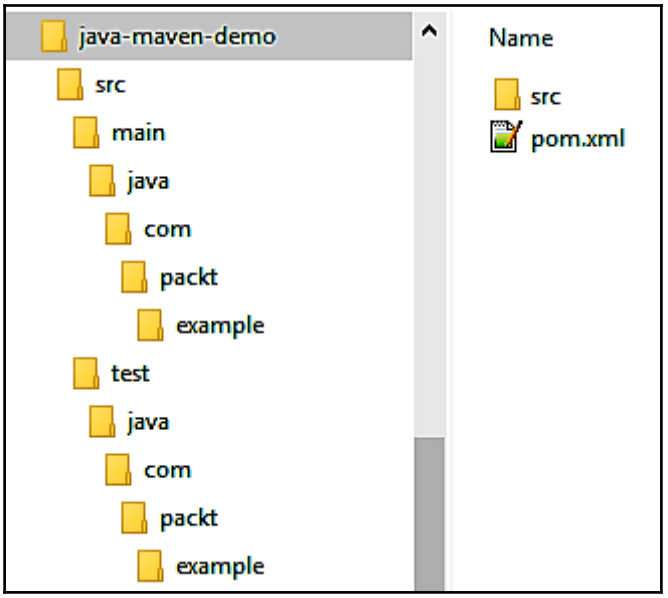
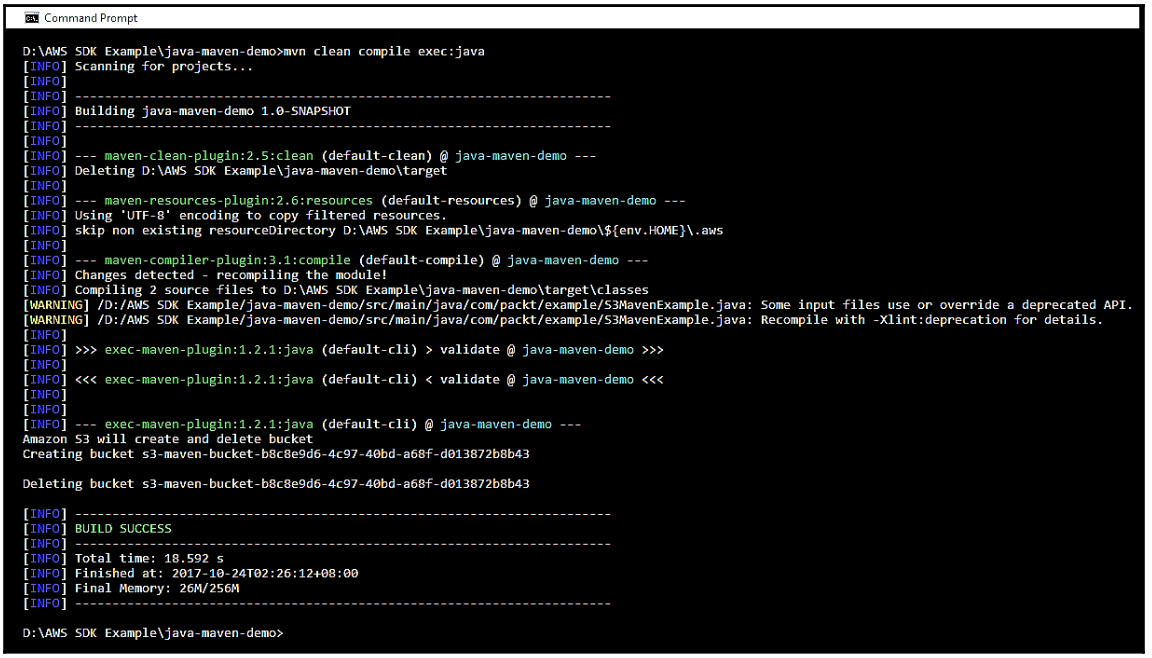
Chapter 1: AWS Tools and SDKs

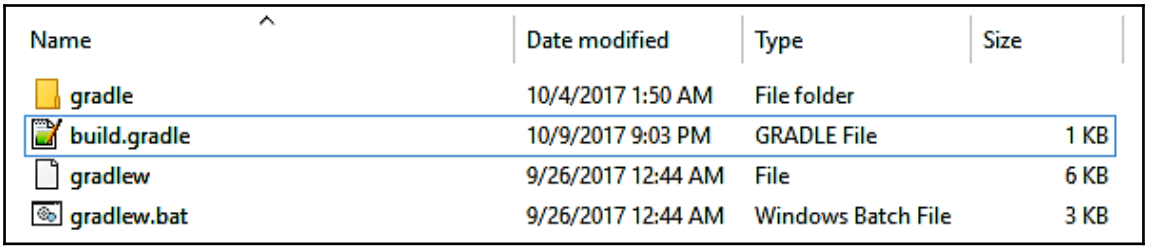
Programming Language SDKs	Java	Node.js	Python
	Go	.Net	C++
	JavaScript	Ruby	PHP
IoT Devices SDKs	Embedded C	JavaScript	Arduino Yún
	Java	Python	C++
Mobile Devices SDKs	Android	iOS	Xamarin
	Unity	React Native	

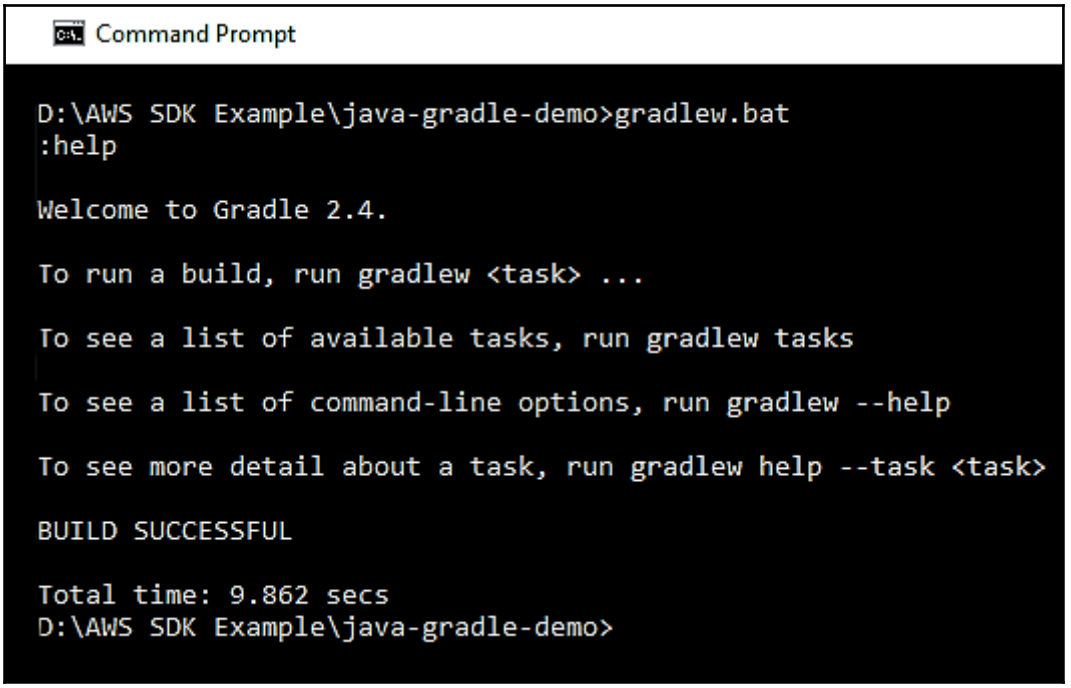
```
D:\AWS SDK Example>mvn archetype:generate -DarchetypeGroupId=org.apache.maven.archetypes -DarchetypeArtifactId=maven-archetype-quickstart
[INFO] Scanning for projects...
[INFO]
[INFO] ------------------------------------------------------------------------
[INFO] Building Maven Stub Project (No POM) 1
[INFO] ------------------------------------------------------------------------
[INFO]
[INFO] >>> maven-archetype-plugin:3.0.1:generate (default-cli) > generate-sources @ standalone-pom >>>
[INFO]
[INFO] <<< maven-archetype-plugin:3.0.1:generate (default-cli) < generate-sources @ standalone-pom <<<
[INFO]
[INFO]
[INFO] --- maven-archetype-plugin:3.0.1:generate (default-cli) @ standalone-pom ---
[INFO] Generating project in Interactive mode
[INFO] Archetype [org.apache.maven.archetypes:maven-archetype-quickstart:1.1] found in catalog remote
Define value for property 'groupId': com.packt
Define value for property 'artifactId': java-maven-demo
Define value for property 'version' 1.0-SNAPSHOT: : 1.0-SNAPSHOT
Define value for property 'package' com.packt: : com.packt.example
Confirm properties configuration:
groupId: com.packt
artifactId: java-maven-demo
version: 1.0-SNAPSHOT
package: com.packt.example
 Y: : Y
[INFO] ----------------------------------------------------------------------------
[INFO] Using following parameters for creating project from Old (1.x) Archetype: maven-archetype-quickstart:1.1
[INFO] ----------------------------------------------------------------------------
[INFO] Parameter: basedir, Value: D:\AWS SDK Example
[INFO] Parameter: package, Value: com.packt.example
[INFO] Parameter: groupId, Value: com.packt
[INFO] Parameter: artifactId, Value: java-maven-demo
[INFO] Parameter: packageName, Value: com.packt.example
[INFO] Parameter: version, Value: 1.0-SNAPSHOT
[INFO] project created from Old (1.x) Archetype in dir: D:\AWS SDK Example\java-maven-demo
[INFO] ------------------------------------------------------------------------
[INFO] BUILD SUCCESS
[INFO] ------------------------------------------------------------------------
[INFO] Total time: 01:28 min
[INFO] Finished at: 2017-10-24T02:18:15+08:00
[INFO] Final Memory: 14M/121M
[INFO] ------------------------------------------------------------------------
```

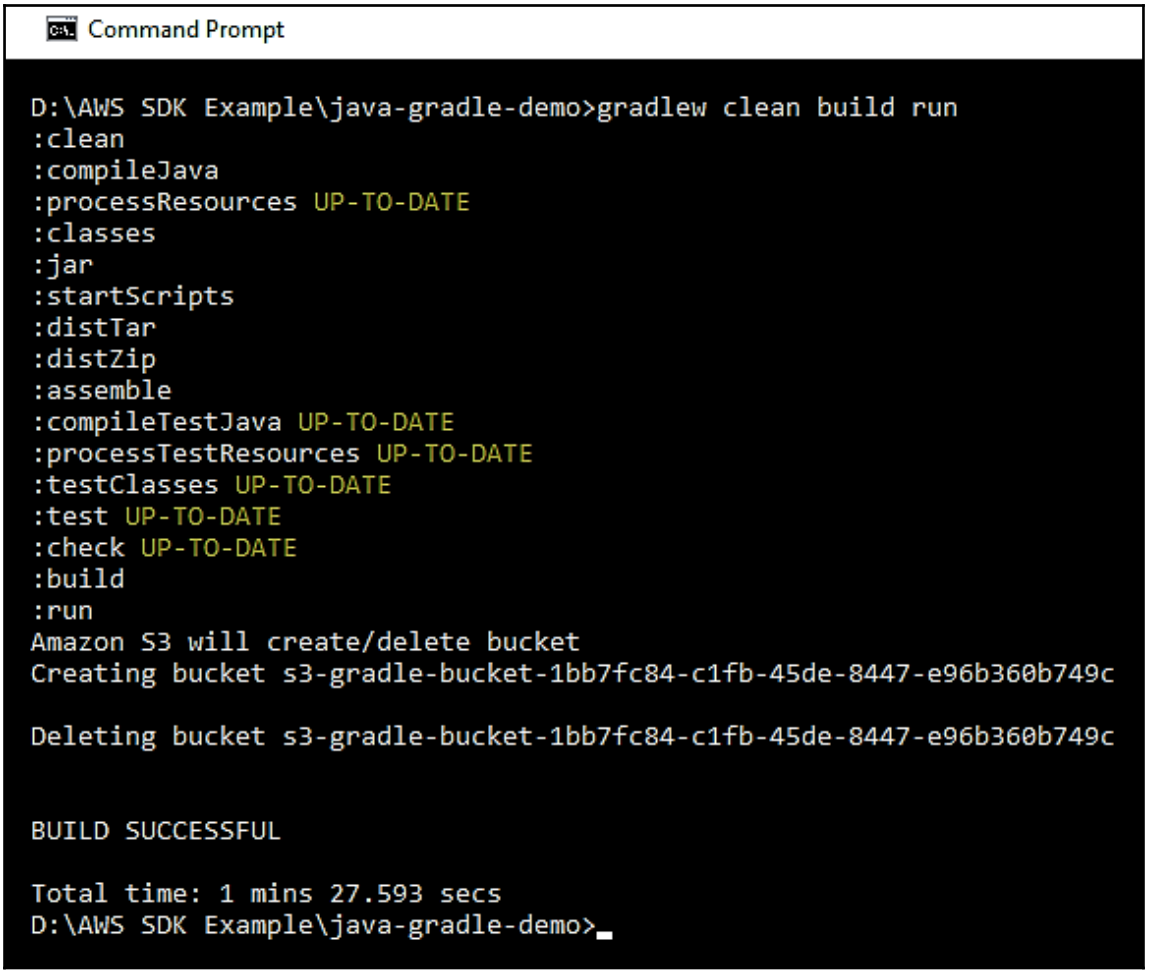

java-maven-demo
src
main
java
com
packt
example
test
java
com
packt
example
Name
src
pom.xml

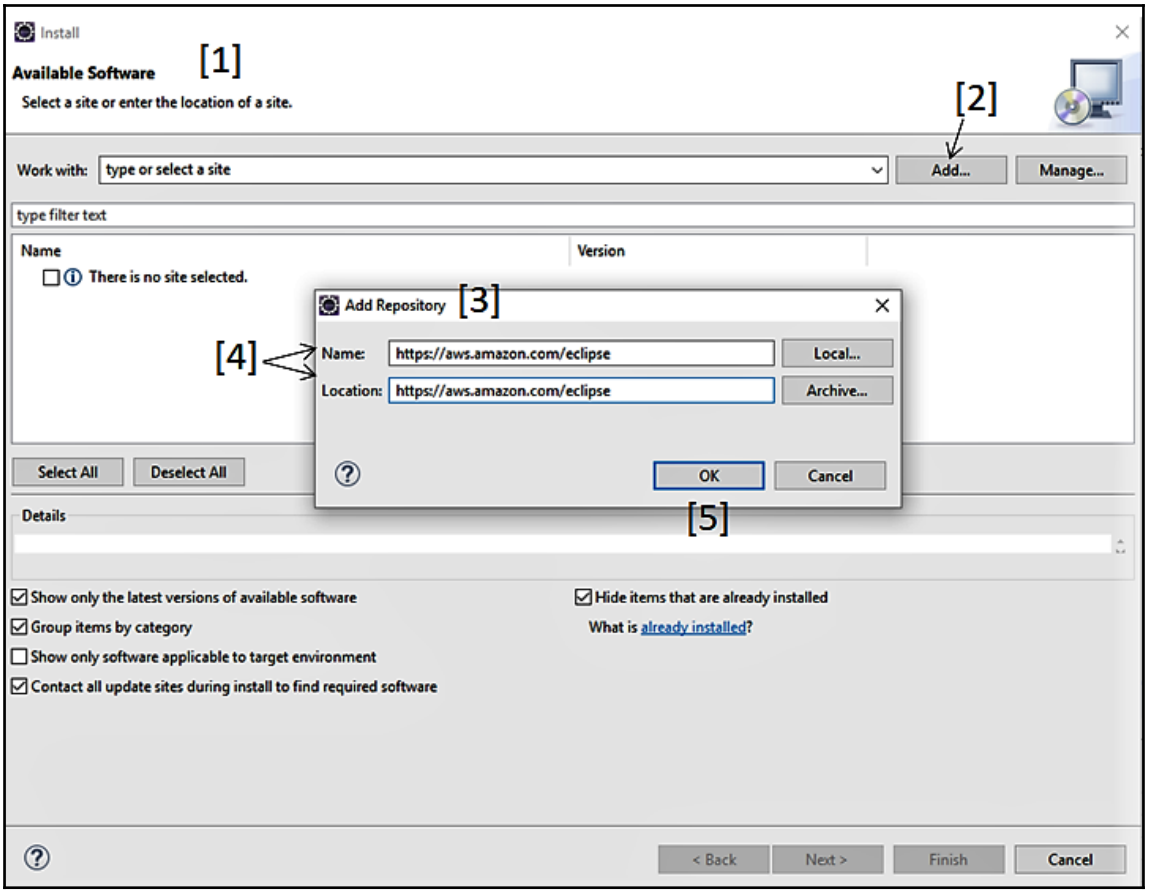
```
D:\AWS SDK Example\java-maven-demo>mvn package
[INFO] Scanning for projects...
[INFO]
[INFO] ------------------------------------------------------------------------
[INFO] Building java-maven-demo 1.0-SNAPSHOT
[INFO] ------------------------------------------------------------------------
[INFO]
[INFO] --- maven-resources-plugin:2.6:resources (default-resources) @ java-maven-demo ---
[INFO] Using 'UTF-8' encoding to copy filtered resources.
[INFO] skip non existing resourceDirectory D:\AWS SDK Example\java-maven-demo\${env.HOME}\.aws
[INFO] --- maven-compiler-plugin:3.1:compile (default-compile) @ java-maven-demo ---
[INFO] Changes detected - recompiling the module!
[INFO] Compiling 2 source files to D:\AWS SDK Example\java-maven-demo\target\classes
[WARNING] /D:/AWS SDK Example/java-maven-demo/src/main/java/com/packt/example/S3MavenExample.java: Some input files use or override a deprecated API.
[WARNING] /D:/AWS SDK Example/java-maven-demo/src/main/java/com/packt/example/S3MavenExample.java: Recompile with -Xlint:deprecation for details.
[INFO]
[INFO] --- maven-resources-plugin:2.6:testResources (default-testResources) @ java-maven-demo ---
[INFO] Using 'UTF-8' encoding to copy filtered resources.
[INFO] skip non existing resourceDirectory D:\AWS SDK Example\java-maven-demo\src\test\resources
[INFO]
[INFO] --- maven-compiler-plugin:3.1:testCompile (default-testCompile) @ java-maven-demo ---
[INFO] Changes detected - recompiling the module!
[INFO] Compiling 1 source file to D:\AWS SDK Example\java-maven-demo\target\test-classes
[INFO]
[INFO] --- maven-surefire-plugin:2.12.4:test (default-test) @ java-maven-demo ---
[INFO] Surefire report directory: D:\AWS SDK Example\java-maven-demo\target\surefire-reports

-------------------------------------------------------
 T E S T S
-------------------------------------------------------
Running com.packt.example.AppTest
Tests run: 1, Failures: 0, Errors: 0, Skipped: 0, Time elapsed: 0.021 sec

Results :

Tests run: 1, Failures: 0, Errors: 0, Skipped: 0

[INFO]
[INFO] --- maven-jar-plugin:2.4:jar (default-jar) @ java-maven-demo ---
[INFO] Building jar: D:\AWS SDK Example\java-maven-demo\target\java-maven-demo-1.0-SNAPSHOT.jar
[INFO] ------------------------------------------------------------------------
[INFO] BUILD SUCCESS
[INFO] ------------------------------------------------------------------------
[INFO] Total time: 55.707 s
[INFO] Finished at: 2017-10-24T02:22:49+08:00
[INFO] Final Memory: 21M/115M
[INFO] ------------------------------------------------------------------------
```

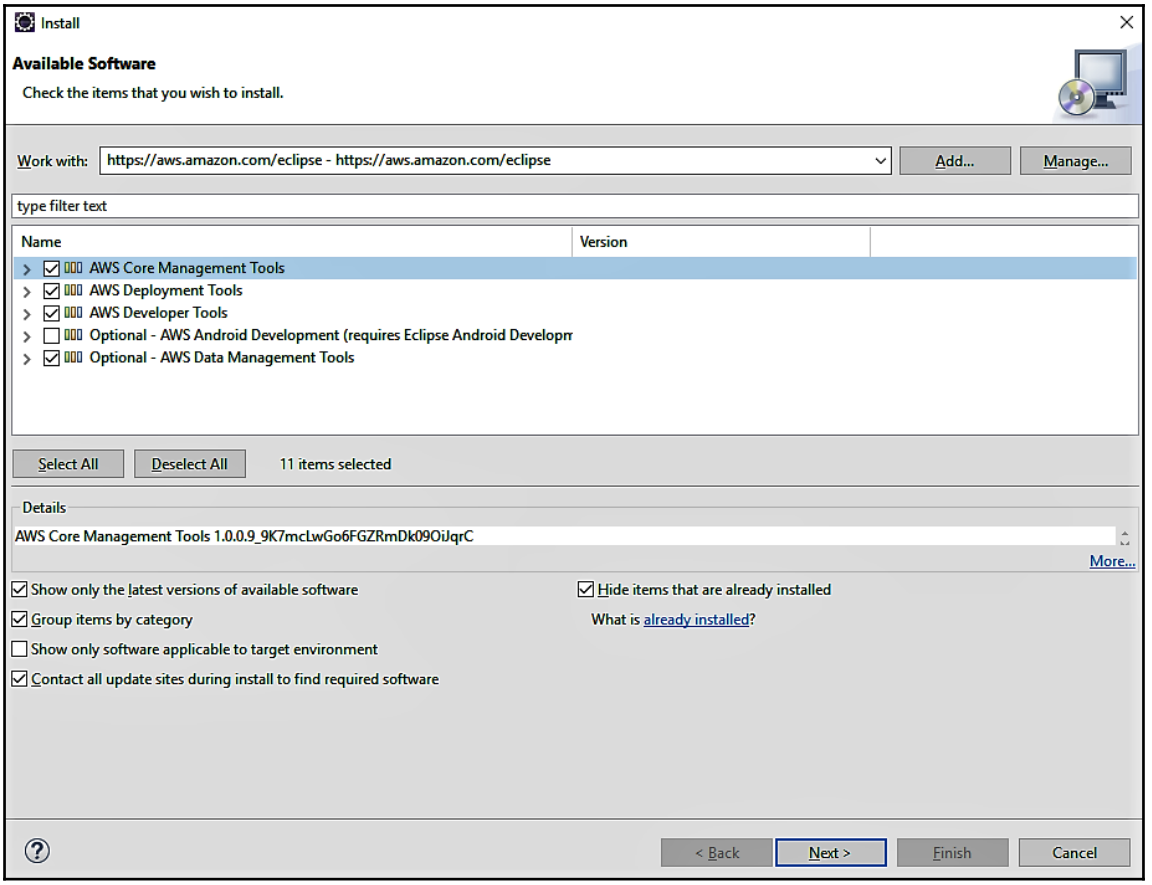

Command Prompt
D:\AWS SDK Example\java-maven-demo>mvn clean compile exec:java
[INFO] Scanning for projects...
[INFO]
[INFO] --
[INFO] Building java-maven-demo 1.0-SNAPSHOT
[INFO] --
[INFO]
[INFO] --- maven-clean-plugin:2.5:clean (default-clean) @ java-maven-demo ---
[INFO] Deleting D:\AWS SDK Example\java-maven-demo\target
[INFO]
[INFO] --- maven-resources-plugin:2.6:resources (default-resources) @ java-maven-demo ---
[INFO] Using 'UTF-8' encoding to copy filtered resources.
[INFO] skip non existing resourceDirectory D:\AWS SDK Example\java-maven-demo\${env.HOME}\.aws
[INFO]
[INFO] --- maven-compiler-plugin:3.1:compile (default-compile) @ java-maven-demo ---
[INFO] Changes detected - recompiling the module!
[INFO] Compiling 2 source files to D:\AWS SDK Example\java-maven-demo\target\classes
[WARNING] /D:/AWS SDK Example/java-maven-demo/src/main/java/com/packt/example/S3MavenExample.java: Some input files use or override a deprecated API.
[WARNING] /D:/AWS SDK Example/java-maven-demo/src/main/java/com/packt/example/S3MavenExample.java: Recompile with -Xlint:deprecation for details.
[INFO]
[INFO] >>> exec-maven-plugin:1.2.1:java (default-cli) > validate @ java-maven-demo >>>
[INFO]
[INFO] <<< exec-maven-plugin:1.2.1:java (default-cli) < validate @ java-maven-demo <<<
[INFO]
[INFO]
[INFO] --- exec-maven-plugin:1.2.1:java (default-cli) @ java-maven-demo ---
Amazon S3 will create and delete bucket
Creating bucket s3-maven-bucket-b8c8e9d6-4c97-40bd-a68f-d013872b8b43
Deleting bucket s3-maven-bucket-b8c8e9d6-4c97-40bd-a68f-d013872b8b43
[INFO] --
[INFO] BUILD SUCCESS
[INFO] --
[INFO] Total time: 18.592 s
[INFO] Finished at: 2017-10-24T02:26:12+08:00
[INFO] Final Memory: 26M/256M
[INFO] --
D:\AWS SDK Example\java-maven-demo>

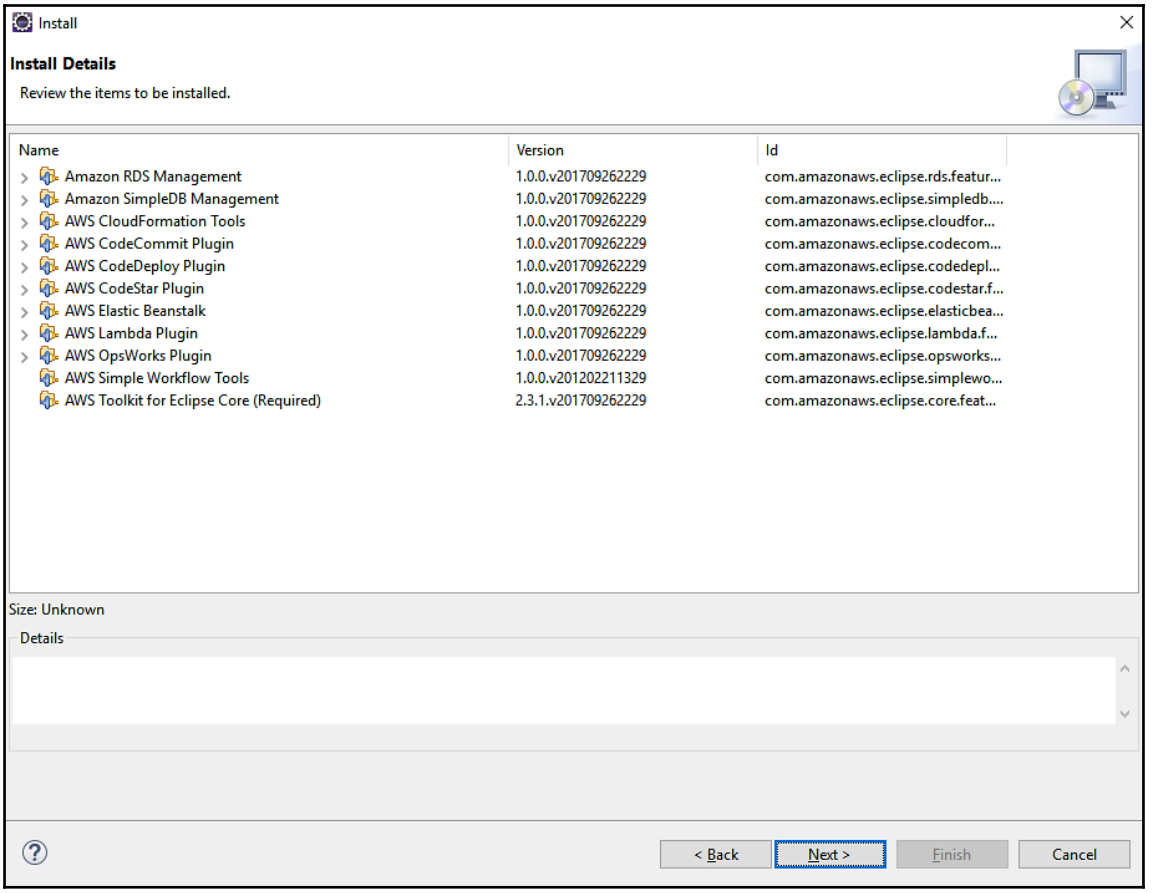

Name
Date modified
Type
Size
gradle
10/4/2017 1:50 AM
File folder
build.gradle
10/9/2017 9:03 PM
GRADLE File
1 KB
gradlew
9/26/2017 12:44 AM
File
6 KB
gradlew.bat
9/26/2017 12:44 AM
Windows Batch File
3 KB

