VoiceGenie 7.2

OA&M Framework – SNMP

User's Guide

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1 Introduction

The VoiceGenie SNMP (VG SNMP) Agent is the component responsible for all SNMP functionality on the VoiceGenie server. This includes the ability to perform SNMP Gets on vital data about the health of the platform, as well as the ability to direct alarms to a Network Management System that can receive SNMP Traps. The system supports a comprehensive set of MIBs allowing monitoring of the system for trends and threshold conditions.

The VoiceGenie SNMP Agent supports the following MIBs:

- MIB-II General network statistics (RFC 1213)
- SNMPv3 MIBS (RFCs 2571-6)
- UCD agent extensions (processes, disks, memory, load average, shell commands, error handling)
- Host Resources (RFC 1514)
- VoiceGenie MIB

VoiceGenie has an assigned enterprise number of 7469.

Chapter

2 VoiceGenie SNMP Agent

The VoiceGenie SNMP Agent is a daemon process that is started at boot time when installed. This daemon is capable of receiving and responding to SNMP requests (i.e. *gets* and *sets*) as well as sending SNMP traps that are generated by VoiceGenie software. This section outlines some of the details of the VoiceGenie SNMP Agent.

2.1 Starting, Stopping and Restarting SNMP

To start, stop or restart the SNMP the user needs to be logged in as root. To start SNMP use the following command:

```
/etc/init.d/vg-snmpd start
```

To stop SNMP use the following command:

```
/etc/init.d/vg-snmpd stop
```

To restart SNMP use the following command:

```
/etc/init.d/vg-snmpd restart
```

Note that in a normal production environment, the SNMP agent will start automatically. If the VoiceGenie SNMP Agent is not starting it may be because another SNMP Agent is running (i.e. LinuxSNMP). Please disable any other SNMP Agents that are running since only one can run at a time.

On Windows system, the SNMP agent is controlled by the SNMP Service. To start, or stop the SNMP Service, go to the `Services` window (i.e. `Start > Settings > Control Panel > Administrative Tools > Services`), highlight the `SNMP Service` and click on the `Start, or Stop` button.

2.2 SNMP Agent Health Information

Health information about the SNMP Agent can be retrieved using the CLC `health` command or by clicking on the colored light for the SNMP Agent in the SMC's `Status Monitor` page. The following information is provided:

```
Health for VG SNMP Agent (vgsnmp) on 10.0.0.78
Started: <data/time SNMP Agent proecss started>
Status: <ONLINE or OFFLINE>
Total # of SNMP Get Requests: <total get requests>
Total # of SNMP Set Requests: <total set requests>
Total # of SNMP Trap Messages Sent: <total trap messages>
```

2.3 Net-SNMP and the VoiceGenie SNMP Agent

The VoiceGenie SNMP Agent consists of a 2 parts, they are as follows:

1. VoiceGenie SNMP Module: A dynamically loaded shared object that interfaces with VoiceGenie software, it is located at: `/usr/local/cmp-snmp/lib/vgsnmp.so`
2. VoiceGenie modified Net-SNMP: A slightly modified version of Net-SNMP that provides support for dynamically changing the trap sink (i.e. where traps are sent)

By default, the VoiceGenie SNMP solution consists of running the modified version of Net-SNMP with the VoiceGenie SNMP Module. However, it is possible to run a special version of the VoiceGenie SNMP Module with the standard generally available version of Net-SNMP. This can be useful when the VoiceGenie platform includes other third party software that requires Net-SNMP for SNMP capability. Note that when running in this configuration the user would no longer be able to modify the SNMP trap sink dynamically at run time. Contact Genesys to obtain this special version of the VoiceGenie SNMP Module.

2.3.1 Configuring Net-SNMP to Load the VoiceGenie SNMP Module

Note that this step is not required on Windows.

To configure Net-SNMP to be the default SNMP daemon process and to have it load the VoiceGenie SNMP Module, please follow the procedure below as the root user:

Stop the VoiceGenie SNMP Agent, the command is listed above, then to stop it from starting automatically at boot time:

```
rm /etc/rc3.d/S55cmp-snmp
```

Change the generic Net-SNMP configuration to load the VoiceGenie SNMP Module. This can be done by adding the following line to the end of the `/etc/snmp/snmpd.conf` file:

```
dlmod vgsnmp /usr/local/cmp-snmp/lib/vgsnmp.so
```

To have the generic Net-SNMP startup automatically at boot time you need to add it as a service, please carry out the following:

```
chkconfig --level 345 snmpd on
```

Chapter

3 VoiceGenie MIB

The VoiceGenie MIB (Management Information Base) is located at `/usr/local/cmp-snmp/share/snmp/mibs/VG-MIB.txt` on Linux and `C:\WINNT\system32\VG-MIB.txt` on Windows. Note that the MIB is recreated every time SNMP is restarted; the reason for this is because when a new VoiceGenie software component is installed the MIB must be regenerated based on what software is installed on that system.

