

Multi-cloud Disaster Recovery with AWS and Azure

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All the code bases can be found in the github link below: -

[https://github.com/shivu9900/CourseAssignment_Submission_Shivakumara_U
pGrad](https://github.com/shivu9900/CourseAssignment_Submission_Shivakumara_UpGrad)

Task 1: Infrastructure Provisioning

AWS Setup:

Created VPC named **DR-VPC** in AWS

The screenshot shows the AWS VPC console interface. At the top, a green notification bar states: "You successfully created vpc-04f2f785797301ebd / DR-VPC". Below this, the VPC details are displayed in a grid format:

- VPC ID:** vpc-04f2f785797301ebd
- State:** Available
- Block Public Access:** Off
- DNS hostnames:** Disabled
- DNS resolution:** Enabled
- Tenancy:** default
- DHCP option set:** dopt-08772501918fbfe85
- Main route table:** rtb-0234f673953730a64
- Main network ACL:** acl-0922d35e5b276799d
- Default VPC:** No
- IPv4 CIDR:** 10.0.0.0/16
- IPv6 pool:** -
- IPv6 CIDR (Network border group):** -
- Network Address Usage metrics:** Disabled
- Route 53 Resolver DNS Firewall rule groups:** Failed to load rule groups
- Owner ID:** 814845532308

Created 2 public and 2 private subnet with AZ as us-east-1a and us-east-1b named **public-subnet-1**, **public-subnet-2**, **private-subnet-1**, **private-subnet-2**

The screenshot shows the AWS Subnets console interface. At the top, a green notification bar states: "You have successfully created 4 subnets: subnet-04c60025fe8686751, subnet-0670614a8cab909e7, subnet-014737939200bf88a, subnet-0ec5efd645a48f8c0". Below this, the subnets are listed in a table:

Name	Subnet ID	State	VPC
private-subnet-1	subnet-014737939200bf88a	Available	vpc-04f2f785797301ebd DR-V...
public-subnet-1	subnet-04c60025fe8686751	Available	vpc-04f2f785797301ebd DR-V...
public-subnet-2	subnet-0670614a8cab909e7	Available	vpc-04f2f785797301ebd DR-V...
private-subnet-2	subnet-0ec5efd645a48f8c0	Available	vpc-04f2f785797301ebd DR-V...

10.0.3.0/24	-	-	251	use1-az1 (us-east-1a)
10.0.1.0/24	-	-	251	use1-az1 (us-east-1a)
10.0.2.0/24	-	-	251	use1-az2 (us-east-1b)
10.0.4.0/24	-	-	251	use1-az2 (us-east-1b)

Created new Internet Gateway named **DR-IGW** and attached to **DR-VPC** VPC

Internet gateway igw-0011405bb071cbc41 successfully attached to vpc-04f2f785797301ebd

igw-0011405bb071cbc41 / DR-IGW

Details

Internet gateway ID

igw-0011405bb071cbc41

State

Attached

VPC ID

vpc-04f2f785797301ebd | DR-VPC

Owner

814845532308

Tags (1)

Search tags

Key	Value
Name	DR-IGW

Manage tags

Created new NAT Gateway named **DR-NATGW** and attached to **DR-VPC** VPC

NAT gateway nat-0e7716d89145f00f7 | DR-NATGW was created successfully.

nat-0e7716d89145f00f7 / DR-NATGW

Details

NAT gateway ID

nat-0e7716d89145f00f7

NAT gateway ARN

arn:aws:ec2:us-east-1:814845532308:natg
ateway/nat-0e7716d89145f00f7

VPC

vpc-04f2f785797301ebd | DR-VPC

Connectivity type

Public

Primary public IPv4 address

-

Subnet

subnet-04c60025fe8686751 | public-subnet-
1

State

Pending

Primary private IPv4 address

-

Created

Sunday, November 16, 2025 at 11:51:43 G
MT+5:30

State message

-

Primary network interface ID

-

Deleted

-

Secondary IPv4 addresses

Monitoring

Tags

Secondary IPv4 addresses

Search

Private IPv4 address

Network interface ID

Status

Failure message

Secondary IPv4 addresses are not available for this nat gateway.

Created Public Route table named **RT-Public**

rtb-0a741599600376454 / RT-Public

Details

Route table ID

rtb-0a741599600376454

VPC

vpc-04f2f785797301ebd | DR-VPC

Main

No

Owner ID

814845532308

Explicit subnet associations

-

Edge associations

-

Routes

Subnet associations

Edge associations

Route propagation

Tags

Routes (2)

Filter routes

Both

Edit routes

Destination	Target	Status	Propagated	Route Origin
0.0.0.0/0	igw-0011405bb071cbc41	Active	No	Create Route
10.0.0.0/16	local	Active	No	Create Route Table

Created Private Route table named **RT-Private**

Updated routes for rtb-0d93f04e01aad1bca / RT-Private successfully
Details

rtb-0d93f04e01aad1bca / RT-Private

Details

Route table ID

rtb-0d93f04e01aad1bca

VPC

vpc-04f2f785797301ebd | DR-VPC

Main

No

Owner ID

814845532308

Explicit subnet associations

-

Edge associations

-

Routes

Subnet associations

Edge associations

Route propagation

Tags

Routes (2)

Both

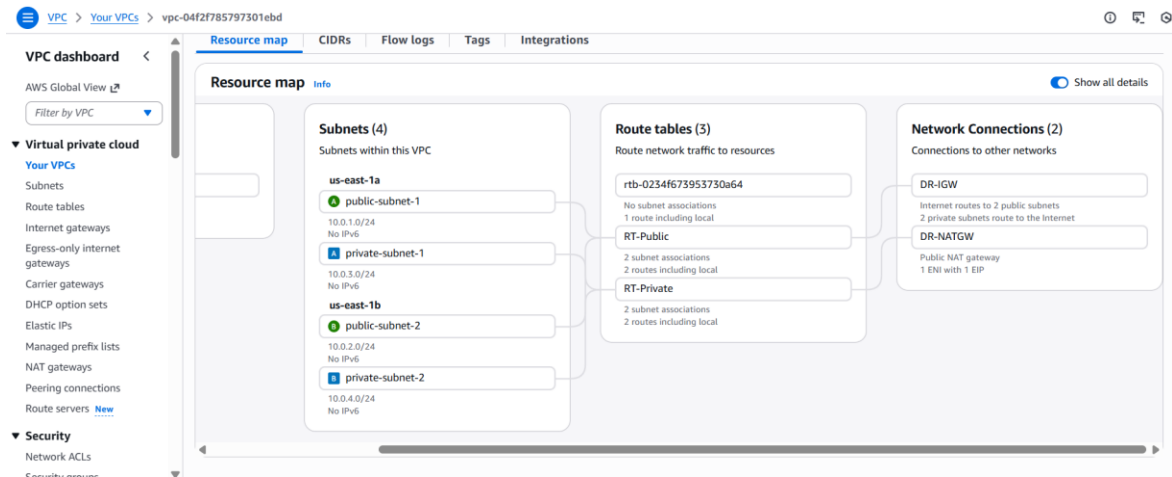
Edit routes

Filter routes

< 1 >

Destination	Target	Status	Propagated	Route Origin
0.0.0.0/0	nat-0e7716d89145f00f7	Active	No	Create Route
10.0.0.0/16	local	Active	No	Create Route Table

Detailed Resource map of **DR-VPC**



Security group named **SG-Web** created with SSH port 22 and HTTP port 80 opened in inbound rules

