

BMC Impact Integration User Guide

for Tivoli



Supporting

BMC Impact Integration version 4.0.21 for Tivoli

September 2015

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United States and Canada

Address	BMC SOFTWARE INC 2101 CITYWEST BLVD HOUSTON TX 77042-2827 USA	Telephone	713 918 8800 or 800 841 2031	Fax	713 918 8000
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Outside United States and Canada

Telephone	(01) 713 918 8800	Fax	(01) 713 918 8000
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Have the following information available so that Customer Support can begin working on your issue immediately:

- product information
 - product name
 - product version (release number)
 - license number and password (trial or permanent)
- operating system and environment information
 - machine type
 - operating system type, version, and service pack or other maintenance level such as PUT or PTF
 - system hardware configuration
 - serial numbers
 - related software (database, application, and communication) including type, version, and service pack or maintenance level
- sequence of events leading to the issue
- commands and options that you used
- messages received (and the time and date that you received them)
 - product error messages
 - messages from the operating system, such as `file system full`
 - messages from related software

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- Use the Customer Support website at <http://www.bmc.com/support>.



Contents

Chapter 1	Introduction to BMC Impact Integration for Tivoli	13
<hr/>		
	About BMC Impact Integration for Tivoli	13
	About BMC IM	14
	BMC Impact Integration for Tivoli components	14
	Java-based Configuration GUI	15
	BAROC files	15
	Rules	16
	IBM Tivoli Netcool/OMNIBus components	16
	How BMC Impact Integration for Tivoli works	16
	Event flow when IBM Tivoli Netcool/OMNIBus (netcool) is primary EMS	17
	Event flow when BMC IM (IM) is primary EMS	18
	Where to go from here.	19
Chapter 2	Installing BMC Impact Integration for Tivoli	21
<hr/>		
	Planning the installation	21
	Supported platforms	22
	Installation requirements for products involved in this integration	22
	Installing BMC Impact Integration for Tivoli.	23
	Installing on Windows	23
	Installing on UNIX	24
	Installing BMC Impact Integration for Tivoli using Console mode	26
	Effects of the installation process	27
	Uninstalling BMC Impact Integration for Tivoli	29
	Where to go from here.	30
Chapter 3	Configuring BMC Impact Integration for Tivoli	31
<hr/>		
	Configuration overview	31
	Configuring BMC IM.	32
	Loading the deduplication rule into BMC IM.	35
	Effects of the configuration process	35
	Configuring IBM Tivoli Netcool/OMNIBus server	36
	Configuring the integration module	39
	Configuring filters	45
	Filter syntax	46
	Configuring severity mapping	47
	Configuring message enrichment	49
	Adding additional slots from BMC IM to IBM Tivoli Netcool/OMNIBus	50
	Adding new slot/slots from BMC IM to IBM Tivoli Netcool/OMNIBus.	51

Adding additional slots from IBM Tivoli Netcool/OMNIBus to BMC IM	54
Configuring modified activity events	58
Filtering activities in BMC Impact Integration for Tivoli	59
Setting the AddNewLineTerminator parameter	60
Configuring BMC Impact Integration for Tivoli Windows process as a service.	60
Configuring parameters to keep the connection active	61
Configuring BMC Impact Integration for Tivoli to accept any IP address	62
Configuring for High Availability (HA) cells support	63
Configuring IPv6 connection support	64
Uninstalling BMC IM configuration	65

Chapter 4 BMC Impact Integration for Tivoli startup tasks 67

Startup tasks	67
Starting/Stopping BMC Impact Integration for Tivoli Services	68
Where to go from here	69

Appendix 5 Status, severity, and slot defaults for BMC Impact Integration for Tivoli 71

BMC IM to IBM Tivoli Netcool/OMNIBus.	71
Severity mapping defaults	71
Status mapping defaults	72
IBM Tivoli Netcool/OMNIBus to BMC IM.	72
Severity mapping defaults	72
Status mapping defaults	73
Slots.	73
BMC IM slots available for message enrichment	73
IBM Tivoli Netcool/OMNIBus slots available for message enrichment	74

Appendix 6 Log files reference for BMC Impact Integration for Tivoli 75

Log file for the source process	75
Log file for the synchronization process	75
Biinetcool.trace file	76

Appendix 7 Troubleshooting for BMC Impact Integration for Tivoli 77

BMC Impact Integration for Tivoli does not start	77
Events are not processed when IBM Tivoli Netcool/OMNIBus (netcool) is primary EMS	79
Events are not processed when BMC IM (IM) is primary EMS.	80
Events are not enriched in IBM Tivoli Netcool/OMNIBus when IBM Tivoli Netcool/OMNIBus (netcool) is primary EMS.	81
Cannot delete IBM Tivoli Netcool/OMNIBus Events/Alerts on BMC IM	81

Appendix 8 Features supported by BMC Impact Integration for Tivoli 83

Support for unique mcue_id.	83
Handle single quotes	83
Support for Multibyte Character sets	84



Figures

Event flow when IBM Tivoli Netcool/OMNIBus (ntecool) is the primary EMS	17
Event flow when BMC IM (IM) is the primary EMS	18
Service successfully installed message	61

Tables

BMC Impact Integration for Tivoli components	14
Rules that manage event exchange between BMC IM and IBM Tivoli Netcool/OMNIBus	16
Installation tasks	21
Required products and components	22
Effects of the installation process	28
Order of tasks in BMC Impact Integration for Tivoli configuration	32
Rules	32
BMC Impact Integration for Tivoli BMC IM side configuration parameters	33
Effects of the BMC IM configuration process	36
Copy files for Windows	37
Copy files for UNIX	37
Parameters	40
Filter operators	46
Functions permitted in filters	47
Slots available from BMC IM to IBM Tivoli Netcool/OMNIBus	51
Slots available from IBM Tivoli Netcool/OMNIBus to BMC IM	54
BMC IM to IBM Tivoli Netcool/OMNIBus event severity mapping defaults	72
BMC IM to IBM Tivoli Netcool/OMNIBus event status mapping defaults	72
IBM Tivoli Netcool/OMNIBus to BMC IM event severity mapping defaults	73
IBM Tivoli Netcool/OMNIBus to BMC IM status mapping defaults	73
BMC IM slots available for message enrichment	73
IBM Tivoli Netcool/OMNIBus slots available for message enrichment	74

Introduction to BMC Impact Integration for Tivoli

About BMC Impact Integration for Tivoli	13
About BMC IM	14
BMC Impact Integration for Tivoli components	14
Java-based Configuration GUI	15
BAROC files	15
Rules	16
IBM Tivoli Netcool/OMNIbus components	16
IBM Tivoli Netcool/OMNIbus components	16
IBM Tivoli Netcool/OMNIbus components	16
Event flow when BMC IM (IM) is primary EMS	18
Where to go from here.....	19

About BMC Impact Integration for Tivoli

This module connects BMC Impact Manager (BMC IM)/BMC ProactiveNet Performance Management (BPPM)/BMC TrueSight Infrastructure Management Server with IBM Tivoli Netcool/OMNIbus.

The BMC Impact Integration for Tivoli product enables the bi-directional flow of enterprise events and message data between BMC IM and IBM Tivoli Netcool/OMNIbus. For instructions about installing the BMC Impact Integration for Tivoli, see [“Installing BMC Impact Integration for Tivoli”](#) on page 23.

BMC Impact Integration for Tivoli provides the following benefits:

- BMC IM events are integrated into the IBM Tivoli Netcool/OMNIbus workspace, or IBM Tivoli Netcool/OMNIbus events are integrated into the BMC IM workspace, providing a single console for event management.

- Only the events designated as being of interest are passed to the relevant system. Other events are filtered out.
- Events are translated from one Event Management System (EMS) format to the other.
- You can enrich a message before you send it from one EMS to the other.

NOTE



The BMC IM and IBM Tivoli Netcool/OMNIBus are referred to collectively in this document and in the product as Event Management Systems (EMSs). Also, only one system can be set as the EMS that receives events, so that EMS is called the primary EMS. The secondary EMS is the EMS that sends events.

About BMC IM

The BMC Impact Manager/BMC ProactiveNet Performance Management cell collects, processes, and stores events arriving from entities such as networks, applications, and databases. Using that rules it obtains from the BMC Impact Manager/BMC ProactiveNet Performance Management Knowledge Base, the cell applies business logic to each event message and takes appropriate action such as forwarding relevant events on to other cells or systems, discarding duplicate events, or associating events with logical business entities.

For more information about BMC Impact Manager/BMC ProactiveNet Performance Management, see the product documentation available from the Customer Support page of the BMC Software website, <http://www.bmc.com/>.

BMC Impact Integration for Tivoli components

BMC Impact Integration for Tivoli consists of the components listed in [Table 1](#):

Table 1 BMC Impact Integration for Tivoli components (part 1 of 2) (part 1 of 2)

Component	Description
Sun Java-based configuration graphical user interface	graphical user interface (GUI) by using which you configure BMC Impact Integration for Tivoli, filters, severity and status mappings, and message enrichment. For more information, see “Java-based Configuration GUI” on page 15.

Table 1 BMC Impact Integration for Tivoli components (part 2 of 2) (part 2 of 2)

Component	Description
BAROC files	language used by BMC IM to identify events. For more information, see “BAROC files” on page 15 .
Rules	that determine which events from BMC IM get passed to the integration module. For more information, see “Rules” on page 16 .

Java-based Configuration GUI

The major features of the Java-based configuration GUI are as follows

- The Configure Integration Module enables you to set configuration parameters for BMC Impact Integration for Tivoli, its interface to the IBM Tivoli Netcool/OMNIbus Enterprise Console, and the BMC IM cell. For more information about configuring this module, see [“Configuring the integration module” on page 39](#).
- Filters enable you to define the event classes and respective slot properties that are permitted into each EMS. Filters are set against events originating in the secondary EMS. For more information, see [“Configuring filters” on page 45](#).
- Status and severity mappings enable you to customize map event status and severity values from the BMC IM environment to the IBM Tivoli Netcool/OMNIbus Enterprise Console, and from the IBM Tivoli Netcool/OMNIbus Enterprise Console to the BMC IM environment. For more information about status and severity mapping, see [“Configuring severity mapping” on page 47](#).
- Message enrichment enables you to insert event message data into a custom statement that appears with the event data on the primary EMS. For more information, see [“Configuring message enrichment” on page 49](#).

BAROC files

The classes that BMC Impact Integration for Tivoli can receive are defined in BMC IM in Basic Recorder of Objects In C (BAROC) language. For more information about the BAROC language, see the *BMC Impact Manager Knowledge Base Reference Guide*.

Rules

Rules, which is a part of event management systems, uses data associated with an event to determine when and how to respond to that class of event. In BMC Impact Integration for Tivoli, rules are used to synchronize, manage, and control the flow of event data from one EMS to the other.

Table 2 Rules that manage event exchange between BMC IM and IBM Tivoli Netcool/OMNIBus

Rule type	Description
synchronization	Detects changes in event status or severity slots and propagates these changes

IBM Tivoli Netcool/OMNIBus components

BMC Impact Integration for Tivoli uses the following IBM Tivoli Netcool/OMNIBus components to enable the bi-directional flow of events:

- **Socket Probe** is used by BMC Impact Integration for Tivoli to communicate with the IBM Tivoli Netcool/OMNIBus ObjectServer. The Socket Probe component acquires event data from BMC Impact Integration for Tivoli and processes it based on a properties file. The event data is then forwarded to the IBM Tivoli Netcool/OMNIBus ObjectServer as an alert. The Socket Probe keeps listening for event data on a user-defined port.
- **Socket Writer Gateway** extracts the alerts data from the IBM Tivoli Netcool/OMNIBus ObjectServer. The alerts are then processed and sent to a user-specified destination and port number. BMC Impact Integration for Tivoli listens to this port and converts the incoming data into BMC IM events. You can configure the Socket Writer Gateway component by using the gateway properties file.

How BMC Impact Integration for Tivoli works

BMC Impact Integration for Tivoli automates the transmission and synchronization of events and event data between IBM Tivoli Netcool/OMNIBus and BMC IM. All filtered events, relevant event slot values, and event statuses propagate between BMC IM and IBM Tivoli Netcool/OMNIBus.

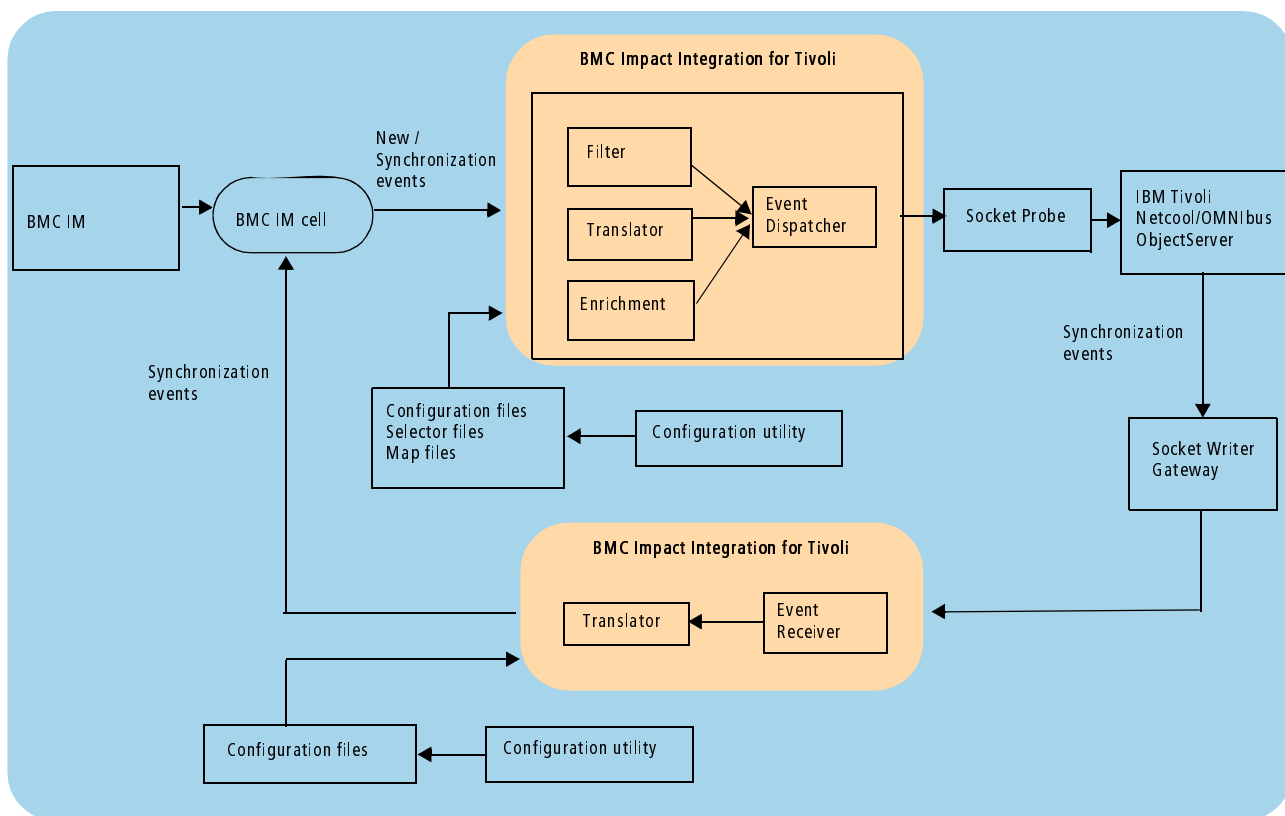
You can designate either BMC IM or IBM Tivoli Netcool/OMNIBus (netcool) as the primary EMS. When you designate BMC IM (IM) as the primary EMS, it receives events from IBM Tivoli Netcool/OMNIBus. When you designate IBM Tivoli Netcool/OMNIBus (netcool) as the primary EMS, it receives events from BMC IM.

You can designate primary EMS while configuring BMC IM for BMC Impact Integration for Tivoli. To change the primary EMS, you must reconfigure BMC IM. For more information, see [“To configure BMC IM”](#) on page 32.

Event flow when IBM Tivoli Netcool/OMNIBus (netcool) is primary EMS

When an event arrives in a BMC IM cell, it is propagated to BMC Impact Integration for Tivoli, which translates, filters, and enriches the event based on user-configured settings. The processed event is passed to the Event Dispatcher module, which passes the event to the Socket Probe. The Socket Probe pushes the translated event to the IBM Tivoli Netcool/OMNIBus ObjectServer. The Socket Writer Gateway pushes the translated event to the IBM Tivoli Netcool/OMNIBus ObjectServer. The Socket Writer Gateway also pushes the event to the Event Receiver, which then passes the event to the Translator.

