

Ansible - Assignment 3

Email - harshalgite888@gmail.com

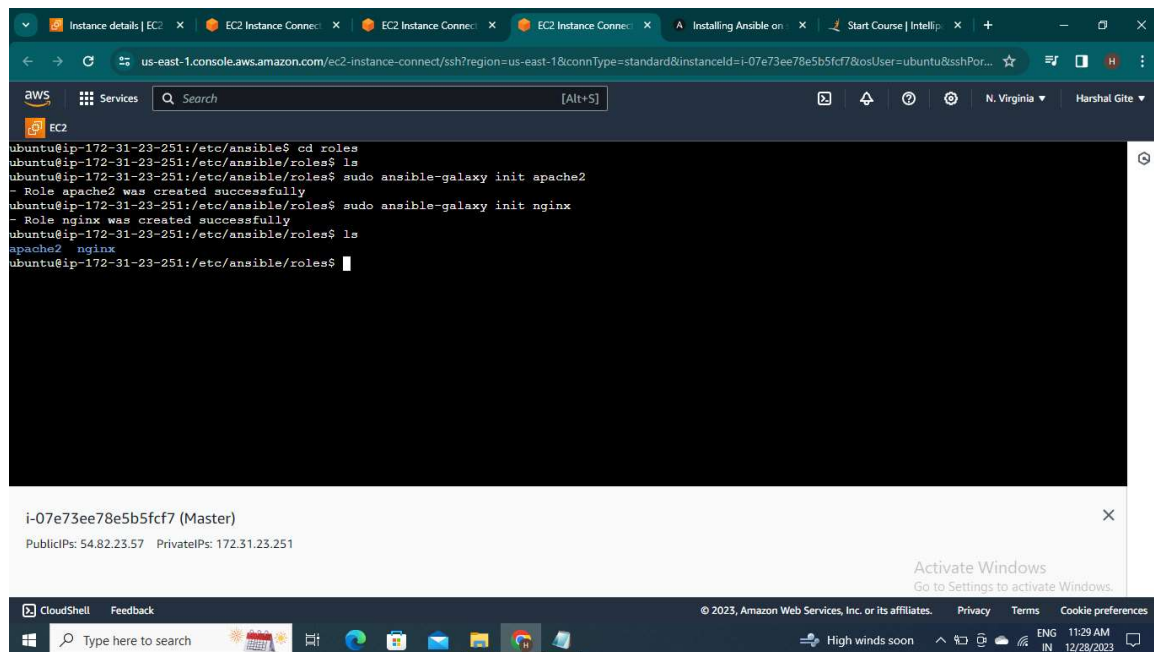
Tasks:

1. Create 2 Ansible Roles
2. Install apache2 on slave1 using one role and nginx on slave2 using the other role

Above should be implemented using different Ansible Roles

Solution:

Steps:



The screenshot shows a terminal window with the following commands and output:

```
ubuntu@ip-172-31-23-251:/etc/ansible$ cd roles
ubuntu@ip-172-31-23-251:/etc/ansible/roles$ ls
ubuntu@ip-172-31-23-251:/etc/ansible/roles$ sudo ansible-galaxy init apache2
- Role apache2 was created successfully
ubuntu@ip-172-31-23-251:/etc/ansible/roles$ sudo ansible-galaxy init nginx
- Role nginx was created successfully
ubuntu@ip-172-31-23-251:/etc/ansible/roles$ ls
apache2  nginx
ubuntu@ip-172-31-23-251:/etc/ansible/roles$
```

Below the terminal window, the instance details are shown:

