Configuration Management using Ansible

Project

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Problem Statement

Rashford assoc. are having trouble provisioning their server environment because of the inconsistencies caused by the new update. They have Hired Marcus to solve their problems related to managing servers. Marcus, after researching, introduced Ansible to the system. Now, he needs to provision the production environment for the upcoming update of their software.

Action Items

- Create separate roles for setting up Apache Tomcat and Apache Maven
- Add the necessary logic to the roles to set up the tools
- Create a new playbook and call Tomcat as well as Maven roles inside it
- Execute the playbook on all the hosts

Commands to install Tomcat and Maven

Apache Tomcat:

1. sudo apt-get update
2. sudo apt-get install default-jdk
3. sudo groupadd tomcat
4. sudo useradd -s /bin/false -g tomcat -d /opt/tomcat tomcat
5. Copy the tar.gz link from the Following link and use it in the given command:
   https://tomcat.apache.org/download-80.cgi

   Binary Distributions

   - Core:
     - zip (pgp, sha512)
     - tar.gz (pgp, sha512)
     - 32-bit Windows zip (pgp, sha512)
     - 64-bit Windows zip (pgp, sha512)
     - 32-bit/64-bit Windows Service Installer (pgp, sha512)
   - Full documentation:

   curl -O <tar file link>
6. sudo mkdir /opt/tomcat
7. sudo tar xzvf apache-tomcat-8*tar.gz -C /opt/tomcat --strip-components=1
8. sudo mkdir /opt/tomcat
9. cd /opt/tomcat
10. sudo chgrp -R tomcat /opt/tomcat
11. sudo chmod -R g+r conf
12. sudo chmod g+x conf
13. sudo chown -R tomcat webapps/ work/ temp/ logs/

14. Add this code to /etc/systemd/system/tomcat.service

```
[Unit]
Description=Apache Tomcat Web Application Container
After=network.targetd

[Service]
Type=forking

Environment=JAVA_HOME=/usr/lib/jvm/java-1.8.0-openjdk-amd64/jre
Environment=CATALINA_PID=/opt/tomcat/temp/tomcat.pid
Environment=CATALINA_HOME=/opt/tomcat
Environment=CATALINA_BASE=/opt/tomcat
Environment='CATALINA_OPTS=-Xms512M -Xmx1024M -server -XX:+UseParallelGC'
Environment='JAVA_OPTS=-Djava.awt.headless=true -
Djava.security.egd=file:/dev/./urandom'

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

User=tomcat
Group=tomcat
UMask=0007
RestartSec=10
Restart=always

[Install]
WantedBy=multi-user.target
```

15. sudo systemctl daemon-reload
16. sudo systemctl start tomcat

Apache Maven:

1. sudo apt install -y python-software-properties
2. sudo add-apt-repository ppa:webupd8team/java
3. sudo apt update
4. sudo apt-get install default-jdk

5. Copy the tar.gz link from the Following link and use it in the given command:
    https://maven.apache.org/download.cgi

Files

Maven is distributed in several formats for your convenience. Simp
if you intend to build Maven yourself.

In order to guard against corrupted downloads/installations, it is hig
Apache Maven developers.

	Link
Binary tar.gz archive	apache-maven-3.8.1-bin.tar.gz
Binary zip archive	apache-maven-3.8.1-bin.zip
Source tar.gz archive	apache-maven-3.8.1-src.tar.gz
Source zip archive	apache-maven-3.8.1-src.zip

cd /home/edureka/Downloads/ && wget <tar file link>

6. cd /opt/ && sudo tar -xzvf /home/edureka/Downloads/apache-maven-3*tar.gz
7. sudo update-alternatives --install /usr/bin/mvn maven /opt/apache-maven-3*/bin/mvn 1001