



lab



lab title

**AWS Command Line Interface (CLI)
V1.01**



Course title

**BackSpace Academy
AWS Certified Associate**



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About the Lab

Please note that not all AWS services are supported in all regions. Please use the US-East-1 (North Virginia) region for this lab.

These lab notes are to support the AWS CLI lab of the AWS Certified Cloud Practitioner Course.

Please note that AWS services change on a weekly basis and it is extremely important you check the version number on this document to ensure you have the latest version with any updates or corrections.

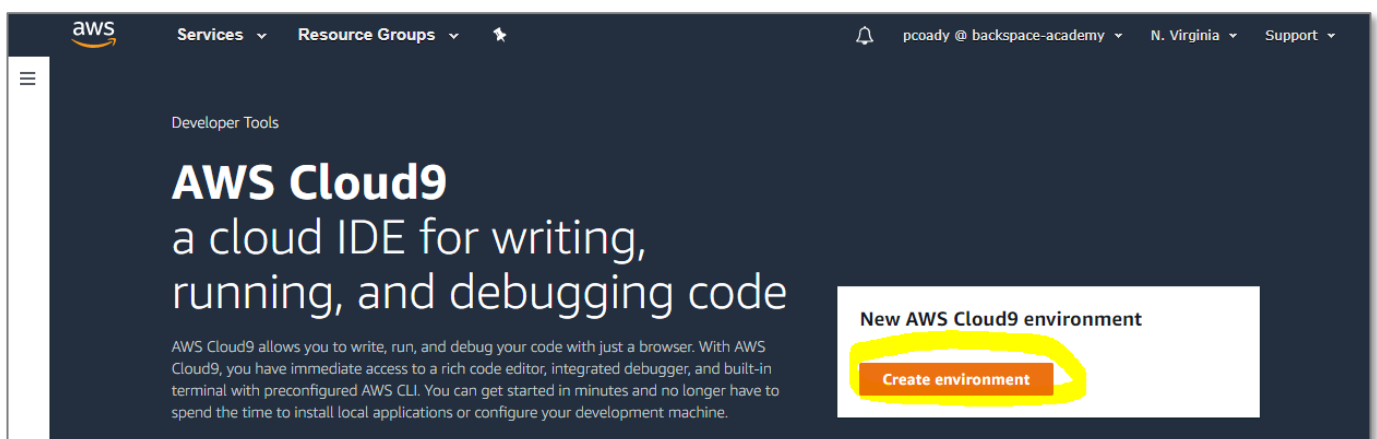
▶ Creating a Cloud9 Development Environment on EC2

In this section, we will use the Cloud9 service to create a development environment on an EC2 instance.

From the AWS console click 'Services'

Click 'Cloud9'

Click 'Create Environment'



Give your environment a unique name.

Click 'Next Step'

AWS Cloud9 X

Step 1 **Name environment**

Step 2 Configure settings

Step 3 Review

Environment name and description

Name
The name needs to be unique per user. You can update it at any time in your environment settings.

Backspace Labs - P Coady

Limit: 60 characters

Description - Optional
This will appear on your environment's card in your dashboard. You can update it at any time in your environment settings.

Write a short description for your environment

Limit: 200 characters

Cancel **Next step**

Select EC2 environment.

Step 1 **Name environment**

Step 2 **Configure settings**

Step 3 Review

Environment settings

Environment type [Info](#)
Choose between creating a new EC2 instance for your new environment or connecting directly to your server over SSH.

☒ **Create a new instance for environment (EC2)**
Launch a new instance in this region to run your new environment.

☐ Connect and run in remote server (SSH)
Display instructions to connect remotely over SSH and run your new environment.

Select t2 micro to stay in the free tier

Instance type

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

☐ t2.small (2 GiB RAM + 1 vCPU)
Recommended for small-sized web projects.

☐ m4.large (8 GiB RAM + 2 vCPU)
Recommended for production and general-purpose development.

