

# HP Business Process Monitor

For the Windows and Linux operating systems

Software Version: 9.23

## Business Process Monitor Deployment Guide

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# Chapter 1: Deploying Business Process Monitor

**Caution:** If you are installing a service pack, before beginning the installation, review the information in the HP BSM Readme file for any last minute notes and limitations for the service pack. Failure to follow procedures listed in the Readme could result in unexpected data loss or failure of the installation process.

You install Business Process Monitor (BPM) on designated host machines. The machines can be located on your local network or on the Internet, and must have http or https access to the BSM Gateway Server (or load balancer, if used). BPM includes BPM Admin, which is the BPM management component.

The number and locations of host machines you use should reflect factors such as the number of transactions you plan to run, the geographic dispersion of typical end-users who access your application, the location of remote servers, the locations of ISPs that provide connectivity to your web site, and so forth. You can always install BPM on additional host machines at a later time.

If you are using secure communication (over SSL) between BPM and the Gateway Server, you must configure BPM to support https communication. For details, see "Communication Using SSL" in the Business Process Monitor Administration Guide.

**Note:**

- The online documentation is best viewed from a browser with Java support. If you do not have Java support on your browser, then you should download the Sun Java plug-in from the [Sun Java web site](http://java.com/en/index.jsp): <http://java.com/en/index.jsp>.
- For details on the compatible versions of BPM and BSM, see "[Compatibility Matrixes](#)" on [page 7](#).

## Chapter 2: Compatibility Matrixes

This section includes the following matrixes for various environments and components supported by BPM versions:

- ["BPM Compatibility Matrix" below](#)
- ["BPM-QuickTest Professional \(QTP\)/Unified Functional Testing \(UFT\) Compatibility Matrix" on the next page](#)
- ["BPM Protocol Support Matrix" on the next page](#)
- ["BPM/VuGen - Citrix Compatibility Matrix" on page 11](#)

In the tables below, ✓ = "supported", and X = "not supported".

### BPM Compatibility Matrix

For each BPM version, the latest supported HP Virtual User Generator (VuGen) version is mentioned. All previous versions, with the exception of VuGen 11.04, are also supported.

Compatibility Matrix	HP Business Service Management 9.x	HP Business Availability Center 8.x
BPM 9.23 (LR Replay 11.50 SP 2)	✓ (Recommended)	✓
BPM 9.22 (LR Replay 11.50 SP 1)	✓ (Recommended)	✓
BPM 9.13 (LR Replay 11 SP 3)	✓ (Recommended)	✓
BPM 9.03 (LR Replay 11 SP 3)	✓ (Recommended)	✓
BPM 9.02 (LR Replay 11 SP 1)	✓ (Recommended)	✓
BPM 9.01 (LR Replay 9.5 SP 2)	✓ (Recommended)	✓
BPM 9.00 (LR Replay 9.5 SP 2)	✓ (Recommended)	✓
BPM 8.03 and later (LR Replay 9.5 SP2)	✓	✓ (Recommended)
BPM 8.02 (LR Replay 9.5)	✓	✓ (Recommended)

Compatibility Matrix	HP Business Service Management 9.x	HP Business Availability Center 8.x
BPM 7.5x (LR Replay 9.1)	✓	✓
BPM 7.0 (LR Replay 9.0)	✓	✓

### BPM-QuickTest Professional (QTP)/Unified Functional Testing (UFT) Compatibility Matrix

Compatibility Matrix	BPM 9.23	BPM 9.22	BPM 9.0x, 9.1x	BPM 8.03, 8.04, 8.05	BPM 8.02	BPM 7.5x	BPM 7.0
UFT 11.50 SP2	✓	X	X	X	X	X	X
QTP 11.0 with patches 00944, 00994, and 00699	✓	✓	X	X	X	X	X
QTP 11.0	X	X	✓	✓	✓	X	X
QTP 10.0	X	X	✓	✓	✓	X	X
QTP 9.5	X	X	X	X	✓	✓	X
QTP 9.1/2	X	X	X	X	X	✓	✓
QTP 9.0	X	X	X	X	X	✓	✓
QTP SAP R/3 7.31	X	X	X	X	X	✓	✓

### BPM Protocol Support Matrix

Protocol	Windows	Linux
.NET	✓	X
Ajax - Click and Script	✓	X
Ajax TruClient	✓	X
Ajax TruClient for Internet Explorer <b>Note:</b> Ajax TruClient for Internet Explorer cannot run on Windows Server 2008 SP2	✓	X
C VUser	✓	✓
Citrix	✓	X



<b>Protocol</b>	<b>Windows</b>	<b>Linux</b>
COM/DCOM	✓	X
CORBA-java	✓	X
DB2 CLI	✓	X
DNS	✓	X
EJB	✓	X
Flex	✓	X
FTP	✓	X
IMAP	✓	X
I-mode	✓	X
Informix	✓	X
acJada	✓	X
JAVA over HTTP	✓	X
JAVA Record\Replay	✓	X
Java VUser	✓	X
JavaScript VUser	✓	X
JMS	✓	X
LDAP	✓	X
MAPI (Microsoft Exchange)	✓	X
Mobile APP (HTML/HTTP)	✓	✓
Mobile TruClient	✓	X
MSSQL Server	✓	X
Multi protocol Web	✓	X
ODBC	✓	X
Oracle (2-tier)	✓	X
Oracle NCA	✓	✓
Oracle Web App 11i	✓	✓
PeopleSoft - 8	✓	X

Protocol	Windows	Linux
POP 3	✓	X
RDP	✓	X
Real	✓	X
RMI-java	✓	X
SAP Click and Script	✓	X
SAP GUI	✓	X
SAP Web	✓	✓
Siebel – Web	✓	X
Siebel DB2 CLI	✓	X
Siebel MSSQL	✓	X
Siebel Oracle	✓	X
Silverlight	✓	X
SMTP	✓	X
SOAP	✓	X
Sybase CtLib	✓	X
Sybase DBLib	✓	X
Terminal Emulation [RTE]	✓	X
Tuxedo 6	✓	X
Tuxedo 7	✓	X
Voice XML	✓	X
WAP	✓	X
Web [HTTP/HTML]	✓	✓
Web Click and Script	✓	X
Windows sockets	✓	X

**Note:** BPM also supports all the protocols available through add-ins for the supported versions of QTP and UFT.

### BPM/VuGen - Citrix Compatibility Matrix

Protocol	Program	Supported Client Version	Supported Server	Supported VuGen/BPM Versions
Citrix ICA	ICA+Nfuse	10.x	MPS 4.0, 4.5	LR 11.03 (BPM 9.13, 9.0x)
		11.x	XenApp 5.0	LR 11.03 (BPM 9.13, 9.0x)
		12.x	XenApp 6.0	LR 11.03 (BPM 9.13, 9.0x)
		13.x	XenApp 6.5	LR 11.51 (BPM 9.22)
		14.x	XenDesktop 5.5	LR 11.52 (BPM 9.23)
			XenDesktop 5.6	LR 11.52 (BPM 9.23)
			Citrix Access Gateway (with Receiver 13.x and above)	LR 11.51 (BPM 9.22) - supports CAG for Citrix Client version 10.200 (or earlier) and Citrix Client version 13.x

## Chapter 3: System Requirements

This section describes the hardware and system requirements for running Business Process Monitor (BPM).

This section includes the following topics:

- ["Hardware and Operating System" below](#)
- ["Other System Requirements" on the next page](#)
- ["BPM on Virtual Platforms" on the next page](#)

### Hardware and Operating System

Component	Minimum	Recommended	High Volume Loaded Systems
Processor	3.00 GHz	3.00 GHz or higher	At least Intel(R) Core(TM)2 DUO CPU 2.40 GHz
Memory	1 GB	2 GB	Minimum 2 GB Recommended: 4 GB or higher
Cache Size	N/A	N/A	At least 4 MB L2 cache
Operating System	<ul style="list-style-type: none"><li>• Red Hat Enterprise Linux Version 6.3 (RHEL 6.3) – 32/64 bit versions</li><li>• Microsoft Windows Server 2008 SP2 (32/64 bit) Standard and Enterprise Editions</li><li>• Microsoft Windows Server 2008 R2 SP1 (64 bit) Standard and Enterprise Editions</li><li>• Microsoft Windows 7 SP1 (32/64 bit)</li><li>• Microsoft Windows Server 2003 R2 SP2 (32 bit) Standard and Enterprise Editions</li><li>• Microsoft Windows XP Professional SP3 (32 bit)</li></ul>		

**Note:** For additional details on sizing for high volume loaded systems, see "Planning Business Process Monitor Capacity" in the Business Process Monitor Administration Guide.

## Other System Requirements

Component	Minimum
Free Hard Disk Space	<p>Minimum 4.0 GB</p> <p>(If the application files and workspace directory are stored on different drives, the application files require a minimum of 1.5 GB and the workspace directory requires a minimum of 2 GB. The required amount of free disk space for the workspace directory varies according to the scale of the implementation. In addition, an extra 500 MB in the temp folder is required for the extraction of the installation files.)</p>
Web Browser	<ul style="list-style-type: none"> <li>• Microsoft Internet Explorer (IE) 10.0</li> <li>• Microsoft Internet Explorer (IE) 9.0</li> <li>• Microsoft Internet Explorer (IE) 8.0</li> <li>• Mozilla Firefox 17.0 ESR</li> <li>• Mozilla Firefox 24.0 ESR</li> </ul> <p><b>Note:</b></p> <ul style="list-style-type: none"> <li>• The browser must be set to accept third-party cookies and allow session cookies.</li> <li>• The browser must be set to enable JavaScript execution.</li> <li>• The browser must allow pop-ups from the BSM application.</li> <li>• IE users must set browser caching to check automatically for newer versions of stored pages.</li> </ul>
Support for WebTrace over Modem	All supported platforms
Oracle Java JDK (including the Java Plug-in)	Version 7u13 and later

## BPM on Virtual Platforms

BPM is supported on ESX 5.0 hypervisor, with the following restrictions:

- Dedicated (not shared) resources for the BPM VMWare instance (CPU cycles, memory, and so forth) are recommended.
- A Gigabit network should be used.