3.1 MIB Details

To get a tree representation of the VoiceGenie MIB, use the following command:

```
snmptranslate -Tp -IR -m all -M /usr/local/cmp-snmp/share/snmp/mibs/ vg
```

The VoiceGenie MIB contains the following information:

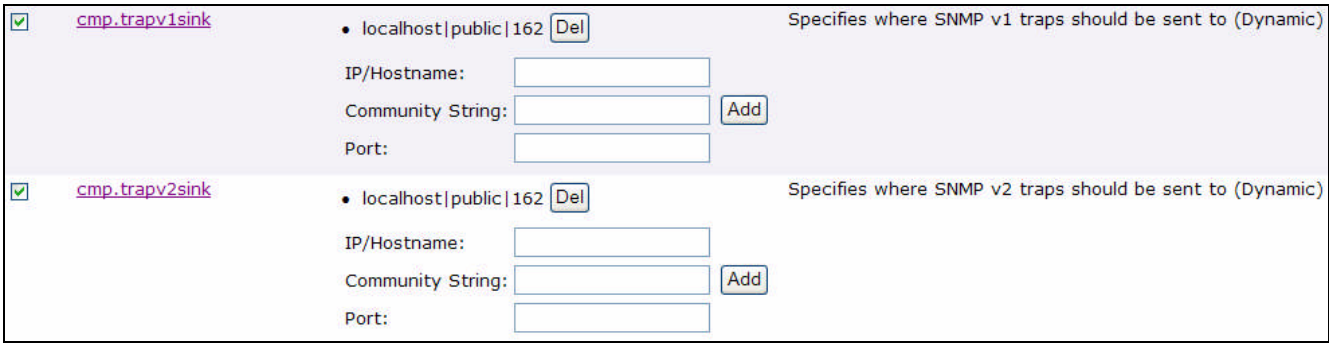
VoiceGenie Component	Scalar OID	Tabular OID	Trap OID
CMP Proxy	.1.3.6.1.4.1.7469.3.9.2	.1.3.6.1.4.1.7469.3.9.3	.1.3.6.1.4.1.7469.251.1.200
VGSNMP	.1.3.6.1.4.1.7469.3.9.4	.1.3.6.1.4.1.7469.3.9.5	.1.3.6.1.4.1.7469.251.1.300
CLC	.1.3.6.1.4.1.7469.3.9.6	.1.3.6.1.4.1.7469.3.9.7	.1.3.6.1.4.1.7469.251.1.308
VoiceXML Interpreter	.1.3.6.1.4.1.7469.3.9.8	.1.3.6.1.4.1.7469.3.9.9	.1.3.6.1.4.1.7469.251.1.303
Call Manager	.1.3.6.1.4.1.7469.3.9.10	.1.3.6.1.4.1.7469.3.9.11	.1.3.6.1.4.1.7469.251.1.302
SRM Server	.1.3.6.1.4.1.7469.3.9.12	.1.3.6.1.4.1.7469.3.9.13	.1.3.6.1.4.1.7469.251.1.311
Web Proxy	.1.3.6.1.4.1.7469.3.9.14	.1.3.6.1.4.1.7469.3.9.15	.1.3.6.1.4.1.7469.251.1.309
SIP Proxy	.1.3.6.1.4.1.7469.3.9.16	.1.3.6.1.4.1.7469.3.9.17	.1.3.6.1.4.1.7469.251.1.316

VoiceGenie Component	Scalar OID	Tabular OID	Trap OID
SS7 Redundancy Mgr	.1.3.6.1.4.1.7469.3.9.18	.1.3.6.1.4.1.7469.3.9.19	.1.3.6.1.4.1.7469.251.1.312
SS7 Connector	.1.3.6.1.4.1.7469.3.9.20	.1.3.6.1.4.1.7469.3.9.21	.1.3.6.1.4.1.7469.251.1.310
ICM Connector	.1.3.6.1.4.1.7469.3.9.22	.1.3.6.1.4.1.7469.3.9.23	.1.3.6.1.4.1.7469.251.1.304
SRM Proxy	.1.3.6.1.4.1.7469.3.9.24	.1.3.6.1.4.1.7469.3.9.25	.1.3.6.1.4.1.7469.251.1.315

Chapter

4 VoiceGenie SNMP Configuration

The VoiceGenie SNMP Agent can be configured to send traps to any user defined location. This configuration is located in the VoiceGenie SNMP configuration which is located under the `Configuration` tab of the SMC. The `cmp.trapv1sink` and `cmp.trapv2sink` define where the traps are sent:



The `cmp.trapv1sink` parameter defines where SNMP v1 traps are sent. If no SNMP v1 traps are desired then all entries for this parameter should be deleted.

The `cmp.trapv2sink` parameter defines where SNMP v2 traps are sent. If no SNMP v2 traps are desired then all entries for this parameter should be deleted.

The IP address in both parameters can be changed to the location where all SNMP v1 and SNMP v2 traps should be sent. Multiple trap sinks can be specified by adding another location to the list.

On Linux, the VoiceGenie SNMP Agent only accepts SNMP request from the localhost by default. To change this behavior, edit the configuration file located at `/usr/local/cmp-snmp/etc/snmp/snmpd.conf`. The following line in the configuration determines what networks the SNMP Agent accepts requests from:

```
com2sec mynetwork NETWORK/24       public
```

The `NETWORK` part in the above configuration should be updated with the network address from where SNMP requests will be sent. For example, to accept SNMP request from network `192.168.1.0, 255.255.255.0`, the above configuration should read:

```
com2sec mynetwork 192.168.1.0/24       public
```

Note that after making any changes in this configuration file, the SNMP Agent will need to be restarted.