☐ Other instance type
Select an instance type.

t2.nano

Leave hibernation setting at 30 mins

Cost-saving setting
Choose a predetermined amount of time to auto-hibernate your environment and prevent unnecessary charges. We recommend a hibernation settings of half an hour of no activity to maximize savings.

After 30 minutes (default)

Leave Network settings as default

Click 'Next Step'

▼ Network settings (advanced)

Network (VPC)
Launch your EC2 instance into an existing Amazon Private Cloud (VPC) or create a new one.

vpc-72d25a0b (default)

Subnet
Select a range of IP addresses in your VPC to isolate EC2 resources from each other.

No preference (default subnet in any Availability Zone)

Cancel Previous step **Next step**

Click 'Create Environment'

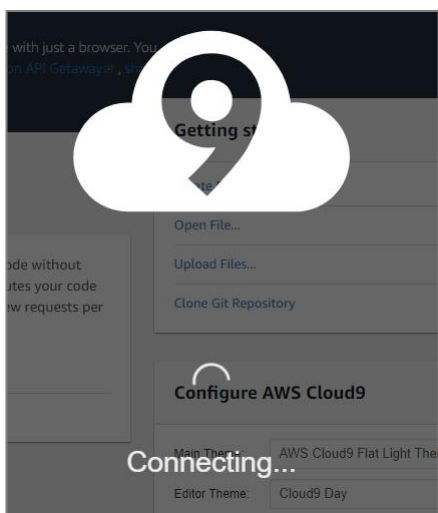
IAM role
AWSServiceRoleForAWSCloud9 (generated)

We recommend the following best practices for using your AWS Cloud9 environment

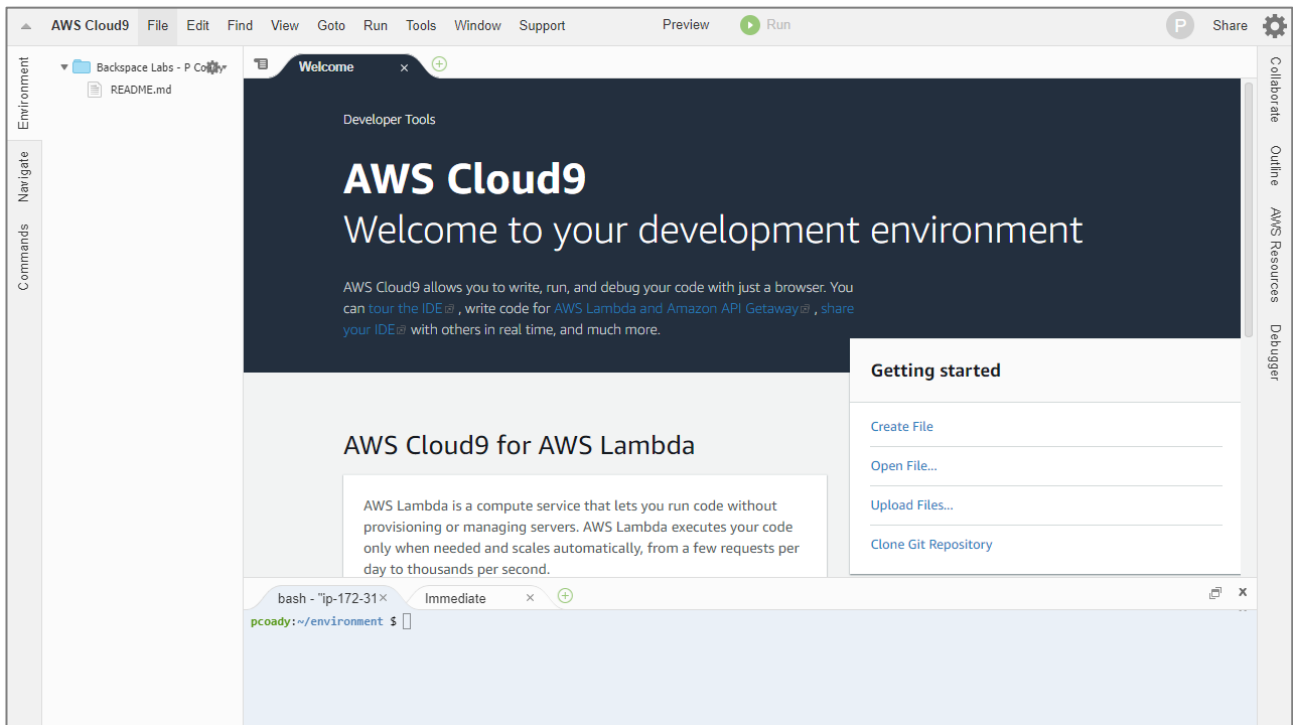
- Use **source control** and **backup** your environment frequently. AWS Cloud9 does not perform automatic backups.
- Perform regular **updates of software** on your environment. AWS Cloud9 does not perform automatic updates on your behalf.
- **Turn on AWS CloudTrail** in your AWS account to track activity in your environment. [Learn more](#)
- Only share your environment with **trusted users**. Sharing your environment may put your AWS access credentials at risk. [Learn more](#)

