

SNMP Support for EntireX

EntireX uses the SNMP (Simple Network Management Protocol) interface of the System Management Hub. The configuration of the SNMP interface is described in detail in the section *SNMP Add-on Interface* in the separate System Management Hub documentation.

This chapter covers the following topics:

- Installation
 - SNMP Functionality
 - Activating SNMP Support for EntireX
 - Enabling SNMP Functionality
 - Loading EntireX MIBs
 - Object ID
 - SNMP Support for Broker
 - SNMP TRAP for the Broker
 - SNMP Support for RPC Server
 - SNMP TRAP for the RPC Server
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Installation

The SNMP Add-on interface is installed while installing the System Management Hub. The System Management Hub is installed or updated with EntireX. The additional MIB files for EntireX will be installed into the EntireX installation directory. For the location of the MIB files, see *Loading EntireX MIBs* below. The SNMP interface will be setup on the default SMH SNMP port.

Notes:

1. See section *SNMP Add-on Interface* in the separate System Management Hub documentation for information on the default port and on how to change the settings of the SNMP interface.
2. As a minimum, the TRAP destination should be checked and set up for your environment.

SNMP Functionality

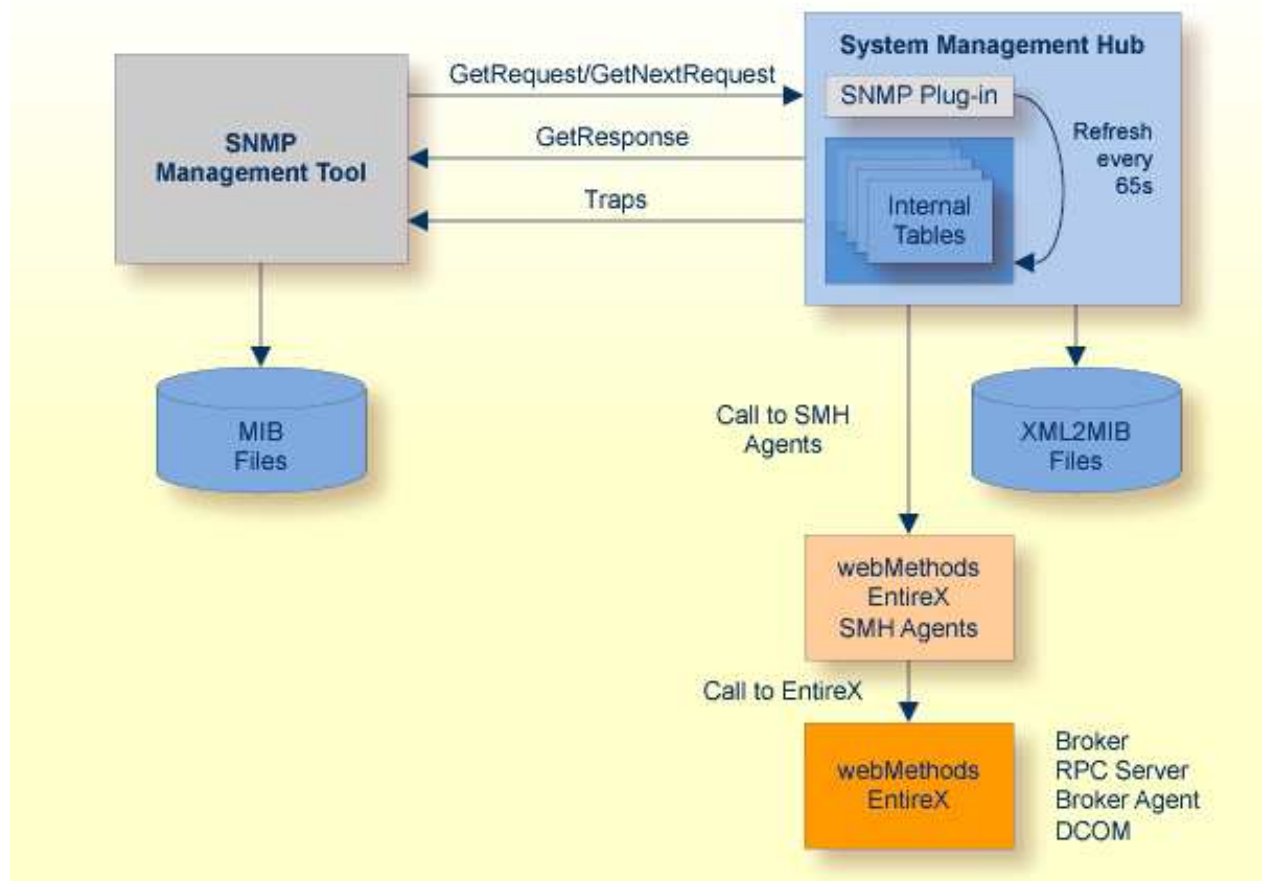
EntireX uses the System Management Hub, in particular the SNMP plug-in of the System Management Hub, to provide SNMP functionality. The two types of file required, MIB and XML2MIB, are located in the EntireX installation directory. See *Loading EntireX MIBs*.

The MIB (Management Information Base) files contain the definitions required for the third-party SNMP Management Tool. The XML2MIB files contain the required definitions of the internal tables for the System Management Hub SNMP plug-in and are the SMH complements to the MIB files. The SMH internal tables are used to buffer the information temporarily.

The System Management Hub SNMP plug-in will refresh these internal tables by default every 65 seconds. The refresh timeout can be adjusted in the SMH settings. The internal tables are also required to generate a trap notification. The System Management Hub SNMP plug-in compares the values defined in the XML2MIB files with the changes to these values, and automatically generates a trap notification if a specified condition occurs.

