IBM® Tivoli® Netcool/OMNIbus Knowledge Library
4.8

Reference Guide
November 23, 2017

SC23-6386-22

Note

Before using this information and the product it supports, read the information in Appendix B, “Notices and Trademarks,” on page 75.

Edition notice

This edition (SC23-6386-22) applies to version 4.8 of Knowledge Library and to all subsequent releases and modifications until otherwise indicated in new editions.

This edition replaces SC23-6386-21.

Contents

Document control page

Use this information to track changes between versions of this guide.

The Knowledge Library documentation is provided in softcopy format only. To obtain the most recent version, visit IBM Documentation:

https://www.ibm.com/support/knowledgecenter/SSSHTQ_int/omnibus/probes/common/Probes.html

Table 1. Document modification history

Document version	Publication date	Comments
SC23-6386-00	April 26, 2007	First IBM® publication.
SC23-6386-01	December 14, 2007	New and enhanced list of MIBs added.
SC23-6386-02	December 19, 2008	Prerequisites for installation section updated. Installing Netcool/OMNIbus Knowledge Library section updated. Directory structure and contents of the updated rules files section updated. Enabling the probes to use Netcool/OMNIbus Knowledge Library 2.0 section added. New and enhanced list of MIBs added. Unsupported list of MIBs are removed.
SC23-6386-03	June 4, 2010	Support for Netcool/OMNIbus Knowledge Library 3.0 added. Additional introductory information added. Supported MIB details for the following vendors were updated: • "Cisco event sources" on page 32 • "Empirix event sources" on page 50 • "Internet Engineering Task Force (IETF) event sources" on page 60 • "Juniper Networks event sources" on page 63 Supported MIB details for the following vendors were added: • "Hatteras event sources" on page 52 • "Acme Packet event sources" on page 22 • "Infinera event sources" on page 62 • "Sandvine event sources" on page 71 Supported devices added for all vendors.

Table 1. Document modification history (continued)

Document version	Publication date	Comments
SC23-6386-04	October 29, 2010	Support for Netcool/OMNIbus Knowledge Library 3.1 added. Supported MIB details for the following vendors were updated: • "Ciena event sources" on page 28 • "Cisco event sources" on page 32 • "Infinera event sources" on page 62 • "Institute of Electrical and Electronics (IEEE) event sources" on page 60 Supported MIB details for the following vendors were added: • "Eaton event sources" on page 49 • "EXFO event sources" on page 51 • "IBM Tivoli Netcool Configuration Manager (ITNCM) event sources" on page 58
SC23-6386-05	February 25, 2011	Support for Netcool/OMNIbus Knowledge Library 3.2 added. Supported MIB details for the following vendors were updated: • "Cisco event sources" on page 32 • "Internet Engineering Task Force (IETF) event sources" on page 60 • "Juniper Networks event sources" on page 63 Supported MIB details for the following vendors were added: • "IBM Proventia event sources" on page 55 • "MRV Communications event sources" on page 67
SC23-6386-06	July 1, 2011	Support for Netcool/OMNIbus Knowledge Library 3.3 added. Supported MIB details for the following vendors were updated: • "Empirix event sources" on page 50 • "Infinera event sources" on page 62 Supported MIB details for the following vendors were added: • "Ciena event sources" on page 28 • "Fujitsu event sources" on page 52 • "IBM BNT event sources " on page 55 • "NetScout event sources" on page 68 Supported device details for the following vendors were updated: • "Cisco supported devices and event sources" on page 30

Table 1. Document modification history (continued)

Document version	Publication date	Comments
SC23-6386-07	November 4, 2011	Support for Netcool/OMNIbus Knowledge Library 3.4 added. Supported MIB details for the following vendors were updated: • "Ciena event sources" on page 28 • "Cisco supported devices and event sources" on page 30 • "Fujitsu event sources" on page 52 • "Juniper Networks event sources" on page 63 • "MRV Communications event sources" on page 67 Supported MIB details for the following vendors were added: • "Trilliant event sources" on page 73
SC23-6386-08	March 2, 2012	Support for Netcool/OMNIbus Knowledge Library 3.5 added. Supported MIB details for the following vendors were updated: • "Brocade event sources" on page 26 • "IBM Director event sources" on page 56 • "Institute of Electrical and Electronics (IEEE) event sources" on page 60 • "Internet Engineering Task Force (IETF) event sources" on page 60 Supported MIB details for the following vendors were added: • "Keymile event sources" on page 67
SC23-6386-09	May 11, 2012	Note for AIX users concerning the LDR_CNTRL environment variable added to "Extracting the updated rules files" on page 10.
SC23-6386-10	July 6, 2012	Support for Netcool/OMNIbus Knowledge Library 3.6 added. "Configuring the ObjectServer to support intra-device correlations" on page 6 updated with improved failover configuration examples. Supported MIB details for the following vendors were updated: • "Infinera event sources" on page 62 • "Juniper Networks event sources" on page 63 Supported MIB details for the following vendors were added: • "Riverbed event sources" on page 70
SC23-6386-11	November 30, 2012	Support for Netcool/OMNIbus Knowledge Library 3.7 added. Supported MIB details for the following vendors were updated: • "Brocade event sources" on page 26 • "IBM BNT event sources " on page 55 Supported MIB details for the following vendors were added: • "IBM PureFlex / Flex System event sources" on page 58

Table 1. Document modification history (continued)		
Document version	**Publication date**	**Comments**
SC23-6386-12	March 14, 2013	Support for Netcool/OMNIbus Knowledge Library 3.8 added. The “Netcool/OMNIbus Knowledge Library rules file components” on page 16 added to clarify the fields generated by the MIB Manager tool. Supported MIB details for the following vendors were updated: • “Infinera event sources” on page 62 • “Juniper Networks event sources” on page 63 Supported MIB details for the following vendors were added: • Supported syslog event sources added for JUNOS 12.2 to “Juniper syslog-based event sources” on page 65
SC23-6386-13	July 5, 2013	Supported MIB details for the following vendors were updated: • “IBM PureFlex / Flex System event sources” on page 58 • Supported syslog event sources updated for JUNOS 12.2 to “Juniper syslog-based event sources” on page 65 Supported MIB details for the following vendors were added: • “SAP event sources” on page 71
SC23-6386-14	November 8, 2013	Supported MIB details for the following vendors were updated: • “Using the ExtendedAttr in the alerts.status table instead of the alerts.details table” on page 9 • “IBM PureFlex / Flex System event sources” on page 58 • “IBM Security QRadar Security Information & Event Management (SIEM) event sources ” on page 59 • “Infinera event sources” on page 62
SC23-6386-15	March 7, 2014	Support for Data Center Switching 9000 Series added to “Cisco supported devices and event sources” on page 30 Supported MIB details for the following vendors were updated: “Cisco event sources” on page 32. “Cisco Latitude event sources” on page 38. “Fujitsu event sources” on page 52. “IBM PureFlex / Flex System event sources” on page 58. “Juniper syslog-based event sources” on page 65. “Keymile event sources” on page 67.
SC23-6386-16	June 12, 2014	Support for following devices added to “Infinera event sources” on page 62: • Infinera DTN R10.0 • Infinera DTNX R10.0 • Infinera FIS R10.0

Table 1. Document modification history (continued)		
Document version	**Publication date**	**Comments**
SC23-6386-17	November 7, 2014	Supported MIB details were updated for “Cisco event sources” on page 32.
SC23-6386-18	August 6, 2015	Support for Netcool/OMNIbus Knowledge Library NcKL 4.4 added. Support for installing and uninstalling Netcool Knowledge Library using Installation Manager added. See “Installing Netcool/OMNIbus Knowledge Library” on page 5 and “Uninstalling Netcool/OMNIbus Knowledge Library ” on page 14. Supported MIB details for the following vendors were updated: “Cisco event sources” on page 32 “IBM Tivoli Netcool Configuration Manager (ITNCM) event sources” on page 58 Support for Infinera FIS R11 added to “Infinera event sources” on page 62
SC23-6386-19	December 10, 2015	Support for Netcool/OMNIbus Knowledge Library NcKL 4.5 added. Supported MIB details for the following vendors were updated: “IBM FlashSystem event sources” on page 57 References to supported versions of Netcool/OMNIbus updated throughout.
SC23-6386-20	September 15, 2016	Support for Netcool/OMNIbus Knowledge Library NcKL 4.6 added. MIBs for the following event sources updated: • “Juniper Networks event sources” on page 63: • “ADVA AG Optical Networking event sources” on page 24: Version 4.6 of Netcool/OMNIbus Knowledge Library addresses the following APAR: • **IV80996**: Decode Integer to IP Rules files fix in NcKL. Fixed sign extension on bitwise shift causing the negative number in the following file: `/rules/include-snmptrap/decodeInteger2Ip.include.snmptrap.rules`

Table 1. Document modification history (continued)		
Document version	**Publication date**	**Comments**
SC23-6386-21	March 14, 2017	Support for Netcool/OMNIbus Knowledge Library NcKL 4.7 added. Support added for Cisco Cloud Services Router CSR 1000V. NcKL rules developed for the following existing CISCO MIBs: • CISCO-ATM-PVCTRAP-EXTN-MIB • CISCO-CDMA-AHDLC-MIB • CISCO-DOCS-EXT-MIB • CISCO-EIGRP-MIB • CISCO-ENHANCED-SLB-MIB • CISCO-GGSN-SERVICE-AWARE-MIB • CISCO-IF-EXTENSION-MIB • CISCO-SYSTEM-EXT-MIB • CISCO-VISM-TRAPS-MIB

Table 1. Document modification history (continued)		
Document version	**Publication date**	**Comments**
SC23-6386-21 *continued*	March 14, 2017	NcKL rules developed for the following new CISCO MIBs: • Cisco90Series-MIB • CISCO-AON-STATUS-MIB • CISCO-ASN-GATEWAY-MIB • CISCO-CDSTV-SERVICES-MIB • CISCO-DIAMETER-BASE-PROTOCOL-MIB • CISCO-DIGITAL-MEDIA-SYSTEMS-MIB • CISCO-IETF-MPLS-TE-P2MP-STD-MIB • CISCO-MEETINGPLACE-MIB • CISCO-NHRP-EXT-MIB • CISCO-PSD-CLIENT-MIB • CISCO-SSLVPN-MIB • CISCO-TELEPRESENCE-EXCHANGE-SYSTEM-MIB • CISCO-TRUSTSEC-SXP-MIB • CISCO-VQES-MIB • CISCO-VSIMASTER-MIB • CISCO-WAN-3G-MIB NcKL rules developed for the following existing Internet Engineering Task Force (IETF) MIBs: • MPLS-VPN-MIB NcKL rules developed for the following new Internet Engineering Task Force (IETF) MIBs: • OSPFV3-MIB Support added for Juniper vMX series and vSRX Virtual Firewall that support JUNOS 16.1. NcKL rules developed for the following existing Juniper MIBs: • JUNIPER-MIB • JUNIPER-MOBILE-GATEWAY-AAA-MIB • JUNIPER-MOBILITY-CHARGING-MIB • JUNIPER-MOBILE-GATEWAY-GTP-MIB • JUNIPER-FABRIC-CHASSIS-MIB NcKL rules developed for the following new Juniper MIBs: • JUNIPER-JVAE-NODE-MIB • JUNIPER-MOBILE-GATEWAY-SGW-GTP-MIB • JUNIPER-MOBILITY-SGW-CHARGING-MIB • JUNIPER-SNMP-SET-MIB • JUNIPER-TIMING-NOTFNS-MIB • JUNIPER-TLB-MIB

Table 1. Document modification history (continued)		
Document version	**Publication date**	**Comments**
SC23-6386-21 *continued*	March 14, 2017	Version 4.7 of Netcool/OMNIbus Knowledge Library addresses the following APAR: • **IV84529**: SNMPTRAP.RULES reference instead of SYSLOG.RULES for Syslog Probe.
SC23-6386-22	November 23, 2017	Support for Netcool/OMNIbus Knowledge Library NcKL 4.8 added. "Cisco event sources" on page 32 updated. Support added for Infinera R17.1 and R18.0.

Chapter 1. Netcool/OMNIbus Knowledge Library

This document describes the Netcool/OMNIbus Knowledge Library 4.8 and its associated publications, prerequisites, installation, and known issues, and lists the supported event sources.

Note: IBM Tivoli Netcool/OMNIbus Knowledge Library 4.8 is supported on all operating systems supported by the SNMP Probe and the Syslog/Syslogd Probes, with the exception of HP-UX Itanium.

This release contains the following sections:

Introduction

This section provides an overview of IBM Tivoli Netcool/OMNIbus Knowledge Library 4.8 under the following headings:

What is Netcool/OMNIbus Knowledge Library?

Netcool/OMNIbus Knowledge Library 4.8 is a collection of rules files written to a common standard, and provides unprecedented levels of event correlation and causal analysis for the IBM Tivoli Netcool suite. IBM Tivoli Netcool/OMNIbus Knowledge Library 4.8 is positioned to complement the current out-of-the-box event correlation capabilities of IBM Tivoli Netcool/OMNIbus (and IBM Tivoli Network Manager IP Edition where available) by enabling enhanced root cause analysis.

Root cause analysis has become an issue of paramount importance for the management of communications and information systems infrastructures. Loosely defined, root cause analysis is the process of making sense of large numbers of alert, status, and information messages (events) which might be generated by such infrastructures.

While some events indicate actual failures that require correction, many others are simply symptoms of the actual failures, or informational messages about normal operations of the infrastructure. Netcool/OMNIbus Knowledge Library 4.8 aims to identify which alarms indicate actual failures, allowing repair efforts to focus on the issues (or root causes) that truly affect the operation of the infrastructure, without the distraction of the symptomatic or information events. The end result is a reduction of *Mean Time To Repair* and increased system availability.

Important: Beginning with version 2.0, Netcool/OMNIbus Knowledge Library enables the user to refer to vendor related rules files in the `snmptrap.rules` file. The rules files specific to vendors are available in: `$NC_RULES_HOME/include-snmptrap/`.

How does Netcool/OMNIbus Knowledge Library operate?

Netcool/OMNIbus is a Service Level Management (SLM) system that presents a consistent and consolidated view of the current state of all the Netcool/OMNIbus managed systems to specific users.

The Netcool/OMNIbus Knowledge Library 4.8 improves the capability of Netcool/OMNIbus in providing more valuable information.

Probes, rules file and Netcool/OMNIbus Knowledge Library

The probes used by the Netcool/OMNIbus collect and interpret information from disparate managed objects in a network. A probe parses the collected information, and sends the parsed data to the ObjectServer in a format described by the rules file and compatible with the ObjectServer fields.

The default rules file necessary for the execution of a probe only performs generic grouping of data. Using a rules file enhanced to cater for SNMP Management Information Base (MIB) events from a specific device provides sharpened event enrichment and causal analysis. The Netcool/OMNIbus Knowledge Library 4.8 is a collection of such enhanced rules files tuned to specific managed objects that send SNMP based events. For more information, refer to "Setting up probes to use the updated rules files" on page 9.

When the device sends the SNMP based events as traps, the probe uses the device specific rules file in the Netcool/OMNIbus Knowledge Library 4.8 specified by the **RulesFile** property. For more information, refer to "Configuring the probes properties files" on page 10.

Note: Not specifying the device specific rules file of the Netcool/OMNIbus Knowledge Library 4.8 makes the probe use its default rules file.

ObjectServer and Netcool/OMNIbus Knowledge Library

The IBM Tivoli Netcool/OMNIbus ObjectServer currently uses two main types of automation to help reduce the number of events that require operator intervention. Generic Clear automations are designed to correlate and delete any matching pair of problem and resolution alerts, whereas deduplication eliminates duplicate alerts while maintaining an 'occurrence' count.

The Netcool/OMNIbus Knowledge Library 4.8 additionally increases the ability of the Tivoli Netcool/OMNIbus ObjectServer automations to correlate alarms and identify root causes by employing the following techniques:

- *Event Pre-Classification*: This process identifies and flags events within the probe rules files to indicate the causal relevance of events, where this can be determined without the need for correlation.
- *Intra-Device Correlation*: This process enhances probe rules files and adds automations to the ObjectServer to perform correlation beyond deduplication and problem or resolution correlation, identifying intra-device root causes and symptoms.
- *AMOS Extended Event Recognition (for IBM Tivoli Network Manager IP Edition integration)*: This process provides IBM Tivoli Network Manager IP Edition with a larger dataset upon which to perform topology-based event correlation, by identifying a larger set of events for analysis.

The first two techniques are described below in further detail.

Event pre-classification

Current root cause analysis and event correlation systems rely on one or more correlation or analysis engines to determine the causal relationships between events. These existing systems ignore the simple 'common sense' understanding of the events as they are received, and are forced to perform root cause analysis operations on the full set of events. This reduces the efficiency of the root cause analysis system, or the accuracy of analysis.

