

HP Business Service Management

For the Windows and Linux Operating Systems

Software Version: 9.24

BSM Patch Installation Guide

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Installing the Latest BSM 9.2x Patch

BSM releases different types of patches such as minor-minor releases (for example 9.22) and build patches, sometimes referred to as IPs (for example 9.22.071).

This procedure describes the standard workflow of how to install the latest BSM patch on top of a running BSM environment and it involves some downtime. If this is problematic, and you have a high availability environment, you can minimize the downtime when installing a patch by using the alternative procedure: "[Installing a Patch with Low Downtime](#)" on page 10.

Note: If Monitoring Automation or User Engagement was installed prior to applying the 9.2x patch, it will automatically be updated. You can see the new Monitoring Automation version in **HPBSM/dat/opr_ma_version.txt** and the new User Engagement version in **HPBSM/dat/opr_exc_version.txt**. You can see both the new Monitoring Automation and User Engagement versions in **HPBSM/dat/bsm_components.html**. However, the Add/Remove Programs entries for Monitoring Automation and User Engagement will continue to display the originally installed version.

1. Prerequisites

- It is recommended that you back up all BSM databases and files you made custom changes to.
- Make sure that BSM has been fully stopped on all machines and that there are no open connections (for example, from Windows Explorer) from any machines to the BSM root directory or any of its subdirectories.
- If the host system for the BSM installation is preinstalled with an HP Operations Agent, you must configure the agent to run under the same user as BSM.
- To install BSM, you must be a root user (Linux) or a user with administrative privileges (Windows).

2. Copy customized Java database connectivity properties (jdbc) - Oracle RAC (optional).

When upgrading, the custom modifications you made in the **jdbc.drivers.properties** file are overwritten. If you configured BSM with an Oracle RAC database, and if you have custom modifications in the **jdbc.drivers.properties** file:

- a. Create a new file in **<HOME_BSM>/conf** called **jdbc.drivers.extention<number>.<name>.properties** and copy the modifications to this file before performing the upgrade.
- b. Locate the **ddoracle.url** parameter and add the following to the end of the line separated by a semicolon: **wireProtocolVersion=8**.

For example, before upgrading, copy this string:

```
ddoracle.url=jdbc:mercury:oracle:TNSNamesFile=<BSM_HOME>\conf\bac-  
tnsnames.ora;TNSServerName=${sid};wireProtocolVersion=8 from the  
jdbc.drivers.properties file to the <HOME_  
BSM>/conf/jdbc.drivers.extention1.RAC.properties file.
```

The `jdbc.drivers.extention1.RAC.properties` file is not overwritten and is used by BSM 9.24.

If there are multiple custom files in the `<HOME_BSM>/conf/` directory with the same property name, BSM uses the one with the latest extension number.

3. Download and install the latest minor-minor version from the SSO site.

If you already have the latest 9.2x minor-minor version, skip this step.

- a. Go to the SSO site:

<http://support.openview.hp.com/selfsolve/patches>

- b. Select **Application Performance Management (BAC)** and search for the applicable patch.
- c. Save the package locally.

Note: If you configured BSM with a non-RAC Oracle database, do not perform steps **d** and **e** below. Instead, continue with "[Running the Patch Installation Files for a BSM Configuration with a Non-RAC Oracle Database](#)" on page 8. After performing this procedure, continue with step 4 "[Download and install the latest build patch.](#)" below

- d. Launch the relevant setup file to install the patch.
- e. Run the installation files on all BSM servers (Gateway and Data Processing).

4. Download and install the latest build patch.

- a. Go to the SSO site:

<http://support.openview.hp.com/selfsolve/patches>

- b. Select **Application Performance Management (BAC)** and search for the applicable patch.
- c. Save the package locally.
- d. Launch the relevant setup file to install the patch.
- e. Run the installation files on all BSM servers (Gateway and Data Processing).

5. **Log out and in (optional).**

If you were running BSM under a different user than you used to install the patch, log out and log back in as the user that was running BSM.

6. **Re-apply manual changes.**

If you have made changes in the HP BSM root directory to files that are updated during patch installation, for example, while performing hardening procedures on your system, you must reapply those changes after patch installation on all relevant BSM machines. For more information, see the BSM Hardening Guide.

7. **Reconfigure BSM (Monitoring Automation customers only).**

Customers using Monitoring Automation need to run the Configuration Wizard to reconfigure BSM. This step only needs to be performed on one of the upgraded servers.

- **Windows:** Select **Start > Programs > HP Business Service Management > Administration > Configure HP Business Service Management.**
- **Linux:** Open a terminal command line and launch **/opt/HP/BSM/bin/config-server-wizard.sh.**

8. **Enable BSM.**

Enable BSM on all servers.

