in UAS03
	Description: The number of conference ports currently reserved. This includes play ports, monitor ports and regular conferee ports. A play port is a conference port reserved specifically to stream audio into the conference. Audio can be streamed into a conference even if a play port is not reserved. In that case, the call processing engine will find a free conferencing resource to perform the play. A monitor port may be reserved by the call agent when setting up a conference. The monitor port can then be used by one or more listen-only conferees.
	In PM Poller CSV file: no

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MIB Objects	Attributes
norUasConfDuration	Object type: Columnar
	Syntax: Counter32
	OID: norUasConfServiceObjects(9).9.1.2
	EM Screen Name: Conferencing Service
	EM PM Name: **Duration** (column heading)
	Products: UAS IP
	Capabilities: Conferencing
	History: added in UAS03
	Description: The time elapsed, in seconds, since the conference was created.
	In PM Poller CSV file: no
norUasConfReservedPorts	Object type: Columnar
	Syntax: Gauge 32
	OID: norUasConfServiceObjects(9).9.1.3
	EM Screen Name: Conferencing Service
	EM PM Name: **Ports Rsvd** (column heading)
	Products: UAS IP
	Capabilities: Conferencing
	History: added in UAS03
	Description: The number of ports reserved for this conference. This number can be increased after the conference is set up. This includes play ports, monitor ports and regular conferee ports.
	In PM Poller CSV file: no

UAS Performance Measurements (Sheet 27 of 37)

MIB Objects	Attributes
norUasConfPortsInUse	Object type: Scalar
	Syntax: Gauge32
	OID: norUasConfServiceObjects(9).9.1.4
	EM Screen Name: Conferencing Service
	EM PM Name: **Ports Used** (column heading)
	Products: UAS IP
	Capabilities: Conferencing
	History: added in UAS03
	Description: The number of regular conferee ports reserved for this conference that are currently in use. This is the current number of conferees.
	In PM Poller CSV file: no
norUasConfMonitors	Object type: Scalar
	Syntax: Gauge32
	OID: norUasConfServiceObjects(9).9.1.8
	EM Screen Name: Conferencing Service
	EM PM Name: **Monitors** (column heading)
	Products: UAS IP
	Capabilities: Conferencing
	History: added in UAS03
	Description: The number of parties currently using the monitor port to monitor the conference.
	In PM Poller CSV file: no

UAS Performance Measurements (Sheet 28 of 37)

MIB Objects	Attributes
norUasAlarmNotificationsSent	Object type: Scalar
	Syntax: Counter32
	OID: norUasMainSubagentObjects(11).1
	EM Screen Name: Main Subagent
	EM PM Name: **Alarm Notifications Sent**
	Products: UAS IP, UAS ATM, PRI
	Capabilities: All
	History: added in UAS02
	Description: The number of alarm raise notifications sent.
	In PM Poller CSV file: no
norUasClearNotificationsSent	Object type: Scalar
	Syntax: Counter32
	OID: norUasMainSubagentObjects(11).2
	EM Screen Name: Main Subagent
	EM PM Name: **Clear Notifications Sent**
	Products: UAS IP, UAS ATM, PRI
	Capabilities: All
	History: added in UAS02
	Description: The number of alarm clear notifications sent.
	In PM Poller CSV file: no

UAS Performance Measurements (Sheet 29 of 37)

MIB Objects	Attributes
norUasLogNotificationsSent	Object type: Scalar
	Syntax: Counter32
	OID: norUasMainSubagentObjects(11).8
	EM Screen Name: Main Subagent
	EM PM Name: **Log Notifications Sent**
	Products: UAS IP, UAS ATM, PRI
	Capabilities:
	History: added in UAS05
	Description: The total number of norUasLogNotification traps that have been sent.
	In PM Poller CSV file: no
norUasBpStarts	Object type: Columnar
	Syntax: Counter32
	OID: norUasPm(1027).1.1.1.2
	EM Screen Name: CG6000
	EM PM Name: **RTP Sessions** (column heading)
	Products: UAS IP
	Capabilities: IVR, BCT
	History: added in UAS03
	Description: Number of RTP sessions that were initiated.
	In PM Poller CSV file: no

