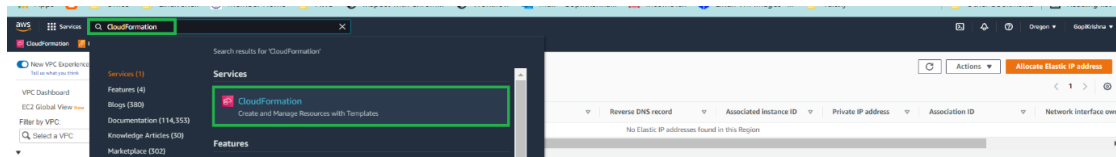
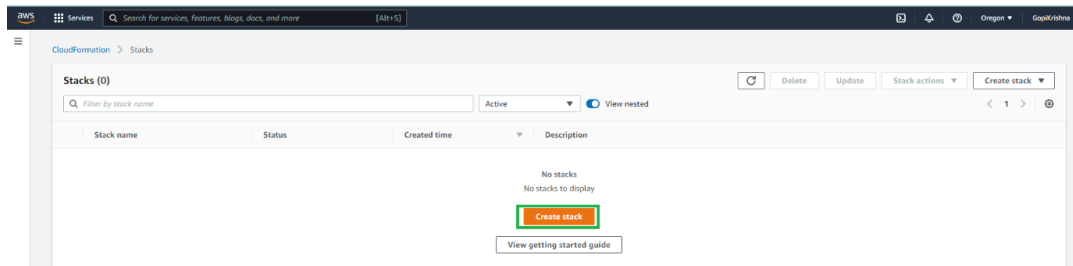


Infrastructure Setup for Ansible

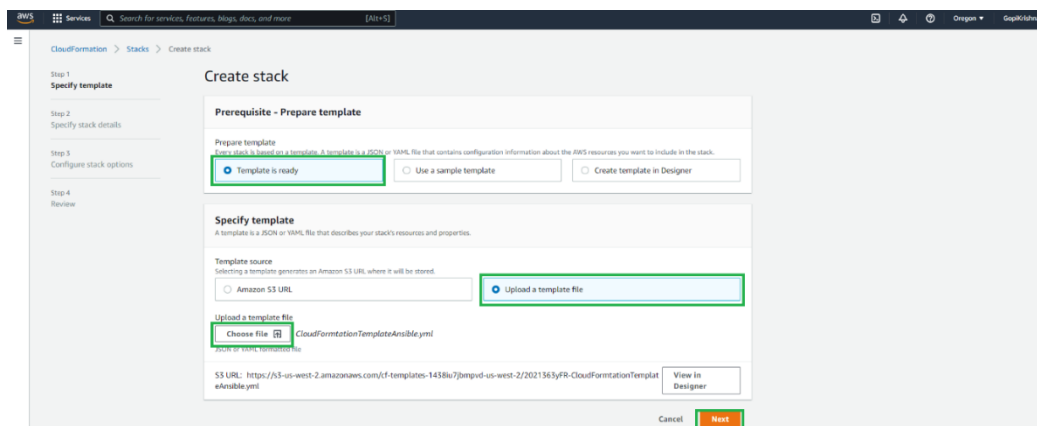
Step1: Select Services and Click on CloudFormation



Step2: Click on Create Stack and Choose the option “Template is ready” and then “Use a Sample file”

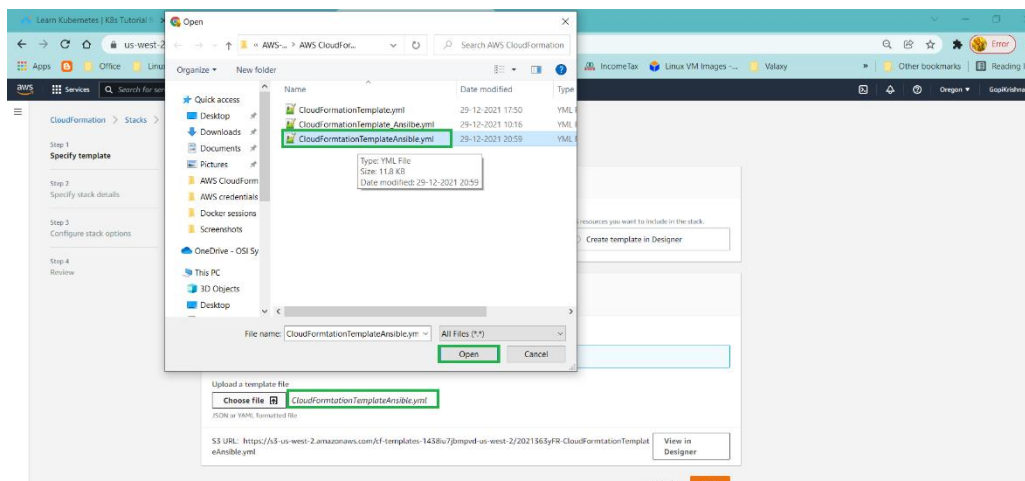


Step2.1: Click on Choose file



Step3: Select the **CloudFormationTemplateAnsible.yml** file from the desired location and click on Next

