



Installation overview and instructions

Note!

Before using this information and the product it supports, be sure to read the general information under “Notices and Trademarks” on page 37

Sixth Edition (March 2006)

This edition applies to Version 6.0.1 of IBM WebSphere Business Monitor product (5724-M24) and to all subsequent releases and modifications until otherwise indicated in new editions.

IBM welcomes your comments. You can send to the following address:

Cairo Technology Development Center (CTDC)
Business Integration Product Development
IBM WTC – Egypt Branch
Pyramids Heights Office Park, Building C10
Cairo – Alexandria Desert Road, km. 22
P.O. Box 166 El-Ahram, Giza, Egypt

Include the page number or topic related to your comment.

When you send information to IBM, you grant IBM a nonexclusive right to use or distribute the information in any way it believes appropriate without incurring any obligation to you.

© Copyright International Business Machines Corporation 2005, 2006. All rights reserved.

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

Contents

Installing WebSphere Business Monitor 1

WebSphere Business Monitor installation readme . . .	1
WebSphere Business Monitor prerequisites . . .	2
WebSphere Business Monitor installation instructions 4	
Installation scenarios.	4
WebSphere Business Monitor Launchpad	9
The Launchpad panels	9
Software prerequisites installation by Launchpad	10
Conventions for entering data	12
Running the Launchpad	12
Creating WebSphere Business Monitor databases	12
Installing the Monitor Server component . . .	16
Installing the Dashboard Client component. . .	20
Uninstalling WebSphere Business Monitor . . .	24
Post installation	26
Installation checklists	29
Installation troubleshooting	30
Assigning permissions to the Launchpad parent	
directories on the AIX platform.	30
WebSphere Business Monitor installation log files	
locations	30
WebSphere Portal Installation and host short	
name length	30

Installing the Dashboard Client with a long host	
name	31
Monitor Server installation fails because of errors	
in stopping and starting the WebSphere	
Application Server	32
AIX and CD-ROM device activity	32
Repository database tables used for other	
databases and components installation	33
After installation, Launchpad check boxes should	
be selected and unavailable	33
Restarting DB2 after its installation	33
A WebSphere Business Monitor database is	
created successfully, but no database tables are	
created	34
Installation fails when Remote Desktop is used	34
Launchpad Installer suspends activity	35
Profile, cell, node, and server fields are not	
prefilled	35

Notices and Trademarks 37

Installing WebSphere Business Monitor

The following information will help you to successfully install WebSphere® Business Monitor. You should become familiar with this information before you begin the installation process.

WebSphere Business Monitor installation readme

Before you begin installing WebSphere Business Monitor, you should become familiar with the following information that will help you to perform a successful installation.

WebSphere Business Monitor is a client/server Web application that runs in a WebSphere Process Server Version 6 environment. WebSphere Business Monitor consists of several components. Most of these components are packaged as Enterprise Archive (.ear) or Web Archive (.war) files that are installed and deployed on an application server in WebSphere Application Server.

The following is a list of all WebSphere Business Monitor components with a short description:

- **Monitor Server:** Is the core component of WebSphere Business Monitor. It is responsible for consuming events from the Common Event Infrastructure (CEI) and processing these events to calculate the measurements and their values. The installation of the Monitor Server component also includes the installation of the **Adaptive Action Manager**, the component responsible for providing different types of business responses as results of the situations expressed within the incoming events. Both the Monitor Server and Adaptive Action Manager components are delivered as enterprise applications (.ear) that are hosted on WebSphere Application Server Version 6.0.
- **Dashboard Client:** Is another server component of the WebSphere Business Monitor and provides the runtime environment for what are known as dashboards. The dashboards are implemented as portal pages that operate within the WebSphere Portal environment. Each dashboard can consist of one or more views. The Dashboard Client is delivered as a set of Web Archive (.war) files that are installed and configured on the WebSphere Portal.
- **Databases:** Are the data storage component that provides the Monitor Server with the required information for event processing and provides the dashboards with the required information for views. There are four databases: State, Runtime, Historical, and Repository. These databases must be created and configured before any of the WebSphere Business Monitor components can be installed. Another database, the Action Catalog database, is used to store the information used by the Adaptive Action Manager.
- **Monitor Administration:** Provides the administrative functions for WebSphere Business Monitor as an extension to the WebSphere Application Server Administrative Console in the form of plug-ins. After the successful installation of WebSphere Business Monitor components, the **WebSphere Business Monitor** node becomes available on the WebSphere Application Server Administrative Console. Through this node, you can access and administer different WebSphere Business Monitor functions using your login information (access rights) to the WebSphere Application Server.

WebSphere Business Monitor is installed using the WebSphere Business Monitor Launchpad, a program that creates the required databases and installs the different components of WebSphere Business Monitor. The Launchpad also checks whether the software prerequisites needed by the WebSphere Business Monitor components are installed and directs you to install any missing prerequisites.

Refer to the section named *Installation scenarios* under the *WebSphere Business Monitor installation instructions* section in the WebSphere Business Monitor documentation for details about the supported installation scenarios.

WebSphere Business Monitor prerequisites

Hardware, system and software prerequisites needed to install WebSphere Business Monitor.

Hardware

WebSphere Business Monitor does not require a particular hardware configuration. The hardware requirements for its software prerequisites are sufficient for the operation of WebSphere Business Monitor, for example, the hardware requirements of the WebSphere Application Server or the WebSphere Portal.

You should consider the following disk space requirements for the WebSphere Business Monitor prerequisites:

Table 1.

Prerequisite	Windows®	AIX®
IBM® DB2® UDB Database Server Version 8.2.1	350 MB	450 MB
DB2 Cube Views™ Version 8.2.1	17 MB	17 MB
WebSphere Process Server Version 6.0.0.1	1.3 GB and 600 MB of temp space	1.3 GB and 600 MB of temp space
WebSphere Application Server ND (WAS) Version v6.0.1.2	990 MB	970 MB
WebSphere Portal v5.1.0.2	2.4 GB and 750 MB of temp space	1.5 GB and 750 MB of temp space
WebSphere Portal v5.1.0.2 PTF	809 MB	809 MB
IBM DB2 Alphablox Version 8.3	400® MB and 200 MB of temp space	500 MB and 450 MB of temp space

For the machines that will hold the WebSphere Business Monitor databases, you must ensure that there is enough memory and disk space available to store and manipulate the required data.

System

The system prerequisites for installing WebSphere Business Monitor are:

- Windows 2000 Server, service pack 4
- Windows 2000 Advanced Server, service pack 4
- Windows Server 2003 Enterprise Edition service pack 1
- Windows Server 2003 Standard Edition service pack 1
- AIX 5.2 with maintenance level 5200-05

- AIX 5.3 with maintenance level 5300-02 and APAR IY58143

Software

Software prerequisites required by each installable component in the WebSphere Business Monitor Version 6.0.1 environment.

The following table lists the required software and the components that require a software product. Each row shows the software prerequisite, and each column shows the components that require this prerequisite.

Prerequisite Software	Monitor Databases	Dashboard Client ⁽¹⁾	Monitor Server ⁽²⁾	Comments
IBM DB2 UDB Database Server Version 8.2.1	✓	✓	✓	On Windows platform, after installing DB2 using the WebSphere Business Monitor Launchpad, you must close the Launchpad and all command windows or Explorer windows. Then you can restart the Launchpad and proceed with the remainder of the installation.
DB2 Cube Views Version 8.2.1	✓	✓		DB2 Cube Views must be installed on the same machine where the Historical database resides.
WebSphere Process Server Version 6.0			✓	Although WebSphere Business Monitor runs on WebSphere Process Server 6.0.0, it only supports applications running on WebSphere Process Server 6.0.1
WebSphere Application Server ND (WAS) Version 6.0.2.3		✓		
WebSphere Portal Version 5.1.0.2		✓		
IBM DB2 Alphablox Version 8.3		✓		If you are installing IBM DB2 Alphablox on a Windows 2003 system, prior to uninstallation, you must set the compatibility level of the file <i>Uninstall IBM DB2 Alphablox8.3.exe</i> to the value "Windows XP".

1) The Dashboard Client component can only be installed onto a machine that does not contain the prerequisites. The Dashboard Client component and its prerequisites must be installed using only the Launchpad onto a clean machine that has no previous installation of the prerequisites. Do not configure any of the prerequisites before the Dashboard Client component is installed. The Dashboard Client machine's host short name is limited to 8 characters or less.

2) The Monitor Server component can only be installed onto a machine that does not contain the prerequisites. The Monitor Server component and its prerequisites must be installed using only the Launchpad onto a clean machine that has no previous installation of the prerequisites.

Important: On the machine where WebSphere Process Server v6.0.1 is installed and running BPEL applications, an iFix is required in order to resolve a memory leak problem. iFix number 311825 is required from WebSphere Process Server support. Refer to IBM Support for further information.

WebSphere Business Monitor installation instructions

This information explains what you need to know before you begin installing WebSphere Business Monitor, lists the supported installation scenarios, and describes the steps you follow to create the required databases and install the Monitor Server and the Dashboard Client.

Installation scenarios

WebSphere Business Monitor Version 6.0.1 has several components and features. You can install each of them solely on a separate server machine, or you can combine one or more on the same machine.

The Dashboard Client must be installed on a separate machine. It cannot be installed on the same machine with the Monitor Server component.

Different installation scenarios can be executed, depending on the needs of your organization. To help you understand the possible combinations, the following scenarios illustrate some common installations.

