IBM Tivoli Composite Application Manager Agent for Lotus Domino 6.2.1 Fix Pack 2

# Installation and Configuration Guide



IBM Tivoli Composite Application Manager Agent for Lotus Domino 6.2.1 Fix Pack 2

# Installation and Configuration Guide



| Note ——<br>fore using | this information | n and the produ | ıct it supports | , read the info | rmation in "N | Notices" on pa | ige 19. |  |
|-----------------------|------------------|-----------------|-----------------|-----------------|---------------|----------------|---------|--|
|                       |                  |                 |                 |                 |               |                |         |  |
|                       |                  |                 |                 |                 |               |                |         |  |
|                       |                  |                 |                 |                 |               |                |         |  |
|                       |                  |                 |                 |                 |               |                |         |  |
|                       |                  |                 |                 |                 |               |                |         |  |
|                       |                  |                 |                 |                 |               |                |         |  |
|                       |                  |                 |                 |                 |               |                |         |  |
|                       |                  |                 |                 |                 |               |                |         |  |
|                       |                  |                 |                 |                 |               |                |         |  |
|                       |                  |                 |                 |                 |               |                |         |  |
|                       |                  |                 |                 |                 |               |                |         |  |
|                       |                  |                 |                 |                 |               |                |         |  |
|                       |                  |                 |                 |                 |               |                |         |  |
|                       |                  |                 |                 |                 |               |                |         |  |
|                       |                  |                 |                 |                 |               |                |         |  |
|                       |                  |                 |                 |                 |               |                |         |  |
|                       |                  |                 |                 |                 |               |                |         |  |
|                       |                  |                 |                 |                 |               |                |         |  |
|                       |                  |                 |                 |                 |               |                |         |  |
|                       |                  |                 |                 |                 |               |                |         |  |
|                       |                  |                 |                 |                 |               |                |         |  |
|                       |                  |                 |                 |                 |               |                |         |  |
|                       |                  |                 |                 |                 |               |                |         |  |
|                       |                  |                 |                 |                 |               |                |         |  |
|                       |                  |                 |                 |                 |               |                |         |  |
|                       |                  |                 |                 |                 |               |                |         |  |
|                       |                  |                 |                 |                 |               |                |         |  |
|                       |                  |                 |                 |                 |               |                |         |  |
|                       |                  |                 |                 |                 |               |                |         |  |
|                       |                  |                 |                 |                 |               |                |         |  |
|                       |                  |                 |                 |                 |               |                |         |  |
|                       |                  |                 |                 |                 |               |                |         |  |
|                       |                  |                 |                 |                 |               |                |         |  |
|                       |                  |                 |                 |                 |               |                |         |  |

© Copyright IBM Corporation 2010, 2016. US Government Users Restricted Rights – Use, duplication or disclosure restricted by GSA ADP Schedule Contract with IBM Corp.

## **Contents**

| Chapter 1. Overview of the agent 1                 | Configuring by using the Tivoli Enterprise Portal |
|--|---|
| IBM Tivoli Monitoring                              | Windows configuration notes                       |
| Functions of the monitoring agent                  | UNIX and Linux configuration notes 12             |
| New in this release                                | Configuration values                              |
| Components of the IBM Tivoli Monitoring            | Remote monitoring configuration                   |
| environment  | Remote installation and configuration 15          |
| User interface options                             |   |
| •  | Appendix. ITCAM for Applications                  |
| Chapter 2. Agent installation and                  | documentation library                             |
| configuration 5                                    | Prerequisite publications                         |
| Requirements                                       | Related publications                              |
| Upgrades for the Lotus Domino agent 5              | Tivoli Monitoring Community on Service            |
| Language pack installation 5                       | Management Connect                                |
| Installing language packs on Windows systems 5     | Other sources of documentation                    |
| Installing language packs on UNIX or Linux         |   |
| systems 6  | Notices   |
| Silent installation of language packs on Windows,  | Trademarks  |
| UNIX, or Linux systems 7                           | Privacy policy considerations                     |
| Agent-specific installation and configuration 8    |   |
| Clearing the Domino Server password 9              | Index   |
| Checking the Access Control List of the database 9 |   |

## Chapter 1. Overview of the agent

The IBM® Tivoli® Composite Application Manager Agent for Lotus® Domino® (product code GB) provides you with the capability to monitor Lotus Domino.

IBM Tivoli Monitoring is the base software for the Lotus Domino agent.

## **IBM Tivoli Monitoring**

IBM Tivoli Monitoring provides a way to monitor the availability and performance of all the systems in your enterprise from one or several designated workstations. It also provides useful historical data that you can use to track trends and to troubleshoot system problems.

You can use IBM Tivoli Monitoring to achieve the following tasks:

- Monitor for alerts on the systems that you are managing by using predefined situations or custom situations.
- Establish your own performance thresholds.
- Trace the causes leading to an alert.
- Gather comprehensive data about system conditions.
- Use policies to take actions, schedule work, and automate manual tasks.

The Tivoli Enterprise Portal is the interface for IBM Tivoli Monitoring products. You can use the consolidated view of your environment as seen in the Tivoli Enterprise Portal to monitor and resolve performance issues throughout the enterprise.

See the IBM Tivoli Monitoring publications listed in "Prerequisite publications" on page 17 for complete information about IBM Tivoli Monitoring and the Tivoli Enterprise Portal.

## Functions of the monitoring agent

#### **Resource monitoring**

Collects monitoring information for Domino statistics, IntelliWatch statistics and events, and server status. You can monitor Domino servers remotely through the local Domino server. Servers in the same domain or cross-certified in a different domain can be remotely monitored. This includes the ability to remotely monitor Domino Servers on platforms not currently supported.

