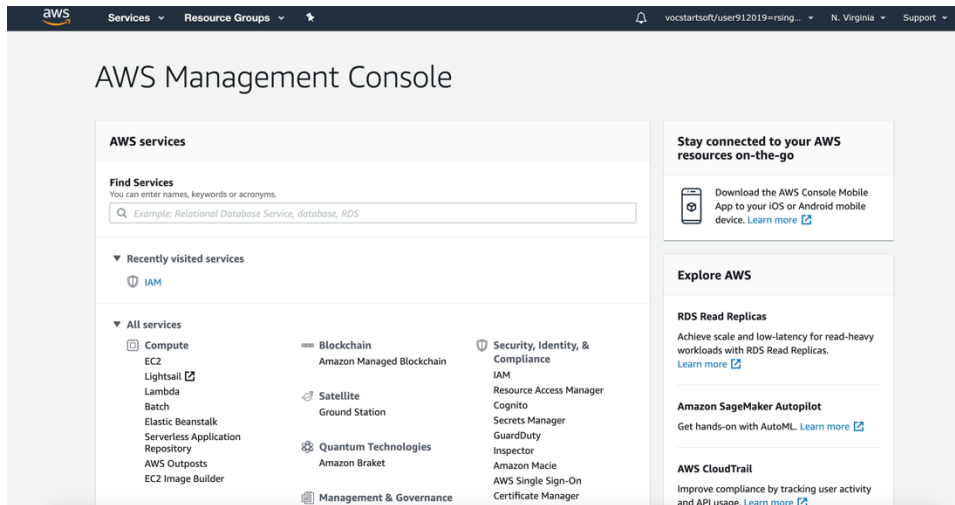


Lab- 1

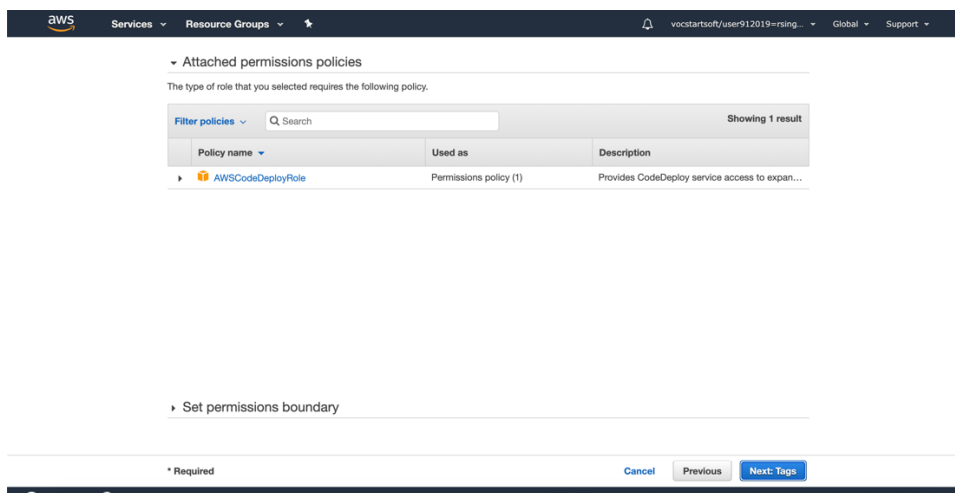
Using AWS Services

1. Created IAM (Identity Access Management) roles:

Selected AWS IAM and then roles



a. Created CodeDeploy Service role



b. Created EC2 Service Role

Create role 1 2 3 4

Select type of trusted entity

AWS service
EC2, Lambda and others

Another AWS account
Belonging to you or 3rd party

Web identity
Cognito or any OpenID provider

SAML 2.0 federation
Your corporate directory

Allows AWS services to perform actions on your behalf. [Learn more](#)

Choose a use case

Common use cases

EC2
Allows EC2 instances to call AWS services on your behalf.

Lambda
Allows Lambda functions to call AWS services on your behalf.

Or select a service to view its use cases

API Gateway	CodeDeploy	EMR	KMS	Rekognition
AWS Backup	CodeGuru	ElastiCache	Kinesis	RoboMaker
AWS Chatbot	CodeStar Notifications	Elastic Beanstalk	Lake Formation	S3
AWS Support	Comprehend	Elastic Container Service	Lambda	SMS
Amplify	Config	Elastic Transcoder	Lex	SNS

Create role 1 2 3 4

▼ Attach permissions policies

Choose one or more policies to attach to your new role.

