



Tivoli<sup>®</sup> Business Systems  
Manager

*Intelligent Monitoring for Unicenter TNG*  
*Release Notes*

*Version 1.5*





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## **Tivoli Intelligent Monitoring for Unicenter TNG Release Notes Version 1.5**

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## Preface

This document provides information about Tivoli® Intelligent Monitoring for Unicenter TNG (Intelligent Monitoring) Version 1.5.

This product maps Unicenter TNG objects and events to Tivoli Business Systems Manager database. Also, it maintains the related database up-to-date with information about the status of managed objects and events.

## Who Should Read This Guide

The target audience for this guide is Unicenter TNG administrators who want to check the availability of TNG objects through Tivoli Business Systems Manager.

To make effective use of the product you require knowledge and practical experience of the following:

- Unicenter TNG
- Tivoli Business Systems Manager
- Windows NT®

## Prerequisite and Related Documents

To use the information in this document, you should be familiar with the following manuals:

- *Tivoli Business Systems Manager Installation and Configuration Guide*
- *Tivoli Business Systems Manager User's Guide*
- *Tivoli Business Systems Manager Distributed Overview*
- *Unicenter TNG Administrator Guide*
- *CA Reference Guide*

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## What This Guide Contains

This guide contains the following sections:

- Chapter 1, “Overview of Intelligent Monitoring”  
Provides an overview of the product and how it replicates the TNG environment in the Tivoli Business Systems Manager.
- Chapter 2, “Installing Intelligent Monitoring”  
Provides you with the instructions necessary to install Intelligent Monitoring.
- Chapter 3, “Using Object Discovery”  
Describes the object discovery function of Intelligent Monitoring and explains how to start it.
- Chapter 4, “Using Event Discovery”  
Describes the event discovery function of Intelligent Monitoring and explains how to start it.
- Appendix A, “Mapping Unicenter TNG Data”  
Provides a list of TNG supported classes whose instances are represented in Tivoli Business Systems Manager. Also, it describes how Unicenter TNG object status and event severity are mapped in Tivoli Business Systems Manager database.
- Appendix B, “Command Reference”  
Describes Intelligent Monitoring commands you can issue from the command prompt and explains how to use them.
- Appendix C, “Error Messages”  
Lists Intelligent Monitoring error messages, explains their meaning and provides some user actions.
- Appendix D, “Known Limitations and Workarounds”  
Describes some known limitations of the product and provides the corresponding workarounds.

## Conventions Used in This Guide

The guide uses several typeface conventions for special terms and actions. These conventions have the following meaning:



|                  |   |
|------------------|---|
| <b>Bold</b>      | Commands, keywords, file names, authorization roles, Web addresses, or other information that you must use literally appear like <b>this</b> , in <b>bold</b> .                   |
| <i>Italics</i>   | Variables and values that you must provide appear like <i>this</i> , in <i>italics</i> . Words and phrases that are emphasized also appear like <i>this</i> , in <i>italics</i> . |
| <b>Monospace</b> | Code examples, output, and system messages appear like <code>this</code> , in a monospace font.   |

## Software Requirements

To use Intelligent Monitoring, the following software must be installed and running:

- Windows NT 4.0 Service Pack 6, or higher.
- Unicenter TNG Version 2.2.
- All software required as a prerequisite of Unicenter TNG, because this product is installed together with Unicenter TNG software.
- IBM JRE 1.3.
- Tivoli Business Systems Manager Version 1.5, with a database version that supports TNG extension.
- Tivoli Business Systems Manager Common Listener.
- The most recent system DLLs. If your DLLs are not updated, download the file **vcredist.exe** from the following Web site:  
**<http://www.msdn.microsoft.com/default.asp>.**

## Accessing Publications Online

You can access Tivoli publications online at **<http://www.tivoli.com/support/documents/>**. The documentation for some products is available in PDF and HTML formats. Translated documents are also available for this product at **<http://www.tivoli.com/support/documents/>**.

To access most of the documentation, you need an ID and a password. To obtain an ID for use on the support Web site, go to <http://www.tivoli.com/support/getting/>.

Resellers should refer to <http://www.tivoli.com/support/smb/index.html> for more information about obtaining Tivoli technical documentation and support.

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- Canadian customers: (800) 426-4968

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- Fill out our customer feedback survey at <http://www.tivoli.com/support/survey/>.

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information about obtaining support through the Tivoli Customer Support Web site, go to **<http://www.tivoli.com/support/getting/>**.

- Send an e-mail to **[support@tivoli.com](mailto:support@tivoli.com)**.
- Customers in the U.S. can call **1-800-TIVOLI8 (1-800-848-6548)**.
- Customers outside the U.S. should refer to the Tivoli Customer Support Web site at **<http://www.tivoli.com/support/locations.html>** for customer support telephone numbers.

When you contact Tivoli Customer Support, be prepared to provide the customer number for your company so that support personnel can assist you more readily.





# Overview of Intelligent Monitoring

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This chapter gives an overview of Intelligent Monitoring and how it enables the integration of Unicenter TNG with Tivoli Business Systems Manager. By replicating Unicenter TNG environment in Tivoli Business Systems Manager, the product helps you to monitor TNG resources, to ensure their availability.

Intelligent Monitoring communicates with Tivoli Business Systems Manager through the Common Listener. Data is sent by Intelligent Monitoring to the Common Listener, which then updates Tivoli Business Systems Manager database accordingly. For more information about the Common Listener, refer to the documentation provided with it.

Intelligent Monitoring operates through the following two distinct processes to update Tivoli Business Systems Manager database.

- Object discovery. This is the process that detects Unicenter TNG objects and object status changes, and notifies them to Tivoli Business Systems Manager.
- Event discovery. This is the process that collects Unicenter TNG events from the Event Managers and routes them to Tivoli Business Systems Manager database.

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## Object Discovery

Intelligent Monitoring uses *object discovery* to instantiate TNG managed objects in Tivoli Business Systems Manager database.

Intelligent Monitoring maps in Tivoli Business Systems Manager database *only* TNG objects that are instances of the classes listed in Appendix A, “Mapping Unicenter TNG Data” on page 23.

Intelligent Monitoring implements the following types of object discovery:

- Bulk discovery
- Delta discovery

## Bulk Discovery

Through the bulk discovery process Intelligent Monitoring accesses TNG Common Object Repository (CORE), identifies all the instances of the supported classes, and replicates them into Tivoli Business Systems Manager database. So, you can organize them in a LOB (line of business), as required.