Cancel Previous step **Create environment**

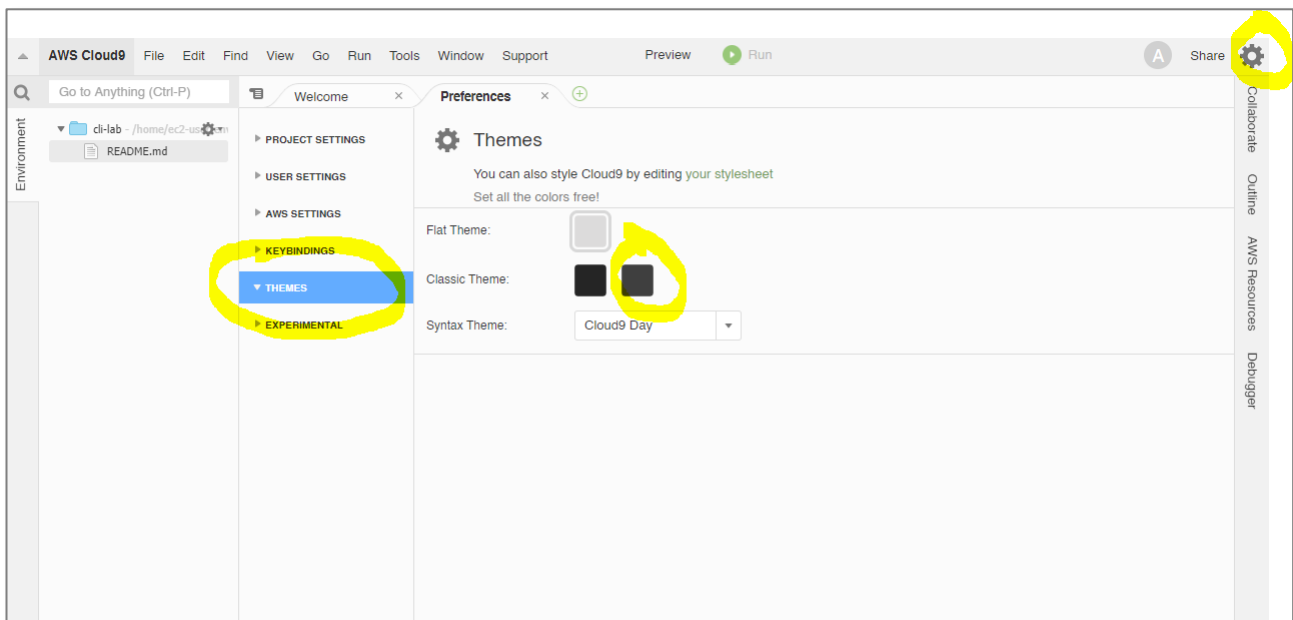
The environment creation process will begin



After some time, your environment will be created.



You can customize the look and feel of the IDE by selecting a theme from the preferences.