Chapter

5 VoiceGenie Traps

VoiceGenie SNMP generates both v1 and v2 traps. The SNMP traps that are generated by the software are detailed in the last section of this document.

Chapter

6 VoiceGenie Health Information

Using SNMP Get, a number of health parameters about the VoiceGenie software are retrievable. This section outlines what health information can be retrieved. Please refer to the VG-MIB file for the data type of the parameters.

6.1 CLC

Name	OID	Type	Description
CLCStartTime	.1.3.6.1.4.1.7469.3.9.6.1.1.1	Scalar	Start time of CLC
NumConnections	.1.3.6.1.4.1.7469.3.9.6.1.2.1	Scalar	Number of active clients connected
NumTotalConnections	.1.3.6.1.4.1.7469.3.9.6.1.3.1	Scalar	Total number of clients connected
NumCommands	.1.3.6.1.4.1.7469.3.9.6.1.4.1	Scalar	Number of commands issued
CLCStatus	.1.3.6.1.4.1.7469.3.9.6.1.5.1	Scalar	Component Status

6.2 CMP Proxy

Name	OID	Type	Description
CMPProxyStartTime	.1.3.6.1.4.1.7469.3.9.2.1.1.1	Scalar	Start time of CMP Proxy
ProxyNetId	.1.3.6.1.4.1.7469.3.9.2.1.2.1	Scalar	Platform/Proxy network ID
ProxyCPUUsage	.1.3.6.1.4.1.7469.3.9.2.1.3.1	Scalar	Platform CPU usage (in %)

Name	OID	Type	Description
ProxyMemUsage	.1.3.6.1.4.1.7469.3.9.2.1.4.1	Scalar	Platform memory usage (in MB)
ProxyDiskUsage	.1.3.6.1.4.1.7469.3.9.3.1.1.x	Tabular	Partition usage (in %)
ProxyDiskDrives	.1.3.6.1.4.1.7469.3.9.3.1.2.x	Tabular	Partition name
AgentNetId	.1.3.6.1.4.1.7469.3.9.3.1.3.x	Tabular	Agent network ID
AgentCPUUsage	.1.3.6.1.4.1.7469.3.9.3.1.4.x	Tabular	Agent CPU usage (in %)
AgentMemUsage	.1.3.6.1.4.1.7469.3.9.3.1.5.x	Tabular	Agent memory usage (in MB)
ComponentName	.1.3.6.1.4.1.7469.3.9.3.1.6.x	Tabular	Component name
ComponentCPUUsage	.1.3.6.1.4.1.7469.3.9.3.1.7.x	Tabular	Component CPU usage (in %)
ComponentMemUsage	.1.3.6.1.4.1.7469.3.9.3.1.8.x	Tabular	Component memory usage (in MB)

6.3 VoiceGenie SNMP

Name	OID	Type	Description
SNMPStartTime	.1.3.6.1.4.1.7469.3.9.4.1.1.1	Scalar	Start time of SNMP
NumGetReq	.1.3.6.1.4.1.7469.3.9.4.1.2.1	Scalar	Number of SNMP get requests
NumSetReq	.1.3.6.1.4.1.7469.3.9.4.1.3.1	Scalar	Number of SNMP set requests
NumTrapSent	.1.3.6.1.4.1.7469.3.9.4.1.4.1	Scalar	Number of SNMP traps sent
SNMPStatus	.1.3.6.1.4.1.7469.3.9.4.1.5.1	Scalar	Component Status

6.4 Call Manager

Name	OID	Type	Description
STARTED	.1.3.6.1.4.1.7469.3.9.10.1.1.1	Scalar	Call Manager Start Time
CURRENTSESSION	.1.3.6.1.4.1.7469.3.9.10.1.2.1	Scalar	Number of current CMAPI sessions
PEAKSESSION	.1.3.6.1.4.1.7469.3.9.10.1.3.1	Scalar	Max number of concurrent sessions since the start