- VMotion and DRS are not supported.
- The total amount of configured resources for all the virtualized environments within the same ESX server (for example, memory or CPU) must not exceed the ESX server's physical resources.
- There is no hardware capacity calculator for determining the number of BPM scripts on a single BPM instance.

# Chapter 4: Installation Requirements

The following topics discuss the requirements and limitations for installation:

- ["Prerequisites for Windows" below](#)
- ["Prerequisites for Linux" on the next page](#)
- ["General Installation Information" on page 18](#)
- ["Details Required During Installation" on page 19](#)
- ["Notes and Limitations" on page 20](#)

## Prerequisites for Windows

The following prerequisite programs are installed as part of the BPM 9.23 installation:

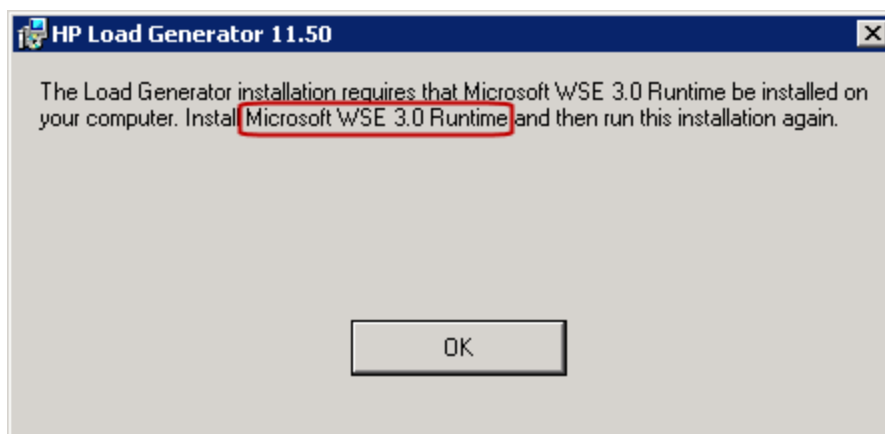
- .NET Framework 3.5 SP1
- .NET Framework 4.0
- Microsoft Data Access Components (MDAC) 2.8 SP1 (or later)
- Microsoft Windows Installer 3.1 or later
- Microsoft Core XML Services (MSXML) 6.0
- Web Services Enhancements (WSE) 2.0 SP3 for Microsoft .NET Redistributable Runtime MSI
- Web Services Enhancements (WSE) 3.0 for Microsoft .NET Redistributable Runtime MSI
- Microsoft Visual C++ 2005 SP1 Redistributable Package MFC Security Update (x86)
- Microsoft Visual C++ 2008 SP1 Redistributable Package MFC Security Update (x86)
- Microsoft Visual C++ 2010 SP1 Redistributable Package MFC Security Update (x86)

If the installation process fails during the install LGSA stage, this may be because the installation failed to install one of these files. In this case you need to install the file manually:

1. Double-click on the following file:

**<BPM\_9.23\_setup.exe directory>\packages\LGSA\HP\_LoadGenerator.msi**

The LGSA 11.50 installation window opens with an error message with details of the file that was not installed successfully.



2. Browse to the following directory:

**<BPM\_9.23\_setup.exe directory>\packages\LGSA\prerequisites**

and run the required installation file.

#### **Example**

`...\packages\LGSA\prerequisites\wse30\MicrosoftWSE3.0Runtime.msi`

3. Run the BPM 9.23 installation again.

A restart may be required after installing some of the prerequisite software. If the installation process prompts you to restart, you need to manually restart the BPM installation after rebooting your computer. To avoid this situation, we recommend that you manually install all the prerequisite software before you install BPM. This is especially important for silent installations.

### **Prerequisites for Linux**

The installation process uses the Yum Package Manager to install the following packages:

- `compat-libstdc++-296.i686`
- `compat-libstdc++-33.i686`
- `glibc.i686`
- `glibc-common.i686`
- `libgcc.i686`
- `libpcap.i686`
- `libstdc++.i686`
- `ncurses.i686`



- ncurses-base.i686
- ncurses-libs.i686

Confirm that all of these packages (with an .i686 extension) were installed correctly. If any of the packages were not installed, identify the required version of the package, and manually download and install it.

1. Open the following log file to view which packages were installed by the Yum Package Manager:

```
/tmp/BPM_prerequisites.log
```

2. If any of the packages listed above are not listed in the log file, use the following command to identify which version you currently have installed:

```
rpm -qa | grep <package name>
```

**Example:**

```
[root@LAB]# rpm -qa | grep glibc-common
```

Returns the following result:

```
glibc-common-2.12-1.107.el6.x86_64
```

This indicates that the **-2.12-1.107.el6.x86\_64** version of this package is currently installed. You will have to install the corresponding .i686 package: **glibc-common-2.12-1.107.el6.i686**

3. If the .i686 package is not installed, download the correct version from the Internet. You can download the correct version from the following sites:

- <http://rpm.pbone.net/>
- <http://rpmfind.net>

**Tip:** To search for the required package, use the package name without the package extension (.i686). For example, search for "**glibc-common-2.12-1.107.el6**" to search for the file **glibc-common-2.12-1.107.el6.i686**.

Please enter searched expression

  [Advanced RPM Search](#)

---

Search for rpms which contain given file name (1) e.g. libhistory.so

New look for FTP search.

Search for rpms by name.

Search for rpms by name in FTP world resources (2) e.g. rpm-4\*i386.rpm

---

Search results for **glibc-common-2.12-1.107.el6** :

Filename	Distribution	File size
<a href="#">glibc-common-2.12-1.107.el6_4.5.x86_64.rpm</a>	RedHat EL 6	14524 kB
<a href="#">glibc-common-2.12-1.107.el6.x86_64.rpm</a>	RedHat EL 6	14523 kB
<a href="#">glibc-common-2.12-1.107.el6.x86_64.rpm</a>	Scientific Linux 6	14523 kB <a href="#">Info available.</a>
<a href="#">glibc-common-2.12-1.107.el6.i686.rpm</a>	RedHat EL 6	14512 kB
<a href="#">glibc-common-2.12-1.107.el6.i686.rpm</a>	RedHat EL 6	14512 kB
<a href="#">glibc-common-2.12-1.107.el6.i686.rpm</a>	Scientific Linux 6	14512 kB <a href="#">Info available.</a>

4. Use the following command to install the package that you downloaded:

```
rpm --force --nodeps -i <package name>.i686.rpm
```

**Example:**

```
rpm --force --nodeps -i glibc-common-2.12-1.107.el6.i686.rpm
```

5. Use the following command to verify that the package was installed correctly:

```
rpm -qa | grep <package name>
```

The result includes all versions of the package that are installed. Make sure that this includes the .i686 version.

**Example**

```
[root@LAB]# rpm -qa | grep glibc-common
```

Returns the following result:

```
glibc-common-2.12-1.107.el6.x86_64  
glibc-common-2.12-1.107.el6.i686
```

## General Installation Information

- The BPM Setup file can be accessed from one of the following locations:

- The BPM installation package.
- The [HP Software Support Online web site](http://www.hp.com/go/hpsupport) (<http://www.hp.com/go/hpsupport>). Go to **Software Support Online > Downloads > Software Patches** and select Application Performance Management as the product. For each version, check for Business Process Monitor as a sub-product.
- The Downloads page in BSM Platform Administration. For details, see the BSM Platform Administration Guide.

**Note:** There may be more recent versions of BPM than the version included in the BSM Downloads page. For details, check the [HP Software Support Online web site](http://www.hp.com/go/hpsupport) (<http://www.hp.com/go/hpsupport>).

- Upgrading to BPM 9.23 requires you to uninstall the previous version of BPM, but provides the option of retaining the existing configuration settings.
- If you change the BSM machine to which a BPM connects (for example, if you use staging during a BSM upgrade), you must redirect the BPM to the new machine. For details, see "Redirecting Business Process Monitor Instances" in the BSM Upgrade Guide.
- During a new installation (with no saved configuration settings), you specify if you want the data collection mechanism used by BPM to run as the system (root) user or as a specific user. Running it as a specific user limits access to resources, settings, and applications located on the local machine. (This may not be true for resources located on remote machines, where a specific user may have different privileges than the local system user.) Note that after installation, you can configure this setting from within BPM Admin. For details, see "Set User Credentials" in the Business Process Monitor Administration Guide.
- Users with advanced knowledge of BSM can install BPM using a silent installation procedure. For details, see "[Running a Silent Installation](#)" on page 36.
- For last-minute technical and troubleshooting information for BPM, refer to the Release Notes file available in:
  - The release download area, for web delivery versions.
  - The [HP Software Product Manuals site](http://h20230.www2.hp.com/selfsolve/manuals) on the HP Software Support web site ([h20230.www2.hp.com/selfsolve/manuals](http://h20230.www2.hp.com/selfsolve/manuals)). To enter the site, you must log on with your HP Passport ID.
  - The root directory on the BSM DVD, for versions delivered on DVD.

## Details Required During Installation

You should have the following information ready when installing BPM:

**Note:** If during installation you select to use configuration settings from a previous BPM

installation, then you are generally not required to supply the following information.

