



PARSHVANATH CHARITABLE TRUST'S

A. P. SHAH INSTITUTE OF TECHNOLOGY

Department of Information Technology

(NBA Accredited)



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Class / Branch: TE IT

Subject: Advanced Devops Lab (ADL)

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EXPERIMENT NO. 01

Aim: To understand the benefits of Cloud Infrastructure and Setup AWS Cloud9 IDE, Launch AWS Cloud9 IDE and Perform Collaboration Demonstration.

Steps:

1. Login with your AWS account.
2. Navigate to Cloud 9 service from Developer tools section as below:
3. Click on Create Environment :





1. create Cloud9 environment

AWS Cloud9 > **Environments** > **Create environment**

Create environment Info

Details

Name
first_environment
Limit of 40 characters, alphanumeric, and underscore per use.

Description - optional
Limit 200 characters.

Environment type Info
Determines what the Cloud9 IDE will run on.

☒ **New EC2 instance**
Cloud9 creates an EC2 instance in your account. The configuration of your EC2 instance cannot be changed by Cloud9 after creation.

☐ **Existing compute**
You have an existing instance or server that you'd like to use.

New EC2 instance

Instance type Info
The memory and CPUs of the EC2 instance that will be created for Cloud9 to run on.

☒ **t2.micro (1 GiB RAM + 1 vCPU)**
Free-tier eligible, ideal for educational users and experiments.

☐ **t3.small (2 GiB RAM + 2 vCPU)**
Recommended for small web projects.

☐ **m5.large (16 GiB RAM + 2 vCPU)**
Recommended for production and more general-purpose development.

☐ **Additional instance types**
Explore additional instances to fit your need.

Platform Info
This will be installed on your EC2 instance. We recommend Amazon Linux 2019.

Amazon Linux 2019

Timeout
How long Cloud9 can be inactive (no user input) before auto-terminating. This value prevents unnecessary charges.

50 minutes

Network settings Info

Connect from
How your environment is accessed.

☒ **AWS Systems Manager (SSM)**
Access environment via SSM without opening inbound ports (no Internet).

☐ **Secure Shell (SSH)**
Access environment directly via SSH, opens inbound ports.

VPC settings Info

Tags - optional Info
A tag is a label that you assign to an AWS resource. Each tag consists of a key and an optional value. You can use tags to search and filter your resources or track your AWS costs.

The following IAM resources will be created in your account

- AWS::ServiceRoleForAWS::Cloud9** - AWS Cloud9 creates a service-linked role for you. This allows AWS Cloud9 to call other AWS services on your behalf. You can delete the role from the AWS IAM console once you no longer have any AWS Cloud9 environments. [Learn more](#)
- AWS::Cloud9::SSMAccessRole** and **AWS::Cloud9::SSMInstanceProfile** - A service role and an instance profile are automatically created if Cloud9 accesses an EC2 instance through AWS Systems Manager. If your environments no longer require EC2 instances that block incoming traffic, you can delete these roles using the AWS IAM console. [Learn more](#)

Cancel **Create**



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AWS Cloud9

My environments

Shared with me

All account environments

Documentation

Successfully created first_environment. To get the most out of your environment, see [Best practices for using AWS Cloud9](#).

For capabilities similar to AWS Cloud9, explore AWS Toolkits in your own IDE and AWS CloudShell in the AWS Management Console. [Learn more](#).

AWS Cloud9 > Environments

Environments (1)

Delete View details Open in Cloud9 Create environment

My environments

Name	Cloud9 IDE	Environment type	Connection	Permission	Owner ARN
first_environment	Open	EC2 instance	AWS Systems Manager (SSM)	Owner	arn:aws:iam::97505022155:root



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2. Create USER

The screenshot shows the AWS IAM console 'Create user' wizard, Step 1: Specify user details. The user name is 'WIZARD'. The user type is 'I want to create an IAM user'. The console password is 'WIZARD@123'. The user is created successfully, and the password is displayed as 'WIZARD@123'.

Specify user details

User details

User name:

☒ Provide user access to the AWS Management Console - optional
If you're providing console access to a person, it's best practice to manage their access in IAM Identity Center.

Are you providing console access to a person?

User type:
☐ Specify a user in Identity Center - Recommended
Not recommended that you use Identity Center to provide console access to a person. With Identity Center, you can centrally manage user access to their AWS accounts and third applications.
☒ I want to create an IAM user
We recommend that you create IAM users only if you need granular, programmable access through access keys, service-specific credentials for AWS CodeCommit or Amazon Keyspaces, or a token or credential for enterprise account access.

Console password

☐ Auto-generated password
You can view the password after you create the user.

☒ Custom password
Enter a custom password for the user.