Security group (sg-09056a2707adb37ef | SG-Web) was created successfully

Details

sg-09056a2707adb37ef - SG-Web

Actions

Details

Security group name

SG-Web

Security group ID

sg-09056a2707adb37ef

Description

webserver security group

VPC ID

vpc-04f2f785797301ebd

Owner

814845532308

Inbound rules count

2 Permission entries

Outbound rules count

1 Permission entry

Inbound rules

Outbound rules

Sharing - new

VPC associations - new

Tags

Inbound rules (2)

Manage tags

Edit inbound rules

Search

Name

Security group rule ID

IP version

Type

Protocol

Port range

Source

-

sg-018ed488e4c8e3f00

IPv4

SSH

TCP

22

0.0.0.0/0

-

sg-047757f60399d5e63

IPv4

HTTP

TCP

80

0.0.0.0/0

Created EC2 Key pair **dr-keypair** as pem file

Successfully created key pair

Key pairs (1)

Info

Actions

Create key pair

Find Key Pair by attribute or tag

Name

Type

Created

Fingerprint

ID

dr-keypair

rsa

2025/11/16 12:02 GMT+5:30

98:35:75:2b:27:7b:cd:bca9:bc:37:e8:30:40:6c:84...

key-05d4b...

Created EC2 Machine named **App-Machine** in public subnet 1

Instance summary for i-059aac8b6dc559b45 (App-Machine) Info

Updated less than a minute ago

Instance ID
i-059aac8b6dc559b45

IPv6 address
-

Hostname type
IP name: ip-10-0-1-157.ec2.internal

Answer private resource DNS name
-

Auto-assigned IP address
44.204.190.114 [Public IP]

Public IPv4 address
44.204.190.114 | [open address](#)

Instance state
Running

Private IP DNS name (IPv4 only)
ip-10-0-1-157.ec2.internal

Instance type
t2.micro

VPC ID
vpc-04f2f785797301ebd (DR-VPC)

Private IPv4 addresses
10.0.1.157

Public DNS
-

Elastic IP addresses
-

AWS Compute Optimizer finding

User: arn:aws:sts::814845532308:federated-user/shivakumaran.d95@gmail.com is not authorized to perform: compute-optimizer:GetEnrollmentStatus on resource: * because no identity-based policy allows the compute-optimizer:GetEnrollmentStatus action
[Retry](#)

Able to SSH into **App-Machine** with public IP :**44.204.190.114** from local machine

```
$ ssh -i "dr-keypair.pem" ubuntu@44.204.190.114
The authenticity of host '44.204.190.114 (44.204.190.114)' can't be established.
ED25519 key fingerprint is SHA256:JDal7pNWRLr9vsWjgl+ViCQi4xQGYwhTJtQyVx4DKSM.
This key is not known by any other names.
Are you sure you want to continue connecting (yes/no/[fingerprint])? yes
Warning: Permanently added '44.204.190.114' (ED25519) to the list of known hosts.
Welcome to Ubuntu 24.04.3 LTS (GNU/Linux 6.14.0-1015-aws x86_64)

 * Documentation:  https://help.ubuntu.com
 * Management:    https://landscape.canonical.com
 * Support:       https://ubuntu.com/pro

System information as of Sun Nov 16 06:42:15 UTC 2025

System load:  0.0           Processes:    110
Usage of /:   25.9% of 6.71GB Users logged in: 0
Memory usage: 21%          IPv4 address for enX0: 10.0.1.157
Swap usage:   0%

Expanded Security Maintenance for Applications is not enabled.

0 updates can be applied immediately.

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

The list of available updates is more than a week old.
To check for new updates run: sudo apt update

The programs included with the Ubuntu system are free software;
the exact distribution terms for each program are described in the
individual files in /usr/share/doc/*/copyright.

Ubuntu comes with ABSOLUTELY NO WARRANTY, to the extent permitted by
applicable law.

To run a command as administrator (user "root"), use "sudo <command>".
See "man sudo_root" for details.

ubuntu@ip-10-0-1-157:~$ |
```

Created another EC2 Machine named **Tools-Machine** in public subnet 2

Instance summary for i-0131c2e1e03f7338b (Tools-Machine) Info

Updated less than a minute ago

Instance ID
i-0131c2e1e03f7338b

IPv6 address
-

Hostname type
IP name: ip-10-0-2-237.ec2.internal

Answer private resource DNS name
-

Auto-assigned IP address
98.81.254.10 [Public IP]

IAM Role
-

Public IPv4 address
98.81.254.10 | [open address](#)

Instance state
Running

Private IP DNS name (IPv4 only)
ip-10-0-2-237.ec2.internal

Instance type
t2.micro

VPC ID
vpc-04f2f785797301ebd (DR-VPC)

Subnet ID
subnet-0670614a8cab909e7 (public-subnet-2)

Private IPv4 addresses
10.0.2.237

Public DNS
-

Elastic IP addresses
-

AWS Compute Optimizer finding
User: arn:aws:sts::814845532308:federated-user/shivakumaran.d95@gmail.com is not authorized to perform: compute-optimizer:GetEnrollmentStatus on resource: * because no identity-based policy allows the compute-optimizer:GetEnrollmentStatus action
[Retry](#)

Auto Scaling Group name
-

Able to SSH into **Tools-Machine** with public IP: **98.81.254.10** from local machine

```
$ ssh -i "dr-keypair.pem" ubuntu@98.81.254.10
The authenticity of host '98.81.254.10 (98.81.254.10)' can't be established.
ED25519 key fingerprint is SHA256:T8PumOk/wjdEDBbFLTzhdTjGOYL7RASwQVE+udJJJoOo.
This key is not known by any other names.
Are you sure you want to continue connecting (yes/no/[fingerprint])? yes
Warning: Permanently added '98.81.254.10' (ED25519) to the list of known hosts.
Welcome to Ubuntu 24.04.3 LTS (GNU/Linux 6.14.0-1015-aws x86_64)

 * Documentation:  https://help.ubuntu.com
 * Management:    https://landscape.canonical.com
 * Support:       https://ubuntu.com/pro

System information as of Sun Nov 16 06:44:41 UTC 2025

System load:  0.0          Processes:    108
Usage of /:   25.9% of 6.71GB Users logged in: 0
Memory usage: 20%         IPv4 address for enX0: 10.0.2.237
Swap usage:  0%

Expanded Security Maintenance for Applications is not enabled.

0 updates can be applied immediately.

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

The list of available updates is more than a week old.
To check for new updates run: sudo apt update

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the exact distribution terms for each program are described in the
individual files in /usr/share/doc/*/copyright.

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applicable law.

To run a command as administrator (user "root"), use "sudo <command>".
See "man sudo_root" for details.

ubuntu@ip-10-0-2-237:~$ |
```

Azure Setup:

Created New Resource group named **dr-rg**

The screenshot shows the Azure portal's 'Resource groups' page. At the top, there are navigation links like 'Home', 'Create', 'Manage view', 'Refresh', 'Export to CSV', 'Open query', 'Assign tags', and 'Add to service group'. Below these, a message states: 'You are viewing a new version of Browse experience. Click here to access the old experience.' A filter bar shows 'Subscription equals all' and 'Location equals all'. The main table lists resource groups with columns for Name, Subscription, and Location. One resource group is listed: 'dr-rg' under the subscription 'npupgradl-1695790677755' in the 'East US' location.