Figure 1 Event flow when IBM Tivoli Netcool/OMNIBus (ntecool) is the primary EMS



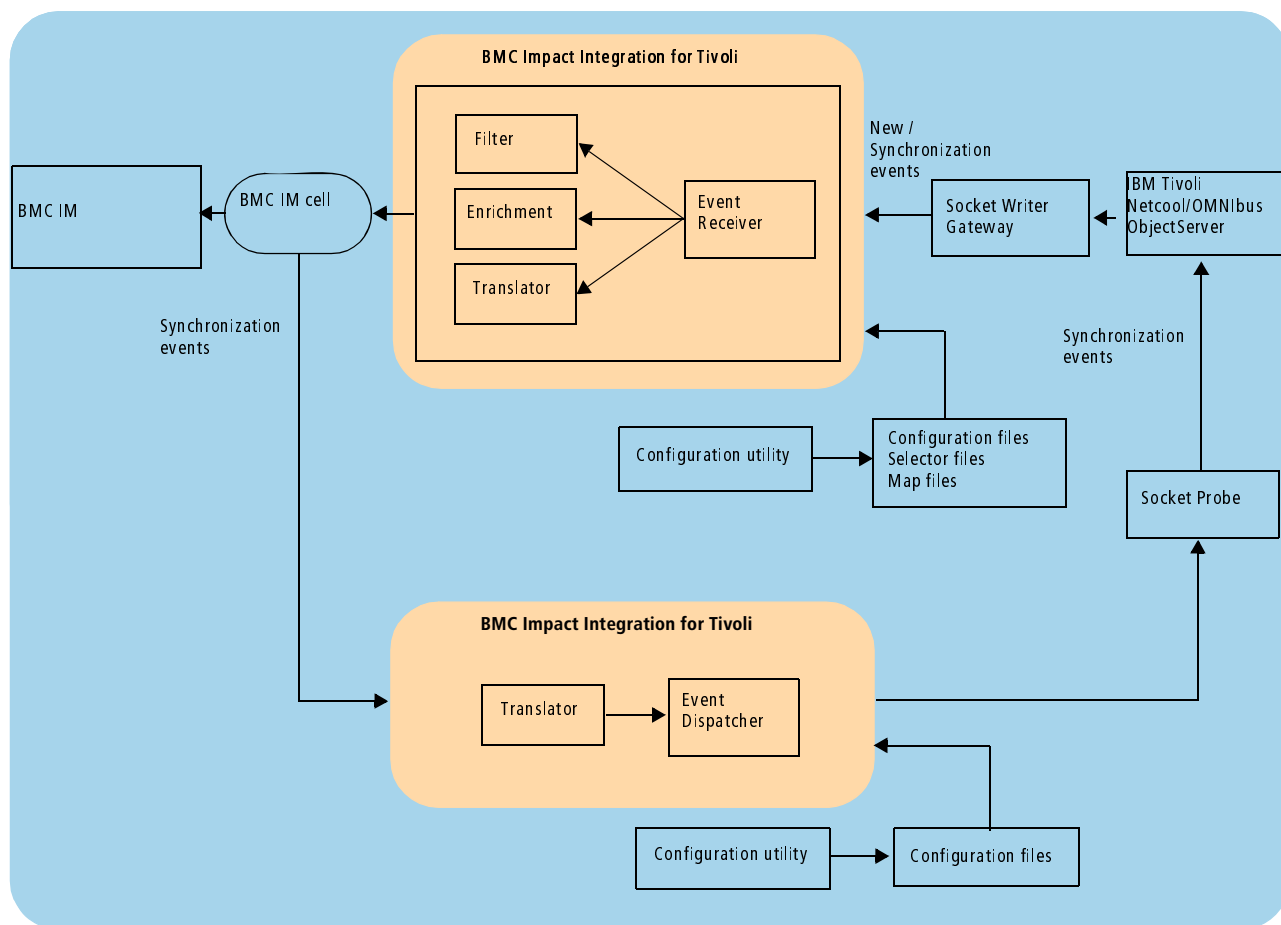
Whenever status or severity is changed for an event in IBM Tivoli Netcool/OMNIBus, a synchronization rule detects the change, and a synchronization event is generated. The synchronization event is received by the Socket Writer Gateway, which pushes the event to BMC Impact Integration for Tivoli. A synchronization event does not pass through the filter and message enrichment

modules. Instead, BMC Impact Integration for Tivoli passes the event through the translation module and sends the translated event to the BMC IM cell. Additionally, if the status or severity for an event originated in BMC IM is changed in BMC IM, a synchronization event is triggered and sent to IBM Tivoli Netcool/OMNIBus.

Event flow when BMC IM (IM) is primary EMS

When an event arrives in IBM Tivoli Netcool/OMNIBus, the event is pulled by the Socket Writer Gateway. The Socket Writer Gateway pushes it to the Event Receiver module, which calls the filter, translation, and enrichment modules. The processed event is then pushed to the BMC IM cell.

Figure 2 Event flow when BMC IM (IM) is the primary EMS



Whenever status or severity is changed for an event in BMC IM cell, a synchronization rule detects the change, and a synchronization event is generated. The synchronization event is received by BMC Impact Integration for Tivoli. A synchronization event does not pass through the filter and message enrichment modules. Instead, BMC Impact Integration for Tivoli passes the event through the translation module and sends the translated event to the Socket Probe. The Socket

Probe then sends the event to the IBM Tivoli Netcool/OMNIBus ObjectServer. Additionally, if the status or severity for an event originated in IBM Tivoli Netcool/OMNIBus is changed in IBM Tivoli Netcool/OMNIBus, a synchronization event is triggered and sent to the BMC IM.

Where to go from here

You are now ready to begin the installation procedure. See [Chapter 2, “Installing BMC Impact Integration for Tivoli”](#), [Chapter 3, “Configuring BMC Impact Integration for Tivoli”](#), [Chapter 4, “BMC Impact Integration for Tivoli startup tasks”](#)

Installing BMC Impact Integration for Tivoli

This chapter presents the following topics:

- Planning the installation 21
 - Supported platforms 22
 - Installation requirements for products involved in this integration 22
- Installing BMC Impact Integration for Tivoli 23
 - Installing on Windows 23
 - Installing on UNIX 24
- Installing BMC Impact Integration for Tivoli using Console mode 26
- Effects of the installation process 27
- Uninstalling BMC Impact Integration for Tivoli 29
- Where to go from here 30

Planning the installation

Table 3 lists the tasks that you need to perform to install BMC Impact Integration for Tivoli.

Table 3 Installation tasks (part 1 of 2)

Task	Required or Optional
Determine if you have the supported platform as described in “Supported platforms” on page 22	required
Review the installation requirements and install the required supporting products as described in “Installation requirements for products involved in this integration” on page 22	required

Table 3 Installation tasks (part 2 of 2)

Task	Required or Optional
Download the product as described in “To download and prepare BMC Impact Integration for Tivoli” on page 23	required
Install BMC Impact Integration for Tivoli as described in “Installing BMC Impact Integration for Tivoli” on page 23	required

Supported platforms

For a list of supported platforms of BMC Impact Integration for Tivoli 4.0.21, use the BMC Solution and Product Availability and Compatibility Utility on the [Product Availability and Compatibility](#) page.

Installation requirements for products involved in this integration

Table 4 lists the required products and sources of installation information for BMC Impact Integration for Tivoli.

Table 4 Required products and components

Software	Installation requirements for integration	How to install and configure
BMC Impact Manager or BMC ProactiveNet Performance Management	Must be installed before you install BMC Impact Integration for Tivoli.	To install, see the <i>BMC Impact Solutions or BMC ProactiveNet Performance Management: Planning and Installation User Guide</i> . To configure, see “Configuring BMC IM” on page 32
IBM Tivoli Netcool/OMNIBus ObjectServer	None	See the <i>IBM Tivoli Netcool/OMNIBus User Guide</i> .
IBM Tivoli Netcool/OMNIBus Socket Probe	None	See the <i>IBM Tivoli Netcool/OMNIBus Socket Probe Reference Guide</i> .
IBM Tivoli Netcool/OMNIBus Socket Writer Gateway	None	See the <i>IBM Tivoli Netcool/OMNIBus Socket Writer Gateway Reference Guide</i> .

To download and prepare BMC Impact Integration for Tivoli

- 1 Create a temporary directory on your computer.
- 2 Access the EPD web page for BMC Impact Integration for Tivoli from <http://webapps.bmc.com/epd>.
- 3 Type the user name and password provided by your BMC software sales representative.
- 4 Download the product documentation.
- 5 Click the link for the product file that you want to download.
- 6 Select the **Save File** option in the File Download dialog box.
- 7 Depending on the platform you are using, perform one of the following:
 - If you are working on a Windows platform, unzip and untar the **BiiNetCool_4.0.21_Win.gz** file you downloaded.
 - If you are working on a UNIX platform, enter the following command to untar the file:

```
tar -xvf BiiNetCool_4.0.21_<os platform>.gz
```

Installing BMC Impact Integration for Tivoli

This section contains the procedures to install BMC Impact Integration for Tivoli module on Windows and UNIX.

Installing on Windows

- 1 Double-click **BiiNetCool_Inst_Win.exe**.
- 2 On the welcome page of the installation wizard, click **Next**.
- 3 On the license agreement page, read the license agreement, and select the appropriate option.
- 4 Click **Next**.

- 5 On the Select Directory page, specify the directory in which you want to install BMC Impact Integration for Tivoli.

By default, BMC Impact Integration for Tivoli is installed in the `%MCELL_HOME%\BiiNetcool` directory.



NOTE

The `MCELL_HOME` environment variable specifies the directory where BMC IM is installed.

- 6 Click **Next**.
- 7 On the Installation Checklist page, verify the space requirements, and click **Next**.
- 8 On the Installation Summary page, read the installation summary, and click **Install** to start the installation process.
- 9 After BMC Impact Integration for Tivoli module is installed, click **Finish** to complete the installation process.

Installing on UNIX

Before you begin

You must log on as a root or super user. In addition, you must have execute permission on the file required to install BMC Impact Integration for Tivoli.



NOTE

Before installing BMC Impact Integration for Tivoli using GUI mode, ensure that `DISPLAY` is configured on that terminal.

To install BMC Impact Integration for Tivoli

- 1 Enter the following command:

For AIX:

```
./BiiNetCool_Inst_AIX.bin
```

For Solaris:

```
./BiiNetCool_Inst_Solaris.bin
```


For Linux:

`./BiiNetCool_Inst_Linux.bin`

- 2 On the welcome page of the installation wizard, click **Next**.
- 3 On the license agreement page, read the license agreement, and select the appropriate option.
- 4 Click **Next**.
- 5 Specify the directory in which you want to install BMC Impact Integration for Tivoli.

By default, BMC Impact Integration for Tivoli is installed in the `$MCELL_HOME/BiiNetcool` directory.

- 6 Click **Next**.
- 7 On the Installation Checklist page, verify the space requirements, and click **Next**.
- 8 On the Installation Summary page, read the installation summary, and click **Install** to start the installation process.
- 9 After BMC Impact Integration for Tivoli is installed, click **Finish** to complete the installation process.
- 10 Perform the following steps to create environment variables:

- A. Run the `.profile` file and check `BIINETCOOL_CELL` and `BIINETCOOL_HOME` environment variable. If not found then create the environment variable by using the following command:

```
export BIINETCOOL_CELL =< IM Cell Name>
```

```
export BIINETCOOL_HOME=BiiNetcoolInstallationDirectory
```

The *BiiNetcoolInstallationDirectory* variable represents the directory where you have installed BMC Impact Integration for Tivoli.

- B. Enter the `./hostname` command to get the host name, and create the `HOSTNAME` environment variable by using the following command:

```
export HOSTNAME=hostName
```

The *hostName* variable represents the value returned by the `./hostname` command.

C. Add the following environment variable

```
export LANG=C ( for Linux only)
```

Installing BMC Impact Integration for Tivoli using Console mode

This section contains the procedure to install BMC Impact Integration for Tivoli module on Windows and UNIX using Console mode.

Before you begin

You must log on as a root or super user. In addition, you must have execute permission on the file required to install BMC Impact Integration for Tivoli.

To install BMC Impact Integration for Tivoli using Console mode

- 1 Copy the files for installing BMC Impact Integration for Tivoli appropriate for your operating system to a directory with approximately 100 MB of free space.
- 2 Enter the following command:
 - For AIX, unzip and untar **BiiNetCool_4_0_21_AIX.gz**
Run **./BiiNetCool_Inst_AIX.bin -console**
 - For Linux, unzip and untar **BiiNetCool_4_0_21_Linux.gz**
Run **./BiiNetCool_Inst_Linux.bin -console**
 - For Solaris, unzip and untar **BiiNetCool_4_0_21_Solaris.gz**
Run **./BiiNetCool_Inst_Solaris.bin -console**
 - For Windows unzip and untar **BiiNetCool_4_0_21_Win.gz**.
Run **BiiNetCool_Inst_Win.exe -console**
- 3 The installation program displays a message, This installation program will guide you through the installation of the BMC Impact Integration for Tivoli 4.0.21 and its modules.
- 4 Press **1** for the Next instruction, **3** to Cancel the installation or **5** to clear the screen and Redisplay.

- 5 The license agreement will be displayed, read the license agreement, and select the appropriate option. Press **Enter** to read the license agreement, **q** to quit.
- 6 Press **1** to accept the license agreement.
- 7 Press one of the following to perform the corresponding action,
 - 1 for the next instruction
 - 2 to return to the previous step
 - 3 to cancel the installation
 - 5 to clear the screen and redisplay
- 8 Specify the directory in which you want to install BMC Impact Integration for Tivoli.

By default, BMC Impact Integration for Tivoli is installed in the `$MCELL_HOME/BiiNetcool` directory.

Enter the appropriate option to proceed with the installation procedure.
- 9 Verify the space requirements, and enter the appropriate option.
- 10 Verify the installation summary, and enter the appropriate option..
- 11 A message is displayed that the installation on your system is complete. Press **3** to finish or press **5** to Redisplay.



NOTE

Depending on the platform you are using, browse to one of the following directories,

(*Windows*) `%MCELL_HOME%`

(*UNIX*) `$MCELL_HOME`

Effects of the installation process

Table 5 lists various files and folders and their locations that are created after the installation process is complete.

Table 5 Effects of the installation process

Sr. No	File/ Folder name	Type	Location ^a
1	_jvm	Folder	<ul style="list-style-type: none"> ■ (Windows) %BIINETCOOL_HOME% ■ (UNIX) \$BIINETCOOL_HOME
2	bin	Folder	<ul style="list-style-type: none"> ■ (Windows) %BIINETCOOL_HOME% ■ (UNIX) \$BIINETCOOL_HOME
3	conf	Folder	<ul style="list-style-type: none"> ■ (Windows) %BIINETCOOL_HOME% ■ (UNIX) \$BIINETCOOL_HOME
4	gui	Folder	<ul style="list-style-type: none"> ■ (Windows) %BIINETCOOL_HOME% ■ (UNIX) \$BIINETCOOL_HOME
5	log	Folder	<ul style="list-style-type: none"> ■ (Windows) %BIINETCOOL_HOME% ■ (UNIX) \$BIINETCOOL_HOME
6	lib	Folder	<ul style="list-style-type: none"> ■ (UNIX) \$BIINETCOOL_HOME
7	Netcool_files	Folder	<ul style="list-style-type: none"> ■ (Windows) %BIINETCOOL_HOME% ■ (UNIX) \$BIINETCOOL_HOME
8	Biinetcool_uninst	Folder	<ul style="list-style-type: none"> ■ (Windows) %BIINETCOOL_HOME% ■ (UNIX) \$BIINETCOOL_HOME
9	Windows: BiiNetCool_CellConfig_W in.exe UNIX: BiiNetCool_CellConfig_AI X.bin BiiNetCool_CellConfig_So laris.bin BiiNetCool_CellConfig_Li nux.bin	binary	<ul style="list-style-type: none"> ■ (Windows) %BIINETCOOL_HOME% ■ (UNIX) \$BIINETCOOL_HOME
10	biinetcool.txt	text file	<ul style="list-style-type: none"> ■ (Windows) %MCELL_HOME%..\ ■ (UNIX) \$MCELL_HOME../

^a BIINETCOOL_HOME represents the BMC Impact Integration for Tivoli installation directory.