i-07e73ee78e5b5fcf7 (Master)
PublicIPs: 54.82.23.57 PrivateIPs: 172.31.23.251

At the bottom, there is a Windows taskbar with the date and time: 11:29 AM 12/28/2023.

```
us-east-1.console.aws.amazon.com/ec2-instance-connect/ssh?region=us-east-1&connType=standard&instanceId=i-07e73ee78e5b5fcf7&osUser=ubuntu&sshPor...
AWS Services Search [Alt+S]
EC2
ubuntu@ip-172-31-23-251:/etc/ansible$ cd roles
ubuntu@ip-172-31-23-251:/etc/ansible/roles$ ls
ubuntu@ip-172-31-23-251:/etc/ansible/roles$ sudo ansible-galaxy init apache2
- Role apache2 was created successfully
ubuntu@ip-172-31-23-251:/etc/ansible/roles$ sudo ansible-galaxy init nginx
- Role nginx was created successfully
ubuntu@ip-172-31-23-251:/etc/ansible/roles$ ls
apache2  nginx
ubuntu@ip-172-31-23-251:/etc/ansible/roles$ cd apache2
ubuntu@ip-172-31-23-251:/etc/ansible/roles/apache2$ ls
README.md defaults files handlers meta tasks templates tests vars
ubuntu@ip-172-31-23-251:/etc/ansible/roles/apache2$ cd tasks
ubuntu@ip-172-31-23-251:/etc/ansible/roles/apache2/tasks$ ls
main.yml
ubuntu@ip-172-31-23-251:/etc/ansible/roles/apache2/tasks$
```

