

IBM® Tivoli® Netcool/OMNIbus Probe for
Alcatel-Lucent 1300 XMC (CORBA)
1.0

Reference Guide
July 01, 2011



Note

Before using this information and the product it supports, read the information in [Appendix A, “Notices and Trademarks,”](#) on page 15.

Edition notice

This edition (SC27-2787-00) applies to version 1.0 of IBM Tivoli Netcool/OMNIbus Probe for Alcatel-Lucent 1300 XMC (CORBA) and to all subsequent releases and modifications until otherwise indicated in new editions.

© **Copyright International Business Machines Corporation 2011.**

US Government Users Restricted Rights – Use, duplication or disclosure restricted by GSA ADP Schedule Contract with IBM Corp.

Contents

About this guide.....	v
Document control page.....	v
Conventions used in this guide.....	v
Chapter 1. Probe for Alcatel-Lucent 1300 XMC (CORBA).....	1
Summary.....	1
Installing probes.....	2
Internationalization support.....	3
Example multi-byte character set on Solaris.....	3
Firewall considerations.....	4
Configuring the probe.....	4
Data acquisition.....	5
Status checking.....	5
Resynchronization.....	5
Inactivity.....	6
Backoff strategy.....	6
Command line interface.....	6
Peer-to-peer failover functionality.....	7
Running multiple probes.....	7
Properties and command line options.....	8
Elements.....	11
Error messages.....	13
ProbeWatch messages.....	14
Running the probe.....	14
Appendix A. Notices and Trademarks.....	15
Notices.....	15
Trademarks.....	16

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 Probe for Alcatel-Lucent 1300 XMC (CORBA) documentation is provided in softcopy format only. To obtain the most recent version, visit the IBM® Tivoli® Knowledge Center:

<http://www-01.ibm.com/support/knowledgecenter/?lang=en#!/SSSHTQ/omnibus/probes/common/Probes.html>

Table 1. Document modification history		
Document version	Publication date	Comments
SC27-2787-00	July 01, 2011	First IBM publication.

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.

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. Probe for Alcatel-Lucent 1300 XMC (CORBA)

The Alcatel-Lucent 1300 Cross-Domain Management Center (XMC) is an element management system (EMS) that provides several standard interfaces for operations support, one of which is the 3rd Generation Partnership Project Release 6 (3GPP R6) specification.

The Probe for Alcatel-Lucent 1300 XMC (CORBA) acquires events from the Alcatel-Lucent 1300 XMC using a Common Object Request Broker Architecture (CORBA) 3GPP interface. The probe connects to the CORBA interface using an Interoperable Object Reference (IOR) file.

This guide contains the following sections:

- [“Summary” on page 1](#)
- [“Installing probes” on page 2](#)
- [“Internationalization support” on page 3](#)
- [“Firewall considerations” on page 4](#)
- [“Configuring the probe” on page 4](#)
- [“Data acquisition” on page 5](#)
- [“Properties and command line options” on page 8](#)
- [“Elements” on page 11](#)
- [“Error messages” on page 13](#)
- [“ProbeWatch messages” on page 14](#)
- [“Running the probe” on page 14](#)

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 Probe for Alcatel-Lucent 1300 XMC (CORBA).

Probe target	Alcatel-Lucent 1300 XMC
Probe executable name	nco_p_alcatel_xmc_corba
Probe installation package	omnibus-arch-probe-nco-p-alcatel-xmc-corba-version
Package version	1.0
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=swg21503121
Properties file	\$OMNIHOME/probes/arch/alcatel_xmc_corba.props

<i>Table 3. Summary (continued)</i>	
Rules file	\$OMNIHOME/probes/arch/alcatel_xmc_corba.rules
Minimum requirements	A currently supported version of IBM Tivoli Netcool/OMNIbus. Nonnative Probe Server: probe-nonnative-base-12 Probe SDK Java component: probe-sdk-java-1 Command Port library: probe-command-port-3 Java Runtime Environment (JRE) 1.5 IBM Object Request Broker (IBM ORB, supplied with Netcool/OMNIbus)
Connection method	CORBA
Remote connectivity	The probe can connect to a remote device using a CORBA interface.
Multicultural support	Not Available
Peer-to-peer failover functionality	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 <i>IBM Tivoli Netcool/OMNIbus Installation and Deployment Guide</i> .

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*.