Name ↑	Subscription	Location
dr-rg	npupgradl-1695790677755	East US

Created Vnet named **dr-vnet** and 2 subnets are added

The screenshot shows the 'Overview' page for a virtual network named 'dr-vnet'. The page includes a search bar, navigation links (Move, Delete, Refresh, Give feedback), and a list of 'Essentials'. The essentials list shows: Resource group (move) : dr-rg, Location (move) : East US, Subscription (move) : npupgradl-1695790677755, Subscription ID : 552cb9f8-c936-4ec0-87be-ff35d4737fcf, Address space : 10.10.0.0/16, Subnets : 2 subnets, DNS servers : Azure provided DNS service, BGP community string : Configure, and Virtual network ID : 52f09c75-755b-492e-80b3-ffa6f90d4240. There is also a 'Tags (edit) : Add tags' link. At the bottom, there are tabs for 'Topology', 'Properties', 'Capabilities (5)', 'Recommendations', and 'Tutorials'.

Home > dr-vnet-1763276210655 | Overview >

dr-vnet
Virtual network

Check health of virtual network Retrieve detailed routing information for troubleshooting Evaluate routing for this virtual network

Search

Move Delete Refresh Give feedback

Overview

Activity log Access control (IAM) Tags Diagnose and solve problems Resource visualizer Settings Monitoring Automation

Essentials

Resource group (move) : dr-rg
Location (move) : East US
Subscription (move) : npupgradl-1695790677755
Subscription ID : 552cb9f8-c936-4ec0-87be-ff35d4737fcf

Address space : 10.10.0.0/16
Subnets : 2 subnets
DNS servers : Azure provided DNS service
BGP community string : Configure
Virtual network ID : 52f09c75-755b-492e-80b3-ffa6f90d4240

Tags (edit) : Add tags

Topology Properties Capabilities (5) Recommendations Tutorials

Created NSG named dr-nsg

Home > CreateNetworkSecurityGroupBladeV2-20251116122900 | Overview >

dr-nsg Network security group

Diagnose connectivity issues related to this security group | How do I create an alert to track firewall metric failures | Retrieve detailed information for troubleshooting security rules

Search < > Move Delete Refresh Give feedback

Overview

- Activity log
- Access control (IAM)
- Tags
- Diagnose and solve problems
- Resource visualizer
- Settings
 - Inbound security rules
 - Outbound security rules
- Network interfaces
- Subnets
- Properties
- Locks
- Monitoring

Essentials [JSON View](#)

Resource group (move): [dr-rg](#) Custom security rules: 2 inbound, 0 outbound
Location: East US Associated with: 0 subnets, 0 network interfaces
Subscription (move): [npupgradl-1695790677755](#)
Subscription ID: 552cb9f8-c936-4ec0-87be-ff35d4737fcf
Tags (edit): [Add tags](#)

Filter by name Port == all Protocol == all Source == all Destination == all Action == all

Priority	Name	Port	Protocol	Source	Destination	Action
Inbound Security Rules						
100	sshPortAllowed	22	TCP	Any	Any	Allow
110	httpAllowed	80	TCP	Any	Any	Allow
65000	AllowVnetInBound	Any	Any	VirtualNetwork	VirtualNetwork	Allow
65001	AllowAzureLoadBalanc...	Any	Any	AzureLoadBalancer	Any	Allow
65500	DenyAllInBound	Any	Any	Any	Any	Deny

Created virtual machine named App-VM

App-VM Virtual machine

Help me copy this VM in any region | Manage this VM with Azure CLI

Search < > Help me copy this VM in any region

Connect Start Restart Stop Hibernate Capture Delete Refresh Open in mobile Feedback CLI / PS

Overview

- Activity log
- Access control (IAM)
- Tags
- Diagnose and solve problems
- Resource visualizer
- Connect
 - Bastion
- Networking
- Settings
- Availability + scale
- Security
- Backup > disaster recovery

Essentials [JSON View](#)

Resource group (move): [dr-rg](#) Operating system: Linux (ubuntu 24.04)
Status: Running Size: Standard DS1 v2 (1 vcpu, 3.5 GiB memory)
Location: East US (Zone 1) Primary NIC public IP: [20.121.42.105](#)
Subscription (move): [npupgradl-1695790677755](#) 1 associated public IPs
Subscription ID: 552cb9f8-c936-4ec0-87be-ff35d4737fcf Virtual network/subnet: [dr-vnet/app-subnet](#)
Availability zone: 1 DNS name: [Not configured](#)
Health state: -
Time created: 11/16/2025, 7:18 AM UTC

Tags (edit): [Add tags](#)

Properties Monitoring Capabilities (7) Recommendations Tutorials

Tested connectivity to App-VM Public IP:20.121.42.105 from local through SSH

```
$ ssh -i azurekey.pem azureuser@20.121.42.105
Welcome to Ubuntu 24.04.3 LTS (GNU/Linux 6.14.0-1012-azure x86_64)

* Documentation:  https://help.ubuntu.com
* Management:    https://landscape.canonical.com
* Support:       https://ubuntu.com/pro

System information as of Sun Nov 16 07:24:35 UTC 2025

System load: 0.11          Processes:            117
Usage of /:  5.6% of 28.02GB Users logged in:           0
Memory usage: 8%          IPv4 address for eth0: 10.10.1.5
Swap usage:  0%

Expanded Security Maintenance for Applications is not enabled.

0 updates can be applied immediately.

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

The list of available updates is more than a week old.
To check for new updates run: sudo apt update

The programs included with the Ubuntu system are free software;
the exact distribution terms for each program are described in the
individual files in /usr/share/doc/*/copyright.

Ubuntu comes with ABSOLUTELY NO WARRANTY, to the extent permitted by
applicable law.

To run a command as administrator (user "root"), use "sudo <command>".
See "man sudo_root" for details.

azureuser@App-VM:~$
```

Created virtual machine named Tools-VM

Home > CreateVm-canonical.ubuntu-24_04-lts-server-20251116125703 | Overview >

Tools-VM

Virtual machine

Help me copy this VM in any region Manage this VM with Azure CLI

Search Help me copy this VM in any region

Overview Connect Start Restart Stop Hibernate Capture Delete Refresh Open in mobile Feedback CLI / PS

Essentials

Resource group (move)	: dr-rg	Operating system	: Linux (ubuntu 24.04)
Status	: Running	Size	: Standard D51 v2 (1 vcpu, 3.5 GiB memory)
Location	: East US (Zone 1)	Primary NIC public IP	: 172.190.112.221 1 associated public IPs
Subscription (move)	: npupgrad-1695790677755	Virtual network/subnet	: dr-vnet/tools-subnet
Subscription ID	: 552cb9f8-c936-4ec0-87be-f35d4737cf	DNS name	: Not configured
Availability zone	: 1	Health state	: -
		Time created	: 11/16/2025, 7:30 AM UTC

Tags (edit) : [Add tags](#)

