

Module-9: OpsWorks Assignment - 3

You have been asked to:

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.

Click on add your first stack.

The screenshot shows the AWS OpsWorks Stacks landing page. On the left, there's a sidebar with links for 'OpsWorks Stacks', 'Users', 'OpsWorks for Chef Automate', 'Chef Automate servers', 'OpsWorks for Puppet Enterprise', and 'Puppet Enterprise servers'. The main content area has a heading 'Welcome to AWS OpsWorks Stacks' with a sub-section 'Introduction to AWS OpsWorks Stacks' featuring an illustration of a stack of servers connected to a database and labeled 'OPS WORKS'. Below this are two sections: 'Start fresh' (with a 'Add your first stack' button) and 'Register existing instances' (with a 'Register instances' button). To the right, there are sections for 'Getting started' (with 'Getting Started Guide' and 'Documentation' links), 'Learn more' (with links for color-coding stacks and exploring the Chef environment), and 'What's New?' (with links for AWS OpsWorks Stacks Event Sources and HDD-backed or encrypted EBS volumes). At the bottom, there's a 'Changelog' section with links for 'Chef 12 OpsWorks agent' and 'Chef 11.10 OpsWorks agent'. The URL in the browser bar is <https://us-east-1.console.aws.amazon.com/opsworks/home?region=us-east-1#/stack/new?funnelFirst=true>.

Choose to create a stack.

The screenshot shows the 'Add stack' creation wizard. It starts with a question 'Which type of stack do you want to create?'. Three options are shown: 'Sample stack' (with a description 'Explore AWS OpsWorks Stacks with a sample Node.js app'), 'Chef 12 stack' (with a description 'Bring your own cookbooks and use community cookbooks'), and 'Chef 11 stack' (with a description 'Use built-in cookbooks for applications and deployments'). A large callout box highlights the 'Create a Chef 12 sample stack with a Node.js app' option. Below this, there's a note about a Node.js app being set up to help explore features and configuration options. There are radio buttons for 'Operating system type' (Linux or Windows) and a 'Create stack' button. The URL in the browser bar is <https://us-east-1.console.aws.amazon.com/opsworks/home?region=us-east-1#/stack/new?funnelFirst=true>.

Your stack is being created.

The screenshot shows a browser window with multiple tabs open, including 'Add stack - AWS OpsWork', 'IAM Management Console', 'Security in AWS OpsWork', 'Allowing AWS OpsWorks', 'Start Course | Intellipaat', 'Module-9-task-3.pdf', and 'aws-opsworks-user-guide'. The main content area displays a 'Setting up a sample stack' guide with five steps:

- ✓ 1. Creating a stack named "My Sample Stack (Linux)"
- ✓ 2. Setting the Chef cookbook repository of the stack
- 3. Creating a layer named "Node.js App Server" in the stack
4. Assigning a recipe to the deploy lifecycle event in the layer
5. Adding an instance to the layer

A sidebar on the left explains what a stack is: "A stack is a set of layers, instances and related AWS resources whose configuration you want to manage together." There is also a feedback link at the bottom.

Click on explore the sample stack.

The screenshot shows the same browser setup as the first one. The main content area now includes a blue 'Explore the sample stack' button at the bottom of the stack creation guide. The URL in the address bar has changed to https://us-east-1.console.aws.amazon.com/opsworks/home?region=us-west-2#/stack/37c4-467-7859-41a5-aaf9-0de5e1ffba760/stack=origin/sample_steps.

This is your stack.

The screenshot shows the AWS OpsWorks console with the URL <https://us-east-1.console.aws.amazon.com/opsworks/home?region=us-west-2#/stack/37c4c467-7859-41d5-aa19-0de5ebf8a260>. The page displays the 'My Sample Stack (Linux)' configuration. On the left, a sidebar lists navigation options: Stack, Layers, Instances, Apps, Deployments, Monitoring, Resources, Permissions, Tags, Stacks, and Users. The main content area is titled 'My Sample Stack (Linux) SAMPLE'. It includes sections for 'Layers' (Node.js App Server), 'Instances' (1 instance: nodejs-server1, status: stopped), 'Apps' (Node.js Sample ...), 'Deployments and Commands' (with a 'Deploy' button), 'Resources' (with a 'Register resources' button), 'Monitoring' (with a 'Show monitoring' button), and 'Permissions' and 'Tags' sections. A note at the top states: 'A stack represents a collection of EC2 instances and related AWS resources that have a common purpose and that you want to manage collectively. Within a stack, you use layers to define the configuration of your instances and use apps to specify the code you want to deploy.' A 'Run Command' button is located at the top right of the main content area.

Go to instances and start the instance.