The event pre-classification mechanism implemented in Netcool/OMNIbus Knowledge Library overcomes these shortcomings. To facilitate pre-classification, a catalog of known events and their causal types is implemented as a lookup table in Netcool/OMNIbus Knowledge Library 4.8. This causal type catalog is referenced by a probe's rules file to determine the causal relevance of a received event before it is forwarded to the ObjectServer.

While causal relevance can be determined by any combination of correlation and analysis methods within an engine, entries in the catalog are restricted to those events whose causal relevance can be determined

only from the data contained within the received event message. Netcool/OMNIbus Knowledge Library 4.8 uses the following guidelines in determining the causal relevance to pre-classify events in the catalog:

- *Root Cause*: An event with a condition that is known not to be caused by any other detectable condition. A root cause event generally results in a degraded condition or failure of other related entities in a system. For example, if a Frame Relay interface fails, the virtual circuits (DLCIs) traversing that interface will fail. Therefore, in this example, the Frame Relay interface failure is the root cause of the virtual circuits (DLCIs) failures. Root cause events include many physical events, for example, certain card pulls, device shutdown, or power loss.
- *Symptom*: An event with a condition that was caused by the degraded condition or failure of higher level entities or processes in a system. Based on the example above, the virtual circuit failures are deemed symptoms of the Frame Relay interface failure.
- *Singularity*: An event with a condition that is not directly caused by any other degraded condition or failure, and which does not cause other degraded conditions or failures in related entities. An example of a singularity is the Accounting File Full condition on some Cisco equipment, which does not cause any other fault condition other than that the accounting file can no longer be written to.

  It can be argued that a singularity is equivalent to a root cause. IBM believes that there is value in identifying singularities as events are received, and leaves it to other correlation engines and event management methods to implement the flexibility necessary to provide the system operator a choice of how singularities are finally considered.
- *Information*: A message that indicates non-fault-related conditions which might be of interest to system operators. Such events also include messages that indicate the clearing or resolution of previously occurring fault-related conditions. Examples of information events include Neighbor Adjacency Establishment events, successful call establishment messages, and recovery messages relating to physical events.
- *Unknown*: An event that cannot be classified as a root cause, symptom, singularity or informational event. While they cannot be pre-classified, unknown events may be further analyzed by one or more engines to determine their true causal relevance.

Intra-device correlation

Intra-device correlation is implemented as a collection of ObjectServer automations that determine the causal relevance of intra-device events by using algorithms which consider managed object parent and child relationships. The automations use information revealed about the relationships to determine related events and test them for causal relevance.

There are separate automations for determining root causes and symptoms. The symptom-detecting automations will process an event at least once before the event is processed by the root-cause-detecting automations. If the event is identified as a symptom, it will be ignored by the correlation automations. This allows a more granular control of which events are processed, reducing the load the automations place on the ObjectServer. The automations are implemented in the same style as the Generic Clear v7.x automations, using a separate table for correlating temporarily-held events, further enhancing performance.

About the Netcool/OMNIbus Knowledge Library installation

The IBM Tivoli Netcool/OMNIbus Knowledge Library 4.8 installation incorporates a series of automatic and manual processes to add the following to your existing IBM Tivoli Netcool/OMNIbus installation:

- New tables to the ObjectServer database for reference by probe rules files, or for use with the supplied intra-device correlation automations.
- New columns to the `alerts.status` table.

  You will be required to manually add conversions for two of these columns from the IBM Tivoli Netcool/OMNIbus Administrator GUI. For more information, see “Manually adding conversions to the ObjectServer” on page 8.
- Intra-device correlation automations implemented as triggers within a trigger group.

These triggers get automatically fired to perform correlation beyond deduplication and problem/resolution correlation, identifying intra-device root causes and symptoms.

- Updated rules files that have been enhanced to:
  - Identify and flag events according to their causal relevance.
  - Perform intra-device correlation to identify root causes and symptoms.

You will be required to manually configure the relevant probes to use these updated rules files. For more information, see "Configuring the probes properties files" on page 10.

Prerequisites for installation

This section describes the software and hardware requirements for an IBM Tivoli Netcool/OMNIbus Knowledge Library 4.8 installation.

IBM Tivoli Netcool product requirements

This section describes the IBM Tivoli Netcool/OMNIbus Knowledge Library 4.8 dependencies on other IBM Tivoli Netcool products.

IBM Tivoli Netcool/OMNIbus

IBM Tivoli Netcool/OMNIbus Knowledge Library 4.8 provides enhanced root cause analysis for events held within the IBM Tivoli Netcool/OMNIbus ObjectServer. As such, the IBM Tivoli Netcool/OMNIbus Knowledge Library 4.8 installation requires prior installation of IBM Tivoli Netcool/OMNIbus.

IBM Tivoli Network Manager IP Edition 3.5 or higher

Installation of IBM Tivoli Network Manager IP Edition 3.5 (or higher) is optional.

If you are using IBM Tivoli Network Manager IP Edition in conjunction with the IBM Tivoli Netcool/OMNIbus ObjectServer, your IBM Tivoli Network Manager IP Edition event gateway will already be configured to integrate with, and recognize, events generated by IBM Tivoli Netcool/OMNIbus Knowledge Library 4.8. Topology-based event correlation will be enabled for those events that have been appropriately pre-classified by the rules files in the IBM Tivoli Netcool/OMNIbus Knowledge Library 4.8.

Note: IBM Tivoli Netcool/OMNIbus Knowledge Library will not enable AMOS Extended Event Recognition with versions of IBM Tivoli Network Manager IP Edition earlier than 3.5.

Other requirements

The following IBM Tivoli Netcool/OMNIbus specification requirements apply to this IBM Tivoli Netcool/OMNIbus Knowledge Library 4.8 installation:

- Supported operating system platforms
- Java Runtime Environment (JRE) requirements
- User interface requirements
- Disk space requirements
- Browser requirements on Windows platforms

These specifications are documented in the *IBM Tivoli Netcool/OMNIbus Installation and Deployment Guide*

Licensing

For IBM Tivoli Netcool/OMNIbus Knowledge Library 4.8, license keys are not required beyond those relevant to the associated IBM Tivoli Netcool products, which use the IBM Tivoli software licensing process.

Accompanying publications

To efficiently install IBM Tivoli Netcool/OMNIbus Knowledge Library 4.8 and fully realize the benefits delivered, you must be familiar with the underlying principles of IBM Tivoli Netcool/OMNIbus including the following:

- The IBM Tivoli Netcool/OMNIbus components:
  - The ObjectServer (including the database tables and columns)
  - Probes (including editing probe properties, and stopping and restarting probes)
  - Desktop tools (including event lists, filters, and views)
  - Administration tools (including the IBM Tivoli Netcool/OMNIbus Administrator, the SQL interactive interface, and process control)
- The IBM Tivoli Netcool/OMNIbus directory structure and necessary configuration files.
- Basic rules file syntax including the use of lookup tables (both inline as well as separate files).
- Permissions, conversions and automations.

The documents listed below provide reference information on the related concepts of IBM Tivoli Netcool/OMNIbus and IBM Tivoli Netcool/OMNIbus Knowledge Library 4.8.

IBM Tivoli Netcool/OMNIbus™ Installation and Deployment Guide

This book provides instructions for installing and deploying IBM Tivoli Netcool/OMNIbus, and includes details of the supported platforms and requirements.

IBM Tivoli Netcool/OMNIbus™ Administration Guide

This book describes how to perform administrative tasks using the IBM Tivoli Netcool/OMNIbus Administrator GUI, command line tools and process control.

IBM Tivoli Netcool/OMNIbus™ Probe and Gateway Guide

This book provides general introductory and reference information on probes and gateways. Documentation on the specific probes discussed within these release notes is available from IBM Documentation.

Installing Netcool/OMNIbus Knowledge Library

This section provides instructions for installing and uninstalling IBM Tivoli Netcool/OMNIbus Knowledge Library.

Prior to installation of IBM Tivoli Netcool/OMNIbus Knowledge Library 4.8, you must install the following IBM Tivoli Netcool products:

- IBM Tivoli Netcool/OMNIbus ObjectServer
- IBM Tivoli Netcool/OMNIbus probes for SNMP, NetView, Network Node Manager (NNM) or Syslog

These probes may be installed on the same or a different machine as the ObjectServer installation.

Installation steps

The installation procedure involves a number of steps to be carried out in the following sequence:

1. “Downloading the installation from IBM” on page 6.
2. “Configuring the IBM Tivoli Netcool/OMNIbus ObjectServer” on page 6.
3. “Setting up probes to use the updated rules files” on page 9

The sections below document these steps in detail.

Downloading the installation from IBM

IBM Tivoli Netcool/OMNIbus Knowledge Library 4.8 is distributed as a compressed tar file that can be downloaded from IBM using the following steps:

1. Go to the IBM Passport Advantage website:

   http://www.ibm.com/software/howtobuy/passportadvantage/pao_customers.htm
2. Use the **Find by part number** field to search for NcKL by its part number. For the standard version of NcKL search for CNNZ7EN. For the IM version of NcKL search for CNNZ8EN.

   Note: For Netcool/OMNIbus Knowledge Library 4.8 there is no version of NcKL lite.
3. Download the compressed tar file.
4. Extract the contents of this file to a temporary location of your choice.

Note: If you are running Netcool/OMNIbus version 8.1, you can install the Netcool/OMNIbus Knowledge Library package using Installation Manager. To install with Installation Manager, the NcKL installation package is shipped in a ZIP file. For example: NcKL_4.8.0.zip.

The above steps extract various files related to Netcool/OMNIbus Knowledge Library 4.8, and also create individual subdirectories specific to each supported vendors. Each vendor specific directory contains the vendor specific rules files and lookup files. The **`RulesFile`** property in the `snmptrap.rules` file enables the probes to use the vendor specific files. For more information, see “Enabling the probes to use Netcool/OMNIbus Knowledge Library 4.8” on page 14.

A readme file containing the change history is also created in the parent directory.

If working within a Windows environment, you will require a Windows utility that supports `*.tar.gz` file extractions. NcKL is also archived using POSIX tar format, so you will require a utility that supports POSIX tar format extractions.

The extracted files include:

- `advcorr.sql` - This file configures the ObjectServer for the (advanced) intra-device correlations.
- `rules.tar.gz` - Extract this file to have updated vendor specific rules files enhanced to support root cause analysis.
- `removeadvcorr.sql` - This file removes some Netcool/OMNIbus Knowledge Library 4.8 components from the ObjectServer, but retains other components for continued use if preferred. For further details, see “Uninstalling Netcool/OMNIbus Knowledge Library ” on page 14.
- `license/RELEASEID` - Contains the release ID of Netcool/OMNIbus Knowledge Library that you have downloaded.
- `README` - This file contains the change history.

Configuring the IBM Tivoli Netcool/OMNIbus ObjectServer

This is a two-stage process that involves the following tasks:

1. “Configuring the ObjectServer to support intra-device correlations” on page 6
2. “Manually adding conversions to the ObjectServer” on page 8

Configuring the ObjectServer to support intra-device correlations

You must perform this task as an IBM Tivoli Netcool/OMNIbus user with ISQLWrite permissions.

From a command prompt, run the extracted `advcorr.sql` script using one of the following platform-dependent, case-sensitive commands:

On UNIX and Linux operating systems:

`$OMNIHOME/bin/nco_sql -server objectserver_name -user username -password password < path_to_file/advcorr.sql`

Where:

$OMNIHOME represents your installation location of IBM Tivoli Netcool/OMNIbus

objectserver_name represents the name assigned to your ObjectServer

username and *password* are your ObjectServer login details

path_to_file is the directory path to the files extracted in the previous section

On Windows operating systems:

`%NCHOME%\bin\redist\isql.exe -S objectserver_name -U username -P password -i path_to_file\advcorr.sql`

Where:

%NCHOME% represents your installation location of IBM Tivoli Netcool/OMNIbus

objectserver_name represents the name assigned to your ObjectServer

username and *password* are your ObjectServer login details

path_to_file is the directory path to the files extracted in the previous section

As part of the configuration, the script attempts to drop intra-device correlation tables (and associated triggers) which might have been created during a previous installation. As this is a first-time installation, no such tables or triggers exist, and an error listing is generated on completion. These messages are harmless and can be ignored. A sample output is shown below:

```
ERROR=Object not found on line 102 of statement
'--##############################################################################
######...', at or near 'AdvCorr_SetCauseType'
ERROR=Object not found on line 1 of statement 'drop trigger
AdvCorr_LPC_RC;...',
at or near 'AdvCorr_LPC_RC'
ERROR=Object not found on line 1 of statement 'drop trigger
AdvCorr_LPC_Sym;...', at or near 'AdvCorr_LPC_Sym'
ERROR=Object not found on line 4 of statement '-- Drop tables in case they
already exist from a previous installation...', at or near
'AdvCorrLpcSymCand'
ERROR=Object not found on line 1 of statement 'drop table
alerts.AdvCorrLpcRcCand;...', at or near 'AdvCorrLpcRcCand'
(0 rows affected)
(0 rows affected)
(0 rows affected)
(0 rows affected)
(0 rows affected)
(0 rows affected)
(0 rows affected)
(0 rows affected)
(0 rows affected)
(0 rows affected)
(0 rows affected)
(0 rows affected)
(0 rows affected)
(0 rows affected)
(0 rows affected)
(0 rows affected)
```

The `advcorr.sql` script creates the following objects in the ObjectServer, to aid in determining the causal relevance of events:

- Intra-device correlation (AdvCorr) tables within the `alerts` database
- Supplementary automations implemented as an AdvCorr trigger group and three related triggers
- Additional columns in the `alerts.status` table

Improving OMNIbus performance in failover architecture

The `advcorr.sql` file has been updated to include a `WHEN` condition for all Advanced Correlation (AdvCorr) triggers so that they will only run on the primary ObjectServer to improve performance in a failover architecture. For example: `when get_prop_value('ActingPrimary')%='TRUE'`

Manually adding conversions to the ObjectServer

Conversions are required to support two columns (`AdvCorrCauseType` and `CauseType`) that were added to the `alerts.status` table as a result of the ObjectServer configuration. These conversions translate Type integer values (0 - 4) into descriptive 'causal relevance' text for display within the event list.

Note: These conversions are automatically created from Netcool/OMNIbus Knowledge Library 3.8 onwards.

To add the required conversions:

1. From the IBM Tivoli Netcool/OMNIbus Administrator window, click the **Visual** drop-down list, and then click the **Conversions** icon.
2. Right click **alerts.status** and click the **Add Conversion** button to access the Conversion Details window.
3. Select `AdvCorrCauseType` from the **Column** drop-down list, and then make the following entries within the **Value** and **Conversion** fields, clicking the **OK** button to save each set of entries.

Table 2. Conversion details window entries

Value	**Conversion**
`0`	`Unknown`
`1`	`Root cause`
`2`	`Symptom`
`3`	`Singularity`
`4`	`Information`

Repeat steps 2 and 3 to set up the same conversions for the `CauseType` column, substituting `CauseType` as the **Column** field entry in step 3.

On completion, the **Conversions** window appears.

For further information on conversions, see the *IBM Tivoli Netcool/OMNIbus Administration Guide*.

Updating the alerts.status table

Use nco_sql to add the following new attributes to the alerts.status table:

Use nco_sql to add the following new attributes to the alerts.status table:

```
alter table alerts.status add column NetworkAssureAlarmId int
alter table alerts.status add column NetworkAssureHost varchar(64)
alter table alerts.status add column NetworkAssurePort int
```

Note: These columns can also be added by using the IBM Tivoli Netcool/OMNIbus Administrator GUI.

Using the ExtendedAttr in the alerts.status table instead of the alerts.details table

The Netcool/OMNIbus Knowledge Library allows you to use the extended attribute field in the alerts.status table instead of, or in addition to, the alerts.details table to capture returned token values for the NcKL SNMP traps and SYSLOG events.

The ExtendedAttr column is a default column in the alerts.status table.

The alerts.details table has a limit of 4096 characters and therefore some tokens returned by the NcKL traps may be lost due to size limitations. Starting from NcKL version 4.0, NcKL records data into the ExtendedAttr column by default by using the nvp_add() function. If you wish to use the details() function to record data into the alerts.details table, you must enable the following variables in the snmptrap.rules file or syslog.rules file.

- $OPTION_EnableDetails : This option enables the use of the details() function in all NcKL rules files, for example, $OPTION_EnableDetails = "1".
- $OPTION_EnableDetails_*vendor* : This option enables the use of the details() function for the specific NcKL SNMP traps or SYSLOG events of the specified vendor. All tokens returned from the NcKL SNMP traps and SYSLOG events will appear in the alerts.details table.