#### Availability monitoring

Provides availability information separately for the monitored Domino Servers. The agent pings the application to determine whether the Domino Server is available.

#### New in this release

For version 6.2.1.2 of the Lotus Domino agent, the following enhancements were made since version 6.2, including the fix packs:

- Provided a common installer for all operating systems that the agent supports.
- Added the self-describing agent capability to the Lotus Domino agent.

## Components of the IBM Tivoli Monitoring environment

After you install and set up the Lotus Domino agent, you have an environment that contains the client, server, and monitoring agent implementation for Tivoli Monitoring.

This Tivoli Monitoring environment contains the following components:

#### **Tivoli Enterprise Portal client**

The portal has a user interface based on Java<sup>™</sup> for viewing and monitoring your enterprise.

#### Tivoli Enterprise Portal Server

The portal server is placed between the client and the Tivoli Enterprise Monitoring Server and enables retrieval, manipulation, and analysis of data from the monitoring agents. The Tivoli Enterprise Portal Server is the central repository for all user data.

#### **Tivoli Enterprise Monitoring Server**

The monitoring server acts as a collection and control point for alerts received from the monitoring agents, and collects their performance and availability data. The Tivoli Enterprise Monitoring Server is also a repository for historical data.

#### Tivoli Enterprise Monitoring Agent, Lotus Domino agent

This monitoring agent collects data and distributes the data to the Tivoli Enterprise Monitoring Server, Tivoli Enterprise Portal Server, Tivoli Enterprise Portal, Tivoli Data Warehouse, and Tivoli Integrated Portal.

Multiple copies of this agent can run on the same system.

#### IBM Tivoli Netcool/OMNIbus

Tivoli Netcool/OMNIbus is an optional component and the recommended event management component. The Netcool/OMNIbus software is a service level management (SLM) system that delivers real-time, centralized monitoring of complex networks and IT domain events. Event information is tracked in a high-performance, in-memory database and presented to specific users through individually configurable filters and views. The software includes automation functions that you can use to perform intelligent processing on managed events. You can use this software to forward events for Tivoli Monitoring situations to Tivoli Netcool/OMNIbus.

#### **IBM Tivoli Enterprise Console**

The Tivoli Enterprise Console<sup>®</sup> is an optional component that acts as a central collection point for events from various sources, including events from other Tivoli software applications, Tivoli partner applications, custom applications, network management platforms, and relational database systems. You can view these events through the Tivoli Enterprise Portal (by using the event viewer), and you can forward events from Tivoli Monitoring situations to the Tivoli Enterprise Console component. If you do not already use Tivoli Enterprise Console and need an event management component, you can choose to use IBM Tivoli Netcool/OMNIbus.

## User interface options

Installation of the base IBM Tivoli Monitoring software and other integrated applications provides various interfaces that you can use to work with your resources and data.

The following interfaces are available:

#### Tivoli Enterprise Portal user interface

You can run the Tivoli Enterprise Portal as a desktop application or a browser application. The client interface is a graphical user interface (GUI) based on Java on a Windows or Linux workstation. The browser application is automatically installed with the Tivoli Enterprise Portal Server. The desktop application is installed by using the Tivoli Monitoring installation media or with a Java Web Start application. To start the Tivoli Enterprise Portal browser client in your Internet browser, enter the URL for a specific Tivoli Enterprise Portal browser client installed on your Web server.

#### Command-line interface

You can use Tivoli Monitoring commands to manage the Tivoli Monitoring components and their configuration. You can also run commands at the Tivoli Enterprise Console event server or the Tivoli Netcool/OMNIbus ObjectServer to configure event synchronization for enterprise situations.

#### Manage Tivoli Enterprise Monitoring Services window

You can use the window for the Manage Tivoli Enterprise Monitoring Services utility to configure the agent and start Tivoli services not designated to start automatically.

#### IBM Tivoli Netcool/OMNIbus event list

You can use the Netcool/OMNIbus event list to monitor and manage events. An event is created when the Netcool/OMNIbus ObjectServer receives an event, alert, message, or data item. Each event is made up of columns (or fields) of information that are displayed in a row in the ObjectServer alerts.status table. The Tivoli Netcool/OMNIbus web GUI is also a web-based application that processes network events from one or more data sources and presents the event data in various graphical formats.

#### **IBM Tivoli Enterprise Console**

You can use the Tivoli Enterprise Console to help ensure the optimal availability of an IT service for an organization. The Tivoli Enterprise Console is an event management application that integrates system, network, database, and application management. If you do not already use Tivoli Enterprise Console and need an event management component, you can choose to use Tivoli Netcool/OMNIbus.

## Chapter 2. Agent installation and configuration

Agent installation and configuration requires the use of the *IBM Tivoli Monitoring Installation and Setup Guide* and agent-specific installation and configuration information.

To install and configure the Lotus Domino agent, use the *Installing monitoring agents* procedures in the *IBM Tivoli Monitoring Installation and Setup Guide* along with the agent-specific installation and configuration information.

If you are installing silently by using a response file, see *Performing a silent installation of IBM Tivoli Monitoring in the IBM Tivoli Monitoring Installation and Setup Guide*.

## Requirements

Before installing and configuring the agent, make sure your environment meets the requirements for the IBM Tivoli Composite Application Manager Agent for Lotus Domino.

For information about requirements, see the Prerequisites topic for the agent in the (ITCAM for Applications Information Center (http://publib.boulder.ibm.com/infocenter/tivihelp/v24r1/topic/com.ibm.itcama.doc\_7.2.1/welcome\_apps721.html)

For the most up-to-date information about system requirements, see the Software product compatibility reports (http://publib.boulder.ibm.com/infocenter/prodguid/v1r0/clarity/index.html). Search for the ITCAM for Applications product.

