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# <mark>e</mark>genesys™

# CIC and SNMP

## **Technical Reference**

## Abstract

This document contains information regarding the implementation, configuration, and usage of Simple Network Management Protocol (SNMP) in a Customer Interaction Center environment.

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## **Table of Contents**

Table of Contents	2
SNMP overview	4
SNMP standards	4
SNMP components	5
SNMP messages	6
SNMP network details	7
SNMP Protocol Data Units	8
SNMP glossary	9
SNMP and Customer Interaction Center	
Customer Interaction Center products that support SNMP	11
SNMP requirements for Customer Interaction Center products	12
PureConnect SNMP service	13
Functionality of the PureConnect SNMP service	13
Customer Interaction Center products that use the PureConnect SNMP service	13
Supported SNMP features	13
Unsupported SNMP features	14
Configure SNMP for CIC products and subsystems	15
Configure PureConnect SNMP service through the command line utility	15
Configure ININ SNMP v2c settings through SNMP Service Properties dialog box	21
Install MIB files on Customer Interaction Center	25
Configure SNMP in Customer Interaction Center products	26
Customer Interaction Center server parameters for SNMP	26
Customer Interaction Center handlers for SNMP, Notifier, or Remoco	20
Customer Interaction Center Management Information Base files	27
	28
HOST-RESOURCES-MIB.mib	28
hrSystem objects	29 29
hrStorage objects hrDevice objects	31
hrSWRun objects	40
hrSWRunPerf objects	40
hrSWInstalled objects	42
Customer Interaction Center	43
i3ic.mib	44
i3lcGeneral objects	45
i3lcInfo objects	43
i3lcCommands objects	40
i3lcTrapInfo objects	52
i3lcTraps objects	56
reporting_plugin.mib	60
reportingplugin objects	60
Interaction Recorder	60
i3icrecorder.mib	61
i3RecGeneral	61
i3RecContentServerInfo	61
i3RecTrapVars objects	65
I3RecTraps objects	66
Interaction Media Server	66
INTERACTION-MEDIASERVER.mib	67
i3MsGeneral objects	67
i3MsInfo objects	69
i3MsTraps objects	73
HOST-RESOURCES-MIB.mib	75
Interaction SIP Proxy	75
INTERACTION-SIP-PROXY.mib	73
i3SpGeneral objects	76
i3Splnfo objects	84
i3SpTraps objects	87
HOST-RESOURCES-MIB.mib	89
Session Manager	89
i3icsessionmanager.mib	89
	60

sessionmanagerInfo objects	89
StatAlert Server	91
i3icstatalertsserver.mib	91
StatalertserverObjects objects	91
Change log	93

## **SNMP overview**

Simple Network Management Protocol (SNMP) is a standard for monitoring network systems, such as servers, switches, routers, and other network-based devices without requiring physical interaction with the device.

SNMP requires a network management system (NMS) to receive alerts (traps) and to request status messages from the network devices. Using SNMP, you can monitor multiple network devices and react quickly to conditions, problems, or outages with those devices. There are many commercial and open-source NMS products available.

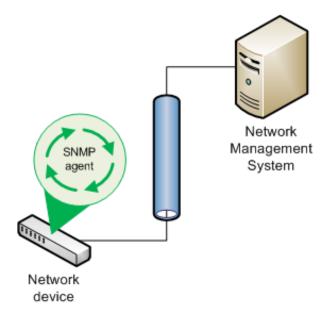
## **SNMP standards**

PureConnect products and the PureConnect SNMP service support SNMPv2c and SNMPv3. The PureConnect SNMP service also supports SNMP agents that use the SNMPv1, SNMPv2, and SNMPv3 standards.

## **SNMP components**

Simple Network Management Protocol (SNMP) requires the following components:

- Host device with a network connection and one or more Management Information Base (MIB) files
- SNMP agent service on host device
- Network
- Network Management System (NMS)



## **SNMP messages**

(1 step: agent to NMS)

Trap notification Trap notification Trap notification SNMP agent System Defined condition occurs

There are two types of Simplified Network Messaging Protocol (SNMP) messages: requests and traps.

in i

Network device

SNMP requests are issued from a Network Management System (NMS) to an SNMP agent service on a host network device. The request can be a query for status of a particular object, as defined in a Management Information Base (MIB) file, of the host network device. A request can also be a command to set a variable, such as a specific value for an object defined in a MIB file. When the request is received, the SNMP agent responds with a message to the NMS that sent the request.

SNMP traps are unsolicited messages from the network device to the NMS. When a monitored condition on the network device reaches a specific value, as defined in a MIB file on the host device, the SNMP agent sends the trap to the NMS.

## **SNMP network details**

The following table provides specific details regarding Simple Network Management Protocol (SNMP) network communications:

Transport layer protocols	The SNMPv2c and SNMPv3 standards support the following network transport layer protocols: <ul> <li>UDP</li> <li>TLS</li> </ul>
Network port numbers	The SNMPv2c and SNMPv3 standards use the following default network port numbers for the specified transport layer protocols: UDP • 161 - SNMP requests • 162 - SNMP traps TLS • 10161 - SNMP requests • 10162 - SNMP traps

Note:

The PureConnect SNMP service (ININ SNMP) does not support TLS.

## **SNMP Protocol Data Units**

The Simple Network Management Protocol v2c (SNMPv2c) and v3 (SNMPv3) standards use protocol data units (PDUs) to contain messages between Network Management Systems (NMSs) and SNMP agents. The following table lists each available message type in the standard and a description.

Message	Description
GetRequest	An NMS sends a GetRequest message to an SNMP agent to request data from one or more variables on the target network device.
	The SNMP agent returns a Response message with the current data of the requested variables.
SetRequest	An NMS sends a SetRequest message to an SNMP agent to set values for one or more variables on the target network device.
	The SNMP agent returns a Response message with the current data of the requested variables for validation.
GetNextRequest	An NMS sends a GetNextRequest message to an SNMP agent to query for the next defined variable on the target network device.
	The SNMP agent returns a Response message with the next defined variable and its current value.
GetBulkRequest	An NMS sends a GetBulkRequest message to an SNMP agent to request data from multiple variables on the target network device.
	The SNMP agent returns a Response message with the current data of the requested variables.
	This optimized variation of the GetNextRequest message was introducted in SNMPv2.
Response	An SNMP agent sends a Response message to an NMS after being prompted by a request message from that NMS. The Response message normally contains variable bindings or errors
Trap	An SNMP agent sends an unsolicited Trap message to an NSM when an object defined in the MIB file on a host network device meets or exceeds a specific value.
InformRequest	The InformRequest message can be sent by either SNMP agents or NMSs. Since SNMP typically uses the UDP transport layer protocol, which does not use receipt confirmation messages, the InformRequest message was created to provide receipt confirmation, especially for Trap messages.

## **SNMP glossary**

Simple Network Management Protocol (SNMP) uses specific terms and phrases to describe different aspects in the monitoring of network devices. The following table contains some of these items and the associated definitions:

Agent

A software service that resides and runs on a network device. This service monitors objects defined through one or more Management Information Base (MIB) files on the host system. The SNMP agent can send unsolicited trap messages to one or more Network Management Systems (NMSs) and respond to SNMP request messages with host device information.

#### Authentication protocol

A method of validating SNMPv3 messages.

#### Community

A string of characters that represents a group of SNMP-enabled network devices. Only Network Management Systems (NMSs) and SNMP agents that use the same SNMP community name can communicate with each other. Most SNMP agents support multiple community names, which allow the SNMP agents to receive SNMP requests from multiple NMSs.

The SNMPv1 and SNMPv2c standards support SNMP communities as a method of authorization.

SNMPv3 uses User-based Security Model (USM) for authentication and encryption. USM uses *user* and *password* for authentication, not a community name. While a community name is not required, supplying one allows communication with systems that use the earlier versions of SNMP.

#### Destination

The address of a Network Management System (NMS). The format of the address, such as IP address or fully-qualified domain name (FQDN), is dependent on the application in which you configure the destination.

An SNMP agent can send traps to one or more destinations.

Management Information Base (MIB)

A text file, in a specific format, that defines the information available in the host network device.

The format for MIB files is defined by Structure of Management Information, version 2 (SMIv2), which is included in <u>RFC</u> <u>2578</u>.

Genesys has registered its own, unique SNMP MIB object:

interintelli(2793)

Objects in MIB files that are created by PureConnect are listed under the following object ID (OID):

.1.3.6.1.4.1.2793

Objects in MIB files from other sources use different OIDs. For example, MIBs such as <code>aus.mib</code>, <code>HOST-RESOURCES-MIB.mib</code>, and <code>lmmib2.mib</code>, which are common on host servers, are not created by Genesys and the objects contained within are not members under the .1.3.6.1.4.1.2793 OID.

#### Manager

See Network Management System.

#### Network device

A piece of computerized equipment that is connected to a network.

Examples of network devices that commonly use SNMP are servers, routers, switches, IP telephones, VoIP gateways, and printers.

#### Network Management System (NMS)

Also known as an SNMP manager, a network management system communicates with network devices through the SNMP protocol. An NMS can request status information for one or more variables defined in a MIB located on the network device. An NMS also receives unsolicited *traps* that are also defined in a MIB from SNMP network devices.

#### Object Identifier (OID)

Standard: <u>section 3.1 in RFC1155</u>. Every object in a MIB file is assigned an OID. It is through OIDs that SNMP agents and Network Management Systems (NMSs) communicate variable bindings, such as the current amount of free hard drive

space.

#### Privacy protocol

A method of encrypting and decrypting SNMPv3 messages.

#### Protocol Data Units (PDU)

The format of an SNMP message. SNMP PDUs contain the following information:

- IP header
- UDP header
- version
- community
- PDU-type
- request-id
- error-status
- error-index
- variable bindings

For information about the messages that can be sent or received through SNMP, see SNMP messages.

#### Request

A message that a Network Management System (NMS) sends to an SNMP agent. This message requests that the SNMP agent send status information about a specific variable to the NMS.

#### Traps

Unsolicted messages that an SNMP agent sends to a Network Management System (NMS) as specified in a destination address.

SNMP agents send trap messages when variables, as defined in Management Information Base (MIB) files on the network devices, meet a specific criterion, such as a lack of free hard drive space.

#### User

The identifier used in conjunction with a password to authenticate SNMPv3 messages.

#### Variable bindings

An object and one or more values as defined in a Management Information Base (MIB) file.

Each object has a unique object identifier (OID). Within an object, a MIB file can contain one or more values. The pairing of an object and the value is a variable binding.

For example, a MIB file may define an object for free storage space and includes the values of 20%, 10%, and 5%. The SNMP agent on the host network device sends a trap message when the free storage space of the network device reaches each of those defined thresholds.

Variable bindings do not apply only to trap messages. Some MIB files enable a Network Management System (NMS) to set values for an object through variable bindings as well.

#### Variables

One or more values assigned to an object in a Management Information Base (MIB) file.

#### Walk

A term that describes the process of a Network Management System (NMS) submitting a succession of GetNext SNMP requests to an SNMP agent on a network device. Usually, the succession of requests continues until the end of defined objects in a Management Information Base (MIB) file on the host network device.

Some operating systems contain an snmpwalk command that you can use to request data from an SNMP agent on a network device. Most NMS products also provide this functionality.

## **SNMP and Customer Interaction Center**

Customer Interaction Center and its subsystem products use SNMPv2c, SNMPv3, and proprietary protocols for real-time management and reporting of resources on host network devices, such as servers.

Mechanism	Туре	Areas of responsibility
Simple Network Management Protocol (SNMP)	Real-time	<ul> <li>Hardware:</li> <li>Status of components in a networked device</li> <li>Capacities</li> <li>Configured thresholds</li> <li>Current utilization</li> </ul>
Notifier/Remoco	Real-time	<ul> <li>Hardware, software, and contact center interactions:</li> <li>Errors</li> <li>Warnings</li> <li>Information</li> <li>Status</li> <li>Current utilization</li> </ul> Some Customer Interaction Center subsystem products, such as Interaction Media Server and Interaction Dialer, send errors and events to the Windows Event Log on the Customer Interaction Center server through the Notifier protocol.
Windows Event Log	Historical	Hardware and software Errors and problems encountered by the Windows operating system and other installed software. Some Customer Interaction Center subsystem products, such as Interaction Media Server, send errors and events to the Windows Event Log on the Customer Interaction Center server through the Notifier protocol.
Product-specific log files	Historical	Various errors, problems, and events recorded by software to one or more files on the host device. For some Customer Interaction Center subsystem products, the amount of data

## **Customer Interaction Center products that support SNMP**

Product	Supported SNMP services	
Customer Interaction Center server	PureConnect SNMP (through Remoco)	
Interaction Media Server	PureConnect SNMP	
Interaction SIP Proxy	PureConnect SNMP	
Session Manager	PureConnect SNMP	
Interaction Recorder	PureConnect SNMP	

## SNMP requirements for Customer Interaction Center products

- Ensure that Microsoft Windows SNMP Service is installed but disabled.
- Using the Services control panel, ensure that the following services are set correctly:
- The ININ SNMP service is set to start automatically.
- The Microsoft Windows SNMP Service is disabled.
- Ensure that all firewalls and network nodes between the host network device and the Network Management System (NMS) allow communications through the necessary protocols and ports. By default, the SNMP ports are UDP 161 and UDP 162.

For more information on the protocols and ports used for SNMP, see <u>SNMP network details</u>.

- Ensure that Domain Name Service (DNS) servers are properly configured so that communications between SNMP entities, such as agents and NMSs, reach the intended targets through fully-quality domain names (FQDN).
- Ensure that the SNMP entities, such as agents and NMSs, are configured to communicate within the same sub-network (subnet).

## **PureConnect SNMP service**

Genesys has developed an SNMP service (ININ SNMP) that provides more control and capabilities with SNMP. For CIC products that include the ININ SNMP service, the installation disables the Windows SNMP service (SNMP Service in Control Panel > Services). Upon startup, the ININ SNMP service reads all configuration settings for the Windows SNMP service, including accepted communities, registered MIB extension agents, and trap destinations, and binds to the default SNMP port 161.

#### Important!

Do not enable the Windows SNMP service while ININ SNMP is enabled as it will create a conflict for port 161.

Leaving the Windows SNMP service installed but disabled also provides the following benefits for ININ SNMP:

- Enables new registrations of any MIB extension agents
- Enables editing of configuration settings through the Microsoft Windows SNMP Service Properties dialog box

## Functionality of the PureConnect SNMP service

The ININ SNMP service functions as a master agent or agent registry. For CIC and its subsystems, the ININ SNMP service is the default SNMP service. It disables the Windows SNMP Service during installation or an update and binds to UDP port 161, which is the default SNMP port. The ININ SNMP service receives all SNMP requests and pass subrequests to any SNMP subagents that have registered with it (or Windows SNMP Service, previously).

All CIC products that use SNMP register as subagents with the ININ SNMP service and provide variable bindings to their included Management Information Base (MIB) files, such as those installed with the CIC server, Interaction Media Server, and Interaction SIP Proxy.

#### Note:

The Windows **SNMP Trap** service listens for trap messages from remote network entitites on UDP port 162. The **SNMP Trap** service is not associated with any SNMP activities that originate on the host computer. The ININ SNMP service is not dependent on or connected to the **SNMP Trap** service in any way.

# Customer Interaction Center products that use the PureConnect SNMP service

The PureConnect SNMP agent service is installed with the following Customer Interaction Center (CIC) products:

- Customer Interaction Center server
- Interaction Media Server
- Interaction SIP Proxy
- Session Manager
- Interaction Recorder

## Supported SNMP features

- Agent mode for all SNMP versions
- Manager mode for all SNMP versions
- User-based Security Model (USM) (RFC 3414), except for the HMAC-MD5-96 authentication protocol
- SNMPv3 user management through command line utility

## **Unsupported SNMP features**

- View-based Access Control Model (VACM) (RFC 3415)
- SNMP-FRAMEWORK-MIB definitions (<u>RFC 3411, section 5</u>)
- usmUserTable of the SNMP-USER-BASED-SM-MIB (<u>RFC 3414, section 5</u>)
- Transport Security Model (TSM) (<u>RFC 5591</u>)
- Extended Security Options (<u>ESO</u>)
- Discovery (<u>RFC 5343</u>)
- SNMPv3 authentication protocols:
- HMAC-MD5-96
- HMAC-SHA-2
- The snmpSetSerialNo object in the SNMP MIB defined in <u>RFC 3418</u>.
- SNMP MUX protocol and MIB (RFC 1227)
- Agent Extensibility Protocol (AgentX) (RFC 2741)
- SNMP over TCP (<u>RFC 3430</u>)
- SNMP proxying (<u>RFC 2273, RFC 2573, RFC 3413</u>)
- API for Manager or Agent mode for issuing and receiving responses for InformRequest style messages.

## **Configure SNMP for CIC products and subsystems**

Note: If you purchased a packaged server from Genesys, The ININ SNMP service is already installed.

