

Quantum[®]

SNMP Reference Guide

Quantum DXi-Series



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Preface

This manual provides a reference to using SNMP (Simple Network Management Protocol) with a Quantum DXi™-Series system.

Audience

This manual is written for DXi™ system administrators and field service engineers.

Note: It is useful for the audience to have a basic understanding of UNIX® and backup/recovery systems.

Document Organization

Following is a brief description of chapter contents.

- [Chapter 1, Description](#) provides an overview of SNMP.
- [Chapter 2, SNMP Agent](#) provides information on the SNMP agent.
- [Chapter 3, SNMP Traps](#) provides information on the supported SNMP traps.

Notational Conventions

This manual uses the following conventions:

Note: Note emphasizes important information related to the main topic.

Caution: Caution indicates potential hazards to equipment or data.

WARNING: Warning indicates potential hazards to personal safety.

- Right side of the system - Refers to the right side as you face the component being described.
- Left side of the system - Refers to the left side as you face the component being described.
- Data sizes are reported in base 1000 rather than base 1024. For example:

- 1 MB = 1,000,000 bytes
- 1 GB = 1,000,000,000 bytes
- 1 TB = 1,000,000,000,000 bytes

Related Documents

The following Quantum documents are also available for DXi-Series systems:

Document No.	Document Title	Document Description
6-00618	<i>System Safety and Regulatory Information - Quantum Products</i>	Lists all safety and regulatory information for all Quantum products.

For the most up to date information on the DXi-Series, see:

<http://www.quantum.com/ServiceandSupport/Index.aspx>

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For information about contacting Quantum, including Quantum office locations, go to:

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Chapter 1

Description

Simple Network Management Protocol (SNMP) is a light-weight protocol designed for remote management and monitoring of infrastructure devices. DXi-Series systems (DXi V-Series, DXi4000, DXi6000, and DXi8500) provide SNMP support so you can use a framework application to monitor the status of the system. Using SNMP, you can be alerted of numerous system events.

The DXi also provides detailed status reports from its own reporting system, called the Reliability, Availability, and Serviceability (Service) ticket system. Service tickets enable system administrators to diagnose specific system events.

SNMP Functionality Available to Remote Applications

The DXi supports standard SNMP functionality, including GET queries and unicast traps (which can be sent only to registered recipients), that enables you to monitor system status from a remote application. SET commands are currently not enabled on the DXi.

All DXi MIB variables are supported by Quantum for remote management of the system.

Specific SNMP characteristics include:

- Supports SNMP v2c.
- Supports SNMP v2 traps as defined by RFC 1157. You can set the system to report SNMP traps v2. The timeout for SNMP requests to the system must be at 10 seconds or greater (command line parameter-t).
- SMIPv2 compliance only.
- Usage of port 161 for GET queries.
- Default community read/trap strings: *publicCmtyStr* (see [SNMP Community Strings](#) on page 4).
- Trap Registration interface in the system's remote web client, which enables you to configure application IP addresses, transport protocols, and user-configurable UDP port numbers to receive traps

Accessing SNMP Information

SNMP information can be obtained from the DXi using traps and GET queries. Using the information contained in this guide, system administrators can configure their framework application to generate alerts to receive SNMP information.

SNMP Version

The DXi supports SNMP version 2c for MIB information retrieval.

To access the system for SNMP support, use the following values as needed in the remote management application:

- **User name** - Admin
- **Context name** - (None. Leave this field blank.)
- **Authentication protocol** - MD5
- **Privacy protocol** - (None. Leave this field blank.)
- **Password** - Your Admin password

For secure access to the system using SNMP, disable SNMPv2c access from the remote management console.

SNMP Traps

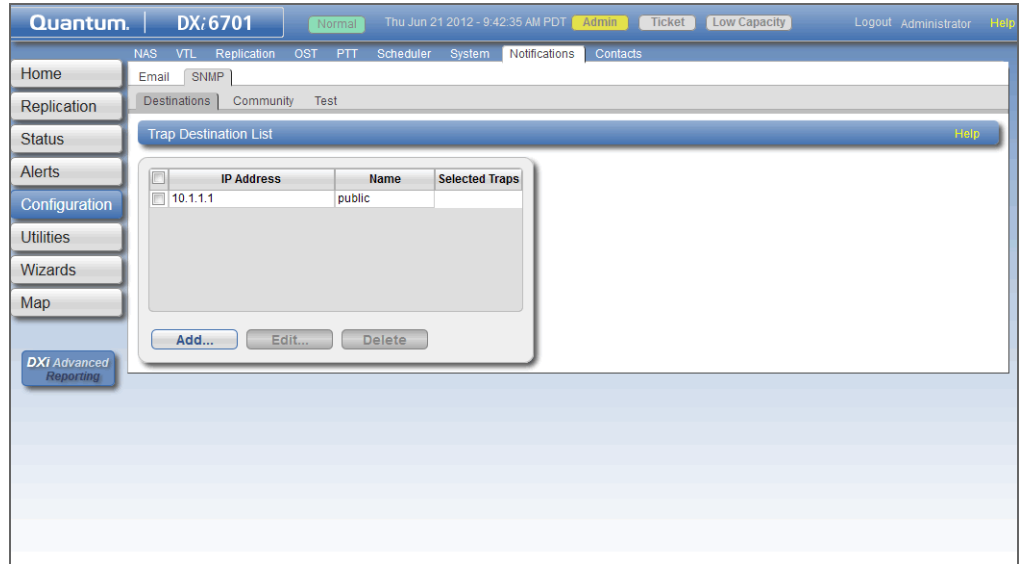
Traps enable alerts to be sent automatically to registered hosts when specific events occur. Only one application per UDP port can listen for traps.

The DXi supports SNMP v2 traps as defined by RFC 1157. The timeout for all SNMP requests to the system must be at 10 seconds or greater (command line parameter-t).

To receive traps, perform the following steps:

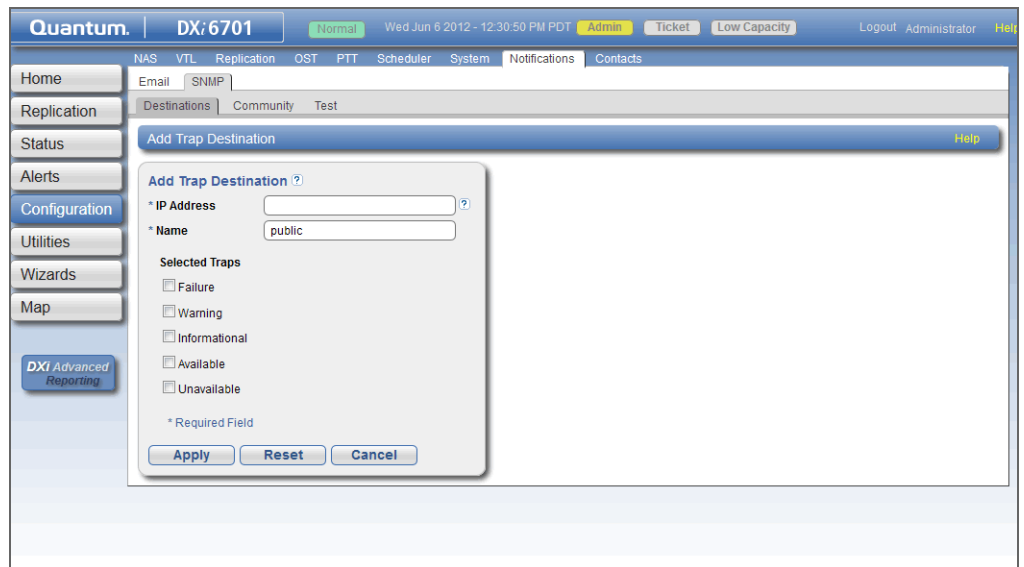
- 1 Configure your framework application to collect traps from the DXi.
 - Access the DXi remote management console and navigate to the **Configuration > Notifications > SNMP > Destinations** page (see [Figure 1](#)).

Figure 1 Destinations Page (DXi6701 Shown)



2 Click **Add** to add an SNMP destination (see [Figure 2](#)).

Figure 2 Add Trap Destination Page (DXi6701 Shown)



3 Enter information about the destination:

- **IP Address** - Enter the IP address of the system that will receive the traps generated by the DXi.

Note: When entering IP addresses, never use an address that is in a reserved IP address range. To see a list of reserved IP address ranges, click the quick tip icon [?] located near the IP address field.

- **Name** - Enter the name of the destination.

4 Select one or more traps to send to the destination:

- **Failure** - Sends failure traps.