Name	OID	Type	Description
TOTALSESSION	.1.3.6.1.4.1.7469.3.9.10.1.4.1	Scalar	Total number of sessions since the start
VXMLIBIND	.1.3.6.1.4.1.7469.3.9.10.1.5.1	Scalar	Total number of times VoiceXML interpreter established connection with Call Manager
SIPPORT	.1.3.6.1.4.1.7469.3.9.10.1.6.1	Scalar	Local SIP port
SIPCURRENTIN	.1.3.6.1.4.1.7469.3.9.10.1.7.1	Scalar	Number of current inbound SIP calls
SIPCURRENTOUT	.1.3.6.1.4.1.7469.3.9.10.1.8.1	Scalar	Number of current outbound SIP calls
SIPPEAKIN	.1.3.6.1.4.1.7469.3.9.10.1.9.1	Scalar	Max number of concurrent inbound SIP calls
SIPPEAKOUT	.1.3.6.1.4.1.7469.3.9.10.1.10.1	Scalar	Max number of concurrent outbound SIP calls
SIPININIT	.1.3.6.1.4.1.7469.3.9.10.1.11.1	Scalar	Total number of inbound SIP calls initiated since the start
SIPOUTINIT	.1.3.6.1.4.1.7469.3.9.10.1.12.1	Scalar	Total number of outbound SIP calls initiated since the start
H323PORT	.1.3.6.1.4.1.7469.3.9.10.1.13.1	Scalar	Local H.323 port
H323CURRENTIN	.1.3.6.1.4.1.7469.3.9.10.1.14.1	Scalar	Number of current inbound H.323 calls
H323CURRENTOUT	.1.3.6.1.4.1.7469.3.9.10.1.15.1	Scalar	Number of current outbound H.323 calls
H323PEAKIN	.1.3.6.1.4.1.7469.3.9.10.1.16.1	Scalar	Max number of concurrent inbound H.323 calls
H323PEAKOUT	.1.3.6.1.4.1.7469.3.9.10.1.17.1	Scalar	Max number of concurrent outbound H.323 calls
H323ININIT	.1.3.6.1.4.1.7469.3.9.10.1.18.1	Scalar	Total number of inbound H.323 calls initiated since the start
H323OUTINIT	.1.3.6.1.4.1.7469.3.9.10.1.19.1	Scalar	Total number of outbound H.323 calls initiated since the start
DLGCCURRENTIN	.1.3.6.1.4.1.7469.3.9.10.1.20.1	Scalar	Number of current inbound Dialogic calls

Name	OID	Type	Description
DLGCCURRENTOUT	.1.3.6.1.4.1.7469.3.9.10.1.21.1	Scalar	Number of current outbound Dialogic calls
DLGCPEAKIN	.1.3.6.1.4.1.7469.3.9.10.1.22.1	Scalar	Max number of concurrent inbound Dialogic calls
DLGCPEAKOUT	.1.3.6.1.4.1.7469.3.9.10.1.23.1	Scalar	Max number of concurrent outbound Dialogic calls
DLGCTOTALIN	.1.3.6.1.4.1.7469.3.9.10.1.24.1	Scalar	Total number of inbound Dialogic calls initiated since the start
DLGCTOTALOUT	.1.3.6.1.4.1.7469.3.9.10.1.25.1	Scalar	Total number of outbound Dialogic calls initiated since the start
DLGCINCHANENABLED	.1.3.6.1.4.1.7469.3.9.10.1.26.1	Scalar	Total number of inbound-only channels that are in service
DLGCOUTCHANENABLED	.1.3.6.1.4.1.7469.3.9.10.1.27.1	Scalar	Total number of outbound-only channels that are in service
DLGCDUPLEXCHANENABLED	.1.3.6.1.4.1.7469.3.9.10.1.28.1	Scalar	Total number of duplex channels that are in service
DLGCINCHTOTAL	.1.3.6.1.4.1.7469.3.9.10.1.29.1	Scalar	Total number of configured inbound-only channels
DLGCOUTCHTOTAL	.1.3.6.1.4.1.7469.3.9.10.1.30.1	Scalar	Total number of configured outbound-only channels
DLGCDUPLEXCHTOTAL	.1.3.6.1.4.1.7469.3.9.10.1.31.1	Scalar	Total number of configured duplex channels
DLGCINLOGGED	.1.3.6.1.4.1.7469.3.9.10.1.32.1	Scalar	Total number of agent-logged-in channels that are inbound-only
DLGCOUTLOGGED	.1.3.6.1.4.1.7469.3.9.10.1.33.1	Scalar	Total number of agent-logged-in channels that are outbound-only
DLGCDUPLEXLOGGED	.1.3.6.1.4.1.7469.3.9.10.1.34.1	Scalar	Total number of agent-logged-in channels that are duplex
DLGCBOARDSTATUS	.1.3.6.1.4.1.7469.3.9.10.1.35.1	Scalar	Dialogic Board Status
BRKTCURRENTIN	.1.3.6.1.4.1.7469.3.9.10.1.36.1	Scalar	Number of current inbound Brooktrout calls

