Red Hat JBoss Core Services Apache HTTP Server 2.4

Apache HTTP Server Installation Guide

For use with Red Hat JBoss middleware products

Last Updated: 2018-01-04

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Legal Notice

Abstract

This book is a guide to the installation of Red Hat JBoss Core Services Apache HTTP Server.

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CHAPTER 1. INTRODUCTION

1.1. ABOUT RED HAT JBOSS CORE SERVICES

Red Hat JBoss Core Services is a set of supplementary software for Red Hat JBoss middleware products. This software, such as Apache HTTP Server, is common to multiple JBoss middleware products, and is packaged under Red Hat JBoss Core Services to allow for faster distribution of updates, and for a more consistent update experience.

1.2. ABOUT JBOSS CORE SERVICES APACHE HTTP SERVER

Apache HTTP Server is used in multiple Red Hat JBoss middleware products, and previously Apache HTTP Server was distributed with each JBoss product. Starting from the following product versions, each product will instead use the JBoss Core Services distribution of Apache HTTP Server:

- Red Hat JBoss Enterprise Application Platform (JBoss EAP) 7.0 and onwards.

IMPORTANT

The Apache HTTP Server distribution included as part of Red Hat Enterprise Linux is completely separate from the JBoss Core Services distribution of Apache HTTP Server.

1.3. SUPPORTED OPERATING SYSTEMS AND CONFIGURATIONS

For information on supported operating systems and configurations for JBoss Core Services Apache HTTP Server, see link:https://access.redhat.com/articles/2258971.

1.4. INSTALLATION METHODS

JBoss Core Services Apache HTTP Server can be installed on supported Red Hat Enterprise Linux, Microsoft Windows, and Solaris systems using ZIP installation files available for each platform. JBoss Core Services Apache HTTP Server can also be installed on supported Red Hat Enterprise Linux systems using RPM packages.

CHAPTER 2. INSTALLING JBOSS CORE SERVICES APACHE HTTP SERVER ON RED HAT ENTERPRISE LINUX

2.1. ZIP INSTALLATION

2.1.1. Download and Extract Apache HTTP Server

To install Apache HTTP Server, download and extract the installation ZIP files.

1. Open a browser and log in to the Red Hat Customer Portal JBoss Software Downloads page.

2. Select **Apache HTTP Server** in the **Product** drop-down menu.

3. Select the correct JBoss Core Services version from the **Version** drop-down menu.

4. Find **Red Hat JBoss Core Services Apache HTTP Server** in the list, ensuring that you select the correct platform and architecture for your system, and click the **Download** link.

5. Extract the downloaded ZIP file to your installation directory.

> **NOTE**
>
> We recommend that you install Apache HTTP Server in the **/opt/** directory.

The **jbcs-httpd24-2.4/httpd** directory created by extracting the ZIP archive is the top-level directory for Apache HTTP Server. This is referred to in this documentation as **HTTPD_HOME**.

2.1.2. Configuring the Apache HTTP Server Installation

Some configuration is required before running JBoss Core Services Apache HTTP Server. This section includes the following configuration procedures:

- Creating an Apache User

- Disabling/Enabling SSL Support

- Running the Apache HTTP Server Post-Installation Script

Creating an Apache User
Follow this procedure to create the **apache** user and its parent group:

1. In a shell prompt as the root user, change directory to **HTTPD_HOME**.

2. Run the following command to create the **apache** user group:

   ```
   # groupadd -g 48 -r apache
   ```

3. Run the following command to create the **apache** user in the **apache** user group:

   ```
   # useradd -c "Apache" -u 48 -g apache -s /bin/sh -r apache
   ```

4. From **HTTPD_HOME**, run the following command to assign the ownership of the Apache directories to the apache user to allow the user to run Apache HTTP Server:

```
# chown -R apache:apache *
```

You can use `ls -l` to verify that the `apache` user is the owner of the directory.

Disabling/Enabling SSL Support

Apache HTTP Server supports SSL by default, but it can be disabled. Follow this procedure to disable or re-enable SSL support.

