

Netcool/OMNIbus  
Version 7 Release 3

## *Release Notes*





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**Note**

Before using this information and the product it supports, read the information in “Notices” on page 29.

This edition applies to version 7, release 3, modification 1 of IBM Tivoli Netcool/OMNIbus (product number 5724-S44) and to all subsequent releases and modifications until otherwise indicated in new editions.

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## Contents

Release notes - IBM Tivoli	
Netcool/OMNIBus Version 7.3.1 . . . . .	1

Notices . . . . .	29
Trademarks . . . . .	31



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## Release notes - IBM Tivoli Netcool/OMNIBus Version 7.3.1

Tivoli Netcool/OMNIBus V7.3.1 is available. Compatibility, installation, and other getting-started issues are addressed in these release notes.

### Contents

- “Description”
- “Announcement” on page 6
- “Compatibility issues with earlier versions” on page 6
- “System requirements” on page 13
- “Installing Tivoli Netcool/OMNIBus V7.3.1” on page 15
- “Known problems at eGA” on page 16
- “Problems identified after eGA” on page 27
- “Support” on page 27

### Description

Tivoli Netcool/OMNIBus is a service level management (SLM) system that delivers real-time, centralized monitoring of complex networks and IT domains.

Tivoli Netcool/OMNIBus V7.3.1 offers the following new features.

#### Enhanced visualization capabilities

##### Gauges

The Web GUI provides new functionality to offer an at-a-glance overview of the state of Tivoli Netcool/OMNIBus. A link to this information can be sent to, and viewed on mobile devices. Information captured by metrics is visualized in the form of gauges. A metric is a type of measurement that is used to determine a quantifiable value from tables or properties in the ObjectServer.

As an administrator, you can create new pages, add the Gauges portlet and add gauges, associating them with the required metrics. You can generate a URL of the page; this URL can be sent to users, for example executives, for viewing in a Web browser or a mobile device. You can associate click-actions with gauges, for example, launching URLs (such as the URL of another Gauges page) and scripts (such as to launch an event list). You can also customize the appearance of any gauge from five supplied types, and rearrange gauges on a page using drag and drop facilities.

There are over 20 metrics supplied as standard and an administrator can create new ones using any ObjectServer table. There are two pages of gauges supplied as standard that offer commonly-monitored functions.

##### Web widget portlet

V2.1 introduces a new portlet, the Web widget portlet. You can use this to display discrete web pages or HTML files. For the Web GUI a primary use of the Web widget is to publish maps to user.

The Web widget portlet replaces the Inline Frame portlet which is now deprecated.

#### **Globalization support**

The Web GUI now has support for the Hebrew, Hijri, and Hijri Civilian calendars in addition to the Gregorian calendar. The product also has support for Arabic and Hebrew and supports mirroring.

#### **Greater ease of use**

##### **Linear trending using IBM Tivoli Monitoring**

In an integrated environment that contains Tivoli Netcool/OMNIBus V7.3.1, the Probe for Tivoli EIF, and IBM Tivoli Monitoring V6.2.2 Fix Pack 1, and Tivoli Performance Analyzer V6.2.2 Fix Pack 2, you can use the predictive analytics capabilities of IBM Tivoli Monitoring to determine whether Tivoli Netcool/OMNIBus event rates per device are likely to exceed defined upper thresholds within a specific timeframe. This capability builds on the predictive eventing capabilities provided in Tivoli Netcool/OMNIBus V7.3. The event rate data is calculated by the ObjectServer and collected by the IBM Tivoli Monitoring for IBM Tivoli Netcool/OMNIBus Agent and analyzed by Tivoli Performance Analyzer. Tivoli Performance Analyzer produces trends based on the event rate from each device; if the trend indicates that an event rate will exceed the defined threshold within the specified timeframe then a predictive event is generated. The Probe for Tivoli EIF can be configured to forward predictive events to the Tivoli Netcool/OMNIBus, and the resulting events can be viewed in the Active Event List or desktop event list. Tools are provided for interacting with these predictive events.

A number of configuration resources are provided for customizing the ObjectServer, Web GUI server and the Probe for Tivoli EIF. These resources are available in the \$NCHOME/omnibus/extensions/itmpredictive directory.

##### **Baselining using IBM Tivoli Monitoring**

In an integrated environment that contains Tivoli Netcool/OMNIBus V7.3.1, the Probe for Tivoli EIF, IBM Tivoli Monitoring V6.2.2 Fix Pack 1, and Tivoli Performance Analyzer V6.2.2 Fix Pack 2, you can now use the baselining capabilities of IBM Tivoli Monitoring to determine a normal level for Tivoli Netcool/OMNIBus events. After sufficient event data has built up, IBM Tivoli Monitoring can compare the current event rate to a baseline average value. If the current event rate exceeds the defined upper or lower event rate thresholds, IBM Tivoli Monitoring generates a situation. IBM Tivoli Monitoring and the Probe for Tivoli EIF converts the situation into a Tivoli Netcool/OMNIBus event and forwards the event to the ObjectServer, and can be viewed in the Active Event List or the desktop event list.

The configuration resources required to set up baselining are provided in the \$NCHOME/omnibus/extensions/itmpredictive/baseline directory.

##### **Enhancements to the rules file for the Probe for Tivoli EIF**

For Tivoli Netcool/OMNIBus V7.3.1, the rules file of the Probe for



Tivoli EIF is replaced. The `tivoli_eif.rules`, contained under `$NCHOME/omnibus/probes/arch`, now contains include statements for subordinate rules files that support integrations with other Tivoli products. By default, the include statements are commented out. These rules files must be copied into the `$NCHOME/omnibus/probes/arch` directory and the include statement for the appropriate rules file must be uncommented. For more information, see the *IBM Tivoli Netcool/OMNIBus Probe for Tivoli EIF Guide*.

#### **Search and replace functionality in probe rules files**

The new `regreplace` function enables you as a probe rules file developer to use regular expressions to search for and replace strings in probe rules files. One of the uses of this function is to remove unwanted characters from strings received by the EIF probe. This function was also supplied in the December 2010 Fix Packs for IBM Tivoli Netcool/OMNIBus.

#### **Iterative looping in probe rules files**

The `foreach` function enables you to write statements in the probe rules file language that iterate through lists of event elements or table entries. You can construct nested `foreach` statements. You can use probe rules file functions to change the items in a loop. This function was also supplied in the December 2010 Fix Packs for IBM Tivoli Netcool/OMNIBus.

### **Faster time to value**

#### **Improved Deployment Engine (DE) installation procedure**

On UNIX operating systems, a single user installation of DE is now copied to `$HOME/.acsi_hostname`. Previously it was copied to `$HOME/.acsi_username`. This simplifies the use of single user installations of DE on multiple computers which use network mounted home directories.

Several preinstallation checks are now performed which enable a smoother installation of the DE.

In addition, user access security options have been introduced to protect a global instance of the DE from unauthorized modifications.

#### **Tivoli Integrated Portal V2.1**

The Web GUI is based on the latest release of Tivoli Integrated Portal. This provides a number of enhancements including the latest application server technology, IBM WebSphere® Application Server V7.0, improved scalability through an increased number of concurrent users, enhanced support for bidirectional text, new export and import facilities for configuration data allowing a move from a test environment to production, the ability to customize logos, login screens, and URLs. In addition, there is the ability to allow multiple logins on the same user ID to give support to network operations centers.

Adhere to a specific setup if you want the Web GUI to coexist with products that on Tivoli Integrated Portal V1.1. The V1.1 and V2.1 components must be each installed into a unique path and run on unique port numbers. If you install V1.1 and V2.1 with the same user (root or non-root), the Deployment Engine (DE) is shared across the versions. However, if you install one version as root, and the other as non-root, each version has its own DE. V1.1 and

V2.1 can be installed on the same server as the Tivoli Netcool/OMNIBus server-side components and integrated with these components. V1.1 and V2.1 are compatible with Tivoli Netcool/OMNIBus V7.2.1 or later.