During the refresh cycle, the SNMP plug-in calls the EntireX System Management Hub agents to retrieve the required information from the EntireX components. Currently SNMP functionality is provided for the following EntireX components.

- EntireX Broker
- EntireX RPC Servers
- EntireX Broker Agent



Currently only SNMP monitoring functionality is supported. Use of the SNMP command SetRequest to change an object value is not supported. See section *SNMP Add-on Interface* in the separate System Management Hub documentation for further information. Use the SMH GUI to set or change any properties for the managed component.

Activating SNMP Support for EntireX

> To activate SNMP support for EntireX

1. Import the Software AG EntireX MIB files to your SNMP Manager Tool.

Under Windows: `<drive>:\SoftwareAG\EntireX\smh\snmp\mib`

Under UNIX: `/opt/softwareag/EntireX\smh\snmp\mib`

2. Set up your SNMP Manager Tool (SMH uses UDP port 9903 by default).

The SNMP port may be changed by the user during installation. Verify these setting in the System Management Hub settings.

3. Switch on SNMP support for EntireX. See *Enabling SNMP Functionality*.

4. Restart SMH services/daemons.

5. For EntireX Broker only:

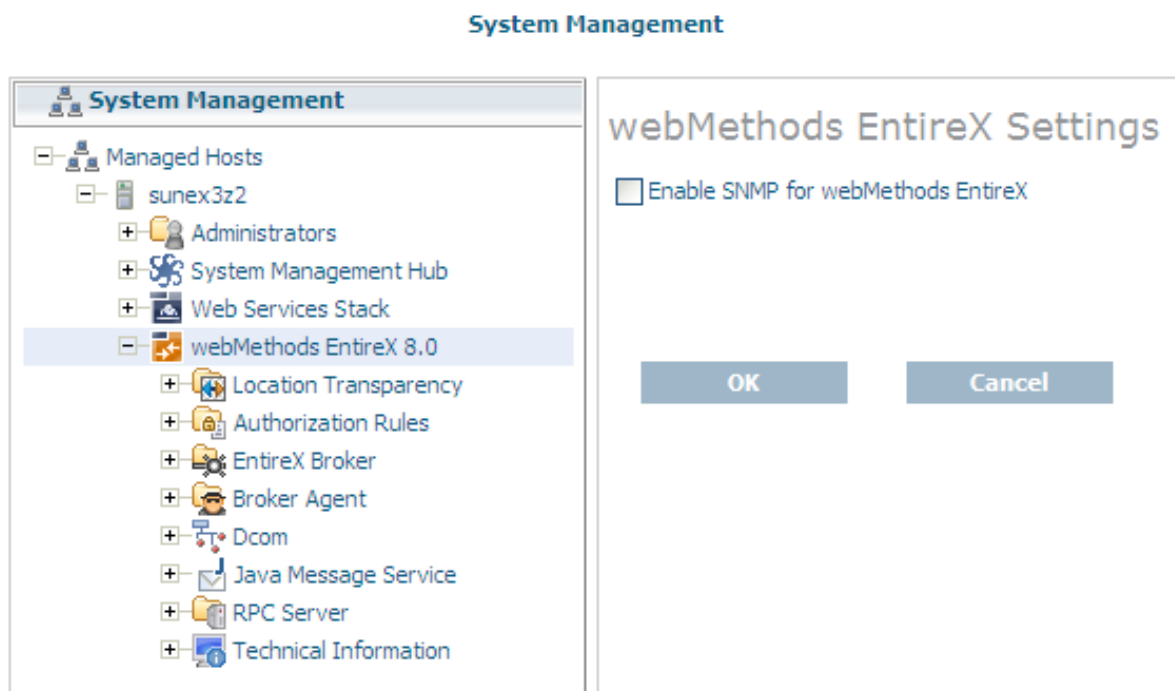
Enter a user and password for each broker for which SNMP support is to be enabled. See *Enabling the SNMP Plug-in in Broker Administration using System Management Hub* under UNIX | Windows.

Enabling SNMP Functionality

SNMP support for EntireX is switched off by default after the installation. If you need SNMP support, enable it using the steps below.

> To enable or disable SNMP support

1. Log on to the System Management Hub and select the root node of EntireX.
2. From the context menu, choose **Settings**.
3. Check the check box to enable SNMP support, and clear it to disable SNMP support.



4. Choose **OK** to submit changes. If the check box is not visible, check whether System Management Hub SNMP support has been enabled. (See note below).
5. For EntireX Broker, the SNMP plug-in must be enabled individually for each broker before it can be administered by SNMP. See *Enabling the SNMP Plug-in in Broker Administration using System Management Hub* under UNIX | Windows for more details.

Changes will become active when your system or System Management Hub services are restarted.

Note:

If System Management Hub's SNMP support has been disabled, the EntireX's SNMP support will also be disabled. If this is the case, the message and check box **Enable SNMP for EntireX** in the screenshot above will be replaced by the message: "The SNMP features in SMH are disabled". See the separate System Management Hub documentation.

Similarly, if you do not have a valid license, the message and check box above will be replaced by the message: "The EntireX XML license key file does not contain a license for SNMP".

Loading EntireX MIBs

EntireX MIBs are provided with the EntireX.

Under Windows: `<drive>:\SoftwareAG\EntireX\smh\snmp\mib`

Under UNIX: `/opt/softwareag/EntireX/smh/snmp/mib`

Compile and load the MIB files into your SNMP management tool. If required, copy these files into the directory of your SNMP management tool. The MIB file `SOFTWAREAG-EXXnnn-GLOBAL.MIB` has global definitions for all EntireX SNMP MIBs.

Note:

In the example above, *nnn* in the global MIB file refers to the first three digits of the EntireX Version.

Object ID

The EntireX Object ID (OID) is below the public Software AG Object ID.

