

CODESTAR-Build,test,deploy the python django application in Ec2.

pre-requires:

please read the complete java-spring application in ec2 [CODESTAR-Build,test,deploy the javaspring application in Ec2](#).

In this documentation most of the steps are similar to above java-spring app documentation, so i'm just giving reference on for some of the steps.

Create a Project(Python-Django app in ec2) in AWS CodeStar:

You use the AWS CodeStar console to create a project. If you use a project template, it sets up the required resources for you. The template also includes sample code that you can use to start coding.

To create a project, sign in to the AWS Management Console with an IAM user that has the `AWSCodeStarFullAccess` policy or equivalent permissions.

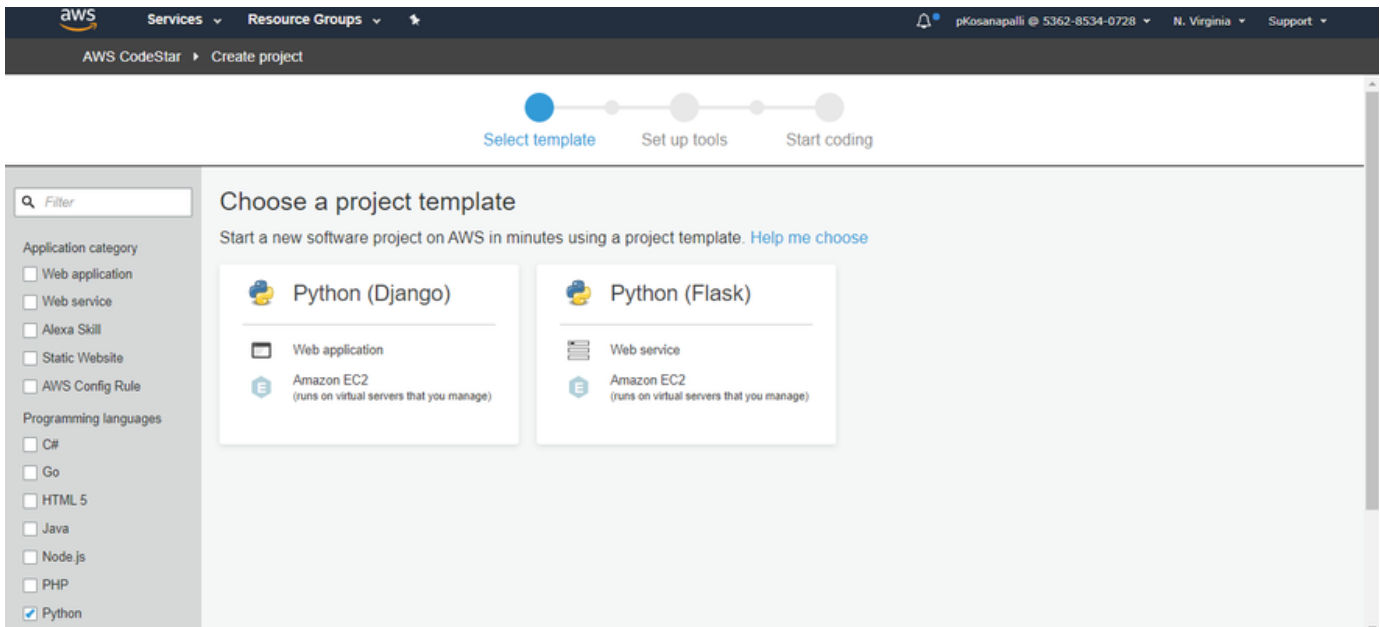
You must complete the steps in [How CodeStar - Getting started- how to create project in codestar in AWS](#) before you can complete the procedures in this topic.

Build, test, package& deploy the Python-Django application in ec2:

Use the AWS CodeStar console to create a project.

To create a project in AWS CodeStar

- Sign in to the AWS Management Console, and then open the AWS CodeStar console at <https://console.aws.amazon.com/codestar/>.
- On the **AWS CodeStar** page, choose **Create a new project**. (If you are the first user to create a project, choose **Start a project**.)
- On the **Choose a project template** page, choose the project type from the list of AWS CodeStar project templates. You can use the filter bar to narrow your choices. For example, for a web application project written in java spring to be deployed to Amazon EC2 instances, select the **Web application**, **python** and **Amazon EC2** check boxes. Then choose from the templates available for that set of options.



- In **Project name**, enter a name for the project, such as *My First Project*. The ID for the project is derived from this project name, but is limited to 15 characters.


For example, the default ID for a project named *My First Project* is *python-codestar-ec2*. This project ID is the basis for the names of all resources associated with the project. AWS CodeStar uses this project ID as part of the URL for your code repository and for the names of related security access roles and policies in IAM. After the project is created, the project ID cannot be changed. To edit the project ID before you create the project, choose **Edit**. Project IDs must be unique for your AWS account in an AWS Region.

Project details


Project name
python-codestar-ec2

Project ID ⓘ [Edit](#)
python-codestar

Which repository do you want to use?
AWS CodeStar will store the project's source code with the service you choose here.



AWS CodeCommit
Highly available Git source control from AWS.
Includes encryption, IAM integration, and more.



GitHub
Creates a GitHub source repository for this project.
Requires an existing GitHub account.

Repository name
python-codestar-ec2

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- Choose the repository provider, **AWS CodeCommit** or **GitHub**.
- If you chose **AWS CodeCommit**, for **Repository name**, accept the default AWS CodeCommit repository name, or enter a different one.
- If you chose **GitHub**, choose **Connect with GitHub**. go to this documentation [CODESTAR integration with github](#) .
- Choose **Next**. You can see the project details i.e codecommit, codebuild, code deploy, codepipeline, cloudwatch. these services are default created.

code commit- creates new repository.

codebuild - creates default codebuild service contains source, build environment(docker image,environment,service role),variables, build spec,artifacts, logs.

codedeploy - deployments, deployment groups (service role, compute platform.)

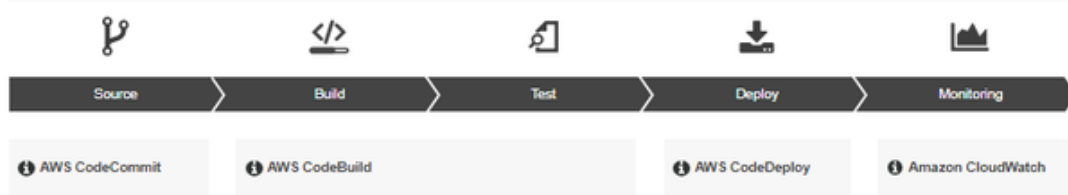
codepipeline- source,build,deploy.

- Review the resources and configuration details.