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```
us-east-1.console.aws.amazon.com/ec2-instance-connect/ssh?region=us-east-1&connType=standard&instanceId=i-07e73ee78e5b5fcf7&osUser=ubuntu&sshPor...
AWS Services Search [Alt+S]
EC2
ubuntu@ip-172-31-23-251:/etc/ansible$ cd roles
ubuntu@ip-172-31-23-251:/etc/ansible/roles$ ls
ubuntu@ip-172-31-23-251:/etc/ansible/roles$ sudo ansible-galaxy init apache2
- Role apache2 was created successfully
ubuntu@ip-172-31-23-251:/etc/ansible/roles$ sudo ansible-galaxy init nginx
- Role nginx was created successfully
ubuntu@ip-172-31-23-251:/etc/ansible/roles$ ls
apache2  nginx
ubuntu@ip-172-31-23-251:/etc/ansible/roles$ cd apache2
ubuntu@ip-172-31-23-251:/etc/ansible/roles/apache2$ ls
README.md defaults files handlers meta tasks templates tests vars
ubuntu@ip-172-31-23-251:/etc/ansible/roles/apache2$ cd tasks
ubuntu@ip-172-31-23-251:/etc/ansible/roles/apache2/tasks$ ls
main.yml
ubuntu@ip-172-31-23-251:/etc/ansible/roles/apache2/tasks$ sudo nano install.yaml
```

i-07e73ee78e5b5fcf7 (Master)
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The screenshot shows a terminal window in the AWS CloudShell environment. The terminal is running the command `install.yaml` in a `nano` editor. The content of the file is as follows:

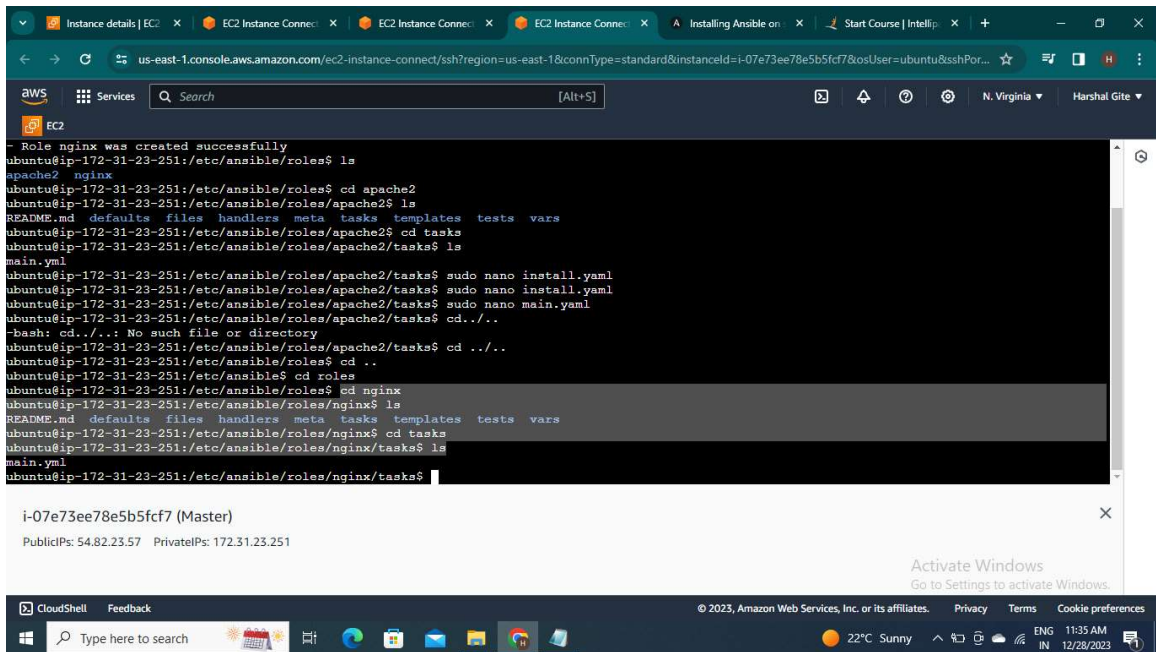
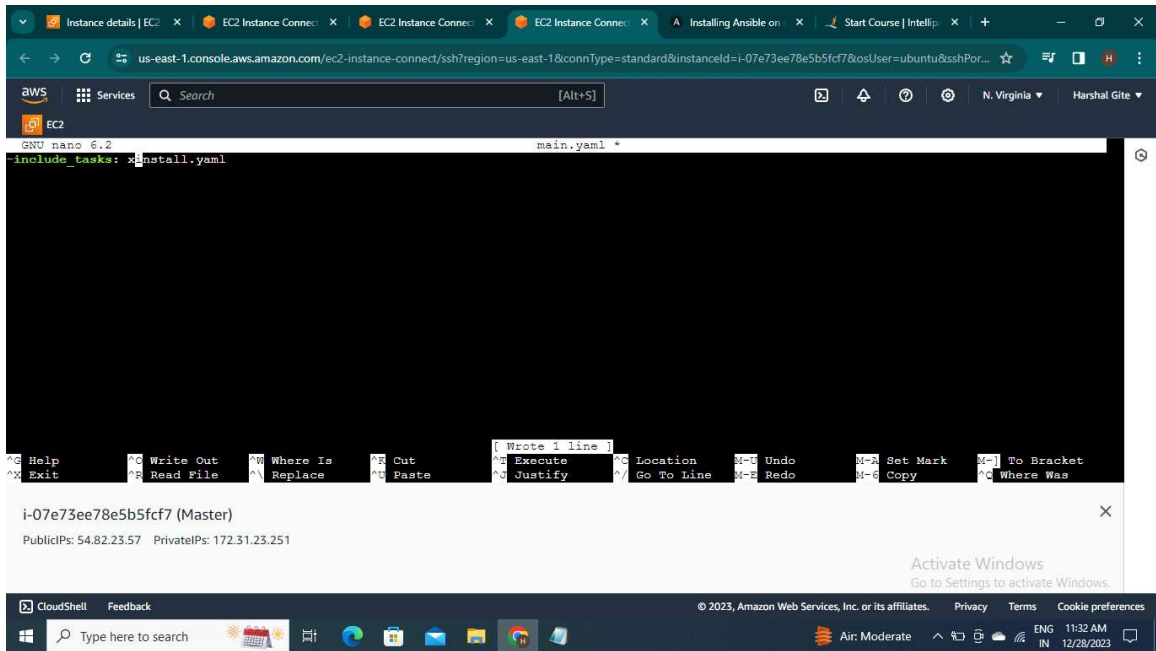
```
---
- name: installing apache2
  apt: name=apache2 state=latest
  become: true
```

The terminal output shows the file being edited. The bottom of the terminal shows the public IP address 54.82.23.57 and the private IP address 172.31.23.251. The terminal also shows the AWS CloudShell interface with the search bar and the "Activate Windows" watermark.

The screenshot shows a terminal window in the AWS CloudShell environment. The terminal is running the command `install.yaml` in a `nano` editor. The content of the file is as follows:

```
---
- name: installing apache2
  apt: name=apache2 state=latest
  become: true
```

The terminal output shows the file being edited. The bottom of the terminal shows the public IP address 54.82.23.57 and the private IP address 172.31.23.251. The terminal also shows the AWS CloudShell interface with the search bar and the "Activate Windows" watermark.