1. Go to the **HTTPD_HOME/conf.d/** directory and rename the SSL configuration file:

   a. To disable SSL, rename `ssl.conf` to `ssl.conf.disabled`.

   b. To re-enable SSL, rename `ssl.conf.disabled` to `ssl.conf`.

Running the Apache HTTP Server Post-Installation Script

1. In a shell prompt as the root user, change directory to **HTTPD_HOME**.

2. Run the following command:

```
# ./.postinstall
```

2.1.3. Starting Apache HTTP Server

To start Apache HTTP Server, in a shell prompt as the root user, change to **HTTPD_HOME/sbin/** and run the following command:

```
# ./apachectl start
```

2.1.4. Stopping Apache HTTP Server

To stop Apache HTTP Server, in a shell prompt as the root user, change to **HTTPD_HOME/sbin/**, and run the following command:

```
# ./apachectl stop
```

2.2. RPM INSTALLATION

Installing JBoss Core Services Apache HTTP Server from RPM packages installs Apache HTTP Server as a service. The RPM installation option is only available for Red Hat Enterprise Linux 6 and Red Hat Enterprise Linux 7.

2.2.1. Installing Apache HTTP Server from RPM Packages

Before downloading and installing the RPM packages, you must register your system with Red Hat Subscription Management and subscribe to the respective Content Delivery Network (CDN) repositories.

1. Log in to Red Hat Subscription Manager.

2. Click on **Systems** in the **Subscriber Inventory.**

3. Subscribe to the JBoss Core Services CDN repositories for your operating system version and architecture:

   a. For Red Hat Enterprise Linux 6:

      - jb-coreservices-1-for-rhel-6-server-rpms

   b. For Red Hat Enterprise Linux 7:

      - jb-coreservices-1-for-rhel-7-server-rpms

4. Run the following command as the root user to install Apache HTTP Server:

```
# yum groupinstall jbcs-httpd24
```

2.2.2. Configuring the Apache HTTP Server Installation (RPM Installation)

Before starting an RPM installation of JBoss Core Services Apache HTTP Server, there are some optional configurations you can perform. This section includes the following configuration procedures:

- Removing SSL Support

Removing SSL Support
Apache HTTP Server supports SSL by default, but it can be removed. To remove SSL support, remove the mod_ssl package.

1. At a shell prompt, run the following command as the root user:

```
# yum remove jbcs-httpd24-mod_ssl
```

2.2.3. Starting Apache HTTP Server

In a shell prompt as the root user, start the Apache HTTP Server service:

- For Red Hat Enterprise Linux 6:

```
# service jbcs-httpd24-httpd start
```

- For Red Hat Enterprise Linux 7:

```
# systemctl start jbcs-httpd24-httpd.service
```

2.2.4. Stopping Apache HTTP Server

In a shell prompt as the root user, stop the Apache HTTP Server service:

- For Red Hat Enterprise Linux 6:

```
# service jbcs-httpd24-httpd stop
```

- For Red Hat Enterprise Linux 7:

```
# systemctl stop jbcs-httpd24-httpd.service
```

2.2.5. Configuring Apache HTTP Server to Start at Boot

Use the following command to enable the Apache HTTP Server service to start at boot.

- For Red Hat Enterprise Linux 6:

  ```
  # chkconfig jbcs-httpd24-httpd on
  ```

- For Red Hat Enterprise Linux 7:

  ```
  # systemctl enable jbcs-httpd24-httpd.service
  ```

CHAPTER 3. INSTALLING JBOSS CORE SERVICES APACHE HTTP SERVER ON MICROSOFT WINDOWS

3.1. DOWNLOAD AND EXTRACT APACHE HTTP SERVER

To install Apache HTTP Server, download and extract the installation ZIP files.