## **Upgrades for the Lotus Domino agent**

The Lotus Domino agent can be upgraded locally or remotely. Remote upgrades require running a script to restore the agent instances on Windows systems.

On Windows systems, for local upgrades, agent instances are upgraded automatically. During remote upgrades, the previous agent instances are lost. A tool is provided to restore the instances. Run the **%CANDLE\_HOME%\InstallITM\updategbinstance.bat** script to restore and upgrade the instances.

On AIX<sup>®</sup>, Solaris, and Linux systems, agent instances are upgraded automatically.

## Language pack installation

The steps for installing language packs depend on which operating system and mode of installation you are using.

To install a language pack for the agent support files on the Tivoli Enterprise Monitoring Server, the Tivoli Enterprise Monitoring Agent, and the Tivoli Enterprise Portal Server, make sure that you installed the product in the English language. Then use the steps for the operating system or mode of installation you are using:

- "Installing language packs on Windows systems"
- "Installing language packs on UNIX or Linux systems" on page 6
- "Silent installation of language packs on Windows, UNIX, or Linux systems" on page 7

## Installing language packs on Windows systems

You can install the language packs on a Windows system.

#### Before you begin

First, make sure that you installed the product in the English language.

#### **Procedure**

- 1. On the language pack CD, double-click the lpinstaller.bat file to start the installation program.
- 2. Select the language of the installer and click **OK**.
- 3. In the Introduction panel, click **Next**
- 4. Click Add/Update and click Next.
- 5. Select the folder where the National Language Support package (NLSPackage) files are located. Typically, the NLSPackage files are located in the nlspackage folder where the installer executable file is located.
- 6. Select the language support for the agent of your choice and click **Next**. To make multiple selections, press Ctrl and select the language that you want.
- 7. Select the languages that you want to install and click **Next**.
- 8. Examine the installation summary page and click Next to begin installation.
- 9. After installation completes, click **Finish** to exit the installer.
- 10. Restart the Tivoli Enterprise Portal, Tivoli Enterprise Portal Server, and Eclipse Help Server if any of these components are installed.

## Installing language packs on UNIX or Linux systems

You can install the language packs on a UNIX or Linux system.

### Before you begin

First, make sure that you installed the product in the English language.

#### **Procedure**

- 1. Enter the mkdir command to create a temporary directory on the computer, for example, mkdir dir\_name. Make sure that the full path of the directory does not contain any spaces.
- Mount the language pack CD to the temporary directory that you created.
- 3. Enter the following command to start the installation program: cd dir\_name lpinstaller.sh -c install\_dir where install\_dir is where you installed IBM Tivoli Monitoring. Typically, the directory name is /opt/IBM/ITM for UNIX and Linux systems.
- 4. Select the language of the installer and click **OK**.
- 5. In the Introduction panel, click **Next**.
- 6. Click Add/Update and click Next.
- Select the folder where the National Language Support package (NLSPackage) files are located.
   Typically, the NLSPackage files are located in the nlspackage folder where the installer executable file is located.
- 8. Select the language support for the agent of your choice and click **Next**. To make multiple selections, press Ctrl and select the language that you want.
- 9. Select the languages that you want to install and click **Next**.
- 10. Examine the installation summary page and click **Next** to begin installation.
- 11. After installation completes, click **Finish** to exit the installer.
- 12. Restart the Tivoli Enterprise Portal, Tivoli Enterprise Portal Server, and Eclipse Help Server if any of these components are installed.

## Silent installation of language packs on Windows, UNIX, or Linux systems

You can use the silent-mode installation method to install the language packs. In silent mode, the installation process obtains the installation settings from a predefined response file. It does not prompt you for any information.

#### Before you begin

First, make sure that you installed the product in the English language.

#### **Procedure**

- 1. Copy and paste the ITM\_Agent\_LP\_silent.rsp response file template as shown in "Response file example."
- 2. Change the following parameter settings:

#### NLS\_PACKAGE\_FOLDER

Folder where the National Language Support package (NLSPackage) files are located. Typically, the NLSPackage files are located in the nlspackage folder, for example: NLS PACKAGE FOLDER = //tmp//LP//nlspackage.

#### PROD\_SELECTION\_PKG

Name of the language pack to install. Several product components can be included in one language package. You might want to install only some of the available components in a language pack.

#### BASE AGENT FOUND PKG LIST

Agent for which you are installing language support. This value is usually the same as PROD SELECTION PKG.

#### LANG SELECTION LIST

Language you want to install.

- 3. Enter the command to install the language pack with a response file (silent installation):
  - For Windows systems:

```
lpinstaller.bat -f path to response file
```

• For UNIX or Linux systems:

```
lpinstaller.sh -c candle_home -f path_to_response_file
```

where *candle home* is the IBM Tivoli Monitoring base directory.