### Home directories

In previous releases, the Web GUI and the Tivoli Integrated Portal used the same home directory. For example `/ibm/tivoli/tip` on Unix and Linux systems and `C:\IBM\tivoli\tip` on Microsoft Windows systems. This was designated in the documentation as *install\_dir*.

From this release the products have separate home directories. For example, for the Web GUI:

- Linux UNIX `/ibm/tivoli/netcool/omnibus_webgui`
- Windows `C:\IBM\tivoli\netcool\omnibus_webgui`

For the Tivoli Integrated Portal:

- Linux UNIX `/ibm/tivoli/tipv2`
- Windows `C:\IBM\tivoli\tipv2`

This separation allows the Web GUI and the Tivoli Integrated Portal to be updated separately from one another in the future.

In the documentation these home directories are designated by the variables *webgui\_home\_dir* and *tip\_home\_dir* respectively.

The user can specify the home directories for the Web GUI and Tivoli Integrated Portal during the installation.

### Context root

During the installation of the Web GUI it is now possible to specify the context root of the product.

### Multiple connections to the ObjectServer

Previously the Web GUI used only one connection to each ObjectServer. Now there can be multiple connections to any ObjectServer, and the administrator can configure the number of connections for each ObjectServer individually.

### Enhancement to migration of Tivoli Enterprise Console® BAROC data

To facilitate the mapping of Tivoli Enterprise Console ClassName strings to ObjectServer class identifiers, you can now use the **nco\_baroc2sql** tool to generate a probe lookup table file that contains the mapping of ClassName values to ObjectServer classes. This table can be inserted into rules file of a probe, such as the EIF probe, and enables the Class field to be maintained with a number based on a Tivoli Enterprise Console class name.

### Default Web GUI users and groups

The Web GUI is supplied with two default users and two default groups. These enable you to start using the product immediately after installation and configuration. The default users consist of one administrator and one user. There are groups for administrative users and for regular users. These groups enable you to add new users more quickly by simplifying the allocation of roles.

In addition, the Web GUI is supplied with two pages of gauges that provide commonly monitored metrics.

### **OpenLDAP support**

The Lightweight Directory Access Protocol (LDAP) capabilities of the Web GUI are extended in V7.3.1 to include directories maintained by OpenLDAP V2.1 or later.

### **Improved performance and greater scalability**

#### **Load balancing**

The Web GUI now includes load balancing capabilities. The administrator can set up a cluster of Web GUI servers that share configuration data stored in a DB2® environment. Replication of configuration data between the nodes in a cluster is automated. There are facilities for configuring the data stored in the database and thus replicated across the cluster. In addition, the administrator can add additional nodes to and remove nodes from the cluster.

#### **Export and import**

There is a new utility that enables the selective transfer of configuration data from one Web GUI server to another. The utility can also be used to create backup copies of Web GUI configuration data. In addition, the utility provides a convenient way of cloning all Web GUI and Tivoli Integrated Portal data from one server to another.

### **Infrastructure improvements to support product deployment and monitoring**

#### **Firewall bridge**

A firewall bridge enables probes that are situated outside a secure network to connect to an ObjectServer situated inside a firewall. A firewall bridge is comprised of two servers: a Server Access Bridge and a Client Access Bridge, which run either side of the firewall with the connection being initiated from the more secure side. This allows client connections and data to be sent to the ObjectServer from outside the firewall. You can configure single and multiple firewall bridge servers to enable a connection to an ObjectServer from across single and multiple firewalls.

#### **Utility for exporting and importing ObjectServer configurations**

The **nco\_osreport** utility enables you to export the configuration of an ObjectServer. Three command-line options enable you to export the configuration to an HTML file, XML file, or to a series of SQL files that can be input into a new ObjectServer created by running the **nco\_dbinit** command. You can use the SQL command-line to create copies of an ObjectServer on different operating systems to the source ObjectServer, and to archive ObjectServer contents in a form that is independent of operating systems. The SQL files can be modified before you use them to create a new ObjectServer. All three options are suitable for submitting the content of an ObjectServer to a support team.

#### **Documentation for Key Performance Indicators**

The Tivoli Netcool/OMNIbus now contains information about Key Performance Indicators (KPI) that you can use to monitor critical aspects of your system. The description of each KPI describes how to set up the KPI, what information to expect, and what it means if the value of the KPI changes, including what action to take. The KPI information covers the ObjectServer, probes and gateways.

### **Enhanced logging and profiling**

The logging mechanism has been enhanced for this release. In addition there is a new facility for generating profile logs.

### **Migration and upgrade**

The server-side components of Tivoli Netcool/OMNIBus V7.1, V7.2, V7.2.1, and V7.3 can be upgraded to V7.3.1. An inplace upgrade is supported from Tivoli Netcool/OMNIBus V7.3.

More information: [Upgrading on UNIX and Linux](#) and [Upgrading on Windows](#).

The Web GUI is supplied with utilities to migrate data from IBM Tivoli Netcool/Webtop V1.3.1, V2.0, and V2.1 and to upgrade from IBM Tivoli Netcool/Webtop V2.2 or Tivoli Netcool/OMNIBus Web GUI V7.3.0.

### **Documentation**

#### **ObjectServer Gateway Reference Guide**

The Tivoli Netcool/OMNIBus V7.3.1 ObjectServer Gateway documentation has been incorporated into the Tivoli Netcool/OMNIBus information center at [http://publib.boulder.ibm.com/infocenter/tivihelp/v8r1/topic/com.ibm.netcool\\_OMNIBus.doc\\_7.3.1/omnibus/gateways/objectservergw/wip/concept/objsrvgw\\_intro.html](http://publib.boulder.ibm.com/infocenter/tivihelp/v8r1/topic/com.ibm.netcool_OMNIBus.doc_7.3.1/omnibus/gateways/objectservergw/wip/concept/objsrvgw_intro.html). The *IBM Tivoli Netcool/OMNIBus ObjectServer Gateway Reference Guide* is located in the table of contents under **PDF documentation set**. For earlier versions of Tivoli Netcool/OMNIBus, the ObjectServer Gateway documentation remains in the Tivoli Network Management information center, under **IBM Tivoli Netcool/OMNIBus > Tivoli Netcool/OMNIBus gateways**.

#### **Web GUI Administration API (WAAPI) User's Guide**

This is a new guide that contains detailed information on the using WAAPI to administer a Web GUI server. There are instructions on how to structure a WAAPI command file along with detailed descriptions of each request and method. There are also examples of each method.

### **Announcement**

The Tivoli Netcool/OMNIBus V7.3.1 announcement is available at <http://www.ibm.com/common/ssi/index.wss>. See the announcement for the following information:

- Detailed product description, including a description of new functions
- Product-positioning statement
- Packaging and ordering details
- International compatibility information

### **Compatibility issues with earlier versions**

Tivoli Netcool/OMNIBus V7.3.1 components are compatible with the components of Tivoli Netcool/OMNIBus versions 7.1, 7.2, 7.2.1, and 7.3. Any exceptions, and workarounds (where applicable), are documented here.

### **Deprecated or dropped functionality**

The Web GUI Inline Frame portlet is deprecated with the release of V7.3.1 and is replaced by the Web widget portlet. Existing Inline Frame portlets continue to operate correctly, however look to migrating them to Web widget portlets in the future. All new implementations should use the Web widget portlet.

On UNIX and Linux, if you need to install the process agent startup scripts that cause process agents to automatically start on reboot, you are prompted to set the `NETCOOL_LICENSE_FILE` environment variable because some older probes still require this setting. You can either press Enter to accept the default value of `27000@localhost`, or specify another value that reflects the settings for your configured license server. For full details about starting process agents automatically, see the *IBM Tivoli Netcool/OMNIBus Administration Guide*.

In the Event Integration Facility (EIF) toolkit, the state correlation functionality is deprecated.

### Probe and gateway dependencies

Ensure that you download the latest version of probe and gateway components for use with V7.3.1. Do not use the V7 probe bundle **PINSTALL** function.