- **Warning** - Sends warning traps.
- **Informational** - Sends informational traps.
- **Available** - Sends a trap when the system transitions from an unavailable to an available state.
- **Unavailable** - Sends a trap when the system transitions from an available to an unavailable state.

5 Click **Apply**.

For more information about registering a host with the DXi, see the *User's Guide* for your DXi system.

SNMP Queries

SNMP queries, or GET queries, can be initiated on a periodic basis by the framework application. By querying the MIB, hosts can gather status information about specific components of the system. Frequent MIB queries are not required, however, since the SNMP agent is event-driven.

Note: As with any SNMP device, excessive MIB queries can result in performance degradation for the SNMP daemon, as well as for the network.

GETs must also include an instance ID. The instance identifies a specific device from which you can retrieve status information. For example, to determine if the second partition on a DXi is online, access the MIB variable for logical system online status and select the instance for partition 2.

SNMP Community Strings

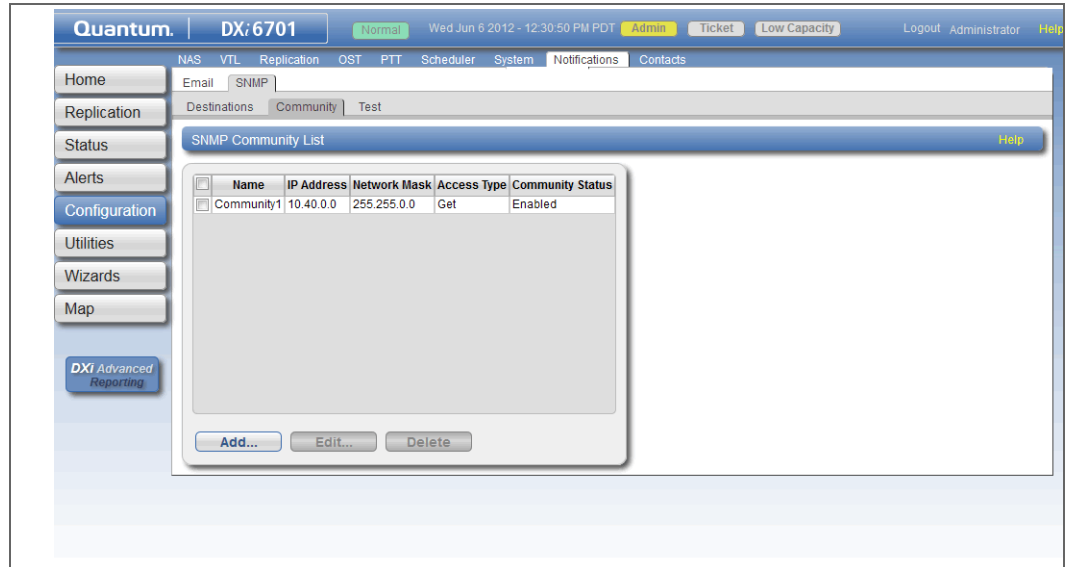
An SNMP community string is a text string that acts as a password to authenticate messages sent between the SNMP remote management application and the device (the SNMP agent). SNMP **Get** and **Get-next** requests are valid only if the community string in the request matches the community string at the device. If the community strings do not match, either modify the community string at the device so that it is the string that the management station expects, or modify the management station so that it uses the device's community strings.

The community string is included in every SNMPv2C packet transmitted between the SNMP manager and the SNMP agent. This string is case sensitive, cannot be empty, and cannot exceed 32 characters.

To add a community:

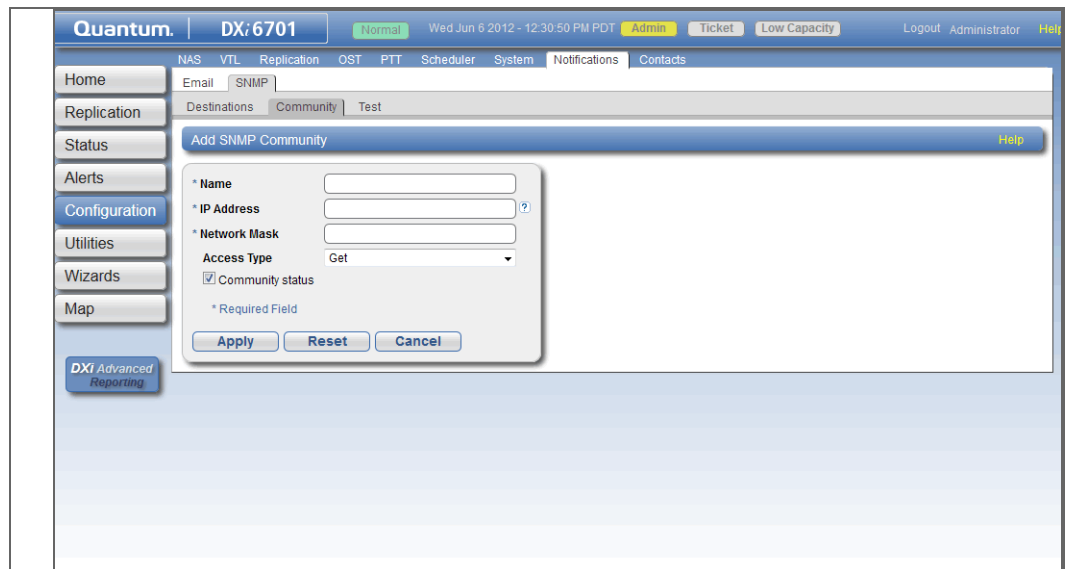
- 1 Access the DXi remote management console and navigate to the **Configuration > Notifications > SNMP > Community** page (see [Figure 3](#)).

Figure 3 Community Page (DXi6701 Shown)



2 Click **Add** to an SNMP community (see [Figure 4](#)).

Figure 4 Add SNMP Community Page (DXi6701 Shown)



3 In the **Name** box, enter a unique **Name** for the community (up to 20 characters). Valid characters are letters, numbers, hyphens, and underscores.

4 Enter a valid **IP Address and Network Mask** pair.

A pair is valid if performing a logical bitwise **AND** operation on the IP address and the network mask results in the IP address. See the table below for examples:

IP Address / Network Mask	Result
10.40.166.87 255.255.255.255	Allows access only from 10.40.166.87

IP Address / Network Mask	Result
10.40.166.87 10.40.166.87	Allows access only from 10.40.166.87
10.40.166.87 10.40.166.0	Invalid because the logical bitwise operation (address AND mask) is not equal to the address
10.40.166.87 255.255.0.0	Invalid because the logical bitwise operation (address AND mask) is not equal to the address
10.40.0.0 255.255.0.0	Allows access from any client with address 10.40.xx.xx

Note: If you define a single community and set both the IP address and network mask to 0.0.0.0 (or leave both blank), then IP address-based access control is disabled. In this case, the SNMP agent is accessible from any IP address.

Note: When entering IP addresses, never use an address that is in a reserved IP address range. To see a list of reserved IP address ranges, click the quick tip icon [?] located near the IP address field.

- 5 In the **Access Type** drop-down box, select the access type for the community:
 - **Get** - Allows SNMP get operations.
 - **Get/Set** - Allows both SNMP **get** and **put** operations.
- 6 Select the **Community status** check box to enable the community.
Or clear the **Community status** check box to disable the community.
- 7 Click **Apply**.



Chapter 2 SNMP Agent

The DXi operating system is running Linux and the SNMP Agent residing within the DXi is the Net-SNMP 5.7.1. Whenever a request comes in to the SNMP Agent, the agent will parse the request and decide how to process. The SNMP Agent responds directly to any requests for non-Quantum specific MIB objects such as the MIB-II (defined in rfc1213) but if the request is for a Quantum specific MIB object, it will pass the data to the SNMP subagent that processes all the Quantum specific MIB objects. The SNMP subagent processes the request and returns the data to the Net-SNMP agent.