Bulk discovery takes a snapshot of TNG instances, collects information about their status, and maps this information in Tivoli Business Systems Manager database. This snapshot acts as a starting point for the delta discovery service that then updates the database at fixed time intervals.

First, you perform bulk discovery to populate Tivoli Business Systems Manager database for the first time, then you can keep the database up to date by means of the delta discovery service.

## Delta Discovery

The delta discovery service visits Unicenter TNG CORE at regular time intervals that are set at 60 seconds by default. However, launching a command from the command prompt, you can customize the interval you want to elapse between two successive delta discoveries. During the visits, the service collects the objects that have been removed or added since the previous discovery and

updates Tivoli Business Systems Manager database accordingly. It also updates the database with information about all the changes in object status.

## Event Discovery

Intelligent Monitoring uses *event discovery* to collect and forward Unicenter TNG events to Tivoli Business Systems Manager.

At fixed time intervals, the event discovery process collects the events logged in a Unicenter TNG Event Manager and updates the event list associated to that Event Manager in Tivoli Business Systems Manager database. Each Event Manager is represented by an object on Tivoli Business Systems Manager side.

The following figure depicts the whole process of collecting data and transmitting it to Tivoli Business Systems Manager database.

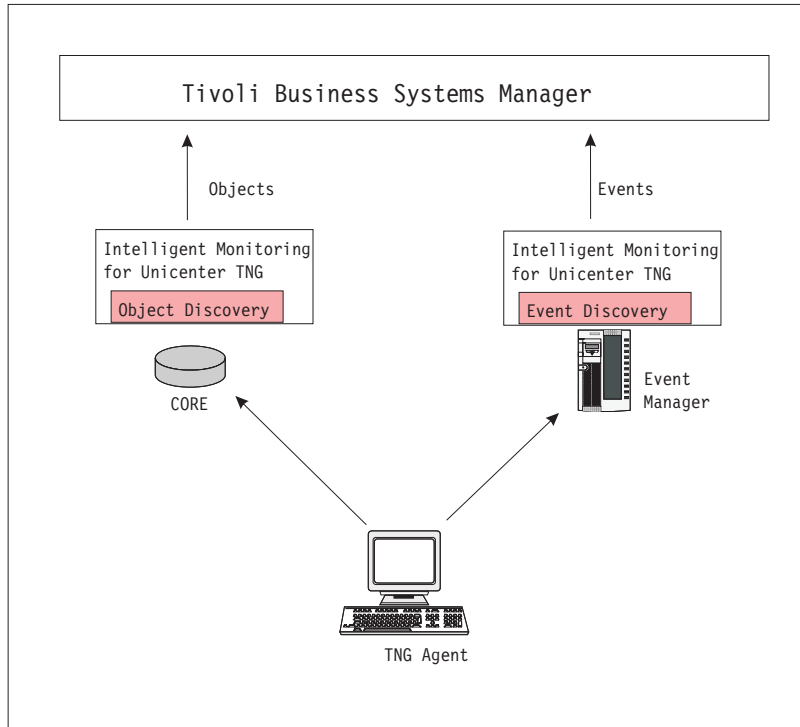


Figure 1. Data transfer from Unicenter TNG to Tivoli Business Systems Manager



# 2

## Installing Intelligent Monitoring

---

This chapter provides you with the instructions necessary to install Intelligent Monitoring on your system.

Intelligent Monitoring consists of two components, which have to be installed separately:

- Object discovery, which you install on Unicenter TNG CORE
- Event discovery, which you install on Unicenter TNG Event Managers

Before you install Intelligent Monitoring, ensure that you have satisfied the software and hardware requirements listed below.

### Software Requirements

To use Intelligent Monitoring, you must have the following software installed and running:

- Windows NT 4.0 Service Pack 6, or higher.
- Unicenter TNG Version 2.2.
- IBM JRE 1.3.
- Tivoli Business Systems Manager Version 1.5, with a database version that supports TNG extension.
- Tivoli Business Systems Manager Common Listener.

- All software required as a prerequisite of Unicenter TNG, because this product is installed together with Unicenter TNG.
- The most recent system DLLs. If your DLLs are not updated, download the file **vc redistrib.exe** from the following Web site:  
**<http://www.msdn.microsoft.com/default.asp>**.

## Hardware Requirements

The minimum hardware requirements for Intelligent Monitoring are listed in the following table.

| Hardware   | Minimum Required                |
|------------|---------------------------------|
| Disk space | 5 MB                            |
| RAM        | 96 MB                           |
| Processor  | Pentium <sup>®</sup> II 300 MHz |

## Related Documents

During the installation of Intelligent Monitoring, you might need to refer to the following books:

- *Tivoli Business Systems Manager Installation and Configuration Guide*
- *Tivoli Business Systems Manager User's Guide*
- *Tivoli Business Systems Manager Distributed Overview*
- *Unicenter TNG Administrator Guide*
- *CA Reference Guide*

## Installation Procedure

To install Intelligent Monitoring, perform the following procedure:

1. Download the **IMfTNG.tar** file, from the following Web site:  
**<http://www.tivoli.com/patches>** (or  
**[ftp://ftp.tivoli.com/support/patches/patches\\_3.7/patch\\_version/patchname](ftp://ftp.tivoli.com/support/patches/patches_3.7/patch_version/patchname)**).

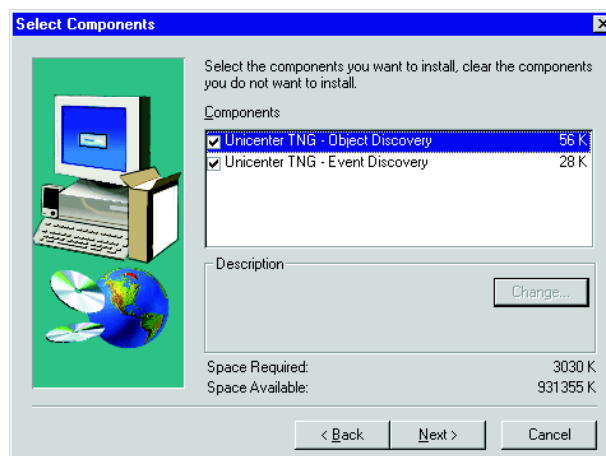
2. Expand the TAR file in a temporary directory, like **C:\Tempinstall**.
3. Open the temporary directory and double click the **Setup.exe** file. The Welcome dialog opens.



4. Click **Next**. The Choose Destination Location dialog opens.



5. If you do not want to install the product in the default folder, browse to a destination directory.
6. Click **Next**. The Select Components dialog opens.