EntireX OID looks like this:

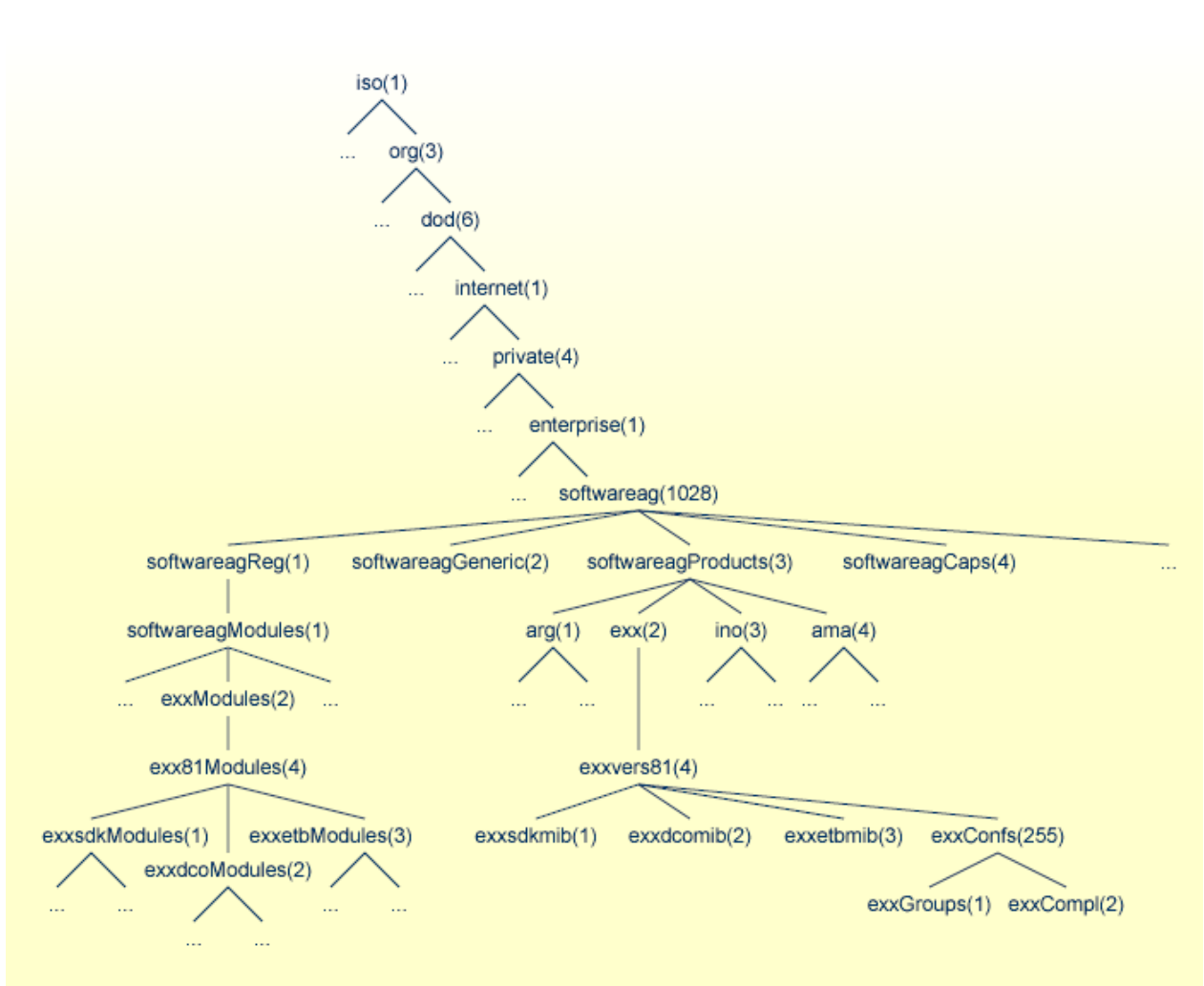
```
iso(1).org(3).dod(6).internet(1).private(4).enterprise(1).softwareag(1028).softwareagProducts(3).exx(2)
```

The following diagrams provide more detailed information on the OID tree. The MIB files provided for EntireX are designed for the Version 2c of the Simple Network Management Protocol (SNMPv2).

EntireX imports the following predefined standard definitions:

- SNMPv2-SMI from RFC1902 (MIB Structure)
- SNMPv2-TC from RFC1903 (Textual Conventions)
- SNMPv2-CONF from RFC1904 (Conformance Statements)

Your SNMP management tool must provide these standard definitions.



SNMP Support for Broker

The Broker SNMP MIB file defines some of the imported basic properties. The SNMP table shows these properties for each Broker that has been entered in the SMH GUI. For each table entry, the System Management Hub adds an extension to the OID prefix.

1. exxetbEntry (1.3.6.1.4.1.1028.3.2.4.3.1.1.1)

Property	Description	OID Prefix
exxetbBrokerName	The Name of the EntireX Broker	1.3.6.1.4.1.1028.3.2.4.3.1.1.1.1
exxetbBrokerStatus	Status of the EntireX Broker	1.3.6.1.4.1.1028.3.2.4.3.1.1.1.2
exxetbBrokerTCPPort	TCP Port of the EntireX Broker	1.3.6.1.4.1.1028.3.2.4.3.1.1.1.3
exxetbBrokerSSLPort	SSL Port of the EntireX Broker	1.3.6.1.4.1.1028.3.2.4.3.1.1.1.4
exxetbBrokerTransport	Transport of the EntireX Broker	1.3.6.1.4.1.1028.3.2.4.3.1.1.1.5
exxetbBrokerTraceLevel	Trace Level of the EntireX Broker	1.3.6.1.4.1.1028.3.2.4.3.1.1.1.6
exxetbBrokerSecurity	Security of the EntireX Broker	1.3.6.1.4.1.1028.3.2.4.3.1.1.1.7
exxetbBrokerAutoLogon	Auto Logon of the EntireX Broker	1.3.6.1.4.1.1028.3.2.4.3.1.1.1.8
exxetbBrokerServiceUpdate	Service Update of the EntireX Broker	1.3.6.1.4.1.1028.3.2.4.3.1.1.1.9
exxetbBrokerClientNonAct	Client Nonact of the EntireX Broker	1.3.6.1.4.1.1028.3.2.4.3.1.1.1.10