Create policy

Filter policies Showing 1 result

Policy name	Used as
<input checked="" type="checkbox"/> AmazonS3ReadOnlyAccess	Permissions policy (1)

► Set permissions boundary

* Required

Cancel Previous Next: Tags

console.aws.amazon.com/iam/home?region=us-east-1#/roles

Identity and Access Management (IAM)

Create role Delete role

Search

Role name	Trusted entities	
<input type="checkbox"/> AWSServiceRoleForAmazonSSM	AWS service: ssm (Service-Linked r...	
<input type="checkbox"/> AWSServiceRoleForAWSCloud9	AWS service: cloud9 (Service-Link...	
<input type="checkbox"/> AWSServiceRoleForCloudWatchEvents	AWS service: events (Service-Link...	
<input type="checkbox"/> AWSServiceRoleForElastiCache	AWS service: elasticsearch (Service-L...	
<input type="checkbox"/> AWSServiceRoleForOrganizations	AWS service: organizations (Service-...	
<input type="checkbox"/> AWSServiceRoleForSupport	AWS service: support (Service-Link...	
<input type="checkbox"/> AWSServiceRoleForTrustedAdvisor	AWS service: trustedadvisor (Service-Link...	
<input type="checkbox"/> codedeployrole	AWS service: codedeploy	4 days
<input type="checkbox"/> EC2S3	AWS service: ec2	4 days
<input type="checkbox"/> EMR_AutoScaling_DefaultRole	AWS service: elasticmapreduce and 1 more	None
<input type="checkbox"/> EMR_DefaultRole	AWS service: elasticmapreduce	None
<input type="checkbox"/> EMR_EC2_DefaultRole	AWS service: ec2	None
<input type="checkbox"/> robomaker_students	AWS service: rekognition and 3 more	None
<input type="checkbox"/> vocareum	Account: 014348785960	You need permissions
<input type="checkbox"/> vocstartsoft	Account: 014348785960	You need permissions

Federated Login:
vocstartsoft/user912019=rsingh37@syr.edu

Account:
2650-6280-6495

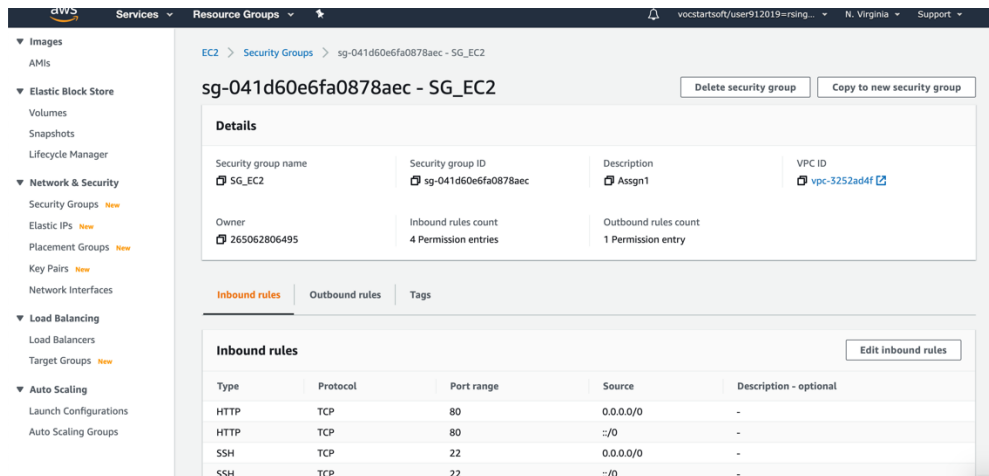
My Account
My Organization
My Service Quotas
My Billing Dashboard
Orders and Invoices
Switch Role
Sign Out