Name	OID	Type	Description
BRKTCURRENTOUT	.1.3.6.1.4.1.7469.3.9.10.1.37.1	Scalar	Number of current outoubnd Brooktrout calls
BRKTPEAKIN	.1.3.6.1.4.1.7469.3.9.10.1.38.1	Scalar	Max number of concurrent inbound Brooktrout calls
BRKTPEAKOUT	.1.3.6.1.4.1.7469.3.9.10.1.39.1	Scalar	Max number of concurrent outbound Brooktrout calls
BRKTTOTALIN	.1.3.6.1.4.1.7469.3.9.10.1.40.1	Scalar	Total number of inbound Brooktrout calls initiated since the start
BRKTTOTALOUT	.1.3.6.1.4.1.7469.3.9.10.1.41.1	Scalar	Total number of outbound Brooktrout calls initiated since the start
BRKTINCHANENABLED	.1.3.6.1.4.1.7469.3.9.10.1.42.1	Scalar	Total number of inbound-only channels that are in service
BRKTOUTCHANENABLED	.1.3.6.1.4.1.7469.3.9.10.1.43.1	Scalar	Total number of outbound-only channels that are in service
BRKTDUPLEXCHANENABLED	.1.3.6.1.4.1.7469.3.9.10.1.44.1	Scalar	Total number of duplex channels that are in service
BRKTINCHTOTAL	.1.3.6.1.4.1.7469.3.9.10.1.45.1	Scalar	Total number of configured inbound-only channels
BRKTOUTCHTOTAL	.1.3.6.1.4.1.7469.3.9.10.1.46.1	Scalar	Total number of configured outbound-only channels
BRKTDUPLEXCHTOTAL	.1.3.6.1.4.1.7469.3.9.10.1.47.1	Scalar	Total number of configured duplex channels
BRKTBOARDSTATUS	.1.3.6.1.4.1.7469.3.9.10.1.48.1	Scalar	Brooktrout Board Status
METRO1CURRENTIN	.1.3.6.1.4.1.7469.3.9.10.1.49.1	Scalar	Number of current inbound Metro1 calls
METRO1CURRENTOUT	.1.3.6.1.4.1.7469.3.9.10.1.50.1	Scalar	Number of current outbound Metro1 calls
METRO1PEAKIN	.1.3.6.1.4.1.7469.3.9.10.1.51.1	Scalar	Max number of concurrent inbound Metro1 calls
METRO1PEAKOUT	.1.3.6.1.4.1.7469.3.9.10.1.52.1	Scalar	Max number of concurrent outbound Metro1 calls

Name	OID	Type	Description
METRO1TOTALIN	.1.3.6.1.4.1.7469.3.9.10.1.53.1	Scalar	Total number of inbound Metro1 calls initiated since the start
METRO1TOTALOUT	.1.3.6.1.4.1.7469.3.9.10.1.54.1	Scalar	Total number of outbound Metro1 calls initiated since the start
METRO1INCHANENABLED	.1.3.6.1.4.1.7469.3.9.10.1.55.1	Scalar	Total number of inbound-only channels that are in service
METRO1OUTCHANENABLED	.1.3.6.1.4.1.7469.3.9.10.1.56.1	Scalar	Total number of outbound-only channels that are in service
METRO1INCHTOTAL	.1.3.6.1.4.1.7469.3.9.10.1.57.1	Scalar	Total number of configured inbound-only channels
METRO1OUTCHTOTAL	.1.3.6.1.4.1.7469.3.9.10.1.58.1	Scalar	Total number of configured outbound-only channels
METRO1T1STATUS	.1.3.6.1.4.1.7469.3.9.10.1.59.1	Scalar	T1 Status of device
VXMLIENABLED	.1.3.6.1.4.1.7469.3.9.10.1.60.1	Scalar	Total number of times VoiceXML interpreter established connection with Call Manager
VRMCLIENTLIST	.1.3.6.1.4.1.7469.3.9.10.1.61.1	Scalar	Available VRM Engine list

6.5 SRM Server

Name	OID	Type	Description
SRMServerStarted	.1.3.6.1.4.1.7469.3.9.12.1.1.1	Scalar	The time the server was started
SRMServerStatus	.1.3.6.1.4.1.7469.3.9.12.1.2.1	Scalar	The status of the SRM Server
ASRDisplayName	.1.3.6.1.4.1.7469.3.9.13.1.1.x	Tabular	The name of the engine
ASRURI	.1.3.6.1.4.1.7469.3.9.13.1.2.x	Tabular	The URI used to access the engine
ASRAvailable	.1.3.6.1.4.1.7469.3.9.13.1.3.x	Tabular	The number of available clients
ASRTotal	.1.3.6.1.4.1.7469.3.9.13.1.4.x	Tabular	The total number of clients
ASRPeak	.1.3.6.1.4.1.7469.3.9.13.1.5.x	Tabular	The lowest number of clients that were available at any given

Name	OID	Type	Description
ASRDied	.1.3.6.1.4.1.7469.3.9.13.1.6.x	Tabular	The number of clients that died unexpectedly
ASRFailed	.1.3.6.1.4.1.7469.3.9.13.1.7.x	Tabular	The number of sessions that ended with a failure code
ASRSuccess	.1.3.6.1.4.1.7469.3.9.13.1.8.x	Tabular	The number of successfully completed sessions
TTSDisplayName	.1.3.6.1.4.1.7469.3.9.13.1.9.x	Tabular	The name of the engine
TTSURI	.1.3.6.1.4.1.7469.3.9.13.1.10.x	Tabular	The URI used to access the engine
TTSAvailable	.1.3.6.1.4.1.7469.3.9.13.1.11.x	Tabular	The number of available clients
TTSTotal	.1.3.6.1.4.1.7469.3.9.13.1.12.x	Tabular	The total number of clients
TTSPeak	.1.3.6.1.4.1.7469.3.9.13.1.13.x	Tabular	The lowest number of clients that were available at any given time
TTSDied	.1.3.6.1.4.1.7469.3.9.13.1.14.x	Tabular	The number of clients that died unexpectedly
TTSFailed	.1.3.6.1.4.1.7469.3.9.13.1.15.x	Tabular	The number of sessions that ended with a failure code
TTSSuccess	.1.3.6.1.4.1.7469.3.9.13.1.16.x	Tabular	The number of successfully completed sessions
PMName	.1.3.6.1.4.1.7469.3.9.13.1.17.x	Tabular	The name of the protocol module
PMOpenMin	.1.3.6.1.4.1.7469.3.9.13.1.18.x	Tabular	The minimum amount of time an open request took
PMCloseMin	.1.3.6.1.4.1.7469.3.9.13.1.19.x	Tabular	The minimum amount of time a close request took
PMStopMin	.1.3.6.1.4.1.7469.3.9.13.1.20.x	Tabular	The minimum amount of time a stop request took
PMSetParamsMin	.1.3.6.1.4.1.7469.3.9.13.1.21.x	Tabular	The minimum amount of time a set params request took
PMGetParamsMin	.1.3.6.1.4.1.7469.3.9.13.1.22.x	Tabular	The minimum amount of time a get params request took
PMLoadGrammarMin	.1.3.6.1.4.1.7469.3.9.13.1.23.x	Tabular	The minimum amount of time a load grammar request took