9. **Repeat Hardening Procedures (optional).**

If your original environment was secured with SSL you need to repeat the following hardening procedures:

- a. If you had previously made changes to **<HP BSM root directory>\EJBContainer\server\mercury\deploy\jboss-web.deployer\server.xml** while performing hardening procedures on your system, repeat the “Securing JBOSS” procedure in the Hardening Guide after the patch installation on all relevant BSM machines.
- b. If you had previously configured SSL on an IIS web server used by BSM, you need to verify HTTPS port binding in IIS is set to the correct port (443).
- c. If you had previously configured SSL on the Apache web server used by BSM, you may need to reapply the changes to httpd.conf and httpd-ssl.conf files as follows:
 - In **<HP BSM root directory>\WebServer\conf\httpd.conf**, uncomment the following two lines:

```
LoadModule ssl_module modules/mod_ssl.so
```

```
Include conf/extra/httpd-ssl.conf
```

- In **<HP BSM root directory>\WebServer\conf\extra\httpd-ssl.conf**, specify paths to **SSLCertificateFile** and **SSLCertificateKeyFile**
- Restart the HP BSM Apache web service.

10. Clean up files.

Delete the files contained in the following directory:

**<HP BSM_root_directory>\EJBContainer\server
\mercury\work\jboss.web\localhost\topaz\org\apache\jsp\tag\web\flex**

11. Upgrade SHA metadata.

If you had previously installed SHA on a working version of BSM 9.20, perform this procedure:

- a. If you backed up your SHA analytics metadata (in case you made manual changes), merge any manual changes onto the new files.
 - i. Open any files that had manual changes in the backed up directory:

<SHA analytics server installation directory>/conf/analytics/metadata/default

- ii. Merge them using a text editor onto the same files in the following directory:

<BSM DPS installation directory>/conf/analytics/metadata/default

- b. Log onto the JMX console on the DPS using the following address:

**http://<BSM_DPS_
FQDN>:29924/mbean?objectname=Topaz%3Aservice%3DAnalyticsMetadata**

- c. In **java.lang.string.reloadmetadata**, under **Value**, click **True**, and then click **Invoke**.
- d. Restart the analytics loader.

You can do this by restarting the **analytics_loader** on all BSM Gateway servers (avoiding system downtime), or restart all BSM Gateway servers.

12. Deploy the Updated Packages.

If you are applying the latest patch to BSM versions previous to 9.23, deploy the following packages.

<BSM_HOME>/odb/conf/factory_packages/BACKPIsAdapter.zip

<BSM_HOME>/odb/conf/factory_packages/BSMConnector.zip

<BSM_HOME>/odb/conf/factory_packages/BSMDowntime.zip

<BSM_HOME>/odb/conf/factory_packages/BSMDowntimeAdapter.zip

<BSM_HOME>/odb/conf/factory_packages/EUM.zip

<BSM_HOME>/odb/conf/factory_packages/sitescope.zip

To deploy a package:

- a. In BSM, go to **RTSM Administration > Administration > Package Manager**.
- b. Select the **Deploy packages to server (from local disk)**  button .
- c. Select the **Add** button, and navigate to the package (see the paths above).
- d. Select **Deploy**.

13. Validate BSM Service.

After the Windows installation, validate that the BSM service is running with the same credentials as before the installation.

- a. In Microsoft's Services window, double-click **HP Business Service Management**. The HP Business Service Management Properties (Local Computer) dialog box opens.
- b. Click the **Log On** tab. In the **This account** field, the credentials of the user running the BSM services is displayed.

Note: There is no need to validate the user in the Linux installation.

14. Update Data Collectors.

See the System Requirements and Support Matrixes, available from **Help > Planning and Deployment** and the Updated Components section in the HP Business Service Management Release Notes to determine if you must upgrade your data collector to the latest supported version.

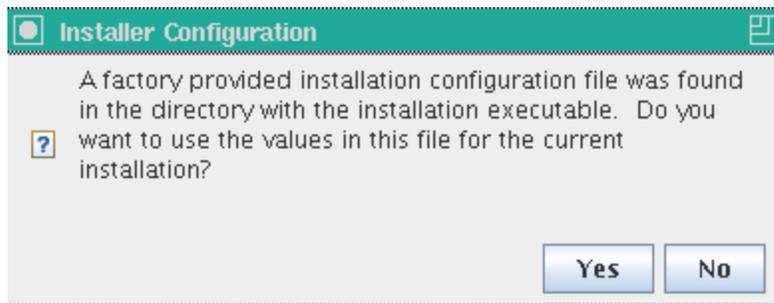
Running the Patch Installation Files for a BSM Configuration with a Non-RAC Oracle Database

If you configured BSM with a non-RAC Oracle database, you must create an additional file in the installation folder so that you can run the installer without running the post installation script. This enables you to edit the **ddoracle.url** parameter in the **<HOME_BSM>/conf/jdbc.drivers.properties** file before running the post installation script.