Note: if any configuration issues are there in the file, it will display the errors when we click on the “Next” button



Step4: Specify the Stack name and click on Next

Specify stack details

Stack name

Stack name

Stack name can include letters (a-z and A-Z), numbers (0-9), and dashes (-).

Parameters

Parameters are defined in your template and allow you to input custom values when you create or update a stack.

No parameters

There are no parameters defined in your template.

Cancel Previous Next

Step5: Rollback all stack resources will be selected by default in case of any failures happen, it will revert to the previous state. And click on Next.

Permissions

Choose an IAM role to explicitly define how CloudFormation can create, modify, or delete resources in the stack. If you don't choose a role, CloudFormation uses permissions based on your user credentials. [Learn more](#)

IAM role - optional

Choose the IAM role for CloudFormation to use for all operations performed on the stack.

IAM role name

Remove

Stack failure options

Behavior on provisioning failure

Specify how all stack resources that are created fail. [Learn more](#)

☒ Rollback all stack resources

Rollback the stack to the last known stable state.

☐ Preserve successfully provisioned resources

Preserve the state of successfully provisioned resources, while rolling back failed resources to the last known stable state. Resources without a last known stable state will be deleted upon the next stack operation.

Advanced options

You can set additional options for your stack, like notification options and a stack policy. [Learn more](#)

Stack policy

Define a policy that you want to protect from unintentional updates during a stack update.

Rollback configuration

Specify alarms for CloudFormation to monitor when creating and updating the stack. If the operation breaches an alarm threshold, CloudFormation rolls it back. [Learn more](#)

Notification options

Stack creation options

Cancel Previous Next

Step6: Click on Create Stack to initiate the infrastructure configuration / setup.

Stack policy

No stack policy

There is no stack policy defined.

Rollback configuration

Monitoring time

CloudWatch alarm ARN

Notification options

No notification options

There are no notification options defined.

Stack creation options

Timeout

Termination protection

Disabled

Quick create link

Cancel Previous Create change set Create stack

CloudFormation > Stacks > Ansible-Stack

Stacks (1)

Filter by stack name

Active View history

Ansible-Stack

Stack ID: ia-2021-12-29-UTC-0530

CREATE_IN_PROGRESS

Events (1)

Timestamp	Logical ID	Status	Status reason
2021-12-29 21:02:33 UTC-0530	Ansible-Stack	CREATE_IN_PROGRESS	User initiated

Validation of Steps:

1. EC2 – 1 Ansible Control Node and 2 Ansible Target Nodes

The screenshot displays the AWS Management Console's 'Instances' page. A table lists three EC2 instances: 'Ansible-control-node' (running), 'Ansible-Target-Node-1' (initializing), and 'Ansible-Target-Node-2' (initializing). The details for 'Ansible-control-node' are expanded, showing its configuration: Instance ID i-0c43f6d0e555da8, Instance type t2.micro, Status check passing, Alarm status no alarms, Availability Zone us-west-2a, Public IPv4 DNS 54.212.211.70, Private IPv4 DNS 172.31.2.9, Elastic IP 54.212.211.70, and IPv6 IPs none. The instance is running Amazon Linux 2 (ami-007f6c32d9487226) in the us-west-2a region.

The screenshot displays the AWS Management Console's 'Instances' page. A table lists three EC2 instances: 'Ansible-control-node' (running), 'Ansible-Target-Node-1' (initializing), and 'Ansible-Target-Node-2' (initializing). The details for 'Ansible-Target-Node-1' are expanded, showing its configuration: Instance ID i-0f6245880e0c6df, Instance type t2.micro, Status check passing, Alarm status no alarms, Availability Zone us-west-2a, Public IPv4 DNS 54.212.211.70, Private IPv4 DNS 172.31.2.9, Elastic IP 54.212.211.70, and IPv6 IPs none. The instance is running Amazon Linux 2 (ami-007f6c32d9487226) in the us-west-2a region.