The screenshot shows the 'Instances' page for the 'My Sample Stack (Linux)'. The URL is <https://us-east-1.console.aws.amazon.com/opsworks/home?region=us-west-2#/stack/37c4c467-7859-41d5-aa19-0de5ebf8a260/instances>. The page title is 'Instances - My Sample Stack'. The sidebar on the left is identical to the previous screenshot. The main content area shows a summary of instances: total 1, online 0, setting up 0, shutting down 0, stopped 1, errors 0. A 'Start All Instances' button is at the top right. Below this, a note explains: 'An instance represents a server. It can belong to one or more layers, that define the instance's settings, resources, installed packages, profiles and security groups. When you start the instance, OpsWorks uses the associated layer's blueprint to create and configure a corresponding EC2 instance.' A table lists the single instance: nodejs-server1, status stopped, type t2.medium, size 24/7, AZ us-west-2a, public IP -, actions: start, stop, delete. A note at the bottom says: 'You can add more layers to this stack or register an instance.' A large black rectangular redaction box covers the bottom half of the page content.

Instance has started.

The screenshot shows the AWS OpsWorks Instances page. On the left, a sidebar navigation includes Stack, Layers, Instances (selected), Time-based, Load-based, Apps, Deployments, Monitoring, Resources, Permissions, Tags, Stacks, and Users. The main content area displays the 'Instances' section with a summary bar showing 1 total instance, 1 online, 0 setting up, 0 shutting down, 0 stopped, and 0 errors. A detailed table lists one instance: nodejs-server1, which is online, t2.medium, 24/7, in us-west-2a, with a public IP of 34.213.79.2. Actions for stopping or SSHing into the instance are shown. Below the table, a note says "You can add more layers to this stack or register an instance." The bottom of the page includes a feedback link, copyright information (© 2023, Amazon Web Services India Private Limited or its affiliates.), and links for Privacy, Terms, and Cookie preferences.

Now go to Deployments and let's deploy an app.

The screenshot shows the AWS OpsWorks Deploy App page. The sidebar navigation is identical to the previous page. The main content area is titled 'Deploy App' and contains a 'Settings' section. Under Settings, the 'App' dropdown is set to 'Node.js Sample App (other)', the 'Command' dropdown is set to 'Deploy', and there is a 'Comment' field labeled 'Optional'. Below these, a 'Custom Chef JSON' section allows entering custom JSON for Chef recipes. The 'Instances' section indicates that the command will be run on 1 of 1 instances. At the bottom right, there are 'Cancel' and 'Deploy' buttons. The bottom of the page includes a feedback link, copyright information (© 2023, Amazon Web Services India Private Limited or its affiliates.), and links for Privacy, Terms, and Cookie preferences.

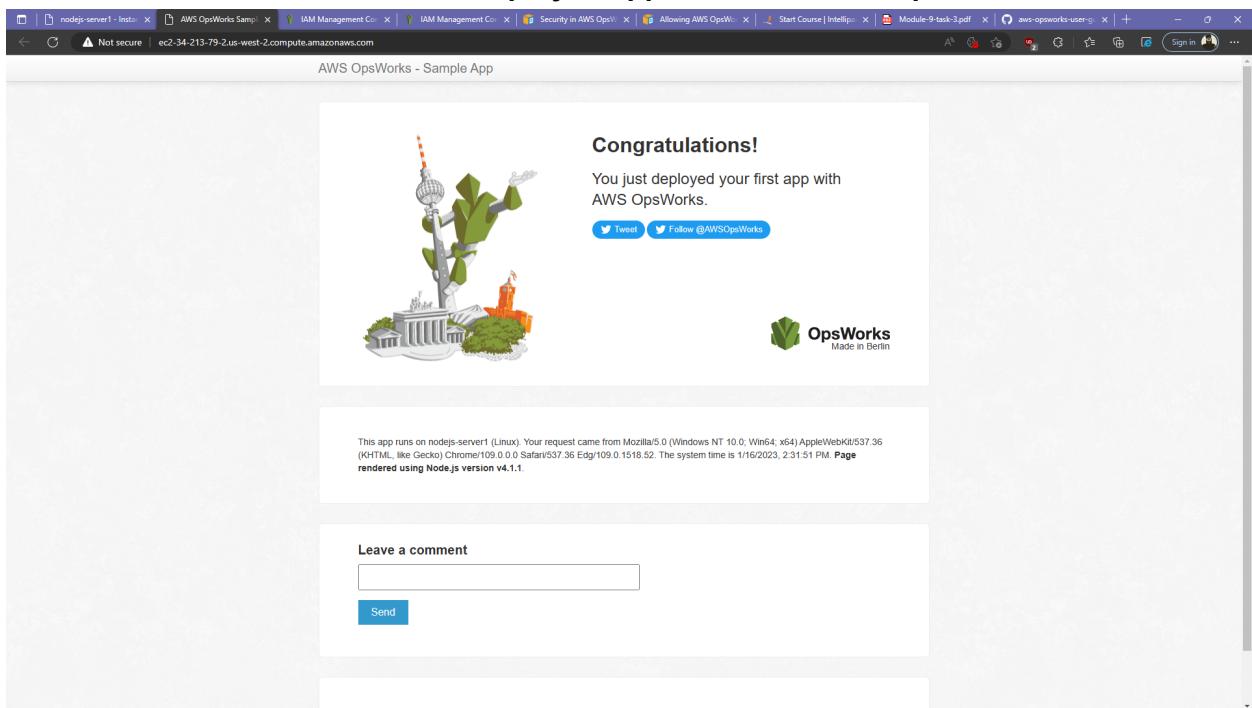
Node.js sample app has been deployed.