Review project details

[Edit Amazon EC2 configuration](#)

AWS CodeStar includes all of the tools and services you need for a development project.
This project includes an AWS CodePipeline connected with the following tools:

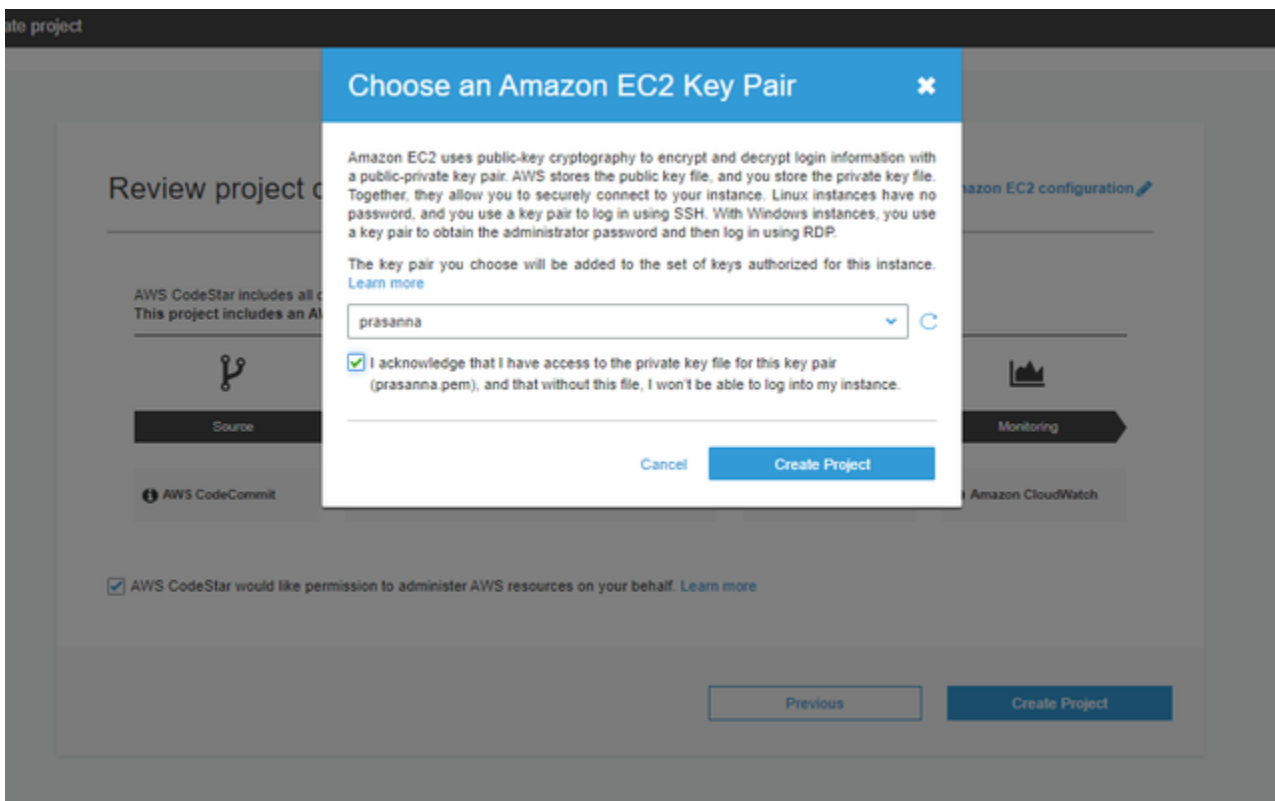


☒ AWS CodeStar would like permission to administer AWS resources on your behalf. [Learn more](#)

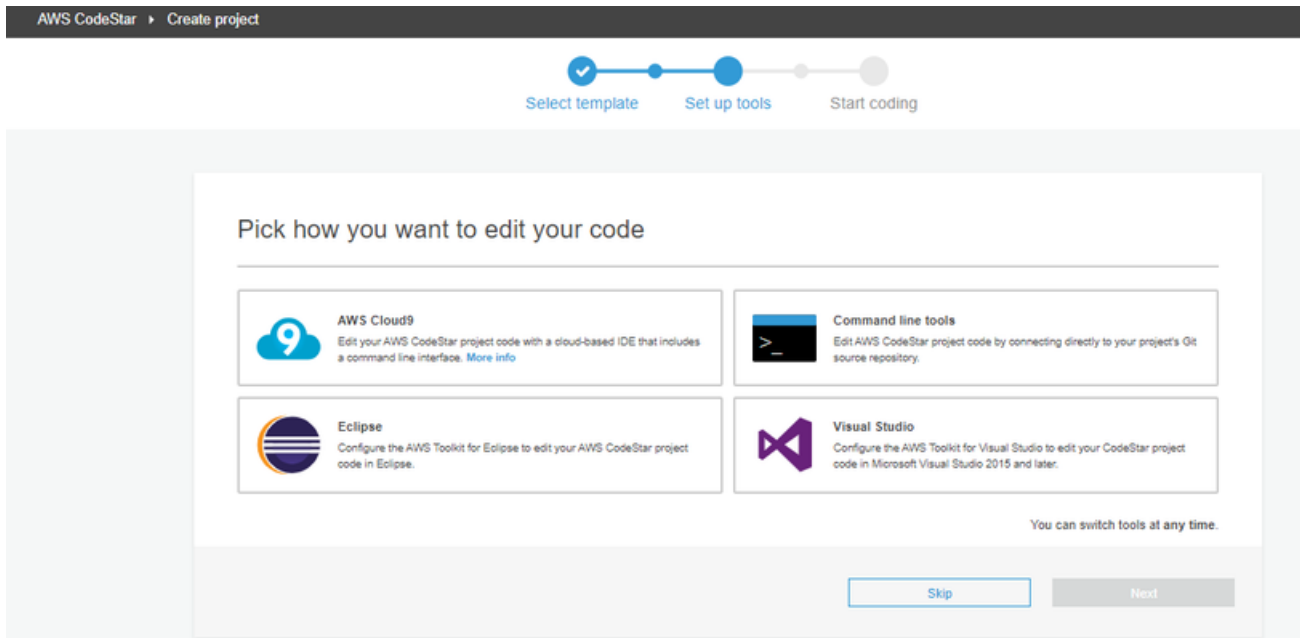
[Previous](#)

[Create Project](#)

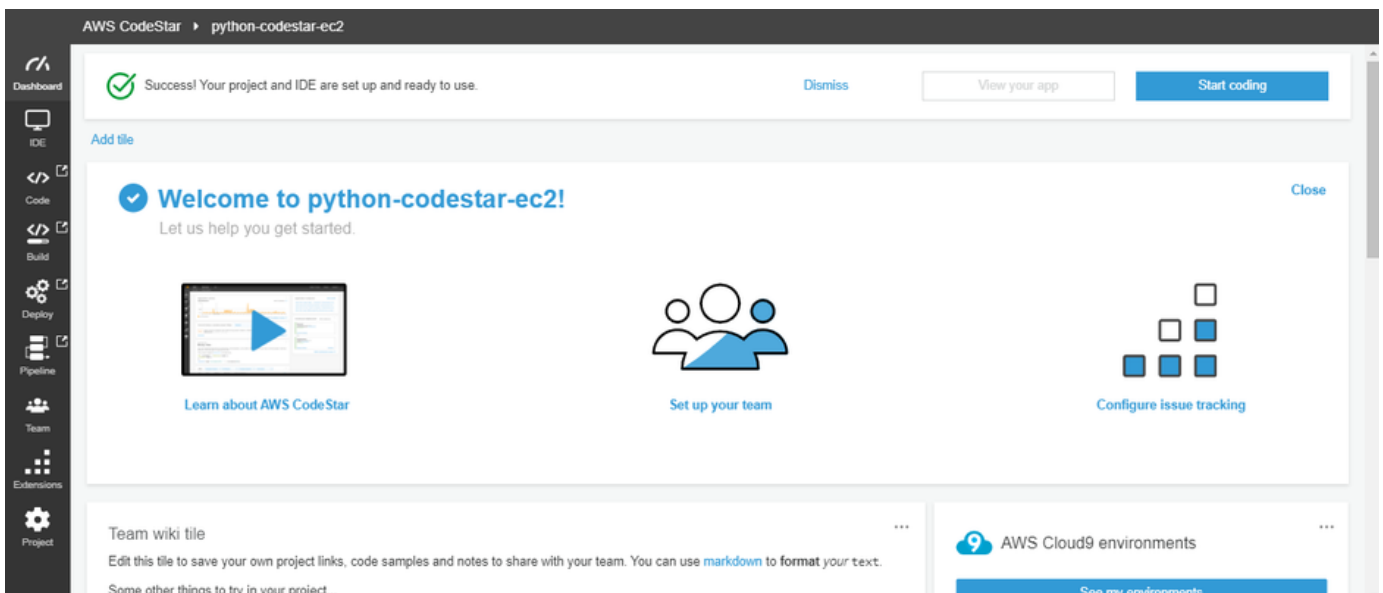
- In **Choose an Amazon EC2 Key Pair**, choose the Amazon EC2 key pair you created in keypairs.
- Select **I acknowledge that I have access to the private key file for this key pair**, and then choose **Create project**.