Properties Monitoring Capabilities (7) Recommendations Tutorials

Virtual machine Networking

Tested connectivity to **Tools-VM** public IP: **172.190.112.221** from local through SSH

```
$ ssh -i azurekey.pem azureuser@172.190.112.221
Welcome to Ubuntu 24.04.3 LTS (GNU/Linux 6.14.0-1012-azure x86_64)

 * Documentation:  https://help.ubuntu.com
 * Management:    https://landscape.canonical.com
 * Support:       https://ubuntu.com/pro

System information as of Sun Nov 16 07:34:55 UTC 2025

System load:  0.09           Processes:            129
Usage of /:   5.6% of 28.02GB Users logged in:          0
Memory usage: 8%           IPv4 address for eth0: 10.10.2.4
Swap usage:   0%

Expanded Security Maintenance for Applications is not enabled.

0 updates can be applied immediately.

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

The list of available updates is more than a week old.
To check for new updates run: sudo apt update

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the exact distribution terms for each program are described in the
individual files in /usr/share/doc/*/copyright.

Ubuntu comes with ABSOLUTELY NO WARRANTY, to the extent permitted by
applicable law.

To run a command as administrator (user "root"), use "sudo <command>".
See "man sudo_root" for details.

azureuser@Tools-VM:~$
```

Task 2: Configuration Management

Installed Ansible on AWS Tools machine

```
sudo apt update
sudo apt install -y software-properties-common
sudo add-apt-repository --yes --update ppa:ansible/ansible
sudo apt install -y ansible
ansible --version # confirm installation
```

```
No VM guests are running outdated hypervisor (qemu) binaries on this host.
ubuntu@ip-10-0-2-237:~$ ansible --version
ansible [core 2.19.4]
  config file = /etc/ansible/ansible.cfg
  configured module search path = ['/home/ubuntu/.ansible/plugins/modules', '/usr/share/ansible/plugins/modules']
  ansible python module location = /usr/lib/python3/dist-packages/ansible
  ansible collection location = /home/ubuntu/.ansible/collections:/usr/share/ansible/collections
  executable location = /usr/bin/ansible
  python version = 3.12.3 (main, Aug 14 2025, 17:47:21) [GCC 13.3.0] (/usr/bin/python3)
  jinja version = 3.1.2
  pyyaml version = 6.0.1 (with libyaml v0.2.5)
ubuntu@ip-10-0-2-237:~$ chown ubuntu:ubuntu ~/.ssh/*.pem
ubuntu@ip-10-0-2-237:~$ vi inventory.ini
ubuntu@ip-10-0-2-237:~$ ssh -i ~/.ssh/dr-keypair.pem ubuntu@44.204.190.114
The authenticity of host '44.204.190.114 (44.204.190.114)' can't be established.
ED25519 key fingerprint is SHA256:JDa17pNWRLr9vswjg1+ViCQ14xQGyWhtJtQyVx4DkSM.
This key is not known by any other names.
Are you sure you want to continue connecting (yes/no/[fingerprint])? yes
Warning: Permanently added '44.204.190.114' (ED25519) to the list of known hosts.
Welcome to Ubuntu 24.04.3 LTS (GNU/Linux 6.14.0-1015-aws x86_64)
```

from local workstation copied .pem file to Tools Machine using below commands

```
scp -i ~/Downloads/dr-keypair.pem ~/Downloads/dr-keypair.pem
ubuntu@98.81.254.10:/home/ubuntu/.ssh/dr-keypair.pem

scp -i ~/Downloads/azurekey.pem ~/Downloads/azurekey.pem
ubuntu@98.81.254.10:/home/ubuntu/.ssh/azurekey.pem

chmod 600 /home/ubuntu/.ssh/azurekey.pem

chown azureuser:azureuser /home/ubuntu/.ssh/dr-keypair.pem
```

Tested connectivity from tool machine to **app machine (AWS) (IP:44.204.190.114)**

```
ubuntu@ip-10-0-2-237:~$ ssh -i ~/.ssh/dr-keypair.pem ubuntu@44.204.190.114
The authenticity of host '44.204.190.114 (44.204.190.114)' can't be established.
ED25519 key fingerprint is SHA256:JDal7pNWRLr9vswjgl+ViCQi4xQGYwhTjtQyVx4DkSM.
This key is not known by any other names.
Are you sure you want to continue connecting (yes/no/[fingerprint])? yes
Warning: Permanently added '44.204.190.114' (ED25519) to the list of known hosts.
Welcome to Ubuntu 24.04.3 LTS (GNU/Linux 6.14.0-1015-aws x86_64)
```

Tested connectivity from tool machine to **app machine (Azure)(IP:20.121.42.105)**

```
ubuntu@ip-10-0-2-237:~$ ssh -i ~/.ssh/azurekey.pem azureuser@20.121.42.105
The authenticity of host '20.121.42.105 (20.121.42.105)' can't be established.
ED25519 key fingerprint is SHA256:E4Uy+RaOtTmO2mDunyaA24xrxxcJ82Rz00dglSXwz8/4.
This key is not known by any other names.
Are you sure you want to continue connecting (yes/no/[fingerprint])? yes
Warning: Permanently added '20.121.42.105' (ED25519) to the list of known hosts.
Welcome to Ubuntu 24.04.3 LTS (GNU/Linux 6.14.0-1012-azure x86_64)
```

```
* Documentation:  https://help.ubuntu.com
* Management:    https://landscape.canonical.com
* Support:        https://ubuntu.com/pro
```

System information as of Sun Nov 16 08:06:40 UTC 2025

System load:	0.0	Processes:	115
Usage of /:	5.7% of 28.02GB	Users logged in:	0
Memory usage:	7%	IPv4 address for eth0:	10.10.1.5
Swap usage:	0%		

Used below **inventory.ini** inventory file to mention webserver's name

```
[webserver]
```

```
aws_app ansible_host=44.204.190.114 ansible_user=ubuntu
ansible_ssh_private_key_file=/home/ubuntu/.ssh/dr-keypair.pem

azure_app ansible_host=20.121.42.105 ansible_user=azureuser
ansible_ssh_private_key_file=/home/ubuntu/.ssh/azurekey.pem
```

used below code `install_nginx.yml` file as playbook file

```
---
- name: Install and verify nginx on all web servers
  hosts: webservers
  become: yes
  gather_facts: yes
  vars:
    welcome_content: "<h1>Welcome to Nginx</h1>"
  tasks:
    - name: Ensure apt cache is updated
      ansible.builtin.apt:
        update_cache: yes
        cache_valid_time: 3600
    - name: Install Nginx
      ansible.builtin.apt:
        name: nginx
        state: present
    - name: Ensure nginx service is enabled and started
      ansible.builtin.service:
        name: nginx
        state: started
        enabled: yes
    - name: Create custom index.html
      ansible.builtin.copy:
        dest: /var/www/html/index.html
        content: "{{ welcome_content }}"
        owner: root
        group: root
        mode: '0644'
      notify: Restart nginx
    - name: Wait for HTTP port 80 to become open
      ansible.builtin.wait_for:
        host: "{{ ansible_host | default(inventory_hostname) }}"
        port: 80
        timeout: 30
        state: started
    - name: Verify that HTTP returns Welcome to Nginx
      ansible.builtin.uri:
        url: "http://{{ ansible_host }}"
        return_content: yes
```

```

    status_code: 200
    register: web_response
    retries: 3
    delay: 2
    until: web_response.status == 200
  - name: Assert expected content present
    ansible.builtin.assert:
      that:
        - "'Welcome to Nginx' in web_response.content"
handlers:
  - name: Restart nginx
    ansible.builtin.service:
      name: nginx
      state: restarted

```

executed below command to deploy the playbook

```
ansible-playbook -i inventory.ini install_nginx.yml
```