First scenario

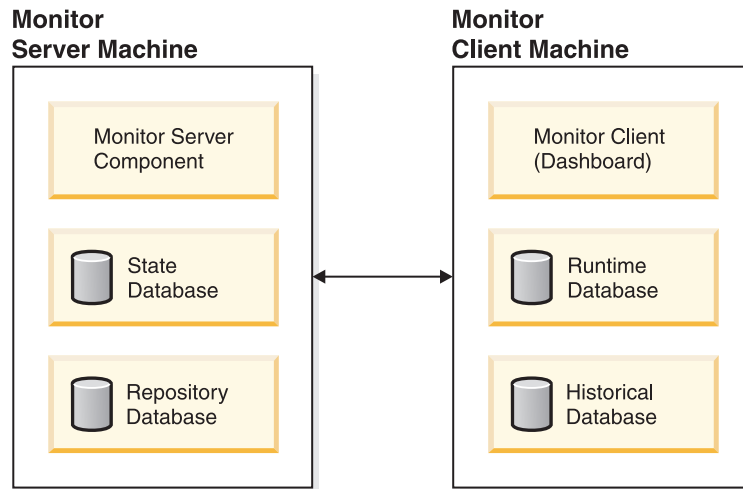
In this scenario, you have two machines: the Monitor Server machine and the Monitor Client machine. The WebSphere Business Monitor databases are distributed on both machines.

Important: Although WebSphere Business Monitor runs on Process Server 6.0.0, it only supports applications running on Process Server 6.0.1

The components to be installed on each machine are:

- On the Monitor Server machine:
 - Monitor Server
 - State database
 - Repository database
- On the Monitor Client machine:
 - Dashboard Client
 - Runtime database
 - Historical database

The following diagram illustrates the distribution on the machines in this scenario:



You should consider the following:

- Although WebSphere Business Monitor runs on Process Server 6.0.0, it only supports applications running on Process Server 6.0.1
- All WebSphere Business Monitor databases must be created before you install any of the components. You should create the Repository and State databases on the Monitor Server machine and create the Runtime and Historical databases on the Monitor Client machine before you start the installation of the Monitor Server and Dashboard Client components.
- The Repository database must be cataloged on the Client machine before you create the Runtime and Historical databases on this machine. You can use the DB2 commands or the DB2 Control Center to catalog the Repository database. The name used to catalog the Repository database must match the name of the Repository database on the Server machine.
- The Runtime database must be cataloged on the Server machine after the Runtime and Historical databases are created on the Client machine. You can use the DB2 commands or the DB2 Control Center to catalog the Runtime database. The name used to catalog the Runtime database must match the name of the Runtime database on the Client machine.

Second scenario

In this scenario, you have three machines: the database server, the Monitor Server machine, and the Monitor Client machine.

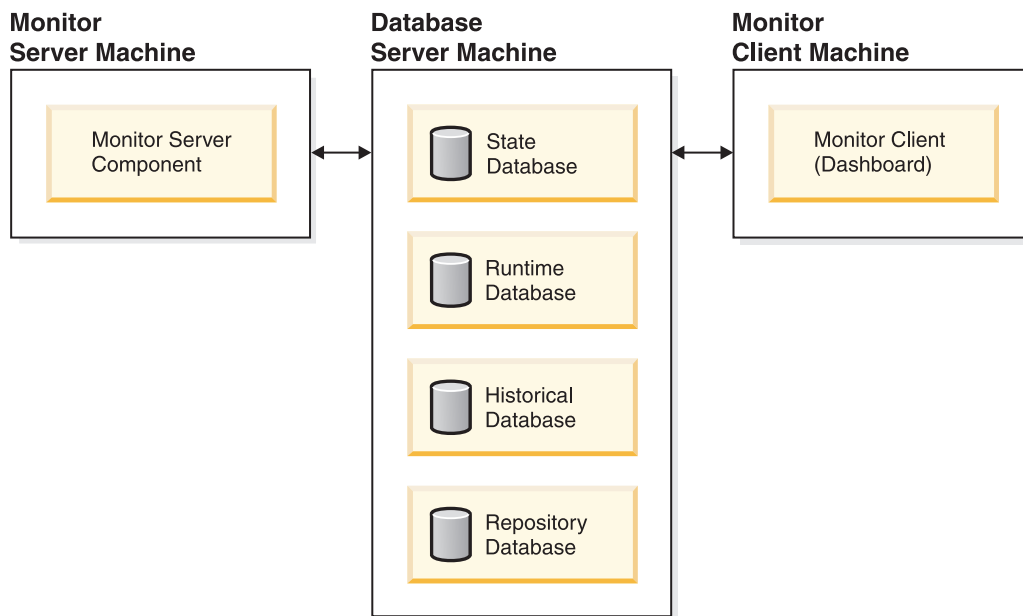
Important: Although WebSphere Business Monitor runs on Process Server 6.0.0, it only supports applications running on Process Server 6.0.1

The components to be installed on each machine are:

- On the Database Server machine:
 - State database
 - Runtime database
 - Historical database
 - Repository database
- On the Monitor Server machine:

- Monitor Server: Includes Monitor Server Application (with Adaptive Action Manager) and Monitor Server administrative console (including Monitor Server, Adaptive Action Manager, and Schema Generator)
- On the Monitor Client machine:
 - Dashboard Client

The following diagram illustrates the distribution on the machines in this scenario:



You should consider the following:

- All WebSphere Business Monitor databases must be created on the Database Server machine before you install the Monitor Server and Dashboard Client components.
- The Repository database must be cataloged on both the Monitor Server machine and the Monitor Client machine before you install the Monitor Server and Dashboard Client components. You can use the DB2 commands or the DB2 Control Center to catalog the Repository databases. The name used to catalog the Repository database must match the name of Repository database on the Database Server machine.
- The State and Runtime databases must be cataloged on the Monitor Server machine before you install the Monitor Server component. You can use the DB2 commands or the DB2 Control Center to catalog the State and Runtime databases. The name used to catalog each database must match the name of the corresponding database on the Database Server machine.
- The Runtime and Historical databases must be cataloged on the Monitor Client machine before you install the Dashboard Client component. You can use the DB2 commands or the DB2 Control Center to catalog the Runtime and Historical databases. The name used to catalog each database must match the name of the corresponding database on the Database Server machine.

Third scenario

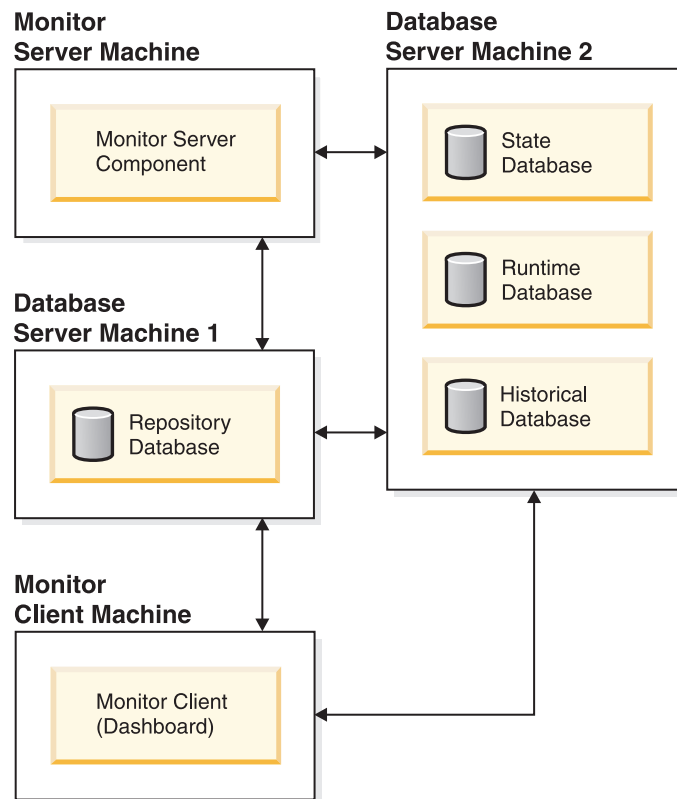
In this scenario you have four machines: a Database server containing the Repository database; a Database server containing the State, Runtime, and Historical databases; the Monitor Server machine, and the Monitor Client machine.

Important: Although WebSphere Business Monitor runs on Process Server 6.0.0, it only supports applications running on Process Server 6.0.1

The features to be installed on each machine are:

- On the first Database Server machine:
 - Repository database
- On the second Database Server machine:
 - State database
 - Runtime database
 - Historical database
- On the Monitor Server machine:
 - Monitor Server: Includes Monitor Server Application (with Adaptive Action Manager) and Monitor Server administrative console (including Monitor Server, Adaptive Action Manager, and Schema Generator).
- On the Monitor Client machine:
 - Dashboard Client

The following diagram illustrates the machines distribution in this scenario:



You should consider the following:

- All WebSphere Business Monitor databases must be created before you install any of the components. You should create the Repository database on the first database server machine, and create the State, Runtime and Historical databases on the second database server machine before you install the Monitor Server and Dashboard Client components.

- The Repository database must be created on the first database server machine before you create the State, Runtime, and Historical databases on the second database server machine.
- The Repository database must be cataloged on the second database server machine before you create the State, Runtime, and Historical databases on this machine. It should be also cataloged on the Monitor Server machine and the Monitor Client machine before you install the Monitor Server and Dashboard Client components on these machines. You can use the DB2 commands or the DB2 Control Center to catalog the Repository database. The name used to catalog the Repository database must match the name of the Repository database on the first database server machine.
- The State and Runtime databases must be cataloged on the Monitor Server machine before you install the Monitor Server component. You can use the DB2 commands or the DB2 Control Center to catalog the State and Runtime databases. The name used to catalog each database must match the name of the corresponding database on the second database server machine.
- The Runtime and Historical databases must be cataloged on the Monitor Client machine before you install the Dashboard Client component. You can use the DB2 commands or the DB2 Control Center to catalog the Runtime and Historical databases. The name used to catalog each database must match the name of the corresponding database on the second database server machine.

Note: This scenario can be modified in several ways. One alternative is to distribute the databases on more than two machines. For example, there can be a separate machine for each database.

WebSphere Business Monitor Launchpad

The WebSphere Business Monitor Launchpad is the program you use to create the required databases and install different components of WebSphere Business Monitor.

The Launchpad checks for the existence of all the software prerequisites needed by the WebSphere Business Monitor components. You use it to install any prerequisites that are not installed.

After all the prerequisites have been installed, the Launchpad calls the WebSphere Business Monitor Installer, which creates the selected WebSphere Business Monitor databases and installs the selected WebSphere Business Monitor components.