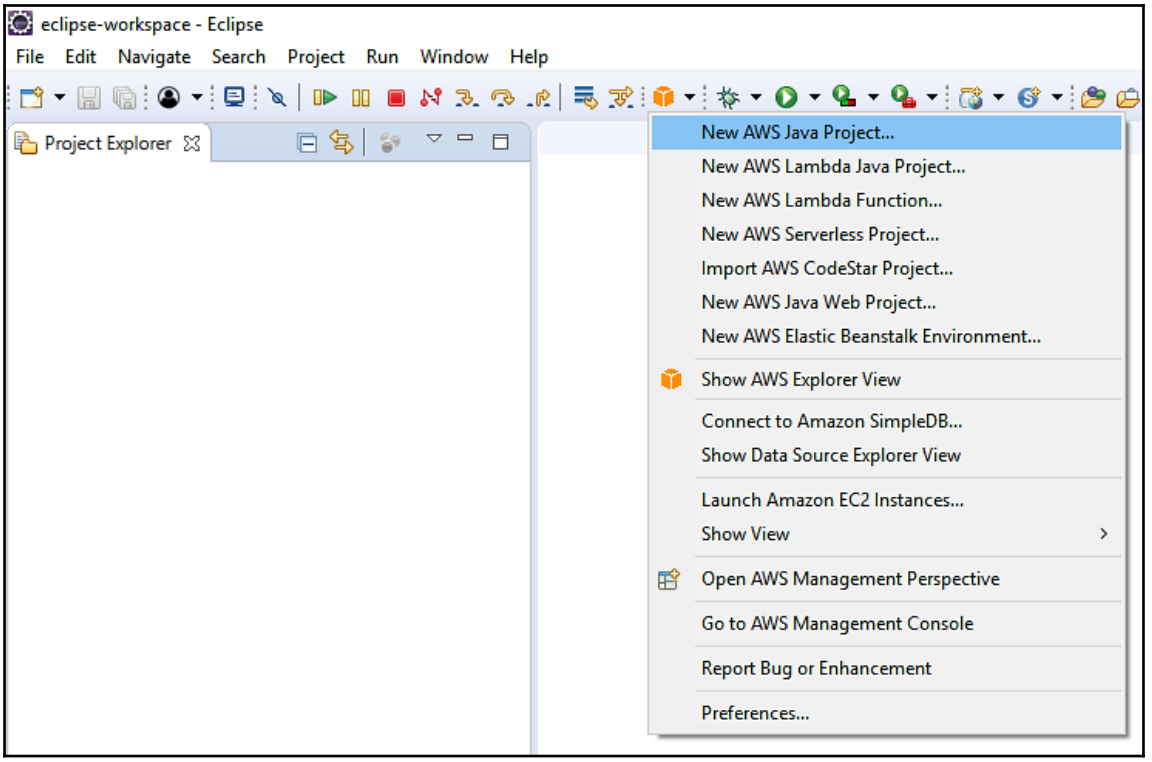

Command Prompt
D:\AWS SDK Example\java-gradle-demo>gradlew.bat
:help
Welcome to Gradle 2.4.
To run a build, run gradlew <task> ...
To see a list of available tasks, run gradlew tasks
To see a list of command-line options, run gradlew --help
To see more detail about a task, run gradlew help --task <task>
BUILD SUCCESSFUL
Total time: 9.862 secs
D:\AWS SDK Example\java-gradle-demo>

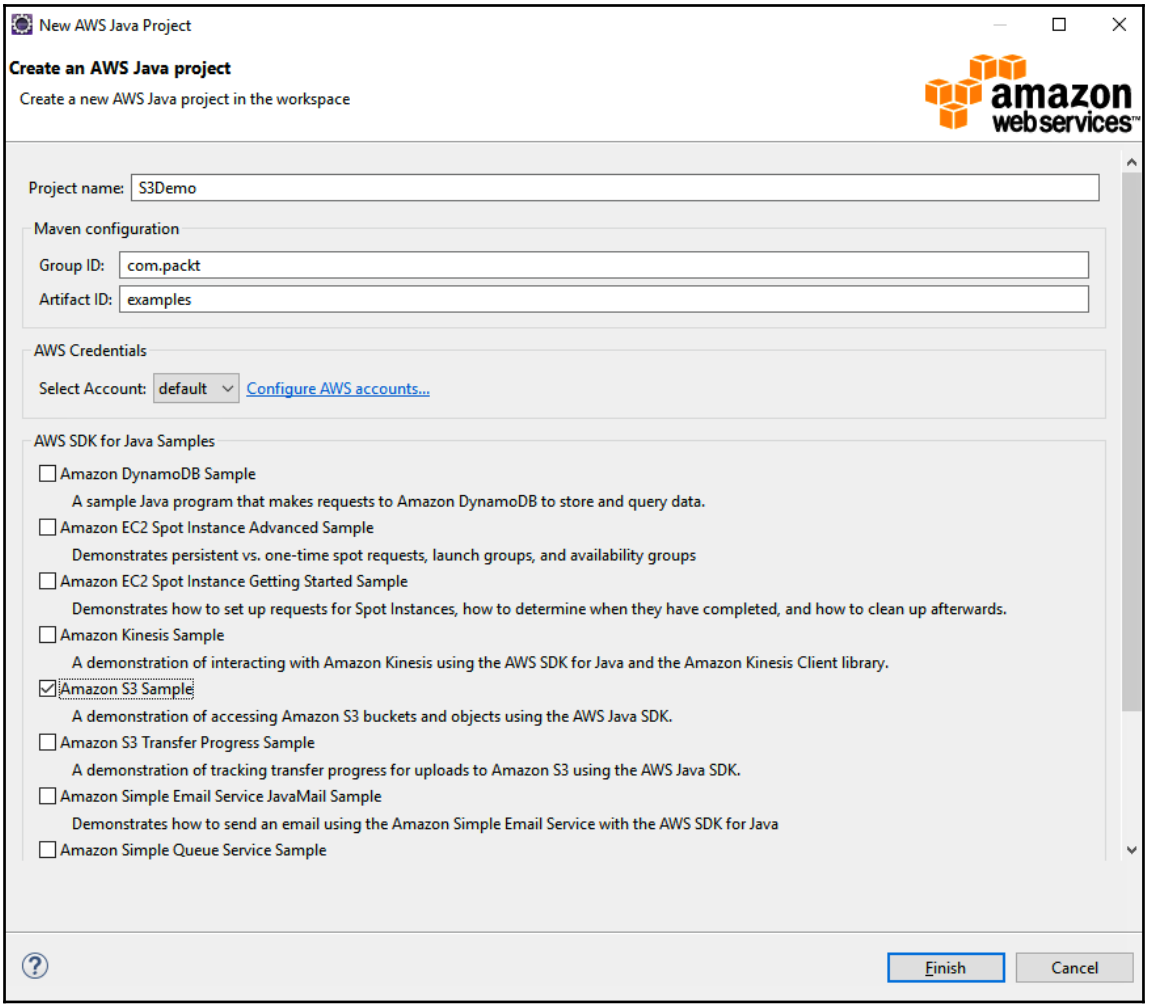

Command Prompt
D:\AWS SDK Example\java-gradle-demo>gradlew clean build run
:clean
:compileJava
:processResources UP-TO-DATE
:classes
:jar
:startScripts
:distTar
:distZip
:assemble
:compileTestJava UP-TO-DATE
:processTestResources UP-TO-DATE
:testClasses UP-TO-DATE
:test UP-TO-DATE
:check UP-TO-DATE
:build
:run
Amazon S3 will create/delete bucket
Creating bucket s3-gradle-bucket-1bb7fc84-c1fb-45de-8447-e96b360b749c
Deleting bucket s3-gradle-bucket-1bb7fc84-c1fb-45de-8447-e96b360b749c
BUILD SUCCESSFUL
Total time: 1 mins 27.593 secs
D:\AWS SDK Example\java-gradle-demo>

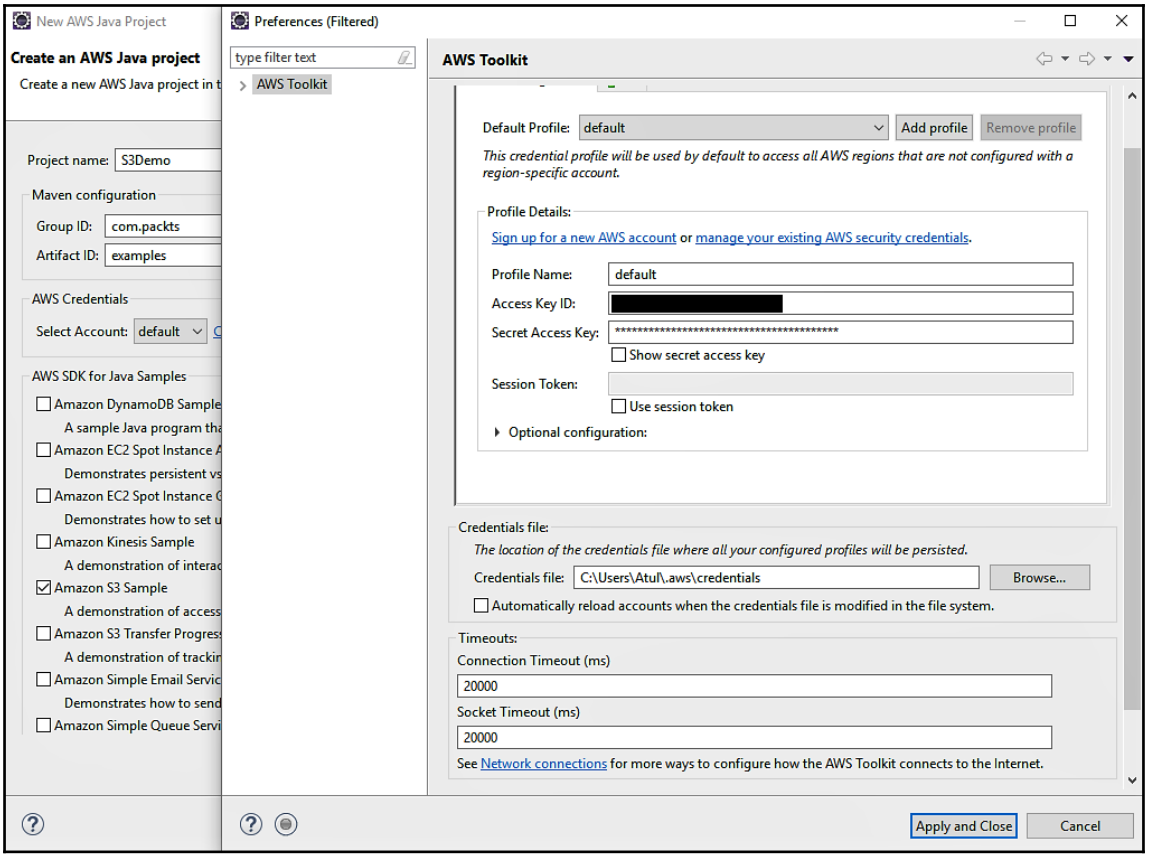

Install
Available Software
[1]
Select a site or enter the location of a site.
[2]
Work with:
type or select a site
Add...
Manage...
type filter text
Name
Version
There is no site selected.
Add Repository
[3]
[4]
Name:
https://aws.amazon.com/eclipse
Local...
Location:
https://aws.amazon.com/eclipse
Archive...
OK
Cancel
[5]
Select All
Deselect All
Details
Show only the latest versions of available software
Group items by category
Show only software applicable to target environment
Contact all update sites during install to find required software
Hide items that are already installed
What is already installed?
< Back
Next >
Finish
Cancel


Install
Available Software
Check the items that you wish to install.
Work with:
https://aws.amazon.com/eclipse - https://aws.amazon.com/eclipse
Add...
Manage...
type filter text
Name
Version
AWS Core Management Tools
AWS Deployment Tools
AWS Developer Tools
Optional - AWS Android Development (requires Eclipse Android Developm
Optional - AWS Data Management Tools
Select All
Deselect All
11 items selected
Details
AWS Core Management Tools 1.0.0.9_9K7mcLwGo6FGZRmDk09OiJqrC
More...
Show only the latest versions of available software
Group items by category
Show only software applicable to target environment
Contact all update sites during install to find required software
Hide items that are already installed
What is already installed?
< Back
Next >
Finish
Cancel

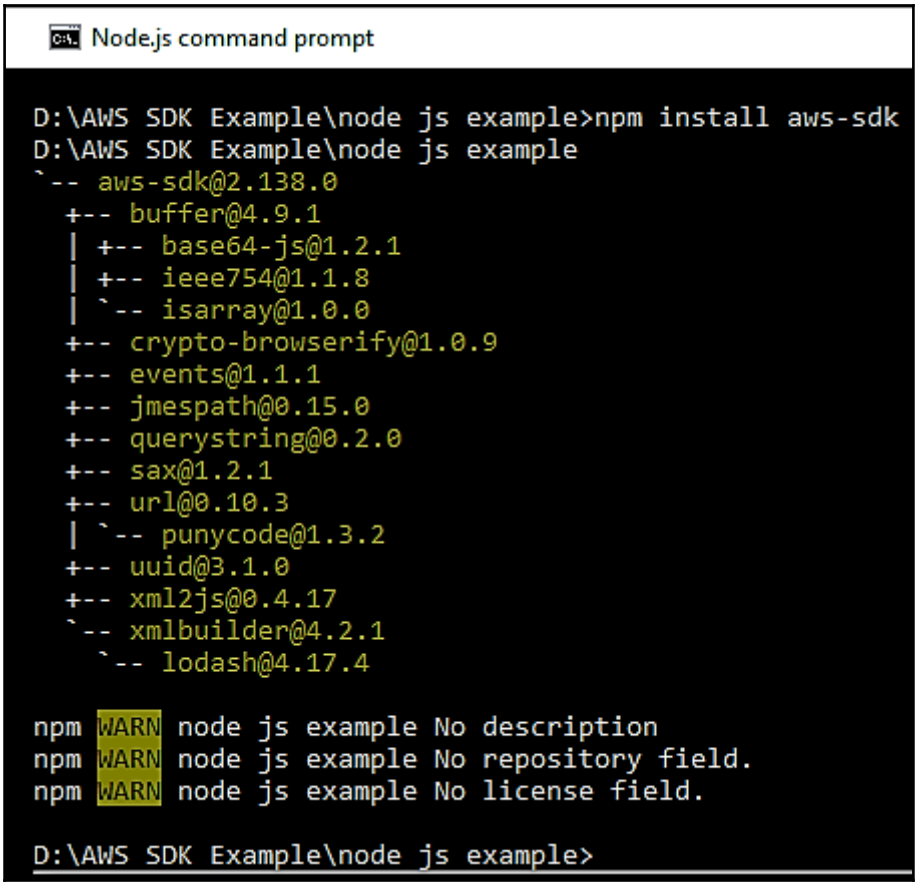

Install
Install Details
Review the items to be installed.
Name
Version
Id
Amazon RDS Management
1.0.0.v201709262229
com.amazonaws.eclipse.rds.featur...
Amazon SimpleDB Management
1.0.0.v201709262229
com.amazonaws.eclipse.simpledb....
AWS CloudFormation Tools
1.0.0.v201709262229
com.amazonaws.eclipse.cloudfor...
AWS CodeCommit Plugin
1.0.0.v201709262229
com.amazonaws.eclipse.codecom...
AWS CodeDeploy Plugin
1.0.0.v201709262229
com.amazonaws.eclipse.codedepl...
AWS CodeStar Plugin
1.0.0.v201709262229
com.amazonaws.eclipse.codestar.f...
AWS Elastic Beanstalk
1.0.0.v201709262229
com.amazonaws.eclipse.elasticbea...
AWS Lambda Plugin
1.0.0.v201709262229
com.amazonaws.eclipse.lambda.f...
AWS OpsWorks Plugin
1.0.0.v201709262229
com.amazonaws.eclipse.opsworks...
AWS Simple Workflow Tools
1.0.0.v201202211329
com.amazonaws.eclipse.simplewo...
AWS Toolkit for Eclipse Core (Required)
2.3.1.v201709262229
com.amazonaws.eclipse.core.feat...
Size: Unknown
Details
< Back
Next >
Finish
Cancel

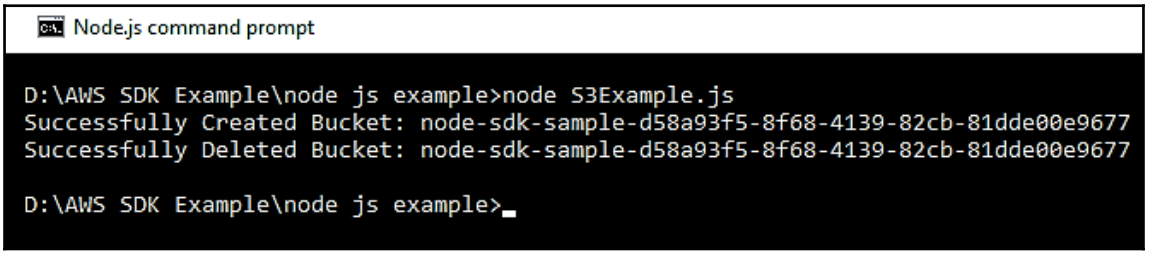

eclipse-workspace - Eclipse
File
Edit
Navigate
Search
Project
Run
Window
Help
Project Explorer
New AWS Java Project...
New AWS Lambda Java Project...
New AWS Lambda Function...
New AWS Serverless Project...
Import AWS CodeStar Project...
New AWS Java Web Project...
New AWS Elastic Beanstalk Environment...
Show AWS Explorer View
Connect to Amazon SimpleDB...
Show Data Source Explorer View
Launch Amazon EC2 Instances...
Show View
Open AWS Management Perspective
Go to AWS Management Console
Report Bug or Enhancement
Preferences...


New AWS Java Project
Create an AWS Java project
Create a new AWS Java project in the workspace
amazon web services
Project name: S3Demo
Maven configuration
Group ID: com.packt
Artifact ID: examples
AWS Credentials
Select Account: default
Configure AWS accounts...
AWS SDK for Java Samples
Amazon DynamoDB Sample
A sample Java program that makes requests to Amazon DynamoDB to store and query data.
Amazon EC2 Spot Instance Advanced Sample
Demonstrates persistent vs. one-time spot requests, launch groups, and availability groups
Amazon EC2 Spot Instance Getting Started Sample
Demonstrates how to set up requests for Spot Instances, how to determine when they have completed, and how to clean up afterwards.
Amazon Kinesis Sample
A demonstration of interacting with Amazon Kinesis using the AWS SDK for Java and the Amazon Kinesis Client library.
Amazon S3 Sample
A demonstration of accessing Amazon S3 buckets and objects using the AWS Java SDK.
Amazon S3 Transfer Progress Sample
A demonstration of tracking transfer progress for uploads to Amazon S3 using the AWS Java SDK.
Amazon Simple Email Service JavaMail Sample
Demonstrates how to send an email using the Amazon Simple Email Service with the AWS SDK for Java
Amazon Simple Queue Service Sample
Finish
Cancel


New AWS Java Project
Create an AWS Java project
Create a new AWS Java project in t
Project name: S3Demo
Maven configuration
Group ID: com.packts
Artifact ID: examples
AWS Credentials
Select Account: default
AWS SDK for Java Samples
Amazon DynamoDB Sample
A sample Java program tha
Amazon EC2 Spot Instance A
Demonstrates persistent vs
Amazon EC2 Spot Instance C
Demonstrates how to set u
Amazon Kinesis Sample
A demonstration of interac
Amazon S3 Sample
A demonstration of access
Amazon S3 Transfer Progress
A demonstration of trackir
Amazon Simple Email Servic
Demonstrates how to send
Amazon Simple Queue Servi
Preferences (Filtered)
type filter text
AWS Toolkit
AWS Toolkit
Default Profile: default
Add profile
Remove profile
This credential profile will be used by default to access all AWS regions that are not configured with a region-specific account.
Profile Details:
Sign up for a new AWS account or manage your existing AWS security credentials.
Profile Name: default
Access Key ID:
Secret Access Key:
Show secret access key
Session Token:
Use session token
Optional configuration:
Credentials file:
The location of the credentials file where all your configured profiles will be persisted.
Credentials file: C:\Users\Atul\.aws\credentials
Browse...
Automatically reload accounts when the credentials file is modified in the file system.
Timeouts:
Connection Timeout (ms)
20000
Socket Timeout (ms)
20000
See Network connections for more ways to configure how the AWS Toolkit connects to the Internet.
Apply and Close
Cancel

```
<terminated> S3Sample [Java Application] C:\Program Files\Java\jre1.8.0_121\bin\javaw.exe (O
=========================================

Creating bucket my-first-s3-bucket-b4f4af50-6a7f-4620-a8d4-1e3034a5f228

Listing buckets
[redacted]
 - my-first-s3-bucket-b4f4af50-6a7f-4620-a8d4-1e3034a5f228
[redacted]
Uploading a new object to S3 from a file

Downloading an object
Content-Type: text/plain
    abcdefghijklmnopqrstuvwxyz
    01234567890112345678901234
    !@#$%^&*()-=[]{};':',.<>/?
    01234567890112345678901234
    abcdefghijklmnopqrstuvwxyz

Listing objects
 - MyObjectKey  (size = 135)

Deleting an object

Deleting bucket my-first-s3-bucket-b4f4af50-6a7f-4620-a8d4-1e3034a5f228
```



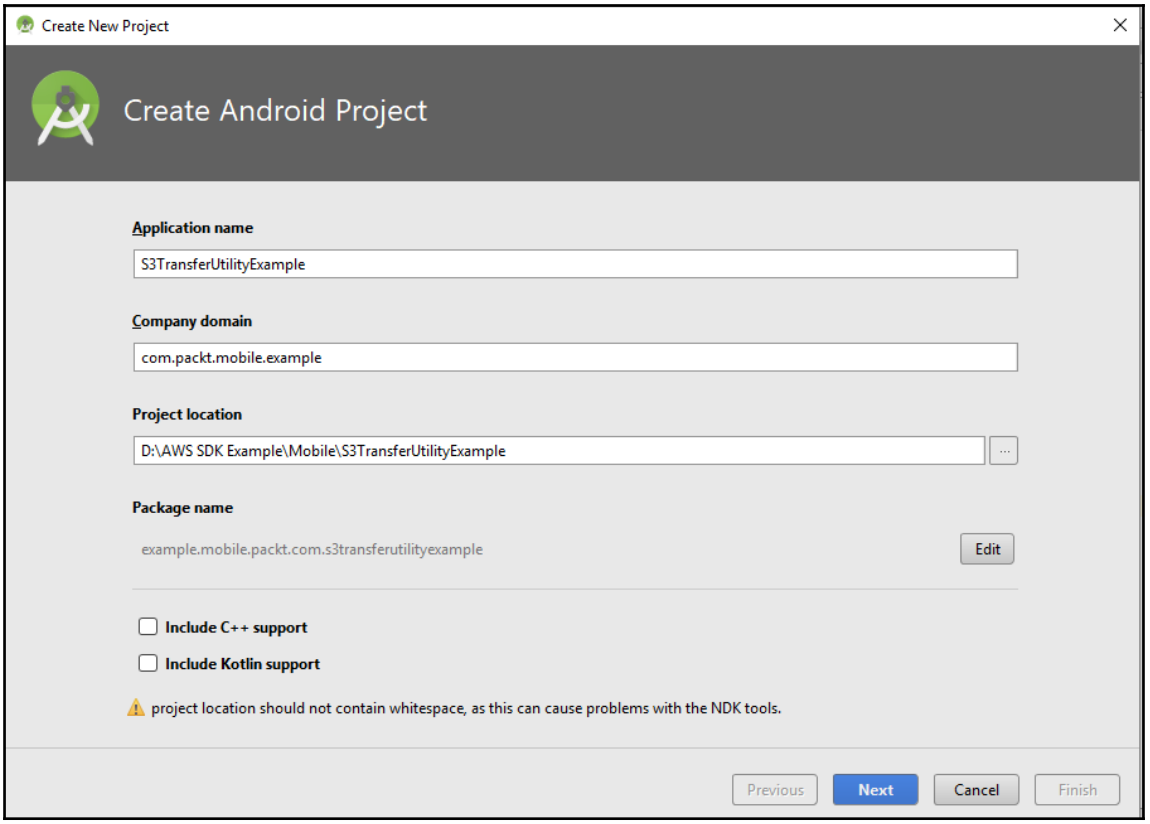


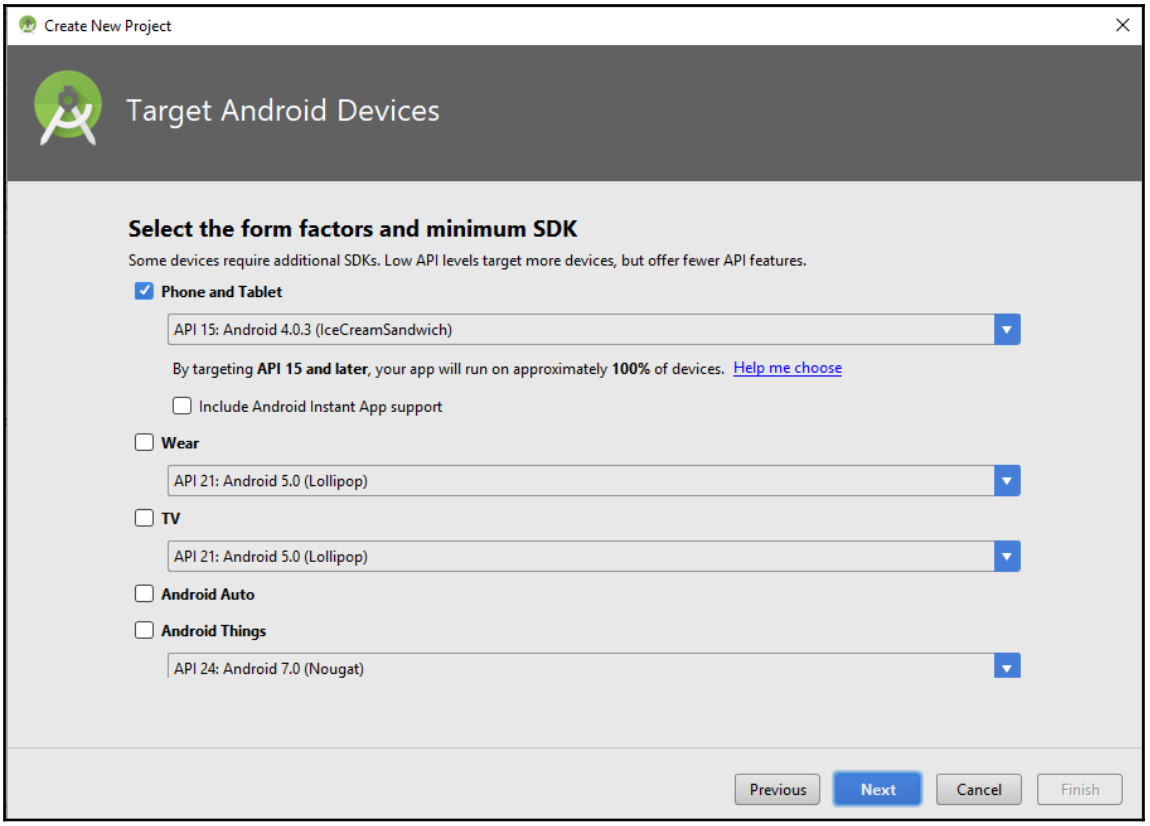
IoT Devices SDKs	Java	JavaScript	Arduino Yún
	Embedded C	Python	C++

