

Apache Cassandra

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Created by:	cloudimg

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1.) Overview

This document is provided as a user guide for the Apache Cassandra product offering on the AWS 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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cloudimg
(+44) 02045382725
3rd Floor 86-90 Paul Street London EC2A 4NE
support@cloudimg.co.uk
<https://cloudimg.co.uk>

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
Custom TCP	TCP	7199	JMX monitoring port
Custom TCP	TCP	7000	Internode communication
Custom TCP	TCP	9042	CQL native transport port

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 Amazon EC2 Service, please connect to the instance via an SSH client using the **ec2-user** with the key pair associated at launch. Once connected as the **ec2-user** user, you will be able to sudo to the **root** user by issuing the below command.

Switch to the root user.

```
sudo su -
```

NOTE: Please allow the EC2 Instance to reach 2/2 successful status checks to ensure you will be able to connect successfully with the ec2-key pair assigned at launch. Upon attempting to SSH to early you may receive errors such as below, this is expected with an early SSH connection. Allow the EC2 instance to reach 2/2 status checks and you will be able successfully connect with the ec2-key pair assigned at launch as the ec2-user.

Name	Instance ID	Instance state	Instance type	Status check
cloudimg-example-instance	i-039990b0d91026962	Running	t3a.xlarge	2/2 checks passed

Example errors you may receive with an early SSH connection.

```
Permission denied (publickey,gssapi-keyex,gssapi-with-mic).
ec2-user@your-instance-ip's password:
```



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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
```

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	2.6G	33G	8%	/
/dev/xvda1	2.0G	93M	1.7G	6%	/boot
tmpfs	99M	0	99M	0%	/run/user/1002
/dev/xvdf	9.8G	37M	9.2G	1%	/var/lib/cassandra

Mount Point	Description
/boot	Operating System Kernel files
/var/lib/cassandra	Apache Cassandra data directory



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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	Software Home
Apache Cassandra	/etc/cassandra
Java	/bin/java

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.

Apache Cassandra

The Apache Cassandra service has been configured to start on boot, please use the below commands to start, stop and check the status of the service.

```
#Check the Cassandra Server is running
systemctl status cassandra

#Stop the Cassandra Server
systemctl stop cassandra
```



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```
#Start the Cassandra Server  
systemctl start cassandra
```

You will be to run the below command to check the Cassandra service is running.

```
nodetool status  
  
cqlsh
```

EXAMPLE OUTPUT

```
[root@ip-172-31-94-200 cassandra]# nodetool status  
Datacenter: datacenter1  
=====
```

Status=Up/Down						
/ State=Normal/Leaving/Joining/Moving						
--	Address	Load	Tokens	Owns (effective)	Host ID	Rack
UN	127.0.0.1	69.05 KiB	16	100.0%	bb9d3091-c1e0-4ed2-92b4-2897099aba7d	rack1

```
  
[root@ip-172-31-94-200 cassandra]# cqlsh  
Connected to Test Cluster at 127.0.0.1:9042  
[cqlsh 6.0.0 | Cassandra 4.0.4 | CQL spec 3.4.5 | Native protocol v5]  
Use HELP for help.  
cqlsh>
```



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