Below is the successful connection and nginx installation on app servers through ansible

```

ubuntu@ip-10-0-2-237:~$ vi inventory.ini
ubuntu@ip-10-0-2-237:~$ ansible-playbook -i inventory.ini install_nginx.yml

PLAY [Install and verify nginx on all web servers] *****

TASK [Gathering Facts] *****
[WARNING]: Host 'aws_app' is using the discovered Python interpreter at '/usr/bin/python3.12', but future installation of another Python interpreter could cause a different interpreter to be discovered. See https://docs.ansible.com/ansible-core/2.19/reference_appendices/interpreter_discovery.html for more information.
ok: [aws_app]
[WARNING]: Host 'azure_app' is using the discovered Python interpreter at '/usr/bin/python3.12', but future installation of another Python interpreter could cause a different interpreter to be discovered. See https://docs.ansible.com/ansible-core/2.19/reference_appendices/interpreter_discovery.html for more information.
ok: [azure_app]

TASK [Ensure apt cache is updated] *****
changed: [aws_app]
changed: [azure_app]

TASK [Install Nginx] *****
changed: [aws_app]
changed: [azure_app]

TASK [Ensure nginx service is enabled and started] *****
ok: [aws_app]
ok: [azure_app]

TASK [Create custom index.html] *****
changed: [aws_app]
changed: [azure_app]

TASK [Wait for HTTP port 80 to become open] *****
ok: [aws_app]
ok: [azure_app]

TASK [Verify that HTTP returns Welcome to Nginx] *****
ok: [aws_app]
ok: [azure_app]

TASK [Assert expected content present] *****
ok: [aws_app] => {
  "changed": false,
  "msg": "All assertions passed"
}
ok: [azure_app] => {
  "changed": false,
  "msg": "All assertions passed"
}

RUNNING HANDLER [Restart nginx] *****

```

```

RUNNING HANDLER [Restart nginx] *****
changed: [aws_app]
changed: [azure_app]

PLAY RECAP *****
aws_app      : ok=9    changed=4    unreachable=0    failed=0    skipped=0    rescued=0    ignored=0
azure_app    : ok=9    changed=4    unreachable=0    failed=0    skipped=0    rescued=0    ignored=0

ubuntu@ip-10-0-2-237:~$

```

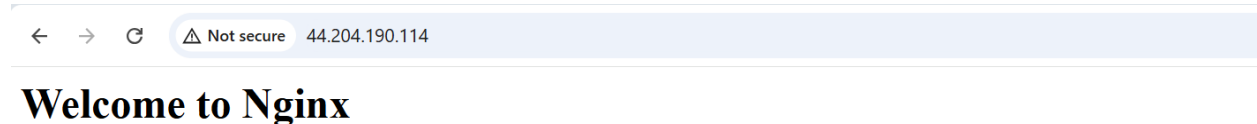
Testing from Tools Machine to App-server (AWS) (IP:44.204.190.114)

```

ubuntu@ip-10-0-2-237:~$ curl http://44.204.190.114
<h1>Welcome to Nginx</h1>ubuntu@ip-10-0-2-237:~$ |

```

Accessing application via http port 80: App-server (AWS)



A screenshot of a web browser window. The address bar shows a 'Not secure' warning and the URL '44.204.190.114'. The main content area displays 'Welcome to Nginx' in a large, bold, black serif font.

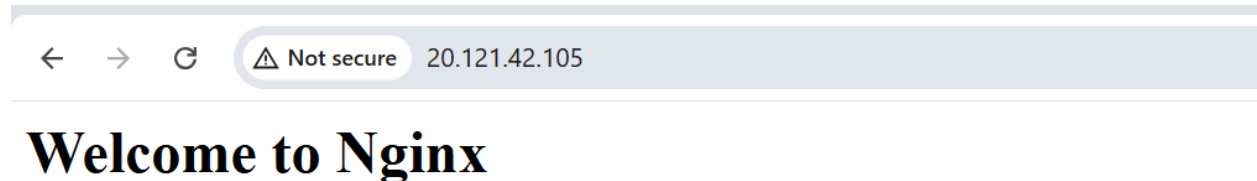
Testing from Tools Machine to App-server (Azure) (IP:20.121.42.105)

```

ubuntu@ip-10-0-2-237:~$ curl http://20.121.42.105
<h1>welcome to Nginx</h1>ubuntu@ip-10-0-2-237:~$

```

Accessing application via http port 80: App-server (Azure)



A screenshot of a web browser window. The address bar shows a 'Not secure' warning and the URL '20.121.42.105'. The main content area displays 'Welcome to Nginx' in a large, bold, black serif font.

Task 3: Application Deployment

Created separate html file for aws App server

index-aws.html

```
<!DOCTYPE html>
<html>
<head>
  <title>Welcome to AWS</title>
</head>
<body>
<h1>Welcome to AWS</h1>
<p>This page was deployed by Ansible.</p>
</body>
</html>
```

Created separate html file for aws App server

index-azure.html

```
<!DOCTYPE html>
<html>
<head>
  <title>Welcome to Azure</title>
</head>
<body>
<h1>Welcome to Azure</h1>
<p>This page was deployed by Ansible.</p>
</body>
</html>
```

Created new inventory file to deploy separate html files on different app servers

inventory.ini

```
[webservers]
aws_app  ansible_host=44.204.190.114  ansible_user=ubuntu
ansible_ssh_private_key_file=/home/ubuntu/.ssh/dr-keypair.pem  cloud=aws
azure_app  ansible_host=20.121.42.105  ansible_user=azureuser
ansible_ssh_private_key_file=/home/ubuntu/.ssh/azurekey.pem  cloud=azure
```

New playbook file to deploy separate html files on different app servers

deploy_index_pages.yml

```
---
- name: Deploy cloud-specific index pages and ensure nginx serves them
  hosts: webservers
  become: yes
  gather_facts: yes

  tasks:
    - name: Ensure apt cache is updated
      ansible.builtin.apt:
        update_cache: yes
        cache_valid_time: 3600

    - name: Install nginx if not present
      ansible.builtin.apt:
        name: nginx
        state: present

    - name: Ensure nginx service is enabled and started
      ansible.builtin.service:
        name: nginx
        state: started
        enabled: yes

    - name: Deploy cloud-specific index file
      ansible.builtin.copy:
```

```
    src: "index-{{ cloud }}.html"
    dest: /var/www/html/index.html
    owner: root
    group: root
    mode: '0644'
    notify: Reload nginx

- name: Wait for nginx to be ready
  ansible.builtin.wait_for:
    host: "{{ ansible_host }}"
    port: 80
    timeout: 30

- name: Verify page contents
  ansible.builtin.uri:
    url: "http://{{ ansible_host }}"
    return_content: yes
    status_code: 200
    register: resp

- name: Assert correct content is shown
  ansible.builtin.assert:
    that:
      - "'Welcome to AWS' in resp.content if cloud == 'aws' else 'Welcome
to Azure' in resp.content"

handlers:
- name: Reload nginx
  ansible.builtin.service:
    name: nginx
    state: restarted
```