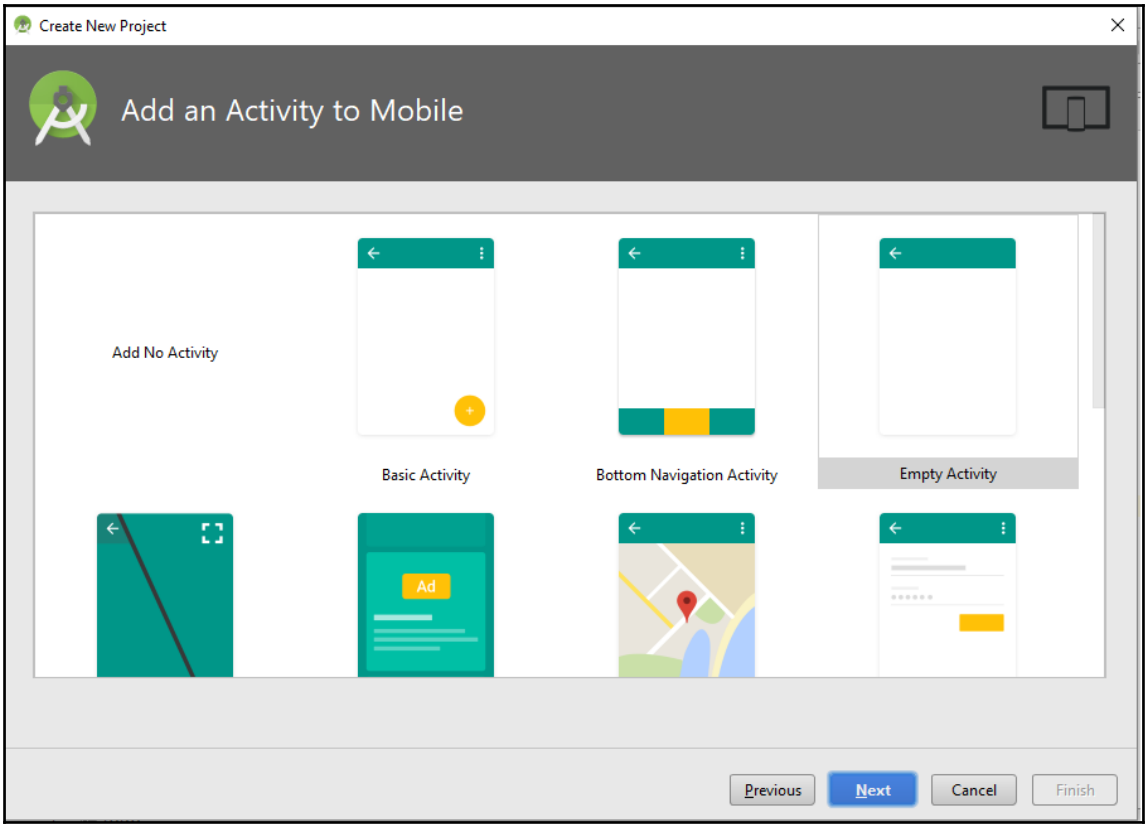
Mobile Devices SDKs	Android	iOS	Xamarin
	Unity	React Native	

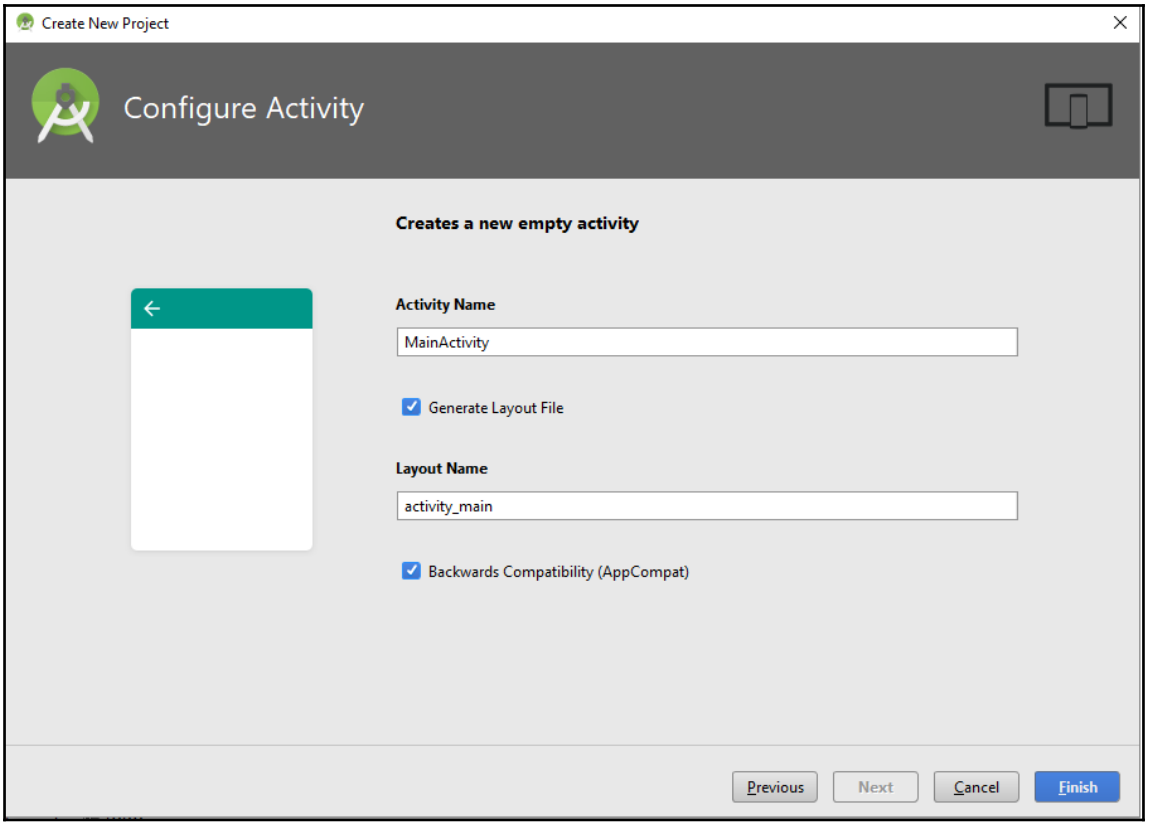
```
<dependencies>
    <dependency>
        <groupid>com.amazonaws</groupid>
        <artifactid>aws-android-sdk-core</artifactid>
        <version>[2.2.0, 2.3)</version>
    </dependency>
    <dependency>
        <groupid>com.amazonaws</groupid>
        <artifactid>aws-android-sdk-s3</artifactid>
        <version>[2.2.0, 2.3)</version>
    </dependency>
    <dependency>
        <groupid>com.amazonaws</groupid>
        <artifactid>aws-android-sdk-ec2</artifactid>
        <version>[2.2.0, 2.3)</version>
    </dependency>
</dependencies>
```

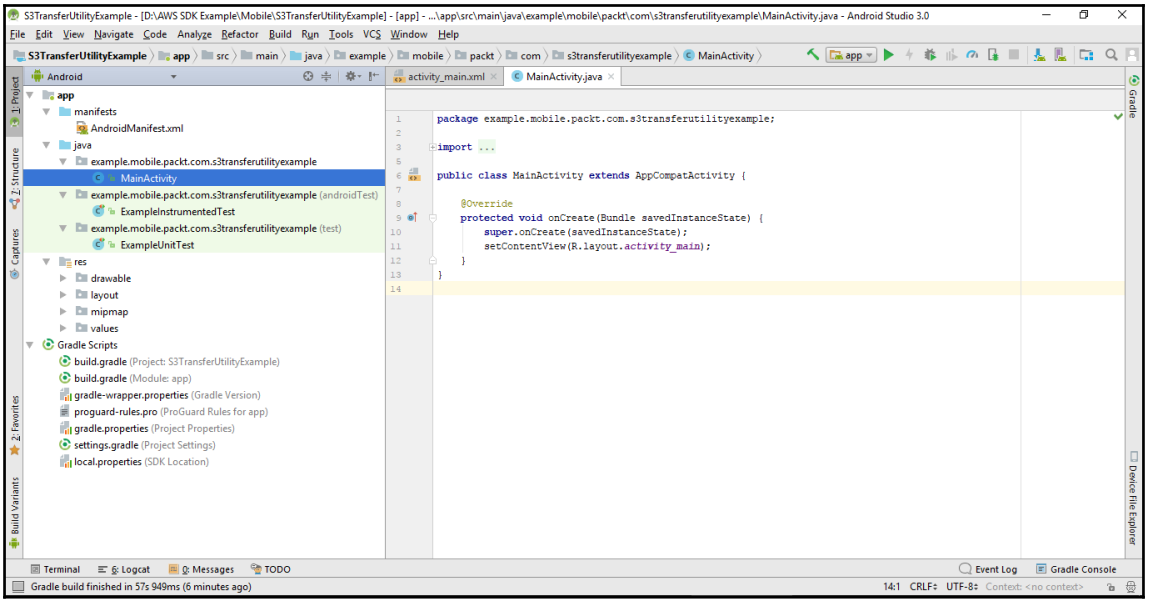
```
dependencies {
    compile 'com.amazonaws:aws-android-sdk-core:2.6.6'
    compile 'com.amazonaws:aws-android-sdk-s3:2.6.6'
    compile 'com.amazonaws:aws-android-sdk-ec2:2.6.6'
}
```

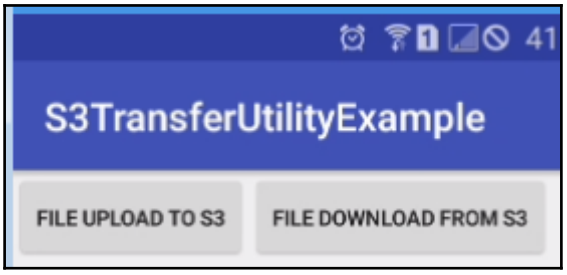

Create New Project
Create Android Project
Application name
S3TransferUtilityExample
Company domain
com.packt.mobile.example
Project location
D:\AWS SDK Example\Mobile\S3TransferUtilityExample
Package name
example.mobile.packt.com.s3transferutilityexample
Edit
Include C++ support
Include Kotlin support
project location should not contain whitespace, as this can cause problems with the NDK tools.
Previous
Next
Cancel
Finish

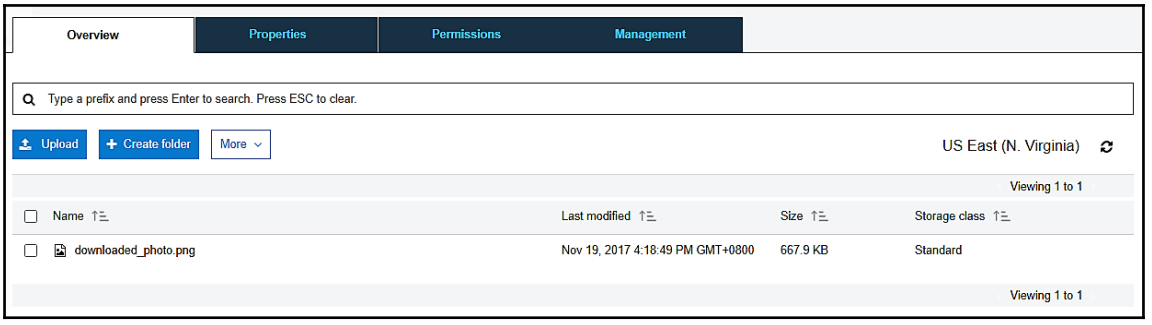

Create New Project
Target Android Devices
Select the form factors and minimum SDK
Some devices require additional SDKs. Low API levels target more devices, but offer fewer API features.
Phone and Tablet
API 15: Android 4.0.3 (IceCreamSandwich)
By targeting API 15 and later, your app will run on approximately 100% of devices. Help me choose
Include Android Instant App support
Wear
API 21: Android 5.0 (Lollipop)
TV
API 21: Android 5.0 (Lollipop)
Android Auto
Android Things
API 24: Android 7.0 (Nougat)
Previous
Next
Cancel
Finish


Create New Project
Add an Activity to Mobile
Add No Activity
Basic Activity
Bottom Navigation Activity
Empty Activity
Ad
Previous
Next
Cancel
Finish


Create New Project
Configure Activity
Creates a new empty activity
Activity Name
MainActivity
Generate Layout File
Layout Name
activity_main
Backwards Compatibility (AppCompat)
Previous
Next
Cancel
Finish

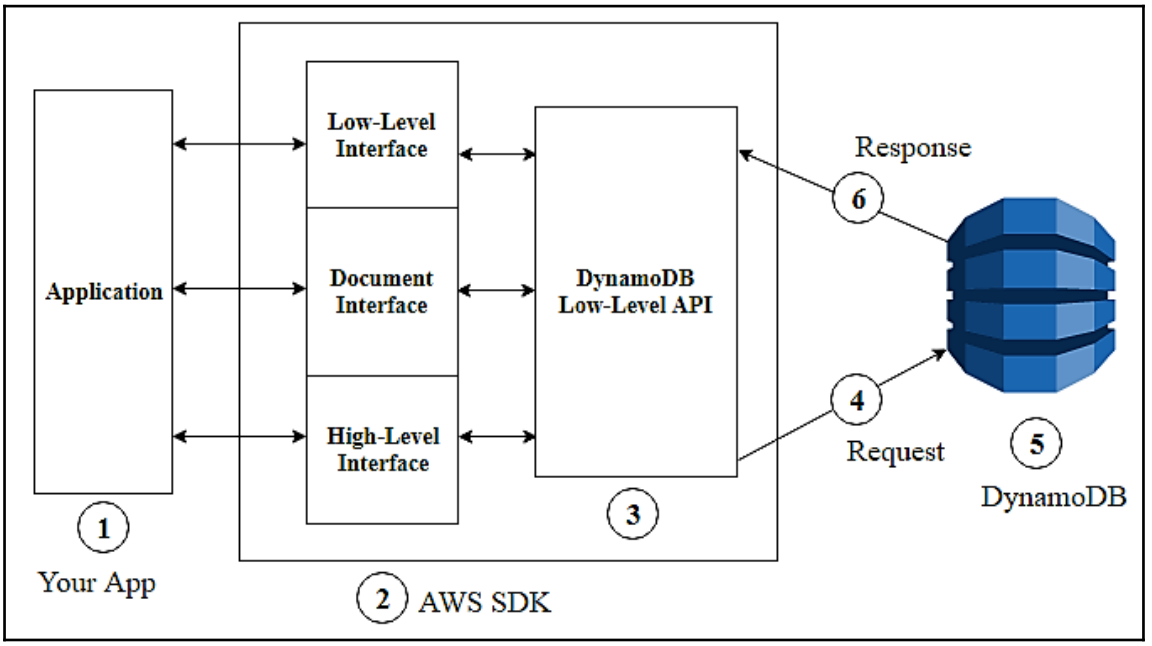

S3TransferUtilityExample - [D:\AWS SDK Example\Mobile\S3TransferUtilityExample] - [app] - ...\app\src\main\java\example\mobile\packt\com\s3transferutilityexample\MainActivity.java - Android Studio 3.0
File Edit View Navigate Code Analyze Refactor Build Run Tools VCS Window Help
S3TransferUtilityExample app src main java example mobile packt com s3transferutilityexample MainActivity
Android
app
manifests
AndroidManifest.xml
java
example.mobile.packt.com.s3transferutilityexample
MainActivity
example.mobile.packt.com.s3transferutilityexample (androidTest)
ExampleInstrumentedTest
example.mobile.packt.com.s3transferutilityexample (test)
ExampleUnitTest
res
drawable
layout
mipmap
values
Gradle Scripts
build.gradle (Project: S3TransferUtilityExample)
build.gradle (Module: app)
gradle-wrapper.properties (Gradle Version)
proguard-rules.pro (ProGuard Rules for app)
gradle.properties (Project Properties)
settings.gradle (Project Settings)
local.properties (SDK Location)
activity_main.xml
MainActivity.java
package example.mobile.packt.com.s3transferutilityexample;
import ...
public class MainActivity extends AppCompatActivity {
@Override
protected void onCreate(Bundle savedInstanceState) {
super.onCreate(savedInstanceState);
setContentView(R.layout.activity_main);
}
}
Terminal
6: Logcat
0: Messages
TODO
Event Log
Gradle Console
Gradle build finished in 57s 949ms (6 minutes ago)
14:1 CRLF UTF-8


41
S3TransferUtilityExample
FILE UPLOAD TO S3
FILE DOWNLOAD FROM S3


Overview
Properties
Permissions
Management
Type a prefix and press Enter to search. Press ESC to clear.
Upload
Create folder
More
US East (N. Virginia)
Viewing 1 to 1
Name
Last modified
Size
Storage class
downloaded_photo.png
Nov 19, 2017 4:18:49 PM GMT+0800
667.9 KB
Standard
Viewing 1 to 1


Name
Created
Screenshots
11/19/2017 3:57 PM
downloaded_photo.png
11/19/2017 4:22 PM

Chapter 2: Integrating Applications with AWS Services



name	fans	rating	year
Airplane	James	*****	1980
Bill & Ted's Excellent Adventure	Sara	****	1989

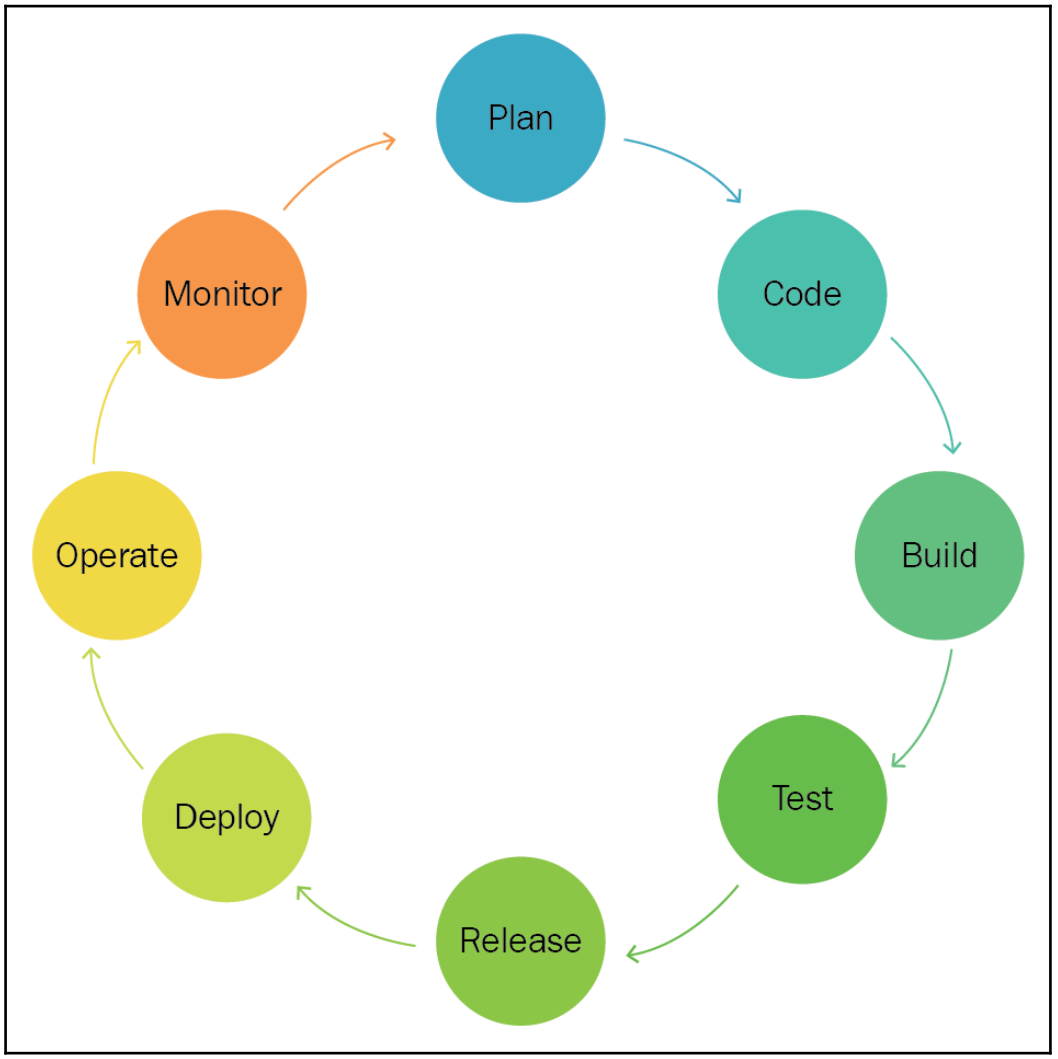
```
Example for Low-level Interface
The movie was released in 1980
```

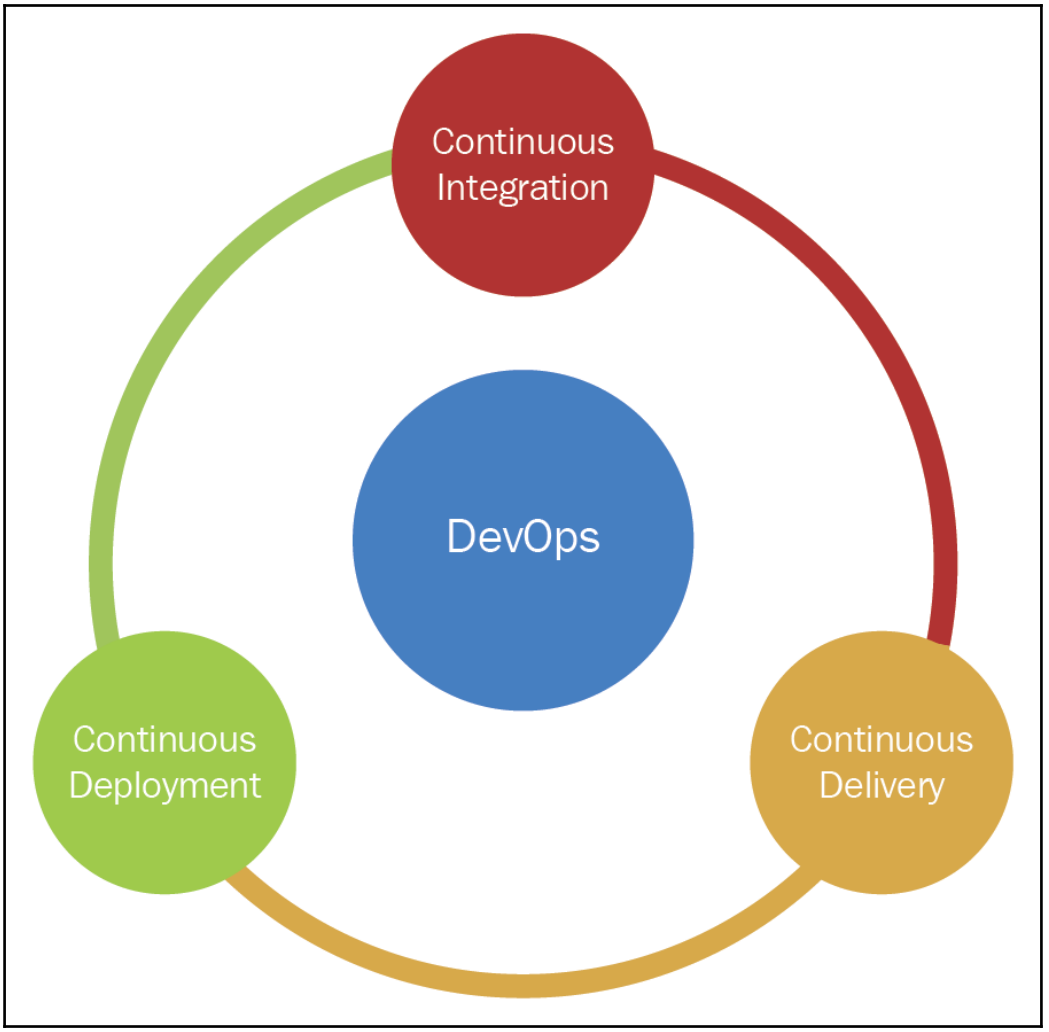
```
Kinesis Stream "MyExampleStream" has a status of "ACTIVE".
Putting records in stream : "MyExampleStream" until this application is stopped...
Success : Partition key "partitionKey-1510596635446", ShardID "shardId-000000000000" and SequenceNumber "49578856183557438877423927844079469532024951432017870850".
Success : Partition key "partitionKey-1510596635739", ShardID "shardId-000000000000" and SequenceNumber "49578856183557438877423927844080678457844566129912053762".
Success : Partition key "partitionKey-1510596636009", ShardID "shardId-000000000000" and SequenceNumber "49578856183557438877423927844081887383664180759086759938".
Success : Partition key "partitionKey-1510596636279", ShardID "shardId-000000000000" and SequenceNumber "49578856183557438877423927844083096309483795388261466114".
Success : Partition key "partitionKey-1510596636550", ShardID "shardId-000000000000" and SequenceNumber "49578856183557438877423927844084305235303410017436172290".
Success : Partition key "partitionKey-1510596636818", ShardID "shardId-000000000000" and SequenceNumber "49578856183557438877423927844085514161123024715330355202".
Success : Partition key "partitionKey-1510596637090", ShardID "shardId-000000000000" and SequenceNumber "49578856183557438877423927844086723086942639344505061378".
```

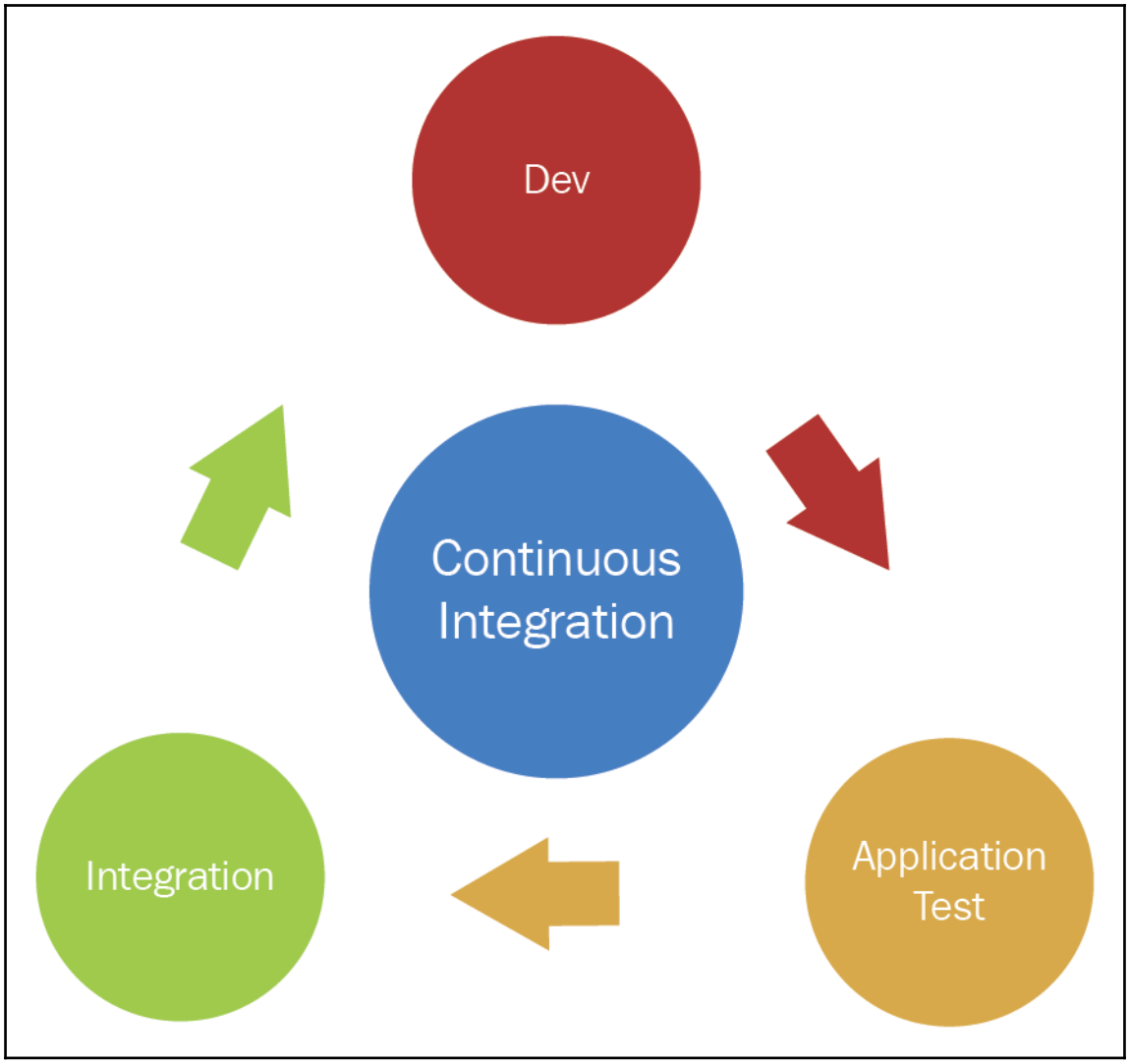
```
Progress  EC2 Instances  EC2 AMIs  EC2 Elastic Block Storage  EC2 Security Groups  Console
<terminated> KinesisFirehoseExample [Java Application] C:\Program Files\Java\jre1.8.0_121\bin\javaw.exe (Nov 15, 2017, 1:12:26 AM)
Put Request Record ID : r3YAYeW3z9abSK7BQchsCP3jIbgasKmhuofwuEVHvRLz3T69L1JMNWABfZh1RFuCrCDGBQyesFBEDftMH0jVkOaxgt9X26D5gt6o9LOgR/b1Bak1ma6R8+/whMuB0nt26W8cxtppfPCiKh5H
Put Batch Request Record ID :0: 1r8EqDR3S1bDxk4r8wAk6ka7VLskInQ+UZ8vpDGfSFbavSbpN/inotECtA5/C37GXN7KMQkOBnpSaTFQY0E9ItPp42/iQX9KjurCoQMapJ1W1734K/RLDY1gd+WgVCYs99OQShur
Put Batch Request Record ID :1: ogbHv8O2R119yInu5kHhLH57ETGUmxvoc+17uJ492tbDmmL9jLb+LzfDgXdUPK1vYb4EoC6eh1VIpmeVuZoMK5uWsspC+C8WwEQp0B/UkHE3MsZP+YYLjD09Ee9xLepvD8Goq965
```