- If you want to run BPM data collection as a specific user, you need the login parameters (for Windows—user name, password, and domain and for Linux—user name and group) for the user.
- Logical names to use for the host name and location (for example, Atlanta). These logical names are used by the first BPM instance (defined as part of the installation process) to register with BSM. They do not have to match the actual machine's host name and location. (Note that Setup provides the actual machine host name as the default value for the **Host name** parameter.)

**Note:** You can choose to skip the default instance configuration during installation and can configure an instance in BPM Admin at a later stage.

- The protocol to be used to access BSM (http or https).
- The name or IP address of the machine on which you installed the BSM Gateway Server, and the port number to be used by BPM to access BSM.

For a distributed deployment, you need the name of the Gateway Server machine, or the load balancer machine behind which servers are installed.

## Notes and Limitations

- If you have an older version of BPM, you need to uninstall it before installing BPM 9.23.
- If you have HP Virtual User Generator (VuGen) installed, you need to uninstall it before installing BPM; BPM 9.23 cannot run on the same machine as VuGen.
- BPM cannot run on the same machine as BSM due to a port conflict.
- If you have QuickTest Professional (QTP) installed on the same machine as BPM, if you do not require QTP you should uninstall it before installing BPM 9.23.

If you do require QTP:

- a. Upgrade QTP to a supported version and install the required patches as described in "[BPM-QuickTest Professional \(QTP\)/Unified Functional Testing \(UFT\) Compatibility Matrix](#)" on page 8.
  - b. Integrate QTP using a clean configuration in the BPM Configuration Wizard as described in "[QuickTest Professional \(QTP\)/Unified Functional Testing \(UFT\) Integration Page](#)" on page 34.
- BPM should not be installed on a network drive.
  - You cannot install BPM to an installation path that contains special characters (for example, # ())

%).

- If BPM is installed on the same machine as any other BSM component, it is highly recommended that you define a host name for BPM that is not the actual name of the machine.
- BPM can be run on a machine with a different language locale to the BSM system, but all relevant entity names (applications, business transaction flows, transactions, and scripts) in BSM must be entered in the same language as the BPM operating system.
- On Linux installations, BPM is installed in a default path (**/opt/HP/BPM**), which you cannot change.
- The logical host name for each BPM instance must be unique within a BSM platform. When two BPM instances are each connected to a different BSM platform, they can use the same logical host name.
- We recommend that you run BPM on Windows platforms as a specific user. You select this option during setup. Note that if you set BPM to run as a specific user on Windows platforms, the user must have Administrator privileges on the local machine. (You can also set BPM to run as a specific user after installation, from BPM Admin. For details, see "Set User Credentials" in the Business Process Monitor Administration Guide.)
- BPM does not support installation via terminal service. Installation must be performed at the destination machine.
- BPM supports basic (http) and NTLM authentication, as well as SSL with client side certification and/or server side certification.

When connecting via proxy, BPM supports basic and NTLM proxy authentication.

For required parameter settings when configuring NTLM authentication, see "Parameters in sconn.cfg" in the Business Process Monitor Administration Guide.

If you have BPM 9.23.build 541 (for 64 bit) or 551 (for 32 bit), the following additional limitations apply:

- You need to save and run the BPM installation from the system drive (%systemdrive%), for example, **C:\**
- The installation path cannot contain spaces.

## Chapter 5: BPM Directories

BPM is installed in and uses a number of main directories, which are referred to extensively throughout this documentation. The following table lists these directories, showing the name used in the documentation, their default path, and a description of what they include:

Directory Name (as used in the documentation)	Description	Operating System	Default Path	Configurable
<BPM installation directory>	The directory in which the BPM application is installed.	Windows	C:\HP\BPM	Yes
<BPM application directory>	The directory containing BPM configuration data.	Windows	<b>Windows 2003 and Windows XP:</b> C:\Documents and Settings\All Users\Application Data\HP\BPM <b>Windows 2008 and Windows 7:</b> C:\ProgramData\HP\BPM	No
<BPM root directory>	Contains both the BPM installation and the BPM configuration data.  (This is similar to a combination of the <BPM installation directory> and the <BPM application directory> for Windows.)	Linux	/opt/HP/BPM	No
<BPM workspace directory>	BPM working directory	Windows Linux	<b>Windows:</b> <BPM application directory>\workspace <b>Linux:</b> <BPM root directory>/workspace	Yes

# Chapter 6: Installing BPM

This procedure describes how to install/upgrade directly on the BPM machine.

You must have administrative privileges on the machine on which you are installing BPM.

The installation process consists of two main parts—the installation of the application and the BPM configuration wizard.

## How to Install BPM

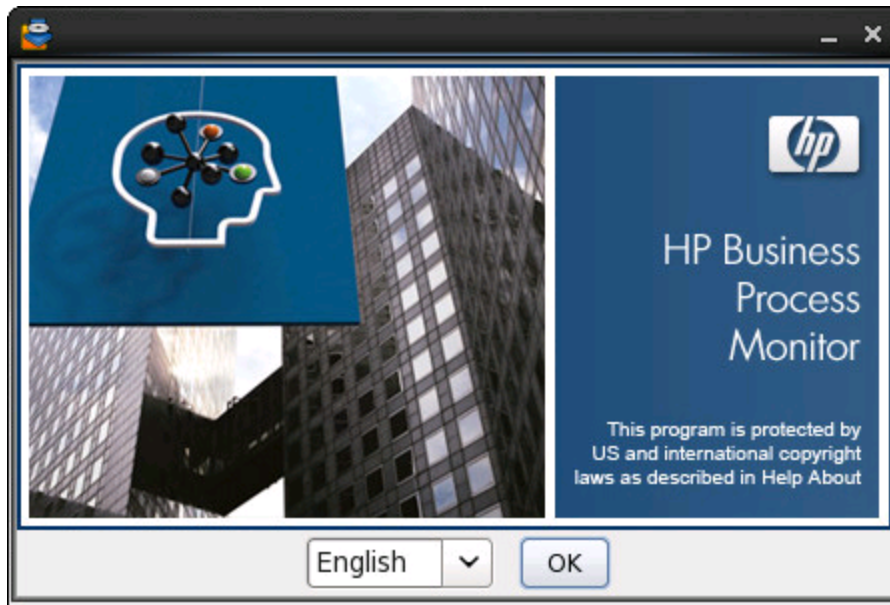
**Tip:** Ensure that the machine on which you are installing BPM is not installing or updating any other software. If other software is being installed or updated on the same machine, this may interfere with the installation of BPM and may necessitate restarting the BPM installation at a later time.

1. Ensure that prerequisites are installed. For details, see ["Installation Requirements" on page 15](#).
2. Save the BPM Setup file on the machine on which you are installing BPM. For more details on the location of the BPM Setup file, see ["General Installation Information" on page 18](#).

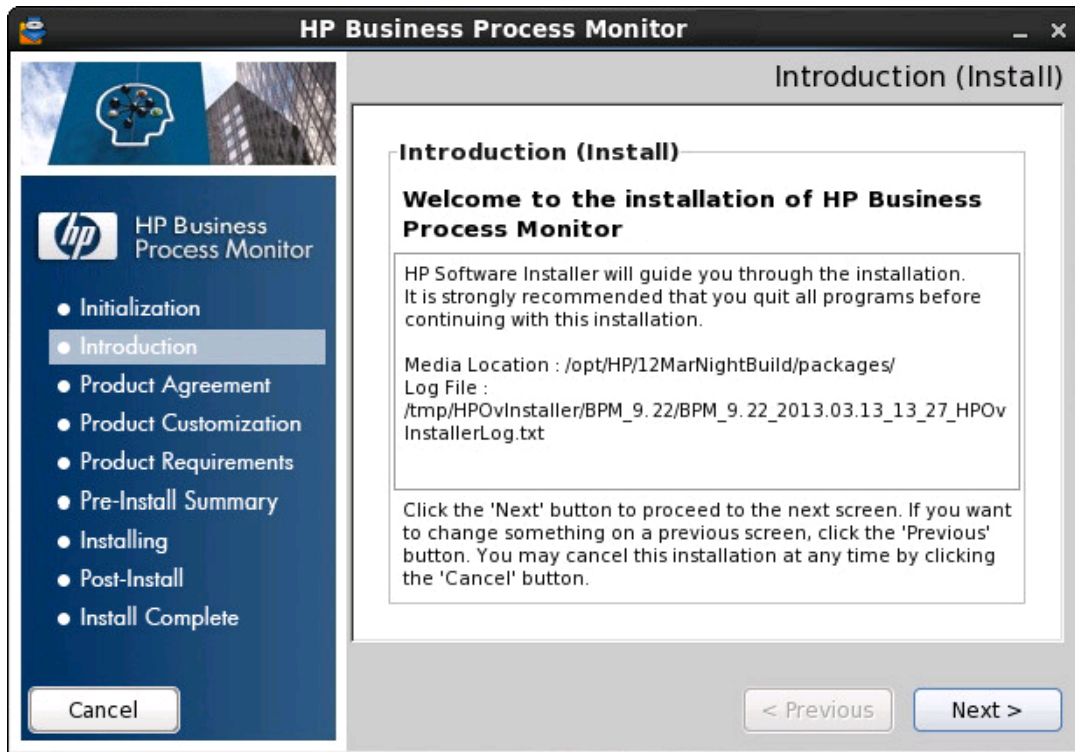
**Note:** The directory name into which you save, and from which you run, the BPM setup program cannot contain spaces.