Below is the Deployment status:

```
ubuntu@ip-10-0-2-237:~$ vi index azure.html
ubuntu@ip-10-0-2-237:~$ ansible-playbook -i inventory.ini deploy_index_pages.yml

PLAY [Deploy cloud-specific index pages and ensure nginx serves them] *****

TASK [Gathering Facts] *****
[WARNING]: Host 'aws_app' is using the discovered Python interpreter at '/usr/bin/python3.12', but future installation of another Python interpreter could cause a different interpreter to be discovered. See https://docs.ansible.com/ansible-core/2.19/reference_appendices/interpreter_discovery.html for more information.
ok: [aws_app]
[WARNING]: Host 'azure_app' is using the discovered Python interpreter at '/usr/bin/python3.12', but future installation of another Python interpreter could cause a different interpreter to be discovered. See https://docs.ansible.com/ansible-core/2.19/reference_appendices/interpreter_discovery.html for more information.
ok: [azure_app]

TASK [Ensure apt cache is updated] *****
ok: [aws_app]
ok: [azure_app]

TASK [Install nginx if not present] *****
ok: [aws_app]
ok: [azure_app]

TASK [Ensure nginx service is enabled and started] *****
ok: [aws_app]
ok: [azure_app]

TASK [Deploy cloud-specific index file] *****
changed: [aws_app]
changed: [azure_app]

TASK [Wait for nginx to be ready] *****
ok: [aws_app]
ok: [azure_app]

TASK [Verify page contents] *****
ok: [aws_app]
ok: [azure_app]

TASK [Assert correct content is shown] *****
ok: [aws_app] => {
  "changed": false,
  "msg": "All assertions passed"
}

TASK [Assert correct content is shown] *****
ok: [aws_app] => {
  "changed": false,
  "msg": "All assertions passed"
}
ok: [azure_app] => {
  "changed": false,
  "msg": "All assertions passed"
}

RUNNING HANDLER [Reload nginx] *****
changed: [aws_app]
changed: [azure_app]

PLAY RECAP *****
aws_app      : ok=9    changed=2    unreachable=0    failed=0    skipped=0    rescued=0    ignored=0
azure_app    : ok=9    changed=2    unreachable=0    failed=0    skipped=0    rescued=0    ignored=0

ubuntu@ip-10-0-2-237:~$
```

Connecting to App-server (AWS) (IP:44.204.190.114)

```
ubuntu@ip-10-0-2-237:~$ curl http://44.204.190.114
<!DOCTYPE html>
<html>
<head>
  <title>Welcome to AWS</title>
</head>
<body>
<h1>Welcome to AWS</h1>
<p>This page was deployed by Ansible.</p>
</body>
</html>
ubuntu@ip-10-0-2-237:~$
```

Accessing application via http port 80: App-server (AWS) (IP:44.204.190.114)



Welcome to AWS

This page was deployed by Ansible.

Connecting to App-server (Azure) (IP:20.121.42.105)

```
ubuntu@ip-10-0-2-237:~$ curl http://20.121.42.105
<!DOCTYPE html>
<html>
<head>
  <title>Welcome to Azure</title>
</head>
<body>
<h1>Welcome to Azure</h1>
<p>This page was deployed by Ansible.</p>
</body>
</html>
ubuntu@ip-10-0-2-237:~$
```

Accessing application via http port 80: App-server (Azure) (IP:20.121.42.105)



Welcome to Azure

This page was deployed by Ansible.

Task 4: Jenkins Setup for Continuous Deployment

Installed Java using the steps below before installing Jenkins on Tool Machine

```
sudo apt update
sudo apt install -y openjdk-17-jdk
```

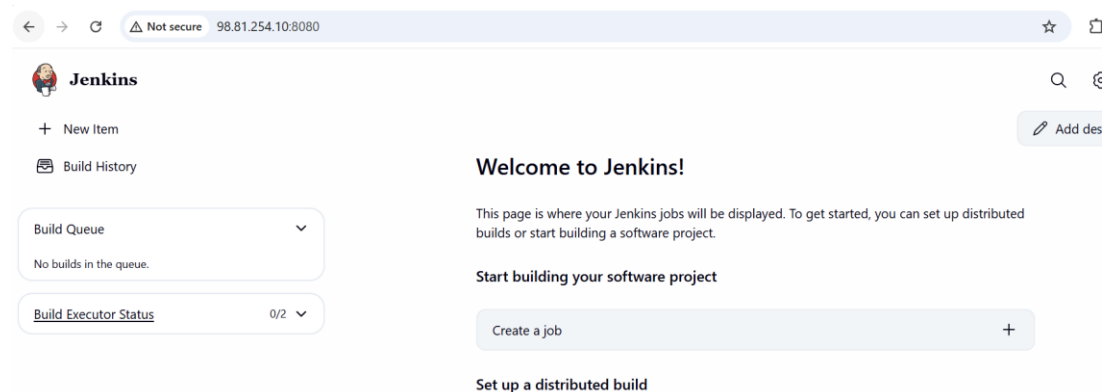
```
ubuntu@ip-10-0-2-237:~$ java -version
openjdk version "17.0.16" 2025-07-15
OpenJDK Runtime Environment (build 17.0.16+8-Ubuntu-0ubuntu124.04.1)
OpenJDK 64-Bit Server VM (build 17.0.16+8-Ubuntu-0ubuntu124.04.1, mixed mode, sharing)
ubuntu@ip-10-0-2-237:~$
```

Installed Jenkins with below commands

```
sudo apt update
sudo apt install -y jenkins
sudo systemctl enable jenkins
sudo systemctl start jenkins
```

```
ubuntu@ip-10-0-2-237:~$ sudo systemctl status jenkins
● jenkins.service - Jenkins Continuous Integration Server
   Loaded: loaded (/usr/lib/systemd/system/jenkins.service; enabled; preset: enabled)
   Active: active (running) since Sun 2025-11-16 09:22:37 UTC; 2min 29s ago
     Main PID: 6273 (java)
        Tasks: 38 (limit: 1121)
      Memory: 278.2M (peak: 300.8M)
         CPU: 18.676s
    CGroup: /system.slice/jenkins.service
            └─6273 /usr/bin/java -Djava.awt.headless=true -jar /usr/share/java/jenkins.war --webroot=/var/cache/jenkins/war --httpPort=8080
```

Jenkins portal on webpage



Tested connectivity from Jenkins to App-server (AWS) (IP:44.204.190.114)

```
ubuntu@ip-10-0-2-237:~/.ssh$ sudo su - jenkins
jenkins@ip-10-0-2-237:~$ ssh -i ~/.ssh/dr-keypair.pem ubuntu@44.204.190.114 "echo AWS OK"
The authenticity of host '44.204.190.114 (44.204.190.114)' can't be established.
ED25519 key fingerprint is SHA256:JDal7pNWRLr9vswjgl+ViCQi4xQGYwhTJtQyVx4DkSM.
This key is not known by any other names.
Are you sure you want to continue connecting (yes/no/[fingerprint])? yes
Warning: Permanently added '44.204.190.114' (ED25519) to the list of known hosts.
AWS OK
jenkins@ip-10-0-2-237:~$ |
```

Tested connectivity from Jenkins to App-server (Azure) (IP:20.121.42.105)

```
jenkins@ip-10-0-2-237:~$ ssh -i ~/.ssh/azurekey.pem azureuser@20.121.42.105 "echo AZURE OK"
The authenticity of host '20.121.42.105 (20.121.42.105)' can't be established.
ED25519 key fingerprint is SHA256:E4Uy+RaOtTMo2mDunyaA24xrxxcJ82Rz00dglSXwz8/4.
This key is not known by any other names.
Are you sure you want to continue connecting (yes/no/[fingerprint])? yes
Warning: Permanently added '20.121.42.105' (ED25519) to the list of known hosts.
AZURE OK
jenkins@ip-10-0-2-237:~$ |
```

Created 2 separate index file for aws, azure server and Jenkins files in github repo

The screenshot shows the GitHub interface for the repository 'shivu9900 / upgrade_project'. The repository is public and has 1 branch (main) and 0 tags. The commit history shows three recent commits: 'Jenkinsfile' (4 minutes ago), 'index-aws.html' (2 minutes ago), and 'index-azure.html' (9 minutes ago). The repository has 0 stars, 0 watching, and 0 forks. The 'About' section is empty, stating 'No description, website, or topics provided.'