1. Create a file named **ovinstallparams.ini** with the following content:

```
[installer.properties]
setup=HPBsm924
automationPostInstall=false
```

2. Place the **ovinstallparams.ini** file in the same directory in which the HPBsm924_9.24_setup executable file is located.
3. Launch the relevant setup file to install the patch. Click **Yes** in the confirmation message that appears.



4. Install the patch without running the post installation script on all BSM servers (Gateway and Data Processing).
5. On each BSM server, in the **<HOME_BSM>/conf/jdbc.drivers.properties** file, locate the **ddoracle.url** parameter in the file and add the following to the end of the line separated by a semicolon: **wireProtocolVersion=8**.

For example:

```
ddoracle.url=jdbc:mercury:oracle://${host}:${port};sid=${sid};wireProtocolVersion=8
```

6. Run the BSM post installation script:

For Windows: %TOPAZ_HOME%\bin\ovii-postinstall-silent.bat "%TOPAZ_HOME%"

For Linux: /opt/HP/BSM/bin/ovii-postinstall-silent.sh /opt/HP/BSM true

7. Continue with step 4 "[Download and install the latest build patch.](#)" on page 5.

Installing a Patch with Low Downtime

The typical patch installation procedure involves a minor amount of downtime. If this is problematic, and you have a high availability environment, you can minimize the downtime when installing a patch by using this procedure.

1. Prerequisites
 - It is recommended that you back up all BSM databases and files you made custom changes to.
 - If the host system for the BSM installation is preinstalled with an HP Operations Agent, you must configure the agent to run under the same user as BSM.
2. There are two sets of servers. A set of servers can be one BSM Gateway and one BSM Data Processing server or one one-machine server (Gateway and DPS in one machine). Disable the set of BSM servers that has a DPS that is running the bus Domain Manager.
3. Install the patch on the set of servers you disabled. For details, see steps 2-6 in "[Installing the Latest BSM 9.2x Patch](#)" on page 4.
4. Disable all other BSM servers.
5. Customers using Monitoring Automation need to run the Configuration Wizard to reconfigure BSM on one of the upgraded servers from the set of servers that has a DPS that is running the bus Domain Manager.
 - **Windows:** Select **Start > Programs > HP Business Service Management > Administration > Configure HP Business Service Management**.
 - **Linux:** Open a terminal command line and launch `/opt/HP/BSM/bin/config-server-wizard.sh`.
6. Enable the set of servers that has a DPS that is running the bus Domain Manager.
7. Install the patch on the other BSM servers. For details, see steps 2-6 in "[Installing the Latest BSM 9.2x Patch](#)" on page 4.
8. Enable the other BSM servers.
9. Continue with the post-installation steps in the standard procedure starting with "[Enable BSM.](#)" on page 6.

Uninstalling a Patch (Rolling Back)

This procedure explains how to uninstall a patch. For example, this means rolling back from BSM 9.24 to BSM 9.20. Follow the appropriate instructions depending on your operating system.

Note: When you uninstall a patch, the L-Core version does not revert to the previous version.

To roll back a BSM patch to a previously installed version - Windows:

1. If you have HP Monitoring Automation installed, before rolling back to a previous version, delete all assignments and auto assignment rules using the Assignments and the Automatic Assignment Rules UIs under **Admin > Operations Management > Monitoring**.
2. If you have smart card authentication enabled, it must be disabled before you begin uninstalling a patch. For details, see the Smart Card Authentication Configuration Guide, which can be found on the Planning and Deployment Documentation page (**Help > Planning and Deployment**) or the SSO manuals site (<http://support.openview.hp.com/selfsolve/manuals>).
3. Stop the HP BSM service on all servers and confirm that they are stopped.
4. Stop the web server process on all servers (IIS Admin Service for IIS; Apache service for Apache).
5. Select the service pack to remove from **Control Panel > Programs and Features > View Installed Updates**.
6. When the uninstall process is complete, restart the machine if requested. Verify that HP BSM services are not running.
7. The following step is not relevant if you are rolling back from BSM 9.22.131 (i.e., IP2) or higher.

Remove all subdirectories under the directory **<HP BSM root directory>\EJBContainer\server\mercury\work** on all Gateway servers.

