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Assignment / lab1

1. Creating two IAM (Identity Access Management) roles.

1.1 Creating code deploy role

The screenshot shows the AWS IAM console interface. At the top, a green notification banner states: "The role **codedeployrole** has been created." Below this, there are buttons for "Create role" and "Delete role". The main content area displays a table of IAM roles. The table has three columns: "Role name", "Trusted entities", and "Last activity". The "codedeployrole" is listed in the table with "AWS service: codedeploy" as the trusted entity and "None" for last activity. Other roles listed include various AWS service roles like "AWSServiceRoleForAWSCloud9", "AWSServiceRoleForCloudWatchEvents", etc. The left sidebar shows the navigation menu with "Roles" highlighted. The bottom of the page shows the AWS account ID: 013340209667 and the footer with "Feedback" and "English (US)" options.

Role name	Trusted entities	Last activity
<input type="checkbox"/> AWSServiceRoleForAWSCloud9	AWS service: cloud9 (Service-Linked role)	None
<input type="checkbox"/> AWSServiceRoleForCloudWatchEvents	AWS service: events (Service-Linked role)	None
<input type="checkbox"/> AWSServiceRoleForElastiCache	AWS service: elasticache (Service-Linked role)	None
<input type="checkbox"/> AWSServiceRoleForOrganizations	AWS service: organizations (Service-Linked r...	None
<input type="checkbox"/> AWSServiceRoleForSupport	AWS service: support (Service-Linked role)	None
<input type="checkbox"/> AWSServiceRoleForTrustedAdvisor	AWS service: trustedadvisor (Service-Linked ...)	None
<input type="checkbox"/> codedeployrole	AWS service: codedeploy	None
<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: greengrass and 3 more	None
<input type="checkbox"/> vocareum	Account: 519031508252	You need permissions
<input type="checkbox"/> vocstartsoft	Account: 519031508252	You need permissions

1.2 Creating EC2 role

The role **EC2S3** has been created.

Create role Delete role

Showing 14 results

Role name	Trusted entities	Last activity
<input type="checkbox"/> AWSServiceRoleForAWSCloud9	AWS service: cloud9 (Service-Linked role)	None
<input type="checkbox"/> AWSServiceRoleForCloudWatchEvents	AWS service: events (Service-Linked role)	None
<input type="checkbox"/> AWSServiceRoleForElasticCache	AWS service: elasticache (Service-Linked role)	None
<input type="checkbox"/> AWSServiceRoleForOrganizations	AWS service: organizations (Service-Linked r...	None
<input type="checkbox"/> AWSServiceRoleForSupport	AWS service: support (Service-Linked role)	None
<input type="checkbox"/> AWSServiceRoleForTrustedAdvisor	AWS service: trustedadvisor (Service-Linked ...)	None
<input type="checkbox"/> codepipeline	AWS service: codepipeline	None
<input type="checkbox"/> EC2S3	AWS service: ec2	None
<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: lambda and 3 more	None
<input type="checkbox"/> vocareum	Account: 519031508252	You need permissions
<input type="checkbox"/> vocastartsoft	Account: 519031508252	You need permissions

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2. Created a Security group “SG_EC2” with two inbound rules of the type ‘SSH’ and ‘HTTP’ respectively with source as ‘Anywhere’.

Security group (sg-0b14eb5cabdd950b6 | SG_EC2) was created successfully

Details

sg-0b14eb5cabdd950b6 - SG_EC2

Delete security group Copy to new security group

Details

Security group name	Security group ID	Description	VPC ID
SG_EC2	sg-0b14eb5cabdd950b6	Allow SSH to developers	vpc-f2bd48f

Owner: 013340209667 Inbound rules count: 4 Permission entries Outbound rules count: 1 Permission entry