Any dependency patches that are required for probes and gateways are documented in the `README.txt` and `description.txt` files that are available with the download packages. This information is also available in the individual probe and gateway publications in the Tivoli Netcool/OMNIBus Information Center at: [http://publib.boulder.ibm.com/infocenter/tivihelp/v8r1/topic/com.ibm.tivoli.nam.doc/welcome\\_ob.htm](http://publib.boulder.ibm.com/infocenter/tivihelp/v8r1/topic/com.ibm.tivoli.nam.doc/welcome_ob.htm).

### Compatibility of ObjectServer Gateways

The Tivoli Netcool/OMNIBus V7.3.1 ObjectServer Gateways contain additional gateway mappings, which are not available in Tivoli Netcool/OMNIBus V7.2.1, or earlier, and therefore cannot be replicated. To use a Tivoli Netcool/OMNIBus V7.3.1 ObjectServer Gateway with an earlier version of the ObjectServer, you must comment out some of the entries in the table replication definition file and map definition file.

For the unidirectional gateway:

- Edit the `$NCHOME/omnibus/gates/objserv_uni/objserv_uni.reader.tblrep.def` file by commenting out the following lines, as shown:

```
# REPLICATE ALL FROM TABLE 'iduc_system.iduc_stats'
# USING map 'IducMap';
```

- Edit the `$NCHOME/omnibus/gates/objserv_uni/objserv_uni.map` file by commenting out the following lines, as shown:

In the CREATE MAPPING StatusMap section:

```
# 'ProbeSubSecondId' = '@ProbeSubSecondId',
# 'BSM_Identity' = '@BSM_Identity'
```

Further on in the file:

```
# CREATE MAPPING IducMap
# (
#   'ServerName' = '@ServerName' ON INSERT ONLY,
#   'AppName' = '@AppName',
#   'AppDesc' = '@AppDesc' ON INSERT ONLY,
#   'ConnectionId' = '@ConnectionId' ON INSERT ONLY,
#   'LastIducTime' = '@LastIducTime'
# );
```

For the bidirectional gateway:

- Edit both the \$NCHOME/omnibus/gates/objserv\_bi/objserv\_bi.objectservera.tblrep.def and \$NCHOME/omnibus/gates/objserv\_bi/objserv\_bi.objectserverb.tblrep.def files by commenting out the following lines, as shown:

```
# REPLICATE ALL FROM TABLE 'iduc_system.iduc_stats'  
# USING map 'IducMap';
```

- Edit the \$NCHOME/omnibus/gates/objserv\_bi/objserv\_bi.map file by commenting out the following lines, as shown:

In the CREATE MAPPING StatusMap section:

```
# 'ProbeSubSecondId' = '@ProbeSubSecondId',  
# 'BSM_Identity' = '@BSM_Identity'
```

Further on in the file:

```
# CREATE MAPPING IducMap  
# (  
# 'ServerName' = '@ServerName' ON INSERT ONLY,  
# 'AppName' = '@AppName',  
# 'AppDesc' = '@AppDesc' ON INSERT ONLY,  
# 'ConnectionId' = '@ConnectionId' ON INSERT ONLY,  
# 'LastIducTime' = '@LastIducTime'  
# );
```

### Process control compatibility

The V7.3.1 Windows process agent cannot communicate with a V7.2.0, or earlier, Windows process agent. The V7.3.1 Windows process agent also cannot communicate with V7.2.0, or earlier ObjectServers.

### nco\_postmsg

The **nco\_postmsg** utility is compatible with ObjectServer versions 7.1, or later. You can install this utility and then use it to connect to, and send events to, ObjectServer versions 7.1, or later.

### Tivoli® Event Integration Facility toolkit compatibility

The EIF is compatible with earlier versions (such as Tivoli Enterprise Console-based senders and receivers) only when the SOCKET transport type is used. The following conditions apply:

- A new EIF sender cannot send events to the Tivoli Enterprise Console server by using the SSL transport. However, a new sender can send events to the Tivoli Enterprise Console server by using the SOCKET transport.
- A new EIF receiver cannot receive events from Tivoli Enterprise Console adapters over the SSL transport. However, a new sender can receive events from Tivoli Enterprise Console adapters over the SOCKET transport.
- The Tivoli Enterprise Console adapters and the Tivoli Enterprise Console server are not linked to the new version of the EIF libraries.
- A new EIF receiver can receive events from Tivoli Enterprise Console adapters over IPv4 or IPv6.
- A Probe for Tivoli EIF without the EIF updates cannot receive events over the SSL transport.
- A Probe for Tivoli EIF without the EIF updates can receive events from new EIF senders over IPv6 because the Java implementation already supports IPv6 through the JVM.



- A Probe for Tivoli EIF with the EIF updates can receive events sent over IPv4 from earlier EIF senders such as IBM® Tivoli Monitoring and Tivoli Enterprise Console adapters.

### Timestamp formats in log files

Time stamps are shown in the ISO 8601 format in log files for the ObjectServer, proxy server, **nco\_dbinit** utility, probe, ObjectServer Gateway, and other gateways. For compatibility with earlier versions, you can use the **OldTimeStamp** property to switch to the old time stamp format used in V7.2.1, or earlier. You might find this property useful if you already have tools in place for parsing log files. Note that the **nco\_dbinit** log file time stamps cannot be switched to the old format because this utility does not have an **OldTimeStamp** property.

A comparison of the formats is as follows:

Old format in V7.2.1, or earlier	ISO 8601 format
dd/MM/YYYY hh:mm:ss AM dd/MM/YYYY hh:mm:ss PM when the locale is set to en_GB on a Solaris 9 computer  For example:  01/05/2009 07:15:04 AM	YYYY-MM-DDThh:mm:ss  Where T separates the date and time, hh is in 24-hour clock, and the numbers are shown in Western Arabic digits (0-9). For example:  2001-10-21T13:43:11

### Date and time formatting and parsing

In Tivoli Netcool/OMNIBus V7.2.1, or earlier, the POSIX strftime() function is used in date and time conversions. For the ObjectServer SQL functions (to\_char, to\_date, and to\_time), and the probe rules file functions (datetotime and timetodate), you can define an output format by specifying a format string that consists of zero or more conversion specifiers. For example, the POSIX format for output can be defined in the ObjectServer to\_time function as follows:

```
to_time('Thu Dec 11 2003', '%a %b %d %Y')
```

In Tivoli Netcool/OMNIBus V7.3.1, the International Components for Unicode (ICU) libraries use the Locale Data Markup Language (LDML) for date and time patterns. The characters used in these patterns are defined at <http://userguide.icu-project.org/formatparse/datetime>. Use these date and time patterns wherever possible in your ObjectServer SQL functions and probe rules file functions to obtain your required results.

To maintain compatibility with earlier versions, there is continued support for the POSIX format in the date and time functions for the ObjectServer and probe rules files. Note, however, that the POSIX format is not fully compatible with the parsing technology used for LDML date and time patterns. Some POSIX formats are also not supported. When fully compatible with the parsing technology, identical output is obtained for the POSIX format in V7.3.1 as in earlier versions. When partially compatible, variations can occur in the output obtained for the POSIX format across product versions. For example, the following variations can be obtained for the same date and time:

Result for POSIX %c format in V7.3.1: Monday, July 20, 2009 10:18:43 AM United Kingdom Time

Result for POSIX %c format in earlier versions: Mon Jul 20 10:18:43 2009

Result for POSIX %x format in V7.3.1: Monday, July 20, 2009

Result for POSIX %x format in earlier versions: 07/20/09

The following table provides some guidance on the POSIX formats that are fully-supported or partially-supported in V7.3.1. The first column shows the standard POSIX conversion specifiers that can be used in the date and time functions, and the expected result. The second and third columns indicate whether each conversion specifier is fully supported in V7.3.1 and whether the conversion specifier matches the expected result after parsing. Additionally, the second column lists the results for the POSIX format in the C, en\_GB, and en\_US locales, while the third column lists the results for the POSIX format in all other locales except Hindi and Arabic.

