

Auto Deployment using Cloudformation Template

Cloud formation template in yaml

1.Open the delta-vpc-cfn.yaml that is attached in this link

<https://drive.google.com/file/d/1id5OjMv1Md1Ctxk2hNNdfMrfaQV8w76/view?usp=sharing>

2.Go through the file and understand the code

3.You need to couple of resources in the yaml file for creating security group and instance of Type: AWS::EC2::SecurityGroup & Type: AWS::EC2::Instance

4.You need to use Nginx ami image id for instance creation.

5.you need to allow port 80 as inbound and outbound, port 22 as inbound

6.Once you added these resources you can save the file

7.You can use this AWS link for your reference to add the resources

<https://docs.aws.amazon.com/AWSCloudFormation/latest/UserGuide/aws-properties-ec2-security-group.html>

<https://docs.aws.amazon.com/AWSCloudFormation/latest/UserGuide/aws-properties-ec2-instance.html>

8.Navigate to Launch templates(Ec2 feature)

9.Navigate to Cloud formation page

10.Click on create stack

11. In the Template source select upload a template file

A:

The screenshot shows the AWS CloudFormation console interface. At the top, there's a navigation bar with 'Services', a search bar, and user information. Below this, a sidebar on the left indicates 'Step 4 Review'. The main content area is titled 'Specify template' and includes a description: 'A template is a JSON or YAML file that describes your stack's resources and properties.' There are three tabs at the top: 'Template is ready' (selected), 'Use a sample template', and 'Create template in Designer'. Under 'Template source', there are three options: 'Amazon S3 URL', 'Upload a template file' (selected), and 'Sync from Git - new'. The 'Upload a template file' section shows a 'Choose file' button and a text input field containing 'CFN Template.yml'. Below this, it says 'JSON or YAML formatted file'. At the bottom, it displays the 'S3 URL' for the uploaded template.

Step 4
Review

Template is ready | Use a sample template | Create template in Designer

Specify template
A template is a JSON or YAML file that describes your stack's resources and properties.

Template source
Selecting a template generates an Amazon S3 URL where it will be stored.

☐ Amazon S3 URL
Provide an Amazon S3 URL to your template.

☒ Upload a template file
Upload your template directly to the console.

☐ Sync from Git - new
Sync a template from your Git repository.

Upload a template file

Choose file

CFN Template.yml

JSON or YAML formatted file

S3 URL: <https://s3.ap-south-1.amazonaws.com/cf-templates-1vi1vh35e71um-ap-south-1/2024-01-29T135704.409Zaop-CFNTemplate.yml>

12. Choose the modified codebuild-vpc-cfn.yaml click on "Next"

13. Provide the stack name

14. In the Parameters you can change EnvironmentName to your desired name

A:

The screenshot shows the 'Specify stack details' page in the AWS CloudFormation console. The left sidebar contains a navigation pane with steps: Step 1 (Create stack), Step 2 (Specify stack details), Step 3 (Configure stack options), and Step 4 (Review pranay-stack1). The main content area is titled 'Specify stack details' and contains two sections: 'Provide a stack name' and 'Parameters'. In the 'Provide a stack name' section, the 'Stack name' field is filled with 'pranay-stack1'. Below it, a note states: 'Stack name can include letters (A-Z and a-z), numbers (0-9), and dashes (-)'. In the 'Parameters' section, there is a description: 'Parameters are defined in your template and allow you to input custom values when you create or update a stack.' Below this, the 'EnvironmentName' parameter is set to 'pranay-CFN' with a note: 'An environment name that is prefixed to resource names'. The 'PrivateSubnet1CIDR' parameter is partially visible with a note: 'Please enter the IP range (CIDR notation) for the private subnet in the first Availability Zone'.

15. Click 'Next'

16. You can add the tags, leave other options as default and click "Next"

17. Review your stack details once and you can click on create stack

18. You can see the status of the stack when it started creating

19. You can see the status create_complete if your yaml template does not have any error

A:

The screenshot shows the 'stack-1' details page in the AWS CloudFormation console. The left sidebar shows the 'Stacks (1)' section with a filter for 'Active' status and a 'View nested' toggle. The main content area is titled 'stack-1' and shows the stack's status as 'CREATE_COMPLETE'. The right sidebar shows the 'Events (41)' tab, which displays a list of events. The events table has columns for 'Timestamp', 'Logical ID', and 'Status'. The events are as follows:

Timestamp	Logical ID	Status
2024-01-31 14:08:20 UTC+0530	PublicSubnet2	CREATE_COMPLETE
2024-01-31 14:08:20 UTC+0530	PrivateSubnet1	CREATE_COMPLETE
2024-01-31 14:08:20 UTC+0530	PrivateSubnet2	CREATE_COMPLETE
2024-01-31 14:08:20 UTC+0530	InternetGateway	CREATE_COMPLETE
2024-01-31 14:08:18 UTC+0530	PublicSubnet1	CREATE_IN_PROGRESS
2024-01-31 14:08:17 UTC+0530	PublicRouteTable	CREATE_IN_PROGRESS

20. Once your stack is created you can go ahead and verify all the resources created and instance should be running successfully.