#### Response file example

```
IBM Tivoli Monitoring Agent Language Pack Silent Installation Operation
#This is a sample response file for silent installation mode for the IBM Tivoli
#Monitoring Common Language Pack Installer.
#This file uses the IBM Tivoli Monitoring Common Agent Language Pack with the
#install package as an example.
#This response file is for the INSTALLATION of language packs only.
#This file does not support UNINSTALLATION of language packs in silent mode.
#-----
#To successfully complete a silent installation of the the example of Common Agent
#localization pack, complete the following steps:
#1.Copy ITM_Agent_LP_silent.rsp to the directory where lpinstaller.bat or
#lpinstaller.sh is located (IBM Tivoli Monitoring Agent Language Pack build
#location).
```

```
#2.Modify the response file so that it is customized correctly and completely for
#your site.
# Complete all of the following steps in the response file.
#3.After customizing the response file, invoke the silent installation using the
#following command:
#For Windows:
       lpinstaller.bat -f <path to response file>
#For UNIX and Linux:
       lpinstaller.sh -c <candle home> -f <path to response file>
#Note:<candle home> is the IBM Tivoli Monitoring base directory.
#______
#Force silent install mode.
#_____
INSTALLER UI=silent
#-----
#Run add and update actions.
CHOSEN INSTALL_SET=ADDUPD_SET
#-----
#NLS Package Folder, where the NLS Packages exist.
    Use the backslash-backslash(\setminus) as a file separator (for example,
\#C:\\c) and \c) and \c) are the second of the secon
#For UNIX and Linux:
# Use the slash-slash (//) as a file separator (for example,
#//installtivoli//lpsilenttest//nlspackage).
#NLS PACKAGE FOLDER=C:\\zosgmv\\LCD7-3583-01\\n1spackage
NLS_PACKAGE_FOLDER=//tmp//LP//nlspackage
#-----
#List the packages to process; both variables are required.
#Each variable requires that full paths are specified.
#Separate multiple entries with a semicolon (;).
#For Windows:
                  Use the backslash-backslash(\backslash \backslash) as a file separator.
#For Unix and Linux:
         Use the slash-slash (//) as a file separator.
#PROD SELECTION PKG=C:\\zosgmv\\LCD7-3583-01\\nlspackage\\KIP NLS.nlspkg
#BASE AGENT FOUND PKG LIST=C:\\zosgmv\\LCD7-3583-01\\nlspackage\\KIP NLS.nlspkg
PROD SELECTION PKG=//tmp//LP//nlspackage//kex_nls.nlspkg;//tmp//LP//nlspackage//
kog nls.nlspkg
BASE AGENT FOUND PKG LIST=//tmp//LP//nlspackage//kex nls.nlspkg;//
tmp//LP//nlspackage//koq nls.nlspkg
#List the languages to process.
#Separate multiple entries with semicolons.
#------
LANG_SELECTION_LIST=pt_BR;fr;de;it;ja;ko;zh_CN;es;zh_TW
```

## Agent-specific installation and configuration

In addition to the installation and configuration information in the *IBM Tivoli Monitoring Installation and Setup Guide*, use this agent-specific installation and configuration information to install the Lotus Domino agent.

You can configure an instance of the Lotus Domino agent remotely (**tacmd** command), locally on the computer (**itmcmd** command on UNIX only), by using the Tivoli Enterprise Portal, or by using the Manage Tivoli Enterprise Monitoring Services window. See the *IBM Tivoli Monitoring Installation and Setup Guide* for information about starting these interfaces.

## Clearing the Domino Server password

On all supported operating systems, and for both local and remote configuration, you must clear the password on the Domino Server being used by the agent for the agent to start. You can clear the password at any time before you start the Lotus Domino agent.

#### **Procedure**

Use the following steps to clear the password:

- 1. Copy your server ID file, not the user ID file, to a Windows computer that has a Notes<sup>®</sup> client. Each Domino server has a server ID file, and if the password of the server ID file is not cleared the Lotus Domino agent cannot be started.
- 2. From the Notes client, click **File** > **Security** > **Switch ID**, and select the server ID file.
- 3. Click File > Security > User Security.
- 4. In "Security Basics", select Change Password.
- 5. In the Change Your Password window, select No Password.
- 6. Confirm the change, and click **OK** to exit.
- 7. Copy your server ID back to your server computer. On UNIX and Linux systems, make sure that the ID file is set to the correct user, group, and permissions.

## Checking the Access Control List of the database

To use Database Corruption monitoring or the Database Space Usage monitoring feature, the Domino server ID must be in the Access Control List of the database you want to monitor.

#### About this task

To check whether the Domino server ID is in the Access Control List, configure and start the Lotus Domino agent first, then check table Database Status > Database Corruption and Failover in the Tivoli Enterprise Portal. If the State column is Operation not authorized or Access not authorized, the Domino server ID is not in the Access Control List of the database.

#### **Procedure**

To add the Domino server ID to the Access Control List, complete the following steps:

- 1. Start the Domino Administrator client.
- 2. From the **Domino Administrator Server** pane, select the server that stores the databases.
- 3. Click Files and select one or more databases from the Domino data directory.
- 4. Click Tools > Database > Manage ACL.
- 5. Click Add.
- 6. Type the entry, or select it from the Domino Directory by clicking the button next to the list box. Select Server as the user type, and select an access level. The access level must be at least at Reader level.
- 7. Click OK.

## Configuring by using the Tivoli Enterprise Portal

Configuration of an instance of the monitoring agent can be done remotely (tacmd), locally on the computer (itmcmd), or by using the Tivoli Enterprise Portal. This configuration requires values to be defined for the agent to operate.

The following fields are defined for this agent:

#### Instance

This field uniquely defines the name that is seen on the monitoring server and portal server for the Domino Server being monitored. Usually the instance name is based off the Domino Server name or domain so that the user can easily identify the Domino Server being monitored.

#### Monitored Domino Server Name

This field is the canonical or abbreviated Domino Server name for which you want to monitor. This name can be a local server where the agent is installed or a remote server that is not located on this computer.

#### Local hostname or IP address for Intelliwatch Events

This field is optional. Use this field if Intelliwatch events are going to be received by the monitoring agent. If Intelliwatch events are going to be received by the monitoring agent, the host name or IP address of the local computer the monitoring agent is installed on must be entered. This host name or IP address must have access outside the computer to the network.

#### Local port for Intelliwatch Events

This field is optional, but must be defined if the local host name or IP address for Intelliwatch Events is used. This port, which can be any port number that is not used by other processes, is used for a TCP/IP socket connection to receive Intelliwatch events. This socket must be open to the network and not blocked by any firewall.