2. exxetbBrkrEntry (1.3.6.1.4.1.1028.3.2.4.3.2.1.1)

Property	Description	OID Prefix
exxetbBrkrBrokerName	Broker name of the EntireX Broker	1.3.6.1.4.1.1028.3.2.4.3.2.1.1.2
exxetbBrkrBrokerStatus	Broker status of the EntireX Broker	1.3.6.1.4.1.1028.3.2.4.3.2.1.1.3
exxetbBrkrPlatformName	Broker platform name of the EntireX Broker	1.3.6.1.4.1.1028.3.2.4.3.2.1.1.4
exxetbBrkrBrokerVersion	Broker version of the EntireX Broker	1.3.6.1.4.1.1028.3.2.4.3.2.1.1.5
exxetbBrkrRunTime	Broker runtime of the EntireX Broker	1.3.6.1.4.1.1028.3.2.4.3.2.1.1.6
exxetbBrkrNumWorker	Broker number of worker of the EntireX Broker	1.3.6.1.4.1.1028.3.2.4.3.2.1.1.7
exxetbBrkrTraceLevel	Broker trace level of the EntireX Broker	1.3.6.1.4.1.1028.3.2.4.3.2.1.1.8
exxetbBrkrLongMsgBufNum	Broker number of long message Buffer of the EntireX Broker	1.3.6.1.4.1.1028.3.2.4.3.2.1.1.9

Property	Description	OID Prefix
exxetbBrkrLongMsgBufLen	Broker length of long message buffer of the EntireX Broker	1.3.6.1.4.1.1028.3.2.4.3.2.1.1.10
exxetbBrkrLongMsgBufActive	Broker active long message buffer of the EntireX Broker	1.3.6.1.4.1.1028.3.2.4.3.2.1.1.11
exxetbBrkrLongMsgBufHigh	Broker high watermark of long message buffer of the EntireX Broker	1.3.6.1.4.1.1028.3.2.4.3.2.1.1.12
exxetbBrkrShortMsgBufNum	Broker number of short message buffer of the EntireX Broker	1.3.6.1.4.1.1028.3.2.4.3.2.1.1.13
exxetbBrkrShortMsgBufLen	Broker length of short message buffer of the EntireX Broker	1.3.6.1.4.1.1028.3.2.4.3.2.1.1.14
exxetbBrkrShortMsgBufActive	Broker active short message buffer of the EntireX Broker	1.3.6.1.4.1.1028.3.2.4.3.2.1.1.15
exxetbBrkrShortMsgBufHigh	Broker high watermark of short message buffer of the EntireX Broker	1.3.6.1.4.1.1028.3.2.4.3.2.1.1.16
exxetbBrkrServiceNum	Broker number of service of the EntireX Broker	1.3.6.1.4.1.1028.3.2.4.3.2.1.1.17
exxetbBrkrServiceActive	Broker active service of the EntireX Broker	1.3.6.1.4.1.1028.3.2.4.3.2.1.1.18
exxetbBrkrServerNum	Broker number of server of the EntireX Broker	1.3.6.1.4.1.1028.3.2.4.3.2.1.1.19
exxetbBrkrServerActive	Broker active server of the EntireX Broker	1.3.6.1.4.1.1028.3.2.4.3.2.1.1.20
exxetbBrkrServerHigh	Broker high watermark of server of the EntireX Broker	1.3.6.1.4.1.1028.3.2.4.3.2.1.1.21
exxetbBrkrClientsNum	Broker number of clients of the EntireX Broker	1.3.6.1.4.1.1028.3.2.4.3.2.1.1.22
exxetbBrkrClientsActive	Broker active clients of the EntireX Broker	1.3.6.1.4.1.1028.3.2.4.3.2.1.1.23
exxetbBrkrClientsHigh	Broker high watermark of clients of the EntireX Broker	1.3.6.1.4.1.1028.3.2.4.3.2.1.1.24
exxetbBrkrConversationNum	Broker number of conversation of the EntireX Broker	1.3.6.1.4.1.1028.3.2.4.3.2.1.1.25

