# ONMSI SNMP API

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## 1. General SNMP principles

### 1.1. Overview

Simple Network Management Protocol (SNMP) is an UDP-based network protocol. It is mostly used in network management systems to monitor network-attached devices.

SNMP exposes management data in the form of variables on the managed systems, which describe the system configuration. These variables can then be queried (and sometimes set) by managing applications.

## 1.2. SNMP network

An SNMP-managed network consists of two key components:

- the agent (server): it is a network-management software module that resides on a managed device. An agent has local knowledge of management information and translates that information to or from an SNMP specific form.
- the manager (client): it is a monitoring and controlling software module, managing network devices.

## 1.3. Management Information Base (MIB)

SNMP itself does not define which information (which variables) a managed system should offer. Rather, SNMP uses an extensible design, where the available information is defined by management information bases (MIBs). MIBs describe the structure of the management data of a device subsystem; they use a hierarchical namespace containing object identifiers (OID). Each OID identifies a variable that can be read or set via SNMP.

# 2. ONMSi SNMP setup

The setup process for SNMP is the following:

- 1. Create and configure the ONMSi user to be used as SNMP manager
- Update the configuration files
- 3. Make sure the SNMP ports are opened on the firewall
- 4. Restart all the ONMSi services using ONMSiTools

## 2.1. SNMP user setup

### 2.1.1. Create an ONMSi user

SNMP managers view the system and perform actions using the identity of an ONMSi user. Their associated ONMSi users should then be created as any other ONMSi user, with a login, a password, and permission roles on the system and/or some domains.

Ļģ	Users Authentication and Authorizations							
[	Users System roles Domain roles Users <-> Roles API Notified users <-> More							
Li	List Detail 🖉 Edit							
			Login	snmpV2user				
	User		Account	Full name	snmpV2user			
	Login	Eull name	Description	Access granted	Password			
	Login	L Fuil name	- Description	<ul> <li>Access granted</li> </ul>	Password confirmation			
	admin General Administrator snmpV2user snmpV2user		0	r	Description	0		
			Θ	V	Access granted	✓		
	snmpV3user	snmpV3user	ø	v	LDAP			
-								

SNMP v2: the ONMSi user login must be the same as an SNMP v2 community SNMP v3: the ONMSi user login must be the same as the SNMP user name

### 2.1.2. Setup the SNMP user privileges

Because API users tend to have administration tasks to manage, be sure to give them sufficient privileges.

Users     System roles     Domain roles     Users <> Roles     API Notified users     Image: Notified users       System     Users <> Roles     Image: Notified users     Image: Notified users     Image: Notified users       Image: Notified users     Image: Notified users     Image: Notified users     Image: Notified users	lore dit
▼ ::::::::::::::::::::::::::::::::::::	dit
▶ 📑 Default New 💌 M	
	ore
P2P User Roles	
▶ 🕂 PON Login L Full name L Role name	
admin General Administrator General administrator	
snmpV2user snmpV2user API operator	
snmpV3user snmpV3user API operator	

WARNING: be sure to give your API user at least the Connect to API (northbound interface) privilege. You can also use the convenient API operator system role, which includes the following privileges:

- Manage domains: to manage all the domains of the system
- *Skip password policies*: to avoid security issues, such as password aging *Connect to API (northbound interface)*: to be able to login through the API

## 2.1.3. Register the user to be API notified

Add the user to the notified user list, and configure its notification rule.

Users Authenti	cation and /	Authorizations		0
Users System roles	Domain roles	Users <-> Roles	API Notified users	s 🔽 Mor
API (Northbound interface) N	otified users			
				New user 🔽 Mor
Login		Full name		
snmpV2user		snmpV2user		
snmpV3user		snmpV3user		
Detail				🖳 Edi
Login snmpV2user				
Full name snmpV2user				
Notification rule				
Notification rule	Severity, type and	status		
Description	Accepting conditio	ns are determined by the sev	erity, the type and sta	tus of alarm event
	Quality of Service	✓		
	Communication	$\checkmark$		
Notified alarm types	Equipment	$\checkmark$		
	Processing	V		
Minimum severity	Indeterminate			
Notify acknowledging events	~			
Notify clearing events	$\checkmark$			
Notify comment events				

## 2.2. Update SNMP configuration files

SNMP configuration files are located in %TOPAZ\_HOME%/jboss/standalone/topaz-conf/:

## 2.2.1. jdmk.acl (V2 and V3)

Default configuration is the following:

```
acl = {
    {
        {
        communities = snmpV2user
        access = read-write
        managers = managerV2hostname
    }
}
trap = {
    {
        {
        trap-community = snmpV2user
        hosts = managerV2hostname
    }
    #
        {
        t trap-community = snmpV3user
    }
}
# trap-community = snmpV3user
# hosts = managerV3hostname
# }
```

This file contains 2 blocks :

### 2.2.1.1. acl (V2)

This block describes the **SNMP V2 manager** configuration.

You must change the community *snmpV2user* to the name of the ONMSi user created in the first step of the installation process. You can also change *managerV2hostname* to your manager hostname/IP address.

To add another manager, please duplicate the inner block:

```
acl = {
    {
        {
            communities = snmpV2user
            access = read-write
            managers = managerV2hostname
        }
        {
            communities = snmpV2otheruser
            access = read-write
            managers = managerV2otherhostname
        }
    }
}
```

If you exclusively use SNMP V3, please comment the whole  $\ensuremath{\text{acl}}$  part:

```
#acl = {
  # {
  # {
    communities = snmpV2user
  # access = read-write
  # managers = managerV2hostname
  # }
  #}
```

### 2.2.1.2. trap (V2 and V3)

This block describes the **both SNMP V2 and SNMP V3** trap destination configuration.

To add other trap destinations, please duplicate the inner block:

ONMSi SNMP API

```
hosts = managerV2hostname
}
{
trap-community = snmpV2otheruser
hosts = managerV2otherhostname
}
{
trap-community = snmpV3user
hosts = managerV3hostname
}
```

trap-community = snmpV2user

More documentation about the ACL file format: http://docs.oracle.com/cd/E19206-01/816-4178/6madjde88/index.html

## 2.2.2. jdmk.uacl (V3)

This file contains describes the SNMP V3 manager configuration

Default configuration is the following:

```
#acl = {
  # {
  # context-names = null
  # access = read-write
  # security-level = authNoPriv
  # users = snmpV3user
  # }
```

To setup the SNMP V3 manager configuration, you must uncomment the **acl** block, then change *snmpV3user* to the name of the ONMSi user created in the first step of the installation process and the **security-level** according to the jdmk.security configuration (see below):

```
acl = {
    {
        context-names = null
        access = read-write
        security-level = authNoPriv
        users = snmpV3user
    }
}
WARNING: the context-names must always be null
WARNING: be sure to match the security-level of the users according to the jdmk.security configuration:
        authNoPriv: for authentication but no privacy (data encryption)
        authPriv: for authentication and no privacy (data encryption)
        authPriv: noAuthNoPriv is not supported.
```

To add another V3 manager with the **same** security-level, append its username to the users attribute:

```
acl = {
    {
        {
            context-names = null
            access = read-write
            security-level = authNoPriv
            users = snmpV3user,snmpV3otheruser
        }
}
```

To add another V3 manager with a different security-level, please duplicate the inner block:

```
acl = {
    {
        {
            context-names = null
            access = read-write
            security-level = authNoPriv
            users = snmpVJouser
        }
        {
            context-names = null
            access = read-write
            security-level = authPriv
            users = snmpVJotheruser
        }
    }
}
```

More documentation about the UACL file format: http://docs.oracle.com/cd/E19206-01/816-4178/6madjde89/index.html

## 2.2.3. jdmk.security (V3)

Because this file is rewritten after each SNMP agent reboot, it won't hold any documentation comment.