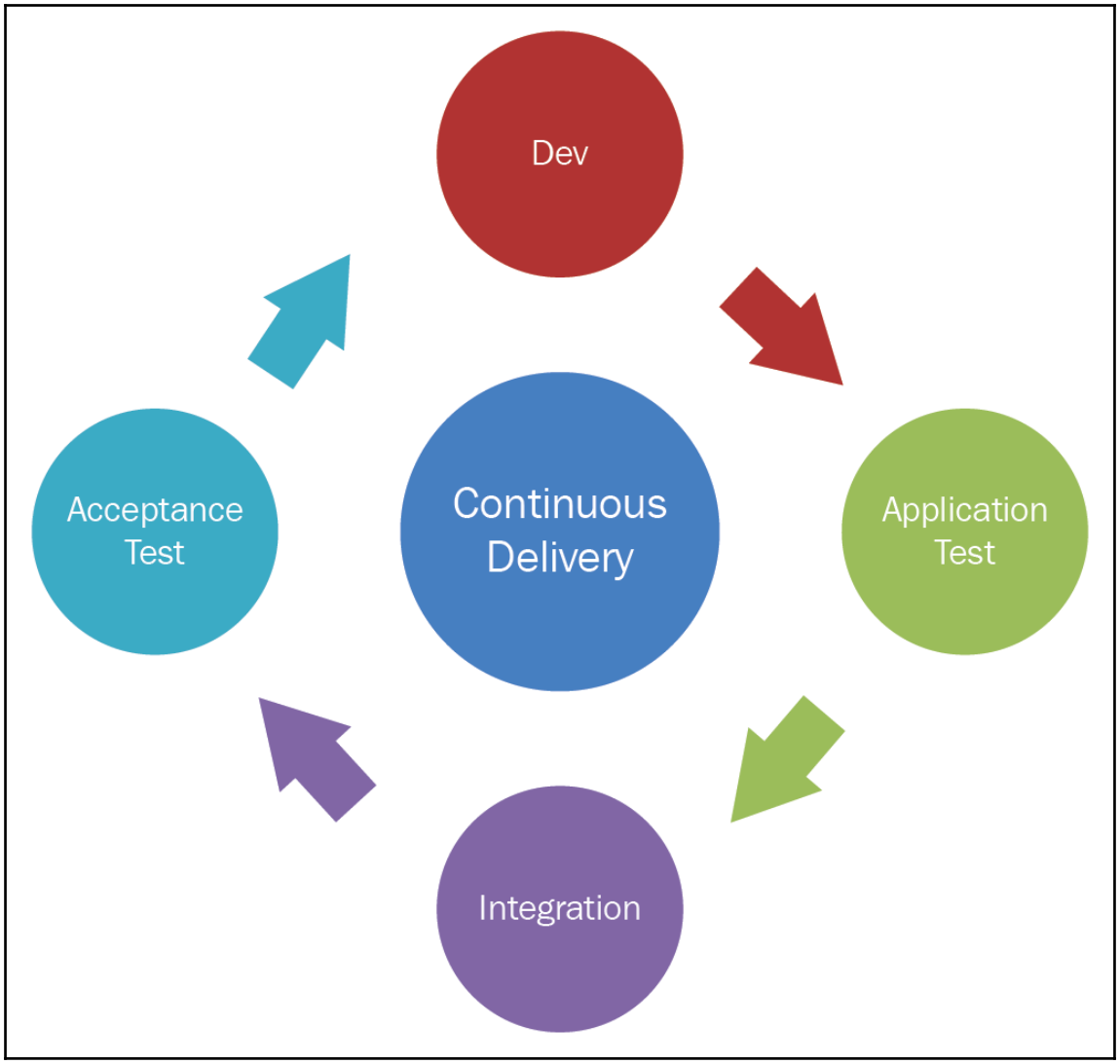
```
D:\AWS SDK Example\swf\swfexample>java -cp "D:\AWS SDK Example\AWS Tools and SDK\aws-java-sdk-
1.11.205\lib\aws-java-sdk-1.11.205.jar;D:\AWS SDK Example\AWS Tools and SDK\aws-java-sdk-1.11.
205\third-party\lib\*;D:\AWS SDK Example\swf\swfexample\target\swfexample-1.0-SNAPSHOT.jar" co
m.packt.example.Starter
Starting the workflow execution 'ExampleWorkflowExecution' with input 'Amazon SWF'.
Workflow execution started with the run id '224bGMBktPIudrtutup4M/kd8u0Orx0apxefEE7KRIs3Y='.
```

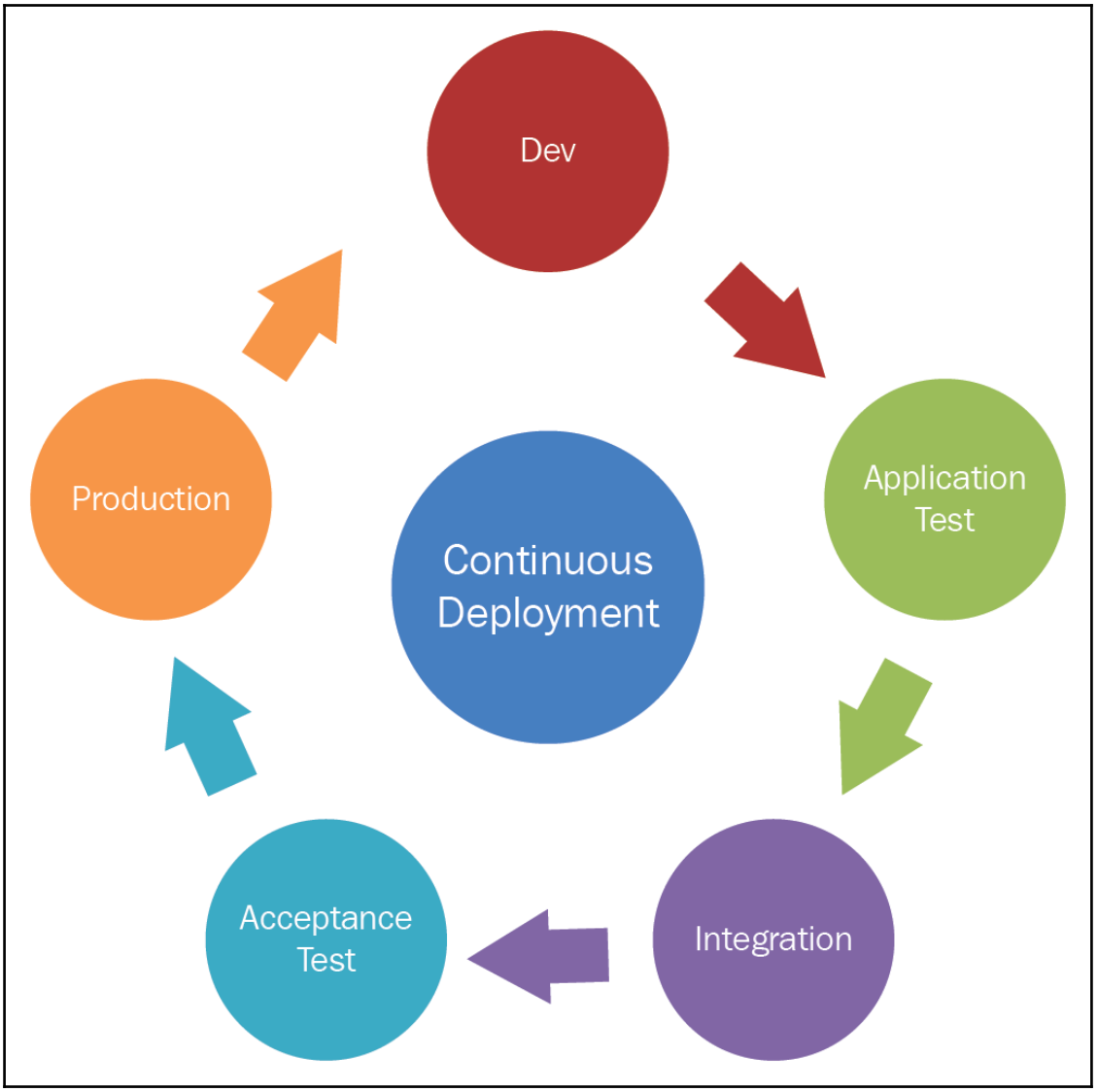
Chapter 3: Continuous Integration and Continuous Deployment Workflow



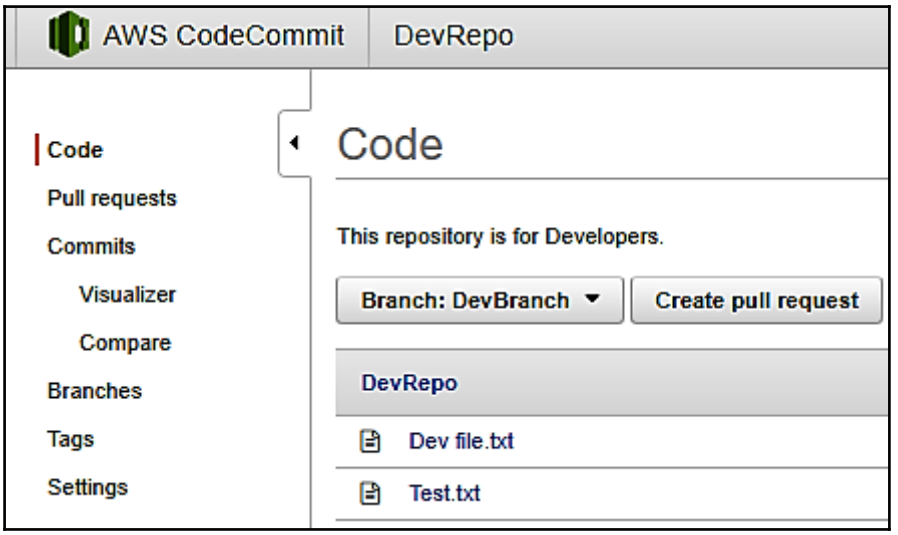

Continuous Integration
DevOps
Continuous Deployment
Continuous Delivery

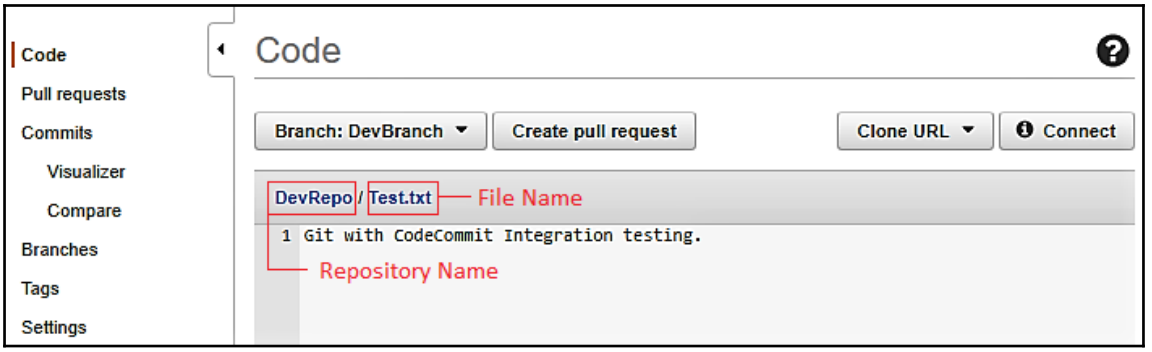

Dev
Continuous Integration
Integration
Application Test

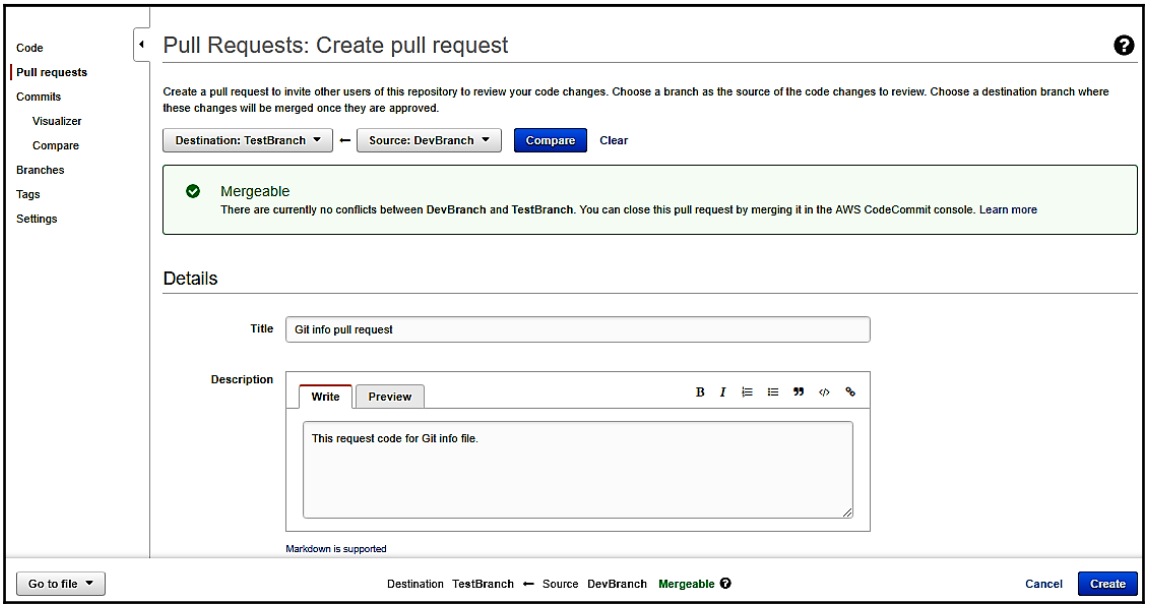

Dev
Application Test
Integration
Acceptance Test
Continuous Delivery

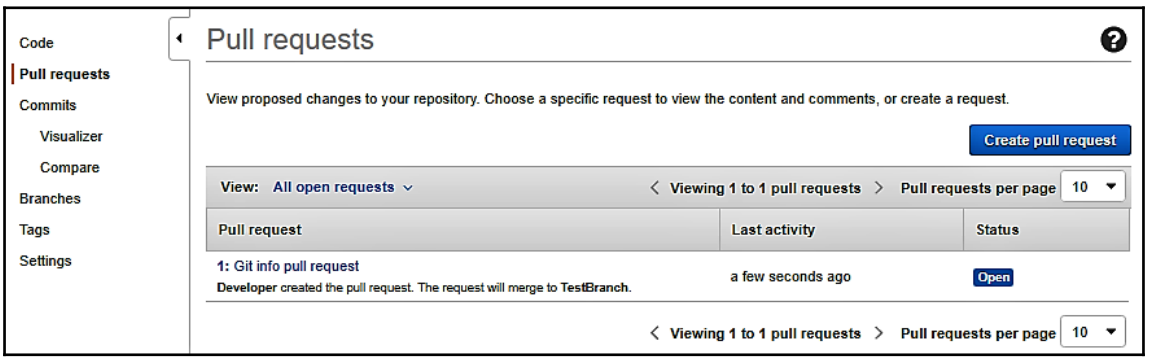

Dev
Application Test
Integration
Acceptance Test
Production
Continuous Deployment

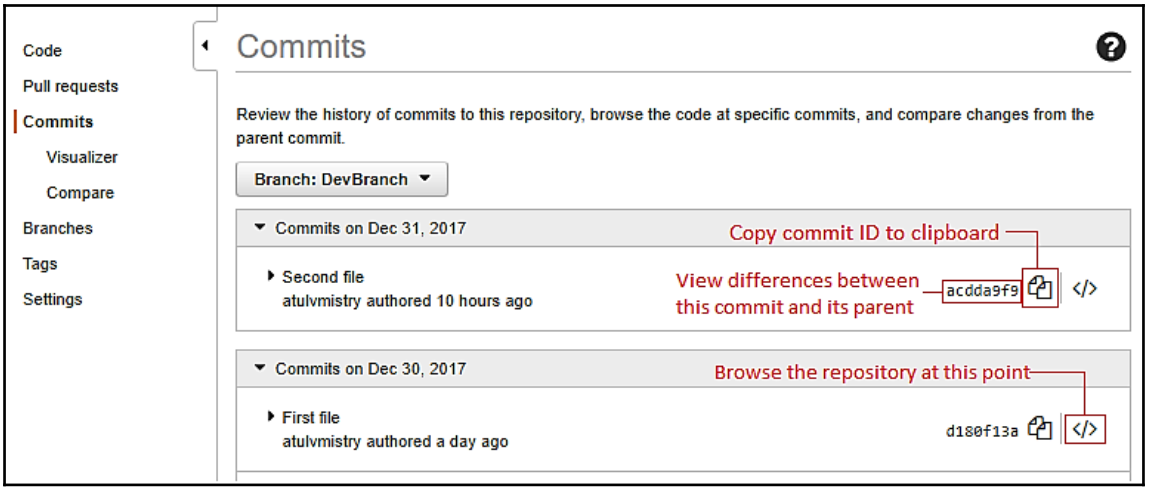
Chapter 4: CI/CD in AWS Part 1 – CodeCommit, CodeBuild, and Testing

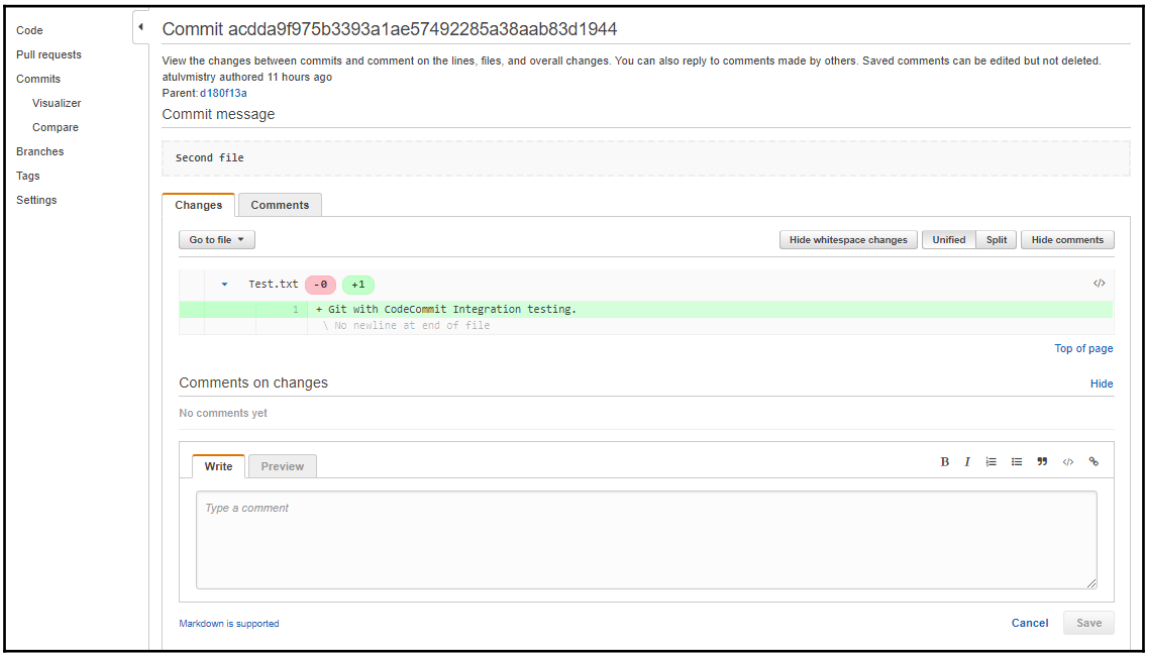


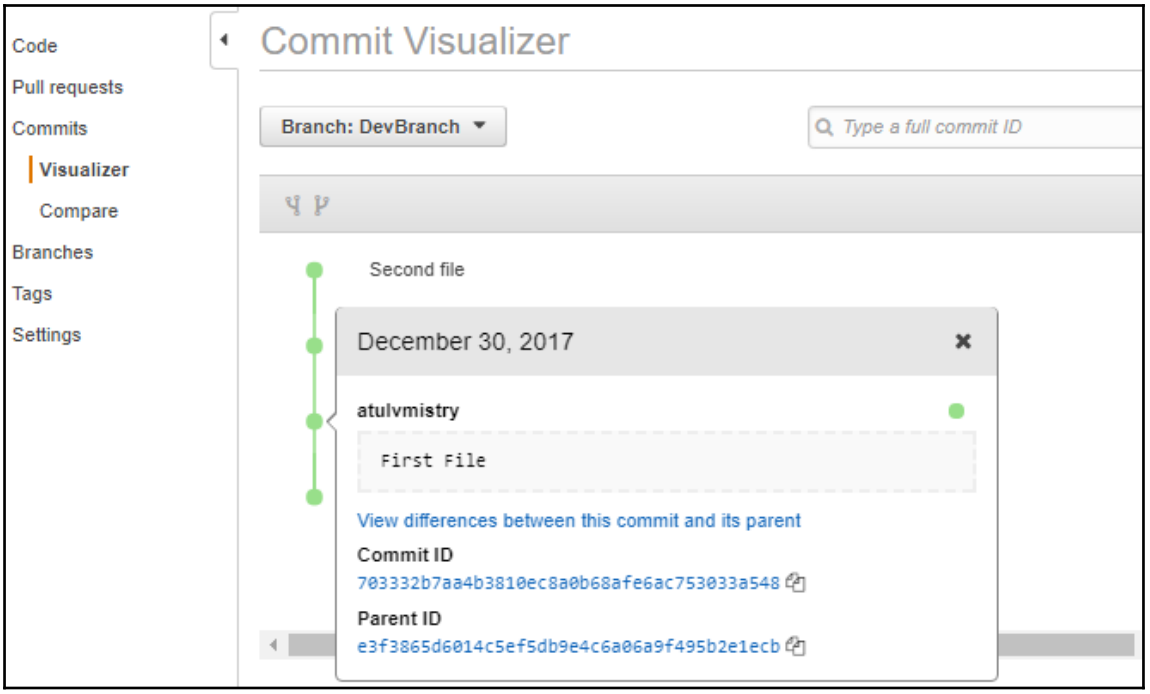

Code
Pull requests
Commits
Visualizer
Compare
Branches
Tags
Settings
Code
Branch: DevBranch
Create pull request
Clone URL
Connect
DevRepo / Test.txt
File Name
1 Git with CodeCommit Integration testing.
Repository Name

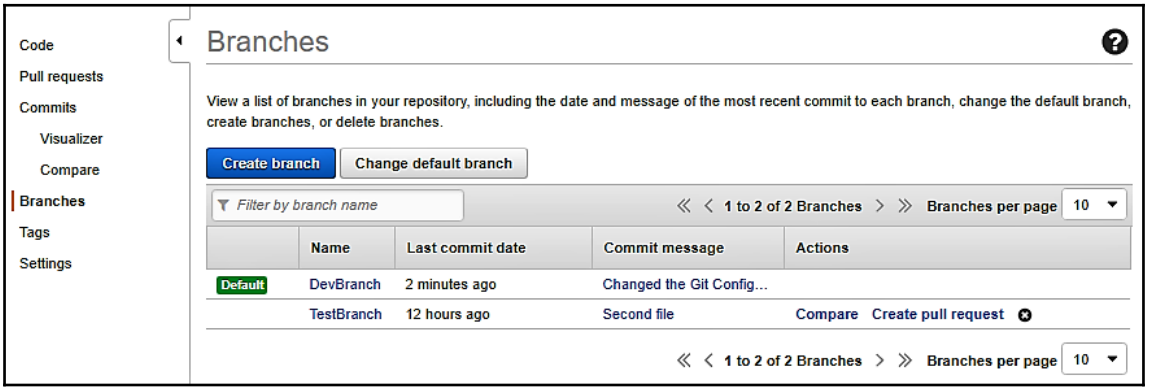

Code
Pull requests
Commits
Visualizer
Compare
Branches
Tags
Settings
Pull Requests: Create pull request
Create a pull request to invite other users of this repository to review your code changes. Choose a branch as the source of the code changes to review. Choose a destination branch where these changes will be merged once they are approved.
Destination: TestBranch
Source: DevBranch
Compare
Clear
Mergeable
There are currently no conflicts between DevBranch and TestBranch. You can close this pull request by merging it in the AWS CodeCommit console. Learn more
Details
Title
Git info pull request
Description
Write
Preview
This request code for Git info file.
Markdown is supported
Go to file
Destination TestBranch ← Source DevBranch Mergeable
Cancel
Create

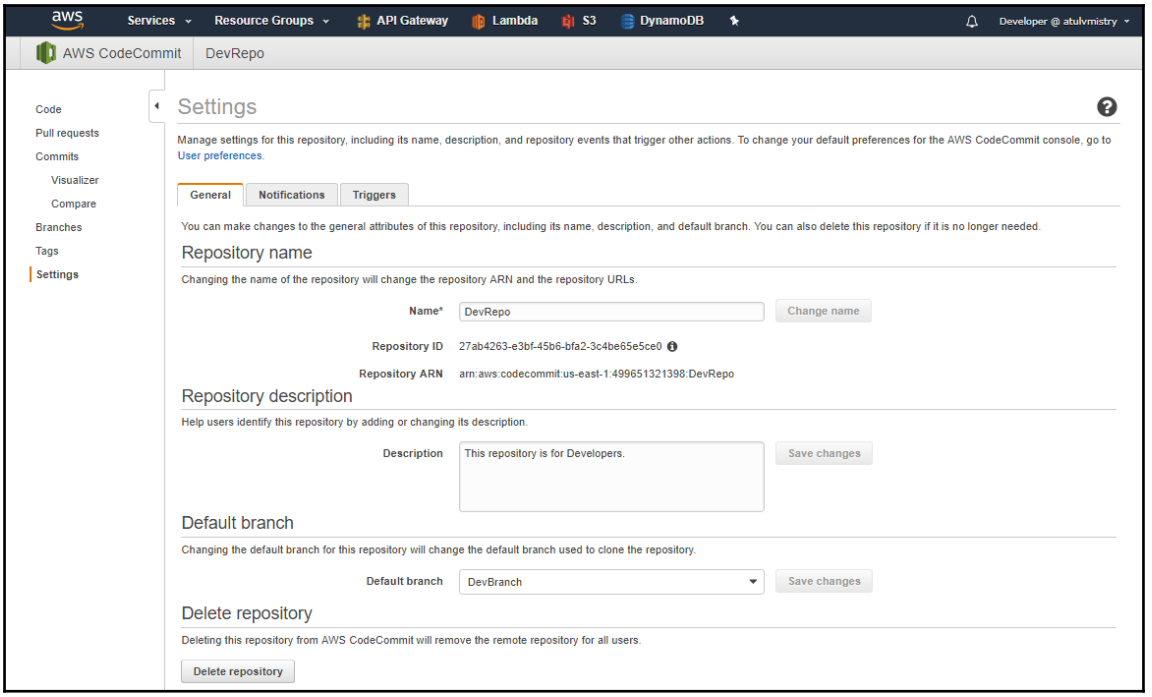

Code
Pull requests
Commits
Visualizer
Compare
Branches
Tags
Settings
Pull requests
View proposed changes to your repository. Choose a specific request to view the content and comments, or create a request.
Create pull request
View: All open requests
Viewing 1 to 1 pull requests
Pull requests per page 10
Pull request
Last activity
Status
1: Git info pull request
Developer created the pull request. The request will merge to TestBranch.
a few seconds ago
Open
Viewing 1 to 1 pull requests
Pull requests per page 10