#### Full directory path to the local notes.ini file

Installing the Domino monitoring agent on a computer requires you to choose a local notes.ini file to use so that the monitoring agent can issue API requests. The full path does not include the notes.ini file name.

#### The interval to check database

This field indicates the interval to check the databases. The default value is 3600, which means that the database check runs every 3600 seconds. If the field is set to 0, the database check never

#### The databases or database directories to check

This field is optional. The default value is \*, which means all the databases are checked. The field can be used to specify which databases or database directories to check. Each path in the field, separated by semicolons, is relative to the Domino data directory. The path can be a Domino database, a normal Domino directory, or a Domino directory with \*. For example, names.nsf; mail; mail2/\* means the database names.nsf, all the databases in mail, and all the databases in mail2 including its subdirectories are checked.

#### The databases or database directories to exclude

This field is optional. The field can be used to specify which databases or database directories to exclude. Each entry in the field, separated by semicolons, is relative to the Domino data directory. The path can be a Domino database, a normal Domino directory, or a Domino directory with \*. If a database is excluded, it is not checked for corruption, failover, or space usage. The Database Status workspace and any situation you set up is also excluded automatically. For example, names.nsf; mail; mail2/\* means the database names.nsf, all the databases in mail, and all the databases in mail2 including its subdirectories are not checked.

#### The configuration file to define which views of a database to check

This field is optional. It is a fully qualified configuration file path of the database view mapping. In this configuration file, you can define which views of a database are checked. By default, only the default view is checked. Use the following rules for setting up a configuration file:

- 1. There must be no space characters at the beginning of each line.
- 2. A line that begins with # is a comment.
- 3. The definition line is in the following format: PATH=VIEW[,VIEW]\* where:

**PATH** Database path

There are three kinds of database paths:

All nsf databases on the Domino server

**test** All nsf databases in the test directory, not including subdirectories

**test\\*** All nsf databases in the test directory, including subdirectories

**Note:** The path separator can be either \ or /

#### VIEW[,VIEW]\*

Database view list in which each view is separated by a comma

Configuration file examples:

```
# test1.nsf
test1.nsf = view1, view2, view3
# the database directory
dir1 = view_dir11, view_dir12
# the directory including its subdirectory
dir2/* = view dir21, view dir22
```

If there are multiple definitions for a database, only the first one is used to check the database views. For example, in the configuration file there are three definitions for the database readme file:

```
help/readme.nsf = View1
help/readme.nsf = View2, View3
help/readme.nsf = View4
```

Only View1 of readme.nsf is checked.

#### Semicolon separated database replication strings to include

Strings that are separated by semicolons. Only reports indications that have database events and events attributes that include these strings.

All replication events are collected. These events include manual, hit, and missed replication events. For each replication event found, the string is scanned to see whether it matches one of the include or exclude strings. If it matches the include string, it is kept in the returned set of rows. If it matches the exclude string, it is eliminated from the returned set of rows. If no include or exclude strings are configured, all replication events are returned.

#### Semicolon separated database replication strings to exclude

Strings that are separated by semicolons. Only reports indications that have database events and events attributes that do *not* include these strings.

All replication events are collected. These events include manual, hit, and missed replication events. For each replication event found, the string is scanned to see whether it matches one of the include or exclude strings. If it matches the include string, it is kept in the returned set of rows. If it matches the exclude string, it is eliminated from the returned set of rows. If no include or exclude strings are configured, all replication events are returned.

#### Monitored Domino Server Log File

Name of log file to be monitored with fully qualified path.

#### Log file errors to search for

Vertical bar separated search strings. The default search strings can be updated or more search strings added with | new\_search\_string.

**Note:** If you change the search string, the Lotus Domino agent must be restarted for the new string to be included in the search.

## Windows configuration notes

After you installing the Lotus Domino agent and before you configure an instance, you must reboot the Windows computer to update the system environment variables.

See "Configuration values" on page 13 for the values that are required to configure the Lotus Domino agent.

See "Remote installation and configuration" on page 15 for information about configuring the Lotus Domino agent remotely.

When you start the Domino Server on Windows, the server must be started as a Service so the monitoring agent and the Domino Server can be in the same process tree.

Make sure that the notes.ini file contains the <code>NotesProgram</code> and the <code>Directory</code> keywords. The Lotus Domino agent fails to start if the notes.ini file pointed to by the configuration parameter, Full path to the local notes.ini file, does not contain the <code>NotesProgram</code> keyword. The <code>NotesProgram</code> keyword is the path to the Lotus Domino base directory. The <code>Directory</code> keyword is used to determine the path to the Domino Serverlock file.

## Changing the ping interval for determining the status of the Domino Server on Windows systesms

The Lotus Domino agent determines the status of the Domino Server by issuing the NSPingServer API call. This API call runs by default every 30 seconds.

If you want to change the default 30-second interval, you can change the KGB\_PING\_INTERVAL value by using the Tivoli Enterprise Monitoring Services Console, right-clicking, and selecting **Advanced** > **Edit ENV File** for the instance to be modified. The new value must be greater than the default of 30 seconds.

## **UNIX and Linux configuration notes**

See "Configuration values" on page 13 for the values that are required to configure the Lotus Domino agent.

See "Remote installation and configuration" on page 15 for information about configuring the agent remotely.

Make sure that the notes.ini file contains the NotesProgram keyword. The Lotus Domino agent fails to start if the notes.ini file pointed to by the configuration parameter, Full path to the local notes.ini file, does not contain the NotesProgram keyword. The NotesProgram keyword is the path to the Lotus Domino base directory.

#### Configuring and starting the Lotus Domino agent as root user

On UNIX and Linux operating systems, you must configure and start the Lotus Domino agent as the root user.