☒ Show password
Users must create a new password at next sign-in - Recommended
Users automatically get the [AWS IAM and password](#) policy to allow them to change their own password.

☒ If you are creating programmable access through access keys or service-specific credentials for AWS CodeCommit or Amazon Keyspaces, you can generate them after you create this IAM user. [Link to create](#)

User created successfully
You can view and download the user's password and email instructions for signing in to the AWS Management Console.

Retrieve password
You can view and download the user's password below or email users instructions for signing in to the AWS Management Console. This is the only time you can view and download this password.

Console sign-in details

Console sign-in URL
<https://975050222155.signin.aws.amazon.com/console>

User name
WIZARD

Console password
WIZARD@123 [Show](#)

[Email sign-in instructions](#)

[Download .csv file](#) [Return to users list](#)



3. Create User Group

Identity and Access Management (IAM)

Search IAM

Dashboard

Access management

- User groups
- Users
- Roles
- Policies
- Identity providers
- Account settings

Access reports

- Access Analyzer
- External access
- Unused access
- Analyzer settings
- Credential report
- Organization activity

Group1 user group created.

View group

IAM > User groups

User groups (1) info

A user group is a collection of IAM users. Use groups to specify permissions for a collection of users.

Search

<input type="checkbox"/>	Group name	Users	Permissions	Creation time
<input type="checkbox"/>	Group1	0	Not defined	Now

CloudShell Feedback

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4. Add user to User Group

Identity and Access Management (IAM)

Search IAM

Dashboard

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1 user added to this group.

Group1 info

Delete

Summary

Edit

User group name: Group1

Creation time: August 01, 2024, 20:21 (UTC+05:30)

ARN: arn:aws:iam::975050222155:group/Group1

Users (1) Permissions Access Advisor

Users in this group (1)

An IAM user is an entity that you create in AWS to represent the person or application that uses it to interact with AWS.

Search

<input type="checkbox"/>	User name	Groups	Last activity	Creation time
<input type="checkbox"/>	WIZARD	1	None	2 minutes ago

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5. Add policies to User Group

Identity and Access Management (IAM)

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6. Write code after creating file in environment

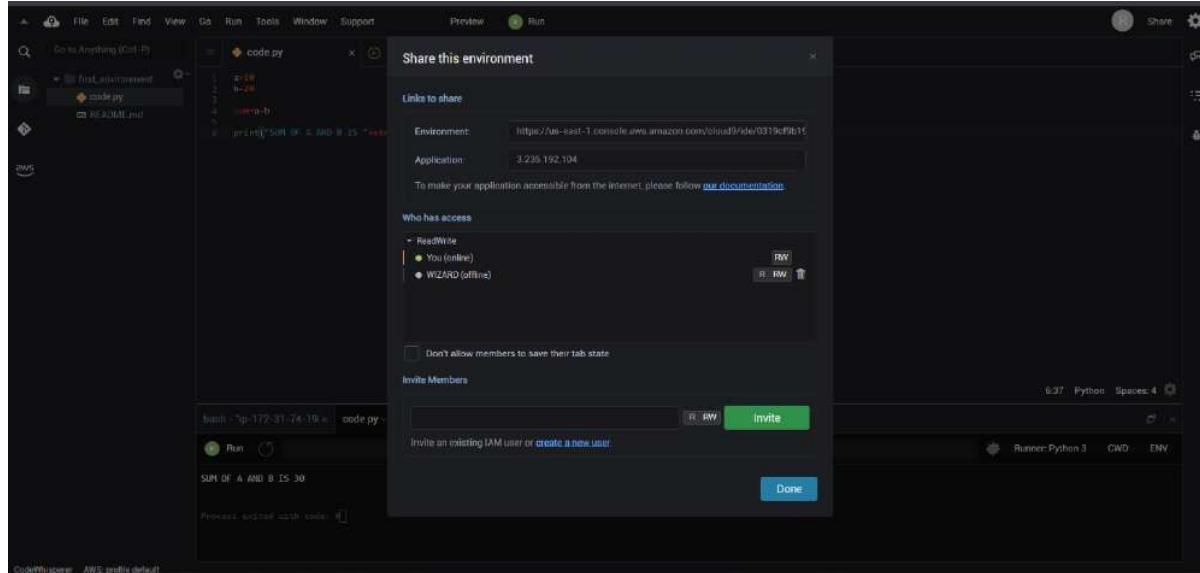
```
1 a=10
2 b=20
3 c=a+b
4 print('SUM OF A AND B IS '+str(c))
```