The screenshot shows the AWS OpsWorks console with a deployment summary for the 'Deployment Node.js Sample App - deploy' task. The status is 'Successful' and it was created at 2023-01-16 14:29:38 UTC, completed at 2023-01-16 14:30:46 UTC, and took 00:01:08. The deployment table lists one host named 'nodejs-server1' with an SSH connection established. The user is root. The layers are 'Node.js App Server'. The duration is 00:01:07 and the log link is shown.

These are the details of the app. Click on DNS or IP.

The screenshot shows the AWS OpsWorks instance details for 'nodejs-server1'. The instance is online and part of the 'Node.js App Server' layer. It is an EC2 instance with ID i-0ed04bd2082fe9b0d, OpsWorks ID de6df332-e6dd-40a9-9390-52b8d996bd5b, and t2.medium size. It is in subnet subnet-0b3682a4b28434565, located in us-west-2a. The operating system is Amazon Linux 2. There is no Elastic Load Balancing attached. The instance has a Public DNS of ec2-34-213-79-2.us-west-2.compute.amazonaws.com and a Public IP of 34.213.79.2. The network and security section shows no security groups applied.

This is what the deployed app looks like for the public.



Let's add an instance.

A screenshot of the AWS OpsWorks console interface. The left sidebar shows navigation options: Stack, Layers, Instances (selected), Time-based, Load-based, Apps, Deployments, Monitoring, Resources, Permissions, and Tags. The main content area is titled 'Instances' and shows a table with one row:

Hostname	Status	Size	Type	AZ	Public IP	Actions
nodejs-server1	online	t2.medium	24/7	us-west-2a	34.213.79.2	stop ssh

Below the table, there is a note: 'You can add more layers to this stack or register an instance.'

The URL in the browser is: <https://us-east-1.console.aws.amazon.com/opsworks/home?region=us-west-2#/stack/37c4c467-7859-41d5-aaf9-0de5ebfb2a260/instances>

t2.medium is chosen.

The screenshot shows the AWS OpsWorks console interface. A modal window is open for creating a new EC2 instance. The instance details are as follows:

- Hostname: nodejs-server2
- Status: online
- Type: t2.medium
- AZ: us-west-2a
- Public IP: 34.213.79.2
- Actions: stop, ssh

The configuration section includes:

- Scaling type: 24/7
- SSH key: Do not set an SSH key
- Operating system: Amazon Linux 2
- OpsWorks Agent version: Inherit from stack
- Tenancy: Default - Rely on VPC settings
- Root device type: EBS backed
- Volume type: General Purpose SSD (gp2)
- Volume size: 8

At the bottom right of the modal are "Cancel" and "Add Instance" buttons.

You can add more layers to this stack or register an instance.

The screenshot shows the AWS OpsWorks console with the "My Sample Stack (Linux)" selected. The dashboard displays the following information:

- Instances: 3 total, 1 online, 1 setting, 1 starting, 2 stopped, 0 errors.
- Start All Instances | Stop All Instances buttons.
- An instance summary message: "An instance represents a server. It can belong to one or more layers, that define the instance's settings, resources, installed packages, profiles and security groups. When you start the instance, OpsWorks uses the associated layer's blueprint to create and configure a corresponding EC2 instance. [Learn more.](#)"
- Node.js App Server section:
 - Search bar: Search for instances in this layer by name, status, size, type, AZ or IP.
 - Table of instances:

Hostname	Status	Size	Type	AZ	Public IP	Actions
nodejs-server1	online	t2.medium	24/7	us-west-2a	34.213.79.2	stop, ssh
nodejs-server2	stopped	t2.medium	24/7	us-west-2a	-	start, delete
nodejs-server3	stopped	t2.medium	24/7	us-west-2a	-	start, delete

