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|  | FS – CIO  RELEASE NOTICE  (6610-7) | |  |
| October 23, 2019 | **CIO – ISO** | | RN-2019-Web-?? |
| **Subject:** | | Install JBOSS EAP 7.2.4 on RHEL 6.x | |
| **Purpose:** | | Detailed instructions on installing JBOSS Enterprise Application Server with Enterprise Application Platform(EAP) 7.2.4 on RHEL 6.x servers. | |
| **Support Contact:** | | Suresh Chorampalli (303-335-0196) schorampalli@fs.fed.us | |
| **Application Sponsor:** | | David Dupre (505-438-5342) drdupre@fs.fed.us | |
| **OS Level:** | | RHEL 6.x | |
| **Mandatory:** | | No | |
| **Required System Reboot:** | | No Reboot Required  Servers (if applicable) | |
| **Service Interruption:** | | No | |
| **Affected Server Types:** | | JBOSS EAP7.2 servers hosted on RHEL 6.x OS | |
| **Server Team Implementing Update:** | | Linux | |
| **Expected Completion Date:** | | Friday, October 25, 2019 | |
| **Environment:** | | FSVDC-NITC | |
| **SBR #:** | | Enter the Statement of Business Requirements number (if applicable) for this release. | |
| **CR #:** | | CHG | |
| **If there are any problems installing this release, please contact the following people:** | | Suresh Chorampalli (303-335-0196) schorampalli@fs.fed.us | |
| General Overview | | | |
| This RN provides the instructions to install JBOSS EAP 7.2 on RHEL 6.x servers. Cumulative Patch of JBOSS EAP 7.2.4 is applied to remediate the latest security vulnerabilities. Addresses the latest CVEs as below:  [CVE-2019-14838 wildfly-core: Incorrect privileges for 'Monitor', 'Auditor' and 'Deployer' user by default](https://access.redhat.com/jbossnetwork/restricted/softwareDetail.html?softwareId=74211&product=appplatform&version=7.2&downloadType=securityPatches)  [CVE-2019-14843 wildfly: wildfly-security-manager: security manager authorization bypass](https://access.redhat.com/jbossnetwork/restricted/softwareDetail.html?softwareId=73122&product=appplatform&version=7.2&downloadType=securityPatches) | | | |
| Prerequisites | | | |
| 1. /etc/redhat-release should state the RHEL version 6.x 2. Proper permissions to install JBOSS EAP under /opt/EAP7.2 3. Root access is required to install. 4. NFS file system and Artifactory access to retrieve the installation files. 5. /tmp has about 900 MB free for temporary files and /opt has 500 MB free for patch installation. 6. Userid jadmin and password is required to access and test the JBOSS management console. 7. This RN will install JBOSS EAP7.2 base software, then applies the latest patch 7.2.4 as an update to JBOSS EAP 7.2. 8. WARNING: User data or modified configuration files should be saved from EAP 6 Installs and moved to EAP 7.2 and verified to make sure the EAP6 configuration works well on EAP7 on RHEL6. Some of those files include the welcome-content directory, custom modules in the modules directory and custom bundles in the bundles directory, deployments directory, standalone.xml etc. 9. Application data and files should reside in /app and not /opt as per the architecture design document. | | | |

**SECTION I: Install Instructions**

1. Log on to the server with your Admin ID using SSH or Putty and authenticate as root.

#user: ssh <Admin id>@<Server\_FQDN>

#user: sudo su -

1. Verify that this is a RHEL 6.x Server.

#root: cat /etc/redhat-release

Expected result:

Example: Red Hat Enterprise Linux Server release 6.10 (Santiago)

**NOTE:** STOP this RN if the results do not match the expected result for Red Hat Servers.

1. Verify IF JBOSS EAP Base software is pre-installed and the subsequent patches upto to 6.4.22 applied.

#root: /opt/EAP6.4/bin/standalone.sh -version | grep 6.4 | grep AS

Expected result acceptable is JBoss EAP 6.4.22.GA

1. Verify that EAP 6.4 directories and required configuration and application files have been backed up. Verify with the application administrator to backup and confirm before installing EAP 7.2.