3. Run the BPM setup program:
  - Linux: **BPM\_setup.sh**
  - Windows: **BPM\_<version>\_setup.exe**

A screen opens requesting a language.

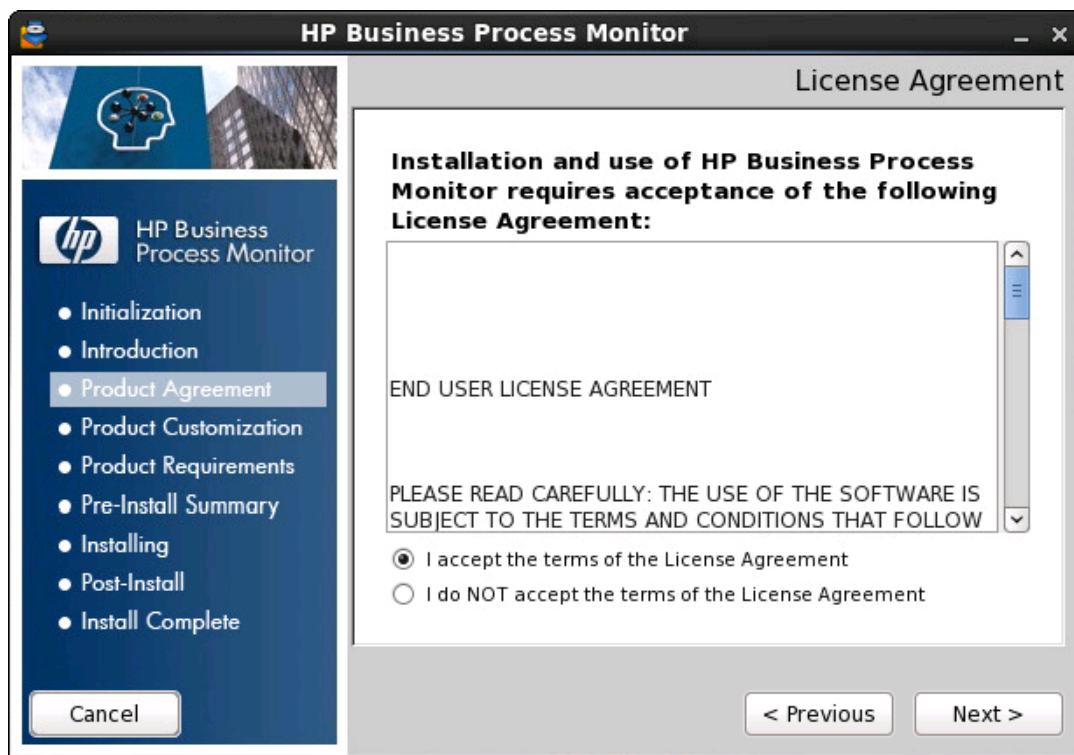


4. Select a language and click **Next**. The Welcome to Installation screen opens.



5. Click **Next** to continue. The license agreement screen opens.





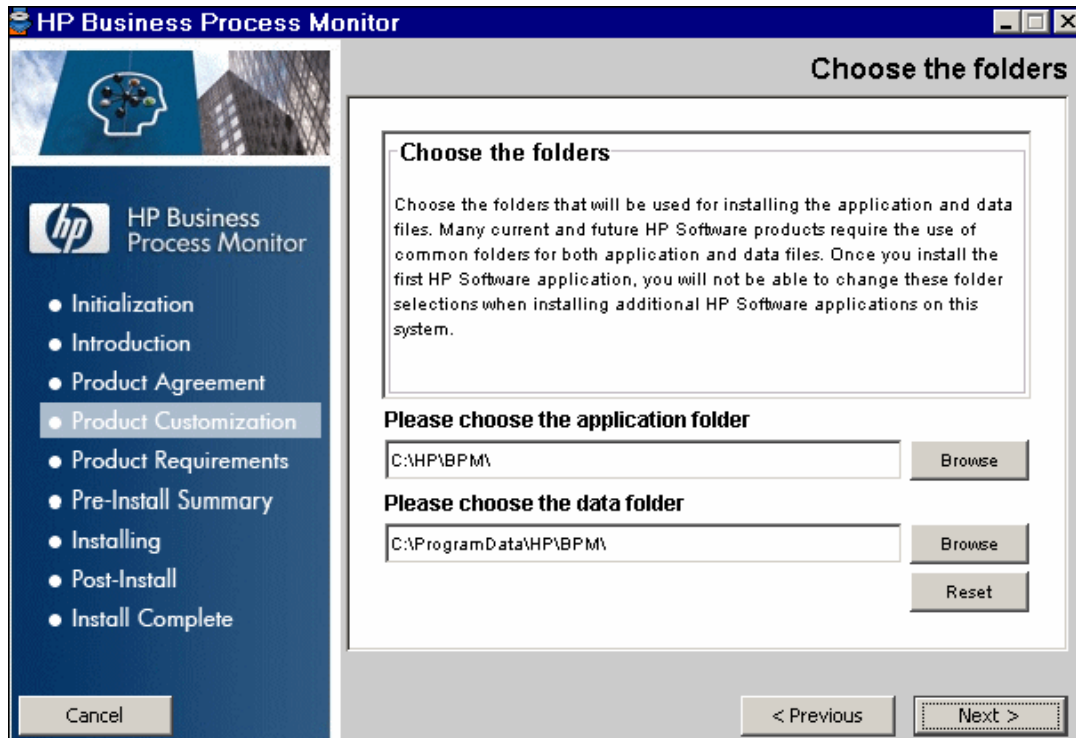
6. Read the BPM License Agreement.

To install BPM, you must accept the terms of the license agreement. Click **Next** to continue.

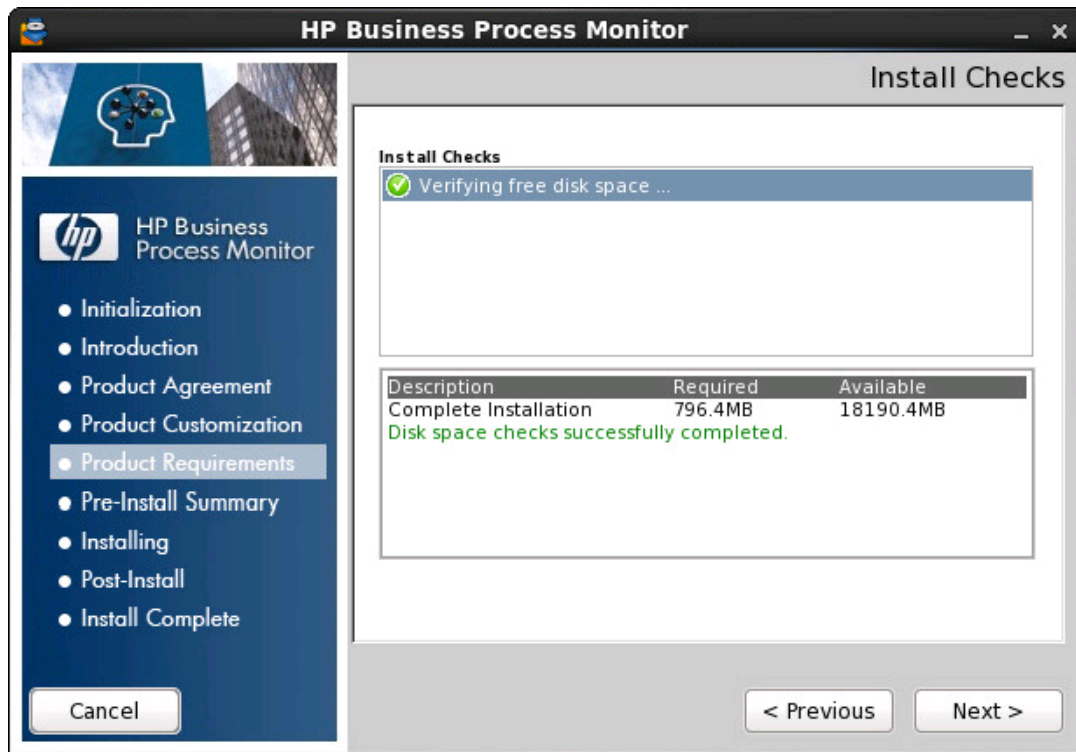
For Windows installations, the Choose Folders screen opens, enabling you to configure the BPM application folder (the directory in which the BPM application is installed) and the BPM data directory (the BPM workspace directory).

**Note:** If the application files and workspace directory are stored on different drives, the application files require a minimum of 1.5 GB and the workspace directory requires a minimum of 2 GB. The required amount of free disk space for the workspace directory varies according to the scale of the implementation. In addition, an extra 500 MB in the temp folder is required for the extraction of the installation files.