This section contains the following topics:

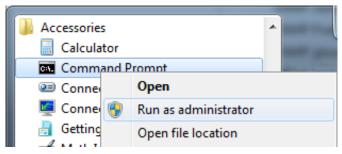
- <u>Configure PureConnect SNMP service through the command line utility</u>
- <u>Configure ININ SNMP v2c settings through SNMP Service Properties dialog box</u>
- Install MIB files on Customer Interaction Center
- <u>Configure SNMP in Customer Interaction Center products</u>
- <u>Customer Interaction Center server parameters for SNMP</u>
- Customer Interaction Center handlers for SNMP, Notifier, or Remoco

## Configure PureConnect SNMP service through the command line utility

#### Important!

You can configure SNMPv3 settings only through the PureConnect SNMP command line utility. For SNMPv2c settings, you can use either the PureConnect SNMP command line utility or the SNMP Service Properties dialog box.

1. On the Windows server hosting a CIC product and the PureConnect SNMP service, open a command prompt window as administrator.



2. Use the cd command in the command prompt window to navigate to the ININ SNMP subdirectory:

CIC product	Default PureConnect SNMP service directory	
Interaction Media Server	C:\Program Files (x86)\PureConnect\ININ SNMP	
Interaction SIP Proxy	C:\Program Files (x86)\PureConnect\ININ SNMP	
CIC server	D:\I3\IC\ININ SNMP\	

Examples:

cd "C:\Program Files (x86)\PureConnect\ININ SNMP"
cd "D:\I3\IC\ININ SNMP"

3. Enter the following command and press the Enter key:

ininsnmpconfig-w32r.exe

The command prompt window displays the following output and changes the prompt to ININ SNMP>.

ININ SNMP Configuration Connecting to ININ SNMP...Connected ININ SNMP>

The ININ SNMP> prompt indicates that the PureConnect SNMP service is in configuration mode.

Tip:

You can enter h or ? at the ININ SNMP> prompt and then press the Enter key to see a list of commands.

4. At the ININ SNMP> command prompt, configure the PureConnect SNMP service by entering the following command with the specified switches and necessary parameter values, and pressing the Enter key.

ININ SNMP>setup --posture param1 --authmethod param2 --authpassword param3 --engineid param4

#### posture **values**

param1 represents a secure configuration level

```
min
```

Configures outgoing messages to conform to SNMPv2c Accepts incoming messages conforming to SNMPv1 (Not secure for incoming message but able to provide security for traps) Deletes any previously defined SNMPv3 users for the PureConnect SNMP service Creates a user identifier of initial with no privacy method or password (security level: authNoPriv) Sets the snmpEngineID to the specified value Sets agent.defaultTraUsername to initial Example: --posture min

semi

```
Configures outgoing messages to conform to SNMPv3
Accepts incoming messages that conform to SNMPv3
Deletes all previously-defined users
Creates a user identity of initial with the specified authentication method and password, and the specified
privacy method and password (security level: authPriv)
Sets the snmpEngineID to the specified value
Sets agent.defaultTrapUsername to initial
Example:
--posture semi
```

very

Configures outgoing messages to conform to SNMPv3 Accepts incoming messages that conform to SNMPv3 Deletes all previously-defined users Sets the snmpEngineID to the specified value

#### Note:

The very value does not create the user, initial. The PureConnect SNMP service will not accept any SNMP requests until you define and user and password.

#### Example:

--posture very

#### authmethod values

*param2* represents the user authentication method that the PureConnect SNMP service users for each SNMP message.

none

No user authentication is done by the PureConnect SNMP service.

#### Example:

--authmethod none

#### sha

The PureConnect SNMP service users the HMAC-SHA-96 (SHA) protocol to create a message digest with an algorithm. The authentication keys used by the service are generated locally with the Engine ID and the password of the defined SNMPv3 user.

#### Example:

--authmethod sha

#### authpassword values

*param3* represents a password that you enter for the defined SNMPv3 user. The PureConnect SNMP service uses this password for user authentication of SNMP messages.

#### Example:

--authpassword mypassword

#### engineid values

param4 represents three components in a colon-separated string:

- A number specifying an identifying method (IP address, MAC address, character string)
- The Internet Assigned Numbers Authority (IANA)-assigned organization identifier

2793 is the IANA private enterprise identifer for "Interactive Intelligence", which was acquired by Genesys.

• A value conforming to the specified method

#### IPv4 address

1: *IANA org number*: *4 octets* **Example**: --engineid 1:2793:192.168.10.45

#### IPv6 address

2:IANA org number:16 octets

Example: --engineid 2:2793:2001:db8:3c4d:15::1a2f:1a2b

#### MAC address

3: IANA org number: MAC address

Example:

--engineid 3:2793:782bcb8d6987

#### Text

4: IANA org number: text (27 character maximum) Example: --engineid 4:2793:thisisatest

#### Octets

5: IANA org number: octets (27 character maximum) Example: --engineid 5:2793:38a63b9d76df893a

After you press the Enter key, the command prompt window displays the following messages:

Setting up ININ SNMP.... Completed, ININ SNMP setup.

5. At the ININ SNMP> command prompt, add an SNMP user by entering the following command with the specified switches and necessary parameter values, and then pressing the Enter key:

ININ SNMP>au -uparam1 -a param2 --authpasword param3 -p param4 --privpassword param5

u (username) values

param1 represents the name of an SNMP user to add to the PureConnect SNMP service for SNMPv3 authentication.

Example:

-u johnsmith

a (authmethod) values

*param2* represents the user authentication method that the PureConnect SNMP service users for each SNMP message for this user.

none

No user authentication is done by the PureConnect SNMP service.

sha

The PureConnect SNMP service uses the HMAC-SHA-96 (SHA) protocol to create a message digest with an algorithm. The authentication keys used by the service are generated locally with the Engine ID and the password of the defined SNMPv3 user.

Example:

-a sha

#### authpassword values

*param3* represents a password that you enter for the defined SNMPv3 user. The PureConnect SNMP service users this password for user authentication of SNMP messages.

#### Example:

--authpassword mypassword

#### p (privmethod) values

param4 represents the privacy protocol that the PureConnect SNMP service uses for this SNMP user.

none

No privacy protocol is used. Example: -p none

des

The PureConnect SNMP service uses the CBC-DES Symmetric Encryption Protocol for this SNMP user. Example:

-p des

aes128

The PureConnect SNMP service uses the Advanced Encryption Standard (AES) Cipher Algorithm for this SNMP user.

Example:

-p aes128

privpassword values

param5 represents the password that the PureConnect SNMP service uses to generate keys with the specified privacy protocol for this SNMP user.

Note:

If you specify the privacy method (-p) as none, the --privpassword parameter is not required.

#### Example:

--privpassword mypassword

After you press the Enter key, the command prompt window displays the following messages:

Adding user "username"... Completed, user added.

#### Tip:

To see a list of all users while using the PureConnect SNMP configuration tool, enter lu and then press the Enter key.

6. At the ININ SNMP> prompt, add a trap destination by entering the following command with the specified switches and necessary parameter values, and pressing the Enter key:

ININ SNMP> atd --community param1 --uri param2

community values

*param1* represens a name that you define as an SNMP community identifier for SNMPv2c communications. This name is not used with SNMPv3 messages or authentication.

Supply a community name so that the PureConnect SNMP service can exchange message with multiple Network Management System (NMS) instances that support the range of SNMPv1, SNMPv2c, SNMPv3.

Example:

--community myexamplecommunity

uri values

param2 represents a Uniform Resource Identifier (URI) destination, which is used for SNMP messages.

#### Note:

You can specify more separate destination URIs for differing protocols. For exaple, you can set the default URI as localhost and the SNMPv3 destination as username@myhost.com.

#### Tip:

Using the uri switch, you can specify additional information in the value, such as the SNMP user name and the network port to use.

default

This value configures the PureConnect SNMP service to send all SNMP messages to the specified URI of an NMS.

If you use multiple SNMP agents that use differing versions (v1, v2c, v3), setting this value to the URI of an NMS that is capable of processing messages from all versions provides the simplest configuration. Examples:

```
--uri default://mynms.example.com
--uri default://192.168.1.100
```

#### Note:

If you do not use the default value, the trap destination is not saved so that it appears in the Windows **SNMP Service** dialog box. The **PureConnect SNMP** service will save and use trap destinations that use values other than default but they are not displayed in the Windows **SNMP Service** dialog box.

snmp

At this time, this value is equivalent to using the default value in that it sends messages for all SNMP versions to the specified URI of an NMS.

Examples:

```
--uri snmp://mynms.example.com
--uri snmp://192.168.1.100
```

snmpv1

This value configures the PureConnect SNMP service to send all SNMPv1 messages are sent to the specified URI of an NMS.

#### Examples:

```
--uri snmpv1://mynms1.example.com
--uri snmpv2://192.168.1.102
```

snmpv2

This value configures the PureConnect SNMP service to send all SNMPv2c messages are sent to the specified URI of an NMS.

#### Examples:

```
--uri snmpv2://mynms.example.com
--uri snmpv2://192.168.1.102
```

snmpv3

This value configures the PureConnect SNMP service to send all SNMPv3 messages are sent to the specified URI of an NMS.

You can specify an SNMP user and network port number as part of the URI in the following format:

snmpuser@uri:port

Examples:

```
--uri snmpv3://testuser@mynms3.example.com:8161
--uri snmpv3://192.168.1.103
```

#### Note:

You can add multiple trap destination URIs for each protocol version. For example, you can specify one SNMPv2c trap destination and five or more SNMPv3 trap destinations. To see a list of all defined trap destinations while using the PureConnect SNMP configuration tool, enter ltd at the ININ SNMP> prompt, and then press the Enter key.

7. At the ININ SNMP> prompt, set a default user to associate with SNMPv3 traps by entering the following command and then pressing the Enter key:

ININ SNMP>sdtu --username param1

*param1* represents an SNMP user that you have already added with the au -u username command in the PureConnect SNMP configuration tool.

After you press the Enter key, the command prompt window displays the following messages:

Setting the default trap user to "username"... Completed, default trap user changed.

8. At the ININ SNMP> prompt, add an accepted host for which the PureConnect SNMP service will receive and process SNMP messages by entering the following command with the specified switch and then pressing the Enter key:

ININ SNMP>aah --host param1

*param1* represents the fully-qualified domain name (FQDN) or IP address of a host from which the PureConnect SNMP service will receive and process SNMP messages.

Tip: You can add multiple hosts through a single aah command by adding multiple --host param switches. Example: aah --host 192.168.1.90 --host 192.168.1.91

After pressing the Enter key, the command prompt window displays the following messages:

```
Adding the accept host(s)...
Completed, host(s) added.
```

#### Tip:

You can list all defined accepted hosts by entering the lah command at the ININ SNMP> prompt and then pressing the Enter key.

9. If you need to set a minimum SNMP version that is acceptable to the PureConnect SNMP service, enter the following command with the specified switches and parameters and then press the Enter key:

Note:

This command is required only if you previously set the setup --posture command to a value of min. For the semi and very values, the PureConnect SNMP service automatically sets the accepted and outgoing SNMP version to 3.

ININ SNMP>smv --snmpversion param1

param1 represents a single digit that corresponds to an SNMP version as defined in the following table:

1	SNMPv1
2	SNMPv2c
3	SNMPv3

The PureConnect SNMP service will accept SNMP messages for the specific version and any later version, if one exists. After you press the Enter key, the command prompt window display the following messages:

Setting the default accepted SNMP version to version-n (n) Completed, default accepted SNMP version changed.

10. If you need to set a minimum SNMP version that the PureConnect SNMP service is allowed to send, enter the following command with the specified switches and parameters and then press the Enter key:

#### Note:

This command is required only if you set the setup --posture command to a value of min. For the semi and very values, the ININ SNMP service automatically sets the accepted and outgoing SNMP version to 3.

ININ SNMP>sdv --snmpversion param1

param1 represents a single digit that corresponds to an SNMP version as defined in the following table:

1	SNMPv1
2	SNMPv2c
3	SNMPv3

The PureConnect SNMP service will send SNMP that conform to the specific version and any later version, if one exists. After you press the Enter key, the command prompt window displays the following messages:

Setting the default outgoing SNMP version to version-n (n)... Completed, default outgoing SNMP version changed.

11. To check the status of the SNMP configuration, enter s at the ININ SNMP> prompt and then press the Enter key. The command prompt window displays the following messages and the associated values (examples shown):

```
Getting ININ SNMP status ...
Configured SNMP port: 161
In use SNMP port: 161
SNMP Port bind status: Both IPv4 and IPv6 ports successfully bound
In packets: 523
Out packets: 957
Minimum accepted SNMP version: version-3 (3)
Default outgoing SNMP version: version-3 (3)
Default trap username: myexampleuser
```

12. To exit the ininsnmpconfig utility, enter x at the ININ SNMP> prompt and then press the Enter key.

#### Note:

Ensure the Windows Firewall allows ports 161 and 162 for SNMP and traps to the Network Management Servers that you specified as trap destinations.

# Configure ININ SNMP v2c settings through SNMP Service Properties dialog box

You can configure the SNMPv1 and SNMPv2c settings of the ININ SNMP service through the interfaces of the CIC products that install the service. Additionally, you can use the dialog box for the disabled Windows **SNMP Service**.

#### Important!

Microsoft Windows **SNMP Service** does not support SNMPv3. As such, you cannot configure SNMPv3 users, passwords, or authentication methods through the **SNMP Service Properties** dialog box. To configure users and authentication for SNMPv3, the ININ SNMP service includes the ininsnmpconfig-w32r.exe command line utility. For more information, see Configure ININ SNMP service through the command line utility.

#### Note:

If the Windows SNMP Service is not installed, Genesys recommends that you add this feature but ensure that it is disabled.

- 1. At the Windows host machine, log on with an administrative account.
- 2. Select Start > Run.
- 3. Enter services.msc and select OK.
- 4. In the Services window, double-click the SNMP Service entry.
- 5. On the General tab of the SNMP Service Properties (Local Computer) dialog box, set the Startup type box to Automatic.
- 6. Select the Agent tab.
- 7. In the Contact box, enter the name of the Customer Interaction Center administrator account.

SNMP Service Properties (Local Computer)
General Log On Recovery Agent Traps Security Dependencies
Internet management systems may request the contact person, system location, and network services for this computer from the SNMP service.
Contact:
Location:
Service
Learn more about <u>SNMP</u>
OK Cancel <u>Apply</u>

- 8. In the Services section, enable the following check boxes:
  - Applications
  - Internet
  - End-to-end
- 9. Select the Traps tab.

SNMP Service Properties (Local Computer)		
General Log On Recovery Agent Traps Security Dependencies		
The SNMP Service provides network management over TCP/IP and IPX/SPX protocols. If traps are required, one or more community names must be specified. Trap destinations may be host names, IP addresses or IPX addresses.		
Community name		
Trap destinations:		
A <u>d</u> d <u>E</u> dit Re <u>m</u> ove		
Leam more about <u>SNMP</u>		
OK Cancel Apply		

- 10. In the **Community name** box, enter the name of an SNMP community in which this server will participate and then select the **Add to list** button.
- 11. Below the **Trap destinations** box, select the **Add** button.
- 12. In the Host name, IP or IPX address box of the SNMP Service Configuration dialog box, enter the address of the Network Management System (NMS) that will receive SNMP traps from this server.

SNMP Service Configuration	×
	Add
Host name, IP or IPX address:	Cancel

You can use a host name, fully-qualified domain name, or IP address to specify the destination server.

- 13. In the SNMP Service Configuration dialog box, select the Add button.
- 14. In the SNMP Service Properties (Local Computer) dialog box, select the Security tab.

SNMP Service Properties (Lo	cal Computer)	)	>
General Log On Recovery	Agent   Traps	Security [	Dependencies
Send authentication trap			
Accepted community <u>n</u> ame	s		
Community	Ri	ghts	
, A <u>d</u> d	<u>E</u> dit	Remov	e
C Accept SNMP packets	from any host		
Accept SNMP packets     localhost	s from <u>t</u> hese host	s	
Add	Ed <u>i</u> t	Re <u>m</u> ove	•
Learn more about <u>SNMP</u>			
	ОК	Cancel	Apply

- 15. Ensure that the **Send authentication trap check box** is enabled.
- 16. In the Accepted community names group box, select the Add button.
- 17. In the **Community rights** box of the **SNMP Service Configuration** dialog box, select the rights that the community will have for SNMP objects on this server.

SNMP Service Configuration	×
Community rights:	Add
<u>C</u> ommunity Name:	Cancel

#### NONE

The host system will not process any SNMP requests from the specified community.

#### NOTIFY

The host system will send SNMP traps to the specified community.

#### **READ ONLY**

The host system will send SNMP traps and fulfill SNMP object data GET requests from systems in the specified community.

#### **READ WRITE**

The host system will send SNMP traps, fulfill SNMP object data GET requests, and process SET requests on existing SNMP objects from systems in the specified community.

#### **READ CREATE**

The host system will send SNMP traps, fulfill SNMP object data GET requests, process SET requests on existing SNMP objects, and fulfill creation requests for new entries in SNMP tables from systems in the specified community.