On Windows, after the installation process is completed successfully, an environment variable BIINETCOOL_HOME is created.

Uninstalling BMC Impact Integration for Tivoli

- 1 Go to one of the following directories:
 - *(For Windows)* %BIINETCOOL_HOME%\BiiNetcool_uninst
 - *(For UNIX)* \$BIINETCOOL_HOME/BiiNetcool_uninst
- 2 Depending on the platform you are using, do one of the following:
 - *(For Windows)* Double-click **uninstaller.exe**.
 - *(For UNIX)* Enter the following command: **./uninstaller.bin**
- 3 Click **Next**.
- 4 Click **Uninstall** to start the uninstallation process.
- 5 Click **Finish** to complete the uninstallation process.

NOTE



The uninstallation process does not delete the **conf** and **log** folders if they are not empty. You need to delete these folders manually.

To uninstall BMC Impact Integration for Tivoli using Console mode

- 1 Login using the root login and password.
- 2 Go to one of the following directories:
 - *(For Windows)* %MCELL_HOME%\BiiNetcool\BiiNetcool_uninst
 - *(For UNIX)* \$MCELL_HOME/BiiNetcool/BiiNetcool_uninst
- 3 Depending on the platform you are using, do one of the following:
 - *(For Windows)* Enter the following command on command prompt:
uninstaller.exe -console
 - *(For AIX, Linux, Solaris)* Enter the following command: **./uninstaller.bin -console**
- 4 The installation program displays a message, This uninstallation program will guide you through the uninstallation of the BMC Impact Integration for Tivoli 4.0.21 and its modules.
- 5 Press 1 for the Next instruction, 3 to Cancel the installation or 5 to clear the screen and Redisplay.

- 6 A confirmation message will be displayed with the uninstall location. Enter the following,
 - 1 to confirm the uninstallation
 - 2 to return to the previous step
 - 3 to cancel the uninstallation
 - 5 to clear the screen and redisplay
- 7 The installation program will verify again if you want to uninstall the product. Enter 1 for **Yes**, enter 2 for **No**.
- 8 A message is displayed that the uninstallation on your system is complete. Press 3 to Finish or press 5 to Redisplay.

Where to go from here

You should read [Chapter 3, “Configuring BMC Impact Integration for Tivoli”](#) next to configure BMC Impact Integration for Tivoli.

Configuring BMC Impact Integration for Tivoli

This chapter presents the following topics:

Configuration overview	31
Configuring BMC IM.	32
Loading the deduplication rule into BMC IM.	35
Effects of the configuration process	35
Configuring IBM Tivoli Netcool/OMNIBus server	36
Configuring the integration module	39
Configuring filters	45
Filter syntax	46
Configuring severity mapping	47
Configuring message enrichment	49
Adding additional slots from BMC IM to IBM Tivoli Netcool/OMNIBus	50
Adding additional slots from IBM Tivoli Netcool/OMNIBus to BMC IM	54
Configuring modified activity events	58
Filtering activities in BMC Impact Integration for Tivoli	59
Setting the AddNewLineTerminator parameter	60
Configuring BMC Impact Integration for Tivoli Windows process as a service	60
Configuring parameters to keep the connection active	61
Configuring BMC Impact Integration for Tivoli to accept any IP address	62
Configuring for High Availability (HA) cells support	63
Configuring IPv6 connection support	64
Uninstalling BMC IM configuration	65

Configuration overview

In BMC Impact Integration for Tivoli, you can perform configuration tasks by using the Java-based graphical user interface (GUI).

Table 6 lists the required and optional tasks involved in configuring BMC Impact Integration for Tivoli.

Table 6 Order of tasks in BMC Impact Integration for Tivoli configuration

Order	Task	Required?
1	"Configuring BMC IM" on page 32	Yes
2	"Configuring IBM Tivoli Netcool/OMNIBus server" on page 36	Yes
3	"Configuring the integration module" on page 39	Yes
4	"Configuring filters" on page 45	No
5	"Configuring severity mapping" on page 47	No
6	"Configuring message enrichment" on page 49	No

Configuring BMC IM

Configuration of BMC IM loads the classes and rule definitions required by BMC IM to operate in BMC Impact Integration for Tivoli. Rules in each Event Management System (EMS) determine the types of events that are forwarded to BMC Impact Integration for Tivoli. One rule is configured automatically in BMC IM by the integration Module, and one rule can be loaded manually.

Table 7 Rules

Rule type	Description
Synchronization	detects changes in event status or severity values and propagates these changes to the relevant EMS.
Deduplication	identifies duplicate events and increments the event count by 1 when a duplicate event is detected. You need to load this rule manually, as described in "Loading the deduplication rule into BMC IM" on page 35.

To configure BMC IM

- 1 Go to the **BIINETCOOL_HOME** directory.
- 2 Depending on the platform you are using, perform one of the following tasks:
 - (Windows) Double-click **BiiNetCool_CellConfig_Win.exe**
 - (UNIX) Enter the following command: `./BiiNetCool_CellConfig_<os platform>.bin`
- 3 On the welcome page of the configuration wizard, click **Next**.

- 4 In the Select Directory page, specify the directory in which you want to configure BMC IM.

(For Windows) By default, BMC IM is configured in the %BIINETCOOL_HOME%\BiiNetcoolIMConf directory.

(For UNIX) By default, BMC IM is configured in the \$BIINETCOOL_HOME/BiiNetcoolIMConf directory.

- 5 Click **Next**.
- 6 In the Configuration Checklist page, verify the configuration directory, and click **Next**.
- 7 In the Parameters for BMC Impact Integration for Tivoli Configuration page, enter the following parameters:

Table 8 BMC Impact Integration for Tivoli BMC IM side configuration parameters

Parameter	Description
IM Name (Cell Name)	name of the BMC IM cell.
Cell Port	port number on which the BMC IM cell is running.
BiiNetcool Server Port	port number on which the integration module will run.
BiiNetcool Server Host Name	host name where BMC Impact Integration for Tivoli is installed
Primary System (IM/netcool)	the EMS that you want to designate as the primary system. You can specify one of the following options: <ul style="list-style-type: none"> ■ IM ■ netcool

- 8 Click **Next**.
- 9 In the Configuration Summary page, verify all the configuration parameters, and click **Install**.
- 10 After BMC IM is installed, click **Finish** to complete the installation process.

To configure BMC IM using Console mode

Before you begin

You must log on as a root or super user. In addition, you must have execute permission on the file required to install BMC IM.

- 1 Go to one of the following directories:
 - (For Windows) %BIINETCOOL_HOME%
 - (For UNIX) \$BIINETCOOL_HOME
- 2 Enter the following command:
 - For AIX,

```
./BiiNetCool_CellConfig_AIX.bin -console
```
 - For Linux,

```
./BiiNetCool_CellConfig_Linux.bin -console
```
 - For Solaris,

```
./BiiNetCool_CellConfig_Solaris.bin -console
```
 - For Windows,

```
BiiNetCool_CellConfig_Win.exe -console
```
- 3 Specify the directory in which you want to install BMC IM.
- 4 On the Installation Checklist page, verify the space requirements, and click **Next**.
- 5 Enter the following information:
 1. Enter the BMC IM cell name and press **Enter**. For default just press **Enter**.
 2. Enter the Cell Port number and press **Enter**. For default just press **Enter**.
 3. Enter the BiiNetcool System Host name and press **Enter**. For default just press **Enter**.
 4. Enter the BiiNetcool System Port number and press **Enter**. The port number must be between 1025 and 65535.
 5. Select the primary EMS as either IM or netcool.

NOTE

All the values are case sensitive. Do not add blank space when entering the values.



- 6 On the Installation Summary page, read the installation summary, and click Install to start the installation process.
- 7 A message is displayed that the installation on your system is complete. Press **Enter** to Finish configuration or press 3 to go to the earlier screen.

Loading the deduplication rule into BMC IM



NOTE

This feature is applicable only for IM primary configuration.

Check the `$MCELL_HOME/etc/<cell name>/kb/rules/bic_dupdetect.mrl` file before deploying the deduplication rule. The deduplication rule written in the file is generic. Apply your own logic for deduplication according to your business needs.

- 1 Open the `.load` file on the computer where BMC IM is installed. The location of the file is as follows:
 - *(Windows)* `%MCELL_HOME%\etc\<cell name>\kb\rules`
 - *(UNIX)* `$MCELL_HOME/etc/<cell name>/kb/rules`
- 2 Search for the `#bic_dupdetect` line and uncomment the line by removing # sign
- 3 Save the `.load` file.
- 4 Compile the knowledge base by using the following command:


```
mccomp -n <cell name>
```
- 5 Restart the BMC IM cell by using the following commands:
 - A `mkill -n <cell name>`
 - B `mcell -n <cell name>`

Effects of the configuration process

Table 9 lists the files and folders that are created after you configure BMC IM:

Table 9 Effects of the BMC IM configuration process

Sr. No	File/ Folder name	Type	Location
1	gateway.biinetcool	File	<ul style="list-style-type: none"> ■ (Windows) %MCELL_HOME%\etc ■ (UNIX) \$MCELL_HOME/etc
2	<ul style="list-style-type: none"> ■ bic.baroc ■ bic_related_events.baroc ■ bic_root_redef.baroc 	Class definition	<ul style="list-style-type: none"> ■ (Windows) %MCELL_HOME%\etc\cellName\kb\classes ■ (UNIX) \$MCELL_HOME/etc/cellName/kb/classes
3	<ul style="list-style-type: none"> ■ bic_IMPrimary.mrl ■ bic_NetcoolPrimary.mrl ■ bic_dupdetect.mrl 	Master rule file	<ul style="list-style-type: none"> ■ (Windows) %MCELL_HOME%\etc\cellName\kb\rules ■ (UNIX) \$MCELL_HOME/etc/cellName/kb/rules
4	BiiNetcoolIM_uninst	Folder	<ul style="list-style-type: none"> ■ (Windows) \$MCELL_HOME\BiiNetcoolIMConfig\ ■ (UNIX) \$MCELL_HOME/BiiNetcoolIMConfig/
5	mcell.propagate	Propagation file	<ul style="list-style-type: none"> ■ (Windows) %MCELL_HOME%\etc ■ (UNIX) \$MCELL_HOME/etc

After the configuration process is complete, an environment variable BIINETCOOL_CELL is created, which represents the BMC IM cell.

Configuring IBM Tivoli Netcool/OMNIBus server

To configure IBM Tivoli Netcool/OMNIBus server, perform the following tasks:

1. Modify the deduplication database trigger on the computer where IBM Tivoli Netcool/OMNIBus is installed. For more information, see [“To modify the trigger” on page 38](#).
2. Modify the NCO_GATE.props file. For more information, see [“To modify the NCO_GATE.props file” on page 37](#).
3. Modify the socket.props file. For more information, see [“To modify the socket.props file” on page 38](#).

4. Based on the platform you are using, copy the following files:

- *(For Windows)* Copy the following files from the
`%BIINETCOOL_HOME%\Netcool_files\` directory to the destination directory:

Table 10 Copy files for Windows

File Name	Destination directory
NCO_GATE.props	%OMNIHOME%\etc\
NCO_GATE.props socket.reader.tblrep.def socket.map	%OMNIHOME%\gates\socket\
socket.rules socket.props	%OMNIHOME%\probes\platformName\

- *(For UNIX)* Copy the following files from the
`$BIINETCOOL_HOME/Netcool_files/` directory to the destination directory:

Table 11 Copy files for UNIX

File Name	Destination directory
NCO_GATE.props	\$OMNIHOME/etc/
NCO_GATE.props socket.reader.tblrep.def socket.map	\$OMNIHOME/gates/socket/
socket.rules socket.props	\$OMNIHOME/probes/platformName/

To modify the NCO_GATE.props file

1 Open the NCO_GATE.props file with a text editor. The file is located as follows:

- *(Windows)* %BIINETCOOL_HOME%\Netcool_files\`NCO_GATE.props`
- *(UNIX)* \$BIINETCOOL_HOME\Netcool_files\`NCO_GATE.props`

2 Enter the values of the following parameters:

Parameter	Description
Gate.Reader.Server	Name of the IBM Tivoli Netcool/OMNIBus ObjectServer to which the Socket Writer Gateway connects. By default, it is NCOMS.
Gate.Socket.Host	Name of the computer where the integration module is running.
Gate.Socket.Port	Port number on the BMC Impact Integration for Tivoli machine to which the Socket Writer Gateway connects.



NOTE

The changes stated above must be done before copying the files on IBM Tivoli Netcool/OMNIBus environment.

To modify the socket.props file

1 Open the **socket.props** file with a text editor. The file is located as follows:

- (Windows) %BIINETCOOL_HOME%\Netcool_files\
- (UNIX) \$BIINETCOOL_HOME\Netcool_files\

2 Enter the values of the following parameters:

Parameter	Description
Server	Name of the IBM Tivoli Netcool/OMNIBus ObjectServer to which the Socket Probe connects.
PeerHost	IP address of the computer where the integration module is running. <i>(Optional)</i>
PortNumber	Port number on the BMC Impact Integration for Tivoli machine to which the Socket Probe connects.



NOTE

The changes stated above must be done before copying the files on IBM Tivoli Netcool/OMNIBus environment.

To modify the trigger

1 Open the **deduplication_trigger.txt** file. The file is located as follows:

- (Windows) %BIINETCOOL_HOME%\Netcool_files/
- (UNIX) \$BIINETCOOL_HOME/Netcool_files/

2 Copy the contents of the file.

3 Connect to the IBM Tivoli Netcool/OMNIBus Admin GUI.

4 Click the **Automation** tab.

5 In the Triggers area, double-click the deduplication trigger.

6 In the Edit Database Trigger dialog box, replace the existing text with the contents of the **deduplication_trigger.txt** file.

Configuring the integration module



NOTE

Install J2SE™ Java™ Runtime Environment (JRE™) version 1.5 or later on the computer where the Java-based configuration GUI is installed.

The Java-based configuration GUI provides the interface that you use to specify configuration parameters for BMC Impact Integration for Tivoli settings, and the interfaces to IBM Tivoli Netcool/OMNIBus and the BMC IM cell.

To start the configuration GUI on Windows

- 1 Go to the `%BIINETCOOL_HOME%\gui` folder.
- 2 Double-click `run.bat` to launch the configuration GUI.

To start the configuration GUI on UNIX

- 1 At the command line, enter the following command: `cd $BIINETCOOL_HOME/gui`
- 2 Enter `./console.sh` to launch the configuration GUI.