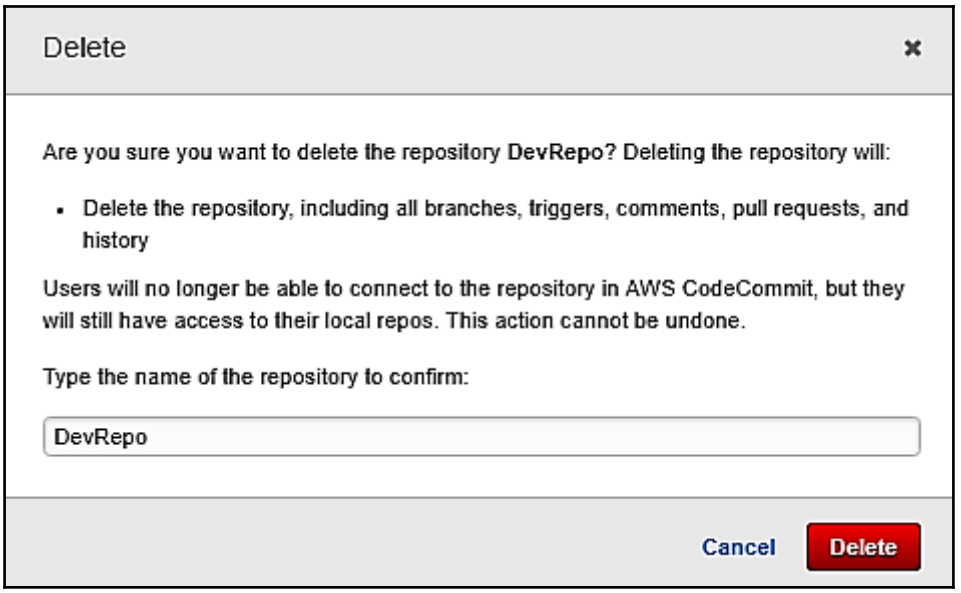

Code
Pull requests
Commits
Visualizer
Compare
Branches
Tags
Settings
Commits
Review the history of commits to this repository, browse the code at specific commits, and compare changes from the parent commit.
Branch: DevBranch
Commits on Dec 31, 2017
Copy commit ID to clipboard
Second file
atulvmistry authored 10 hours ago
View differences between this commit and its parent
acdda9f9
Commits on Dec 30, 2017
Browse the repository at this point
First file
atulvmistry authored a day ago
d180f13a


Code
Pull requests
Commits
Visualizer
Compare
Branches
Tags
Settings
Commit acdda9f975b3393a1ae57492285a38aab83d1944
View the changes between commits and comment on the lines, files, and overall changes. You can also reply to comments made by others. Saved comments can be edited but not deleted.
atulvmistry authored 11 hours ago
Parent: d180f13a
Commit message
Second file
Changes
Comments
Go to file
Hide whitespace changes
Unified
Split
Hide comments
Test.txt -0 +1
1 + Git with CodeCommit Integration testing.
\ No newline at end of file
Top of page
Comments on changes
Hide
No comments yet
Write
Preview
Type a comment
Markdown is supported
Cancel
Save

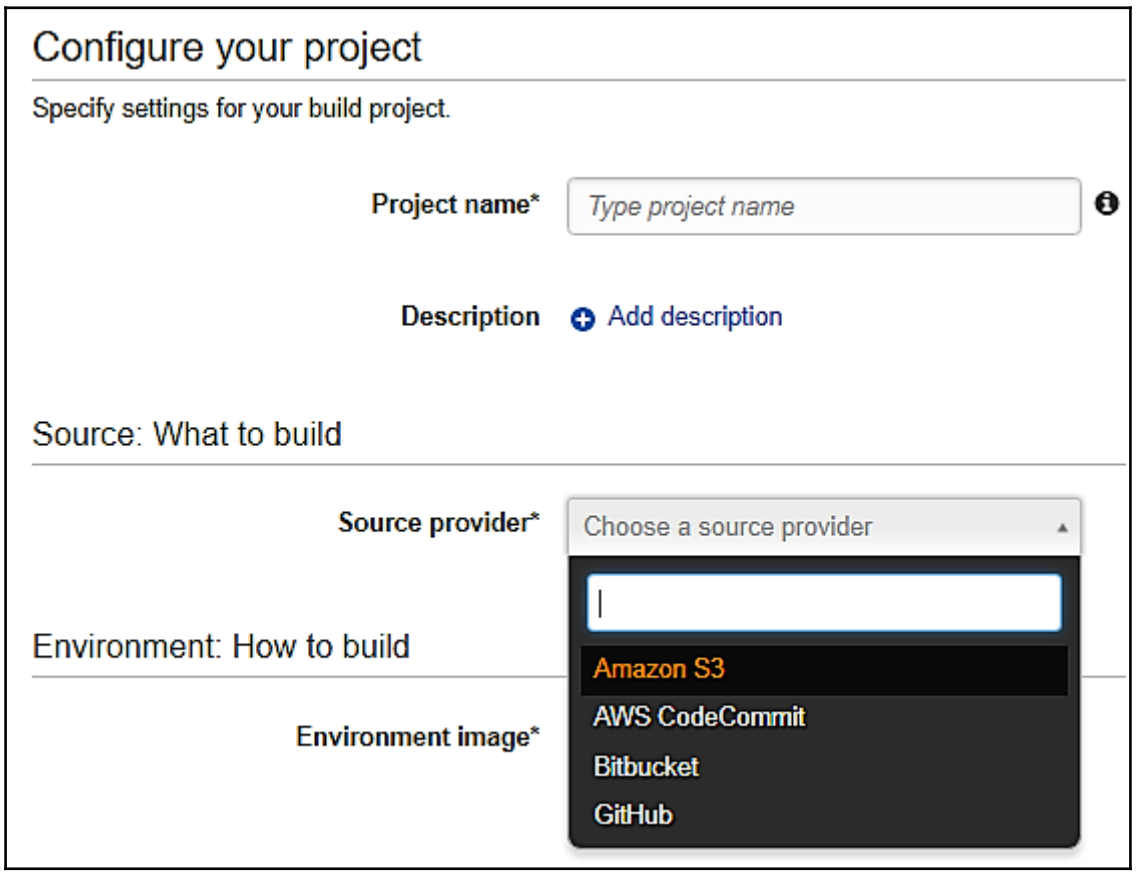

Code
Pull requests
Commits
Visualizer
Compare
Branches
Tags
Settings
Commit Visualizer
Branch: DevBranch
Type a full commit ID
Second file
December 30, 2017
atulvmistry
First File
View differences between this commit and its parent
Commit ID
703332b7aa4b3810ec8a0b68afe6ac753033a548
Parent ID
e3f3865d6014c5ef5db9e4c6a06a9f495b2e1ecb

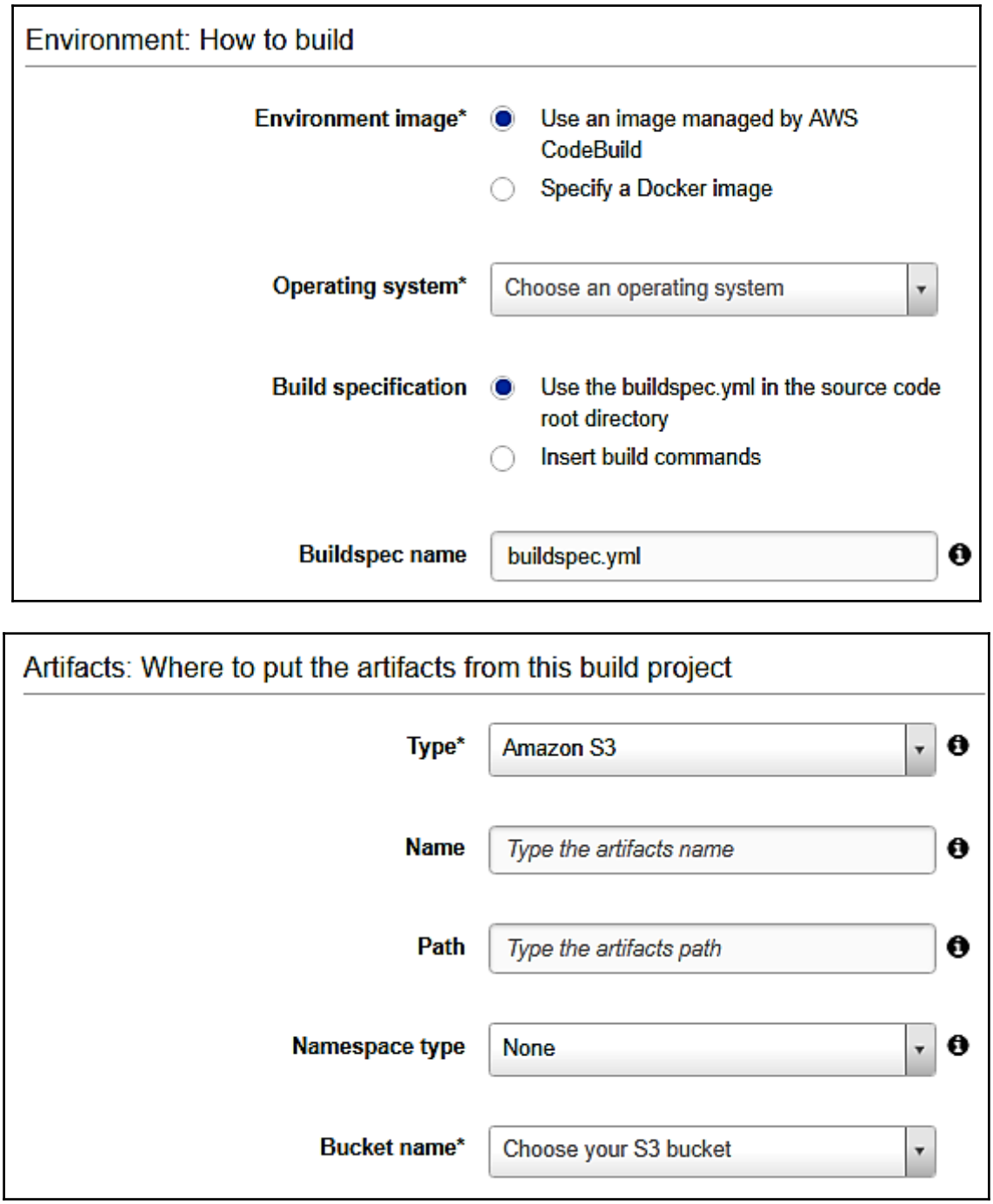

Code
Pull requests
Commits
Visualizer
Compare
Branches
Tags
Settings
Branches
View a list of branches in your repository, including the date and message of the most recent commit to each branch, change the default branch, create branches, or delete branches.
Create branch
Change default branch
Filter by branch name
1 to 2 of 2 Branches
Branches per page
10
Name
Last commit date
Commit message
Actions
Default
DevBranch
2 minutes ago
Changed the Git Config...
TestBranch
12 hours ago
Second file
Compare
Create pull request
1 to 2 of 2 Branches
Branches per page
10

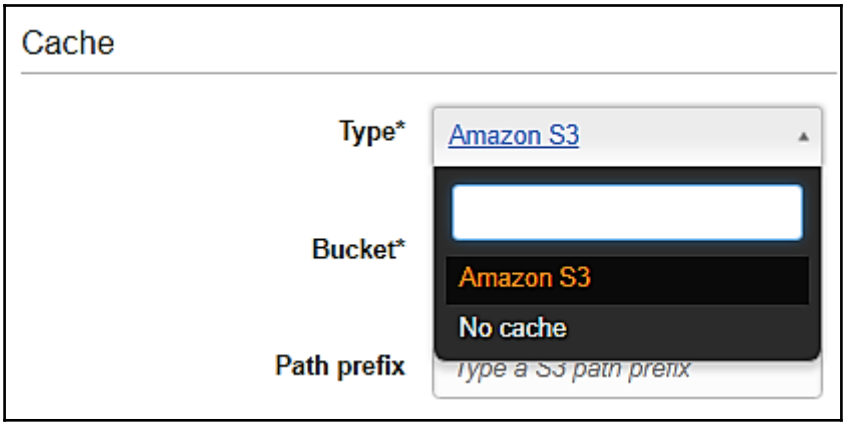

aws
Services
Resource Groups
API Gateway
Lambda
S3
DynamoDB
Developer @ atulvmistry
AWS CodeCommit
DevRepo
Code
Pull requests
Commits
Visualizer
Compare
Branches
Tags
Settings
Settings
Manage settings for this repository, including its name, description, and repository events that trigger other actions. To change your default preferences for the AWS CodeCommit console, go to User preferences.
General
Notifications
Triggers
You can make changes to the general attributes of this repository, including its name, description, and default branch. You can also delete this repository if it is no longer needed.
Repository name
Changing the name of the repository will change the repository ARN and the repository URLs.
Name*
DevRepo
Change name
Repository ID
27ab4263-e3bf-45b6-bfa2-3c4be65e5ce0
Repository ARN
arn:aws:codecommit:us-east-1:499651321398:DevRepo
Repository description
Help users identify this repository by adding or changing its description.
Description
This repository is for Developers.
Save changes
Default branch
Changing the default branch for this repository will change the default branch used to clone the repository.
Default branch
DevBranch
Save changes
Delete repository
Deleting this repository from AWS CodeCommit will remove the remote repository for all users.
Delete repository

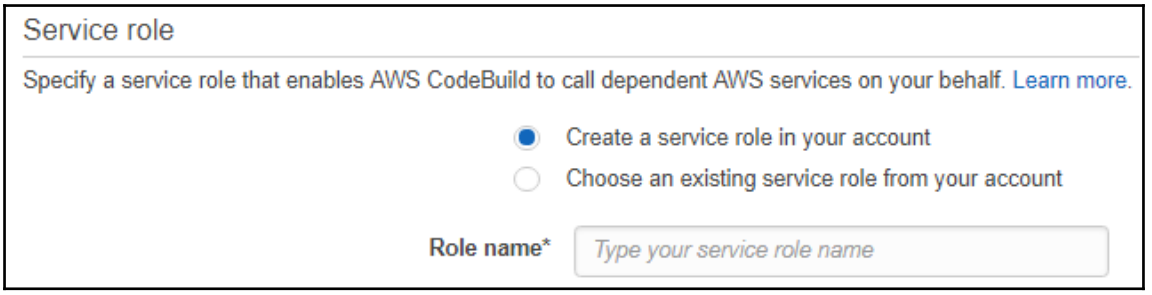

Delete
Are you sure you want to delete the repository DevRepo? Deleting the repository will:
Delete the repository, including all branches, triggers, comments, pull requests, and history
Users will no longer be able to connect to the repository in AWS CodeCommit, but they will still have access to their local repos. This action cannot be undone.
Type the name of the repository to confirm:
DevRepo
Cancel
Delete

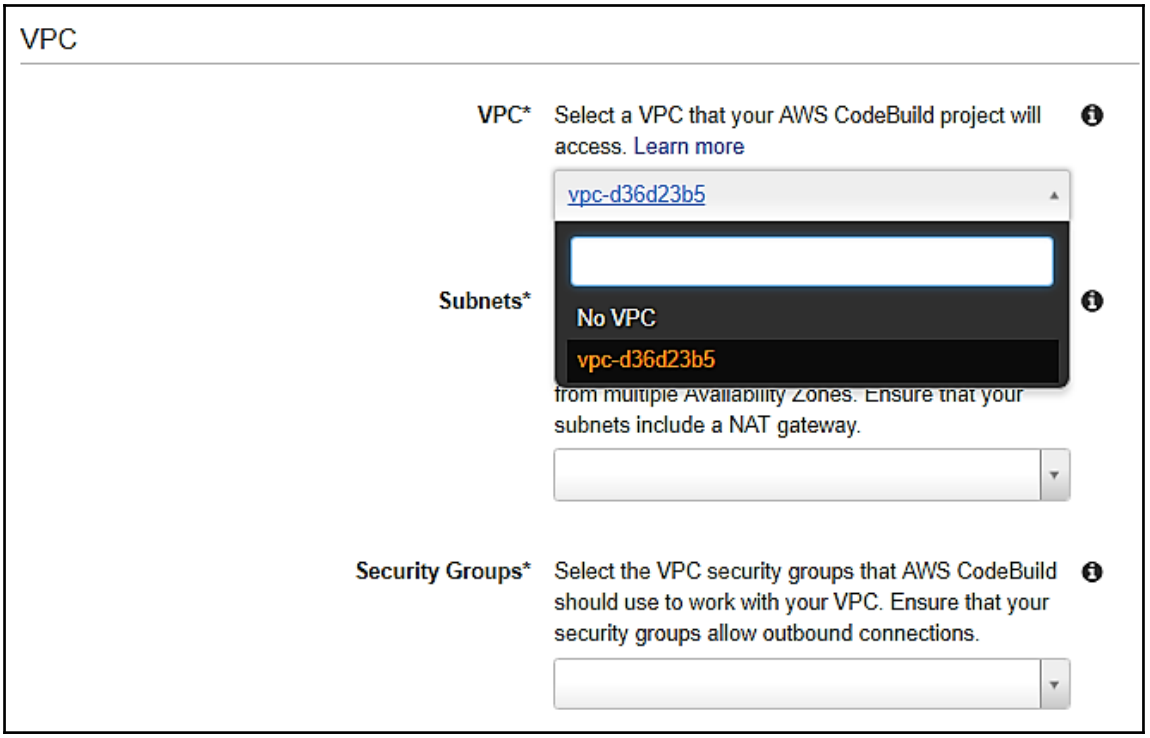

AWS CodeBuild
Build projects
Build history
Build projects
Review your build projects and start new builds.
Start build
Create project
Actions
Viewing 1 to 1 projects
projects per page
10
Project
Repository
NewProject
https://git-codecommit.us-east-1.amazonaws.com/v1/repos/DevRepo

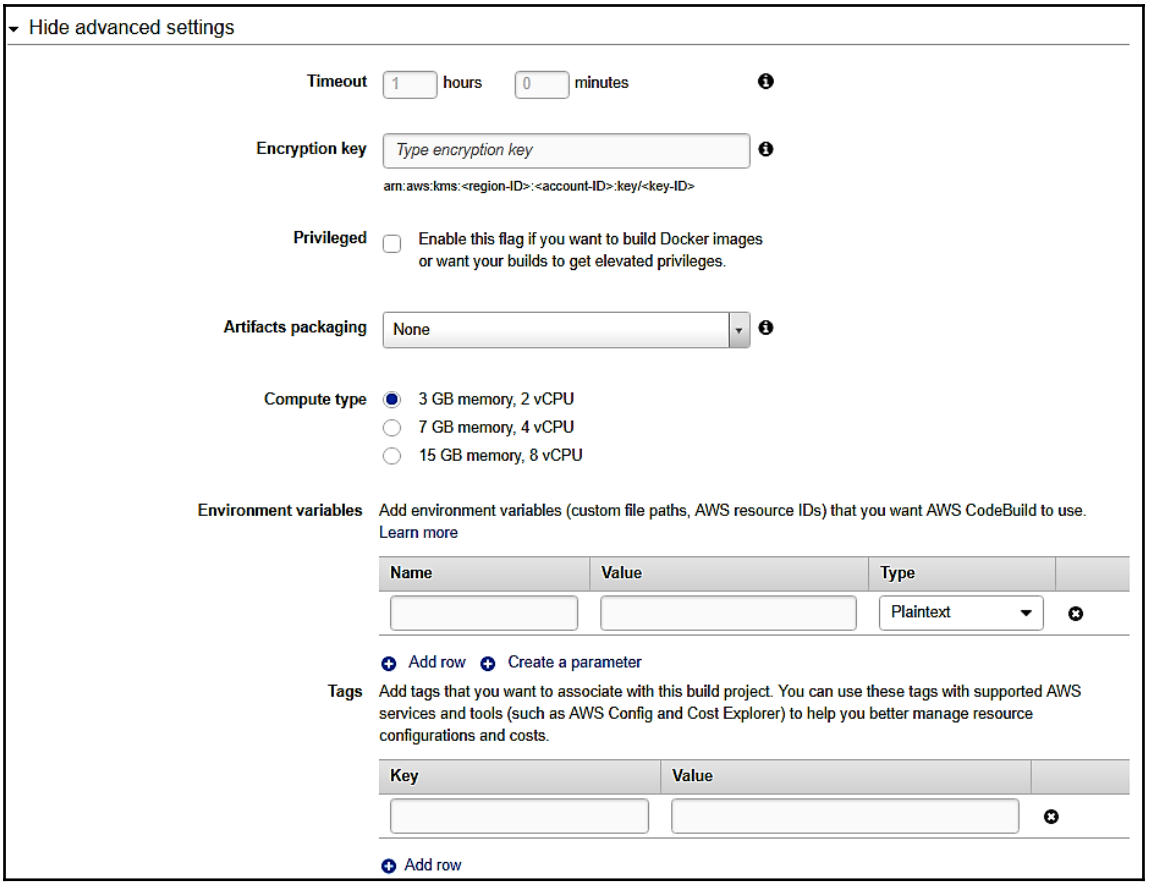

Configure your project
Specify settings for your build project.
Project name*
Type project name
Description
Add description
Source: What to build
Source provider*
Choose a source provider
Amazon S3
AWS CodeCommit
Bitbucket
GitHub
Environment: How to build
Environment image*

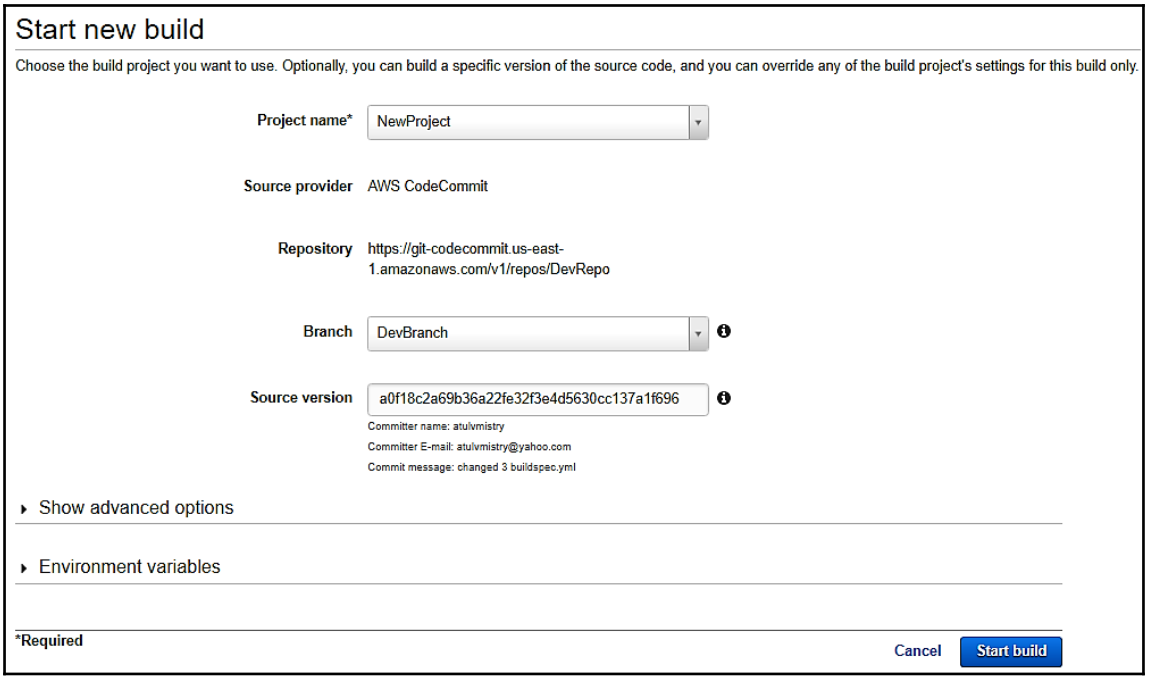

Environment: How to build
Environment image*
Use an image managed by AWS CodeBuild
Specify a Docker image
Operating system*
Choose an operating system
Build specification
Use the buildspec.yml in the source code root directory
Insert build commands
Buildspec name
buildspec.yml
Artifacts: Where to put the artifacts from this build project
Type*
Amazon S3
Name
Type the artifacts name
Path
Type the artifacts path
Namespace type
None
Bucket name*
Choose your S3 bucket

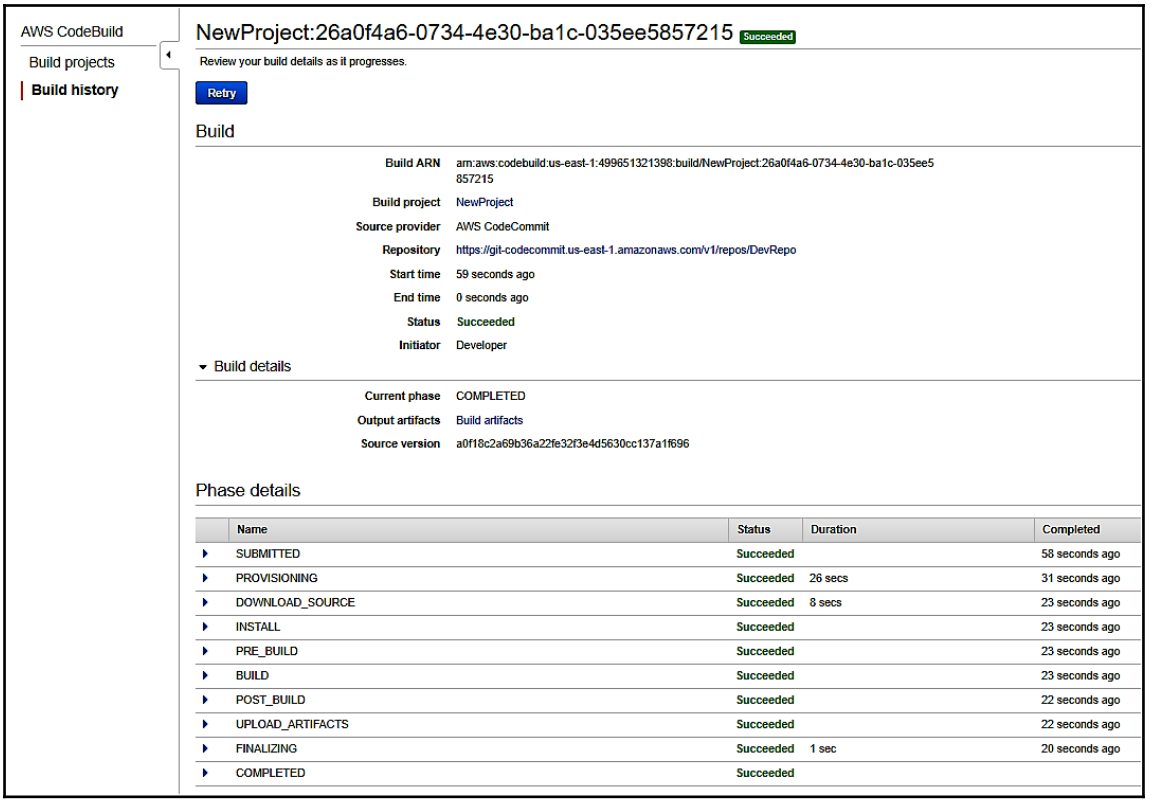

Cache
Type*
Amazon S3
Bucket*
Amazon S3
No cache
Path prefix
Type a S3 path prefix

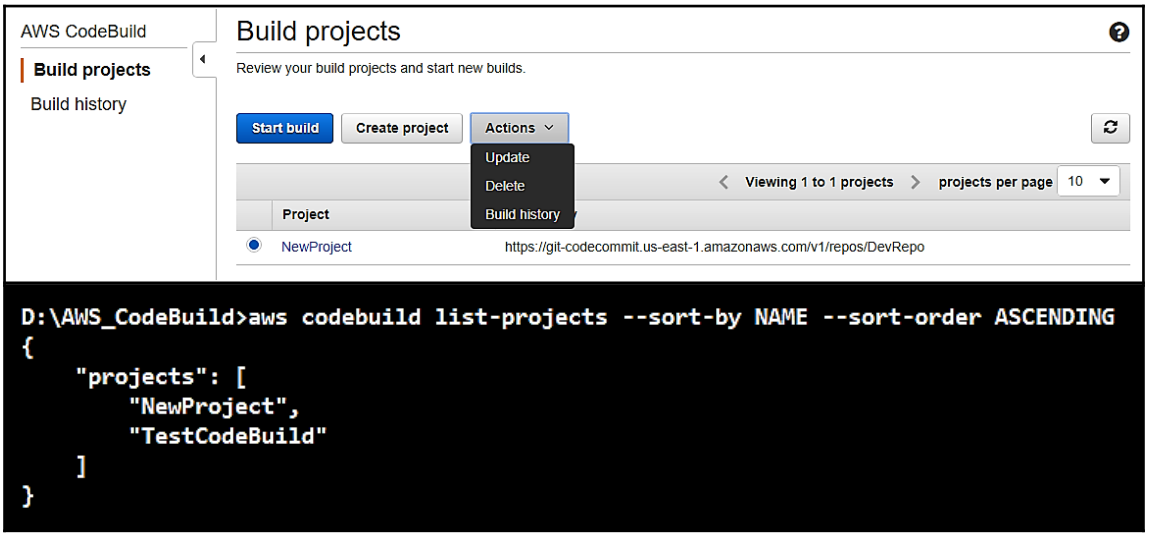

Service role
Specify a service role that enables AWS CodeBuild to call dependent AWS services on your behalf. Learn more.
Create a service role in your account
Choose an existing service role from your account
Role name*
Type your service role name


VPC
VPC*
Select a VPC that your AWS CodeBuild project will access. Learn more
vpc-d36d23b5
No VPC
vpc-d36d23b5
Subnets*
from multiple Availability Zones. Ensure that your subnets include a NAT gateway.
Security Groups*
Select the VPC security groups that AWS CodeBuild should use to work with your VPC. Ensure that your security groups allow outbound connections.