18. In the **Community Name** box, enter the name of the SNMP community to have the specified rights.

Caution!

Do not use **Public** as an SNMP community name as it is the default community name for many SNMP products. Because of the security concerns with SNMPv2c, you should protect your SNMP community names as though they were passwords.

19. Select the Add button.

To add more communities and rights, repeat steps 16 through 19.

- 20. In the SNMP Service Properties (Local Computer) dialog box, select the the appropriate option for receiving SNMP packets.
- 21. If you choose to limit which systems can send SNMP packets to this host, those systems must still be members of an allowed SNMP community.

#### Important!

Genesys recommends that you specify which systems can send SNMP messages to this host server by using the Accept SNMP packets from these hosts option and specifying the necessary addresses through the Add button.

22. Select the OK button.

## Install MIB files on Customer Interaction Center

- 1. If you have not done so already:
  - a. Download the CIC .iso file from the PureConnect product information site at the following URL address: https://help.genesys.com/pureconnect/secure/Downloads.aspx
  - b. Copy the .iso file to a non-Customer Interaction Center file server with a high bandwidth connection to the machines on which you will install CIC products.
  - c. Mount the .iso file and share the contents to make them accessible to the machines on which you will install CIC products.
- 2. Navigate to the \Additional Files\SNMP directory of the mounted .iso image.
- 3. Copy the i3ic.mib and i3icrecorder.mib files to the \I3\IC\Server directory on the Customer Interaction Center server.

## **Configure SNMP in Customer Interaction Center products**

To configure SNMPv2c settings for a specific Customer Interaction Center product, see the documentation listed for that product.

Customer Interaction Center product	Product documentation
Customer Interaction Center server	CIC and SNMP Technical Reference
Interaction Media Server	Interaction Media Server Technical Reference
Interaction SIP Proxy	Interaction SIP Proxy Technical Reference Interaction SIP Proxy Help
Session Manager	Session Manager has no direct user interface and is configured through Interaction Administrator, which connects the SNMP features with the CIC Remoco subsystem (IC System Manager) for reporting information and traps. You can edit the <code>i3icsessionmanager.mib</code> and <code>i3icstatalertserver.mib</code> files to change thresholds and other MIB object values.
Interaction Recorder	For SNMP, Interaction Recorder has no direct user interface and is configured through Interaction Administrator, which connects the SNMP features with the CIC Remoco subsystem (IC System Manager) for reporting information and traps. Statistics about recordings gathered through SNMP are displayed in Interaction Supervisor. You can edit i3icrecorder.mib to change thresholds and other MIB object values.

#### Important!

To use the SNMPv3 features of the PureConnect SNMP service, you configure the users and encryption settings through the ININ SNMP configuration command line utility in a command prompt window with administrator privileges. For more information on the ININ SNMP configuration command line utility, see <u>Configure ININ SNMP service through the command line utility</u>.

## **Customer Interaction Center server parameters for SNMP**

The Customer Interaction Center server supports the following server parameters:

Server parameter	Values	Description
Allow SNMP Process Restarts	<ul><li>0 (default)</li><li>1</li></ul>	This server parameter enables stopping and restarting Customer Interaction Center server processes through SNMP SETRequest messages. Set this server parameter to 1 to enable this functionality.
SNMPTrapEnterprise	<ul> <li>All</li> <li>I3</li> <li>ININ (default)</li> <li>None</li> </ul>	This server parameter, set by default on packaged servers, enables the Customer Interaction Center server to send SNMP trap messages to handlers, which can be customized. The value indicates which SNMP trap messages to send to handlers.

For information on how to set server parameters, see Interaction Administrator Help.

## Customer Interaction Center handlers for SNMP, Notifier, or Remoco

The following initiators and tools in Customer Interaction Center handlers support SNMP, Notifier, or Remoco:

- Receive Log Events initiator
- Receive Trap initiator
- Get Process Information tool
- Merge Log Event Messages tool
- Merge Log Event ID and Insertion Strings tool
- Restart IC Subsystem tool
- Stop IC Subsystem tool

For more information on these initiators and tools, see Interaction Designer Help.

## **Customer Interaction Center Management Information** Base files

Several Customer Interaction Center products use Simple Network Management Protocol (SNMP) to provide information about a host server and its software to a Network Management System (NMS).

This section contains the following topics about base files:

- <u>General</u>
- Customer Interaction Center
- Interaction Recorder
- Interaction Media Server
- Interaction SIP Proxy
- Session Manager
- StatAlert Server

## General

The MIB files in this section apply to multiple Customer Interaction Center products.

- HOST-RESOURCES-MIB.mib
- hrSystem objects
- hrStorage objects
- hrDevice objects
- hrSWRun objects
- hrSWRunPerf objects
- hrSWInstalled objects

## HOST-RESOURCES-MIB.mib

The following Customer Interaction Center products use the HOST-RESOURCES-MIB.mib file:

- Interaction Media Server
- Interaction SIP Proxy

The HOST-RESOURCES-MIB.mib file contains the following SNMP object types:

SNMP object type	Description
hrSystem	This object contains information about running time, date, parameters, users, and processes on the host system. See <u>hrSystem objects</u> .
hrStorage	This object contains information on available memory space and local storage space on the host system. See <u>hrStorage objects</u> .
hrDevice	This object contains information on hardware installed on the host system. See hrDevice objects.
hrSWRun	This object contains information on software processes that are running on the host system. See <u>hrSWRun</u> objects.
hrSWRunPerf	This object contains information on the CPU and memory impacts of software processes that are running on the host system. See <a href="https://www.host.system">https://www.host.system</a> .
hrSWInstalled	This object contains information on the versions of software installed on the host system. See <u>hrSWInstalled</u> objects.

## hrSystem objects

## hrSystemUptime

Туре	Access	Description
TimeTicks	read- only	The amount of time since this host was last initialized. Note that this is different from sysUpTime in MIB-II [3] because sysUpTime is the uptime of the network management portion of the system.

### hrSystemDate

Туре	Access	Description
DateAndTime	read-write	The host's notion of the local date and time of day.

## hrSystemInitialLoadDevice

Туре	Access	Description
Integer	read- write	The index of the hrDeviceEntry for the device from which this host is configured to load its initial operating system configuration.

## hrSystemInitialLoadParameters

Туре	Access	Description
InternationalDisplayString	read- write	This object contains the parameters (e.g. a pathname and parameter) supplied to the load device when requesting the initial operating system configuration from that device.

### hrSystemNumUsers

Туре	Access	Description
Gauge	read- only	The number of user sessions for which this host is storing state information. A session is a collection of processes requiring a single act of user authentication and possibly subject to collective job control.

### hrSystemProcesses

Туре	Access	Description
Gauge	eread-only	The number of process contexts currently loaded or running on this system.

### hrSystemMaxProcesses

Туре	Access	Description
Integer	read- only	The maximum number of process contexts this system can support. If there is no fixed maximum, the value should be zero. On systems that have a fixed maximum, this object can help diagnose failures that occur when this maximum is reached.

## hrStorage objects

### hrMemorySize

Туре	Access	Description
KBytes	read-only	The amount of physical main memory contained by the host

## hrStorageTable

Туре	Access	Description
N/A		The (conceptual) table of logical storage areas on the host. An entry shall be placed in the storage table for each logical area of storage that is allocated and has fixed resource limits. The amount of storage represented in an entity is the amount actually usable by the requesting entity, and excludes loss due to formatting or file system reference information. These entries are associated with logical storage areas, as might be seen by an application, rather than physical storage entities which are typically seen by an operating system. Storage such as tapes and floppies without file systems on them are typically not allocated in chunks by the operating system to requesting applications, and therefore shouldn't appear in this table. Examples of valid storage for this table include disk partitions, file systems, ram (for some architectures this is further segmented into regular memory, extended memory, and so on), backing store for virtual memory (`swap space'). This table is intended to be a useful diagnostic for `out of memory' and `out of buffers' types of failures. In addition, it can be a useful performance monitoring tool for tracking memory, disk, or buffer usage.

## hrStorageEntry

Туре	Access	Description
N/A	not- accessible	A (conceptual) entry for one logical storage area on the host. As an example, an instance of the hrStorageType object might be named hrStorageType.3
		Each entry contains data for the following objects:
		hrStorageIndex
		hrStorageType
		hrStorageDescr
		hrStorageAllocationUnits
		hrStorageSize
		hrStorageUsed
		hrStorageAllocationFailures

## hrStorageIndex

Туре	Access	Description
Integer	read-only	A unique value for each logical storage area contained by the host.

## hrStorageType

	Туре	Access	Description
Obje	ect Identifier	read-only	The type of storage represented by this entry.

## hrStorageDescr

Туре	Access	Description
DisplayString	read-only	A description of the type and instance of the storage described by this entry.

## hrStorageAllocationUnits

Туре	Access	Description
Integer		The size, in bytes, of the data objects allocated from this pool. If this entry is monitoring sectors, blocks, buffers, or packets, for example, this number will commonly be greater than one. Otherwise this number will typically be one.

## hrStorageSize

Туре	Access	Description
Integer	read-write	The size of the storage represented by this entry, in units of hrStorageAllocationUnits.

### hrStorageUsed

Тур	e Access	Description
Integ	erread-only	The amount of the storage represented by this entry that is allocated, in units of hrStorageAllocationUnits.

### hrStorageAllocationFailures

Туре	Access	Description
Counter	read- only	The number of requests for storage represented by this entry that could not be honored due to not enough storage. It should be noted that as this object has a SYNTAX of Counter, that it does not have a defined initial value. However, it is recommended that this object be initialized to zero.

## hrDevice objects

## hrDeviceTable

Τ	ype	Access	Description
Ν	I/A	not-accessible	The (conceptual) table of devices contained by the host.

## hrDeviceEntry

Туре	Access	Description
N/A	not- accessible	A (conceptual) entry for one device contained by the host. As an example, an instance of the hrDeviceType object might be named hrDeviceType.3
		Each entry contains data for the following objects:
		hrDeviceIndex
		hrDeviceType
		hrDeviceDescr
		hrDeviceID
		hrDeviceStatus
		hrDeviceErrors

## hrDeviceIndex

Туре	Access	Description
Integer	read- only	A unique value for each device contained by the host. The value for each device must remain constant at least from one re-initialization of the agent to the next re-initialization.

## hrDeviceType

Туре	Access	Description
Object	read-	An indication of the type of device.
Identifier	only	If this value is `hrDeviceProcessor { hrDeviceTypes 3 }' then an entry exists in the hrProcessorTable which corresponds to this device.
		If this value is `hrDeviceNetwork { hrDeviceTypes 4 }', then an entry exists in the hrNetworkTable which corresponds to this device.
		If this value is `hrDevicePrinter { hrDeviceTypes 5 }', then an entry exists in the hrPrinterTable which corresponds to this device.
		If this value is `hrDeviceDiskStorage { hrDeviceTypes 6 }', then an entry exists in the hrDiskStorageTable which corresponds to this device.

### hrDeviceDescr

Т	уре	Access	Description
Displ	ayString	read- only	A textual description of this device, including the device's manufacturer and revision, and optionally, its serial number.

### hrDeviceID

Туре	Access	Description
ProductID	read-only	The product ID for this device.

## hrDeviceStatus

Туре	Access	Description
Integer	read- only	The current operational state of the device described by this row of the table. A value unknown(1) indicates that the current state of the device is unknown. running(2) indicates that the device is up and running and that no unusual error conditions are known. The warning(3) state indicates that agent has been informed of an unusual error condition by the operational software (e.g., a disk device driver) but that the device is still 'operational'. An example would be a high number of soft errors on a disk. A value of testing(4), indicates that the device is not available for use because it is in the testing state. The state of down(5) is used only when the agent has been informed that the device is not available for any use. This object supports the following values: 1 = unknown 2 = running 3 = warning
		4 = testing
		5 = down

## hrDeviceErrors

Туре	Access	Description
Counter	read- only	The number of errors detected on this device. It should be noted that as this object has a SYNTAX of Counter, that it does not have a defined initial value. However, it is recommended that this object be initialized to zero.

## hrProcessorTable

Туре	Access	Description
N/A	not- accessible	The (conceptual) table of processors contained by the host. Note that this table is potentially sparse: a (conceptual) entry exists only if the correspondent value of the hrDeviceType object is `hrDeviceProcessor'.

## hrProcessorEntry

Туре	Access	Description	
N/A	not- accessible	A (conceptual) entry for one processor contained by the host. The hrDeviceIndex in the index represents the entry in the hrDeviceTable that corresponds to the hrProcessorEntry.	
		As an example of how objects in this table are named, an instance of the hrProcessorFrwID object might be named hrProcessorFrwID.3	
		Each entry contains data for the following objects:	
		hrProcessorFrwID	
		hrProcessorLoad	

### hrProcessorFrwID

Туре	Access	Description
ProductID	read-only	The product ID of the firmware associated with the processor.

## hrProcessorLoad

Туре	Access	Description
Integer		The average, over the last minute, of the percentage of time that this processor was not idle. Implementations may approximate this one minute smoothing period if necessary.

## hrNetworkTable

Туре	Access	Description
N/A		The (conceptual) table of network devices contained by the host. Note that this table is potentially sparse: a (conceptual) entry exists only if the correspondent value of the hrDeviceType object is `hrDeviceNetwork'.

## hrNetworkEntry

Туре	Access	Description	
N/A	not- accessible	A (conceptual) entry for one network device contained by the host. The hrDeviceIndex in the index represents the entry in the hrDeviceTable that corresponds to the hrNetworkEntry.	
		As an example of how objects in this table are named, an instance of the hrNetworkIfIndex object might be named hrNetworkIfIndex.3.	
		Each entry contains data for the following objects:	
		hrNetworkIfIndex	

## hrNetworkIfIndex

Туре	Access	Description
Integer	read-only	The value of ifIndex which corresponds to this network device.

## hrPrinterTable

Туре	Access	Description
N/A	not- accessible	The (conceptual) table of printers local to the host. Note that this table is potentially sparse: a (conceptual) entry exists only if the correspondent value of the hrDeviceType object is `hrDevicePrinter'. Each entry contains data for the following objects: HrPrinterEntry

## hrPrinterEntry

Туре	Access	Description
N/A	not- accessible	A (conceptual) entry for one printer local to the host. The hrDeviceIndex in the index represents the entry in the hrDeviceTable that corresponds to the hrPrinterEntry.
		As an example of how objects in this table are named, an instance of the hrPrinterStatus object might be named hrPrinterStatus.3
		Each entry contains data for the following objects:
		hrPrinterStatus
		hrPrinterDetectedErrorState

### hrPrinterStatus

Туре	Access	Description
Integer	read-only	The current status of this printer device.
		This object supports the following values:
		1 = other
		2 = unknown
		3 = idle
		4 = printing
		5 = warmup

## hrPrinterDetectedErrorState

Туре	Access				Description
Octet String	read- only	This object represer an octet string, with		•	e detected by the printer. The error conditions are encoded as bits in ns:
		Condition	Bit	hrDeviceStatus	
		IowPaper	0	warning(3)	
		noPaper	1	down(5)	
		lowToner	2	warning(3)	
		noToner	3	down(5)	
		doorOpen	4	down(5)	
		jammed	5	down(5)	
		offline	6	down(5)	
		serviceRequested	7	warning(3)	
			viceS	tatus shall corresp	d and the hrDeviceStatus would not otherwise be unknown(1) or bond to the worst state of those indicated, where down(5) is worse g(2).
		first byte being bit 7	, the	most significant bi	ignificant bit of the first byte being bit 0, the least significant bit of the it of the second byte being bit 8, and so on. A one bit encodes that t encodes that the condition was not detected.
		This object is usefu those requiring hum		- ·	or to specific warning or error conditions that may occur, especially

## hrDiskStorageTable

Туре	Access	Description
N/A	not- accessible	The (conceptual) table of long-term storage devices contained by the host. In particular, disk devices accessed remotely over a network are not included here.
		Note that this table is potentially sparse: a (conceptual) entry exists only if the correspondent value of the hrDeviceType object is `hrDeviceDiskStorage'.

## hrDiskStorageEntry

Туре	Access	Description
N/A	not- accessible	A (conceptual) entry for one long-term storage device contained by the host. The hrDeviceIndex in the index represents the entry in the hrDeviceTable that corresponds to the hrDiskStorageEntry. As an example, an instance of the hrDiskStorageCapacity object might be named hrDiskStorageCapacity.3
		Each entry contains data for the following objects:
		hrDiskStorageAccess
		hrDiskStorageMedia
		hrDiskStorageRemoveble
		hrDiskStorageCapacity

## hrDiskStorageAccess

Туре	Access	Description
Integer	read- only	An indication if this long-term storage device is readable and writable or only readable. This should reflect the media type, any write-protect mechanism, and any device configuration that affects the entire device. This object supports the following values:
		1 = readWrite 2 = readOnly

## hrDiskStorageMedia

Туре	Access	Description
Integer	read-only	An indication of the type of media used in this long-term storage device.
		This object supports the following values:
		1 = other
		2 = unknown
		3 = hardDisk
		4 = floppyDisk
		5 = opticalDiskROM
		6 = opticalDiskWORM
		7 = opticalDiskRW
		8 = ramDisk

## hrDiskStorageRemoveble

Туре	Access	Description
Boolean	read-only	Denotes whether or not the disk media may be removed from the drive.
		This object supports the following values:
		1 = true
		2 = false

## hrDiskStorageCapacity

Туре	Access	Description
KBytes	read-only	The total size for this long-term storage device.