Showing 15 results

Search IAM

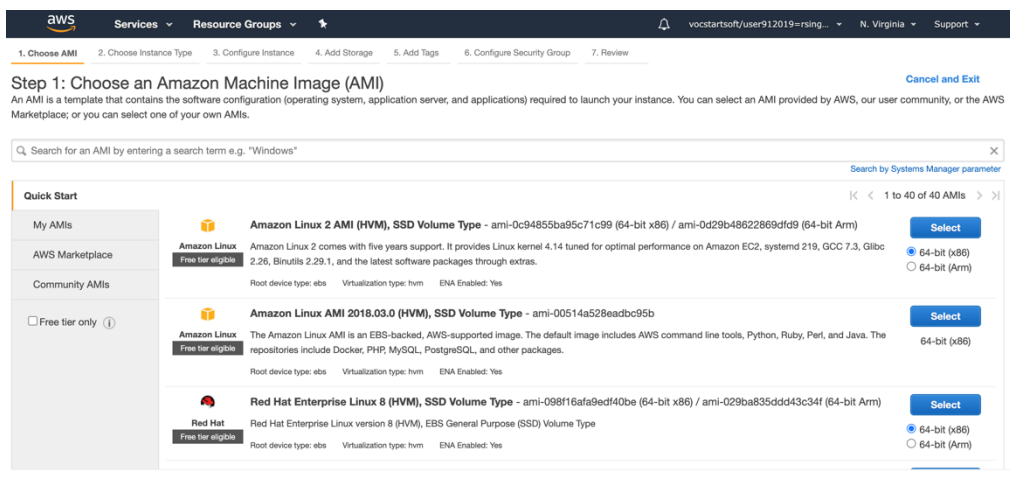
AWS account ID:
265062806495

- Created Security Groups SG_EC2 with inbound rule 'SSH' as type and source selected as 'anywhere' with the same outbound rules. Adding another inbound rule 'HTTP' and source 'anywhere'



- Launching EC2 Instance:

Selected instances and launch instance. Select second AMI named as Amazon Linux AMI 2018.03.0. Then selected 't2.micro' followed by selecting 'EC2S3' for IAM role. Added a script to install codedeploy agent on the EC2 instance, added storage and tags. Then added tag with "Name" in the 'Key' column and "Web Server" in the 'Value' column and then configured the security group with the previously created 'SG_EC2'.



aws Services Resource Groups vocstartsoft/user912019=rsing... N. Virginia Support

1. Choose AMI 2. Choose Instance Type 3. Configure Instance 4. Add Storage 5. Add Tags 6. Configure Security Group 7. Review

Step 3: Configure Instance Details

Purchasing option ☐ Request Spot instances

Network [Create new VPC](#)

Subnet [Create new subnet](#)

Auto-assign Public IP

Placement group ☐ Add instance to placement group

Capacity Reservation

Domain join directory [Create new directory](#)

IAM role [Create new IAM role](#)

Shutdown behavior

Stop - Hibernate behavior ☐ Enable hibernation as an additional stop behavior

Enable termination protection ☐ Protect against accidental termination

Monitoring ☐ Enable CloudWatch detailed monitoring
[Additional charges apply.](#)

Tenancy

[Cancel](#) [Previous](#) [Review and Launch](#) [Next: Add Storage](#)

aws Services Resource Groups vocstartsoft/user912019=rsing... N. Virginia Support

1. Choose AMI 2. Choose Instance Type 3. Configure Instance 4. Add Storage 5. Add Tags 6. Configure Security Group 7. Review

Step 4: Add Storage

Your instance will be launched with the following storage device settings. You can attach additional EBS volumes and instance store volumes to your instance, or edit the settings of the root volume. You can also attach additional EBS volumes after launching an instance, but not instance store volumes. [Learn more](#) about storage options in Amazon EC2.

Volume Type	Device	Snapshot	Size (GiB)	Volume Type	IOPS	Throughput (MB/s)	Delete on Termination	Encryption
Root	/dev/xvda	snap-0f894df8f8dcb4885	8	General Purpose SSD (gp2)	100 / 3000	N/A	<input checked="" type="checkbox"/>	Not Encrypted

[Add New Volume](#)

Free tier eligible customers can get up to 30 GB of EBS General Purpose (SSD) or Magnetic storage. [Learn more](#) about free usage tier eligibility and usage restrictions.

[Cancel](#) [Previous](#) [Review and Launch](#) [Next: Add Tags](#)

aws Services Resource Groups vocstartsoft/user912019=rsing... N. Virginia Support

1. Choose AMI 2. Choose Instance Type 3. Configure Instance 4. Add Storage 5. Add Tags 6. Configure Security Group 7. Review

Step 6: Configure Security Group

A security group is a set of firewall rules that control the traffic for your instance. On this page, you can add rules to allow specific traffic to reach your instance. For example, if you want to set up a web server and allow Internet traffic to reach your instance, add rules that allow unrestricted access to the HTTP and HTTPS ports. You can create a new security group or select from an existing one below. [Learn more](#) about Amazon EC2 security groups.