Default configuration is the following:

```
localEngineID=0x80008c21010a211169000000a1
localEngineBoots=0
```

userEntry=localEngineID, snmpV3user, snmpV3user, usmHMACMD5AuthProtocol, snmpV3password

You must change the *snmpV3user* and *snmpV3password* to the name and password of the ONMSi user created in the first step of the installation process.

If you intend to use different passwords for SNMP and ONMSi, you can set *snmpV3password* to any value, then override the password in snmp.properties to match your ONMSi user password (see below).

You can change the authentication to SHA algorithm:

localEngineID=0x80008c21010a211169000000a1
localEngineBoots=0

userEntry=localEngineID, snmpV3user, snmpV3user, usmHMACSHAAuthProtocol, snmpV3password

Supported authentication algorithms are:

- usmHMACMD5AuthProtocol: authentication using MD5
- usmHMACSHAAuthProtocol: authentication using SHA

WARNING: usmNoAuthProtocol is not supported.

You can enable the privacy (data encryption) using the DES algorithm by appending the algorithm and its password to the entry:

localEngineID=0x80008c21010a211169000000a1
localEngineBoots=0

userEntry=localEngineID, snmpV3user, snmpV3user, usmHMACMD5AuthProtocol, snmpV3password, usmDESPrivProtocol, snmpV3passwordforprivacy

WARNING: when enabling privacy, be sure to use **authPriv** in the jdmk.uacl configuration file! The privacy key *snmpV3passwordforprivacy* can and should be different from the authentication password *snmpV3password* (the longer, the better).

You can add users by duplicating the userEntry, and additionalize authentication/privacy for each user:

localEngineID=0x80008c21010a211169000000a1 localEngineBoots=0 userEntry=localEngineID, snmpV3user, snmpV3user, usmHMACMD5AuthProtocol, snmpV3password userEntry=localEngineID, snmpV3otheruser, snmpV3otheruser, usmHMACSHAAuthProtocol, snmpV3otherpassword, usmDESPrivProtocol, snmpV3otherpasswordforprivac

More documentation about the jdmk.security file format: http://docs.oracle.com/cd/E19206-01/816-4178/snmpsecurity-131/index.html

## 2.2.4. snmp.properties (V2 and V3)

This files allows the additionalization of several SNMP specific parameters (agent port, trap port, buffer size, ...). Most of them should remain to their default values, however, some must or can be changed::

#### 2.2.4.1. snmpEnabled (mandatory for V2 and V3)

The default value is false to enforce the SNMP configuration to be performed before activating SNMP.

```
# The SNMP activation flag (true/false)
# Please uncomment and set to true to enable SNMP
#
snmpEnabled=false
```

Uncomment this entry and set it to **true** to enable SNMP.

```
# The SNMP activation flag (true/false)
# Please uncomment and set to true to enable SNMP
#
snmpEnabled=true
```

#### 2.2.4.2. password

Used to associated the ONMSi password of SNMP users.

# Configure SNMP user passwords (for V2 community support, or V3 password override)
# Please uncomment the following entry and configure it to your needs as explain in the documentation

#password.snmpuser=snmppassword

Because SNMP V2 communities don't have password, it is mandatory to uncomment and duplicate this entry for each SNMP V2 community, then configure it with you ONMSi user login (=SNMP V2 community) and ONMSi user password:

```
# Configure SNMP user passwords (for V2 user/community support, or V3 password override)
# Please uncomment the following entry and configure it to your needs as explain in the documentation
#
password.snmpV2user=snmpV2password
password.snmpV2otheruser=snmpV2otherpassword
```

Because SNMP V3 users already have passwords defined in **jdmk.security**, their authentication passwords will be used as ONMSi user password. If you want the SNMP V3 authentication password to be different from the ONMSi user password, you can override the password here, as described above for SNMP V2:

# Configure SNMP user passwords (for V2 user/community support, or V3 password override)
# Please uncomment the following entry and configure it to your needs as explain in the documentation
#
password.snmpV3user=snmpV3password

#### 2.2.5. Multiple manager support

In order to allow for multiuser access, each SNMP V2 community/SNMP V3 user has its own instance of the MIB. This allows secure use of functions (see below), and sequenced alarm traps.

## 2.3. Open SNMP ports in the firewall

ONMSi uses by default the standard SNMP ports:

- 161 for the agent (locally on the agent for the data access)
- 162 for managers (remotely on managers for trap reception).

These ports can be changed in the snmp.properties configuration file.

# ONMSi MIB

## 3.1. Files

The ONMSi SNMP interface is defined in the JDSU-ONMSI-MIB.mib file. This MIB depends on some other static MIBs:

- JDSU-SMI-MIB.mib: core MIB for JDSU products, defining the ONMSi root OID
- IANA-ITU-ALARM-TC-MIB.mib: IANA MIB for alarm standard conformity
- SNMPv2-SMI: structure of management information for SNMP v2
- SNMPv2-TC: the textual conventions for SMIv2

A zipped archive of all these MIBS is available for download.

## 3.2. Main nodes



- jdsuOnmsiProduct: contains informations about the product
- jdsuOnmsiAdministration: allows the ONMSi SNMP agent configuration (reload configuration, I'm alive trap configuration)
- jdsuOnmsiServices: allows resource management and operations
- jdsuOnmsiEvents: contains trap definitions
- jdsuOnmsiConf: contains conformance information

## 3.3. The service concept

#### idsuOnmsiServices

- +- jdsuOnmsiHomeService
- jdsuOnmsiPonService
- +- jdsuOnmsiPeakService
- +- jdsuOnmsiLinkService
- +- jdsuOnmsiMonitoringTestService
- +- jdsuOnmsiAlarmService | +- jdsuOnmsiOtuService
- +- jdsuOnmsiCentralOfficeService

Managing resources with the MIB is done through services dedicated to each object type:

- jdsuOnmsiHomeService: for homes
- jdsuOnmsiPonService: for PONs
- jdsuOnmsiPeakService: for PON peaks
- jdsuOnmsiLinkService: for links
- jdsuOnmsiMonitoringTestService: for monitoring tests
- jdsuOnmsiAlarmService: for alarms
- jdsuOnmsiOtuService: for OTUs
- jdsuOnmsiCentralOfficeService: for central offices

### 3.3.1. Data

Services are split into two nodes. The first node is the data node, where tables represent objects. For objects supporting additional attributes, those are displayed in another table.

