IBM® Tivoli® Netcool/OMNIbus Standard Input Probe
4.0

Reference Guide
July 20, 2017

SC23-7925-05

Note

Before using this information and the product it supports, read the information in Appendix A, “Notices and Trademarks,” on page 7.

Edition notice

This edition (SC23-7925-05) applies to version 4.0 of IBM Tivoli Netcool/OMNIbus Standard Input Probe and to all subsequent releases and modifications until otherwise indicated in new editions.

This edition replaces SC23-7925-04.

Contents

About this guide

The following sections contain important information about using this guide.

Document control page

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

The IBM Tivoli Netcool/OMNIbus Standard Input Probe documentation is provided in softcopy format only. To obtain the most recent version, visit the IBM® Tivoli® Information Center:

http://publib.boulder.ibm.com/infocenter/tivihelp/v8r1/index.jsp?topic=/com.ibm.tivoli.nam.doc/welcome_ptsm.htm

Table 1. Document modification history

Document version	Publication date	Comments
SC23-7925-00	June 20, 2006	First IBM publication.
SC23-7925-01	August 22, 2008	Support for Linux® for zSeries added.
SC23-7925-02	December 31, 2008	Summary table updated. IPv6 support information added. FIPS information added. Installation section added.
SC23-7925-03	June 10, 2011	Information about operating system conventions added in "Conventions used in this guide" on page vi. Installation section replaced by "Installing probes" on page 2. Property information updated in "Escape codes" on page 3. **ProcessEscapes** property updated in "Properties and command line options" on page 4. Troubleshooting information added in "Troubleshooting" on page 5.
SC23-7925-04	November 30, 2012	Summary table updated in "Summary" on page 1 Property information updated in "Escape codes" on page 3. **ProcessEscapes** property updated in "Properties and command line options" on page 4.
SC23-7925-05	July 20, 2017	"Example usage" on page 3 added.

Conventions used in this guide

All probe guides use standard conventions for operating system-dependent environment variables and directory paths.

Operating system-dependent variables and paths

All probe guides use standard conventions for specifying environment variables and describing directory paths, depending on what operating systems the probe is supported on.

For probes supported on UNIX and Linux operating systems, probe guides use the standard UNIX conventions such as **$***variable* for environment variables and forward slashes (**/**) in directory paths. For example:

`$OMNIHOME/probes`

For probes supported only on Windows operating systems, probe guides use the standard Windows conventions such as **%***variable***%** for environment variables and backward slashes (****) in directory paths. For example:

`%OMNIHOME%\probes`

For probes supported on UNIX, Linux, and Windows operating systems, probe guides use the standard UNIX conventions for specifying environment variables and describing directory paths. When using the Windows command line with these probes, replace the UNIX conventions used in the guide with Windows conventions. If you are using the bash shell on a Windows system, you can use the UNIX conventions.

Note : The names of environment variables are not always the same in Windows and UNIX environments. For example, %TEMP% in Windows environments is equivalent to $TMPDIR in UNIX and Linux environments. Where such variables are described in the guide, both the UNIX and Windows conventions will be used.

Operating system-specific directory names

Where Tivoli Netcool/OMNIbus files are identified as located within an *arch* directory under NCHOME or OMNIHOME, *arch* is a variable that represents your operating system directory. For example:

`$OMNIHOME/probes/`*`arch`*

The following table lists the directory names used for each operating system.

Note : This probe may not support all of the operating systems specified in the table.

Table 2. Directory names for the arch variable

Operating system	**Directory name represented by *arch***
AIX® systems	`aix5`
Red Hat Linux and SUSE systems	`linux2x86`
Linux for System z	`linux2s390`
Solaris systems	`solaris2`
Windows systems	`win32`

OMNIHOME location

Probes and older versions of Tivoli Netcool/OMNIbus use the OMNIHOME environment variable in many configuration files. Set the value of OMNIHOME as follows:

- On UNIX and Linux, set $OMNIHOME to $NCHOME/omnibus.
- On Windows, set %OMNIHOME% to %NCHOME%\omnibus.