  Where *vendor* is the name of the vendor directory in NcKL rules, for example, $OPTION_EnableDetails_empirix = "1"

To copy existing data from the alerts.details table into the ExtendedAttr column in the alerts.status table use the following example with nco_sql. This example creates a procedure called **copy_details**. To run the procedure use the **execute** command as shown:

```
--Create SQL procedure to copy details to Extended Attr
create or replace procedure copy_details()
begin
   -- Copy all detail from alerts.details table to ExtendedAttr column in
        alerts.status
     for each row det in alerts.details where det.Name != ''
 begin
  update alerts.status set ExtendedAttr = nvp_set(ExtendedAttr,det.Name,det.Detail)
    where Identifier = det.Identifier
 end;
end;
go

-- To run the procedure
execute copy_details
go
```

Note: Only rules contained in the Netcool/OMNIbus Knowledge Library prior to NcKL 4.0 are added to the alerts.details table with the above OPTION_EnableDetails variable. From NcKL 4.0, all rules files added to the Netcool/OMNIbus Knowledge Library only use the nvp_add() function. If you wish to use the alerts.details table with post NcKL 4.0 rules, you must customize the rules file to add the details() function.

Setting up probes to use the updated rules files

The rules files supplied with the Netcool/OMNIbus Knowledge Library adheres to a common standard and enable event correlation and causal analysis.

The **RulesFile** property in the properties file of the SNMP probe specifies the path to the snmptrap.rules file, which has all the contents suitable for various vendors.

Enabling the probes to use the rules file of the Netcool/OMNIbus Knowledge Library is a two-stage process that involves:

1. “Extracting the updated rules files” on page 10
2. “Configuring the probes properties files” on page 10

Extracting the updated rules files

The rules.tar.gz file extracted from the download contains updated rules files to support the following IBM Tivoli Netcool/OMNIbus probes:

- SNMP probe
- Probe for HP OpenView Network Node Manager (NNM)
- Probe for IBM NetView
- Syslog probe
- Syslogd probe

Note: The updated rules files must be extracted into the specific location on each machine where these probes are installed.

To extract the rules files:

1. From the machine(s) on which the probes are installed, extract the NcKL installation package into the relevant IBM Tivoli installation location for your platform, and set `NC_RULES_HOME` env variable as follows:

   Table 3. Default locations on various platforms

Platform	Default NcKL location	NC_RULES_HOME
UNIX	/opt/IBM/tivoli/NcKL	/opt/IBM/tivoli/NcKL/rules
Windows	C:\IBM\Tivoli\NcKL	C:\IBM\Tivoli\NcKL\rules

2. Extract the contents of the rules.tar.gz file into the default NcKL location. If working within a Windows environment, you will need a utility that can uncompress and unpack UNIX `tar.gz` files.

   Note: Do not use WinZip for uncompressing or unpacking the pack `tar.gz` files. Using WinZip creates an extracted directory structure different to the directory structure before the extraction.

By default, the files in the rules.tar.gz bundle will be extracted into a rules subdirectory - for example: `/opt/IBM/tivoli/NcKL/rules` on UNIX.

Note: This location is required for reference within the probe properties files and the extracted rules files. You might therefore find it useful to make a note of the path for use in later steps.

For details of the extracted rules files, see "Directory structure and contents of the updated rules files" on page 11.

Note: In a previous version of this guide (SC23-6386-08), AIX users of the Netcool Knowledge Library were instructed to set the LDR_CNTRL environment variable. Version 3.9 of ITNM sets this variable automatically during installation, so you must not set it manually. If you upgrade from Version 3.8 of ITNM and have set the LDR_CNTRL environment variable, you should remove the setting before installing Version 3.9.

Configuring the probes properties files

The trap-based probes supported by this installation are associated with the extracted base rules file `snmptrap.rules`, and the syslog-based probes are associated with the base file `syslog.rules`.

To configure these probes to reference their base rules files:

1. Navigate to the location `$OMNIHOME/probes/arch`, where arch is the name of the platform on which the probe was installed. For example, the default location for a Solaris installation is `/opt/IBM/tivoli/netcool/omnibus/probes/solaris2`.

   The next two steps require details of the path into which you extracted the updated rules files.

2. Using a text editor that is appropriate for your platform (for example, `vi` for Solaris and Notepad for Windows), modify the properties files listed in the table below with the specified entries. (This table shows the UNIX defaults.)

Table 4. Required modifications to probes properties files		
Probe	**File name to edit**	**Required modification (UNIX defaults)**

SNMP	mttrapd.props	`RulesFile : "/opt/IBM/tivoli/NcKL/rules/ snmptrap.rules"`
		`MIBFile : ""`
		`QuietOutput : 1`

HP OpenView NNM Version 6.x	nnm6.props	`RulesFile : "/opt/IBM/tivoli/NcKL/rules/ snmptrap.rules"`
HP OpenView NNM Version 7.x	nnm7.props	
IBM NetView Version 5.x	nv5.props	`RulesFile : "/opt/IBM/tivoli/NcKL/rules/ snmptrap.rules"`
IBM NetView Version 6.x	nv6.props	
IBM NetView Version 7.x	nv7.props	
Syslog	syslog.props	`RulesFile : "/opt/IBM/tivoli/NcKL/rules/ syslog.rules"`
Syslogd	syslogd.props	

If amending the properties files within a Windows environment, replace the UNIX RulesFile path `/opt/IBM/tivoli/NcKL/rules/` with the relevant Windows path. For example:

```
RulesFile : "C:\\IBM\\Tivoli\\NcKL\\rules\\snmptrap.rules"
```

Details on the supported platforms for these probes is provided within the relevant probes documentation.

3. For the changes to take effect, you must now stop and restart the probes either automatically using process control (on UNIX) or services (on Windows), or manually from the command line. For example, you can use:
   - kill -15 to kill the process, and process control to automatically restart the probes (on UNIX)
   - The *Services* window to stop and start services if the probes were installed as services (on Windows)
   - CTRL+C to stop the probes, and the command nco_p_probename [-option [value] ...] to restart the probes if they were installed as console applications (on Windows)

For more information, see the *IBM Tivoli Netcool/OMNIbus Probe and Gateway Guide*, and the *IBM Tivoli Netcool/OMNIbus Administration Guide*.

Directory structure and contents of the updated rules files

The IBM Tivoli Netcool/OMNIbus Knowledge Library 4.8 installation supplies updated rules files that deliver support for various MIBs. Full details of the event sources are provided in Appendix A, “Supported event sources,” on page 21.

The following files are added to the `/opt/IBM/tivoli/NcKL` (or equivalent platform- dependent) location as a result of the installation:

Table 5. Structure and contents of installed files	
Directory	**Description**
`/rules`	The base IBM Netcool/OMNIbus Knowledge Library 4.8 directory which contains the base rules files (snmptrap.rules and syslog.rules) and related files.
`/rules/include-common`	This directory contains `include` files that provide probe-independent logic - for example, 3GPP and TMF814 specific log, lookup table to help convert between hex, decimal, and ASCII.
`/rules/include-compat`	This directory contains `include` files to activate support for various IBM Tivoli Netcool/OMNIbus Knowledge Library 4.8 features.
`/rules/include-snmptrap`	This directory contains `include` files for processing events from the SNMP trap-based probes.
`/rules/include-snmptrap/common-lookup`	This directory contains the common lookup files that any vendor can use.
`/rules/include-snmptrap/generic`	This directory contains SNMP trap-based `include` files that improve the handling of enterprise-specific implementations of the generic SNMP traps.

Table 5. Structure and contents of installed files (continued)

Directory	Description
/rules/include-snmptrap/*vendor*	This directory identifies the specific vendor and contains the following set of master and preclass files that improve the handling of enterprise-specific implementations of the traps specific to the vendor: • *vendor*.master.include.lookup - This file lists all the lookup files related to that vendor. • *vendor*.master.include.rules - This file lists all the rules files related to that vendor. • *vendor*-preclass.snmptrap.lookup - This file contains all the PreClassification entries related to that vendor. • *vendor*-preclass.include.snmptrap.rules - This file maps the PreClassification entries to Object Server. • *vendor*-MIB.include.snmptrap.rules - This file contains the include statement defining the path to the vendor specific rules file in the include-snmptraps directory. • *vendor*-MIB.include.snmptrap.lookup -This file contains the include statement defining the path to the vendor specific lookup file in the include-snmptraps directory. • *vendor*-MIB.user.include.snmptrap.rules - This file contains the include statement defining the path to the vendor specific rules file of the user in the include-snmptraps directory. • *vendor*-MIB.sev.snmptrap.lookup - This file lists the severity lookup files related to the vendor. • *vendor*_MIB.adv.include.snmptrap.lookup - This file contains the include statement defining the path to the vendor specific lookup file for the advanced traps in the include-snmptraps directory.
/rules/include-syslog	This directory contains include files for processing events from the Syslog-based probes . **Note:** This includes the Windows version of the Syslog Daemon probe (nco_p_syslogd.exe), but does not include the Winsyslog probe (nco_p_winsyslog.exe).
/rules/include-syslog/cisco-ios	This directory contains Syslog-based include files for the processing of syslog messages from various Cisco syslog facilities.
/rules/include-syslog/juniper-junos	This directory contains Syslog-based include files for the processing of syslog messages from various JUNOS syslog facilities.
/rules/include-syslog/regmatch	This directory contains include files that use regular expressions or other matching techniques to make a best guess at the source of an event received by the Syslog-based probe.

Note: IBM recommends that any user customizations are made within the user include files. (These are usually in the format *sometext*`.user.include.`*sometext*`.rules`, where *sometext* can be a reference to the event source or probe type.) In future upgrades, you can then choose to retain your existing user `include` files, removing the need for updating the new files with your current customizations.

Enabling the probes to use Netcool/OMNIbus Knowledge Library 4.8

Netcool/OMNIbus Knowledge Library 4.8 provides an option to use vendor specific rules files that enable correlation and causal analysis of events specific to the vendors. The following configurations make the probes use the rules file of the Netcool/OMNIbus Knowledge Library 4.8 instead of the rules file specified for Netcool/OMNIbus Knowledge Library 1.4:

1. Open the properties file of the SNMP probe.
2. In the **`RulesFile`** property, specify the path to the `snmptrap.rules` file extracted from the NcKL compressed tar file.
3. To include a set of vendor-specific rules, uncomment the following lines from the snmptrap.rules file:

```
#include “$NC_RULES_HOME/include-snmptrap/vendor/vendor.master.include.lookup"

#include “$NC_RULES_HOME/include-snmptrap/vendor/vendor.master.include.rules"

#include “$NC_RULES_HOME/include-snmptrap/vendor/vendor.preclass.include.
snmptrap.rules"
```

   Where *vendor* is the subdirectory specific to the vendor.

   For example, following is an updated and uncommented section of the snmptrap.rules file when the vendor is IBM:

```
#include “$NC_RULES_HOME/include-snmptrap/ibm/ibm.master.include.lookup"

#include “$NC_RULES_HOME/include-snmptrap/ibm/ibm.master.include.rules"

#include “$NC_RULES_HOME/include-snmptrap/ibm/ibm.preclass.include.
snmptrap.rules"
```

4. Restart the SNMP Probe for the probes to use the Netcool/OMNIbus Knowledge Library 4.8.

Important: Without the above configurations, the probes will only use the generic rules files and ignore the vendor specific rules files.

Downloading additional third party Integrations Modules

Additional Integration Modules providing inter-operability between the Tivoli portfolio and third party products are available online for download from the IBM Tivoli Integrated Service Management Library (ISML).

The ISM library contains validated Integration Modules developed by IBM under the IBM Tivoli Netcool Technology Program or by partners.

The ISM library is available at:

http://www.ibm.com/software/ismlibrary

Uninstalling Netcool/OMNIbus Knowledge Library

To uninstall IBM Tivoli Netcool/OMNIbus Knowledge Library 4.8, you must be working as an IBM Tivoli Netcool/OMNIbus user with ISQLWrite permissions.

From a command prompt, run the extracted `removeadvcorr.sql` script using one of the following platform-dependent, case-sensitive commands:

On UNIX and Linux operating systems:

`$OMNIHOME/bin/nco_sql -server objectserver_name -user username -password password < path_to_file/removeadvcorr.sql`

Where:

`$OMNIHOME` represents your installation location of IBM Tivoli Netcool/OMNIbus

objectserver_name represents the name assigned to your ObjectServer

username and *password* are your ObjectServer login details

path_to_file is the directory path to the extracted `removeadvcorr.sql` file

On Windows operating systems:

`%NCHOME%\bin\redist\isql.exe -S objectserver_name -U username -P password -i path_to_file\removeadvcorr.sql`

Where:

`%NCHOME%` represents your installation location of IBM Tivoli Netcool/OMNIbus

objectserver_name represents the name assigned to your ObjectServer

username and *password* are your ObjectServer login details

path_to_file is the directory path to the extracted `removeadvcorr.sql` file

On successful completion, the following lines are generated:

```
(0 rows affected)
(0 rows affected)
(0 rows affected)
```

The uninstall process removes the intra-device correlation automations and tables, but retains the updated rules files and additional `alerts.status` columns. Based on your preference, you can now take one of the actions detailed below.

To continue using the rules files and additional columns, no further action is required.

To continue using the rules files without the columns, you must modify the base rules files snmptrap.rules and syslog.rules. (See “Directory structure and contents of the updated rules files” on page 11 for details of the location of these rules files.) Open each rules file and comment out the line:

```
include "/opt/IBM/tivoli/NcKL/rules/include-compat/AdvCorr36.include.compat.rules"
```

The include statement above shows the default UNIX path, but the starting directory in this path might vary depending on your platform.

If you no longer require the rules files or columns, you must edit the trap-based and syslog-based probe properties files so that they no longer reference the rules files. To do this, open each probe properties file and comment out each line that was manually added as part of the IBM Tivoli Netcool/OMNIbus Knowledge Library 4.8 installation process. (See "Configuring the probes properties files" on page 15 for further details of these entries.) You must then manually remove or drop the columns from the alerts.status table using one of these methods:

- From the IBM Tivoli Netcool/OMNIbus Administrator window, drop the following columns from the alerts.status table:

Table 6. Columns to be dropped from the alerts.status table

Drop these columns:		
LocalTertObj	RemoteObjRelate	AdvCorrCauseType
LocalObjRelate	CorrScore	AdvCorrServerName
RemoteTertObj	CauseType	AdvCorrServerSerial

Table 6. Columns to be dropped from the alerts.status table (continued)		
Drop these columns:		
LocalPriObj	LocalSecObj	LocalRootObj

- From the IBM Tivoli Netcool/OMNIbus Administrator window, enter and run the commands below in the SQL interactive interface.
- From the command line of the SQL interactive interface, run the commands below.

```
alter table alerts.status drop column LocalTertObj;
alter table alerts.status drop column LocalObjRelate;
alter table alerts.status drop column RemoteTertObj;
alter table alerts.status drop column LocalPriObj;
alter table alerts.status drop column RemoteObjRelate;
alter table alerts.status drop column CorrScore;
alter table alerts.status drop column CauseType;
alter table alerts.status drop column CauseType;
alter table alerts.status drop column LocalSecObj;
alter table alerts.status drop column AdvCorrServerName;
alter table alerts.status drop column AdvCorrServerSerial;
alter table alerts.status drop column LocalRootObj;
```

Full details on dropping columns are provided in the IBM Tivoli Netcool/OMNIbus Administration Guide.

Note: If you revert to the old probe properties files or comment out the include statement in snmptrap.rules and syslog.rules, you must stop and restart your probes.

Note: If you are running Netcool/OMNIbus version 8.1, you can uninstall the Netcool/OMNIbus Knowledge Library package using Installation Manager.

Known Issues in Netcool/OMNIbus Knowledge Library

This section contains the known issues that may occur while using the Netcool/OMNIbus Knowledge Library 4.8:

No event is displayed for the EX_UNITFAULT and EX_CRASH exceptions in the Event List.

These exceptions are for the traps `mpMajHwAlarm`, `mpMinHwAlarm`, `mpMajSwAlarm`, `mpMinSwAlarm` sent from the devices loaded with the MIB named CISCO-LATITUDE.

However, by entering the case values of `EX_UNITFAULT` and `EX_CRASH` in the `latitude-CISCO-LATITUDE-MIB.user.include.snmptrap.rules` and `latitude-CISCOLATITUDE-MIB.include.snmptrap.lookup` files, you can enable their display in the Event List.

You can find the case values of the `EX_UNITFAULT` and `EX_CRASH` exceptions using the value of `EX_SI_BASE`.

Table 9 shows method to calculate the case values of the `EX_UNITFAULT` and `EX_CRASH` exceptions.

Table 7. Calculating case values of the EX_UNITFAULT and EX_CRASH exceptions	
Exception code	**Calculating the case values**
EX_UNITFAULT	`EX_SI_BASE + 129`
EX_CRASH	`EX_SI_BASE + 73`

Netcool/OMNIbus Knowledge Library rules file components

The Netcool/OMNIbus Knowledge Library rules files integrate with supported devices to deliver event correlation and causal analysis for the IBM Tivoli Netcool suite. The main purpose is to provide root cause

analysis to ensure that alarms that need to be addressed quickly are acted on fast and the reason for an alarm occurring is correctly identified.