Internationalization support

The probe supports multibyte character sets (for example, Japanese) and character sets that contain individual multibyte characters (for example German, French, and Spanish). To view the character sets correctly, you must configure the locale settings on the host machine correctly.

If you are using a language that contains multibyte characters, you must set the LANG environment variables to the name of your character set, and export the LC_ALL environment variable. For example, if you are using Japanese, set these environment variables to ja_JP.UTF-8; if you are using German, set these environment variables to de_DE.UTF-8. This will enable the probe to recognise the multibyte characters used by your character set when they occur in any network events.

The probe supports the following language locales:

Table 4. Supported language locales

Languages	AIX	HP-UX	Solaris	Linux
English (US)	en_US	en_US	en_US	en_US
Simplified Chinese	zh_CN	zh_CN	zh_CN	zh_CN
Traditional Chinese	zh_TW	zh_TW.eucTW	Zh_TW.big5	zh_TW.big5
Czech	cs_CZ	cs_CZ	cs	cs_CZ
French (standard)	fr_FR	fr_FR	fr	fr_FR
German (standard)	de_DE	de_DE	de	de_DE
Hungarian	hu_HU	hu_HU	hu	hu_HU
Italian (standard)	it_IT	it_IT	it	it_IT
Japanese	ja_JP	ja_JP	ja	ja_JP
Korean	ko_KR	ko_KR	ko	ko_KR
Polish	pl_PL	pl_PL	pl	pl_PL
Portuguese (Brazilian)	pt_BR	pt_BR	pt	pt_BR
Russian	ru_RU	ru_RU	ru	ru_RU
Spanish	es_ES	es_ES	es	es_ES

Example multi-byte character set on Solaris

The following steps describe how to configure Solaris to use the Japanese character set:

1. Install the necessary components for Japanese on to the host machine using the Solaris CD.
2. Set the LANG and LC_ALL environment variables to ja_JP PCK. This uses SJIS encoding.

Note : You may have to set the LANG in the host machine's default settings file and reboot it to make the changes take effect.

3. Make sure that the file \$OMNIHOME/platform/arch/locales/locales.dat has the following entry:

```
locale = ja_JP PCK, japanese, sjis
```

Where ja_JP PCK is the vendor locale, japanese is the Sybase language, and sjis is the Sybase character set.

Firewall considerations

When using CORBA probes in conjunction with a firewall, the firewall must be configured so that the probe can connect to the target system.

Most CORBA probes can act as both a server (listening for connections from the target system) and a client (connecting to the port on the target system to which the system writes events). If you are using the probe in conjunction with a firewall, you must add the appropriate firewall rules to enable this dual behavior.

There are three possible firewall protection scenarios, for which you must determine port numbers before adding firewall rules:

1. If the host on which the probe is running is behind a firewall, you must determine what remote host and port number the probe will connect to.
2. If the host on which the target system is running is behind a firewall, you must determine the incoming port on which the probe will listen and to which the target system will connect.
3. If each host is secured with its own firewall, you must determine the following four ports:
 - a. The outgoing port (or port range) for the probe.
 - b. The hostname and port of the target system.
 - c. The outgoing port on which the target system sends events if the probe is running as a client.
 - d. The incoming port on which the probe listens for incoming events.

Note : Most, but not all, CORBA probes listen on the port specified by the **ORBLocalPort** property. The default value for this property is 0, which means that an available port is selected at random. If the probe is behind a firewall, the value of the **ORBLocalPort** property must be specified as a fixed port number.

CORBA probes that use EventManager or NotificationManager objects may use different hosts and ports from those that use NamingService and EntryPoint objects. If the probe is configured to get object references from a NamingService or EntryPoint object, you must obtain the host and port information from the system administrator of the target system. When you have this information, you can add the appropriate firewall rules.

Configuring the probe

Before running the probe for the first time, you must specify a minimum set of properties.

To run the probe successfully, the following properties are the minimum that you must specify in the alcatel_xmc_corba.props file:

- **FTPServer** - This property specifies the host name or IP address of the server on which the EntryPoint IOR file is located.
- **FTPUsername** - This property specifies the user name required for FTP access to the EntryPoint IOR file.

- **FTPPassword** - This property specifies the encrypted password required for FTP access to the EntryPoint IOR file.
- **ORBLocalHost** - This property specifies the host name or IP address of the host to use when the local Object Request Broker (ORB) is initialized.
- **ORBLocalPort** - This property specifies the port number to use when the local ORB is initialized.