Name	OID	Type	Description
PMRecognizeMin	.1.3.6.1.4.1.7469.3.9.13.1.24.x	Tabular	The minimum amount of time a recognize request took
PMPromptDoneMin	.1.3.6.1.4.1.7469.3.9.13.1.25.x	Tabular	The minimum amount of time a prompt done request took
PMSpeakMin	.1.3.6.1.4.1.7469.3.9.13.1.26.x	Tabular	The minimum amount of time a speak request took
PMPauseMin	.1.3.6.1.4.1.7469.3.9.13.1.27.x	Tabular	The minimum amount of time a pause request took
PMResumeMin	.1.3.6.1.4.1.7469.3.9.13.1.28.x	Tabular	The minimum amount of time a resume request took
PMControlMin	.1.3.6.1.4.1.7469.3.9.13.1.29.x	Tabular	The minimum amount of time a control request took
PMBargeInMin	.1.3.6.1.4.1.7469.3.9.13.1.30.x	Tabular	The minimum amount of time a barge in occurred request took
PMOpenMax	.1.3.6.1.4.1.7469.3.9.13.1.31.x	Tabular	The maximum amount of time an open request took
PMCloseMax	.1.3.6.1.4.1.7469.3.9.13.1.32.x	Tabular	The maximum amount of time a close request took
PMStopMax	.1.3.6.1.4.1.7469.3.9.13.1.33.x	Tabular	The maximum amount of time a stop request took
PMSetParamsMax	.1.3.6.1.4.1.7469.3.9.13.1.34.x	Tabular	The maximum amount of time a set params request took
PMGetParamsMax	.1.3.6.1.4.1.7469.3.9.13.1.35.x	Tabular	The maximum amount of time a get params request took
PMLoadGrammarMax	.1.3.6.1.4.1.7469.3.9.13.1.36.x	Tabular	The maximum amount of time a load grammar request took
PMRecognizeMax	.1.3.6.1.4.1.7469.3.9.13.1.37.x	Tabular	The maximum amount of time a recognize request took
PMPromptDoneMax	.1.3.6.1.4.1.7469.3.9.13.1.38.x	Tabular	The maximum amount of time a prompt done request took
PMSpeakMax	.1.3.6.1.4.1.7469.3.9.13.1.39.x	Tabular	The maximum amount of time a speak request took
PMPauseMax	.1.3.6.1.4.1.7469.3.9.13.1.40.x	Tabular	The maximum amount of time a pause request took

Name	OID	Type	Description
PMResumeMax	.1.3.6.1.4.1.7469.3.9.13.1.41.x	Tabular	The maximum amount of time a resume request took
PMControlMax	.1.3.6.1.4.1.7469.3.9.13.1.42.x	Tabular	The maximum amount of time a control request took
PMBargeInMax	.1.3.6.1.4.1.7469.3.9.13.1.43.x	Tabular	The maximum amount of time a barge in occurred request took
PMOpenAvg	.1.3.6.1.4.1.7469.3.9.13.1.44.x	Tabular	The average amount of time an open request took
PMCloseAvg	.1.3.6.1.4.1.7469.3.9.13.1.45.x	Tabular	The average amount of time a close request took
PMStopAvg	.1.3.6.1.4.1.7469.3.9.13.1.46.x	Tabular	The average amount of time a stop request took
PMSetParamsAvg	.1.3.6.1.4.1.7469.3.9.13.1.47.x	Tabular	The average amount of time a set params request took
PMGetParamsAvg	.1.3.6.1.4.1.7469.3.9.13.1.48.x	Tabular	The average amount of time a get params request took
PMLoadGrammarAvg	.1.3.6.1.4.1.7469.3.9.13.1.49.x	Tabular	The average amount of time a load grammar request took
PMRecognizeAvg	.1.3.6.1.4.1.7469.3.9.13.1.50.x	Tabular	The average amount of time a recognize request took
PMPromptDoneAvg	.1.3.6.1.4.1.7469.3.9.13.1.51.x	Tabular	The average amount of time a prompt done request took
PMSpeakAvg	.1.3.6.1.4.1.7469.3.9.13.1.52.x	Tabular	The average amount of time a speak request took
PMPauseAvg	.1.3.6.1.4.1.7469.3.9.13.1.53.x	Tabular	The average amount of time a pause request took
PMResumeAvg	.1.3.6.1.4.1.7469.3.9.13.1.54.x	Tabular	The average amount of time a resume request took
PMControlAvg	.1.3.6.1.4.1.7469.3.9.13.1.55.x	Tabular	The average amount of time a control request took
PMBargeInAvg	.1.3.6.1.4.1.7469.3.9.13.1.56.x	Tabular	The average amount of time a barge in occurred request took