**Note:** This information is based on checks that were run on a Solaris 9 host. POSIX output varies across operating systems, so you might observe some variations from the results shown in the table.

*Table 1. Compatibility for POSIX format in date and time conversions in V7.3.1*

Standard POSIX format supported in date and time parsing (and expected result)	V7.3.1 results for C, en_GB, and en_US locales	V7.3.1 results for all other locales except Hindi, Arabic
%a is replaced by the locale's abbreviated weekday name.	Identical result	Not identical
%A is replaced by the locale's full weekday name.	Identical result	Not identical
%b is replaced by the locale's abbreviated month name.	Identical result	Not identical
%B is replaced by the locale's full month name.	Identical result	Not identical
%c is replaced by the locale's appropriate date and time representation.	Not identical	Not identical
%C is replaced by the century number (the year divided by 100 and truncated to an integer) as a decimal number [00-99].	Not supported	Not supported
%d is replaced by the day of the month as a decimal number [01,31].	Identical result	Identical result
%D same as %m/%d/%y.	Identical result	Identical result
%e is replaced by the day of the month as a decimal number [1,31]; a single digit is preceded by a space.	Identical result	Identical result
%h same as %b.	Identical result	Identical result



Table 1. Compatibility for POSIX format in date and time conversions in V7.3.1 (continued)

Standard POSIX format supported in date and time parsing (and expected result)	V7.3.1 results for C, en_GB, and en_US locales	V7.3.1 results for all other locales except Hindi, Arabic
%H is replaced by the hour (24-hour clock) as a decimal number [00,23].	Identical result	Identical result
%I is replaced by the hour (12-hour clock) as a decimal number [01,12].	Identical result	Identical result
%j is replaced by the day of the year as a decimal number [001,366].	Identical result	Identical result
%m is replaced by the month as a decimal number [01,12].	Identical result	Identical result
%M is replaced by the minute as a decimal number [00,59].	Identical result	Identical result
%n is replaced by a newline character.	Identical result	Identical result
%p is replaced by the locale's equivalent of either a.m. or p.m.	Identical result	Identical result
%r is replaced by the time in a.m. and p.m. notation; in the POSIX locale this is equivalent to %I:%M:%S %p.	Identical result	Not identical
%R is replaced by the time in 24 hour notation (%H:%M).	Identical result	Identical result
%S is replaced by the second as a decimal number [00,61].	Identical result	Identical result
%t is replaced by a tab character.	Identical result	Identical result
%T is replaced by the time (%H:%M:%S).	Identical result	Identical result
%U is replaced by the week number of the year (Sunday as the first day of the week) as a decimal number [00,53].	Not supported	Not supported
%u is replaced by the weekday as a decimal number [1,7], with 1 representing Monday.	Identical result	Identical result
%V is replaced by the week number of the year (Monday as the first day of the week) as a decimal number [01,53]. If the week containing 1 January has four or more days in the new year, then it is considered week 1. Otherwise, it is the last week of the previous year, and the next week is week 1.	Identical result	Identical result

Table 1. Compatibility for POSIX format in date and time conversions in V7.3.1 (continued)

Standard POSIX format supported in date and time parsing (and expected result)	V7.3.1 results for C, en_GB, and en_US locales	V7.3.1 results for all other locales except Hindi, Arabic
%W is replaced by the week number of the year (Monday as the first day of the week) as a decimal number [00,53]. All days in a new year proceeding the first Monday are considered to be in week 0.	Not supported	Not supported
%w is replaced by the weekday as a decimal number [0,6], with 0 representing Sunday.	Not supported	Not supported
%x is replaced by the locale's appropriate date representation.	Not identical	Not identical
%X is replaced by the locale's appropriate time representation.	Not identical	Not identical
%y is replaced by the year without century as a decimal number [00,99].	Identical result	Identical result
%Y is replaced by the year with century as a decimal number.	Identical result	Identical result
%Z is replaced by the timezone name or abbreviation, or by no bytes if no timezone information exists.	Identical result	Identical result
%% is replaced by %.	Identical result	Identical result

**Additional notes:**

- The following POSIX formats are not supported in Tivoli Netcool/OMNIBus V7.3 or V7.3.1: %U, %w, %W, %C
- For Arabic and Hindi locales, the digits in the formatted output are in the Hindi number format instead of the western Arabic number; so the result is different from the POSIX result.
- Modified conversion specifiers of the POSIX format, which start with E or O are not supported.
- The locale-related formats (%c, %r, %x and %X) can be used individually in a format string, or can be used together only in the following combinations:
  - %x %X
  - %x %r
 Other combinations like %x %C or %X %x result in an error "Invalid date/time format".
- If the locale-related formats (%c, %r, %x and %X) are used with any ordinary characters or other non-locale related formats such as %a or %b, the characters and non-locale related formats are silently ignored. For example:
  - %c YEAR is treated the same way as %c
  - %A %b %x is treated the same way as %x

- V7.2.1, or earlier versions, can only parse time strings that contain local timezone information. The following example shows how a sting that includes timezone information can be parsed in V7.3.1:

String	Output
select to_time( '2009-03-28:10:00:00 GMT+08:00', 'yyyy-MM-dd:HH:mm:ss vv' ) from alerts.status	FUNC ----- 1238205600

### Multi-byte character string processing

Support is provided to handle invalid characters during multi-byte character string processing. If an invalid character is encountered, the invalid character is substituted with a question mark (?), and processing continues. A warning message is also recorded in the log file about the invalid character.

### Accelerated event notification and the Web GUI

The Tivoli Netcool/OMNIBus Accelerated Event Notification (AEN) facility can display events in an Active Event List of the Web GUI. Versions of Tivoli Netcool/OMNIBus earlier than V7.3.1 can display events in Web GUI V7.3.1 only if the Web GUI was installed using the default context root.

### Tivoli Integrated Portal versions

The Web GUI is based on Tivoli Integrated Portal V2.1. Adhere to a specific setup if you want the Web GUI to coexist with products that are deployed on Tivoli Integrated Portal V1.1. The V1.1 and V2.1 components must be each installed into a unique path and run on unique port numbers. V1.1 and V2.1 can be installed on the same server as the Tivoli Netcool/OMNIBus server-side components and integrated with these components. V1.1 and V2.1 are compatible with Tivoli Netcool/OMNIBus V7.2.1 or later. If you install V1.1 and V2.1 with the same user (root or non-root), the Deployment Engine (DE) is shared across the versions. However, if you install one version as root, and the other as non-root, each version has its own DE.

## System requirements

For information about hardware and software compatibility, see the detailed system requirements document at:

<http://www.ibm.com/support/docview.wss?rs=203&uid=swg21067036>

### Additional considerations for Windows

If installing Tivoli Netcool/OMNIBus on Windows operating systems, Microsoft Windows Installer 3.0, 3.1, or later versions are required on your system before the installation.

### Additional considerations for Linux

On 64-bit Linux systems, Tivoli Netcool/OMNIBus runs in toleration mode. Therefore, you must install the 32-bit versions of the RPM packages on your system. On RHEL 6, no 32-bit versions of the packages are installed by default, so make sure that you have the 32-bit versions of the required packages.

The following table describes the RPM packages required for Linux operating systems.