Property	Description	OID Prefix
exxetbBrkrConversationHigh	Broker high watermark of conversation of the EntireX Broker	1.3.6.1.4.1.1028.3.2.4.3.2.1.1.26
exxetbBrkrUOWMax	Broker maximum of unit of work of the EntireX Broker	1.3.6.1.4.1.1028.3.2.4.3.2.1.1.27
exxetbBrkrUOWMsgs	Broker unit of work messages of the EntireX Broker	1.3.6.1.4.1.1028.3.2.4.3.2.1.1.28
exxetbBrkrUOWTime	Broker unit of work time of the EntireX Broker	1.3.6.1.4.1.1028.3.2.4.3.2.1.1.29
exxetbBrkrUOWMaxMsg	Broker maximum message of unit of work of the EntireX Broker	1.3.6.1.4.1.1028.3.2.4.3.2.1.1.30
exxetbBrkrUOWActive	Broker number of active unit of work of the EntireX Broker	1.3.6.1.4.1.1028.3.2.4.3.2.1.1.31
exxetbBrkrUOWStore	Broker unit of work store of the EntireX Broker	1.3.6.1.4.1.1028.3.2.4.3.2.1.1.32
exxetbBrkrUOWPStore	Broker unit of work persistence store of the EntireX Broker	1.3.6.1.4.1.1028.3.2.4.3.2.1.1.33
exxetbBrkrUOWStatP	Broker unit of work status of persistence of the EntireX Broker	1.3.6.1.4.1.1028.3.2.4.3.2.1.1.34
exxetbBrkrUOWDeferred	Broker unit of work deferred of the EntireX Broker	1.3.6.1.4.1.1028.3.2.4.3.2.1.1.35
exxetbBrkrUOWStatAddTime	Broker unit of work status additional time of the EntireX Broker	1.3.6.1.4.1.1028.3.2.4.3.2.1.1.36
exxetbBrkrAccounting	Broker accounting of the EntireX Broker	1.3.6.1.4.1.1028.3.2.4.3.2.1.1.37
exxetbBrkrNewUOWMsg	Broker new unit of work message of the EntireX Broker	1.3.6.1.4.1.1028.3.2.4.3.2.1.1.38
exxetbBrkrPStoreType	Broker persistence store type of the EntireX Broker	1.3.6.1.4.1.1028.3.2.4.3.2.1.1.39
exxetbBrkrPublishAndSubscribe	Broker publish and subscribe of the EntireX Broker	1.3.6.1.4.1.1028.3.2.4.3.2.1.1.40

Property	Description	OID Prefix
exxetbBrkrTopic	Broker topic of the EntireX Broker	1.3.6.1.4.1.1028.3.2.4.3.2.1.1.41
exxetbBrkrTopicActive	Broker topic active of the EntireX Broker	1.3.6.1.4.1.1028.3.2.4.3.2.1.1.42
exxetbBrkrSubscriber	Broker subscriber of the EntireX Broker	1.3.6.1.4.1.1028.3.2.4.3.2.1.1.43
exxetbBrkrSubscriberActive	Broker subscriber active of the EntireX Broker	1.3.6.1.4.1.1028.3.2.4.3.2.1.1.44
exxetbBrkrSubscriberHigh	Broker subscriber high of the EntireX Broker	1.3.6.1.4.1.1028.3.2.4.3.2.1.1.45
exxetbBrkrPublisher	Broker publisher of the EntireX Broker	1.3.6.1.4.1.1028.3.2.4.3.2.1.1.46
exxetbBrkrPublisherActive	Broker publisher active of the EntireX Broker	1.3.6.1.4.1.1028.3.2.4.3.2.1.1.47
exxetbBrkrPublisherHigh	Broker publisher high of the EntireX Broker	1.3.6.1.4.1.1028.3.2.4.3.2.1.1.48
exxetbBrkrPublication	Broker publication of the EntireX Broker	1.3.6.1.4.1.1028.3.2.4.3.2.1.1.49
exxetbBrkrPublicationHigh	Broker publication high of the EntireX Broker	1.3.6.1.4.1.1028.3.2.4.3.2.1.1.50

3. exxetbWrkr Entry (1.3.6.1.4.1.1028.3.2.4.3.3.1.1)

Property	Description	OID Prefix
exxetbWrkrBrokerName	Broker Name of the EntireX Broker	1.3.6.1.4.1.1028.3.2.4.3.3.1.1.2
exxetbWrkrBrokerStatus	Broker Status of the EntireX Broker	1.3.6.1.4.1.1028.3.2.4.3.3.1.1.3
exxetbWrkrNumber	Worker Number of the EntireX Broker	1.3.6.1.4.1.1028.3.2.4.3.3.1.1.4
exxetbWrkrStatus	Worker Status of the EntireX Broker	1.3.6.1.4.1.1028.3.2.4.3.3.1.1.5
exxetbWrkrCalls	Worker Calls of the EntireX Broker	1.3.6.1.4.1.1028.3.2.4.3.3.1.1.6
exxetbWrkrIdleTime	Worker Idle Time of the EntireX Broker	1.3.6.1.4.1.1028.3.2.4.3.3.1.1.7

4. exxetbSrvEntry (1.3.6.1.4.1.1028.3.2.4.3.4.1.1)

Property	Description	OID Prefix
exxetbSrcvBrokerName	Broker name of the EntireX Broker	1.3.6.1.4.1.1028.3.2.4.3.4.1.1.2
exxetbSrcvBrokerStatus	Broker status of the EntireX Broker	1.3.6.1.4.1.1028.3.2.4.3.4.1.1.3
exxetbSrcvServerName	Server Name of the EntireX Broker	1.3.6.1.4.1.1028.3.2.4.3.4.1.1.4
exxetbSrcvServerClass	Server Class of the EntireX Broker	1.3.6.1.4.1.1028.3.2.4.3.4.1.1.5
exxetbSrcvService	Service of the EntireX Broker	1.3.6.1.4.1.1028.3.2.4.3.4.1.1.6
exxetbSrcvTranslation	Service translation of the EntireX Broker	1.3.6.1.4.1.1028.3.2.4.3.4.1.1.7
exxetbSrcvActiveServers	Service active Servers of the EntireX Broker	1.3.6.1.4.1.1028.3.2.4.3.4.1.1.8
exxetbSrcvConvsActive	Service conversations (active) of the EntireX Broker	1.3.6.1.4.1.1028.3.2.4.3.4.1.1.9
exxetbSrcvConvsHigh	Service conversations (high) of the EntireX Broker	1.3.6.1.4.1.1028.3.2.4.3.4.1.1.10
exxetbSrcvServiceNonact	Service nonactive of the EntireX Broker	1.3.6.1.4.1.1028.3.2.4.3.4.1.1.11
exxetbSrcvLongBufsActive	Service long buffers (active) of the EntireX Broker	1.3.6.1.4.1.1028.3.2.4.3.4.1.1.12
exxetbSrcvLongBufsHigh	Service long buffers (high) of the EntireX Broker	1.3.6.1.4.1.1028.3.2.4.3.4.1.1.13
exxetbSrcvShortBufsActive	Service short buffers (active) of the EntireX Broker	1.3.6.1.4.1.1028.3.2.4.3.4.1.1.14
exxetbSrcvShortBufsHigh	Service short buffers (high) of the EntireX Broker	1.3.6.1.4.1.1028.3.2.4.3.4.1.1.15
exxetbSrcvWaits	Service waits of the EntireX Broker	1.3.6.1.4.1.1028.3.2.4.3.4.1.1.16
exxetbSrcvOccupied	Service occupied of the EntireX Broker	1.3.6.1.4.1.1028.3.2.4.3.4.1.1.17
exxetbSrcvConvPending	Service conversation pending of the EntireX Broker	1.3.6.1.4.1.1028.3.2.4.3.4.1.1.18