Quantum SNMP MIB

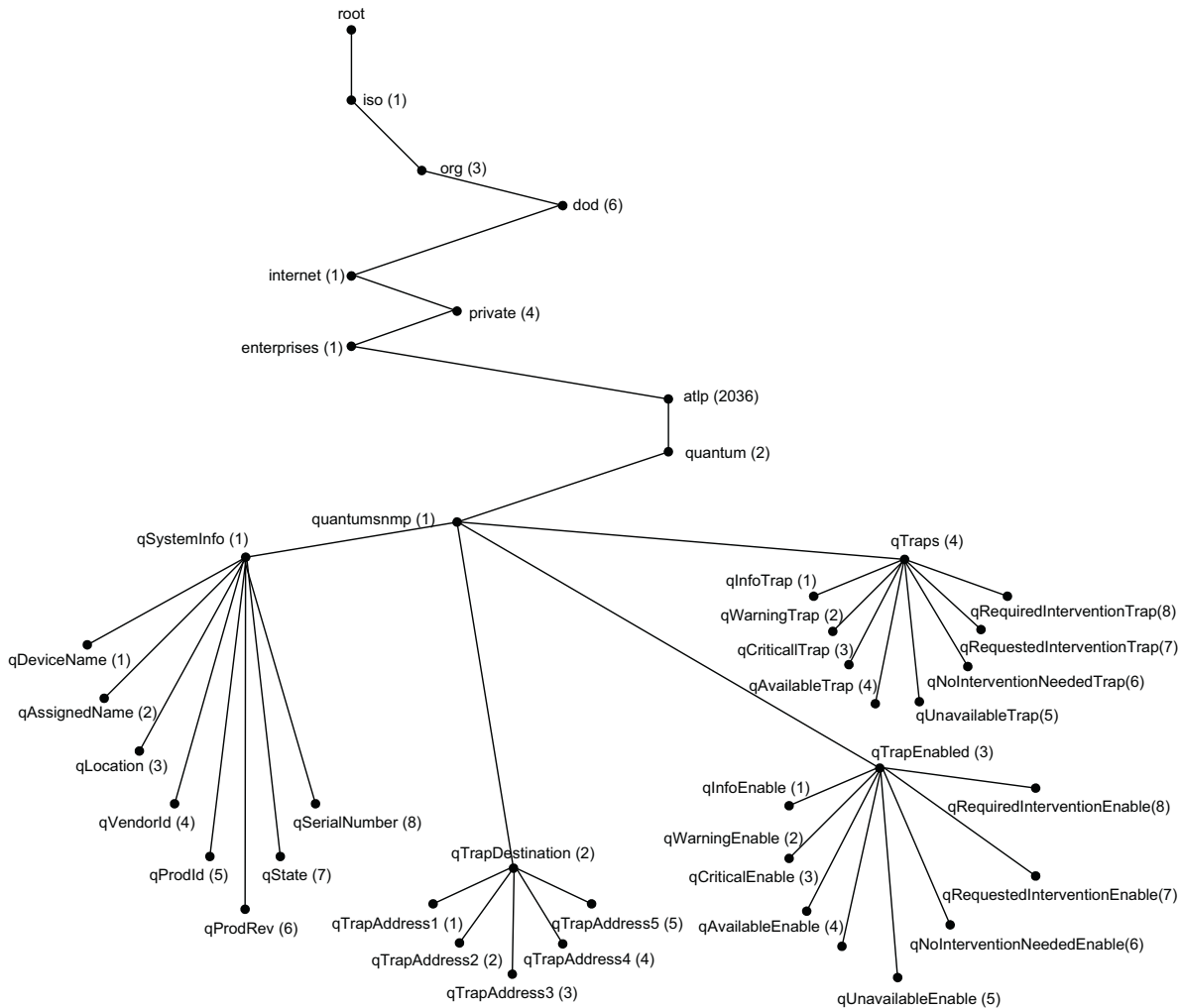
The SNMP agent that supports the DXi system also supports the general Quantum MIB, QUANTUM-SNMP.MIB. The object ID for the Quantum MIB is as follows (see [Figure 5](#)):

.1(iso).3(org).6(dod).1(internet).4(private).1(enterprises).2036(atlp).2(quantum).1(quantumsnmp)

There are 5 groups under.1(quantumsnmp) tree:

qSystemInfo	.1.3.6.1.4.1.2036.2.1.1
qTrapDestination	.1.3.6.1.4.1.2036.2.1.2
qTrapEnable	.1.3.6.1.4.1.2036.2.1.3
qTraps	.1.3.6.1.4.1.2036.2.1.4
qSerialNumber	.1.3.6.1.4.1.2036.2.1.1.12

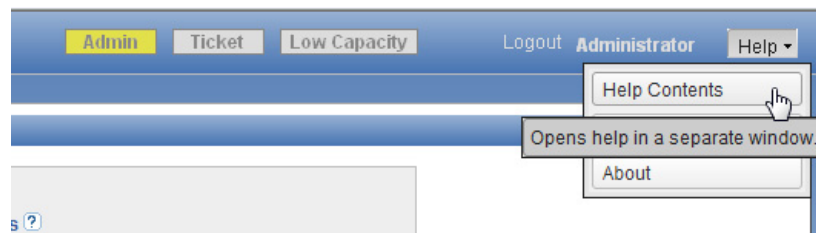
Figure 5 Quantum SNMP Object ID



To view the MIB file for your DXi:

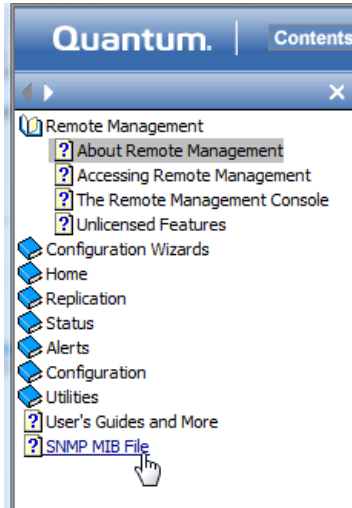
- 1 On the DXi's Help drop-down list, select Help Contents (see [Figure 6](#)).

Figure 6 DXi Help Contents



- 2 On the online help's left pane, select the **SNMP MIB file** link (see [Figure 7](#)).

Figure 7 SNMP MIB File Link



- 3 On the **SNMP MIB File** online help screen, select the Download the SNMP MIB File link (see [Figure 8](#)).

Figure 8 Download the SNMP MIB File link

SNMP MIB File

Simple Network Management Protocol (SNMP) is a light-weight protocol designed for remote management and monitor you can use a framework application to monitor the status of the system. Using SNMP, you can be alerted of numerou

The Quantum MIB (Management Information Base) file defines the objects (variables) that can be managed using SNM

[Download the DXi8500 SNMP MIB File](#)

Note: For more information about using SNMP, see the *DXi-Series SNMP Reference Guide* (6-67082).

qSystemInfo Group

The DXi supports the following 8 of objects of the qSystemInfo group. Some are read-only (RO) objects; some are read-write (RW) objects; and some are "accessible-for-notify" objects. The "accessible-for-notify" objects are objects that will be sent as information when notifications or traps are sent, not readable or writable from a management console. From the management console, only the get request operation can be applied to the RO objects, and both get and set request operations can be applied to the RW objects.

qDeviceName

qDeviceName is a RO object, with the object ID .1.3.6.1.4.1.2036.2.1.1.1. This is the host name of the device.

qAssignedName

qAssignedName is a RW object, with the object ID .1.3.6.1.4.1.2036.2.1.1.2. This is the emulated storage library name. If none is given, the default value is the name of the device (qDeviceName).

qLocation

qLocation is a RW object, with the object ID .1.3.6.1.4.1.2036.2.1.1.3. This is the location of the DXi. If none is provided, the value is an empty string.

qVendorId

qVendorId is a RO object, with the object ID .1.3.6.1.4.1.2036.2.1.1.4. This is the manufacturing vendor ID.

qProdId

qProdId is a RO object, with the object ID .1.3.6.1.4.1.2036.2.1.1.5. This is the product model number.

qProdRev

qProdRev is a RO object, with the object ID .1.3.6.1.4.1.2036.2.1.1.6. This is the product revision number.

qState

qState is a RO object, with the object ID .1.3.6.1.4.1.2036.2.1.1.7. This is the current state of the emulated storage library.

qSerialNumber

qSerialNumber is a RO object, with the object ID .1.3.6.1.4.1.2036.2.1.1.12. This is the serial number of the Quantum device.

qTrapDestination Group

There are 5 read-write objects in the qTrapDestination group. They are the IP addresses of the Management Consoles that are allowed to receive traps from the SNMP Agent. The maximum number of trap destination IP addresses that can be set in the agent is 5. Currently the DXi implements these as Read Only objects and the trap addresses are configurable only through the remote management console.

qTrapAddress1

qTrapAddress1 has an object ID of .1.3.6.1.4.1.2036.2.1.2.1. This object is the IP address of the Management Console the traps will be sent to.

qTrapAddress2

qTrapAddress2 has an object ID of .1.3.6.1.4.1.2036.2.1.2.2. This object is the IP address of the Management Console the traps will be sent to.