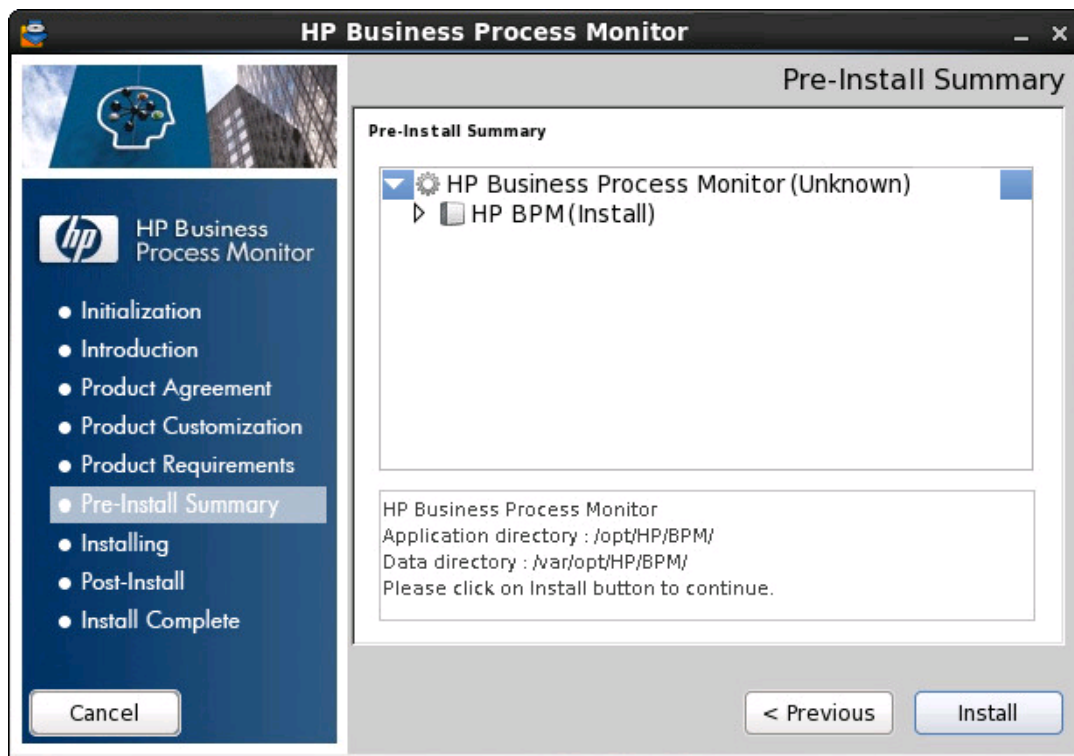
For Linux installations this screen is not displayed as these paths are fixed and you cannot change them.



7. Click **Next** to continue. The Install Checks screen opens.



8. Click **Next** to continue. The Pre-Install Summary screen opens.



9. Click **Install** to continue. The Install Wizard opens the BPM Configuration wizard. For details on the user interface, see ["BPM Configuration Wizard" on page 28](#).

# Chapter 7: BPM Configuration Wizard

The BPM Configuration wizard enables you to configure the settings for a BPM, including the work directory, user mode, and default instance settings.

## To access

The BPM Configuration wizard is automatically launched during a BPM installation, after the setup program has installed the BPM application.

## UI Description

The BPM Configuration wizard comprises the following pages:

- ["Current Settings Page" below](#)
- ["Work Directory Page" on the next page](#)
- ["Run as User Page" on the next page](#)
- ["Server Authentication Page" on page 30](#)
- ["Instance Definition Page" on page 31](#)
- ["QuickTest Professional \(QTP\)/Unified Functional Testing \(UFT\) Integration Page" on page 34](#)
- ["Preview Page" on page 35](#)
- ["Finish Page" on page 35](#)

## Current Settings Page

This page enables you to select whether you want to apply existing configuration settings from a previous BPM installation, or configure new settings.

If no existing configuration settings are detected on the machine on which you are installing BPM, this page is not displayed and the wizard continues with the ["Work Directory Page" on the next page](#).

**Note:** General information about the wizard is available in ["BPM Configuration Wizard" above](#).

The following elements are included on this page:

UI Element	Description
<b>Yes, I want to keep all current settings</b>	Select this option to apply existing settings to the current installation. <b>Note:</b> <ul style="list-style-type: none"><li>• If you select this option, the wizard continues with the <a href="#">"Server Authentication Page" on the next page</a>.</li><li>• If you choose to use configuration settings from a previous installation of BPM, the configured instances are registered to the same BSM Gateway Servers as the previous installation. This means that the same jobs are retrieved, although previous persistency data is not saved.</li></ul>
<b>No, I want to reconfigure agent settings</b>	Select this option to configure new settings.

## Work Directory Page

**Note:** This page appears only on Linux platforms.

This page enables you to select the location of the BPM work directory. Accept the default location, or click **Browse** to select a different location.

If you select a different directory, make sure that you have administrative privileges for the directory.

**Note:** General information about the wizard is available in ["BPM Configuration Wizard" on the previous page](#).

## Run as User Page

This page enables you to configure BPM data collection to run as a system user, or as a specific user. Running it as a specific user limits access to resources, settings, and applications located on the local machine. This may not be true for resources located on remote machines, where a specific user may have different privileges from the local system user.

You can also set BPM to run as a specific user after installation, from BPM Admin. For details, see "BPM Host Machine" in the Business Process Monitor Administration Guide.

**Note:** General information about the wizard is available in ["BPM Configuration Wizard" on the previous page](#).

The following elements are included on this page:

UI Element	Description
<b>Run as system user</b>	Select this option to set BPM data collection to run as a system user.
<b>Run as specific user</b>	<p>Select this option to set BPM data collection to run as a specific user and configure the following parameters:</p> <ul style="list-style-type: none"> <li>• <b>User name.</b> The specific user name. This is a mandatory field of up to 24 characters. The name cannot include spaces, nor any of the following characters: ( ; : " &lt; &gt; * + = \   ? , ).</li> <li>• <b>Password.</b> (For Windows only) The user's password.</li> <li>• <b>Domain.</b> (For Windows only) The domain for the user. The domain name can be up to 67 characters long and can include the following characters: <b>0-9, a-z, A-Z</b>, hyphen (-). The domain name cannot start or end with a hyphen (-), nor can it include spaces.</li> <li>• <b>Group.</b> (For Linux only) The user's group.</li> </ul>

## Server Authentication Page

This page enables you to specify server authentication credentials.

If you have previously configured BPM to run as a specific user and selected to keep current user settings on the Current User page, the options on this page are disabled.

**Note:** General information about the wizard is available in ["BPM Configuration Wizard" on page 28](#).

The following elements are included on this page:

UI Element	Description
<b>No authentication</b>	Select this option to skip to the Instance Definition page without specifying server authentication credentials.
<b>Use basic authentication</b>	Select this option to specify server authentication credentials.

If, in the Current Settings page, you selected to keep current settings from a previous installation, the wizard continues with:

- ["QuickTest Professional \(QTP\)/Unified Functional Testing \(UFT\) Integration Page"](#) on page 34 if QTP/UFT is installed, and only on Windows platforms.
- ["Preview Page"](#) on page 35 if QTP/UFT is not installed.

## Instance Definition Page

This page enables you to define a default instance for the BPM.

You can also define an instance after installation, from BPM Admin. For details, see BPM Instances in the Business Process Monitor Administration Guide.

**Note:** General information about the wizard is available in ["BPM Configuration Wizard"](#) on page 28.

The following elements are included on this page:

UI Element	Description
<b>Skip Instance Definition</b>	Select this option to skip the instance definition.
<b>Define Instance</b>	<p>Select this option to define an instance and configure the following, mandatory parameters:</p> <ul style="list-style-type: none"> <li>• <b>Display name.</b> The display name for the instance in BPM Admin. The display name can be up to 50 characters and can include the following characters: <b>0-9, a-z, A-Z</b>, hyphen (-), underscore (_). The display name cannot start or end with a hyphen (-) or an underscore (_).</li> <li>• <b>Gateway Server URL.</b> The URL of the BSM Gateway Server to which this instance sends collected data. The URL must be in the following format: <code>http (or https)://&lt;Gateway Server name or IP address&gt;:&lt;port number&gt;/topaz</code>. If you do not specify a port number, the default port is used (80 for http and 443 for https).</li> <li>• <b>Location name.</b> The location defined for the instance. The location name can be up to 50 characters and can include the following characters: <b>0-9, a-z, A-Z, ` ~ ! @ # \$ % ^ &amp; * ( ) _ - + = [ ] { }   / ? . , ; (space)</b>.</li> <li>• <b>Host name.</b> The host name defined for the instance. The host name can be up to 50 characters and can include the following characters: <b>0-9, a-z, A-Z, ` ~ ! @ # \$ % ^ &amp; * ( ) _ - + = [ ] { }   / ? . , ' ' ; &lt; &gt; (space)</b>.</li> <li>• <b>Job poll interval.</b> The defined frequency (in minutes) with which BPM polls the database for assigned task, application, and business transaction flow changes. This is an integer positive number of up to 4 digits.</li> </ul>

UI Element	Description
	<ul style="list-style-type: none"><li>• <b>Time poll interval.</b> The defined frequency (in minutes) with which BPM polls BSM for time synchronization. This is an integer positive number of up to 4 digits.</li></ul>
<b>Additional Instance Settings</b>	Click <b>Additional Instance Settings</b> to open the Additional Instance Settings dialog box, where you configure user, authentication, proxy, and SSL settings for the instance. For detail on the user interface, see " <a href="#">Instance Definition Page</a> " on the <a href="#">previous page</a> .

## Additional Instance Settings Dialog Box

This dialog box enables you to define additional settings for a default instance, such as user, authentication, proxy, and SSL settings.

To access, click **Additional Instance Settings** on the Instance Definition page.

The following rules apply when you configure additional instance settings:

- User names can be up to 24 characters long. Names cannot include spaces, nor any of the following characters: ( ; : " < > \* + = | \ ? , ).
- All domain names can be up to 67 characters long and can include the following characters: **0-9**, **a-z**, **A-Z**, hyphen (-). Domain names cannot start or end with a hyphen (-), nor can they contain spaces.
- For more information on supporting SSL communication, see "Communication Using SSL" in the Business Process Monitor Administration Guide.



