**Setting up App and DB servers with 2 different disk**

**App Server Setup**

Prerequisite – AWS instance of t2 large which consist of 2cpu and 8GB RAM. 20GB primary volume attached with it and 1 secondary disk of required size, initially go for 20GB

1. **Installation of necessary software**
   1. **Apache**

sudo apt-get update

sudo apt-get install apache2

sudo ufw app list

sudo ufw allow 'Apache'

sudo ufw status

sudo systemctl status apache2

http://your\_server\_ip

* 1. **Tomcat**

sudo apt-get update

sudo apt-get install default-jdk

java -version

sudo nano /etc/environment

**Add this line in environment file** ---> JAVA\_HOME='/usr/lib/jvm/java-1.8.0-openjdk-amd64/jre'

sudo nano ~/.bashrc

**Add this line in bashrc** ---> export JAVA\_HOME=/usr/lib/jvm/java-1.8.0-openjdk-amd64/jre

export PATH=$JAVA\_HOME/bin:$PATH

source ~/.bashrc

sudo groupadd tomcat

sudo useradd -s /bin/false -g tomcat -d /opt/tomcat tomcat

sudo wget https://mirrors.estointernet.in/apache/tomcat/tomcat-8/v8.5.61/bin/apache-tomcat-8.5.61.tar.gz8/v8.5.61/bin/apache-tomcat-8.5.61.tar.gz

sudo tar -xzvf apache-tomcat.tar.gz

sudo mv apache-tomcat/ tomcat/

sudo chown -R tomcat:tomcat /opt/tomcat

sudo chmod +x /opt/tomcat/bin/

sudo nano ~/.bashrc

**Add this line** ---> export CATALINA\_HOME=/opt/tomcat

source ~/.bashrc

cd /opt/tomcat/bin

sudo ./startup.sh

sudo ./shutdown.sh

sudo chown -hR tomcat:tomcat /opt/tomcat/

cd /etc/systemd/system/

sudo nano apache-tomcat.service

**Add this**

[Unit]

Description=Apache Tomcat 9 Servlet Container

After=syslog.target network.target

[Service]

User=tomcat

Group=tomcat

Type=forking

Environment=JAVA\_HOME=/usr/lib/jvm/java-1.8.0-openjdk-amd64/jre

Environment=CATALINA\_PID=/opt/tomcat/tomcat.pid

Environment=CATALINA\_HOME=/opt/tomcat

Environment=CATALINA\_BASE=/opt/tomcat

ExecStart=/opt/tomcat/bin/startup.sh

ExecStop=/opt/tomcat/bin/shutdown.sh

Restart=on-failure

[Install]

WantedBy=multi-user.target

sudo systemctl daemon-reload

sudo systemctl start apache-tomcat.service

sudo systemctl status apache-tomcat.service

**Set manager username and password**

sudo nano /opt/tomcat/conf/tomcat-users.xml

**Add this**

<role rolename="manager-gui"/>

<role rolename="admin-gui"/>

<user username="taxgenie" password="taxgenie" roles="manager-gui,admin-gui"/>

**Reference link**

tomcat istallation - <https://www.youtube.com/watch?v=feCesKLw420>

<https://www.digitalocean.com/community/tutorials/how-to-install-apache-tomcat-8-on-ubuntu-16-04>

1. **Mounting second disk**
   1. **Manual**

lsblk

sudo file -s /dev/xvdf

**o/p** - /dev/xvdf: data

sudo file -s /dev/xvda1

**o/p**- /dev/xvda1: SGI XFS filesystem data (blksz 4096, inosz 512, v2 dirs)

sudo mkdir /data

ls –l /

sudo mkfs -t xfs /dev/xvdf

sudo file -s /dev/xvdf

sudo mount /dev/xvdf /data

* 1. **Automatic**

sudo blkid

sudo cp /etc/fstab /etc/fstab.orig

sudo blkid **(Copy xvdf uuid Which is the second one)**

sudo vi /etc/fstab

**Add this line**

UUID=071198ff-7364-4226-b51a-f3c155fee8fa /data xfs defaults,nofail 0 2

sudo umount /data

sudo mount –a

sudo mkdir /data/apachelog

sudo mkdir /data/tomcatlog

**Reference link** -- <https://docs.aws.amazon.com/AWSEC2/latest/UserGuide/ebs-using-volumes.html>

<https://docs.aws.amazon.com/AWSEC2/latest/UserGuide/ebs-attaching-volume.html>

1. **Change log files location to second disk**
   1. **Apache**

cd /etc/apache2

ls –l

sudo nano envvars

**Change this line**

export APACHE\_LOG\_DIR=/data/apachelog$SUFFIX **(change to new log directory)**

sudo systemctl restart apache2

* 1. **Tomcat**

cd /opt/tomcat/conf/

sudo nano logging properties

**change all logs path to new location**

1. **Deployment**

**Transfer Dist file (in zip format) through filezilla at /var/www/**

**Unzip File** 🡪 sudo unzip Distfile

**Deploy War file on tomcat manager**

**Setup domain**

etc/apache2/site-available/000-default.conf

sudp cp 000-default.conf demo.taxgenie.online 🡪 **Change dist path and add URL**

sudo service apache2 reload

sudo a2ensite demo.taxgenie.online

sudo systemctl restart apache2

**Database Server Setup**

1. **Installation of Mysql**

sudo apt-get update

sudo apt-get install mysql-server

Enter password for root

Confirm password

sudo ufw allow mysql

sudo systemctl start mysql

sudo systemctl enable mysql

sudo mysql -u root -p

password root

mysql > SELECT User, Host, authentication\_string FROM mysql.user;

mysql > CREATE USER 'taxgenie'@'%' IDENTIFIED BY 'taxgenie@123';

mysql > GRANT ALL PRIVILEGES ON \* . \* TO 'taxgenie'@'%';

mysql > FLUSH PRIVILEGES;

mysql > exit;

sudo service mysql restart

**Change conf file**

etc/mysql/

sudo nano mysql.cnf

[mysqld]

lower\_case\_table\_names = 1

sql\_mode = ""

innodb\_buffer\_pool\_size = 12884901888

innodb\_write\_io\_threads = 16

innodb\_read\_io\_threads = 16

innodb\_buffer\_pool\_instances=32

sort\_buffer\_size=52428800

event\_scheduler=ON

/etc/mysql/mysql.conf.d

sudo nano mysqld.cnf

bindaddress from 127.0.0.1 to 0.0.0.0

1. Change Data directory location to second disk

sudo systemctl stop mysql

sudo systemctl status mysql

sudo mv /var/lib/mysql /data/lib/mysql

sudo ln -s /data/lib/mysql /var/lib/mysql

**Add in Apparmor**

sudo nano /etc/apparmor.d/tunables/alias

alias /var/lib/mysql/ -> /mnt/volume-nyc1-01/mysql/,

sudo systemctl restart apparmor

sudo systemctl start mysql

sudo systemctl status mysql

**Reference link** - <https://www.digitalocean.com/community/tutorials/how-to-change-a-mysql-data-directory-to-a-new-location-using-a-symlink>