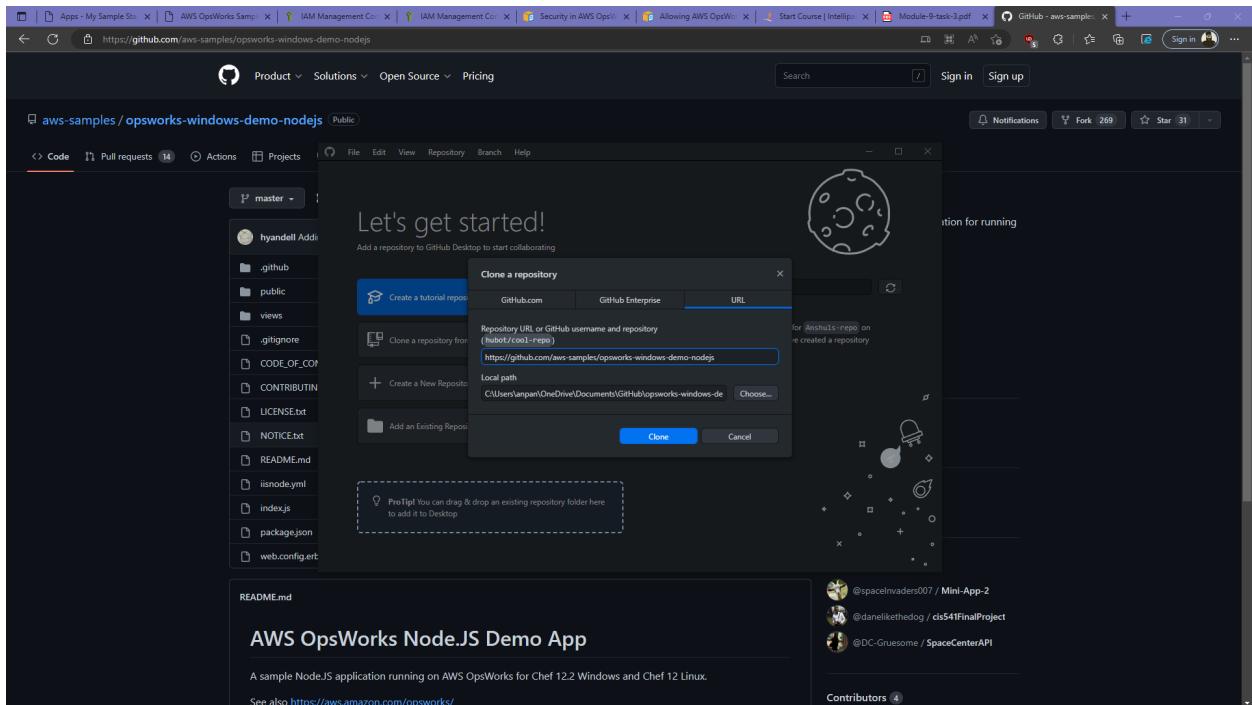
Let's make changes in the app.

The screenshot shows the AWS OpsWorks console with the URL <https://us-east-1.console.aws.amazon.com/opsworks/home?region=us-west-2#/stack/37c4c467-7859-41d5-aa19-0de5ebf8a260/deployments>. The left sidebar navigation includes Stack, Layers, Instances, Time-based, Load-based, Apps, Deployments (selected), Monitoring, Resources, Permissions, and Tags. The main content area is titled "Deployments and Commands" with a sub-section "Deployments are a set of operations that you can use to manage your apps, such as deploying an app to a set of app server instances, or to run a command on some or all instances in the entire stack, such as updating packages. Learn more." A table lists one deployment entry: "Created at (UTC)" is 2023-01-16 14:29:38, "User" is root, "Command" is deploy, "App" is Node.js Sample App, "Instances" is 1, and "Actions" is repeat. At the top right are "Deploy an App" and "Run Command" buttons. The footer includes links for Privacy, Terms, and Cookie preferences.

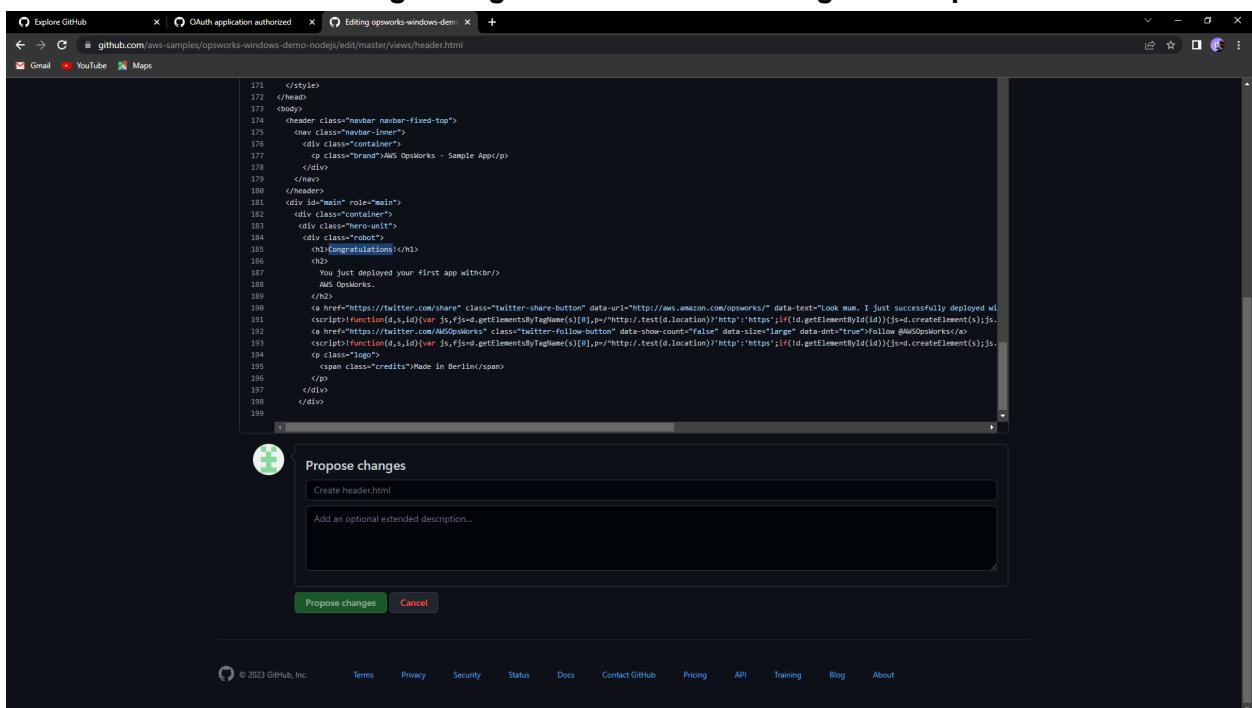
This is the base repository from which the app has been deployed.