You use the installer to :

- Specify the installation directory
- Specify database connection information
- Create the different WebSphere Business Monitor databases
- Install the different WebSphere Business Monitor components
- Register the product's presence with the operating system

Important: On the AIX platform, the parent directory into which you have extracted the compressed (.tar) file that contains the Launchpad must have **read** and **execute** permission for all users. Refer to the topic named Assigning permissions to the Launchpad parent directories on the AIX platform for details

During the installation of the prerequisites, some user IDs and their passwords are created to be used later in the installation of the different components and for creating the different databases. The following table shows the user IDs and passwords that are created in each prerequisite:

The user IDs and passwords that are created in each prerequisite

Prerequisite	User ID	Password
WebSphere Application Server	admin	
WebSphere Portal	wpsadmin	wpsadmin
DB2	<ul style="list-style-type: none"> On Windows platform: db2admin On the AIX platform: db2inst1 	<ul style="list-style-type: none"> On Windows platform: monPa55w0rd On the AIX platform: monPa55w
DB2 Alphablox	admin	password

The Launchpad panels

The following is a list of the panels that are included in the Launchpad and the installer. A check mark indicates what panels are available with each component. You do not have to visit each panel, depending on what you selected. Panels may be skipped by the installer if the information required by the panel has already been collected by the Launchpad.

Monitor Components and their corresponding Launchpad panels

	State Database	Runtime Database	Historical Database	Repository Database	Monitor Server	Dashboard Client
Launchpad Welcome Page	✓	✓	✓	✓	✓	✓
Create Database	✓	✓	✓	✓		
Select Features					✓	✓
Software Prerequisites	✓	✓	✓	✓	✓	✓
Repository Database Information Panel*	✓	✓	✓		✓	✓
Software License Agreement Panel	✓	✓	✓	✓	✓	✓
Destination Panel	✓	✓	✓	✓	✓	✓
State Database Creation Panel	✓					
Runtime Database Creation Panel		✓				
Historical Database Creation Panel			✓			
Repository Database Creation Panel				✓		
WebSphere Application Server Configuration Panel					✓	
WebSphere Application Server Security Configuration Panel (Only appears in a secured WebSphere Application Server environment).					✓	
Action Catalog Database Panel					✓	
WebSphere Portal Configuration Panel						✓
DB2 Alphablox Configuration Panel						✓

Monitor Components and their corresponding Launchpad panels

	State Database	Runtime Database	Historical Database	Repository Database	Monitor Server	Dashboard Client
Summary Panel	✓	✓	✓	✓	✓	✓
Progress Panel	✓	✓	✓	✓	✓	✓
Finish Panel	✓	✓	✓	✓	✓	✓

* The Repository Database Information Panel appears only if the Repository database resides on a remote machine and is cataloged on each machine on which you are creating any of the other databases or installing any of the components.

Software prerequisites installation by Launchpad

The WebSphere Business Monitor Launchpad is used to install the prerequisites of each WebSphere Business Monitor component.

The behavior of the product prerequisites installation follows:

When you select to install any prerequisite using the Launchpad, the Launchpad first checks for the existence of the prerequisite installation files in a specific location under the directory where the Launchpad file exists. This is because if WebSphere Business Monitor is downloaded from the Web, it will come down in one or more .zip files that will contain all of the product prerequisites.

For example, if you extracted the downloaded WebSphere Business Monitor *Launchpad* .zip file in a directory named Downloads, you should then locate the directory that contains the *launchpad.jar*. This will be found in either the root or the next subdirectory. If the *launchpad.jar* is found in the *Downloads\CDImage* directory, then all other prerequisites downloaded files should be extracted in subdirectories under the *CDImage* folder as in the following table:

The prerequisites directories names

Prerequisite	Directory name
DB2 Universal Database™	CDImage\ESE
DB2 Cube Views	CDImage\CUBE
WebSphere Process Server	CDImage\ProcessServer
WebSphere Application Server	CDImage\WAS
WebSphere Portal	CDImage\Portal
WebSphere Portal PTF	CDImage\Portal5102PTF
DB2 Alphablox	CDImage\Alphablox

If the Launchpad detects that the prerequisite installation files exist in the proper location as in the table above, it proceeds with the installation of the prerequisite. Otherwise, The following scenarios will take place:

- If there is more than one CD to install the prerequisite, (for example the WebSphere Portal on Windows and also DB2 Universal Database on the AIX), you will be prompted with the following message in Windows platform: *Is your installation media on CD-ROM?* or with the following message in the AIX platform: *Is the install image on CD or on a locally accessible hard drive?*

- If you click **Yes** (on Windows platform) or click **CD** (on the AIX platform), this means the installation files of the prerequisite are on a CD. In this case the following will happen:
 - On Windows platform you will be prompted to enter the CD drive letter.
 - On the AIX platform:
 1. The CD drive will be unmounted.
 2. You will be prompted to load the correct CD.
 3. The CD drive will be mounted.
 4. The files will be copied to the \$TEMP directory.

This process is repeated until all necessary CD(s) are copied and then the installation of the prerequisite starts.

If you insert an incorrect CD at any point, then the temporary directory is cleaned up, and the installation of the prerequisite exits back to the Launchpad.

Then you will be prompted for the **copy to** hard drive location of the CDs. The Launchpad will prompt you for the CDs and copy them to a temporary directory on the chosen hard drive. This allows you to run an unattended installation without having to be prompted to enter disks during the installation. Next you will be prompted for the drive letter which the prerequisite will be installed on, and then the installation will start.

The temp directory where the prerequisite was copied to is cleaned up upon the completion of the prerequisite installation (successful or unsuccessful).

- If you click **No** (on Windows platform) or click **Hard Drive** (on the AIX platform) this means the prerequisite installation files are on a hard drive. In this case a file browser window appears to let you select the Hard Drive location as follows:
 - On Windows platform, you can either select the parent location of the install media (the *CDImage* folder in the example above), or you can directly select the prerequisite folder (e.g. *ESE*, *CUBE* ... etc.).
 - On the AIX platform, you select the prerequisite folder (e.g. *ESE*, *CUBE* ... etc.).

Important: The file selection dialog box is currently not supported for WebSphere Application Server and WebSphere Process Server on the AIX platforms, and it will not be displayed. This means to install WebSphere Application Server and WebSphere Process Server on the AIX platforms from the hard drive, the installation images must exist in the default location.

The Launchpad will check for the existence of the expected installation files at that location and if it finds them, it will proceed with the installation.

Otherwise, you will be prompted to select a different directory or drive and will also have the option to cancel the installation.

- If there is only one CD to install the prerequisite on Windows or you click **Hard Drive** (on the AIX platform), a file browser window appears to let you select the Hard Drive or CD-ROM location. In this case, Launchpad does not care whether it is installing from a CD or a hard drive.
 - On Windows platform, you can select the drive letter of the CD-ROM or the parent location of the install media (the *CDImage* folder in the example above), or you can directly select the prerequisite folder (e.g. *ESE*, *CUBE*, *ProcessServer* ... etc.).
 - On the AIX platform, you select the prerequisite folder (e.g. *ESE*, *CUBE*, *ProcessServer* ... etc.).

The Launchpad will check for the existence of the expected installation files at that location and if it finds them, it will proceed with the installation. Otherwise, you will be prompted to select a different directory or drive and will also have the option to cancel the installation.

Important: The file selection dialog box is currently not supported for WebSphere Application Server and WebSphere Process Server on the AIX platforms, and it will not be displayed. This means to install WebSphere Application Server and WebSphere Process Server on the AIX platforms from the hard drive, the installation images must exist in the default location.

Conventions for entering data

As you enter data, create paths, and name folders and files, you should be aware of certain requirements.

It is recommended that you read the *WebSphere Business Monitor Installation Readme* and plan for your installation scenario before you start the installation process.

- On the AIX platform, use forward slash / instead of a back slash \ when writing paths.
- The names and paths of folders and files are case sensitive on the AIX platform.
- The names and paths of folders and files that you specify during the installation should not contain any spaces. (For example, the WebSphere Business Monitor installation directory should not contain any spaces, as the following: C:\IBM\WebSphere\Monitor).
- Use short paths as much as possible to avoid any I/O failure.
- The WebSphere Business Monitor Launchpad does not support Arabic characters in directory names.
- Make sure that the user account you are using for installation has all the needed permissions. For example, using a user account that has no permissions on WebSphere Portal or the Database will cause the installation to fail.

Running the Launchpad

The WebSphere Business Monitor Launchpad starts by running the batch file named *Launchpad.bat* from the product CD or from the location where you have extracted the contents of the zipped file that you downloaded from the Internet.

When you start the Launchpad, the main window appears. You follow these general steps:

1. On the Launchpad main window, click **Welcome** to display the introduction to the Launchpad. This window appears when you start the Launchpad.
2. To start the Monitor databases creation procedure, click **Create Databases**.
3. To start the Monitor components installation procedure, click **Install Product**.
4. To exit the Launchpad, click **Exit**.

Creating WebSphere Business Monitor databases

You use WebSphere Business Monitor Launchpad to create the WebSphere Business Monitor databases: State, Runtime, Historical, and Repository. The Launchpad creates the databases by running a set of database scripts.

These scripts contain the SQL statements needed to create the databases, configure them with configuration values, define the table spaces, and create the static database tables and indexes. The DB2 Cube Views must be installed before you can create the Historical database.

During installation using the Launchpad, you can go to the **Progress** panel at any time to check the status of the installation. All buttons are disabled when this panel is displayed.

When the State, Runtime, and Historical databases are created, the following information for each database is stored in the Repository database:

- Database name.
- Database schema
- Database type
- Host name on which the database was created
- Operating system on which the database was created

The Repository database must be created before or at the same time the other databases are created.

Important: Before creating WebSphere Business Monitor databases, you must either remove or drop all databases that were previously created for a previous installation of WebSphere Business Monitor if you want to use the same databases names. Alternatively, you can specify databases names that are different from any previously created WebSphere Business Monitor databases.