8. If you installed BSM 9.23 or higher on top of BSM version 9.21 or 9.20 and are rolling back to one of those versions, you must completely uninstall Monitoring Automation or User Engagement (if they were installed) after rolling back BSM.
 - a. In the Server Deployment page, disable Monitoring Automation or User Engagement. For details, see the Monitoring Automation Installation Guide.
 - b. Uninstall BSM 9.24 by running **uninstallMaSP** (for Monitoring Automation) or **uninstall** (for User Engagement).
 - c. Uninstall Monitoring Automation or User Engagement according to the Monitoring Automation and User Engagement Installation Guides.

9. If you installed BSM 9.24 on top of BSM version 9.23 and have updated Monitoring Automation or User Engagement to the 9.24 version using the redeployment script:
 - a. Uninstall BSM 9.24 by running **uninstallMaSP** (for Monitoring Automation) or **uninstall** (for User Engagement).
 - b. Run the 9.23 redeployment script as described in the Installing the Software chapter in the Monitoring Automation and User Engagement Guides.
10. Delete the temporary internet files on each browser that accesses BSM.
11. Run the Configuration Wizard to reconfigure BSM.

Click **Start > Programs > HP Business Service Management > Administration > Configure HP Business Service Management**.

12. Restart the BSM service.
13. Reload the required TQL.

As part of the uninstallation, a required TQL was removed and must be redeployed. If this is not done, the BSM_DT service will not start. To redeploy the TQL:

- a. Make sure BSM is started and the odb service has a status of **STARTED**.
 - b. Open the following JMX console:
<DPS Machine FQDN>:21212/jmx-console/HtmlAdaptor
 - c. In the JMX console, select **UCMDB:service=Packaging Services**.
 - d. In the method **deployPackages**, enter the following parameters:
customerId = 1 (unless it is a "SAAS" environment),
packagesNames = BSMDowntime"
 - e. Select **invoke**
 - f. Verify that the **BSM_DT** service has started.
14. If you are rolling back to BSM 9.20 you need to install hotfix **QCCR1A152986** available from HP support. The hotfix must be installed on all BSM Gateway and Data Processing Servers. This is not required if you are rolling back to BSM version 9.21 or later.
 15. Make sure to uninstall or rollback any updated data collectors as well.

To roll back a BSM service pack to a previously installed version - Linux:

1. If you have HP Monitoring Automation installed, before rolling back to a previous version, delete all assignments and auto assignment rules using the Assignments and the Automatic Assignment Rules UIs under **Admin > Operations Management > Monitoring**.
2. If the system is managed using an HP Operations Agent, change the agent user to root. For details on how to switch the HP Operations Agent user, see the HP Operations Agent manuals.
3. If you are running BSM 9.23 or higher using a non-root linux user, and you are rolling back to BSM 9.22 or lower, you must change the linux user to root before rolling back. This is because the use of non-root users was not supported before BSM 9.23.

4. Stop BSM as follows:

```
/opt/HP/BSM/scripts/run_hpbsm stop
```

5. Run the uninstall script as follows:

```
/opt/HP/BSM/installation/<Patch_Name>/bin/uninstall.sh
```

Where <Patch_Name> is your HP BSM version. For example HPBsm922.

To run this script in silent mode, use the command **/opt/HP/BSM/installation/<Patch_Name>/bin/uninstall.sh -i silent**

6. The following step is not relevant if you are rolling back from BSM 9.22.131 (i.e., IP2) or higher.

Remove all subdirectories under the directory **<HP BSM root directory>/EJBContainer/server/mercury/work** for all Gateway servers.

7. If you installed BSM 9.23 on top of BSM version 9.21 or 9.20 and are rolling back to one of those versions, you must completely uninstall Monitoring Automation or User Engagement (if they were installed) after rolling back BSM.
 - a. In the Server Deployment page, disable Monitoring Automation or User Engagement. For details, see the Monitoring Automation Installation Guide.
 - b. Uninstall BSM 9.24 by running **uninstallMaSP** (for Monitoring Automation) or **uninstall** (for User Engagement).
 - c. Uninstall Monitoring Automation or User Engagement according to the Monitoring Automation and User Engagement Installation Guides.
8. If you installed BSM 9.24 on top of BSM version 9.23 and have updated Monitoring Automation or User Engagement to the 9.24 version using the redeployment script:
 - a. Uninstall BSM 9.24 by running **uninstallMaSP** (for Monitoring Automation) or **uninstall** (for User Engagement).

- b. Run the 9.23 redeployment script as described in the Installing the Software chapter in the Monitoring Automation and User Engagement Guides.
9. Delete the temporary internet files on each browser that accesses BSM.
10. Reconfigure BSM.
 - **Windows:** Select **Start > Programs > HP Business Service Management > Administration > Configure HP Business Service Management**.
 - **Linux:** Open a terminal command line and launch **/opt/HP/BSM/bin/config-server-wizard.sh**.
11. Restart the BSM service.

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