**ANSIBLE-JENKINS-DEPLOYMENT**

**Developer** → Pushes code to **Git Repository**

**Jenkins** → Pulls the code from Git

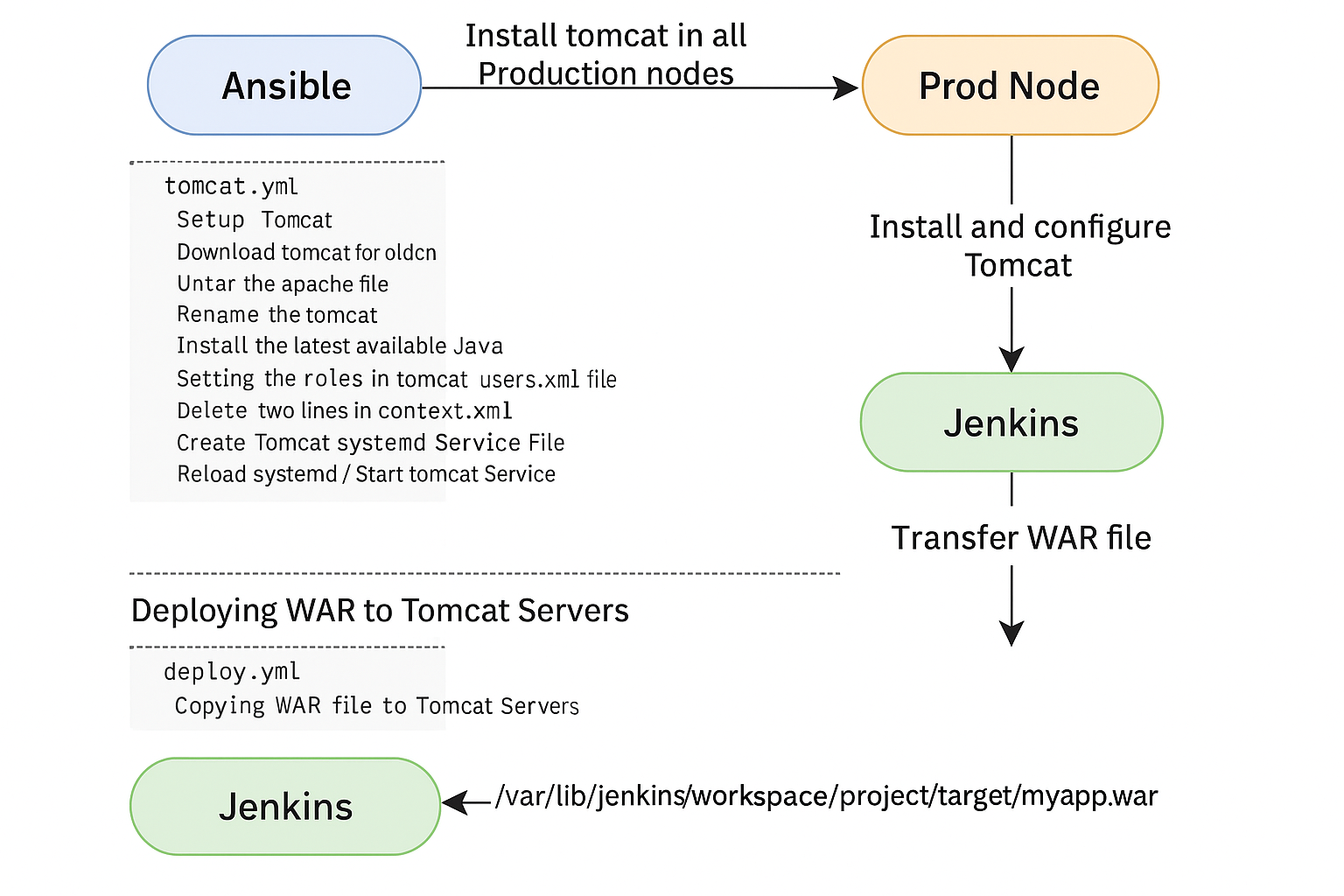
**Jenkins** → Builds the project and generates myapp.war