Chapter 1. Standard Input Probe

The IBM Tivoli Netcool/OMNIbus Standard Input Probe takes event data from Standard Input (stdin) and sends it to the ObjectServer.

This guide contains the following sections:

Summary

Each probe works in a different way to acquire event data from its source, and therefore has specific features, default values, and changeable properties. Use this summary information to learn about this probe.

The following table provides a summary of the Standard Input Probe.

Table 3. Summary

Probe target	Standard input data stream (stdin)
Probe executable file name	`nco_p_stdin`
Probe installation package	`omnibus-`*`arch`*`-probe-nco-p-stdin-`*`version`*
Package version	4.0
Probe supported on	For details of supported operating systems, see the following Release Notice on the IBM Software Support Website: https://www-304.ibm.com/support/docview.wss?uid=swg21414844
Properties file	`$OMNIHOME/probes/`*`arch`*`/stdin.props`
Rules file	`$OMNIHOME/probes/`*`arch`*`/stdin.rules`
Requirements	For details of any additional software that this probe requires, refer to the `description.txt` file that is supplied in its download package.
Connection method	The probe reads standard input (stdin).
Remote connectivity	Not available

Table 3. Summary (continued)	
Multicultural support	Available
Peer-to-peer failover functionality	Not available
IP environment	IPv4 and IPv6
Federal Information Processing Standards (FIPS)	IBM Tivoli Netcool/OMNIbus uses the FIPS 140-2 approved cryptographic provider: IBM Crypto for C (ICC) certificate 384 for cryptography. This certificate is listed on the NIST website at http://csrc.nist.gov/groups/STM/cmvp/documents/140-1/1401val2004.htm. For details about configuring Netcool/OMNIbus for FIPS 140-2 mode, see the *IBM Tivoli Netcool/OMNIbus Installation and Deployment Guide*.

Installing probes

All probes are installed in a similar way. The process involves downloading the appropriate installation package for your operating system, installing the appropriate files for the version of Netcool/OMNIbus that you are running, and configuring the probe to suit your environment.

The installation process consists of the following steps:

1. Downloading the installation package for the probe from the Passport Advantage Online website.

   Each probe has a single installation package for each operating system supported. For details about how to locate and download the installation package for your operating system, visit the following page on the IBM Tivoli Knowledge Center:

   http://www-01.ibm.com/support/knowledgecenter/SSSHTQ/omnibus/probes/all_probes/wip/reference/install_download_intro.html
2. Installing the probe using the installation package.

   The installation package contains the appropriate files for all supported versions of Netcool/OMNIbus. For details about how to install the probe to run with your version of Netcool/OMNIbus, visit the following page on the IBM Tivoli Knowledge Center:

   http://www-01.ibm.com/support/knowledgecenter/SSSHTQ/omnibus/probes/all_probes/wip/reference/install_install_intro.html
3. Configuring the probe.

   This guide contains details of the essential configuration required to run this probe. It combines topics that are common to all probes and topics that are peculiar to this probe. For details about additional configuration that is common to all probes, see the *IBM Tivoli Netcool/OMNIbus Probe and Gateway Guide*.

Using the probe

The probe can be used as a prototyping agent for the rapid deployment of proof-to-concept probes, as a building block in custom production integrations, and as a means of replaying raw capture files from other probes (for example, to test rules files).

The examples given below show you how to use the probe to process data from `cat`, `tail`, and Telnet data streams.

Example: `cat`

In this example, the probe receives data from the `cat` command, which outputs the contents of a file named `myevents`:

```
cat myevents | nco_p_stdin
```

Example: `tail`

In this example, the probe receives data from the `tail` command, which outputs the last ten lines of a log file named `myeventlog`:

```
tail -f myeventlog | nco_p_stdin
```

Example: Telnet

In this example, the probe receives data from the `telnet` command, which outputs raw data from the host and port specified by the *`host`* and *`port`* parameters:

```
telnet host port | nco_p_stdin
```

Example usage

In this example, the Standard Input Probe is used to replay the raw captured data from the SNMP Probe (`nco_p_mttrapd`) and forward it to the ObjectServer.