Hide advanced settings
Timeout
1
hours
0
minutes
Encryption key
Type encryption key
arn:aws:kms:<region-ID>:<account-ID>:key/<key-ID>
Privileged
Enable this flag if you want to build Docker images or want your builds to get elevated privileges.
Artifacts packaging
None
Compute type
3 GB memory, 2 vCPU
7 GB memory, 4 vCPU
15 GB memory, 8 vCPU
Environment variables
Add environment variables (custom file paths, AWS resource IDs) that you want AWS CodeBuild to use.
Learn more
Name
Value
Type
Plaintext
Add row
Create a parameter
Tags
Add tags that you want to associate with this build project. You can use these tags with supported AWS services and tools (such as AWS Config and Cost Explorer) to help you better manage resource configurations and costs.
Key
Value
Add row

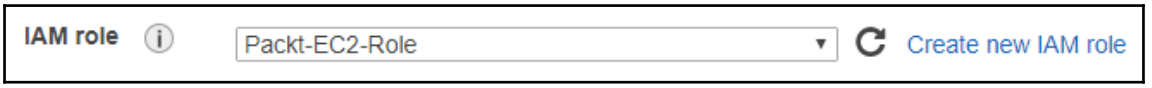

Start new build
Choose the build project you want to use. Optionally, you can build a specific version of the source code, and you can override any of the build project's settings for this build only.
Project name*
NewProject
Source provider
AWS CodeCommit
Repository
https://git-codecommit.us-east-1.amazonaws.com/v1/repos/DevRepo
Branch
DevBranch
Source version
a0f18c2a69b36a22fe32f3e4d5630cc137a1f696
Committer name: atulvmistry
Committer E-mail: atulvmistry@yahoo.com
Commit message: changed 3 buildspec.yml
Show advanced options
Environment variables
*Required
Cancel
Start build

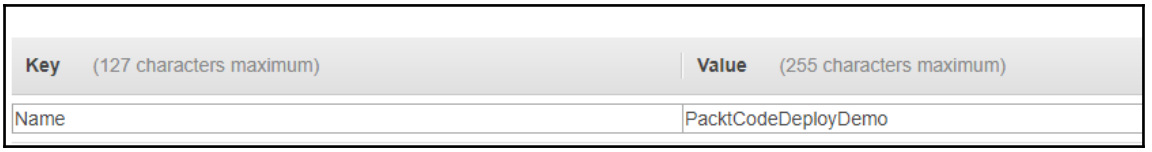


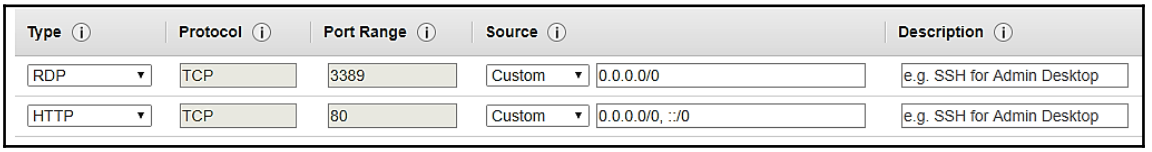


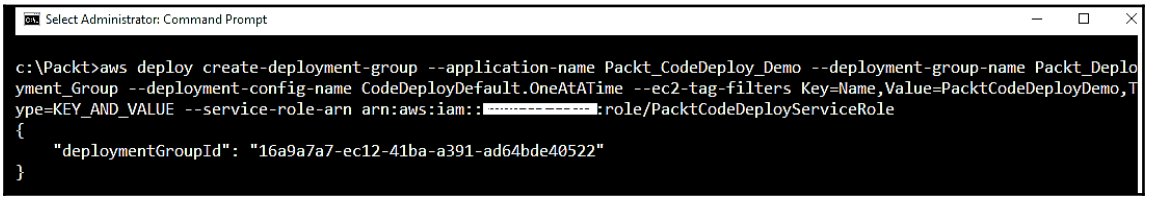

```
D:\AWS_CodeBuild>aws codebuild list-projects --sort-by NAME --sort-order ASCENDING
{
    "projects": [
        "NewProject",
        "TestCodeBuild"
    ]
}
```

Chapter 5: CI/CD in AWS Part 2 – CodeDeploy, CodePipeline, and CodeStar





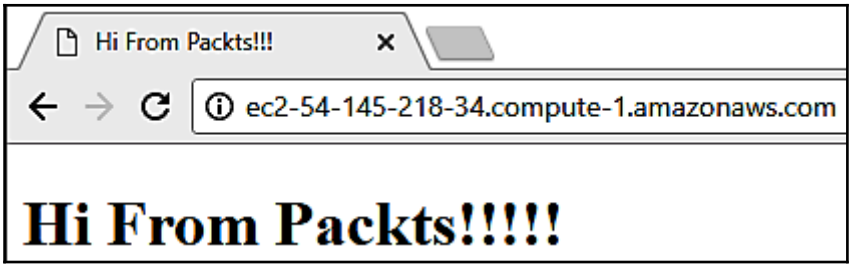


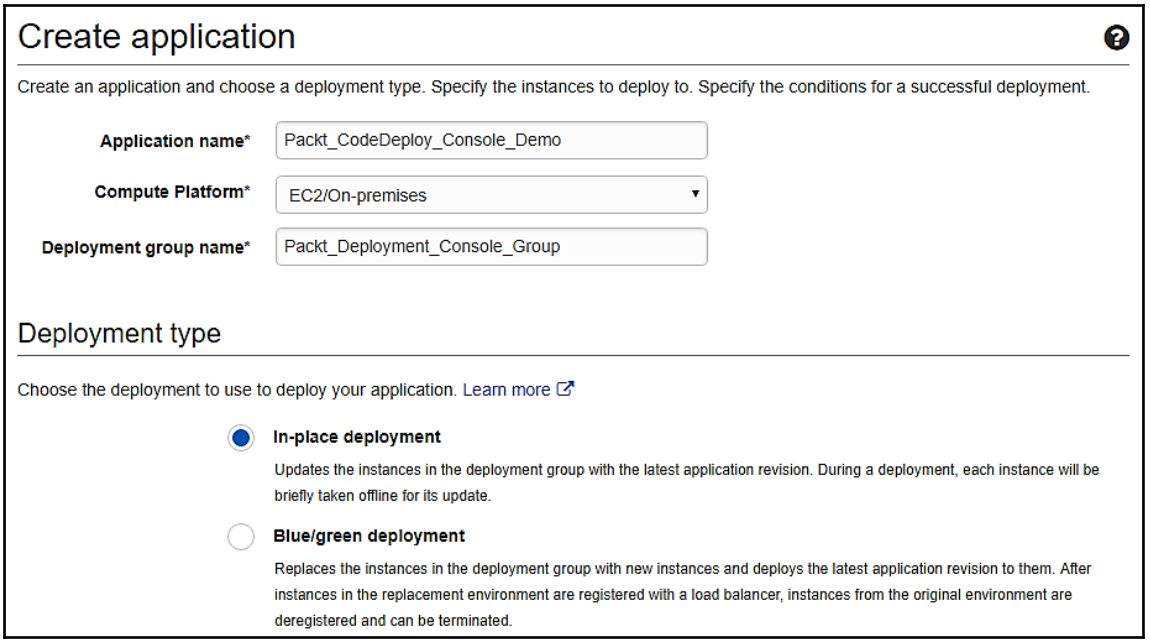


```
c:\Packt>aws deploy create-deployment --application-name Packt_CodeDeploy_Demo --deployment-config-name CodeDeployDefaul
t.OneAtATime --deployment-group-name Packt_Deployment_Group --s3-location bucket=packtdemo,bundleType=zip,key=PacktCodeD
eploy.zip
{
    "deploymentId": "d-H81YVFHVQ"
}
```

```
Select Administrator: Command Prompt

c:\Packt>aws deploy list-deployments --application-name Packt_CodeDeploy_Demo --deployment-group-name Packt_Deployment_G
roup --query "deployments" --output text
d-H81YVFHVQ     d-ZW2S5FOVQ     d-DMYJILHVQ
```

```
c:\Packt>aws deploy get-deployment --deployment-id d-H81YVFHVQ --query "deploymentInfo.status" --output text
Succeeded

c:\Packt>
```




Create application
Create an application and choose a deployment type. Specify the instances to deploy to. Specify the conditions for a successful deployment.
Application name*
Packt_CodeDeploy_Console_Demo
Compute Platform*
EC2/On-premises
Deployment group name*
Packt_Deployment_Console_Group
Deployment type
Choose the deployment to use to deploy your application. Learn more
In-place deployment
Updates the instances in the deployment group with the latest application revision. During a deployment, each instance will be briefly taken offline for its update.
Blue/green deployment
Replaces the instances in the deployment group with new instances and deploys the latest application revision to them. After instances in the replacement environment are registered with a load balancer, instances from the original environment are deregistered and can be terminated.

Environment configuration

Specify any combination of Auto Scaling groups, Amazon EC2 instances, and on-premises instances to add instances to this deployment group.

Auto Scaling groups | **Amazon EC2 instances** | **On-premises instances**

You can add up to three groups of tags for EC2 instances to this deployment group. Learn more

One tag group : Any instance identified by the tag group will be deployed to.

Multiple tag groups : Only instances identified by all the tag groups will be deployed to.

Tag group 1

	Key	Value	Instances	
1	Name	PacktCodeDeployDemo	1	⊗
2				⊗

Add tag group

Matching instances

Right now these instances match the criteria you specified. There might be more or fewer instances that match your criteria when a deployment runs.

« ‹ **1 to 1 of 1 instances** › »

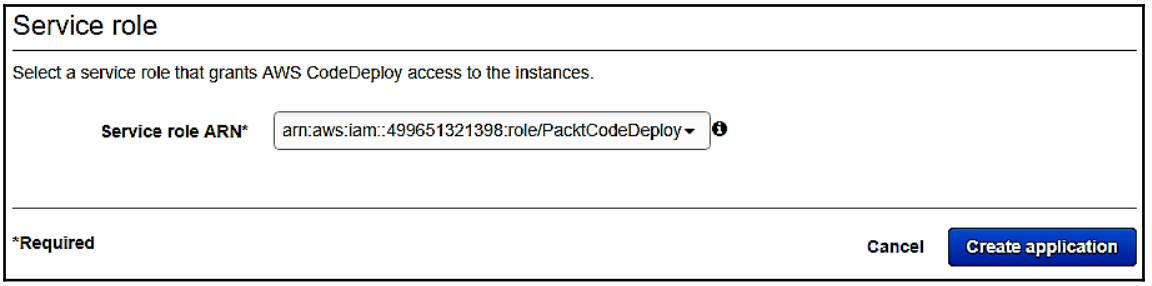
Instance ID	Status	Filter types	Association
i-03ed5b379a4722490	Running	Name:PacktCodeDeployDemo	EC2

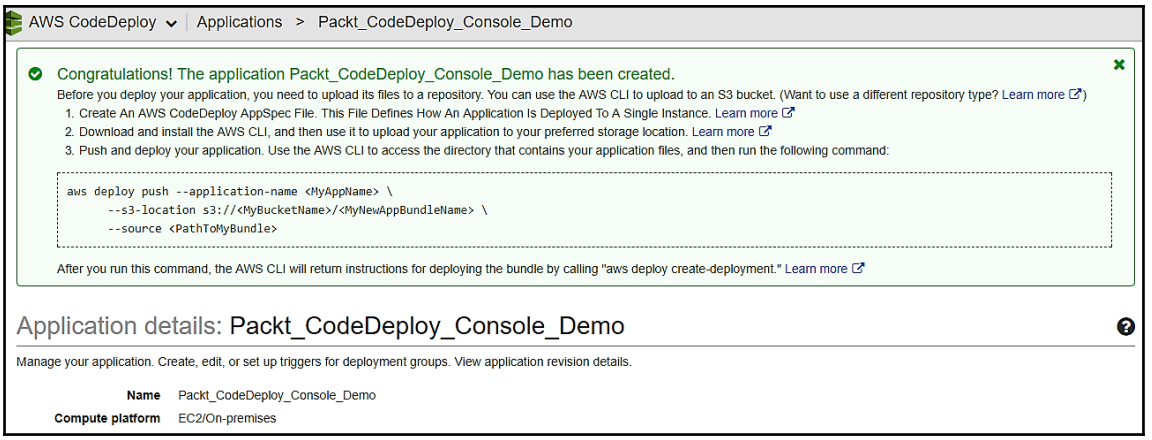
Deployment configuration

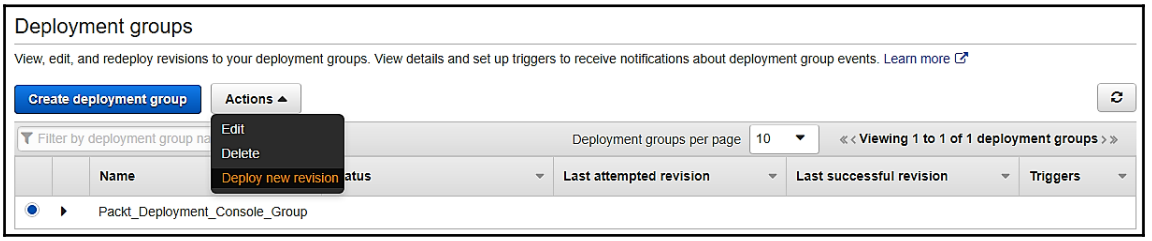
Choose from a list of default and custom deployment configurations. A deployment configuration is a set of rules that determines how fast an application will be deployed and the success or failure conditions for a deployment.

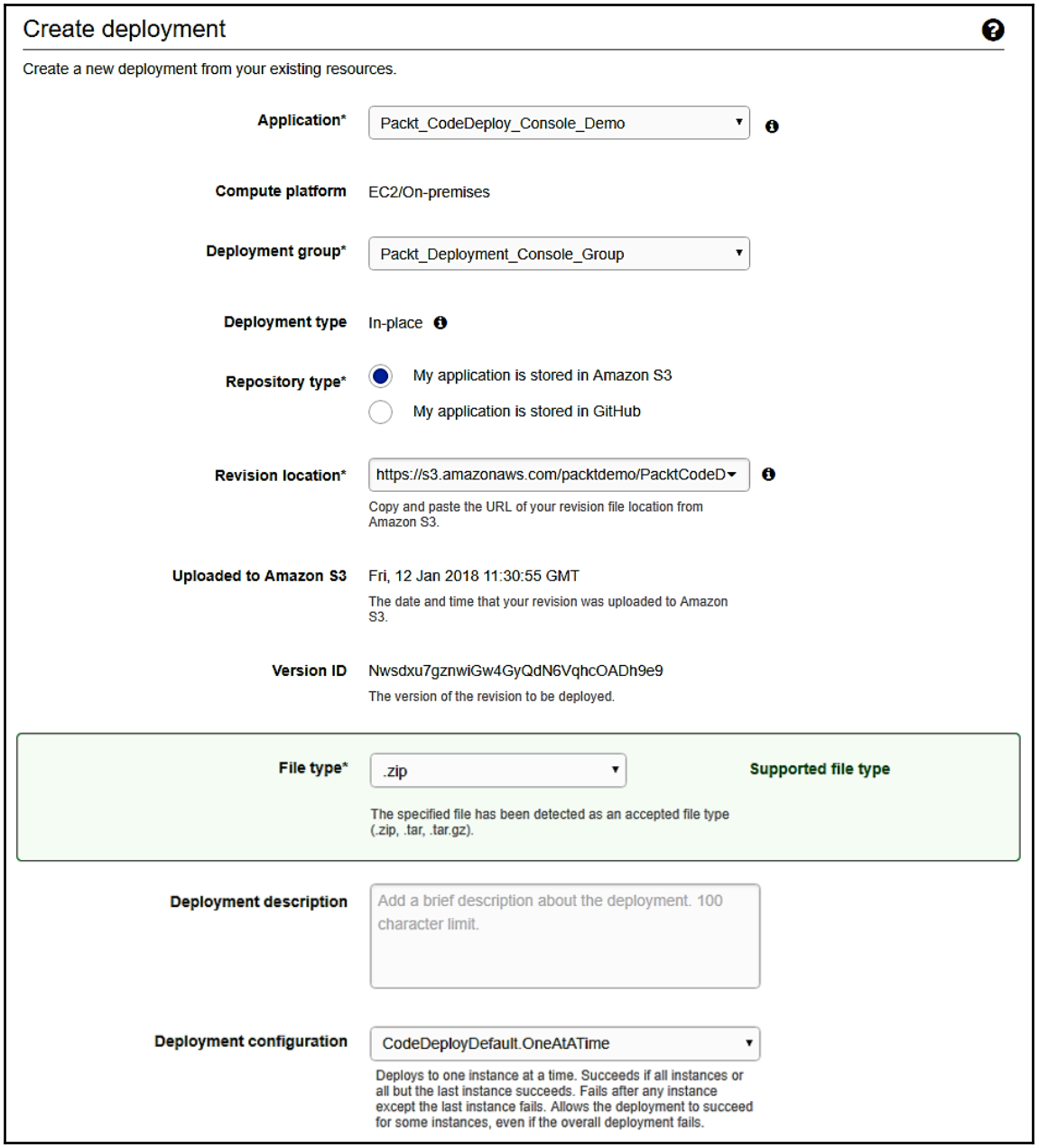
Deployment configuration CodeDeployDefault.OneAtATime or **Create deployment configuration**

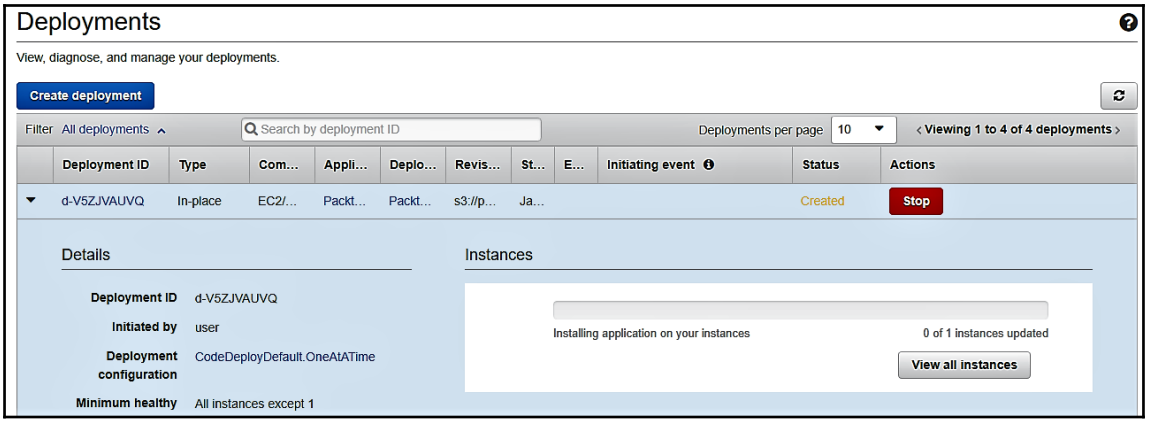
Routes traffic to one instance in the replacement environment at a time. Succeeds if traffic is successfully rerouted to all replacement instances. Fails after the very first rerouting failure. Allows the deployment to succeed for some instances, even if the overall deployment fails.

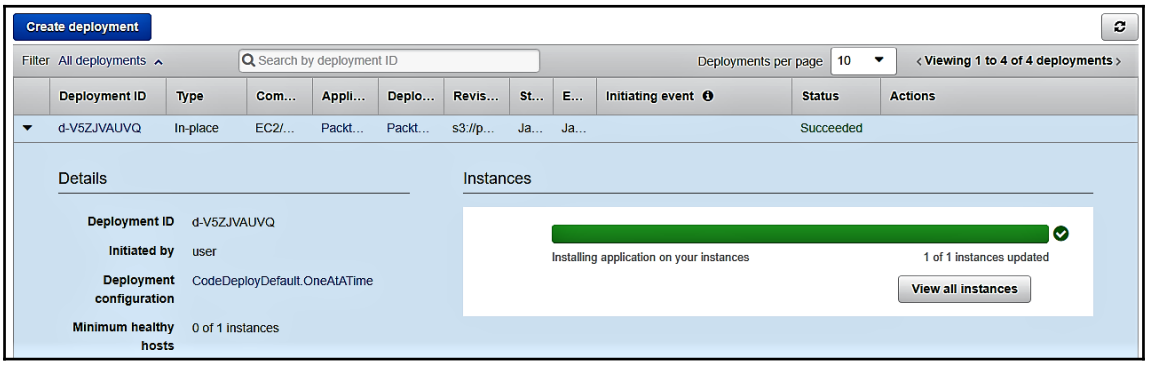

Service role
Select a service role that grants AWS CodeDeploy access to the instances.
Service role ARN*
arn:aws:iam::499651321398:role/PacktCodeDeploy
*Required
Cancel
Create application

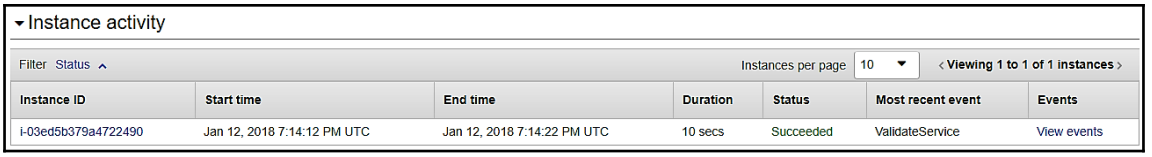

AWS CodeDeploy
Applications > Packt_CodeDeploy_Console_Demo
Congratulations! The application Packt_CodeDeploy_Console_Demo has been created.
Before you deploy your application, you need to upload its files to a repository. You can use the AWS CLI to upload to an S3 bucket. (Want to use a different repository type? Learn more)
1. Create An AWS CodeDeploy AppSpec File. This File Defines How An Application Is Deployed To A Single Instance. Learn more
2. Download and install the AWS CLI, and then use it to upload your application to your preferred storage location. Learn more
3. Push and deploy your application. Use the AWS CLI to access the directory that contains your application files, and then run the following command:
aws deploy push --application-name <MyAppName> \
--s3-location s3://<MyBucketName>/<MyNewAppBundleName> \
--source <PathToMyBundle>
After you run this command, the AWS CLI will return instructions for deploying the bundle by calling "aws deploy create-deployment." Learn more
Application details: Packt_CodeDeploy_Console_Demo
Manage your application. Create, edit, or set up triggers for deployment groups. View application revision details.
Name Packt_CodeDeploy_Console_Demo
Compute platform EC2/On-premises

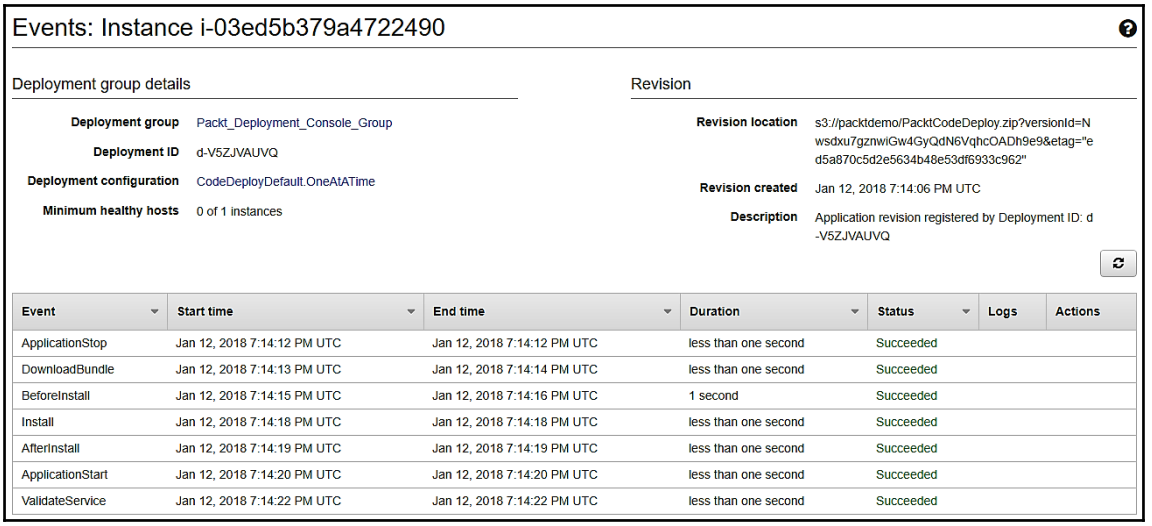

Deployment groups
View, edit, and redeploy revisions to your deployment groups. View details and set up triggers to receive notifications about deployment group events. Learn more
Create deployment group
Actions
Edit
Delete
Deploy new revision
Deployment groups per page 10
Viewing 1 to 1 of 1 deployment groups
Name
Last attempted revision
Last successful revision
Triggers
Packt_Deployment_Console_Group

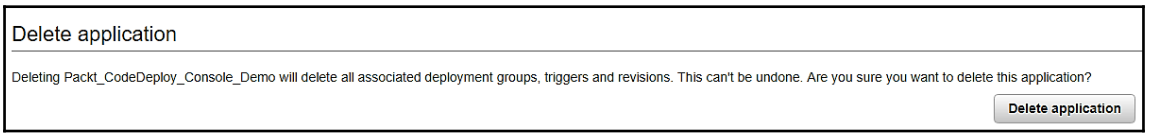

Create deployment
Create a new deployment from your existing resources.
Application*
Packt_CodeDeploy_Console_Demo
Compute platform
EC2/On-premises
Deployment group*
Packt_Deployment_Console_Group
Deployment type
In-place
Repository type*
My application is stored in Amazon S3
My application is stored in GitHub
Revision location*
https://s3.amazonaws.com/packtdemo/PacktCodeD
Copy and paste the URL of your revision file location from Amazon S3.
Uploaded to Amazon S3
Fri, 12 Jan 2018 11:30:55 GMT
The date and time that your revision was uploaded to Amazon S3.
Version ID
Nwsdxu7gznwiGw4GyQdN6VqhcOADh9e9
The version of the revision to be deployed.
File type*
.zip
Supported file type
The specified file has been detected as an accepted file type (.zip, .tar, .tar.gz).
Deployment description
Add a brief description about the deployment. 100 character limit.
Deployment configuration
CodeDeployDefault.OneAtATime
Deploys to one instance at a time. Succeeds if all instances or all but the last instance succeeds. Fails after any instance except the last instance fails. Allows the deployment to succeed for some instances, even if the overall deployment fails.

