



# Tomcat Update

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- [Tomcat Update, on page 1](#)
- [Running Tomcat Service without Administrator Privileges, on page 3](#)

## Tomcat Update

Perform the following procedure to update Tomcat version on Call Server, Operations Console, VXML Server, and Web Services Manager (WSM). For example, you can update from Tomcat version 9.0.8 to 9.0.x.

Perform the following procedure to update Tomcat version on Call Server, Operations Console, VXML Server, and Web Services Manager (WSM). For example, you can update from Tomcat version 9.0.43 to 9.0.x.

### Before you begin

- Save a backup copy of the Tomcat folder from the following locations:
  - For Call Server: `C:\Cisco\CVP\CallServer`
  - For VXML Server: `C:\Cisco\CVP\VXMLServer`
  - For Operations Console: `C:\Cisco\CVP\OPConsoleServer`
  - For WSM: `C:\Cisco\CVP\wsm\Server`



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**Note** Save a backup copy of the Tomcat folder on a directory path that is different from the default destination folder (`C:\Cisco\CVP`).

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- Rename the Tomcat folders with a different name. For example: `Tomcat_backup`.

### Procedure

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#### Step 1

Stop the following Tomcat services:

- Cisco CVP Call Server
- Cisco CVP Operations Console Server

- Cisco CVP VXML Server
- Cisco CVP Web Services Manager

**Step 2** Remove the Tomcat folder from the following locations:

- For Call Server: C:\Cisco\CVP\CallServer
- For VXML Server: C:\Cisco\CVP\VXMLServer
- For Operations Console: C:\Cisco\CVP\OPConsoleServer
- For WSM: C:\Cisco\CVP\wsm\Server

**Step 3** Download the Tomcat binary `apache-tomcat-9.0.x-windows-x64.zip` file from the following location:  
<https://archive.apache.org/dist/tomcat/tomcat-9/>.

**Step 4** Right-click the `apache-tomcat-9.0.x-windows-x64.zip` file and extract the files to a known location on the local drive.

**Step 5** Rename the folder `apache-tomcat-9.0.x` to `Tomcat`.

**Step 6** Copy the Tomcat folder to the following locations:

- For Call Server: C:\Cisco\CVP\CallServer
- For VXML Server: C:\Cisco\CVP\VXMLServer
- For Operations Console: C:\Cisco\CVP\OPConsoleServer
- For WSM: C:\Cisco\CVP\wsm\Server

**Step 7** Copy the `webapps` file from the `Tomcat_backup` folder (...Tomcat\_backup\webapps) and paste it in the following folder locations:

- For Call Server: C:\Cisco\CVP\CallServer\Tomcat
- For VXML Server: C:\Cisco\CVP\VXMLServer\Tomcat
- For Operations Console: C:\Cisco\CVP\OPConsoleServer\Tomcat
- For WSM: C:\Cisco\CVP\wsm\Server\Tomcat

**Step 8** Copy the missing jar files from the `Tomcat_backup` folder (. .\Tomcat\_backup\lib) to the following locations:

- For Call Server: C:\Cisco\CVP\CallServer\Tomcat\lib
- For VXML Server: C:\Cisco\CVP\VXMLServer\Tomcat\lib
- For Operations Console: C:\Cisco\CVP\OPConsoleServer\Tomcat\lib
- For WSM: C:\Cisco\CVP\wsm\Server\Tomcat\lib

**Note** Copy the contents of the `. .\Tomcat_backup\Shared` folder to  
C:\Cisco\CVP\OPConsoleServer\Tomcat\.

**Step 9** Copy the `context.xml` file from the `Tomcat_backup` folder (. .\Tomcat\_backup\conf) to the following locations:

- For Call Server: C:\Cisco\CVP\CallServer\Tomcat\conf
- For VXML Server: C:\Cisco\CVP\VXMLServer\Tomcat\conf
- For Operations Console: C:\Cisco\CVP\OPConsoleServer\Tomcat\conf
- For WSM: C:\Cisco\CVP\wsm\Server\Tomcat\conf

**Step 10** Update the new `server.xml` files with the existing properties from the backed up `server.xml` files.

**Step 11** For wsm Tomcat upgrade, ensure the `jaas.conf` from the backed up Tomcat folder is copied to the new `Tomcat/conf` folder.