To configure BMC Impact Integration for Tivoli

- 1 Start the configuration GUI.
- 2 From the **File** menu, choose **Open**.
- 3 Depending on the platform you are using, browse to one of the following directories in the Open dialog box:
 - *(Windows)* `%BIINETCOOL_HOME%\gui\resource\`
 - *(UNIX)* `$BIINETCOOL_HOME/gui/resource/`
- 4 From the list of files, select `BiiNetcool.xml`, and click **Open**.
- 5 In the BMC Impact Integration for Tivoli `BiiNetcool.xml` dialog box, select `BiiNetcoolSourceConfiguration` in the Parameter Classes pane.
- 6 Enter the values for each parameter (for information about parameters, see [Table 12](#)), and click **Apply** after each entry:

Table 12 Parameters (part 1 of 5)

Parameter	Description	Type	Default value
Trace	enables the generation of trace messages.	Boolean	Yes
TraceSrc	indicates the file and line number in the trace messages.	Boolean	No
TraceConfigFileName	indicates the location of the file containing the configuration of trace messages.	path	Biinetcool.trace
TraceDefaultFileName	indicates the destination file to redirect trace messages from stderr to, in case the BMC IM cell runs as a daemon or service.	path	<i>(For Windows)</i> .\logsrc\Biinetcool_Src_Trace.log <i>(For UNIX)</i> ./logsrc/Biinetcool_Src_Trace.log
TraceFileSize	indicates the limit on the size of a trace destination file, expressed in KB. When the trace file grows beyond the specified size, it is renamed with a numerical suffix appended. A new trace file is created. The value 0 means no limitation on file size.	Integer	1024
TraceFileHistory	indicates the number of trace files to be kept in history. When the number of trace files equals to the value of this parameter, a new numbered trace file replaces the oldest one.	Integer	5
TraceFileAppend	indicates whether to append to the existing trace file or empty the existing trace file at startup.	Boolean	Yes
ServerDirectoryName	indicates the name of the cell directory file.	String	Biinetcool.dir
PersistencyEnabled	indicates whether persistency is enabled.	Boolean	Yes

Table 12 Parameters (part 2 of 5)

Parameter	Description	Type	Default value
PersistencyLevel	indicates the level of persistency.	String	Low
PersistencyFileName	indicates the location of the buffer in which events are buffered.	String	<i>(For Windows)</i> .\logsrc\ BiiNetcool_Eventsbuffer.dat <i>(For UNIX)</i> ./logsrc/ BiiNetcool_Eventsbuffer.dat
PersistencyDisconnectRemoveMessages	indicates whether messages written to the persistency file are deleted when the integration module is connected to a BMC IM instance.	Boolean	No
PersistencyCleanupSizeThreshold	indicates threshold size (in bytes) of the persistency file that activates garbage collection.	Integer	100000
PersistencyCleanupGarbageThreshold	indicates the threshold size (as a percentage of file size) of the persistency file that activates garbage collection.	Integer	40
MessageBufferReconnectInterval	indicates the time interval, in seconds, during which the BMC IM cell attempts to reconnect to a destination if the connection is lost.	Integer	60
MessageBufferResendCount	indicates the number of times to resend unanswered messages.	Integer	10

Table 12 Parameters (part 3 of 5)

Parameter	Description	Type	Default value
MessageBufferSize	indicates the number of messages or events retained in the buffer when the BMC IM cell is unable to send, or when waiting for an answer. For example, a message that is not sent because the destination is down, or a message that was sent but not yet answered, remains in the buffer.	Integer	50000
SystemLogDirName	specifies the path to the default system-defined log directory.	String	<i>(For Windows)</i> .\logsrc <i>(For UNIX)</i> ./logsrc
SystemTmpDirName	specifies the path to the default system-defined logsrc directory for the source process.	String	<i>(For Windows)</i> .\logsrc <i>(For UNIX)</i> ./logsrc
UniqueIDFile	specifies the absolute path to the uniqueID.dat file.	String	<i>(For Windows)</i> .\logsrc\uniqueID.dat <i>(For UNIX)</i> ./logsrc/uniqueID.dat
LocaleConfigFileName	stores the locale-specific configuration information.	String	<i>(For Windows)</i> .\conf\locale\Biinetcool.load <i>(For UNIX)</i> ./conf/locale/Biinetcool.load
MainCellName	stores the name of the main cell for which you want to configure BMC Impact Integration for Tivoli.	String	the name that you provided while configuring BMC IM.

Table 12 Parameters (part 4 of 5)

Parameter	Description	Type	Default value
PrimaryEMS	indicates the EMS that needs to be configured as the primary EMS.	String	<i>none</i>
IMTimeOut	indicates the time interval, in seconds, during which BMC Impact Integration for Tivoli attempts to reconnect to the BMC IM cell if the connection is lost.	Integer	100
ForegroundOrBackground	specifies whether you want to only log the events in a file or both log and display them on the console.	String	Background
FetchOldEvents	indicates whether to fetch the old BMC IM events.	Boolean	TRUE
StatsIntervalInSec	indicates the interval, in seconds, at which to log the event statistics in the .stat file.	Integer	120
NetcoolSocketProbe	indicates the port number for the Socket Probe.	Integer	6068
NetcoolSocketGateway	indicates the port number for the Socket Writer Gateway.	Integer	6072
NetcoolServerIP	indicates the IP address of the server on which IBM Tivoli Netcool/OMNIBus is installed.	String	<i>none</i>
IMtoTPEMSMapName	stores the names of the severity and status maps when events flow from BMC IM to IBM Tivoli Netcool/OMNIBus.	String	CustomizationMapForIMtonetcool
TPEMStoIMMapName	stores the names of the severity and status maps when events flow from IBM Tivoli Netcool/OMNIBus to BMC IM.	String	CustomizationMapFornetcooltoIM
PidSrcFileName	stores process ID for the source process.	String	biinetcool.x1
PidSyncFileName	stores process ID for the synchronization process.	String	biinetcool.x2

Table 12 Parameters (part 5 of 5)

Parameter	Description	Type	Default value
AttributeMapForIMToOtherEMS	maps slots from BMC IM to IBM Tivoli Netcool/OMNIBus.	String	IM_To_TPEMS_Map
AttributeMapForOtherEMSToIM	maps slots from IBM Tivoli Netcool/OMNIBus to BMC IM.	String	TPEMS_To_IM_Map
AttributeMapForRelatedEvent	indicates name of the related event map present in the EventMapping.map file.	String	RelatedEventMap
CellEventClassName	stores the class name for an event.	String	BMCINT
CellRelatedEventClassName	stores the class names for related events.	String	BMCINT
DefaultConfPath	stores the default path for the configuration files.	String	<i>(For Windows)</i> %BIINETCOOL_HOME%\conf <i>(For UNIX)</i> \$BIINETCOOL_HOME/conf
FetchOldnetcoolEvent	indicates whether to fetch the old IBM Tivoli Netcool/OMNIBus events.	Boolean	FALSE
netcoolReconnectionInterval	indicates the interval after which you want to make an attempt to reconnect to IBM Tivoli Netcool/OMNIBus.	Integer	60
netcoolReconnectionAttempts	indicates the number of attempts that you want to make to reconnect after the connection to IBM Tivoli Netcool/OMNIBus is lost.	Integer	999999
Delimiter	stores the character used to separate event slots.	String	
EventTerminator	stores the sequence of characters that mark the end of an event.	String	##

7 In the BMC Impact Integration for Tivoli BiiNetcool.xml dialog box, select **BiiNetcoolSynchronizationConfiguration**.

- 8 Enter the values for each parameter (for information about parameters, see Table 12 on page 40), and click **Apply** after each entry.
- 9 Click **Save** to save BMC Impact Integration for Tivoli configuration.

Configuring filters

A filter defines the events that are accepted or rejected by the filter module of BMC Impact Integration for Tivoli and subsequently sent (or not sent) to the primary EMS. You can configure filters in the **BiiFilter.selector** file.

To open the **BiiFilter.selector** file

- 1 Start the configuration GUI.
- 2 From the **File** menu, choose **Open**.
- 3 In the **Files of Type** list in the Open dialog box, select **Selectors File (.selector)**.
- 4 Depending on the platform you are using, browse to one of the following directories to view the list of filters:
 - *(Windows)* %BIINETCOOL_HOME%\conf\
 - *(UNIX)* \$BIINETCOOL_HOME/conf/
- 5 From the list of files, select the **BiiFilter.selector** file and click **Open**.

To add or modify a selector in the **BiiFilter.selector** file

- 1 Open the **BiiFilter.selector** file.
- 2 To add a selector,
 - A In the **SelectorName** box, enter a name for the selector.
 - B In the **SelectorName** box, enter a description for the selector.
 - C Click **Add Selector**.
- 3 To modify a selector,
 - A In the **Selector List**, select the selector you want to modify.
 - B Click the **Condition** tab, and then click **Add**.

- C In the **Value1** list, select a slot or function.
- D Select an operator.
- E In the **Value2** list, select a value for the slot or function.
- F Click **Apply** to view the changes in the Preview Selector File pane.

To delete a selector or a condition in it

To delete a selector, select its name in the **Selector List**, and click **Delete Selector**. To delete a condition from a selector, select the condition, and then click **Delete**.

Filter syntax

Use the following syntax to enter a filter condition:

```
[Value1, operator, Value2]
```

The variables in the syntax are as follows:

<i>Value1</i>	can be a slot or a function
<i>operator</i>	can be one of the operators that are defined in Table 13
<i>Value 2</i>	can be a slot, static text, or a function

[Table 13](#) describes the operators that you can use in a filter condition.

Table 13 Filter operators

Operator	Logical value	Description
=	equal to	specifies that the value of the left operand is equal to the right operand.
!=	not equal to	specifies that the value of the left operand is not equal to the right operand.
=~	not applicable	enables the use of a regular expression. If the message that is being evaluated contains the specified parameter and the parameter value, a match is made.
<=	less than or equal to	specifies that the value of the left operand is less than or equal to the right operand.
>=	greater than or equal to	specifies that the value of the left operand is greater than or equal to the right operand.

You can enter multiple filter conditions by using the `||` operator, which specifies an OR relationship between the conditions. The `||` operator is available in the operator list. If you do not specify any relationship between multiple filter conditions, they are joined by the AND relationship.

You can use various functions in a filter condition, as listed in [Table 14](#):

Table 14 Functions permitted in filters

Function	Description
\$HostName	specifies the host name of the computer on which BMC Impact Integration for Tivoli is running.
\$Lookup	creates a lookup table between the values. For example, a severity value of Major in the source gets translated to Critical in the destination.
\$ClassName	specifies the class name for the source event.
\$LocalTime	formats the local time into a string.
\$GmtTime	formats the Greenwich Mean Time (GMT) into a string.
\$TimeT	Returns the seconds since January 1, 1970.

Configuring severity mapping

Severity mappings enable you to customize the severity of events that are sourced in BMC IM and represented in IBM Tivoli Netcool/OMNIBus, and vice-versa. If you do not customize the settings, they inherit the default settings.

To open a severity map file

- 1 Start the configuration GUI.
- 2 From the **File** menu, choose **Open**.
- 3 In the **Files of Type** list in the Open dialog box, select **Map File (.map)**.
- 4 Depending on the platform you are using, browse to one of the following directories to view the list of maps:
 - *(Windows)* %BIINETCOOL_HOME%\conf\
 - *(UNIX)* \$BIINETCOOL_HOME/conf/
- 5 Select the **BiiCustomizationConfiguration.map** file from the list of files, and click **Open** to display the severity map editor.

To add a condition to a map

- 1 In the **Map List**, select the map that you want to configure.
- 2 Click the **Condition** tab, and then click **Add**.
- 3 In the **Value1** list, select a severity level for the event.
- 4 Select an operator.
- 5 In the **Value2** list, select a severity level, to which you want to map the severity level specified in the **Value1** list.
- 6 Click **Apply** to view the changes in the Preview Map File pane.

To modify a condition in a map

- 1 Click the **Condition** tab.
- 2 Select the condition you want to modify.
- 3 In the **Value1** list, select a severity level for the event.
- 4 Select an operator.
- 5 In the **Value2** list, select a severity level, to which you want to map the severity level specified in the **Value1** list.
- 6 Click **Apply** to view the changes in the Preview Map File pane.

To add a severity map

- 1 In the **MapName** box, enter a name for the selector.
- 2 In the **Description** box, enter a description for the selector.
- 3 Click **Add Map**.

To delete a map or a mapping condition in it

To delete a defined map, select its name in the **Map List**, and click **Delete Map**. To delete a condition from a defined map, select the condition, and then click **Delete**.

Configuring message enrichment

Message enrichment enables you to construct meaningful, logical statements related to message data for users. If you configure message enrichment, the users will see the statement that you have constructed instead of the event data.

For example, you may want to identify an incoming event for degraded performance on a server by using attributes such as type, severity, or class. You can identify the event by using variables that are replaced with message data.

To open a message enrichment map

- 1 Start the configuration GUI.
- 2 From the **File** menu, choose **Open**.
- 3 In the **Files of Type** list in the Open dialog box, select **Map File (.map)**.
- 4 Depending on the platform you are using, browse to one of the following directories to view the list of enrichment maps:
 - *(Windows)* %BIINETCOOL_HOME%\conf\
 - *(UNIX)* \$BIINETCOOL_HOME/conf/
- 5 From the list of files, select the **BiiEnrichmentConfiguration.map** file, and click **Open** to display the message enrichment map editor.

To add a condition to a message enrichment map

- 1 In the **Map List**, select the map that you want to configure.
- 2 Click the **Condition** tab, and then click **Add**.
- 3 In the **Value1** list, select a slot or function for the event.
- 4 Select an operator.
- 5 In the **Value2** list, select a value for the slot or function.
- 6 Click **Apply** to view the changes in the Preview Map File pane.

To modify a condition in a message enrichment map

- 1 In the **Map List**, select the map that you want to configure.
- 2 Click the **Condition** tab.
- 3 Select the condition.
- 4 In the **Map List**, select a slot or function for the event.
- 5 Select an operator.
- 6 In the **Value2** list, select a value for the slot or function.
- 7 Click **Apply** to view the changes in the Preview Map File pane.

To add a message enrichment map

- 1 In the **MapName** box, enter a name for the selector.
- 2 In the **Description** box, enter a description for the selector.
- 3 Click **Add Map**.

To delete a message enrichment map or a definition in it

To delete a message enrichment map, select its name in the **Map List**, and then click **Delete Map**. To delete a condition from a message enrichment map, select the condition, and then click **Delete**.

Adding additional slots from BMC IM to IBM Tivoli Netcool/OMNIBus

You can add and send slots or fields with the event to the IBM Tivoli Netcool/OMNIBus. The default configuration allows you to send 11 slots plus one Activity slot to IBM Tivoli Netcool/OMNIBus.

Table 15 Slots available from BMC IM to IBM Tivoli Netcool/OMNIBus

Slot name	Description
Identifier	Unique identifier for the event. BMC IM sends mcue_id if primary ems is IBM Netcool/OMNIBus (netcool). For BMC IM (IM) primary BMC IM sends original Identifier IBM Tivoli Netcool/OMNIBus side slot.
Message group	Indicates the message group for which the event belongs to.
Event handle	Incremental number known as Event Handle.
Node	Host name from where the event is generated.
Message	Description for the event.
Priority	Priority of the event.
Severity	Severity value of the event
ACK/UNACK	For acknowledge event: 1 For open state event: 0
Server Serial	IBM Tivoli Netcool/OMNIBus side slot. This serial is unique for each event.
Modification date	Contains the event modification date. This field will remain blank for a new event.
Repeat Count	Deduplication or repeat count.
Activity	Indicates the operation performed on the BMC IM event.

NOTE

Addition of a new slot will change the old position of Activity slot. Activity slot will always be the last slot in the slot list.

WARNING

Add only the required slots. Adding too many slots might hamper the performance or cause delay in the event.

Adding new slot/slots from BMC IM to IBM Tivoli Netcool/OMNIBus

To add an existing slot or a new slot modify the files in BMC IM, BMC Impact Integration for Tivoli and IBM Tivoli Netcool/OMNIBus Socket Probe.

Perform the following tasks to modify the files:

To modify the configuration file in BMC IM

- 1 Add a new slot to the `$MCELL_HOME/etc/<cell name>/kb/classes/bic_root_redef.baroc` configuration file. If the slot already exists in any other BAROC file then, do not add this slot in the `$MCELL_HOME/etc/<cell name>/kb/classes/bic_root_redef.baroc` file.
- 2 Backup and open `$MCELL_HOME/etc/gateway.biinetcool` configuration file in editor. Add additional slot in `slots.mod` and `modify` section along with the related class name.

— EXAMPLE —

If the slot name is `ITSM_TTStatus` and its related class name is `EVENT` then add the slot as follows:

```
slots.mod=[$MODS,severity,status,EVENT:mc_priority,repeat_count,mc_ueid,mc_date_modification,mc_operations,mc_parameter,EVENT:who_modified,BMCINT:netcool_event_ID,EVENT:mc_host,EVENT:ITSM_TTStatus]
```

```
modify=[severity,status,repeat_count,mc_owner,administrator,EVENT:who_modified,EVENT:mc_host,EVENT:mc_priority,EVENT:ITSM_TTStatus]
```

Here, the value defined in `EVENT` is the class name.

- 3 Save and close the `$MCELL_HOME/etc/gateway.biinetcool` configuration file.
- 4 Restart the cell.

— NOTE —



To generate modified activity events on the slots, see “Configuring modified activity events” on page 58.

To modify the configuration file in BMC Impact Integration for Tivoli

- 1 For netcool (IBM Tivoli Netcool/OMNIBus) primary, backup and open `<BiiNetcool Home>/conf/Bii_Src.conf` configuration file in editor.

OR
- 1 For IM (BMC IM) primary, backup and open `<BiiNetcool Home>/conf/Bii_Sync.conf` configuration file in editor.
- 2 Add new slot/slots in `ExtraEventSlotsListIMtoNetCool` parameter. Use pipe (`|`) character to separate two slot names.