qTrapAddress3

qTrapAddress3 has an object ID of .1.3.6.1.4.1.2036.2.1.2.3. This object is the IP address of the Management Console the traps will be sent to.

qTrapAddress4

qTrapAddress4 has an object ID of .1.3.6.1.4.1.2036.2.1.2.4. This object is the IP address of the Management Console the traps will be sent to.

qTrapAddress5

qTrapAddress5 has an object ID of .1.3.6.1.4.1.2036.2.1.2.5. This object is the IP address of the Management Console the traps will be sent to.

qTrapEnable Group

There are 8 read-write objects in the qTrapEnable group. Each object determines whether the specific type of trap should be sent to the defined management station(s) or not. If the object value is 1(disabled), the trap will not be sent. If the object value is 2(enabled), the trap will be sent.

qInfoEnable

qInfoEnable has an object ID of .1.3.6.1.4.1.2036.2.1.3.1. This object determines whether the device should send the Informational notification to the Management Console.

qWarningEnable

qWarningEnable has an object ID of .1.3.6.1.4.1.2036.2.1.3.2. This object determines whether the device should send the Warning notification to the Management Console.

qCriticalEnable

qCriticalEnable has an object ID of .1.3.6.1.4.1.2036.2.1.3.3. This object determines whether the device should send the Critical notification to the Management Console.

qAvailableEnable

qAvailableEnable has an object ID of .1.3.6.1.4.1.2036.2.1.3.4. This object determines whether the device should notify the management console when the library is available.

qUnavailableEnable

qUnavailableEnable has an object ID of .1.3.6.1.4.1.2036.2.1.3.5. This object determines whether the device should notify the management console when the library is unavailable.

qNoInterventionNeededEnable

qNoInterventionNeededEnable has an object ID of .1.3.6.1.4.1.2036.2.1.3.6. This object determines whether the device should send the "No User Intervention Needed" notification to the Management Console. This object is not used by the DXi.

qRequestedInterventionEnable

qRequestedInterventionEnable has an object ID of .1.3.6.1.4.1.2036.2.1.3.7. This object determines whether the device should send the "Requested User Intervention" notification to the Management Console. This object is not used by the DXi.

qRequiredInterventionEnable

qRequiredInterventionEnable has an object ID of .1.3.6.1.4.1.2036.2.1.3.8. This object determines whether the device should send the "Required User Intervention" notification to the Management Console. This object is not used by the DXi.

qTraps Group

There are 8 objects in the qTraps group, representing the 8 different types of traps. They are v2 traps with information includes: qAssignedName, qSenseKey, qAsc, qAscq, and qTrapDescription.

qInfoTrap

qInfoTrap has an object ID of .1.3.6.1.4.1.2036.2.1.4.1. The informational traps will be sent if qInfoEnable is set to enabled.

qWarningTrap

qWarningTrap has an object ID of .1.3.6.1.4.1.2036.2.1.4.2. The warning traps will be sent if qWarningEnable is set to enabled.

qCriticalTrap

qCriticalTrap has an object ID of .1.3.6.1.4.1.2036.2.1.4.3. The critical traps will be sent if qCriticalEnable is set to enabled.

qAvailableTrap

qAvailableTrap has an object ID of .1.3.6.1.4.1.2036.2.1.4.4. The available traps will be sent if qAvailableEnable is set to enabled.

qUnavailableTrap

qUnavailableTrap has an object ID of .1.3.6.1.4.1.2036.2.1.4.5. The unavailable traps will be sent if qUnavailableEnable is set to enabled.

qNoInterventionNeededTrap

qNoInterventionNeededTrap has an object ID of .1.3.6.1.4.1.2036.2.1.4.6. The "No User Intervention Needed" traps will be sent if qNoInterventionNeededEnable is set to enabled. This object is not used by the DXi.

qRequestedInterventionTrap

qRequestedInterventionTrap has an object ID of .1.3.6.1.4.1.2036.2.1.4.7. The "Requested User Intervention" traps will be sent if qRequestedInterventionEnable is set to enabled. This object is not used by the DXi.

qRequiredInterventionTrap

qRequiredInterventionTrap has an object ID of .1.3.6.1.4.1.2036.2.1.4.8. The "Required User Intervention" traps will be sent if qRequiredInterventionEnable is set to enabled. This object is not used by the DXi.

Other Supported MIBs

The Net-SNMP agent also supports MIBII, SNMPv2, and UCD MIBs by default.



Chapter 3

SNMP Traps

An SNMP trap is generated by an individual component in the DXi device when there is a change or failure in the component and is triggered by the creation of a Service ticket.

A Service ticket event is always reported against the violating FRU. The reporting FRU can be the violating FRU itself, or a peer FRU which determines the violating FRU is in a bad state. In the current interface, it is sometimes necessary to report the violating FRU instance, as well as the parent (of the violating FRU) instance.

The following tables show the list of FRUs and the events that can generate Service tickets.

DXi issued SNMP v2c traps each take the form of 4 OID/value pairs of data in each trap.

1 Uptime

- a OID: sysUpTimeInstance = 1.3.6.1.2.1.1.3.0
- b Value: DXi system uptime

2 Trap Type

- a OID: snmpTrapOID = 1.3.6.1.6.3.1.1.4.1.0
- b Value: The Quantum trap type (OID), which is one of:
 - i qInfoTrapOID -- 1.3.6.1.4.1.2036.2.1.4.1 (Severity=Information)
 - ii qWarningTrapOID -- 1.3.6.1.4.1.2036.2.1.4.2 (Severity=Warning)
 - iii qCriticalTrapOID -- 1.3.6.1.4.1.2036.2.1.4.3 (Severity=Error)
 - iv qAvailableTrapOID -- 1.3.6.1.4.1.2036.2.1.4.4 (Severity=Information, Library Online)
 - v qUnavailableTrapOID -- 1.3.6.1.4.1.2036.2.1.4.5 (Severity=Information, Library Offline)

3 IP address

- a OID: snmpTrapAddress = 1.3.6.1.6.3.18.1.3.0
- b Value: DXi Mgmt IP address

4 Trap Description

- a OID: qTrapOID (from 2b above)
- b Value: OctetString:
[Product=XXX][System=XXX][Severity=Information | Warning | Error][Serial=XXX][Details=XXX]

This section lists the SNMP traps by component for DXi 2.X.

- **SNMP Traps for DXi 2.X Systems**
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I/O Server

FRU_ID	EVENT_ID	TRAP_LEVEL	TRAP_DETAILS	ONLINE_HELP_FILENAME
0101	7	Error	I/O Server <FRU_Inst> : Hardware fault	0101-TP003.htm
0101	8	Error	I/O Server <FRU_Inst> : Software fault	0101-TP003.htm
0101	10	Warning	I/O Server <FRU_Inst> : Over voltage	0101-TP001.htm
0101	11	Warning	I/O Server <FRU_Inst> : Under voltage	0101-TP001.htm
0101	31	Error	I/O Server <FRU_Inst> : Low voltage	0101-TP001.htm
0101	33	Warning	I/O Server <FRU_Inst> : Low temperature	0101-TP002.htm
0101	34	Error	I/O Server <FRU_Inst> : High temperature	0101-TP002.htm
0101	35	Information	I/O Server <FRU_Inst> : Under temperature	0101-TP002.htm
0101	36	Warning	I/O Server <FRU_Inst> : Over temperature	0101-TP002.htm
0101	52	Error	I/O Server <FRU_Inst> : Not responding	0101-TP003.htm
0101	77	Error	I/O Server <FRU_Inst> : Configuration mismatch	IOS_ConfigMismatch.htm
0101	95	Error	I/O Server <FRU_Inst> : Nonrecoverable temperature	0101-TP002.htm
0101	96	Error	I/O Server <FRU_Inst> : Nonrecoverable voltage	0101-TP001.htm
0101	115	Error	I/O Server <FRU_Inst> : Component is degraded	0101-TP003.htm
0102	9	Error	I/O Server I/O Server drive <FRU_Inst> : Not present	0102-TP001.htm
0102	22	Error	I/O Server I/O Server drive <FRU_Inst> : Drive failure	losDrvBoot.htm
0102	24	Error	I/O Server I/O Server drive <FRU_Inst> : IO Error	0102-TP001.htm
0103	9	Error	I/O Server I/O Server FC HBA <FRU_Inst> : Not present	0103-TP001.htm