bash -p -172-31-74-19 x

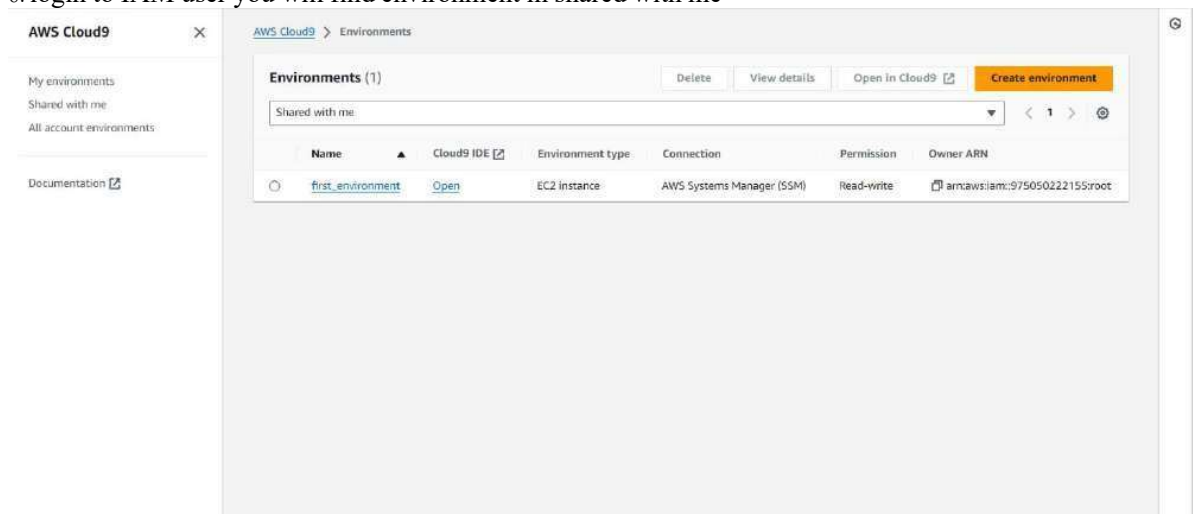
ec2-user:~/environment \$

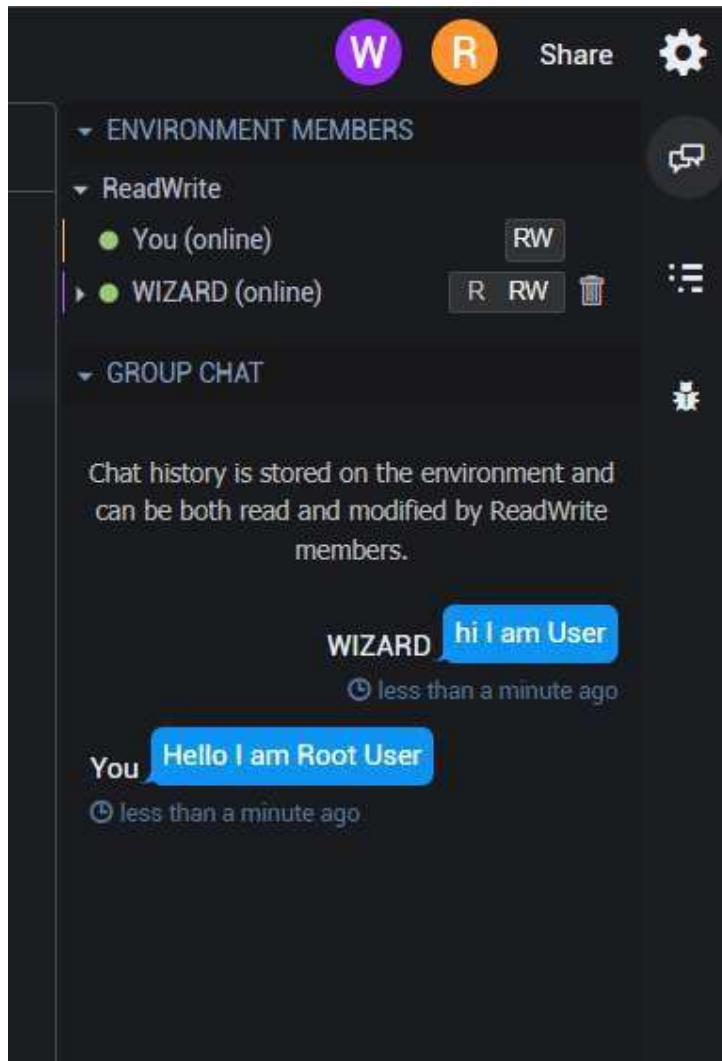


7. Add IAM user to Environment



8. login to IAM user you will find environment in shared with me





Conclusion:

Now we understand the benefits of Cloud Infrastructure and Setup AWS Cloud9 IDE, Launch AWS Cloud9 IDE and Perform Collaboration Demonstration.