

Module 9: OpsWorks Assignment

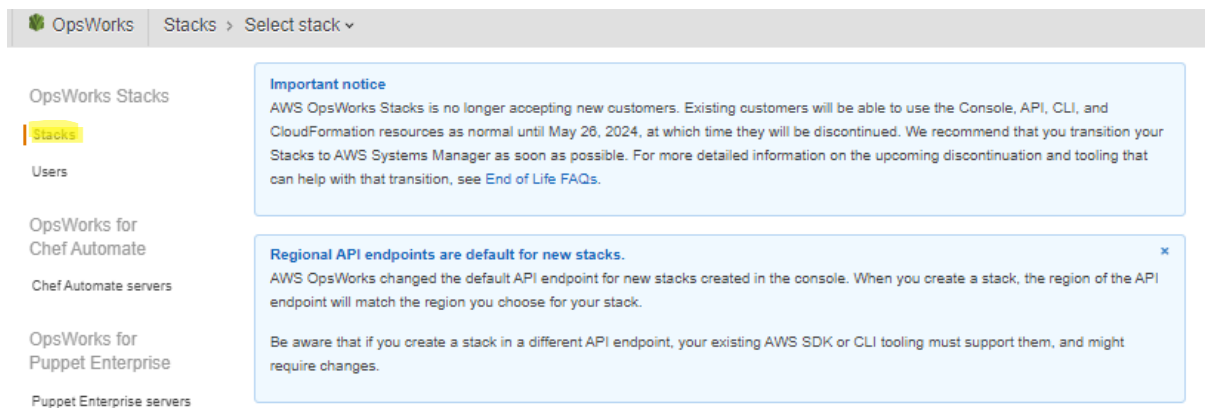
Problem Statement:

You work for XYZ Corporation. Your corporation wants to launch a new web-based application and they do not want their servers to be running all the time. It should also be managed by AWS. Implement suitable solutions.

Tasks To Be Performed:

1. Create an OpsWorks sample stack, start the instances and deploy the application.
2. Add 2 more t2.medium instances.
3. Make a change to the repository code and check if it reflects in all the instances.

1. Go to Console Search AWS OpsWorks, it will trigger to Opswork Page. Creating OpsWorks Sample Stack



OpsWorks Stacks

Stacks > Select stack

OpsWorks Stacks

Stacks

Users

OpsWorks for Chef Automate

Chef Automate servers

OpsWorks for Puppet Enterprise

Puppet Enterprise servers

Important notice

AWS OpsWorks Stacks is no longer accepting new customers. Existing customers will be able to use the Console, API, CLI, and CloudFormation resources as normal until May 26, 2024, at which time they will be discontinued. We recommend that you transition your Stacks to AWS Systems Manager as soon as possible. For more detailed information on the upcoming discontinuation and tooling that can help with that transition, see [End of Life FAQs](#).

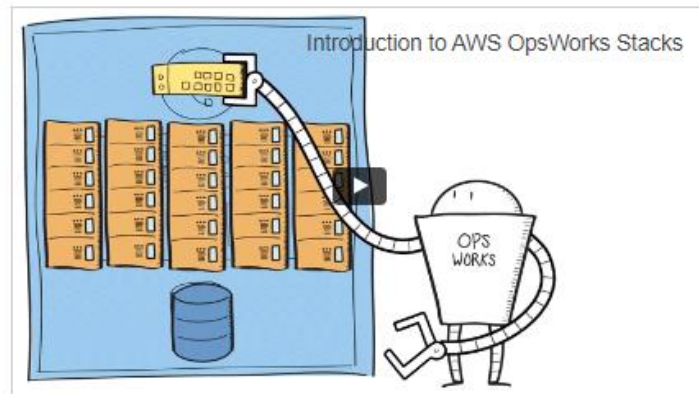
Regional API endpoints are default for new stacks.