For more information about these properties, see [“Properties and command line options” on page 8](#).

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 for Alcatel-Lucent 1300 XMC (CORBA) connects to the Alcatel-Lucent 1300 XMC EMS by retrieving an IOR file over an FTP connection. The probe uses the IOR file to connect to the Entry Point Integration Reference Point (EntryPointIRP) object and retrieve a reference on it. From this object, the probe can retrieve references on the AlarmIRP object (used for resynchronization) and the NotificationIRP object (used to subscribe to realtime events). The connection is successful when the probe holds references on both the AlarmIRP and NotificationIRP objects.

You can manually acknowledge alarms and perform triggered resynchronization using the command line interface.

Data acquisition is further described in the following topics:

- [“Status checking” on page 5](#)
- [“Resynchronization” on page 5](#)
- [“Inactivity” on page 6](#)
- [“Backoff strategy” on page 6](#)
- [“Command line interface” on page 6](#)
- [“Peer-to-peer failover functionality” on page 7](#)
- [“Running multiple probes” on page 7](#)

Status checking

The probe verifies that the Alcatel-Lucent 1300 XMC server is running by sending a ping command at set intervals.

You can change the frequency with which the probe pings the Alcatel-Lucent 1300 XMC server using the **Agentheartbeat** property. The default is 60 seconds.

Resynchronization

If the **Resync** property is set to true, the probe retrieves a list of all active alarms from the Alcatel-Lucent 1300 XMC on startup.

After retrieving the existing alarms, the probe then connects to the subscriber object and uses the CORBA notification push model to receive new alarms from the Alcatel-Lucent 1300 XMC server as they are generated. If the **Resync** property is set to false, the probe only receives new alarms.

You can use the **ResyncBatchSize** property to specify the number of alarms to return in each batch when resynchronizing. The default is 100.

You can also use the **ResyncInterval** property to specify the interval (in seconds) at which the probe makes successive resynchronization requests. The default is 0, which disables the **ResyncInterval** feature entirely.

Inactivity

The probe has a timeout facility that allows it to disconnect from the Alcatel-Lucent 1300 XMC if it fails to receive alarm data within a predefined amount of time.

Use the **Inactivity** property to specify the length of time (in seconds) that the probe waits for event activity before disconnecting from the Alcatel-Lucent 1300 XMC. The default is 0, which disables the **Inactivity** feature entirely.

Backoff strategy

If the **Retry** property is set to `true`, and the probe fails to establish a connection or loses an existing connection to the device, the probe reverts to a backoff strategy.

The probe's backoff strategy is to try to reestablish a connection at successive intervals of one second, two seconds, four seconds, eight seconds, and so on, up to a maximum of 4096 seconds. When the maximum retry interval is reached, the probe stops trying to reconnect and will not try again until it is restarted.

Command line interface

The probe is supplied with a Command Line Interface (CLI) that allows you to issue commands to the probe using Telnet.

The Command Port library (`probe-command-port`) provides CLI functions that you can use to issue commands to the probe.

To use the CLI, you must use the **CommandPort** property to specify a port through which commands will be sent. The default port is 6970. When you want to run commands, use Telnet to connect through this port.

Note : Before you can use the CLI to acknowledge alarms, you must specify a system identifier using the **SystemID** property and a user identifier using the **Userid** property.

The following table describes the commands that you can use with the CLI.

Command	Description
acknowledgeAlarms	Use this command to acknowledge one or more alarms by specifying the identifier of the alarms in the following format: acknowledgeAlarms <i>alarm_id_01</i> <i>alarm_id_02 ... alarm_id_nn</i> The system returns the identifiers of any alarms that cannot be acknowledged.
exit/quit	Use this command to close the connection.
help	Use this command to display online help about the CLI.
resync	Use this command to perform a full resynchronization with the Alcatel-Lucent 1300 XMC server.
version	Use this command to display the version of the probe and the CLI.

CLI scripts

As the CLI uses Telnet connections, you can connect to the probe from anywhere by creating a desktop tool to open a Telnet connection, send a command, and then close the connection. This means that simple scripts can be set up to allow users to acknowledge selected events from the IBM Tivoli Netcool/OMNIbus event list.