The screenshot shows the AWS OpsWorks console with the URL <https://us-east-1.console.aws.amazon.com/opsworks/home?region=us-west-2#/stack/37c4c467-7859-41d5-aa19-0de5ebf8a260/apps/001684f5-7cef-4814-bee4-ea98b60d5c5e>. The left sidebar navigation includes Stack, Layers, Instances, Time-based, Load-based, Apps (selected), Deployments, Monitoring, Resources, Permissions, and Tags. The main content area is titled "App Node.js Sample App" with tabs for Settings, Application Source, Data Sources, Environment Variables, Domains, and SSL Settings. Under Settings, the Name is Node.js Sample App, Short name is nodejs_sample_app, OpsWorks ID is 001684f5-7cef-4814-bee4-ea98b60d5c5e, and Type is Other. Under Application Source, the App source type is GitHub (Search ...), Repository URL is <https://github.com/awslabs/opsworks-windws-demos-nodejs.git>, and Data source type is None. Under Environment Variables, APP_ADMIN_EMAIL is set to admin@example.com. Under Domains, there are no domains listed. Under SSL Settings, SSL is set to no. The footer includes links for Feedback, Unified Settings, Privacy, Terms, and Cookie preferences.

Fork it to your repository to make changes to it.



We will change Congratulations to For Assignment Update.



This is the change. Commit the changes.

A screenshot of a web browser window showing a GitHub pull request. The URL is github.com/aws-samples/opsworks-windows-demo-nodjs/edit/master/views/header.html. The page displays the source code for header.html. A modal dialog titled "Propose changes" is open over the code editor. The dialog has two input fields: "Update header.html" and "Add an optional extended description...". At the bottom are two buttons: "Propose changes" (green) and "Cancel". Below the code editor, the GitHub navigation bar is visible with links for Terms, Privacy, Security, Status, Docs, Contact GitHub, Pricing, API, Training, Blog, and About.

A screenshot of a web browser window showing a GitHub pull request. The URL is github.com/Anshuls-repo/opsworks-windows-demo-nodejs/edit/master/views/header.html. The page displays the source code for header.html. A modal dialog titled "Commit changes" is open over the code editor. The dialog has two input fields: "Update header.html" and "Add an optional extended description...". Below these fields are two radio button options: "Commit directly to the `master` branch." (selected) and "Create a new branch for this commit and start a pull request. Learn more about pull requests.". At the bottom are two buttons: "Commit changes" (green) and "Cancel". Below the code editor, the GitHub navigation bar is visible with links for Terms, Privacy, Security, Status, Docs, Contact GitHub, Pricing, API, Training, Blog, and About.

Copy the code link.

A sample NodeJS application for running on AWS OpsWorks

Local Codespaces

Clone

HTTPS GitHub CLI

<https://github.com/aws-samples/opsworks-windows-demo-nodejs>

Use Git or checkout with SVN using the web URL.

Open with GitHub Desktop

Download ZIP

About

Readme

Apache-2.0 license

Code of conduct

Security policy

31 stars

18 watching

269 forks

Releases

No releases published

Packages

No packages published

Used by 6

@spacelvaders007 / Mini-App-2

@danelikethedog / cis541FinalProject

@DC-Gruesome / SpaceCenterAPI

Contributors 4

See also <https://aws.amazon.com/opsworks/>

The 2 instances that we deployed previously has been started.

Instances 3 | 3 online 1 setting 1 shutting 1 stopped 1 errors

Stop All Instances

An instance represents a server. It can belong to one or more layers, that define the instance's settings, resources, installed packages, profiles and security groups. When you start the instance, OpsWorks uses the associated layer's blueprint to create and configure a corresponding EC2 instance. [Learn more.](#)

Node.js App Server

Hostname	Status	Size	Type	AZ	Public IP	Actions
nodejs-server1	online	t2.medium	24/7	us-west-2a	34.213.79.2	stop ssh
nodejs-server2	online	t2.medium	24/7	us-west-2a	54.203.9.53	stop ssh
nodejs-server3	online	t2.medium	24/7	us-west-2a	35.161.3.121	stop ssh