AWS OpsWorks changed the default API endpoint for new stacks created in the console. When you create a stack, the region of the API endpoint will match the region you choose for your stack.

Be aware that if you create a stack in a different API endpoint, your existing AWS SDK or CLI tooling must support them, and might require changes.

Welcome to AWS OpsWorks Stacks

AWS OpsWorks Stacks is a configuration management service that helps you build and operate highly dynamic applications and propagate changes instantly. [Learn more.](#)



Start fresh

Create an AWS OpsWorks Stacks stack to model your application components, deploy code, configure instances, automate tasks, and control the resources used by your application.

[Add your first stack](#)

Register existing instances

Use AWS OpsWorks Stacks with existing Amazon EC2 instances, as well as on-premises servers, for an easy way to install packages, run scripts, manage operating system users, and more.

[Register instances](#)

Services

Search

[Alt+S]

Global

Salman S

A stack is a set of layers, instances and related AWS resources whose configuration you want to manage together.

Add stack

Which type of stack do you want to create?

Sample stack
Explore AWS OpsWorks Stacks with a sample Node.js app

Chef 12 stack
Bring your own cookbooks and use community cookbooks

Chef 11 stack
Use built-in cookbooks for applications and deployments

Create a Chef 12 sample stack with a Node.js app

A Node.js app will be set up to help you explore the features and configuration options of AWS OpsWorks Stacks, for example: layers and lifecycle events. [Learn more.](#)

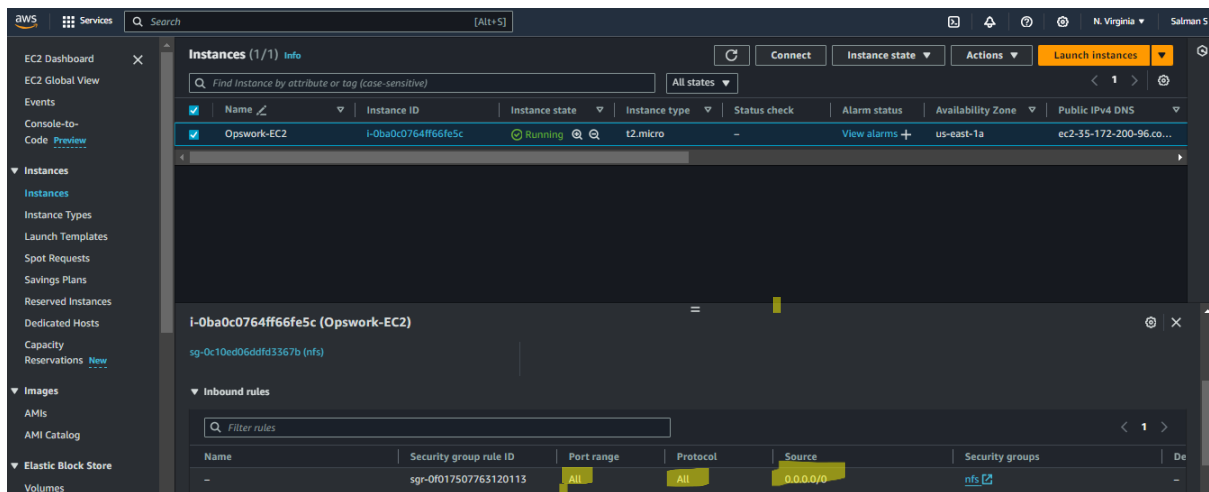
Operating system type ☒ Linux ☐ Windows

An IAM role is required to create a stack. [Learn more.](#)