## hrPartitionTable

Туре	Access	Description
N/A		The (conceptual) table of partitions for long-term storage devices contained by the host. In particular, partitions accessed remotely over a network are not included here.

## hrPartitionEntry

Туре	Access	Description
N/A	not- accessible	A (conceptual) entry for one partition. The hrDeviceIndex in the index represents the entry in the hrDeviceTable that corresponds to the hrPartitionEntry.
		As an example of how objects in this table are named, an instance of the hrPartitionSize object might be named hrPartitionSize.3.1
		Each entry contains data for the following objects:
		hrPartitionIndex
		hrPartitionLabel
		hrPartitionID
		hrPartitionSize
		hrPartitionFSIndex

## hrPartitionIndex

Туре	Access	Description			
Integer	read- only	A unique value for each partition on this long-term storage device. The value for each long-term storage device must remain constant at least from one re-initialization of the agent to the next re-initialization.			

### hrPartitionLabel

Туре	Access	Description
InternationalDisplayString	read-only	A textual description of this partition.

#### hrPartitionID

Туре	Access	Description
Octet String		A descriptor which uniquely represents this partition to the responsible operating system. On some systems, this might take on a binary representation.

#### hrPartitionSize

Туре	Access	Description	
KBytes	read-only	The size of this partition.	

### hrPartitionFSIndex

Туре	Access	Description	
Integer	read- only	The index of the file system mounted on this partition. If no file system is mounted on this partition, then this value shall be zero. Note that multiple partitions may point to one file system, denoting that that file system resides on those partitions. Multiple file systems may not reside on one partition.	

### hrFSTable

Туре	Access	Description
N/A		The (conceptual) table of file systems local to this host or remotely mounted from a file server. File systems that are in only one user's environment on a multi-user system will not be included in this table.

# hrFSEntry

Туре	Access	Description			
N/A	not- accessible	A (conceptual) entry for one file system local to this host or remotely mounted from a file server. File systems that are in only one user's environment on a multi-user system will not be included in this table.			
		As an example of how objects in this table are named, an instance of the hrFSMountPoint object might be named hrFSMountPoint.3			
		Each entry contains data for the following objects:			
		hrFSIndex			
		hrFSMountPoint			
		hrFSRemoteMountPoint			
		hrFSType			
		hrFSAccess			
		hrFSBootable			
		hrFSStorageIndex			
		hrFSLastFullBackupDate			
		hrFSLastPartialBackupDate			

# hrFSIndex

Туре	Access	Description
Integer		A unique value for each file system local to this host. The value for each file system must remain constant at least from one re-initialization of the agent to the next re-initialization.

# hrFSMountPoint

Туре	Access	Description
InternationalDisplayString	read-only	The path name of the root of this file system.

# hrFSRemoteMountPoint

Type Access		Description		
InternationalDisplayString reac only		A description of the name and/or address of the server that this file system is mounted from. This may also include parameters such as the mount point on the remote file system. If this is not a remote file system, this string should have a length of zero.		

# hrFSType

Туре	Access	Description		
Object Identifier	read-only	The value of this object identifies the type of this file system.		
			ject supports the fo	llowing values:
		Value	File system type	
		1	hrFSOther	
		2	hrFSUnknown	
		3	hrFSBerkeleyFFS	
		4	hrFSSys5FS	
		5	hrFSFat	
		6	hrFSHPFS	
		7	hrFSHFS	
		8	hrFSMFS	
		9	hrFSNTFS	
		10	hrFSVNode	
		11	hrFSJournaled	
		12	hrFSiso9660	
		13	hrFSRockRidge	
		14	hrFSNFS	
		15	hrFSNetware	
		16	hrFSAFS	
		17	hrFSDFS	
		18	hrFSAppleshare	
		19	hrFSRFS	
		20	hrFSDGCFS	
		21	hrFSBFS	

### hrFSAccess

Туре	Access	Description
Integer	read- only	An indication if this file system is logically configured by the operating system to be readable and writable or only readable. This does not represent any local access-control policy, except one that is applied to the file system as a whole. This object supports the following values:
		1 = readWrite 2 = readOnly

## hrFSBootable

Туре	Access	Description
Boolean	read-only	A flag indicating whether this file system is bootable.

# hrFSStorageIndex

Туре	Access	Description
Integer	only	The index of the hrStorageEntry that represents information about this file system. If there is no such information available, then this value shall be zero. The relevant storage entry will be useful in tracking the percent usage of this file system and diagnosing errors that may occur when it runs out of space.

# hrFSLastFullBackupDate

Туре	Access	Description
DateAndTime		The last date at which this complete file system was copied to another storage device for backup. This information is useful for ensuring that backups are being performed regularly.
		If this information is not known, then this variable shall have the value corresponding to January 1, year 0000, 00:00:00.0, which is encoded as (hex)'00 00 01 01 00 00 00 00'.

# hrFSLastPartialBackupDate

Туре	Access	Description
DateAndTime	read- write	The last date at which a portion of this file system was copied to another storage device for backup. This information is useful for ensuring that backups are being performed regularly.
		If this information is not known, then this variable shall have the value corresponding to January 1, year 0000, 00:00:00.0, which is encoded as (hex)'00 00 01 01 00 00 00 00'.

# hrSWRun objects

#### hrSWOSIndex

Туре	Access	Description
Integer32		The value of the hrSWRunIndex for the hrSWRunEntry that represents the primary operating system running on this host. This object is useful for quickly and uniquely identifying that primary operating system.

#### hrSWRunTable

Туре	Access	Description
N/A	not-accessible	The (conceptual) table of software running on the host.

# hrSWRunEntry

Туре	Access	Description	
N/A	not- accessible	A (conceptual) entry for one piece of software running on the host Note that because the installed softwar table only contains information for software stored locally on this host, not every piece of running softwar will be found in the installed software table. This is true of software that was loaded and run from a non-lo source, such as a network-mounted file system.	
		As an example of how objects in this table are named, an instance of the hrSWRunName object might be named hrSWRunName.1287	
		Each entry contains data for the following objects:	
		hrSWRunIndex	
		hrSWRunName	
		hrSWRunID	
		hrSWRunPath	
		hrSWRunParameters	
		hrSWRunType	
		hrSWRunStatus	

#### hrSWRunIndex

Туре	Access	Description
Integer32		A unique value for each piece of software running on the host. Wherever possible, this should be the system's native, unique identification number.

#### hrSWRunName

Туре	Access	Description
InternationalDisplayString		A textual description of this running piece of software, including the manufacturer, revision, and the name by which it is commonly known. If this software was installed locally, this should be the same string as used in the corresponding hrSWInstalledName.

### hrSWRunID

Туре	Access	Description
ProductID	read-only	The product ID of this running piece of software.

# hrSWRunPath

Туре	Access	Description
InternationalDisplayString		A description of the location on long-term storage (e.g. a disk drive) from which this software was loaded.

#### hrSWRunParameters

Туре	Access	Description
InternationalDisplayString	read-only	A description of the parameters supplied to this software when it was initially loaded.

# hrSWRunType

Туре	Access	Description
Integer	read-only	The type of this software.
		This object supports the following values:
		1 = unknown
		2 = operatingSystem
		3 = deviceDriver
		4 = application

# hrSWRunStatus

Туре	Access	Description
Integer	read- write	The status of this running piece of software. Setting this value to invalid(4) shall cause this software to stop running and to be unloaded. Sets to other values are not valid.
		This object supports the following values:
		1 = running
		2 = runnable
		3 = notRunnable
		4 = invalid

# hrSWRunPerf objects

#### hrSWRunPerfTable

Туре	Access	Description
N/A	not-accessible	The (conceptual) table of running software performance metrics.

# hrSWRunPerfEntry

Туре	Access	Description
N/A	not- accessible	A (conceptual) entry containing software performance metrics. As an example, an instance of the hrSWRunPerfCPU object might be named hrSWRunPerfCPU.1287
		Each entry contains data for the following objects:
		hrSWRunPerfCPU
		hrSWRunPerfMem

# hrSWRunPerfCPU

Туре	Access	Description
Integer32	read- only	The number of centi-seconds of the total system's CPU resources consumed by this process. Note that on a multi-processor system, this value may increment by more than one centi-second in one centi-second of real (wall clock) time.

# hrSWRunPerfMem

Туре	Access	Description
KBytes	read-only	The total amount of real system memory allocated to this process.

# hrSWInstalled objects

## hrSWInstalledLastChange

Туре	Access	Description
TimeTicks	read- only	The value of sysUpTime when an entry in the hrSWInstalledTable was last added, renamed, or deleted. Because this table is likely to contain many entries, polling of this object allows a management station to determine when re-downloading of the table might be useful.

# hrSWInstalledLastUpdateTime

Туре	Access	Description
TimeTicks	read- only	The value of sysUpTime when the hrSWInstalledTable was last completely updated. Because caching of this data will be a popular implementation strategy, retrieval of this object allows a management station to obtain a guarantee that no data in this table is older than the indicated time.

## hrSWInstalledTable

Туре	Access	Description
N/A	not-accessible	The (conceptual) table of software installed on this host.

#### hrSWInstalledEntry

Туре	Access	Description
N/A	not- accessible	A (conceptual) entry for a piece of software installed on this host. As an example of how objects in this table are named, an instance of the hrSWInstalledName object might be named hrSWInstalledName.96 Each entry contains data for the following objects: hrSWInstalledIndex hrSWInstalledName hrSWInstalledID hrSWInstalledType hrSWInstalledDate

#### hrSWInstalledIndex

Туре	Access	Description
Integer32	read- only	A unique value for each piece of software installed on the host. This value shall be in the range from 1 to the number of pieces of software installed on the host.

#### hrSWInstalledName

Туре	Access	Description
InternationalDisplayString		A textual description of this installed piece of software, including the manufacturer, revision, the name by which it is commonly known, and optionally, its serial number.

#### hrSWInstalledID

Туре	Access	Description
ProductID	read-only	The product ID of this installed piece of software.

# hrSWInstalledType

Туре	Access	Description
Integer	read-only	The type of this software.
		This object supports the following values:
		1 = unknown
		2 = operatingSystem
		3 = deviceDriver
		4 = application

#### hrSWInstalledDate

Туре	Access	Description
DateAndTime	only	The last-modification date of this application as it would appear in a directory listing. If this information is not known, then this variable shall have the value corresponding to January 1, year 0000, 00:00:00.0, which is encoded as (hex)'00 00 01 01 00 00 00 00'.

# **Customer Interaction Center**

Using Simple Network Management Protocol (SNMP) on a Customer Interaction Center server is optional. To use SNMP on a Customer Interaction Center server, you must install the Microsoft Windows SNMP service through the **Programs and Features** object in the **Control Panel**.

This section contains information about the following .mib files and SNMP object types:

- i3ic.mib
- i3lcGeneral objects
- i3lcInfo objects
- i3lcCommands objects
- i3lcTrapInfo objects
- i3lcTraps objects
- reporting\_plugin.mib

# i3ic.mib

The i3ic.mib file contains SNMP object definitions for a Customer Interaction Center server. By default, this file is located in the D:\I3\IC\Server directory.

The i3ic.mib file contains the following SNMP object types:

SNMP object type	Description
i3lcGeneral	These objects contain information about the Customer Interaction Center software. See i3lcGeneral objects.
i3lcInfo	These objects contain host system information such as CPU usage, memory usage, elapsed run time, and thread count. See <u>i3lcInfo objects</u> .
i3lcCommands	These objects are responsible for stopping and restarting various subsystems. See i3lcCommands objects.
i3lcTrapInfo	These objects contain the information that is displayed with trap messages. See i3lcTrapInfo objects.
i3lcTraps	These objects are the trap messages when a warning or error threshold has been met on the host system. These objects can contain one or more i3lcTrapInfo objects. See <u>i3lcTraps objects</u> .

# i3lcGeneral objects

#### i3lcGenVersion

Туре	Access	Description
DisplayString	read- only	This object displays the version of the Customer Interaction Center server software on the host network device.

#### i3IcGenBuild

Туре	Access	Description
DisplayString		This object displays the build number that produced the Customer Interaction Center server software on the host network device.

#### i3lcGenTimeStarted

Туре	Access	Description
DisplayString		This object displays the chronological time when the Customer Interaction Center server on the host network device was last started.

#### i3lcGenMibVersion

Туре	Acces	Description
DisplayS	ring read- only	This object displays the version of the i3ic.mib Management Information Base (MIB) file that is used by the Customer Interaction Center server on the host network device.

#### i3IcGenSwitchoverRole

Туре	Access	Description
Integer	read-only	<ul> <li>This object displays the switchover role for this CIC server:</li> <li>1 = NotApplicable because the Server is not in a Primary/Backup configuration.</li> <li>2 = Primary</li> <li>3 = Backup</li> <li>4 = Failed</li> </ul>

### i3IcGenSwitchoverBackupState

Туре	Access	Description
Integer	read-only	<ul> <li>This object displays the switchover backup state for this CIC server:</li> <li>1 = Not Applicable. Not in a Primary/Backup configuration</li> <li>2 = Not Ready. The backup server is either not active or is starting</li> <li>3 = Ready</li> </ul>

# i3IcGenSwitchoverSwitchMode

Туре	Access	Description
Integer	read-only	<ul> <li>This object displays the switchover mode for this CIC server pair:</li> <li>0 = Not Applicable. Not in a Primary/Backup configuration</li> <li>1 = Auto. Switchovers occur automatically between the two CIC servers.</li> <li>2 = Manual. Switchovers between the two CIC servers must be initiated manually.</li> </ul>

# i3IcGenSwitchoverReplicationMode

Туре	Access	Description
Integer	read-only	<ul> <li>This object displays the switchover replication mode for this CIC server pair:</li> <li>0 = Unknown</li> <li>1 = Normal</li> <li>2 = Upgrade</li> </ul>

## i3IcGenSwitchoverPeer

Туре	Access	Description
DisplayString	read-only	This object displays the name of the peer machine in the switchover pair.

# i3lcInfo objects

# i3IcSubsysInfoTable

Туре	Access	Description
N/A	not-accessible	This SNMP information object contains entries for various Customer Interaction Center subsystems.

## i3IcSubsysInfoTableEntry

Туре	Access	Description
N/A	not- accessible	This SNMP information object contains the following SNMP information objects for a Customer Interaction Center subsystem:
		Each entry contains data for the following objects:
		i3lcSubsysInfoIndex
		i3lcSubsysInfoCpuUsage
		i3IcSubsysInfoMemUsage
		i3lcSubsysInfoRuntime
		i3lcSubsysInfoThreadCount
		i3lcSubsysInfoAvailable
		i3lcSubsysInfoName

# i3lcSubsysInfoIndex

Туре	Access	Description
Integer	N/A	Each item represents a Customer Interaction Center subsystem.
		This object supports the following values:
		1 = Notifier
		2 = FileMonitor
		3 = IonNotifier
		4 = DSServer
		5 = HttpPluginHost
		6 = ClusterConnector
		7 = Mail Account Monitor
		8 = SwitchoverService
		9 = Transaction Server
		10 = AdminServer
		11 = AccServer
		12 = Compressor Manager
		13 = DataManager
		14 = DSSink
		15 = HostServer
		16 = IPDBServer
		17 = Mrcp Subsystem
		18 = Post Office
		19 = Prompt Server
		20 = Provision Server
		21 = Reco Subsystem
		22 = VXIHostServer
		23 = Client Services
		24 = Feedback Server
		25 = Optimizer Server
		26 = Recorder Server

27 = Resource Broker
28 = Tracker Server
29 = AcdServer
30 = OutOfProcCustomDLL
31 = QueueStatProvider
32 = Session Manager
33 = TsServer
34 = EMS Server
35 = FaxServer
36 = FileRouter
37 = IpServer
38 = RCCServer
39 = SMSServer
40 = StatAlertServer
41 = StatServer
42 = VPIM Receiver
43 = WebProcessor
44 = WebProcessorBridge
45 = IP
46 = Process Automation Server
47 = Set SIP NAT
48 = Thin IP Bridge
49 = DialerServer (Dialer)
50 = CampaignServer (Dialer)
51 = UpdateServer (Dialer)
52 = DialerStatRepeater (Dialer)
53 = DialerStatServer (Dialer)
54 = DialerTranServer (Dialer)
55 = DialerHistoryWriter (Dialer)
56 = DirectorServer(Director)
57 = MicServer (Communite)
58 = InteractionRecoveryService
59 = WebPortalServer
60 = ICSecureTokenServer

# i3lcSubsysInfoCpuUsage

Туре	Access	Description
Integer	read- only	The amount of central processing unit (CPU) resources currently in use by the Customer Interaction Center subsystem product.