UAS Performance Measurements (Sheet 30 of 37)

MIB Objects	Attributes
norUasBpJitterUnderflows	Object type: Columnar
	Syntax: Counter32
	OID: norUasPm(1027).1.1.1.3
	EM Screen Name: CG6000
	EM PM Name: **Jitter Underflows** (column heading)
	Products: UAS IP
	Capabilities: IVR
	History: added in UAS03
	Description: Total number of jitter underflow events in all RTP sessions for this card.
	In PM Poller CSV file: no
norUasBpJitterOverflows	Object type: Columnar
	Syntax: Counter32
	OID: norUasPm(1027).1.1.1.4
	EM Screen Name: CG6000
	EM PM Name: **Jitter Overflows** (column heading)
	Products: UAS IP
	Capabilities: IVR
	History: added in UAS03
	Description: Total number of jitter overflow events in all RTP sessions for this card.
	In PM Poller CSV file: no

UAS Performance Measurements (Sheet 31 of 37)

MIB Objects	Attributes
norUasBpOutOfOrder	Object type: Columnar
	Syntax: Counter32
	OID: norUasPm(1027).1.1.1.5
	EM Screen Name: CG6000
	EM PM Name: **Out of Order** (column heading)
	Products: UAS IP
	Capabilities: IVR
	History: add in UAS03
	Description: Total number of out of order packet events in all RTP sessions for this card.
	In PM Poller CSV file: no
norUasBpInvalidPackets	Object type: Columnar
	Syntax: Counter32
	OID: norUasPm(1027).1.1.1.6
	EM Screen Name: CG6000
	EM PM Name: **Invalid Packets** (column heading)
	Products: UAS IP
	Capabilities: IVR
	History: added in UAS03
	Description: Total number of invalid packet events in all RTP sessions for this card.
	In PM Poller CSV file: no

UAS Performance Measurements (Sheet 32 of 37)

MIB Objects	Attributes
norUasBpReceiveErrorCount	Object type: Columnar
	Syntax: Counter32
	OID: norUasPm(1027).1.1.1.7
	EM Screen Name: CG6000
	EM PM Name: **Receive Errors** (column heading)
	Products: UAS IP
	Capabilities: IVR, BCT
	History: added in UAS03
	Description: Total number of receive errors in all RTP sessions for this card.
	In PM Poller CSV file: no
norUasBpTransmitErrorCount	Object type: Columnar
	Syntax: Counter32
	OID: norUasPm(1027).1.1.1.8
	EM Screen Name: CG6000
	EM PM Name: **Transmit Errors** (column heading)
	Products: UAS IP
	Capabilities: IVR, BCT
	History: added in UAS03
	Description: Total number of transmit errors in all RTP sessions for this card.
	In PM Poller CSV file: no

UAS Performance Measurements (Sheet 33 of 37)

MIB Objects	Attributes
norUasBpG711MuLawSessionsTotal / norUasBpG711MuLawSessionsCurrent	Object type: Scalar
	Syntax: Counter32/Gauge32
	OID: norUasPm(1027).1.2 / norUasPm(1027).1.3
	EM Screen Name: CG6000
	EM PM Name: **Total/Current G711 Mu-law sessions**
	Products: UAS IP
	Capabilities: IVR
	History: added in UAS03
	Description: Total/Current number of RTP sessions using G.711 Mu-Law audio coding/encoding.
	In PM Poller CSV file: no

UAS Performance Measurements (Sheet 34 of 37)