EXAMPLE

To add a single slot,

```
ExtraEventSlotsListIMtoNetCool=ITSM_TTStatus
```

To add multiple slots,

```
ExtraEventSlotsListIMtoNetCool=ITSM_TTStatus|ITSM_TTNum
```



NOTE

1. Use the exact slot name present on BMC IM side. Slot name is case sensitive.
 2. Do not add blank space in **ExtraEventSlotsListIMtoNetCool** parameter.
 3. BMC Impact Integration for Tivoli sends all additional slots in the same sequence present in **ExtraEventSlotsListIMtoNetCool** parameter.
 4. Absence of any slot or slot value will send empty slot to the IBM Tivoli Netcool/OMNIBus Socket Probe.
-

3 Save and close the modified file.

4 Restart the BMC Impact Integration for Tivoli processes.

To modify the configuration file in IBM Tivoli Netcool/OMNIBus Socket Probe

- 1 Backup and open `<netcool home>/omnibus/probes/<os platform>/socket.rules` file on IBM Tivoli Netcool/OMNIBus side.
- 2 Navigate to the *if condition* where MODIFIED activity is handled.
- 3 Assign the incoming slots to the appropriate IBM Tivoli Netcool/OMNIBus slot.
- 4 Update the Activity slot position in all *if conditions*.
- 5 Restart the IBM Tivoli Netcool/OMNIBus Socket Probe.

— EXAMPLE —

Assign values of the newly added slots (tokens) to appropriate IBM Tivoli Netcool/OMNIBus slot for modified activity support.

```
if( nmatch($Token013,"MODIFIED") OR nmatch($Token013,"NEW") )
{
  @Tally = $Token010
  #$Token008 for Server Serial
  #$Token009 for modification date
  update(@Tally,TRUE)
  @SlotAtNetcool1=$Token011
  @SlotAtNetcool2=$Token012
}
```

In the above example, two new slots are added and then assigned to two IBM Tivoli Netcool/OMNIBus slots. Earlier, Activity slot was on 11th token position. After adding two slots the Activity slot position will change to 13th token. Search for Activity slot token (earlier, Token011) and replace it with new token position (Token013). Replace the slot position in all *if condition* statements.

— NOTE —



Depending on the platform you are using, browse to one of the following directories,

(Windows) %MCELL_HOME%

(UNIX) \$MCELL_HOME

Adding additional slots from IBM Tivoli Netcool/OMNIBus to BMC IM

You can add and send slots or fields with the event to the BMC IM. The default configuration allows you to send 15 to BMC IM.

Table 16 Slots available from IBM Tivoli Netcool/OMNIBus to BMC IM

Slot name	Description
Identifier	Unique identifier for IBM Tivoli Netcool/OMNIBus event.
Serial	Auto incremental number coming from IBM Tivoli Netcool/OMNIBus
Node	Host name from where the event is generated
NodeAlias	IP address of the host from where the event is generated
Manager	IBM Tivoli Netcool/OMNIBus slot

Table 16 Slots available from IBM Tivoli Netcool/OMNIBus to BMC IM

Slot name	Description
Agent	IBM Tivoli Netcool/OMNIBus slot
AgentGroup	IBM Tivoli Netcool/OMNIBus slot
AlertKey	IBM Tivoli Netcool/OMNIBus slot
Severity	Severity of the IBM Tivoli Netcool/OMNIBus event
Summary	Description for the event
StateChange (used internally)	IBM Tivoli Netcool/OMNIBus slot
InternalLast (used internally)	IBM Tivoli Netcool/OMNIBus slot
Tally	Deduplication or repeat count
Acknowledged	Set when the event is an acknowledge event
SuppressEscl	Priority of an event
ServerName	IBM Tivoli Netcool/OMNIBus slot
ServerSerial	Auto incremental number

NOTE

Do not change sequence of the above slots. Do not add any slot in between these slots.

**WARNING**

Add only the required slots. Adding too many slots might hamper the performance or cause delay in the event.



To modify the configuration file in IBM Tivoli Netcool/OMNIBus Socket Writer Gateway

- 1 On IBM Tivoli Netcool/OMNIBus, backup and open `<netcool home>/omnibus/gates/socket/socket.map` configuration file.
- 2 Add new slot or field at the end of the configuration file. This new slot or field must be available in IBM Tivoli Netcool/OMNIBus database.
- 3 Save the file.
- 4 Restart the IBM Tivoli Netcool/OMNIBus Socket Writer Gateway.

— **EXAMPLE** —

If the slot or field names available in IBM Tivoli Netcool/OMNIBus database are **NetCoolSlotName1** and **NetCoolSlotName2**, then add the slots as below,

```
.  
. .  
.  
" = '@SuppressEscl',  
" = '@ServerName',  
" = '@ServerSerial',  
" = '@NetcoolSlotName1',  
" = '@NetcoolSlotName2'  
};
```

To modify the configuration file in BMC Impact Integration for Tivoli

- 1 Backup and open `<BiiNetcool Home>/conf/EventMapping.map` configuration file in editor.
- 2 Navigate to `TPEMS_To_IM_Map` mapping section.
- 3 BMC Impact Integration for Tivoli will identify the additional slots added in `TPEMS_To_IM_Map` mapping section in `netcool_ExtraSlot1` and `netcool_Extraslot2` and so on. BMC Impact Integration for Tivoli handles maximum 5000 slots.
- 4 Assign the new slots to BMC IM slots.
- 5 Map the new slots at the end of `TPEMS_To_IM_Map` mapping section.

— **EXAMPLE** —

```
.  
. .  
.  
netcool_manager="netcool_Manager"  
  
netcool_alert_group="netcool_AlertGroup"  
  
netcool_alert_key="netcool_AlertKey"  
  
netcool_ExtraSlot1="netcool_ExtraBPPM10"  
  
netcool_ExtraSlot2="itsm_ttstatus"  
  
}#end map netcool_EVENT -> EVENT
```



NOTE

1. Use existing slot or a new slot on BMC IM.
 2. If case of a new slot, add the new slot in `$MCELL_HOME/etc/<cell name>/kb/classes/bic_root_redef.baroc` configuration file.
 3. Use the exact slot name present on BMC IM side. Slot name is case sensitive.
 4. Do not add blank space in the slot name.
 5. Absence of any slot or slot value will send empty slot to BMC IM.
-

To modify the configuration file in BMC IM

For an update event, any modification on an additional slot from IBM Tivoli Netcool/OMNIBus side does not get reflected on BMC IM side.

Perform the following to modify the slots:

- 1 For netcool (IBM Tivoli Netcool/OMNIBus) primary, backup and open `$MCELL_HOME/etc/<cell name>/kb/rules/bic_NetcoolPrimary.mrl` configuration file in editor.

OR

- 1 For IM (BMC IM) primary, backup and open `$MCELL_HOME/etc/<cell name>/kb/rules/bic_IMPrimary.mrl` configuration file in editor.
- 2 Navigate to the `update_for_EH_SH_Date` rule section.
- 3 Assign the new slot value to existing slot value.

EXAMPLE

```

.
.

$OLD_EV.status = $NEW_EV.status;
$OLD_EV.mc_priority = $NEW_EV.mc_priority;
$OLD_EV.netcool_serverserial = $NEW_EV.netcool_serverserial;

##Modify slot values here for existing events with new values of updated event

$OLD_EV.netcool_ExtraBPPM10=$NEW_EV.netcool_ExtraBPPM10
$OLD_EV.itsm_ttstatus =$NEW_EV.itsm_ttstatus
drop_new;
}
END

```



NOTE

Depending on the platform you are using, browse to one of the following directories,
(*Windows*) %MCELL_HOME%
(*UNIX*) \$MCELL_HOME

Configuring modified activity events

If the specified slot value is changed, BMC IM generates a MODIFIED activity event.

If a specified slot is modified, except for the default slots present in \$MCELL_HOME/etc/mcell.propagate configuration file a MODIFIED activity event will be generated. If the slot added in this file is modified manually or automatically, then a MODIFIED activity event is generated.

To configure a slot to generate MODIFIED activity event

- 1 Backup and open \$MCELL_HOME/etc/mcell.propagate configuration file on BMC IM.
- 2 Add the slot name on which you want to generate MODIFIED activity.
- 3 Assign forward (f) parameter to the slot name.
- 4 Restart the cell.

Any modification on the added slot will generate a MODIFIED event.

EXAMPLE

```
.  
.msg=f  
  
mc_owner=f  
  
mc_notes=f  
  
##Add additional slots required to generate MODIFIED activity event  
  
ITSM_TTStatus=f
```

Filtering activities in BMC Impact Integration for Tivoli

BMC Impact Integration for Tivoli supports filtering of activities coming from BMC IM. You can filter the following Activities coming from BMC IM:

- MODIFIED
- ACK
- UNACK
- PRIORITY_CHG
- SEVERITY_CHG
- CLOSED

To enable filtering

- 1 For netcool (IBM Tivoli Netcool/OMNIbus) primary, backup and open `<BiiNetcool Home>/conf/Bii_Src.conf` configuration file in editor.

OR

- 1 For IM (BMC IM) primary, backup and open `<BiiNetcool Home>/conf/Bii_Sync.conf` configuration file in editor.
- 2 Add the activities in `DropActivityIMtoNetCool` parameter. Use pipe (|) character to separate two slot names.

EXAMPLE

1. `DropActivityIMtoNetCool=`

This will pass all the activities to the IBM Tivoli Netcool/OMNIbus Socket Probe.

2. `DropActivityIMtoNetCool=MODIFIED | SEVERITY_CHG | CLOSED`

This will drop MODIFIED, SEVERITY_CHG and CLOSED activity.

3. `DropActivityIMtoNetCool=NEW | MODIFIED | ACK | UNACK | PRIORITY_CHG | SEVERITY_CHG | CLOSED`

This will drop all the activities.



NOTE

Do not add blank space in the **DropActivityIMtoNetCool** parameter value.

Setting the AddNewLineTerminator parameter

The AddNewLineTerminator appends `\r\n` in event terminator. After setting the AddNewLineTerminator parameter IBM Tivoli Netcool/OMNIBus Socket Probe starts receiving every event on new line.

To set the AddNewLineTerminator parameter

- 1 For netcool (IBM Tivoli Netcool/OMNIBus) primary, backup and open `<BiiNetcool Home>/conf/Bii_Src.conf` configuration file in editor.

OR

- 1 For IM (BMC IM) primary, backup and open `<BiiNetcool Home>/conf/Bii_Sync.conf` configuration file in editor.
- 2 For adding new line terminator in AddNewLineTerminator parameter, set the parameter value to ON or TRUE.

EXAMPLE

1. To disable the AddNewLineTerminator parameter,

```
AddNewLineTerminator=FALSE
```

2. To enable the AddNewLineTerminator parameter,

```
AddNewLineTerminator=TRUE
```

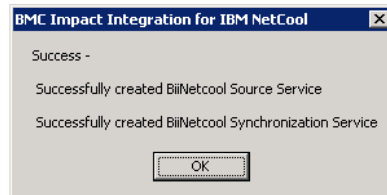
Configuring BMC Impact Integration for Tivoli Windows process as a service

You can configure BMC Impact Integration for Tivoli process as a Service on Windows platform.

To configure BMC Impact Integration for Tivoli Windows process as a Service

- 1 Navigate to the <BiiNetcool Home>/conf/bin folder.
- 2 Execute the `InstallBiiNetcoolServices.vbs` script to install Services.
- 3 The following message is displayed after successful installation of Services.

Figure 3 Service successfully installed message



To start/stop BMC Impact Integration for Tivoli Services

For instructions to start or stop BMC Impact Integration for Tivoli Services refer “Starting/Stopping BMC Impact Integration for Tivoli Services” on page 68.

Configuring parameters to keep the connection active



NOTE

This feature is available only for Microsoft Windows platform.

Configure parameters in configuration files to maintain the connection even if the connection remains idle. Earlier, if the connection between IBM Tivoli Netcool/OMNIBus Socket Probe or Socket Writer Gateway and BMC Impact Integration for Tivoli remained idle for long, it was cleaned by the firewall.

Configuring parameters

For IM (BMC IM) Primary

- Change the parameters in <BiiNetcool Home>/conf/Bii_Sync.conf configuration file for IBM Tivoli Netcool/OMNIBus Socket Probe and BMC Impact Integration for Tivoli connection.

- Change the parameters in `<BiiNetcool Home>/conf/Bii_Src.conf` configuration file for IBM Tivoli Netcool/OMNIbus Socket Writer Gateway and BMC Impact Integration for Tivoli connection.

For netcool (IBM Tivoli Netcool/OMNIbus) Primary

- Change the parameters in `<BiiNetcool Home>/conf/Bii_Sync.conf` configuration file for IBM Tivoli Netcool/OMNIbus Socket Writer Gateway and BMC Impact Integration for Tivoli connection.
- Change the parameters in `<BiiNetcool Home>/conf/Bii_Src.conf` configuration file for IBM Tivoli Netcool/OMNIbus Socket Probe and BMC Impact Integration for Tivoli connection.

Configuring parameters to keep the connection active

- Use `KeepAliveOnOff` parameter to maintain the connection even if the connection is idle for a longer period of time.

`KeepAliveOnOff=TRUE`

To disable the Keep Alive feature, set the `KeepAliveOnOff` feature to `FALSE`.
Default value is `TRUE`.

- Use `KeepAliveTime` parameter to maintain the connection for a specific period of time after the connection is idle.

`KeepAliveTime=1800 (time in seconds)`

Default value is 1800 seconds.

- Use `KeepAliveInterval` parameter to

`KeepAliveInterval=2 (time in seconds)`

Default value is 2 seconds.

Configuring BMC Impact Integration for Tivoli to accept any IP address

BMC Impact Integration for Tivoli supports any IP address for IBM Tivoli Netcool/OMNIbus Socket Writer Gateway connection.

Earlier, IBM Tivoli Netcool/OMNIBus Socket Writer Gateway could not connect to BMC Impact Integration for Tivoli if the IP address of IBM Tivoli Netcool/OMNIBus Socket Writer Gateway server was not present in `<BiiNetcool Home>/conf/Bii_Src.conf` (IM Primary) or `<BiiNetcool Home>/conf/Bii_Sync.conf` (netcool Primary) in `NetcoolServerIP` parameter.

To accept any IP address for IBM Tivoli Netcool/OMNIBus Socket Writer Gateway connection

- 1 For netcool (IBM Tivoli Netcool/OMNIBus) primary, backup and open `<BiiNetcool Home>/conf/Bii_Sync.conf` configuration file in editor.

OR

- 1 For IM (BMC IM) primary, backup and open `<BiiNetcool Home>/conf/Bii_Src.conf` configuration file in editor.

- 2 Set `AcceptAnyIP` parameter to TRUE.

- `AcceptAnyIP=TRUE`

BMC Impact Integration for Tivoli will accept any IBM Tivoli Netcool/OMNIBus Socket Writer Gateway connection.

- `AcceptAnyIP=FALSE`

BMC Impact Integration for Tivoli will accept only IBM Tivoli Netcool/OMNIBus Socket Writer Gateway IP which is available in `NetcoolServerIP` parameter.

- 3 Restart BMC Impact Integration for Tivoli.

Configuring for High Availability (HA) cells support

Before you configure the High Availability (HA) cells, ensure that the Primary and Secondary BEM/BPPM server and its respective cells are appropriately configured

- 1 On the BMC Impact Integration for Tivoli side, open the `<BiiNetcool Home>/conf/Biinetcool.dir` file.

- 2 Search for the cell information similar to:

```
cell <Cell Name> mc <host name>:<port number>
```

3 Modify this cell information to

```
cell <Cell Name> mc <host name 1>:<port number 1> <host name 2>:<port number 2>
```

where,

<Cell Name> is the name of the cell that is present on both the primary and secondary BEM/BPPM server MC is the encryption key

<host name 1> is the host name of the primary server where primary cell is configured

<port number 1> is the port number of the primary cell

<host name 2> is the host name of the secondary server where the secondary cell is configured

<port number 2> is the port number of the secondary cell

4 Restart the BMC Impact Integration for Tivoli processes.

Configuring IPv6 connection support

BMC Impact Integration for Tivoli supports IPV6 address for the connection with BMC IM.

- **Biinetcool.dir** located in **<BiiNetcool Home>/conf** folder should have IPv6 address or host name entries which resolves to IPV6 address only.
- **mcell.dir** in **\$MCELL_HOME/etc** folder should have IPV6 address or host name entries which resolves to IPV6 address only.
- Machine where BMC Impact Integration for Tivoli is installed should be a dual stack machine which resolves to both IPV6 and IPV4 addresses. BMC Impact Integration for Tivoli only supports the IPV4 address for the connection with IBM Tivoli Netcool/OMNIBUS components (i.e. IBM Tivoli Netcool/OMNIBUS Socket Writer Gateway and Socket Probe).