Use the following steps:

1. Set the following property in the `mttrapd.props` file:

   ```
   RawCaptureFile : '$OMNIHOME/var/mttrapd.cap'
   ```

2. Run the SNMP Probe using the `-raw` command-line option:

   ```
   $OMNIHOME/probes/nco_p_mttrapd -server NCOMS -raw
   ```

3. Set the **`RulesFile`** property in the `stdin.props` file to point to the SNMP Probe rules file:

   ```
   RulesFile : '$OMNIHOME/probes/<arch>/mttrapd.rules'
   ```

   Where *<arch>* depends on which operating system you are running the probe.

4. Replay the raw captured data from the SNMP Probe using the Standard Input Probe:

   ```
   cat mttrapd.cap | $OMNIHOME/probes/nco_p_stdin –server <server>
   ```

   Where *<server>* is the name of the primary ObjectServer.

Data acquisition

Each probe uses a different method to acquire data. Which method the probe uses depends on the target system from which it receives data.

The probe reads data from standard input (stdin) provided by programs such as `cat`, `tail`, and Telnet. The probe expects to receive data in the same format as data stored in a standard raw data capture file. Raw capture is available for all probes and is part of the standard probe C library (`common-libOpl`). The probe dynamically generates elements based on the format of the raw data.

Escape codes

The standard input (stdin) processed by the probe can contain C-style escape codes in the form of characters preceded by a backslash character (\).

The probe can treat escape codes as either raw text or as escaped characters. For example, the probe can treat `\r` either as the raw text "\r" or as a carriage return character.

You can specify how the probe handles the backslash escape codes using the **`ProcessEscapes`** property. If you specify a value of `0` for the **`ProcessEscapes`** property, the probe treats the backslash character as raw text. If you specify a value of `1`, the probe treats the backslash character as an escape

character. The default value is `0` which means that there is no special processing and the backslash character is treated as raw text.

Properties and command line options

You use properties to specify how the probe interacts with the device. You can override the default values by using the properties file or the command line options.

The following table describes the properties and command line options specific to this probe. For information about default properties and command line options, see the *IBM Tivoli Netcool/OMNIbus Probe and Gateway Guide* (SC14-7608).

Table 4. Properties and command line options

Property name	Command line option	Description
ProcessEscapes *integer*	`-noprocessescapes` (equivalent to **ProcessEscapes** with a value of `0`) `-processescapes` (equivalent to **ProcessEscapes** with a value of `1`)	Use this property to specify how the probe handles escape codes. This property takes the following values: `0`: The probe treats the backslash character as normal raw text. `1`: The probe treats the backslash character as an escape character. The default is `0`.

Elements

The probe dynamically generates elements from the data it receives.

An event consists of one or more name-value pairs separated by blank lines. The probe generates one element for each name-value pair. The following example describes three events, each of which consists of two name-value pairs:

```
name1 : value1
name2 : value2

name1 : value3
name2 : value4

name1 : value5
name2 : value6
```

Error messages

There are no error messages specific to this probe.

For information about generic error messages, see the *IBM Tivoli Netcool/OMNIbus Probe and Gateway Guide* (SC14-7608).

ProbeWatch messages

There are no ProbeWatch messages specific to this probe.

For information about generic ProbeWatch messages, see the *IBM Tivoli Netcool/OMNIbus Probe and Gateway Guide* (SC14-7608).

Troubleshooting

This section contains troubleshooting information and details about known issues.

Failure to set token values

The probe generates an error message similar to the following:

```
Setting of values failed for Summary: element already exists.
```

This problem occurs when a token in the raw capture file has the same name as one used by the `common-libOpl` library. In most cases, this error can be avoided by enabling the **ProcessEscapes** property.

If the problem occurs when the **ProcessEscapes** property is enabled, you can manually remove problematic tokens from the raw capture file before running the probe. In the following example, the `grep` command is used to remove the `Status_Summary` token from the file before passing it to the probe:

```
cat filename | grep -v "Status_Summary = ''" | nco_p_stdin
```

Appendix A. Notices and Trademarks

This appendix contains the following sections:

- Notices
- Trademarks

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