# i3lcSubsysInfoMemUsage

Туре	Access	Description
Integer	read- only	The amount of random access memory (RAM) resources currently in use by the Customer Interaction Center subsystem product.

# i3IcSubsysInfoRuntime

[	Туре	Access	Description
	DisplayString	read- only	The amount of time that has elapsed since the Customer Interaction Center subsystem product was last started.

# i3IcSubsysInfoThreadCount

Туре	Access	Description
Integer	read- only	The total number of CPU threads on the host network device of the Customer Interaction Center subsystem product.

### i3lcSubsysInfoAvailable

Туре	Access	Description
Integer	read-only	An integer value that indicates if the Customer Interaction Center subsystem product is available for use.
		This object supports the following values:
		1 = available
		2 = unavailable

# i3lcCommands objects

## i3IcSubsysCmdTable

Туре	Access	Description
N/A	not- accessible	This SNMP control object contains status information from the designated system or commands to run on the designated system.

# i3IcSubsysCmdTableEntry

Туре	Access	Description
N/A	not- accessible	This SNMP control object contains the following SNMP control objects for a Customer Interaction Center subsystem:
		Each entry contains data for the following objects:
		i3lcSubsysCmdIndex
		i3lcSubsysCmdRestart
		i3lcSubsysCmdStop
		i3lcSubsysCmdFilterEvents

# i3lcSubsysCmdIndex

Ту	ype	Access	Description
Inte	eger	read-only	An integer that represents a PureConnect subsystem for which the SNMP command is issued.

	This object supports the following values:
	1 = Notifier
	2 = FileMonitor
	3 = IonNotifier
	4 = DSServer
	5 = HttpPluginHost
	6 = ClusterConnector
	7 = Mail Account Monitor
	8 = SwitchoverService
	9 = Transaction Server
	10 = AdminServer
	11 = AccServer
	12 = Compressor Manager
	13 = DataManager
	14 = DSSink
	15 = HostServer
	16 = IPDBServer
	17 = Mrcp Subsystem
	18 = Post Office
	19 = Prompt Server
	20 = Provision Server
	21 = Reco Subsystem
	22 = VXIHostServer
	23 = Client Services
	24 = Feedback Server
	25 = Optimizer Server
	26 = Recorder Server
	27 = Resource Broker
	28 = Tracker Server
	29 = AcdServer
	30 = OutOfProcCustomDLL
	31 = QueueStatProvider
	32 = Session Manager
	33 = TsServer
	34 = EMS Server
	35 = FaxServer
	36 = FileRouter
	37 = IpServer
	38 = RCCServer
	39 = SMSServer
	40 = StatAlertServer
	41 = StatServer
	42 = VPIM Receiver

43 = WebProcessor
44 = WebProcessorBridge
45 = IP
46 = Process Automation Server
47 = Set SIP NAT
48 = Thin IP Bridge
49 = DialerServer (Dialer)
50 = CampaignServer (Dialer)
51 = UpdateServer (Dialer)
52 = DialerStatRepeater (Dialer)
53 = DialerStatServer (Dialer)
54 = DialerTranServer (Dialer)
55 = DialerHistoryWriter (Dialer)
56 = DirectorServer(Director)
57 = MicServer (Communite)
58 = InteractionRecoveryService
59 = WebPortalServer
60 = ICSecureTokenServer

# i3lcSubsysCmdRestart

Туре	Access	Description
Integer	read-write	An integer that represents the SNMP status or command for the PureConnect subsystem.
		This object supports the following values:
		1 = running
		2 = restart

# i3IcSubsysCmdStop

Туре	Access	Description
Integer	read-write	An integer that represents the SNMP status or command for the PureConnect subsystem.
		This object supports the following values:
		1 = running
		2 = stop

# i3IcSubsysCmdFilterEvents

Туре	Access	Description
Integer	read- write	An integer that represents which SNMP event messages that the SNMP agent sends for the PureConnect subsystem.
		The integers use a binary mask, which enables you to add two or more items for inclusion. For example, a value of 3 enables the SNMP events for 1 and 2 (1+2=3). A value of 7 enables the SNMP events for 1, 2, and 4 (1+2+4=7).
		This object supports the following values or their inclusion in a binary mask:
		0 = Don't send any event messages
		1 = Send Error level event messages
		2 = Send Warning level event messages
		4 = Send Information level event messages
		8 = Unable to get filter data

# i3lcTrapInfo objects

# i3lcTrapInfoSubsys

Туре	Access	Description
Integer	N/A	This SNMP trap message indicates which Customer Interaction Center subsystem has restarted.
		This SNMP trap message supports the following values:
		1 = Notifier
		2 = FileMonitor
		3 = IonNotifier
		4 = DSServer
		5 = HttpPluginHost
		6 = ClusterConnector
		7 = Mail Account Monitor
		8 = SwitchoverService
		9 = Transaction Server
		10 = AdminServer
		11 = AccServer
		12 = Compressor Manager
		13 = DataManager
		14 = DSSink
		15 = HostServer
		16 = IPDBServer
		17 = Mrcp Subsystem
		18 = Post Office
		19 = Prompt Server
		20 = Provision Server
		21 = Reco Subsystem
		22 = VXIHostServer
		23 = Client Services
		24 = Feedback Server

25 = Optimizer Server
26 = Recorder Server
27 = Resource Broker
28 = Tracker Server
29 = AcdServer
30 = OutOfProcCustomDLL
31 = QueueStatProvider
32 = Session Manager
33 = TsServer
34 = EMS Server
35 = FaxServer
36 = FileRouter
37 = IpServer
38 = RCCServer
39 = SMSServer
40 = StatAlertServer
41 = StatServer
42 = VPIM Receiver
43 = WebProcessor
44 = WebProcessorBridge
45 = IP
46 = Process Automation Server
47 = Set SIP NAT
48 = Thin IP Bridge
49 = DialerServer (Dialer)
50 = CampaignServer (Dialer)
51 = UpdateServer (Dialer)
52 = DialerStatRepeater (Dialer)
53 = DialerStatServer (Dialer)
54 = DialerTranServer (Dialer)
55 = DialerHistoryWriter (Dialer)
56 = DirectorServer(Director)
57 = MicServer (Communite)
58 = InteractionRecoveryService
59 = WebPortalServer
60 = ICSecureTokenServer

# i3lcTrapInfoRestartReason

Туре	Access	Description
Integer	read-only	An integer that identifies the reason why Customer Interaction Center was restarted.
		This SNMP trap message supports the following values:
		1 = maintenance
		2 = unknown

# i3lcTrapInfoEventLogSubsys

Туре	Access	Description
DisplayString	read- only	A string that identifies the PureConnect subsystem that caused Customer Interaction Center to write an SNMP trap information message to the Windows Event Log of the Customer Interaction Center host server.

# i3IcTrapInfoEventLogMsgID

Туре	Access	Description
Integer		An integer that provides the numerical identifier of the Windows Event Log entry that was the Customer Interaction Center server wrote to the Windows Error Log for an SNMP trap information message on behalf of a Customer Interaction Center subsystem.

## i3lcTrapInfoEventLogMsg

Туре	Access	Description
DisplayString		The SNMP trap information message that was written to the Windows Event Log of the Customer Interaction Center server on behalf of a Customer Interaction Center subsystem.

# i3IcTrapWarningEventLogSubsys

	Туре	Access	Description
Di	splayString	read- only	A string that identifies the PureConnect subsystem that caused Customer Interaction Center to write an SNMP trap warning message to the Windows Event Log of the Customer Interaction Center host server.

# i3IcTrapWarningEventLogMsgID

Туре	Access	Description
Integer	read- only	An integer that provides the numerical identifier of the Windows Event Log entry that was the Customer Interaction Center server wrote to the Windows Error Log for an SNMP trap warning message on behalf of a Customer Interaction Center subsystem.

# i3IcTrapWarningEventLogMsg

Т	уре	Access	Description
Displa	ayString	read- only	The SNMP trap warning message that was written to the Windows Event Log of the Customer Interaction Center server on behalf of a Customer Interaction Center subsystem.

# i3IcTrapErrorEventLogSubsys

Туре	Access	Description
DisplayString	read- only	A string that identifies the PureConnect subsystem that caused Customer Interaction Center to write an SNMP trap error message to the Windows Event Log of the Customer Interaction Center host server.

# i3IcTrapErrorEventLogMsgID

Туре	Access	Description
Integer	read- only	An integer that provides the numerical identifier of the Windows Event Log entry that was the Customer Interaction Center server wrote to the Windows Error Log for an SNMP trap error message on behalf of a Customer Interaction Center subsystem.

#### i3IcTrapErrorEventLogMsg

Туре	Access	Description
DisplayString	read- only	The SNMP trap error message that was written to the Windows Event Log of the Customer Interaction Center server on behalf of a Customer Interaction Center subsystem.

## i3IcTrapYellowAlarmTSInterface

Туре	Access	Description
DisplayString	read- only	For Customer Interaction Center subsystems that provide connectivity to the Public Switched Telephone Network (PSTN), this object provides the identifier of the Time Division Multiplexer (TDM) interface that receives a yellow PSTN alarm from the carrier.

## i3IcTrapRedAlarmTSInterface

Туре	Access	Description
DisplayString		For Customer Interaction Center subsystems that provide connectivity to the Public Switched Telephone Network (PSTN), this object provides the identifier of the Time Division Multiplexer (TDM) interface that receives a red PSTN alarm from the carrier.

#### i3IcTrapAlarmClearedTSInterface

Туре	Access	Description
DisplayString	read- only	For Customer Interaction Center subsystems that provide connectivity to the Public Switched Telephone Network (PSTN), this object provides the identifier of the Time Division Multiplexer (TDM) interface that receives an alarm clearance message from the carrier.

### i3IcTrapDChannelDownTSInterface

Туре	Access	Description
DisplayString	only	For Customer Interaction Center subsystems that provide connectivity to the Public Switched Telephone Network (PSTN), this object provides the identifier of the interface that receives, from the carrier, an error message that the D-channel for a Time Division Multiplexer (TDM) span is not functional.

# i3IcTrapVariableHostName

Туре	Access	Description
DisplayString	read-only	This object displays the host name of this CIC server that is associated with a trap message.

#### i3IcTrapVariableSubsystemName

Туре	Access	Description
DisplayString	read-only	This object displays the name of the subsystem on this CIC server for which a trap message pertains.

# i3IcTrapVariablePluginName

Туре	Access	Description
DisplayString	read-only	This object displays the optional name of the HttpPluginHost if it is associated with a trap message.

### i3IcTrapVariableErrorDesc

Тур	;	Access	Description
DisplayS	tring	read-only	This object contains the condition or reason for which a trap message was generated.

### i3IcTrapVariableHealthLevel

Туре	Access	Description
Integer	read- only	<ul> <li>This object indicates the health level of the subsystem on the CIC server that is associated with a trap message:</li> <li>0 = Recovered - The subsystem of the CIC server has resumed normal functionality</li> <li>3 = Warning - The subsystem of the CIC server is in a limited state of functionality as some problems are still present</li> <li>5 = Error - The subsystem of the CIC server is not functioning</li> </ul>

# i3lcTraps objects

# i3lcTrapRestart

Туре	Access	Description
N/A	N/A	This SNMP trap message indicates that a Customer Interaction Center subsystem has restarted.
		This SNMP trap message contains the following objects:
		i3lcTrapInfoSubsys
		i3lcTrapInfoRestartReason

## i3IcTrapInformationalEventLog

Туре	Access	Description
N/A	N/A	This SNMP trap information message indicates that the Customer Interaction Center server has written an information entry in the Windows Event Log of the host server.
		Important! To use this trap on the CIC server (or both in a switchover pair) and the subsystems, you must set the following keys in the specified path to 1:
		HKEY_LOCAL_MACHINE \SOFTWARE \Wow6432 \Node \Interactive Intelligence \EIC \Remoco \EIC Subsystems[ <i>subsystem_name</i> ] \Log Event Filter
		Error Log Event Info Log Event Warning Log Event After modifying these Registry keys, you must restart the server for these changes to take effect.
		This SNMP trap message contains the following objects:
		i3lcTrapInfoEventLogSubsys
		i3lcTrapInfoEventLogMsgID
		i3lcTrapInfoEventLogMsg

# i3IcTrapWarningEventLog

Туре	Access	Description
N/A	N/A	This SNMP trap warning message indicates that the Customer Interaction Center server has written a warning entry in the Windows Event Log of the host server.
		Important! To use this trap on the CIC server (or both in a switchover pair) and the subsystems, you must set the following keys in the specified path to 1:
		HKEY_LOCAL_MACHINE \SOFTWARE \Wow6432 \Node \Interactive Intelligence \EIC \Remoco \EIC Subsystems[ <i>subsystem_name</i> ] \Log Event Filter
		Error Log Event Info Log Event Warning Log Event After modifying these Registry keys, you must restart the server for these changes to take effect.
		This SNMP trap message contains the following objects:
		i3IcTrapWarningEventLogSubsys
		i3lcTrapWarningEventLogMsgID
		i3lcTrapWarningEventLogMsg

# i3lcTrapErrorEventLog

Туре	Access	Description
N/A	N/A	This SNMP trap error message indicates that the Customer Interaction Center server has written an error entry in the Windows Event Log of the host server.
		Important! To use this trap on the CIC server (or both in a switchover pair) and the subsystems, you must set the following keys in the specified path to 1:
		HKEY_LOCAL_MACHINE \SOFTWARE \Wow6432 \Node \Interactive Intelligence \EIC \Remoco \EIC Subsystems[ <i>subsystem_name</i> ] \Log Event Filter
		Error Log Event Info Log Event Warning Log Event After modifying these Registry keys, you must restart the server for these changes to take effect.
		This SNMP trap message contains the following objects:
		i3lcTrapErrorEventLogSubsys
		i3lcTrapErrorEventLogMsgID
		i3lcTrapErrorEventLogMsg

# i3IcCommenceSwitchoverEvent

Туре	Access	Description
N/A		This SNMP trap message indicates that a switchover from a primary Customer Interaction Center server to a backup Customer Interaction Center server has been initiated.

# i3IcTSInterfaceYellowAlarm

Туре	Access	Description
N/A	N/A	For Customer Interaction Center subsystems that provide connectivity to the Public Switched Telephone Network (PSTN), this object provides the identifier of the Time Division Multiplexer (TDM) interface that receives a yellow PSTN alarm from the carrier.
		This SNMP trap message contains the following object:
		i3lcTrapYellowAlarmTSInterface

# i3IcTSInterfaceRedAlarm

Туре	Access	Description
N/A	N/A	For Customer Interaction Center subsystems that provide connectivity to the Public Switched Telephone Network (PSTN), this object provides the identifier of the Time Division Multiplexer (TDM) interface that receives a red PSTN alarm from the carrier.
		This SNMP trap message contains the following object:
		i3IcTrapRedAlarmTSInterface

# i3IcTSInterfaceAlarmCleared

Туре	Access	Description
N/A	N/A	For Customer Interaction Center subsystems that provide connectivity to the Public Switched Telephone Network (PSTN), this object provides the identifier of the Time Division Multiplexer (TDM) interface that receives an alarm clearance message from the carrier. This SNMP trap message contains the following object:
		i3IcTrapAlarmClearedTSInterface

#### i3IcTSInterfaceDChannelDown

Туре	Access	Description
N/A	N/A	For Customer Interaction Center subsystems that provide connectivity to the Public Switched Telephone Network (PSTN), this object provides the identifier of the interface that receives, from the carrier, an error message that the D-channel for a Time Division Multiplexer (TDM) span is not functional. This SNMP trap message contains the following object: i3IcTrapDChannelDownTSInterface

## i3IcDiscontinueSwitchoverEvent

Туре	Access	Description
N/A	N/A	This SNMP trap message indicates that a switchover from a primary Customer Interaction Center server to a backup Customer Interaction Center server has been stopped before completion.

## i3lcHighLatencyState

Туре	Access	Description
N/A	N/A	This SNMP trap message indicates that the Customer Interaction Center server is experiencing significant delays between network packets resulting in delayed interactions, such as receiving calls or chat messages, transferring calls, or placing a call on hold.

# i3IcHighLatencyStateClear

Туре	Access	Description
N/A	N/A	This SNMP trap message indicates that the Customer Interaction Center server is no longer experiencing significant delays between network packets.

### $i \\ 3 \\ Ic \\ Tracing \\ Stopped \\ In \\ sufficient \\ Disk \\ Space$

Туре	Access	Description
N/A	N/A	This SNMP trap message indicates that the Customer Interaction Center is no longer monitoring system resources because the host server has insufficient free storage space to ensure continued core functionality.

# $i \\ 3 \\ lc \\ Tracing \\ Stopped \\ In \\ sufficient \\ Disk \\ Space \\ Cleared$

Туре	Access	Description
N/A	N/A	This SNMP trap message indicates that the Customer Interaction Center server has re-enabled the monitoring of system resources as the host server has adequate free storage space.