Expected result: Manual verify VM backup or directory backup of EAP 6.4 (/opt/EAP6.4)

1. Make sure /tmp has at least 900MB free and /opt has 600 MB free.

#root: df -h /tmp /opt

Expected result:

Example:

Filesystem Size Used Avail Use% Mounted on

/dev/mapper/appVG-tmpLV 2.0G 89M 2.0G 5% /tmp

/dev/mapper/rootVG-optLV 4.0G 820M 3.2G 21% /opt

**NOTE:** STOP this RN if the results do not match the expected result.

1. Verify package integrity.

#root: cd /tmp

#root: wget http://artifactory.fdc.fs.usda.gov/artifactory/application-release-local/gov/usda/fs/jboss-eap/rhel6\_jboss\_eap\_7.2.4\_install.tar.gz

#root: sha256sum rhel6\_jboss\_eap\_7.2.4\_install.tar.gz

Expected results:

276a4dcd8dca0b6ba792c8c68b0c31a6a4e553e0cecab210734149edef202006 ./rhel6\_jboss\_eap\_7.2.4\_install.tar.gz

1. If this RHEL6 server has a previous installation of EAP 6.4, stop the JBOSS services.

**#root: service jboss-as-standalone.sh stop**

1. To stop JBOSS EAP 6.4 from starting on server reboot.

**#root: chkconfig --del jboss-as-standalone.sh**

**#root: rm -rf /etc/init.d/jboss-as-standalone.sh**

1. Execute the following commands to install JBOSS EAP 7.2.4.

#root: tar xvzf rhel6\_jboss\_eap\_7.2.4\_install.tar.gz; echo Exit code is $?.

Expected Result:

Exit code is 0.

#root: rm -rf rhel6\_jboss\_eap\_7.2.4\_install.tar.gz

#root: cd /tmp/jbosseap724

#root: ./install\_rhel6\_jboss\_eap\_7.2.4.sh -install

Expected result:

./install\_rhel6\_jboss\_eap\_7.2.4.sh -install

Installation of eap\_7.2.4 package starting...

Starting: install\_rhel6\_eap\_7.2.4 Update.

Validating: OS and OS Level

Validated: OS is RHEL

Validated: Red Hat Enterprise Linux Server release 6.10 (Santiago)

Validating: Free up space in /var by cleaning the yum cache

Validated: Cleaned up /var yum cache.

Validating: Checking free space in /

Validated: Enough free space in /

Validating: Checking free space in /usr

Validated: Enough free space in /usr

Validating: Checking free space in /var

Validated: Enough free space in /var

Validating: Checking free space in /opt

Validated: Enough free space in /opt

Validating: RHN Registration.

Refreshing: Clean and refresh the RHN repository list

Validating: Free up space in /var by cleaning the yum cache

Validated: Cleaned up /var yum cache.

Install: Creating local jboss user jboss72 with group jboss72.

Install: Finished creating jboss72 user ..

Install: Installing Apache Portability Runtime (APR), Openssl and OpenJDK for eap\_7.2.4.

Install: Completed APR, Openssl and OpenJDK install..

Install: Installing jboss base server jboss\_eap\_7.2.0 package.

Install: Completed Jboss base server jboss\_eap\_7.2.0 install..

Install: Configuring jboss start/stop.

Starting jboss-eap: /

[ OK ]

Validated: start/stop scripts for Jboss server eap\_7.2.4 install..

Validating: jboss service in allowed services

Validated: No Allowed services file in system

Install: Configuring jboss management console ip settings for jboss server

Validated: jboss management console ip settings

Install: Applying jboss server patch eap\_7.2.4 .

Stopping jboss-eap: [ OK ]

Starting jboss-eap: /

[ OK ]

Install: Completed Applying Patch Jboss server eap\_7.2.4 install..

Install: Applying jboss server patch jbeap-17583.zip .

Stopping jboss-eap: [ OK ]

Starting jboss-eap: /

[ OK ]

Install: Completed Applying Patch Jboss server jbeap-17583.zip install..

Install: Applying jboss server patch jbeap-17715.zip .

Stopping jboss-eap: [ OK ]

Starting jboss-eap: /

[ OK ]

Install: Completed Applying Patch Jboss server jbeap-17715.zip install..

Install: Installing JBOSS Signature File.

Success: Finished with JBOSS Enterprise Application Platform Server install\_rhel6\_eap\_7.2.4 Update.

1. Verify with JBOSS administrator and application owner if the application is working as desired and then clean up /opt/EAP6.4. Instructions to remove EAP6.4 is in Appendix A.