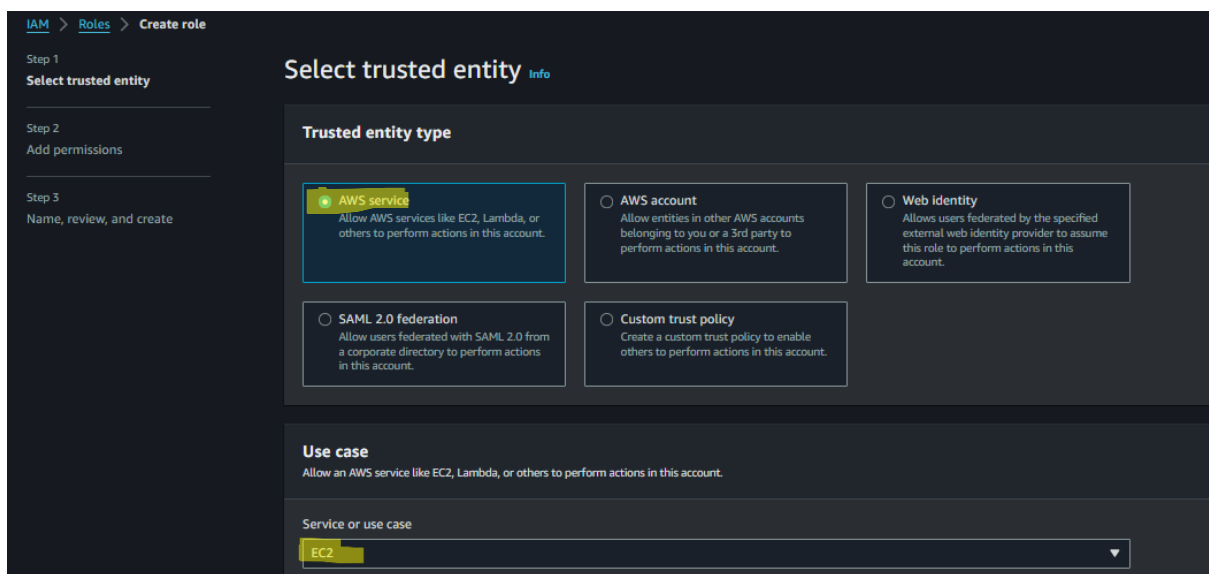
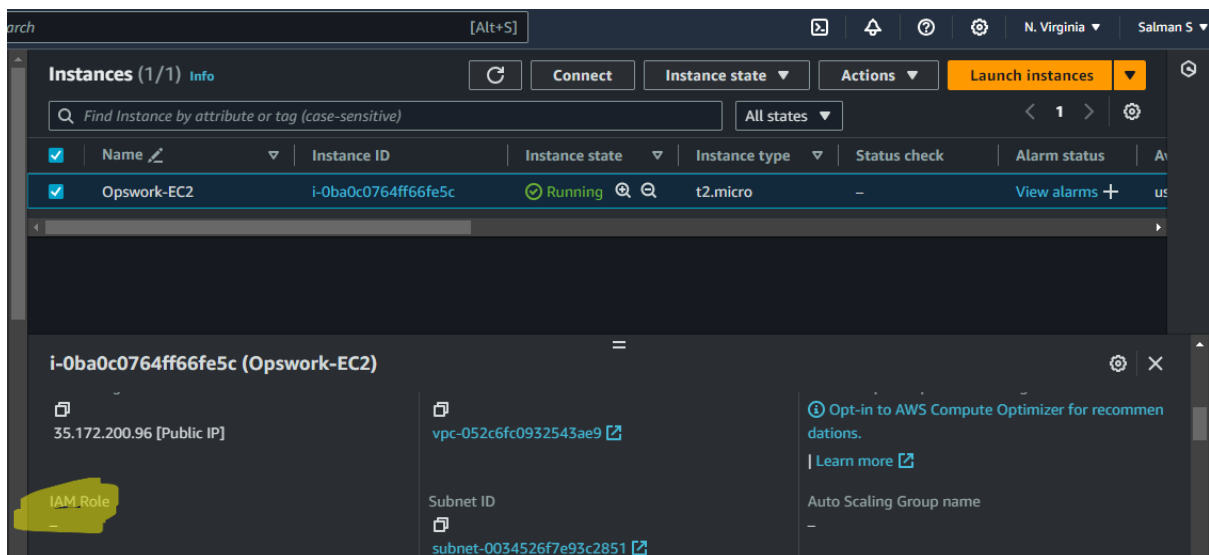
An instance profile is required to create a stack. [Learn more.](#)