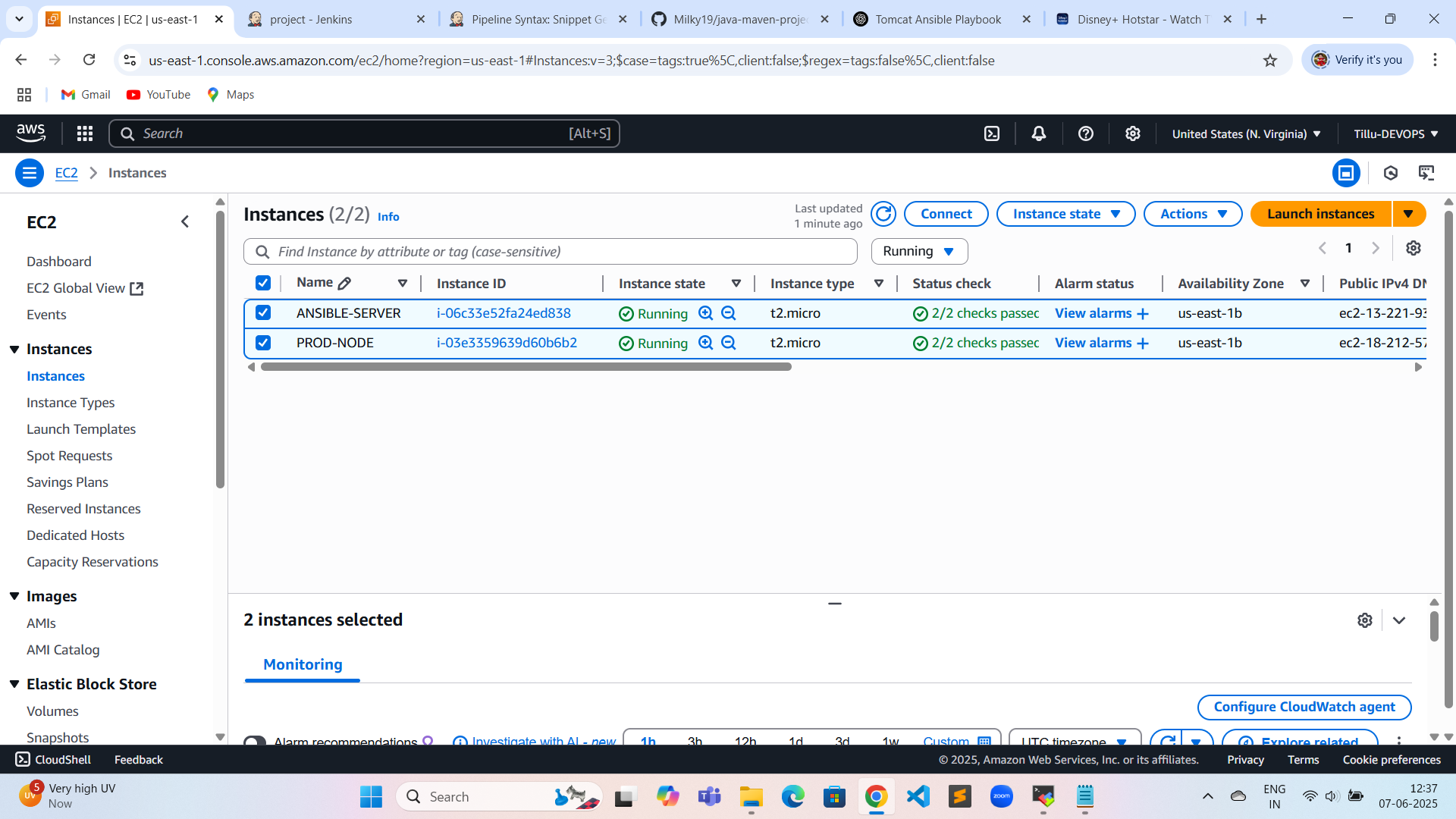
J**enkins** → Triggers **Ansible Playbook**

**Ansible** → Connects to **Production Node**

**Ansible** → Copies myapp.war to /root/tomcat/webapps/

**Ansible** → Restarts **Tomcat Server** for deployment





Ansible-installation

1 vim jenkins.sh

2 sh jenkins.sh

3 amazon-linux-extras install ansible2 -y

4 yum install python3 python-pip python-dlevel -y

5 passwd root

6 vim /etc/ssh/sshd\_config

7 systemctl restart sshd

8 systemctl status sshd

9 ssh-keygen

10 ssh-copy-id root@172.31.95.172

11 ssh 'root@172.31.95.172'

12 vim /etc/ansible/hosts

13 vim tom.sh

14 vim tomcat-users.xml

15 vim context.xml

22 vim tommm.yaml

23 ansible-playbook tommm.yaml

24 vim deploy.yml

25 ansible-playbook deploy.yml

Cat tomcat.yaml

[root@ip-172-31-87-34 ~]# cat tommm.yaml

---

- name: Setup Apache Tomcat 11.0.9

hosts: all

become: yes

tasks:

- name: Install Java (OpenJDK 17)

yum:

name: java-17-amazon-corretto

state: present

- name: Download Tomcat 11.0.9 from official site

get\_url:

url: "https://dlcdn.apache.org/tomcat/tomcat-11/v11.0.9/bin/apache-tomcat-11.0.9.tar.gz"

dest: "/root/"