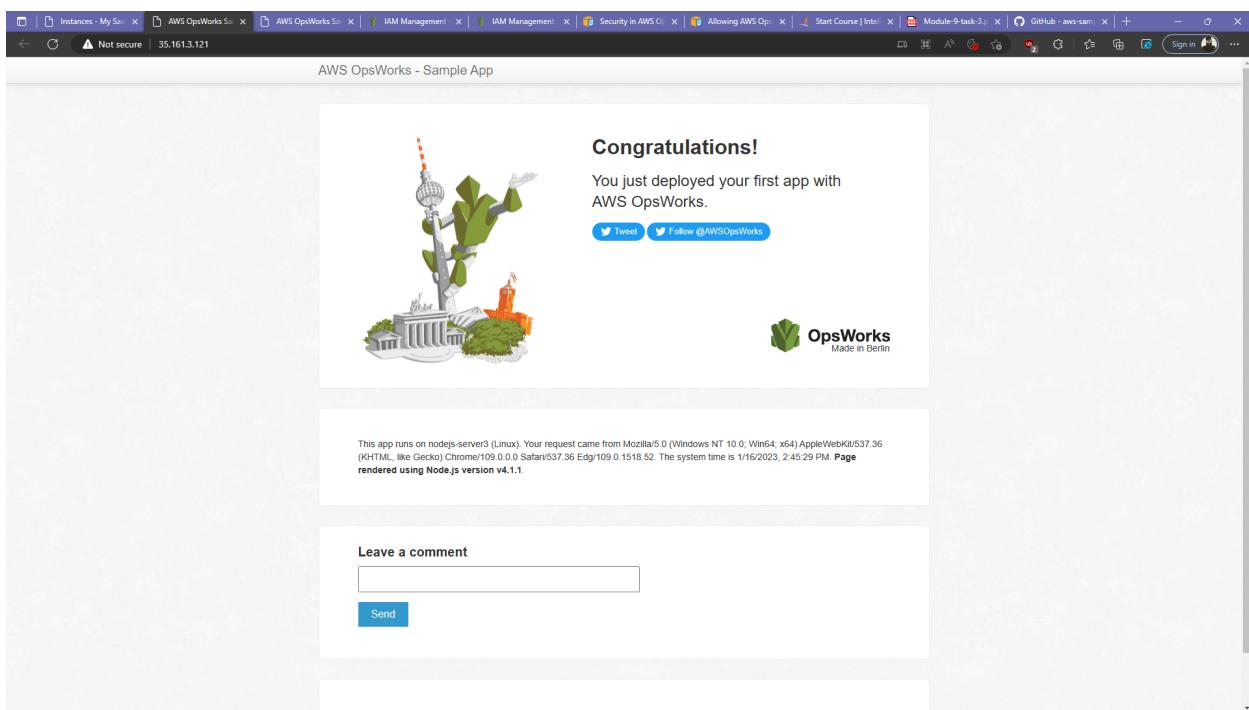
+ Instance

You can add more layers to this stack or register an instance.

Feedback Looking for language selection? Find it in the new Unified Settings [\[?\]](#)

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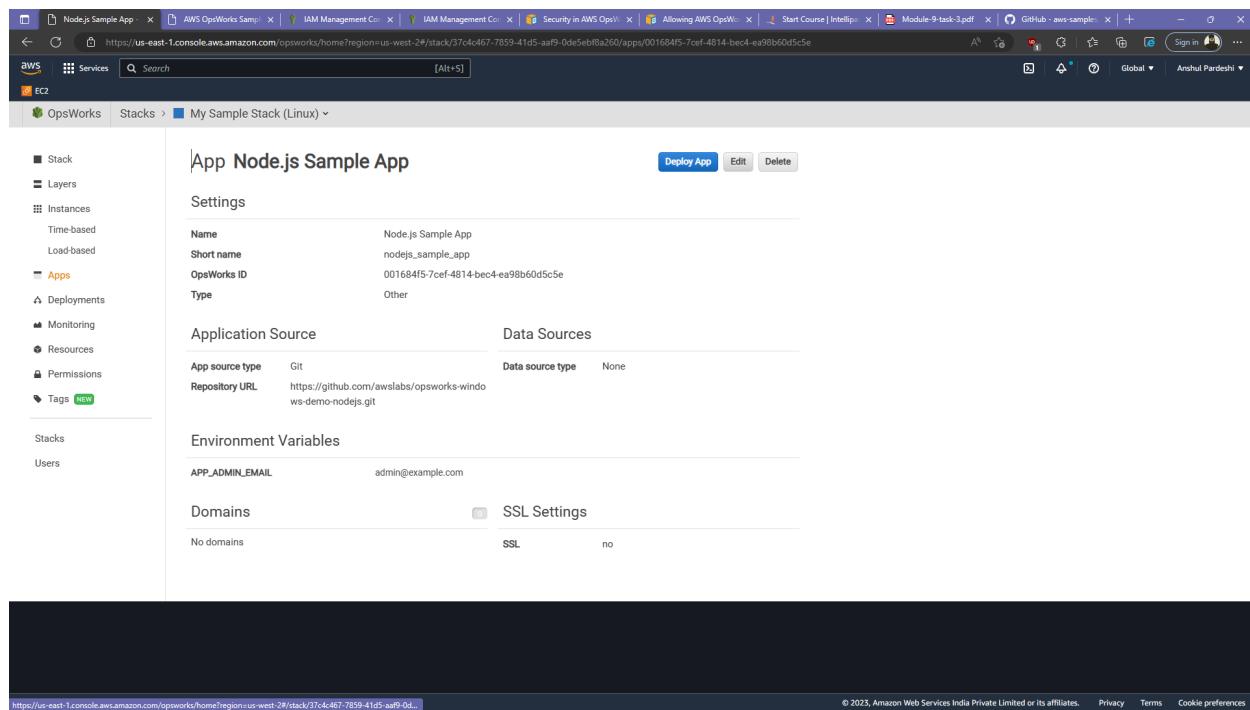
This was the end result from those new instances as well. Check the IP.