NOTE



Depending on the platform you are using, browse to one of the following directories,

(Windows) %MCELL_HOME%

(UNIX) \$MCELL_HOME

Uninstalling BMC IM configuration

To uninstall BMC IM configuration

- 1 Login using the root login and password.
- 2 Go to one of the following directories:
 - *(For Windows)* %MCELL_HOME%\BiiNetcool\BiiNetcool_uninst
 - *(For UNIX)* \$MCELL_HOME/BiiNetcool/BiiNetcool_uninst
- 3 Depending on the platform you are using, do one of the following:
 - *(For Windows)* Double-click **uninstaller.exe**
 - *(For AIX, Linux, Solaris)* Enter the following command: **./uninstaller.bin**
- 4 A message is displayed that BMC Impact Integration for Tivoli will be uninstalled. Click **Next**.
- 5 A confirmation message is displayed again to uninstall BMC IM side installation program. Click **Uninstall**.
- 6 Click **Finish** to complete the uninstallation process.

To uninstall BMC IM configuration using Console mode

- 1 Login using the root login and password.
- 2 Go to one of the following directories:
 - *(For Windows)* %MCELL_HOME%\BiiNetcool\BiiNetcool_uninst
 - *(For UNIX)* \$MCELL_HOME/BiiNetcool/BiiNetcool_uninst
- 3 Depending on the platform you are using, do one of the following:
 - *(For Windows)* Enter the following command on command prompt: **uninstaller.exe -console**.
 - *(For AIX, Linux, Solaris)* Enter the following command: **./uninstaller.bin -console**
- 4 The installation program displays a message, This uninstallation program will guide you through the uninstallation of the BMC Impact Integration for Tivoli 4.0.21 and its modules.
- 5 Press 1 for the Next instruction, 3 to Cancel the installation or 5 to clear the screen and Redisplay.

- 6 A confirmation message will be displayed with the uninstall location. Enter the following,
 - 1 to confirm the uninstallation
 - 2 to return to the previous step
 - 3 to cancel the uninstallation
 - 5 to clear the screen and redisplay
- 7 The installation program will verify again if you want to uninstall the product. Enter 1 for **Yes**, enter 2 for **No**.
- 8 A message is displayed that the uninstallation on your system is complete. Press 3 to Finish or press 5 to Redisplay.

BMC Impact Integration for Tivoli startup tasks

This chapter presents the following topic:

Startup tasks	67
Starting/Stopping BMC Impact Integration for Tivoli Services	68
Where to go from here.....	69

Startup tasks

After you install and configure BMC Impact Integration for Tivoli, complete the following tasks:

- 1 Start the source and synchronization processes.

(On Windows)

A Go to the `BIINETCOOL_HOME\bin` directory.

B Double-click `BiiNetcool_start.vbs`.

(On UNIX)

A Enter the following command: `cd $BIINETCOOL_HOME/bin`

B To start the source process, enter the following command:

```
./biinetcool.sh startsrc
```

C To start the synchronization process, enter the following command:

```
./biinetcool.sh startsync
```



NOTE

- To stop the source and synchronization processes on Windows, double-click the **BiiNetcool_stop.vbs** file.
 - To check the status of source and synchronization processes on Windows, double-click the **BiiNetcool_status.vbs** file.
 - To stop the source and synchronization processes on UNIX, run the following command:
./biinetcool.sh stop
 - To check the status of source and synchronization processes on UNIX, run the following command: **./biinetcool.sh status**
-

2 To check that BMC Impact Integration for Tivoli has started and is working as expected, complete the following tasks:

- A Send an event to the secondary EMS.
- B Check that the event is displayed in the browser of the primary EMS.
- C Acknowledge the event or change its severity in the primary EMS.
- D Verify that the acknowledgement or severity change status is displayed in the secondary EMS.

Starting/Stopping BMC Impact Integration for Tivoli Services

Before starting/stopping services refer “[Configuring BMC Impact Integration for Tivoli Windows process as a service](#)” on page 60

To start/stop BMC Impact Integration for Tivoli Services using scripts

- Start the services using **BiiNetcool_start.vbs** script.
- Stop the services using **BiiNetcool_stop.vbs** script.
- Check the status of the service using **BiiNetcool_status.vbs** script.

To start/stop BMC Impact Integration for Tivoli Services using control panel options

- 1 Navigate to Control Panel > Administrative Tools > Services.
- 2 Locate BiiNetcool Source and BiiNetcool Synchronization Services.
 - To start BMC Impact Integration for Tivoli Source Service, **right click BiiNetcool Source Service > click Start**. To stop the Service click **Stop**.
 - To start BMC Impact Integration for Tivoli Synchronization Service, **right click BiiNetcool Synchronization Service > click Start**. To stop the Service click **Stop**.

Where to go from here

You are now ready to begin the server installation procedure. Go to the chapter corresponding to the type of host computer that you plan to use:

Type of Host	Chapter
Netcool	Appendix 5, "Status, severity, and slot defaults for BMC Impact Integration for Tivoli,".

Status, severity, and slot defaults for BMC Impact Integration for Tivoli

This appendix presents the following topics:

BMC IM to IBM Tivoli Netcool/OMNIBus	71
Severity mapping defaults	71
Status mapping defaults	72
IBM Tivoli Netcool/OMNIBus to BMC IM	72
Severity mapping defaults	72
Status mapping defaults	73
Slots	73
BMC IM slots available for message enrichment	73
IBM Tivoli Netcool/OMNIBus slots available for message enrichment	74

BMC IM to IBM Tivoli Netcool/OMNIBus

This section describes severity and status mapping defaults when events flow from BMC IM to IBM Tivoli Netcool/OMNIBus.

Severity mapping defaults

Table 17 lists the severity mapping defaults when events flow from BMC IM to IBM Tivoli Netcool/OMNIBus.

Table 17 BMC IM to IBM Tivoli Netcool/OMNIBus event severity mapping defaults

BMC IM source severity	IBM Tivoli Netcool/OMNIBus default target severity
Critical	Critical
Major	Major
Warning	Warning
Ok	Clear
Info	Clear
Unknown	Indeterminate

Status mapping defaults

Table 18 lists the status mapping defaults when events flow from BMC IM to IBM Tivoli Netcool/OMNIBus.

Table 18 BMC IM to IBM Tivoli Netcool/OMNIBus event status mapping defaults

BMC IM	IBM Tivoli Netcool/OMNIBus
Acknowledge	Acknowledge
Reopen	Open
Close	Delete

IBM Tivoli Netcool/OMNIBus to BMC IM

This section describes the severity and status mapping defaults when events flow from IBM Tivoli Netcool/OMNIBus to BMC IM.

Severity mapping defaults

Table 19 lists the severity mapping defaults when events flow from IBM Tivoli Netcool/OMNIBus to BMC IM.

Table 19 IBM Tivoli Netcool/OMNIBus to BMC IM event severity mapping defaults

IBM Tivoli Netcool/OMNIBus source severity	BMC IM target severity
Critical	Critical
Major	Major
Minor	Minor
Warning	Warning
Clear	Ok
Indeterminate	Unknown

Status mapping defaults

Table 20 lists the status mapping defaults when events flow from IBM Tivoli Netcool/OMNIBus to BMC IM.

Table 20 IBM Tivoli Netcool/OMNIBus to BMC IM status mapping defaults

IBM Tivoli Netcool/OMNIBus source status	BMC IM target status
Acknowledge	Acknowledge
Deacknowledge	Open

Slots

This section describes the slots available for message enrichment in BMC IM and IBM Tivoli Netcool/OMNIBus.

BMC IM slots available for message enrichment

Table 21 describes the slots available for message enrichment in BMC IM.

Table 21 BMC IM slots available for message enrichment

Slot name	Description
classname	class name for the event
status	the status of the event
severity	severity value of the event

IBM Tivoli Netcool/OMNIBus slots available for message enrichment

Table 22 describes the slots available for message enrichment in IBM Tivoli Netcool/OMNIBus.

Table 22 IBM Tivoli Netcool/OMNIBus slots available for message enrichment

Slot name	Description
classname	class name for the event
status	the status of the event
severity	severity value of the event

Log files reference for BMC Impact Integration for Tivoli

This appendix presents the following topics:

Log file for the source process	75
Log file for the synchronization process.....	75
Biinetcool.trace file.....	76

Log file for the source process

BMC Impact Integration for Tivoli stores logs for the source process in the **biinetcool** file. The location of the file is as follows:

- *(Windows)* %BIINETCOOL_HOME%\log\logsrc\netcool\
■ *(UNIX)* \$BIINETCOOL_HOME/log/logsrc/netcool/

Log file for the synchronization process

BMC Impact Integration for Tivoli stores logs for the synchronization process in the **biinetcool** file. The location of the file is as follows:

- *(Windows)* %BIINETCOOL_HOME%\log\logsync\netcool\
■ *(UNIX)* \$BIINETCOOL_HOME/log/logsync/netcool/

Biinetcool.trace file

The **Biinetcool.trace** file stores all the settings that define entries in the log files for the source and synchronization processes.

The location of the file is as follows:

- *(Windows)* %BIINETCOOL_HOME%\conf\
■ *(UNIX)* \$BIINETCOOL_HOME/conf\

You can configure the following settings in the trace file for logging events data:

- ALL
- VERBOSE
- INFORM
- WARNING
- ERROR
- FATAL

Troubleshooting for BMC Impact Integration for Tivoli

This appendix presents the following topics:

BMC Impact Integration for Tivoli does not start	77
Events are not processed when IBM Tivoli Netcool/OMNIbus (netcool) is primary EMS	79
Events are not processed when BMC IM (IM) is primary EMS	80
Events are not enriched in IBM Tivoli Netcool/OMNIbus when IBM Tivoli Netcool/OMNIbus (netcool) is primary EMS.	81
Cannot delete IBM Tivoli Netcool/OMNIbus Events/Alerts on BMC IM.	81

BMC Impact Integration for Tivoli does not start

If BMC Impact Integration for Tivoli does not start, perform the following tasks:

- If IBM Tivoli Netcool/OMNIbus (netcool) is configured as the primary EMS, verify that the value of the **Enable** parameter is set to **TRUE** for the **IM_To_TPEMS_Map** map in the **EventMapping.map** file. The location of the file is as follows:

— (Windows) %BIINETCOOL_HOME%\conf\
 — (UNIX) \$BIINETCOOL_HOME/conf/

- If BMC IM (IM) is configured as the primary EMS, verify that the value of the **Enable** parameter is set to **TRUE** for the **TPEMS_To_IM_Map** map in the **EventMapping.map** file. The location of the file is as follows:

— (Windows) %BIINETCOOL_HOME%\conf\
 — (UNIX) \$BIINETCOOL_HOME/conf/

- Verify that the value of the **PrimaryEMS** parameter is set to **netcool** or **IM** (depending on the primary EMS) in the **Bii_Src.conf** and **Bii_Sync.conf** files. The location of these files is as follows:

- *(Windows)* %BIINETCOOL_HOME%\conf\
— *(UNIX)* \$BIINETCOOL_HOME/conf/

- Verify that the value of the **NetcoolSocketProbe** parameter in the **BiiSrc.conf** file is the same as the **PortNumber** parameter in the **socket.props** file. The location of the **Bii_Src.conf** file is as follows:

- *(Windows)* %BIINETCOOL_HOME%\conf\
— *(UNIX)* \$BIINETCOOL_HOME/conf/

The location of the **socket.props** file is as follows:

- *(Windows)* <netcool home>\omnibus\probes\— *(UNIX)* <netcool home>/omnibus/probes/<os platform>/

- Verify that the value of the **NetcoolSocketGateway** parameter in the **Bii_Src.conf** file is the same as the value of the **PortNumber** parameter in the **NCO_GATE.props** file. The location of the **Bii_Src.conf** file is as follows:

- *(Windows)* %BIINETCOOL_HOME%\conf\
— *(UNIX)* \$BIINETCOOL_HOME/conf/

The location of the **NCO_GATE.props** file is as follows:

- *(Windows)* <netcool home>\omnibus\gates\socket
— *(UNIX)* <netcool home>/omnibus/gates/socket

- Verify that the port number for **gateway.biinetcool** entry in the **mcell.dir** file and the **netcool_cellName** entry in the **Biinetcool.dir** file are the same. The location of the **mcell.dir** file is as follows:

- *(Windows)* %MCELL_HOME%\etc\
— *(UNIX)* \$MCELL_HOME/etc/

The location of the **Biinetcool.dir** file is as follows:

- *(Windows)* %BIINETCOOL_HOME%\conf\
— *(UNIX)* \$BIINETCOOL_HOME/conf/

Events are not processed when IBM Tivoli Netcool/OMNIBus (netcool) is primary EMS

If the events are not processed when IBM Tivoli Netcool/OMNIBus (netcool) is configured as the primary EMS, perform the following tasks:

- 1 Verify that the BMC IM cell is running by entering the following command:

```
mcstat -n cellName
```

- 2 Verify that BMC Impact Integration for Tivoli is running.
- 3 Verify that the IBM Tivoli Netcool/OMNIBus Socket Probe and the IBM Tivoli Netcool/OMNIBus Socket Writer Gateway are running.
- 4 Verify that the value of the **NetcoolSocketProbe** parameter in the **Bii_Src.conf** file is the same as the **PortNumber** parameter in the **socket.props** file. The location of the **Bii_Src.conf** file is as follows:

```
— (Windows) %BIINETCOOL_HOME%\conf\  
— (UNIX) $BIINETCOOL_HOME/conf/
```

The location of the **socket.props** file is as follows:

```
— (Windows) <netcool home>\omnibus\probes<os platform>\  
— (UNIX) <netcool home>/omnibus/probes/<os platform>/
```

- 5 Verify that the value of the **PrimaryEMS** parameter is set to **netcool** in the **Bii_Src.conf** and **Bii_Sync.conf** files. The location of these files is as follows:

```
— (Windows) %BIINETCOOL_HOME%\conf\  
— (UNIX) $BIINETCOOL_HOME/conf/
```

- 6 Verify that the port number for **gateway.biinetcool** entry in the **mcell.dir** file and the **netcool_cellName** entry in the **Biinetcool.dir** file are the same. The location of the **mcell.dir** file is as follows:

```
— (Windows) %MCELL_HOME%\etc\  
— (UNIX) $MCELL_HOME/etc/
```

The location of the **Biinetcool.dir** file is as follows:

```
— (Windows) %BIINETCOOL_HOME%\conf\  
— (UNIX) $BIINETCOOL_HOME/conf/
```

Events are not processed when BMC IM (IM) is primary EMS

If the events are not processed when BMC IM (IM) is configured as the primary EMS, perform the following tasks:

- Verify that the BMC IM cell is running by entering the following command:

```
mcstat -n cellName
```

- Verify that BMC Impact Integration for Tivoli module is running.
- Verify that the IBM Tivoli Netcool/OMNIBus Socket Probe and the IBM Tivoli Netcool/OMNIBus Socket Writer Gateway are running.
- Verify that the value of the **NetcoolSocketGateway** parameter in the **Bii_Src.conf** file is the same as the **PortNumber** parameter in the **NCO_GATE.props** file. The location of the **Bii_Src.conf** file is as follows:

```
— (Windows) %BIINETCOOL_HOME%\conf\  
— (UNIX) $BIINETCOOL_HOME/conf/
```

The location of the **socket.props** file is as follows:

```
— (Windows) <netcool home>\omnibus\probes\<os platform>\  
— (UNIX) <netcool home>/omnibus/probes/<os platform>/
```

- Verify that the port number for **gateway.biinetcool** entry in the **mcell.dir** file and the **netcool_cellName** entry in the **Biinetcool.dir** file. The location of the **mcell.dir** file is as follows:

```
— (Windows) %MCELL_HOME%\etc\  
— (UNIX) $MCELL_HOME/etc/
```

The location of the **Biinetcool.dir** file is as follows:

```
— (Windows) %BIINETCOOL_HOME%\conf\  
— (UNIX) $BIINETCOOL_HOME/conf/
```

- Verify that the value of the **PrimaryEMS** parameter is set to **IM** in the **Bii_Src.conf** and **Bii_Sync.conf** files. The location of these files is as follows:

```
— (Windows) %BIINETCOOL_HOME%\conf\  
— (UNIX) $BIINETCOOL_HOME/conf/
```


Events are not enriched in IBM Tivoli Netcool/OMNIBus when IBM Tivoli Netcool/OMNIBus (netcool) is primary EMS

When you use a customized mapping for an event and then enrich it, first the mapping takes place, and then the event is enriched. For example, if you map an event from Major in BMC IM to Critical in IBM Tivoli Netcool/OMNIBus, and if the enrichment is specified for the Major event severity, the event gets mapped to Critical. Because enrichment is specified for a Major severity event, it does not get enriched.