*Table 2. Additional considerations and requirements for Linux operating systems*

Linux version	Minimum required RPMs	Explanation and comments
Red Hat Enterprise Linux (RHEL) AS, ES, and WS 5.	<ul style="list-style-type: none"> <li>• libXp-1.0.0-8 (required by the native desktop)</li> <li>• openmotif22-2.2.3-18 (required by the native desktop)</li> <li>• libgcc-4.1.2</li> <li>• libXmu-1.0.2-5</li> <li>• libXpm-3.5.5-3</li> <li>• compat-libstdc++-296-2.96-138 (for 32-bit and 64-bit versions of x86 only)</li> <li>• compat-libstdc++-33-3.2.3-61</li> </ul>	<p>Install the compat-libstdc++33-3.2.3-61 package before installing the Web GUI component.</p> <p>For more information about obtaining the package, go to the IBM WebSphere Application Server Information Center at <a href="http://publib.boulder.ibm.com/infocenter/wasinfo/v7r0/index.jsp">http://publib.boulder.ibm.com/infocenter/wasinfo/v7r0/index.jsp</a> and search for <i>compat-libstdc++-33-3.2.3-61</i>.</p>
RHEL AS, ES, and WS 6	<ul style="list-style-type: none"> <li>• libXp-1.0.0-8 (required by the native desktop)</li> <li>• openmotif22-2.2.3-18 (required by the native desktop)</li> <li>• pam-1.1.1-4</li> <li>• libstdc++-4.4.4-13</li> <li>• libXft</li> <li>• libXtst</li> <li>• libgcc-4.4.4-13</li> <li>• libXmu-1.0.5</li> <li>• libXpm-3.5.8</li> <li>• compat-libstdc++-296-2.96-144</li> <li>• compat-libstdc++-33-3.2.3-69</li> <li>• compat-libstdc++-33-3.2.3-47.3</li> <li>• compat-libstdc++-33.i686</li> </ul>	

Table 2. Additional considerations and requirements for Linux operating systems (continued)

Linux version	Minimum required RPMs	Explanation and comments
SuSE Linux Enterprise Server (SLES) 32-bit	<ul style="list-style-type: none"> <li>• openmotif-libs-2.2.4 (required for the native desktop)</li> <li>• compat-libstdc++-5.0.7-22.2</li> </ul>	
SLES 64-bit	<ul style="list-style-type: none"> <li>• openmotif-libs-32bit-2.2.4 (required for the native desktop)</li> <li>• compat-libstdc++-5.0.7-22.2</li> <li>• libgcc-4.1.2</li> </ul>	

Also note that the desktop event list is not supported on Linux S390.

#### Additional considerations for Linux on System z

If installing Tivoli Netcool/OMNIBus on RHEL AS, ES and WS 5 or 6 on System z operating systems, the following operating system packages must be available on your system before the installation:

- compat-libstdc++-295-2.95.3-85
- libX11
- libXtst

The packages for RHEL AS, ES, and WS 5 and 6 must also be installed on your system.

#### Additional considerations for HP-UX Itanium

The desktop event list is not supported on HP-UX Itanium.

### Installing Tivoli Netcool/OMNIBus V7.3.1

**Note:** You must back up the DE database before installing Tivoli Netcool/OMNIBus or the Web GUI on a new machine with a version of the DE currently installed.

**Note:** You can install the Tivoli Netcool/OMNIBus Web GUI V7.3.1 in an existing instance of Tivoli Integrated Portal V2.2. However, the Web GUI does not use any of the new features in that version of Tivoli Integrated Portal.

For step-by-step installation instructions, see the Tivoli Netcool/OMNIBus Information Center at:

[http://publib.boulder.ibm.com/infocenter/tivihelp/v8r1/topic/com.ibm.netcool\\_OMNIBus.doc\\_7.3.1/omnibus/wip/welcome.htm](http://publib.boulder.ibm.com/infocenter/tivihelp/v8r1/topic/com.ibm.netcool_OMNIBus.doc_7.3.1/omnibus/wip/welcome.htm)

## Known problems at eGA

The following problems in the server-side components were known at the time of eGA:

### **Coexistence of Tivoli Netcool/OMNIBus V7.3.1 server-side components with IBM Tivoli Business Service Manager V4.2.1**

The Tivoli Netcool/OMNIBus V7.3.1 server-side components are compatible with IBM Tivoli Business Service Manager (TBSM) V4.2.1. However, if you intend to install the server-side components on a computer that already hosts TBSM V4.2.1, you must make sure that, at a minimum, Fix Pack 01 has been applied to the TBSM installation.

### **DE precheck failure**

During installation, the DE prechecks might fail depending on whether you are installing as a root or a non-root user, and on whether a root instance of the DE has already been installed. A non-root user cannot install an instance of the DE in silent mode if a root instance of the DE is already installed.

For more information about the DE see The Deployment Engine. For more information about troubleshooting the DE, see Installation error messages.

### **Installation on HP-UX**

When you run the installer on an HP-UX 11.23 operating system, the installer fails with an error message that states that the **gzip** command could not be located.

To resolve this problem, ensure that the \$PATH environment variable contains the path to the **gzip** command located on your system.

### **No features selected for installation**

When you install Tivoli Netcool/OMNIBus, if you do not select any features for installation, the installer continues with the installation process and eventually fails.

To resolve this problem, select at least one feature.

### **Installation on UNIX**

When you run the installer on UNIX operating systems, a temporary directory is created in /tmp with an approximate size of 230 MB. This directory is deleted after a successful installation. However, the directory is not deleted when the installer is run to view the install.bin help text only. The /tmp directory might eventually exceed the available free space and cause future installation attempts to fail.

### **Installation of probes in silent mode**

If you attempt to install a probe in silent mode, the installation fails if the full path to the response.txt file is not specified.

### **Installation after change to default locale**

When you attempt to install Tivoli Netcool/OMNIBus after you changed the default locale (English), the **All Files** option (displayed in the initial installer panel) is not translated into the selected language.

### **Installation of the IBM Tivoli Monitoring Agent for Tivoli Netcool/OMNIBus**

When you install the ITM Monitoring Agent for Tivoli Netcool/OMNIBus, several of the installation panels overlap.

### **Installation of probes and gateways on HP-UX**

When you attempt to install a probe or gateway as a non-root user on

HP-UX (PA-RISC) operating systems, the installer fails to start because the DE, which was previously installed by the Tivoli Netcool/OMNIBus installer, cannot be located.

To resolve this problem, after installing Tivoli Netcool/OMNIBus as a non-root user, create a symbolic link in the home directory of the user that installed Tivoli Netcool/OMNIBus. After installation of Tivoli Netcool/OMNIBus, a directory called `.acsi_${HOSTNAME}` is created in the user's home directory. If the name of the directory contains the fully-qualified domain name of the host, you must create that does not contain the domain name. For example, `ln -s .acsi_myhost.ibm.com $HOME/.acsi_myhost`.

### Uninstallation in console mode

When you attempt to uninstall Tivoli Netcool/OMNIBus in console mode, the following message is displayed:

```
Preparing CONSOLE Mode Installation...
```

This message should read as follows:

```
Preparing CONSOLE Mode Uninstallation...
```

### Uninstallation on Windows

When you attempt to uninstall Tivoli Netcool/OMNIBus V7.3.1 on Windows, after you have previously upgraded from Tivoli Netcool/OMNIBus V7.2.1, the following error message is displayed:

```
Unable to remove registry key: HKEY_LOCAL_MACHINE\SYSTEM\CurrentControlSet\Control\Session Manager\Environment
```

This error message can be ignored. After you close the error message window, Tivoli Netcool/OMNIBus is successfully uninstalled.

### Display of strings in the installer or uninstaller panel

Strings displayed in the left frame of the installer or uninstaller panel appear truncated in some languages.

### Restarting on Windows

When Windows is restarted, the ObjectServer rejects the connection request from the JDBC clients, and the following error message is displayed:

```
Failed to contact the ObjectServer
```

To resolve this problem, take one of the following actions:

- In the `sql.ini` file, replace the host name with an IP address, and set the ObjectServer service startup type to Automatic (Delayed Start).
- In the hosts file, add the computer host name and IP address, and set the ObjectServer service startup type to Automatic (Delayed Start)
- Manually restart the ObjectServer service.

### Remote deployment of probes on Linux

The **tacmd addSystem** command, which is used to deploy a probe to a remote computer, does not work on Linux SLES 11.0 1x86 operating systems. The following error message is displayed:

```
The agent bundle NCO-P-EIF-CB was not found in the agent bundle depot on TEMS. The agent bundle specified for deployment is not installed on the agent bundle depot for the target operating system
```

To resolve this problem, before running the **tacmd addSystem** command, modify the `.dsc` file located within the generated probe bundle. Copy the

<name 1i6266>.dsc file to the <name 1x826>.dsc file, and then replace 1i6266 with 1x826 in the <name 1x826>.dsc file.