#### i3IcSubsystemInTroubleTrap

Туре	Access	Description
N/A		This SNMP trap message indicates that a subsystem of the Customer Interaction Center server is not functioning optimally or has recovered from a trap.

### reporting\_plugin.mib

The reporting\_plugin.mib enables you to monitor plugin status through your MIB browser.

# reportingplugin objects

#### $reporting plug in {\sf Total Reporting Tunnel Connections}$

Туре	Access	Description
Unsigned32		The number of open http tunnel connections against this instance of the Reporting Plugin. The number of this value is intended for use by Genesys personel and software.

#### reportingpluginLongestActiveConnection

Туре	Access	Description
TimeTick	read- only	The duration that the longest active reporting tunnel has been open. The number of this value is intended for use by Genesys personnel and software.

#### $reporting plug in {\it Highest} Data {\it TransferConnection}$

Туре	Access	Description
Unsigned32		The amount of data in KB transferred over the most heavily used connection in the last 30 seconds. The number of this value is intended for use by Genesys personel and software.

## $reporting plug in {\sf Total Reporting Tunnel Error Connections}$

Туре	Access	Description
Unsigned32		The number of open http tunnel connections against this instance of the Reporting Plugin that have reported an error status. The number of this value is intended for use by Genesys personel and software.

# **Interaction Recorder**

This section contains information about the following .mib file and SNMP object types:

- <u>i3icrecorder.mib</u>
- <u>i3RecGeneral</u>
- <u>i3RecContentServerInfo</u>
- i3RecTrapVars objects
- I3RecTraps objects

# i3icrecorder.mib

The <code>i3icrecorder.mib</code> file contains the following SNMP object	types:
---	--------

SNMP object type	Description
General objects	These objects contain version information of the CIC subsystem. See <u>i3RecGeneral</u> .
Interaction Recorder Remote Content Service information objects	These objects provide information on the configuration of Interaction Recorder Remote Content Service servers.See <u>i3RecContentServerInfo</u> .
Trap variables	These object provide the configurable settings as they relate to trap messages for Interaction Recorder Remote Content Service servers. See <u>i3RecTrapVars objects</u> .
Traps	These objects contain informational, error, or warning messages that occur for Interaction Recorder Remote Content Service servers. See <u>I3RecTraps objects</u> .

# i3RecGeneral

# i3RegGenFileVersion

Туре	Access	Description
DisplayString	read-only	The file version information for Interaction Recorder.

# i3RecContentServerInfo

#### i3RecContentServerInfoTable

Туре	Access	Description
N/A	not-accessible	Table containing information about Interaction Recorder Remote Content Service servers.

# $i \\ 3 \\ RecContent \\ Server \\ Info \\ Table \\ Entry$

Туре	Access	Description
N/A	not- accessible	Entry in the i3ContentServerInfoTable. Each entry is applicable for each Interaction Recorder Remote Content Service server.
		Each entry contains data for the following objects:
		i3RecContentServerId
		i3RecContentServerHostFqdn
		i3RecContentServerHostPort
		i3RecContentServerRegistered
		i3RecContentServerMemoryUsage
		i3RecContentServerCpuUsage
		i3RecContentServerLocalFreeSpace
		i3RecContentServerSharedFreeSpace
		i3RecContentServerConfiguredForS3
		i3RecContentServerAvailableHttpClientConnections
		i3RecContentServerSuccessfulRecordingsLastHour
		i3RecContentServerFailedRecordingsLastHour
		i3RecContentServerInfoTracingFreeSpace

#### i3RecContentServerId

Туре	Access	Description
Unsigned32		The unique identifier for this Interaction Recorder Remote Content Service server, which Customer Interaction Center persists in the DS subsystem. The Interaction Recorder server identifier is always 0.

## i3RecContentServerHostFqdn

Туре	Access	Description
DisplayString	read-only	The Fully-Qualified Domain Name (FQDN) of this Interaction Recorder Remote Content Service server.

#### i3RecContentServerHostPort

Туре	Access	Description
Integer	read- only	The port number used on this Interaction Recorder Remote Content Service server for moving files and communicating the other systems.
		For HTTPS operations, the port number is one value higher (+1).

# i3RecContentServerRegistered

Туре	Access	Description
TruthValue	read- only	This object indicates if the Interaction Recorder Remote Content Service server is connected and registered with a Customer Interaction Center. If this value is false, the values for other MIB objects for this server will not update.

### i3RecContentServerMemoryUsage

Туре	Access	Description
Gauge32	read- only	The amount of Random Access Memory (RAM) that this Interaction Recorder Remote Content Service server is using.

### i3RecContentServerCpuUsage

Туре	Access	Description
Gauge32	read-only	The percentage of CPU that this Interaction Recorder Remote Content Service server is using.

#### i3RecContentServerLocalFreeSpace

Туре	Access	Description
Gauge32	read- only	The total amount, in gigabytes, of all free local storage space that is available to this Interaction Recorder Remote Content Service server.

#### i3RecContentServerSharedFreeSpace

Туре	Access	Description
Gauge32	read- only	The total amount, in gigabytes, of all free shared storage lcoations that are available to this Interaction Recorder Remote Content Service server.

### i3RecContentServerConfiguredForS3

Туре	Access	Description	
TruthValue	read- only	This value indicates if this Interaction Recorder Remote Content Service server is configured to access storage space through Amazon Simple Storage Service (Amazon S3).	

## $i \\ 3 \\ RecContent \\ Server \\ Available \\ Http \\ Client \\ Connections$

Туре	Access	Description	
Gauge32		The number of HTTP client connections that this Interaction Recorder Remote Content Service server supports before it rejects additional connections.	

## $i \\ 3 \\ RecContent \\ Server \\ Success \\ ful \\ Recording \\ s \\ Last \\ Hour$

Туре	Access	Description
Gauge32		The number of recordings that this Interaction Recorder Remote Content Service server successfully processed in the last 60 minutes.

#### $i \\ 3 \\ RecContent \\ Server \\ Failed \\ Recording \\ s \\ Last \\ Hour$

Туре	Access	Description	
Gauge32		The number of recordings that this Interaction Recorder Remote Content Service server failed to process in the last 60 minutes.	

#### i3RecContentServerInfoTracingFreeSpace

Туре	Access	Description	
Gauge32	read- only	The amount of free storage space, in gigabytes, that is available to this Interaction Recorder Remote Content Service server for the purpose of storing trace logs.	

# $i \\ 3 \\ RecContent \\ Server \\ Storage \\ Info \\ Table$

Туре	Access	Description	
N/A		Table containing information about all storage locations that are accessible by this indexed Interaction Recorder Remote Content Service server. This value is updated at every directory stat update interval.	

## i3RecContentServerStorageInfoTableEntry

Туре	Access	Description	
N/A	not- accessible	Entry in the i3RecContentServerStorageInfoTable. Each entry is applicable for each Interaction Recorder Remote Content Service server.	
		Each entry contains data for the following objects:	
		3RecContentServerStorageId	
		BRecContentServerIndexFqdn	
		i3RecContentServerStoragePath	
		i3RecContentServerStorageFreeSpace	

#### i3RecContentServerStorageId

Туре	Access	Description	
Unsigned32	read- only	The numeric identifier assigned to this Interaction Recorder Remote Content Service server's storage location.	

# $i \\ 3 \\ RecContent \\ ServerIndex \\ Fqdn$

Туре	Access	Description	
DisplayString	read- only	The Fully-Qualified Domain Name (FQDN) of this Interaction Recorder Remote Content Service server storage index entry.	

# i3RecContentServerStoragePath

Туре	Access	Description	
DisplayString	read-only	The path of the storage location for this Interaction Recorder Remote Content Service server.	
		This object supports the specification of an Amazon Simple Storage Service (Amazon S3) location.	

# $i \\ 3 \\ RecContent \\ Server \\ Storage \\ Free \\ Space$

Туре	Access	Description
Gauge32	read-only	The amount of free storage space for the location specified by the i3RecContentServerStoragePath object.
		Note:
		This object is not set if the i3RecContentServerStoragePath object is set to an Amazon S3 location.

# i3RecTrapVars objects

# i3RecSpecificTrapType

Туре	Access	Description
Integer	accessible-for-notify	This variable object specifies the type of trap notification:
		• 1 - transferFailure
		<ul> <li>2 - regionLowDiskSpace</li> </ul>
		3 - sharedStorageNotAccessible

## i3RecMediaSourcePath

Туре	Access	Description
DisplayString	accessible-for- notify	This variable object specifuies the path of the media source that is associated with the i3RecTrapTransferFailure trap.

## i3RecMediaDestinationPath

	Туре	Access	Description	
1	DisplayString	accessible-for- notify	This variable object specifies the path of the media source that is associated with the i3RecTrapTransferFailure trap.	

# i3RecRegionName

Туре	Access	Description
DisplayString	accessible-for- notify	This variable object specifies the region name that is associated with the i3RecRegionLowDiskSpace trap.

# I3RecTraps objects

## I3RecTrapsPrefix

Туре	Access	Description	
N/A	N/A	This object is a container for the following traps of the <code>i3icrecorder.mib</code> file.	

### i3RecTrapTransferFailure

Туре	Access	Description	
N/A	N/A	This trap is generated when an Interaction Recorder Remote Content Service server fails to transfer a file. To prevent SNMP message flooding, this trap provides subsequent failures to transfer a specific file once every 5 minutes.	
		This trap includes the following objects: <ul> <li>i3RecContentServerId</li> <li>i3RecMediaDestinationPath</li> <li>i3RecMediaSourcePath</li> </ul>	

### i3RecTrapRegionLowDiskSpace

Туре	Access	Description	
N/A	N/A	This trap is generated when the available storage space for all Interaction Recorder Remote Content Service servers in a configured region is less than 5 gigabytes. This trap is generated at each directory stat update interval until the problem is correct. This trap includes the following objects: • i3RecRegionName	

## i3RecTrapSharedStorageNotAccessible

Туре	Access	Description	
N/A	N/A	This trap is generated when a Interaction Recorder Remote Content Service servers cannot access a shared storage space. This trap is generated at each directory stat update interval until the problem is correct.	
		<ul><li>This trap includes the following objects:</li><li>i3RecMediaDestinationPath</li></ul>	

# Interaction Media Server

This section contains information about the following .mib files and SNMP object types:

- INTERACTION-MEDIASERVER.mib
- <u>i3MsGeneral objects</u>
- i3MsInfo objects
- <u>i3MsTraps objects</u>
- HOST-RESOURCES-MIB.mib

# INTERACTION-MEDIASERVER.mib

The INTERACTION-MEDIASERVER.mib file contains the following SNMP object types:

SNMP object type	Description
General objects	These objects contain information of the host system such as operational status, product version, memory usage, and other configuration details. See <u>i3MsGeneral objects</u> .
Information objects	These objects contain information on media engines, which facilitate communications by Interaction Media Server, and configured Customer Interaction Center servers with which this Interaction Media Server can communicate. See <u>i3MsInfo objects</u> .
Traps	These objects contain informational, error, or warning messages that occur on the Interaction Media Server host system. See <u>i3MsTraps objects</u> .

# i3MsGeneral objects

### i3MsGeneralInfoCurrentTimeStamp

Type Access		Description	
DisplayString	read-only	The current time as reported by Media Server, in GMT.	

## i3MsGeneralInfoOperStatus

Туре	Access	Description	
Type Integer	Access read-only		
		6 = quiescing 7 = testing	

### i3MsGeneralInfoOperStatusDuration

Type Access		Description	
Unsigned32	read-only	The duration of the current status in seconds	

### i3MsGeneralInfoFileVersion

Туре	Access	Description
DisplayString	read-only	Current product file version

# i 3 Ms General Info Build Description

Туре	Access	Description
DisplayString	read-only	Current product build description

### i3MsGeneralInfoLicenseType

Туре	Access	Description
DisplayString	read-only	Current product license type.

#### i3MsGeneralInfoLicenseExpiration

Туре	Access	Description	
DisplayString	read-only	Expiration date of current license	

#### i3MsGeneralInfoFqdn

Туре	Access	Description
DisplayString	read-only	The Fully Qualified Domain Name (FQDN) of the Media Server.

#### i3MsGeneralInfoSnmpTrapDestinations

Туре	Access	Description
DisplayString	-	A comma-separated list of hostnames and IP addresses which are currently configured as SNMP trap destinations.

## i3MsGeneralInfoMemoryUsage

Туре	Access	Description
Gauge32	read-only	Memory usage of Interaction Media Server, in bytes.

#### i 3 Ms General Info Trace log File Path

	Туре	Access	Description
Disp	olayString	read-only	Local file path where tracelogs are kept.

#### i3MsGeneralInfoTracelogFreeDiskSpace

Туре	ype Access Description	
Gauge32	read-only	Amount of remaining (free) space on the disk available for tracelog files, in MiB

## i 3 MsGeneralInfoTracelogTotalDiskSpace

Туре	Access	Description
Gauge32	read-only	Total amount of disk space reserved for tracelog files, in MiB

### i 3 Ms General InfoHttp CacheFilePath

Туре	Access	Description
DisplayString	read-only	Local file path where HTTP cache files are kept.

# i 3 Ms General InfoHttp Cache Free Disk Space

Туре	Access	Description
Gauge32	read-only	Amount of remaining (free) space on the disk available for HTTP cache files, in MiB

### i 3 MsGeneralInfoHttpCacheTotalDiskSpace

Туре	Access	Description
Gauge32	read-only	Total amount of disk space reserved for HTTP cache files, in MiB

# i3MsInfo objects

# i3MsAudioEngineInfoTable

Туре	Access	Description
N/A	not-accessible	Table containing all media engine parameters.

### i3MsAudioEngineInfoTableEntry

Туре	Access	Description
N/A	not-accessible	Entry in the i3MsAudioEngineInfoTable. Each entry is applicable for each activated media engine.
		Each entry contains data for the following objects:
		i3MsAudioEngineId
		i3MsAudioEngineThreadID
		i3MsAudioEngineCPUID
		i3MsAudioEngineLocation
		i3MsAudioEngineCurrentLoad
		i3MsAudioEngineAverageLoad
		i3MsAudioEngineGraphCount
		i3MsAudioEngineElementCount

### i3MsAudioEngineId

Туре	Access	Description	
Integer	read-only	Index into Audio Engine Table	

### i3MsAudioEngineThreadID

Туре	Access	Description
DisplayString	read-only	The local thread ID of this media engine

#### i3MsAudioEngineCPUID

Туре	Access	Description
Integer	read-only	The local CPU ID of this media engine

### i3MsAudioEngineLocation

Туре	Access	Description
DisplayString	read-only	The Location ID of this media engine

# i 3 Ms Audio Engine Current Load

Туре	Access	Description
DisplayString	read-only	The current load of this media engine, in percent capacity

#### i3MsAudioEngineAverageLoad

Туре	Access	Description
DisplayString	read-only	The average load of this media engine, in percent capacity, over last 30 seconds

### i3MsAudioEngineGraphCount

Туре	Access	Description
Gauge32	read-only	The number of active graphs within this media engine

## i3MsAudioEngineElementCount

Туре	Access	Description
Gauge32	read-only	The total number of active graph elements within this media engine

## i3MsCommandServerInfoTable

Туре	Access	Description
N/A	not-accessible	Table containing all listed Command Servers.

### i3MsCommandServerInfoTableEntry

Туре	Access	Description
N/A	not-accessible	Entry in the i3MsCommandServerInfoTable. Each entry represents a single defined Command Server.
		Each entry contains data for the following objects:
		i3MsCmdSrvId
		i3MsCmdSrvStatus
		i3MsCmdSrvStatusLabel
		i3MsCmdSrvStatusDetail
		i3MsCmdSrvNotifierHost
		i3MsCmdSrvClient
		i3MsCmdSrvClientId
		i3MsCmdSrvAcceptSessions
		i3MsCmdSrvResourceCount
		i3MsCmdSrvLogicalCapacity
		i3MsCmdSrvRecFilePath
		i3MsCmdSrvRecFreeDiskSpace
		i3MsCmdSrvRecTotalDiskSpace
		i3MsCmdSrvResourceAgeHistogram

## i3MsCmdSrvId

Туре	Access	Description
Gauge32	read-only	Unique Command Server identifier

#### i3MsCmdSrvStatus

Туре	Access	Description
Integer	read-only	Enumeration indicating broad classification of status.
		This object supports the following values:
		0 = unknown
		1 = ready
		2 = notready
		3 = error

## i3MsCmdSrvStatusLabel

Туре	Access	Description
DisplayString	read-only	Extra status information

# i3MsCmdSrvStatusDetail

Туре	Access	Description
DisplayString	read-only	More detailed status information

# i3MsCmdSrvNotifierHost

Туре	Access	Description
DisplayString	read-only	DNS name or IP address of the Notifier for the primary Notifier connection.

