1. **Demonstrate three instances of this website running**

Solution 1: Using Ansible

1. Created 4 EC2 instances from my AWS portal.
2. On one instance I have installed Ansible, git and required softwares (apache tomcat, httpd, java). (I would be referencing this instance as control server further)
3. Created RSA paswordless authentication between control server and the remote servers.
4. Open port 80 on remote servers from AWS console.
5. Updated the hosts file under /etc/ansible/ with ip address of remote servers.
6. Verified if I was able to ping those servers by using ad-hoc command

ansible all –m ping

1. Created playbook webdeploy.yml
2. Check for syntax errors using

ansible-playbook webdeploy.yml –syntax-check

1. If no erros, then execute the playbook.

ansible-playbook webdeploy.yml

output:

1. With successful execution of the playbook, it installs git, httpd. After it clones the git repo to destination location on target servers and restarts the httpd service.
2. Verify the result in the browser

<http://54.242.61.2/test-app/>

<http://54.145.65.89/test-app/>

<http://3.82.47.14/test-app/>



Solution 2: Using shell script

Shell script to clone git repository and place the files under /var/www/html on target server.

Change the permission of webdeploy.sh to 0755, to execute the file.



Solution 3: Using Jenkins

1. Create parameters for destination ip and login name.
2. Clone the git repository
3. Copy files to target server



1. **Demonstrate procedures for deploying an updated change to the instances from #1**

I have modified the index.html file by adding h1 tag.

Output:



1. **Provide code as a pull request to this repo**

Create a pull request as per the instructions

1. **Solutions can be in the language of your choice**

I have written scripts in yaml, shell and Jenkins.

1. **Technology of your choice**

I have used DevOps technologies like AWS for creating EC2 instances, ansible playbooks, Jenkins file and shell scripts for code deployments.