Property	Description	OID Prefix
exxetbSrvcConvPendHigh	Service conversion pending high of the EntireX Broker	1.3.6.1.4.1.1028.3.2.4.3.4.1.1.19
exxetbSrvcRequests	Service request of the EntireX Broker	1.3.6.1.4.1.1028.3.2.4.3.4.1.1.20
exxetbSrvcMaxUOWs	Service maximum UOWs of the EntireX Broker	1.3.6.1.4.1.1028.3.2.4.3.4.1.1.21
exxetbSrvcMaxMsg	Service maximum message of the EntireX Broker	1.3.6.1.4.1.1028.3.2.4.3.4.1.1.22
exxetbSrvcUOWLifeTime	Service UOW lifetime of the EntireX Broker	1.3.6.1.4.1.1028.3.2.4.3.4.1.1.23
exxetbSrvcMaxDelCount	Service maximum delivery count of the EntireX Broker	1.3.6.1.4.1.1028.3.2.4.3.4.1.1.24
exxetbSrvcMsgSize	Service maximum message size of the EntireX Broker	1.3.6.1.4.1.1028.3.2.4.3.4.1.1.25
exxetbSrvcActiveUOWs	Service active UOWs of the EntireX Broker	1.3.6.1.4.1.1028.3.2.4.3.4.1.1.26
exxetbSrvcStore	Service store of the EntireX Broker	1.3.6.1.4.1.1028.3.2.4.3.4.1.1.27
exxetbSrvcLifeTimeMult	Service lifetime multiple of the EntireX Broker	1.3.6.1.4.1.1028.3.2.4.3.4.1.1.28
exxetbSrvcDeferred	Service deferred of the EntireX Broker	1.3.6.1.4.1.1028.3.2.4.3.4.1.1.29
exxetbSrvcAttachManagersActive	Service attach managers active of the EntireX Broker	1.3.6.1.4.1.1028.3.2.4.3.4.1.1.30
exxetbSrvcUwStatAddTime	Service UOW status additional time of the EntireX Broker	1.3.6.1.4.1.1028.3.2.4.3.4.1.1.31

5. exxetbSrvrEntry (1.3.6.1.4.1.1028.3.2.4.3.5.1.1)

Property	Description	OID Prefix
exxetbSrvrBrokerName	Broker name of the EntireX Broker	1.3.6.1.4.1.1028.3.2.4.3.5.1.1.2
exxetbSrvrBrokerStatus	Broker status of the EntireX Broker	1.3.6.1.4.1.1028.3.2.4.3.5.1.1.3

Property	Description	OID Prefix
exxetbSrvrUserID	Server user ID of the EntireX Broker	1.3.6.1.4.1.1028.3.2.4.3.5.1.1.4
exxetbSrvrToken	Server class of the EntireX Broker	1.3.6.1.4.1.1028.3.2.4.3.5.1.1.5
exxetbSrvrInternalID	Server internal ID of the EntireX Broker	1.3.6.1.4.1.1028.3.2.4.3.5.1.1.6
exxetbSrvrStatus	Server status of the EntireX Broker	1.3.6.1.4.1.1028.3.2.4.3.5.1.1.7
exxetbSrvrConv	Server conversation of the EntireX Broker	1.3.6.1.4.1.1028.3.2.4.3.5.1.1.8
exxetbSrvrServerName	Server name of the EntireX Broker	1.3.6.1.4.1.1028.3.2.4.3.5.1.1.9
exxetbSrvrServerClass	Server class of the EntireX Broker	1.3.6.1.4.1.1028.3.2.4.3.5.1.1.10
exxetbSrvrService	Server Service of the EntireX Broker	1.3.6.1.4.1.1028.3.2.4.3.5.1.1.11
exxetbSrvrCharSet	Server character set of the EntireX Broker	1.3.6.1.4.1.1028.3.2.4.3.5.1.1.12
exxetbSrvrActiveConv	Server active conversation of the EntireX Broker	1.3.6.1.4.1.1028.3.2.4.3.5.1.1.13
exxetbSrvrActiveServices	Server active services of the EntireX Broker	1.3.6.1.4.1.1028.3.2.4.3.5.1.1.14
exxetbSrvrLastActive	Server last active of the EntireX Broker	1.3.6.1.4.1.1028.3.2.4.3.5.1.1.15
exxetbSrvrServerNonact	Server nonactive of the EntireX Broker	1.3.6.1.4.1.1028.3.2.4.3.5.1.1.16
exxetbSrvrNew	Server new of the EntireX Broker	1.3.6.1.4.1.1028.3.2.4.3.5.1.1.17
exxetbSrvrNewTotal	Server new (total) of the EntireX Broker	1.3.6.1.4.1.1028.3.2.4.3.5.1.1.18
exxetbSrvrNewAvg	Server new (avg.) of the EntireX Broker	1.3.6.1.4.1.1028.3.2.4.3.5.1.1.19
exxetbSrvrOld	Server old of the EntireX Broker	1.3.6.1.4.1.1028.3.2.4.3.5.1.1.20
exxetbSrvrOldTotal	Server old (total) of the EntireX Broker	1.3.6.1.4.1.1028.3.2.4.3.5.1.1.21
exxetbSrvrOldAvg	Server old (avg.) of the EntireX Broker	1.3.6.1.4.1.1028.3.2.4.3.5.1.1.22
exxetbSrvrWaits	Server waits of the EntireX Broker	1.3.6.1.4.1.1028.3.2.4.3.5.1.1.23