The following elements are included in this dialog box:

UI Element	Description
<b>Run Instance as User</b>	<p>If you want to configure the instance to run as a specific user, type:</p> <p><b>Windows:</b> The user name, password, and domain.</p> <p><b>Linux:</b> The user name and group.</p> <p><b>Note:</b> To enable the BPM to run as a specific user on Linux, additional system configuration is required as follows:</p> <ol style="list-style-type: none"> <li>1. Open the <b>/etc/sudoers</b> file with a dedicated editor (for example, sudoedit).</li> <li>2. Replace the line Defaults requiretty with Defaults !requiretty.</li> <li>3. Replace the line root ALL=(ALL) ALL with root ALL=(ALL:ALL) ALL.</li> <li>4. At the end of the <b>Defaults env_keep</b> definition section add:           <pre>Defaults env_keep += "PATH M_LROOT QTLIB QTINC PRODUCT_DIR"</pre> <p><b>Note:</b> If there is no line beginning with Defaults env_keep= already in the file, then add the line:</p> <pre>Defaults env_keep = "PATH M_LROOT QTLIB QTINC PRODUCT_DIR"</pre>           (there is no plus sign before the equals sign)</li> </ol> <p>5. Save.</p>
<b>Authentication</b>	<p>The authentication parameters for the BPM instance to support the authentication scheme in use by the server (basic or NTLM authentication). Type the user name, password, and domain name of a user recognized by the BSM Gateway Server.</p>
<b>Proxy Settings</b>	<p>If the BPM instance is accessing the BSM Gateway Server through a proxy server, define authentication parameters for proxy requests (basic or NTLM proxy authentication). Type the user name, password, domain name, and URL for the proxy server.</p> <p><b>Note:</b></p> <ul style="list-style-type: none"> <li>• To configure a user name, you must also configure the proxy server URL.</li> <li>• The proxy URL must be in the following format: http (or https)://&lt;host name or IP address&gt;:&lt;port number&gt;/URI path.</li> <li>• To configure reverse proxy, do not use these proxy settings, but configure the reverse proxy server URL instead of the Gateway Server URL in the <a href="#">"Instance Definition Page" on page 31</a>.</li> </ul>

UI Element	Description
	<ul style="list-style-type: none"> <li>You cannot connect a forward proxy configured for NTLM authentication to a BSM server configured for SSL.</li> <li>If you do not configure a user name and password then no authentication is applied to the proxy.</li> </ul>
<b>SSL Settings</b>	<p>If the BPM instance is communicating with the BSM Gateway Server using SSL, type the required information in the relevant boxes. For details on SSL settings, see "Security Settings Area" in the Business Process Monitor Administration Guide.</p> <p><b>Syntax exceptions:</b> You cannot use a UNC (Uniform Naming Convention) path when configuring the path for SSL files.</p>

## QuickTest Professional (QTP)/Unified Functional Testing (UFT) Integration Page

**Note:**

- If you are integrating UFT, "Unified Functional Testing (UFT)" appears instead of "QuickTest Professional (QTP)".
- This page appears only if QTP/UFT is installed, and only on Windows platforms.

On this page, you can enable BPM integration with QTP/UFT to run QTP/UFT tests. To do this, you must configure a user name and domain for a logged in active user. The tests will be run by this configured user.

**Caution:** If you want to run QuickTest Professional (QTP) or Unified Functional Testing (UFT) tests, do not set BPM (either as an instance or as the whole BPM) to run as a specific user.

If you enable BPM integration with QTP/UFT, the service Uft4Winrt is installed on your machine. If you uninstall BPM, this service is also uninstalled.

If you enable BPM integration with QTP/UFT on a 64-bit machine, Microsoft Visual C++ 2010 SP1 Redistributable Package (x64) is installed.

The following elements are included:

UI Element	Description
<b>Enable BPM integration with QuickTest Professional (QTP) /Unified Functional Testing (UFT)</b>	Select this option to enable BPM integration with QTP/UFT.

UI Element	Description
<b>User name</b>	You must enter a user name in this field. The user name must be for an active logged in user. The tests will be run by this configured user.  <b>Note:</b> This user must have full permissions for BPM. For details, see "How to set full user permissions on a Windows platform" in the Business Process Monitor Administration Guide.
<b>Domain</b>	Enter the domain of the machine in this field.

General information about the wizard is available in ["BPM Configuration Wizard" on page 28](#).

## Preview Page

This page enables you to view a summary of the configured settings before they are saved. Click **Finish** to save the configuration and continue, or click **Back** to modify any of the settings.

**Note:** General information about the wizard is available in ["BPM Configuration Wizard" on page 28](#).

## Finish Page

This page displays a message about the success of the installation. Click **Close** to exit from the configuration wizard.

After Setup successfully completes the installation process, BPM is added as a daemon and launched on the machine. For details on stopping and starting BPM manually, see "How to Run BPM" in the Business Process Monitor Administration Guide.

**Note:** General information about the wizard is available in ["BPM Configuration Wizard" on page 28](#).

# Chapter 8: Running a Silent Installation

You can use a silent installation procedure to run the BPM Setup. A silent installation is an installation that is performed automatically, without the need for user interaction. Instead, all configuration parameters are allocated predetermined values that are stored in a configuration xml file.

This section includes:

- ["Silent Installation Overview" below](#)
- ["How a Silent Installation Assigns Values" below](#)
- ["Silent Installation Prerequisites" on the next page](#)
- ["How to Run a Silent Installation" on page 38](#)
- ["Configuring the bpm\\_install\\_config.xml File" on page 39](#)

## Silent Installation Overview

There are three different types of silent installation:

- Using the silent installation default settings (when there is no configuration file or previous settings).
- Using previous settings.
- Using an xml configuration file. For this type on silent installation, do the following:
  - a. Create a silent installation configuration file with predefined settings for all the hosts you are installing.
  - b. Copy the BPM setup program and the silent installation xml configuration file to each of the target host machines.
  - c. Run the silent installation on each of the target host machines.

## How a Silent Installation Assigns Values

You can configure predetermined values to be used by a silent installation for a specific BPM machine in the **<BPM application directory>\bpm\_install\_config.xml** file located on the machine on which you run the silent installation.

If the silent installation locates the **bpm\_install\_config.xml** file and the file contains values to be used for the specific machine, the silent installation uses these values.

If the silent installation cannot locate the **bpm\_install\_config.xml** file, or the file does not contain values to be used for the specific machine, the silent installation looks for configuration settings

from a previous installation of BPM. If these settings are detected, the silent installation uses these settings.

If a silent installation cannot locate the **bpm\_install\_config.xml** file, or the file does not contain values to be used for the specific machine, and does not detect configuration settings from the previous installation of BPM on the machine, it uses default settings. The default settings configure BPM to run as a system user and locate the workspace directory in the default BPM application directory. When default settings are used, a default instance is not defined during the installation and you must define the instance manually later. For details on defining an instance, see "Create New Instance" in the Business Process Monitor Administration Guide.

For details on configuring the **bpm\_install\_config.xml** file, see ["Configuring the bpm\\_install\\_config.xml File" on page 39](#).

## Silent Installation Prerequisites

Before you begin a silent installation of BPM, make sure of the following:

### Install Prerequisites

For details, see ["Installation Requirements" on page 15](#)

### Uninstall Previous Versions of BPM

You must uninstall any previous versions of BPM from each machine on which you are installing BPM. For details on uninstalling Business Process Monitor, see:

- **Windows:** ["Uninstalling BPM on a Windows Platform" on page 45](#).
- **Linux:** ["Uninstalling BPM on a Linux Platform" on page 46](#).

### Assign Administration Privileges

You must have administration privileges for each machine on which you are installing BPM.

### Configure the bpm\_install\_config.xml File

If you want to use a silent installation to install BPM on multiple machines, or if you want to configure specific settings to be used by a silent installation, edit the **bpm\_install\_config.xml** file accordingly. After installing BPM, the template for this file is located in:

**<BPM application directory>** \ServletContainer\webapps\ROOT\help\BPMWeb\Content\sample\_files\.

You should rename the configured template **bpm\_install\_config.xml** and place it in the **<BPM installation directory>** or the **<BPM application directory>** on the machine on which you run the silent installation. (Create this directory manually if it does not already exist.)

If you have not yet installed BPM and want to run a silent installation, create a **bpm\_install\_config.xml** file using the sample (for details, see ["Configuring the bpm\\_install\\_config.xml File" on page 39](#)) and locate it in the same directory as the BPM setup file on the machine on which you are running the installation.

For details on configuring the **bpm\_install\_config.xml** file, see ["Configuring the bpm\\_install\\_config.xml File" on page 39](#).

## How to Run a Silent Installation

You run a silent installation using the regular setup program.

### To run a silent installation:

1. Install prerequisites. For details, see ["Installation Requirements" on page 15](#).
2. Save the BPM Setup file on the machine on which you are installing BPM. For more details on the location of the BPM Setup file, see ["General Installation Information" on page 18](#).
3. Extract the files from the downloaded file to a location of your choice on the machine on which you are installing BPM. To extract the installation files, run the BPM setup program and once the files are extracted, terminate the installation process.
4. Assign **Execute** privileges to the all the files in the directory containing the BPM setup files.
5. From the extracted files, run the setup program located in the language directory relevant for your system. For example, to run the setup.exe program from the English language directory, use:

- **Windows:** <extracted files path>/BPM\_<version>\_setup.exe -i silent
- **Linux:** <extracted files path>/BPM\_<version>\_setup.bin -i silent

The following command line options are available when running a silent installation:

-DLOGFILE=<text log file name including path>
-DLOGLEVEL=debug info warn error fatal (default level is info)
-DMEDIAPATH=<directory path to packages>
-DUNINSTALL=true (valid only for maintenance mode)
-DREPAIR=true (valid only for maintenance mode)
-DSHOWRELEASENOTES=true false
-DINSTALLDIR=<InstallDir> (Windows installations only)
-DDATADIR=<DataDir> (Windows installations only)
-DGROUP=<valid group name>
-DSKIPCHECKS=true (causes all requirement checks to be skipped)

-DSKIPINITIALCHECKS=true (skips the initial checks including JRE, Admin privileges check, and so forth)

-DSKIPALL (skips both the initial and the requirements checks)

6. To verify that the installation has successfully completed, view the installation log files. For details, see ["Installation Log Files" on page 47](#).