[Cancel](#) [Create stack](#)

So Need to Create a EC2 instances and IAM Role



No IAM Role Created



[IAM](#) > [Roles](#) > [Create role](#)

Step 1
[Select trusted entity](#)

Step 2
[Add permissions](#)

Step 3
Name, review, and create

Name, review, and create

Role details

Role name
Enter a meaningful name to identify this role.

OpsWork-Role

Maximum 64 characters. Use alphanumeric and '+', '@', '-', '_' characters.


Description
Add a short explanation for this role.

Allows EC2 instances to call AWS services on your behalf.

Maximum 1000 characters. Use letters (A-Z and a-z), numbers (0-9), tabs, new lines, or any of the following characters: '_', '@', '/', '[', ']', '#', '\$', '^', '&', '*', '!', '~', '<', '>'.

Step 2: Add permissions

Permissions policy summary

Policy name 	Type	Attached as
AdministratorAccess	AWS managed - job function	Permissions policy
AmazonEC2FullAccess	AWS managed	Permissions policy
AWSOpsWorks_FullAccess	AWS managed	Permissions policy


Go to Created Instances and Attach IAM Roles and Update

[EC2](#) > [Instances](#) > [i-0ba0c0764ff66fe5c](#) > **Modify IAM role**


Modify IAM role [Info](#)

Attach an IAM role to your instance.

Instance ID

 **i-0ba0c0764ff66fe5c (Opswork-EC2)**

IAM role
Select an IAM role to attach to your instance or create a new role if you haven't created any. The role you select replaces any roles that are currently attached to your instance.

OpsWork-Role ▼  [Create new IAM role !\[\]\(816d0567398778a19c4fe82ba03434ff_img.jpg\)](#)

Cancel **Update IAM role**

Successfully attached OpsWork-Role to instance i-0ba0c0764ff66fe5c

Instances (1/1) Info Refresh Connect Instance state Actions Launch instances

Find Instance by attribute or tag (case-sensitive) All states

	Name	Instance ID	Instance state	Instance type	Status check	Alarm status	Actions
<input checked="" type="checkbox"/>	Opwork-EC2	i-0ba0c0764ff66fe5c	Running	t2.micro	2/2 checks passed		View alarms

i-0ba0c0764ff66fe5c (Opwork-EC2)

IAM Role 	Subnet ID subnet-0034526f7e93c2851	Auto Scaling Group name -
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Go To Opwork Page and Refresh it, Creating a Sample Stack Selecting Linux Machine and **Click Create Stack**

Add stack

Which type of stack do you want to create?

Sample stack
Explore AWS OpsWorks Stacks with a sample Node.js app

Chef 12 stack
Bring your own cookbooks and use community cookbooks

Chef 11 stack
Use built-in cookbooks for applications and deployments

Create a Chef 12 sample stack with a Node.js app
A Node.js app will be set up to help you explore the features and configuration options of AWS OpsWorks Stacks, for example: layers and lifecycle events. [Learn more.](#)

Operating system type ☒ Linux ☐ Windows

Cancel Create stack

Add stack

Which type of stack do you want to create?

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Operating system type ☒ Linux ☐ Windows


An IAM role is required to create a stack. [Learn more.](#)

Cancel Create stack

We Created IAM Role, Now we are going to Create with Chef 12 Stack and Default IAM Selected but still asking to required IAM Role

OpsWorks


Stacks > Add stack




A stack is a set of layers, instances and related AWS resources whose configuration you want to manage together.

Add stack


Which type of stack do you want to create?