When you start the monitoring agent as root, the initialization process verifies that the correct softlinks were established in the Domino installation directory, and switches the process to the Notes user ID defined by the notes.ini file. If the correct softlinks were not established, the initialization process creates the required softlinks. The final monitoring agent process runs as the Notes user ID when the process communicates with the Notes Server.

**Note:** When you use itmcmd commands with multi-instance agents, you must include the **-o** parameter as follows to start or stop the instance:

itmcmd agent -o instance start stop gb

# Changing the ping interval for determining the status of the Domino Server on UNIX or Linux systems

The Lotus Domino agent determines the status of the Domino Server by issuing the NSPingServer API call. This API call runs by default every 30 seconds.

The ping interval can be changed by changing the {instance name} | KGB\_PING\_INTERVAL | 30 | value that is found in the kgbenv file that is in the \$CANDLEHOME/config/.ConfigData directory. The new value must be greater than the default of 30 seconds.

#### Uninstalling the monitoring agent

To make sure that configuration softlinks created in the Domino Server install directory are removed, you must use the kgbuninstall.sh script to uninstall the monitoring agent. Run the kgbuninstall.sh script that is located at \$CANDLEHOME/binArch/gb/bin/kgbuninstall.sh. The value for binArch can be found by running the **cinfo -i** command.

## **Configuration values**

For both local and remote configuration, provide the configuration values for the agent to operate.

When you are configuring an agent, a panel is displayed so you can enter each value. When a default value exists, this value is pre-entered into the field. If a field represents a password, two entry fields are displayed. You must enter the same value in each field. The values that you type are not displayed to help maintain the security of these values.

The configuration fields are not checked for validity until the Lotus Domino agent is started. Therefore, any errors in the fields, such as an incorrect path or server name, cause the monitoring agent data collection process to fail to start. When this condition occurs, no data is returned to the workspaces or the Availability workspace shows incorrect Domino Server status. To resolve the problem look in the log files for error messages to determine which field was incorrect and causing the failure. Check the kgbstart\_{instance name}.log file first, then check the unique instance kgbclient log file. See "Trace logging" in the IBM Tivoli Composite Application Manager Agent for Lotus Domino Troubleshooting Guide for the name of the kgbclient.exe log.

The configuration for this agent is organized into the following sections:

#### **Domino Server Configuration (config)**

This section defines information that applies to the agent.

#### The databases or database directories not to check

The Domino database paths that are separated by a semicolon and are not checked.

The type is string.

This value might be optional.

#### The databases or database directories to check

The Domino database paths that are separated by a semicolon that and are checked.

The type is string.

This value might be optional.

#### The interval to check database

The interval in which the checking of database corruption and database usage runs.

The type is string.

This value is required.

#### The configuration file to define which views of a database are to check

The full path to the configuration file of database view mapping.

The type is string.

This value might be optional.

#### Local hostname or IP address for Intelliwatch Events

The host name or IP address of the local computer on which the agent is installed.

The type is string.

This value might be optional.

#### Local port for IntelliWatch® Events

The port that is used for a TCP/IP socket connection to receive IntelliWatch events.

The type is string.

This value might be optional.

#### Log file errors to search for

Each ICU regular expression that is separated by a vertical bar issearched for.

The type is string.

This value might be optional.

#### Monitored Domino Server Log File

The name of the log file to be monitored with fully qualified path.

The type is string.

This value might be optional.

#### Semicolon separated database replication strings to exclude

Reports only indications of database events and events attributes without these strings.

The type is string.

This value is required.

#### Semicolon separated database replication strings to include

Reports only indications of database events and events attributes including these strings.

The type is string.

This value is required.

#### Full path to the local notes.ini file

The full path to the local notes.ini file.

The type is string.

This value is required.

#### Monitored Domino Server Name

The canonical or abbreviated Domino Server name that you want to monitor.

The type is string.

This value is required.

## Remote monitoring configuration

• To monitor a Domino server remotely:

The local Domino server must be in the same Domino domain as the remote Domino server. –OR–

The local Domino server must be cross-certified with the remote Domino server if they are not in the same Domino domain.

- A local Domino installation is required on the computer where the Lotus Domino agent resides, because the Lotus Domino agent requires Domino libraries and the notes.ini file to initialize run time.
- There are no differences between configuring remote monitoring and local monitoring. To configure remote monitoring, specify the remote Domino server name in the configuration fields; specify the other configuration fields with the same information as local monitoring.

For example, if Domino server serverA/ibm is on *computer A*, and the Lotus Domino agent is deployed on *computer B*, a Domino server must be installed on *computer B* to provide runtime libraries and a notes.ini file. The Domino server on *computer B* must be in the same domain as serverA/ibm or cross-certified if not in the same domain. During agent configuration, serverA/ibm must be used in the server name field, while the notes.ini file path is the path of the notes.ini file on *computer B*, not the notes.ini file path for the remote Domino server.

## Remote installation and configuration

You can install the monitoring agent remotely from the Tivoli Enterprise Portal or from the command line.

When you install the agent remotely, you must provide the configuration values for the agent to operate. See "Configuration values" on page 13.

To install from the portal, see the IBM Tivoli Monitoring Installation and Setup Guide.

To remotely install or configure an agent through the Tivoli Enterprise Portal, application support for that agent must be installed (Tivoli Enterprise Monitoring Server, Tivoli Enterprise Portal Server, and Tivoli Enterprise Portal). Also, the agent bundle must be installed into the Remote Deploy Depot.

For information about displaying the configuration options that are available to use with the **configureSystem** or **addSystem** commands see "tacmd describeSystemType" in the *IBM Tivoli Monitoring Command Reference*.