### i3MsCmdSrvClient

Туре	Access	Description
DisplayString	read- only	Name of the Customer Interaction Center server to which the subsystem is connected (empty if not connected)

#### i3MsCmdSrvClientId

Туре	Access	Description
DisplayString	read-only	Unique identifier of the client API instance (empty if not connected)

#### i3MsCmdSrvAcceptSessions

Туре	Access	Description
TruthValue	read-only	Indicates if Command Server can host more resources.
		This object supports the following values:
		1 = true
		2 = false

#### i3MsCmdSrvResourceCount

Туре	Access	Description
Gauge32	read-only	The number of resources allocated to this command server

# i3MsCmdSrvLogicalCapacity

Туре	Access	Description
DisplayString	read-only	The logical capacity of this server (frequency of CPUs multiplied by number of CPUs)

#### i3MsCmdSrvRecFilePath

Туре	Access	Description
DisplayString	read-only	The local file path where recordings are kept.

#### i3MsCmdSrvRecFreeDiskSpace

Туре	Access	Description
Gauge32	read-only	The amount of remaining (free) storage space that is available for recordings, in MiB

#### i3MsCmdSrvRecTotalDiskSpace

Туре	Access	Description
Gauge32	read-only	The total amount of storage space reserved for recordings, in MiB

#### i3MsCmdSrvResourceAgeHistogram

Туре	Access	Description
DisplayString	read- only	The aggregated age of all active resources on this command server, separated into raw histogram bands defined in a comma-separated list of elements of [max_age_in_seconds]:[resource_count]

# i3MsTraps objects

## i3MsSpecificTrapType

Туре	Access	Description
Integer	accessible-for-notify	Contains the type of trap notification.
		This SNMP trap message supports the following values:
		2 = operStatus
		3 = adminCredentials
		4 = configChange
		5 = dnsQueryAlarm
		6 = diskLogSpace
		7 = memoryUsage
		8 = diskRecSpace
		9 = dosAttack
		10 = i3MsTrapAudioQuality
		11 = i3MsTrapAudioFault
		12 = i3MsTrapHttpCacheDiskSpace

#### i3MsTrapOperStatus

Туре	Access	Description
N/A		This trap is generated when the Interaction Media Server changes its own state. If the SNMP service is running, but the Interaction Media Server application is unresponsive, this trap will be sent repeatedly every 30 seconds until the condition is cleared.

#### i3MsTrapAdminCredentials

Туре	Access	Description
N/A	N/A	This trap is generated when the administrator login credentials are changed.

## i3MsTrapCmdSrvConfigChange

Туре	Access	Description	
N/A	N/A	This trap is generated when the configuration of any Command Server within the Media Server is changed.	
		This SNMP trap message contains data for the following object:	
		i3MsCmdSrvId	

## i3MsTrapDNSQueryAlarm

Туре	Access	Description
N/A	N/A	This trap is currently not implemented.

#### i3MsTrapLogDiskSpace

Туре	Access	Description
N/A	N/A	This trap is generated when the amount of free space for tracelog files drops below 100 MiB. Tracing will be disabled until more storage space is provided to the application.

#### i3MsTrapMemoryUsage

Туре	Access	Description
N/A	N/A	This trap is generated when overall memory usage of Interaction Media Server exceeds 1.825 Gb (85 percent of 2Gb process limit).

#### i3MsTrapRecDiskSpace

Туре	Access	Description	
N/A	N/A	This trap is generated when the amount of free space available on the recording drive falls below 10 percent and again below 2 percent. Recordings are disabled if the recording drive free space falls to 2 percent or below.	
		This SNMP trap message contains data for the following object:	
		i3MsCmdSrvId	

#### i3MsTrapDOSAttack

Туре	Access	Description
N/A	N/A	This trap is currently not implemented.

#### i3MsTrapAudioQuality

Type Access		Description
N/A	N/A	This trap is currently not implemented.

#### i3MsTrapAudioFault

Туре	Access	Description
N/A	N/A	This trap is generated when a media engine enters an error or exception state.

#### i3MsTrapHttpCacheDiskSpace

Туре	Access	Ccess Description	
N/A	N/A	This trap is generated when the amount of free space for HTTP cache files drops below 500 MiB.	

## i3MsTrapLogDiskSpaceClear

Туре	Type Access Description	
N/A	-	This trap is generated after i3MsTrapLogDiskSpace was previously sent and the amount of free space for tracelog files reaches or exceeds 100 MiB.

#### i3MsTrapMemoryUsageClear

Type Access Description		Description
N/A		This trap is generated after i3MsTrapMemoryUsage was previously sent and overall memory usage of Interaction Media Server drops below 85 percent of the process limit.

#### i3MsTrapRecDiskSpaceClear

Type Access Description		Description
N/A		This trap is generated after i3MsTrapRecDiskSpace was previously sent and the amount of free space available on the audio recording drive meets or exceeds 10 percent.

#### i3MsTrapHttpCacheDiskSpaceClear

Туре	Access	Description
N/A		This trap is generated ater i3MsTrapHttpCacheDiskSpace was previously sent and the amount of free space for HTTP cache files meets or exceeds 500 MiB.

#### i 3 Ms Trap Audio Engine Load Limit Clear

Туре	Access	Description
N/A	N/A	This trap is generated after i3MsTrapAudioEngineLoadLimit was previously sent and the running average of the audio engine load has fallen below the load limit.

## HOST-RESOURCES-MIB.mib

For a list of SNMP objects in this Management Information Base (MIB) file, see <u>HOST-RESOURCES-MIB.mib</u> in the <u>General</u> section.

# **Interaction SIP Proxy**

This section contains information about the following .mib files and SNMP object types:

- INTERACTION-SIP-PROXY.mib
- i3SpGeneral objects
- i3SpInfo objects
- <u>i3SpTraps objects</u>
- HOST-RESOURCES-MIB.mib

# INTERACTION-SIP-PROXY.mib

SNMP         Description           object type		
General objects	These objects contain information of the host system such as operational status, product version, memory usage and other configuration details. See <u>i3SpGeneral objects</u> .	
Information objects	These objects contain information regarding IP routes, call counts, destination status, and media engine parameters. See <u>i3Splnfo objects</u> .	
Traps	These objects contain informational, error, and warning messages for events that occur on the Interaction SIP Proxy host system. See <u>i3SpTraps objects</u> .	

# i3SpGeneral objects

#### i3SpGeneralInfoTable

Туре	Access	Description	
N/A	not-accessible	Table containing general information about Interaction SIP Proxy server.	

# $i \\ 3 \\ SpGeneral \\ InfoTable \\ Entry$

Туре	Access	Description
N/A	not-accessible	Entry in the i3SpGeneralInfoTable.
		Each entry contains data for the following objects:
		i3SpGeneralInfoIndex
		i3SpGeneralInfoProductVersion
		i3SpGeneralInfoOperStatus
		i3SpGeneralInfoLastOperStatusChange
		i3SpGeneralInfoActiveSessions
		i3SpGeneralInfoSIPQueueLength
		i3SpGeneralInfoLicenseType
		i3SpGeneralInfoHostAddress
		i3SpGeneralInfoMemoryAddress
		i3SpGeneralInfoCurrentTimeStamp
		i3SpGeneralInfoDiskFreeSpace
		i3SpGeneralInfoSnmpTrapDestinations
		i3SpGeneralInfoAlertServerStatus
		i3SpGeneralInfoAlertAdminCredentials
		i3SpGeneralInfoAlertConfigChanges
		i3SpGeneralInfoAlertCallDuration
		i3SpGeneralInfoAlertDNSQueryTimeout
		i3SpGeneralInfoAlertSIPQueueLength

# i3SpGeneralInfoIndex

Туре	Access	Description
Integer	read-only	Index into General Plan Table.

# ${\bf i3SpGeneralInfoProductVersion}$

Туре	Access	Description
DisplayString	read-only	The Interaction SIP Proxy version and build number.

#### i3SpGeneralInfoOperStatus

Туре	Access	Description
Integer	read-only	Operational status of Interaction SIP Proxy.
		This object supports the following values:
		1 = unknown
		2 = up
		3 = down
		4 = congested
		5 = restarting
		6 = quiescing
		7 = testing

## i 3 Sp General Info Last Oper Status Change

Туре	Access	Description
Counter32	read-only	The duration of the current status, in seconds.

#### i3SpGeneralInfoActiveSessions

Туре	Access	Description
Gauge32	read-only	Count of currently active sessions.

#### 

Туре	Access	Description
Gauge32	read-only	Count of pending SIP transactions.

## i3SpGeneralInfoLicenseType

Туре	Access	Description
DisplayString	read-only	The Interaction SIP Proxy license type.

## i3SpGeneralInfoHostAddress

	Туре	Access	Description
I	InetAddress	read-only	The IPv4 host address on which Interaction SIP proxy is listening.

#### i3SpGeneralInfoMemoryUsage

Туре	Access	Description
Gauge32	read-only	Memory usage of Interaction SIP Proxy, in bytes.

#### i3SpGeneralInfoCurrentTimeStamp

Туре	Access	Description
DisplayString	read-only	The current timestamp reference of Interaction SIP Proxy server.

#### i3SpGeneralInfoDiskFreeSpace

Туре	Access	Description
Gauge32	read-only	Amount of remaining free space on the disk used for trace logging, in GiB.

#### i3SpGeneralInfoSnmpTrapDestinations

Туре	Access	Description
DisplayString	read- only	A comma-separated list of hostnames and IP addresses which are currently configured to as SNMP trap destinations.

#### i3SpGeneralInfoAlertServerStatus

Туре	Access	Description
TruthValue	read-only	Indicates whether alerts will be sent when destination server status changes from UP to DOWN.
		This object supports the following values:
		1 = true
		2 = false

#### i3SpGeneralInfoAlertAdminCredentials

Туре	Access	Description
TruthValue	read-only	Indicates whether an alert will be sent if the Administrator credentials are changed.
		This object supports the following values:
		1 = true
		2 = false

## $i \\ 3 \\ SpGeneral \\ Info \\ Alert \\ Config \\ Changes$

Туре	Access	Description
TruthValue	read- only	Indicates whether an alert will be sent if any configuration item, such as protocols, routes, certificates, server plans, etc. are changed.
		This object supports the following values:
		1 = true
		2 = false

# $i \\ 3 \\ SpGeneral \\ Info \\ Alert \\ Call \\ Duration$

Туре	Access	Description
TruthValue	read-only	Indicates whether an alert will be sent if any single call session exceeds a preset duration.
		This object supports the following values:
		1 = true
		2 = false

## $i \\ 3 \\ SpGeneral \\ Info \\ Alert \\ DNS \\ Query \\ Time out$

Туре	Access	Description
TruthValue	read-only	Indicates whether an alert will be sent if any single DNS lookup query requires more than 2 seconds.
		This object supports the following values:
		1 = true
		2 = false

## $i \\ 3 \\ SpGeneral \\ Info \\ Alert \\ SIP \\ Queue \\ Length$

Туре	Access	Description
TruthValue	read-only	This alert parameter is currently disabled. It may be implemented in a future release.

## i3SpLicenseInfo

#### i3SpLicenseVersion

Туре	Access	Description
DisplayString	read-only	The license version number.

#### i3SpLicenseDetail

Туре	Access	Description
DisplayString	read-only	The license type and details.

## i3SpLicenseCompanyName

Туре	Access	Description
DisplayString	read-only	The name of the Company to which this license was issued.

## i3SpLicenseServerName

Туре	Access	Description
DisplayString	read-only	The server name associated with this license

#### i3SpLicenseFeatureLoadBalancing

Туре	Access	Description
TruthValue	read-only	Indicates whether the load-balancing license feature has been activated.
		This object supports the following values:
		1 = true
		2 = false

## i3SpLicenseRegistrationsCount

Туре	Access	Description
Gauge32	read-only	The maximum number of SIP devices allowed to concurrently register with this Interaction SIP Proxy server.

## i3SpLicenseMediaPortCount

Туре	Access	Description
Gauge32	read-only	The maximum number of concurrent media recordings enabled on this Interaction SIP Proxy server.

#### i3SpLicenseG723Count

Туре	Access	Description
Gauge32	read-only	The maximum number of concurrent G.723 media recordings enabled on this Interaction SIP Proxy server.

#### i3SpLicenseG729Count

Туре	Access	Description
Gauge32	read-only	The maximum number of concurrent G.729 media recordings enabled on this Interaction SIP Proxy server.

## i3SpManagedProxyInfo

## i3SpManagedProxyState

Туре	Access	Description
Integer	read-only	Operational status of Managed Proxy feature.
		This object supports the following values:
		0 = disconnected
		1 = pending
		2 = activated
		3 = rejected

## i3SpManagedProxyLastUpdate

Туре	Access	Description
DisplayString	read- only	The local time at which the last update message was received from the Customer Interaction Center server.

## i3SpManagedProxyRegion

Туре	Access	Description
DisplayString	read- only	The geographical region name which has been assigned to this Interaction SIP Proxy server by the Customer Interaction Center administrator.

## i3SpManagedProxyHostname

Туре	Access	Description
DisplayString	read-only	The local host name of this Interaction SIP Proxy server.

## i3SpManagedProxyFqdn

Туре	Access	Description
DisplayString	read-only	The fully qualified domain name (FQDN) of this Interaction SIP Proxy server.

#### i3SpManagedProxyStationCount

Туре	Access	Description
Counter32		The number of local stations which are currently being remotely managed by the Customer Interaction Center server. The stations are enumerated in the i3SpAuthenticationTable.

#### i3SpManagedProxyProvisionProxyRunning

Туре	Access	Description
TruthValue	read-only	Indicates if the Provision Proxy feature is currently running.
		This object supports the following values:
		1 = true
		2 = false

## i3SpMediaManagerInfo

#### i3SpMediaRecFilePath

Туре	Access	Description
DisplayString	read-only	The local file path destination where recordings are kept.

#### i3SpMediaRecFreeDiskSpace

Туре	Access	Description
Gauge32	read-only	The amount of remaining free storage space used for recordings, in MiB.

#### i3SpMediaRecTotalDiskSpace

Туре	Access	Description
Gauge32	read-only	The total allocated storage size used for recordings, in MiB. This value includes free space and used space.

#### i3SpmediaResourceAgeHistogram

Туре	Access	Description
DisplayString		The aggregated age of all active audio resources on this Interaction SIP Proxy server, separated into raw histogram bands defined in a comma-separated list of elements of [max_age_in_seconds]: [resource_count].

# i3SpTracelogInfo

## i3SpTracelogFilePath

Туре	Access	Description
DisplayString	read-only	The local file path destination where tracelog files are kept.

#### i3SpTracelogFreeDiskSpace

Туре	Access	Description
Gauge32	read-only	The amount of remaining free space on the hard drive used for trace logging, in MiB.

#### i3SpTracelogTotalDiskSpace

Туре	Access	Description
Gauge32	read- only	The total allocated size of the hard drive used for tracelog files, in MiB. This value includes free space and used space.

## i3SpDiagnostics

# i3SpDiagCpuTimeTotalPct

Туре	Type Access Description	
Gauge32	read-only	The overall CPU usage of this server, across all cores and processes, in percent capacity.

## i3SpDiagProcessTimeTotalPct

Туре	Access	Description
Gauge32	read-only	The CPU usage of this server due to the Interaction SIP Proxy process only, in percent capacity.

#### i3SpDiagPrivateBytes

Type Access Description		Description	
	Gauge32	read-only	The amount of memory current in use by the Interaction SIP Proxy process, in Kilobytes.

#### i3SpDiagIOBytesPerSec

Туре	Access	Description
Gauge32		The rate at which the Interaction SIP Proxy process is reading and writing bytes in I/O operations. This value represents all I/O activity generated by the process to include file network and device I/Os.

#### i3SpDiagTCPConnectionCount

Туре	Access	Description
Gauge32	read-only	The number of currently active TCP connections to this Interaction SIP Proxy server.

# ${\bf i3SpDiagTLSConnectionCount}$

Туре	Access	Description
Gauge32	read-only	The number of currently active TLS connections to this Interaction SIP Proxy server.

#### i3SpDiagSIPSessionCount

Type Access Description		Description
Gauge32	read-only	The total number of all SIP sessions being managed, in ALL of their various states (not just 'connected').

## i3SpDiagSIPQueueLength

Туре	Access	Description
Gauge32	read-only	The number of SIP messages waiting to be processed.

## i3SpTrapVars

## i3SpSpecificTrapType

Туре	Access	Description
Integer	accessible-for-notify	Contains the type of trap notification
		This object contains one of the following values:
		1 = operStatus
		2 = destServerStatus
		3 = adminCredentials
		4 = configChange
		5 = dnsQueryAlarm
		6 = sipQueueLength
		7 = sessionDuration
		8 =- memoryUsage
		9 = diskSpace
		10 = dosAttack
		11 = recDiskSpace

## i3SpSessionCallID

Туре	Access	Description
DisplayString	accessible-for-notify	Specific call ID value associated with i3SpTrapSessionDuration.

## i3SpSessionConnectDuration

Туре	Access	Description
Counter32	accessible-for-notify	Call duration, in minutes, associated with i3SpTrapSessionDuration.