FRU_ID	EVENT_ID	TRAP_LEVEL	TRAP_DETAILS	ONLINE_HELP_FILENAME
0103	14	Error	I/O Server I/O Server FC HBA <FRU_Inst> : Link failure	0103-TP001.htm
0103	28	Error	I/O Server I/O Server FC HBA <FRU_Inst> : FC communication failure	0103-TP001.htm
0104	14	Error	I/O Server Ethernet port <FRU_Inst> : Link failure	IOS_EtherFail.htm
0104	29	Error	I/O Server Ethernet port <FRU_Inst> : Communication failure (internal bus)	IOS_EtherFail.htm
0106	9	Error	I/O Server power supply <FRU_Inst> : Not present	IOS_PowerSupplyNotPresent.htm
0106	17	Error	I/O Server power supply <FRU_Inst> : Power supply failure	IOS_PowerSupplyFail.htm
0107	9	Error	I/O Server fan <FRU_Inst> : Not present	0107-TP002.htm
0107	18	Error	I/O Server fan <FRU_Inst> : Low speed (tach counts)	IOS_FanFail.htm
0107	97	Warning	I/O Server fan <FRU_Inst> : High speed (tach counts)	IOS_FanFail.htm
0107	98	Error	I/O Server fan <FRU_Inst> : Critical speed	IOS_FanFail.htm
0107	99	Error	I/O Server fan <FRU_Inst> : Nonrecoverable speed	IOS_FanFail.htm
011A	146	Error	I/O Server Server memory <FRU_Inst> : Imminent hardware failure expected	ImminentHWFail.htm
011A	147	Error	I/O Server Server memory <FRU_Inst> : Memory misconfiguration detected	DIMMisconfig.htm
0806	7	Error	IPMI Controller <FRU_Inst> : Hardware fault	IPMI.htm

Storage

FRU_ID	EVENT_ID	TRAP_LEVEL	TRAP_DETAILS	ONLINE_HELP_FILENAME
0301	7	Error	storage subsystem chassis <ParFRU_Inst> controller <FRU_Inst> : Hardware fault	0301-TP003.htm
0301	25	Error	storage subsystem chassis <ParFRU_Inst> controller <FRU_Inst> : Communication failure	0301-TP005.htm
0301	114	Error	storage subsystem chassis <ParFRU_Inst> controller <FRU_Inst> : RPA Parity error	RaidCtrl.htm
0301	120	Error	storage subsystem chassis <ParFRU_Inst> controller <FRU_Inst> : Component is failed	RaidCtrl.htm
0301	124	Error	storage subsystem chassis <ParFRU_Inst> controller <FRU_Inst> : Needs attention	RaidCtrl.htm
0301	126	Error	storage subsystem chassis <ParFRU_Inst> controller <FRU_Inst> : Component is removed	RaidCtrl.htm
0301	127	Error	storage subsystem chassis <ParFRU_Inst> controller <FRU_Inst> : Component in service mode	RaidCtrl.htm
0301	128	Error	storage subsystem chassis <ParFRU_Inst> controller <FRU_Inst> : Component is suspended	RaidCtrl.htm
0302	22	Error	storage subsystem chassis <ParFRU_Inst> drive <FRU_Inst> : Drive failure	0302-TP001.htm
0302	23	Error	storage subsystem chassis <ParFRU_Inst> drive <FRU_Inst> : Drive removed	0302-TP001.htm
0302	117	Warning	storage subsystem chassis <ParFRU_Inst> drive <FRU_Inst> : Drive is bypassed	RaidDrv.htm

FRU_ID	EVENT_ID	TRAP_LEVEL	TRAP_DETAILS	ONLINE_HELP_FILENAME
0302	118	Warning	storage subsystem chassis <ParFRU_Inst> drive <FRU_Inst> : Drive is replaced	RaidDrv.htm
0302	119	Error	storage subsystem chassis <ParFRU_Inst> drive <FRU_Inst> : Drive is unresponsive	RaidDrv.htm
		Error	storage subsystem chassis <ParFRU_Inst> drive <FRU_Inst> : Component is failed	
0303	7	Error	storage subsystem chassis <FRU_Inst> : Hardware fault	0303-TP001.htm
0304	9	Error	storage subsystem chassis <ParFRU_Inst> power supply <FRU_Inst> : Not present	0304-TP001.htm
0304	17	Error	storage subsystem chassis <ParFRU_Inst> power supply <FRU_Inst> : Power supply failure	0304-TP001.htm
		Error	storage subsystem chassis <ParFRU_Inst> power supply <FRU_Inst> : Component is failed	
0305	9	Error	storage subsystem chassis <ParFRU_Inst> fan <FRU_Inst> : Not present	0305-TP001.htm
0305	19	Error	storage subsystem chassis <ParFRU_Inst> fan <FRU_Inst> : Fan failure	0305-TP001.htm
		Error	storage subsystem chassis <ParFRU_Inst> fan <FRU_Inst> : Component is failed	
030B	115	Error	storage subsystem chassis <ParFRU_Inst> storage subsystem volume <FRU_Inst> : Component is degraded	RaidVol.htm
030B	120	Error	storage subsystem chassis <ParFRU_Inst> storage subsystem volume <FRU_Inst> : Component is failed	RaidVol.htm

FRU_ID	EVENT_ID	TRAP_LEVEL	TRAP_DETAILS	ONLINE_HELP_FILENAME
030C	34	Error	storage subsystem chassis <ParFRU_Inst> storage subsystem temperature sensor <FRU_Inst> : High temperature	0301-TP002.htm
030C	36	Information	storage subsystem chassis <ParFRU_Inst> storage subsystem temperature sensor <FRU_Inst> : Over temperature	0301-TP002.htm
030C	126	Error	storage subsystem chassis <ParFRU_Inst> storage subsystem temperature sensor <FRU_Inst> : Component is removed	RaidSensor.htm
030E	126	Error	storage subsystem chassis <ParFRU_Inst> storage subsystem SFP <FRU_Inst> : Component is removed	RaidSfp.htm
		Error	storage subsystem chassis <ParFRU_Inst> storage subsystem battery <FRU_Inst> : Component is degraded	
030F	120	Error	storage subsystem chassis <ParFRU_Inst> storage subsystem battery <FRU_Inst> : Component is failed	RaidBattery.htm
030F	123	Error	storage subsystem chassis <ParFRU_Inst> storage subsystem battery <FRU_Inst> : Component is near expiration	RaidBattery.htm
030F	126	Error	storage subsystem chassis <ParFRU_Inst> storage subsystem battery <FRU_Inst> : Component is removed	RaidBattery.htm
0312	116	Information	storage subsystem chassis <ParFRU_Inst> storage subsystem alarm <FRU_Inst> : Component is disabled	RaidAlarm.htm
0312	124	Error	storage subsystem chassis <ParFRU_Inst> storage subsystem alarm <FRU_Inst> : Needs attention	RaidAlarm.htm
0312	126	Error	storage subsystem chassis <ParFRU_Inst> storage subsystem alarm <FRU_Inst> : Component is removed	RaidAlarm.htm
0313	125	Error	storage subsystem chassis <ParFRU_Inst> storage subsystem support CRU <FRU_Inst> : Component is receiving no input	RaidCru.htm

FRU_ID	EVENT_ID	TRAP_LEVEL	TRAP_DETAILS	ONLINE_HELP_FILENAME
0313	126	Error	storage subsystem chassis <ParFRU_Inst> storage subsystem support CRU <FRU_Inst> : Component is removed	RaidCru.htm
0314	7	Error	storage subsystem chassis <ParFRU_Inst> storage subsystem tray <FRU_Inst> : Hardware fault	RaidTray.htm
		Information	"Alarm <AlarmId>: encl= <xx>	slot= <xx>"
		Information	Alarm <AlarmId>: unit= <xx>	
		Information	Alarm <AlarmId>: vport= <xx>	
		Information	Storsave mode setup	
		Information	RAID Unit <(DXi6xxx) RaidVolume> Storsave Policy = performance . Setting to balance.	
		Information	RAID Unit<(DXi6xxx) RaidVolume> Storsave Policy = protection . Setting to balance.	
		Information	RAID Unit <(DXi6xxx) RaidVolume> Storsave Policy = unknown . Setting to balance.	