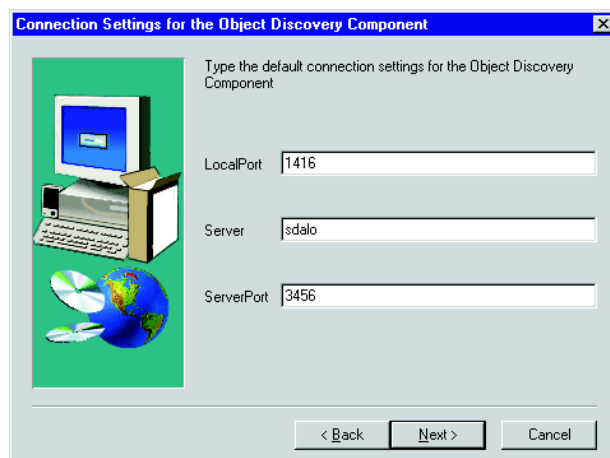
7. Select the components you want to install, and click **Next**.

**Note:** You must install the Event Discovery component on each Event Manager from where you want to collect TNG events for transmission to the Tivoli Business Systems Manager.

The Connection Settings dialog opens, specifying the name of the component you are installing.

8. Type the following information and click **Next**:

|                    |   |
|--------------------|---|
| <b>Local Port</b>  | The workstation port number used by Intelligent Monitoring to communicate with Common Listener.   |
| <b>Server</b>      | The IP address of the server where Common Listener is installed.  |
| <b>Server Port</b> | A port of the server where Common Listener is installed. This must be the same port that Common Listener uses to receive data from Intelligent Monitoring. For more information about Common Listener, refer to the documentation provided with it. |



**Note:** If you are installing both the components, perform step 8 for the each of them.

9. Restart the computer, when required

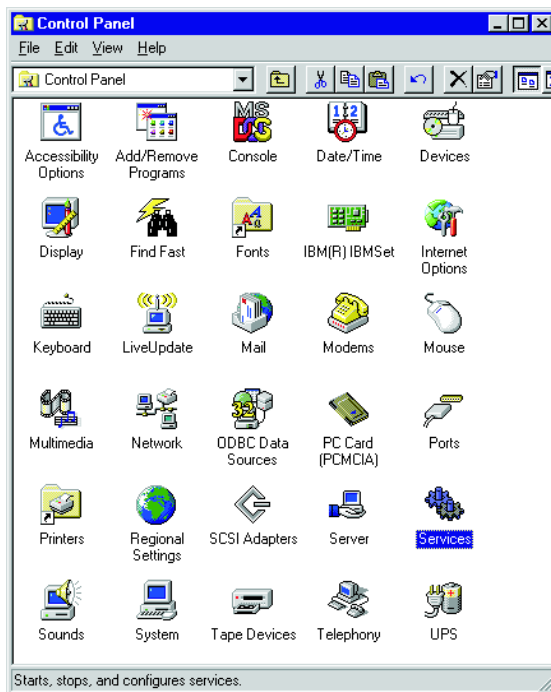
You have now successfully installed Intelligent Monitoring.

If you want to change any of the settings specified during the installation, or you need to customize other setup values, see Appendix B “Command Reference” on page 31 for more information.

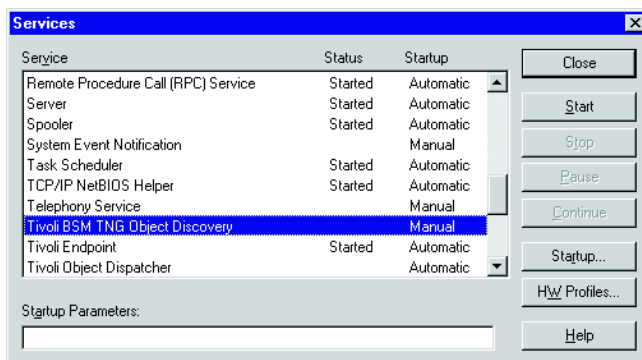
## Configuring the Delta Object Discovery

After installing the product, but before starting the delta object discovery for the first time, you have to perform the following procedure:

1. From the Windows tool bar, select **Start** —> **Settings** —> **Control Panel**. The Control Panel window opens.

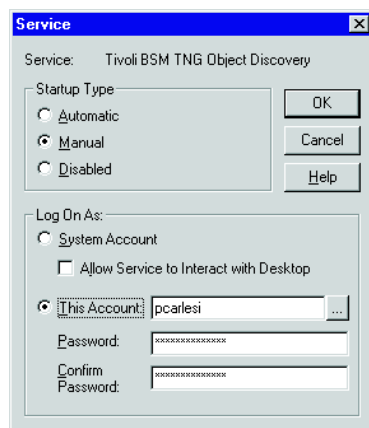


2. Double click the **Services** icon. The Services panel opens.



3. From the **Service** list, select **Tivoli BSM TNG Object Discovery** and click **Startup**.

The Service dialog opens.



4. In the **Startup Type** group, leave the default option selected.
5. In the **Log On As** group, select **This Account** option.
6. In **This Account** text box enter the account name of a system administrator.
7. In the **Password** text box enter the password of the system administrator.
8. In the **Confirm Password** text box enter the password again.
9. Click **OK** to save the settings and close the dialog.





# 3

## Using Object Discovery

---

This chapter describes the use of Intelligent Monitoring object discovery and the options you can specify to obtain the required results.

Object discovery consists of two processes:

- Bulk discovery
- Delta discovery

**Note:** Object discovery collects data about TNG instances of the classes listed in Appendix A, “Mapping Unicenter TNG Data” on page 23.

### Bulk Discovery

First, you run bulk discovery to populate Tivoli Business Systems Manager database with data concerning objects and object status as they are defined in Unicenter TNG CORE.

To start bulk discovery, launch the following command from the command prompt:

```
wimtdiscovery
```

You can add some options to this command to specify more details in the bulk discovery process. For more information on the use of the bulk discovery command, see Appendix B, “wimtdiscovery” on page 32.

---

**Note:** When starting the bulk discovery process, ensure that the delta discovery service is not active. The two functions are mutually exclusive.

## Bulk Discovery Options

You can perform bulk discovery in different ways, depending on the options you specify. The options you can specify are as follows:

### Performance Saving

Use this option if you want to specify a degree of performance saving, as follows:

- Maximum
- Normal
- Minimum

For example, if you need to use the system for other activities while performing the bulk discovery, specify *maximum* performance saving. The bulk discovery process then takes a relatively long time, but avoids increasing system overhead and reducing performance. If you do not need to use the system for other activities, specify *minimum* performance saving. The discovery process is then relatively fast, but system performance can be reduced. For more information on the use of this option, see Appendix B, “Command Reference” on page 31.

