



Security Considerations

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Update the Java Runtime Environment (Optional)

The Unified CCE Installer installs the Java Runtime Environment (JRE) to a default location (for example, C:\Program Files (x86)\Java\jre<version>) and creates a JAVA_HOME environment variable set to that location. In most circumstances, you do not need to modify or configure the JRE.

For more information on the JRE version installed, see the Contact Center Enterprise Solution Compatibility Matrix at <https://www.cisco.com/c/en/us/support/customer-collaboration/unified-contact-center-enterprise/products-device-support-tables-list.html>.

If you have requirements for a different version of the JRE, you can update the JRE to a later version.

To update the JRE to a later version:

1. Review the *Contact Center Enterprise Compatibility Matrix* to confirm that Packaged CCE supports the JRE version you want to install.
2. Follow the Oracle JRE installer procedure to install the JRE to the VM on which your Unified CCE components are installed.
3. Set the JAVA_HOME environment variable to the location of the new JRE.
4. Restart the virtual machine.

When you have completed the update to the new JRE version, uninstall the old JRE.



Note

- If the ICM-CCE installer installs JRE on the Windows platform, the system retains only the Ciscoapproved CA certificates in the java certificate store, and removes all the unapproved certificates.
- If you do not have CA certificates, import self-signed certificates of all components into AW machines. For more information, see *Self-Signed Certificates* section in the *Cisco Packaged Contact Center Enterprise Administration and Configuration Guide* at <https://www.cisco.com/c/en/us/support/customer-collaboration/packaged-contact-center-enterprise/products-maintenance-guides-list.html>.

Upgrade Tomcat Utility

Use the optional Cisco Upgrade Tomcat Utility to:

- Upgrade Tomcat to version 9.0 build releases. (That is, only version 9.0 build releases work with this tool.) You may choose to upgrade to newer builds of Tomcat release 9.0 to keep up with the latest security fixes.

Tomcat uses the following release numbering scheme: Major.minor.build. For example, you can upgrade from 9.0.21 to 9.0.22. You cannot use this tool for major or minor version upgrades.

- Revert a Tomcat upgrade.

We do not guarantee compatibility with the latest build release of Tomcat. If upgrading Tomcat causes a problem, use the utility to revert to the previous release.

**Note**

If you use the utility to upgrade Tomcat multiple times, you can revert to only one version back of Tomcat.

For example, if you upgrade Tomcat from 9.0.21 to 9.0.22, and then to 9.0.24, the utility reverts Tomcat to 9.0.22.

Before using the tool:

- Download the Tomcat installer (apache-tomcat-version.exe) from the Tomcat website: <http://archive.apache.org/dist/tomcat/tomcat-9/>. Copy the installer onto the Unified CCE component VMs.
- Download the utility (UpgradeTomcatTool-<version>.jar) and copy it onto the Unified CCE component VMs.

Download link: <https://software.cisco.com/download/home/284360381/type/284416107/release>.

- Delete or back up large log files in these directories to reduce upgrade time:

c:\icm\tomcat\logs
c:\icm\debug.txt

Upgrade Tomcat

For detailed information on the results from each step, see the ../UpgradeTomcatResults/UpgradeTomcat.log file.

**Note**

Stop Unified CCE services on the VM before using the Tomcat Utility.

Procedure

- Step 1** From the command line, navigate to the directory where you copied the Upgrade Tomcat Utility.
- Step 2** Enter this command to run the tool: **java -jar UpgradeTomcatTool-<version>.jar -upgrade**
- Step 3** When prompted, enter the full pathname of the new Tomcat installer.
- For example:
- ```
c:\tomcatInstaller\apache-tomcat-9.0.21.exe
```
- Step 4** When prompted, enter **yes** to continue with the upgrade.
- Step 5** Repeat these steps for all unified CCE component VMs.
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## Revert Tomcat

For detailed information on the results from each step, see the `../UpgradeTomcatResults/UpgradeTomcat.log` file.



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**Note** Stop Unified CCE services on the VM before using the Tomcat Utility.

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### Procedure

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- Step 1** From the command line, navigate to the directory where you copied the Upgrade Tomcat Utility.
- Step 2** Enter this command to run the tool: **java -jar UpgradeTomcatTool-<version>.jar -revert**
- Step 3** When prompted, enter **yes** to continue with the reversion.
- Step 4** Repeat these steps for all unified CCE component VMs.
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