#### Usage of **nco\_cftp**

When you run the **nco\_cftp** utility and accept the results of the summary window, you cannot read the content displayed in the next window because it closes too quickly.

#### Connection to the ObjectServer on AIX®

On AIX 6.1 operating systems, running on Power 7 hardware, it might take longer than expected to connect to the ObjectServer when the **isql** command is used to update events.

#### Usage of the **genevent** statement and the **details** statement in probe rules file

Probes might crash if the associated rules file uses the **genevent** statement to generate new events to multiple ObjectServers, and the **genevent** statement is preceded by a **details** statement.

To resolve this problem, do not place a **details** statement before a **genevent** statement in the rules file.

#### Usage of wildcards in ObjectServer queries

ObjectServer queries that contain several combinations of wildcard conditions are not optimized correctly by the query optimizer, for example where Node like 'com' or Node like 'sol' . To optimize the query in this example, change it as follows: where Node like any ('com','sol').

#### Online help on Windows

On a Windows 7 operating system, online help information is not displayed after the **install.exe -h** command is run.

#### Time and date formats of the IBM Tivoli Monitoring Agent for Tivoli Netcool/OMNIbus in Simplified Chinese

The date and time format displayed in the IBM Tivoli Monitoring Agent for Tivoli Netcool/OMNIbus severity charts is incorrect in the Simplified-Chinese locale.

#### Usage of **nco\_osreport** in Traditional Chinese

If you run the **nco\_osreport** command in the Traditional Chinese locale, and the operation fails, several of the resulting error messages are displayed in Simplified Chinese, and some characters appear corrupted.

#### Usage of **nco\_osreport** to export data from a Tivoli Netcool/OMNIbus V7.2 ObjectServer

An error occurs if you use **nco\_osreport** to export data from a Tivoli Netcool/OMNIbus V7.2 ObjectServer in SQL format. You can, however, export data successfully to HTML and XML files.

#### Usage of **nco\_osreport** to export procedures with the "in out" parameters

The **automation.sql** file that **nco\_osreport** generates contains a syntax errors for any procedure that has an "in out" parameter. The parameter mode is incorrectly written as in/out. To resolve this problem, edit the **automation.sql** file and replace the forward slash character (/) with a space.

#### Usage of **nco\_osreport** to export triggers with evaluation blocks that end with a comment

The **automation.sql** file that **nco\_osreport** generates contains a space between the end of the evaluate block and the bind as phrase. When the evaluate block ends with a comment, the bind as phrase is mistakenly included in the comment, as shown below:



```

create or replace trigger update_service_affecting_events
group sae
priority 1
comment 'Update Service Affecting Events'
every 60 seconds
evaluate -- group by is used for "select distinct"
        select ServiceEntityId, count(*)
        from precision.entity_service
        -- there must be an nmos-id in alerts.status for this service-id
        where NmosEntityId in
            (select NmosEntityId from alerts.status
             where NmosEntityId != 0 and Severity = 5)
        group by ServiceEntityId
-- a comment here causes a problem bind as services
begin

```

To resolve this problem, edit `automation.sql`, search for the `bind as` phrase and insert a new line immediately before it, as shown below:

```

-- a comment here causes a problem
bind as services
begin

```

The following problems in the Web GUI component were known at the time of eGA:

#### Java vulnerability

To resolve the Java Denial of Service Security Exposure (see here: <http://www.oracle.com/technetwork/topics/security/alert-cve-2010-4476-305811.html>), take the following actions:

##### Apply the Tivoli Netcool/OMNIbus fix

Follow the instructions outlined here: <http://www-01.ibm.com/support/docview.wss?uid=swg21469003>.

##### Apply the IBM Websphere Application Server fix

To download and install this fix follow these instructions. You need the WebSphere Update Installer (WUI) to install the fix.

**Note:** If the WUI was installed during the installation of Tivoli Netcool/OMNIbus, it is located by default in `TIP_HOME_DIR/WebSphereUpdateInstallerV7`. If the WUI was already installed on the server by another application, or it was installed stand-alone, the existing installation will be used

1. Go to <http://www-01.ibm.com/support/docview.wss?uid=swg21462019> and download the **PM32173** fix into the `TIP_HOME_DIR/WebSphereUpdateInstallerV7/maintenance` directory.
2. Stop the Tivoli Integrated Portal server and all related processes.
3. Start the WUI by running `WUI_HOME_DIR/update.sh` on UNIX, or `update.exe` on Windows. On the first panel, click **Next**.
4. Specify the `TIP_HOME_DIR` path used by your installation and click **Next**.
5. Click **Install maintenance package** and click **Next**.
6. On the Maintenance Operation Selection panel, navigate to the `TIP_HOME_DIR/WebSphereUpdateInstallerV7/maintenance` directory and click **Next**.

7. Select the **IFPM32173** fix and click **Next**. Then click through the Installation Summary panels.

The JRE is patched and the installation completes. Click **Finish** close the installer.

#### **DISPLAY variable for silent and console installation and uninstallation on**

**Linux** The console installer, silent installer, console uninstaller, or silent uninstaller on SuSE Linux Enterprise Server (SLES) requires that the DISPLAY variable is set. So in these instances, do not unset the variable as shown in the installation and uninstallation instructions.

#### **Migration of pages from IBM Tivoli Netcool/Webtop**

Pages migrated from IBM Tivoli Netcool/Webtop are created in the Tivoli Integrated Portal as page type "system" rather than "custom".

#### **Error messages are displayed when installing the Web GUI**

When installing the Web GUI, the following messages might appear.

Failure at Step: WAS 7.0 iFix 19665

An older version of the Update Installer was found.

Uninstall it and rerun this installer. Click cancel to exit installer

The installer then exits and the installation is unsuccessful.

**Note:** These errors do *not* occur if the downloadable part for the Web GUI has the one of the following part numbers:

*Table 3. Downloadable part numbers for the Web GUI that do not experience the Failure at Step: WAS 7.0 iFix 19665 error message*

Operating system	Downloadable part number
AIX	CI3JIML
HP-UX	CI3JFML
HP-UX on itanium	CI3JGML
Linux	CI3JAML
Linux on System z	CI3JBML
Solaris	CI3JJML
Windows	CI3J9ML

The following scenarios describe where this problem may occur:

- **Scenario A. Where an installation is deleted or there is a failed uninstallation on the same computer**

1. Install one of the following products:
  - Tivoli Netcool/OMNIbus V7.3.1 (Beta version).
  - Tivoli Netcool/OMNIbus V7.3.1 (GA version).
  - Tivoli Netcool/OMNIbus V7.3.0 (GA version and any fix pack).
  - IBM Tivoli Netcool/Webtop V2.2 (GA version and any fix pack).
2. Remove the product you installed in step 1 by deleting the installation directory.

**Note:** This can also be caused if the you attempt an uninstallation which is unsuccessful.

3. On the same computer, install Tivoli Netcool/OMNIbus V7.3.1 (GA version).

The following error message is then displayed:

Failure at Step: WAS 7.0 iFix 19665

To resolve the problem, remove the NIF registry as follows:

1. Stop the TIP java process (if it exists).
2. Delete the nifregistry file.

**Note:** If the same error occurs after restarting the installer, proceed as follows:

3. Remove the installer and associated files from the following locations:

- Unix root installation (AIX):

```
/usr/ibm/common/acsi  
/var/ibm/common/acsi  
/usr/.ibm/.nif  
/.coi
```

- Unix root installation (non-AIX):

```
/usr/ibm/common/acsi  
/var/ibm/common/acsi  
/opt/.ibm/.nif  
/.coi
```

- Unix user installation:

```
~/acsi_*  
~/coi  
~/ibm/.nif
```

**Note:** For Unix installations, check the /tmp directory for any files or directories that have been created, for example acsiTemp\_<username>. Grep for /tmp files created by the user, and then delete these files.