- Step 12** Back up **connector.property** that was created before starting the process from:
- For Operations Console:  
C:\Cisco\CVP\OPConsoleServer\Tomcat\_backup\bin\connector.property
  - For VXML Server:  
C:\Cisco\CVP\VXMLServer\Tomcat\_backup\bin\connector.property
- Step 13** Restore these to:
- For Operations Console:  
C:\Cisco\CVP\OPConsoleServer\Tomcat\bin\connector.property
  - For VXML Server: C:\Cisco\CVP\VXMLServer\Tomcat\bin\connector.property
- Step 14** Restart the following Tomcat services:
- Cisco CVP CallServer
  - Cisco CVP OPConsoleServer
  - Cisco CVP VXMLServer
  - Cisco CVP WebServicesManager
- Step 15** Ensure that the CVP Diag portal is up and running.
- Step 16** Check Tomcat and CVP logs for any exceptions.
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## Running Tomcat Service without Administrator Privileges

### Procedure

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- Step 1** Create a Windows user, for example, *cvp\_guest*.
- Step 2** In C:\Cisco folder, grant read, write, modify permission to *cvp\_guest*.
- Step 3** Grant permission to *cvp\_guest* to access the machine remotely (to allow remote connection capability in future) by right clicking **This Computer** from File Explorer > Properties > Remote Settings > Allow remote connections to this computer > Select Users > Add, type the name of the new user (eg. *cvp\_guest*) > Check Names > OK.
- Step 4** Log out as the current user, and log on as *cvp\_guest*.
- Step 5** Get the SID of the *cvp\_guest* user to grant *cvp\_guest* the required permissions to start and stop the Windows services.
- Go to Start > regedit > HKEY\_LOCAL\_MACHINE\SOFTWARE\Microsoft\Windows NT\CurrentVersion\ProfileList\.
  - Browse to the folder that has the **ProfileImagePath** value as C:\Users\cvp\_guest.
  - Right-click that folder and select **Copy Key Name** to copy the key name to Notepad. By default, the key name appears with the full path. Copy only the last part (for example, S-1-5-21-1386459338-4158420048-3623644462-1067).
- Step 6** Log out as *cvp\_guest* and log in as Administrator to assign permission to *cvp\_guest* for starting and stopping the Tomcat service(s) that are to be run on that node.

- a) Go to command prompt and run: `sc.exe sdshow <service_name>`. For example, on a Call Server node, type `sc.exe sdshow callserver` in the command prompt. Refer to the following table for all possible values of `<service_name>`.

Sample Output:

```
D: (A;;CCLCSWRPWPDTLOCRRC;;;SY) (A;;CCDCLCSWRPWPDTLOCRSDRCWDWO;;;BA) (A;;CCLCSWLOCRRC;;;IU)
(A;;CCLCSWLOCRRC;;;SU) S: (AU;FA;CCDCLCSWRPWPDTLOCRSDRCWDWO;;;WD)
```

This output lists the permissions for each user and group on this system.

Copy this output for reference and use in the following steps.

- b) Suffix the key to **A;;RPWPCR;;;** (for example: `A;;RPWPCR;;;<KEY_NAME>`) and insert it in the output from Step 6a just before 'S:' as shown:

Example:

```
D: (A;;CCLCSWRPWPDTLOCRRC;;;SY) (A;;CCDCLCSWRPWPDTLOCRSDRCWDWO;;;BA) (A;;CCLCSWLOCRRC;;;IU) (A;;CCLCSWLOCRRC;;;SU)
(A;;RPWPCR;;;S-1-5-21-1386459338-4158420048-3623644462-1067) S: (AU;FA;CCDCLCSWRPWPDTLOCRSDRCWDWO;;;WD)
```

### Step 7 Go to command prompt and run `sc.exe sdset <service_name> <Output from Step 6b>`

Example:

```
sc.exe sdset callserver "D: (A;;CCLCSWRPWPDTLOCRRC;;;SY) (A;;CCDCLCSWRPWPDTLOCRSDRCWDWO;;;BA)
(A;;CCLCSWLOCRRC;;;IU) (A;;CCLCSWLOCRRC;;;SU) (A;;RPWPCR;;;S-1-5-21-1386459338-4158420048-3623644462-1067) S: (AU;FA;CCDCLCSWRPWPDTLOCRSDRCWDWO;;;WD)"
```

Depending on which CVP services are to be run on a node, grant permissions to the `cvp_guest` as follows. For example: on a Call Server node, run Steps 6 and 7 for 'callserver' and 'vxmlserver' Tomcat services.

Use the following table to refer to the possible values of `<service_name>` in the above commands to be run on each node:

Node	Service	<service_name>
Call Server/VXML Server	Call Server	callserver
	VXML Server	vxmlserver
	Web Services Manager	WebServicesManager
	SNMP Management	"Cisco CVP SNMP Management"
OAMP	OPS Console Server	OPSConsoleServer
	Web Services Manager	WebServicesManager
	SNMP Management	"Cisco CVP SNMP Management"

<b>Node</b>	<b>Service</b>	<b>&lt;service_name&gt;</b>
Reporting Server	Call Server	callserver
	Web Services Manager	WebServicesManager
	SNMP Management	"Cisco CVP SNMP Management"
	Informix IDS	cvp

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