Peer-to-peer failover functionality

The probe supports failover configurations where two probes run simultaneously. One probe acts as the master probe, sending events to the ObjectServer; the other acts as the slave probe on standby. If the master probe fails, the slave probe activates.

While the slave probe receives heartbeats from the master probe, it does not forward events to the ObjectServer. If the master probe shuts down, the slave probe stops receiving heartbeats from the master and any events it receives thereafter are forwarded to the ObjectServer on behalf of the master probe. When the master probe is running again, the slave probe continues to receive events, but no longer sends them to the ObjectServer.

Example property file settings for peer-to-peer failover

You set the peer-to-peer failover mode in the properties files of the master and slave probes. The settings differ for a master probe and slave probe.

Note : In the examples, make sure to use the full path for the property value. In other words replace \$OMNIHOME with the full path. For example: /opt/IBM/tivoli/netcool.

The following example shows the peer-to-peer settings from the properties file of a master probe:

```
Server      : "NCOMS"
RulesFile   : "master_rules_file"
MessageLog  : "master_log_file"
PeerHost    : "slave_hostname"
PeerPort    : 6789 # [communication port between master and slave probe]
Mode        : "master"
PidFile     : "master_pid_file"
```

The following example shows the peer-to-peer settings from the properties file of the corresponding slave probe:

```
Server      : "NCOMS"
RulesFile   : "slave_rules_file"
MessageLog  : "slave_log_file"
PeerHost    : "master_hostname"
PeerPort    : 6789 # [communication port between master and slave probe]
Mode        : "slave"
PidFile     : "slave_pid_file"
```

Running multiple probes

You can run multiple instances of the probe.

For each running instance, specify a different port to which the server listens using the **ORBLocalPort** property.

Running multiple probes in a failover configuration

If you have implemented a peer-to-peer failover configuration, both the master probe and the slave probe have their own Object Request Broker (ORB) local port.

Where you are running this configuration in conjunction with a firewall, add the receiving port of each probe to the firewall rules. The direction of the connection is from the target system to the master or slave probe.

You set the peer-to-peer failover mode in the properties files of the master and slave probes.

Include the following peer-to-peer settings in the master's probe properties file:

```
PeerHost    :    "slave_hostname"  
PeerPort    :    5555 # [communication port between master and slave probes]
```

Include the following peer-to-peer settings in the slave's probe properties file:

```
PeerHost    :    "master_hostname"  
PeerPort    :    5555 # [communication port between master and slave probes]
```

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)*.

Property name	Command line option	Description
Agentheartbeat <i>integer</i>	-agentheartbeat <i>integer</i>	Use this property to specify the frequency (in seconds) with which the probe pings the Alcatel-Lucent 1300 XMC. The default is 60.
CommandPort <i>integer</i>	-commandport <i>integer</i>	Use this property to specify the port through which users can use Telnet to send commands to the probe. The default is 6970.
CommandPortLimit <i>integer</i>	-commandportlimit <i>integer</i>	Use this property to specify the maximum number of Telnet connections that can be made to the probe. The default is 10.
EncodingStandard <i>string</i>	-encodingstandard <i>string</i>	Use this property to specify the character encoding standard that the probe uses. The default is ISO-8859-1 (this sets the encoding standard to Latin Alphabet 1).

Table 6. Properties and command line options (continued)

Property name	Command line option	Description
EntryPointIORFile <i>string</i>	-entrypointiorfile <i>string</i>	Use this property to specify a local EntryPoint IOR file. The default is " ". Note : Leave this property empty to retrieve a remote EntryPoint IOR file using FTP. The probe looks for the remote IOR file in a vendor-specified location on the Alcatel-Lucent 1300 XMC server.
FTPPassword <i>string</i>	-ftppassword <i>string</i>	Use this property to specify the password required for FTP access to the server on which the EntryPoint IOR file is located. The default is ftppassword. Note : Whenever possible, the password should be encrypted using the nco_aes_crypt utility. For more information, see the <i>IBM Tivoli Netcool/OMNIBus Administration Guide</i> (SC14-7605).
FTPServer <i>string</i>	-ftpserver <i>string</i>	Use this property to specify the host name or IP address of the server on which the EntryPoint IOR file is located. The default is ftpserver.
FTPTimeout <i>integer</i>	-ftptimeout <i>integer</i>	Use this property to specify the maximum amount of time (in seconds) that the probe waits to make an FTP connection before timing out. The default is 10.
FTPUsername <i>string</i>	-ftpusername <i>string</i>	Use this property to specify the user name required for FTP access to the server on which the EntryPoint IOR file is located. The default is ftpusername.
Inactivity <i>integer</i>	-inactivity <i>integer</i>	Use this property to specify the length of time (in seconds) that the probe waits for event activity before disconnecting from the Alcatel-Lucent 1300 XMC. The default is 0 (which disables this feature).