- name: Extract Tomcat archive

command: tar -zxvf /root/apache-tomcat-11.0.9.tar.gz -C /root/

- name: Rename extracted folder to tomcat

command: mv /root/apache-tomcat-11.0.9 /root/tomcat

- name: Set roles in tomcat-users.xml

template:

src: tomcat-users.xml

dest: /root/tomcat/conf/tomcat-users.xml

- name: Modify context.xml to allow access

template:

src: context.xml

dest: /root/tomcat/webapps/manager/META-INF/context.xml

- name: Create Tomcat systemd service file

copy:

dest: /etc/systemd/system/tomcat.service

content: |

[Unit]

Description=Apache Tomcat Server

After=network.target

[Service]

Type=forking

User=root

Group=root

Environment="JAVA\_HOME=/usr/lib/jvm/jre"

Environment="CATALINA\_HOME=/root/tomcat"

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

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

Restart=on-failure

[Install]

WantedBy=multi-user.target

- name: Reload systemd daemon

systemd:

daemon\_reload: yes

- name: Start and enable Tomcat service

service:

name: tomcat

state: started

enabled: yes

[root@ip-172-31-87-34 ~]#

[root@ip-172-31-87-34 ~]# cat tomcat-users.xml

<?xml version="1.0" encoding="UTF-8"?>

<!--

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-->

<tomcat-users xmlns="http://tomcat.apache.org/xml"

xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"

xsi:schemaLocation="http://tomcat.apache.org/xml tomcat-users.xsd"

version="1.0">

<!--

By default, no user is included in the "manager-gui" role required

to operate the "/manager/html" web application. If you wish to use this app,

you must define such a user - the username and password are arbitrary.

Built-in Tomcat manager roles:

- manager-gui - allows access to the HTML GUI and the status pages

- manager-script - allows access to the HTTP API and the status pages

- manager-jmx - allows access to the JMX proxy and the status pages

- manager-status - allows access to the status pages only

The users below are wrapped in a comment and are therefore ignored. If you

wish to configure one or more of these users for use with the manager web

application, do not forget to remove the <!.. ..> that surrounds them. You

will also need to set the passwords to something appropriate.

-->

<!--

<user username="admin" password="<must-be-changed>" roles="manager-gui"/>

<user username="robot" password="<must-be-changed>" roles="manager-script"/>

-->

<!--

The sample user and role entries below are intended for use with the

examples web application. They are wrapped in a comment and thus are ignored

when reading this file. If you wish to configure these users for use with the

examples web application, do not forget to remove the <!.. ..> that surrounds

them. You will also need to set the passwords to something appropriate.

-->

<!--

<role rolename="tomcat"/>

<role rolename="role1"/>

<user username="tomcat" password="<must-be-changed>" roles="tomcat"/>

<user username="both" password="<must-be-changed>" roles="tomcat,role1"/>

<user username="role1" password="<must-be-changed>" roles="role1"/>

-->

<role rolename="manager-gui"/>

<role rolename="manager-script"/>

<user username="tomcat" password="root123456" roles="manager-gui, manager-script"/>

</tomcat-users>

[root@ip-172-31-87-34 ~]#

[root@ip-172-31-87-34 ~]# cat context.xml

<?xml version="1.0" encoding="UTF-8"?>

<!--

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-->

<Context antiResourceLocking="false" privileged="true" >

<CookieProcessor className="org.apache.tomcat.util.http.Rfc6265CookieProcessor"

sameSiteCookies="strict" />

<Manager sessionAttributeValueClassNameFilter="java\.lang\.(?:Boolean|Integer|Long|Number|String)|org\.apache\.catalina\.filters\.CsrfPreventionFilter\$LruCache(?:\$1)?|java\.util\.(?:Linked)?HashMap"/>

</Context>

[root@ip-172-31-87-34 ~]#

[root@ip-172-31-87-34 ~]# cat deploy.yml

---

- name: Deploying WAR to Tomcat Servers

hosts: all

tasks:

- name: Copying WAR file to Tomcat Servers

copy:

src: /var/lib/jenkins/workspace/project/target/myapp.war

dest: /root/tomcat/webapps/

[root@ip-172-31-87-34 ~]#

**PIPELINE-CODE:**

pipeline {

agent any

stages {

stage('Checkout') {

steps {

git 'https://github.com/Milky19/java-maven-project-new.git'

}

}

stage('Compile-project'){

steps{

sh 'mvn compile'

}

}

stage('Test-project'){

steps{

sh 'mvn test'

}

}

stage('Artifactory-file'){

steps{

sh 'mvn clean package'

}

}

stage("Deployment"){

steps{

ansiblePlaybook credentialsId: 'ansible', disableHostKeyChecking: true, installation: 'ansible', inventory: '/etc/ansible/hosts', playbook: '/etc/ansible/deploy.yml', vaultTmpPath: ''

}

}

}

}