From the release of Netcool/OMNIbus version 7.4 onwards, the MIB Manager utility is fully supported. The Tivoli Netcool/OMNIbus MIB Manager is an IBM Eclipse-based application that you can use to parse Simple Network Management Protocol (SNMP) management information base (MIB) files, from which you can generate Netcool rules files. It is intended as a replacement for the **mib2rules** utility.

For more information on generating the Netcool/OMNIbus Knowledge Library content explained in this section see the Tivoli Netcool/OMNIbus MIB Manager section in the *IBM Tivoli Netcool/OMNIbus Administering the server components guide.*

The following table describes the components of a rules file and the role each part plays in monitoring the activity of a supported device.

Table 8. Netcool/OMNIbus Knowledge Library rules file components

NcKL rules file component	Description	Example
`Alert Group`	This value specifies the alert group under which a trap can be grouped.	`Authentication Status`
`Alert Key`	The Alert Key contains a descriptive key that indicates the object instance referenced by the alarm. The major goal of the value for this attributes is to ensure proper deduplication of alarms and compatibility with the Generic Clear Automation. The Alert Key should be the SNMP instance of the managed object which is represented by the alarm. Usually, this can be obtained by extracting the instance from the OID of one of the trap's variable bindings.	`"Sys Name: " + $sysName + ", Location: " + $sysLocation OR "ifEntry" + $ifIndex"`
`Description`	This value explains the reason for the trap being triggered.	`An altSwTempExceedThreshold trap signifies that the switch temperature has exceeded maximum safety limits.`
`Enterprise`	This value specifies the parent object of the trap.	`altTraps`
`Module Name`	This value specifies the name of the MIB with which the rules file integrates.	`BNT-GbESM-1G-L2L3-MIB`
`OID`	This value specifies the object identifier (OID) of the object or trap.	`.1.3.6.1.4.1.1872.2.5.7.3`

Table 8. Netcool/OMNIbus Knowledge Library rules file components (continued)

NcKL rules file component	Description	Example
`Object Type`	This value specifies the SNMP trap version. The `Object Type` value can have the following valid properties: • `TRAP-TYPE` : SNMP Version 1 trap. • `NOTIFICATION-TYPE` : SNMP Version 2 trap.	`TRAP-TYPE` `NOTIFICATION-TYPE`
`Status`	This value specifies the status of trap.	`current` `oboslete`

`Severity`	This value specifies the alert severity that activates the trap to generate alerts.	`(0) CLEAR`
		`(1) INDETERMINATE`
		`(2) WARNING`
		`(3) MINOR`
		`(4) MAJOR`
		`(5) CRITICAL`
		`(6) DISCARD`

`Supported Device Name`	This value specifies the name of the devices for which the rules file is valid.	`Layer 2/3 Copper Gigabit Ethernet Switch Module for IBM Blade Center`
`Total Number of Traps`	This value specifies the total number of traps that the Netcool/OMNIbus Knowledge Library has for the supported MIB.	`28`
`Traps`	This value specifies the traps that monitor alerts generated by the supported MIB.	`altSwTempExceedThreshold, altSwTempReturnThreshold`
`Trap Group`	This value specifies the group under which similar traps can be grouped. The trap group contains traps in the same `Alert Group`. For example a number of traps that monitor temperature status or connection status.	`Group Switch Temperature Status`
`Trap Name`	This value specifies the name of the trap.	`altSwTempExceedThreshold`

Table 8. Netcool/OMNIbus Knowledge Library rules file components (continued)

NcKL rules file component	Description	Example

`Variables`	This value specifies the trap attributes, also known as varbinds. A varbind or variable binding is a sequence of two specific fields. The first field is an OID, which addresses a specific parameter. The second field contains the value of the specified parameter.	`altSwTrapDisplayString`
		`sysName`
		`sysLocation`

`Vendor`	This value specifies the company that owns the device that the rules files integrate with.	`IBM`
`Version`	This value specifies the version of the supported device.	`5.2`

Appendix A. Supported event sources

Netcool/OMNIbus Knowledge Library supports devices produced by a number of third party vendors. For each vendor, this appendix lists the devices supported, and for those that generate SNMP trap-based events, it also lists the MIBs for which rules files have been written.

If you are using a device that is not listed below, you have the following options:

1. Consult the MIB Manager FAQ. See:

   https://developer.ibm.com/answers/questions/320279/how-are-the-exported-mb-manager-rules-files-used-w.html
2. Raise a Request for Enhancement to the NcKL. For details of this process see:

   https://developer.ibm.com/answers/questions/246375/how-do-i-submit-an-rfe-request-for-enhancement-for
3. Develop your own rules files. For details see the rules file programming documentation:

   http://www.ibm.com/support/knowledgecenter/en/SSSHTQ_8.1.0/com.ibm.netcool_OMNIbus.doc_8.1.0/omnibus/wip/probegtwy/reference/omn_gtw_rulesfiledevelopmentguidelines.html

The rules files that are supplied with Netcool/OMNIbus Knowledge Library can be used in place of the generic `snmptrap.rules` file that is supplied with the Netcool/OMNIbus SNMP Probe. The rules files specific to the vendor are available in the appropriate subdirectory within: `$NC_RULES_HOME/include-snmptrap/`. For example, rules files specific to the vendor Adtran are available in: `$NC_RULES_HOME/include-snmptrap/adtran/`.

Note: The `$NC_RULES_HOME` variable specifies where the rules file is located and must be set to enable probes to utilize the Netcool/OMNIbus Knowledge Library. To set the `$NC_RULES_HOME` variable, see the "Extracting the updated rules files" on page 10 section.

Within the topics that follow, MIBs for which new rules files have been written, or MIBs for which existing rules files have been updated, are marked as **added** or **updated** respectively.

This appendix contains the following sections:

Acme Packet event sources

This topic details the Acme Packet devices that the Netcool/OMNIbus Knowledge Library supports, and the rules files written to support them.

Supported devices

The following table lists the Acme Packet devices that the Netcool/OMNIbus Knowledge Library supports.

Table 9. Supported Acme Packet devices

Supported Acme Packet Devices
Acme Packet Net-Net 4000 release 5.0, 5.1
Acme Packet Net-Net 3000/4000 release 6.2.0
Acme Packet Net-Net 9000 release 7.0.0

Table 9. Supported Acme Packet devices (continued)
Supported Acme Packet Devices
Acme Packet C series 6.3.0
Acme Packet C series 7.0.0

MIBs

The following table lists the MIBs that describe the data structure of the Acme Packet event sources for which the Netcool/OMNIbus Knowledge Library contains rules files.

Table 10. Acme MIBs	
Acme Packet MIBs	
ap-ems.mib	ap-env-monitor.mib
ap-license.mib	ap-security.mib
ap-slog.mib	ap-smgmt.mib
ap-swinventory.mib	

Adtran event sources

This topic details the Adtran devices that the Netcool/OMNIbus Knowledge Library supports.

Supported devices

The following table lists the Adtran devices that the Netcool/OMNIbus Knowledge Library supports.

Table 11. Supported Adtran devices
Supported Adtran Devices
Adtran ACTDAXL3
Adtran ADVISOR
Adtran DS1
Adtran DSU3AR

MIBs

The following table lists the MIBs that describe the data structure of the Adtran event sources for which the Netcool/OMNIbus Knowledge Library contains rules files.

Table 12. Adtran MIBs	
Adtran MIBs	
ADTRAN-ACTDAXL3-MIB	ADTRAN-ACTDAXL
ADTRAN-ADVISOR-MIB	ADTRAN-DSU3AR
ADTRAN-DSU3AR-MIB	

ADVA AG Optical Networking event sources

This topic details the ADVA AG Optical Networking devices that the Netcool/OMNIbus Knowledge Library supports.

Supported devices

The following table lists the ADVA AG Optical Networking devices that the Netcool/OMNIbus Knowledge Library supports.

Table 13. Supported ADVA AG Optical Networking devices
Supported ADVA AG Optical Networking Devices
Fiber Service Platform (FSP) 2000
Fiber Service Platform (FSP) 3000 R7

MIBs

The following table lists the MIBs that describe the data structure of the ADVA AG Optical Networking event sources for which the Netcool/OMNIbus Knowledge Library contains rules files.

Table 14. ADVA AG Optical Networking MIBs	
ADVA AG Optical Networking MIBs	
FSP2000-R2-MIB	ADVA-FSPR7-MIB

Allied Telesyn event sources

This topic details the Allied Telesyn devices that the Netcool/OMNIbus Knowledge Library supports.

Supported devices

The following table lists the Allied Telesyn devices that the Netcool/OMNIbus Knowledge Library supports.

Table 15. Supported Allied Telesyn devices
Supported Allied Telesyn Devices
Allied Telesyn-Firewall
Allied Telesyn-Layer 2 Switches
Allied Telesyn-NBase Switch
Allied Telesyn-Next Generation atswitch Switch

MIBs

The following table lists the MIBs that describe the data structure of the Allied Telesyn event sources for which the Netcool/OMNIbus Knowledge Library contains rules files.

Table 16. Allied Telesyn MIBs	
Allied Telesyn MIBs	
ALLIEDTELESYN-MIB	ATI-MIB

Table 16. Allied Telesyn MIBs (continued)	
Allied Telesyn MIBs	
ATKKNBSW-MIB	ATMCCommon-MIB
AtiL2-MIB	AtiSwitch.mib
ATSWTCH2-MIB	

Ascend event sources

This topic details the Ascend devices that the Netcool/OMNIbus Knowledge Library supports.

Supported devices

The following table lists the Ascend devices that the Netcool/OMNIbus Knowledge Library supports.

Table 17. Supported Ascend devices
Supported Ascend Devices
Ascend SONET Linear Automatic Protection Switching (APS)

MIBs

The following table lists the MIBs that describe the data structure of the Ascend event sources for which the Netcool/OMNIbus Knowledge Library contains rules files.

Table 18. Ascend MIBs	
Ascend MIBs	
APS-MIB	

ATM Forum event sources

This topic details the ATM Forum devices that the Netcool/OMNIbus Knowledge Library supports.

Supported devices

The following table lists the ATM Forum devices that the Netcool/OMNIbus Knowledge Library supports.

Table 19. Supported ATM Forum devices
Supported ATM Forum Devices
ATM Forum
ATM Forum Soft PVC

MIBs

The following table lists the MIBs that describe the data structure of the ATM Forum event sources for which the Netcool/OMNIbus Knowledge Library contains rules files.

Table 20. ATM Forum MIBs	
ATM Forum MIBs	
ATM-FORUM-MIB	ATM-SOFT-PVC-MIB

Table 20. ATM Forum MIBs (continued)	
ATM Forum MIBs	
ATM-TRACE-MIB	IMA-MIB

BridgeWater event sources

This topic details the BridgeWater devices that the Netcool/OMNIbus Knowledge Library supports.

Supported devices

The following table lists the BridgeWater devices that the Netcool/OMNIbus Knowledge Library supports.

Table 21. Supported BridgeWater devices
Supported BridgeWater Devices
RADIUS Server

MIBs

The following table lists the MIBs that describe the data structure of the BridgeWater event sources for which the Netcool/OMNIbus Knowledge Library contains rules files.

Table 22. BridgeWater MIBs	
BridgeWater MIBs	
BW-NOTIFICATION	BW-RADIUS

Brocade event sources

This topic details the Brocade devices that the Netcool/OMNIbus Knowledge Library supports, and the rules files written to support them.

Supported devices

The following table lists the Brocade devices that the Netcool/OMNIbus Knowledge Library supports.

Table 23. Supported Brocade devices
Supported Brocade Devices
BigIron RX 2.8.00
Fabric OS version 7.0
FastIron GS 7.2.00
FastIron LS 7.2.00
FastIron SX, CX, WS 7.3.00
FastIron SuperX, FESX, FWSX 7.3.00
Foundry Wireless Access Point
IronPoint 2.2.03

Table 23. Supported Brocade devices (continued)
Supported Brocade Devices
NetIron IMR 3.0.00
NetIron CER/CES 5.3.00
NetIron XMR/MLX 5.3.00
NetIron MLXe 5.3.00
ServerIron 450/850 9.5.02
ServerIron 100/400/800/GTE 9.4.00
ServerIron ADX 12.3.00
TurboIron 24x 7.3.00
VDX 6720 2.1.00

MIBs

The following table lists the MIBs that describe the data structure of the Brocade event sources for which the Netcool/OMNIbus Knowledge Library contains rules files.

Table 24. Supported Brocade MIB event sources	
Brocade MIBs	
Foundry-SN-TRAP-MIB	foundry-wireless-ap MIB
iana-pwe3 MIB	BRCD-SLB-MIB
DOT3-OAM-MIB	DVMRP-STD-MIB
FDRY-MPLS-L2VPN-MIB	FOUNDRY-BFD-STD-MIB
FOUNDRY-LAG-MIB	FOUNDRY-SN-BGP4-GROUP-MIB
FOUNDRY-SN-MPLS-LSR-MIB	FOUNDRY-SN-MPLS-TE-MIB
FOUNDRY-SN-NOTIFICATION-MIB	FOUNDRY-SN-ROUTER-NOTIFICATION-MIB
FOUNDRY-SN-ROUTER-TRAP-MIB	FOUNDRY-SN-TRAP-MIB
Foundry-MPLS-MIB	ISIS-MIB
SYSTEM-MIB	
HA-MIB	SW-MIB

Chipcom event sources

This topic details the Chipcom devices that the Netcool/OMNIbus Knowledge Library supports.

Supported devices

The following table lists the Chipcom devices that the Netcool/OMNIbus Knowledge Library supports.

Table 25. Supported Chipcom devices
Supported Chipcom Devices
Ethernet Management Module (EMM) 4.01
Token Ring Management Module (TRMM) 3.0
FDDI Management Module (FMM) 2.0
Distributed Management Module (DMM) 1.0
Ethernet to Ethernet Bridge Module (EEBM) 2.13
Ethernet to Ethernet Bridge Box (EEBB) 2.13
Ethernet Interconnect Module (EIM) 1.0

MIBs

The following table lists the MIBs that describe the data structure of the Chipcom event sources for which the Netcool/OMNIbus Knowledge Library contains rules files.

Table 26. Supported Chipcom MIB event sources	
Chipcom MIBs	
CHIPCOM.mib	

Ciena event sources

This topic details the Ciena devices that the Netcool/OMNIbus Knowledge Library supports.

Supported devices

The following table lists the Ciena devices that the Netcool/OMNIbus Knowledge Library supports.

Table 27. Supported Ciena devices
Supported Ciena Devices
CN-4200 5.0, 6.2, 7.1
Multiwave
Ciena SAOS 7.0 devices CN 3916, CN3920, CN3930, CN3960, CN5142, CN5150, CN5305, CN5410

MIBs

The following table lists the MIBs that describe the data structure of the Ciena event sources for which the Netcool/OMNIbus Knowledge Library contains rules files.

Table 28. Ciena MIBs	
Ciena MIBs	
CIENA-CN4200-L2-ETHERNET-NOTIFICATION-MIB	
ciena-WWP-CONTAINMENT-MIB	ciena-WWP-ENVIRON-MIB
ciena-WWP-EXT-BRIDGE-TRAP-MIB	ciena-WWP-FILE-TRANSFER-MIB
ciena-WWP-IP-INTERFACE-MIB	ciena-WWP-LEOS-BLADE-MIB
ciena-WWP-LEOS-BROADCAST-CONTAINMENT-MIB	
ciena-WWP-LEOS-CHASSIS-MIB	ciena-WWP-LEOS-DHCP-CLIENT-MIB
ciena-WWP-LEOS-FILE-TRANSFER-MIB	ciena-WWP-LEOS-FLOW-MIB
ciena-WWP-LEOS-IP-INTERFACE-MIB	ciena-WWP-LEOS-MSTP-MIB
ciena-WWP-LEOS-MULTICAST-FILTER-MIB	ciena-WWP-LEOS-OAM-MIB
ciena-WWP-LEOS-PBT-MIB	ciena-WWP-LEOS-PORT-MIB
ciena-WWP-LEOS-PORT-XCVR-MIB	ciena-WWP-LEOS-RSTP-MIB
ciena-WWP-LEOS-SW-XGRADE-MIB	ciena-WWP-LEOS-SYSTEM-CONFIG-MIB
	ciena-WWP-MAC-MGMT-MIB
ciena-WWP-QOS-410-MIB	ciena-WWP-SYSTEM-CONFIG-APPS-MIB
ciena-WWP-SYSTEM-CONTROL-MIB	ciena-WWP-VOIP-MIB
ciena-WWP-XCVR-MIB	IPI-OAMP-MIB
IPI-MEMMGMT-MIB	IPI-GSLAMAG-MIB
internetphotonics-IPI-GSLAMAG	ipi-memmgmt MIB
ipi-oamp MIB	ipi-services MIB
CIENA-CES-CFM-MIB	CIENA-CES-CHASSIS-MIB
CIENA-CES-DATAPLANE-MIB	CIENA-CES-FEATURE-LICENSE-MIB
CIENA-CES-FILE-TRANSFER-MIB	CIENA-CES-IP-INTERFACE-MIB
CIENA-CES-MODULE-MIB	CIENA-CES-MPLS-MIB
CIENA-CES-OAM-MIB	CIENA-CES-PBT-MIB
CIENA-CES-PORT-MIB	CIENA-CES-PORT-XCVR-MIB

Table 28. Ciena MIBs (continued)	
Ciena MIBs	
CIENA-CES-RSTP-MIB	CIENA-CES-SW-XGRADE-MIB
CIENA-CES-SYSTEM-CONFIG-MIB	WWP-EXT-BRIDGE-TRAP-MIB
WWP-LEOS-FEATURE-LICENSE-MIB	WWP-LEOS-INFORM-STATUS-MIB
	WWP-LEOS-MPLS-MIB
WWP-LEOS-NTP-CLIENT-MIB	WWP-LEOS-RAPS-MIB
WWP-LEOS-TABLE-CHG-NOTIF-MIB	WWP-LEOS-TCE-CHASSIS-MIB
WWP-LEOS-CFM-MIB	WWP-LEOS-TCE-DATAPLANE-MIB
WWP-LEOS-TCE-DHCP-CLIENT-MIB	WWP-LEOS-TCE-FEATURE-LICENSE-MIB
WWP-LEOS-TCE-FILE-TRANSFER-MIB	WWP-LEOS-TCE-IP-INTERFACE-MIB
WWP-LEOS-TCE-MODULE-MIB	WWP-LEOS-TCE-MULTICAST-FILTER-MIB
WWP-LEOS-TCE-PORT-MIB	WWP-LEOS-TCE-SW-XGRADE-MIB
WWP-LEOS-TCE-SYSTEM-CONFIG-MIB	

Cisco supported devices and event sources

This topic details the Cisco devices that the Netcool/OMNIbus Knowledge Library supports, and the rules files written to support them.