Commit	Message	Time
shivu9900	Update index-aws.html	aa886c8 · 2 minutes ago
	Create Jenkinsfile	4 minutes ago
	Update index-aws.html	2 minutes ago
	Create index-azure.html	9 minutes ago

Jenkins file

```
pipeline {
    agent any

    environment {
        AWS_KEY = "/var/lib/jenkins/.ssh/dr-keypair.pem"
        AZURE_KEY = "/var/lib/jenkins/.ssh/azurekey.pem"
        AWS_USER = "ubuntu"
        AZURE_USER = "azureuser"
        AWS_HOST = "44.204.190.114"
        AZURE_HOST = "20.121.42.105"
    }

    stages {

        stage('Pull Latest Files') {
            steps {
                echo "Pulled latest HTML from GitHub"
            }
        }

        stage('Deploy to AWS') {
            steps {
                sh """
                    ssh -o StrictHostKeyChecking=no -i \${AWS_KEY}
                    \${AWS_USER}@\${AWS_HOST} \
                        "sudo mv /var/www/html/index.html
                        /var/www/html/index.html.bak || true"

                    scp -o StrictHostKeyChecking=no -i \${AWS_KEY} index-
                    aws.html \${AWS_USER}@\${AWS_HOST}:/tmp/index.html

                    ssh -i \${AWS_KEY} \${AWS_USER}@\${AWS_HOST} \
                        "sudo mv /tmp/index.html /var/www/html/index.html && sudo
                        systemctl restart nginx"
                """
            }
        }

        stage('Deploy to Azure') {
            steps {
                sh """
```

```

        ssh -o StrictHostKeyChecking=no -i \${AZURE_KEY}
\${AZURE_USER}@ \${AZURE_HOST} \
        "sudo mv /var/www/html/index.html
/var/www/html/index.html.bak || true"

        scp -o StrictHostKeyChecking=no -i \${AZURE_KEY} index-
azure.html \${AZURE_USER}@ \${AZURE_HOST}:/tmp/index.html

        ssh -i \${AZURE_KEY} \${AZURE_USER}@ \${AZURE_HOST} \
        "sudo mv /tmp/index.html /var/www/html/index.html && sudo
systemctl restart nginx"
        ""
    }
}
}

post {
    success {
        echo "Deployment Successful!"
    }
    failure {
        echo "Deployment Failed!"
    }
}
}
}

```

App Server AWS index file code:

[upgrade_project](#) / index-aws.html


 shivu9900 Update index-aws.html
aa886c8 · 6 minutes ago
[History](#)

CodeBlame

RawCopyDownloadEditDropdown

1 <h1>Welcome to AWS - v1 from jenkins deployment</h1>

App Server Azure index file code:

[upgrade_project / index-azure.html](#) 



shivu9900 Update index-azure.html

9f7da5a · 1 minute ago



Code

Blame

Raw



```
1      <h1>Welcome to Azure - v1 from Jekins Deployment</h1>
```

Jenkins build console output:



Jenkins / MultiCloud-Deployment / #1 / Console Output



Status

Changes

Console Output

Edit Build Information

Delete build '#1'

Timings

Git Build Data

Pipeline Overview

Restart from Stage

Replay

Pipeline Steps

Workspaces



Console Output

Download

Copy

View as pl

```
Started by user Shivakumara n d
Obtained Jenkinsfile from git https://github.com/shivu9900/upgrade_project.git
[Pipeline] Start of Pipeline
[Pipeline] node
Running on Jenkins in /var/lib/jenkins/workspace/MultiCloud-Deployment
[Pipeline] {
[Pipeline] stage
[Pipeline] { (Declarative: Checkout SCM)
[Pipeline] checkout
Selected Git installation does not exist. Using Default
The recommended git tool is: NONE
No credentials specified
Cloning the remote Git repository
Cloning repository https://github.com/shivu9900/upgrade_project.git
> git init /var/lib/jenkins/workspace/MultiCloud-Deployment # timeout=10
Fetching upstream changes from https://github.com/shivu9900/upgrade_project.git
> git --version # timeout=10
> git --version # 'git version 2.43.0'
> git fetch --tags --force --progress -- https://github.com/shivu9900/upgrade_project.git
```



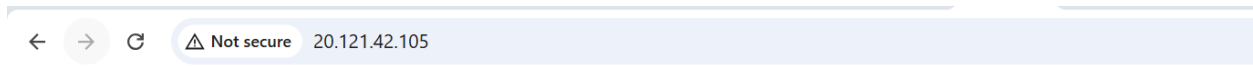
The screenshot shows the Jenkins web interface. The breadcrumb navigation at the top reads "Jenkins / MultiCloud-Deployment / #1 / Console Output". The main content area displays the console output of a pipeline. The output includes a shell command to restart nginx, followed by several "[Pipeline]" log markers, a "Deployment Successful!" message, and a final "Finished: SUCCESS" status.

```
/var/www/html/index.html && sudo systemctl restart nginx
[Pipeline] }
[Pipeline] // stage
[Pipeline] stage
[Pipeline] { (Declarative: Post Actions)
[Pipeline] echo
Deployment Successful!
[Pipeline] }
[Pipeline] // stage
[Pipeline] }
[Pipeline] // withEnv
[Pipeline] }
[Pipeline] // withEnv
[Pipeline] }
[Pipeline] // node
[Pipeline] End of Pipeline
Finished: SUCCESS
```