- It might take a few minutes to create the project (including the repository). After your project has a repository, you can use the **Set up tools** page to configure access to it, or you can choose **Skip** and configure access later.



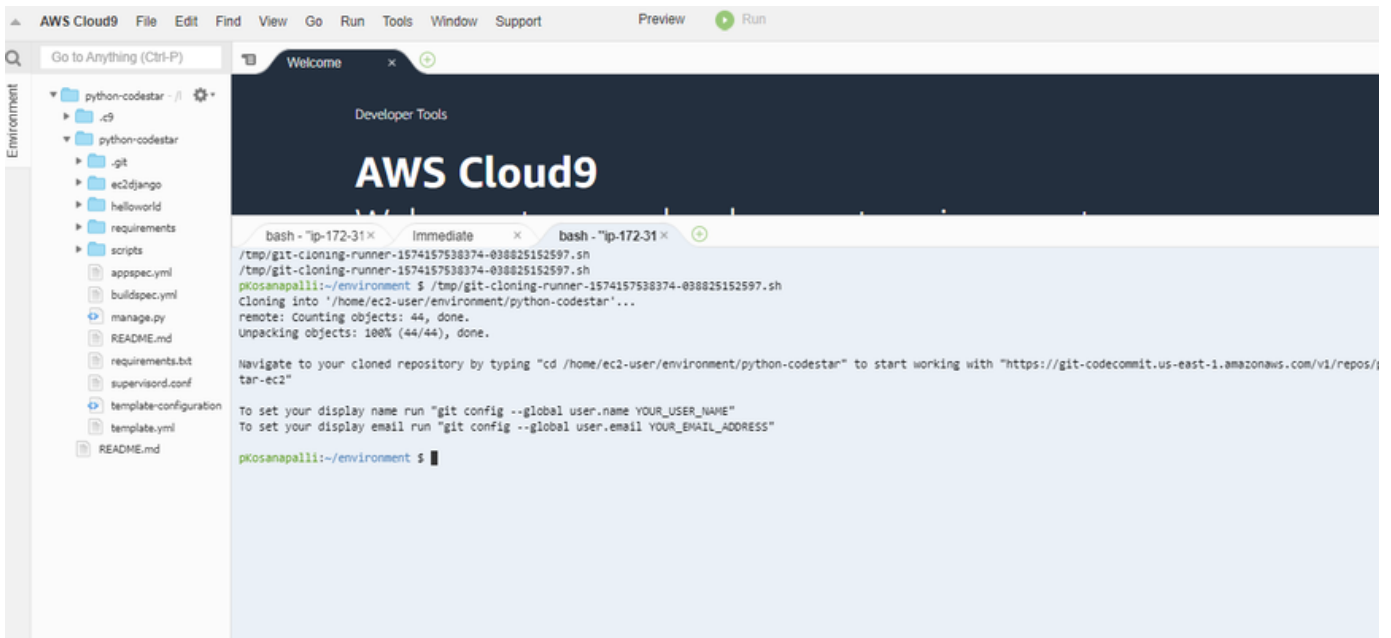
- After your project has been created, you can use the links on the **Welcome** tile to configure other items, such as your user profile in AWS CodeStar.



- While your project is being created, you can add team members or configure access to your project repository from the command line or your favorite IDE.
- You can connect your favorite IDE in any one of IDE's AWS cloud9, Eclipse, Vs code, AWS cli., for complete setup with IDE's, see the documentations here [Codestar integrate with IDEs- ECLIPSE, CLOUD9, CLI,VS CODE.](#)

Lets see the content of Welcome board of codestar project:

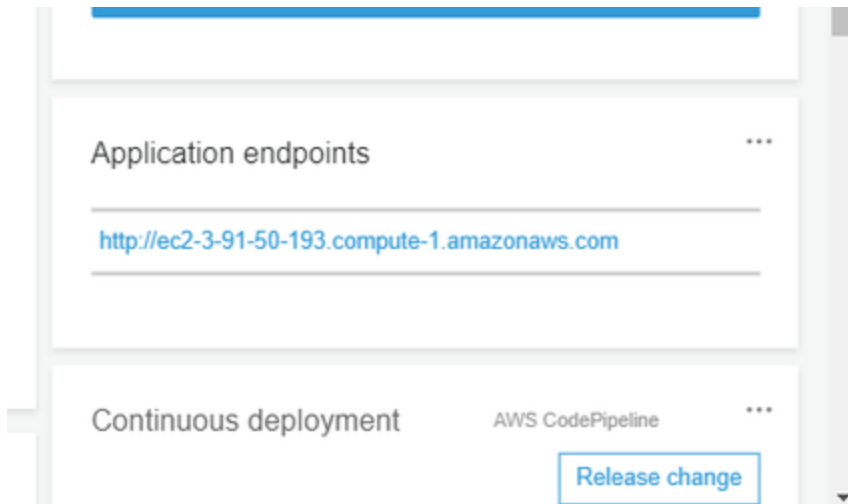
- first you can observe welcome page dashboard of the codestar project, which contains all collaborative services of aws and some of features of codestar.
- On the left side of dashboard you can observe some labels contains IDE, code, build, Deploy,pipeline, team,extensions, project see the below pics. more complete details refer the java-spring app. here im showing only python-django app in ec2.
- when ever you click the IDE, you can go to new page, that configure the favorite IDE setup.



- On the left side of dashboard you can observe some labels name code, build, deploy you click the code, you can go to new page, codestar is configure with new repo name python-codestar-ec2 and build,deploy also.
- this are the resources using for codestarproject. All resource under code-star (s3, codepipeline,ec2) is configured with cloud-formation (stored under secret) for complete background of architecture of CODESTAR is documented separately- [CODESTAR- background architecture](#).
- you can see the corresponding resource dashboard by clicking the corresponding urls in the pics.