Supported devices

The following table lists the Cisco devices that the Netcool/OMNIbus Knowledge Library supports.

Table 29. Supported Cisco devices	
Category	**Supported Cisco Devices**
Cisco Cloud Services Router	CSR 1000V
Cisco LAN Switches	Catalyst 1600, 1900, 2820, 5000, 2900, 2900 XL, 2900 XL LRE, 2926, 4000, 2948, 2948g, 2948G-L3, 2950, 2950 LRE, 2955, 2970, 2980g, 2980ga, 3500 XL, 3550, 3560, 3750, 4000, 4003, 4006, 4908 g, 4912, 4912g, 5002, 5500, 5505, 5509, 6000/7600 OS, 6000/7600 IOS, 6006, 6009, 6503, 6504, 6506, 6509, 6513, 8510 CSR, 8510 MSR, 8540 CSR, 8540 MSR LightStream 1010
Cisco Workgroup Concentrators	C6400 NRP, C6400 NSP

Table 29. Supported Cisco devices (continued)

Category	Supported Cisco Devices
Cisco Secure and VPN Products	ACE Applicance, ACE, Adaptive Security Appliance Firewall Service Module Global Site Selector Pix Security Appliance C1710, C1721
Cisco Storage Networking	MDS 9000 Family SN 5400 Family
Cisco Voice, Telephony & Messaging Software Products	Call Manager Cisco Unity Express PGW, HSI, BAMS
Metro Ethernet Products	ME 6524, ME3400/2400 Catalyst 3750me
Cisco Service Routing Products	SCE 2020 SCE 8000
Data Center Switching	Nexus 1000v/2000/3000/4000/5000/7000/9000 Series
CiscoPro Workgroup Switches	CPW 1220/1420
Cisco Optical Transport Products	ONS 15501, ONS 15530/40
Cisco Wireless LAN	c1400, c1300, c1240, c1210, c1130, c1100, c350, Aironet 1200, 350, 340 Cisco Wireless Solution Engine Cisco Wireless LAN Controller ASR Cisco Prime Network Control System (NCS) 1.0
Broadband or IP Services	Cisco Network Registrar
Cisco TelePresence Products	TelePresence System

Table 29. Supported Cisco devices (continued)	
Category	**Supported Cisco Devices**
Cisco Access Products	C800, C805 c 1003, c 1004, c 1005, c 1020, c 1417, c 1601/1602/1603/1604/1605, c 1701/1711/1720/1750/1751/1760, c 2000, c 2102/2202/25xx/261x/3620/3640/4500/4700/ 7000/7010/7200/75xx/10000/12000/AS 5xxx/ AGS +/ AccessPro EC/RC cs500/cIGS/ c3810 6xxx DSLAM FAMILY c7304/c 10000 c76xx, c 10720/ ubr 7200 XR12000/CRS-1

SNMP trap-based and syslog-based event sources

The Netcool/OMNIbus Knowledge Library supports both SNMP trap-based events and syslog-based events generated by Cisco devices. The following topics list the MIBs (for SNMP trap-based event sources) and syslog facilities that describe the data structure of the Cisco event sources for which the Netcool/OMNIbus Knowledge Library contains rules files:

- “Cisco event sources” on page 32
- “Cisco Latitude event sources” on page 38
- “Cisco syslog-based event sources” on page 38

Cisco event sources

The following table lists the MIBs that describe the data structure of the Cisco SNMP trap-based event sources for which the Netcool/OMNIbus Knowledge Library contains rules files.

Table 30. Cisco MIBs	
Cisco MIBs	
AIRESPACE-SWITCHING-MIB	AIRESPACE-WIRELESS-MIB
ACCOUNTING-CONTROL-MIB	
Cisco90Series-MIB	CISCO-5800-HEALTH-MON-MIB
CISCO-6400-CHASSIS-MIB	CISCO-AAA-SERVER-MIB
CISCO-ACCESS-ENVMON-MIB	CISCO-ALPS-MICISCO-ALPS-MIB
CISCO-AON-STATUS-MIB	
CISCO-APPLIANCE-REDUNDANCY-MIB	CISCO-APS-MIB

Table 30. Cisco MIBs (continued)	
Cisco MIBs	
CISCO-ASN-GATEWAY-MIB	
CISCO-ATM-DUAL-PHY-MIB	CISCO-ATM-IF-MIB
CISCO-ATM-PVCTRAP-EXTN-MIB	CISCO-AUTH-FRAMEWORK-MIB
CISCO-BAMSP3-MIB	CISCO-BBSM-MIB
CISCO-BGP4-MIB	CISCO-BITS-CLOCK-MIB
CISCO-BSTUN-MIB	CISCO-BULK-FILE-MIB
CISCO-C2900-MIB	CISCO-C8500-REDUNDANCY-MIB
CISCO-CABLE-AVAILABILITY-MIB	CISCO-CABLE-METERING-MIB
CISCO-CABLE-QOS-MONITOR-MIB	CISCO-CABLE-SPECTRUM-MIB
CISCO-CALLHOME-MIB	CISCO-CALL-TRACKER-MIB
CISCO-CASA-MIB	CISCO-CASA-FA-MIB
CISCO-CAT6K-CROSSBAR-MIB	CISCO-CCME-MIB
CISCO-CCM-MIB	CISCO-CCM-MIB
CISCO-CDL-MIB	CISCO-CDMA-AHDLC-MIB
CISCO-CDMA-PDSN-MIB	CISCO-CDSTV-SERVICES-MIB
CISCO-CEF-MIB	
CISCO-CFS-MIB	CISCO-CHANNEL-MIB
CISCO-CIDS-MIB	CISCO-CIPCMPC-MIB
CISCO-CIPCSNA-MIB	CISCO-CLUSTER-MIB
CISCO-CONFIG-COPY-MIB	CISCO-CONFIG-COPY-MIB
CISCO-CONFIG-MAN-MIB	CISCO-CONTENT-ENGINE-MIB
CISCO-CONTENT-NETWORK-MIB	CISCO-CRYPTO-ACCELERATOR-MIB
CISCO-CSG-MIB	CISCO-DATA-COLLECTION-MIB
CISCO-DDP-IAPP-MIB	CISCO-DEVICE-EXCEPTIONREPORTING-MIB
CISCO-DIAMETER-BASE-PROTOCOL-MIB	CISCO-DIGITAL-MEDIA-SYSTEMS-MIB
CISCO-DIST-DIRECTOR-MIB	CISCO-DLSW-EXT-MIB

Table 30. Cisco MIBs (continued)	
Cisco MIBs	
CISCO-DM-MIB	CISCO-DOCS-EXT-MIB
CISCO-DOCS-REMOTE-QUERY-MIB	CISCO-DOT11-CONTEXT-SERVICES-MIB
CISCO-DOT11-IF-MIB	CISCO-DOT11-QOS-MIB
CISCO-DOT3-OAM-MIB	CISCO-DS1-EXT-MIB
CISCO-DSP-MGMT-MIB	CISCO-DSPU-MIB
CISCO-EIGRP-MIB	CISCO-ENHANCED-IPSEC-FLOW-MIB
CISCO-ENHANCED-MEMPOOL-MIB	CISCO-ENHANCED-SLB-MIB
CISCO-ENTITY-ALARM-MIB	CISCO-ENTITY-DIAG-MIB
CISCO-ENTITY-FRU-CONTROL-MIB	CISCO-ENTITY-PFE-MIB
CISCO-ENTITY-SENSOR-MIB	CISCO-ENVMON-MIB
CISCO-EPM-NOTIFICATION-MIB	CISCO-ES-STACK-MIB
CISCO-ETHER-CFM-MIB	CISCO-EXT-SCSI-MIB
CISCO-FABRIC-C12K-MIB	CISCO-FABRIC-HFR-MIB
CISCO-FASTHUB-MIB	CISCO-FCC-MIB
CISCO-FC-FE-MIB	CISCO-FCPING-MIB
CISCO-FCS-MIB	CISCO-FCSP-MIB
CISCO-FCTRACEROUTE-MIB	CISCO-FDMI-MIB
CISCO-FEATURE-CONTROL-MIB	CISCO-FIREWALL-MIB
CISCO-FLASH-MIB	CISCO-FLEX-LINKS-MIB
CISCO-FSPF-MIB	CISCO-GATEKEEPER-MIB
CISCO-GENERAL-TRAPS-MIB	CISCO-GGSN-MIB
CISCO-GGSN-SERVICE-AWARE-MIB	CISCO-GOLDWING-MIB
CISCO-GOLDWING-PMMAIN-MIB	CISCO-GPRS-ACC-PT
CISCO-GPRS-CHARGING-MIB	CISCO-GPRS-GTP-MIB
CISCO-GSLB-DNS-MIB	CISCO-GSLB-HEALTH-MON-MIB
CISCO-GSLB-SYSTEM-MIB	CISCO-GTP-DIRECTOR-MIB

Table 30. Cisco MIBs (continued)	
Cisco MIBs	
CISCO-HC-ALARM-MIB	CISCO-HEALTH-MONITOR-MIB
CISCO-HSRP-MIB	CISCO-ICSUDSU-MIB
CISCO-IEEE-CFM-MIB	CISCO-IETF-ATM2-PVCTRAP-MIB
CISCO-IETF-DHCP-SERVER-EXT-MIB	CISCO-IETF-DHCP-SERVER-MIB
CISCO-IETF-DOT11-QOS-EXT-MIB	CISCO-IETF-FRR-MIB
CISCO-IETF-ISIS-MIB	CISCO-IETF-ISNS-MGMT-MIB
CISCO-IETF-MPLS-TE-P2MP-STD-MIB	CISCO-MEETINGPLACE-MIB
CISCO-IETF-MSDP-MIB	CISCO-NHRP-EXT-MIB
CISCO-IETF-PIM-EXT-MIB	
CISCO-IETF-PIM-MIB	CISCO-IETF-PW-MIB
CISCO-IETF-SCTP-EXT	CISCO-IETF-VDSL-LINE-MIB
CISCO-IF-EXTENSION-MIB	CISCO-IF-THRESHOLD-MIB
CISCO-IKE-CONFIGURATION-MIB	CISCO-IKE-FLOW-MIB
CISCO-IMAGE-UPGRADE-MIB	CISCO-IP-ENCRYPTION-MIB
CISCO-INTERFACE-XCVR-MONITOR-MIB	
CISCO-IP-LOCAL-POOL-MIB	CISCO-IPMROUTE-MIB
CISCO-IPSEC-FLOW-MONITOR-MIB	CISCO-IPSEC-MIB
CISCO-IPSEC-PROVISIONING-MIB	CISCO-IPSEC-SIGNALING-MIB
CISCO-ISCSI-MIB	CISCO-ISDN-MIB
CISCO-ISDNU-IF-MIB	CISCO-ITP-GRT-MIB
CISCO-ITP-GSCCP-MIB	CISCO-ITP-GSP-MIB
CISCO-ITP-MLR-MIB	CISCO-ITP-MONITOR-MIB
CISCO-ITP-RT-MIB	CISCO-ITP-SP-MIB
CISCO-ITP-XUA-MIB	CISCO-IVR-MIB
CISCO-L2-CONTROL-MIB	CISCO-L2-DEV-MONITORING-MIB
CISCO-L2-TUNNEL-CONFIG-MIB	CISCO-L4L7MODULE-RESOURCE-LIMIT-MIB

Table 30. Cisco MIBs (continued)	
Cisco MIBs	
CISCO-LATITUDE-MIB	CISCO-LICENSE-MGR-MIB
CISCO-LINK-ERROR-MONITOR-MIB	CISCO-LOCAL-DIRECTOR-MIB
CISCO-LWAPP-DOT11-CLIENT-MIB	CISCO-LWAPP-IDS-MIB
CISCO-LWAPP-MESH-BATTERY-MIB	CISCO-LWAPP-MESH-MIB
CISCO-LWAPP-MESH-STATS-MIB	CISCO-LWAPP-MFP-MIB
CISCO-LWAPP-MOBILITY-MIB	CISCO-LWAPP-ROGUE-MIB
CISCO-LWAPP-WEBAUTH-MIB	CISCO-MAC-NOTIFICATION-MIB
CISCO-MOBILE-IP-MIB	CISCO-MODEM-MGMT-MIB
CISCO-MODULE-AUTO-SHUTDOWN-MIB	CISCO-MVPN
CISCO-NBAR-PROTOCOL-DISCOVERY-MIB	CISCO-NETWORK-REGISTRAR-MIB
CISCO-NETWORK-REGISTRAR-MIB	CISCO-NS-MIB
CISCO-NTP-MIB	CISCO-OAM-MIB
CISCO-OPTICAL-MONITOR	CISCO-OPTICAL-PATCH-MIB
CISCO-OSCP-MIB	CISCO-OSPF-TRAP-MIB
CISCO-OUTAGE-MONITOR-MIB	CISCO-PAE-MIB
CISCO-PIM-MIB	CISCO-PING-MIB
CISCO-POP-MGMT	CISCO-PORT-SECURITY-MIB
CISCO-PORT-STORM-CONTROL-MIB	CISCO-PPPOE-MIB
CISCO-PROCESS-MIB	CISCO-PSA-MICROCODE-MIB
CISCO-PSD-CLIENT-MIB	
CISCO-PSM-MIB	CISCO-RADIUS-MIB
CISCO-REMOTE-ACCESS-MONITOR-MIB	CISCO-REPEATER-MIB
CISCO-RESILIENT-ETHERNET-PROTOCOL-MIB	CISCO-RF-MIB
CISCO-RF-SUPPLEMENTAL-MIB	CISCO-RHINO-MIB
CISCO-RPMS-MIB	CISCO-RSCN-MIB

Table 30. Cisco MIBs (continued)	
Cisco MIBs	
CISCO-RSRB-MIB	CISCO-RTTMON-MIB - **updated**
CISCO-SCSI-MIB	CISCO-SDLLC
CISCO-SERVICE-CONTROL-LINK-MIB	CISCO-SERVICE-CONTROL-RDR-MIB
CISCO-SERVICE-CONTROL-SUBSCRIBERS-MIB	CISCO-SIBU-MANAGERS-MIB
CISCO-SIBU-STACKABLE-DUALSPEED-HUB-MIB	CISCO-SLB-EXT-MIB
CISCO-SLB-MIB	CISCO-SNA-LLC-MIB
CISCO-SONET-MIB	CISCO-SP-MIB
CISCO-SRP-MIB	CISCO-SRST-MIB
CISCO-SSG-MIB	CISCO-SSLVPN-MIB
	CISCO-STACK-MIB
CISCO-STACKWISE-MIB	CISCO-STP-EXTENSIONS-MIB
CISCO-STUN-MIB	CISCO-STUN-MIB
CISCO-SVC-INTERFACE-MIB	CISCO-SYS-INFO-LOG-MIB
CISCO-SYSTEM-EXT-MIB	CISCO-SYSTEM-MIB
CISCO-SYSLOG-MIB	
CISCO-TAP2-MIB	CISCO-TAP-MIB
CISCO-TELEPRESENCE-MIB	CISCO-TELEPRESENCE-CALL-MIB
CISCO-TELEPRESENCE-EXCHANGE-SYSTEM-MIB	CISCO-TELNET-SERVER-MIB
CISCO-TRANSPATH-MIB	CISCOTRAP-MIB
CISCO-TRUSTSEC-SXP-MIB	CISCO-TS-STACK-MIB
CISCO-UDLDP-MIB	CISCO-UNIFIED-COMPUTING-NOTIFS-MIB
CISCO-UNITY-EXPRESS-MIB	CISCO-VIRTUAL-NW-IF-MIB
CISCO-VIRTUAL-SWITCH-MIB	CISCO-VISM-TRAPS
CISCO-VLAN-MEMBERSHIP-MIB	CISCO-VOICE-APPS-MIB

Table 30. Cisco MIBs (continued)	
Cisco MIBs	
CISCO-VOICE-CONNECTIVITY-MIB	CISCO-VOICE-DIAL-CONTROL-MIB
CISCO-VOICE-DNIS-MIB	CISCO-VPDN-MGMT-MIB
CISCO-VQES-MIB	CISCO-VRF-MIB
CISCO-VSAN-MIB	CISCO-VTP-MIB
CISCO-VSIMASTER-MIB	CISCO-WAN-3G-MIB
CISCO-WIRELESS-DOCS-EXT-MIB	CISCO-WIRELESS-IF-MIB
CISCO-WIRELESS-NOTIFICATION-MIB	CISCO-WIRELESS-P2MP-LINK-METRICS-MIB
CISCO-WIRELESS-P2MP-PHY-MIB	CISCO-WLAN-VLAN-MIB
CISCOWORKS-MIB	CISCO-WWNMGR-MIB
CISCO-ZS-MIB	ESSWITCH-MIB
ENTITY-MIB	MPLS-VPN-MIB
MPLS-LDP-MIB	NOVELL-IPX-MIB
ONS15501-MIB	PCUBE-SE-MIB

Cisco Latitude event sources

The following table lists the MIBs that describe the data structure of the Cisco Latitude SNMP trap-based event sources for which the Netcool/OMNIbus Knowledge Library contains rules files.