1. Open a browser and log in to the Red Hat Customer Portal JBoss Software Downloads page.

2. Select **Apache HTTP Server** in the **Product** drop-down menu.

3. Select the correct JBoss Core Services version from the **Version** drop-down menu.

4. Find **Red Hat JBoss Core Services Apache HTTP Server** in the list, ensuring that you select the correct platform and architecture for your system, and click the **Download** link.

5. Extract the downloaded ZIP file to your installation directory.

> **NOTE**
>
> We recommend that you install Apache HTTP Server in the `C:\Program Files` directory.

The `jbcs-httpd24-2.4` directory created by extracting the ZIP archive is the top-level directory for Apache HTTP Server. This is referred to in this documentation as **HTTPD_HOME**.

3.2. CONFIGURING THE APACHE HTTP SERVER INSTALLATION

Some configuration is required before running JBoss Core Services Apache HTTP Server. This section includes the following configuration procedures:

- Running the Apache HTTP Server Post-Installation Script

- Installing the Apache HTTP Server Service

- Configuring Folder Permissions for the Apache HTTP Server Service

- Disabling/Enabling SSL Support

Running the Apache HTTP Server Post-Installation Script

1. Open a **Command Prompt** with administrator privileges, and change to the **HTTPD_HOME\etc** directory.

2. Run the following command:

```
call postinstall.httpd.bat
```

Installing the Apache HTTP Server Service

NOTE

By default, Apache HTTP Server is configured to use port 80. If you have Microsoft IIS installed, ensure that you disable or reconfigure it to avoid port conflicts:

- Stop the `World Wide Web…` service, and change the `Startup Type` to `Manual`.

- Configure IIS to use different ports.

Alternatively, you can edit `httpd.conf` before installing the Apache HTTP Server service and change `Listen` to a port that does not conflict with the IIS ports.

1. Open a **Command Prompt** with administrator privileges, and change to the **HTTPD_HOME\bin** directory.

2. Install the Apache HTTP Server service with the following command:

```
httpd -k install
```

A Firewall security dialog prompt may appear asking for networking access for Apache HTTP Server. Click **Allow** to access this service from the network.

Configuring Folder Permissions for the Apache HTTP Server Service
Follow this procedure to ensure that the account used to run the service has full control over the **HTTPD_HOME** folder and all of its subfolders:

1. Right-click the **HTTPD_HOME** folder and click **Properties**.

2. Select the **Security** tab.

3. Click the **Edit** button.

4. Click the **Add** button.

5. In the text box, enter **LOCAL SERVICE**.

6. Select the **Full Control** check box for the **LOCAL SERVICE** account.

7. Click **OK**.

8. Click the **Advanced** button.

9. Inside the **Advanced Security Settings** dialog, select **LOCAL SERVICE** and click **Edit**.

10. Select the check box next to the **Replace all existing inheritable permissions on all descendants with inheritable permissions from this object** option.

11. Click **OK** through all the open folder property windows to apply the settings.

Disabling/Enabling SSL Support
Apache HTTP Server supports SSL by default, but it can be disabled. Follow this procedure to disable or re-enable SSL support.

1. Open a file browser and go to **HTTPD_HOME\conf.d**.

2. Rename the SSL configuration file:

   a. To disable SSL, rename `ssl.conf` to `ssl.conf.disabled`.

   b. To re-enable SSL, rename `ssl.conf.disabled` to `ssl.conf`.

3.3. STARTING APACHE HTTP SERVER

You can start the Apache HTTP Server service from the Command Prompt, or with the Computer Management tool.

Starting Apache HTTP Server Using the Command Prompt

1. Open a Command Prompt with administrator privileges.

2. Start the Apache HTTP Server service with the following command:

```
net start Apache2.4
```

Starting Apache HTTP Server Using the Computer Management Tool

1. Go to **Start → Administrative Tools → Services**.

2. In the **Services** list, right-click the `httpd` service and click **Start**.

3.4. STOPPING APACHE HTTP SERVER

You can stop the Apache HTTP Server service from the Command Prompt, or with the Computer Management tool.