Lets apply changes to the opsworks node.js app.

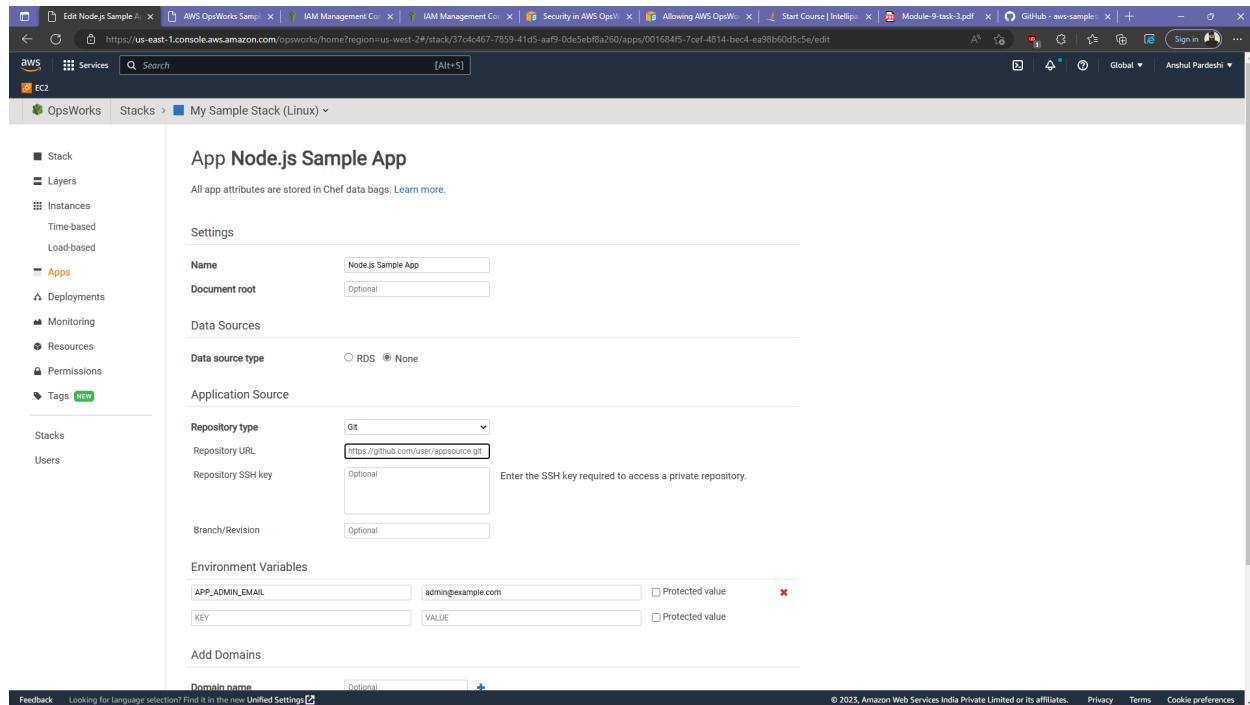
The screenshot shows the AWS Management Console interface for the OpsWorks service. On the left, there is a navigation sidebar with various options like Stack, Layers, Instances, etc. The main area is titled "Deployments and Commands" and contains a table of deployment history. The table has columns for Created at (UTC), User, Command, Comment, App, Instances, and Actions. One entry is visible: "2023-01-16 14:29:38" by user "root" with command "deploy" for the "Node.js Sample App" across 1 instance. There are "Deploy an App" and "Run Command" buttons at the top right of the table area.

Click on edit.



The screenshot shows the AWS OpsWorks console with the URL <https://us-east-1.console.aws.amazon.com/opsworks/home?region=us-west-2#/stack/37c4c467-7859-41d5-aa19-0de5ebf8a260/apps/001684f5-7cef-4814-bee4-ea98b60d5c5e>. The page displays the configuration for the 'Node.js Sample App' within the 'My Sample Stack (Linux)'. The 'Edit' button is located at the top right of the main content area.

Paste the new repository link with changes made.



The screenshot shows the AWS OpsWorks console with the same URL as the previous screenshot. The configuration has been updated. In the 'Application Source' section, the 'Repository type' dropdown is set to 'Git', and the 'Repository URL' field contains the new value <https://github.com/user/appsource.git>. The 'Edit' button is no longer highlighted.

Save.

The screenshot shows the AWS OpsWorks console with a new stack configuration page. The left sidebar includes options like Deployments, Monitoring, Resources, Permissions, Tags, Stacks, and Users. The main area is titled 'Edit Node.js Sample App' and contains the following fields:

- Document root:** Optional
- Data Sources:** Data source type is set to None (radio button selected).
- Application Source:** Repository type is Git, with the URL set to `https://opsworks-windows-demo-nodejs.git`. Repository SSH key is optional.
- Environment Variables:** APP_ADMIN_EMAIL is set to admin@example.com, marked as a protected value.
- Add Domains:** Domain name is optional.
- SSL Settings:** Enable SSL is set to No.