Chapter

7 Server Health Information

Other health status information about the server is also available by the other MIBs supported by the VoiceGenie SNMP agent. This table outlines a few useful ones:

OID	Description
.1.3.6.1.4.1.2021.11	CPU usage information
.1.3.6.1.4.1.2021.4	Memory usage information
.1.3.6.1.4.1.2021.9.1	Disk space information
.1.3.6.1.2.1.1.5.0	System hostname

Chapter

8 References

http://www.faqs.org/rfcs/rfc1213.html

RFC 1213 - Management Information Base for Network Management of TCP/IP-based internets:MIB-II

http://www.faqs.org/rfcs/rfc2571.html

RFC 2571 - An Architecture for Describing SNMP Management Frameworks

http://www.faqs.org/rfcs/rfc2572.html

RFC 2572 - Message Processing and Dispatching for the Simple Network Management Protocol (SNMP)

http://www.faqs.org/rfcs/rfc2573.html

RFC 2573 - SNMP Applications

http://www.faqs.org/rfcs/rfc2574.html

RFC 2574 - User-based Security Model (USM) for version 3 of the Simple Network Management Protocol (SNMPv3)

http://www.faqs.org/rfcs/rfc2575.html

RFC 2575 - View-based Access Control Model (VACM) for the Simple Network Management Protocol (SNMP)

http://www.faqs.org/rfcs/rfc2576.html

RFC 2576 - Coexistence between Version 1, Version 2, and Version 3 of the Internet-standard Network Management Framework

UCD agent extensions (processes, disks, memory, load average, shell commands, error handling)

http://ucd-snmp.ucdavis.edu

http://www.faqs.org/rfcs/rfc1514.html

RFC 1514 - Host Resources MIB

Appendix

A VoiceGenie SNMP Traps

This Appendix contains the list of traps that can be produced by a VoiceGenie component. The second last number in the OID corresponds to the type of component. The component types are as follows:

Type	Name
200	CMP Proxy
300	VG SNMP
302	Call Manager
303	VoiceXML Interpreter
308	CLC
309	Web Proxy (IProxy)
311	VRM Server

The last number corresponds to the LogID, this ID uniquely identifies the log and corresponds to the id field in the CallLog table.

Each Description field contains information about the relative severity of the alarm, the severities are:

Severity	Description
CRIT	An alarm event that denotes a critical or fatal condition and results in the failure of the software.
EROR	An alarm event that denotes an error condition that should never happen and that results in the loss of functionality.
WARN	An alarm event that denotes an exceptional situation that may occur legitimately but it is necessary to be aware of.

Also, each alarm has a Response Code specified, the response codes are defined as follows:

Severity	Description
CKAPP	Check application or Web server
CKCFG	Check and correct configuration
CKFS	Check file/directory existence/permission, or disk space
CKHW	Check hardware
CKTY	Check telephony hardware/connection
CKASR	Check ASR server
CKTTS	Check TTS server
CKNW	Check network connection
CKOP	Check operational state of the server
NOTE	Notice/observation
REVG	Report to VoiceGenie `[with logs]`
SWRS	Software restart: `[collect logs]` restart VoiceGenie server
HWRS	Hardware restart: `[collect logs]` reboot VoiceGenie platform

In addition the table list any old alarm code (i.e. pre NexusPoint 6.4) that may relate to the alarm.

A.1 VoiceGenie SNMP Agent Traps

The prefix for all SNMP Agent traps OIDs is `.1.3.6.1.4.1.7469.251.1.300.`

Name	OID Suffix	Level	Definition and Possible Message/Info	Impact	Causes	Response Code/Detailed Recommended Actions
VGLOG-UNAUTHORIZED-LOGIN	20000	WARN	Unauthorized login attempt, only logged if monitoring script is running	–	–	NOTE

Name	OID Suffix	Level	Definition and Possible Message/Info	Impact	Causes	Response Code/Detailed Recommended Actions
VGLOG-INVALID-MSG-TYPE	1048597	WARN	Invalid Message Type Sent or Received	An OA&M message is being ignored	VoiceGenie software version mismatch	REVG
VGLOG-CANNOT-CREATE-SERVER-SNMP	1048598	WARN	Error Creating Server Socket	SNMP can not create a server socket.	–	CKCFG
VGLOG-CANNOT-CREATE-CLIENT	1048599	WARN	Error Creating Client Socket	SNMP can not create a client connection.	Invalid port or IP set in SNMP Agent's configuration file.	REVG
VGLOG-CFG-WRITE-FAIL-SNMP	2097178		Configuration file could not be written	The SNMP Agent's configuration file will not be updated.	Disk may be full.	CKCFG
VGLOG-DSRV-INVALID-QUERY	6291477	WARN	Invalid data query string received	An SNMP get or set request may fail.	OID values in XML may be incorrect.	REVG Report to VoiceGenie
VGLOG-DSRV-UNSUPPORTED-VAR	6291478	WARN	Query for unsupported variable received	An SNMP get or set request may fail.	OID values in XML may be incorrect.	REVG Report to VoiceGenie
VGLOG-VGSNMP-DUPLICATE-OIDS	13631500	EROR	Duplicate scalar/tabular OID	A component will not be initialized with the SNMP Agent.	Duplicate OID suffixes in the XML or in SNMP Agent's configuration file.	CKCFG Report to VoiceGenie.