## Configuring the bpm\_install\_config.xml File

The **bpm\_install\_config.xml** file is used by a silent installation to obtain the parameter values required during the installation of a specific BPM machine. For details on how the silent installation assigns values, see ["How a Silent Installation Assigns Values" on page 36](#).

The **bpm\_install\_config.xml** file can contain parameter values for multiple machines, enabling you to create one file which you can copy to all the machines on which you want to run a silent installation. Only the values for the specific machine on which the installation runs are used.

This section includes the following topics:

- ["Example of the xml Schema File \(.xsd\) Structure" below](#)
- ["Description of the xml Schema File \(.xsd\) Structure" on the next page](#)
- ["Sample Files" on page 44](#)

### Example of the xml Schema File (.xsd) Structure

```
<xs:schema attributeFormDefault="unqualified" elementFormDefault="qualified"
  xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:element name="hosts">
    <xs:complexType>
      <xs:sequence>
        <xs:element name="authentication" maxOccurs="1" minOccurs="0">
          <xs:complexType>
            <xs:attribute name="username" type="xs:string" use="required" />
            <xs:attribute name="password" type="xs:string" use="required"/>
          </xs:complexType>
        </xs:element>
        <xs:element name="host" maxOccurs="unbounded" minOccurs="0">
          <xs:complexType>
            <xs:sequence>
              <xs:element type="xs:string" name="workspacePath"/>
              <xs:element name="instances">
                <xs:complexType>
                  <xs:sequence>
                    <xs:element name="instance" maxOccurs="unbounded" minOccurs="1">
                      <xs:complexType>
                        <xs:sequence>
                          <xs:element type="xs:string" name="displayName"/>
                          <xs:element type="xs:anyURI" name="serverUrl"/>
                          <xs:element type="xs:string" name="locationName"/>
                          <xs:element type="xs:string" name="hostName"/>
                          <xs:element type="xs:byte" name="timeInterval"/>
                          <xs:element type="xs:byte" name="jobInterval"/>
                          <xs:element name="ssl" minOccurs="0"/>
                        </xs:sequence>
                      </xs:complexType>
                    </xs:element>
                  </xs:sequence>
                </xs:complexType>
              </xs:element>
            </xs:sequence>
          </xs:complexType>
        </xs:element>
      </xs:sequence>
    </xs:complexType>
  </xs:element>
```

```

        <xs:complexType>
            <xs:sequence>
                <xs:element type="xs:string" name="privatekeyPassword"/>
                <xs:element type="xs:string" name="truststorePath"/>
                <xs:element type="xs:string" name="truststoreType"/>
                <xs:element type="xs:string" name="truststorePassword"/>
                <xs:element type="xs:string" name="keystorePath"/>
                <xs:element type="xs:string" name="keystoreType"/>
                <xs:element type="xs:string" name="keystorePassword"/>
                <xs:element type="xs:string" name="SSLValidateTrusted"/>
                <xs:element type="xs:string"
                    name="SSLValidateCertExpiration"/>
                <xs:element type="xs:string"
                    name="SSLValidateHostName"/>
            </xs:sequence>
        </xs:complexType>
    </xs:element>
    <xs:element name="proxy" minOccurs="0">
        <xs:complexType>
            <xs:sequence>
                <xs:element type="xs:string" name="username"/>
                <xs:element type="xs:string" name="password"/>
                <xs:element type="xs:string" name="domain"/>
                <xs:element type="xs:string" name="url"/>
            </xs:sequence>
        </xs:complexType>
    </xs:element>
</xs:sequence>
</xs:complexType>
</xs:element>
</xs:sequence>
</xs:complexType>
</xs:element>
</xs:sequence>
<xs:attribute type="xs:string" name="hostName"/>
</xs:complexType>
</xs:element>
</xs:sequence>
</xs:complexType>
</xs:element>
</xs:schema>
    
```

### Description of the xml Schema File (.xsd) Structure

Parent Element	Element	Sub Element
authentication. Tomcat basic authentication	<b>username.</b> Tomcat user name.	
	<b>password.</b> Tomcat password	
<b>host.</b> The name or IP address of the machine for which the parameter values are valid.		
<b>Note:</b> The host name cannot be in Fully Qualified Domain (FQDN) format.		
<b>workspacePath.</b> The path of the workspace directory of the BPM installation. For example: /opt/HP/BPM/workspace.		



Parent Element	Element	Sub Element
<p><b>runBpmAsUser.</b> For running the BPM as a specific user instead of as a system user:</p>	<p><b>username.</b> The specific user name. The name can contain up to 24 characters and cannot include spaces, nor any of the following characters: ( ; : " &lt; &gt; * + = \   ? , ).</p>	
	<p><b>password</b> (for Windows). The specific user's password .</p>	
	<p><b>domain.</b> The domain for the user . The domain name can be up to 67 characters long and can include the following characters: <b>0-9, a-z, A-Z</b>, hyphen (-). The domain name cannot start or end with a hyphen (-), nor can it include spaces.</p>	
	<p><b>group</b> (for Linux). The Linux group for the user.</p>	
<p><b>instance.</b> Default instance settings. For details on BPM instances, see "Business Process Monitor Instance Page" in the Business Process Monitor Administration Guide.</p>	<p><b>displayName.</b> The display name for the instance in BPM Admin. The display name can be up to 50 characters and can include the following characters: <b>0-9, a-z, A-Z</b>, hyphen (-), underscore (_). The display name cannot start or end with a hyphen (-) or an underscore (_).</p>	
	<p><b>serverUrl.</b> The URL of the BSM Gateway Server to which this instance sends collected data. The URL must be in the following format: http (or https)://&lt;Gateway Server name or IP address&gt;:&lt;port number&gt;/topaz. If you do not specify a port number, the default port is used (80 for http and 443 for https).</p>	
	<p><b>locationName.</b> The location defined for the instance. The location name can be up to 50 characters and can include the following characters: <b>0-9, a-z, A-Z, ` ~ ! @ # \$ % ^ &amp; * ( ) _ - + = [ ] { }   / ? . , ; ; (space)</b>.</p>	
	<p><b>hostName.</b> The host name defined for the instance. The host name can be up to 50 characters and can include the following characters: <b>0-9, a-z, A-Z, ` ~ ! @ # \$ % ^ &amp; * ( ) _ - + = [ ] { }   / ? . , ' ' ; ; &lt; &gt; (space)</b>.</p>	
	<p><b>timeInterval.</b> The defined frequency (in minutes) with which BPM polls BSM for time synchronization. This is an integer positive number.</p>	
	<p><b>jobInterval.</b> The defined frequency (in minutes) with which BPM polls the database for assigned task, application, and business transaction flow changes. This is an integer positive number of up to 4 digits.</p>	

Parent Element	Element	Sub Element
<b>instance</b>	<p><b>ssl.</b> Select if the BPM instance is communicating with the BSM Gateway Server using SSL.</p> <p>For more information on supporting SSL communication, see "Communication Using SSL" in the Business Process Monitor Administration Guide.</p>	<p><b>privatekeyPassword.</b> The password for the private key located in the keystore file.</p> <p><b>truststorePath.</b> The full path and file name of the truststore file containing the trusted root certificates. The truststore file must be a java keystore file (JKS).</p> <p><b>Note:</b> Configure this field only if you do not want to use the default JRE truststore (/opt/HP/BPM/JRE/lib/security/ca certs).</p> <p><b>truststoreType.</b> The type of truststore file, Use JKS only.</p> <p><b>truststorePassword.</b> The password for the truststore file.</p> <p><b>keystorePath.</b> The full path and file name of the keystore file containing the private keys and client certificate. The keystore file must be either a java keystore file (JKS) or PKCS#12 type file.</p> <p><b>Note:</b></p> <ul style="list-style-type: none"> <li>• Configure this field only if BSM connection requires a client certificate.</li> <li>• Request a client certificate from your CA with keys marked as exportable.</li> </ul> <p><b>keystoreType.</b> The type of keystore file—JKS or PKCS#12.</p> <p><b>keystorePassword.</b> The password for the keystore file.</p>

Parent Element	Element	Sub Element
		<p><b>SSLValidateTrusted.</b> Set to <b>true</b> to validate that the authority that issued the BSM server certificate is trusted by BPM (that is, the certificate of the issuing authority has been imported to the BPM truststore).</p> <p><b>SSLValidateCertExpiration.</b> Set to <b>true</b> to validate that the certificate is current.</p> <p><b>SSLValidateHostName.</b> Set to <b>true</b> to validate that the configured BSM Gateway Server host name matches the name in the server certificate.</p>
<b>instance</b>	<p><b>proxy.</b> Select if the BPM instance is accessing the BSM Gateway Server through a proxy server.</p> <p><b>Note:</b></p> <ul style="list-style-type: none"> <li>To configure reverse proxy, do not use these proxy settings, but configure the reverse proxy server URL instead of the Gateway Server URL in the <b>serverUrl</b> element of the instance.</li> <li>You cannot connect a forward proxy configured for NTLM authentication to a BSM server configured for SSL.</li> </ul>	<p><b>username.</b> The user name for the proxy server.</p> <p><b>Note:</b> To configure a user name, you must also configure the proxy server URL.</p> <p><b>password.</b> The password for the user.</p> <p><b>domain.</b> The domain of the user.</p> <p><b>url.</b> The URL for the proxy server.</p> <p><b>Note:</b> The proxy URL must be in the following format: http (or https)://&lt;host name or IP address&gt;:&lt;port number&gt;/URI path.</p>
<b>instance</b>	<p><b>runAsUser.</b> Set to run the instance as a specific user.</p>	<p><b>username.</b> The specific user name.</p> <p><b>password</b> (for Windows). The password for the specific user .</p> <p><b>domain.</b> The domain of the specific user (for Windows).</p> <p><b>group</b> (for Linux). The group of the specific user.</p>

**Note:** To configure parameter values for multiple BPM machines, create a new `<host></host>` section for each machine.