#### Example:

+ jdsuOnmsiHomeService
\ +- jdsuOnmsiHomeData
+- jdsuOnmsiHomeTable
+- jdsuOnmsiHomeEntry
+- jdsuOnmsiHomeEntryInternalKey

JQ2	uunmsihomeAddiiionalAttributeiable
j	dsuOnmsiHomeAdditionalAttributeEntry
+-	jdsuOnmsiHomeAdditionalAttributeEntryInternalKey
+-	jdsuOnmsiHomeAdditionalAttributeEntryName
+-	jdsuOnmsiHomeAdditionalAttributeEntryValue
jds	suOnmsiHomeTerminationTypeTable
⊦- j	dsuOnmsiHomeTerminationTypeEntry
+-	jdsuOnmsiHomeTerminationTypeEntryInternalKey
+-	jdsuOnmsiHomeTerminationTypeEntryName
+-	jdsuOnmsiHomeTerminationTypeEntryDescription
jds	uOnmsiHomeAttributeTable
⊦- j	dsuOnmsiHomeAttributeEntry
+-	jdsuOnmsiHomeAttributeEntryName
+-	jdsuOnmsiHomeAttributeEntryAdditional
+-	jdsuOnmsiHomeAttributeEntryFindable
+-	jdsuOnmsiHomeAttributeEntryUpdatable

The home data node has 2 main tables: *jdsuOnmsiHomeTable* representing home objects, and *jdsuOnmsiHomeTerminationTypeTable* representing home termination types.

The additional attributes of home objects are displayed in the *jdsuOnmsiHomeAdditionalAttributeTable* table, that combines home internal keys with home additional attribute names and values.

The noticeable attributes of home objects (such as those that are additional, can be updated or user in find functions) are displayed in the *jdsuOnmsiHomeAttributeTable* table.

You can get a more details description of SNMP tables in the ONMSi SNMP Tables page.

### **3.3.2. Functions**

The second node of services is the functions node. Each sub-node represents a function.

Each function has 2 mandatory children nodes:

- the execute node: setting the node to 1 (integer) will execute the function
- the error node: when the function execution fails, the node contains information on the error that occurred. When the execution is successful, the node is empty.

Functions may also have optional children nodes for defining:

- parameters
- results

Example: the function used to find homes



There are two parameters:

• jdsuOnmsiHomeFindParamAttribute for the attribute on which the find is performed

• jdsuOnmsiHomeFindParamValue for the value to find

Because the result of the find function is a list of homes, there is no result node. This function will clear *jdsuOnmsiHomeTable* and *jdsuOnmsiHomeAdditionalAttributeTable* to fill them with found homes.

## 3.4. I'm alive trap

In order to inform the managers that the agent is up and running, jdsuOnmsiImAliveTrap are sent periodically.

The period of the trap and text contained in the trap can be additionalized in *jdsuOnmsiImAlive* (globally, not per SNMP user). This trap also contains the latest alarm event sequence, in order to help manager alarm synchronization (see below)

## 3.5. Alarm event synchronization

### 3.5.1. Alarm event sequence number

In order to prevent losing of alarm event traps, *jdsuOnmsiAlarmEventTrap* contains a *jdsuOnmsiAlarmEventEntrySequence* attribute. That attribute holds a sequence starting from 1 and increasing after every alarm event trap.

Because every SNMP user (community) has its own notification filter, there is one sequence for each SNMP user (community).

### 3.5.2. Alarm event trap loss detection

The detection of lost traps can be done upon alarm event trap reception, by checking that its sequence number strictly follows the previous alarm event trap sequence number.

Should a long duration elapse between subsequent alarm event traps, another way to detect lost traps would be to check the sequence number contained in *jdsuOnmsiImAliveTrap*: it should be equal to the sequence number held in the latest alarm event trap.

### 3.5.3. Re-sending lost alarm event traps

When a manager detects a trap loss, it can ask the agent to re-send missing traps through the *jdsuOnmsiAlarmResendEvents* function: Set as parameter the sequence number of the first lost alarm event trap, then execute the function. The agent will re-send all alarm event traps with a sequence number equal to or greater than the parameter.

#### 3.5.4. Full alarm event re-synchronization

If the manager has been shut down for a long duration, it should clear its alarm event cache, and ask for a re-synchronization through the *jdsuOnmsiAlarmResynchronize* function.

The agent will then reset the SNMP user alarm event sequence, and send alarm event traps for all events of all currently active alarms.

## 4. Cook book

## 4.1. Running a PON test

This recipe demonstrates how we can find a PON by its name, run a test on that PON and receive the result as a trap.

#### 4.1.1. Finding a PON

We look for the PON with the name PON 1234 through the jdsuOnmsiPonFind function:

Results can be found in the jdsuOnmsiPonTable, and the data we need is the PON internal key.

## 4.1.2. Starting a PON test

Let's suppose the internal key of the PON was *123456*. Starting the PON test will be done by using the *jdsuOnmsiPonStartTest* function:

```
+ jdsuOnmsiPonService
+- jdsuOnmsiPonFunctions
+- jdsuOnmsiPonStartTest
+- jdsuOnmsiPonStartTestParamInternalKey <= set 123456
|
+- jdsuOnmsiPonStartTestExecute <= set 1
|
+- jdsuOnmsiPonStartTestError => check the attribute is empty
```

## 4.1.3. Receiving the PON test result

If the PON test was successfully started, the result will be asynchronously sent through a *jdsuOnmsiPonTestResultTrap*. Because the operation is processed asynchronously, the *jdsuOnmsiPonStartTestError* attribute of the trap should also be checked upon trap reception, to verify that the test did not fail or time out.

## 4.2. Running a test on demand on a link

This recipe demonstrates how we can find a link by its *\_externalKey* additional attribute, find the monitoring tests on this link, start a monitoring test and receive the result as a trap.

### 4.2.1. Finding a link

We look for a link where the \_externalKey additional attribute value is LINK\_1234. This is done through the jdsuOnmsiLinkFind function:



+- jdsuOnmsiLinkFind
+- jdsuOnmsiLinkFindParamAttribute <= set _externalKey
+- jdsuOnmsiLinkFindParamValue <= set LINK_1234
+- jdsuOnmsiLinkFindExecute <= set 1
 +- idsuOnmsiLinkFindError => check the attribute is empty

Result can be found in the jdsuOnmsiLinkTable, and the data we need is the link internal key.

## 4.2.2. Finding a monitoring test on the link

Let's suppose the internal key of the link was 123456.

We now look for a monitoring test where the *linkInternalKey* attribute value is *123456*. This is done through the *jdsuOnmsiMonitoringTestFind* function:

```
+ jdsuOnmsiMonitoringTestService
+- jdsuOnmsiMonitoringTestFunctions
+- jdsuOnmsiMonitoringTestFind
+- jdsuOnmsiMonitoringTestFindParamAttribute <= set linkIternalKey
+- jdsuOnmsiMonitoringTestFindParamValue <= set 123456
+- jdsuOnmsiMonitoringTestFindExecute <= set 1
+- jdsuOnmsiMonitoringTestFindExecute <= set 1
+- jdsuOnmsiMonitoringTestFindError => check the attribute is empty
```

Result can be found in the jdsuOnmsiMonitoringTestTable, and the data we need is the link internal key.

### 4.2.3. Starting a monitoring test

Let's suppose the internal key of the monitoring test was *1234567890*. Starting the monitoring test is done through the *jdsuOnmsiMonitoringTestStartTest* function:

If the monitoring test was successfully started, the result will be asynchronously sent through a *jdsuOnmsiMonitoringTestResultTrap*. Because the operation is processed asynchronously, the *jdsuOnmsiMonitoringTestStartTestError* attribute of the trap should also be checked upon trap reception, to be sure that the test did not fail or time out.