The screenshot displays the AWS Management Console's 'Instances' page. A table lists three EC2 instances: 'Ansible-control-node' (running), 'Ansible-Target-Node-1' (initializing), and 'Ansible-Target-Node-2' (initializing). The details for 'Ansible-Target-Node-2' are expanded, showing its configuration: Instance ID i-0b4428a0395c8b39, Instance type t2.micro, Status check passing, Alarm status no alarms, Availability Zone us-west-2a, Public IPv4 DNS 54.212.211.70, Private IPv4 DNS 172.31.2.9, Elastic IP 54.212.211.70, and IPv6 IPs none. The instance is running Amazon Linux 2 (ami-007f6c32d9487226) in the us-west-2a region.

2. VPC's Created for both Control Node and Target Nodes

The screenshot displays the AWS Management Console's 'Your VPCs' page. A table lists two VPCs: 'AnsibleControlNodeVPC' (available) and 'AnsibleTargetNodeVPC' (available). The details for 'AnsibleControlNodeVPC' are expanded, showing its configuration: VPC ID vpc-0204852304741962, State Available, IPv4 CIDR 172.16.0.0/16, IPv4 CIDR Network border group none, IPv4 pool none, DHCP options set default-0204852304741962, Main route table rtb-040f1020e02134ff59, and Main subnet subnet-0204852304741962.

3. Subnet's

Name	Subnet ID	State	VPC	IPv4 CIDR	IPv6 CIDR	Available IPv4 addresses	Availability Zone
AnsibleTargetNode...	subnet-088f975dc2281a0e	Available	vpc-0157c0fa7323257b0	172.31.16.0/20	-	4091	us-west-2b
AnsibleTargetNode...	subnet-030f470a22761a02	Available	vpc-0157c0fa7323257b0	172.31.0.0/20	-	4091	us-west-2c
AnsibleControlNode...	subnet-0fca089f975dc2281a0e	Available	vpc-0157c0fa7323257b0	172.31.32.0/20	-	4091	us-west-2a
AnsibleControlNode...	subnet-088f975dc2281a0e	Available	vpc-0157c0fa7323257b0	172.31.48.0/20	-	4091	us-west-2d
AnsibleControlNode...	subnet-08855a27668a4c2e7	Available	vpc-02049262964743922 AnsibleControlNodeVPC	192.168.1.0/24	-	249	us-west-2a
AnsibleTargetNode...	subnet-0c2113db0e039b45	Available	vpc-0205961ecf541c2c7 AnsibleTargetNodeVPC	172.32.2.0/24	-	249	us-west-2a

4. Route tables

Name	Route table ID	Explicit subnet associations	Edge associations	Main	VPC	Owner ID
AnsibleTargetNode...	rtb-07b2644379b23ef9f	2 subnets	-	No	vpc-0205961ecf541c2c7 Ans...	649723454046
AnsibleControlNode...	rtb-0a0f779e1c2b871e7	subnet-08855a27668a4c2e7 AnsibleControlNodeSubnet	-	No	vpc-02049262964743922 An...	649723454046
AnsibleControlNode...	rtb-05e0f779e1c2b871e7	-	-	Yes	vpc-0205961ecf541c2c7 Ans...	649723454046
AnsibleControlNode...	rtb-040e0b0a5623b4084	-	-	Yes	vpc-02049262964743922 An...	649723454046
AnsibleControlNode...	rtb-081b35a03040b1818	subnet-0c20d04115199b098	-	No	vpc-0205961ecf541c2c7 Ans...	649723454046
AnsibleControlNode...	rtb-0d7130a06071f7a8	-	-	Yes	vpc-0157c0fa7323257b0	649723454046

Destination	Target	Status	Propagated
172.32.0.0/16	local	Active	No
192.168.0.0/16	sgw-0ca270b623b0d8555	Active	No
0.0.0.0/0	vpc-0157c0fa7323257b0	Active	No

Destination	Target	Status	Propagated
172.32.0.0/16	sgw-0ca270b623b0d8555	Active	No
192.168.0.0/16	local	Active	No
0.0.0.0/0	vpc-0157c0fa7323257b0	Active	No

5. Subnets Associated with Route Tables

Subnet ID	IPv4 CIDR
subnet-0c2113db0e039b45 AnsibleTargetNode	172.32.2.0/24
subnet-040e0b0a5623b4084	172.32.0.0/24

Subnet ID	IPv4 CIDR
subnet-08855a27668a4c2e7 AnsibleControlNodeSubnet	192.168.1.0/24

