

# Installing JBOSS on OpenVMS Integrity

## Installation Manual

OpenVMS V8.2-1 and V8.3



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## Table of Contents

|  |    |
|--|----|
| Introduction .....   | 4  |
| JBoss Application Server .....   | 4  |
| Hardware Prerequisites .....   | 4  |
| Software Prerequisites .....   | 4  |
| Download and Installation Instructions for the JBoss Application Server .....          | 4  |
| Preparing Your System .....  | 4  |
| Verifying the Prerequisites on Your System .....                                       | 4  |
| Setting Up a Disk, Directory, and Account to Run the JBoss Application<br>Server ..... | 5  |
| Download Required Software .....   | 7  |
| Installing the JBoss Application Server .....  | 8  |
| Post-Installation Setup Instructions for JBoss .....                                   | 9  |
| Configure JBoss Application Server Environment .....                                   | 9  |
| Starting the JBoss Application Server .....  | 10 |
| Shutdown the JBoss Application Server .....  | 10 |
| Additional Documentation .....   | 10 |

## Introduction

JBoss, a division of Red Hat, is the global leader in open source middleware software, combining enterprise-class JEMS open source software with the industry's leading services and tools.

### ***JBoss Application Server***

A simply powerful J2EE application server – the JBoss Application Server is the #1 most widely used Java application server on the market. A J2EE certified platform for developing and deploying enterprise Java applications, Web applications, and Portals, JBoss Application Server provides the full range of J2EE 1.4 features as well as extended enterprise services including clustering, caching, and persistence.

### **Hardware Prerequisites**

- 500MHz minimum Itanium processor
- 256MB of memory
- 200,000 blocks minimum free disk space on an ODS-5 disk

### **Software Prerequisites**

- OpenVMS I64 Version 8.2-1 or higher
- Software Development Kit (SDK) v 1.4.2-3 (or higher) for OpenVMS I64 for the Java Platform
- All required ECOs for the Java SDK
- HP TCP/IP Services for OpenVMS Version 5.5 or higher
- ODS-5 disk

## **Download and Installation Instructions for the JBoss Application Server**

### ***Preparing Your System***

#### **Verifying the Prerequisites on Your System**

- Install OpenVMS I64 Version 8.2-1 or V8.3
- Install the Java Platform Software Development Kit (SDK) v1.4.2-3 (or higher) for OpenVMS I64
- Install All Required ECO's for the Java SDK

- Install HP TCPIP/IP Services for OpenVMS Version 5.5 or higher

## Setting Up a Disk, Directory, and Account to Run the JBoss Application Server

Before you can run the JBOSS Application Server on OpenVMS, you must set up an ODS-5 disk, and a dedicated directory and account. To do so, complete the following procedure:

Log in to the SYSTEM account.

```
$ SET PROCESS /PARSE_STYLE=EXTENDED
```

If you do not already have an ODS-5 disk, then create or convert an ODS-5 disk. Define a system logical called `swdisk` to reference this disk, and then mount the disk.

### For example:

Note: This INITIALIZE command will destroy all data on the selected drive.

```
$ INITIALIZE/STRUCTURE_LEVEL=5 DKA100: "swdisk"
```

**Note:** If the logical defined in the next step contains any lowercase characters, it must be enclosed in quotes. Take note of the exact syntax. You must specify the same spelling (including distinctions between uppercase and lowercase) and syntax when you create the default jboss directory on the ODS-5 device. This also applies when you specify the default device and directory specification for the jboss account in the user authorization file. (UAF).

```
$ DEFINE/SYSTEM/EXECUTIVE_MODE/ -
TRANSLATION_ATTRIBUTES=CONCEALED "swdisk" DKA100:
```

To verify the logical definition:

```
$ SHOW LOGICAL swdisk /FULL
"swdisk" [exec] = "DKA100:" [concealed] (LNM$SYSTEM_TABLE)
```

```
$ MOUNT/SYSTEM DKA100: "swdisk"
```

Add the DEFINE and MOUNT commands, above, to:

```
SYS$STARTUP:SYSTARTUP_VMS.COM
```