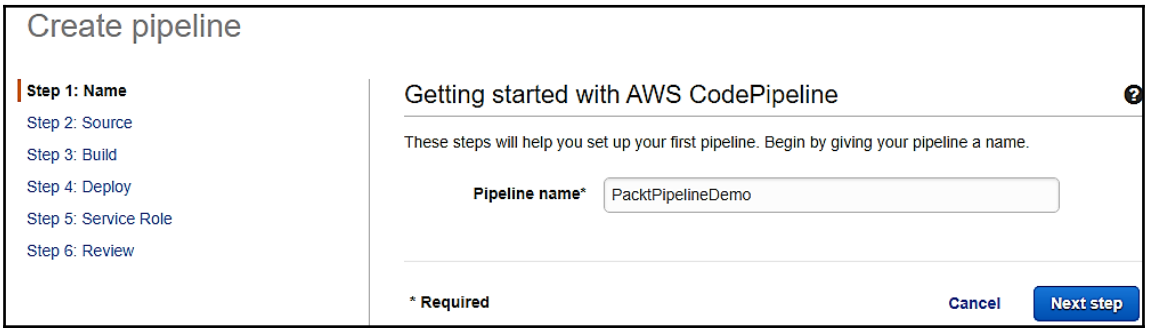

Deployments
View, diagnose, and manage your deployments.
Create deployment
Filter All deployments
Search by deployment ID
Deployments per page 10
Viewing 1 to 4 of 4 deployments
Deployment ID
Type
Com…
Appli…
Deplo…
Revis…
St…
E…
Initiating event
Status
Actions
d-V5ZJVAUVQ
In-place
EC2/…
Packt…
Packt…
s3://p…
Ja…
Created
Stop
Details
Deployment ID d-V5ZJVAUVQ
Initiated by user
Deployment configuration CodeDeployDefault.OneAtATime
Minimum healthy All instances except 1
Instances
Installing application on your instances
0 of 1 instances updated
View all instances

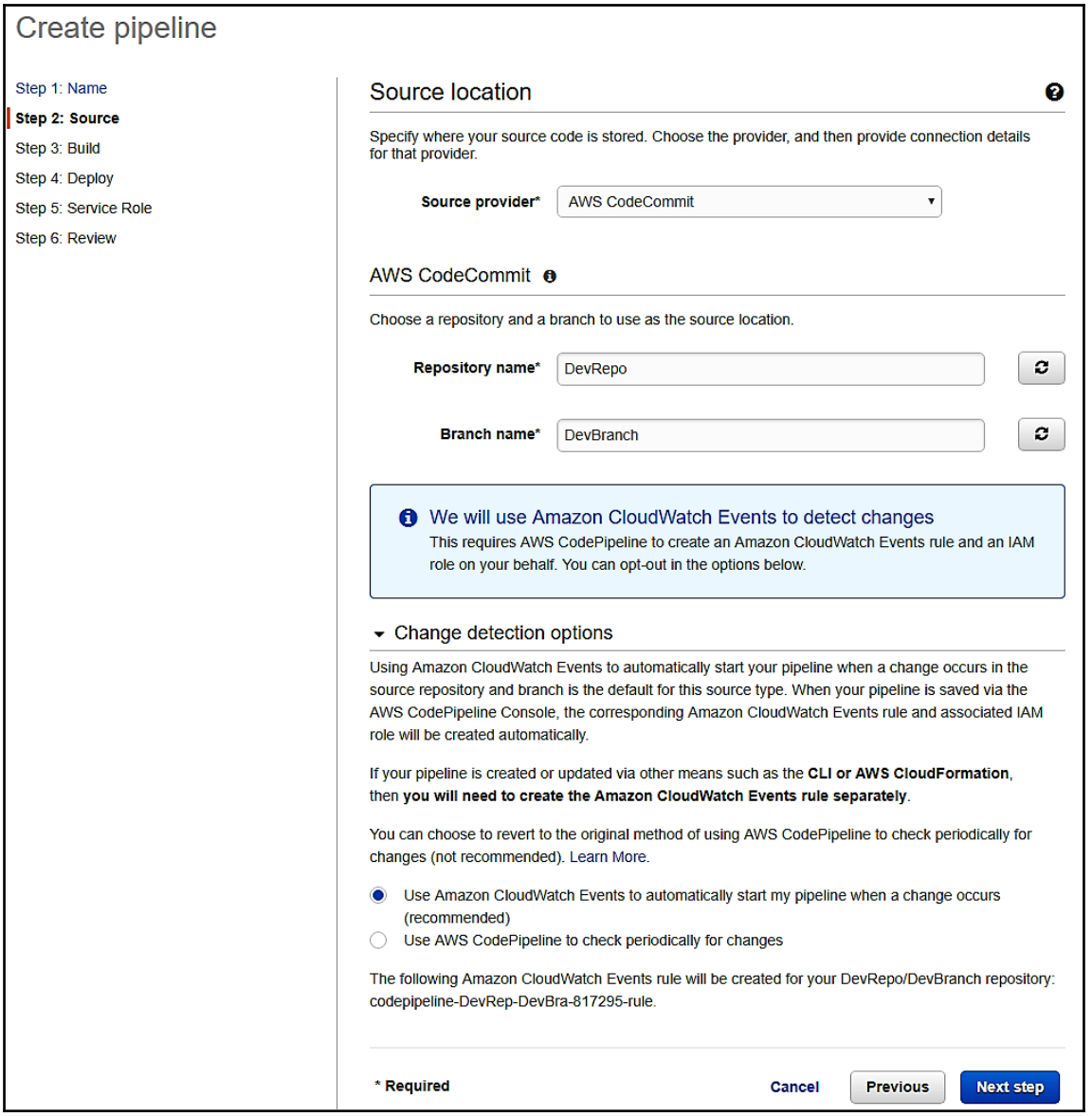

Create deployment
Filter All deployments
Search by deployment ID
Deployments per page 10
Viewing 1 to 4 of 4 deployments
Deployment ID
Type
Com…
Appli…
Deplo…
Revis…
St…
E…
Initiating event
Status
Actions
d-V5ZJVAUVQ
In-place
EC2/…
Packt…
Packt…
s3://p…
Ja…
Ja…
Succeeded
Details
Deployment ID d-V5ZJVAUVQ
Initiated by user
Deployment configuration CodeDeployDefault.OneAtATime
Minimum healthy hosts 0 of 1 instances
Instances
Installing application on your instances
1 of 1 instances updated
View all instances

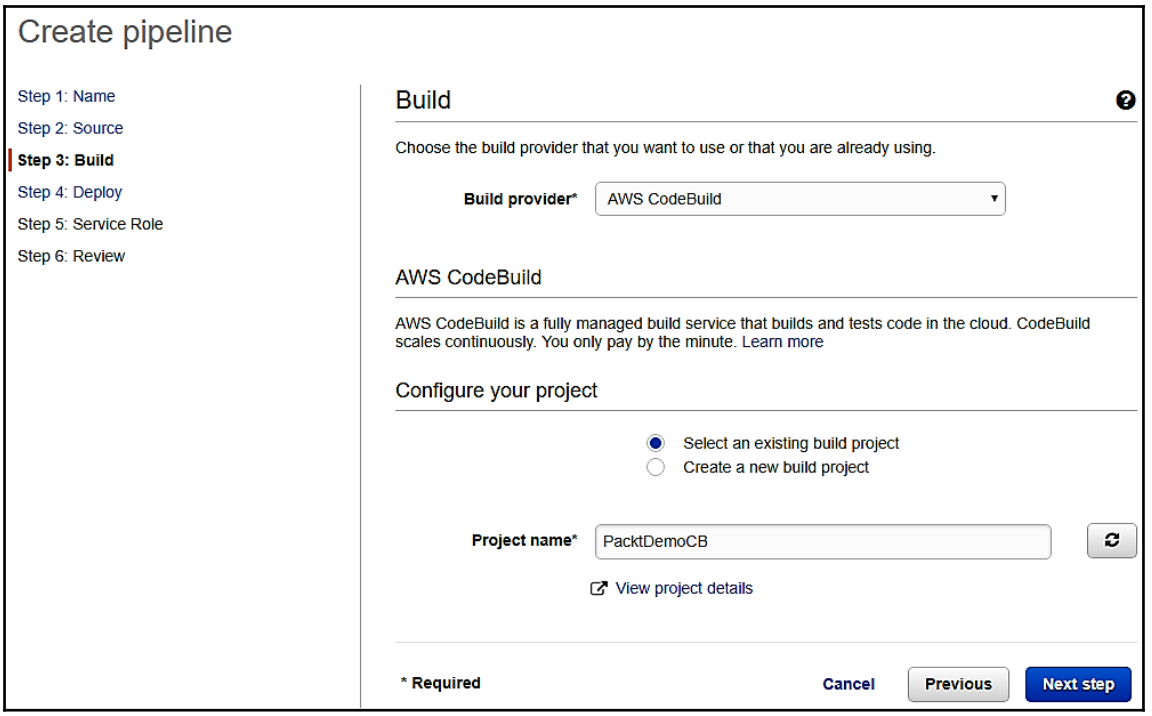

Instance activity
Filter Status
Instances per page 10
Viewing 1 to 1 of 1 instances
Instance ID
Start time
End time
Duration
Status
Most recent event
Events
i-03ed5b379a4722490
Jan 12, 2018 7:14:12 PM UTC
Jan 12, 2018 7:14:22 PM UTC
10 secs
Succeeded
ValidateService
View events

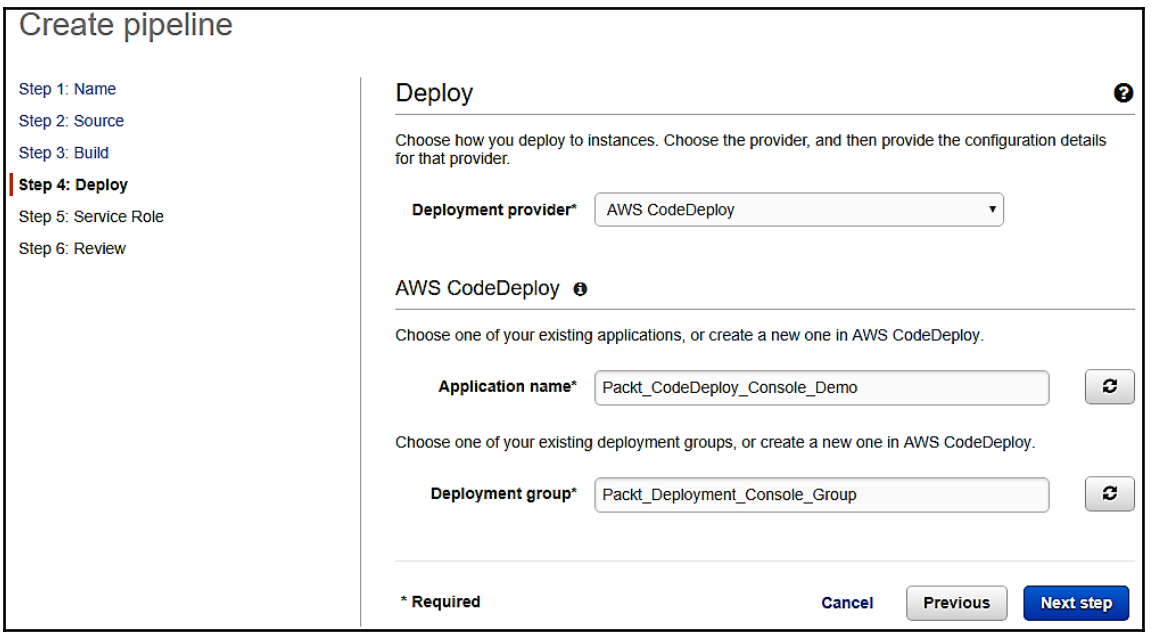

Events: Instance i-03ed5b379a4722490
Deployment group details
Deployment group
Packt_Deployment_Console_Group
Deployment ID
d-V5ZJVAUVQ
Deployment configuration
CodeDeployDefault.OneAtATime
Minimum healthy hosts
0 of 1 instances
Revision
Revision location
s3://packtdemo/PacktCodeDeploy.zip?versionId=Nwsdxu7gznwiGw4GyQdN6VqhcOADh9e9&etag="ed5a870c5d2e5634b48e53df6933c962"
Revision created
Jan 12, 2018 7:14:06 PM UTC
Description
Application revision registered by Deployment ID: d-V5ZJVAUVQ
Event
Start time
End time
Duration
Status
Logs
Actions
ApplicationStop
Jan 12, 2018 7:14:12 PM UTC
Jan 12, 2018 7:14:12 PM UTC
less than one second
Succeeded
DownloadBundle
Jan 12, 2018 7:14:13 PM UTC
Jan 12, 2018 7:14:14 PM UTC
less than one second
Succeeded
BeforeInstall
Jan 12, 2018 7:14:15 PM UTC
Jan 12, 2018 7:14:16 PM UTC
1 second
Succeeded
Install
Jan 12, 2018 7:14:18 PM UTC
Jan 12, 2018 7:14:18 PM UTC
less than one second
Succeeded
AfterInstall
Jan 12, 2018 7:14:19 PM UTC
Jan 12, 2018 7:14:19 PM UTC
less than one second
Succeeded
ApplicationStart
Jan 12, 2018 7:14:20 PM UTC
Jan 12, 2018 7:14:20 PM UTC
less than one second
Succeeded
ValidateService
Jan 12, 2018 7:14:22 PM UTC
Jan 12, 2018 7:14:22 PM UTC
less than one second
Succeeded

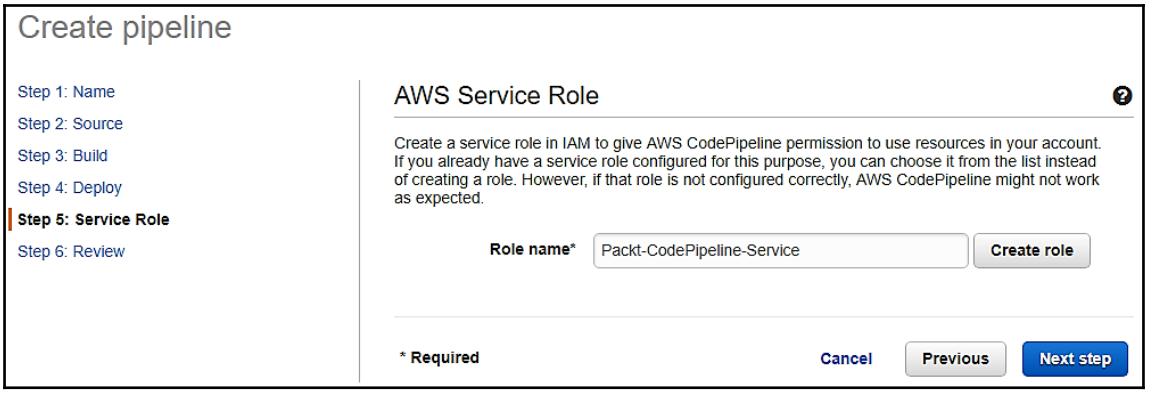

Delete application
Deleting Packt_CodeDeploy_Console_Demo will delete all associated deployment groups, triggers and revisions. This can't be undone. Are you sure you want to delete this application?
Delete application

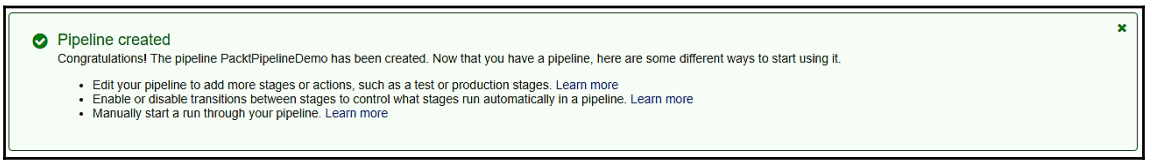

Create pipeline
Step 1: Name
Step 2: Source
Step 3: Build
Step 4: Deploy
Step 5: Service Role
Step 6: Review
Getting started with AWS CodePipeline
These steps will help you set up your first pipeline. Begin by giving your pipeline a name.
Pipeline name*
PacktPipelineDemo
* Required
Cancel
Next step

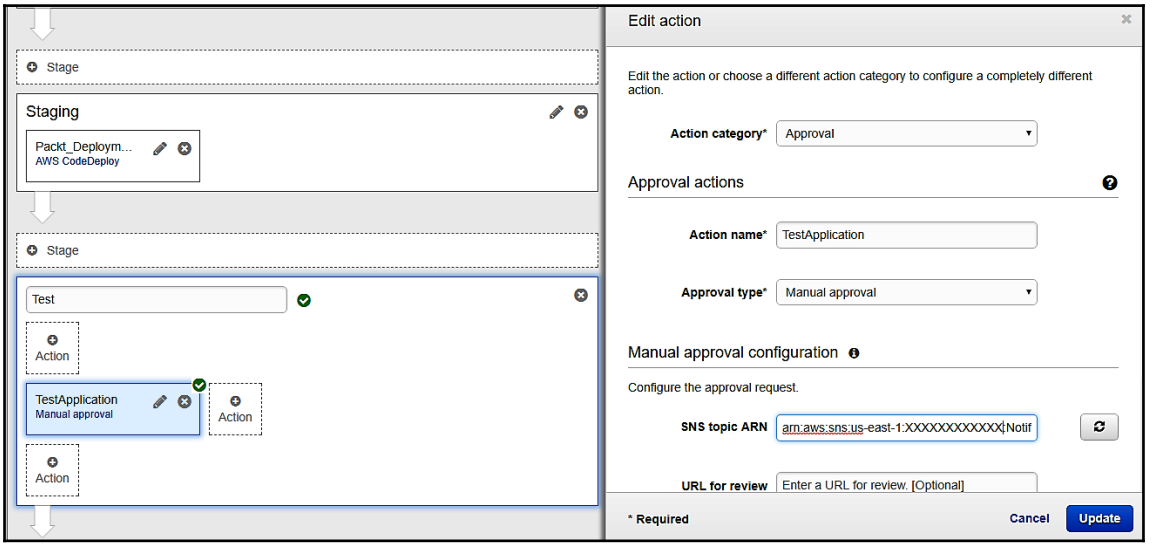

Create pipeline
Step 1: Name
Step 2: Source
Step 3: Build
Step 4: Deploy
Step 5: Service Role
Step 6: Review
Source location
Specify where your source code is stored. Choose the provider, and then provide connection details for that provider.
Source provider*
AWS CodeCommit
AWS CodeCommit
Choose a repository and a branch to use as the source location.
Repository name*
DevRepo
Branch name*
DevBranch
We will use Amazon CloudWatch Events to detect changes
This requires AWS CodePipeline to create an Amazon CloudWatch Events rule and an IAM role on your behalf. You can opt-out in the options below.
Change detection options
Using Amazon CloudWatch Events to automatically start your pipeline when a change occurs in the source repository and branch is the default for this source type. When your pipeline is saved via the AWS CodePipeline Console, the corresponding Amazon CloudWatch Events rule and associated IAM role will be created automatically.
If your pipeline is created or updated via other means such as the CLI or AWS CloudFormation, then you will need to create the Amazon CloudWatch Events rule separately.
You can choose to revert to the original method of using AWS CodePipeline to check periodically for changes (not recommended). Learn More.
Use Amazon CloudWatch Events to automatically start my pipeline when a change occurs (recommended)
Use AWS CodePipeline to check periodically for changes
The following Amazon CloudWatch Events rule will be created for your DevRepo/DevBranch repository: codepipeline-DevRep-DevBra-817295-rule.
* Required
Cancel
Previous
Next step

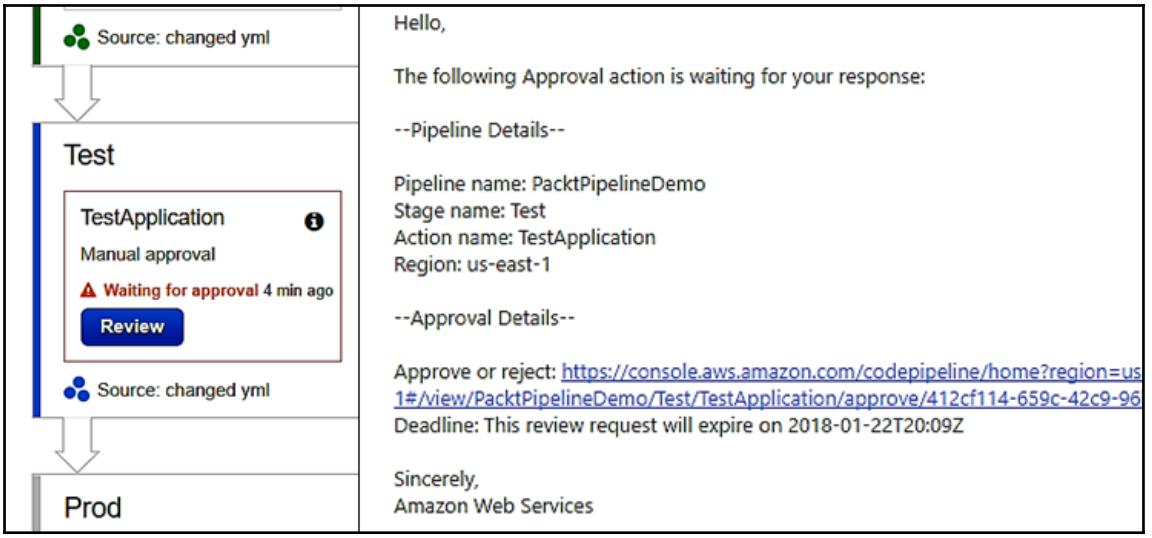

Create pipeline
Step 1: Name
Step 2: Source
Step 3: Build
Step 4: Deploy
Step 5: Service Role
Step 6: Review
Build
Choose the build provider that you want to use or that you are already using.
Build provider*
AWS CodeBuild
AWS CodeBuild
AWS CodeBuild is a fully managed build service that builds and tests code in the cloud. CodeBuild scales continuously. You only pay by the minute. Learn more
Configure your project
Select an existing build project
Create a new build project
Project name*
PacktDemoCB
View project details
* Required
Cancel
Previous
Next step

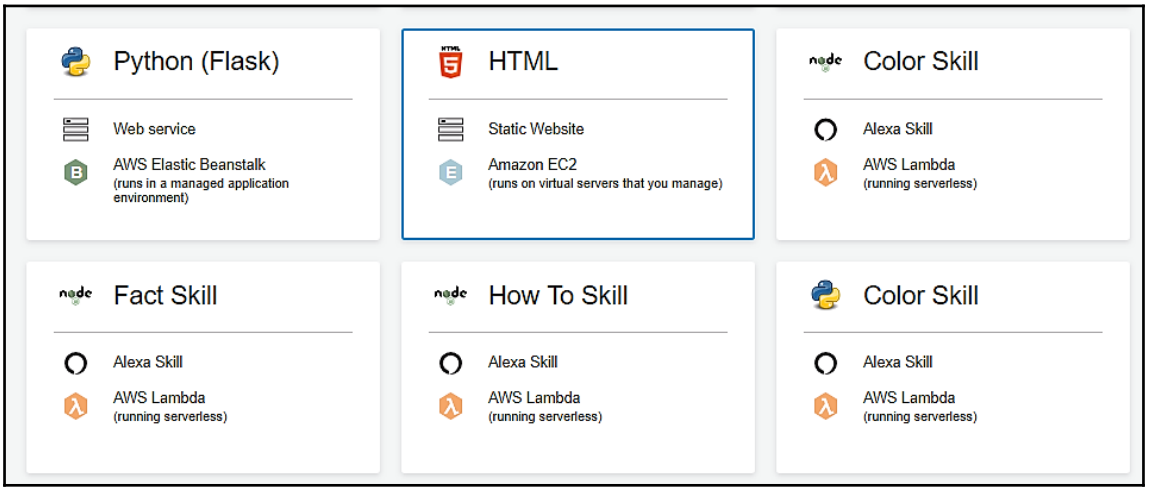

Create pipeline
Step 1: Name
Step 2: Source
Step 3: Build
Step 4: Deploy
Step 5: Service Role
Step 6: Review
Deploy
Choose how you deploy to instances. Choose the provider, and then provide the configuration details for that provider.
Deployment provider*
AWS CodeDeploy
AWS CodeDeploy
Choose one of your existing applications, or create a new one in AWS CodeDeploy.
Application name*
Packt_CodeDeploy_Console_Demo
Choose one of your existing deployment groups, or create a new one in AWS CodeDeploy.
Deployment group*
Packt_Deployment_Console_Group
* Required
Cancel
Previous
Next step

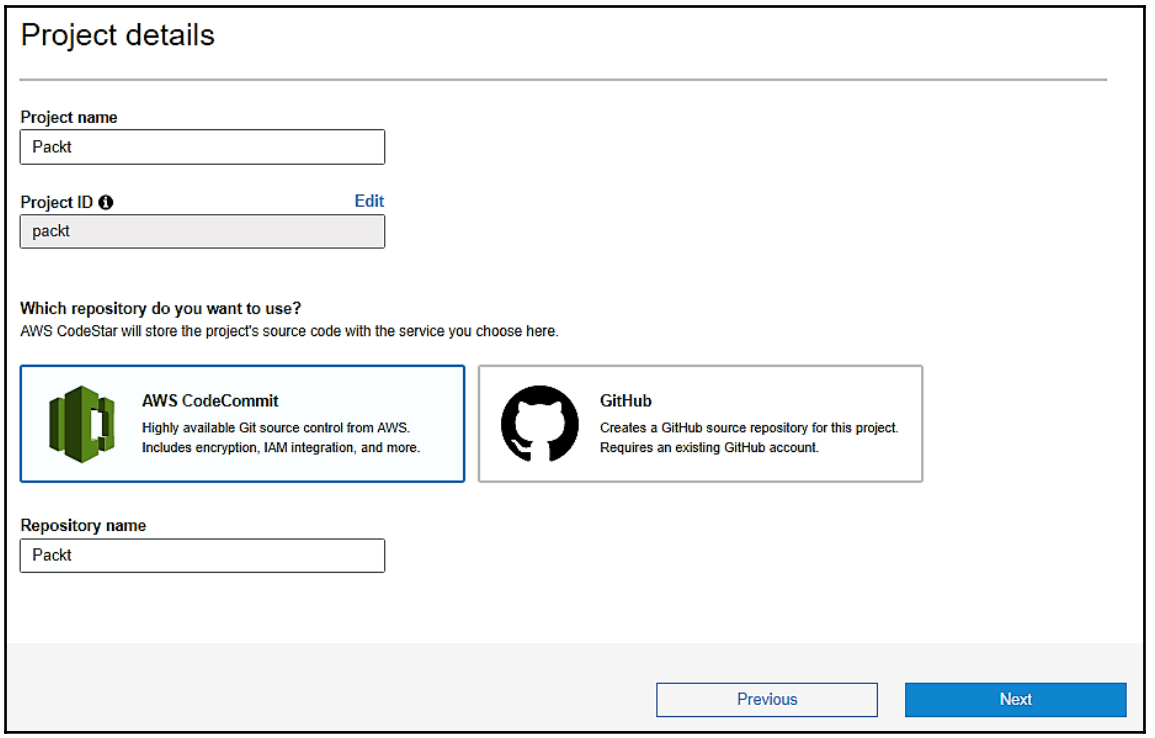

Create pipeline
Step 1: Name
Step 2: Source
Step 3: Build
Step 4: Deploy
Step 5: Service Role
Step 6: Review
AWS Service Role
Create a service role in IAM to give AWS CodePipeline permission to use resources in your account. If you already have a service role configured for this purpose, you can choose it from the list instead of creating a role. However, if that role is not configured correctly, AWS CodePipeline might not work as expected.
Role name*
Packt-CodePipeline-Service
Create role
* Required
Cancel
Previous
Next step

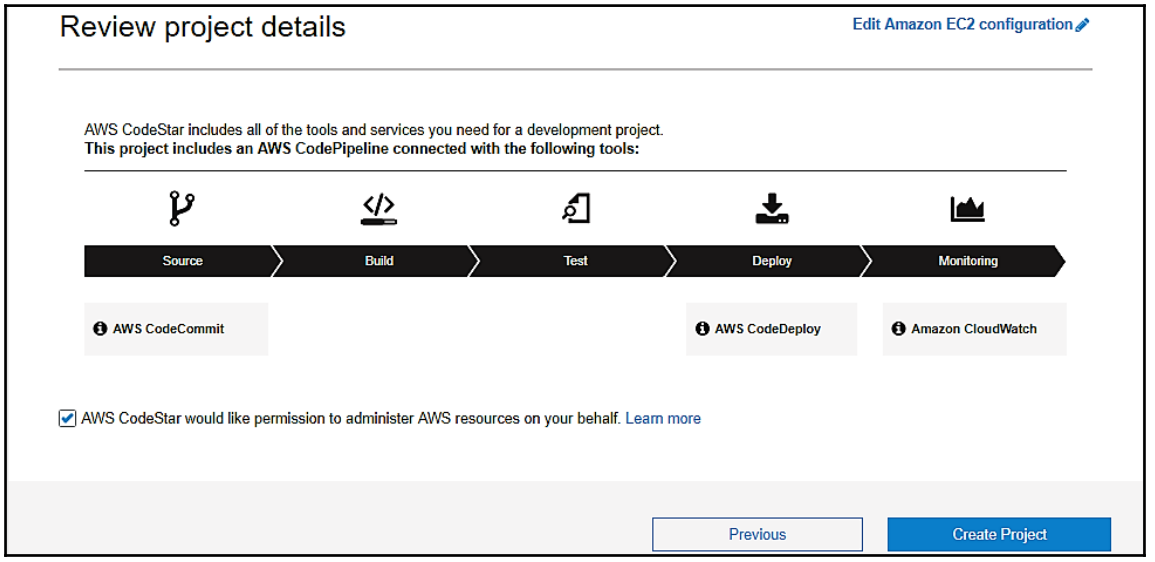

Pipeline created
Congratulations! The pipeline PacktPipelineDemo has been created. Now that you have a pipeline, here are some different ways to start using it.
Edit your pipeline to add more stages or actions, such as a test or production stages. Learn more
Enable or disable transitions between stages to control what stages run automatically in a pipeline. Learn more
Manually start a run through your pipeline. Learn more