Type	Name	ARN
AWS Cloud9	environment:7c3e571399ae4405b4fb7232...	arn:aws:cloud9:us-east-1:536285340728:environment:7c3e571399ae4405b4fb72323a5ec4f
AWS CloudFormation	stack/awscodestar-python-codestar/3a807...	arn:aws:cloudformation:us-east-1:536285340728:stack/awscodestar-python-codestar/3a807d80-0ab2-11ea-b00e-12cf...
AWS CloudFormation	stack/awscodestar-python-codestar-infrastr...	arn:aws:cloudformation:us-east-1:536285340728:stack/awscodestar-python-codestar-infrastructure/cc2fe9d0-0ab2-11...
AWS CodeBuild	project/python-codestar	arn:aws:codebuild:us-east-1:536285340728:project/python-codestar
AWS CodeCommit	python-codestar-ec2	arn:aws:codecommit:us-east-1:536285340728:python-codestar-ec2
AWS CodeDeploy	application:python-codestar	arn:aws:codedeploy:us-east-1:536285340728:application:python-codestar
AWS CodeDeploy	deploymentgroup:python-codestar/python-...	arn:aws:codedeploy:us-east-1:536285340728:deploymentgroup:python-codestar/python-codestar-Env
AWS CodePipeline	python-codestar-Pipeline	arn:aws:codepipeline:us-east-1:536285340728:python-codestar-Pipeline
AWS IAM	role/CodeStarWorker-python-codestar-Clo...	arn:aws:iam:536285340728:role/CodeStarWorker-python-codestar-CloudFormation
AWS IAM	role/CodeStarWorker-python-codestar-Tool...	arn:aws:iam:536285340728:role/CodeStarWorker-python-codestar-ToolChain
AWS IAM	policy/CodeStar_python-codestar_Permiss...	arn:aws:iam:536285340728:policy/CodeStar_python-codestar_PermissionsBoundary
AWS IAM	role/CodeStarWorker-python-codestar-We...	arn:aws:iam:536285340728:role/CodeStarWorker-python-codestar-WebApp
Amazon EC2	instance/i-0dad8f11c0b04e5b7	arn:aws:ec2:us-east-1:536285340728:instance/i-0dad8f11c0b04e5b7
Amazon EC2	security-group/sg-01820ec48de48ccaa	arn:aws:ec2:us-east-1:536285340728:security-group/sg-01820ec48de48ccaa
Amazon S3	aws-codestar-us-east-1-536285340728-py...	arn:aws:s3::aws-codestar-us-east-1-536285340728-python-codestar-pipe

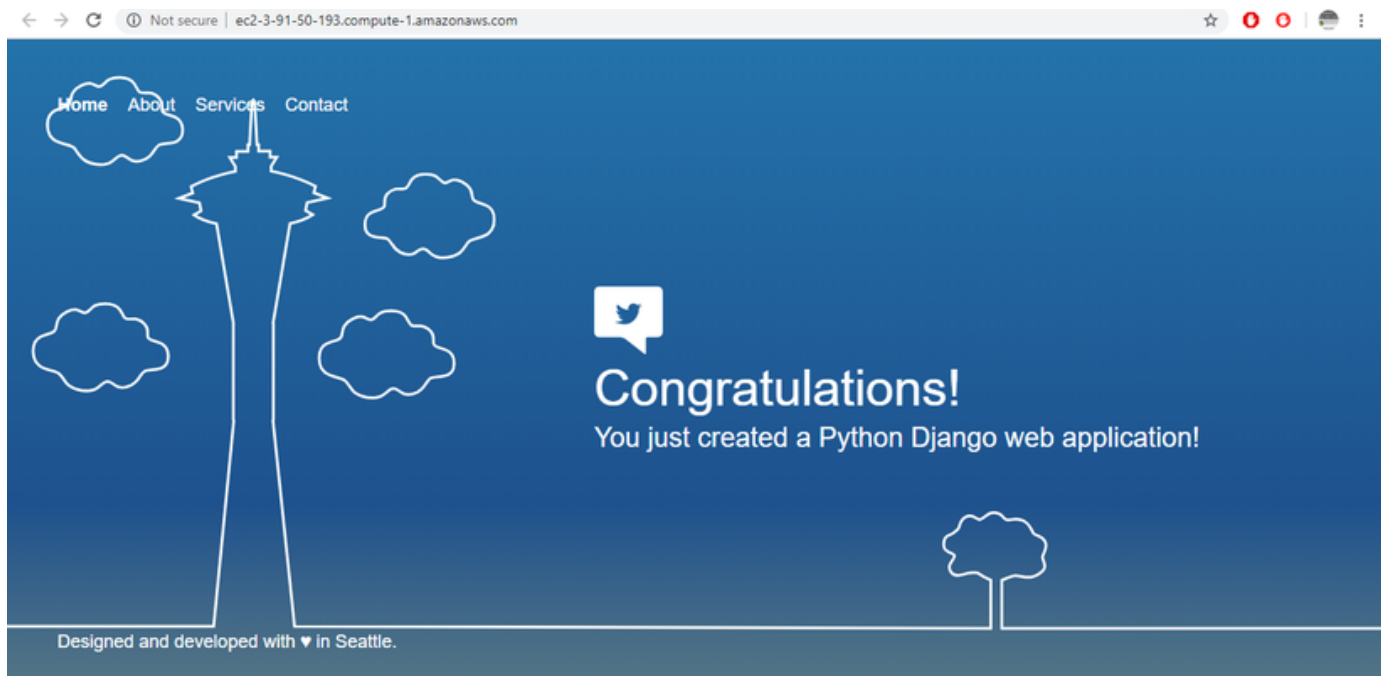
- Application endpoints- which are the configured for application output dashboard you can see the changes here by clicking the URL.



- Application activity - which can be monitor by the AWS cloudwatch for the application, click the cloudwatch details for more details.

Build, test, package& deploy the Python-Django application in ec2:

- Now we have created a python-django project in codestar.
- Go to project explore click the endpoint(url of application), redirect to new url of your application, this url can be configure based on our requirement in the DNS service.
- you can able to see the new python-django web application.



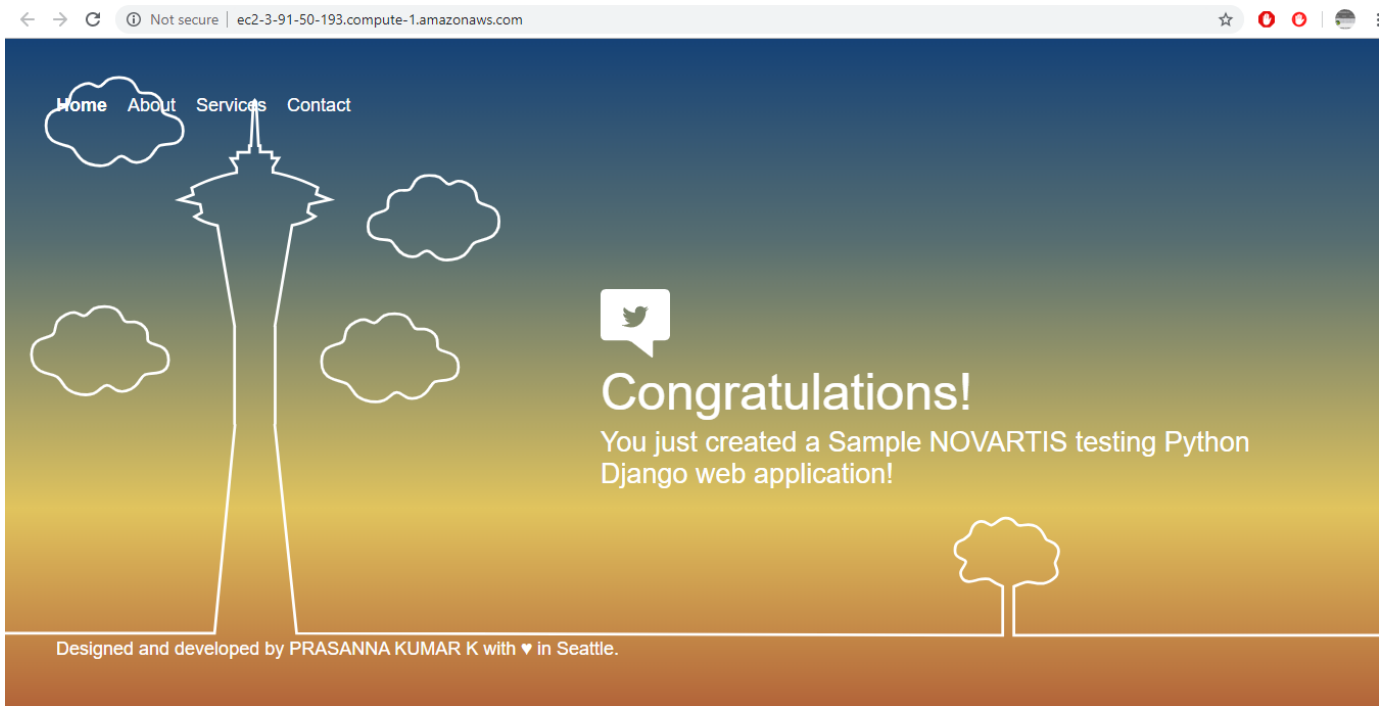
- Now go to the Cloud9 editor and modify the required changes and pull the changes to codestar. for more go to [Codestar integrate with IDEs- ECLIPSE, CLOUD9, CLI,VS CODE.](#)