Assign a security group: ☐ Create a new security group ☒ Select an existing security group

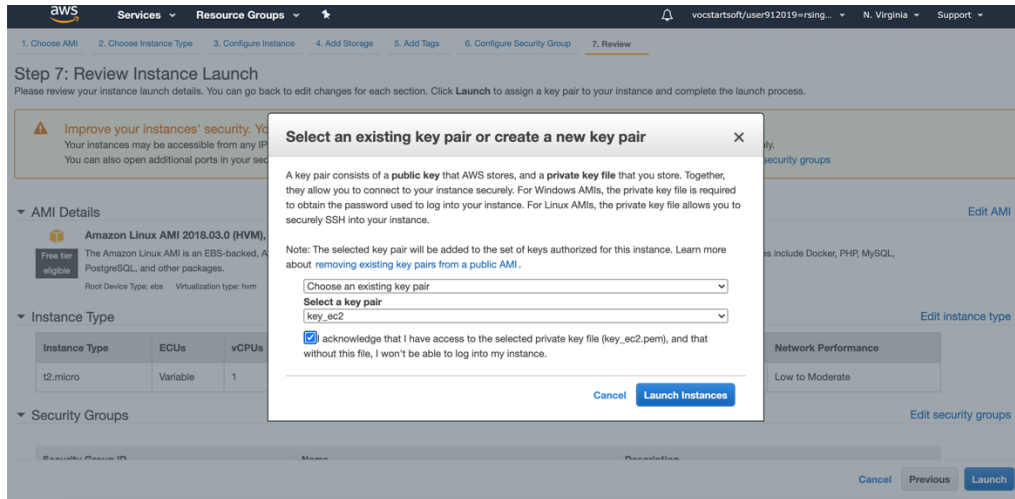
Security Group ID	Name	Description	Actions
sg-722b2e4f	default	default VPC security group	Copy to new
sg-041d60e6fa0878aec	SG_EC2	Assign1	Copy to new

Inbound rules for sg-041d60e6fa0878aec (Selected security groups: sg-041d60e6fa0878aec)

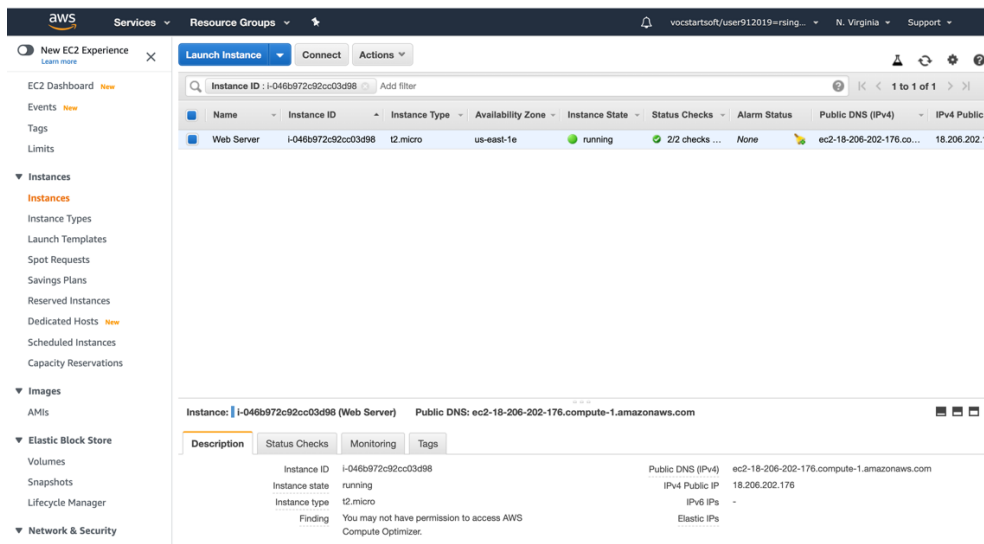
Type	Protocol	Port Range	Source	Description
HTTP	TCP	80	0.0.0.0/0	
HTTP	TCP	80	:::0	
SSH	TCP	22	0.0.0.0/0	
---	---	--	--	

[Cancel](#) [Previous](#) [Review and Launch](#)

Downloaded the key_ec2 key pair which is a .pem file and then clicked on launch instances.