Cannot delete IBM Tivoli Netcool/OMNIBus Events/Alerts on BMC IM

If events deleted from IBM Tivoli Netcool/OMNIBus are not reflected on BMC IM perform the following on IBM Tivoli Netcool/OMNIBus Socket Writer Gateway side.

1 Open `<netcool home>/omnibus/gates/socket/NCO_GATE.props`

2 Comment the following line,

```
Gate.Socket.DeleteHeader : '!#*$D'
```

3 Uncomment the following line,

```
#Gate.Socket.DeleteHeader : '!#*$DServerSerial'
```

4 Restart the IBM Tivoli Netcool/OMNIBus Socket Writer Gateway.

5 Check if the issue is resolved.

NOTE



File name may be different. Contact your IBM Tivoli Netcool/OMNIBus Admin if file is not found in specified folder.

Features supported by BMC Impact Integration for Tivoli

This appendix presents the following topics:

Support for unique mcue_id	83
Handle single quotes	83
Support for Multibyte Character sets	84

Support for unique mcue_id

BMC Impact Integration for Tivoli generates a unique mcue_id for every event.

In the old design, mcue_id was constructed based on the identifier slot. Sometimes, the event was discarded at BMC IM side because the mcue_id was not unique. This happened because most of the events coming from IBM Tivoli Netcool/OMNIBus had the same Identifier slot.

Handle single quotes

BMC Impact Integration for Tivoli can now handle single quotes properly.

Earlier if the slot value contained single quotes, BMC Impact Integration for Tivoli could not handle them and generated unexpected behaviour. Due to this unexpected behaviour slot mismatch occurred on IBM Tivoli Netcool/OMNIBus Socket Probe side.

Support for Multibyte Character sets

BMC Impact Integration for Tivoli now supports Multibyte Character sets. This feature is available only on Windows platform.

Glossary

\$BIINETCOOL_HOME

The UNIX platform environment variable that defines the home directory in which the product files reside. Use this environment variable to find all product executables and configuration files.

%BIINETCOOL_HOME%

The Windows platform environment variable that defines the home directory in which the product files reside. Use this environment variable to find all product executables and configuration files.

\$MCELL_HOME

The UNIX platform environment variable that defines the home directory in which product files reside. Use this environment variable to find all product executables and configuration files.

%MCELL_HOME%

The Windows platform environment variable that defines the home directory in which product files reside. Use this environment variable to find all product executables and configuration files.

.load file

A file that specifies the order in which a directory's files are to be loaded and read by a BMC IM instance.

.map file

See [adapter map file](#).

.mrl file

A file that contains rule and collector definitions written in the Master Rule Language (MRL). Event and service management processing rules and collectors are stored in **.mrl** files and in compiled **.wic** files.

/etc/mcell

On UNIX platforms, the directory that contains the **setup_env.sh** and **setup_env.csh** scripts, which set the environment variables used by the product software.

A

Acknowledge

The event operation action that acknowledges the existence of an event. *See also* [local action](#).

Acknowledged status

The event status that results from an Acknowledge event operation action; it means that an operator has acknowledged the event's existence.

action

1. Generally, a procedure that is invoked to produce a specific result. It can be a script or a call to an executable that is invoked automatically in response to an event, or it can be a manual intervention. Actions can be scheduled or immediately invoked locally or remotely.

2. In BMC IM, an executable that can be run by a cell. Actions are called in an Execute rule. Users can request the execution of actions in the BMC Impact Explorer. *See also* [local action](#) and [non-local action](#).

adapter

A background process that audits data from various sources, evaluates it for specific conditions, and creates the corresponding events. Adapters also transform event data into the format understood by BMC IM.

adapter instance

An adapter that is defined in the adapter configuration file. The definition is given a name and specifies an adapter type, such as a log file adapter.

adapter map file

A text file that defines the translation of a message between one event format and another. It is also known as a `.map` file.

administrator

The person responsible for administrative tasks within the product.

API

See [Application Program Interface \(API\)](#).

Application Program Interface (API)

A set of externalized functions that allow interaction with an application.

Assign To

The event operation action that assigns the responsibility for an event to an individual.

Assigned status

The event status that indicates that the specified operator is responsible for the event. It results from the Assign To or the Take Ownership event operation actions.

attribute

A characteristic or property of an object, such as a common data model service model component class. An attribute may contain a value.

automated action

An action that is automatically executed when an alert occurs whose values match the conditions established for the action. You use automated actions to perform an operation as soon as a problem or condition is detected.

automation

In BMC Impact Explorer, operator responses that have been programmed to occur automatically when an event is received.

B**BAROC language**

Basic Recorder of Objects in C. A structured language used to create and modify class definitions. A class definition is similar to a structure in the C programming language. The elements in a BAROC class are called slots.

base class

In programming, a root superclass, a class from which all other classes of its type are derived.

BMC Event Manager (BMC EM)

A real-time event management product license package that provides event management, including event collection, correlation, enrichment, and integration. It enables IT operations staff to focus the proper resources on resolving the most critical events.

BMC EM

See [BMC Event Manager \(BMC EM\)](#)

BMC Impact Integration product (BMC II product)

An interface that enables the synchronized flow of events and data between a BMC IM instance and another BMC Software product or a specific third-party product.

BMC Impact Manager instance

An installation of the BMC IM product on a host computer. *Compare with [cell](#).*

BMC Impact Manager (BMC IM)

The BMC Impact product that provides automated event and service-impact management. It runs as a daemon on UNIX platforms, and can be distributed throughout a networked enterprise and connected in various topologies to support IT goals.

BMC ProactiveNet Performance Management (BPPM)

BMC ProactiveNet provides the core features and functionality for the BMC ProactiveNet Performance Management Suite. BMC ProactiveNet is an integrated platform for service availability and performance management of your IT environment. It combines events management, service management, performance monitoring and data analytics (including baselines, abnormality detection, and Root Cause Analysis algorithms) in a single seamless solution for physical, virtual and cloud environments.

BMC Service Impact Manager (BMC SIM)

A real-time service impact management product license package that provides technologies for both service impact and event management (SIEM). BMC SIM identifies related applications and the underlying systems and databases of any software or infrastructure component and ties systems-level monitoring to the supported business services, enabling IT personnel to respond quickly to problems that threaten the delivery of business services.

BMC SIM

See [BMC Service Impact Manager \(BMC SIM\)](#).

C**cause event**

In a sequence of events, the event that is identified as the cause of the other events. *See also* [effect event](#).

cell

The event processing engine that collects, processes, and stores events within a BMC IM instance. Each cell uses the information in its associated Knowledge Base to identify the types of events to accept and how to process and distribute them.

class

1. A data storage element. In database terms, it relates to a table in a database or a form in the Remedy AR System.
2. In BMC IM, a BAROC-language data structure that defines a type of object used in BMC IM. A BAROC class is made up of data fields, called slots, that define its properties.
3. In BMC Impact Portal: *See* [object class](#).

Close

The event operation action that closes an event. If the event was assigned to the current user, Close sets the status to Closed and shows an Operator Closed entry in the operation history. Otherwise, Close sets the status to Closed and shows an Override Closed entry in the operation history.

Close status

The event status that results from a Close event operation action.

CORE_DATA class

The base class for all BMC IM BAROC data classes. It is the parent class for all customized data classes.

CORE_EVENT class

The base class for all BMC IM event classes. It is the parent class for all customized event classes.

Correlate phase

The event-processing phase in which the Correlate rules are evaluated to determine whether any events have a cause-and-effect relationship. *See also* [Correlate rule](#).

Correlate rule

An event-processing rule that establishes the cause-and-effect relationship between two events. Correlate rules represent a one-to-one relationship.

correlation

1. The process of identifying a cause-and-effect relationship between two events from one or more sources for the purpose of identifying a root cause.
2. The cause and effect relationship itself.
3. A type of policy.

D**data class**

A BAROC class that is a child of the base data class, `CORE_DATA`, and that defines a type of data. Users can create their own data classes.

datastore

A central place in which an aggregation of data is kept and maintained in an organized way.

Decline Ownership

The event operation action that indicates that the assigned operator does not accept responsibility for an event. Decline Ownership clears the owner's name, sets the status back to Acknowledged, and shows a Declined entry in the operation history.

deduplication

The rule that identifies duplicate events and increments the event count by 1 when a duplicate event is detected.

default status view type

In the BMC Impact Portal, one of the view types available under the **Status** tab.

Delete rule

An event-processing rule that is used to clean up obsolete information when an event is deleted from the repository. Delete rules are evaluated when an event is deleted and they take actions to ensure that data integrity is maintained.

duplicate event

A subsequent occurrence of an event that has already been received, such as the second or later notification that a component is down. An event that has matching values for all the slots defined with the `dup_detect=yes` facet in the event class definition. You can use Regulate rules to detect and count duplicate events. *See also* [facet](#).

E

effect event

In a sequence of events, the event that is identified as an effect of a cause event. *See also* [cause event](#).

encryption key

The seed encryption key. If the destination product has a key value, all clients must encrypt their communications using the same key value.

enrichment

1. The process of adding to or modifying the original event data to enhance it for problem management, service management, correlation, automation, notification, or reporting functions.
2. A type of policy.

event

In a BMC Impact environment, a structured message passed to and from cells. Each event is an instance of an event class.

event class

1. A BAROC class that is a child of the base event class, `CORE_EVENT`, and that defines a type of event.
2. A category of events that you can create as a child of the base event class, `CORE_EVENT`, according to how you want the events to be handled by an event manager and what actions you want to be taken when the event occurs. Event classes may be inherited from parent objects, depending on the specific product. Event classes are inherited from parent objects in BMC IM.

event collector

An event grouping whose content is defined by its collector rule. Event collectors are displayed in the BMC Impact Explorer and are defined in the BMC Impact Manager Knowledge Base. *See also* [event collector rule](#).

event collector rule

A type of rule in the Knowledge Base that defines how events from a cell are organized and presented in the BMC Impact Explorer. Collector rules are written in Master Rule Language (MRL).

event collector set

A group of event collectors, organized in a parent-child hierarchy, that results from progressive filtering of the incoming events that match the top-level (parent event collector) criteria. A collector set organizes the events for display in the BMC Impact Explorer.

event datastore

An archive of generated event data.

event group

A grouping of collectors that depicts the relationship of events through the hierarchy of the navigation tree. Each level of the collector set is shown as a node under the event group. The parent level of an event group represents all of the events associated with the collectors. An event list is associated with the lowest level nodes of an event group. The parent level of an event group is associated with an image view.

event list

1. A tabular listing of events.
2. In BMC Impact Explorer, you can access the event list from the **Events** tab.

event management

The collection and correlation of events across an enterprise to enable IT operations to focus the proper resources on the most critical events.

event management policy

One of several generic rule types that perform actions against events that meet selection criteria specified in an associated event selector. Unlike manually written rules, event policies are defined interactively using the Event Management Policy Editor in the BMC Impact Explorer. *See also* [user-defined policy](#).

event operation history

The tabular display of the operation actions taken against an event in BMC Impact Explorer. You can access the event operation history from the **Operations History** tab of the **Event Details** pane on the **Events** tab in BMC Impact Explorer.

event operations

Commands issued by operators to respond to events and correct the problems that the events represent. Operators perform these commands from an event list in BMC Impact Explorer.

event processor

See [cell](#).

event propagation

The act of forwarding events and maintaining their synchronization among multiple BMC IM instances (cells).

event repository

1. An archive of generated event data.
2. In BMC IM instances (cells), the storage facility (**mcdb**) in which event information is stored.

event selection criteria

The syntax of an event selector that specifies the conditions that an incoming event must meet to trigger selection of the event for rule evaluation during each phase of event processing. You can specify event selection criteria through the BMC Impact Explorer GUI. An MRL Event

Condition Formula (ECF) also contains event selection criteria. An event selector contains one or more event selection criteria.

event selector

The filtering mechanism associated with an event policy that selects the events against which the event policy performs actions. An event selector contains one or more event selection criteria. Event selectors are defined interactively by using the BMC Impact Explorer. An event policy can use one or more event selectors.

event source

The monitored IT resource from which source event data is collected, such as an operating system or application log file.

event timeout

An event timeout policy changes an event status to closed after a specified period of time elapses.

Events View

The BMC Impact Explorer user interface for viewing and manipulating event data. *See also* Services View and Administration View.

Execute phase

The event-processing phase in which Execute rules are evaluated, and, if conditions are met, specified actions are performed.

Execute rule

An event-processing rule that performs actions when an attribute (slot) value changes in the event repository. Execute rules are evaluated during the Execute phase of event processing. Often, the resulting actions are internal actions, but you can use the `execute` primitive in a rule to call an external executable.

expression

A combination of operators, operands (constants, variables, functions, and primitives), and conditions that represents a value or a relationship between values.

F**facet**

A specific attribute of a BAROC class slot (field) that either controls the values that the slot can have or controls aspects of a class instance's processing.

field

See [attribute](#).

Filter phase

The event-processing phase in which Filter rules are evaluated to determine which events need additional processing or are unneeded and can be discarded.

Filter rule

An event-processing rule that determines whether a specific type of event should be passed as it is, subjected to further processing, or discarded during the Filter phase.

function

Code that executes an operation in a cell and returns a value. A function can be used as an expression within a rule or a policy and in alias formulas. *See also* [primitive](#).

G**gateway**

See [BMC Impact Integration product \(BMC II product\)](#).

gateway.biinetcool file

A special file that controls the propagation and synchronization of events to a BMC IM Integration product. The file is in the `$MCELL_HOME/etc/` directory on UNIX platforms and in the `%MCELL_HOME\etc\` directory on Windows platforms.

global record

A special BAROC class instance that defines a persistent global variable. When a cell starts, it creates one instance of each global record defined in the Knowledge Base and restores any existing values. Global record definitions are stored in the `record` subdirectory of the cell Knowledge Base. You can get and set global record values in MRL rules or by using the BMC IM CLI `mgetrec` and `msetrec` commands.

global slot order

In BMC Impact Explorer, a set of slots (attributes), in a particular order, that is associated with a filter and is shared among users.

group

A logical or an arbitrary collection of user-defined objects that may or may not have measurable relationships and may or may not have summary data associated with them.

H**heartbeat**

1. A periodic message sent between communicating objects to inform each object that the other is still active and accessible.

2. In BMC IM, a dynamic data object sent by a cell to monitor other cells to verify that they remain active and accessible.

heartbeat interval

The time between heartbeats; the period of the heartbeat.

I**image view**

A graphical and hierarchical display that depicts a business view. You can create image view objects or elements to represent managed systems (tools), geographic locations, operators, time, severity levels, categories, and so forth.

informational alert

An alert of relatively low importance, such as a routine state change. *See also* [severity](#).

infrastructure element

An addressable object that can be monitored, such as a managed system in the BMC Performance Manager Portal.

instance

1. A specific object with specific attributes or characteristics that distinguish it from other items (members) of its class or type.
2. In BMC IM, an object that has specific attribute values and that was created using a class definition.

integration product

See [BMC Impact Integration product \(BMC II product\)](#).

internal base class

A BAROC internal class that defines the required structure for the base class from which a group of BMC IM classes is derived.

internal event

An event that is created by the cell during event processing. An internal event is processed in the same way as an incoming event. All internal events are processed before any new, incoming external events are processed.

Internet Protocol (IP) adapter

An adapter that collects and translates events from a Telnet, UDP, or TCP data source.

IP adapter

See [Internet Protocol \(IP\) adapter](#).

K**kb directory**

The default directory in which a BMC Impact Manager Knowledge Base is located. The directory and basic product definitions are created during installation.

key slot

A slot whose value is compared during searches.

Knowledge Base (KB)

A collection of information that forms the intelligence of a BMC Impact Manager instance and enables it to process events and perform service-impact-management activities. This information includes event class definitions, service component definitions, record definitions, interface definitions, collector definitions, data associations, and processing rules.

L**load file**

See [.load file](#).

local action

An executable that you can run directly from the BMC Impact Manager. Local actions are written in XML and are stored in the OS-specific subdirectory of the **bin** directory of the BMC Impact Manager cell Knowledge Base.