Using AUTHORIZE, create a JBoss Home account called jboss.

```
$ SET DEFAULT SYS$SYSTEM
```

```
$ RUN SYS$SYSTEM:AUTHORIZE.EXE
```

Set the default device to the logical name defined in the previous step, and the directory of the account to `jboss`. The account must have the following minimum quotas:

```
sysuaf> copy default jboss /DEVICE="swdisk"  
/DIRECTORY=jboss /uic=[unique_uic]/ -  
/PGFLQUO=2097152 /WSDEF=8192 /WSEXTENT=32768 /WSQUO=16384  
/BYTLM=400000 /FILLM=4096  
/flag=nodisuser /password=unique_password
```

The system parameter `CHANNELCNT` must be greater than or equal to `FILLM`.

Use the `SYSMAN` utility to examine the value of `CHANNELCNT`:

```
$ mcr sysman  
SYSMAN> parameters show channelcnt  
Parameter Name      Current Default  Minimum  Maximum  Unit Dynamic  
-----  
CHANNELCNT          4096      512       64       65535    Channels  
SYSMAN> EXIT
```

To change the value of `CHANNELCNT`, edit `SYS$SYSTEM:MODPARAMS.DAT` file and then use `AUTOGEN`.

Create a directory on the ODS-5 disk called `swdisk:[jboss]` and set the owner to the `jboss` account.

The directory name is case sensitive; it must match the directory specified earlier for the `jboss` home account.

**For example:**

```
$ CREATE/DIRECTORY/OWNER=JBOSS/VERSION=0 swdisk:[jboss]
```

Create an additional directory on the ODS-5 disk to hold the downloaded kits, and set the owner to the `jboss` account.

For example, to name the directory `swdisk:[kits]`, enter the following command:

```
$ CREATE/DIRECTORY/OWNER=JBOSS/VERSION=0 swdisk:[kits]
```

## Download Required Software

- Downloads of the JBoss Application Server are located at:  
<http://www.jboss.org/downloads/index>
- Search for "**JBoss Application Server**" and click on the "download" button.
- Look for the latest production release of the JBoss Application Server.
- As of 14-Sep-2006, the latest production version of the JBOSS Application Server is 4.0.4.
- Download the JBOSS "GA" kit with extension ".zip", for example:  
jboss-4.0.4.GA.zip.
- Choose download source and mirror locations geographically close to you.
- If you downloaded the file directly to an OpenVMS machine, the downloaded file will have a name similar to:  
JBOSS4\_\_2E0\_\_2E4\_\_2EGA.ZIP
- Rename the file to `swdisk:[kits]JBOSS-404_ga.zip`
- Set the attributes on the file to stream-lf using the following command:  

```
$ set file/attr=(rfm:stmlf) swdisk:[kits]JBOSS-404_ga.zip
```

In addition to the JBOSS Application Server software, you also need the OpenVMS Supplementary JAR file, `jboss_OpenVMS_supp.jar`, which contains installation and configuration files for OpenVMS.

Download this file from:

[http://peseta.zko.hp.com/jboss\\_info/jboss\\_openvms\\_supp.jar](http://peseta.zko.hp.com/jboss_info/jboss_openvms_supp.jar)

and save to `swdisk:[kits]`

Set the attributes on the file to stream-lf using the following command:

```
$ set file/attr=(rfm:stmlf)-  
swdisk:[kits]jboss_OpenVMS_supp.jar
```

## Installing the JBoss Application Server

Login to the account that will run the JBoss Application Server, and execute the following commands.

**Note:** If you want to use the Software Development Kit V1.5.0, modify the following instructions to use:

```
"@SYS$MANAGER:JAVA$150_SETUP.COM"
```

