

HP Business Service Management

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BSM Build Patch Installation Guide

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Installing the Latest BSM 9.2x Build 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 build 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 8](#).

1. Prerequisites

- It is recommended that you back up all BSM databases and files you made custom changes to.
- Some of the steps in this procedure may require you to access the JMX console. To access the JMX console, you may need to enable remote access unless you are loading the JMX console from the BSM server itself. To enable remote access to the JMX console, follow the below steps in BSM:
 - i. Select **Admin > Platform > Setup and Maintenance > Infrastructure Settings > Foundations > Security**.
 - ii. In the Security-Login table, locate **Restrict remote access to JMX console** and change the value to **false**
- 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:

Create a new file in **<BSM_HOME>\conf** called **jdbc.drivers.extension<number>.<name>.properties** and copy the modifications to this file before performing the upgrade.

For example, before upgrading, copy this string:

ddoracle.url=jdbc:mercury:oracle:TNSNamesFile=<BSM_HOME>\conf\bac-tnsnames.ora;TNSServerName=\${sid} from the **jdbc.drivers.properties** file to the **<BSM_HOME>\conf\jdbc.drivers.extension1.RAC.properties** file.

The **jdbc.drivers.extension1.RAC.properties** file is not overwritten and is used by BSM 9.2x.

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

3. **Download and install the latest build patch (if available).**

- a. Go to the [HP Software Support](https://softwaresupport.hp.com) web site (<https://softwaresupport.hp.com>) and sign in.
- b. Click **Search**.
- c. Select the relevant product, version , and operating system (for example, **Application Performance Management (BAC) > 9.26 > Windows**).
- d. Under Document Type, select **Patches**.
- e. Locate the applicable patch and save the package locally.
- f. Launch the relevant setup file to install the patch.
- g. Run the installation files on all BSM servers (Gateway and Data Processing).

4. **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.

5. **Re-apply manual changes.**

BSM creates the configuration file **<BSM_HOME>\WebServer\conf\httpd.conf** during installation. If you make changes to this file, the changes are overwritten when you install a patch. To keep the changes you made to the configuration file, save a copy of the file before installing a new patch. When the installation completes, replace the new **<BSM_HOME>\WebServer\conf\httpd.conf** with the file you saved.

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.

6. **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**.

7. **Enable BSM.**

Enable BSM on all servers.

8. **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 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).
- b. 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 `<BSM_HOME>\WebServer\conf\httpd.conf`, uncomment the following two lines:
LoadModule ssl_module modules\mod_ssl.so
Include conf\extra\httpd-ssl.conf
 - In `<BSM_HOME>\WebServer\conf\extra\httpd-ssl.conf`, specify paths to **SSLCertificateFile** and **SSLCertificateKeyFile**
 - Restart the HP BSM Apache web service.

9. **(Recommended) Clean the JBoss cache.**

- a. Stop the JBoss process.
- b. Remove the **HPBSM/jboss-as/standalone/tmp** folder.
- c. Start the JBoss process.

10. **Validate BSM Service.**

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

Note: The build patch removes and re-installs the HP BSM service. Therefore, all service

configurations are reset to the default values.

- 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.

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.
- Some of the steps in this procedure may require you to access the JMX console. To access the JMX console, you may need to enable remote access unless you are loading the JMX console from the BSM server itself. To enable remote access to the JMX console, follow the below steps in BSM:
 - i. Select **Admin > Platform > Setup and Maintenance > Infrastructure Settings > Foundations > Security**.
 - ii. In the Security-Login table, locate **Restrict remote access to JMX console** and change the value to **false**
- 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. 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.
3. Install the patch on the set of servers you disabled. For details, see steps 2-5 in "[Installing the Latest BSM 9.2x Build 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.
 - **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.
 7. Install the patch on the other BSM servers. For details, see steps 2-5 in ["Installing the Latest BSM 9.2x Build 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 Build Patch (Rolling Back)

This procedure explains how to uninstall a build patch. 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 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 HPE Software Support site (<https://softwaresupport.hpe.com>).
2. Stop the HP BSM service on all servers and confirm that they are stopped.
3. Stop the web server process on all servers (IIS Admin Service for IIS; Apache service for Apache).
4. Select the build patch to remove from **Control Panel > Programs and Features > View Installed Updates**.

To run this command in silent mode, execute **<BSM_HOME>\installation\<Patch_Name>\bin\uninstall.bat -i silent**.

5. When the uninstall process is complete, restart the machine if requested. Verify that HP BSM services are not running.
6. Delete the temporary internet files on each browser that accesses BSM.
7. Start the BSM service.
8. Reload the required TQL.

As part of the uninstall process, 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
```

```
packagesNames = BSMDowntime
```

- e. Select **invoke**
- f. Verify that the **BSM_DT** service has started.

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

1. 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.
2. Stop the HP BSM service on all servers and confirm that they are stopped.
3. To access the uninstall program, type: **cd /opt/HP/BSM/installation/<Patch_Name>** where **<Patch_Name>** is your HP BSM version.
4. Run the following script to uninstall in UI mode: **./uninstall.sh**

To perform this step in silent mode, run the command **./uninstall.sh -i silent**

5. Delete the temporary internet files on each browser that accesses BSM.
6. Start the BSM service.
7. Reload the required TQL.

As part of the uninstall process, 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:

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- d. In the method **deployPackages**, enter the following parameters:

```
customerId = 1
```

```
packagesNames = BSMDowntime
```

- e. Select **invoke**
- f. Verify that the **BSM_DT** service has started.

Installation and Connectivity Troubleshooting

Server is not ready message

If you see the following, it is an indication that JBoss is not starting.

- The status page returns the “Server is not ready” message.
- Processes are not loading.
- The wrapper.log file from the <HPBSM>\log\supervisor folder contains this error: “Error: Password file read access must be restricted: c:\HPBSM\JRE64\lib\management\jmxremote.password”

Workaround:

1. Disable BSM.
2. Navigate to <HPBSM>\JRE64\lib\management.
3. Right-click **jmxremote.password** and select **Properties**.
4. Click the **Security** tab..
5. Click **Edit**.
6. Click **Add** and add the **Administrators** group.
7. Allow **Read** and **Write** permissions for the Administrators group.
8. Enable BSM.

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