Ethernet

FRU_ID	EVENT_ID	TRAP_LEVEL	TRAP_DETAILS	ONLINE_HELP_FILENAME
0803	9	Error	Ethernet switch <FRU_Inst> : Not present	NWSLinkFail.htm
0803	14	Error	Ethernet switch <FRU_Inst> : Link failure	NWSLinkFail.htm
0803	20	Error	Ethernet switch <FRU_Inst> : Invalid switch type (non-QUANTUM)	NWSConfig.htm
0803	25	Error	Ethernet switch <FRU_Inst> : Communication failure	NWSComm.htm

FRU_ID	EVENT_ID	TRAP_LEVEL	TRAP_DETAILS	ONLINE_HELP_FILENAME
0803	30	Error	Ethernet switch <FRU_Inst> : Wrong firmware level	NWSFirmware.htm
0803	105	Error	Ethernet switch <FRU_Inst> : MAC address variation	NWSMac.htm
0810	17	Error	Ethernet switch <ParFRU_Inst> power supply <FRU_Inst> : Power supply failure	NWS_PowerSupplyFail.htm
		Information	The Ethernet port <xx> has a communication failure. Device '<DeviceString>' is missing.	
		Information	The Ethernet port <xx> has a communication failure. Device '<DeviceString>' has failed.	
		Information	The Ethernet port <xx> link is down. Link '<DeviceString>' is down.	

Fibre Channel

FRU_ID	EVENT_ID	TRAP_LEVEL	TRAP_DETAILS	ONLINE_HELP_FILENAME
0201	9	Error	FC switch <FRU_Inst> : Not present	0201-TP002.htm
		Error	FC switch <FRU_Inst> : Link failure	
0201	15	Error	FC switch <FRU_Inst> : Port failure	0201-TP002.htm
0201	25	Error	FC switch <FRU_Inst> : Communication failure	0201-TP002.htm
0202	9	Error	FC switch <ParFRU_Inst> power supply <FRU_Inst> : Not present	FCS_PowerSupplyNotPresent.htm
0202	17	Error	FC switch <ParFRU_Inst> power supply <FRU_Inst> : Power supply failure	FCS_PowerSupplyFail.htm

FRU_ID	EVENT_ID	TRAP_LEVEL	TRAP_DETAILS	ONLINE_HELP_FILENAME
0203	9	Error	FC switch <ParFRU_Inst> fan <FRU_Inst> : Not present	FCS_FanNotPresent.htm
0203	19	Error	FC switch <ParFRU_Inst> fan <FRU_Inst> : Fan failure	FCS_FanFail.htm
0204	9	Error	FC switch <ParFRU_Inst> SFP <FRU_Inst> : Not present	0204-TP001.htm
0208	7	Error	FC switch <ParFRU_Inst> Temperature sensor <FRU_Inst> : Hardware fault	FCS_Temperature.htm
		Information	The HBA <PortString> is missing.	
		Information	The HBA <PortString> link is down.	
		Information	The HBA <PortString> has failed.	

Software

FRU_ID	EVENT_ID	TRAP_LEVEL	TRAP_DETAILS	ONLINE_HELP_FILENAME
0108	41	Error	QUANTUM software Quantum software <FRU_Inst> : Configuration not supported	ATAC.htm
0109	65	Warning	QUANTUM software Virtual Tape System component <FRU_Inst> : System resource warning	VTS_ResourceWarn.htm
010C	1	Error	QUANTUM software : Storage Manager component <FRU_Inst> : Process/Task died (not restarted)	software.htm
010C	63	Error	QUANTUM software : Storage Manager component <FRU_Inst> : Duplicate barcode	dup_med.htm
010C	77	Warning	QUANTUM software : Storage Manager component <FRU_Inst> : Configuration mismatch	ConfigFileError.htm

FRU_ID	EVENT_ID	TRAP_LEVEL	TRAP_DETAILS	ONLINE_HELP_FILENAME
010D	1	Error	QUANTUM software : File System component <FRU_Inst> : Process/ Task died (not restarted)	software.htm
010D	24	Error	QUANTUM software : File System component <FRU_Inst> : IO Error	SNFS_IOError.htm
010D	25	Warning	QUANTUM software : File System component <FRU_Inst> : Communication failure	SNFS_MDCNetwork.htm
010D	41	Error	QUANTUM software : File System component <FRU_Inst> : Configuration not supported	SNFS_BadConfig.htm
010D	48	Error	QUANTUM software : File System component <FRU_Inst> : LUN communication failure	SNFS_IOError.htm
010D	52	Information	QUANTUM software : File System component <FRU_Inst> : Not responding	software.htm
010D	65	Warning	QUANTUM software : File System component <FRU_Inst> : System resource warning	SNFS_Resource_warn.htm
010D	72	Error	QUANTUM software : File System component <FRU_Inst> : License failed	SNFS_LicenseExpire.htm
010D	78	Error	QUANTUM software : File System component <FRU_Inst> : Initialization failure	SNFS_Startup.htm
010D	82	Error	QUANTUM software : File System component <FRU_Inst> : Label validation failure	SNFS_BadLabel.htm
010D	87	Warning	QUANTUM software : File System component <FRU_Inst> : Fail-over has occurred	SNFS_FailOver.htm
010D	88	Information	QUANTUM software : File System component <FRU_Inst> : LUN mapping changed	SNFS_LunsChanged.htm

FRU_ID	EVENT_ID	TRAP_LEVEL	TRAP_DETAILS	ONLINE_HELP_FILENAME
010D	89	Error	QUANTUM software : File System component <FRU_Inst> : Failed to allocate disk space	SNFS_Nospace.htm
010D	90	Error	QUANTUM software : File System component <FRU_Inst> : Metadata error	SNFS_Metadata.htm
010D	92	Warning	QUANTUM software : File System component <FRU_Inst> : Error shutting down	SNFS_Shutdown.htm
010D	94	Error	QUANTUM software : File System component <FRU_Inst> : Missing LUNs	SNFS_MissingLuns.htm
010D	129	Error	QUANTUM software : File System component <FRU_Inst> : System resource critical	SNFS_Resource_crit.htm
010F	1	Error	QUANTUM software RAS component <FRU_Inst> : Process/Task died (not restarted)	software.htm
0110	51	Warning	QUANTUM software OS component <FRU_Inst> : Operation failure	TAC.htm
		Error	QUANTUM software OS component <FRU_Inst> : System resource warning	
		Error	DXixxxx: General DXixxxx Software <FRU_Inst> : Process/Task died (not restarted)	
		Error	DXixxxx: General DXixxxx Software <FRU_Inst> : Communication failure	
0804	51	Error	DXixxxx: General DXixxxx Software <FRU_Inst> : Operation failure	DXiOpFail.htm
0804	65	Warning	DXixxxx: General DXixxxx Software <FRU_Inst> : System resource warning	ResourceWarn.htm
0804	72	Warning	DXixxxx: General DXixxxx Software <FRU_Inst> : License failed	lic_excd.htm

FRU_ID	EVENT_ID	TRAP_LEVEL	TRAP_DETAILS	ONLINE_HELP_FILENAME
0804	78	Error	DXixxxx: General DXixxxx Software <FRU_Inst> : Initialization failure	DXIInitFail.htm
0804	80	Error	DXixxxx: General DXixxxx Software <FRU_Inst> : Licence required	lic_fail.htm
		Error	DXixxxx: General DXixxxx Software <FRU_Inst> : Metadata error	

Replication

FRU_ID	EVENT_ID	TRAP_LEVEL	TRAP_DETAILS	ONLINE_HELP_FILENAME
0805	108	Error	Replication <FRU_Inst> : Namespace replication failure	Replication.htm
0805	133	Error	Replication <FRU_Inst> : Trigger replication failed	Replication.htm
0805	135	Error	Replication <FRU_Inst> : Trigger replication message notification failed	Replication.htm
0805	109	Error	Replication <FRU_Inst> : Replication paused	Replication.htm
		Information	: aud Synchronization of Partition: <vtl name> Failed. Reason: <details>	
		Information	: aud Failed to DB Initialization failed	
		Information	: aud Failed to process Delete request: <details>	
		Information	: aud Failed to process unpack request: <details>	
		Information	: aud Recovery of Synchronization Failed. Error: <details>	
		Information	": aud Source notification of synchronization recovery failed for source Sync_ID: <source ip address> source IP Address:<source IP> with status: <status>"	