### Logging Mode

Specify this option if you want the collected data to be logged in a file. Then you can transfer the file manually onto Tivoli Business Systems Manager in a format understandable by Common Listener. Use this option if you want to avoid increasing network traffic while performing the bulk discovery. Using this option, you can also specify the file where you want to log collected data. For more information on the use of this option, see Appendix B, “Command Reference” on page 31.

## Delta Discovery

Delta discovery maintains Tivoli Business Systems Manager database consistent with Unicenter TNG CORE. This service periodically queries Unicenter TNG CORE to check if any existing objects have been deleted or modified, new objects added, or if any objects have changed their status. If the service finds that some changes have taken place in Unicenter TNG CORE, it reflects those changes in Tivoli Business Systems Manager database.

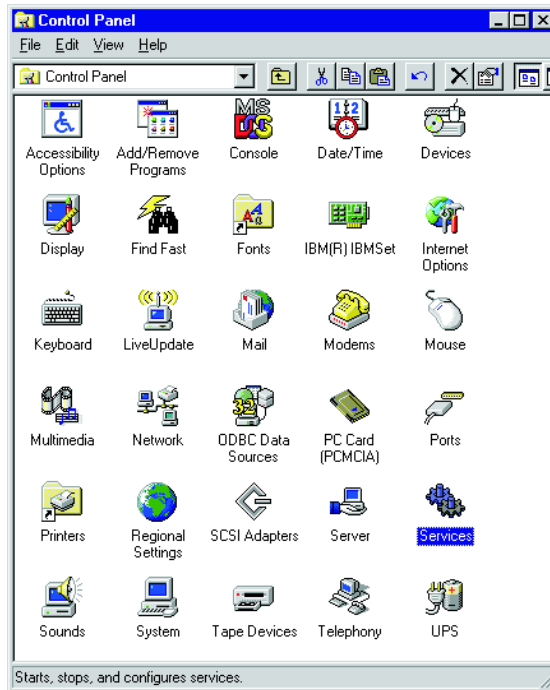
When you install Intelligent Monitoring on your system, the delta discovery service is added to the Windows Services.

The delta discovery process refreshes the objects and object status in Tivoli Business Systems Manager database on a timely basis. The time interval between two successive delta discoveries is set to 60 seconds by default. However, you can customize it using the corresponding command from the command prompt. For more information about setup customizing commands, see Appendix B, “wimtsetup” on page 35.

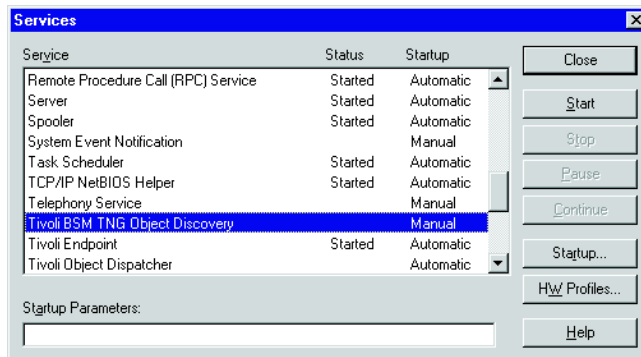
### Starting the Delta Discovery Service

To start the delta discovery service, perform the following procedure:

1. From Windows tool bar, select **Start** —> **Settings** —> **Control Panel**. The Control Panel window opens.



2. Double click the **Services** icon. The Services panel opens.



3. From the **Service** list, select **Tivoli BSM TNG Object Discovery** and click **Start**.

**Note:** Delta discovery must be always active when Unicenter TNG is operating. The service does not keep track of object changes that take place when the delta discovery is not active. For example, if some objects are added when the delta discovery service is not running, you do not see those objects on the Tivoli Business Systems Manager side when you start the service again.



# 4

## Using Event Discovery

---

This chapter describes the use of Intelligent Monitoring event discovery. Event discovery collects the events from Unicenter TNG Event Managers and transmits them to Tivoli Business Systems Manager.

### Event Discovery

Event discovery collects events from each Event Manager on which it is installed. Then, it forwards to Tivoli Business Systems Manager the event related information, such as message severity and message text. The message severity indicates the error level of the event, while the message text specifies the node on which the event is generated, the user that originates it, and the actual text that describes the event.

On Tivoli Business Systems Manager side, each event is associated to the object that represents the Event Manager that has logged it.

On a timely basis, the event discovery process refreshes the events in Tivoli Business Systems Manager database. The time interval that elapses between two successive event discoveries is set to 60 seconds by default. However, you can customize it using the corresponding command from the command prompt. For more information about setup customizing commands, see Appendix B, “wimtsetup” on page 35.

---

## Event Discovery Options

You can perform event discovery in different ways, depending on the options you specify. The options you can specify are as follows:

**Start Mode** Use this option if you want to specify the starting point for the event discovery. The start mode can be specified as follows:

- Cold
- Warm

When you specify a *cold* start mode, the service resets the event list in Tivoli Business Systems Manager database, deleting all previous events, and routing to the database only new events logged after the service had started. When you specify a *warm* start mode, the service collects and add to the database all the events that have been logged since the service last stopped, recovering also the events logged when the service was not active. For more information on the use of this option, see Appendix B, “wimtsetup” on page 35.

### Message Filtering

Use this option if you want to specify filtering criteria for event discovery. You can choose between the following options:

- Active-only
- Daily

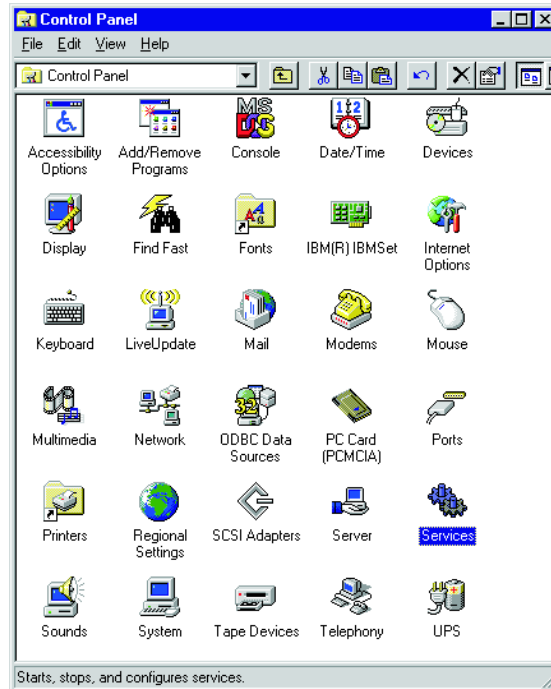
Specify *active-only* filtering if you want the service to collect only Unicenter TNG messages associated with either the action of SENDKEEP or WAITOPER and that have not yet been deleted by Unicenter TNG. Specify a *daily* filtering if you want the service to collect all Unicenter TNG messages logged during the current day. For more information on the use of this option, see Appendix B, “wimtsetup” on page 35.