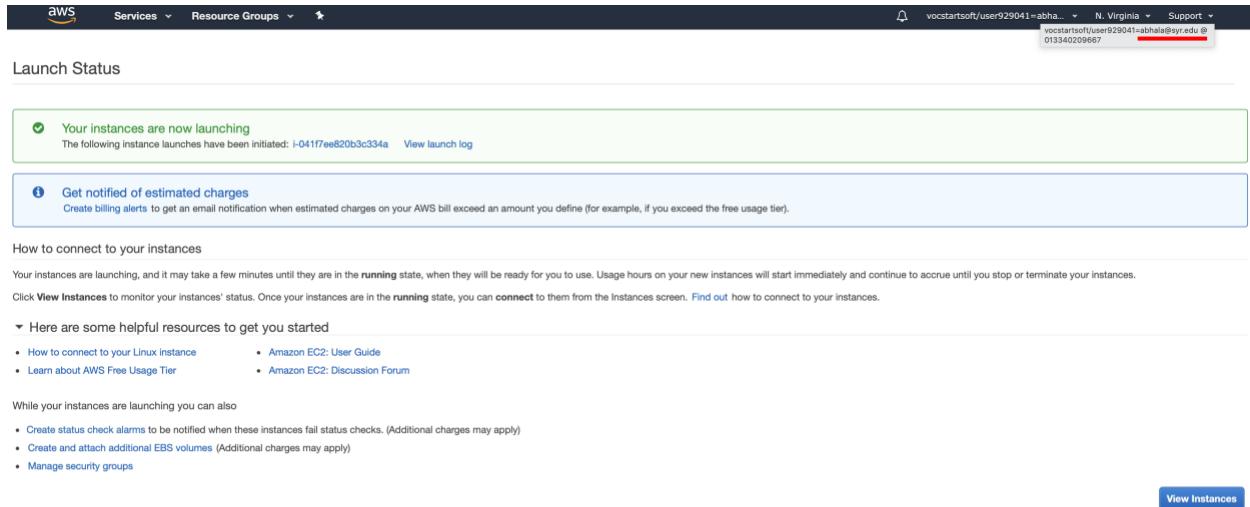
Inbound rules

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

Edit inbound rules

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- Proceeding to launch instance by selecting EC2S3 as IAM role, Amazon linux AMI 2018.03.0. as AMI, script in advance details to install a codedeploy agent on EC2 instnce, tags consisting key as 'Name' and value as 'Web Server' and finally selecting our created security group (SG_EC2). Finally we launch our instances.



Launch Status

✓ **Your instances are now launching**
The following instance launches have been initiated: i-0417ee820b3c334a [View launch log](#)

ℹ **Get notified of estimated charges**
[Create billing alerts](#) to get an email notification when estimated charges on your AWS bill exceed an amount you define (for example, if you exceed the free usage tier).

How to connect to your instances

Your instances are launching, and it may take a few minutes until they are in the **running** state, when they will be ready for you to use. Usage hours on your new instances will start immediately and continue to accrue until you stop or terminate your instances. Click **View Instances** to monitor your instances' status. Once your instances are in the **running** state, you can **connect** to them from the Instances screen. [Find out](#) how to connect to your instances.

▼ Here are some helpful resources to get you started

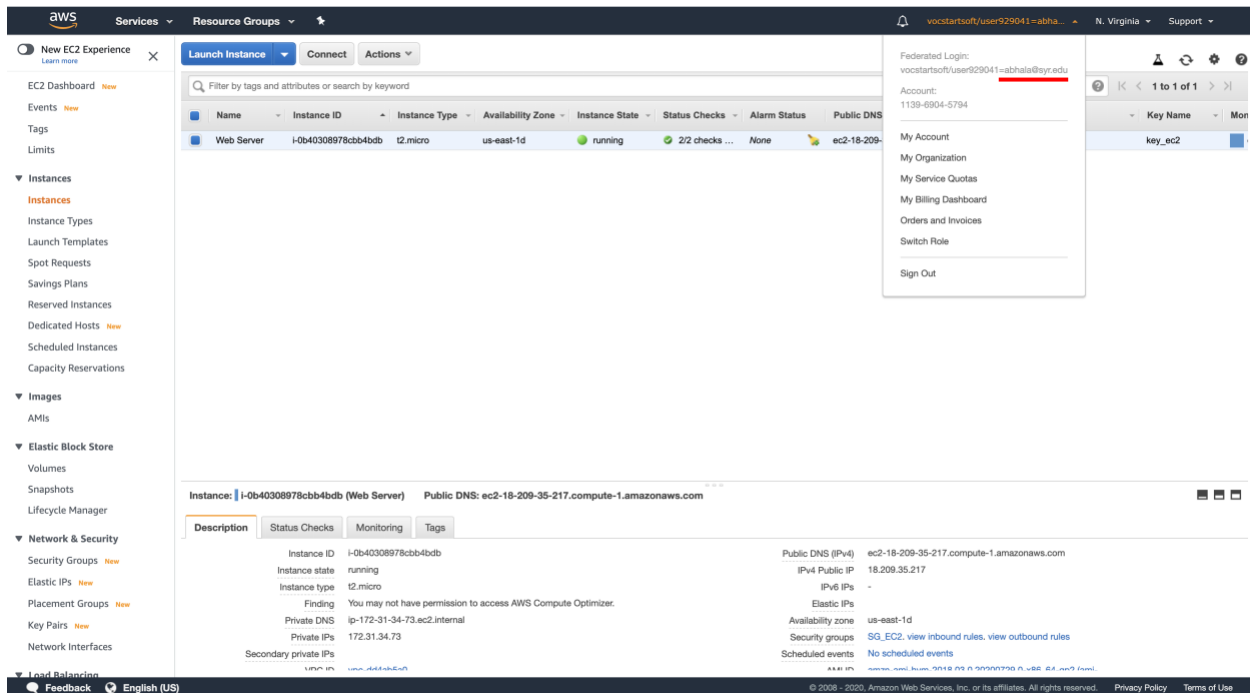
- [How to connect to your Linux instance](#)
- [Amazon EC2: User Guide](#)
- [Learn about AWS Free Usage Tier](#)
- [Amazon EC2: Discussion Forum](#)