Table 31. Cisco Latitude MIBs	
Cisco Latitude MIBs	
CISCO-LATITUDE-MIB	

Cisco syslog-based event sources

The following table lists the Cisco syslog-based event sources for which the Netcool/OMNIbus Knowledge Library contains rules files.

Table 32. Supported Cisco syslog event sources	
Cisco syslog facilities	
AAA	AAA_CACHE
AAAA	AC
ACCESS_IE	ACLMERGE
ADAPTER ADJ	AESOP_AIM
AICMGMT	AIM

Table 32. Supported Cisco syslog event sources (continued)	
Cisco syslog facilities	
AIP	ALARM
ALC	ALIGN
ALPS	AMD79C971_FE
AMDP2_FE	AP
ARAP	AS5400
AS5400_ENVM	ASPP
AT	ATM
ATM_AIM	ATMCES
ATMCORE	ATMOC3
ATMPA	ATMSIG
ATMSSCOP	ATOM_TRANS
ATUC	AUDIT
AUTOQOS	AUTORP
AUTOSEC	AUTOSTATE
BAP	BCM3220
BCM56XX	BERT
BGP	BIT
BOOMERANG	BRI
BRIMUX	BSC
BSQ	BSTUN
C1400_PCI	C1600
C1700	C1700_EM
C2600C2600_ MAINBOARD_	ASYNC_PQUICC
C29ATM	C2KATM
C3600	C4GWY_DSPRM
C542	C5421
C54X	C5RSP
C6KENV C6KPWR	C6MSFC
C6SUP	C7200_TDM
C950 CAIM	CALL_CONTROL
CALL_MGMT	CALLPROG
CALLRECORD	CALLTREAT
CALLTRKR	CAPITOLA_MOD
CARRIER CASA	CBUS

Table 32. Supported Cisco syslog event sources (continued)	
Cisco syslog facilities	
CBUS_ATTN	CBUS_WRITE
CCA	CCH323
CCPROXY	CDM
CDNLD_CLIENT	CDNLD_SERVER
CDP	CDSX_MODULE
CE3 CERF	CES
CES_CLIENT	CES_CONN
CHARLOTTE	CHOPIN
CHOPIN_ MAINBOARD_ ASYNC_PQII	CI
CIOS	CIPDUMP
CIRRUS	CIRRUS_PM
CLAW	CLEAR
CLIENT_CLOCK_ SYNC	CLNS
CLOCK	CLOCKSW
CLS	CLSDR
CM622_CM155	CM_DSPRM
CM_MONITOR	CMAPP
CMCC	CMPCTG
CNS	CNS_AGENT_ CFGCHG
CNSES	COBALT
COMP	CONFIG
CONTROLLER	COPS
COT	CPAD
CPE_MMI	CPM
CPU_NET	CRYPTO
CTRC	CWAN_ATM
CSM	CSM_VOICE
CT3	CTA
CWAN_RP	CWANLC
CWANLC_ATM	CWPA
CWRMP	CWRSU
CWRTEST	CWTLC
CWTLC_ATM	DAS_ENV
DBCONN	DBUS

Table 32. Supported Cisco syslog event sources (continued)	
Cisco syslog facilities	
DCU	DEBUGGER
DEC21140	DFC
DFC_CARRIER	DHCPD
DIAG	DIALER
DIALPEER_DBDIALSHELF	DIRECTOR
DISKMIRROR	DLC
DLSWC	DLSWMasterSlave
DLSWP	DMA
DMTDSL	DNET
DNSSERVER	DOT1X_MOD
DPM	DRIP
DRP	DRVGRP
DS_MODEM	DS_TDM
DSA	DSC
DSC_ENV	DSC_ REDUNDANCY
DSCC4	DSCCLOCK
DSCEXTCLK	DSCREDCLK
DSI	DSIP
DSIPPF	DSLSAR
DSM	DSP_CONN
DSPDD	DSPDUMP
DSPFARM	DSPRM
DSPU	DSX0
DSX1	DSXPNM
DTP	DUAL
DVLAN	DVMRP
E1T1_MODULE	EARL
EC	ECC
EGP	EHSA
ENSP	ENT_API
ENV_MON	ENVIRONMENT
ENVM	EPAD
ESWILP_FLTMG	ESWITCH
ET2_MODULE	ETHC

Table 32. Supported Cisco syslog event sources (continued)	
Cisco syslog facilities	
ETHERNET	EVENT
EVENT_TRACE	EXFREE
EXPRESS_SETUP	EXPRESSION
FABRIC	FALLBACK
FAN	FASTBLK
FB	FB_COREDUMP
FBINFO	FCL
FDDI	FECPM
FIB	FILESYS
FLASH	FM FM
FPGA	FR
FR_ADJ	FR_ELMI
FR_FRAG	FR_LMI
FR_VCB	FRANK
FRATM	FREEDM
FS_IPHC	FTC_TRUNK
FTPSERVER	FTSP
FW	FX1000
GBIC	GBIC_1000BASET
GBIC_SECURITY	GBIC_SECURITY_ CRYPT
GBIC_SECURITY_UNIQUE	GE
GENERAL	GET_DATA
GIGASTACK	GK
GK_OSP	GL2PT
GLBP	GPRSFLTMG
GPRSMIB	GRIP
GRP	GRP_OC12_CH_DS3
GRPGEGRPPOS	GSHDSL
GSI	GSR_ENV
GSRIPC	GT64010
GT64011	GT96K_FE
GT96K_FEWAN	GT96K_TDM
GTP	GVRP
HAL	HAWKEYE

Table 32. Supported Cisco syslog event sources (continued)	
Cisco syslog facilities	
HD	HDV
HDX	HEARTBEAT
HIFN79XX	HMM_ASYNC
HOOD	HP100VG
HPI	HSRP
HTSP	HTTP
HTTPC	HUB
HW_MEMORY	HW_VPN
HWMATM_MOD	I82543
I82559FE	IAD2420_VOICEPORT
IBM2692	ICC
IDMGR	IDNLD
IDS	IDTATM25
IF	IFINDEX
IFS	IGRP
ILACC	IMA
IMA_LINK	INDXOBJ
INT	INTERFACE_API
IOCARD	IP
IP_SNMP	IPA
IPACCESS	IPC
IPC_DRVR	IPCGRP
IPCOIR	IPC_RPM
IPC_RSP_CBUS	IPC_URM
IPDCAPP	IPFAST
IPFLOW	IPM_C54X
IPM_DSPRM	IPM_NV_EEPROM
IPMOBILE	IPNAT
IPP	IPRT
IPV6	IPV6FIB
IPX	IRONBUS
ISA	ISDN
ISRHOG	IUA
IVR	IVR_MSB

Table 32. Supported Cisco syslog event sources (continued)	
Cisco syslog facilities	
KERBEROS	KERNEL
KEYMAN	KINEPAK
L2CAC	L2R
L3_MGR	LANCE
LANE	LANMGR
LAPB	LAPP_OFF
LAPP_ON_MSGS	LAT
LCB	LCCEF
LCCOREDUMP	LCINFO
LCLOG	LD
LDP	LES_FDDI
LEX	LIBT2F
LIBTIFF	LINECARD
LINEPROTO	LINK
LLC	LLIST
LNMC	LOADER
LOGIN	LOVE
LPD	LRE_CPE
LRE_LINK	LRE_UPGRADELSS
M32X	MAILBOX
MARS_NETCLK	MBRI
MBUF	MBUS
MBUS_SYS	MC3810_DSX1
MCAST	MCX
MDS	MDT
MEMD	MEMSCAN
MGCP	MGCP_APP
MGMT	MHA_MODE
MICA	MIF68840
MIMIC	MIPC
MIRROR	MISA
MISTRAL	MK5
MLS	MMODEM
MODEM	MODEM_HIST

Table 32. Supported Cisco syslog event sources (continued)	
Cisco syslog facilities	
MODEM_NV	MODEMCALL
RECORD	MODULES
MONITOR	MPA68360
MPC	MPLS_ATM_TRANS
MPLS_TE	MPLS_TE_PCALC
MPOA	MROUTE
MSDP	MSG802
MSPI	MUESLIX
MXT_FREEDM	NATMIB_HELPER
NBAR	NET_SERV
NETWORK_ CLOCK_SYNCH RONIZATION	NEVADA
NHRP	NI2
NIM	NP
NP_BS	NP_DDSM
NP_DSPLIB	NP_EST
NP_MD	NP_MM
NP_SIGLIB	NP_SPE_DS
NP_SSM	NP_VPD
NP_VSM	NRP
NRP2	NRP2_NVMANAGE
NRP2_SE64	NRP2EHSA
NSE	NSP
NSP_APS	NSP_DISK
NSP_OIR	NSPINT
OFFL	OIR
ON_DIAG	OOBP
OSPF	OSPFv3
P2IPC	P2IPC_TRACE
PA	PACK
PAD	PAGP
PAMMBOX	PAR
PARSE_RC	PARSER
PCMCIAFS	PERUSER
PF	PGM

Table 32. Supported Cisco syslog event sources (continued)	
Cisco syslog facilities	
PGMHOST	PIF
PIM	PIX
PKTS	PLATFORM
PLATFORM_ CAT2950	PLATFORM_ CATALST2955
PLATFORM_ CATALYST2950	PLATFORM_ CATALYST2955
PM	PM_MODEM_HIST
PM_MODEM_ MAINT	PMSMPNNI
PORT	POS
POSDW	POSLC
POT1E1	POTS
PPP	PQII
PQUICC	PQUICC_ASYNC
PQUICC_ASYNC_NOMEM	PQUICC_ETHER PQUICC_ETHERNET
PQUICC_FE	PQUICC_SERIAL
PRIVATEVLAN	PRUNING
PS	PV
PW_WATCHER	PXF
PXF_DMA _VIRTUAL_ PORT RPMXF	QA
QEM	QLLC
QM	QOS
QUICC	QUICC_ASYNC
QUICC_ETHER	QUICC_SERIAL
RAC	RADIO
RADIO_DRIVER	RADIUS
RADIX	RAIKO
RBCP	RCMD
Regen	Regen_ MAINBOARD_ ASYNC_PQUICC
REGISTORS	REGISTRY
RESOURCE_MON	RESYNCH
RIP	RLM
RM	RMON
ROUTEMAP_IPC	RP_MLP
RPA	RPC
RPM	RPM_BULK

Table 32. Supported Cisco syslog event sources (continued)	
Cisco syslog facilities	
RPM_CONFIG_COPY	RPM_RED
RPM	RPMXF_QOS_GENERAL
RPMXF_QUEUE_CFG_GENERAL	RPMXF_TOASTER
RPMXFEVENTMGR	RPS
RS_TDM	RSC
RSC_CF	RSCPB
RSP	RSRB
RSVP	RTD
RTT RUDP	S4T68360
SARMGR	SBETH
SCB SCCP	SCHED
SCP	SDLC
SDLLC	SDP
SDSL	SEC
SECURITY	SERVER_CLOCK_SYNC
SERVICE_MODULE	SERVICEMODULE
SGBP	SGCP
SGCP_APP	SHELF
SIGSM	SIP
SKINNYSERVER	SLB SLB_DFPSLC
SLCI	SLIP
SLOT	SLOTDUMP
SMSMF	SMB
SMRP	SNAPSHOT
SNASW	SNMP
SNMP_MGR	SOI
SONET	SONETMIB
SONICT	SPAN
SPANTREE	SPANTREE_FAST
SPANTREE_VLAN_SW	SPARC
SPE	SRCP_APP
SRP	SSE
SSG	SSH
SSI	SSI802

Table 32. Supported Cisco syslog event sources (continued)	
Cisco syslog facilities	
SSRP	SSSMGR
STANDBY	STORM_CONTROL
STRING	STUN
SUBSYS	SUNI_DUAL
SW_VLAN	SW56
SWITCH	SWITCH_IF
SWEPA	SYS
SYSCTLR	SYSLOG_SERVER
SYSMGT_RPC	T1E1SUNI
TAC	TAGCON
TAGCOS	TBRIDGE
TCATM	TCP
TCPIP	TDM
TDM_CLOCK_SYNCHRO NIZATION	TDM_CONN
TDP	TESTPA
TFIB	TI1570
TIB	TIGER
TLV	TMQ
TN	TN3270
TN3270S	TOASTER_IPC
TPLUS	TR
TRANGE	TRUNK
TRUNK_CLOCK	TRUNK_DFC
TRUNK_SERIAL	TSP
TTY	TTYDRIVER
TUN	TUNSS
TXCONN	UBR7200
UCODE	UDLD
UNIX	UPS
URLF	UTIL
VFC	VINES
VIP	VIPMLP
VMPS	VOICE_FSM
VOICE_RC	VOICE_UTIL

Table 32. Supported Cisco syslog event sources (continued)	
Cisco syslog facilities	
VOIPAAA	VOIPFIB
VOLANT	VPA
VPD	VPDN
VPN_HW	VQPCLIENT
VRM	VRRP
VSI_M	VTP
VTSP	WCCP
X25	XCCTSP_VOICE
XCPA	XTAGATM
YS	

Eaton event sources

This topic details the Eaton devices that the Netcool/OMNIbus Knowledge Library supports, and the rules files written to support them.

Supported devices

The following table lists the Eaton devices that the Netcool/OMNIbus Knowledge Library supports.

Table 33. Supported Eaton devices
Supported Eaton Devices
Eaton Environment Monitoring Probes
Eaton Power Chain Devices
Eaton Power Xpert Gateway
Eaton UPS

MIBs

The following table lists the MIBs that describe the data structure of the Eaton event sources for which the Netcool/OMNIbus Knowledge Library contains rules files.

Table 34. Eaton MIBs	
Eaton MIBs	
EATON-PXG-MIB	XUPS-MIB

Empirix event sources

This topic details the Empirix devices that the Netcool/OMNIbus Knowledge Library supports, and the rules files written to support them.

Supported devices

The following table lists the Empirix devices that the Netcool/OMNIbus Knowledge Library supports.

Table 35. Supported Empirix devices
Supported Empirix Devices
Hammer XMS 2.4

MIBs

The following table lists the MIBs that describe the data structure of the Empirix event sources for which the Netcool/OMNIbus Knowledge Library contains rules files.

Table 36. Empirix MIBs	
Empirix MIBs	
EMP-ACTIVEPROBE-MIB	EMP-ERROR-STATS-MIB
EMP-STATS-MIB	empirix-EMP-STATS-MIB--EMP-ERROR-ST ATS
endPoint MIB	statistic MIB
staterr MIB	

Enterasys event sources

This topic details the Enterasys devices that the Netcool/OMNIbus Knowledge Library supports, and the rules files written to support them.

Supported devices

The following table lists the Enterasys devices that the Netcool/OMNIbus Knowledge Library supports.

Table 37. Supported Enterasys devices
Supported Enterasys Devices
Cabletron Smart Switch Router

MIBs

The following table lists the MIBs that describe the data structure of the Enterasys event sources for which the Netcool/OMNIbus Knowledge Library contains rules files.