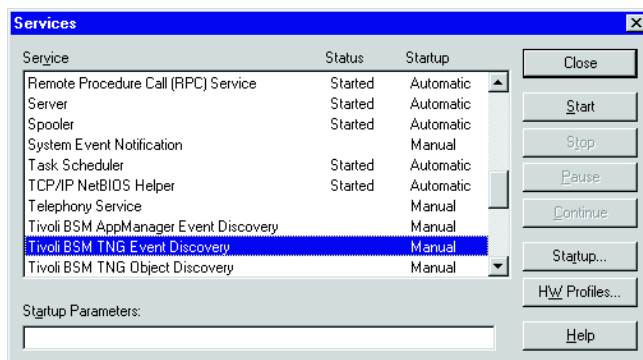
## Starting Event Discovery

To start the event discovery service, perform the following procedure:

1. From the Windows tool bar, select **Start** —> **Settings** —> **Control Panel**. The Control Panel window opens.



2. Double click the **Services** icon. The Services panel opens.

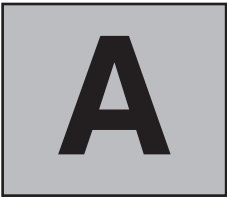


3. From the **Service** list, select **Tivoli BSM TNG Event Discovery** and click **Start**.

## Viewing Event Information

Intelligent Monitoring maps TNG events into Tivoli Business Systems Manager database, and associates them with the icon of the Event Manager that logged them.

Double-click that icon to display event information. This is the same information you would view from TNG Event Console, for the same event.



# Mapping Unicenter TNG Data

---

This appendix provides information on TNG classes whose instances are replicated within Tivoli Business Systems Manager database. Also, it explains how TNG object status and event severity levels are mapped in Tivoli Business Systems Manager database.

## Unicenter TNG Classes

The following table illustrates how Unicenter TNG classes and instances are mapped in Tivoli Business Systems Manager database.

Only TNG objects that are instances of any of the following classes are discovered and replicated within Tivoli Business Systems Manager database.

The first column of the following table lists TNG-supported classes. The second column describes how each class is mapped in Tivoli Business Systems Manager database.

| Unicenter TNG Classes               | Tivoli Business Systems Manager Classes |
|-------------------------------------|---|
| IP_Network                          | IPNetwork                               |
| Location, Building, Cities, Country | NetworkLocation                         |

| Unicenter TNG Classes   | Tivoli Business Systems Manager Classes   |
|---|---|
| <b>Subnet</b><br>Subclasses:<br>IP_Subnet,  | <b>NetworkSubnet</b><br><br><b>NetworkSubnet</b> with <b>Type</b> attribute set according to the subnet type.<br><br><b>Example:</b><br>NetworkSubnet Type IP_Subnet  |
| <b>Segment</b><br>Subclasses:<br>LANBus,<br>LanFDDI, LANRing  | <b>NetworkSegment</b><br><br><b>NetworkSegment</b> with <b>Type</b> attribute set according to the segment type.<br><br><b>Example:</b><br>NetworkSegment Type LANBus |
| <b>Node</b>   | <b>NetworkNode</b>  |
| <b>Workstation</b><br>Subclasses:<br>Asante, CmuTek, DECSysm, GenericPC, ICSSNMP, InterActive, Macintosh, ManagedPC, Windows95_ManagedPC, WindowsNT_ManagedPC, NetGeneral, NetSNMP, NGSniffer, OS2, PCNIU, Samsung, SCOUNix, SunOS, UBNIU, Windows, Windows95, WindowsNT, Xterm | <b>Computer</b><br><br><b>Computer</b> with <b>Type</b> attribute set according to the workstation type.<br><br><b>Example:</b><br>Computer Type Asante               |
| <b>NCD17c, NCR_Xterm, SUN</b>   | <b>Computer</b> Type = Xterm<br><br>with <b>Type</b> attribute set according to the Xterm subtype.<br><br><b>Example:</b><br>Computer Type Xterm Subtype NCD17c       |

| Unicenter TNG Classes  | Tivoli Business Systems Manager Classes  |
|--|--|
| <b>Host</b><br>Subclasses:<br>AS400, Bull, DG_UX,<br>FUJIUxp, HPSEServer,<br>HPUnix, IBM3090,<br>ICLUnix, Linux,<br>Multi_Protocol_Host, MVS,<br>NCRUnix, Novell,<br>RISC6000, Sequent_Server,<br>SiemenUX, Silicon, Solaris,<br>Tandem, Unisys, UnixWare,<br>WindowsNT_Server | <b>Computer</b><br><br><b>Computer</b> with <b>Type</b> attribute set according to the host type.<br><br><b>Example:</b><br>Computer Type AS400                      |
| <b>OperatingSystem</b>   | <b>OperatingSystem</b>   |
| <b>Router</b><br>Subclasses:<br>_3COM, CISCO,<br>DECRouter,<br>MultiNet, Wellfleet   | <b>NetworkRouter</b><br><br><b>NetworkRouter</b> with <b>Type</b> attribute set according to the router type.<br><br><b>Example:</b><br>NetworkRouter Type _3COM     |
| <b>Hub</b><br>Subclasses:<br>AccessStax, Cabletron,<br>Chipcom, DECHub,<br>ETSMIM, GatorStar,<br>HPHub, IRM2SNMP,<br>Micom, Multi_Port,<br>NetWorth, NovellHub,<br>SynOptics, Telebit,<br>UBEMPower,<br>VCP_1000, Vitalink   | <b>NetworkHub</b><br><br><b>NetworkHub</b> with <b>Type</b> attribute set according to the hub type.<br><br><b>Example:</b><br>NetworkHub Type AccessStax            |
| <b>Bridge</b><br>Subclasses:<br>DECBridge, HPBridge,<br>SynOptics_Bridge   | <b>NetworkBridge</b><br><br><b>NetworkBridge</b> with <b>Type</b> attribute set according to the bridge type.<br><br><b>Example:</b><br>NetworkBridge Type DECBridge |