Table 6. Properties and command line options (continued)

Property name	Command line option	Description
ORBLocalHost <i>string</i>	<code>-orbllocalhost</code> <i>string</i>	Use this property to specify the host name or IP address of the host to use when the local Object Request Broker (ORB) is initialized. The default is localhost.
ORBLocalPort <i>integer</i>	<code>-orbllocalport</code> <i>integer</i>	Use this property to specify the port number to use when the local ORB is initialized. The default is 0.
Resync <i>string</i>	<code>-resync</code> <i>string</i>	Use this property to specify whether or not the probe attempts to resynchronize existing alarms during startup. This property takes the following values: <code>false</code> : The probe does not attempt resynchronization at startup. <code>true</code> : The probe does attempt resynchronization at startup. The default is <code>true</code> .
ResyncBatchSize <i>integer</i>	<code>-resyncbatchsize</code> <i>integer</i>	Use this property to specify the number of alarms to return in each batch when resynchronizing. The default is 100.
ResyncInterval <i>integer</i>	<code>-resyncinterval</code> <i>integer</i>	Use this property to specify the interval (in seconds) at which the probe makes successive resynchronization requests. The default is 0 (which disables this feature).
Retry <i>string</i>	<code>-retry</code> <i>string</i>	Use this property to specify whether or not the probe attempts to reconnect to the system following a timeout or disconnection. This property takes the following values: <code>false</code> : The probe does not attempt to reconnect to the system. <code>true</code> : The probe does attempt to reconnect to the system. The default is <code>false</code> .

Table 6. Properties and command line options (continued)

Property name	Command line option	Description
SystemId <i>string</i>	-systemid <i>string</i>	Use this property to specify the system identifier to use when acknowledging alarms. The default is systemId.
UserId <i>string</i>	-userid <i>string</i>	Use this property to specify the user identifier to use when acknowledging alarms. The default is userId.

Elements

The probe breaks event data down into tokens and parses them into elements. Elements are used to assign values to ObjectServer fields; the field values contain the event details in a form that the ObjectServer understands.

The following table describes the elements that the probe generates. Not all the elements described are generated for each event; the elements that the probe generates depend on the event type.

Table 7. Elements

Element name	Element description
\$AdditionalText	This element contains additional data included in the alarm.
\$AlarmClearedTime	This element indicates the time at which the alarm was cleared, for example: Tue Nov 09 11:32:55 PST 2010
\$AlarmId	This element contains the alarm identifier, for example: SubNetwork=1,ManagedElement=PTH-SDM1-FE1%x1%306%association#ASSO_I_OCK::G3UA#1200
\$AlarmRaisedTime	This element indicates the time at which the alarm was created, for example: Tue Nov 09 11:32:55 PST 2010
\$DomainName	This element identifies the 3GPP specification that defines the received event, for example: 32.111 V6.1 (for alarms)

Table 7. Elements (continued)

Element name	Element description
\$EventName	<p>This element indicates that the alarm is one of the following types:</p> <ul style="list-style-type: none"> • x1: CommunicationsAlarm • x2: ProcessingErrorAlarm • x3: EnvironmentalAlarm • x4: QualityOfServiceAlarm • x5: EquipmentAlarm • x6: IntegrityViolation • x7: OperationalViolation • x8: PhysicalViolation • x9: SecurityServiceOrMechanismViolation • x10: TimeDomainViolation
\$EventTime	<p>This element indicates the time at which the event occurred, for example:</p> <p>Wed Nov 10 17:05:57 PST 2010</p>
\$EventType	<p>This element indicates that the event is one of the following types:</p> <ul style="list-style-type: none"> • x1: NewAlarm • x2: ChangedAlarm • x3: AckStateChanged • x4: CommentAdded • x5: ClearedAlarm • x6: AlarmListRebuilt • x7: PotentialFaultyAlarmList
\$ManagedObjectInstance	<p>This element identifies the object for which the alarm occurred, for example:</p> <p>SubNetwork=1,ManagedElement=PTH-1</p>
\$NotificationId	<p>This element contains the notification identifier.</p>
\$PerceivedSeverity	<p>This element indicates that the alarm is of one of the following levels of severity:</p> <ul style="list-style-type: none"> • 1 (Indeterminate) • 2 (Critical) • 3 (Major) • 4 (Minor) • 5 (Warning) • 6 (Cleared)