A: vpc

Your VPCs (3) Info					
<input type="text" value="Search"/>					
<input type="checkbox"/>	Name	VPC ID	State	IPv4 CIDR	IPv6 CIDR
<input type="checkbox"/>	Marak-CFN	vpc-0abbe239e781f83c4	Available	10.10.0.0/16	-
<input type="checkbox"/>	-	vpc-0358873cff60846f	Available	10.0.0.0/16	-
<input type="checkbox"/>	-	vpc-04a92cbdd7b5b801a	Available	172.31.0.0/16	-

Route table

Route tables (8) Info					
<input type="text" value="Find resources by attribute or tag"/>					
<input type="checkbox"/>	Name	Route table ID	Explicit subnet associati...	Edge associations	M...
<input type="checkbox"/>	private route 2	rtb-0468372964d020fd3	subnet-0b27aa66a3ab0e...	-	Nc
<input type="checkbox"/>	public rt2	rtb-0872f91503c247a1f	subnet-000034a8c50f43...	-	Nc
<input type="checkbox"/>	private_rt	rtb-01faedeeec6dac76	3 subnets	-	Nc
<input type="checkbox"/>	-	rtb-0867f6cf2c48bd0e4	-	-	Ye
<input type="checkbox"/>	Marak-CFN Public Routes	rtb-02039913f08c23177	2 subnets	-	Nc
<input type="checkbox"/>	-	rtb-02a07db8835646f0b	-	-	Ye
<input type="checkbox"/>	-	rtb-040114191b50c789c	-	-	Ye
<input type="checkbox"/>	public_rt	rtb-0421bd628a2d39c51	2 subnets	-	Nc

Subnet

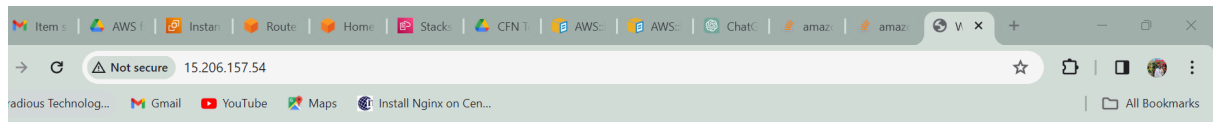
Subnets (14) Info				
<input type="text" value="Find resources by attribute or tag"/>				
<input type="checkbox"/>	Name	Subnet ID	State	VPC
<input type="checkbox"/>	public instance 2	subnet-000034a8c50f4335a	Available	vpc-0358873cff60846f
<input type="checkbox"/>	private instance 3	subnet-0b27aa66a3ab0e1c6	Available	vpc-0358873cff60846f
<input type="checkbox"/>	-	subnet-05c98ae908813fd31	Available	vpc-04a92cbdd7b5b801a
<input type="checkbox"/>	-	subnet-05de8f4109a701137	Available	vpc-04a92cbdd7b5b801a
<input type="checkbox"/>	Marak-CFN Public Subnet (AZ2)	subnet-0ab60d3d15c461873	Available	vpc-0abbe239e781f83c4 Mara..
<input type="checkbox"/>	Marak-CFN Private Subnet (AZ2)	subnet-0ec532c28006352cb	Available	vpc-0abbe239e781f83c4 Mara..

Instance

Instances (4) Info					
<input type="text" value="Find Instance by attribute or tag (case-sensitive)"/>					
Any state					
<input type="checkbox"/>	Name	Instance ID	Instance state	Instance type	Status check
<input type="checkbox"/>		i-0c10f9c52c6d712b2	Running	t2.micro	2/2 checks passed

21. You should be able to access nginx server using the public ip

A:



Welcome to nginx!

If you see this page, the nginx web server is successfully installed and working. Further configuration is required.

For online documentation and support please refer to nginx.org.
Commercial support is available at nginx.com.

Thank you for using nginx.

END