## Sample Files

Sample files are located in:

- **Windows:** `\\<%TEMP%>\HP Business Process Monitor <BPM VERSION>\MSI\TARGETDIR\ServletContainer\webapps\ROOT\help\BPMWeb\Content\sample_files`
- **Linux:** `/opt/HP/BPM/ServletContainer/webapps/ROOT/help/examples` directory after you download and extract the BPM setup file:
  - **silent\_installation.xsd.** A sample .xsd file.
  - **bpm\_install\_config-simple.xml.** A sample .xml file that contains a simple configuration.
  - **bpm\_install\_config-ssl.xml.** A sample .xml file that contains a basic configuration including ssl settings.
  - **bpm\_install\_config-proxy.xml.** A sample .xml file that contains a basic configuration including proxy settings.
  - **bpm\_install\_config-complicated.xml.** A sample .xml file that contains a basic configuration including both ssl and proxy settings.

For details on downloading and extracting the BPM setup file, see "[How to Run a Silent Installation](#)" on page 38.

# Chapter 9: Uninstalling BPM

This chapter includes the following topics:

- ["Uninstalling BPM on a Windows Platform" below](#)
- ["Uninstalling BPM on a Linux Platform" on the next page](#)

## Uninstalling BPM on a Windows Platform

The uninstall process saves configuration settings on the machine for future installation.

The following procedures relate to uninstalling BPM version 9.23 on a Windows platform. For details on uninstalling earlier versions on Windows platforms, refer to the relevant version documentation.

### To run a regular uninstall for BPM

1. On the host machine, shut down BPM Admin and BPMs (select: **Start > Programs > HP Business Process Monitor > Stop HP Business Process Monitor Service**).
2. Wait two minutes.
3. Run the BPM uninstall program from the **Add/Remove Programs** option in the **Control Panel** (select **Start > Settings > Control Panel > Add/Remove Programs > HP Business Process Monitor**, and click **Change/Remove**).
4. Restart the machine if prompted to do so.
5. If you do **not** want to save the configuration settings for use by a future installation, delete the BPM root installation directory from the machine and also, if it was not deleted automatically by the uninstall procedure, the **workspace** directory.

**Note:** If you do want to save the configuration settings for use by a future BPM installation, do **not** delete the **<BPM application directory>/config** directory from the machine.

### To run a silent uninstall for BPM on a Windows platform using MSI

1. Locate the **HP\_BPM.msi** file, which is included in the BPM setup files for Windows. For details on downloading and extracting files from the BPM setup file for Windows, see ["How to Run a Silent Installation" on page 38](#).
2. Open the command prompt window (**Start > Run > cmd**) and enter the following command:

```
<BPM installation directory>/Uninstall/BPM/BPM_<version>_setup.exe -i silent  
-DSKIPINITIALCHECKS=true -DSKIPCHECKS=true
```

3. If you do **not** want to save the configuration settings for use by a future installation, delete the BPM root installation directory from the machine and also, if it was not deleted automatically by the uninstall procedure, the **workspace** directory.

**Note:** If you do want to save the configuration settings for use by a future BPM installation, you must not delete the **<BPM application directory>/config** directory from the machine.

4. Ensure that the uninstall has finished successfully by checking that HP Business Process Monitor is not included in the list of installed programs in the Windows Control Panel.

## Uninstalling BPM on a Linux Platform

The uninstall process saves configuration settings on the machine for future installation.

### To run a regular uninstall for BPM

1. Run the BPM uninstall program:

```
<BPM root directory>/Uninstall/BPM/BPM_setup.sh
```

**Note:** Make sure that you have **Execute** permission for all the files in the directory.

2. If you do **not** want to save the configuration settings for use by a future BPM installation, delete the BPM root installation directory from the machine and also, if it was not deleted automatically by the uninstall procedure, the **workspace** directory.

**Note:** If you do want to save the configuration settings for use by a future BPM installation, you must not delete the **<BPM root directory>/config** directory from the machine.

### To run a silent uninstall for BPM

1. On the console, run the following command:

```
bash <BPM root directory>/Uninstall/BPM/BPM_setup.sh -i silent
```

2. If you do **not** want to save the configuration settings for use by a future BPM installation, delete the BPM root installation directory from the machine and also, if it was not deleted automatically by the uninstall procedure, the **workspace** directory.

**Note:** If you do want to save the configuration settings for use by a future BPM installation, you must not delete the **<BPM root directory>/config** directory from the machine.

# Chapter 10: Installation Log Files

The installation log files that are created when you deploy BPM can help you troubleshoot installation problems. The following installation log files are available:

## Common installation logs

- Installation log files are located in **<Temp directory>\HPOvInstaller\BPM\_<version>**.

The Temp directory is:

- **Windows.** %TEMP%
- **Linux.** /tmp

- Individual installation package log files are in the following format:

**Package\_<Package type>\_<Package name>\_install.log** (for example, **Package\_msi\_HPBPmCore\_install.log**).

- The installer log file name is in the following format:

**BPM\_<Version>\_<Installation Date>\_HPOvInstallerLog.html** or **BPM\_<Version>\_<Installation Date>\_HPOvInstallerLog.txt** (for example, **BPM\_9.23\_2013.09.21\_HPOvInstallerLog.html**).

## Prerequisite installation logs

The prerequisite installation logs are as follows:

### Windows:

- **<BPM\_9.23\_setup.exe directory>\packages\Prerequisites\_installation.log**
- **<BPM Installation directory>\install.log**

### Linux:

- **/tmp/BPM\_prerequisites.log**
- **<BPM Installation directory>/install.log**

## Extended Logging

You can configure extended logging to obtain more detailed log file entries during installation. To configure extended logging, add **-DLOGLEVEL=debug** to the installation command. For example:

```
./BPM_setup.sh -DLOGLEVEL=debug
```

## Configuration Wizard Log Files

The following log files are created by the Configuration wizard and are located in the **<BPM installation directory>**:

File Name	Description
<b>BPM_&lt;Version&gt;_&lt;Installation Date&gt;_&lt;Installation Time&gt;_HPOvInstallerLog.txt</b>	The log file that contains all log messages from the Configuration wizard.
<b>installation\logs\bpm_post_install.log</b>	The log file that contains post-install log messages from the Configuration wizard.



# Chapter 11: Troubleshooting

This section describes common problems that you may encounter when deploying BPM, and their solutions, as well as the log files created during the deployment.

## Windows Platforms

This section describes troubleshooting problems when installing BPM on a Windows platform.

### Cannot Set BPM to Run as a Different User

If you (mistakenly) set the whole BPM to run as a specific user for a user that does not have write permissions to the **<BPM application directory>\config** directory, BPM fails to run, and you are unable to switch to a different user using the **Set BPM as User** option in BPM Admin. To set a different user, use the following procedure:

1. Stop BPM.
2. Open the **<BPM installation directory>\yajsw\conf\wrapper.conf** file in a text editor.
3. Locate the following parameters and ensure that they have no value and are commented out (by a preceding hash sign #):
  - **#wrapper.app.account=**
  - **#wrapper.app.password=**
4. Save the file and restart BPM. BPM now runs as a system user.
5. From BPM Admin, set BPM to run as a new specific user (with Administrator permissions).

### Error Message when Installing Prerequisites on Windows 7

When installing BPM on Windows 7, you may receive an error message during the installation of the prerequisites. In such cases, carry out the following procedure and then restart the installation:

1. Select **Start > Control Panel > Administrative Tools > Local Security Policy > Software Restriction Policies**.
2. If no software restriction policies are defined, right-click the Software Restriction Policies node and select **New Software Restriction Policy**.
3. Double-click **Enforcement**.
4. Select **All users except local administrators**.
5. Click **OK**.
6. Reboot the machine.

## BPM Does not Start After Upgrade

If the old BPM was set to run as a specific user, during the BPM upgrade procedure, the migration of the specific user's password may fail. This prevents the upgraded BPM from starting. To fix this issue:

1. On the upgraded BPM machine, edit the **<BPM installation directory>\yajsw\conf\wrapper.conf** file.
2. Set the following **Application Account** attributes to blank values and comment them out:
  - `#wrapper.app.account=`
  - `#wrapper.app.password=`
3. Start BPM

**Caution:** The application will run with SYSTEM permissions.

4. Access the BPM web console.
5. Configure the required specific user credentials in the Set User Credentials dialog box.

## We appreciate your feedback!

If you have comments about this document, you can [contact the documentation team](#) by email. If an email client is configured on this system, click the link above and an email window opens with the following information in the subject line:

**Feedback on Business Process Monitor Deployment Guide (Business Process Monitor 9.23)**

Just add your feedback to the email and click send.

If no email client is available, copy the information above to a new message in a web mail client, and send your feedback to [SW-doc@hp.com](mailto:SW-doc@hp.com).