Property	Description	OID Prefix
exxetbSrvrWaitsTotal	Server waits (total) of the EntireX Broker	1.3.6.1.4.1.1028.3.2.4.3.5.1.1.24
exxetbSrvrWaitsAvg	Server waits (avg.) of the EntireX Broker	1.3.6.1.4.1.1028.3.2.4.3.5.1.1.25
exxetbSrvrSumConvs	Server sum conversations of the EntireX Broker	1.3.6.1.4.1.1028.3.2.4.3.5.1.1.26
exxetbSrvrActiveUOWs	Server active UOWs of the EntireX Broker	1.3.6.1.4.1.1028.3.2.4.3.5.1.1.27
exxetbSrvrRecvOption	Server receive option of the EntireX Broker	1.3.6.1.4.1.1028.3.2.4.3.5.1.1.28
exxetbSrvrAttachManager	Server attach manager of the EntireX Broker	1.3.6.1.4.1.1028.3.2.4.3.5.1.1.29
exxetbSrvrIpAddress	Server IP address of the EntireX Broker	1.3.6.1.4.1.1028.3.2.4.3.5.1.1.30
exxetbSrvrHostName	Server host name of the EntireX Broker	1.3.6.1.4.1.1028.3.2.4.3.5.1.1.31

6. exxetbClntEntry (1.3.6.1.4.1.1028.3.2.4.3.6.1.1)

Property	Description	OID Prefix
exxetbClntBrokerName	Broker name of the EntireX Broker	1.3.6.1.4.1.1028.3.2.4.3.6.1.1.2
exxetbClntBrokerStatus	Broker status of the EntireX Broker	1.3.6.1.4.1.1028.3.2.4.3.6.1.1.3
exxetbClntUserID	Client user ID of the EntireX Broker	1.3.6.1.4.1.1028.3.2.4.3.6.1.1.4
exxetbClntToken	Client token of the EntireX Broker	1.3.6.1.4.1.1028.3.2.4.3.6.1.1.5
exxetbClntInternalID	Client internal ID of the EntireX Broker	1.3.6.1.4.1.1028.3.2.4.3.6.1.1.6
exxetbClntStatus	Client status of the EntireX Broker	1.3.6.1.4.1.1028.3.2.4.3.6.1.1.7
exxetbClntConv	Client conversation of the EntireX Broker	1.3.6.1.4.1.1028.3.2.4.3.6.1.1.8
exxetbClntServerName	Client server name of the EntireX Broker	1.3.6.1.4.1.1028.3.2.4.3.6.1.1.9
exxetbClntServerClass	Client server class of the EntireX Broker	1.3.6.1.4.1.1028.3.2.4.3.6.1.1.10
exxetbClntService	Client Service of the EntireX Broker	1.3.6.1.4.1.1028.3.2.4.3.6.1.1.11

Property	Description	OID Prefix
exxetbClntCharSet	Client character set of the EntireX Broker	1.3.6.1.4.1.1028.3.2.4.3.6.1.1.12
exxetbClntConvsActive	Client active conversation of the EntireX Broker	1.3.6.1.4.1.1028.3.2.4.3.6.1.1.13
exxetbClntLastActive	Client last active of the EntireX Broker	1.3.6.1.4.1.1028.3.2.4.3.6.1.1.14
exxetbClntClientNonact	Client nonactive of the EntireX Broker	1.3.6.1.4.1.1028.3.2.4.3.6.1.1.15
exxetbClntWaits	Client waits of the EntireX Broker	1.3.6.1.4.1.1028.3.2.4.3.6.1.1.16
exxetbClntWaitsTotal	Client waits (total) of the EntireX Broker	1.3.6.1.4.1.1028.3.2.4.3.6.1.1.17
exxetbClntWaitsAvg	Client waits (avg.) of the EntireX Broker	1.3.6.1.4.1.1028.3.2.4.3.6.1.1.18
exxetbClntSumConvs	Client sum conversations of the EntireX Broker	1.3.6.1.4.1.1028.3.2.4.3.6.1.1.19
exxetbClntActiveUOWs	Client active UOWs of the EntireX Broker	1.3.6.1.4.1.1028.3.2.4.3.6.1.1.20

7. exxetbConvEntry (1.3.6.1.4.1.1028.3.2.4.3.7.1.1)

Property	Description	OID Prefix
exxetbConvBrokerName	Broker name of the EntireX Broker	1.3.6.1.4.1.1028.3.2.4.3.7.1.1.2
exxetbConvBrokerStatus	Broker status of the EntireX Broker	1.3.6.1.4.1.1028.3.2.4.3.7.1.1.3
exxetbConvNumbActiveConv	Number of EntireX Broker active conversations	1.3.6.1.4.1.1028.3.2.4.3.7.1.1.4

8. exxetbPsEntry (1.3.6.1.4.1.1028.3.2.4.3.8.1.1)