## 4.3. Alarm event synchronization

This recipe demonstrates how we can detect synchronization problems and fix them.

### 4.3.1. Synchronization problem detection

Let's suppose the last alarm event trap received had a sequence number of 123. If either the next alarm event trap, or the next *I'm Alive* trap, holds an alarm event sequence number higher than 124, then some traps have been lost.

### 4.3.2. Synchronization fix

There are 2 ways of restoring the alarm event synchronization:

• re-send missed traps: the agent will send alarm event traps starting from the sequence number given as parameter, in chronological order.

```
+ jdsuOnmsiAlarmService

+- jdsuOnmsiAlarmFunctions

+- jdsuOnmsiAlarmResendEvents

+- jdsuOnmsiAlarmResendEventsParamSequence <= set 124 (the first missed trap sequence)

+- jdsuOnmsiAlarmResendEventsExecute <= set 1

+- jdsuOnmsiAlarmResendEventsError => check the attribute is empty

-- ro curchtropize plarms; the agent will reset the plarm event trap sequence and

-- ro curchtropize plarms; the agent will reset the plarm event trap sequence and

-- ro curchtropize plarms; the agent will reset the plarm event trap sequence and
```

• re-synchronize alarms: the agent will reset the alarm event trap sequence, and send all alarm event trap of all currently active alarms, in chronological order.

+ jdsuOnmsiAlarmService

```
+- jdsuOnmsiAlarmFunctions
```

- +- jdsuOnmsiAlarmResynchronize
  - +- jdsuOnmsiAlarmResynchronizeExecute <= set 1
  - +- jdsuOnmsiAlarmResynchronizeError => check the attribute is empty

# 5. SNMP testing

This last chapter will explain how to check that SNMP has been properly configured and managers will properly receive traps.

## 5.1. Testing tool setup

Many tools can be used to check the SNMP interface. This chapter will feature "ManageEngine MibBrowser Free Tool v5".

Before starting the tool, download and unzip the ONMSi MIBs into "MibBrowser Free Tool\mibs\". Then run "MibBrowser Free Tool\MibBrowser.bat" (you may have to allow the firewall to let the tool listen traps on the port 162)

### 5.1.1. SNMP v2

Upon startup, the tool should already be configured for SNMP v2c. You can check it in the settings (menu Edit>Settings)

MibBrov	vser Set	tings							×
General	Mib Settir	ngs							
SNMP Ve	ersion			-	-				
	© v <u>1</u>			( )	v <u>2</u> c			© v <u>3</u>	
General	Options			-		et Bulk O	ptions-		
Time Out	30				∃.			50	_
Retries	0				÷.	иа <u>х</u> . Кере	titions	50	
Encoding	U	F-8			Ţ	Non Repe	aters	D	
Validate Broadcast Address     Context Name       Net Mask     .     .									
V3 Settin	V3 Settings Save V3 Settings to File Set EngineID For Adding V3 entry								
Save	V3 Setti	ngs to D	atabase	9		Databa <u>s</u>	e Settin	gs	
User	Secu	Auth	Priv	Auth	Priv	Targ	Targ	Engi	Entity
	Add			Mo	dify			<u>D</u> elete	]
Restore	Defaul	ts					Ok		Cancel

The connection host and port should already be set to "localhost" and 161. You will have to fill the community and write community attributes with the ONMSi user login (=SNMP community).

ManageEngine MibBrowser Free Tool							
Eile Edit View Operations Help							
🚵 🎂 🗈 🍪 🖬 🎒 🖻	) 🔚 🏚 🔊 🗠 🥳 📾 🕷 🛫 🚭 🥥 🔟 🗛 Download						
♣ Loaded MibModules 	localhost   Port 161						
IDSU-ONMSI-MIB	Write Community						
Set Value							
Object ID							
Loading MIB:	. \mibs\IANA-ITU-ALARM-TC-MIB.mib \mibs\JDSU-SMI-MIB.mib						
MIB(s) Loade	d Successfully						
Description N	ultiVar						
Syntax	Status						
Access	Reference						
Index							
Object ID							
Description							
Global View							

## 5.1.2. SNMP v3

Upon startup, the tool should be configured for SNMP v2c. You will have to configure it for SNMP v3, in the settings (menu Edit>Settings), then add an SNMP user.

MibBrowser	Settings		
General Mib S	iettings		
SNMP Versio	n		$\frown$
0	v <u>1</u>	⊚ v <u>2</u> c	● v <u>3</u>
-General Opti	ons		Get Bulk Options
Time Out	30		Max. Repetitions 50
Retries	0		Non Repeaters
Encoding	UTF-8	-	
🗌 🕅 <u>V</u> alidate	Broadcast Address -		V3 Options
NotMack			Context Name
IN EL MASK			Context ID
-V3 Settings-			
Save V3 S	Settings to File	Se	et EngineID For Adding V3 entry
Save V3 S	Settings to Database		Databa <u>s</u> e Settings
User Secu	Auth Priv	Auth Priv	v Targ Targ Engi Entity
	dd	Modify	Delete
Restore Def	faults		OK Cancel

**WARNING**: because MIB Browser Free Tool checks the user configuration with the SNMP agent, ONMSi SNMP should be up and running. You won't be allowed to add an SNMP user in MIB Free Tool if the entered configuration does not match the jdmk.security and jdmk.uacl configuration files!

The following screenshot is for an MD5 authenticated user without privacy:

🖺 SnmpParame	eterPanel	10	X				
V3 Parameters							
Target Host	localhost	Target Port	161				
User Name	mysnmpuser	Security Level	Auth,NoPriv -				
Auth Protocol	MD5 👻	Auth Password	•••••				
Priv Protocol	CBC-DES 👻	Priv Password					
Context Name		Engine ID					
OK Cancel Apply							

You can change mysnmpuser to your ONMSi user login (=SNMP user name), and localhost to you manager hostname/IP address.

WARNING: the context name must always be empty!

The following screenshot is for an SHA authenticated user without privacy:

SnmpParameterPanel							
V3 Parameters							
Target Host	localhost	Target Port	161				
User Name	mysnmpuser	Security Level	Auth,NoPriv 🔹				
Auth Protoc	SHA	Auth Password	•••••				
Priv Protocol	CBC-DES 👻	Priv Password					
Context Name		Engine ID					
OK Cancel Apply							

The following screenshot is for an MD5 authenticated user with DES privacy:

🖺 SnmpParam	eterPanel	-	×
V3 Parameter	s		
Target Host	localhost	Target Port	161
User Name	mysnmpuser	Security Leve	Auth,Priv
Auth Protocol	MD5 👻	Auth Password	•••••
Priv Protoc	CBC-DES -	Piv Password	•••••
Context Name		Engine ID	
	ОК	Cancel A	pply

**WARNING: AES** algorithm for privacy is not supported.

## 5.2. Working with the MIB

First, check the global view box, in order to see merged MIBs:

ManageEngine MibBrowser	Free Tool	
<u>File Edit View Operations</u>	<u>H</u> elp	
🔒 🎂 🗈 😸	3 🖻 🖻	🖷 🗊 🔊 🧠 🔨 🛍 🛅 👋 🛫 🚭 🥏 🔟 Download
<ul> <li>▲ Loaded MibModules</li> <li>⊕ ⊕ enterprises</li> <li>⊕ To TEXTUAL CONVENTIC</li> </ul>	Host Community Set Value Object ID	Iocalhost   Port 161  Write Community  Write Community  MriteSVANA-ITU-ALARM-TC-MIB.mib \mibs\JDSU-SMI-MIB.mib
	.\mibs\JDSU-O MIB(s) Loaded Description Mul	NIMSI-MIB.mib Successfully
	Syntax	Status Reference
Global Vi	Access Index Object ID Description	

## 5.2.1. Get operation

Expand the tree up to the "jdsuOnmsiImAliveText" node:

ManageEngine MibBrowser Free Tool				
Eile Edit View Operations Help				
🚴 📥 🖻 🍪 🗳 😂 ष 🖻 📽 🔊 🧠 🔨	🖄 🖽 🦂	🎉 🛫 🐵 🧼 🖉 🚺 Dow	nload ree Tools	
Coaded MibModules	Host	localhost -	Port	161 -
idsuAccessNetworkTest	Community	••••	Write Communit	y ••••
jdsuCableNetworkTest	Set Value	-	]	
jdsuDatalPlest jdsuDigitalVideoTest	Object ID	.iso.org.dod.internet.private.enterprises.jds	suRoot.jdsuFiberField	TestSystems.jdsuRemoteFiberTest.jdsuOnmsi.ju
⊟ jdsuFiberFieldTestSystems ≡				
i jdsu0nmsi				
i i i i i i i i i i i i i i i i i i i				
idsuOnmsiAdministration				
in international postering international in				-
	Description Mul	tiVar		
idsuOnmsilmAliveAlarmEventSequen	Syntax	DisplayString	Status	urrent
i jdsuOnmsiServices	Access	read-write	Reference	
	Index			
	Object ID	.1.3.6.1.4.1.35873.5.1.1.1.2.2.2		
	Description	"The text carried by the j	dsuOnmsiImAli	.veTrap"
Global View 🔽	Description			

Then get the node value with the menu (Operations>GET), the toolbar button or the context menu:

ManageEngine MibBrowser Free Tool	A PROPERTY OF	1.	A Charles The Low Avenue	- 1 3-00000	
Eile Edit View Operations Help					
GET Ctrl+G	🖻 🗊 🔊 🗠 🖄	2 III   4	🎉 🛫 🐵 🧇 🖳 🚺 🗛	ee Tools	
GETNEXT Ctrl+N	<b>^</b>			1	
GETBULK Ctrl+B	Ho	st	localhost	Port	161 -
SNMPWALK Ctrl+W	Co	mmunity	••••	Write Community	y ••••
SET Ctrl+S Test	Se	t Value	•		
Stop Ctrl+C st	Ob	ject ID	.iso.org.dod.internet.private.enterprises.jds	uRoot.jdsuFiberField	TestSystems.jdsuRemoteFiberTest.jdsuOnmsi.j
Clear Ctrl+L FestSystems	=				
i⊡jdsuOnmsi					
🖃 🖼 jdsuOnmsiMib					
ideuOnmsiProduct	ration				
🗄 🛄 jdsuOnmsiSnmj	pConfig				
🖻 🔄 jdsuOnmsilmAli	ve				<b>T</b>
jdsuOnmsiln	nAlivePeriodMin Des	scription Mul	tiVar		
jdsuOnmsiln	nAliveA GET	эх	DisplayString	Status o	urrent
idsuOnmsiServices	SET	SS	read-write	Reference	
i jdsuOnmsiEvents	GETNEXT	<			
		ct ID	.1.3.6.1.4.1.35873.5.1.1.1.2.2.2		
	View MIB Description	cription	"The text carried by the jo	dsuOnmsiImAli	.veTrap"
Global View 🔽	Find Node	supaon			

You will see the result in the result panel:

ManageEngine MibBrowser Free Tool				
<u>File Edit View Operations Help</u>				
🚴 🛃 🖻 🔀 😂 😂 隆 🗃 🖗	🏹 🖄 🛅 🕯	🎉 🛫 🚭 🧼 🎯 🔟 Down	ee Tools	
Loaded MibModules enterprises dsuRcot dsuAccessNetworkTest dsuDatelPTest dsuDigitalVideoTest dsuDigitalVideoTest dsuDigitalVideoTest dsuDigitalVideoTest dsuDigitalVideoTest dsuDigitalVideoTest dsuDigitalVideoTest dsuDigitalVideoTest dsuDigitalVideoTest dsuDigitalVideoTest dsuDigitalVideoTest dsuDigitalVideoTest dsuDigitalVideoTest dsuDigitalVideoTest dsuDigitalVideoTest dsuDigitalVideoTest dsuDigitalVideoTest dsuDigitalVideoTest dsuDigitalVideoTest dsuDigitalVideoTest dsuDigitalVideoTest dsuDigitalVideoTest dsuDigitalVideoTest dsuDigitalVideoTest dsuDigitalVideoTest dsuDigitalVideoTest dsuDigitalVideoTest dsuDigitalVideoTest dsuDigitalVideoTest dsuDigitalVideoTest dsuDigitalVideoTest dsuDigitalVideoTest dsuDigitalVideoTest dsuDigitalVideoTest dsuDigitalVideoTest dsuDigitalVideoTest dsuDigitalVideoTest dsuDigitalVideoTest dsuDigitalVideoTest dsuDigitalVideoTest dsuDigitalVideoTest dsuDigitalVideoTest dsuDigitalVideoTest dsuDigitalVideoTest dsuDigitalVideoTest dsuDigitalVideoTest dsuDigitalVideoTest dsuDigitalVideoTest dsuDigitalVideoTest dsuDigitalVideoTest dsuDigitalVideoTest dsuDigitalVideoTest dsuDigitalVideoTest dsuDigitalVideoTest dsuDigitalVideoTest dsuDigitalVideoTest dsuDigitalVideoTest dsuDigitalVideoTest dsuDigitalVideoTest dsuDigitalVideoTest dsuDigitalVideoTest dsuDigitalVideoTest dsuDigitalVideoTest dsuDigitalVideoTest dsuDigitalVideoTest dsuDigitalVideoTest dsuDigitalVideoTest dsuDigitalVideoTest dsuDigitalVideoTest dsuDigitalVideoTest dsuDigitalVideoTest dsuDigitalVideoTest dsuDigitalVideoTest dsuDigitalVideoTest dsuDigitalVideoTest dsuDigitalVideoTest dsuDigitalVideoTest dsuDigitalVideoTest dsuDigitalVideoTest dsuDigitalVideoTest dsuDigitalVideoTest dsuDigitalVideoTest dsuDigitalVideoTest dsuDigitalVideoTest dsuDigitalVideoTest dsuDigitalVideoTest dsuDigitalVideoTest dsuDigitalVideoTest dsuDigitalVideoTest dsuDigitalVideoTest dsuDigitalVideoTest dsuDigitalVideoTest dsuDigitalVideoTest dsuDigitalVideo	Host Community Set Value Object ID E Sent GET requ jdsuOnmsilmA	localhost	Port Write Communit uRoot.jdsuFiberField	y ••••• TestSystems.jdsuRemoteFiberTest.jdsuOnmsi.j
JdsuOnmsilmAlive     JdsuOnmsilmAliveText     JdsuOnmsilmAliveText	Description Mu	ltiVar DisolavString	Status	•
a Gi jdsuOnmsilmAilveAlarmEventSequeni a Gi jdsuOnmsiServices	Access	read-write	Reference	
	Index     Object ID	.1.3.6.1.4.1.35873.5.1.1.1.2.2.2		
Global View 🔽	Description	"The text carried by the j	dsuOnmsiImAli	iveTrap"