To create one or more of the databases using the Launchpad, complete the following steps:

1. On the Launchpad main window, click **Create Databases**.
2. On the **Create Databases** window, select the check box next to each database you want to create, and then click **Next**. You can create four databases: State, Runtime, Historical, and Repository. Selecting the check box next to the **Databases** option selects all databases under it.
3. On the **Software Prerequisites** window, the Launchpad displays the status of the database prerequisite. The status is:
 - **Installed:** Indicates that the database prerequisite is already installed.
 - **Not Installed:** Indicates that either the database prerequisite is not installed, or an unsupported version of the prerequisite is installed. If the database prerequisite (DB2) is not installed, click the prerequisite's name to expand the section, and then click **Install** to install it. The Launchpad then installs DB2 from the **Software Prerequisites** window. If an unsupported version of DB2 is already installed, a message displays asking you to exit the Launchpad and upgrade the software manually.

Important: In order to avoid errors during the WebSphere Portal PTF installation, you must ensure that prior to installing DB2 Universal Database, the host short name is limited to eight characters. If you need to change the host short name, you must change it, reboot the machine, and then install the DB2.

Important: After installing DB2 using the WebSphere Business Monitor Launchpad, you must you must do the following:

- On Windows platforms: Close the Launchpad and all command windows or Explorer windows. Make sure that DB2 is started before you attempt to install any feature. You can start DB2 by typing the "db2start" command. Then you can restart the Launchpad and proceed with the remainder of the installation.
 - On the AIX platform: Do the following:
 - a. Exit the Launchpad.
 - b. Create /.profile and add this line: . /home/db2inst1/sqllib/db2profile (Note that there is a space between the period and the first slash).
 - c. Uncomment the last line from the /.dtprofile
 - d. Log out.
 - e. Log back in.
 - f. Start DB2 by typing the "db2start" command
 - g. Restart the Launchpad and proceed with the remainder of the installation.
4. After the database prerequisites have been installed, click **Start Database Creation** to start the WebSphere Business Monitor installer. The Launchpad determines the status of the Repository database. There are three possibilities:
- a. If the Repository database exists on the current machine, the installation continues and the installer starts.
 - b. If the Repository database does not exist, but you selected the Repository database on the **Create Databases** window, the installation continues and the installer starts.
 - c. If the Repository database does not exist, and you did not select the Repository database on the **Create Databases** window, the following message displays:

"The Repository database information is not available in the CommonInstallParam.tcl file. If the Repository database exists on a remote machine, make sure the database is cataloged on this machine, and then click **OK** to enter the database information. If the Repository database is planned to be on this machine, click **Cancel** to stop the current install, and then use the Launchpad to create the Repository database."

You can do one of the following:

 - 1) If the Repository database is intended to exist on the current machine, click **Cancel** to stop the installation. Then click **Back** to return to the **Create Databases** window, and select the Repository database.
 - 2) If the Repository database has been created on a remote machine, make sure that the database is cataloged on the current machine. You must use DB2 commands or the DB2 Control Center to catalog the database. Then click **OK** to display the **Repository Database Information** dialog where you enter the following information for the Repository database:
 - Database name
 - User ID of a valid user with DB2 administrative authority.
 - Password of the User ID
 - Password confirmation

Enter the required information, and click **OK** to start the installer. If you click **Cancel**, the installation is terminated.
5. When the installer starts, the **Software License Agreement** panel appears. Read the License Agreement carefully, and select **"I accept both the IBM and**

the non-IBM terms" to accept the agreement. Click **Next** to continue. If you select "I do not accept the terms in the License Agreement" and click **Next**, a message appears asking you to confirm your selection. Clicking **Yes** exits you from the installation. Clicking **No** returns you to the **Software License Agreement** panel.

6. On the **Destination** panel, specify where to install the WebSphere Business Monitor components. The default directory path and name is C:\IBM\WebSphere\Monitor on the Windows platform and /opt/IBM/WebSphere/Monitor on the AIX platform. You can accept the default path or change this path to a new directory by clicking **Browse** and selecting the other directory. Click **Next** to continue.
7. **To create the State database**, on the **State Database Creation** panel, enter the required information for creating the State database. The database name and database schema will be stored in the Repository database. Complete the following fields:
 - a. In the **Name** field, type the database name.
 - b. In the **Schema** field, type the database schema.
 - c. In the **User ID** field, type the user ID of a user with DB2 administrative authority.
 - d. In the **Password** field, type the password for the user ID.
 - e. In the **Backup directory** field, type the path of the directory used for the database backup. Click **Browse** to select this directory.

Important: The Backup Directory path and name must not contain any spaces. Otherwise, the backup will fail.

- f. In the **Table Space Directory**, type the path of the database Table Space directory. Click **Browse** to select this directory.
 - g. Click **Next** to continue.
8. **To create the Runtime database**, on the **Runtime Database Creation** panel, enter the required information for creating the Runtime database. The database name and database schema will be stored in the Repository database. Complete the following fields:
 - a. In the **Name** field, type the database name.
 - b. In the **Schema** field, type the database schema.
 - c. In the **User ID** field, type the user ID of a user with DB2 administrative authority.
 - d. In the **Password** field, type the password for the user ID.
 - e. In the **Backup directory** field, type the path of the directory used for the database backup. Click **Browse** to select this directory.

Important: The Backup Directory path and name must not contain any spaces. Otherwise, the backup will fail.

- f. In the **Table Space Directory** field, type the path of the database Table Space directory. Click **Browse** to select this directory.
 - g. Click **Next** to continue.
9. **To create the Historical database**, on the **Historical Database Creation** panel, enter the required information for creating the Historical database. The database name and database schema will be stored in the Repository database. Complete the following fields:
 - a. In the **Name** field, type the database name.
 - b. In the **Schema** field, type the database schema.

- c. In the **User ID** field, type the user ID of a user with DB2 administrative authority.
 - d. In the **Password** field, type the password for the user ID.
 - e. Click **Next** to continue.
10. **To create the Repository database**, in the **Repository Database Creation** panel, enter the required information for creating the Repository database. The Repository database contains the information about the other databases (State, Runtime, and Historical). Complete the following fields:
 - a. In the **Name** field, type the database name.
 - b. Do not type anything in the **Schema** field. The database schema is already entered and cannot be changed.
 - c. In the **User ID** field, type the user ID of a user with DB2 administrative authority.
 - d. In the **Password** field, type the password for the user ID.
 - e. Click **Next** to continue.
11. A summary of your selections is displayed on the **Summary** panel. It includes information for the destination directory, a listing of selected features and components, and the total amount of disk space to be used for the installation. Click **Next** to start installing the selected features and components.

The wizard checks the disk space to verify that there is sufficient space for installing the selected features. A warning message informs you if there is not enough disk space in the selected drive. The **Next** button is disabled. Click **Back** to return to the **Summary** panel. Free enough space on the specified drive, then click **Next** again to start installing the selected components. If you cannot free enough space, you can change the destination directory by revisiting the **Destination** panel. If there is enough disk space, the **Progress** panel is displayed showing the installation progress. Only the **Cancel** button is enabled while the this panel is displayed. The **Cancel** button is used to abort the creation of the databases.
12. When you have completed the installation, on the **Finish** panel, click **Finish** to exit the installer.

Installing the Monitor Server component

You use the Launchpad to install the Monitor Server component.

Before the Monitor Server component can be installed, the following databases must already be created:

- Repository
- State
- Runtime

During installation, using the Launchpad, you can go to the **Progress** panel at any time to check the status of the installation. All buttons except the **Cancel** button are disabled when this panel is displayed.

Important: The Monitor Server must be installed on a standalone node.

To install the Monitor Server component using the Launchpad, complete the following steps:

1. On the Launchpad main window, click **Install Product**.

2. On the **Select Features** window, select **Monitor Server** to install the Monitor Server component including the Adaptive Action Manager, Schema Generator and the WebSphere Business Monitor Administrative Console extensions. The extensions, which are extensions to the WebSphere Application Server administrative console, are used for administering Monitor Server, Adaptive Action Manager, and Schema Generator. If the component has already been installed on the system, the component is selected and its check box is disabled.

After selecting the component to install, click **Next**. The **Software Prerequisites** window is displayed.

3. On the **Software Prerequisites** window, all prerequisites of the Monitor Server component are displayed with their installation status. The status is one of the following:

- **Installed:** Indicates that the software prerequisite is already installed.
- **Not Installed:** Indicates that either the software prerequisite is not installed, or an unsupported version of the prerequisite is installed. If the software prerequisite is not installed, click the prerequisite's name to expand the section, and then click **Install** to install it. If an unsupported version of the software prerequisite is already installed, a message displays asking you to exit the Launchpad and upgrade the software manually.

Refer to the Software Prerequisites section in the Installation Readme for details about the prerequisites for this component.

Important: After installing DB2 using the WebSphere Business Monitor Launchpad, you must do the following:

- On Windows platforms: Close the Launchpad and all command windows or Explorer windows. Make sure that DB2 is started before you attempt to install any feature. You can start DB2 by typing the "db2start" command. Then you can restart the Launchpad and proceed with the remainder of the installation.
 - On the AIX platform: Do the following:
 - a. Exit the Launchpad.
 - b. Create /.profile and add this line: . /home/db2inst1/sqllib/db2profile (Note that there is a space between the period and the first slash).
 - c. Uncomment the last line from the /.dtpfile
 - d. Log out.
 - e. Log back in.
 - f. Start DB2 by typing the "db2start" command
 - g. Restart the Launchpad and proceed with the remainder of the installation.
4. After all prerequisites have been installed, click **Start Monitor Installation** to start the WebSphere Business Monitor installer. The Launchpad will determine the status of the databases required by the selected features. There are several possibilities:
 - a. If all databases exist on the current machine, the installation will continue, and the installer will start.
 - b. If the Repository database does not exist on the current machine, the following message is displayed:

"The Repository database information is not available in the CommonInstallParam.tcl file. If the Repository database exists on a remote

machine, make sure the database is cataloged on this machine, and then click **OK** to enter the database information. If the Repository database is planned to be on this machine, click **Cancel** to stop the current install, and then use the Launchpad to create the Repository database."