App-server (AWS) (IP:44.204.190.114) website access from html

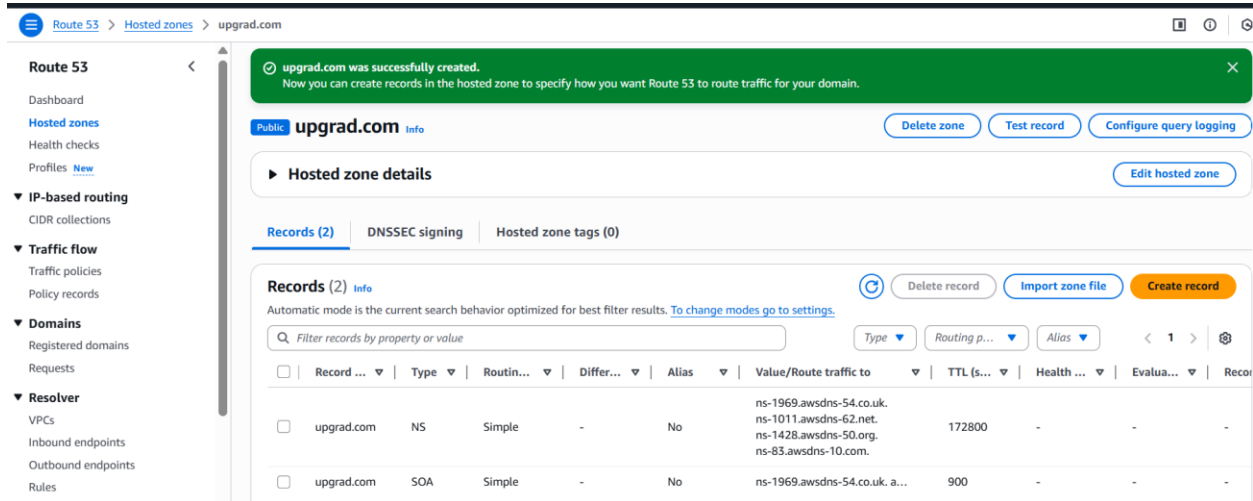


App-server (Azure) (IP:20.121.42.105) website access from html



Task 5: Traffic Management Using AWS Route 53

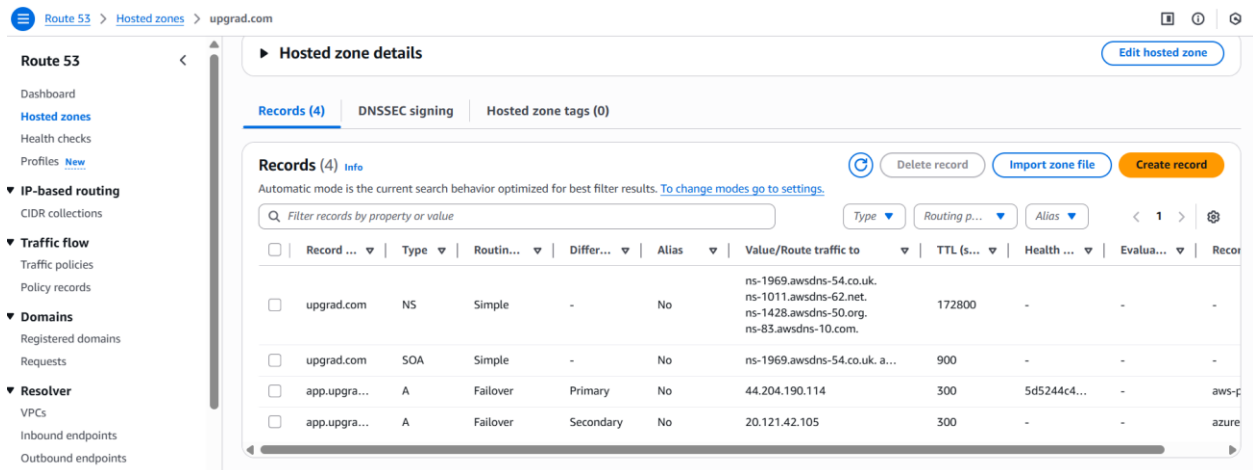
Created hosted zone upgrad.com in AWS route 53



The screenshot shows the AWS Route 53 console for the hosted zone 'upgrad.com'. A green notification banner at the top states: 'upgrad.com was successfully created. Now you can create records in the hosted zone to specify how you want Route 53 to route traffic for your domain.' The left sidebar shows the navigation menu with 'Hosted zones' selected. The main content area shows the 'Hosted zone details' for 'upgrad.com' with buttons for 'Delete zone', 'Test record', 'Configure query logging', and 'Edit hosted zone'. Below this, the 'Records (2)' tab is active, showing a table with 2 records. The table has columns: Record, Type, Routing, Differ..., Alias, Value/Route traffic to, TTL (s...), Health..., Evalua..., and Record. The records are:

Record	Type	Routing	Differ...	Alias	Value/Route traffic to	TTL (s...)	Health...	Evalua...	Record
upgrad.com	NS	Simple	-	No	ns-1969.awsdns-54.co.uk. ns-1011.awsdns-62.net. ns-1428.awsdns-50.org. ns-83.awsdns-10.com.	172800	-	-	-
upgrad.com	SOA	Simple	-	No	ns-1969.awsdns-54.co.uk. a...	900	-	-	-

Created 2 records for app server aws and app server azure respectively



The screenshot shows the AWS Route 53 console for the hosted zone 'upgrad.com'. The 'Records (4)' tab is active, showing a table with 4 records. The table has columns: Record, Type, Routing, Differ..., Alias, Value/Route traffic to, TTL (s...), Health..., Evalua..., and Record. The records are:

Record	Type	Routing	Differ...	Alias	Value/Route traffic to	TTL (s...)	Health...	Evalua...	Record
upgrad.com	NS	Simple	-	No	ns-1969.awsdns-54.co.uk. ns-1011.awsdns-62.net. ns-1428.awsdns-50.org. ns-83.awsdns-10.com.	172800	-	-	-
upgrad.com	SOA	Simple	-	No	ns-1969.awsdns-54.co.uk. a...	900	-	-	-
app.upgra...	A	Failover	Primary	No	44.204.190.114	300	5d5244c4...	-	aws-p
app.upgra...	A	Failover	Secondary	No	20.121.42.105	300	-	-	azure

Traffic direct is tested using Dummy Hosted Zone in Route 53 as upgrad.com is already registered and we can't reuse the same in public domain.

Route 53 directs traffic to the AWS App Machine **App-server (AWS)** (IP:44.204.190.114) when it is healthy

Response returned by Route 53

Response from Route 53 based on the following options.

Hosted zone
upgrad.com

Record name
app

Record type
A

DNS response code
✔ No Error

Protocol
UDP

Response returned by Route 53
44.204.190.114

Stopped the AWS app machine

EC2 > Instances

Dashboard
EC2 Global View
Events

▼ Instances
Instances
Instance Types
Launch Templates
Spot Requests
Savings Plans
Reserved Instances
Dedicated Hosts
Capacity Reservations

Successfully initiated stopping of i-059aac8b6dc559b45

Instances (1/2) Info

Find Instance by attribute or tag (case-sensitive)

Instance state = running Clear filters

All states

	Name	Instance ID	Instance state	Instance type	Status check	Alarm status	Availability Zone	Public IPv4 DNS
<input checked="" type="checkbox"/>	App-Machine	i-059aac8b6dc559b45	Stopped	t2.micro	2/2 checks passed	View alarms +	us-east-1a	-
<input type="checkbox"/>	Tools-Machine	i-0131c2e1e03f7338b	Running	t2.micro	2/2 checks passed	View alarms +	us-east-1b	-

i-059aac8b6dc559b45 (App-Machine)

Details Status and alarms Monitoring Security Networking Storage Tags

Route 53 redirects traffic to the Azure VM's public IP **App-server (Azure)** (IP:20.121.42.105) as AWS app machine is stopped

Response returned by Route 53

Response from Route 53 based on the following options.

Hosted zone
upgrad.com

Record name
app

Record type
A

DNS response code
✔ No Error

Protocol
UDP

Response returned by Route 53
20.121.42.105

Restarted the AWS App machine

The screenshot displays the AWS Management Console interface for the EC2 Instances page. At the top, a green notification bar indicates that the instance 'i-059aac8b6dc559b45' has been successfully initiated. Below this, a table lists the instance details. The instance is named 'App-Machine' and is currently in a 'Running' state. It is a 't2.micro' instance type, and its status check is 'Initializing'. The instance is located in the 'us-east-1a' availability zone. The console also shows a sidebar with navigation options like 'Dashboard', 'EC2 Global View', and 'Instances'.

Name	Instance ID	Instance state	Instance type	Status check	Alarm status	Availability Zone	Public IPv4 DNS
App-Machine	i-059aac8b6dc559b45	Running	t2.micro	Initializing	View alarms +	us-east-1a	-

Route 53 redirects traffic to the AWS VM's public IP as AWS app machine App-server (AWS) (IP:44.204.190.114) is restarted again

Response returned by Route 53

Response from Route 53 based on the following options.

Hosted zone

upgrad.com

Record name

app

Record type

A

DNS response code

✔ No Error

Protocol

UDP

Response returned by Route 53

44.204.190.114