instead of

```
"@SYS$MANAGER:JAVA$142_SETUP.COM"
```

```
$ SET PROCESS/PARSE_STYLE=EXTENDED
$ DEFINE/NOLOG/JOB DECC$ARGV_PARSE_STYLE ENABLE
$ DEFINE/NOLOG/JOB DECC$EFS_CASE_PRESERVE ENABLE
$ @SYS$MANAGER:JAVA$142_SETUP.COM
$ DEFINE/NOLOG/JOB DECC$EFS_CHARSET ENABLE
$ DEFINE/NOLOG/JOB DECC$FD_LOCKING ENABLE
$ DEFINE/NOLOG/JOB DECC$REaddir_DROPDOTNOTYPE ENABLE
$ DEFINE/NOLOG/JOB DECC$WLS ENABLE
$ DEFINE/NOLOG/JOB JAVA$CREATE_DIR_WITH_OWNER_DELETE TRUE
$ DEFINE/NOLOG/JOB JAVA$DELETE_ALL_VERSIONS TRUE
$ DEFINE/NOLOG/JOB JAVA$DISABLE_JAVA_FCNTL_LOCKS TRUE
$ DEFINE/NOLOG/JOB JAVA$FILENAME_CONTROLS 8
$ DEFINE/NOLOG/JOB JAVA$FILE_OPEN_MODE 3
$ DEFINE/NOLOG/JOB JAVA$FORK_SUPPORT_CHDIR TRUE
$ DEFINE/NOLOG/JOB JAVA$FSYNC_INTERVAL 5
$ DEFINE/NOLOG/JOB JAVA$RENAME_ALL_VERSIONS TRUE
```

Expand the Jboss zip file using the following commands:

```
$ set def swdisk:[jboss]
$ jar xvf swdisk:[kits]JBoss-404_ga.zip
```

The zip file will be extracted to the swdisk:[jboss...] directory structure.



## Post-Installation Setup Instructions for JBoss

Shutdown CSWS\_JAVA if it is running on the system. JBoss starts its own version of Tomcat on port 8080. Port allocation failures will occur if two products attempt to use the same ports.

```
$ @SYS$STARTUP:APACHE$JAKARTA_SHUTDOWN
```

Create a directory to contain the JBoss Application Server command files for OpenVMS:

```
$ create/directory swdisk:[jboss.support]
$ set def swdisk:[jboss.support]
$ jar xvf swdisk:[kits]jboss_OpenVMS_supp.jar
```

## Configure JBoss Application Server Environment

Next, Configure the JBoss Application Server command files for OpenVMS. You will be requested to enter the JBOSS\_HOME directory.

JBoss refers to the "swdisk:[jboss.jboss-4<sup>^</sup>.0<sup>^</sup>.4<sup>^</sup>.GA]" directory as JBOSS\_HOME, and references many of its files using this directory as a base. Be sure you enter the correct JBOSS\_HOME directory.

```
$ set def swdisk:[jboss.support]
$ @configEnvVMS.com
```

```
Enter the JBOSS Home Directory (e.g.,swdisk:[jboss.jboss-4^.0^.4^.GA])? swdisk:[jboss.jboss-4^.0^.4^.GA]
```

```
Creating swdisk:[jboss.support]setEnvVMS.com . . .
Create complete
Install OpenVMS Command Procedure Files (Y/N)? Y
Installing OpenVMS Command Procedure Files...
OpenVMS Command Procedure Files installed.
```

## Starting the JBoss Application Server

```
$ set def sys$login
$ @login
$ set def jboss_home:[bin]
$ @run
```

The JBoss Application Server is started when a message similar to the following appears:

```
16:48:04,677 INFO [Server] JBoss (MX MicroKernel) [4.0.4.GA (build:
CVSTag=JBoss_4_0_4_GA date=200605151000)] Started in 47s:466ms
```

Access the JBoss Application Server via

<http://fully.qualified.domain.name.of.your.server:8080/web-console/>

The JBoss Application Server can be queried for information via the twiddle command procedure.

To provide help on twiddle:

```
$ set def jboss_home:[bin]
$ @twiddle "-h"
```

A few sample queries for twiddle:

```
$ @twiddle "serverinfo --count"
$ @twiddle "serverinfo --domain"
$ @twiddle "get jboss:service=invoker,type=jrmp
RMIOBJECTPORT StateString"
```

## Shutdown the JBoss Application Server

Shutdown the JBoss Application Server by executing the following commands:

```
$ set def jboss_home:[bin]
$ @shutdown
```

## Additional Documentation

Refer to the "JBoss Application Server" documentation located at <http://www.jboss.org/docs/index> for detailed information about JBoss.

To view the documentation you will need to register for an account at <http://www.jboss.org/index.html> using the "register" link.