At the bottom right are 'Cancel' and 'Save' buttons.

Ans then deploy again with the changes.

The screenshot shows the AWS OpsWorks console with a specific app configuration page. The left sidebar shows the stack 'My Sample Stack (Linux)'. The main area is titled 'App Node.js Sample App' and contains the following settings:

- Settings:** Name is Node.js Sample App, Short name is nodejs_sample_app, OpsWorks ID is 001684f5-7cef-4814-bec4-ea98b60d5c5e, Type is Other.
- Application Source:** App source type is Git, with the Repository URL set to `https://github.com/aws-samples/opsworks-windows-demo-nodejs.git`.
- Data Sources:** Data source type is None.
- Environment Variables:** APP_ADMIN_EMAIL is set to admin@example.com.
- Domains:** No domains are listed.
- SSL Settings:** SSL is set to no.

At the top right are 'Deploy App', 'Edit', and 'Delete' buttons.

Deploy.

The screenshot shows the AWS OpsWorks console with the URL <https://us-east-1.console.aws.amazon.com/opsworks/home?region=us-west-2#stack/37c4c467-7859-41d5-aaef-0de5ebf8a260/deployments/deploy-app/001684f5-7cef-4514-be04-ea98b60d5c5e>. The page title is "Deploy App". The left sidebar shows navigation options like Stack, Layers, Instances, Apps, Deployments, Monitoring, Resources, Permissions, Tags, Stacks, and Users. The main content area is titled "Deploy App" with sub-sections for "Settings" and "Instances". Under "Settings", the "App" is set to "Node.js Sample App", "Command" is set to "Deploy", and there is a "Comment" field. Under "Instances", it says "OpsWorks will run this command on 3 of 3 instances. The assigned recipes are run on all selected instances." A "Deploy" button is at the bottom right. The status bar at the bottom includes "Feedback", "Privacy", "Terms", and "Cookie preferences".

Changes are being updated.

The screenshot shows the AWS OpsWorks console with the same URL as the previous screenshot. The page title is now "Deployment Node.js Sample App - deploy". The main content area displays deployment details: Status is "running", User is "root", Created at is "2023-01-16 14:46:57 UTC", Completed at is "-", and Duration is "-". Below this is a table showing deployment results for three servers:

Hostname	SSH	Layers	Duration	Log
nodejs-server1	ssh	Node.js App Server	-	
nodejs-server2	ssh	Node.js App Server	-	
nodejs-server3	ssh	Node.js App Server	-	

The status bar at the bottom includes "Feedback", "Privacy", "Terms", and "Cookie preferences".

Updated app is deployed.

The screenshot shows the AWS OpsWorks console with a deployment summary for the 'Node.js Sample App - deploy' task. The status is 'Successful' and it was created at 2023-01-16 14:46:57 UTC, completed at 2023-01-16 14:47:52 UTC, and took 00:00:55. The deployment involved three EC2 instances: nodejs-server1, nodejs-server2, and nodejs-server3, all running Node.js App Server layers via SSH. A 'Repeat' button is visible in the top right corner.

These are the 3 instances. Lets go to their ip and see if changes are reflected.

The screenshot shows the AWS OpsWorks Instances page for the 'My Sample Stack (Linux)' stack. It lists three instances: nodejs-server1, nodejs-server2, and nodejs-server3, all in the 'online' status. Each instance has a public IP address listed: 34.213.79.2, 54.203.9.53, and 35.161.3.121 respectively. Actions for stopping or SSHing into each instance are available. A note at the bottom indicates that instances belong to one or more layers, which define settings, resources, installed packages, profiles, and security groups.

Yes! Note the IP. Changes are updated.

AWS OpsWorks - Sample App

For intellipaat assignemnt update!

You just deployed your first app with AWS OpsWorks.

[Tweet](#) [Follow @AWSOpsWorks](#)

OpsWorks
Made in Berlin

This app runs on nodejs-server1 (Linux). Your request came from Mozilla/5.0 (Windows NT 10.0; Win64; x64) AppleWebKit/537.36 (KHTML, like Gecko) Chrome/109.0.0.0 Safari/537.36 Edg/109.0.1518.52. The system time is 1/16/2023, 2:51:32 PM. [Page rendered using Node.js version v4.1.](#)

Leave a comment

Send

Changes Updated in second instance.

AWS OpsWorks - Sample App

For intellipaat assignemnt update!

You just deployed your first app with AWS OpsWorks.

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OpsWorks
Made in Berlin

This app runs on nodejs-server2 (Linux). Your request came from Mozilla/5.0 (Windows NT 10.0; Win64; x64) AppleWebKit/537.36 (KHTML, like Gecko) Chrome/109.0.0.0 Safari/537.36 Edg/109.0.1518.52. The system time is 1/16/2023, 2:51:42 PM. [Page rendered using Node.js version v4.1.](#)

Leave a comment

Send

Finally changes are updated in the third instance as well.