## 5.2.2. Set operation

Fill the new node value in the "Set Value" attribute:

ManageEngine MibBrowser Free Tool				
Eile Edit View Operations Help				
🚴 📥 🗉 🍪 日 🗇 🤷 🕾 🖷 🕼 💋 🧠 🖄	🖄 🖬 🛔	🎉 🛫 🔤 🧼 🖉 🚺 Down	ee Tools	
Loaded MibModules enterprises gldsuRoot dsuCacessNetworkTest dsuCableNetworkTest dsuDataIPTest dsuDigitalVideoTest gldsuFiberFieldTestSystems gldsuFiberFieldTestSystems dsuDommai gldsuCherFiberTest gldsuOnmsiMib gldsuOnmsiMib gldsuOnmsiMib gldsuOnmsiMib gldsuOnmsiMib gldsuOnmsiAdministration	Host Community Set Value Object ID	Iocalhost	Port Write Communit	161 V y ••••• ITestSystems.jdsuRemoteFiberTest.jdsuOnmsi.j
id 🔄 jdsuOnmsilmAlive	Description Mu	ltiVar		<b>•</b>
GSUORMSIIMAIveTexi → jdsuOrmsiImAliveAlarmEventSequen → jdsuOrmsiServices	Syntax Access	DisplayString read-write	Status c Reference	urrent
Jusuominsitzvenis	Index Object ID	.1.3.6.1.4.1.35873.5.1.1.1.2.2.2		
Global View 🗹	Description	"The text carried by the j	dsuOnmsiImAl:	iveTrap"

Then set the node value with the menu (Operations>SET), the toolbar button or the context menu:

ManageEngine MibBrowser Free Tool	the little management.					
Eile Edit View Operations Help						
🚴 💑 📋 🛛 GET 🛛 Ctrl+G 🖥 🆷	🖻 🗊 🌮 🧠 🏹 📾		🐞 🛫 🐵 🧶 🚺	Downl More Fre	load ee Tools	
Loaded MibM GETNEXT Ctrl+N						
GETBULK Ctrl+B	Hos	t	localhost	-	Port	161 👻
□ jdsuR SNMPWALK Ctrl+W	Con	nmunity	••••		Write Community	
jusun SET Ctrl+S	Set	Value	ONMSi is alive	•		
jdsuD jdsuD Stop Ctrl+C	Obje	ect ID	.iso.org.dod.internet.private.enter	prises.jdsu	Root.jdsuFiberField1	FestSystems.jdsuRemoteFiberTest.jdsuOnmsi.j
ide Clear Ctrl+L						*
i⊟−jdsuOnmsi						
🖃 🔄 jdsuOnmsiMib						
i jdsuOnmsiProduct						
🖃 🔄 jdsuOnmsiAdministra	ation					
i jdsuOnmsiSnmpC	Config					-
🖃 📹 jdsuOnmsilmAlive						
jdsuOnmsilmA idsuOnmsilmA	AlivePeriodMin Desc	ription Mu	ltiVar			
jdsuOnmsilmA	AliveAl GET	х	DisplayString		Status cu	urrent
idsuOnmsiServices	SET	SS	read-write		Reference	
i jdsuOnmsiEvents	CETNEYT					
•	GEINEXT	TID	1.3.6.1.4.1.35873.5.1.1.1.2.2.2			
	View MIB Description					
	Find Node	ription	"Ine text carried by	the jo	isuonms11MAI1	veirap"
Global View 🔽	- Ind Node					

You will see the result in the result panel:

ManageEngine MibBrowser Free Tool					
Eile Edit View Operations Help					
🗞 🛃 🖬 🚳 🖬 🗁 🦷 👘 🗊 🧆	🏹 🖄 🛅 🕯	💐 🔹 🚭	Own More Fre	load ee Tools	
Loaded MibModules	Host	localhost	•	Port	161
jdsuAccessNetworkTest	Community	••••		Write Community	••••
jdsuCableNetworkTest	Set Value	ONMSi is alive	•		
jdsuDataiPiest jdsuDigitalVideoTest	Object ID	.iso.org.dod.internet.private.	enterprises.jdsu	Root.jdsuFiberFieldT	estSystems.jdsuRemoteFiberTest.jdsuOnmsi.
☐ jdsuFiberTield1estSystems     ☐ jdsuRemoteFiberTest     ☐ jdsuConmsiMib     ☐ jdsuConmsiMib     ☐ jdsuConmsiAdministration	E Sent SET requ jdsuOnmsilm/	est to localhost : 161 NiveText.0	ONM	Si is alive	
jdsuOnmsilmAlivePeriodMin	Description Mu	ltiVar			
i dsuonmsilmAivertexi	Syntax	DisplayString		Status cu	rrent
i dsuOnmsiServices	Access	read-write		Reference	
	* Index				
	Object ID	.1.3.0.1.4.1.358/3.5.1.1.1.2.	.2.2		
	Description	"The text carried	by the jo	lsuOnmsiImAli	veTrap"
Global View 🔽					

# 5.3. Receiving Traps

Open the trap viewer window with the menu (View>Trap Viewer) or the toolbar button:

🛯 Manag	eEng	ine MibBrowser Free To	ol						
File Edit	Viev	v Operations Help	<i>26</i>		2				
2	<	Trap Viewer Alt+P	a 🖻 🖷 🤹	1 🔊 🐵 🧒		🌢 🛫 🌚	O Down More Fre	ee Tools	
Coade	<ul> <li>Image: A start of the start of</li></ul>	Line Graph Ait+L Bar Graph Alt+B Snmp Table Alt+T Description Alt+R Debug Alt+D ToolBar	ms it	E	Host Community Set Value Object ID	Iocalhost •••• ONMSi is alive .iso.org.dod.internet.private.et	▼ ▼	Port Write Community uRoot.jdsuFiberField	161       Image: the state of t
		Display Jusuommsmin - Jusuomms Jusuomms Jusuomms Jusuoms Jusuoms Jusuoms Jusuoms Jusuoms Jusuoms Jusuoms Jusuoms Jusuoms Jusuoms Jusuoms Jusuoms Jusuoms Jusuoms Jusuoms Jusuoms Jusuoms Jusuoms Jusuoms Jusuoms Jusuoms Jusuoms Jusuoms Jusuoms Jusuoms Jusuoms Jusuoms Jusuoms Jusuoms Jusuoms Jusuoms Jusuoms Jusuoms Jusuoms Jusuo Jusuo Jusuo Jusuo Jusuo Jusuo Jusuo Jusuo Jusuo Jusuo Jusuo Jusuo Jusuo Jusuo Jusuo Jusuo Jusuo Jusuo Jusuo Jusuo Jusuo Jusuo Jusuo Jusuo Jusuo Jusuo Jusuo Jusuo Jusuo Jusuo Jusuo Jusuo Jusuo Jusuo Jusuo Jusuo Jusuo Jusuo Jusuo Jusuo Jusuo Jusuo Jusuo Jusuo Jusuo Jusuo Jusuo Jusuo Jusuo Jusuo Jusuo Jusuo Jusuo Jusuo Jusuo Jusuo Jusuo Jusuo Jusuo Jusuo Jusuo Jusuo Jusuo Jusuo Jusuo Jusuo Jusuo Jusuo Jusuo Jusuo Jusuo Jusuo Jusuo Jusuo Jusuo Jusuo Jusuo Jusuo Jusuo Jusuo Jusuo Jusuo Jusuo Jusuo Jusuo Jusuo Jusuo Jusuo Jusuo Jusuo Jusuo Jusuo Jusuo Jusuo Jusuo Jusuo Jusuo Jusuo Jusuo Jusuo Jusuo Jusuo Jusuo Jusuo Jusuo Jusuo Jusuo Jusuo Jusuo Jusuo Jusuo Jusuo Jusuo Jusuo Jusuo Jusuo Jusuo Jusuo Jusuo Jusuo Jusuo Jusuo Jusuo Jusuo Jusuo Jusuo Jusuo Jusuo Jusuo Jusuo Jusuo Jusuo Jusuo Jusuo Jusuo Jusuo Jusuo Jusuo Jusuo Jusuo Jusuo Jusuo Jusuo Jusuo Jusuo Jusuo Jusuo Jusuo Jusuo Jusuo Jusuo Jusuo Jusuo Jusuo Jusuo Jusuo Jusuo Jusuo Jusuo Jusuo Jusuo Jusuo Jusuo Jusuo Jusuo Jusuo Jusuo Jusuo Jusuo Jusuo Jusuo Jusuo Jusuo Jusuo Jusuo Jusuo Jusuo Jusuo Jusuo Jusuo Jusuo Jusuo Jusuo Jusuo Jusuo Jusuo Jusuo Jusuo Jusuo Jusuo Jusuo Jusuo Jusuo Jusuo Jusuo Jusuo Jusuo Jusuo Jusuo Jusuo Jusuo Jusuo Jusuo Jusuo Jusuo Jusuo Jusuo Jusuo Jusuo Jusuo Jusuo Jusuo Jusuo Jusuo Jusuo Jusuo Jusuo Jusuo Jusuo Jusuo Jusuo Jusuo Jusuo Jusuo Jusuo Jusuo Jusuo Jusuo Jusuo Jusuo Jusuo Jusuo Jusuo Jusuo Jusuo Jusuo Jusuo Jusuo Jusuo Jusuo Jusuo	o siProduct siAdministration nmsiSnmpConfig nmsilmAlive suOnmsilmAlivePer	iodMin	Description Med				
Global Vie	w 🔽	jds jdsuOnms idsuOnms jdsuOnms ifsuOnms	uOnmsilmAliveTex uOnmsilmAliveAlar siServices siEvents	mEventSequen	Syntax Access Index Object ID Description	DisplayString read-write .1.3.6.1.4.1.35873.5.1.1.1.2. "The text carried	2.2 by the jo	Status a Reference	veTrap"

## 5.3.1. SNMP v2

### 5.3.1.1. Trap viewer setup

Check the Authenticate v1/v2 traps box and fill the community attribute with the ONMSi user login (=SNMP community). Change the trap port if you modified it in snmp.properties.

Class	Type	Source	Date	Message
Authentica	te v1/v2c traps (Comr te v3 Trap	nunity)	📄 Enable Log	ging Log Format
V Authentica	te v1/v2c traps (Comr te v3 Trap 162	munity) TrapList	Enable Log	ging Log Format I Configure Mai
Authentica Authentica Ort Community	te v1/v2c traps (Comr te v3 Trap 162 mysnmpuser	TrapList	Enable Log	ging Log Format I Configure Mai J Del Load

Start the trap reception:

Class	Туре	Source	Date	Message
Authentic	ate v1/v2c traps (Comm	iunity)	Enable Logo	ing Log Format
Authentic Authentic	ate v1/v2c traps (Comm ate v3 Trap	iunity)	Enable Logo	ing Log Format
Authentic Authentic Port	ate v1/v2c traps (Comm ate v3 Trap 162	uunity) TrapList	Enable Logo	ing Log Format Configure Mai
Authentic Authentic Ort Community	ate v1/v2c traps (Comm ate v3 Trap 162 mysnmpuser	TrapList TrapParser	Enable Logo	jing Log Format Configure Mai Del Load
Authentic Authentic Port Community Start	ate v1/v2c traps (Comm ate v3 Trap 162 mysnmpuser Stop	TrapList TrapParser Show Details	Enable Logg     Enable Mail     Add     Delete Entry	Log Format Configure Mai Del Load ParserEditor

The trap viewer is now listening for traps:

TrapViewe	r				l	
Class	Туре	Source		Date	Messag	je
Authentio	cate v1/v2c traps (Co	mmunity)		Enable I	Logging Lo	og Format 👻
Authentio	cate v3 Trap			Enable	Mail Cor	figure Mail
Port	162	TrapList	162:mys	nmpuser 👻	Add	Del
Community	mysnmpuser	TrapParser				Load
Start	Stop	Show D	etails	Delete Entr	/ Pa	rserEditor
	Traps : 0 Inform : 0		Status	: Listening for Tr	aps	

## 5.3.1.2. Trap reception

When a trap is sent by the server, such as the *I'm alive* trap, it appears in the trap viewer list:

🔨 Trap\	/iewer						1	
Class	Туре	Source	Date		M	lessage		
Clear	v2c Trap	10.33.18.25	Mon Nov 0	7 10:45:04 CET	2011 .is	so.org.dod.internet.mgmt	.mib-2.1.	3.0: TimeTick
✓ Auth	nenticate v	/1/v2c traps (	(Communi	ty)		Enable Logo	ing L	og Format 👻
Autr	nenticate v	/3 Trap				Enable Mail	Cor	nfigure Mail
Port	162	2		TrapList	162:m	ysnmpuser 👻	Add	Del
Commu	nity mys	snmpuser		TrapParser				Load
	Start	S	top	Show De	etails	Delete Entry	Pa	rserEditor
Traps : 1 Inform : 0					Statu	is : Listening for Traps		

You can get more details on the trap with the Show Details button:

Class	Туре	Source	Date		Message			
Clear	v2c Trap	10.33.18.25	Mon Nov 0	7 10:45:04 CET 2	011 .iso.c	Delete the Sele Show Details	ected Row	
V Auth	ienticate v	/1/v2c traps (	(Communi	ty)	[	Enable Logg	ing Log	g Format
Auth	ienticate v ienticate v	/1/v2c traps ( /3 Trap	(Communii	ty)	[	Enable Logg	ing Log Conf	g Format igure Mail
Auth	enticate v enticate v 162	/1/v2c traps ( /3 Trap 2	(Communit	ly) TrapList	[ 162:mysnmpu	_ Enable Logg _ Enable Mail Jser ▼	ing Log Conf	g Format igure Mail Del
Auth Auth Auth Yort Commun	ienticate v ienticate v 162 nity mys	/1/v2c traps ( /3 Trap 2 snmpuser	(Communi	ty) TrapList TrapParser	[ 162:mysnmpu	_ Enable Logg _ Enable Mail Jser →	jing Log Conf Add	g Format igure Mail Del Load
Auth Auth Auth Ort Commun	nenticate v nenticate v 162 nity mys	/1/v2c traps ( /3 Trap ? snmpuser	(Communit	by) TrapList TrapParser	l62:mysnmpl	□ Enable Logg □ Enable Mail Jser ▼ □ Delete Entry	ing Log Conf Add	g Format igure Mail Del Load serEditor