The image displays two screenshots of the AWS Cloud9 IDE interface, showing the process of committing changes to a Git repository.

Top Screenshot: The editor shows the file `helloworld/templates/index.html`. The code includes a navigation bar, a message section with a Twitter link and a congratulatory message, and a footer. The terminal shows the command `git add .` and the output indicating that changes are staged for commit.

Bottom Screenshot: The terminal shows the command `git commit -m "adding new changes"` and the output indicating that the commit was successful. The commit message is "adding new changes".

- Now a new release is triggered in the code pipeline with latest changes. We have configured our code pipeline like this. Go to pipeline and check this.
- Go to the Url of the application, see the changes we made.



- Now we have done the build, test, deploy the python-django application.

How we build, test, deploy the Python-Django application in EC2:

- First lets see whats things in code commit(SCM), go to code commit & see the repo.



- lets see what it is

This sample code helps how simple Django web application deployed by AWS CodeDeploy and AWS CloudFormation to an Amazon EC2 server.

This sample includes:

README.md - this file

appspec.yml - this file is used by AWS CodeDeploy when deploying the web application to EC2

buildspec.yml - this file is used by AWS CodeBuild to build and test your application

requirements/ - this directory contains requirements files that describe the Python dependencies required for your Django application in different environments

requirements.txt - this file is used to install production Python dependencies

ec2django/ - this directory contains your Django project files. Note that this directory contains a Django config file (settings.py) that includes a pre-defined SECRET_KEY. Before running in a production environment, you should replace this application key with one you generate (see

<https://docs.djangoproject.com/en/1.11/howto/deployment/checklist/#secret-key> for details)

helloworld/ - this directory contains your Django application files

manage.py - this Python script is used to start your Django web application

scripts/ - this directory contains scripts used by AWS CodeDeploy when installing and deploying your application on the Amazon EC2 instance

supervisord.conf - this configuration file is used by Supervisor to control your web application on the Amazon EC2 instance

template.yml - this file contains the description of AWS resources used by AWS CloudFormation to deploy your infrastructure

template-configuration.json - this file contains the project ARN with placeholders used for tagging resources with the project ID

- lets see the code individually etc.

```
{
  "Tags":
  {

    "awscodestar:projectArn": "arn:$PARTITION$:codestar:$AWS_REGION$: $ACCOUNT_ID$:project/$PROJECT_ID$"
  }
}
```

all resources under this codestar project will be created with this naming configuration.

- Once after selecting the application type and deployment, we need to configure the required resources for codestar project i.e s3, codepipeline, ec2 instance. For that purpose we need to create cloud formation stack for creating the ec2 instance and configurations,

```

this is cloud formation stack for creating the ec2 instance with
specified default parameters and security group also.
AWSTemplateFormatVersion: 2010-09-09
Conditions:
  UseSubnet: !Not [!Equals [!Ref 'SubnetId', subnet-none]]
  IsBurstableInstanceType: !Equals [!Select [0, !Split ['.', !Ref
InstanceType]], t2]
Transform:
- AWS::CodeStar
Parameters:
  ProjectId:
    Type: String
    Description: AWS CodeStar project ID used to name project resources
and create roles.
  InstanceType:
    Type: String
    Description: The type of Amazon EC2 Linux instances that will be
launched for this project.
  WebAppInstanceProfile:
    Type: String
    Description: The IAM role that will be created for the Amazon EC2
Linux instances.
  ImageId:
    Type: String
    Description: The Amazon EC2 Linux instance Amazon Machine Image
(AMI), which designates the configuration of the new instance.
  KeyPairName:
    Type: String
    Description: The name of an existing Amazon EC2 key pair in the
region where the project is created, which you can use to SSH into the
new Amazon EC2 Linux instances.
  VpcId:
    Type: String
    Description: The ID of the Amazon Virtual Private Cloud (VPC) to use
for Amazon EC2 instances.
  SubnetId:
    Type: String
    Description: The name of the VPC subnet to use for Amazon EC2
instances launched for this project.
  Stage:
    Type: String
    Description: The name for a project pipeline stage, such as Staging
or Prod, for which resources are provisioned and deployed.
    Default: ''
Resources:
  WebApp01:

```

Description: The installation and configuration commands this project will use to create instances that support this sample web application.

Properties:

CreditSpecification:

CPUCredits: !If [IsBurstableInstanceType, unlimited, !Ref 'AWS::NoValue']

IamInstanceProfile: !Ref 'WebAppInstanceProfile'

ImageId: !Ref 'ImageId'

InstanceType: !Ref 'InstanceType'

KeyName: !Ref 'KeyName'

NetworkInterfaces:

- AssociatePublicIpAddress: true

DeviceIndex: 0

GroupSet:

- !Ref 'WebAppSG'

SubnetId: !If

- UseSubnet

- !Ref 'SubnetId'

- !Ref 'AWS::NoValue'

Tags:

- Key: Environment

Value: !Sub '\${ProjectId}-WebApp\${Stage}'

- Key: Name

Value: !Sub '\${ProjectId}-WebApp\${Stage}'

UserData:

Fn::Base64:

Fn::Sub: |

#!/bin/bash -ex

Install the AWS CodeDeploy Agent.

cd /home/ec2-user/

wget

[https://aws-codedeploy-\\${AWS::Region}.s3.amazonaws.com/latest/codedeploy-agent.noarch.rpm](https://aws-codedeploy-${AWS::Region}.s3.amazonaws.com/latest/codedeploy-agent.noarch.rpm)

yum -y install codedeploy-agent.noarch.rpm

Install the Amazon CloudWatch Logs Agent.