M**macro**

An executable used in **.map** files to manipulate the fields used for event translation.

manifest.kb

A central locator file that specifies the locations of the directories that make up a Knowledge Base. The **manifest.kb** file is used by the compiler to load the Knowledge Base sources files for compilation.

map

See [image view](#).

Master Rule Language (MRL)

A compact, declarative language used to define rules and collectors for processing and organizing events in BMC IM. Uncompiled rule and collector source files have a **.mrl** file extension.

mccomp

The BMC IM rules compiler. Rules are written in the Master Rule Language (MRL). The platform-independent compiler converts them to byte code that the cell can read and process.

mcdb

See [event repository](#).

mcell.conf file

The configuration file that contains configuration options for a BMC IM instance (cell). It is in the **\$MCELL_HOME/etc/** directory on UNIX platforms and in the **%MCELL_HOME%\etc** directory on supported Windows platforms.

mcell.dir file

The file that lists the cells to which a BMC Impact Solutions product or component can connect and communicate. The information in each cell includes its name, its encryption key, and its host name and port number. This file is in the `$MCELL_HOME/etc/` directory on UNIX platforms and in the `%MCELL_HOME%\etc\` directory on supported Windows platforms.

mcell.modify file

The file that lists the slots that affect the `mc_modification_date` slot. When a specified slot is modified, the time stamp of the modification is reset in the `mc_modification_date` slot, so that slot is listed in `mcell.modify`.

mcell.propagate file

The configuration file that specifies the slot values that are synchronized during event propagation between BMC IM instances (cells). It is in the `$MCELL_HOME/etc/` directory on UNIX platforms and in the `%MCELL_HOME%\etc\` directory on supported Windows platforms.

mcell.trace file

The configuration file that specifies the trace information about a BMC IM (cell) that should be recorded and the location to which it is written. It is in `$MCELL_HOME/etc/` directory on UNIX platforms and in the `%MCELL_HOME%\etc\` directory on supported Windows platforms.

MCELL_HOME

See `$MCELL_HOME` for UNIX or `%MCELL_HOME%` for Windows.

mclient.conf file

The configuration file that specifies the configurations for the BMC IM CLI commands. It is in the `$MCELL_HOME/etc/` directory on UNIX platforms and in the `%MCELL_HOME%\etc\` directory on supported Windows platforms.

mclient.trace file

The configuration file that specifies the trace information that should be collected for the BMC IM CLI commands and the location to which it should be written. This file is in the `$MCELL_HOME/etc/` directory on UNIX platforms and in the `%MCELL_HOME%\etc\` directory on supported Windows platforms.

mcontrol command

The CLI command that sends control commands to a BMC IM instance (cell).

mc_udid

See [universal data identifier \(mc_udid\)](#).

N**navigation tree**

See [navigation tree view](#).

navigation tree view

1. A hierarchical display of the objects and user-defined groups and views.
2. In BMC Impact Explorer, a hierarchical view of defined objects and groups. An object can be a filter, rule, or event. The groups are arranged to show relationship and dependency between the managed systems. The navigation tree view appears in the left pane.
3. In the BMC Portal, a hierarchical display of groups defined in a view.

New phase

The event-processing phase in which New rules are evaluated to determine which events in the repository should be updated with new information from new incoming events. This is the last opportunity to prevent an event from entering the event repository (**mcd**).

New rule

An event processing rule that is evaluated during the New event processing phase, and can update events stored in the repository (**mcd**) with fresh information from new incoming events.

node

A BMC IM instance that can receive only events originating on the local host system.

non-local action

A user-initiated action that does not execute on the user console host machine.

normalization

The process of homogenizing event data into a common event format so that a standard set of event data is collected and reported regardless of the event source.

O**object**

1. An item that can be inserted into a dashboard. For example, a chart, link, or Active-X control.
2. A generic term for anything that is displayed in the user interface.
3. *See class.*

object class

In BMC Impact Solutions, a data structure that defines a type of object. An object class can be a BAROC-language data structure in a BMC Impact Manager cell Knowledge Base or a Common Data Model (CDM) data structure in the BMC Configuration Management Database. A class is made up of data fields, called attributes (slots) that define its properties. *See also* event class, object, and object hierarchy.

open event

An event that may require action. An open event may have a status of Open, Acknowledged, Assigned, or Blackout.

Open status

The event status that indicates that the event has not been examined, or that neither an operator nor an automated process has been assigned responsibility for the event.

P**policy class**

A BAROC class that is a child of the base data class `POLICY` and that defines a type of policy.

policy instance

A specific implementation of any of the types of event management policies. For example, you could have an instance of a blackout policy that defined blackout periods for holidays and another instance of the same policy that defined blackout periods for monthly maintenance.

port

A number that designates a specific communication channel in TCP/IP networking. Ports are identified by numbers. BMC IM communicates using the ports specified during installation.

primitive

Similar to a function, code that executes an operation in a cell and returns a value; can be used as an instruction, or as a function if contained in Boolean expression. See the *BMC Impact Manager Knowledge Base Reference Guide* for information about the MRL primitives.

priority

An attribute indicating the precedence or scale of importance of an event.

Propagate phase

The event-processing rule phase in which Propagate rules are evaluated to determine the events to be forwarded to another cell or to a BMC Impact Integration product.

propagate policy

A type of policy that forwards events to other cells in the managed domain. A propagate policy is evaluated during the Propagate phase of event processing.

Propagate rule

An event-processing rule that is used to forward events to other cells in the managed domain. Propagate rules are evaluated during the Propagate phase of event processing.

propagated event

An event that is forwarded from one cell to another cell or to a BMC Impact Integration product during the Propagate phase of event processing.

R

recurrence

1. The characteristic of occurring more than once.
2. The type of policy that handles recurrent events. *See also* [recurrent event](#).

recurrent event

An event that occurs more than one time. Both scheduled and unscheduled events can be recurrent events: a monitored hardware device could experience multiple voltage spikes within a single polling cycle, and a reminder notification could be scheduled to be sent periodically until acknowledgment is received. *See also* [duplicate event](#).

Refine phase

The first phase of event processing, in which Refine rules are evaluated to validate incoming events and, if necessary, collect additional data needed before further event processing can occur.

Refine rule

A rule evaluated during the first phase of event processing to validate an incoming event and, if necessary, to collect any additional data needed before further processing can occur.

regular expression

Sometimes referred to as “regex,” regular expressions are used in pattern matching and substitution operators. A simple regular expression is a sequence or pattern of characters that is matched against a text string when performing search and replacement functions.

Regulate phase

The event-processing phase in which Regulate rules are evaluated and, if true, collect duplicate events for a time period and, if a specified threshold of duplicates is reached, passes an event to the next processing phase.

Regulate rule

An event-processing rule that processes duplicate events or events that occur with a specified frequency. With a Regulate rule, you can create a new event based on the detection of repetitive or frequent events. *See also* Regulate Phase.

remote action

A user-initiated action that does not execute on the user console host computer; an executable that can be run by a cell. Remote actions are written in the Master Rule Language (MRL) and are stored in the OS-specific subdirectory of the **bin** directory of the Knowledge Base.

Reopen

The event operation action that reopens an event that is in the Closed state. Reopen sets the status to Open and shows a Reopen entry in the operation history.

repository

See [event repository](#).

restricted object

A dynamically created object that contributes to service status, but which the user does not have permission to view.

rule

A conditional statement written in MRL and that, if determined to be true, executes actions. Cell event processing occurs in phases with the cell comparing each event to the series of rules associated with that phase. Each phase's rules are evaluated one by one before the event is passed to the next phase. The order in which rules are evaluated during a particular phase is based on the order in which the rules were loaded.

rule engine

See [cell](#).

rule phase

A specific stage of event processing. A combination of sequential phases and nonsequential phases comprise event processing, each with a corresponding rule type.

rule type

The designation that identifies a rule as being in a specific phase of event processing. The cell executes rules within the context of the associated event-processing phase and in the order in which the rules were loaded from the rule file.

S**saved state**

The state of a BMC IM instance (cell) as determined by the StateBuilder utility, **statbld.exe**. The StateBuilder utility periodically consolidates the data in the transactions file (**xact**) to produce the "saved state" of the product instance. This information is stored in the event repository (**mddb**) and the state is reloaded when BMC IM restarts.

SDK

See [Software Development Kit \(SDK\)](#).

selector

See [event selector](#).

selector class

A BAROC class that is a child of the base data class **SELECTOR** and that defines a type of event selector.

Service Impact Management (SIM)

A technique for managing the impact of IT events on the company's core business services to ensure their delivery. *See also [BMC Service Impact Manager \(BMC SIM\)](#).*

Set Priority

The event operation action that escalates or de-escalates an event. Set Priority sets the events priority to the specified values and shows a Priority Set entry in the operation history.

severity

An indication of the seriousness of an event.

severity-to-status mapping table

One of the two tables that relate event severity and service component status. It is used by the cell to map the severity of an impact event to a status value to be used in the computation of the associated service component's status. *See also* [status-to-severity mapping table](#).

slot

An field in a BAROC class definition. A class definition consists of one or more slots. Each slot has a data type and can have specific attributes, called facets, that can control the values that the slot can have or other aspects of a class instance's processing. A subclass inherits all the slots of the parent class. *See also* [attribute](#).

slot facet

See [facet](#).

SNMP adapter

An adapter that listens at a port for SNMP traps. It evaluates the traps and formats them based on the configured event mapping. If the event-mapping conditions are satisfied, it sends the event to the cell.

SNMP Adapter Configuration Manager

A component of the BMC Impact Event Adapters that converts Management Information Base (MIB) data into BMC IM class data.

Software Development Kit (SDK)

A set of procedures and tools with which you can develop a type of application.

source data

The information that enters the BMC IM system from another entity and that will be transformed into an event in the system.

statbld.conf file

The configuration file for the StateBuilder utility. It is in the `$MCELL_HOME/etc/` directory on UNIX platforms and in the `%MCELL_HOME%\etc\` directory on supported Windows platforms.

statbld.trace file

The configuration file that specifies the trace information to be collected for the StateBuilder utility and where it should be written. It is in the `$MCELL_HOME/etc/` directory on UNIX platforms and in the `%MCELL_HOME%\etc\` directory on supported Windows platforms.

state change event

A generated event type that records changes in a component’s status. State change events never participate in component status computation.

StateBuilder utility

The utility, `statbld.exe`, that periodically consolidates the data in a cell’s transactions file (`xact`) and writes the “saved state” of the cell to the repository (`mcdb`).

status

1. For events, an indication of the event’s management. Possible values are Open, Closed, Acknowledged, Assigned, and Blackout.

2. For service components, an indication of the relative availability of an IT resource. Possible values are OK, Unknown, Blackout, Information, Warning, Minor Impact, Impacted, and Unavailable.

status-to-severity mapping table

One of the two tables that relate event severity and component status. The status-to-severity map is used by the cell to map the main status of a component to the severity of a history event, logging a status change.

status computation model

A model that determines the status of a consumer service component when a change in the status of its provider service component occurs.

status propagation

The effect that a change in status of a provider component has on the status of its consumer components.

STATUS_PROPAGATION table

A dynamic data table that defines the different pairs of service component types whose instances can have a relationship and the status propagation model to be used for each relationship.

Socket Writer Gateway

The IBM Tivoli Netcool/OMNIbus component that extracts the data from the IBM Tivoli Netcool/OMNIbus ObjectServer.

Socket Probe

The IBM Tivoli Netcool/OMNIbus component that acquires event data and processes it based on a properties file. The Socket Probe is a multiheaded probe that acts as a single process concurrent server.

store and forward

A mechanism that ensures that if an event cannot reach its destination, it is saved in a file and sent when a viable connection to the destination becomes available.

stored event

An event that has been processed by the cell and stored in its event repository. Only stored events can be: returned by queries and displayed in BMC Impact Explorer, returned by the mquery CLI command, or referenced by the Using and Update clauses of an MRL rule.

superclass

A hierarchically superior event or data class. A class that is derived from another class inherits part of its attributes (slots) from its superclass.

suppression

1. The intentional exclusion of an event or a type of event.
2. The type of policy that governs event suppression.

syslog adapter

An adapter that collects information from the log file generated by the UNIX daemon **syslogd**. The syslog adapter reads **syslogd** events and formats and sends them to the cell.

T**Take Ownership**

The event operation action that assigns the current user as the event's owner, sets the event status as Assigned, and shows an entry of Taken in the operation history.

target

The entity designated to receive events from an adapter, an event generator, or a BMC IM instance. Also, a cell whose content currently is displayed in a BMC Impact Explorer dialog box.

threshold

1. In BMC IM, the point beyond which the value of a facet, slot, or other attribute can trigger an alert.
2. A type of policy.

Threshold rule

A rule that executes if the number of events exceeds the specified number within a particular timeframe.

timeframe

The specification for the period during which an event management policy instance is in effect.

Timer phase

The event-processing phase in which Timer rules for the delayed execution of another rule type are evaluated. This phase spans the New, Abstract, Correlate, and Execute phases of event processing.

Timer rule

An event-processing rule that triggers the delayed execution of another type of rule.

Timer trigger

See [Timer rule](#).

tree

See [navigation tree view](#).

U**unknown object**

An object whose status cannot be determined because of a connectivity failure.

universal data identifier (mc_udid)

A unique, system-generated value used to identify a specific service component instance. Each service component must have a value for the `mc_udid` attribute (slot). One use of the universal data identifier is in associating aliases to a service component instance.

unpublished component

A service component that is currently part of the service model but that has not been published (distributed) to BMC IM instances.

Update phase

See [New phase](#).

user-defined policy

A type of policy that a service manager or operations manager can define to perform specialized event processing, not available through any BMC Impact Explorer built-in policy. See also [event management policy](#)

Using clause

An MRL rule clause that is used primarily to retrieve data instances for a dynamic rule, but can also be used to retrieve instances of past events. For details, see the *BMC Impact Manager Knowledge Base Reference Guide*.

V**View**

In the Service Model editor, the centralized area where you begin to build and maintain a service model. Each View is unique to a user account. Multiple users can have different Views into the same service model. You can save Views for later reuse.

W

When clause

A part of MRL rule syntax for Abstract, Correlate, Execute, Propagate, and Timer rules. Events must first meet the selection criteria in the rule before the When clause is evaluated. Changes to slot values cause When clauses to be re-evaluated. For details, see the *BMC Impact Manager Knowledge Base Reference Guide*.

wildcard

A type of pattern matching that uses the asterisk character (*) to represent any number of different characters, and the question mark character (?) to represent a single unknown character. *See also* [regular expression](#).

workspace

See [View](#).

A B C D E F G H I J K L M N O P Q R S T U V W X Y Z

B
Biinetcool.trace, description 76
BMC IM 13
BMC Impact Integration for IBM Tivoli installation 23
BMC Impact Integration for Netcool
 overview 13
BMC Software, contacting 2

C
components, BMC Impact Integration for Tivoli 14
configuring
 filters 45
 integration module 39
 message enrichment 49
 severity mapping 47
customer support 2

E
events
 in BMC IM 14

F
filters
 configuring 45
 functions 47
 operators 46
 syntax 46
functions
 ClassName 47
 GmtTime 47
 HostName 47
 in filters 47
 LocalTime 47
 Lookup 47
 TimeT 47

I
IBM Tivoli Netcool/OMNIBus 16
installing BMC Impact Integration for Tivoli 23
integration module, configuring 39

L
log file
 for source process 75
 for synchronization process 75

M
message enrichment, configuring 49

N
Netcool/OMNIBus
 primary EMS 17

O

operators, in filters 46

P

primary EMS

 Netcool/OMNIBus 17

product support 2

R

rule

 deduplication 32

 synchronization 32

S

severity mapping defaults

 from BMC IM to IBM Tivoli Netcool/OMNIBus 71

 from IBM Tivoli Netcool/OMNIBus to BMC IM 72

severity mapping, configuring 47

Socket Probe, description 16

Socket Writer Gateway, description 16

source process, log file 75

status mapping defaults

 from BMC IM to IBM Tivoli Netcool/OMNIBus 72

 from Netcool/OMNIBus to BMC Impact Manager 73

support, customer 2

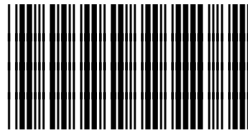
synchronization process, log file 75

T

technical support 2

trace file, Biinetcool.trace 76

Notes



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