MIB Objects	Attributes
norUasBpG711ALawSessionsTotal / norUasBpG711ALawSessionsCurrent	Object type: Scalar
	Syntax: Counter32/Gauge32
	OID: norUasPm(1027).1.4 / norUasPm(1027).1.5
	EM Screen Name: CG6000
	EM PM Name: **Total/Current G711 A-law sessions**
	Products: UAS IP
	Capabilities: IVR
	History: added in UAS03
	Description: Total/Current number of RTP sessions using G.711 A-Law audio coding/encoding.
	In PM Poller CSV file: no
norUasBpG723SessionsTotal / norUasBpG723SessionsCurrent	Object type: Scalar
	Syntax: Counter32/Gauge32
	OID: norUasPm(1027).1.6 / norUasPm(1027).1.7
	EM Screen Name: CG6000
	EM PM Name: **Total/Current G723 sessions**
	Products: UAS IP
	Capabilities: IVR
	History: added in UAS03
	Description: Total/Current number of RTP sessions using G.723 audio coding/encoding.
	In PM Poller CSV file: no

UAS Performance Measurements (Sheet 35 of 37)

MIB Objects	Attributes
norUasPbG726SessionsTotal / norUasBpG726SessionsCurrent	Object type: Scalar
	Syntax: Counter32/Gauge32
	OID: norUasPm(1027).1.8 / norUasPm(1027).1.9
	EM Screen Name: CG6000
	EM PM Name: **Total/Current G726 sessions**
	Products: UAS IP
	Capabilities: IVR
	History: added in UAS03
	Description: Total/Current number of RTP sessions using G.726 audio coding/encoding.
	In PM Poller CSV file: no
norUasBpG729SessionsTotal / norUasBpG729SessionsCurrent	Object type: Scalar
	Syntax: Counter32/Gauge32
	OID: norUasPm(1027).1.10 / norUasPm(1027).1.11
	EM Screen Name: CG6000
	EM PM Name: **Total/Current G729 sessions**
	Products: UAS IP
	Capabilities: IVR
	History: added in UAS03
	Description: Total/Current number of RTP sessions using G.729 audio coding/encoding.
	In PM Poller CSV file: no

UAS Performance Measurements (Sheet 36 of 37)

MIB Objects	Attributes
norUasBpSimplexInSessionsTotal / **norUasBpSimplexInSessionsCurrent**	Object type: Scalar
	Syntax: Counter32/Gauge32
	OID: norUasPm(1027).1.12 / norUasPm(1027).1.13
	EM Screen Name: CG6000
	EM PM Name: **Total/Current Simplex In sessions**
	Products: UAS IP
	Capabilities: IVR
	History: added in UAS03
	Description: Total/Current number of simplex input RTP sessions.
	In PM Poller CSV file: no
norUasBpSimplexOutSessionsTotal / **norUasBpSimplexOutSessionsCurrent**	Object type: Scalar
	Syntax: Counter32/Gauge32
	OID: norUasPm(1027).1.14 / norUasPm(1027).1.15
	EM Screen Name: CG6000
	EM PM Name: **Total/Current Simplex Out sessions**
	Products: UAS IP
	Capabilities: IVR
	History: added in UAS03
	Description: Total/Current number simplex output RTP sessions.
	In PM Poller CSV file: no

UAS Performance Measurements (Sheet 37 of 37)

MIB Objects	Attributes
norUasBpDuplexSessionsTotal / norUasBpDuplexSessionsCurrent	Object type: Scalar
	Syntax: Counter32/Gauge32
	OID: norUasPm(1027).1.16 / norUasPm(1027).1.17
	EM Screen Name: CG6000
	EM PM Name: **Total/Current Duplex sessions**
	Products: UAS IP
	Capabilities: IVR, BCT
	History: added in UAS03
	Description: Total/Current number of duplex RTP sessions.
	In PM Poller CSV file: no

Performance management tools

UAS performance measurement information is configured for reporting and retrieved through the Universal Audio Server Manager.

Performance management tasks

The following table lists procedures for configuring and collecting performance measurement information for the UAS.

UAS performance management tasks

Procedure and page	Interface or Tool used
UAS Performance ManagementViewing UAS performance measurements on page 40	UAS Manager
Viewing UAS status on page 43	UAS Manager
Determining UAS status through performance measurements on page 44	UAS Manager

UAS Performance ManagementViewing UAS performance measurements

The Universal Audio Server Manager retrieves performance metrics in real time. This procedure enables you to view the performance measurements for the network element components. For a description of the performance measurement information that you can display, UAS Performance Management on page 1.