```
us-east-1.console.aws.amazon.com/ec2-instance-connect/ssh?region=us-east-1&connType=standard&instanceId=i-07e73ee78e5b5fcf7&osUser=ubuntu&sshPor...
AWS Services Search [Alt+S] N. Virginia Marshal Gite
EC2
ubuntu@ip-172-31-23-251:/etc/ansible/roles/nginx$ cd ..
ubuntu@ip-172-31-23-251:/etc/ansible/roles$ cd apache 2
-bash: cd: too many arguments
ubuntu@ip-172-31-23-251:/etc/ansible/roles$ apach2
Command 'apach2' not found, did you mean:
  command 'apache2' from deb apache2-bin (2.4.52-1ubuntu4.6)
Try: sudo apt install <deb name>
ubuntu@ip-172-31-23-251:/etc/ansible/roles$ cd apache2
ubuntu@ip-172-31-23-251:/etc/ansible/roles/apache2$ ls
README.md defaults files handlers meta tasks templates tests vars
ubuntu@ip-172-31-23-251:/etc/ansible/roles/apache2$ cd tasks
ubuntu@ip-172-31-23-251:/etc/ansible/roles/apache2/tasks$ ls
install.yaml main.yaml main.yml
ubuntu@ip-172-31-23-251:/etc/ansible/roles/apache2/tasks$ sudo nano install.yaml
ubuntu@ip-172-31-23-251:/etc/ansible/roles/apache2/tasks$ sudo nano main.yml
ubuntu@ip-172-31-23-251:/etc/ansible/roles/apache2/tasks$ sudo nano main.yml
ubuntu@ip-172-31-23-251:/etc/ansible/roles/apache2/tasks$ cd ../../
ubuntu@ip-172-31-23-251:/etc/ansible/roles$ cd nginx
ubuntu@ip-172-31-23-251:/etc/ansible/roles/nginx$ ls
README.md defaults files handlers meta tasks templates tests vars
ubuntu@ip-172-31-23-251:/etc/ansible/roles/nginx$ cd tasks
ubuntu@ip-172-31-23-251:/etc/ansible/roles/nginx/tasks$ ls
main.yml
ubuntu@ip-172-31-23-251:/etc/ansible/roles/nginx/tasks$ sudo nano install.yaml

i-07e73ee78e5b5fcf7 (Master)
PublicIPs: 54.82.23.57 PrivateIPs: 172.31.23.251

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```

```
us-east-1.console.aws.amazon.com/ec2-instance-connect/ssh?region=us-east-1&connType=standard&instanceId=i-07e73ee78e5b5fcf7&osUser=ubuntu&sshPor...
AWS Services Search [Alt+S] N. Virginia Marshal Gite
EC2
GNU nano 6.2 install.yaml *
---
--name: Installing nginx
apt: name=nginx state=latest
become: true

NG Help      NG Write Out  NG Where Is  NG Cut       NG Execute   NG Location  NG Undo      NG Set Mark  NG To Bracket
NX Exit      NX Read File  NX Replace   NX Paste     NX Justify   NX Go To Line NX Redo      NX Copy      NX Where Was

i-07e73ee78e5b5fcf7 (Master)
PublicIPs: 54.82.23.57 PrivateIPs: 172.31.23.251

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```


us-east-1.console.aws.amazon.com/ec2-instance-connect/ssh?region=us-east-1&connType=standard&instanceId=i-07e73ee78e5b5fcf7&osUser=ubuntu&sshPor...

EC2