wget

<https://s3.amazonaws.com/aws-cloudwatch/downloads/latest/awslogs-agent-setup.py>

wget

https://s3.amazonaws.com/aws-codedeploy-us-east-1/cloudwatch/codedeploy_logs.conf

wget

<https://s3.amazonaws.com/aws-codedeploy-us-east-1/cloudwatch/awslogs.conf>

chmod +x ./awslogs-agent-setup.py

python awslogs-agent-setup.py -n -r \${AWS::Region} -c

./awslogs.conf

mkdir -p /var/awslogs/etc/config

cp codedeploy_logs.conf /var/awslogs/etc/config/

```
        service awslogs restart
    Type: AWS::EC2::Instance
    WebAppSG:
        Description: The default Amazon EC2 security group that will be
        created for the Amazon EC2 Linux instances.
        Type: AWS::EC2::SecurityGroup
        Properties:
            GroupDescription: Enable HTTP access via port 80 and SSH access
            via port 22.
            SecurityGroupIngress:
                - IpProtocol: tcp
                  FromPort: '80'
                  ToPort: '80'
                  CidrIp: 0.0.0.0/0
                - IpProtocol: tcp
                  FromPort: '22'
                  ToPort: '22'
```

```
CidrIp: 0.0.0.0/0  
VpcId: !Ref 'VpcId'
```

- Now we have Ec2 instance for deployment, now we need to configure the instance for django app deployment . After instance created, this cloudformation stack created and this script runs includes(shell scripts).

```

version: 0.0
os: linux
files: (copy file from agent)
  - source: /ec2django/
    destination: /home/ec2-user/ec2django
  - source: /helloworld/
    destination: /home/ec2-user/helloworld
  - source: /manage.py
    destination: /home/ec2-user
  - source: /supervisord.conf
    destination: /home/ec2-user
  - source: /requirements.txt
    destination: /home/ec2-user
  - source: /requirements/
    destination: /home/ec2-user/requirements

permissions:
  - object: /home/ec2-user/manage.py
    owner: ec2-user
    mode: 644
    type:
      - file
  - object: /home/ec2-user/supervisord.conf
    owner: ec2-user
    mode: 644
    type:
      - file
hooks:
  AfterInstall:
    - location: scripts/install_dependencies
      timeout: 300
      runas: root
    - location: scripts/codestar_remote_access
      timeout: 300
      runas: root
    - location: scripts/start_server
      timeout: 300
      runas: root

  ApplicationStop:
    - location: scripts/stop_server
      timeout: 300
      runas: root

```

- The scripts are below install priority wise.

/scripts/codestar_remoteaccess	/scripts/install_dependencies	/scripts/start_server
--------------------------------	-------------------------------	-----------------------

<pre>#!/bin/bash # Install AWS CodeStar remote access management. # Allows project members to remotely access Amazon EC2 instances running Linux associated with the project. wget -O /usr/local/bin/get_authorized_keys https://awscode-star-templates-common.s3.amazonaws.com/us-east-1/get_authorized_keys chmod 755 /usr/local/bin/get_authorized_keys sed -i '/AuthorizedKeysCommand /s/.*AuthorizedKeysCommand Vusr/local/bin/get_authorized_keys/g' /etc/ssh/sshd_config sed -i '/AuthorizedKeysCommandUser /s/.*AuthorizedKeysCommandUser root/g' /etc/ssh/sshd_config /etc/init.d/sshd restart yum update -y aws-cfn-bootstrap yum install -y aws-cli # Install pip and python dev libraries. yum install -y python27-devel python27-pip gcc pip install boto3 pip install pycryptodome</pre>	<pre>#!/bin/bash yum update easy_install pip pip install supervisor==3.3.4 yum -y install python36 python36-virtualenv python36-pip cd /home/ec2-user virtualenv-3.6 environment source environment/bin/activate pip install -r requirements.txt</pre>	<pre>cd /home/ec2-user source environment/bin/activate python manage.py collectstatic --noinput /usr/local/bin/supervisord -c /home/ec2-user/supervisord.conf</pre>
--	--	---

- Till now we have done deployment configurations in ec2 instance. What about build part, let see codebuild.

Code-build - build the python-django app specifications:-

- Code-build- the code will be build in containers remote agent and store the artifacts in s3 instance. So lets see the specifications in code build.
- project configurations- related to name,Project ARN, description,tags.
- Source- its taken default code pipeline which is reflected by code-star.

```

version: 0.2
phases:
  install:
    runtime-versions:
      python: 3.7
    commands:
      # Install dependencies needed for running tests
      - pip install -r requirements/common.txt
  pre_build:
    commands:
      # Discover and run unit tests. For more information, see
      <https://docs.djangoproject.com/en/2.0/topics/testing/overview/>
      - python manage.py test
  post_build:
    commands:
      # Do not remove this statement. This command is required for AWS
      CodeStar projects.
      # Update the AWS Partition, AWS Region, account ID and project ID
      in the project ARN in template-configuration.json file so AWS
      CloudFormation can tag project resources.
      - sed -i.bak
      's/\$PARTITION\$/'\${PARTITION}\'/g;s/\$AWS_REGION\$/'\${AWS_REGION}\'/g;s/\$
      ACCOUNT_ID\$/'\${ACCOUNT_ID}\'/g;s/\$PROJECT_ID\$/'\${PROJECT_ID}\'/g'
      template-configuration.json
artifacts:
  type: zip
  files:
    - 'template.yml'
    - 'ec2django/**/*'
    - 'helloworld/**/*'
    - 'scripts/**/*'
    - 'appspec.yml'
    - 'manage.py'
    - 'requirements/**/*'
    - 'requirements.txt'
    - 'supervisord.conf'
    - 'template-configuration.json'

```

- build environment, this python-django application will be build in a container(remote) with specification image, environment, compute etc.
- build spec- this will allow you to build and archive the application.
- Artifacts- this will store the archived files in the s3 bucket.
- logs - Cloudwatch is configure for monitoring the application.
- build steps is mentioned in the builspec.yml.
- This application is build with python command and give the command to run django server application
- you can able to see the build details and builds history.
- Artifacts will be store in a S3 bucket configure by cloud formation see the codestar project.

Project configuration

Edit

Name
python-codestar

Description
AWS CodeStar created CodeBuild Project for python-codestar

Project ARN
arn:aws:codebuild:us-east-1:536285340728:project/python-codestar

► Tags

Source

Edit

Source provider	Source identifier	Repository	Source version
AWS CodePipeline	-	-	-
Git clone depth	Git submodules		
Full	False		

Environment

Edit

Image aws/codebuild/standard:2.0	Environment type Linux	Compute 3 GB memory, 2 vCPUs	Privileged False
Service role arn:aws:iam::536285340728:role/CodeStarWorker-python-codestar-ToolChain	Timeout 1 hour 0 minutes	Queued timeout 8 hours 0 minutes	Certificate -
Registry credential -			

► VPC

▼ Environment variables

Name	Value	Type
S3_BUCKET	aws-codestar-us-east-1-536285340728-python-codestar-pipe	PLAINTEXT
WEBSITE_S3_PREFIX	NoVal	PLAINTEXT
WEBSITE_S3_BUCKET	NoVal	PLAINTEXT
PROJECT_ID	python-codestar	PLAINTEXT
ACCOUNT_ID	536285340728	PLAINTEXT

Buildspec

Edit

Using the buildspec.yml in the source code root directory

Artifacts

Edit

Artifact identifier	Artifacts upload location	Packaging
-	-	Zip
Cache type	Cache location	Encryption key
No cache	-	arn:aws:kms:us-east-1:536285340728:alias/aws/s3

Logs

Edit

CloudWatch logs	CloudWatch group name	CloudWatch stream name
-	-	-
S3 logs	S3 location	Encryption disabled
-	-	-

python-codestar

Notify

Edit

Delete build project

Start build

Configuration

Source provider	Primary repository	Artifacts upload location	Build badge
AWS CodePipeline	-	-	Disabled

Build history

Build details

Build triggers

Metrics

Build history

Stop build

View artifacts

View logs

Delete builds

Retry build

	Build run	Status	Build Number	Source version	Submitter	Duration	Completed
<input type="checkbox"/>	python-codestar:cb1e3792-ad5a-4a26-aaaa-faec37b1861a	✓ Succeeded	1	arn:aws:s3::aws-codestar-us-east-1-536285340728-python-codestar-pipe/python-codestar-Pipe/python-cod/NPO16YF	codepipeline/python-codestar-Pipeline	31 seconds	5 minutes ago

- for code quality coverage, sonar is generating the results to sonar instance.