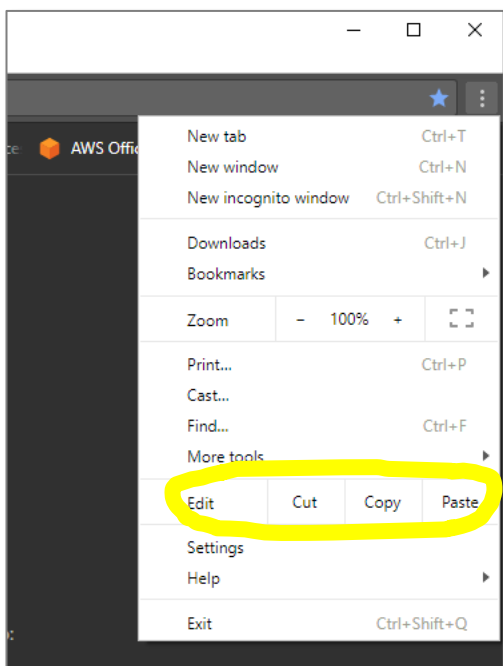
▶ Sending CLI Commands from a Cloud9 Environment

In this section, we will use the Cloud9 service to send CLI commands from the Cloud9 Environment.

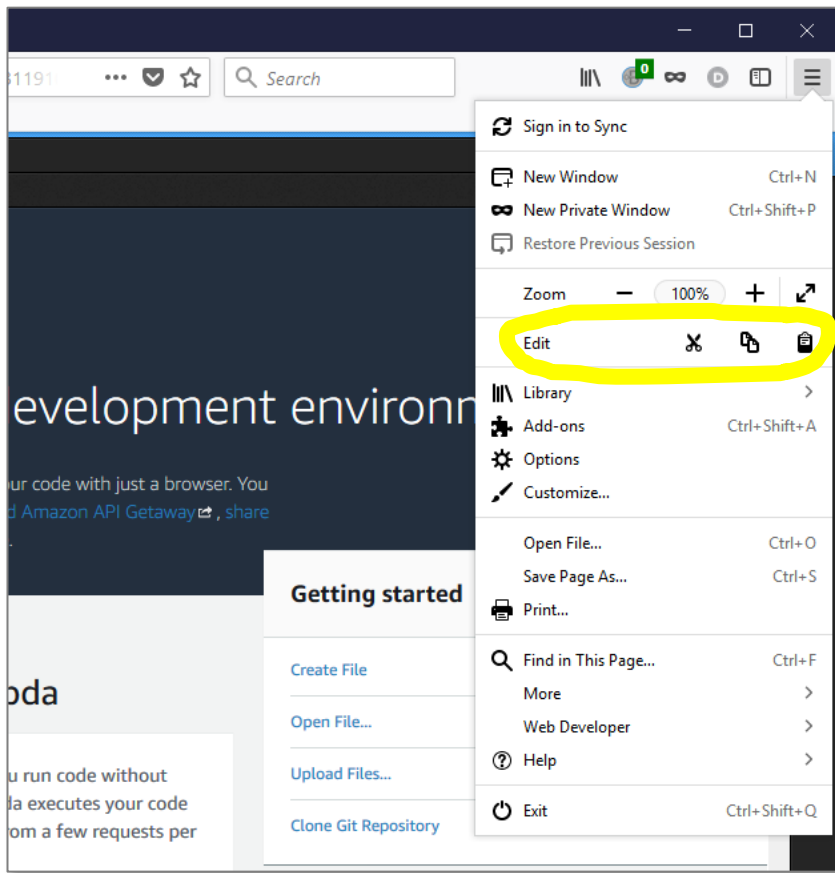
Please note:

Cut and Paste (right click or Cloud9 menu) may not work directly in Cloud9. If you cannot paste into Cloud9 then use the browser paste menu item or use ctrl-v (Windows) / cmd-v (MAC).

e.g. for Chrome:



e.g. for Firefox



Sending Commands from the Cloud9 Environment

At the bottom of the screen will be the Linux terminal console pane.