- Windows installation:

```
C:\Program Files\IBM\Common\acsi  
C:\WINDOWS\.nifregistry  
C:\Users\<username>\Administrator\coi (Windows 2008)
```

4. Restart your computer to complete the process.

• **Scenario B. Where two installations are located on same computer**

1. Install one of the following products:
  - Tivoli Netcool/OMNIbus V7.3.0 (GA version and any fix pack).
  - IBM Tivoli Netcool/Webtop V2.2 (GA version and any fix pack).
2. Install one of the following products:
  - Tivoli Netcool/OMNIbus V7.3.1 (Beta version).
  - Tivoli Netcool/OMNIbus V7.3.1 (GA version).

The following error message is then displayed:

An older version of the Update Installer was found.  
Uninstall it and rerun this installer. Click cancel to exit installer

To resolve the problem, swap the installation files as follows:

1. Before installing the Web GUI V7.3.1, move the following files into a separate directory, for example ncw22\_installer:

```
~/acsi_*  
~/coi  
~/ibm/.nif
```

In addition, check the /tmp directory for files or a directory such as acsiTemp\_<username>. Grep for /tmp files created by the user, and then delete these files.

2. Install the Web GUI V7.3.1.

3. If there is a need to apply a fix pack to the Netcool/Webtop V2.2 installation, move the following files into a separate directory, for example ncw731\_installer:

```
~/acsi_*  
~/coi  
~/ibm/.nif
```

4. Copy the files from ncw22\_installer back to their original location.

5. Apply the fix pack to Netcool/Webtop V2.2.

6. Copy the files from ncw731\_installer back to their original location.

7. Apply any fix pack required to the Web GUI V7.3.1.

• **Scenario C. Where the installation is located on a shared home environment**

1. On a computer which has a home directory mounted on multiple computers, install one of the following products:

- Tivoli Netcool/OMNIBus V7.3.1 (Beta version).
- Tivoli Netcool/OMNIBus V7.3.1 (GA version).
- Tivoli Netcool/OMNIBus V7.3.0 (GA version and any fix pack).
- IBM Tivoli Netcool/Webtop V2.2 (GA version and any fix pack).

2. On a different computer which has a home directory mounted on multiple computers, install one of the following products:

- Tivoli Netcool/OMNIBus V7.3.1 (Beta version).
- Tivoli Netcool/OMNIBus V7.3.1 (GA version).
- Tivoli Netcool/OMNIBus V7.3.0 (GA version and any fix pack).
- IBM Tivoli Netcool/Webtop V2.2 (GA version and any fix pack).

The following error message is then displayed:

Failure at Step: WAS 7.0 iFix 19665

To resolve the problem, remove the NIF registry as follows:

1. Stop the TIP java process (if it exists).
2. Delete the nifregistry file.

**Note:** If the same error occurs after restarting the installer, proceed as follows:

3. Remove the installer and associated files from the following locations:

- Unix root installation (AIX):

```
/usr/ibm/common/acsi  
/var/ibm/common/acsi  
/usr/.ibm/.nif  
/.coi
```

- Unix root installation (non-AIX):

```
/usr/ibm/common/acsi  
/var/ibm/common/acsi  
/opt/.ibm/.nif  
/.coi
```

- Unix user installation:

```
~/acsi_*  
~/coi  
~/ibm/.nif
```

**Note:** For Unix installations, check the /tmp directory for any files or directories that have been created, for example acsiTemp\_<username>. Grep for /tmp files created by the user, and then delete these files.

- Windows installation:

```
C:\Program Files\IBM\Common\acsi  
C:\WINDOWS\nifregistry  
C:\Users\<username>\Administrator\coi (Windows 2008)
```

4. Restart your computer to complete the process.

#### Erroneous error messages in SystemOut.log file

The following erroneous error messages might be recorded in the in the SystemOut.log file in *tip\_home\_dir/profiles/TIPProfile/logs/server1*:

- When installing the Web GUI, the following messages might appear:
  - CWWIM4512E The password match failed.
  - SECJ0369E: Authentication failed when using LTPA. The exception is <null>.

However, the product installs correctly.

- After starting the server, the following error messages might appear:  
BMWFA0019E: Error happened while trying to read the config file  
C:\IBM\tivoli\tipv2\profiles\TIPProfile\installedApps\TIPCell\isc.ear\mm.proxy.war\WEB-INF\Endpoints.properties  
BMWFA0019E: Error happened while trying to read the config file  
C:\IBM\tivoli\tipv2\profiles\TIPProfile\installedApps\TIPCell\isc.ear\mm.proxy.war\WEB-INF\CacheService.properties

These messages are related to a known problem in Lotus® Mashup. However, the server starts correctly.

- The SystemOut.log file might contain a number of error messages regarding the initialization of the ServiceManager when starting the system. However, the service does start correctly as shown by the following message:

```
ServiceManage I ServiceManager init() ServiceManager.init()>>All Services  
initialized successfully
```

#### Java exception during uninstallation

When uninstalling the Web GUI the

IBM\_Tivoli\_Netcool\_OMNibus\_Web\_GUI\_Uninstall-00.log file might record a Java exception. However, the uninstallation completes successfully.

#### Compatibility of the V7.3.1 Web GUI with IBM Tivoli Business Service Manager

**V4.2.1** Compatibility between the V7.3.1 Web GUI and IBM Tivoli Business Service Manager V4.2.1 is restricted to launch-in-context.

#### Loading pages within applets might fail

If the applet cache is cleared and any of the following Web GUI portlets are loaded, the applet associated with that portlet might fail:

- Active Event List
- Event Dashboard
- Maps
- Map Editor
- Filter Builder

- View Builder

The applet panel color becomes black or the applet fails to respond. In addition, the Java console, if it is running, fails.

This problem is known to occur when using the Internet Explorer 8 or Firefox 3.6 browser in conjunction with the either of the following Java Runtime Environments (JRE) on any supported Microsoft Windows operating system or Red Hat Enterprise Linux (RHEL) Desktop 5.0:

- Oracle JRE 1.6.0\_21 to 1.6.0\_23
- IBM JRE 1.6.0 Service Refresh 9

To avoid this problem, set the following environment variable on the client or end-user machine:

```
JPI_PLUGIN2_NO_HEARTBEAT = 1
```

IBM has made an enhancement request to Oracle to have this variable be made “paramaterisable”, so that in the future it can be passed to the JRE by the applet at launch, and obviate the need to set it on a per end-user basis.

Should the problem persist, perform the following tasks:

- If you use Internet Explorer 8, do either of the following tasks:
  - Turn off the Java next-generation plug-in in the JRE. This applies to any version of MicrosoftWindows except Windows 7 Enterprise (64-bit) edition.
  - Switch off the feature to automatically update the JRE on Windows systems, and use either of the following JREs:
    - Oracle JRE 1.6.0\_20 or earlier
    - IBM JRE 1.6.0 Service Release 8 FP1 or earlier
- If you use Firefox 3.6 on any supported Windows operating system or RHEL Desktop 5.0, switch off the feature to automatically update the JRE on Windows systems, and use either of the following JREs:
  - Oracle JRE 1.6.0\_20 or earlier
  - IBM JRE 1.6.0 Service Release 8 FP1 or earlier

**Note:** Once you have done this, ignore any requests to download the latest version of the JRE.

**Windows** To switch off the next-generation plug-in or the feature to automatically update the JRE, follow this procedure:

1. Click **Start** and then click **Control Panel** to open the Windows Control Panel.
2. Double click the icon for the Java Control Panel.
3. Click the **Advanced** tab.
4. To switch off the next-generation plug-in:
  - a. Click the **Java plug-in** entry.
  - b. Clear the **Enable the next-generation Java Plug-in** check box.
5. To switch off the feature to automatically update the JRE:
  - a. Click the **JRE Auto-Download** entry.
  - b. Click the **Never Auto-Download** radio button.
6. Click **OK** to close the Java Control Panel.