FRU_ID	EVENT_ID	TRAP_LEVEL	TRAP_DETAILS	ONLINE_HELP_FILENAME
		Information	: aud Synchronization of Share: <shareName> Failed	
		Information	: aud: Unable to open VP Messaging	
		Information	<share/vtl name> Failback replication cancelled	
		Information	<share/vtl name> Namespace replication cancelled	
		Information	<share/vtl name> Namespace replication failed	
		Information	<share/vtl name> Namespace replication partially complete	
		Information	A synchronization request is already submitted for: <nodename> Target: <target>	
		Information	Attempt to connect to the blockpool on the source host has failed. Details: <details>	
		Information	Attempt to parse section line failed for <details>	
		Information	AUD: Failed to process <delete unpack> request: <details>	
		Information	blockpoolunpackBundle(): Error in unTarAttrBallTarFile fullPath: <path to file> Error Details: <details>	
		Information	"Cant find partition/share with trigger ID : <trigger id>, source : <source ip>"	
		Information	"Cant find share with trigger ID : <trigger id>, source : <source ip>"	
		Information	Could not open replication <properties status update> file (<path to file>) for reading.	
		Information	Could not open replication <properties status update> file (<path to file>) for writing. errno: <errno>	
		Information	Duplicate partition name <part name> detected	

FRU_ID	EVENT_ID	TRAP_LEVEL	TRAP_DETAILS	ONLINE_HELP_FILENAME
		Information	Duplicate partition name <vtl name> detected	
		Information	Duplicate share name <share name> detected	
		Information	Encryption Method Unsupported on Failback Target <target> for Requested Method: <encryption method> Encryption	
		Information	Encryption Method Unsupported on Target: <target> for Requested Method: <encrypt method> Encryption	
		Information	Error calling attrBall load Target: <target> Error Details: < error string>	
		Information	Error calling holdTagsForAttrBall for directory: Target: <target> Error Details: < error string>	
		Information	Error creating share: <share name> Details: <details>	
		Information	Error creating tar file: <tar file>. Error returned: <details>	
		Information	Error during call to SysUtil::getHostByAddr(). Details: <details>	
		Information	"ERROR Encountered during read, errno(<errno>)"	
		Information	"ERROR Encountered trying to connect to <target host>, errno(<errno>)"	
		Information	Error getting encrypt info for target: <target> Details: <details>	
		Information	Error getting replication IP: <address> Details: <details>	
		Information	Error getting seer variable: <details>	
		Information	Error getting user information for user <user name> error: <details>	

FRU_ID	EVENT_ID	TRAP_LEVEL	TRAP_DETAILS	ONLINE_HELP_FILENAME
		Information	Error in AttrBall Untar target: <target> fullpath: <bundle tar file name>	
		Information	Error in createSNFS_FilesFromAttrBall newsharename: <new share name> Error reason: <details>	
		Information	Error in unTarAttrBallTarFile fullPath: <bundle tar file name> Error Details: <details>	
		Information	Error moving continuous wait tags to destination queue for target: <target>	
		Information	Error notifying target or pre-posted file of file <file> details: <details>	
		Information	Error occured removing host < target > as allowed host for replication to this system. Resolving the IP address to a fully qualified host name failed. Error details: <details>	
		Information	Error occurred during recovery process. Details: <details>	
		Information	Error occurred removing host <host> as allowed host for replication to this system. Resolving IP address to a fully qualified host name failed. Error details: gethostbyaddr failed. Returned error: <errno>	
		Information	Error querying transaction: <details>	
		Information	Error replicating tags - reason: <details>	
		Information	Error retrieving list of partitions	
		Information	Error setting encrypt info for target: <target> Details: <details>	
		Information	Error starting query transaction: <details>	
		Information	Error: database api status error: <status>	

FRU_ID	EVENT_ID	TRAP_LEVEL	TRAP_DETAILS	ONLINE_HELP_FILENAME
		Information	Error: Failed to receive TRIGGERD_SYNC response from NS_TRIGGERD: <detail>	
		Information	Error: Failed to send TRIGGERD_SYNC message to NS_TRIGGERD: <detail>	
		Information	Error: synchronization request query failed for: <nodename> Target: <target> with status: <status>	
		Information	Exception during failback details: <details>	
		Information	Exception during failback to target: <target> details: <details>	
		Information	Exception during generatereports details: <details>	
		Information	Exception during recovery details: <details>	
		Information	Exception during Trigger recovery details: <details>	
		Information	Failback Replication is either cancelled or failed for node <share/vtl name>	
		Information	Failback Replication: 2.0 files to pre-2.0 target node(<target>) is disallowed	
		Information	failbackUnbundle failure. Failback Replicatio is disallowed for the current task. <details>	
		Information	Failed in determining Target <target> AttrBall version.	
		Information	Failed in determining Target <target> level of support.	
		Information	Failed in saving Target <target> level of support to configuration file	
		Information	Failed in saving Target <target> NAS support setting to configuration file	

FRU_ID	EVENT_ID	TRAP_LEVEL	TRAP_DETAILS	ONLINE_HELP_FILENAME
		Information	Failed in saving Target <target> VTL support setting to configuration file	
		Information	Failed to open dir <path to file> errno(<errno>): <errno String>	
		Information	Failed to remove file: <path to file> errno(<errno>): <errno String>	
		Information	Failure cancelling OST requests during replication startup. Details: <details>	
		Information	Fork of command failed (<command line>) <details>	
		Information	gethostbyaddr failed. Returned error: <errno>	
		Information	getHostByName failed for hostName:<hostname>. <detail>	
		Information	inet_aton failed	
		Information	Invalid Dedup <dedup value> request, recovery failed	
		Information	Invalid Permissions <permissions>, recovery failed	
		Information	Library name exceeds maximum number of characters allowed in library name (12) <part name>	
		Information	malloc failed	
		Information	Namespace Failback Replication did not complete successfully for task: <details>	
		Information	Namespace replication aborted	
		Information	Namespace Replication did not complete successfully for : <share/vtl name> to target: <target> . <details>	
		Information	Namespace Replication FAILED for task: <details>	

FRU_ID	EVENT_ID	TRAP_LEVEL	TRAP_DETAILS	ONLINE_HELP_FILENAME
		Information	Namespace Replication resulted in only partial replication.	
		Information	NAS Replication Disabled for: <shareName> because target does not support NAS replication	
		Information	NAS Replication of <share name> from source <host> failed because NAS replication to this target system is not supported	
		Information	Node <shareName> is not enabled for Directory/File Based Replication	
		Information	Node <vtlName> is not enabled for Cartridge Based Replication	
		Information	NodeType(<nodetype>) is invalid	
		Information	Not all data was submitted for replication: <details>	
		Information	Not all secondary threads replicated successfully	
		Information	Partial Partition Recovery <status info lines>	
		Information	Partial Partition Recovery. Duplicate barcodes not recovered	
		Information	Partial Partition Recovery. Recover incomplete due to duplicate barcodes.	
		Information	Partition <partition name> does not exist in the replication configuration	
		Information	Partition Recovery failed. <details>	
		Information	Path <path> is not valid for share <shareName>	
		Information	QSRofstream close() failed on <file name> with errno: (<errno>)	
		Information	Recovery Failed or Partial Recovery	

FRU_ID	EVENT_ID	TRAP_LEVEL	TRAP_DETAILS	ONLINE_HELP_FILENAME
		Information	"Recovery process halted. Details, is Running: <true false> isPaused <true false> pauseRequested <true false> "	
		Information	REDaemon cannot send message to Triggerd	
		Information	REDaemon: Replication service is <paused resumed> to target: <target>	
		Information	REDestinationThread: <target> is not resumed as the target does not support the Requested Encryption Method	
		Information	"Remove replication source, clear cont. tags: <errno>"	
		Information	Removed source host <host> from the allowed source list.	
		Information	Replication is for <target host> in this system. Number of Directory/File Based Replication requests in queue = <number of queued requests>. Adding request for: <path for request>	
		Information	Replication is paused in this system - <details>	
		Information	Replication is paused in this system. Number of Directory/File Based Replication requests in queue = <xxx>. Adding request for: <file/directory name><details>	
		Information	Replication of barcode: <barcode> for vtl: <vtl name> failed. Details: <details>	
		Information	Replication of path: <path> for share: <shareName> failed. Details: <details>	
		Information	Replication status for <share/vtl name> from host <source name> to target <target> is: not allowed. Details: <details>	
		Information	Send Namespace Replication Complete event to Target: <target> failed.	