If the Repository database has been created on a remote machine, make sure that the database is cataloged on the current machine. You must use DB2 commands or the DB2 Control Center to catalog the database. Then click **OK** on the message to display the **Repository Database Information** dialog where you can enter the following information for the Repository database:

- Database name.
- User ID of a valid user who has database administrative privileges.
- Password of the valid User ID.
- Password confirmation.

Enter the required information, and click **OK** to start the installer. If you click **Cancel** on the **Repository Database Information** panel or in the message, the installation is terminated.

- c. If the Repository database exists or is cataloged on the current machine, and it contains the information of other databases, the Launchpad reads the information from the Repository database, and starts the installer. If the State and Runtime databases have been created on a remote machine, make sure that the databases are cataloged on the current machine. You must use DB2 commands or the DB2 Control Center to catalog the databases. The name used to catalog each database must match the name of the corresponding database on the remote machine.
 - d. If the Repository database exists or is cataloged on the current machine, but it does not contain the information of the other databases (the other databases have not been created), a message is displayed for each missing database. The message informs you that the information for the database does not exist either in the Repository database or in the commonInstallParam.tcl, and you must create the databases before you can install the selected features. On the message, click **OK** to cancel the installation. Go to Creating WebSphere Business Monitor databases to create the missing databases.
5. When the installer starts, the **Software License Agreement** panel appears. Read the License Agreement carefully, and select **"I accept both the IBM and the non-IBM terms"** to accept the agreement. Then click **Next** to continue. If you select **"I do not accept the terms in the License Agreement"** and click **Next**, a message appears asking you to confirm your selection. Clicking **Yes** exits you from the installation. Clicking **No** returns you to the **Software License Agreement** panel.
 6. On the **Destination** panel, you specify where to install the components. The **Destination** panel will not appear if you have defined the WebSphere Business Monitor databases on the same machine on which you are installing the Monitor server. The default directory path and name is C:\IBM\WebSphere\Monitor on the Windows platform and /opt/IBM/WebSphere/Monitor on the AIX platform. You can accept the default path or change this path to a new directory by clicking **Browse** and selecting the other directory. Click **Next** to continue.
 7. On the **WebSphere Application Server Configuration** panel, you enter the configuration of the current WebSphere Application Server installation:

- a. In the **Profile name** field, type the profile name that contains the specified cell. (This field will be filled in by default with the information passed to the installer by the Launchpad. You can change this value if needed, but try not to exceed 8 characters.)
 - b. In the **Cell name** field, type the name of the cell that contains the specified node. (This field will be filled in by default with the information passed to the installer by the Launchpad. You can change this value if needed, but try not to exceed 18 characters.)
 - c. In the **Node Name** field, type the name of the node on which the specified application server exists. (This field will be filled in by default with the information passed to the installer by the Launchpad. You can change this value if needed, but try not to exceed 8 characters.)
 - d. In the **Server name** field, type the name of the application server on which you want to install the selected component or components. (This field will be filled in by default with the information passed to the installer by the Launchpad. You can change this value if needed.)
 - e. In the **Generation Directory** field, type the name of the generation directory that will be used when the WebSphere Business Monitor Administrative Console is used to import business measures models.
 - f. Click **Next** to continue.
8. If the Monitor Server is being installed on a system where WebSphere Application Server security is enabled, an additional panel named **WebSphere Application Server Security Configuration** is displayed. On this panel, complete the following fields:
- a. In the **User ID** field, type a user ID of a valid user who has the authority to start and stop the WebSphere Application Server. The user id is defined when you enable the WebSphere Application Server security through the WebSphere Application Server administrative console.
 - b. In the **Password** field type the password of the entered user ID
 - c. In the **Confirm Password** field, type the password again to confirm it.
 - d. Click **Next** to continue.

Note: If you are planning to enable WebSphere Application Server global security after installing the Monitor Server, you must update the authentication alias with a valid User ID and password before you enable global security.

9. On the **Action Catalog database** panel, enter the database information for the Adaptive Action Manager database, which is known as the Action Catalog. The Action Catalog database will be created during the Monitor Server installation on the local machine. Complete the following fields:
- a. In the **Name** field, type the Action Catalog database name.
 - b. In the **Host Name** field, type the host name or IP address of the Action Catalog database. The value for this field should be the local host name or IP address as the Action Catalog database will be created on the local machine.
 - c. In the **Port Number** field, type the Action Catalog database port number.
 - d. In the **User ID** field, type the User ID of a valid user with DB2 administrative authority.
 - e. In the **Password** field, type the password for the user ID.
 - f. Click **Next** to continue.

10. A summary of your selections is displayed on the **Summary** panel. It includes information for the destination directory, a listing of selected components, and the total amount of disk space that will be used for the installation. Click **Next** to start installing the Monitor Server component.

The wizard checks the disk space to verify that there is sufficient space for installing the Monitor Server component. A warning message informs you if there is not enough disk space in the selected drive. The **Next** button is disabled. Click **Back** to return to the **Summary** panel. Free enough space on the specified drive, then click **Next** again to start installing the selected components. If you cannot free enough space, you can change the destination directory by revisiting the **Destination** panel. If there is enough disk space, the **Progress** panel is displayed showing the installation progress. Only the **Cancel** button is enabled while the this panel is displayed. The **Cancel** button is used to abort the installation of the Monitor server.

11. When you have completed the installation, on the **Finish** panel, click **Finish** to exit the installer.

Installing the Dashboard Client component

You use the Launchpad to install the Dashboard Client component.

The WebSphere Business Monitor installation process installs the Dashboard Client component without creating the required dashboard and views. You need to create these views in the WebSphere Portal after you finish the installation.

Important: The Dashboard Client component can only be installed onto a machine that does not contain the prerequisites. The Dashboard Client component and its prerequisites must be installed using only the Launchpad onto a machine that has no previous installation of the prerequisites. Do not configure any of the prerequisites before installing the Dashboard Client component.

During installation, using the Launchpad, you can go to the **Progress** panel at any time to check the status of the installation. All buttons are disabled when this panel is displayed

Before the Dashboard Client component can be installed, the following databases must already be created:

- Repository
- Runtime
- Historical

To install the Dashboard Client component using the Launchpad, complete the following steps:

1. On the Launchpad main window, click **Install Product**.
2. On the **Select Features** window, select the Dashboard Client component, and then click **Next**. The **Software Prerequisites** window is displayed.
3. On the **Software Prerequisites** window, all prerequisites of the Dashboard Client component are displayed with their installation status. The status is one of the following:
 - **Installed:** Indicates that the software prerequisite is already installed.
 - **Not Installed:** Indicates that either the software prerequisite is not installed, or an unsupported version of the prerequisite is installed. If the software prerequisite is not installed, click the prerequisite's name to expand the

section, and then click **Install** to install it. If an unsupported version of the software prerequisite is already installed, a message displays asking you to exit the Launchpad and upgrade the software manually.

Refer to the Software Prerequisites section in the Installation Readme for details about the prerequisites of this component.

Important: In order to avoid errors during the WebSphere Portal PTF installation, you must ensure that prior to installing DB2 Universal Database, the host short name is limited to eight characters. If you need to change the host short name, you must change it, reboot the machine, and then install the DB2. If you must use a longer host name, refer to the topic named Installing Dashboard Client with a long host name for details on how to solve this problem.

Important: After installing DB2 using the WebSphere Business Monitor Launchpad, you must do the following:

- On Windows platforms: Close the Launchpad and all command windows or Explorer windows. Make sure that DB2 is started before you attempt to install any feature. You can start DB2 by typing the "db2start" command. Then you can restart the Launchpad and proceed with the remainder of the installation.
 - On the AIX platform: Do the following:
 - a. Exit the Launchpad.
 - b. Create /.profile and add this line: . /home/db2inst1/sqllib/db2profile (Note that there is a space between the period and the first slash).
 - c. Uncomment the last line from the /.dtpfile
 - d. Log out.
 - e. Log back in.
 - f. Start DB2 by typing the "db2start" command
 - g. Restart the Launchpad and proceed with the remainder of the installation.
4. After all prerequisites have been installed, click **Start Monitor Installation** to start the WebSphere Business Monitor installer. The Launchpad determines the status of the databases required by the selected features. There are several possibilities:
- a. If all the databases exist on the current machine, the installation continues, and the installer starts.
 - b. If the Repository database does not exist on the current machine, the following message is displayed:
"The Repository database information is not available in the CommonInstallParam.tcl file. If the Repository database exists on a remote machine, make sure the database is cataloged on this machine, and then click **OK** to enter the database information. If the Repository database is planned to be on this machine, click **Cancel** to stop the current install, and then use the Launchpad to create the Repository database."
If the Repository database has been created on a remote machine, make sure that the database is cataloged on the current machine. You must use DB2 commands or the DB2 Control Center to catalog the database. Then click **OK** on the message to display the **Repository Database Information** dialog where you can enter the following information for the Repository database:

- Database name
- User ID of a valid user who has administrative privileges
- Password of the User ID
- Password confirmation

Enter the required information, and click **OK** to start the installer. If you click **Cancel** on the **Repository Database Information** or in the message, the installation is terminated.