While your instances are launching you can also

- [Create status check alarms](#) to be notified when these instances fail status checks. (Additional charges may apply)
- [Create and attach additional EBS volumes](#) (Additional charges may apply)
- [Manage security groups](#)

[View Instances](#)

3.1 Our instance is running



Instances

Name	Instance ID	Instance Type	Availability Zone	Instance State	Status Checks	Alarm Status	Public DNS
Web Server	i-0b40308978cbb4bdb	t2.micro	us-east-1d	running	2/2 checks ...	None	ec2-18-209-35-217.compute-1.amazonaws.com

Instance: i-0b40308978cbb4bdb (Web Server) Public DNS: ec2-18-209-35-217.compute-1.amazonaws.com

Description	Status Checks	Monitoring	Tags
Instance ID	i-0b40308978cbb4bdb		
Instance state	running		
Instance type	t2.micro		
Finding	You may not have permission to access AWS Compute Optimizer.		
Private DNS	ip-172-31-34-73.ec2.internal		
Private IPs	172.31.34.73		
Secondary private IPs			
Public DNS (IPv4)	ec2-18-209-35-217.compute-1.amazonaws.com		
IPv4 Public IP	18.209.35.217		
IPv6 IPs	-		
Elastic IPs			
Availability zone	us-east-1d		
Security groups	SG_EC2: view inbound rules , view outbound rules		
Scheduled events	No scheduled events		

4. Connecting to instances using SSH

```
akshaybhala@MacBook-Pro downloads % ssh -i key_ec2.pem ec2-user@ec2-54-174-70-243.compute-1.amazonaws.com
```

```
--|  --|_ )
-| (  /
---|\---|---
```

Amazon Linux AMI

```
https://aws.amazon.com/amazon-linux-ami/2018.03-release-notes/
11 package(s) needed for security, out of 17 available
[Run "sudo yum update" to apply all updates.]
[ec2-user@ip-172-31-32-226 ~]$
```

5. Setting my EC2 to host the web page

```
Run "sudo yum update" to apply all updates.
[ec2-user@ip-172-31-32-226 ~]$ sudo yum install -y httpd
Loaded plugins: priorities, update-motd, upgrade-helper
amzn-main | 2.1 kB | 00:00
amzn-updates | 3.8 kB | 00:00
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-ldap 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-ldap.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:				
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	90 k
apr-util-ldap	x86_64	2.5.4-6.18.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-1.5.4-6.18.amzn1.x86_64.rpm	99 kB	00:00
2/5):	apr-1.5.2-5.13.amzn1.x86_64.rpm	118 kB	00:00
3/5):	apr-util-ldap-1.5.4-6.18.amzn1.x86_64.rpm	19 kB	00:00
4/5):	httpd-tools-2.2.34-1.16.amzn1.x86_64.rpm	80 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
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Running transaction check

Running transaction test

Transaction test succeeded
 Rolling transaction

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 : httpd-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-tools-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-172-31-32-226 ~]$ sudo service httpd start
Starting httpd: [ OK ]
[ec2-user@ip-172-31-32-226 ~]$ sudo service httpd restart
Stopping httpd: [ OK ]
Starting httpd: [ OK ]
[ec2-user@ip-172-31-32-226 ~]$
```

6. Setting up CodeDeploy

6.1 Created Application by selecting EC2/on premise for cloud platform

The screenshot shows the AWS CodeDeploy console. At the top, a green banner indicates 'Application created' and provides a link to 'Create a notification rule for this application'. The left sidebar shows the navigation menu with 'Deploy' > 'CodeDeploy' > 'Applications' selected. The main content area displays the details for the application 'abhala'. Under the 'Application details' section, the name is 'abhala' and the compute platform is 'EC2/On-premises'. Below this, the 'Deployment groups' tab is active, showing a message: 'No deployment groups. Before you can deploy your application using CodeDeploy, you must create a deployment group.' with a 'Create deployment group' button.