**Sample stack**

Explore AWS OpsWorks Stacks with a sample Node.js app

**Chef 12 stack**

Bring your own cookbooks and use community cookbooks

**Chef 11 stack**

Use built-in cookbooks for applications and deployments

Create a stack with Linux or Windows instances that run Chef 12

The more advanced experience. Bring your own cookbooks and use community cookbooks. AWS OpsWorks Stacks does separate Chef runs to isolate its internal cookbooks from yours. [Learn more](#).

Stack name

Salman-First-OpsStack

Region

Asia Pacific (Mumbai)

VPC

vpc-072d0c0b6003b79c (default)

Default subnet

172.31.32.0/20 - ap-south-1a

Default operating system

☒ Linux ☐ Windows

Amazon Linux 2

Need a different OS? [Let us know](#).

Default SSH key

Do not use a default SSH key

Select a default SSH key that is used to access the instances in your stack. You can override this per instance. [Learn more](#) or [add a new SSH key for the Asia Pacific \(Mumbai\) region](#).

Chef version

12

Use custom Chef cookbooks

☐ No

Define the source of your Chef cookbooks

Stack color

Advanced options

Default root device type

☒ EBS backed ☐ Instance store

IAM role

A new IAM role is required. Create a new IAM role by using the IAM console or API.

Default IAM instance profile

OpsWork-Role

API endpoint region

NEW ap-south-1

Hostname theme

Layer Dependent

OpsWorks Agent version

Use latest version

Custom JSON

1 Optional

Enter custom JSON that is passed to your Chef recipes for all instances in your stack. You can use this to override and customize built-in recipes or pass variables to your own recipes. [Learn more](#).

Security

Use OpsWorks security

☒ Yes

Maybe Because of this reason, I don't exactly but not able to create a stack eventhough I created IAM role

Note: This Opswork Not Covered to us

The screenshot shows the AWS documentation page for 'Allowing AWS OpsWorks Stacks to Act on Your Behalf'. The page has a dark header with the AWS logo, a search bar, and links for 'Contact Us', 'English', and 'Return to the Console'. Below the header is a breadcrumb trail: 'AWS > Documentation > OpsWorks > User Guide'. On the left, a sidebar lists various topics under 'Allowing AWS OpsWorks Stacks to Act on Your Behalf', including 'Confused deputy prevention', 'Specifying Permissions for Apps Running on EC2 instances', 'Managing SSH Access', 'Managing Security Updates', 'Using Security Groups', 'Chef 12 Linux', 'Previous Chef Versions', 'Using AWS OpsWorks Stacks with Other AWS Services', and 'Using the AWS OpsWorks Stacks CLI'. The main content area features the title 'Allowing AWS OpsWorks Stacks to Act on Your Behalf' with links for 'PDF' and 'RSS'. Below the title is an 'Important' notice box with a warning icon, stating that AWS OpsWorks Stacks is no longer accepting new customers and that existing customers must migrate to AWS Systems Manager by May 26, 2024. The main text explains that AWS OpsWorks Stacks needs to interact with various AWS services (like Amazon EC2 and Amazon CloudWatch) on the user's behalf and that an IAM role (service role) must be specified when creating a stack to grant these permissions. On the right side of the page, there are social sharing icons for Twitter, Facebook, and LinkedIn, and a 'Feedback' icon.

aws Search in this guide Contact Us English Return to the Console

AWS > Documentation > OpsWorks > User Guide Feedback Preferences

Allowing AWS OpsWorks Stacks to Act on Your Behalf

PDF | RSS

Important

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AWS OpsWorks Stacks needs to interact with a variety of AWS services on your behalf. For example, AWS OpsWorks Stacks interacts with Amazon EC2 to create instances and with Amazon CloudWatch to get monitoring statistics. When you create a stack, you specify an IAM role, usually called a service role, that grants AWS OpsWorks Stacks the appropriate permissions.