Code deploy- configurations:

- lets go to code deploy configurations, deployment group details i.e compute platform
- deployment group details- compute platform(tag of cloudformation ec2).
- deployment revisions are taking from s3 bucket (archived files of build).
- Go to each deployment id, you can see the configurations.

python-codestar

[Notify](#)[Delete application](#)

Application details

Name

python-codestar

Compute platform

EC2/On-premises

[Deployments](#)[Deployment groups](#)[Revisions](#)

Deployment groups

[View details](#)[Edit](#)[Create deployment group](#)

< 1 >

	Name	Status	Last attempted deployment	Last successful deployment	Trigger count
<input type="radio"/>	python-codestar-Env	✓ Succeeded	Nov 19, 2019 3:29 PM	Nov 19, 2019 3:29 PM	0

python-codestar-Env

[Edit](#)[Delete](#)[Create deployment](#)

Deployment group details

Deployment group name

python-codestar-Env

Application name

python-codestar

Compute platform

EC2/On-premises

Deployment type

In-place

Service role ARN

arn:aws:iam::536285340728:role/CodeStarWorker-
python-codestar-ToolChain

Deployment configuration

CodeDeployDefault.OneAtATime

Rollback enabled

False

Environment configuration: Amazon EC2 instances

Key

Value

Environment

python-codestar-WebApp

The screenshot shows the AWS CodeDeploy console for deployment **d-8ELDFE701**. The deployment is in a **Succeeded** state. The left sidebar shows the navigation menu with **Deployment** selected. The main content area displays the following information:

- Deployment configuration:** CodeDeployDefault.OneAtATime
- Deployment group:** python-codestar-Env
- Initiated by:** User action

Revision details:

Revision location	Revision created	Revision description
s3://aws-codestar-us-east-1-536285340728-python-codestar-pipe/python-codestar-Pipe/python-cod/SFpHNoj?versionId=n.hyt78VnH5UJUn2YVDHWhieQkYwHo&eTag=dd862a58d68478b7538691fd694ba6d5	3 minutes ago	Application revision registered by Deployment ID: d-8ELDFE701


Deployment lifecycle events:

Instance ID	Duration	Status	Most recent event	Events	Start time	End time
i-0dad8f11c6064e5b7	37 seconds	Succeeded	ValidateService	View events	Nov 19, 2019 3:28 PM	Nov 19, 2019 3:29 PM

d-8ELDFE701

Deployment status

Installing application on your instances 1 of 1 instances updated

 **Succeeded**

Deployment details

Application python-codestar	Deployment ID d-8ELDFE701	Status Succeeded
Deployment configuration CodeDeployDefault.OneAtATime	Deployment group python-codestar-Env	Initiated by User action
Deployment description -		

Code pipeline- configurations:

- Go to code star project code-pipeline see the stages.
- you can click each stage, it will be redirect.
- AWS cloudformation for creating ec2 instance.
- AWS code deploy- code will be deploy here.
- click the release change in pipeline, the trigger will be started.
- The triggers can be also configure based on over requirement at specific stage level code build/code-deploy.
- we can add the stages at any specified point and need to configure the task.

python-codestar-Pipeline

Notify Edit Clone pipeline View history Release change

Source

View current revisions

ApplicationSource
AWS CodeCommit

Succeeded - 5 minutes ago
dd67deff

dd67deff ApplicationSource: Initial commit by AWS CodeCommit

Disable transition

Build

View current revisions

PackageExport
AWS CodeBuild

Succeeded - 4 minutes ago
Details

dd67deff ApplicationSource: Initial commit by AWS CodeCommit

Deploy

View current revisions

GenerateChangeSet
AWS CloudFormation

Succeeded - 4 minutes ago
Details

↓

ExecuteChangeSet
AWS CloudFormation

Succeeded - 2 minutes ago
Details

↓

Deploy
AWS CodeDeploy

Succeeded - 1 minute ago
Details

dd67deff ApplicationSource: Initial commit by AWS CodeCommit

Note: What's next ? How to debug the application

How to debug the code star project application:

- Go to project dashboard project resources click the corresponding resources.
- click the ec2 instances, redirect console and try to login to the instance.
- Here we can observe the tomcat web-apps root directory, that is the war file of what we accessing the application. we can debugg if any issues facing in the application.
- Code build will store the artifacts in s3. The same artifacts will be taken as source for deployment purpose in code deploy.
- For any role based access go to IAM configurations, debug if any issues faced.
- go to cloudwatch for monitoring the code-build.

python-codestar:753ac72a-136b-4fb3-ad18-0b3a891fd8a7

Stop build

Retry build

Build status

Status	Initiator	Build ARN	Resolved source version
 Succeeded	codepipeline/python-codestar-Pipeline	arn:aws:codebuild:us-east-1:536285340728:build/python-codestar:753ac72a-136b-4fb3-ad18-0b3a891fd8a7	53cc35d9c07e6a64db1783a7167a3fc64d48a6c8
Start time	End time	Build Number	
Nov 20, 2019 10:21 AM	Nov 20, 2019 10:21 AM	3	

Build logs

Phase details

Environment variables

Build details

Showing the last 69 lines of the build log. [View entire log](#)

Tail logs

Show previous logs

```
1 [Container] 2019/11/20 04:51:42 Waiting for agent ping
2 [Container] 2019/11/20 04:51:44 Waiting for DOWNLOAD_SOURCE
3 [Container] 2019/11/20 04:51:44 Phase is DOWNLOAD_SOURCE
4 [Container] 2019/11/20 04:51:44 CODEBUILD_SRC_DIR=/codebuild/output/src169440935/src
5 [Container] 2019/11/20 04:51:44 YAML location is /codebuild/output/src169440935/src/buildspec.yml
6 [Container] 2019/11/20 04:51:44 Processing environment variables
7 [Container] 2019/11/20 04:51:44 Moving to directory /codebuild/output/src169440935/src
8 [Container] 2019/11/20 04:51:44 Registering with agent
```



Services

Resource Groups



pkonnapalli @ 5362-8534-0728

N. Virginia

Support

CloudWatch

Dashboards

Alarms

ALARM

INSUFFICIENT

OK

Billing

Logs

Log groups

Insights

Metrics

Events

Rules

Event Buses

Settings

Favorites

Add a dashboard

CloudWatch > Log Groups > /aws/codebuild/python-codestar > 753ac72a-136b-4fb3-ad18-0b3a891fd8a7