**SECTION II: Validation Steps**

1. Run the script with –validate option.

#root: cd /tmp/jbosseap724

#root: ./install\_rhel6\_jboss\_eap\_7.2.4.sh -validate

Expected Result:

./install\_rhel6\_jboss\_eap\_7.2.4.sh -validate

Validation of JDK, APR, Openssl JBOSSEAP eap\_7.2.4 package.

Loaded plugins: enabled\_repos\_upload, package\_upload, product-id, search-disabled-repos, security, subscription-manager

Setting up Install Process

rhel-6-server-optional-rpms | 2.0 kB 00:00

rhel-6-server-rpms | 2.0 kB 00:00

rhel-6-server-satellite-tools-6.3-rpms | 2.1 kB 00:00

No package java-11-openjdk-devel available.

Package openssl-devel-1.0.1e-58.el6\_10.x86\_64 already installed and latest version

Package apr-1.3.9-5.el6\_9.1.x86\_64 already installed and latest version

Nothing to do

Uploading Enabled Repositories Report

Loaded plugins: product-id, subscription-manager

0

If nothing to do is displayed, validation is successful.

Stopping jboss-eap: [ OK ]

Starting jboss-eap: /

[ OK ]

jboss-eap is running (pid 81401)

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JBoss Bootstrap Environment

JBOSS\_HOME: /opt/EAP7.2

JAVA: java

JAVA\_OPTS: -server -verbose:gc -Xloggc:/opt/EAP7.2/standalone/log/gc.log -XX:+PrintGCDetails -XX:+PrintGCDateStamps -XX:+UseGCLogFileRotation -XX:NumberOfGCLogFiles=5 -XX:GCLogFileSize=3M -XX:-TraceClassUnloading -Xms1303m -Xmx1303m -XX:MetaspaceSize=96M -XX:MaxMetaspaceSize=256m -Djava.net.preferIPv4Stack=true -Djboss.modules.system.pkgs=org.jboss.byteman -Djava.awt.headless=true

=========================================================================

03:45:15,819 INFO [org.jboss.modules] (main) JBoss Modules version 1.8.8.Final-redhat-00001

JBoss EAP 7.2.4.GA (WildFly Core 6.0.16.Final-redhat-00002)

JBOSS Server should stop and start - the validation is successful.

1. On the PC, open a web browser and enter the host name of the server with port 9990 in the location bar.
   1. Enter jadmin as user name and password. The Application administrator has the password or contact support contact. Example: <http://fsxopsx0030.wrk.fs.usda.gov:9990>
   2. In the JBOSS management console click on patching and the patches applied should be displayed with jboss-eap-7.2.4.CP, 17715 and 17583 CVEs

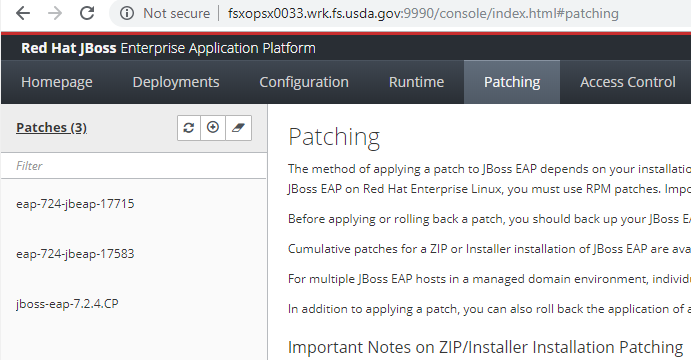
Expected Results:

Under Patching, patches that were applied will be displayed.

Eap-7.2.4

17715

17583



1. If install is successful, perform cleanup using following commands.

#root: cd /tmp

#root: rm -rf jbosseap724

1. If install is successful, verify with the application owner and remove the snapshot or the backups from /efs or /nfs depending on the environment.

**SECTION III Backout Instructions**

#root: cd /tmp/jbosseap724

#root: ./install\_rhel6\_jboss\_eap\_7.2.4.sh -backout

Expected Result:

./install\_rhel6\_jboss\_eap\_7.2.4.sh -backout

Backing out JBOSS EAP Install.