Stopping Apache HTTP Server Using the Command Prompt

1. Open a Command Prompt with administrator privileges.

2. Stop the Apache HTTP Server service with the following command:

```
net stop Apache2.4
```

Stopping Apache HTTP Server Using the Computer Management Tool

1. Go to **Start → Administrative Tools → Services**.

2. In the **Services** list, right-click the `httpd` service and click **Stop**.

CHAPTER 4. INSTALLING APACHE HTTP SERVER ON SOLARIS

4.1. DOWNLOAD AND EXTRACT APACHE HTTP SERVER

To install Apache HTTP Server, download and extract the installation ZIP files.

1. Open a browser and log in to the Red Hat Customer Portal JBoss Software Downloads page.

2. Select **Apache HTTP Server** in the **Product** drop-down menu.

3. Select the correct JBoss Core Services version from the **Version** drop-down menu.

4. Find **Red Hat JBoss Core Services Apache HTTP Server** in the list, ensuring that you select the correct platform and architecture for your system, and click the **Download** link.

5. Extract the downloaded ZIP file to your installation directory.

> **NOTE**
>
> We recommend that you install Apache HTTP Server in the **/opt/** directory.

The **jbcs-httpd24-2.4** directory created by extracting the ZIP archive is the top-level directory for Apache HTTP Server. This is referred to in this documentation as **HTTPD_HOME**.

4.2. CONFIGURING THE APACHE HTTP SERVER INSTALLATION

Some configuration is required before running JBoss Core Services Apache HTTP Server. This section includes the following configuration procedures:

- Running the Apache HTTP Server Post-Installation Script

- Disabling/Enabling SSL Support

Running the Apache HTTP Server Post-Installation Script

1. Open a shell prompt as the root user, and change to the **HTTPD_HOME/etc** directory.

2. Run the following command:

```
# sh .postinstall.httpd
```

The post-installation script creates the Apache user and group.

Disabling/Enabling SSL Support
Apache HTTP Server supports SSL by default, but it can be disabled. Follow this procedure to disable or re-enable SSL support.

1. Go to the **HTTPD_HOME/conf.d/** directory and rename the SSL configuration file:

    a. To disable SSL, rename **ssl.conf** to **ssl.conf.disabled**.

    b. To re-enable SSL, rename **ssl.conf.disabled** to **ssl.conf**.

4.3. STARTING APACHE HTTP SERVER

To start Apache HTTP Server, in a shell prompt as the root user, change to **HTTPD_HOME/sbin/** and run the following command:

```
# ./apachectl start
```

4.4. STOPPING APACHE HTTP SERVER

To stop Apache HTTP Server, in a shell prompt as the root user, change to **HTTPD_HOME/sbin/**, and run the following command:

```
# ./apachectl stop
```

CHAPTER 5. MONITORING APACHE HTTP SERVER WITH JBOSS OPERATIONS NETWORK (ON)

To allow JBoss ON to monitor JBoss Core Services Apache HTTP Server, you must enable the mod_bmx modules.

1. As the **apache** user, enable the mod_bmx modules. Create the file **HTTPD_HOME/conf.d/mod_bmx.conf** with the following contents:

   ```
   LoadModule bmx_module modules/mod_bmx.so
   LoadModule bmx_status_module modules/mod_bmx_status.so
   LoadModule bmx_vhost_module modules/mod_bmx_vhost.so
   ```

2. Add a handler for mod_bmx. In **HTTPD_HOME/conf/httpd.conf**, append your handler definition. For example:

   ```
   <Location /bmx>
   SetHandler bmx-handler
   </Location>
   ```

   You may want to restrict access to this URL to a specific virtual host or use password authentication.

3. Restart the Apache HTTP Server. You can access http://SERVER_ADDRESS:PORT/bmx in a web browser to verify that mod_bmx is working correctly.

4. Apache HTTP Server will now be discoverable for JBoss ON. In JBoss ON, you can import it from the Discovery Queue.
   Consult the JBoss ON documentation for further details on monitoring and managing Apache HTTP Server.

Revised on 2018-01-04 13:58:57 EST