Name	OID Suffix	Level	Definition and Possible Message/Info	Impact	Causes	Response Code/Detailed Recommended Actions
VGLOG-VGSNMP-INVALID-PRODUCT-DEF	13631509	WARN	Invalid product definition	The XML product definition file is invalid since it does not contain component information.	The XML file may be in the wrong format.	CKCFG Report to VoiceGenie.
VGLOG-VGSNMP-FILE-NOT-OPENED	13631510	WARN	ReadProductDef: Unable to open product definition	An XML file that contains information for Traps, Sets and Gets can not be opened and will not be functional.	The file may not exist or may not be readable. The files that are opened are all `.xml` files in the directories listed in the SNMP configuration parameter `cmp.prod_def_path.`	CKCFG Report to VoiceGenie.
VGLOG-VGSNMP-INVALID-PARAM-FILE	13631511	WARN	Invalid config or health data or Duplicate Oid definition	The XML file contains invalid configuration and some get/set or traps will be unusable.	The XML file contents are invalid.	CKCFG Report to VoiceGenie.

Name	OID Suffix	Level	Definition and Possible Message/Info	Impact	Causes	Response Code/Detailed Recommended Actions
VGLOG-VGSNMP-INVALID-SET-REQ	13631513	WARN	Unsupported parameter: <name> or The oid does not exist or The table does not exist	A set request failed.	A set operation was performed against an invalid OID or MIB name.	REVG Check that the OID being used is correct. If it is, check that the path to the configuration directory of that component (i.e. `/config`) is in the SNMP configuration file under the parameter `cmp.prod_def_path.`
VGLOG-VGSNMP-XML-PARSE-ERROR	13631516	WARN	Can not parse XML file <name>	The SNMP information related to Traps, Sets and Gets can not be read and will not be functional.	The XML file may be in the wrong format.	REVG Report to VoiceGenie.
VGLOG-VGSNMP-CANNOT-GET-ELEMENT-TYPE	13631517	WARN	Cannot get element type of a component	Trap was not sent.	A trap was sent from a component whose element type is unknown.	REVG CMP may be configured incorrectly. Report to VoiceGenie.

VGLOG-VGSNMP-CMP-NOT-OPERATING	13631518	WARN	CMP is not operational	The connection to CMP is down, no traps, sets or gets are possible.	The CMP Proxy may have died.	CKCFG
						Restart CMP Proxy:
						`su`
						`/etc/init.d/cmp-proxy restart`

Name	OID Suffix	Level	Definition and Possible Message/Info	Impact	Causes	Response Code/Detailed Recommended Actions
VGLOG-VGSNMP-DUPLICATE-XML	13631519	WARN	Duplicate component XML ignored	An XML file is ignored.	An XML file with the same component type was already loaded.	CKCFG
VGLOG-VGSNMP-CMP-OPERATING	13632513	NOTE	CMP is operational	The connection to the CMP is operational, normal function is resumed.	The CMP Proxy is operational once again.	–
VGLOG-SOCKET-SEND-FAILED-SNMP	134219731 (Old Alarm Number: 10000)	EROR	Socket send failed.	A message failed to get sent over the network.	Ethernet problem.	CKNW/REVG
VGLOG-VGASSERT-SNMP	135267305	CRIT	VGASSERT			REVG

Revision History

Version	Date	Change Summary	Author/Editor
1.0	August 13th 2003	Initial release	Rakesh Tailor
1.1	September 19th 2003	Updated configuration files in appendices. Update sections 2.1.1, 5.1, 7. Added 6.4 for Provisioning service.	Monti Ghai
1.2	September 23rd 2003	Updated sections on SMC configuration as well as details on Hunt Groups and Dialing Rules.	Wen Wang
2.0	December 17th 2003	Updated document to reflect changes for CMP2.1.	Rakesh Tailor
2.1	March 2nd 2004	Updated document to reflect changes for CMP2.2	Rakesh Tailor
2.2	June 19th 2004	Added details for new features in CMP2.3, including Logging, Alarming and SNMP changes	Rakesh Tailor
2.3	February 28th 2005	Added details for new features in VoiceGenie 7.0.0	Rakesh Tailor
2.4	March 7th, 2005	Detached SNMP section from main OA&M User Guide to create a new document	Andrew Ho
2.5	April 13th, 2005	Final Revision for VoiceGenie 7	Andrew Ho
2.6	February 10th, 2006	Updates for 7.1	Rakesh Tailor
2.7	September 5th, 2006	Updates for 7.1	Monti Ghai
2.8	September 21st, 2007	Updates for 7.2	Wen Wang