Table 7. Elements (continued)	
Element name	Element description
\$ProbableCause	This element indicates the probable cause of the alarm. The rules file, <code>alcatel_xmc_corba.rules</code> , contains a complete list of probable causes.
\$SpecificProblem	This element contains additional data that identifies the type of problem that occurred, for example: <code>LTECellAdminDown</code>
\$SystemDn	This element contains the value of the <code>systemDN</code> system parameter.

Error messages

Error messages provide information about problems that occur while running the probe. You can use the information that they contain to resolve such problems.

The following table describes the error messages specific to this probe. For information about generic error messages, see the *IBM Tivoli Netcool/OMNIbus Probe and Gateway Guide (SC14-7608)*.

Table 8. Error messages		
Error	Description	Action
Failed to acknowledge some or all alarms Failed to acknowledge alarm: <code>alarm_id</code> Failed to acknowledge alarms: <code>alarms</code> Failed to acknowledge alarms due to unsupported parameter: <code>parameter</code> Failed to acknowledge alarms due to invalid parameter: <code>parameter</code>	An acknowledgement command, issued using the command line interface, was not acknowledged.	Check the error message for the source of the error.
Failed to close ftp connection Failed to close file	The probe failed to close a file handle.	Contact IBM Software Support.
CLI requested resynchronization, but failed due to <code>exception</code>	A resynchronization command, issued using the command line interface, failed due to the exception given in the error message.	Examine the probe log for more information about this error. The probe log can be found in the following location: <code>\$OMNIHOME/log/alcatel_xmc_corba.log</code>

<i>Table 8. Error messages (continued)</i>		
Error	Description	Action
Cannot parse Any <i>attribute</i> with type <i>type</i>	The probe cannot parse the attribute named in the error message.	Contact IBM Software Support.

ProbeWatch messages

During normal operations, the probe generates ProbeWatch messages and sends them to the ObjectServer. These messages tell the ObjectServer how the probe is running.

The following table describes the raw ProbeWatch error messages that the probe generates. For information about generic ProbeWatch messages, see the *IBM Tivoli Netcool/OMNIbus Probe and Gateway Guide (SC14-7608)*.

<i>Table 9. ProbeWatch messages</i>		
ProbeWatch message	Description	Triggers or causes
Running ...	The probe is running normally.	The probe has just been started up.
Going Down ...	The probe is shutting down.	The probe is shutting down after performing the shutdown routine.

Running the probe

The probe is started from the command line.

To start the probe, use the following command:

```
$OMNIHOME/probes/nco_p_alcatel_xmc_corba
```

Appendix A. Notices and Trademarks

This appendix contains the following sections:

- Notices
- Trademarks

Notices

This information was developed for products and services offered in the U.S.A.

IBM may not offer the products, services, or features discussed in this document in other countries. Consult your local IBM representative for information on the products and services currently available in your area. Any reference to an IBM product, program, or service is not intended to state or imply that only that IBM product, program, or service may be used. Any functionally equivalent product, program, or service that does not infringe any IBM intellectual property right may be used instead. However, it is the user's responsibility to evaluate and verify the operation of any non-IBM product, program, or service.

IBM may have patents or pending patent applications covering subject matter described in this document. The furnishing of this document does not grant you any license to these patents. You can send license inquiries, in writing, to:

IBM Director of Licensing
IBM Corporation
North Castle Drive
Armonk, NY 10504-1785
U.S.A.

For license inquiries regarding double-byte (DBCS) information, contact the IBM Intellectual Property Department in your country or send inquiries, in writing, to:

IBM World Trade Asia Corporation
Licensing 2-31 Roppongi 3-chome, Minato-ku
Tokyo 106-0032, Japan

The following paragraph does not apply to the United Kingdom or any other country where such provisions are inconsistent with local law: INTERNATIONAL BUSINESS MACHINES CORPORATION PROVIDES THIS PUBLICATION "AS IS" WITHOUT WARRANTY OF ANY KIND, EITHER EXPRESS OR IMPLIED, INCLUDING, BUT NOT LIMITED TO, THE IMPLIED WARRANTIES OF NON-INFRINGEMENT, MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE. Some states do not allow disclaimer of express or implied warranties in certain transactions, therefore, this statement may not apply to you.