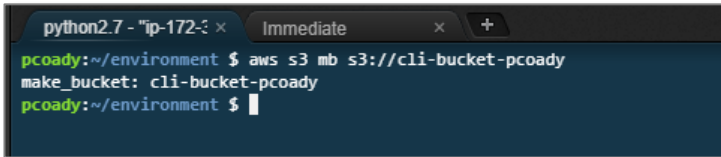
Check that AWS CLI is already installed.

```
aws --version
```

```
python2.7 - "ip-10-2- x" +
admin:~/environment $ aws --version
aws-cli/1.16.186 Python/2.7.16 Linux/4.14.123-86.109.amzn1.x86_64 botocore/1.12.176
admin:~/environment $
```

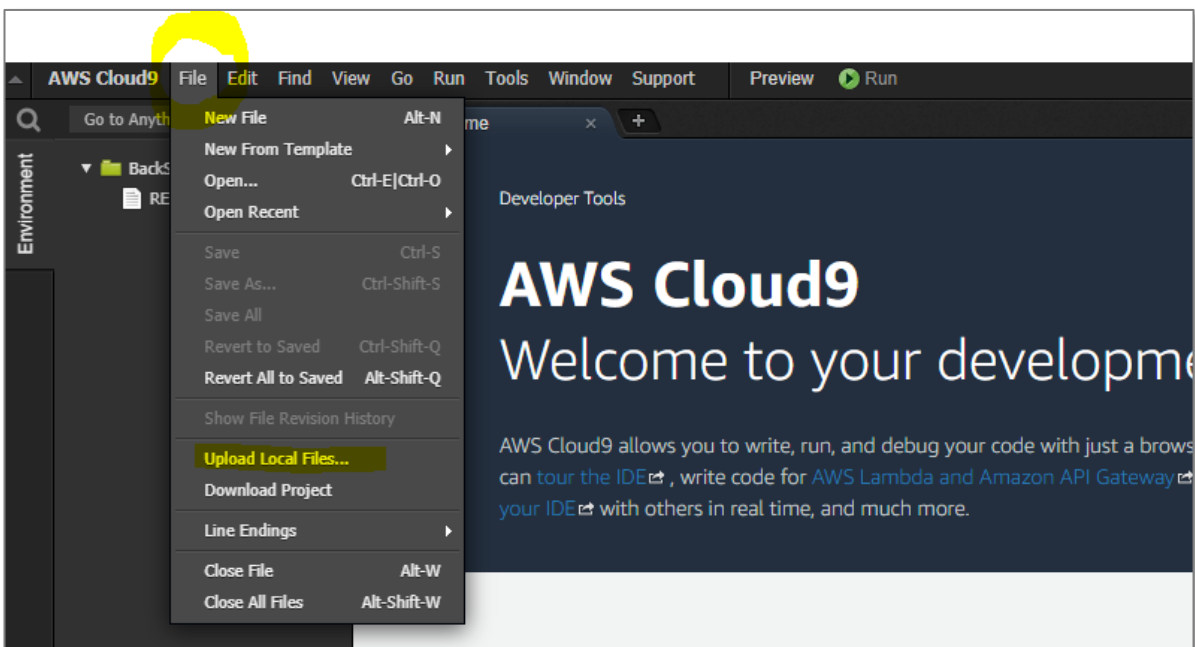
Create a bucket using the `S3 mb` command

```
aws s3 mb s3://yourbucketname
```

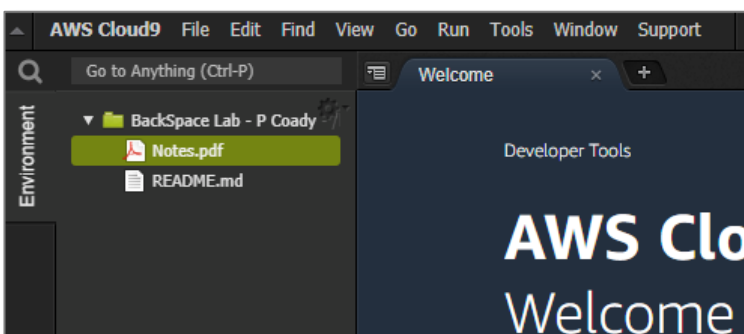


```
python2.7 - "ip-172-31-1-1" x Immediate x +
pcoady:~/environment $ aws s3 mb s3://cli-bucket-pcoady
make_bucket: cli-bucket-pcoady
pcoady:~/environment $
```