6. Internet Gateway for both Ansible control Node & Ansible Target Nodes

Name	Internet gateway ID	State	VPC ID	Owner
igw-06dc2070647963c	igw-06dc2070647963c	Detached	-	649723454846
AnsibleTargetNodeVPC	igw-08ba0c5c14ef5af05	Attached	vpc-020961e541c217 / AnsibleTargetNodeVPC	649723454846
AnsibleControlNodeVPC	igw-0a270b667b0d4855	Attached	vpc-020961e541c217 / AnsibleControlNodeVPC	649723454846

7. NAT Gateway for Ansible Target Node (Private subnets)

Name	NAT gateway ID	Connectivity...	State	State message	Elastic IP address	Private IP address	Network interface ID	VPC
nat-05c3a62270da7224	nat-05c3a62270da7224	Public	Available	-	44.228.183.76	172.32.1.216	eni-0445c7997735e117	vpc-020961e541c217 / AnsibleTargetNodeVPC

8. Security Group created for Target nodes

Name	Security group ID	Security group name	VPC ID	Description	Owner	Inbound rules count	Outbound rules count
igw-06dc2070647963c	igw-06dc2070647963c	default	vpc-0157a5a772222750	default VPC security gr...	649723454846	1 Permission entry	1 Permission entry
igw-08ba0c5c14ef5af05	igw-08ba0c5c14ef5af05	default	vpc-020961e541c217	default VPC security gr...	649723454846	2 Permission entries	1 Permission entry
igw-0a270b667b0d4855	igw-0a270b667b0d4855	default	vpc-020961e541c217	default VPC security gr...	649723454846	1 Permission entry	1 Permission entry
TargetNodeSecurityGroup	sg-0709a265493a258	Ansible-Stack-SGInstanceSecurityGroup-UK8Q873202L	vpc-020961e541c217	Allow port 22 for SSH...	649723454846	2 Permission entries	1 Permission entry

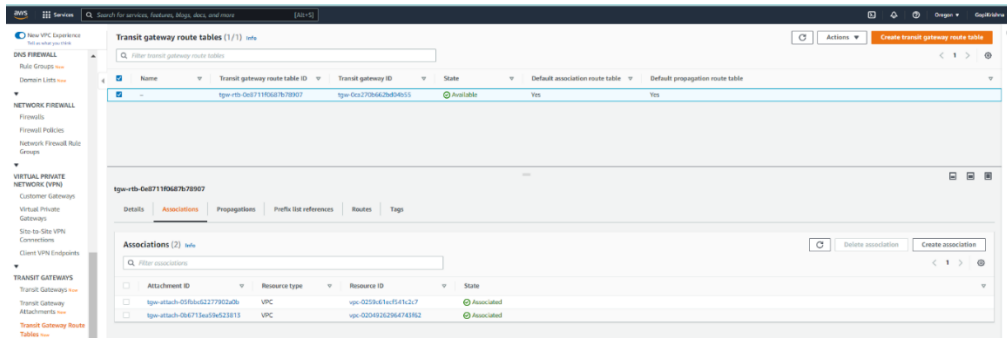
9. Transit Gateway

Name	Transit gateway ID	Owner ID	State
TransitGateway	tgw-08ba0c5c14ef5af05	649723454846	Deleted
TransitGateway	tgw-0a270b667b0d4855	649723454846	Available

10. Transit Gateway Attachments for both VPC's (AnsibleControlNodeVPC & AnsibleTargetNodeVPC)

Name	Transit gateway attachment ID	Transit gateway ID	Resource type	Resource ID	State	Association route table ID	Association state
tgw-attach-011a2007497a240a	tgw-attach-011a2007497a240a	tgw-08ba0c5c14ef5af05	VPC	vpc-0970337ac08370b	Deleted	-	-
tgw-attach-011a2007497a240a	tgw-attach-011a2007497a240a	tgw-08ba0c5c14ef5af05	VPC	vpc-0a7012221a1a1a1	Deleted	-	-
tgw-attach-026715ec5423815	tgw-attach-026715ec5423815	tgw-0a270b667b0d4855	VPC	vpc-020961e541c217	Available	tgw-rtb-0a671190687b78907	Associated

11. Transit Gateway Route Tables



Note: Once we are done with our operations/practice in a prepared environment. we just need to delete the stack. Cloud Formation stack will take care of removing everything. We can get rid of more bills.

Stack deleted successfully and our infrastructure setup was also removed along with a stack.