- c. If the Repository database exists or is cataloged on the current machine, and it contains the information about the other databases, the Launchpad reads the information from the Repository database, and the installer starts. If the Runtime and Historical databases have been created on a remote machine, make sure that the databases are cataloged on the current machine. You must use DB2 commands or the DB2 Control Center to catalog the databases. The name used to catalog each database must match the name of the corresponding database on the remote machine.
 - d. If the Repository database exists or is cataloged on the current machine, but it does not contain the information about the other databases (the other databases have not been created), a message is displayed for each missing database. The message informs you that the information about the database does not exist either in the Repository database or in the commonInstallParam.tcl, and you must create the databases before you can install the selected features. On the message, click **OK** to cancel the installation. Go to Creating WebSphere Business Monitor databases to create the missing databases.
5. When the installer starts, the **Software License Agreement** panel appears. Read the License Agreement carefully, and select **"I accept both the IBM and the non-IBM terms"** to accept the agreement. Then click **Next** to continue. If you select **"I do not accept the terms in the License Agreement"** and click **Next**, a message appears asking you to confirm your selection. Clicking **Yes** exits you from the installation. Clicking **No** returns you to the **Software License Agreement** panel.
 6. On the **Destination** panel, you specify where to install the WebSphere Business Monitor components. The **Destination** panel will not appear if you have defined the WebSphere Business Monitor databases on the same machine on which you are installing the Dashboard Client. The default directory path and name is C:\IBM\WebSphere\Monitor on the Windows platform and /opt/IBM/WebSphere/Monitor on the AIX® platform. You can accept the default path or change this path to a new directory by clicking **Browse** and selecting the other directory. Click **Next** to continue.
 7. On the **WebSphere Portal Information** panel, enter the required information about the WebSphere Portal Server on which the Dashboard Client component will be installed.
 - a. In the **Profile name** field, type the profile name that contains the specified cell, or click **Browse** to select a profile. (This field will be filled in by default with the information passed to the installer by the Launchpad. You can change this value if needed, but try not to exceed 8 characters.)
 - b. In the **Cell name** field, type the cell name that contains the specified node. (This field will be filled in by default with the information passed to the installer by the Launchpad. You can change this value if needed, but try not to exceed 18 characters.)
 - c. In the **Node Name** field, type the node name on which the specified application server exists. (This field will be filled in by default with the

information passed to the installer by the Launchpad. You can change this value if needed, but try not to exceed 8 characters.)

- d. In the **Server Name** field, type the application server name on which the WebSphere Portal is installed. (This field will be filled in by default with the information passed to the installer by the Launchpad. You can change this value if needed.)
 - e. in the **Portal User ID** field, type the user ID of a valid user.
 - f. In the **Password** field, type the password for the user ID.
 - g. In the **Configuration Hostname** field, type the host name on which the WebSphere Portal application server was created.
 - h. In the **Configuration Port** field, type the port number used to access the WebSphere Portal configuration utility.
 - i. In the **Process Server (BPEL) hostname** field, type the host name of the machine on which WebSphere Process Server 6.0.1 is installed.
 - j. In the **Process Server (BPEL) bootstrap port** field, type the bootstrap port on the WebSphere Process Server (BPEL) machine.
 - k. Click **Next** to continue.
8. On the **DB2 Alphablox Configuration** panel, enter the following information about the DB2 Alphablox:
- a. In the **Installation Directory** field, type the name of the DB2 Alphablox installation directory, or click **Browse** to select the directory. (This field will be filled in by default with the information passed to the installer by the Launchpad. You can change this value if needed.)
 - b. In the **User ID**, type the user ID of a valid user of DB2 Alphablox. (This field will be filled in by default with the information passed to the installer by the Launchpad. You can change this value if needed.)
 - c. In the **Password** field, type the password of the user ID. (This field will be filled in by default with the information passed to the installer by the Launchpad. You can change this value if needed.)
 - d. In the **Hostname** field, type the host name on which the DB2 Alphablox is installed. (This field will be filled in by default with the information passed to the installer by the Launchpad. You can change this value if needed.)
 - e. In the **Telnet Port** field, type the port number used to access the DB2 Alphablox Telnet utility. (This field will be filled in by default with the information passed to the installer by the Launchpad. You can change this value if needed.)
 - f. To set the WebSphere Business Monitor theme as the default theme for the AlphaBlox, select the **Set WebSphere Business Monitor as the DB2 Alphablox default theme** check box.
 - g. To set the WebSphere Business Monitor theme as the default theme for the WebSphere Portal, select the **Set WebSphere Business Monitor as the WebSphere Portal default theme** check box.
 - h. To use the WebSphere Business Monitor welcome page instead of the default WebSphere Portal welcome page when you log in to WebSphere Portal, select the **Use WebSphere Business Monitor welcome page for WebSphere Portal** check box.
 - i. Click **Next** to continue.
9. A summary of your selections is displayed on the **Summary** panel. It includes information for the destination directory, a listing of selected components, and

the total amount of disk space that will be used for the installation. Click **Next** to start installing the Dashboard Client component.

The wizard checks the disk space to verify that there is sufficient space for installing the Dashboard Client component. A warning message informs you if there is not enough disk space in the selected drive. The **Next** button is disabled. Click **Back** to return to the **Summary** panel. Free enough space on the specified drive, then click **Next** again to start installing the selected components. If you cannot free enough space, you can change the destination directory by revisiting the **Destination** panel. If there is enough disk space, the **Progress** panel is displayed showing the installation progress. Only the **Cancel** button is enabled while this panel is displayed. The **Cancel** button is used to abort the installation of the Dashboard Client.

10. When the installation is completed, on the **Finish** panel, click **Finish** to exit the installer.

Note: The WebSphere Portal will be in a **stopped** state upon the completion of the Dashboard Client installation. In case it remains started, make sure that you stop and start the WebSphere Portal again prior to attempting to view any installed Dashboard portal pages.

Note: Make sure that the **wbmonitor** theme is applied to DB2 Alphablox. To select the DB2 Alphablox theme, open the DB2 Alphablox, select **Administration** → **General Properties** → **System**, select **wbmonitor** from the **Default HTML Client theme** list, and then click **Save**.

Uninstalling WebSphere Business Monitor

You use an uninstall procedure to uninstall the components of WebSphere Business Monitor that were previously installed by the Launchpad.

The uninstallation procedure removes any WebSphere Application Server resources that were created by the installation procedure, excluding the installation directory and some miscellaneous log files. The WebSphere Business Monitor databases uninstallation procedure removes only the files used to create these databases, but the databases are not removed (dropped). You can then use the DB2 Control Center or a DB2 command to remove (drop) the databases manually according to your needs.

Important: The WebSphere Business Monitor uninstallation does not remove or drop any created WebSphere Business Monitor databases. Before installing the WebSphere Business Monitor and creating the WebSphere Business Monitor database, you must either remove or drop all databases that were previously created for any previous installation of WebSphere Business Monitor if you want to use the same databases names. Alternatively, you can specify databases names that are different from any previously created WebSphere Business Monitor databases.

To uninstall WebSphere Business Monitor and its installed features and databases, complete the following steps:

Note: If control does not return to the "Add/Remove" Programs tool, it may be due to the WebSphere Application Server still running. Part of the uninstall starts this server, and sometimes it remains up. Use the WebSphere Application Server start menu to stop the *Server1* application server.

Note: If security is enabled on the Monitor Server machine or the Dashboard Client machine, disable it prior to proceeding with the uninstallation.

1. Run *unconfigureMonitorCrossCell* script located under *<Monitor_Home_Dir>\install\monsrvr\configuration\crosscell* to remove SI Bus configuration

Note: Remember to run the *unconfigureCrossCell* script on the BPEL Process Server.

2. Run the WebSphere Business Monitor uninstaller program as follows:
 - a. On the Windows platform, use the **Add or Remove Programs** icon on the **Control Panel**. In the **Installed Programs** list, find *IBM WebSphere Business Monitor V6.0* and click **Change/Remove**. The uninstaller starts.
 - b. On the AIX platform, run the *uninstaller.bin* program in the *_uninst* folder under the WebSphere Business Monitor installation directory. The uninstaller starts.

Note: Comment re: JVM – On AIX, JVM used by uninstaller is the same as used by installer. Therefore, the install JVM must be in the same location during uninstall.

3. On the WebSphere Business Monitor uninstaller **Welcome** page, click **Next**.
4. On the **Installed Features** panel, select the features you want to uninstall, and click **Next**. The uninstaller starts to remove the selected features.
5. On the **Progress** panel, the progress bar shows the status of the uninstallation. All buttons are disabled when this panel is displayed.
6. When the uninstallation is completed, on the **Finish** panel, click **Finish** to exit.
7. If you are uninstalling the Monitor Server component then you must delete the following directory after the uninstallation is complete:

<WPS_Profile_Dir>\databases\com.ibm.ws.sib\<Node_Name>.server1-MONITOR.<Cell_Name>.Bus

Where:

- *<WPS_Profile_Dir>* is the location of the WebSphere Process Server profile. The default is *C:\IBM\WebSphere\ProcServer\profiles\monitor*.
 - *<Node_Name>* and *<Cell_Name>* are the WebSphere Process Server names of the Node and Cell on which the Monitor Server component has been installed respectively.
8. Remove log files in *%temp%* directory
 9. Uninstall the prerequisites that have been installed. Consider the following points when uninstalling the prerequisites:

Uninstalling the prerequisites

After uninstalling the WebSphere Business Monitor, you must uninstall all the prerequisites that have been installed using the Launchpad.

In the most basic, on the Windows platform, use the **Add/Remove Programs** icon on the **Control Panel**. In the Installed Programs list, Change/Remove each of the WebSphere Business Monitor prerequisites based on existing documentation for uninstalling associated with these products. On the AIX platform, please refer to the existing documentation for uninstalling each of these products.

Consider the following important steps for the uninstallation of the prerequisites:

1. After uninstalling the WebSphere Process Server, use DB2 to drop the CEI databases **Event** and **WPRCSDB**. Prior to reinstalling WebSphere Process Server using Launchpad, you will need to delete the WebSphere Process Server

root directory located under `C:\IBM\WebSphere\ProcServer` (Launchpad default WebSphere Process Server directory). You will also need to remove the WebSphere Process Server installation log files from the system's `%temp%` directory.

2. After uninstalling the WebSphere Application Server and prior to reinstalling it again using Launchpad, you will need to delete the WebSphere Application Server home directory and the installation log files from the following locations: `C:\IBM\WebSphere\AppServer` (Launchpad default WebSphere Application Server directory) `%temp%*.*`
3. After uninstalling the WebSphere Portal and prior to reinstalling it again using Launchpad, you will need to delete the WebSphere Portal home directory and the installation log files from the following locations: `C:\IBM\WebSphere\PortalServer` (Launchpad default WebSphere Portal directory) `%temp%*.*`

Post installation

To start using the WebSphere Business Monitor after a successful installation, you will need to deploy the business measures model that has been exported from Business Measures editor.