The EC2 instance is running



4. Connecting to instances using SSH:

```
Last login: Thu Sep 3 22:44:58 on tty000

The default interaction shell is now zsh.
To update your account to use zsh, please run 'chsh -s /bin/zsh'.
For more details, please visit https://support.apple.com/kb/HT288050.
(base) Raskhas-Air:~ raskhasingsh$ chmod 400 key.ec2.pem
chmod: key.ec2.pem: No such file or directory
(base) Raskhas-Air:~$ raskhasingsh$ cd /Users/raskhasingsh/Downloads
(base) Raskhas-Air:Downloads$ raskhasingsh$ chmod 400 key.ec2.pem
(base) Raskhas-Air:Downloads$ raskhasingsh$ ssh -i key.ec2.pem ec2-user@ec2-18-206-282-176.compute-1.amazonaws.com
```

```

  _ _ | ( _ _ /
 _ _ | \ _ _ |
                                     Amazon Linux AMI

https://aws.amazon.com/amazon-linux-ami/2018.03-release-notes/
13 package(s) needed for security, out of 17 available
Run "sudo yum update" to apply all updates.
[ec2-user@ip-172-31-49-30 ~]$ sudo yum install -y httpd
Loaded plugins: priorities, update-motd, upgrade-helper
amzn-mainline | 2.1 kB 00:00
amzn-updates | 3.8 kB 00:00
(1/3): amzn-updates/latest/group.gp | 4 kB 00:00
(2/3): amzn-updates/latest/updateinfo | 691 kB 00:00
(3/3): amzn-updates/latest/primary.db | 3.9 MB 00:01
Resolving Dependencies
--> Running transaction check
--> Package httpd.x86_64 0:2.2.34-1.16.amzn1 will be installed
--> Processing Dependency: httpd-tools = 2.2.34-1.16.amzn1 for package: httpd-2.2.34-1.16.amzn1.x86_64
--> Processing Dependency: apr-util-dbd for package: httpd-2.2.34-1.16.amzn1.x86_64
--> Processing Dependency: libaprutil-1.so.0()(64bit) for package: httpd-2.2.34-1.16.amzn1.x86_64
--> Processing Dependency: libapr-1.so.0()(64bit) for package: httpd-2.2.34-1.16.amzn1.x86_64
--> Running transaction check
--> Package apr.x86_64 0:1.5.2-5.13.amzn1 will be installed
--> Package apr-util.x86_64 0:1.5.4-6.18.amzn1 will be installed
--> Package apr-util-dbd.x86_64 0:1.5.4-6.18.amzn1 will be installed
--> Package httpd-tools.x86_64 0:2.2.34-1.16.amzn1 will be installed
--> Finished Dependency Resolution

```

```
Dependencies Resolved
```

Package	Arch	Version	Repository	Size
Installing:				
httplib	x86_64	2.2.34-1.16.amzn1	amzn-main	1.2 M
Installing for dependencies:				
apr	x86_64	1.5.2-5.13.amzn1	amzn-main	118 k
apr-util	x86_64	1.5.4-6.18.amzn1	amzn-main	99 k
apr-util-ldap	x86_64	1.5.4-6.18.amzn1	amzn-main	19 k
httplib-tools	x86_64	2.2.34-1.16.amzn1	amzn-main	80 k

Transaction Summary

Install 1 Package (+4 Dependent packages)

Total download size: 1.5 M
 Installed size: 3.6 M

Downloading packages:

(1/5): apr-util-ldap-1.5.4-6.18.amzn1.x86_64.rpm	119 KB	00:00
(2/5): apr-1.5.2-5.13.amzn1.x86_64.rpm	118 KB	00:00
(3/5): httplib-tools-2.2.34-1.16.amzn1.x86_64.rpm	80 KB	00:00
(4/5): apr-util-1.5.4-6.18.amzn1.x86_64.rpm	99 KB	00:00

Setting the EC2 to host page by entering commands in terminal.