FRU_ID	EVENT_ID	TRAP_LEVEL	TRAP_DETAILS	ONLINE_HELP_FILENAME
		Information	sendContinuousTags command on target <target> failed. DETAILS <details>	
		Information	sendVpMessage - failed on Name: <partition>, Path: <path>, Trigger Id: <triggerId>, Target Host Id: <hostId> Source Host Id: <hostId> with Error: <errorString>	
		Information	sendVpMessage - failed on Name: <vtlName>,Barcode: <barcode>, Trigger Id: <triggerId>, Nodeld: <vtlSerial>, Target Host Id: <hostId>, Source Host Id: <hostId> with Error: <errorString>	
		Information	sendVpMessage - failed: <details>	
		Information	Share <sharename> does not exist in the replication configuration	
		Information	Share or partition type('<nodetype>') is invalid	
		Information	Synchronization of Cartridge or Directory/File FAILED	
		Information	Synchronization Recovery Failed	
		Information	"System has paused the replication service, possible reasons: 1, Either source or target is in low space state. 2, The target is down. 3, The target becomes unavailable for replication from this source."	
		Information	System has resumed the replication service	
		Information	Tag file for bundle already exists for file: <file name>	
		Information	Target host: <hostId> is not reachable.	
		Information	TargetNASReplication cannot be configured because the target <target> does not support NAS replication.	
		Information	TargetVTLReplication cannot be configured because the target <target> does not support VTL replication.	

FRU_ID	EVENT_ID	TRAP_LEVEL	TRAP_DETAILS	ONLINE_HELP_FILENAME
		Information	Unable to get list of NAS shares: <details>	
		Information	Unable to load configured target from configuration file.	
		Information	Unable to prepost bundle tag. Details: <details>	
		Information	Unable to send bundle. Details: <details>	
		Information	Unknown error occurred during recovery process	
		Information	Unreachable targetHost <target>	
		Information	Validation of file/dir replication for target <target host> failed. Details from <target host>: <reason>	
		Information	Validation of file/dir/cartridge replication for target host <hostId> failed. DETAILS from <hostId>: <details>	
		Information	VTL replication cannot be enabled because the target does not support VTL replication.	
		Information	VTL Replication Disabled for: <vtl name> because target <target> does not support VTL replication	
		Information	VTL Replication of <vtl name> from source <source ip> failed because VTL replication to this target is not supported	
		Information	Wild cards are not allowed in path specification for replication	

Blockpool

FRU_ID	EVENT_ID	TRAP_LEVEL	TRAP_DETAILS	ONLINE_HELP_FILENAME
0802	51	Error	Blockpool <FRU_Inst> : Operation failure	BFST_fail.htm

FRU_ID	EVENT_ID	TRAP_LEVEL	TRAP_DETAILS	ONLINE_HELP_FILENAME
		Information	De-Duplication healthcheck Failure	
		Information	De-Duplication healthcheck was unable to run. The most recent failure indicated: <ErrorString>	
		Information	Integrity healthcheck was unable to run. The most recent failure indicated: <ErrorString>	

Space Management

FRU_ID	EVENT_ID	TRAP_LEVEL	TRAP_DETAILS	ONLINE_HELP_FILENAME
0807	65	Warning	Space Manager daemon <FRU_Inst> : System resource warning	SpaceMgr.htm
0807	112	Warning	Space Manager daemon <FRU_Inst> : I/O Write Low Threshold state	SpaceMgr.htm
0807	113	Error	Space Manager daemon <FRU_Inst> : Stop IO due to no space	SpaceMgr.htm
0807	136	Warning	Space Manager daemon <FRU_Inst> : System is nearing full capacity	SpaceMgr.htm
		Information	Space Management: Entered Low Space Mode	
		Information	Space Management: More than 24 hours in Low Space Mode	
		Information	Space Management: Entered Critical Reserve Space/Stop Write Mode	
		Information	Space Management: Cleared Critical Reserve Space/Stop Write Mode	
		Information	Space Management: Critical Reserve Space dropped further. Entered NOSPACE mode.	
		Information	Space Management: Cleared NOSPACE Mode	
		Information	Space Management: Cleared Low Space Mode	

FRU_ID	EVENT_ID	TRAP_LEVEL	TRAP_DETAILS	ONLINE_HELP_FILENAME
		Information	Space Management: The system has resumed to Normal Disk Space Mode.	
		Information	Space Management: In Low Space Mode at System Startup	

Space Reclamation

FRU_ID	EVENT_ID	TRAP_LEVEL	TRAP_DETAILS	ONLINE_HELP_FILENAME
		Information	Cannot start Compaction; Compaction is already running	
		Information	Cannot start Compaction. Possible reasons are: The Garbage Collection Daemon is not running or Compaction is already running or currently in Low Space state.	
		Information	Garbage Collection Deletion Failure	
		Information	Garbage Collection Compaction Failure	
		Information	Garbage Collection compaction running on host: <Hostname> failed. The most recent failure indicated: BFST write error	
		Information	Garbage Collection compaction running on host: <Hostname> failed. The most recent failure indicated: Failure detected during compaction	
		Information	Garbage Collection compaction running on host: <Hostname> failed. The most recent failure indicated: Network error	
		Information	Garbage Collection compaction running on host: <Hostname> failed open(). <errno:xx(ErrorString)>	

FRU_ID	EVENT_ID	TRAP_LEVEL	TRAP_DETAILS	ONLINE_HELP_FILENAME
		Information	Garbage Collection compaction running on host: <Hostname> failed on /data/hurricane/gc.status with <errno:xx(ErrorString)>	
		Information	"Garbage Collection compaction running on host: <Hostname> failed. The most recent failure indicated: Could not open status file for writing: /data/hurricane/gc.status, <errno(xx): ErrorString>"	
		Information	"Garbage Collection compaction running on host: <Hostname> failed. The most recent failure indicated: Error encountered writing status file: /data/hurricane/gc.status, <errno(xx): ErrorString>"	
		Information	Error calling cleanupHoldList details: <ErrorString>	
		Information	Garbage Collection reconciliation running on host: <Hostname> has been unable to run for the last 24 hours. The most recent failure indicated: <ErrorString>	

Virtual Tape Library

FRU_ID	EVENT_ID	TRAP_LEVEL	TRAP_DETAILS	ONLINE_HELP_FILENAME
		Information	Virtual Library <Name> is now online	
		Information	Virtual Library <Name> is now offline	
		Information	<VirtualLibraryName>: Parameters changed	
		Information	<VirtualLibraryName>: Virtual Drive <SerialNumber> online	
		Information	<VirtualLibraryName>: Virtual Drive <SerialNumber> offline	

NDMP PTT

FRU_ID	EVENT_ID	TRAP_LEVEL	TRAP_DETAILS	ONLINE_HELP_FILENAME
		Information	"Failed to check-in a NDMP license, <ErrorString>"	
		Information	"Failed to check-out a NDMP license, <ErrorString>"	
		Information	"Failed to connect to the license manager, <ErrorString>"	

Configuration

FRU_ID	EVENT_ID	TRAP_LEVEL	TRAP_DETAILS	ONLINE_HELP_FILENAME
		Information	Network Configuration has changed and system is rebooting node	
		Information	System is rebooting	
		Information	System is rebooting node 1	
		Information	System is shutting down	
		Information	System is shutting down node 1	
		Information	Illegal upgrade path: <FromModelString> to <ToModelString>	
		Information	Secure shred initiated	
		Information	Secure shred completed successfully	
		Information	There is not enough free space on the boot drives to generate the System Diagnostics log file.	
		Information	NTP server/pool is empty!	

FRU_ID	EVENT_ID	TRAP_LEVEL	TRAP_DETAILS	ONLINE_HELP_FILENAME
		Information	Network Configuration has changed	
		Information	Version: <VersionString> </br>Date: <UnixSeconds> </br>Summary: This software upgrade provides enhancements and bug fixes.</br>	

System Error

FRU_ID	EVENT_ID	TRAP_LEVEL	TRAP_DETAILS	ONLINE_HELP_FILENAME
		Information	ISOLATED transition to DIAGNOSTIC due to health event	
		Information	PRIMARY transition to DIAGNOSTIC due to health event	
		Information	Transition to DIAGNOSTIC due to Restart Count exceeded	
		Information	Service '<ServiceString>' failed but was restarted successfully	
		Information	Failed to SEND: <ErrorString> TO: <EmailAddresses> after 30 retries	
		Information	The system was not shut down cleanly. Power failure?	
		Information	Exception during generatereports details: <ErrorString>	

Activation (V1000)

FRU_ID	EVENT_ID	TRAP_LEVEL	TRAP_DETAILS	ONLINE_HELP_FILENAME
		Information	Capacity is now <xx> GB due to missing product key	

FRU_ID	EVENT_ID	TRAP_LEVEL	TRAP_DETAILS	ONLINE_HELP_FILENAME
		Information	Capacity is now <xx> GB due to RR upgrade failure	
		Information	Capacity is now <xx> GB due to license installation	
		Information	Capacity is now <xx> GB due to upgrade license installation	
		Information	Capacity is now 256 GB due to start of trial license	
		Information	Couldn't contact activation server for RR upgrade (<Error>)	