# i3SpInfo objects

## i3SpServerPlanInfoTable

Туре	Access	Description
N/A	not-accessible	Table containing all destination IP addresses, call counts, and Up/Down status for each destination.

## i3SpServerPlanInfoTableEntry

Туре	Access	Description	
N/A	not- accessible	Entry in the i3SpServerPlanInfoTable. Each entry is applicable for each destination server of all active Server Plans.	
		Each entry contains data for the following objects:	
		i3SpServerPlanInfoIndex	
		i3SpServerPlanInfoName	
		i3SpServerPlanInfoIPAddress	
		i3SpServerPlanInfoProtocol	
		i3SpServerPlanInfoCallCount	
		i3SpServerPlanInfoStatus	
		i3SpServerPlanInfoStatusSince	
		i3SpServerPlanInfoStatusDuration	

#### i3SpServerPlanInfoIndex

Туре	Access	Description
Integer	read-only	Index into Server Plan Table.

#### i3SpServerPlanInfoName

Туре	Access	Description
DisplayString	read-only	The server plan name to which this server belongs.

## i3SpServerPlanInfoIPAddress

Туре	Access	Description
DisplayString	read-only	The address or hostname of this destination server.

## i3SpServerPlanInfoProtocol

Туре	Access	Description
Integer	read-only	Protocol type.
		This object supports the following values:
		0 = notSet
		1 = udp
		2 = tcp
		3 = tls
		4 = sctp
		5 = other

#### i3SpServerPlanInfoCallCount

Туре	Access	Description
Counter32	read-only	The number of calls currently in progress.

## i3SpServerPlanInfoStatus

Туре	Access	Description
Integer	read-only	Destination server status up/down.
		This object supports the following values:
		0 = none
		1 = up
		2 = down

## $i \\ 3 \\ Sp \\ Server \\ Plan \\ Info \\ Status \\ Since$

Туре	Access	Description
DisplayString	read-only	Timestamp when status last changed.

#### i3SpServerPlanInfoStatusDuration

Туре	Access	Description
Counter32	read-only	Duration of current status, in seconds.

## i3SpAudioEngineInfoTable

Туре	Access	Description
N/A	not-accessible	Table containing all audio engine parameters.

## i3SpAudioEngineInfoTableEntry

Туре	Access	Description
N/A	not-accessible	Entry in the i3SpAudioEngineInfoTable. Each entry is applicable for each activated media engine.
		Each entry contains data for the following objects:
		i3SpAudioEngineId
		i3SpAudioEngineThreadID
		i3SpAudioEngineCPUID
		i3SpAudioEngineLocation
		i3SpAudioEngineCurrentLoad
		i3SpAudioEngineAverageLoad
		i3SpAudioEngineGraphCount
		i3SpAudioEngineElementCount

#### i3SpAudioEngineId

Туре	Access	Description
Integer	read-only	Index into Audio Engine Table.

## i3SpAudioEngineThreadID

Туре	Access	Description
DisplayString	read-only	The local thread ID of this media engine.

## i3SpAudioEngineCPUID

Туре	Access	Description
Integer	read-only	The local CPU ID of this media engine.

#### i3SpAudioEngineLocation

Туре	Access	Description
DisplayString	read-only	The Location ID of this media engine.

#### $i \\ 3 \\ SpAudio \\ Engine \\ Current \\ Load$

Туре	Access	Description
DisplayString	read-only	The current load of this media engine, in percent capacity.

## $i \\ 3 \\ SpAudio \\ Engine \\ Average \\ Load$

Туре	Access	Description
DisplayString	read-only	The average load of this media engine, in percent capacity, over the last 30 seconds.

## i3SpAudioEngineGraphCount

Туре	Access	Description
Gauge32	read-only	The number of active graphs within this media engine.

## i3SpAudioEngineElementCount

Туре	Access	Description
Gauge32	read-only	The total number of active graph elements within this media engine.

# i3SpTraps objects

#### i3SpTrapOperStatus

Туре	Access	Description
N/A	N/A	This trap is generated when the Interaction SIP Proxy changes its own state. If the SNMP service is running, but the Interaction SIP Proxy application is unresponsive, this trap will be sent repeatedly every 30 seconds until the condition is cleared.
		This SNMP trap message contains the following objects:
		i3SpGeneralInfoOperStatus

## i3SpTrapDestServerStatus

Туре	Access	Description	
N/A	N/A	This trap is generated when a destination server listed in any active server plan changes state from UP to DOWN or vice-versa.	
		This trap message contains the following objects:	
		i3SpServerPlanInfoIPAddress	
		3SpServerPlanInfoCallCount	
		i3SpServerPlanInfoStatus	

# i3SpTrapAdminCredentials

Туре	Access	Description
N/A	N/A	This trap is generated when the administrator login credentials are changed.
		This trap message contains the following objects:
		i3SpGeneralInfoCurrentTimeStamp

# i3SpTrapConfigChange

Туре	Access	Description
N/A	N/A	This trap is generated when any Interaction SIP Proxy configuration items are changed.
		This trap message contains the following objects:
		i3SpGeneralInfoCurrentTimeStamp

## i3SpTrapDNSQueryAlarm

Туре	Access	Description
N/A	N/A	This trap is generated when any DNS name lookup duration exceeds 2 seconds.
		This trap message contains the following objects:
		i3SpGeneralInfoCurrentTimeStamp

# i3SpTrapSIPQueueLength

Туре	Access	Description
N/A	N/A	Deprecated. This item is currently under review.
		This trap message contains the following objects:
		i3SpGeneralInfoSIPQueueLength
		i3SpGeneralInfoCurrentTimeStamp

# i3SpTrapSessionDuration

Туре	Access	Description
N/A	N/A	This trap is signaled if any call exceeds the Excessive Call Duration threshold that is configured in the Alerts setup.
		This trap message contains the following objects:
		i3SpSessionCallID
		i3SpSessionConnectDuration

# i3SpTrapMemoryUsage

Туре	Access	Description
N/A	N/A	This trap is generated when overall memory usage of Interaction SIP Proxy exceeds 1.825 Gb (85% of 2Gb process limit).
		This trap message contains the following objects:
		i3SpGeneralInfoMemoryUsage

## i3SpTrapDiskSpace

Туре	Access	Description
N/A	N/A	This trap is generated when the amount of free space on the drive used for trace logging falls below 2 GiB (gigabytes).
		This trap message contains the following objects:
		i3SpTracelogFreeDiskSpace

## i3SpTrapDOSAttack

Туре	Access	Description
N/A	N/A	This trap is currently disabled.
		This trap message contains the following objects:
		i3SpGeneralInfoCurrentTimeStamp

#### i3SpTrapRecFreeDiskSpace

Туре	Access	Description
N/A	N/A	This trap is signaled when the amount of free disk space for audio recordings falls below 2 GiB (gigabytes).
		This trap message contains the following objects:
		i3SpMediaRecFreeDiskSpace

## HOST-RESOURCES-MIB.mib

For a list of SNMP objects in this Management Information Base (MIB) file, see <u>HOST-RESOURCES-MIB.mib</u> in the <u>General</u> section.

# **Session Manager**

This section contains information about the following .mib file and SNMP object type:

- <u>i3icsessionmanager.mib</u>
- sessionmanagerInfo objects

#### i3icsessionmanager.mib

The i3icsessionmanager.mib Management Information Base (MIB) file was introduced in CIC 2016 R1. It provides the ability of network and telephony administrators to monitor and determine the current health of a Session Manager instance. See <u>sessionmanagerInfo objects</u>.

#### sessionmanagerInfo objects

#### sessionmanagerTotalSessionsInfoTable

Туре	Access	Description
N/A		Table containing the total number of current sessions by CIC subsystem with this Interaction Session Manager instance

#### $session manager {\sf Total Sessions Info {\sf Table Entry}}$

Туре	Access	Description
N/A	not- accessible	An entry in sessionmanagerTotalSessionsInfoTable. Each entry represents a CIC subsystem and its number of current sessions with this Interaction Session Manager instance.
		Each entry contains data for the following objects:
		sessionmanagerProductId
		sessionmanagerProductName
		sessionmanagerProductTotalSessions

#### sessionmanagerProductId

Туре	Access	Description
Integer	read- only	The index number of a CIC subsystem that has current sessions with this Interaction Session Manager instance.

#### sessionmanagerProductName

Type Access Description		Description
DisplayString	read- only	The name of the CIC subsystem that has current sessions with this Interaction Session Manager instance.

#### sessionmanagerProductTotalSessions

Type Access Descri		Description
Unsigned32	read- only	The number of current sessions for the associated CIC subsystem with this Interaction Session Manager instance.

#### $session manager {\sf Total Number Statistics Cached}$

Type Access		Description	
Unsigned32		The number of alerts that Interaction Session Manager has encountered and saved for statistical purposes. This value is intended for use by Genesys personnel and software.	

#### $session manager {\sf Total Number Statistics Watched}$

Type Access Description		Description
Unsigned32	only	The number of statistics that Session Manager is watching. This MIB object is closely related to the sessionmanagerTotalNumberStatisticsCatched object as it also correlates to the amount of memory used in the process of monitoring, caching, and averaging usage statistics.

#### $session manager {\sf Total Sessions Watching Statistics}$

Type Access Description		Access	Description
	Unsigned32	read- only	The number of sessions from typical CIC products that are watching at least one statistic on this Session Manager host. This value can help you determine if one or more CIC products are dominating this instance of Session Manager.

#### $session manager {\sf Total Alerts Cached}$

Туре	Access	Description
Unsigned32	only	In CIC, alerts are notifications of contact center problems, such as having too few agents available for a large number of interactions. This object provides the number of alerts that Session Manager has encountered and saved for statistical purposes. This value is intended for use by Genesys personnel and software.

#### $session manager {\sf TotalAlertsWatched}$

Туре	Access	Description
Unsigned32		In CIC, alerts are notifications of contact center problems, such as having too few agents available for a large number of interactions. This object provides the number of alerts that Session Manager has encountered and is actively monitoring for statistical purposes. This value is intended for use by Genesys personnel and software.

#### $session manager {\sf Total Sessions Watching Alerts}$

Туре	Access	Description
Unsigned32		In CIC, alerts are notifications of contact center problems, such as having too few agents available for a large number of interactions. This object provides the number CIC subsystems that are actively monitoring these alerts through connections to Interaction Session Manager. This value is intended for use by Genesys personnel and software.

#### sessionmanagerTopBandwidthUsers

Туре	Access	Description
Octet String	read- only	A list of the top 20 bandwidth users of this Session Manager instance over the last 5 minutes. Users and the amount of associated bandwidth are separated by the $ $ character.

# StatAlert Server

This section contains information about the following .mib file and SNMP object type:

- <u>i3icstatlaertsserver.mib</u>
- <u>StatalertserverObjects objects</u>

#### i3icstatalertsserver.mib

The i3icstatalertserver.mib Management Information Base (MIB) file was introduced in CIC 2016 R1. It enables network and telephony administrators to monitor system health of StatAlert Server through SNMP. See <u>StatalertserverObjects objects</u>.

#### StatalertserverObjects objects

#### statisticsByConnections

Туре	Access	Description
N/A	not-accessible	This table contains the number of statistics requested of StatAlertServer from various CIC products.

#### statisticByConnection

Туре	Access	Description	
N/A	not-accessible	Each entry represents a CIC product connection and the number of statistics that it has requested.	
		Each entry contains data for the following objects:	
		connectionIdentifier	
		statisticsWatched	

#### connectionIdentifier

Туре	Access	Description
Unsigned32	read-only	The unique identifier for the associated CIC product connection

#### statisticsWatched

Туре	Access	Description
Unsigned3	2 read-only	The number of statistics requested by the associated CIC product connection

#### statisticsByProviders

Туре	Access	Description
N/A	not-accessible	Table containing the number of statistics provided by each CIC product.

#### statisticsByProvider

Туре	Access	Description	
N/A	not-accessible	Each entry represents a CIC product and the number of statistics that it provided.	
		Each entry contains data for the following objects:	
		providerIdentifier	
		statisticsProvided	

# providerIdentifier

Туре	Access	Description
DisplayString	read-only	The name of the associated CIC product

#### statisticsProvided

Туре	Access	Description
Unsigned32	read-only	The number of statistics provided by the associated CIC product

# Change log

The following changes have been made to this document since release:

Date	Changes
11-November-2011	GA release
09-January-2012	<ul> <li>Updated document formatting to current standards</li> <li>Updated "Copyright and Trademark information" page</li> </ul>
09-February-2012	Removed incorrect statement regarding installation sequence
20-March-2014	<ul> <li>Updated content for 4.0</li> <li>Added Management Information Base (MIB) file objects and traps for Customer Interaction Center products and Interaction Edge/Interaction Gateway</li> <li>Added content for PureConnect SNMP agent service</li> </ul>
05-September-2015	<ul> <li>Updated documentation to reflect changes required in the transition from version 4.0 SU# to CIC 2015 R1, such as updates to product version numbers, system requirements, installation procedures, references to PureConnect Product Information site URLs, and copyright and trademark information.</li> <li>IC-115103 - Rename i3TracelogFreeDiskSpace to i3SpTracelogFreeDiskSpace</li> <li>IC-114101 - Remove ServerURI and RemoteURI objects from the Interaction SIP Proxy MIB</li> <li>IC-115289 - i3SpProvisionProxyRunning element should be renamed</li> </ul>
16-April-2015	<ul> <li>Updated "Copyright and Trademark information" page</li> <li>Updated formatting to conform to new corporate standards</li> </ul>
28-July-2015	<ul> <li>DP-1272 Support for SNMPv3 on our products</li> <li>Updated to reflect the ININ SNMP service is now installed as the default SNMP service</li> <li>Removed obsolete content for the previous SNMP solution</li> <li>Reorganized content to reflect new default SNMP service (ININ SNMP) and configuration process</li> </ul>
24-September-2015	<ul> <li>Added new reporting subsystems for ilic.mib in the following MIB objects: <ul> <li>i3lcSubsysInfolndex</li> <li>i3lcSubsysCmdIndex</li> <li>i3lcTrapInfoSubsys</li> </ul> </li> <li>Added new MIB objects for ilic.mib: <ul> <li>i3lcGenSwitchoverRole</li> <li>i3lcGenSwitchoverBackupState</li> <li>i3lcGenSwitchoverReplicationMode</li> <li>i3lcGenSwitchoverReplicationMode</li> <li>i3lcTrapVariableHostName</li> <li>i3lcTrapVariablePluginName</li> <li>i3lcTrapVariablePluginName</li> <li>i3lcTrapVariableHealthLevel</li> </ul> </li> <li>Removed the following MIB objects for ilic.mib: <ul> <li>i3lcTrapCommenceSwitchoverEvent</li> <li>i3lcTrapDiscontinueSwitchoverEvent</li> <li>i3lcTrapHighLatencyStateClear</li> <li>i3lcTrapTracingStoppedInsufficientDiskSpace</li> <li>i3lcTrapTracingStoppedInsufficientDiskSpaceCleared</li> </ul> </li> </ul>
21-October-2015	<ul> <li>Added new i3icsessionmanager.mib file and its objects</li> <li>Added new i3icstatalertserver.mib file and its objects</li> </ul>

08-January-2016	<ul> <li>IC-134501 Rewrite confusing sentence regarding the ININ Object ID The definition for "Management Information Base (MIB)" was rewritten for clarity.</li> <li>IC-134846 Include registry tweaks necessary for App log trap messages to work for subsystems</li> <li>Added admonitions for the following traps:         <ul> <li>i3lcTrapInformationalEventLog</li> <li>i3lcTrapErrorEventLog</li> </ul> </li> </ul>
06-July-2016	<ul> <li>Updated "Copyright and trademark information" page</li> <li>Added content for Session Manager support for SNMP</li> <li>Added content for Interaction Recorder Remote Content Service support for SNMP</li> </ul>
29-July-2016	IC-138711 - Some traps need corresponding trap that clears the alarm state when the respective condition is alleviated. Added five traps for clearing conditions in <u>i3MsTraps objects</u> .
02-June-2017	Added new MIB object for i3ic.mib • i3lcGenSwitchoverPeer
18-October-2017	Rebranding terminology, updated title page and copyright page.
23-January-2018	Conversion to HTML.
15-March-2018	Added content for reporting_plugin.mib.
01-October-2018	Updated i3IcSubSysInfoAvailablecontent object to 2=unavailable.
03-January-2019	Updated "Configure PureConnect SNMP service through the command line utility" to correct ININ SNMP> atd –community param1 –uri param2 and "D:\I3\IC\ININ SNMP".
23-July-2019	Reorganized the content only, which included combining some topics and deleting others that just had an introductory sentence such as, "In this section".
13-December-2019	Removed references to Interaction Gateway and Interaction Edge as they are EOL.
02-April-2020	Updated values for i3IcGenSwitchoverRole.
09-April-2020	Updated values for i3lcGenSwitchoverBackupState.
29-April-2020	Updated links from my.inin.com to new locations.