On Windows, if the Lotus Domino agent is installed remotely, you must run <code>%CANDLE\_HOME%\InstallITM\updategbinstance.bat</code> from the command line. You can run this script either before or after you configure a Lotus Domino agent instance.

If you are using the command line, the following command is an example of remote configuration for Windows operating systems:

```
tacmd addSystem -t GB -n Primary:sample.node.name:NT -p config.KGB_CHECK_DB_EXCLUDE_PATH=value config.KGB_CHECK_DB_INCLUDE_PATH=value config.KGB_CHECK_DB_INTERVAL=value config.KGB_CHECK_DB_VIEW_CONFIG_FILE=value config.KGB_IWHOSTNAME=value config.KGB_IWHOSTNAME=value config.KGB_IWPORT=value config.KGB_LOGERROR=value config.KGB_LOGFILE=value config.KGB_LOG_INCLUDE=value config.KGB_LOG_INCLUDE=value config.KGB_NOTESINIPATH=value config.KGB_SERVER=value INSTANCE="inst1"
```

## Appendix. ITCAM for Applications documentation library

Various publications are relevant to the use of ITCAM for Applications.

For information about how to access and use the publications, see **Using the publications** (http://pic.dhe.ibm.com/infocenter/tivihelp/v61r1/topic/com.ibm.itm.doc\_6.3/common/using\_publications.htm).

To find publications from the previous version of a product, click **Previous versions** under the name of the product in the **Contents** pane.

Documentation for this product is in the ITCAM for Applications Information Center (http://publib.boulder.ibm.com/infocenter/tivihelp/v24r1/topic/com.ibm.itcama.doc\_7.2.1/welcome\_apps721.html):

- · Quick Start Guide
- · Offering Guide
- · Download instructions
- Links to Prerequisites
- Installation and Configuration Guide for each agent
- · Link to Reference information for each agent
- · Link to Troubleshooting Guide for each agent

## Prerequisite publications

To use the information about the agents effectively, you must have some prerequisite knowledge.

See the following information at the IBM Tivoli Monitoring Information Center (http://pic.dhe.ibm.com/infocenter/tivihelp/v61r1/index.jsp) to gain prerequisite knowledge:

- IBM Tivoli Monitoring Administrator's Guide
- IBM Tivoli Monitoring Installation and Setup Guide
- IBM Tivoli Monitoring High Availability Guide for Distributed Systems
- IBM Tivoli Monitoring: Installation and Configuration Guides for the following agents: Operating System agents and Warehouse agents
- IBM Tivoli Monitoring: User's Guides for the following agents: Agentless OS monitors, Log file agent, System p agents, Systems Director base agent
- IBM Tivoli Monitoring Agent Builder User's Guide
- IBM Tivoli Monitoring Command Reference
- IBM Tivoli Monitoring: Messages
- IBM Tivoli Monitoring Troubleshooting Guide
- IBM Tivoli Monitoring: References for the following agents: Operating System agents and Warehouse agents
- IBM Tivoli Monitoring: Troubleshooting Guides for the following agents: Operating System agents and Warehouse agents
- Tivoli Enterprise Portal User's Guide

## **Related publications**

The publications in related information centers provide useful information.

See the following information centers, which you can find by accessing Tivoli Documentation Central (https://www.ibm.com/developerworks/community/wikis/home?lang=en#!/wiki/Tivoli %20Documentation%20Central):

- Tivoli Monitoring
- · Tivoli Application Dependency Discovery Manager
- Tivoli Business Service Manager
- · Tivoli Common Reporting
- Tivoli Enterprise Console
- Tivoli Netcool/OMNIbus

## **Tivoli Monitoring Community on Service Management Connect**

Service Management Connect (SMC) is a repository of technical information that is organized by communities.

Access Service Management Connect at https://www.ibm.com/developerworks/servicemanagement.

For information about Tivoli products, see the Application Performance Management community (http://www.ibm.com/developerworks/servicemanagement/apm/index.html).

Connect, learn, and share with Service Management professionals. Get access to developers and product support technical experts who provide their perspectives and expertise. You can use SMC for these purposes:

- Become involved with transparent development, an ongoing, open engagement between other users and IBM developers of Tivoli products. You can access early designs, sprint demonstrations, product roadmaps, and prerelease code.
- Connect one-on-one with the experts to collaborate and network about Tivoli and the (enter your community name here) community.
- Read blogs to benefit from the expertise and experience of others.
- Use wikis and forums to collaborate with the broader user community.

#### Other sources of documentation

You can obtain additional technical documentation about monitoring products from other sources.

See the following sources of technical documentation about monitoring products:

- IBM Integrated Service Management Library (http://www.ibm.com/software/brandcatalog/ismlibrary/) is an online catalog that contains integration documentation as well as other downloadable product extensions.
- IBM Redbook publications (http://www.redbooks.ibm.com/) include Redbooks<sup>®</sup> publications, Redpapers, and Redbooks technotes that provide information about products from platform and solution perspectives.
- Technotes (http://www.ibm.com/support/entry/portal/software), which are found through the IBM Software Support website, provide the latest information about known product limitations and workarounds.

## **Notices**

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

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

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

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

Intellectual Property Licensing Legal and Intellectual Property Law IBM Japan Ltd. 19-21, Nihonbashi-Hakozakicho, Chuo-ku Tokyo 103-8510, Japan

The following paragraph does not apply to the United Kingdom or any other country where such provisions are inconsistent with local law:

INTERNATIONAL BUSINESS MACHINES CORPORATION PROVIDES THIS PUBLICATION "AS IS" WITHOUT WARRANTY OF ANY KIND, EITHER EXPRESS OR IMPLIED, INCLUDING, BUT NOT LIMITED TO, THE IMPLIED WARRANTIES OF NON-INFRINGEMENT, MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE.