| Unicenter TNG Classes   | Tivoli Business Systems Manager Classes  |
|---|--|
| <b>Switch</b><br>Subclasses:<br>_3COM_Swith,<br>CISCO_SWITCH,<br>SynOptics_Switch | <b>NetworkSwitch</b><br><br><b>NetworkSwitch</b> with <b>Type</b> attribute set according to the switch type.<br><br><b>Example:</b><br>NetworkSwitch Type _3COM   |
| <b>Interface</b><br>Subclasses:<br>IP_Interface, OverlapInterface                 | <b>NetworkInterface</b><br><br><b>NetworkInterface</b> with <b>Type</b> attribute set according to the interface type.<br><br><b>Example:</b><br>NetworkInterface Type IP_Interface  |
| <b>Probe</b><br>Subclasses:<br>LanProbe, NetScout,<br>Novell_Probe, RMON_Probe    | <b>NetworkDevice Type = Probe</b><br><br><b>NetworkDevice</b> with <b>Type</b> attribute set to <b>Probe</b> and Secondary Type set according to the probe type.<br><br><b>Example:</b><br>NetworkDevice Type Probe SecondaryType LanProbe |

| Unicenter TNG Classes  | Tivoli Business Systems Manager Classes  |
|--|--|
| <b>OtherDevices</b><br>_3COM_Device<br>ATT_Device<br>Banyan_Device<br>CA_Device<br>Hitachi_Device<br>IBM_Device<br>Intel_Device<br>Intergraph_Device<br>LANManager_Device<br>NCD_Device<br>NEC_Device<br>Novell_Device<br>Oracle_Device<br>SUN_Device<br>SynOptics_Device<br>Tandem_Device<br>Tektronix_Device<br>UB_Device<br>Vitalink_Device<br>Xerox_Device<br>Xylogics_Device<br>Xyplex_Device | <b>NetworkDevice</b><br><br><b>NetworkDevice</b> with <b>Manufacturer</b> attribute set according to the device type.<br><br><b>Example:</b><br>NetworkDevice Manufacturer _3COM   |
| <b>Printers</b><br>HP_Printer<br>LaserPrinter  | <b>NetworkPrinter</b><br><br><b>NetworkPrinter</b> with <b>Manufacturer</b> attribute set according to the printer type.<br><br><b>Example:</b><br>NetworkPrinter Manufacturer HP  |
| <b>Devices</b>   | <b>Component</b><br><br><b>Component</b> with <b>Type</b> attribute set according to the device type and <b>SubType</b> attribute set according to the device subclass.<br><br><b>Example:</b><br>Component Type Disk SubType Diskette_350 |

| Unicenter TNG Classes  | Tivoli Business Systems Manager Classes  |
|--|--|
| <b>Device_Disk</b><br>Device_Disk_350Diskette<br>Device_Disk_525Diskette<br>Device_Disk_IDE<br>Device_Disk_SCSI                        | <b>Component</b><br><br><b>Component</b> with <b>Type</b> attribute set to <b>Disk</b> and <b>SubType</b> attribute set according to the disk type.<br><br><b>Example:</b><br>Component Type Disk SubType Diskette_350 |
| <b>Device_Optical</b><br>Device_Optical_CDR<br>Device_Optical_CDROM<br>Device_Optical_Floptical<br>Device_Optical_WORM                 | <b>Component</b><br><br><b>Component</b> with <b>Type</b> attribute set to <b>Optical</b> and <b>SubType</b> attribute set according to the optical type.<br><br><b>Example:</b><br>Component Type Optical SubType CDR |
| <b>Device_Tape</b><br>Device_Tape_4MM<br>Device_Tape_8MM<br>Device_Tape_CART<br>Device_Tape_DAT<br>Device_Tape_QIC<br>Device_Tape_REEL | <b>Component</b><br><br><b>Component</b> with <b>Type</b> attribute set to <b>Tape</b> and <b>SubType</b> attribute set according to the tape type.<br><br><b>Example:</b><br>Component Type Tape SubType Tape_4MM     |
| <b>CPU_Complex</b>   | <b>Component</b><br><br><b>Component</b> with <b>Type</b> attribute set to <b>Processor</b> .<br><br><b>Example:</b><br>Component Type Processor   |
| <b>CPU</b><br>Aggregate_CPU,<br>Intel_PSN  | <b>Component</b><br><br><b>Component</b> with <b>Type</b> attribute set to <b>CPU</b> and <b>SubType</b> attribute set according to the CPU type.<br><br><b>Example:</b><br>Component Type CPU SubType Aggregate_CPU   |
| <b>Memory_banks</b>  | <b>Component</b><br><br><b>Component</b> with <b>Type</b> attribute set to <b>Memory_banks</b> .<br><br><b>Example:</b><br>Component Type Memory_banks   |
| <b>Application, Agent</b>  | <b>SoftwareElement</b>   |



**Note:** The **Aggregate** object, in Tivoli Business Systems Manager database contains all Unicenter TNG instances that cannot be linked to other existing objects in Tivoli Business Systems Manager database.

## Mapping Object Status and Event Severity

The values used by Tivoli Business Systems Manager to define the status of an object and the severity of an event are the following:

- Alert State

- Priority

**Alert State** Defines the degree of severity of an object status or an event, where the higher the value, the more serious the status or event. Values from 1 to 3, inclusive.

**Priority** Defines the urgency of action required, where the higher the value, the less urgent the action. Values from 1 to 5, inclusive.

### Object Status

The following table describes how Unicenter TNG object status is mapped in Tivoli Business Systems Manager database.

The first column of the table lists the status definitions provided by Unicenter TNG. On Tivoli Business Systems Manager side, each status definition is represented by the values listed in the two other columns of the tables.

| Object Status | Alert State | Priority |
|---------------|-------------|----------|
| unknown       | 2           | 5        |
| normal        | 1           | 5        |
| minor         | 2           | 4        |
| major         | 2           | 2        |
| warning       | 2           | 3        |
| critical      | 3           | 2        |

---

| Object Status | Alert State | Priority |
|---------------|-------------|----------|
| in service    | 1           | 4        |
| down          | 3           | 1        |
| remove        | 2           | 5        |
| future        | 2           | 5        |

## Event Severity

The following table describes how Unicenter TNG event severity is mapped in Tivoli Business Systems Manager database.