Removing start/stop services from the server

Stopping jboss-eap: [ OK ]

Removed jboss start/stop services

Remove jboss user and jboss group

Removed jboss user and jboss group

Removing JDK

Loaded plugins: enabled\_repos\_upload, package\_upload, product-id, search-disabled-repos, security, subscription-manager

Setting up Remove Process

No Match for argument: java-11-openjdk-devel

rhel-6-server-optional-rpms | 2.0 kB 00:00

rhel-6-server-rpms | 2.0 kB 00:00

rhel-6-server-satellite-tools-6.3-rpms | 2.1 kB 00:00

Resolving Dependencies

--> Running transaction check

---> Package apr.x86\_64 0:1.3.9-5.el6\_9.1 will be erased

---> Package openssl-devel.x86\_64 0:1.0.1e-58.el6\_10 will be erased

--> Finished Dependency Resolution

Dependencies Resolved

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Package Arch Version Repository Size

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Removing:

apr x86\_64 1.3.9-5.el6\_9.1 @rhel-6-server-rpms 296 k

openssl-devel x86\_64 1.0.1e-58.el6\_10 @rhel-6-server-rpms 2.2 M

Transaction Summary

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Remove 2 Package(s)

Installed size: 2.5 M

Downloading Packages:

Running rpm\_check\_debug

Running Transaction Test

Transaction Test Succeeded

Running Transaction

Erasing : openssl-devel-1.0.1e-58.el6\_10.x86\_64 1/2

Erasing : apr-1.3.9-5.el6\_9.1.x86\_64 2/2

Uploading Package Profile

Verifying : apr-1.3.9-5.el6\_9.1.x86\_64 1/2

Verifying : openssl-devel-1.0.1e-58.el6\_10.x86\_64 2/2

Removed:

apr.x86\_64 0:1.3.9-5.el6\_9.1 openssl-devel.x86\_64 0:1.0.1e-58.el6\_10

Complete!

Uploading Enabled Repositories Report

Loaded plugins: product-id, subscription-manager

Completed: Backing out JBOSS EAP eap\_7.2.4

**APPENDIX A: JBOSS EAP Uninstall Instructions**

1. Log on to the server with your Admin ID using SSH or Putty and authenticate as root.

#user: ssh <Admin id>@<Server\_FQDN>

#user: sudo su -

1. Verify that this is a RHEL 6.x Server.

#root: cat /etc/redhat-release

Expected result:

Example: Red Hat Enterprise Linux Server release 6.10 (Santiago)

**NOTE:** STOP this RN if the results do not match the expected result for Red Hat Servers.

1. Verify IF JBOSS EAP Base software is pre-installed and the subsequent patches upto to 6.4.22 applied.

#root: /opt/EAP6.4/bin/standalone.sh -version

Expected results =========================================================================

JBoss Bootstrap Environment

JBOSS\_HOME: /opt/EAP6.4

JAVA: java

JAVA\_OPTS: -server -XX:+UseCompressedOops -verbose:gc -Xloggc:"/opt/EAP6.4/standalone/log/gc.log" -XX:+PrintGCDetails -XX:+PrintGCDateStamps -XX:+UseGCLogFileRotation -XX:NumberOfGCLogFiles=5 -XX:GCLogFileSize=3M -XX:-TraceClassUnloading -Xms1303m -Xmx1303m -XX:MaxPermSize=256m -Djava.net.preferIPv4Stack=true -Djboss.modules.system.pkgs=org.jboss.byteman -Djava.awt.headless=true -Djboss.modules.policy-permissions=true

=========================================================================

OpenJDK 64-Bit Server VM warning: ignoring option MaxPermSize=256m; support was removed in 8.0

17:26:15,110 INFO [org.jboss.modules] (main) JBoss Modules version 1.3.11.Final-redhat-1

JBoss EAP 6.4.22.GA (AS 7.5.22.Final-redhat-1)

1. WARNING: Verify that EAP 6.4 directories and required configuration and application files have been backed up. Verify with the application administrator and application owners that backups have been taken and configuration and application data and files have been saved.
2. Uninstall Jboss EAP 6.4

#root: cd /opt/EAP6.4/Uninstaller

#root: java -jar uninstaller.jar

Expected results:

# java -jar uninstaller.jar

Force the deletion of /opt/EAP6.4 [y/n] y

|  |
| --- |
| #root: cd  #root: rm -rf /opt/EAP6.4  Δ END OF RELEASE NOTICE Δ |