Package	Arch	Version	Repository	Size
Installing:				
httpd	x86_64	2.2.34-1.16.amzn1	amzn-main	1.2 M
Installing for dependencies:				
apr	x86_64	1.5.2-5.13.amzn1	amzn-main	118 k
apr-util	x86_64	1.5.4-6.18.amzn1	amzn-main	99 k
apr-util-ldap	x86_64	1.5.4-6.18.amzn1	amzn-main	19 k
httpd-tools	x86_64	2.2.34-1.16.amzn1	amzn-main	80 k
Transaction Summary				
Install 1 Package (+4 Dependent packages)				
Total download size: 1.5 M				
Installed size: 3.6 M				
Downloading packages:				
(1/5): apr-util-ldap-1.5.4-6.18.amzn1.x86_64.rpm			19 kB	00:00
(2/5): apr-1.5.2-5.13.amzn1.x86_64.rpm			118 kB	00:00
(3/5): httpd-tools-2.2.34-1.16.amzn1.x86_64.rpm			80 kB	00:00
(4/5): apr-util-1.5.4-6.18.amzn1.x86_64.rpm			99 kB	00:00
(5/5): httpd-2.2.34-1.16.amzn1.x86_64.rpm			1.2 MB	00:00
Total				1.7 MB/s 1.5 MB 00:00
Running transaction check				
Running transaction test				
Transaction test succeeded				
Running transaction				
Installing : apr-1.5.2-5.13.amzn1.x86_64				1/5
Installing : apr-util-1.5.4-6.18.amzn1.x86_64				2/5
Installing : httpd-tools-2.2.34-1.16.amzn1.x86_64				3/5
Installing : apr-util-ldap-1.5.4-6.18.amzn1.x86_64				4/5
Installing : httpd-2.2.34-1.16.amzn1.x86_64				5/5
Verifying : httpd-2.2.34-1.16.amzn1.x86_64				1/5
Verifying : apr-util-1.5.4-6.18.amzn1.x86_64				2/5
Verifying : httpd-2.2.34-1.16.amzn1.x86_64				3/5
Verifying : apr-1.5.2-5.13.amzn1.x86_64				4/5
Verifying : apr-util-ldap-1.5.4-6.18.amzn1.x86_64				5/5
Installed:				
httpd.x86_64 0:2.2.34-1.16.amzn1				
Dependency Installed:				
apr.x86_64 0:1.5.2-5.13.amzn1				
apr-util.x86_64 0:1.5.4-6.18.amzn1				
apr-util-ldap.x86_64 0:1.5.4-6.18.amzn1				
httpd-tools.x86_64 0:2.2.34-1.16.amzn1				
Complete!				
[ec2-user@ip-172-31-49-30 ~]\$ sudo service httpd start				
Starting httpd:			[OK]	
[ec2-user@ip-172-31-49-30 ~]\$ sudo service httpd restart				
Stopping httpd:			[OK]	
Starting httpd:			[OK]	
[ec2-user@ip-172-31-49-30 ~]\$				
Broadcast message from root@ip-172-31-49-30				
(unknown) at 16:34 ...				
The system is going down for power off NOW!				
Connection to ec2-18-206-202-176.compute-1.amazonaws.com closed by remote host.				
Connection to ec2-18-206-202-176.compute-1.amazonaws.com closed.				
(base) ~\$ awscli --help grep Download				

5. Setting CodeDeploy:

Created a new application using CodeDeploy, selected EC2/on-premise for Application name. Created deployment group by selecting 'codedeployrole' under 'Service role' and 'In-place' under 'Deployment type'. Selected Amazon EC2 instances in the Environment configuration and Name as Key and Web Server as Value. Selected code deploy all at once and disabled load balancer.

The screenshot displays the AWS CodeDeploy console interface. The top navigation bar includes the AWS logo, 'Services', 'Resource Groups', and a user profile 'vocstartsoft/user912019=rsing...'. The main content area is divided into two sections. The first section, 'Amazon EC2 Instances', shows a list of instances with a 'Tag group 1' configuration. The 'Key' is 'Name' and the 'Value' is 'Web Server'. Below this, there are buttons for 'Add tag' and '+ Add tag group'. The second section, 'Agent configuration with AWS Systems Manager', includes a note about prerequisites and a link to 'Learn more'. At the bottom, there is a 'Feedback' button and a footer with copyright information.