### This opens a trap detail windows:

🕌 Trap Details	
TimeStamp	3 days, 0 hours, 22 minutes, 57 seconds.
Enterprise	
Generic Type	
Specific Type	
Message	<pre>.iso.org.dod.internet.mgmt.mib-2.1.3.0: TimeTicks: 3 days, 0 hours, 22 minutes, 57 seconds.: .1.3.6.1.6.3.1.1.4.1.0: Object ID: .1.3.6.1.4.1.35873.5.1.1.4.1: .iso.org.dod.internet.private.enterprises.jdsuRoot.jdsuFiberFieldTestSystems.jdsuRemoteFiberTest.jdsuOnmsi.jdsuOn msiMib.jdsuOnmsiAdministration.jdsuOnmsiImAlive.jdsuOnmsiImAliveText.73.32.65.77.32.65.76.73.86.69: I AM ALIVE: .iso.org.dod.internet.private.enterprises.jdsuRoot.jdsuFiberFieldTestSystems.jdsuRemoteFiberTest.jdsuOnmsi.jdsuOn msiMib.jdsuOnmsiAdministration.jdsuOnmsiImAlive.jdsuOnmsiImAliveAlarmEventSequence.73.32.65.77.32.65.76.73.86.69 : INTEGER: 39:</pre>
Severity	Clear
Entity	10.33.18.25
RemotePort	65024
LocalPort	162
Community	mysnmpuser
Node	10.33.18.25
Source	10.33.18.25
TimeReceived	Mon Nov 07 10:45:04 CET 2011
HelpURL	0-0.html
•	

## 5.3.2. SNMP v3

### 5.3.2.1. Trap viewer setup

Check the Authenticate v3 traps box and change the trap port if you modified it in snmp.properties.

TrapViewer	r				
Class	Туре	Source	Date	Mes	sage
Authentic	ate v1/v2c traps (Comm	unity)	En En	able Logging	Log Format
	ate v3 Tran		En En	able Mail 🛛 📿	onfigure Moil
Authentic	die vo map				onligure mail
l♥ Authentic Port	162	TrapList	162: •	Add	Del
V Authentic Port Community	162	TrapList TrapParser	162: 🔻	Add	Del Load
Authentic Port Community Start	162 Stop	TrapList TrapParser Show Details	162:   Delete	Add Entry	Del Load

Start the trap reception:

🔨 TrapViewer					
Class	Туре	Source	Date	М	essage
Authenticate	e v1/v2c traps (Comm	unity)		Enable Logging	Log Format 🔻
Authenticate	e v3 Trap			Enable Mail	Configure Mail
Port	162	TrapList	162:	▼ Add	Del
Community		TrapParser			Load
Start	Stop	Show Details	De	lete Entry	ParserEditor
Tra	ps : 0 Inform : 0	us : Not List	ening for Traps		

The trap viewer is now listening for traps:

TrapViewer						
Class	Туре	Sou	rce	Date	1	Message
Authentic	ate v1/v2c traps (Cor	nmunity)			Enable Logging	g Log Format 👻
✓ Authentic:	ate v3 Trap				Enable Mail	Configure Mail
Port	162	Trap	List 162		✓ Ad	ld Del
Community		TrapP	arser			Load
Start	Stop		Show Details	Del	ete Entry	ParserEditor
Traps : 0 Inform : 0 Status : Listening for Traps						

## 5.3.2.2. Trap reception

When a trap is sent by the server, such as the *I'm alive* trap, it appears in the trap viewer list:

TrapViewer					
Class	Type	Source	Date		Message
Clear	v3 Trap	10.33.17.105	Fri May 04	16:22:24	.iso.org.dod.internet
Authenticate	e v1/v2c traps (Community	)	E	nable Loggir	ng Log Format 👻
Authenticate	e v3 Trap		E	Enable Mail	Configure Mail
Port	162	TrapList	162:	Add	Del
Community		TrapParser			Load
Start	Stop	Show Details	Delet	te Entry	ParserEditor
Tra	ps:1Inform:0	St	atus : Listenin	g for Traps	

You can get more details on the trap with the Show Details button:

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🔨 TrapViewer					
Class	Туре	Source	Date		Message
Clear	v3 Trap	10.33.17.10	5 Fri May	Delete th Show De	ne Selected Rows stails
Authenticat	e v1/v2c traps (Comm	unity)	Er	nable Loggir	Log Format
Authenticate	e v3 Trap		E	nable Mail	Configure Mail
Port	162	TrapList	162: -	Add	Del
Community		TrapParser			Load
Start	Stop	Show Detail:	s Delet	e Entry	ParserEditor
Traps : 1 Inform : 0     Status : Listening for Traps					

This opens a trap detail windows:

Irap Details	
TimeStamp	0 hours, 3 minutes, 45 seconds.
Enterprise	
Generic Type	
Specific Type	
Message	ise and ded internet mont wib_2 1 3 0. TimeTicks. 0 hours 3 minutes 45 seconds .
	1.3.6.1.6.3.1.1.4.1.0: Object ID: 1.3.6.1.4.1.3873.5.1.1.1.4.1:
	.iso.org.dod.internet.private.enterprises.jdsuRoot.jdsuFiberFieldTestSystems.jdsuRemoteFiberTest.jdsuOnmsi.jdsuOnm
	ve.jdsuOnmsiImAliveText.73.32.65.77.32.65.76.73.86.69: I AM ALIVE:
	.180.org.aod.internet.private.enterprises.jasukoot.jasuriberrieidiestSystems.jasukemoteriberiest.jasuonmsi.jasuonm ve.idsubomsilmäliivellarmEventSequence.73.32.65.77.32.65.76.73.86.69: INTEGRE: 4:
Severity	Clear
Entity	10.33.17.105
RemotePort	63076
LocalPort	162
Community	null
Node	10.33.17.105
Source	10.33.17.105
TimeReceived	Fri May 04 16:22:24 CEST 2012
HelpURL	0-0.html
•	

## 5.3.3. Tips

Note: To help testing trap reception, you can have the server generate an I'm alive trap by setting a value to the jdsuOnmsiImAlivePeriodMin node.

Because this operation resets the I'm alive trap timer, you may safely set it several times to the same value (default is 5 minutes), in order to generate several I'm alive traps and validate your SNMP configuration.

Warning: Being able to receive I'm alive traps is mandatory for receiving alarm traps, but not sufficient. If the user set up for SNMP management is not registered as an API notified user with a well configured notification rule, or has not been given proper roles on the system, you may miss important alarm traps. Make sure to test the alarm trap reception by generating alarms on the system.

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