Table 38. Enterasys MIBs	
Enterasys MIBs	
CTRON-SSR-TRAP-MIB	

EXFO event sources

This topic details the EXFO devices that the Netcool/OMNIbus Knowledge Library supports, and the rules files written to support them.

Supported devices

The following table lists the EXFO devices that the Netcool/OMNIbus Knowledge Library supports.

Table 39. Supported EXFO devices

Supported EXFO Devices
EXFO Service Assurance BrixWorx 7.1

MIBs

The following table lists the MIBs that describe the data structure of the EXFO event sources for which the Netcool/OMNIbus Knowledge Library contains rules files.

Table 40. EXFO MIBs

EXFO MIBs	
BRIX-VERIFIER-MIB	BRIXWORX-SERVER-MIB

Fore event sources

This topic details the Fore devices that the Netcool/OMNIbus Knowledge Library supports, and the rules files written to support them.

Supported devices

The following table lists the Fore devices that the Netcool/OMNIbus Knowledge Library supports.

Table 41. Supported Fore devices

Supported Fore Devices
Fore CellPath 90 ATM Access Multiplexer
Fore ATM Switch

MIBs

The following table lists the MIBs that describe the data structure of the Fore event sources for which the Netcool/OMNIbus Knowledge Library contains rules files.

Table 42. Supported Fore MIB event sources

Fore MIBs	
CELLPATH90-MIB	fore-switch.mib

Fujitsu event sources

This topic details the Fujitsu devices that the Netcool/OMNIbus Knowledge Library supports, and the rules files written to support them.

Supported devices

The following table lists the Fujitsu devices that the Netcool/OMNIbus Knowledge Library supports.

Table 43. Supported Fujitsu devices
Supported Fujitsu Devices
FLASHWAVE 9500 5.1
NETSMART 1500 version 7

MIBs

The following table lists the MIBs that describe the data structure of the Fujitsu event sources for which the Netcool/OMNIbus Knowledge Library contains rules files.

Table 44. Supported Fujitsu MIB event sources	
Fujitsu MIBs	
FNC-COMMON-LOG	FNCNMS

Hatteras event sources

This topic details the Hatteras devices that the Netcool/OMNIbus Knowledge Library supports, and the rules files written to support them.

Supported devices

The following table lists the Hatteras devices that the Netcool/OMNIbus Knowledge Library supports.

Table 45. Supported Hatteras devices
Supported Hatteras Devices
Hatteras HN400/HN4000 7.2.2

MIBs

The following table lists the MIBs that describe the data structure of the Hatteras event sources for which the Netcool/OMNIbus Knowledge Library contains rules files.

Table 46. Hatteras MIBs	
Hatteras MIBs	
HN-ACC-MIB	HN-ALARM-MIB
HN-BDP-MIB	HN-BITS-MIB
HN-BONDING-MIB	HN-CFM-MIB

Table 46. Hatteras MIBs (continued)	
Hatteras MIBs	
HN-DB-MIB	HN-DEVICE-MIB
HN-DS1-MIB	HN-DS3-MIB
HN-ETHERNET-MIB	HN-FAN-MIB
HN-HSMODULE-MIB	HN-LACP-MIB
HN-OAM-MIB	HN-PME-MIB
HN-POWERFEED-MIB	HN-PRIV-MIB
HN-SERVICE-MIB	HN-SFP-MIB
HN-STACKPORT-MIB	HN-SYSTEM-MIB
HN-TDR-MIB	HN-TRAFFIC-MIB

Huawei event sources

This topic details the Huawei devices that the Netcool/OMNIbus Knowledge Library supports, and the rules files written to support them.

Supported devices

The following table lists the Huawei devices that the Netcool/OMNIbus Knowledge Library supports.

Table 47. Supported Huawei devices
Supported Huawei Devices
Huawei AR-Series
Huawei NE-Series
Huawei S-Series

MIBs

The following table lists the MIBs that describe the data structure of the Huawei event sources for which the Netcool/OMNIbus Knowledge Library contains rules files.

Table 48. Huawei MIBs	
Huawei MIBs	
L2TP-MIB	HUAWEI-BFD-MIB
HUAWEI-CONFIG-MAN-MIB	HUAWEI-ENTITY-EXTENT-MIB
HUAWEI-FLASH-MAN-MIB	HUAWEI-HGMP-MIB
HUAWEI-NE80-ETHERNET-MIB	HUAWEI-DEVICE-MIB

Table 48. Huawei MIBs (continued)	
Huawei MIBs	
HUAWEI-MSTP-MIB	HUAWEI-NETSTREAM-MIB
HUAWEI-DC-TRAP-MIB	HUAWEI-RPR-MIB
HUAWEI-PERFORMANCE-MIB--HUAWEI-RMON-EXT-MIB	HUAWEI-SYS-MAN-MIB
HUAWEI-TCP-MIB	HUAWEI-VPLS-MIB
IPV6-MIB	RPR-MIB
H3C-CFCARD-MIB	H3C-COMMON-SYSTEM-MIB
H3C-CONFIG-MAN-MIB	H3C-ENTITY-EXT-MIB
H3C-FLASH-MAN-MIB	H3C-FTM-MIB
H3C-IKE-MONITOR-MIB	H3C-IPSEC-MONITOR-MIB
H3C-NMS.NEW-MIB	H3C-PORT-SECURITY-MIB
H3C-POWER-ETH-EXT-MIB	H3C-PPP-OVER-SONET-MIB
H3C-QOS-PROFILE-MIB	H3C-SYS-MAN-MIB
HUAWEI-8021X-EXT-MIB	HUAWEI-AR46-DEV-ADM-MIB
HUAWEI-BASE-TRAP-MIB	HUAWEI-LAG-MIB
HUAWEI-M8070-MIB	HUAWEI-MPLS-LSR-MIB
HUAWEI-NDEC-MIB	HUAWEI-NEDEVICE-MIB
HUAWEI-POS-MIB	HUAWEI-SPLAT-TRAP-MIB
HUAWEI-SIP-MIB	HUAWEI-SNA-DLSW-MIB
HUAWEI-SPLAT-MIX-MIB	HUAWEI-SPLAT-MSTP-MIB
HUAWEI-SPLAT-RSTP-MIB	

IANA event sources

This topic details the IANA devices that the Netcool/OMNIbus Knowledge Library supports, and the rules files written to support them.

Supported devices

The following table lists the IANA devices that the Netcool/OMNIbus Knowledge Library supports.

Table 49. Supported IANA devices
Supported IANA Devices
Pseudowire Management Emulation Edge-to-Edge (PWE3)

MIBs

The following table lists the MIBs that describe the data structure of the IANA event sources for which the Netcool/OMNIbus Knowledge Library contains rules files.

Table 50. IANA MIBs	
IANA MIBs	
IANA-PWE3-MIB	

IBM Proventia event sources

This topic details the IBM devices that the Netcool/OMNIbus Knowledge Library supports, and the rules files written to support them.

Supported devices

The following table lists the IBM devices that the Netcool/OMNIbus Knowledge Library supports.

Table 51. Supported IBM devices
Supported IBM Proventia Devices
IBM Proventia

MIBs

The following table lists the MIBs that describe the data structure of the IBM Proventia event sources for which the Netcool/OMNIbus Knowledge Library contains rules files.

Table 52. IBM MIBs	
IBM Proventia MIBs	
iss.mib	

IBM BNT event sources

This topic details the IBM BNT devices that the Netcool/OMNIbus Knowledge Library supports, and the rules files written to support them.

Supported devices

The following table lists the IBM BNT devices that the Netcool/OMNIbus Knowledge Library supports.

Table 53. Supported IBM BNT devices
Supported IBM BNT Devices
BNT 1/10Gb Uplink Ethernet Switch Module for IBM BladeCenter

Table 53. Supported IBM BNT devices (continued)
Supported IBM BNT Devices
BNT RackSwitch G8264
BNT RackSwitch G8000
BNT RackSwitch G8124
Layer 2/3 Copper Gigabit Ethernet Switch Module for IBM Blade Center Version 5.2
IBM Flex 10GB L2L3 ScSE Version 7.5
IBM Flex 10GB L2L3 ScSE FC Version 7.5
IBM Flex 1GB L2L3 ScSE Version 7.5
BNT RackSwitch G8052
BNT Virtual Fabric 10G Switch Module

MIBs

The following table lists the MIBs that describe the data structure of the IBM BNT event sources for which the Netcool/OMNIbus Knowledge Library contains rules files.

Table 54. IBM BNT MIBs	
IBM BNT MIBs	
BNT-GbESM-10Ub-RS-MIB	BNT-GbESM-24-10G-L2L3-MIB
BNT-GbESM-1G-L2L3-MIB	IBM-GbScSE-10G-L2L3-MIB
BNT-GbTOR-1-10G-RS-MIB	BNT-GbTOR-10G-L2L3-MIB
BNT-GbTOR-G8052-MIB	BNT-GbTOR-G8264-MIB
LLDP-EXT-DCBX-MIB	

IBM Director event sources

This topic details the IBM Director devices that the Netcool/OMNIbus Knowledge Library supports, and the rules files written to support them.

Supported devices

The following table lists the IBM Director devices that the Netcool/OMNIbus Knowledge Library supports.

Table 55. Supported IBM Director devices
Supported IBM Director Devices
IBM System Director
IBM System Raid

Table 55. Supported IBM Director devices (continued)
Supported IBM Director Devices
IBM System Storage
IBM System State

MIBs

The following table lists the MIBs that describe the data structure of the IBM Director event sources for which the Netcool/OMNIbus Knowledge Library contains rules files.

Table 56. IBM Director MIBs	
IBM MIBs	
IBM-BROCADE-MIB	IBM-System-Storage-MIB
IBM-System-Raid-MIB	IBM-SYSTEM-TRAP-MIB
IBM-QLOGIC-MIB	

IBM FlashSystem event sources

This topic details the IBM FlashSystem devices that the Netcool/OMNIbus Knowledge Library supports, and the rules files written to support them.

Supported devices

The following table lists the IBM FlashSystem devices that the Netcool/OMNIbus Knowledge Library supports.

Table 57. Supported IBM FlashSystem devices
Supported IBM Director Devices
IBM FlashSystem V9000

MIBs

The following table lists the MIBs that describe the data structure of the IBM FlashSystem event sources for which the Netcool/OMNIbus Knowledge Library contains rules files.

Table 58. IBM FlashSystem MIBs	
IBM MIBs	
IBM-SVC-MIB	

IBM PureFlex / Flex System event sources

This topic details the IBM PureFlex devices that the Netcool/OMNIbus Knowledge Library supports, and the rules files written to support them.

Supported devices

The following table lists the IBM PureFlex / Flex System devices that the Netcool/OMNIbus Knowledge Library supports.

Table 59. Supported IBM PureFlex / Flex System devices
Supported IBM PureFlex Devices
IBM PureFlex System - Chassis Management Module
IBM PureFlex System - Integration Management Module
IBM Flex System IB6131 InfiniBand Switch
IBM Flex System FC3171 8Gb SAN Switch
IBM Flex System FC3171 8Gb SAN Pass-thru Module

MIBs

The following table lists the MIBs that describe the data structure of the IBM PureFlex / Flex System event sources for which the Netcool/OMNIbus Knowledge Library contains rules files.

Table 60. IBM PureFlex / Flex System MIBs	
IBM PureFlex MIBs	
BLADESPPALT-MIB	IMMALERT-MIB
MELLANOX-EFM-MIB	
QLOGIC-MIB	

IBM Tivoli Netcool Configuration Manager (ITNCM) event sources

This topic details the IBM ITNCM devices that the Netcool/OMNIbus Knowledge Library supports, and the rules files written to support them.

Supported devices

The following table lists the IBM ITNCM devices that the Netcool/OMNIbus Knowledge Library supports.

Table 61. Supported IBM ITNCM devices
Supported IBM ITNCM Devices
Tivoli Netcool Configuration Manager (ITNCM) 6.4

MIBs

The following table lists the MIBs that describe the data structure of the IBM ITNCM event sources for which the Netcool/OMNIbus Knowledge Library contains rules files.

Table 62. IBM ITNCM MIBs	
IBM ITNCM MIBs	
Intelliden-MIB	

IBM Security QRadar Security Information & Event Management (SIEM) event sources

This topic details the IBM QRadar devices that the Netcool/OMNIbus Knowledge Library supports, and the rules files written to support them.

Supported devices

The following table lists the IBM QRadar devices that the Netcool/OMNIbus Knowledge Library supports.

Table 63. Supported IBM QRadar devices
Supported IBM QRadar Devices
IBM Security QRadar Security Information & Event Management (SIEM) 7.1, 7.2

MIBs

The following table lists the MIBs that describe the data structure of the IBM QRadar event sources for which the Netcool/OMNIbus Knowledge Library contains rules files.

Table 64. IBM QRadar MIBs	
IBM QRadar MIBs	
Q1LABS-MIB	

IBM Vallent event sources

This topic details the IBM Vallent devices that the Netcool/OMNIbus Knowledge Library supports, and the rules files written to support them.

Supported devices

The following table lists the IBM Vallent devices that the Netcool/OMNIbus Knowledge Library supports.

Table 65. Supported IBM Vallent devices
Supported IBM Vallent Devices
Tivoli Netcool Performance Manager for Wireless
Tivoli Netcool Service Quality Manager

MIBs

The following table lists the MIBs that describe the data structure of the IBM Vallent event sources for which the Netcool/OMNIbus Knowledge Library contains rules files.

Table 66. IBM Vallent MIBs	
IBM MIBs	
METRICAALARMTRAP-MIB	TNSQM-MIB

Institute of Electrical and Electronics (IEEE) event sources

This topic details the IEEE devices that the Netcool/OMNIbus Knowledge Library supports, and the rules files written to support them.

Supported devices

The following table lists the IEEE devices that the Netcool/OMNIbus Knowledge Library supports.

Table 67. Supported IEEE devices
Supported IEEE Devices
IEEE 802.11
IEEE 802.16 Base Station
IEEE Connectivity Fault Management (CFM) Module

MIBs

The following table lists the MIBs that describe the data structure of the IEEE event sources for which the Netcool/OMNIbus Knowledge Library contains rules files.

Table 68. IEEE MIBs	
IEEE MIBs	
IEEE8021-CFM-MIB	IEEE802dot11-MIB
WMAN-IF-MIB	IEEE8021-CFM-MIB

Internet Engineering Task Force (IETF) event sources

This topic details the IETF devices that the Netcool/OMNIbus Knowledge Library supports, and the rules files written to support them.

Supported devices

The following table lists the IETF devices that the Netcool/OMNIbus Knowledge Library supports.

Table 69. Supported IETF devices
Supported IETF Devices
Various Internet protocols written by the Internet Engineering Task Force (IETF).

MIBs

The following table lists the MIBs that describe the data structure of the IETF event sources for which the Netcool/OMNIbus Knowledge Library contains rules files.

Table 70. IETF MIBs	
IETF MIBs	
ACCOUNTING-CONTROL-MIB	ADSL-LINE-MIB
APPN-TRAP-MIB	APS-MIB
ATM2-MIB	BGP4-MIB
BRIDGE-MIB	CFM MIB
DIAL-CONTROL-MIB	DISMAN-EVENT-MIB
DISMAN-PING-MIB	DISMAN-SCHEDULE-MIB
DISMAN-SCRIPT-MIB	DISMAN-TRACEROUTE-MIB
DLSW-MIB	DOT12-RPTR-MIB
DOT3-OAM MIB	DS1-MIB
DS3-MIB	EFM-CU
Entity State MIB (RFC 2737)	ENTITY-MIB
Entity-State-MIB (RFC 4268)	FRNETSERV-MIB
ENTITY-MIB	
FRAME-RELAY-DTE-MIB	FR-MFR-MIB
GMPLS-TE-STD-MIB	IEEE-WMAN-IF
HDSL2-SHDSL-LINE-MIB	IETF-DRAFT-MSDP
IETF-DOCS-CABLE-DEVICE-TRAP	IETF-FCMGMT
IETF-DVMRP-STD	IETF-HC-ALARM
IETF-FIBRE-CHANNEL-MGMT	IETF-MPLS-L3VPN-STD
IETF-ISIS-MIB	IETF-MPLS-LSR
IETF-MPLS-LDP-STD	IETF-PTOPO
IETF-POWER-ETHERNET	IETF-RSVP
IETF-PW-STD	IETF-SNA-SDLC
IETF-SNA-NAU	IPATM-IPMC-MIB
IF-MIB	IPV6-MIB
IMA-MIB	IPV6-MIB

Table 70. IETF MIBs (continued)	
IETF MIBs	
IPOA-MIB	ISDN-MIB
IPV6-MIB APPN-MIB	MAU-MIB
L2TP-MIB	MPLS-LSR-STD-MIB
LLDP-MIB	LLDP-EXT-MED-MIB
MIP-MIB	MPLS-VPN-MIB
MPLS-L3VPN-STD-MIB	MPLS-LDP-STD-MIB
MPLS-TE-STD-MIB	OSPF-TRAP-MIB
OSPFV3-MIB	PIM-MIB
PW-STD-MIB	RDBMS-MIB
Printer-MIB	RFC 2863 (IF-MIB)
RFC 1657 (BGP4)	RMON-MIB
RFC1382-MIB	SNMP-REPEATER-MIB
SNMPv2-MIB	SNMPv2-M2M-MIB
RPR-MIB	TN3270E-RT-MIB
UPS-MIB	VRRP-MIB
VPLS-GENERIC-DRAFT-01-MIB	XGCP-MIB

Infinera event sources

This topic details the Infinera devices that the Netcool/OMNIbus Knowledge Library supports, and the rules files written to support them.