Installation checklists

The installation of WebSphere Business Monitor consists of many sequenced steps. The following installation checklists summarize the main steps that you perform to install the components of WebSphere Business Monitor.

Read the checklists before you begin the installation to help you understand the steps you have to perform. Print off a copy of this checklist and, as you install WebSphere Business Monitor, you can check off the steps as you perform them. These checklists contain the basic sequenced steps for installing each component.

1. Ensure that the system and software prerequisites are installed.

System prerequisites

The system prerequisites that are needed to install WebSphere Business Monitor

System	Platforms
Windows Servers	<ul style="list-style-type: none">• Windows 2000 Server, service pack 4• Windows 2000 Advanced Server, service pack 4• Windows Server 2003 Enterprise Edition• Windows Server 2003 Standard Edition
AIX Servers	<ul style="list-style-type: none">• AIX 5.2 with maintenance level 5200-05• AIX 5.3 with maintenance level 5300-02 and APAR IY58143

Software prerequisites

The software prerequisites that are needed to run the WebSphere Business Monitor Launchpad and install WebSphere Business Monitor components

Check	Prerequisites
	Java™ 1.4.2 (required to run the Launchpad)
	IBM DB2 Database Server 8.2.1

The software prerequisites that are needed to run the WebSphere Business Monitor Launchpad and install WebSphere Business Monitor components

Check	Prerequisites
	IBM DB2 Cube Views 8.2.1
	IBM WebSphere Process Server 6.0
	IBM WebSphere Application Server ND 6.0.2.3
	IBM WebSphere Portal 5.1.0.2
	IBM DB2 Alphablox 8.3

2. Review the scenarios to help you choose how you want to install the components.

Installation Scenarios

First scenario

Check	Machine	Installed components
	Machine 1	<ul style="list-style-type: none"> • Monitor Server • State database • Repository database
	Machine 2	<ul style="list-style-type: none"> • Monitor Client (Dashboards) • Runtime database • Historical database

Second scenario

Check	Machine	Installed components
	Machine 1	<ul style="list-style-type: none"> • Repository database • State database • Runtime database • Historical database
	Machine 2	<ul style="list-style-type: none"> • Monitor Server
	Machine 3	<ul style="list-style-type: none"> • Monitor Client

Third scenario

Check	Machine	Installed components
	Machine 1	<ul style="list-style-type: none"> • Repository database
	Machine 2	<ul style="list-style-type: none"> • State database • Runtime database • Historical database
	Machine 3	<ul style="list-style-type: none"> • Monitor Server
	Machine 4	<ul style="list-style-type: none"> • Monitor Client

3. Check off the installation steps as you complete them.

Installation checklists

A checklist for the WebSphere Business Monitor installation steps.

Check	Component	Steps	Remarks
	Database Creation	<ol style="list-style-type: none"> 1. Install IBM DB2 Database Server. 2. Create the WebSphere Business Monitor databases. You can use either: <ol style="list-style-type: none"> a. The Launchpad for automatic database creation b. Or, the database creation scripts for manual creation 	
	Repository database		Must be created before creating other databases or at the same time.
	State database		The Repository database must be cataloged or created on the same machine.
	Runtime database		The Repository database must be cataloged or created on the same machine.
	Historical database		The Repository database must be cataloged or created on the same machine.
	Monitor Server	<ol style="list-style-type: none"> 1. Install IBM DB2 Database Server. 2. Install WebSphere Process Server Version 6.0. 3. Catalog the Repository database on the Monitor Server machine if it does not exist on the same machine. 4. Catalog the State and Runtime databases if they do not exist on the same machine. 5. Install the Monitor Server using the Launchpad wizard. 	
	Monitor Server with Action Manager		
	Monitor Server Administrative Console		

A checklist for the WebSphere Business Monitor installation steps.

Check	Component	Steps	Remarks
	Monitor Client	<ol style="list-style-type: none"> 1. Install IBM DB2 Database Server. 2. Install DB2 Cube Views. 3. Install WebSphere Application Server ND Version 6.0. 4. Install WebSphere Portal Version 5.1. 5. Install IBMDB2 Alphablox 6. Catalog the Repository database on the dashboard machine if it does not exist on the same machine. 7. Catalog the Runtime and Historical databases if they do not exist on the same machine. 8. Install the Dashboard Client using the Launchpad wizard. 	

4. Verify the success of the installation.

Post Installation checklist

A checklist for the WebSphere Business Monitor post installation steps.

Check	Steps
	<p>Make sure that all the following servers are stopped:</p> <ul style="list-style-type: none"> • IBM WebSphere Process Server Version 6.0 • IBM WebSphere Application Server ND Version 6.0 • IBM WebSphere Portal Version 5.1
	Start the above servers.
	<p>Check the success of the Monitor Server installation.</p> <ol style="list-style-type: none"> 1. Log into IBM WebSphere Process Server by using admin as the user ID with no password. 2. Click Applications > Enterprise Applications. If IBM_WB_MONITOR_SERVER and IBM_WB_ACTIONMANAGER are installed in the installed application table, then the Monitor Server is installed successfully.
	<p>Check the success of the Dashboard Client installation.</p> <ol style="list-style-type: none"> 1. Log into IBM WebSphere Portal by using wpsadmin as the user ID and wpsadmin as the password. 2. Click Administration > Portlet Management > Web Modules. If dashboardclient.war is an installed web module, then the Dashboard Client is installed successfully.

Installation troubleshooting

Through the installation of WebSphere Business Monitor, some problems may occur, the following is how to troubleshoot installation problems.

Assigning permissions to the Launchpad parent directories on the AIX platform

On the AIX platform, you must assign **read** and **execute** permissions to the parent directories of the Launchpad.

On the AIX platform, the downloadable version of launchpad is shipped as a .tar file. You download the .tar file to a directory such as /home/cdImage, and then extract the .tar file by executing `tar xvf monitor.tar`. The parent directory into which the .tar file is extracted must have **read** and **execute** permission for all users. In this example, both /home and /home/cdImage directories must have those permissions. The command to set the permissions is **chmod 755**. If the permissions are not set on the parent directories, the Launchpad will not be able to write to the Repository database. In the launchpad-monitor.log, you will see "repos command finished rc=126".

WebSphere Business Monitor installation log files locations

To identify the reason for installation errors and problems, examine the following log files that are used by the WebSphere Business Monitor Launchpad and installer.

For problems with the Launchpad or the installation of prerequisites, look at %TEMP%\launchpad-monitor.log on Windows platforms and /tmp/launchpad-monitor.log on the AIX platforms.

For problems with the creation of the WebSphere Business Monitor databases, look at <Monitor_Home>\install\logs\db2Create<DBName>Out.log, where <DBName> is the database type, such as *State* for the State database.

For problems with the installation of the Monitor Server component, look at MonitorAppInstallOut.log, MonitorAppInstallErr.log, MonitorConsoleInstallOut.log and MonitorConsoleInstallErr.log located in <Monitor_Home>\install\logs\

For problems with the installation of the Dashboard Client, look at DashboardClientDeployOut.log, DashboardClientDeployErr.log, and Deploy_WBIMon.log located in <Monitor_Home>\install\logs\

For problems with the installer, look at %TEMP%\WbimInstall.log on Windows platforms and /tmp/WbimInstall.log on the AIX platforms.

For problems with the uninstaller, look at %TEMP%\WbimUninstall.log on Windows platforms and /tmp/WbimUninstall.log on the AIX platforms.

WebSphere Portal Installation and host short name length

To avoid errors during the WebSphere Portal PTF installation, you must ensure that, before you install DB2 Universal Database, you limit the host short name to eight characters.

If you need to change the host short name, you must change it, reboot the machine, and then install DB2.

Using longer host short names has caused the following exception during the installation of WebSphere Portal install: java.io.IOException.. The system cannot find the specified file or the file name is too long. The WebSphere Application Server profile creation uses the following names to create a profile: profile name, host short name, cell name, node name and profile root directory.

Limiting the length of these names keeps the directory path for the profile under the Microsoft® limit of 256 characters in a fully qualified path. DB2 uses the host name during its configuration. If the host name is changed after DB2 is installed, you will get the following error when you try to run any DB2 commands: SQL6031N Error in the db2nodes.cfg file at line number "1". Reason code "10".

Installing the Dashboard Client with a long host name

Installing the Dashboard Client, using Launchpad, on the Windows platform requires that the maximum length of a short host name be 9 characters for a successful Portal PTF 5102 installation.

However, if you do need to use a host short name that is longer than 9 characters, you can manually perform a silent installation of WebSphere Application Server. By changing the format of the cell name to only include the host short name, you can accommodate a host short name of up to 19 characters. When a silent installation is run using a profile options file, the user can configure the cell name.

