

Alma Linux 8 – Tomcat 9

Version:	1.0.0
Created by:	cloudimg

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1.) Overview

This document is provided as a user guide for the Alma Linux 8 – Tomcat 9 product offering on the Azure Marketplace. Please reach out to support@cloudimg.co.uk if any issues are encountered following this user guide for the chosen product offering.

2.) Access & Security



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Please update the security group of the target instance to allow the below ports and protocols for access and connectivity.

Protocol	Type	Port	Description
SSH	TCP	22	SSH connectivity
HTTP	TCP	8080	Tomcat Welcome Page

3.) System Requirements

The minimum system requirements for the chosen product offering can be found below

Minimum CPU	Minimum RAM	Required Disk Space
1	1 GB	20 GB

4.) Connecting to the Instance

Once launched in the Azure Virtual Machines Service, please connect to the instance via an SSH client using the **azureuser** with the key pair associated at launch. Once connected as the **azureuser**, you will be able to **sudo** to the **root** user by issuing the below command.

Switch to the root user

```
sudo su -
```

5.) On Startup

An OS package update script has been configured to run on boot to ensure the image is fully up to date at first use. You can disable this feature by removing the script from `/stage/scripts/` and deleting the entry in crontab for the root user.

Disable the OS update script from running on reboot

```
rm -f /stage/scripts/initial_boot_update.sh  
crontab -e  
#DELETE THE BELOW LINE. SAVE AND EXIT THE FILE.  
@reboot /stage/scripts/initial_boot_update.sh
```



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6.) Filesystem Configuration

Please see below for a screenshot of the server disk configuration and specific mount point mappings for software locations.

Filesystem	Size	Used	Avail	Use%	Mounted on
devtmpfs	485M	0	485M	0%	/dev
tmpfs	495M	0	495M	0%	/dev/shm
tmpfs	495M	6.7M	488M	2%	/run
tmpfs	495M	0	495M	0%	/sys/fs/cgroup
/dev/xvda2	38G	2.4G	34G	7%	/
/dev/xvda1	2.0G	93M	1.7G	6%	/boot
tmpfs	99M	0	99M	0%	/run/user/1002
/dev/xvdf	9.8G	367M	8.9G	4%	/apps

Mount Point	Description
/boot	Operating System Kernel files
/apps	Java & Tomcat installation directory

7.) Server Components

Please see below for a list of installed server components and their respective installation paths. The below versions are subject to change on initial boot based on the initial_boot_update.sh script finding new versions of the software in the systems package repositories.

Component	Version	Software Home
Cloud-Init	22.1	/etc/cloud
Java	11.0.13	/apps/java
Tomcat	9.0.56	/apps/tomcat
Azure CLI	2.53.1	/lib64/az



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8.) Scripts and Log Files

The below table provides a breakdown of any scripts & log files created to enhance the useability of the chosen offering.

Script/Log	Path	Description
Initial_boot_update.sh	/stage/scripts	Update the Operating System with the latest updates available.
Initial_boot_update.log	/stage/scripts	Provides output for initial_boot_update.sh

9.) Using System Components

Instructions can be found below for using each component of the server build mentioned in section 7 of this user guide document.

Azure CLI

Using Azure CLI - as any OS user.

```
az
```

Cloud-Init

Edit the /etc/cloud/cloud.cfg file to reflect your desired configuration. A link to the cloud-init official documentation can be found below for referencing best practise for your use case.

<https://cloudinit.readthedocs.io/en/latest/>

```
vi /etc/cloud/cloud.cfg
```

Tomcat

Start and Stop scripts have been created under the home directory of the tomcat user. Issue the below commands to start and or stop the Tomcat service.



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```
#Switch to the tomcat OS user

sudo su - tomcat

#Start the tomcat service

$HOME/startup.sh

#Stop the tomcat service

$HOME/shutdown.sh
```

Once the Tomcat service has started, you will be able to access the Tomcat front end via the below URL exchanging the values between <> to match that of your own instance.

<PRIVATE/PUBLICIP>:8080

Home Documentation Configuration Examples Wiki Mailing Lists Find Help

Apache Tomcat/9.0.56

If you're seeing this, you've successfully installed Tomcat. Congratulations!

Recommended Reading:

- [Security Considerations How-To](#)
- [Manager Application How-To](#)
- [Clustering/Session Replication How-To](#)

Server Status
Manager App
Host Manager

Developer Quick Start

- [Tomcat Setup](#)
- [Realms & AAA](#)
- [Examples](#)
- [Servlet Specifications](#)
- [First Web Application](#)
- [JDBC DataSources](#)
- [Tomcat Versions](#)

Managing Tomcat

For security, access to the `manager webapp` is restricted. Users are defined in:

```
$CATALINA_HOME/conf/tomcat-users.xml
```

In Tomcat 9.0 access to the manager application is split between different users. [Read more...](#)

[Release Notes](#)

[Changelog](#)

[Migration Guide](#)

[Security Notices](#)

Documentation

[Tomcat 9.0 Documentation](#)

[Tomcat 9.0 Configuration](#)

[Tomcat Wiki](#)

Find additional important configuration information in:

```
$CATALINA_HOME/RUNNING.txt
```

Developers may be interested in:

- [Tomcat 9.0 Bug Database](#)
- [Tomcat 9.0 JavaDocs](#)
- [Tomcat 9.0 Git Repository at GitHub](#)

Getting Help

[FAQ and Mailing Lists](#)

The following mailing lists are available:

- [tomcat-announce](#)
Important announcements, releases, security vulnerability notifications. (Low volume).
- [tomcat-users](#)
User support and discussion
- [taglibs-user](#)
User support and discussion for [Apache Taglibs](#)
- [tomcat-dev](#)
Development mailing list, including commit messages



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