### **Omission of the Web GUI in Windows services list**

On Windows operating systems, the Web GUI does not appear in the list of programs in the Programs and Features window.

### **User groups stored in OpenLDAP**

An error message might occur when adding a member to a group that has an empty **Description** and when OpenLDAP is used as the user repository. However, the user is added to the group successfully.

### **Storage of user E-mail addresses**

The e-mail address of a user is not stored when the ObjectServer is the user repository.

### **Masking of administrative user password on UNIX and Linux**

When using the stopServer.sh script on UNIX or Linux operating systems, the system prompts you for the user name and password of the administrative user. Occasionally, the password is not fully masked.

### **Appearance of portlets in the work area**

In the work area of the Web GUI individual portlets appear as tabbed windows. Occasionally, the size of the tabs is not consistent for all portlets.

### **Omission of icons in menu**

The **Edit Options** menu on any Tivoli Integrated Portal page does not show the icons related to each of the menu options.

### **Usage of Mozilla Firefox for bidirectional languages and mirrored text**

You must have an internationalized version of the Mozilla Firefox browser to be able to see mirrored text and images for bi-directional languages in any pop-up dialogs and buttons on dialogs.

### **Truncated of hot key names in Map Editor in Arabic and Hebrew**

The menus in the Map Editor include text identifying the hot key to use for certain functions. For example, use Ctrl+C to access the **Copy** item on the **Edit** menu. When using the Arabic or Hebrew languages, the names of these keys can appear truncated on the menus.

### **Usage of Internet Explorer in Arabic and Hebrew**

When using the Arabic or Hebrew languages with Internet Explorer 7 or 8, the text in the navigation pane of the Tivoli Integrated Portal can become truncated.

### **Welcome page of other products after uninstalling the Web GUI**

The Welcome page of products that share a Tivoli Integrated Portal with the Web GUI might not display properly after uninstalling the Web GUI. If this problem occurs you can work around it as follows:

1. Make sure that the Tivoli Integrated Portal server is running.
2. Navigate to `tip_home_dir/profiles/TIPProfile/bin`.
3. Enter the following command to start **wsadmin**:  
`wsadmin -conntype NONE`
4. Enter the following command. Be sure to enter the command on a single line:  
`$AdminApp update isc modulefile {-operation delete  
-contenturi OMNIbusWebGUI.war}`
5. Save the configuration and exit from **wsadmin** by entering the following commands:  
`$AdminConfig save  
exit`



6. Restart the Tivoli Integrated Portal server.

### Encrypting passwords using FIPS 140-2 mode fails

A Java exception may occur when attempting to generate passwords encrypted in FIPS 140-2 mode using the `ncw_fips_crypt` tool in the Tivoli Netcool/OMNIBus Web GUI V7.3.1 Fix Pack 1. Instead of obtaining the encrypted password, an exception occurs containing text similar to the following:

```
.....
    at org.apache.harmony.security.fortress.Services$NormalServices.access$1
300(Services.java:141)
    at org.apache.harmony.security.fortress.Services.getProvidersList(Servic
es.java:645)
    at sun.security.jca.GetInstance.getProvidersList(GetInstance.java:79)
    at sun.security.jca.GetInstance.getInstance(GetInstance.java:232)
    at java.security.cert.CertificateFactory.getInstance(CertificateFactory.
java:161)
    at com.ibm.crypto.fips.provider.IBMJCEFIPS.c(Unknown Source)
    at com.ibm.crypto.fips.provider.IBMJCEFIPS.b(Unknown Source)
    at com.ibm.crypto.fips.provider.IBMJCEFIPS.a(Unknown Source)
    at com.ibm.crypto.fips.provider.AESCipher.<init>(Unknown Source)
    at com.ibm.crypto.fips.provider.SelfTest.d(Unknown Source)
    at com.ibm.crypto.fips.provider.SelfTest.runSelfTest(Unknown Source)
    at com.ibm.crypto.fips.provider.SelfTest.<init>(Unknown Source)
    at com.ibm.crypto.fips.provider.IBMJCEFIPS.<init>(Unknown Source)
    at java.lang.J9VMInternals.newInstanceImpl(Native Method)
    at java.lang.Class.newInstance(Class.java:1345)
    at org.apache.harmony.security.fortress.Services$1.run(Services.java:895
)
    at org.apache.harmony.security.fortress.Services$1.run(Services.java:892
)
    at java.security.AccessController.doPrivileged(AccessController.java:202
)
    at org.apache.harmony.security.fortress.Services.newInstance(Services.ja
va:892)
    at org.apache.harmony.security.fortress.Services.access$600(Services.jav
a:55)
    at org.apache.harmony.security.fortress.Services$NormalServices.createPr
oviderInstance(Services.java:316)
    at org.apache.harmony.security.fortress.Services$NormalServices.createEx
tProviderInstance(Services.java:296)
    at org.apache.harmony.security.fortress.Services$NormalServices.loadAllP
roviders(Services.java:225)
    at org.apache.harmony.security.fortress.Services$NormalServices.access$4
00(Services.java:141)
    at org.apache.harmony.security.fortress.Services$NormalServices$2.run(Se
rvices.java:207)
    at org.apache.harmony.security.fortress.Services$NormalServices$2.run(Se
rvices.java:205)
    at java.security.AccessController.doPrivileged(AccessController.java:202
)
    at org.apache.harmony.security.fortress.Services$NormalServices.getProvi
derList(Services.java:205)
.....
```

To resolve the problem, apply the iFix from <http://www-01.ibm.com/support/docview.wss?uid=swg24030503>. Download the file appropriate for the operating system your Web GUI server runs, and follow the instructions in the readme file to install the fix.

In addition, ensure that the IBMJCE and IBMJCEFIPS providers are included in `tip_home_dir/java/jre/lib/java.security` as shown below:



```
security.provider.1=com.ibm.crypto.fips.provider.IBMJCEFIPS
security.provider.2=com.ibm.crypto.provider.IBMJCE
security.provider.3=com.ibm.jsse.IBMJSSEProvider
security.provider.4=com.ibm.jsse2.IBMJSSEProvider2
security.provider.5=com.ibm.security.jgss.IBMJGSSProvider
security.provider.6=com.ibm.security.cert.IBMCertPath
security.provider.7=com.ibm.crypto.pkcs11impl.provider.IBMPKCS11Impl
security.provider.8=com.ibm.security.cmskeystore.CMSProvider
security.provider.9=com.ibm.security.jgss.mech.spnego.IBMSPNEGO
security.provider.10=com.ibm.security.sasl.IBMSASL
security.provider.11=com.ibm.xml.crypto.IBMXMLCryptoProvider
security.provider.12=com.ibm.xml.enc.IBMXMLEncProvider
security.provider.13=org.apache.harmony.security.provider.PolicyProvider
```

### **Securing links to remote WAAPI clients using client and server authentication may cause Web GUI applets to fail**

There are two ways of securing a link to a remote WAAPI client: server only or client and server. Implementing the client and server method may cause Web GUI applets to fail when using the Mozilla Firefox browser. If this occurs, use the server-only authentication method.

### **Problems identified after eGA**

Problems identified after eGA are documented in the form of individual technotes in the Support knowledge base at:

<http://www-306.ibm.com/software/sysmgmt/products/support/IBMTivoliNetcoolOMNIBus.html>

As problems are discovered and resolved, the IBM Support team updates the knowledge base. By searching the knowledge base, you can quickly find workarounds or solutions to problems.

The following link launches a customized query of the live Support knowledge base:

<http://www.ibm.com/support/search.wss?tc=SSSHTQ&rs=3120&rank=8&dc=DB520+D800+D900+DA900+DA800+DB560&dtm>

Use the following link to perform an advanced search of the knowledge base:

[http://www.ibm.com/support/advsrch.wss?rs=3120&loc=en\\_US](http://www.ibm.com/support/advsrch.wss?rs=3120&loc=en_US)

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Printed in the Republic of Ireland

GI11-9400-00