Note: All of the remaining prerequisites for the Dashboard Client can be installed using Launchpad.

complete the following steps to manually perform a silent WebSphere Application Server installation:

1. Copy the `<Monitor_Install_Root>\WAS\WAS\responsefile.nd.txt` file to a temporary directory `<Temp_Dir>` (for example, `c:\temp`). The `<Temp_Dir>` must be fully qualified.
2. Edit the copy of `responsefile.nd.txt` and change the following lines to these values:

```
-W silentInstallLicenseAcceptance.value="true"  
-P wasProductBean.installLocation="C:\IBM\WebSphere\AppServer"  
-W profileUpdateWarningPanelWizardBean.active="false"  
-P samplesProductFeatureBean.active="false"  
-W pctresponsefilelocationqueryactionInstallWizardBean.fileLocation =  
"<Temp_Dir>/responsefile.pct.NDstandAloneProfile.txt"
```
3. Copy the `<Monitor_Install_Root>\WAS\WAS\responsefile.pct.NDstandAloneProfile.txt` file to a temporary directory `<Temp_Dir>`.
4. Edit the copy of `responsefile.pct.NDstandAloneProfile.txt` and change the following lines to these values:

```
-W profilenamepanelInstallWizardBean.profileName="dashboard"  
-W profilenamepanelInstallWizardBean.isDefault="true"  
-P installLocation="C:\IBM\WebSphere\AppServer\profiles\dashboard"  
-W nodehostnamepanelInstallWizardBean.nodeName="Node01"  
-W nodehostnamepanelInstallWizardBean.hostName="Your host short name up  
to 19 characters in length"  
-W setnondmgrcellnameinglobalconstantsInstallWizardBean.value="Your host  
short name - please uncomment this line"
```

- ```
-W winservicepanelInstallWizardBean.winServiceQuery="true"
-W winservicepanelInstallWizardBean.accountType="localsystem"
-W winservicepanelInstallWizardBean.userName="YOUR_USER_NAME - Fill in
this value"
-W winservicepanelInstallWizardBean.password="YOUR_PASSWORD - Fill in
this value"
```
5. Open a command window, and change the directory to <Monitor\_Install\_Root>\WAS\WAS\
  6. Run the silent WebSphere Application Server installation using the following invocation:  
install -options "<Temp\_Dir>\responsefile.nd.txt" -silent

## Monitor Server installation fails because of errors in stopping and starting the WebSphere Application Server

The Monitor Server installation process must stop and start the WebSphere Application Server several times during installation. If the WebSphere Application Server does not stop successfully, the installation process will fail.

To check for this problem, look for the following error in your <WebSphere\_Process\_Server\_Home>\profiles\monitor\logs\server1\stopServer.log or SystemOut.log:

*WsServerStop E ADMU3007E: Exception  
com.ibm.websphere.management.exception.ConnectorException: ADMC0016E: The system  
cannot create a SOAP connector to connect to host <Host\_Name> at port <Port\_Number>*

If you see this error or other errors associated with stopping the server, refer to the WebSphere Application Server Version 6.0 Information Center for troubleshooting information.

After you have resolved the problem, you must uninstall and reinstall the Monitor Server.

## AIX and CD-ROM device activity

If you are installing the WebSphere Business Monitor prerequisites from CDs on an AIX system, you should ensure that the CD-ROM device has ceased all activity before you load the prerequisite CDs.

Make sure that the activity light on the CD-ROM device remains off before you click **OK** on the **Load CD** window:

*Insert the CD with the following label in your CD-ROM drive: <Prerequisite\_CD\_Name>*

Clicking **OK** before the CD-ROM device becomes inactive may cause an information box to be displayed. The information box displays the following message:

*The CD labeled <Prerequisite\_CD\_Name> was not found in CD drive (current CD is mounted to <CD mount point>). Insert the correct CD into the CD-ROM drive and restart this prerequisite installation.*

## Repository database tables used for other databases and components installation

During the installation of WebSphere Business Monitor components and the creation of the WebSphere Business Monitor databases using the Launchpad, information is written to the Repository database.

The following are the features and tables that are updated:

Table 2.

| Database or component name | Repository database table name       |
|----------------------------|--------------------------------------|
| State database             | Database_Characteristics             |
| Runtime database           | Database_Characteristics             |
| Historical database        | Database_Characteristics<br>Property |
| Dashboard Client           | Monitor_Client                       |

If the tables are not updated:

1. Check the *launchpad-monitor.log* file.
2. Search for "repos command0".
3. See if there are any errors.

### Potential problems:

- You must restart the Launchpad after installing DB2. (Refer to "Restarting DB2 after its installation" for details.)
- On the AIX platform, the full path to *<Parent\_Dir>/CDImageAIX/jvm/jre/bin/java* must have "755" permission.
- Make sure that DB2 is started before you attempt to install any WebSphere Business Monitor components. To start DB2, use the *db2start* command.

## After installation, Launchpad check boxes should be selected and unavailable

When the WebSphere Business Monitor installer finishes installing a selected component, and you return to the Launchpad main window, the check boxes next to the names of the components or databases should be selected and unavailable.

If the check boxes are still available, verify that the *VpdExport* folder exists under your WebSphere Business Monitor installation directory. If the *VpdExport* folder does not exist, you have to uninstall all the installed WebSphere Business Monitor components and delete the *vpd.script* file.

## Restarting DB2 after its installation

You must restart DB2 after you install it, using the Launchpad.

### On the Windows platform:

1. Close the Launchpad and all command windows or Internet Explorer windows.
2. Make sure that DB2 is started before you attempt to install any feature of WebSphere Business Monitor. To start DB2, run the "db2start" command.
3. Restart the Launchpad, and continue with the rest of the installation.

#### On the AIX platform:

1. Exit the Launchpad.
2. Create /.profile, and add this line: . /home/db2inst1/sqllib/db2profile (Note that there is a space between the period and the first slash.)
3. Uncomment the last line from the /.dtprofile
4. Log out.
5. Log back in.
6. To start DB2, run the "db2start" command.
7. Restart the Launchpad, and continue with the rest of the installation.

## A WebSphere Business Monitor database is created successfully, but no database tables are created

During installation of WebSphere Business Monitor, a database was successfully created, but no database tables were created.

This situation can occur if you type the database user ID or password incorrectly on the **Database Creation** panels in the WebSphere Business Monitor installer.

In the <Monitor\_Install\_Dir>\install\logs directory, look at the *db2Create\*\*\*\*Out.log* file, where "\*\*\*\*" is the database type (State, Runtime, Historical, or Repository). Search for the following message:

"SQL30082N Attempt to establish connection failed with security reason "24" ("USERNAME AND/OR PASSWORD INVALID")."

If this error occurs, uninstall the database, and then reinstall it with a valid user ID and password.

## Installation fails when Remote Desktop is used

You can use Terminal Services Remote Desktop to run the WebSphere Business Monitor Launchpad on a Windows operating system to install WebSphere Application Server, WebSphere Process Server, or WebSphere Portal. If the Launchpad shows, upon completion of the installation, that the installation failed and WebSphere Business Monitor is not installed, check that Windows has placed the vpd.properties file in the correct location.

The vpd.properties file is the location where InstallShield registers installed software. On the Windows system, this file is usually placed in the %WINDIR% directory, which is either C:\WINDOWS or C:\WINNT.

In certain cases, the vpd.properties file is placed in %USERPROFILE%\WINDOWS. %USERPROFILE% is usually on C:\Documents and Settings\<User\_Name>. If the vpd.properties file in %WINDIR% was not created or updated during installation, the Launchpad cannot locate the installed products.

To fix this problem, shut down Launchpad, locate the vpd.properties file that was created, and either copy it into %WINDIR% or append it to the vpd.properties file already there. If you know that Terminal Services will be running on the installation machine, run the command `change user /install` from a Windows command prompt before you run the Launchpad. This action will prevent the Windows system from redirecting vpd.properties to the %USERPROFILE% directory.

## Launchpad Installer suspends activity

The WebSphere Business Monitor Launchpad Installer may suspend, or appears to lock up, the operating system during the installation of either the Monitor Server or the Dashboard Client components. Your installation involves remote databases.

There are several reasons for this problem. One possible cause can be a firewall. In most cases, disabling the firewall for the duration of the installation solves the problem. However, certain firewalls can cause problems even when disabled. In this case, you may be able to circumvent the problem by completely uninstalling the firewall for the duration of the installation.

**Note:** The Checkpoint Integrity Flex firewall (v6.0.116) does not support Windows 2003 Server. For more information, please consult the Checkpoint Integrity Web site <http://www.checkpoint.com/products/integrity/index.html>.

## Profile, cell, node, and server fields are not prefilled

In the WebSphere Business Monitor installer, the fields on the **WebSphere Application Server Configuration** panel and the **WebSphere Portal Configuration** panel should be prefilled with profile, cell, node, and server information.

If these fields are not prefilled or contain the wrong information, check the *PCNS.properties* file in the *%TEMP%* directory. If the *PCNS.properties* file does not exist, check the *launchpad-monitor.log* file. Search for "WASpcnsInfo" to see if there are any errors.





---

## Notices and Trademarks

### Notices

IBM may not offer the products, services, or features discussed in this document in all 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:

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

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

INTERNATIONAL BUSINESS MACHINES CORPORATION PROVIDES THIS PUBLICATION "AS IS" WITHOUT WARRANTY OF ANY KIND, EITHER EXPRESS OR IMPLIED, INCLUDING, BUT NOT LIMITED TO, THE IMPLIED WARRANTIES OF NON-INFRINGEMENT, MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE. Some states do not allow disclaimer of express or implied warranties in certain transactions, therefore, this statement may not apply to you.

This information could include technical inaccuracies or typographical errors. Changes are periodically made to the information herein; these changes will be incorporated in new editions of the publication. IBM may make improvements and/or changes in the product(s) and/or 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:

*Lab Director  
IBM RTP Laboratory  
3039 Cornwallis Road  
P.O. BOX 12195  
Raleigh, NC 27709-2195  
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 necessarily 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.

This information may contain examples of data and reports used in daily business operations. To illustrate them as completely as possible, the examples may 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.

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

#### COPYRIGHT LICENSE

This information may contain sample application programs in source language, which illustrates 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.

## **Programming interface information**

Programming interface information, if provided, is intended to help you create application software using this program.

General-use programming interfaces allow you to write application software that obtain the services of this program's tools.

However, this information may also contain diagnosis, modification, and tuning information. Diagnosis, modification and tuning information is provided to help you debug your application software.

Warning: Do not use this diagnosis, modification, and tuning information as a programming interface because it is subject to change.

## **Trademarks and service marks**

The following terms are trademarks or registered trademarks of International Business Machines Corporation in the United States or other countries, or both:

IBM  
IBM (logo)  
WebSphere  
DB2  
Tivoli  
MQSeries  
AIX  
z/OS

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

Intel, MMX, and Pentium are trademarks or registered trademarks of Intel Corporation or its subsidiaries in the United States, other countries, or both.

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

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

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

ALPHABLOX is a registered trademark of Alphablox Corporation in the United States, other countries, or both.

Adobe is trademark of Adobe Systems Incorporated in the United States, other countries, or both.

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