Install AWS CodeDeploy Agent

Deployment settings

Deployment configuration

CodeDeployDefault.AllAtOnce

Load balancer

Enable load balancing

Create deployment group

Created deployment by selecting my application is stored in github and entered username and github credentials.

aws Services Resource Groups vocstartsoft/user912019=rsing... N. Virginia Support

Developer Tools > CodeDeploy > Applications > CodeDeploy > Create deployment

Create deployment

Deployment settings

Application
CodeDeploy

Deployment group
group1

Compute platform
EC2/On-premises

Deployment type
In-place

Revision type
☐ My application is stored in Amazon S3 ☒ My application is stored in GitHub

GitHub token name
Select the name of the token associated to an account you have already connected, or grant AWS CodeDeploy permission to access a different account. To connect to a GitHub account for the first time, type an alias for the account, and then choose Connect to GitHub

mlabouardy

Connect to GitHub

Repository name

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aws Services Resource Groups vocstartsoft/user912019=rsing... N. Virginia Support

EC2/On-premises

Deployment type
In-place

Revision type
☐ My application is stored in Amazon S3 ☒ My application is stored in GitHub

GitHub token name
Select the name of the token associated to an account you have already connected, or grant AWS CodeDeploy permission to access a different account. To connect to a GitHub account for the first time, type an alias for the account, and then choose Connect to GitHub

mlabouardy

Connect to GitHub

Repository name

Commit ID
481e6e777cdcc99248a573ae555cd8546d15ff

Deployment description
Deployment description - optional
Add a brief description about the deployment

aws Services Resource Groups vocstartsoft/user912019=rsing... N. Virginia Support

Developer Tools > CodeDeploy

Source • CodeCommit
Artifacts • CodeArtifact
Build • CodeBuild
Deploy • CodeDeploy
Getting started
Deployments
Deployment
Applications
Deployment configurations
On-premises instances
Pipeline • CodePipeline
Settings

Go to resource
Feedback

Deployment details

Application CodeDeploy1	Deployment ID d-OCKSXB5B6	Status Succeeded
Deployment configuration CodeDeployDefault:AllAtOnce	Deployment group group1	Initiated by User action
Deployment description -		

Revision details

Revision location github://mlabouardy/codedeploy-lab/481e6e777cdcc99248a573ae555cd8546d15ff	Revision created 4 days ago	Revision description Application revision registered by Deployment ID: d-OCKSXB5B6
--	--------------------------------	---

Deployment lifecycle events

Instance ID	Duration	Status	Most recent event	Events	Start time	End time
i-046b972c92cc03d98	7 seconds	Succeeded	ValidateService	View events	Sep 4, 2020 12:31 PM (UTC-4:00)	Sep 4, 2020 12:31 PM (UTC-4:00)

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The deployment is successful.

The screenshot shows the AWS CodeDeploy console. A green banner at the top indicates 'Success: Deployment created'. The left sidebar shows the navigation menu with 'Deployments' selected. The main content area displays the details for deployment 'd-OCK5XB5B6'. The 'Deployment status' section shows a progress bar at 100% with the text 'Installing application on your instances' and '1 of 1 instances updated' with a 'Succeeded' status. The 'Deployment details' section shows the application 'CodeDeploy1', deployment ID 'd-OCK5XB5B6', status 'Succeeded', deployment configuration 'CodeDeployDefault:AllAtOnce', deployment group 'group1', and initiated by 'User action'. The 'Revision details' section is partially visible.

Developer Tools > CodeDeploy > Deployments > d-OCK5XB5B6

d-OCK5XB5B6

[Copy deployment](#) [Retry deployment](#)

Deployment status

Installing application on your instances

1 of 1 instances updated Succeeded 100%

Deployment details

Application	CodeDeploy1	Deployment ID	d-OCK5XB5B6	Status	Succeeded
Deployment configuration	CodeDeployDefault:AllAtOnce	Deployment group	group1	Initiated by	User action
Deployment description	-				

Revision details

Revision location	Revision created	Revision description
-------------------	------------------	----------------------

The screenshot shows the AWS CodeDeploy console 'Deployment history' page. The left sidebar shows the navigation menu with 'Deployments' selected. The main content area displays a table of deployment history. The table has columns for Deployment Id, Status, Deployment type, Compute platform, Application, Deployment group, Revision location, and Initiating event. One deployment is listed: 'd-OCK5XB5B6' with status 'Succeeded', deployment type 'In-place', compute platform 'EC2/On-premises', application 'CodeDeploy1', deployment group 'group1', revision location 'github://...', and initiated by 'User action'.

Developer Tools > CodeDeploy > Deployments

Deployment history

[View details](#) [Actions](#) [Copy deployment](#) [Retry deployment](#)

1 of 1

Deployment Id	Status	Deployment type	Compute platform	Application	Deployment group	Revision location	Initiating event
d-OCK5XB5B6	Succeeded	In-place	EC2/On-premises	CodeDeploy1	group1	github://...	User action

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Using IPV4 Public IP of the EC2 instance in the browser, the following page got displayed.