```
-bash: cd: too many arguments
ubuntu@ip-172-31-23-251:/etc/ansible/roles$ apach2
Command 'apach2' not found, did you mean:
  command 'apache2' from deb apache2-bin (2.4.52-1ubuntu4.6)
Try: sudo apt install <deb name>
ubuntu@ip-172-31-23-251:/etc/ansible/roles$ cd apache2
ubuntu@ip-172-31-23-251:/etc/ansible/roles/apache2$ ls
README.md defaults files handlers meta tasks templates tests vars
ubuntu@ip-172-31-23-251:/etc/ansible/roles/apache2$ cd tasks
ubuntu@ip-172-31-23-251:/etc/ansible/roles/apache2/tasks$ ls
install.yaml main.yaml main.yml
ubuntu@ip-172-31-23-251:/etc/ansible/roles/apache2/tasks$ sudo nano install.yaml
ubuntu@ip-172-31-23-251:/etc/ansible/roles/apache2/tasks$ sudo nano main.yaml
ubuntu@ip-172-31-23-251:/etc/ansible/roles/apache2/tasks$ sudo nano main.yaml
ubuntu@ip-172-31-23-251:/etc/ansible/roles/apache2/tasks$ cd ../../
ubuntu@ip-172-31-23-251:/etc/ansible/roles$ cd nginx
ubuntu@ip-172-31-23-251:/etc/ansible/roles/nginx$ ls
README.md defaults files handlers meta tasks templates tests vars
ubuntu@ip-172-31-23-251:/etc/ansible/roles/nginx$ cd tasks
ubuntu@ip-172-31-23-251:/etc/ansible/roles/nginx/tasks$ ls
main.yaml
ubuntu@ip-172-31-23-251:/etc/ansible/roles/nginx/tasks$ sudo nano install.yaml
ubuntu@ip-172-31-23-251:/etc/ansible/roles/nginx/tasks$ sudo nano install.yaml
ubuntu@ip-172-31-23-251:/etc/ansible/roles/nginx/tasks$ sudo nano main.yaml
```

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us-east-1.console.aws.amazon.com/ec2-instance-connect/ssh?region=us-east-1&connType=standard&instanceId=i-07e73ee78e5b5fcf7&osUser=ubuntu&sshPor...

EC2

```
GNU nano 6.2 main.yaml
---
# tasks file for nginx
-include_tasks: install.yaml
```

i-07e73ee78e5b5fcf7 (Master)

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```
us-east-1.console.aws.amazon.com/ec2-instance-connect/ssh?region=us-east-1&connType=standard&instanceId=i-07e73ee78e5b5fcf7&osUser=ubuntu&sshPor...
AWS Services Search [Alt+S] N. Virginia Marshal Gite
EC2
ubuntu@ip-172-31-23-251:/etc/ansible/roles$ cd apache2
ubuntu@ip-172-31-23-251:/etc/ansible/roles/apache2$ ls
README.md defaults files handlers meta tasks templates tests vars
ubuntu@ip-172-31-23-251:/etc/ansible/roles/apache2$ cd tasks
ubuntu@ip-172-31-23-251:/etc/ansible/roles/apache2/tasks$ ls
install.yaml main.yaml main.yml
ubuntu@ip-172-31-23-251:/etc/ansible/roles/apache2/tasks$ sudo nano install.yaml
ubuntu@ip-172-31-23-251:/etc/ansible/roles/apache2/tasks$ sudo nano main.yml
ubuntu@ip-172-31-23-251:/etc/ansible/roles/apache2/tasks$ cd ../../
ubuntu@ip-172-31-23-251:/etc/ansible/roles$ cd nginx
ubuntu@ip-172-31-23-251:/etc/ansible/roles/nginx$ ls
README.md defaults files handlers meta tasks templates tests vars
ubuntu@ip-172-31-23-251:/etc/ansible/roles/nginx$ cd tasks
ubuntu@ip-172-31-23-251:/etc/ansible/roles/nginx/tasks$ ls
main.yml
ubuntu@ip-172-31-23-251:/etc/ansible/roles/nginx/tasks$ sudo nano install.yaml
ubuntu@ip-172-31-23-251:/etc/ansible/roles/nginx/tasks$ sudo nano install.yaml
ubuntu@ip-172-31-23-251:/etc/ansible/roles/nginx/tasks$ sudo nano main.yml
ubuntu@ip-172-31-23-251:/etc/ansible/roles/nginx/tasks$ sudo nano main.yml
ubuntu@ip-172-31-23-251:/etc/ansible/roles/nginx/tasks$ cd ../../
ubuntu@ip-172-31-23-251:/etc/ansible/roles$ cd ..
ubuntu@ip-172-31-23-251:/etc/ansible$ sudo nano assign3.yaml
ubuntu@ip-172-31-23-251:/etc/ansible$

i-07e73ee78e5b5fcf7 (Master)
PublicIPs: 54.82.23.57 PrivateIPs: 172.31.23.251

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```