Viewing UAS performance measurements

At the Network Elements pane of the Universal Audio Server Manager main screen

1   In the Network Elements pane, select the UAS node for which performance measurements are to be shown.

Information about the node displays in the System Identification pane.

2   Ensure that "Performance Measurement" is selected in the pull-down list in the box labeled, "Please select."

Tabs display in the pane located below the System Identification pane. Each tab selects a separate screen used for displaying performance measurements.

3   Select a screen tab for the category of performance measurements that you wish to view.

A list of the available performance measurements in the category you selected displays in a selection window located in the top left corner of the screen.

If	Do
you selected "Call Engine," "Resource manager," "Main SubAgent," or "IVR Service"	step 4
you selected "Conference Service"	step 6
you selected "CG6000"	step 9

4   From the list, select a performance measurement that you wish to view.

Note: More than one measurement may be selected at one time by using the Shift or Ctrl key combined with a mouse click. To retrieve the entire list of measurements, press the left mouse button with the cursor located at the top of the list, scroll to the bottom of the list, and then hold down the Shift key

while releasing the mouse button. To retrieve combinations of the measurements, select a measurement, hold down the Ctrl key and move the cursor to the next desired measurement, and press the left mouse button.

5   Click the "Retrieve" button, located next to the list.

The performance measurement information displays in the table located at the bottom of the screen.

> ***Note:*** The Retrieve function is a "snapshot" operation; therefore, you must click the "Retrieve" button when you wish to see a refreshed display.

a   Go to step 12.

6   From the list, select a performance measurement that you wish to view.

> ***Note:*** More than one measurement may be selected at one time by using the Shift or Ctrl key combined with a mouse click. To retrieve the entire list of measurements, press the left mouse button with the cursor located at the top of the list, scroll to the bottom of the list, and then hold down the Shift key while releasing the mouse button. To retrieve combinations of the measurements, select a measurement, hold down the Ctrl key and move the cursor to the next desired measurement, and press the left mouse button.

7   Click the "Retrieve" button, located below the list.

The performance measurement information displays in the table located at the top right corner of the screen.

> ***Note:*** The Retrieve function is a "snapshot" operation; therefore, you must click the "Retrieve" button when you wish to see a refreshed display.

8   If you wish to also view information about active conferences, click the "Active Conference Info" button located at the lower right corner of the screen.

The active conference information displays in the table located at the bottom of the screen.

a   Go to step 12.

9   From the list, select a performance measurement that you wish to view.

> ***Note:*** More than one measurement may be selected at one time by using the Shift or Ctrl key combined with a mouse click. To retrieve the entire list of measurements, press the left mouse button with the cursor located at the top of the list,

scroll to the bottom of the list, and then hold down the Shift key while releasing the mouse button. To retrieve combinations of the measurements, select a measurement, hold down the Ctrl key and move the cursor to the next desired measurement, and press the left mouse button.

10   Click the "Retrieve" button, located below the list.

The performance measurement information displays in the table located at the top right corner of the screen.

   Note: The Retrieve function is a "snapshot" operation; therefore, you must click the "Retrieve" button when you wish to see a refreshed display.

11   If you wish to also view individual board metrics, click the "Retrieve Board Metrics" button, located at the bottom of the screen.

The metrics associated with each of the CG6000 cards displays in the table located at the bottom of the screen.

12   You have completed this procedure.

Viewing UAS status

This procedure enables you to view the operational status of the UAS and of its components, through the UAS Manager.

Viewing UAS status

At the Network Elements pane of the Universal Audio Server Manager main screen

1 In the Network Elements pane, select the appropriate UAS node.

Information about the node displays in the System Identification pane.

2 In the pull-down list in the box labeled, "Please select," select Maintenance.

3 In the Maintenance Tree pane, select "Node".

4 View the information about the node in the Node States pane.

5 If you wish to view information about the node's components, click the "View Components States" button located at the bottom of the Node States pane.