Upload a local file to the Cloud9 Environment



The file will appear in the file treeview after uploading



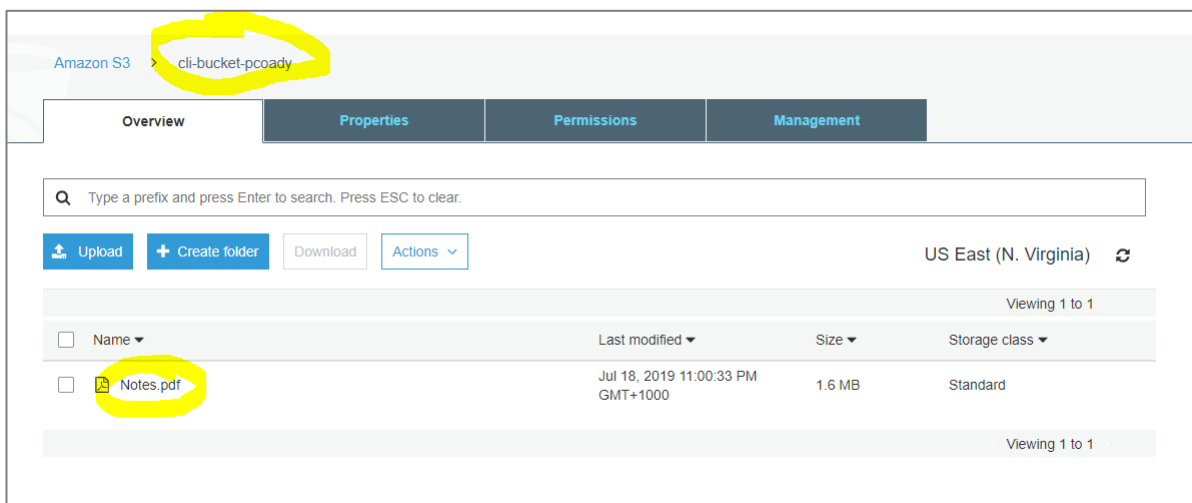
Now use the `S3 cp` command to copy the file to the newly created bucket

***Note filename is case sensitive**

```
aws s3 cp yourfilename s3://yourbucketname
```

```
bash - "ip-172-31-45" x Immediate x +
pcoady:~/environment $ aws s3 mb s3://cli-bucket-pcoady
make_bucket: cli-bucket-pcoady
pcoady:~/environment $ aws s3 cp Notes.pdf s3://cli-bucket-pcoady
upload: ./Notes.pdf to s3://cli-bucket-pcoady/Notes.pdf
pcoady:~/environment $
```

Go to the S3 management console to see the newly created bucket with its contents



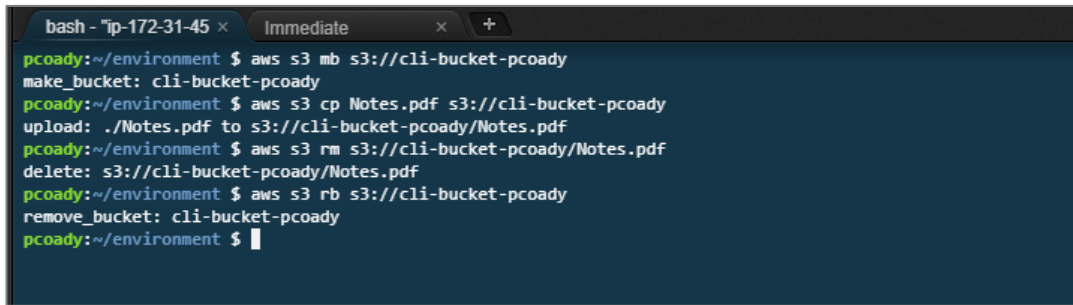
Now we will delete the object using the `S3 rm` command

```
aws s3 rm s3://yourbucketname/yourfilename
```

```
python2.7 - "ip-172-31-45" x Immediate x +
pcoady:~/environment $ aws s3 mb s3://cli-bucket-pcoady
make_bucket: cli-bucket-pcoady
pcoady:~/environment $ aws s3 cp Notes.pdf s3://cli-bucket-pcoady
upload: ./Notes.pdf to s3://cli-bucket-pcoady/Notes.pdf
pcoady:~/environment $ aws s3 rm s3://cli-bucket-pcoady/Notes.pdf
delete: s3://cli-bucket-pcoady/Notes.pdf
pcoady:~/environment $
```

