Install this app :

<https://visualstudio.microsoft.com/free-developer-offers/>

Watch this video to understand how and what to execute :

<https://www.youtube.com/watch?v=I2cXlYYoQqQ>

Start installing following tools/libraries on your laptop :

Python

Pip

Nmp

Download project source code from :

https://github.com/hackeys/aws-cdk/blob/main/awscdkproj.zip

Output of the cdk deploy ;

IAM Statement Changes

┌───┬─────────────────────────────┬────────┬─────────────────────────────┬─────────────────────────────┬──────────────────────────────┐

│ │ Resource │ Effect │ Action │ Principal │ Condition │

├───┼─────────────────────────────┼────────┼─────────────────────────────┼─────────────────────────────┼──────────────────────────────┤

│ + │ ${CloudTrail/LogGroup.Arn} │ Allow │ logs:CreateLogStream │ AWS:${CloudTrail/LogsRole} │ │

│ │ │ │ logs:PutLogEvents │ │ │

├───┼─────────────────────────────┼────────┼─────────────────────────────┼─────────────────────────────┼──────────────────────────────┤

│ + │ ${CloudTrail/LogsRole.Arn} │ Allow │ sts:AssumeRole │ Service:cloudtrail.amazonaw │ │

│ │ │ │ │ s.com │ │

├───┼─────────────────────────────┼────────┼─────────────────────────────┼─────────────────────────────┼──────────────────────────────┤

│ + │ ${CloudTrail/S3.Arn} │ Allow │ s3:GetBucketAcl │ Service:cloudtrail.amazonaw │ │

│ │ │ │ │ s.com │ │

├───┼─────────────────────────────┼────────┼─────────────────────────────┼─────────────────────────────┼──────────────────────────────┤

│ + │ ${CloudTrail/S3.Arn}/AWSLog │ Allow │ s3:PutObject │ Service:cloudtrail.amazonaw │ "StringEquals": { │

│ │ s/${AWS::AccountId}/\* │ │ │ s.com │ "s3:x-amz-acl": "bucket-ow │

│ │ │ │ │ │ ner-full-control" │

│ │ │ │ │ │ } │

├───┼─────────────────────────────┼────────┼─────────────────────────────┼─────────────────────────────┼──────────────────────────────┤

│ + │ ${InstanceSSM.Arn} │ Allow │ sts:AssumeRole │ Service:ec2.${AWS::URLSuffi │ │

│ │ │ │ │ x} │ │

├───┼─────────────────────────────┼────────┼─────────────────────────────┼─────────────────────────────┼──────────────────────────────┤

│ + │ arn:${AWS::Partition}:s3::: │ Allow │ s3:GetBucket\* │ AWS:${InstanceSSM} │ │

│ │ {"Fn::Sub":"cdk-hnb659fds-a │ │ s3:GetObject\* │ │ │

│ │ ssets-${AWS::AccountId}-${A │ │ s3:List\* │ │ │

│ │ WS::Region}"} │ │ │ │ │

│ │ arn:${AWS::Partition}:s3::: │ │ │ │ │

│ │ {"Fn::Sub":"cdk-hnb659fds-a │ │ │ │ │

│ │ ssets-${AWS::AccountId}-${A │ │ │ │ │

│ │ WS::Region}"}/\* │ │ │ │ │

└───┴─────────────────────────────┴────────┴─────────────────────────────┴─────────────────────────────┴──────────────────────────────┘

IAM Policy Changes

┌───┬────────────────┬────────────────────────────────────────────────────────────────────┐

│ │ Resource │ Managed Policy ARN │

├───┼────────────────┼────────────────────────────────────────────────────────────────────┤

│ + │ ${InstanceSSM} │ arn:${AWS::Partition}:iam::aws:policy/AmazonSSMManagedInstanceCore │

└───┴────────────────┴────────────────────────────────────────────────────────────────────┘

Security Group Changes

┌───┬────────────────────────────────┬─────┬────────────┬─────────────────┐

│ │ Group │ Dir │ Protocol │ Peer │

├───┼────────────────────────────────┼─────┼────────────┼─────────────────┤

│ + │ ${sec-group-allow-ssh.GroupId} │ In │ TCP 22 │ 10.0.0.0/16 │

│ + │ ${sec-group-allow-ssh.GroupId} │ Out │ Everything │ Everyone (IPv4) │

└───┴────────────────────────────────┴─────┴────────────┴─────────────────┘

(NOTE: There may be security-related changes not in this list. See https://github.com/aws/aws-cdk/issues/1299)

Do you wish to deploy these changes (y/n)? y

Graphical user interface, text

Description automatically generated

Graphical user interface

Description automatically generated with medium confidence

**AWS Output :**

**Ec2 instance :**

Graphical user interface, text, application, email

Description automatically generated

VPC Created :

Graphical user interface

Description automatically generated

Subnet :

Graphical user interface, application

Description automatically generated

**Internet Gateway :**

Graphical user interface, text, application, email

Description automatically generated

**Security Group :**

Graphical user interface, text, application

Description automatically generated

**CloudWatch :**

Agent Script :

#!/bin/sh

# Use this to install software packages

echo "Userdata script did run" >> /tmp/script\_confirmation.txt

yum install -y amazon-cloudwatch-agent

amazon-cloudwatch-agent-ctl -a start

**Instance Monitoring :**

A screenshot of a computer

Description automatically generated

A screenshot of a computer

Description automatically generated

**Logs :**

Graphical user interface, table

Description automatically generated

**CloudTrail Logs made available to CloudWatch :**

Graphical user interface, application, table

Description automatically generated

**CloudTrail :**

Graphical user interface, application

Description automatically generated

**CloudTrail Log Storage in S3:**

Graphical user interface, text, application, Word

Description automatically generated

Graphical user interface

Description automatically generated with medium confidence