The first column of the table lists the severity levels provided by Unicenter TNG. On Tivoli Business Systems Manager side, each severity level is represented by the values listed in the two other columns of the tables.

| Event Status      | Alert State | Priority |
|-------------------|-------------|----------|
| Error (E)         | 3           | 2        |
| Failure (F)       | 3           | 1        |
| Informational (I) | 1           | 4        |
| Success (S)       | 1           | 5        |
| Unknown (U)       | 2           | 5        |
| Warning (W)       | 2           | 3        |



## Command Reference

---

This appendix describes the Intelligent Monitoring commands, which you can issue from the command prompt, and explains how to use them.

The Intelligent Monitoring commands and the functions you can perform with them, are given in the following table:

| Command              | Function   |
|----------------------|--|
| <b>wimtdiscovery</b> | Starts the object bulk discovery function. Also, it enables you to perform more specific object discoveries. |
| <b>wimtraceset</b>   | Sets the trace options of Intelligent Monitoring to specified values.  |
| <b>wimtsetup</b>     | Configures the integration between Intelligent Monitoring and Tivoli Business Systems Manager                |

# wimtdiscovery

Starts the object discovery function.

## Syntax

The usage of this command is the following:

```
wimtdiscovery [-ps (maximum | normal | minimum)]
[-log [-lf <logfile>]] [-verbose]
```

```
wimtdiscovery -c <classname> [-ps (maximum | normal | minimum)]
[-log [-lf <logfile>]] [-verbose]
```

```
wimtdiscovery -id <instanceId> [-log [-lf <logfile>]]
[-verbose]
```

```
wimtdiscovery -h
```

## Options

**-ps** Use this option if you want to specify the degree of performance saving required, which you specify with one of the following mutually exclusive attributes. If you do not specify any of the following attributes, the default value is **normal**.

- |                |   |
|----------------|---|
| <b>maximum</b> | The discovery process takes a relatively long time, but avoids increasing system overhead and reducing performance. |
| <b>normal</b>  | The discovery process takes an average time, performing an average performance saving.                              |
| <b>minimum</b> | The discovery process is relatively fast, but system performance can be reduced.                                    |

**-log [-lf <logfile>]**

The collected data is logged in a file, instead of being transmitted directly to Tivoli Business Systems Manager. Data is logged in a special format that can be understood by Common Listener. If you do not specify a log file name, data is logged in a file

called **TNGInstanceLst\_LoggingModeFile.log** and located in the product directory. If you specify the file name, you can also specify an absolute path. If you do not specify a path, the log file is created in the directory where the command is located.

**-c** *<classname>*

The discovery process replicates only the instances of a specific TNG class. When you specify the class name, you have to enter the exact name displayed by TNG Class Browser.

**-id** *<instanceId>*

The discovery process replicates only a specific TNG object. When you specify the instance ID, you have to enter the exact uuid that you get from TNG Object Browser.

**-verbose**

The discovery process details are displayed on the screen while the process is running.

**-h**

The usage of the discovery command is displayed.

## Authorization

Ensure you have Administrator privileges before you launch this command.

## Examples

- The following command starts the discovery of the instances of the **IPNetwork** class. The performance saving degree of the process is **minimum**, and the collected data is logged in a file called **mylogfile**.  
wimtdiscovery -c IPNetwork -ps minimum -log -lf mylogfile
- The following command starts the discovery of a single instance.  
wimtdiscovery -id 25CC06D2-0C33-11D2-89F3-0001FAF8A7C9

---

## wimtraceset

This command sets the trace options.

### Syntax

The usage of this command is the following:

```
wimtraceset <tracelevel> <maxsize>
```

### Description

This command sets the trace level to the value entered for *level*. The value for *level* can be one of the following:

- |          |   |
|----------|---|
| <b>0</b> | Only errors are stored in the log file. This is the default value. For performance reasons, Tivoli recommends that you do not change this value unless you are experiencing problems that you want to report to Customer Support. |
| <b>1</b> | Only warnings and errors are stored in the log file.  |
| <b>2</b> | All steps of the monitoring process are stored in the log file.   |
| <b>3</b> | Verbose mode: all operations performed during monitoring are stored in the log file.  |

The output from the trace is saved in the log file. The maximum size of the file is defined by the *size* parameter. The size of the file must be defined in bytes.

### Examples

- The trace file logs only errors and its maximum size is around **1 MB**.

```
wimtraceset 0 1000000
```

## wimtsetup

Configures the integration with Tivoli Business Systems Manager.

### Syntax

The usage of this command for object discovery is the following:

```
wimtsetup -i [-log (on [-lf <Log File Name>] | off) ]
               [-reqport <Request Port Number>]
               [-resport <Response Port Number>]
               [-svrport <Server Port Number>]
               [-svraddress <Server Address>]
               [-lqs (file | memory)]
               [-rqs (file | memory)]
               [-refresh <Refresh Time>]
wimtsetup -h
```

The usage of this command for event discovery is the following:

```
wimtsetup -e [-log (on [-lf <Log File Name>] | off) ]
               [-reqport <Request Port Number>]
               [-resport <Response Port Number>]
               [-svrport <Server Port Number>]
               [-svraddress <Server Address>]
               [-lqs (file | memory)]
               [-rqs (file | memory)]
               [-refresh <Refresh Time>]
               [-startmode (cold | warm)]
               [-msgfilter (a | d)]
wimtsetup -h
```

### Description

This command configures the integration with Tivoli Business Systems Manager. You can use this command to customize the settings you have specified during the installation procedure and some general integration settings. To display the current values of the variables that can be set with this command, launch

```
wimtsetup (-i | -e)
```

The following is an example of the output:

|                      |                                 |
|----------------------|---------------------------------|
| Logging Mode         | true                            |
| Log File Name        | TNGEventLst_LoggingModeFile.log |
| Request Port Number  | 9898                            |
| Response Port Number | 9898                            |
| Server Port Number   | 8082                            |

---

|                    |        |
|--------------------|--------|
| Server Address     | server |
| Local Queue Store  | memory |
| Remote Queue Store | file   |
| Refresh Time       | 60     |

## Options

- i** This option is mandatory if you are customizing the object settings.
- e** This option is mandatory if you are customizing the event settings.
- log on** The collected data is logged in a file, instead of being transmitted directly to Tivoli Business Systems Manager. Data is logged in a special format that can be understood by Common Listener. If you do not specify a log file name, data is logged in a file called **TNGInstanceLst\_LoggingModeFile.log** and located in the product directory. If you specify the file name, you can also specify an absolute path. If you do not specify a path, the log file is created in the directory where the command is located
- log off** The collected data is not logged in any file. It is directly transmitted to Tivoli Business Systems Manager.
- lf <logfile name>**  
This option is valid only if log option is set to on. Here you specify the file name where you want to log your data. You can also specify an absolute path. If you do not specify any path, the log file is created in the directory where the command is located.
- reqport <Request Port Number>**  
This is the workstation port number that is used by Intelligent Monitoring to receive data requests from Common Listener.
- resport <Response Port Number>**  
This is the workstation port number used by Intelligent Monitoring to receive responses by Common Listener. It can be the same port specified



in the **report** option, if you use the same port to receive requests and responses.