Property	Description	OID Prefix
exxetbPsBrokerName	Broker name of the EntireX Broker	1.3.6.1.4.1.1028.3.2.4.3.8.1.1.2
exxetbPsBrokerStatus	Broker status of the EntireX Broker	1.3.6.1.4.1.1028.3.2.4.3.8.1.1.3
exxetbPsNumReceived	Persistent store number of Received status of the EntireX Broker	1.3.6.1.4.1.1028.3.2.4.3.8.1.1.4
exxetbPsNumAccepted	Persistent store number of Accepted status of the EntireX Broker	1.3.6.1.4.1.1028.3.2.4.3.8.1.1.5
exxetbPsNumDelivered	Persistent store number of Delivered status of the EntireX Broker	1.3.6.1.4.1.1028.3.2.4.3.8.1.1.6
exxetbPsNumBackedOut	Persistent store number of Backed Out status of the EntireX Broker	1.3.6.1.4.1.1028.3.2.4.3.8.1.1.7
exxetbPsNumProcessed	Persistent store number of Processed status of the EntireX Broker	1.3.6.1.4.1.1028.3.2.4.3.8.1.1.8
exxetbPsNumCancelled	Persistent store number of Cancelled status of the EntireX Broker	1.3.6.1.4.1.1028.3.2.4.3.8.1.1.9
exxetbPsNumTimedOut	Persistent store number of Timed Out status of the EntireX Broker	1.3.6.1.4.1.1028.3.2.4.3.8.1.1.10
exxetbPsNumDiscarded	Persistent store number of Discarded status of the EntireX Broker	1.3.6.1.4.1.1028.3.2.4.3.8.1.1.11

SNMP TRAP for the Broker

The TRAPs will be sent to the TRAP destination which is setup in the SMH configuration.

The TRAP `exxetbBrokerStart` will be sent if the Broker changes its status from "Not Running" (DOWN) to another status. The TRAP OID for this event is

1.3.6.1.4.1.1028.3.2.4.3.1.255.0.1. The parameter is the name of the Broker for which this TRAP has been sent.

The TRAP `exxetbBrokerStop` will be sent if the Broker Agent changes its status from "Running" (UP) to another status. The TRAP OID for this event is

1.3.6.1.4.1.1028.3.2.4.3.1.255.0.2. The parameter is the name of the Broker for which this TRAP has been sent.

SNMP Support for RPC Server

The RPC SNMP MIB file defines some of the imported basic properties. The SNMP table shows these properties for each RPC Server that has been entered into the System Management Hub GUI. The values for the properties RPC Server Name and RPC Server Status are always significant. If the RPC server has the status Down, the values for the properties RPC Server Started, RPC Server Worker, RPC Server High, RPC Server Host and RPC Server Address are irrelevant. For each table entry, the System Management Hub adds an extension to the OID prefix.

Property	Description	OID Prefix
exxsdkRPCServerName	The Name of the RPC server, defined in SMH GUI	1.3.6.1.4.1.1028.3.2.4.1.2.1.2
exxsdkRPCServerStatus	Status of the Server Running, Down, Retry (see notes 1, 2)	1.3.6.1.4.1.1028.3.2.4.1.2.1.3
exxsdkRPCServerStarted	Start Time of the RPC Server	1.3.6.1.4.1.1028.3.2.4.1.2.1.4
exxsdkRPCServerWorker	Current number of worker threads	1.3.6.1.4.1.1028.3.2.4.1.2.1.5
exxsdkRPCServerHigh	Worker threads high watermark	1.3.6.1.4.1.1028.3.2.4.1.2.1.6
exxsdkRPCServerName	Host name /JES job name (see note 3)	1.3.6.1.4.1.1028.3.2.4.1.2.1.7
exxsdkRPCServerAddress	Network address (see note 4)	1.3.6.1.4.1.1028.3.2.4.1.2.1.8

Notes:

1. The status may be "Init" and "Shutdown" for the XML Servers. The status "Down" will be generated in the System Management Hub RPC server agent if communication with the RPC server is not available.
- 2.

Status	Description
Running	The server is running normally.
Down	The server is not running or the RPC server was started without the System Management Hub control port option. The System Management Hub RPC server agent cannot connect to the RPC Server.
Retry	The RPC server has no connection to the Broker and is trying to connect or reconnect.
Init	The RPC server is just starting and is not yet ready on the RPC interface.
Shutdown	The RPC server is just shutting down and will be down in a moment.
Error	Any error that could not be recovered and leads to shutdown of the server, for example: 0021 0043: ATTR: Service definition not found.

3. This display depends on the RPC Server and the platform where the server is running. On UNIX and Windows (local servers) only the Hostname will be displayed. Under IBM i, the RPC Server will also display the JES job name if available.

4. This display shows the IP or Entire Net-Work address of the RPC Server where the server is running.

See also *Select Root Node of the RPC Server in Operating and Monitoring the RPC Servers using System Management Hub* under UNIX | Windows.

SNMP support for the RPC Server also provides SNMP TRAPs to indicate a status change from Down to another status, and a status change from any other status to Down.

SNMP TRAP for the RPC Server

TRAPs are sent to the TRAP destination which is setup in the SMH configuration.

The TRAP `exxsdkRPCServerStart` will be sent if the RPC server changes its status from Down to another status. The TRAP OID for this event is `1.3.6.1.4.1.1028.3.2.4.1.2.255.0.1`. The parameter is the name of the RPC Server for which this TRAP has been sent. The status of the RPC Server can also be something other than Running if this TRAP has been sent. The condition for this TRAP is satisfied if the status is not Down.

The TRAP `exxsdkRPCServerStop` will be sent if the RPC server changes its state from any status to the status Down. The TRAP OID for this event is `1.3.6.1.4.1.1028.3.2.4.1.2.255.0.2`. The parameter is the name of the RPC Server for which this TRAP has been sent.