6 You have completed this procedure.

Determining UAS status through performance measurements

This procedure enables you to quickly determine the operating status of a UAS through performance measurements. By performing the procedure on both a periodic and a random basis, you should also be able to develop a system operation profile that will help you to determine the general health of your UAS system.

Determining UAS status through performance measurements

At the Network Elements pane of the Universal Audio Server Manager main screen

1   In the Network Elements pane, select the UAS node for which performance measurements are to be shown.

Information about the node displays in the System Identification pane.

2   In the pull-down list in the box labeled, "Please select," select Maintenance.

3   In the Maintenance Tree pane, select "Node".

4   In the Node States pane, look at the Operational category associated with the node to determine whether the node is "enabled."

If	Do
the node operational state is "enabled"	step 6
the node operational state is "disabled"	step 5

5   Abort this procedure now, since this procedure is valid only if the operational state is "enabled," and perform it again at a different time.

     a   Go to step 24.

6   In the pull-down list in the box labeled, "Please select," select Configuration and then select "Node" in the network element tree pane.

Tabs display in the "Details of selected tree node" pane. Each tab selects a separate screen used for displaying configuration parameters.

7   Ensure that the "General" tab is selected.

8   In the configuration parameter display, locate "End Points" and then log this value. This value will remain the same each time you perform this procedure until the system is re-configured.

9   In the pull-down list in the box labeled, "Please select," select Performance Measurement.

Tabs display in the pane located below the System Identification pane. Each tab selects a separate screen used for displaying performance measurements.

10   Select the "Call Engine" performance measurement tab.

11   Scroll down the list of measurements and select "number of endpoints in use."

12   Click the "Retrieve" button, located next to the list.

The performance measurement information displays in the panel located at the bottom of the Call Engine window.

   Note: The Retrieve function is a "snapshot" operation; therefore, you cannot update its metrics with the "Refresh Display" menu item in the Windows pull-down menu.

Log this measurement. This measurement can then be compared with measurements recorded when this procedure was performed at other times. Over time, an increasingly higher number of endpoints in use, when measured against the total number of endpoints available (obtained in step 8), may indicate that the system is under-engineered, whereas an increasingly lower number of endpoints in use may indicate that the system is over-engineered. These trends should be noted and then reported to your next level of support or to your Nortel Networks service representative.

13   In the same list of Call Engine measurements, select "Successful Audio Segment Plays."

14   Click the "Retrieve" button, located next to the list.

The performance measurement information displays in the panel located at the bottom of the Call Engine window.

Log this measurement.

15   In the same list of Call Engine measurements, select "Failed Audio Segment Plays."

16   Click the "Retrieve" button, located next to the list.

The performance measurement information displays in the panel located at the bottom of the Call Engine window.

Log this measurement.

17   Examine the two measurements you have just logged. If, over time, the number of unsuccessful (failed) audio plays steadily increases, especially when the number of successful audio plays remains the same or decreases, you should report this trend to your next level of support or to your Nortel Networks service representative to determine an appropriate corrective action to take.

18   Select the "Conference Service" performance measurement tab.

19   In the list of measurements that displays, select "Conferences in Progress."

20   Click the "Retrieve" button, located next to the list.

The performance measurement information displays in the panel located next to the list of measurements.

By examining this measurement, taken during periodic performance of this procedure, you should be able to determine whether the conferencing service feature is operating. Any indication that the feature is not operating should be reported to your next level of support or to your Nortel Networks service representative.

21   Select the "IVR service" performance measurement tab.

22   In the list of measurements that displays, select "Current Number of Plays."

23   Click the "Retrieve" button, located next to the list.

The performance measurement information displays in the panel located at the bottom of the IVR window.

By examining this measurement and the conferencing service measurement obtained in steps 18 through 20, during periodic performance of this procedure, you should be able to determine whether the UAS is operating correctly. Any indication that your system is not operating correctly should be reported to your next level of support or to your Nortel Networks service representative.

24   You have completed this procedure.