**-svrport** <Server Port Number>

This is a port of the server where Common Listener is installed. It must be the same port that Common Listener uses to receive data from Intelligent Monitoring.

**-svraddress** <Server Address>

This is the IP address of the server where Common Listener is installed.

**-lqs (memory | file)**

This option enables you to choose where to store the incoming queued data. If you do not specify this option, the default value is **file**.

**memory** Incoming data is kept in memory. The process is relatively fast, but if the application fails, you lose the data.

**file** Incoming data is kept in a file. The process is relatively slow, but if the application fails, you can still retrieve the data.

**-rqs (memory | file)**

This option enables you to choose where to store the outgoing queued data. If you do not specify this option, the default value is **file**.

**memory** Outgoing data is kept in memory. The process is relatively fast, but if the application fails, you lose the data.

**file** Outgoing data is kept in a file. The process is relatively slow, but if the application fails, you can still retrieve the data.

**-refresh** <Refresh time>

This is the time interval you want to elapse between two successive discoveries. It is expressed in seconds. The default value is **60**.

**-startmode** (cold | warm)

This option specifies the starting point for the event discovery process. If you do not specify this option, the default value is **warm**.

**cold**                The service collects only the events that are logged after the service had started and deletes all previous events from the event list in Tivoli Business Systems Manager database.

**warm**                The service adds to the database all the events that have been logged since the service last stopped, recovering also the events logged when the service was not active.

**-msgfilter** (a | d)

This option applies filtering criteria to event discovery process. If you do not specify this option, the default value is **d**.

**a**                    The service collects TNG *active-only* events that specify a user action of either SENDKEEP or WAITOPER.

**d**                    The service collects all Unicenter TNG events that have been logged during the current day.

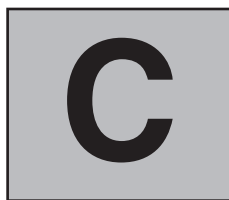
## Examples

- The following command modifies the object setting default values. The collected data is logged in a file named **myFile.log**, the server port number is **8082**, and IP address is **tbsmsserver.rome.tivoli.com**.

```
wimtsetup -i -log on myFile.log -svrport 8082 -svraddress
tbsmsserver.rome.tivoli.com
```

- The following command modifies the event setting default values. Incoming and outgoing queued data is stored in **memory**. Refresh time is set to **40** seconds. Event discovery starts in **cold** mode and collects only TNG **active-only** events.  
`wimtsetup -e -lqs memory -rqs memory -refresh 40 -startmode cold -msgfilter a`





## Error Messages

---

This appendix explains the messages that can be issued by a workstation Intelligent Monitoring is running on.

Messages are listed in ascending numeric order.

### Identifying a Message

Messages are of different type but are all identified in the same way. The following example shows a typical message and explains its identifying components.

| Identity | Message                                  |
|----------|--|
| IMT0001E | Discovery process initialization failed. |

**IMT** This prefix identifies the message as belonging to Intelligent Monitoring for Unicenter TNG.

**0005** The unique serial number of the message.

**E** Is the type of message and can be:

**I** **Information messages** provide feedback about something that has happened in the product or system that may be important. These messages also give guidance when you are requesting a specific action from the product.

**W** **Warning messages** call your attention to an

exception condition that is not necessarily an error but may cause problems if not attended to.

- E**     **Error messages** indicate that an action cannot be completed because of a user or system error. These error messages always require user response.

## Notation

Some messages, especially information and warning messages, are multi-purpose. The same basic text can contain different strings such as different command names or application names, according to the way the application was behaving when the message was generated. These messages are shown in the following sections with the string identity displayed in italics at the appropriate part of the message.

---

## Messages

The following messages can be displayed.

---

|                 |  |
|-----------------|--|
| <b>IMT0001E</b> | <b>Discovery process initialization failed.</b><br><br><b>Explanation:</b> Object discovery process could not start because the communication with Common Listener or with Unicenter TNG could not be established.<br><br><b>User Response:</b> Ensure that SQL Server® is active, and that all port numbers have been set correctly, then launch the process again.   |
| <b>IMT0002E</b> | <b>Unable to get an instance with the ID &lt;instanceId&gt;</b><br><br><b>Explanation:</b> Object discovery process was unable to get the instance from Unicenter TNG.<br><br><b>User Response:</b> Ensure that Unicenter TNG can be accessed, and that SQL Server is active. Use the<br><code>wimtdiscovery -id &lt;instanceId&gt;</code><br><br>command to discover the required instance.                       |
| <b>IMT0003E</b> | <b>Unable to send an instance request with the instance ID &lt;instanceId&gt;</b><br><br><b>Explanation:</b> Object discovery process was unable to send the instance request to Common Listener.<br><br><b>User Response:</b> Ensure that the communication with Common Listener is set correctly. Use the<br><code>wimtdiscovery -id &lt;instanceId&gt;</code><br><br>command to discover the required instance. |
| <b>IMT0004E</b> | <b>Discovery process failed.</b><br><br><b>Explanation:</b> Object discovery process could not be completed successfully.<br><br><b>User Response:</b> Ensure that you have enough system memory, that all port numbers have been set correctly, and that the SQL Server is active.  |

---







## Known Limitations and Workarounds

---

This section describes known defects of Intelligent Monitoring. Where applicable and known, suggested workarounds are identified. Note that this may not be a complete list of defects.

Current defects, limitations and workarounds for Intelligent Monitoring include:

1. Delta discovery must be always active when Unicenter TNG is operating. The service does not keep track of object changes that take place when the delta discovery is not active. If this happens and you realize that in Tivoli Business Systems Manager database one or more specific objects are not updated, you can launch a specific discovery specifying the IDs of the required objects. For more information on this command, see “wimtdiscovery” on page 32.
2. Event discovery forwards to Tivoli Business Systems Manager event related message texts provided by Unicenter TNG. In Tivoli Business Systems Manager database message texts have a maximum length of 128 characters. If the original message text is longer than this, Intelligent Monitoring truncates it.



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