6.2 Created Deployment Group by selecting codedeployrole under service role, in-place under deployment type and under environment configuration selected Amazon EC2 instances, Name as key and Web Server as value. Kept Deployment settings as Code deploy default all at once and disabled load balancer.

The screenshot shows the AWS CodeDeploy console with the 'group_abhala' deployment group details. A green banner at the top indicates 'Success: Deployment group created'. The left sidebar shows the navigation menu with 'Deploy' > 'CodeDeploy' > 'Applications' > 'group_abhala' selected. The main content area displays the details for the deployment group 'group_abhala'. Under the 'Deployment group details' section, the deployment group name is 'group_abhala', the application name is 'abhala', and the compute platform is 'EC2/On-premises'. The deployment type is 'In-place', the service role ARN is 'arn:aws:iam::113969045794:role/codedeployrole', and the deployment configuration is 'CodeDeployDefault.AllAtOnce'. The 'Rollback enabled' checkbox is unchecked. Under the 'Environment configuration: Amazon EC2 instances' section, there is a table with one entry: 'Name' as the key and 'Web Server' as the value. The 'Triggers' section shows a message: 'No triggers have been created for this deployment group.'

6.3 Created Deployment by keeping revision type as 'my application is stored in github'

The screenshot shows the AWS CodeDeploy console for deployment **d-JXTZKRLA6**. The deployment status is **In progress**, with a progress bar indicating 0% completion (0 of 1 instances updated). The deployment details table shows the application is **abhala**, the deployment ID is **d-JXTZKRLA6**, and the status is **In progress**. The revision details table shows the revision location is **github://mlabouardy/codedeploy-labs/481e6e777cdcc99248a573ae555cdc8546d15ffc**, the revision was created **Just now**, and the description is **Application revision registered by Deployment ID: d-JXTZKRLA6**. The deployment lifecycle events section is currently empty.

Deployment status		
Installing application on your instances		
0 of 1 instances updated In progress 0%		

Deployment details		
Application	Deployment ID	Status
abhala	d-JXTZKRLA6	In progress
Deployment configuration	Deployment group	Initiated by
CodeDeployDefault.AllAtOnce	group_abhala	User action
Deployment description		
-		

Revision details		
Revision location	Revision created	Revision description
github://mlabouardy/codedeploy-labs/481e6e777cdcc99248a573ae555cdc8546d15ffc	Just now	Application revision registered by Deployment ID: d-JXTZKRLA6

Deployment lifecycle events		
[Empty]		

6.4 The deployment is successful

The screenshot shows the AWS CodeDeploy console for deployment **d-6ADNVOMA6**. The deployment status is **Succeeded**, with a progress bar indicating 100% completion (1 of 1 instances updated). The deployment details table shows the application is **abhala**, the deployment ID is **d-6ADNVOMA6**, and the status is **Succeeded**. The revision details table shows the revision location is **github://mlabouardy/codedeploy-labs/481e6e777cdcc99248a573ae555cdc8546d15ffc**, the revision was created **18 minutes ago**, and the description is **Application revision registered by Deployment ID: d-JXTZKRLA6**. The deployment lifecycle events section is currently empty.

Deployment status		
Installing application on your instances		
1 of 1 instances updated Succeeded 100%		

Deployment details		
Application	Deployment ID	Status
abhala	d-6ADNVOMA6	Succeeded
Deployment configuration	Deployment group	Initiated by
CodeDeployDefault.AllAtOnce	group_abhala	User action
Deployment description		
-		

Revision details		
Revision location	Revision created	Revision description
github://mlabouardy/codedeploy-labs/481e6e777cdcc99248a573ae555cdc8546d15ffc	18 minutes ago	Application revision registered by Deployment ID: d-JXTZKRLA6

Deployment lifecycle events		
[Empty]		

6.5 Using IPV4 public IP of the EC2 instance into our browser, it shows that our deployment is successful.