Supported devices

The following table lists the Infinera devices that the Netcool/OMNIbus Knowledge Library supports.

Table 71. Supported Infinera devices
Supported Infinera Devices
Infinera ATN release 3.0, 4.0
Infinera DTN release 7.0, 8.0, 8.1, 8.2, 9.0, 10.0 Infinera DTN-X release 8.0, 8.1, 8.2, 9.0, 10.0
Infinera FIS release 7.0, 8.0, 8.1, 8.2, 9.0, 10.0, 11.0, 16.1, 17.1, 18.0

MIBs

The following table lists the MIBs that describe the data structure of the Infinera event sources for which the Netcool/OMNIbus Knowledge Library contains rules files.

Table 72. Infinera MIBs	
Infinera MIBs	
INFINERA-NOTIFICATION-MIB	INFINERA-TRAP-MIB

Juniper Networks event sources

This topic details the Juniper devices that the Netcool/OMNIbus Knowledge Library supports, and the rules files written to support them.

Supported devices

The following table lists the Juniper devices that the Netcool/OMNIbus Knowledge Library supports.

Table 73. Supported Juniper devices
Supported Juniper Devices
EX-Series, E-Series, J-series, M-series, MX-series, SRX-series, WX-series, T-series and any other Juniper Networks network elements that support JUNOS 16.1 (or below).
vMX series and vSRX Virtual Firewall that support JUNOS 16.1.
QFabric devices: QFX3500 and QFX3600
E-Series and any other Juniper Networks network elements that support JUNOSe 11.3 (or below).
BX-Series and any other Juniper Networks network elements that support BX-OS 4.1.
MobileNext Broadband Gateway
TCA6000 Timing Client 2.4 TCA6500 Timing Client 2.4
TCA8000 Timing Server 2.4 TCA8500 Timing Server 2.4

MIBs

The following table lists the MIBs that describe the data structure of the Juniper event sources for which the Netcool/OMNIbus Knowledge Library contains rules files.

Table 74. Juniper MIBs	
Juniper MIBs	
APS-MIB	APS-MIB-JUNI
BGP4-V2-MIB-JUNIPER	BFD-STD-MIB
DVMRP-STD-MIB	DVMRP-STD-MIB-JUNI

Table 74. Juniper MIBs (continued)	
Juniper MIBs	
JUNIPER-DFC-MIB	JNX-MPLS-TE-P2MP-STD-MIB
JUNIPER-CFGMGMT-MIB	JUNIPER-JS-AUTH-MIB
JUNIPER-L2ALD-MIB	JUNIPER-JS-SCREENING-MIB
JUNIPER-ADDRESS-POOL-MIB	JUNIPER-BFD-MIB
JUNIPER-CFGMGMT-MIB	JUNIPER-CLI-MIB
JUNIPER-COLLECTOR-MIB	JUNIPER-CHASSIS-CLUSTER-MIB
JUNIPER-COS-MIB	JUNIPER-DOM-MIB
JUNIPER-DHCP-MIB	JUNIPER-DOS-PROTECTION-PLATFORM-MIB
JUNIPER-DVMRP-MIB	JUNIPER-ERX-SYSTEM-MIB
JUNIPER-EVENT-MIB	JUNIPER-EX-MAC-NOTIFICATION-MIB
JUNIPER-FILE-XFER-MIB	JUNIPER-FABRIC-CHASSIS-MIB
JUNIPER-IF-MIB	JUNIPER-IP-MIB
JUNIPER-MIB	JUNIPER-L2CP-FEATURES-MIB
JUNIPER-JS-IDP-MIB	JUNIPER-JS-NAT-MIB
JUNIPER-JS-PACKET-MIRROR-MIB	JUNIPER-JS-UTM-AV-MIB
JUNIPER-JDHCP-MIB	JUNIPER-JDHCPV6-MIB -
JUNIPER-JVAE-NODE-MIB	JUNIPER-LICENSE-MIB
JUNIPER-LDP-MIB	JUNIPER-LOG-MIB
JUNIPER-MAG-MIB	JNX-MPLS-TE-P2MP-STD-MIB
JUNIPER-MOBILE-GATEWAY-AAA-MIB	JUNIPER-MOBILE-GATEWAY-DHCP-MIB
JUNIPER-MOBILE-GATEWAY-SGW-GTP-MIB	JUNIPER-MOBILE-GATEWAY-SM-MIB
JUNIPER-MOBILITY-CHARGING-MIB	JUNIPER-MOBILITY-SGW-CHARGING-MIB
JUNIPER-MOBILE-GATEWAY-SM-IP-POOL-MIB	JUNIPER-MOBILE-GATEWAY-GTP-MIB
JUNIPER-MIMSTP-MIB	JUNIPER-MPLS-MIB
JUNIPER-MROUTER-MIB	JUNIPER-OTN-MIB

Table 74. Juniper MIBs (continued)	
Juniper MIBs	
JUNIPER-NAT-MIB	JUNIPER-MPLS-LDP
JUNIPER-PACKET-MIRROR-MIB	JUNIPER-PING-MIB
JUNIPER-PMon-MIB	JUNIPER-JS-SCREENING-MIB
JUNIPER-PFE-MIB	JUNIPER-QFABRIC-MIB
JUNIPER-RADIUS-CLIENT-MIB	JUNIPER-REDUNDANCY-MIB
JUNIPER-RMON-MIB	JUNIPER-SONET-MIB
JUNIPER-SECURE-ACCESS-PORT-MIB	JUNIPER-SYRAH-MIB
JUNIPER-SP-MIB	JUNIPER-SMI
JUNIPER-SNMP-SET-MIB	
JUNIPER-SYSLOG-MIB	JUNIPER-SYSTEM-CLOCK-MIB
JUNIPER-SP	JUNIPER-SYSTEM-MIB
JNPR-TIMING-MIB	JUNIPER-TIMING-NOTFNS-MIB
JUNIPER-TLB-MIB	JUNIPER-UNI-SONET-MIB
JUNIPER-VIRTUALCHASSIS-MIB	JUNIPER-UNI-ATM-MIB
JUNIPER-OSPFV3-MIB	JUNIPER-USER-AAA-MIB
JUNIPER-VPN-MIB	VPLS-LDP-DRAFT-01-MIB

Juniper syslog-based event sources

The following table lists the Juniper syslog-based event sources for which the Netcool/OMNIbus Knowledge Library contains rules files.

Table 75. Supported Juniper syslog event sources	
Juniper syslog message supported prefixes	
ACCT	ALARMD
ANALYZER	ANCPD
ANTISPAM	APPID
APPIDD	APPPXY
APPTRACK	
ASP	AUDITD

Table 75. Supported Juniper syslog event sources (continued)	
Juniper syslog message supported prefixes	
AUTHD	AUTOCONFD
AUTOD	AV
BFDD	BOOTPD
CFMD	COSD
CHASSISM	
DBCX	DCD
DDOS	DFCD
DFWD	DHCPD
DOT1XD	DYNAMIC
ESWD	EVENTD
FABOAMD	FC
FCOE	
FIP	FIPS
RTLOGD	RTPERF
SAVAL	SFW
SDXD	SNMP
SMTPD	SNMPD
SPD	SSHD
SSL	SSH
SYSTEM	
TFTPD	UFDD
UI	UTMD
VCCPD	VM
VRRPD	WEB
WEBFILTER	

Keymile event sources

This topic details the Keymile devices that the Netcool/OMNIbus Knowledge Library supports, and the rules files written to support them.

Supported devices

The following table lists the Keymile devices that the Netcool/OMNIbus Knowledge Library supports.

Table 76. Supported Keymile devices

Supported Keymile Devices
UNEM R8C SP4

MIBs

The following table lists the MIBs that describe the data structure of the Keymile event sources for which the Netcool/OMNIbus Knowledge Library contains rules files.

Table 77. Keymile MIBs

Keymile MIBs	
UNEM-MIB	

MRV Communications event sources

This topic details the MRV Communications devices that the Netcool/OMNIbus Knowledge Library supports, and the rules files written to support them.

Supported devices

The following table lists the MRV Communications devices that the Netcool/OMNIbus Knowledge Library supports.

Table 78. Supported MRV Communications devices

Supported MRV Communications Devices
Megavision NMS 2.42x and higher
Pro-Vision PV2.0

MIBs

The following table lists the MIBs that describe the data structure of the MRV Communications event sources for which the Netcool/OMNIbus Knowledge Library contains rules files.

Table 79. MRV Communications MIBs

MRV Communications MIBs	
NMS-MIB	OS-RFC2544 -MIB
OA-DEV-LINK -PROTECTION-MIB	OA-ETHERNET -OAM-MIB
OS-PORT-MIB	OA-PORT-LIN-MIB

Table 79. MRV Communications MIBs (continued)	
MRV Communications MIBs	
MRV-ProVision-MIB	

NetScout event sources

This topic details the NetScout devices that the Netcool/OMNIbus Knowledge Library supports, and the rules files written to support them.

Supported devices

The following table lists the NetScout devices that the Netcool/OMNIbus Knowledge Library supports.

Table 80. Supported NetScout devices
Supported NetScout Devices
nGenius Performance Manager 4.11

MIBs

The following table lists the MIBs that describe the data structure of the NetScout event sources for which the Netcool/OMNIbus Knowledge Library contains rules files.

Table 81. NetScout MIBs	
NetScout MIBs	
NETSCOUT-SERVER-MIB	

Network Harmoni event sources

This topic details the Network Harmoni devices that the Netcool/OMNIbus Knowledge Library supports, and the rules files written to support them.

Supported devices

The following table lists the Network Harmoni devices that the Netcool/OMNIbus Knowledge Library supports.

Table 82. Supported Network Harmoni devices
Supported Network Harmoni Devices
Network Harmoni

MIBs

The following table lists the MIBs that describe the data structure of the Network Harmoni event sources for which the Netcool/OMNIbus Knowledge Library contains rules files.

Table 83. Supported Network Harmoni MIB event sources	
Network Harmoni MIBs	
agentconfig-mib	ipconfig-mib

Table 83. Supported Network Harmoni MIB event sources (continued)	
Network Harmoni MIBs	
SYSRES-MIB	

Nortel event sources

This topic details the Nortel devices that the Netcool/OMNIbus Knowledge Library supports, and the rules files written to support them.

Supported devices

The following table lists the Nortel devices that the Netcool/OMNIbus Knowledge Library supports.

Table 84. Supported Nortel devices
Supported Nortel Devices
Nortel OPTera 80
Nortel Transparent LAN Service

MIBs

The following table lists the MIBs that describe the data structure of the Nortel event sources for which the Netcool/OMNIbus Knowledge Library contains rules files.

Table 85. Supported Nortel MIB event sources	
Nortel MIBs	
BAY-STACK-NOTIFICATIONS-MIB SWCOMMGMT-MIB	BN-LOG-MESSAGE-MIB TLS-MIB
NORTEL-OPTERA-MIB	NORTEL-OPTERA-PUB-MIB
SSG-5000-CHASSIS-MIB	S5-CHASSIS-TRAP-MIB

NTNTech event sources

This topic details the NTNTech devices that the Netcool/OMNIbus Knowledge Library supports, and the rules files written to support them.

Supported devices

The following table lists the NTNTech devices that the Netcool/OMNIbus Knowledge Library supports.

Table 86. Supported NTNTech devices
Supported NTNTech Devices
Ntntech Network Management Services

MIBs

The following table lists the MIBs that describe the data structure of the NTNTech event sources for which the Netcool/OMNIbus Knowledge Library contains rules files.

Table 87. Supported NTNTech MIB event sources	
NTNTech MIBs	
ntntech-nms-traps-MIB	

Rapid City event sources

This topic details the Rapid City devices that the Netcool/OMNIbus Knowledge Library supports, and the rules files written to support them.

Supported devices

The following table lists the Rapid City devices that the Netcool/OMNIbus Knowledge Library supports.

Table 88. Supported Rapid City devices
Supported Rapid City Devices
Nortel Ethernet Routing Switch 8600 (ERS8600)

MIBs

The following table lists the MIBs that describe the data structure of the Rapid City event sources for which the Netcool/OMNIbus Knowledge Library contains rules files.

Table 89. Supported Rapid City MIB event sources	
Rapid City MIBs	
RAPID-CITY.mib	Rapidcity-SWCOMMGMT

Riverbed event sources

This topic details the Riverbed devices that the Netcool/OMNIbus Knowledge Library supports, and the rules files written to support them.

Supported devices

The following table lists the Riverbed devices that the Netcool/OMNIbus Knowledge Library supports.

Table 90. Supported Riverbed devices
Supported Riverbed Devices
Cascade Profiler 9.0

MIBs

The following table lists the MIBs that describe the data structure of the Riverbed event sources for which the Netcool/OMNIbus Knowledge Library contains rules files.

Table 91. Supported Riverbed MIB event sources	
Riverbed MIBs	
MAZU-MIB	

SAP event sources

This topic details the SAP devices that the Netcool/OMNIbus Knowledge Library supports, and the rules files written to support them.

Supported Devices

Table 92. SAP supported devices
Supported SAP Devices
SAP Solution Manager 7.1

Table 93. SAP MIB event sources	
SAP MIBs	
SAP-MIB	

Sandvine event sources

This topic details the Sandvine devices that the Netcool/OMNIbus Knowledge Library supports, and the rules files written to support them.

Supported devices

The following table lists the Sandvine devices that the Netcool/OMNIbus Knowledge Library supports.

Table 94. Supported Sandvine devices	
Supported Sandvine Devices	
Network Demographics Server (NDS) 5.51	Policy Traffic Switch (PTS) 5.51
Service Definition Manager (SDM) 5.51	Subscriber Policy Broker (SPB) 5.51

MIBs

The following table lists the MIBs that describe the data structure of the Sandvine event sources for which the Netcool/OMNIbus Knowledge Library contains rules files.

Table 95. Sandvine MIBs	
Sandvine MIBs	
SANDVINE-MIB	

Stratacom event sources

This topic details the Stratacom devices that the Netcool/OMNIbus Knowledge Library supports, and the rules files written to support them.

Supported devices

The following table lists the Stratacom devices that the Netcool/OMNIbus Knowledge Library supports.

Table 96. Supported Stratacom devices
Supported Stratacom Devices
Cisco Voice Interworking Service Module (VISM)
Cisco CNS Notification Engine (CNOTE)

MIBs

The following table lists the MIBs that describe the data structure of the Stratacom event sources for which the Netcool/OMNIbus Knowledge Library contains rules files.

Table 97. Supported Stratacom MIB event sources	
Stratacom MIBs	
stratacom-SSNG-SYSLOG-MIB	

Synoptics event sources

This topic details the Synoptics devices that the Netcool/OMNIbus Knowledge Library supports, and the rules files written to support them.

Supported devices

The following table lists the Synoptics devices that the Netcool/OMNIbus Knowledge Library supports.

Table 98. Supported Synoptics devices
Supported Synoptics Devices
BayNetworks Synoptics 5000 Chassis
Nortel Bay Stack Products
Nortel Log Message Facility

MIBs

The following table lists the MIBs that describe the data structure of the Synoptics event sources for which the Netcool/OMNIbus Knowledge Library contains rules files.

Table 99. Synoptics MIBs	
Synoptics MIBs	
synoptics-BAY-STACK-NOTIFICATIONS	synoptics-BN-LOG-MESSAGE
synoptics-S5-CHASSIS-TRAP	

Trilliant event sources

This topic details the Trilliant devices that the Netcool/OMNIbus Knowledge Library supports, and the rules files written to support them.

Supported devices

The following table lists the Trilliant devices that the Netcool/OMNIbus Knowledge Library supports.

Table 100. Supported Trilliant devices

Supported Trilliant Devices
Trilliant smart meters

MIBs

The following table lists the MIBs that describe the data structure of the Trilliant event sources for which the Netcool/OMNIbus Knowledge Library contains rules files.

Table 101. Trilliant MIBs

Trilliant MIBs	
SKYPILOT-MIB	SECUREMESH-INVENTORY-MIB
SECUREMESH-STATISTICS-MIB	

Appendix B. Notices and Trademarks

This appendix contains the following sections:

- Notices
- Trademarks

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