This information could include technical inaccuracies or typographical errors. Changes are periodically made to the information herein; these changes will be incorporated in new editions of the publication. IBM may make improvements and/or changes in the product(s) and/or the program(s) described in this publication at any time without notice.

Any references in this information to non-IBM Web sites are provided for convenience only and do not in any manner serve as an endorsement of those Web sites. The materials at those Web sites are not part of the materials for this IBM product and use of those Web sites is at your own risk.

IBM may use or distribute any of the information you supply in any way it believes appropriate without incurring any obligation to you.

Licensees of this program who want to have information about it for the purpose of enabling: (i) the exchange of information between independently created programs and other programs (including this one) and (ii) the mutual use of the information which has been exchanged, should contact:

IBM Corporation
Software Interoperability Coordinator, Department 49XA

3605 Highway 52 N
Rochester, MN 55901
U.S.A.

Such information may be available, subject to appropriate terms and conditions, including in some cases, payment of a fee.

The licensed program described in this information and all licensed material available for it are provided by IBM under terms of the IBM Customer Agreement, IBM International Program License Agreement, or any equivalent agreement between us.

Any performance data contained herein was determined in a controlled environment. Therefore, the results obtained in other operating environments may vary significantly. Some measurements may have been made on development-level systems and there is no guarantee that these measurements will be the same on generally available systems. Furthermore, some measurements may have been estimated through extrapolation. Actual results may vary. Users of this document should verify the applicable data for their specific environment.

Information concerning non-IBM products was obtained from the suppliers of those products, their published announcements or other publicly available sources. IBM has not tested those products and cannot confirm the accuracy of performance, compatibility or any other claims related to non-IBM products. Questions on the capabilities of non-IBM products should be addressed to the suppliers of those products.

All statements regarding IBM's future direction or intent are subject to change or withdrawal without notice, and represent goals and objectives only.

All IBM prices shown are IBM's suggested retail prices, are current and are subject to change without notice. Dealer prices may vary.

This information is for planning purposes only. The information herein is subject to change before the products described become available.

This information contains examples of data and reports used in daily business operations. To illustrate them as completely as possible, the examples include the names of individuals, companies, brands, and products. All of these names are fictitious and any similarity to the names and addresses used by an actual business enterprise is entirely coincidental.

COPYRIGHT LICENSE:

This information contains sample application programs in source language, which illustrate programming techniques on various operating platforms. You may copy, modify, and distribute these sample programs in any form without payment to IBM, for the purposes of developing, using, marketing or distributing application programs conforming to the application programming interface for the operating platform for which the sample programs are written. These examples have not been thoroughly tested under all conditions. IBM, therefore, cannot guarantee or imply reliability, serviceability, or function of these programs.

Each copy or any portion of these sample programs or any derivative work, must include a copyright notice as follows:

© (your company name) (year). Portions of this code are derived from IBM Corp. Sample Programs. © Copyright IBM Corp. _enter the year or years_. All rights reserved.

If you are viewing this information softcopy, the photographs and color illustrations may not appear.

Trademarks

IBM, the IBM logo, ibm.com, AIX, Tivoli, zSeries, and Netcool are trademarks of International Business Machines Corporation in the United States, other countries, or both.

Adobe, Acrobat, Portable Document Format (PDF), PostScript, and all Adobe-based trademarks are either registered trademarks or trademarks of Adobe Systems Incorporated in the United States, other countries, or both.

Intel, Intel Inside (logos), MMX, and Pentium are trademarks of Intel Corporation in the United States, other countries, or both.

Microsoft, Windows, Windows NT, and the Windows logo are trademarks of Microsoft Corporation in the United States, other countries, or both.

Java and all Java-based trademarks are trademarks of Sun Microsystems, Inc. in the United States, other countries, or both.

Linux is a trademark of Linus Torvalds in the United States, other countries, or both.

UNIX is a registered trademark of The Open Group in the United States and other countries.



SC27-2787-00