Now we will delete the empty bucket using the *S3 rb* command

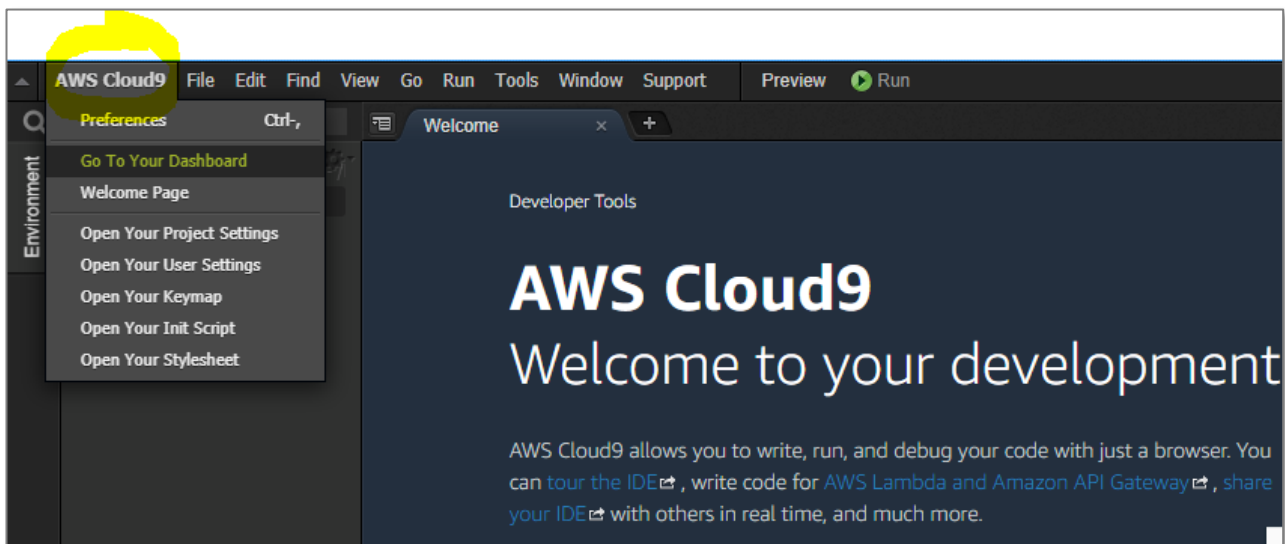
```
aws s3 rb s3://yourbucketname
```

A terminal window titled 'bash - "ip-172-31-45 x' and 'Immediate' shows a series of AWS S3 commands being executed in a shell. The user 'pcoady' is in the directory '~/environment'. The commands are: 'aws s3 mb s3://cli-bucket-pcoady' (output: 'make_bucket: cli-bucket-pcoady'), 'aws s3 cp Notes.pdf s3://cli-bucket-pcoady' (output: 'upload: ./Notes.pdf to s3://cli-bucket-pcoady/Notes.pdf'), 'aws s3 rm s3://cli-bucket-pcoady/Notes.pdf' (output: 'delete: s3://cli-bucket-pcoady/Notes.pdf'), and 'aws s3 rb s3://cli-bucket-pcoady' (output: 'remove_bucket: cli-bucket-pcoady'). The prompt returns to 'pcoady:~/environment \$'.

Cleaning Up

In this section, we will remove the Cloud9 environment.

Go back to your Cloud9 Dashboard



Select your environment and click *Delete*