```
us-east-1.console.aws.amazon.com/ec2-instance-connect/ssh?region=us-east-1&connType=standard&instanceId=i-07e73ee78e5b5fcf7&osUser=ubuntu&sshPor...
AWS Services Search [Alt+S] N. Virginia Marshal Gite
EC2
GNU nano 6.2 assign3.yaml
--
- name: install apache2 on slave1
  hosts: slave1
  become: true
  roles:
    - apache2

- name: install nginx on slave2
  hosts: slave2
  become: true
  roles:
    - nginx

NG Help NG Write Out NG Where Is NG Cut NG Read 12 lines NG Execute NG Location NG Undo NG Set Mark NG To Bracket
NX Exit NX Read File NX Replace NX Paste NX Justify NX Go To Line NX Redo NX Copy NX Where Was

i-07e73ee78e5b5fcf7 (Master)
PublicIPs: 54.82.23.57 PrivateIPs: 172.31.23.251

Activate Windows
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```

us-east-1.console.aws.amazon.com/ec2-instance-connect/ssh?region=us-east-1&connType=standard&instanceId=i-07e73ee78e5b5fcf7&osUser=ubuntu&sshPort=22#/

EC2

```
ok: [slave1]

TASK [apache2 : include_tasks] *****
included: /etc/ansible/roles/apache2/tasks/install.yaml for slave1

TASK [apache2 : install apache2] *****
changed: [slave1]

PLAY [install nginx on slave2] *****

TASK [Gathering Facts] *****
ok: [slave2]

TASK [nginx : include_tasks] *****
included: /etc/ansible/roles/nginx/tasks/install.yaml for slave2

TASK [nginx : Installing nginx] *****
changed: [slave2]

PLAY RECAP *****
slave1      : ok=3    changed=1    unreachable=0    failed=0    skipped=0    rescued=0    ignored=0
slave2      : ok=3    changed=1    unreachable=0    failed=0    skipped=0    rescued=0    ignored=0

ubuntu@ip-172-31-23-251:/etc/ansible$
```

i-07e73ee78e5b5fcf7 (Master)
PublicIPs: 54.82.23.57 PrivateIPs: 172.31.23.251

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us-east-1.console.aws.amazon.com/ec2-instance-connect/ssh?region=us-east-1&connType=standard&instanceId=i-02d369f9bd8fd4020&osUser=ubuntu&sshPort=22#/

EC2

```
Expanded Security Maintenance for Applications is not enabled.
7 updates can be applied immediately.
To see these additional updates run: apt list --upgradable

Enable ESM Apps to receive additional future security updates.
See https://ubuntu.com/esm or run: sudo pro status

*** System restart required ***
Last login: Thu Dec 28 07:50:25 2023 from 172.31.23.251
ubuntu@ip-172-31-26-205:~$ jdk --version
Command 'jdk' not found, did you mean:
  command 'juk' from snap juk (23.08.3)
  command 'jdkb' from deb openjdk-11-jdk-headless (11.0.20.1+1-0ubuntu1~22.04)
  command 'jdkb' from deb openjdk-17-jdk-headless (17.0.8.1+1-us1-0ubuntu1~22.04)
  command 'jdkb' from deb openjdk-18-jdk-headless (18.0.2+9-2~22.04)
  command 'jdkb' from deb openjdk-19-jdk-headless (19.0.2+7-0ubuntu3~22.04)
  command 'jdkb' from deb openjdk-8-jdk-headless (8u382-ga-1~22.04.1)
  command 'jd' from deb jdim (0.7.0-1)
  command 'juk' from deb juk (4:21.12.3-0ubuntu1)
See 'snap info <snapname>' for additional versions.
ubuntu@ip-172-31-26-205:~$
```

i-02d369f9bd8fd4020 (Slave1)
PublicIPs: 54.229.217.34 PrivateIPs: 172.31.26.205

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