Expand all

Row

Text





Filter events


all 30s 5m 1h 6h 1d 1w custom

Time (UTC +00:00)	Message
2019-11-20	
04:51:56	[Container] 2019/11/20 04:51:53 Phase complete: BUILD State: SUCCEEDED
04:51:56	[Container] 2019/11/20 04:51:53 Phase context status code: Message:
04:51:56	[Container] 2019/11/20 04:51:54 Entering phase POST_BUILD
04:51:56	[Container] 2019/11/20 04:51:54 Running command sed -i.bak 's/\$(PARTITION)/\$(PARTITION)/' /ig 's/\$(AWS_REGION)/\$(AWS_REGION)/' /ig 's/\$(ACCOUNT_ID)/\$(ACCOUNT_ID)/' /ig 's/\$(PROJECT_ID)/\$(PROJECT_ID)/'
04:51:56	[Container] 2019/11/20 04:51:54 Phase complete: POST_BUILD State: SUCCEEDED
04:51:56	[Container] 2019/11/20 04:51:54 Phase context status code: Message:
04:51:56	[Container] 2019/11/20 04:51:54 Expanding base directory path: .
04:51:56	[Container] 2019/11/20 04:51:54 Assembling file list
04:51:56	[Container] 2019/11/20 04:51:54 Expanding .
04:51:56	[Container] 2019/11/20 04:51:54 Expanding file paths for base directory .
04:51:56	[Container] 2019/11/20 04:51:54 Assembling file list
04:51:56	[Container] 2019/11/20 04:51:54 Expanding template.yml
04:51:56	[Container] 2019/11/20 04:51:54 Expanding ec2django/**/*
04:51:56	[Container] 2019/11/20 04:51:54 Expanding helloworld/**/*
04:51:56	[Container] 2019/11/20 04:51:54 Expanding scripts/**/*
04:51:56	[Container] 2019/11/20 04:51:54 Expanding appspec.yml
04:51:56	[Container] 2019/11/20 04:51:54 Expanding manage.py
04:51:56	[Container] 2019/11/20 04:51:54 Expanding requirements.txt
04:51:56	[Container] 2019/11/20 04:51:54 Expanding requirements.txt
04:51:56	[Container] 2019/11/20 04:51:54 Expanding supervisord.conf
04:51:56	[Container] 2019/11/20 04:51:54 Expanding template-configuration.json
04:51:56	[Container] 2019/11/20 04:51:54 Found 41 file(s)
04:51:56	[Container] 2019/11/20 04:51:54 Phase complete: UPLOAD_ARTIFACTS State: SUCCEEDED
04:51:56	[Container] 2019/11/20 04:51:54 Phase context status code: Message:

No newer events found at the moment. [Retry](#)


```
ec2-user@ip-172-31-22-21:~$
$ package(s) needed for security, out of 16 available
Run "sudo yum update" to apply all updates.
[ec2-user@ip-172-31-22-21 ~]$ ls
awslogs-agent-setup.py  codedeploy-agent.noarch.rpm  ec2django  helloworld  requirements  static
awslogs.conf            codedeploy_logs.conf        environment  manage.py   requirements.txt  supervisord.conf
[ec2-user@ip-172-31-22-21 ~]$ cd helloworld/
[ec2-user@ip-172-31-22-21 helloworld]$ ls
admin.py  apps.py  __init__.py  migrations  models.py  __pycache__  static  templates  tests.py  urls.py  views.py
[ec2-user@ip-172-31-22-21 helloworld]$ cd ..
[ec2-user@ip-172-31-22-21 ~]$ ls
awslogs-agent-setup.py  codedeploy-agent.noarch.rpm  ec2django  helloworld  requirements  static
awslogs.conf            codedeploy_logs.conf        environment  manage.py   requirements.txt  supervisord.conf
[ec2-user@ip-172-31-22-21 ~]$ cd requirements
[ec2-user@ip-172-31-22-21 requirements]$ ls
common.txt  dev.txt  prod.txt
[ec2-user@ip-172-31-22-21 requirements]$ cd ..
[ec2-user@ip-172-31-22-21 ~]$ ls
awslogs-agent-setup.py  codedeploy-agent.noarch.rpm  ec2django  helloworld  requirements  static
awslogs.conf            codedeploy_logs.conf        environment  manage.py   requirements.txt  supervisord.conf
[ec2-user@ip-172-31-22-21 ~]$ cd ec2django/
[ec2-user@ip-172-31-22-21 ec2django]$ ls
__init__.py  pip-selfcheck.json  __pycache__  settings.py  urls.py  wsgi.py
[ec2-user@ip-172-31-22-21 ec2django]$ cd ..
[ec2-user@ip-172-31-22-21 ~]$ ls
awslogs-agent-setup.py  codedeploy-agent.noarch.rpm  ec2django  helloworld  requirements  static
awslogs.conf            codedeploy_logs.conf        environment  manage.py   requirements.txt  supervisord.conf
[ec2-user@ip-172-31-22-21 ~]$ netstat -altp
(No info could be read for "-p": geteuid()=500 but you should be root.)
Active Internet connections (servers and established)
Proto Recv-Q Send-Q Local Address          Foreign Address         State       PID/Program name
tcp        0      0 *:sunrpc                *:                        LISTEN      -
tcp        0      0 *:http                  *:                        LISTEN      -
tcp        0      0 *:ssh                   *:                        LISTEN      -
tcp        0      0 localhost:smtp          *:                        LISTEN      -
tcp        0      0 *:49985                 *:                        LISTEN      -
tcp        0 464 ip-172-31-22-21.ec2.int:ssh 27.59.168.221:f5-iquery ESTABLISHED -
tcp        54      0 ip-172-31-22-21.ec2.i:43228 52.94.229.96:https      CLOSE_WAIT -
tcp        0      0 ip-172-31-22-21.ec2.i:36520 52.46.157.48:https      ESTABLISHED -
tcp        54      0 ip-172-31-22-21.ec2.i:52760 54.239.27.146:https     CLOSE_WAIT -
tcp        54      0 ip-172-31-22-21.ec2.i:57388 s3-1-w.amazonaws.com:https CLOSE_WAIT -
tcp        0      0 *:sunrpc                *:                        LISTEN      -
tcp        0      0 *:ssh                   *:                        LISTEN      -
tcp        0      0 *:40219                 *:                        LISTEN      -
```


 **Services** ▾ **Resource Groups** ▾ 

 pKosanapalli @ 5362-8534-0728 ▾ Global ▾ Support ▾

Amazon S3 > aws-codestar-us-east-1-536285340728-python-codestar-pipe > python-codestar-Pipe > python-cod

Overview

 Upload

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Actions ▾






Versions

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US East (N. Virginia) 

Viewing 1 to 6

<input type="checkbox"/> Name ▾	Last modified ▾	Size ▾	Storage class ▾
<input type="checkbox"/>  NPO16YF	Nov 19, 2019 3:24:54 PM GMT+0530	17.2 KB	Standard
<input type="checkbox"/>  SFpHNoj	Nov 19, 2019 3:25:27 PM GMT+0530	20.8 KB	Standard
<input type="checkbox"/>  aTkuN4H	Nov 20, 2019 10:21:22 AM GMT+0530	17.3 KB	Standard
<input type="checkbox"/>  IXsZ1Eg	Nov 19, 2019 6:05:09 PM GMT+0530	20.8 KB	Standard
<input type="checkbox"/>  x0phUqY	Nov 19, 2019 6:04:38 PM GMT+0530	17.3 KB	Standard

that done !!!