Some states do not allow disclaimer of express or implied warranties in certain transactions, therefore, this statement might not apply to you.

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

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

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

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

**IBM** Corporation 2Z4A/101 11400 Burnet Road Austin, TX 78758 U.S.A.

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

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

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

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

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

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

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

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

#### COPYRIGHT LICENSE:

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

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

© IBM 2009. Portions of this code are derived from IBM Corp. Sample Programs. © Copyright IBM Corp. 2009. All rights reserved.

If you are viewing this information in softcopy form, the photographs and color illustrations might not be displayed.

#### **Trademarks**

IBM, the IBM logo, and ibm.com<sup>®</sup> are trademarks or registered trademarks of International Business Machines Corp., registered in many jurisdictions worldwide. Other product and service names might be trademarks of IBM or other companies. A current list of IBM trademarks is available on the web at Copyright and trademark information (www.ibm.com/legal/copytrade.shtml).



Java and all Java-based trademarks and logos are trademarks or registered trademarks of Oracle and/or its affiliates.

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

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

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

Other company, product, or service names may be trademarks or service marks of others.

## Privacy policy considerations

IBM Software products, including software as a service solutions, ("Software Offerings") may use cookies or other technologies to collect product usage information, to help improve the end user experience, to tailor interactions with the end user or for other purposes. In many cases no personally identifiable information is collected by the Software Offerings. Some of our Software Offerings can help enable you to collect personally identifiable information. If this Software Offering uses cookies to collect personally identifiable information, specific information about this offering's use of cookies is set forth below.

Depending upon the configurations deployed, this Software Offering may use session cookies that collect each user's user name for purposes of session management, authentication, and single sign-on configuration. These cookies cannot be disabled.

If the configurations deployed for this Software Offering provide you as customer the ability to collect personally identifiable information from end users via cookies and other technologies, you should seek your own legal advice about any laws applicable to such data collection, including any requirements for notice and consent.

For more information about the use of various technologies, including cookies, for these purposes, See IBM's Privacy Policy at http://www.ibm.com/privacy and IBM's Online Privacy Statement at

http://www.ibm.com/privacy/details the section entitled "Cookies, Web Beacons and Other Technologies" and the "IBM Software Products and Software-as-a-Service Privacy Statement" at http://www.ibm.com/software/info/product-privacy.

## Index

| A   | Integrated Service Management Library documentation 1 interface | 18 |
|---|---|----|
| ACL 9   | user 2  |    |
| agent   | itmcmd command 12   |    |
| functions 1                                     |   |    |
| agent fails to start 12                         |   |    |
| Application Performance Management community on | L   |    |
| SMC 18  | language packs 5  |    |
|   | installing 5  |    |
| ^   | silent installation 5   |    |
| C   | shert instanction 5   |    |
| changing the ping interval                      |   |    |
| Linux 13  | M   |    |
| UNIX 13   |   |    |
| Windows 12                                      | monitor remotely 14   |    |
| clearing the Domino Server password 9           |   |    |
| commands  | <b>A.1</b>  |    |
| itmcmd 12                                       | N   |    |
| tacmd addSystem 15                              | new in this release 1   |    |
| updategbinstance.bat 5                          | notes.ini file 12   |    |
| components 2                                    | NotesProgram keyword 12   |    |
| IBM Tivoli Monitoring 2                         | ,   |    |
| configuration 8                                 |   |    |
| agent 5   | 0   |    |
| fields 13                                       | _   |    |
| Linux 12  | operating systems 5   |    |
| remote 15                                       | overview IBM Tivoli Monitoring 1                                |    |
| UNIX 12   | IBM Tivoli Monitoring 1   |    |
| values 13                                       |   |    |
| Windows 11                                      | Р   |    |
| configure an instance 9                         | Г   |    |
| configuring the monitoring agent 5              | ping interval   |    |
| cookies 21                                      | changing on Linux 13  |    |
|   | changing on UNIX 13   |    |
| <b>D</b>  | changing on Windows 12  |    |
| D   | prerequisite publications 17                                    |    |
| determining the status of the Domino Server     | privacy policy 21   |    |
| Linux 13  | publications 17, 18   |    |
| UNIX 13   | IBM Tivoli Monitoring 17  |    |
| Windows 12                                      | Integrated Service Management Library 18                        |    |
| documentation                                   | prerequisite 17   |    |
| See publications                                | Redbooks 18   |    |
| Domino Server password, clearing 9              | related 18  |    |
|   | Service Management Connect 18                                   |    |
| _   | SMC   |    |
| E   | See Service Management Connect                                  |    |
| enhancements 1                                  | Technotes 18<br>wikis 18  |    |
|   | WIKIS 10  |    |
|   |   |    |
|   | R   |    |
| IBM Tivoli Monitoring 2                         |   |    |
| overview 1                                      | Redbooks 18   |    |
| installation 8                                  | remote  |    |
| agent 5   | installation and configuration 15                               |    |
| remote 15                                       | requirements 5  |    |
| installing language packs 5                     | response file template 5  |    |
| installing the monitoring agent 5               | root user 12  |    |
| instance  |   |    |
| starting 12                                     |   |    |
| stopping 12                                     |   |    |
|   |   |    |

## S

```
Service Management Connect 18
silent installation 5
silent installation of language packs 5
   See Service Management Connect
starting
   agent 12
   instance 12
starting the agent
   Linux 12
   UNIX 12
status of the Domino Server
   determining on Linux 13
   determining on UNIX 13
   determining on Windows 12
stopping
   instance 12
```

## T

tacmd addSystem command 15 Technotes 18

## U

uninstalling the monitoring agent 13 updategbinstance.bat 5 upgrading the agent 5 user interface options 2

## W

wikis 18

# IBM.

Printed in USA

SC27-5675-01