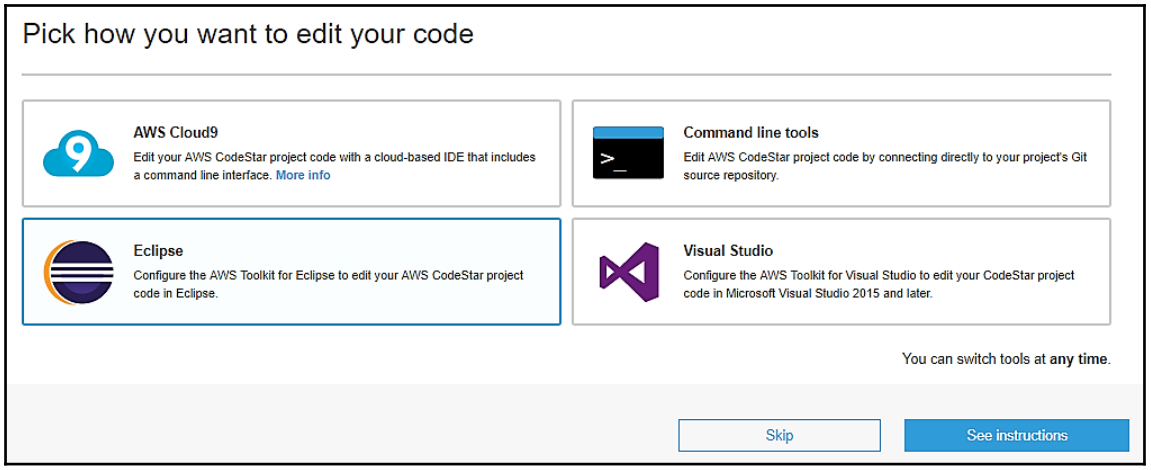

Stage
Staging
Packt_Deploym...
AWS CodeDeploy
Stage
Test
Action
TestApplication
Manual approval
Action
Action
Edit action
Edit the action or choose a different action category to configure a completely different action.
Action category*
Approval
Approval actions
Action name*
TestApplication
Approval type*
Manual approval
Manual approval configuration
Configure the approval request.
SNS topic ARN
arn:aws:sns:us-east-1:XXXXXXXXXXX:Notif
URL for review
Enter a URL for review. [Optional]
* Required
Cancel
Update

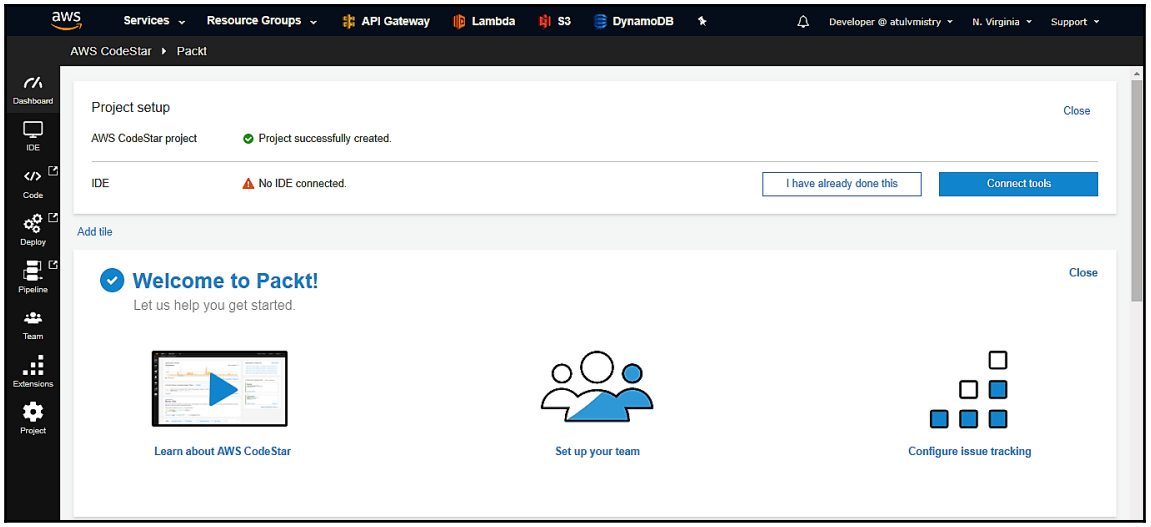

Source: changed yml
Test
TestApplication
Manual approval
Waiting for approval 4 min ago
Review
Source: changed yml
Prod
Hello,
The following Approval action is waiting for your response:
--Pipeline Details--
Pipeline name: PacktPipelineDemo
Stage name: Test
Action name: TestApplication
Region: us-east-1
--Approval Details--
Approve or reject: https://console.aws.amazon.com/codepipeline/home?region=us
1#/view/PacktPipelineDemo/Test/TestApplication/approve/412cf114-659c-42c9-96
Deadline: This review request will expire on 2018-01-22T20:09Z
Sincerely,
Amazon Web Services

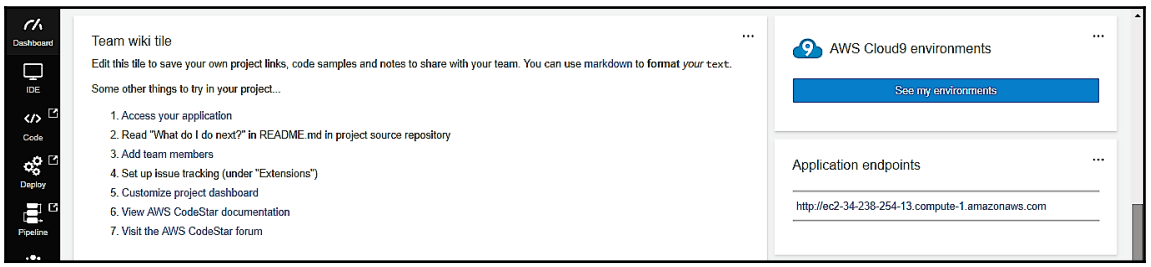

Python (Flask)
Web service
AWS Elastic Beanstalk
(runs in a managed application environment)
HTML
Static Website
Amazon EC2
(runs on virtual servers that you manage)
Color Skill
Alexa Skill
AWS Lambda
(running serverless)
Fact Skill
Alexa Skill
AWS Lambda
(running serverless)
How To Skill
Alexa Skill
AWS Lambda
(running serverless)
Color Skill
Alexa Skill
AWS Lambda
(running serverless)

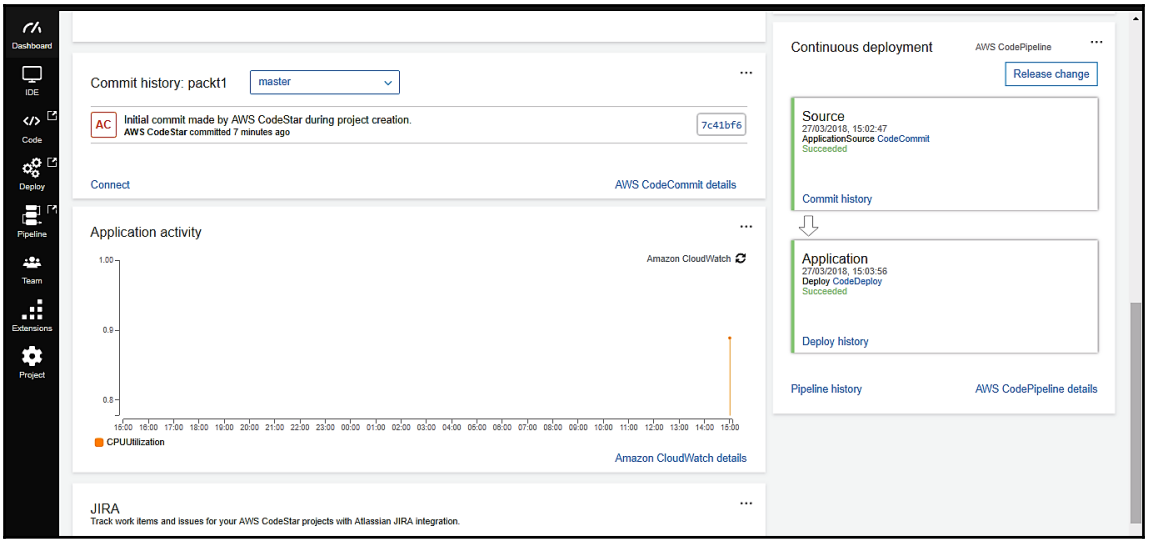

Project details
Project name
Packt
Project ID
Edit
packt
Which repository do you want to use?
AWS CodeStar will store the project's source code with the service you choose here.
AWS CodeCommit
Highly available Git source control from AWS.
Includes encryption, IAM integration, and more.
GitHub
Creates a GitHub source repository for this project.
Requires an existing GitHub account.
Repository name
Packt
Previous
Next

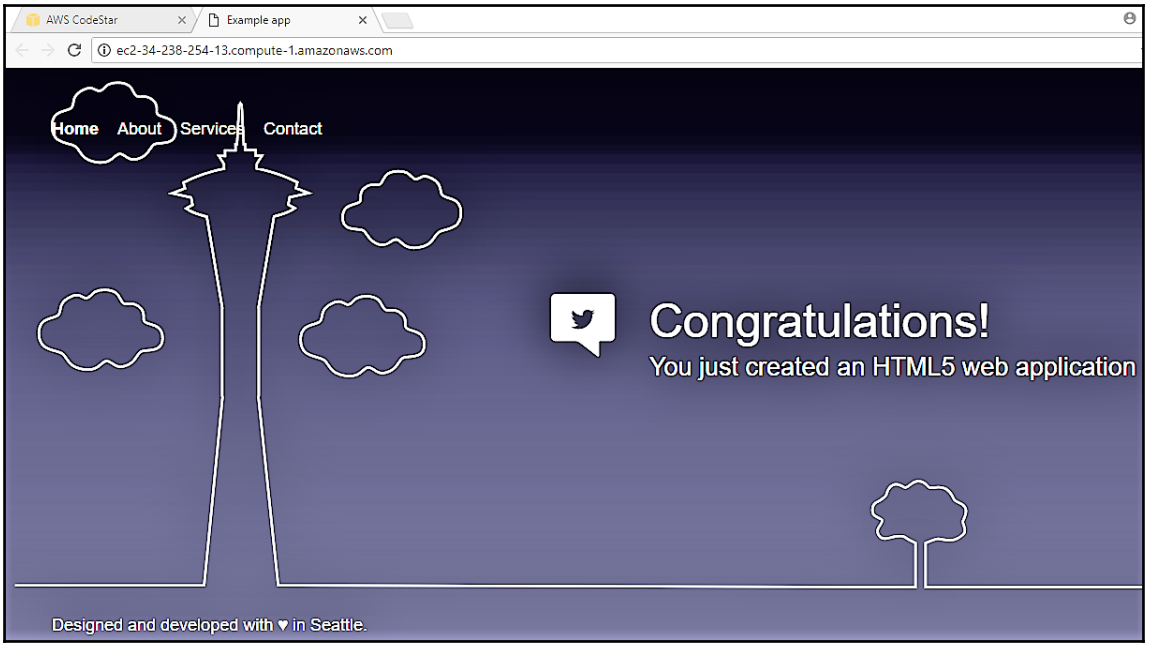

Review project details
Edit Amazon EC2 configuration
AWS CodeStar includes all of the tools and services you need for a development project.
This project includes an AWS CodePipeline connected with the following tools:
Source
Build
Test
Deploy
Monitoring
AWS CodeCommit
AWS CodeDeploy
Amazon CloudWatch
AWS CodeStar would like permission to administer AWS resources on your behalf. Learn more
Previous
Create Project

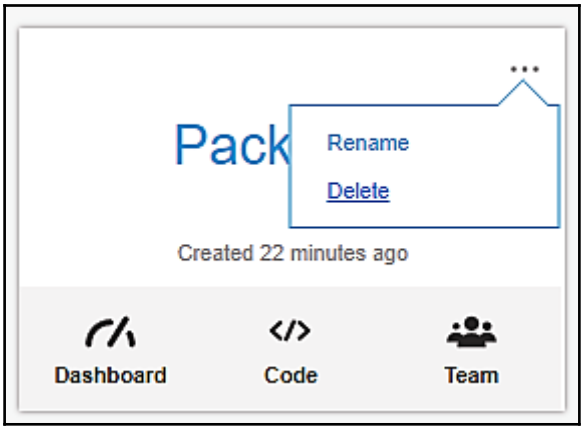

Pick how you want to edit your code
AWS Cloud9
Edit your AWS CodeStar project code with a cloud-based IDE that includes a command line interface. More info
Command line tools
Edit AWS CodeStar project code by connecting directly to your project's Git source repository.
Eclipse
Configure the AWS Toolkit for Eclipse to edit your AWS CodeStar project code in Eclipse.
Visual Studio
Configure the AWS Toolkit for Visual Studio to edit your CodeStar project code in Microsoft Visual Studio 2015 and later.
You can switch tools at any time.
Skip
See instructions

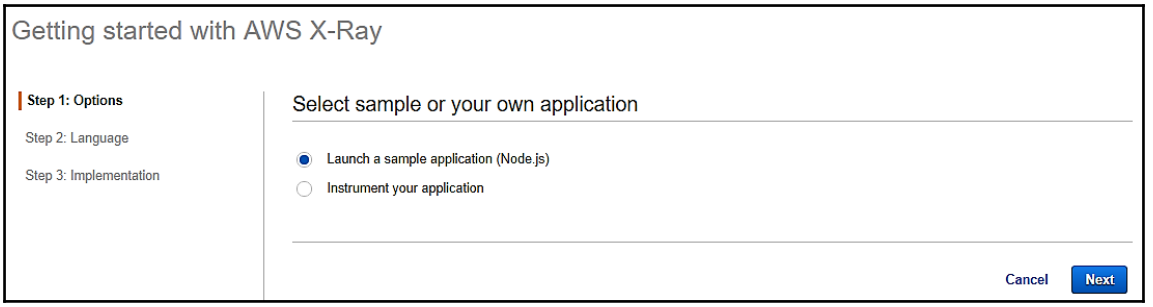

Services
Resource Groups
API Gateway
Lambda
S3
DynamoDB
Developer @ atulvmistry
N. Virginia
Support
AWS CodeStar ▸ Packt
Dashboard
IDE
Code
Deploy
Pipeline
Team
Extensions
Project
Project setup
Close
AWS CodeStar project
Project successfully created.
IDE
No IDE connected.
I have already done this
Connect tools
Add tile
Welcome to Packt!
Let us help you get started.
Close
Learn about AWS CodeStar
Set up your team
Configure issue tracking

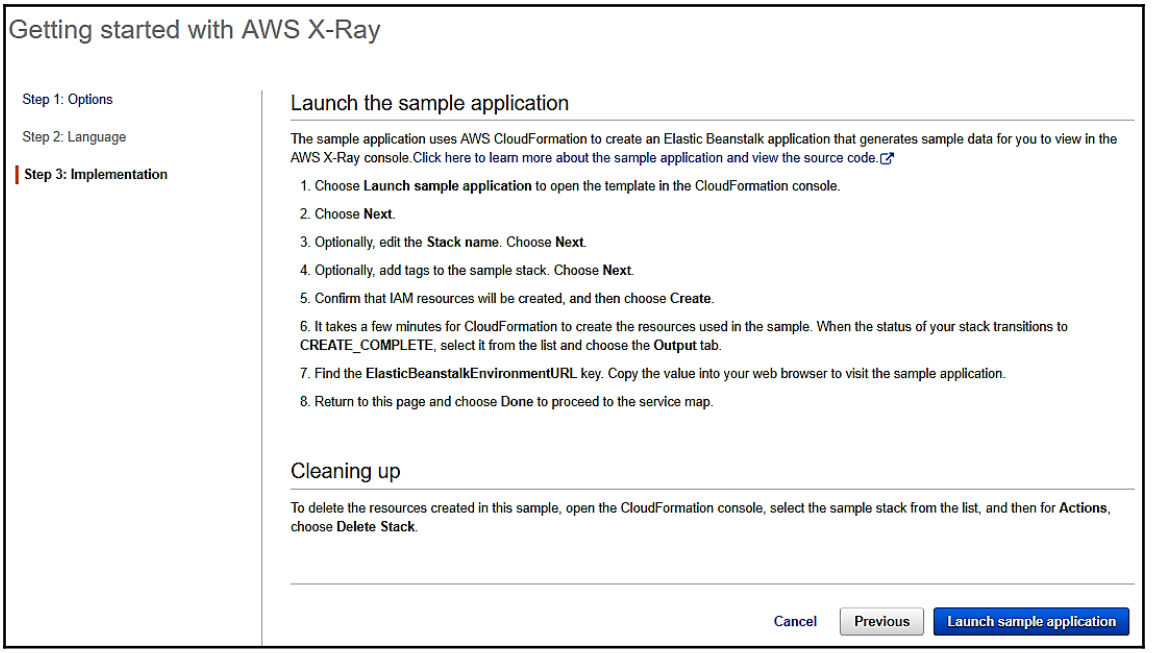

Dashboard
IDE
Code
Deploy
Pipeline
Team wiki tile
Edit this tile to save your own project links, code samples and notes to share with your team. You can use markdown to format your text.
Some other things to try in your project...
1. Access your application
2. Read "What do I do next?" in README.md in project source repository
3. Add team members
4. Set up issue tracking (under "Extensions")
5. Customize project dashboard
6. View AWS CodeStar documentation
7. Visit the AWS CodeStar forum
AWS Cloud9 environments
See my environments
Application endpoints
http://ec2-34-238-254-13.compute-1.amazonaws.com

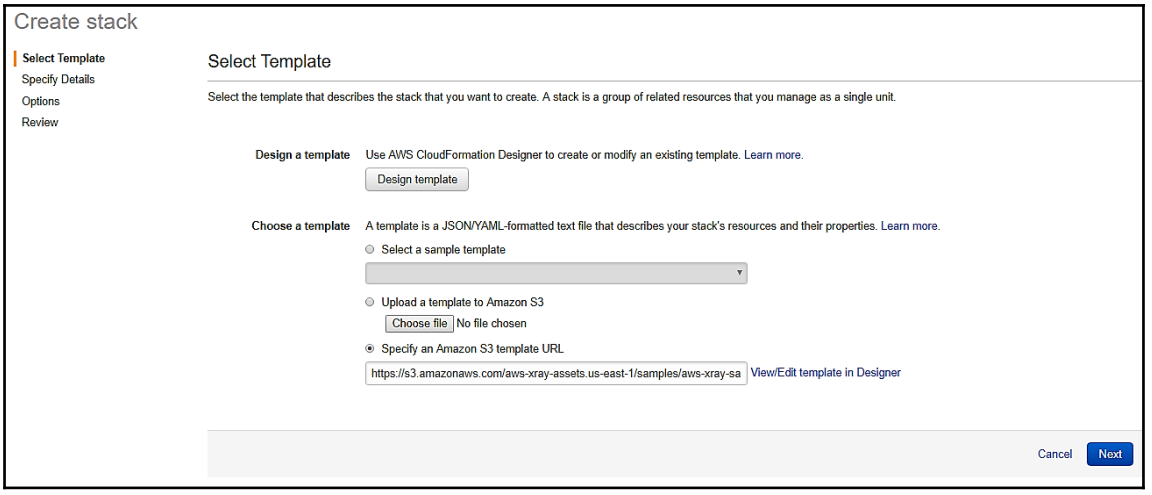

Dashboard
IDE
Code
Deploy
Pipeline
Team
Extensions
Project
Commit history: packt1
master
AC
Initial commit made by AWS CodeStar during project creation.
AWS CodeStar committed 7 minutes ago
7c41bf6
Connect
AWS CodeCommit details
Application activity
Amazon CloudWatch
1.00
0.9
0.8
CPUUtilization
Amazon CloudWatch details
JIRA
Track work items and issues for your AWS CodeStar projects with Atlassian JIRA integration.
Continuous deployment
AWS CodePipeline
Release change
Source
27/03/2018, 15:02:47
ApplicationSource CodeCommit
Succeeded
Commit history
Application
27/03/2018, 15:03:56
Deploy CodeDeploy
Succeeded
Deploy history
Pipeline history
AWS CodePipeline details

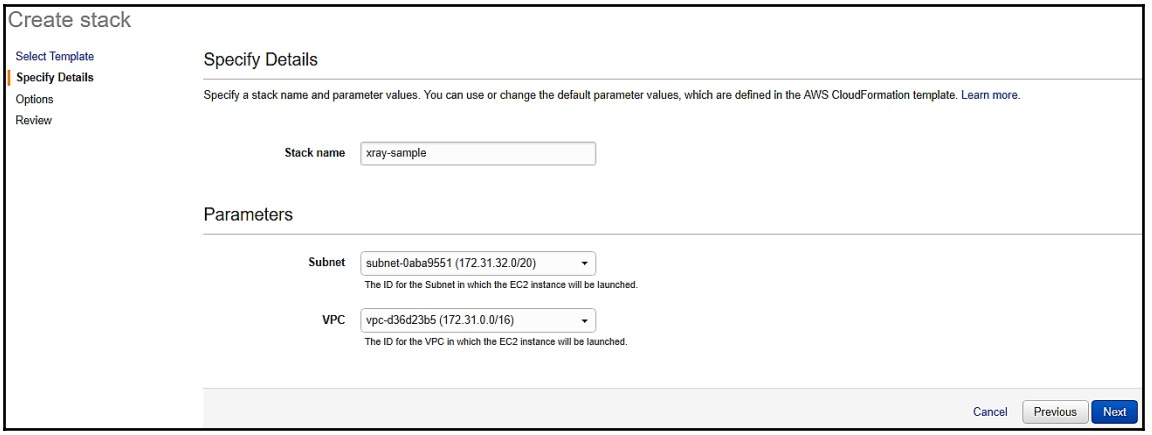

AWS CodeStar
Example app
ec2-34-238-254-13.compute-1.amazonaws.com
Home
About
Services
Contact
Congratulations!
You just created an HTML5 web application
Designed and developed with ♥ in Seattle.

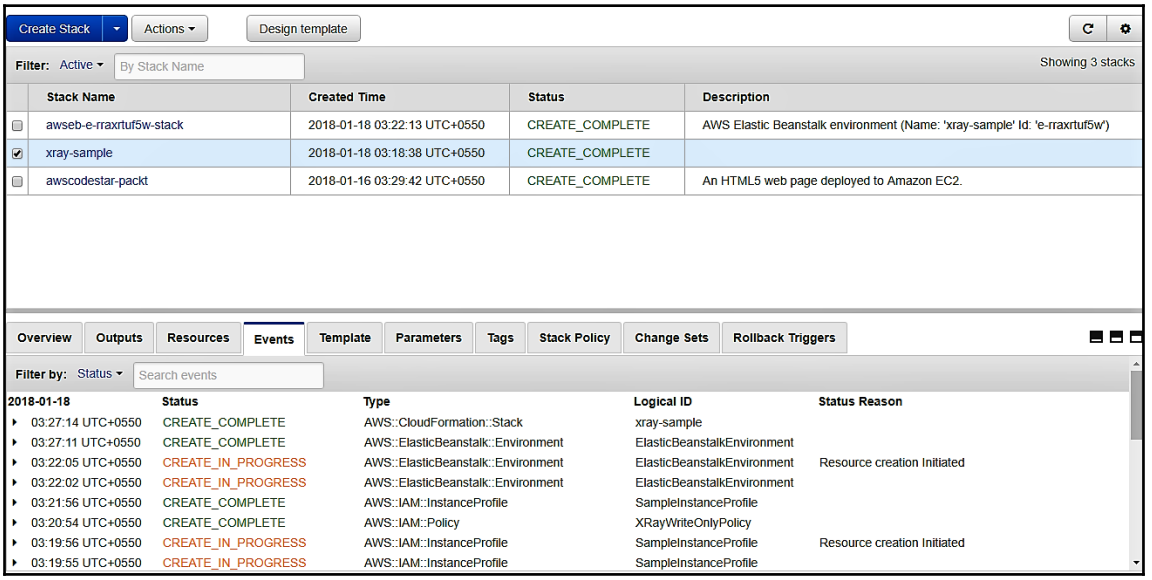

Pack
Rename
Delete
Created 22 minutes ago
Dashboard
Code
Team


Getting started with AWS X-Ray
Step 1: Options
Step 2: Language
Step 3: Implementation
Select sample or your own application
Launch a sample application (Node.js)
Instrument your application
Cancel
Next


Getting started with AWS X-Ray
Step 1: Options
Step 2: Language
Step 3: Implementation
Launch the sample application
The sample application uses AWS CloudFormation to create an Elastic Beanstalk application that generates sample data for you to view in the AWS X-Ray console.Click here to learn more about the sample application and view the source code.
1. Choose Launch sample application to open the template in the CloudFormation console.
2. Choose Next.
3. Optionally, edit the Stack name. Choose Next.
4. Optionally, add tags to the sample stack. Choose Next.
5. Confirm that IAM resources will be created, and then choose Create.
6. It takes a few minutes for CloudFormation to create the resources used in the sample. When the status of your stack transitions to CREATE_COMPLETE, select it from the list and choose the Output tab.
7. Find the ElasticBeanstalkEnvironmentURL key. Copy the value into your web browser to visit the sample application.
8. Return to this page and choose Done to proceed to the service map.
Cleaning up
To delete the resources created in this sample, open the CloudFormation console, select the sample stack from the list, and then for Actions, choose Delete Stack.
Cancel
Previous
Launch sample application


Create stack
Select Template
Specify Details
Options
Review
Select Template
Select the template that describes the stack that you want to create. A stack is a group of related resources that you manage as a single unit.
Design a template
Use AWS CloudFormation Designer to create or modify an existing template. Learn more.
Design template
Choose a template
A template is a JSON/YAML-formatted text file that describes your stack's resources and their properties. Learn more.
Select a sample template
Upload a template to Amazon S3
Choose file
No file chosen
Specify an Amazon S3 template URL
https://s3.amazonaws.com/aws-xray-assets.us-east-1/samples/aws-xray-sa
View/Edit template in Designer
Cancel
Next


Create stack
Select Template
Specify Details
Options
Review
Specify Details
Specify a stack name and parameter values. You can use or change the default parameter values, which are defined in the AWS CloudFormation template. Learn more.
Stack name
xray-sample
Parameters
Subnet
subnet-0aba9551 (172.31.32.0/20)
The ID for the Subnet in which the EC2 instance will be launched.
VPC
vpc-d36d23b5 (172.31.0.0/16)
The ID for the VPC in which the EC2 instance will be launched.
Cancel
Previous
Next


Create Stack
Actions
Design template
Filter: Active
By Stack Name
Showing 3 stacks
Stack Name
Created Time
Status
Description
awseb-e-rraxrtuf5w-stack
2018-01-18 03:22:13 UTC+0550
CREATE_COMPLETE
AWS Elastic Beanstalk environment (Name: 'xray-sample' Id: 'e-rraxrtuf5w')
xray-sample
2018-01-18 03:18:38 UTC+0550
CREATE_COMPLETE
awscodestar-packt
2018-01-16 03:29:42 UTC+0550
CREATE_COMPLETE
An HTML5 web page deployed to Amazon EC2.
Overview
Outputs
Resources
Events
Template
Parameters
Tags
Stack Policy
Change Sets
Rollback Triggers
Filter by: Status
Search events
2018-01-18
Status
Type
Logical ID
Status Reason
03:27:14 UTC+0550
CREATE_COMPLETE
AWS::CloudFormation::Stack
xray-sample
03:27:11 UTC+0550
CREATE_COMPLETE
AWS::ElasticBeanstalk::Environment
ElasticBeanstalkEnvironment
03:22:05 UTC+0550
CREATE_IN_PROGRESS
AWS::ElasticBeanstalk::Environment
ElasticBeanstalkEnvironment
Resource creation Initiated
03:22:02 UTC+0550
CREATE_IN_PROGRESS
AWS::ElasticBeanstalk::Environment
ElasticBeanstalkEnvironment
03:21:56 UTC+0550
CREATE_COMPLETE
AWS::IAM::InstanceProfile
SampleInstanceProfile
03:20:54 UTC+0550
CREATE_COMPLETE
AWS::IAM::Policy
XRayWriteOnlyPolicy
03:19:56 UTC+0550
CREATE_IN_PROGRESS
AWS::IAM::InstanceProfile
SampleInstanceProfile
Resource creation Initiated
03:19:55 UTC+0550
CREATE_IN_PROGRESS
AWS::IAM::InstanceProfile
SampleInstanceProfile

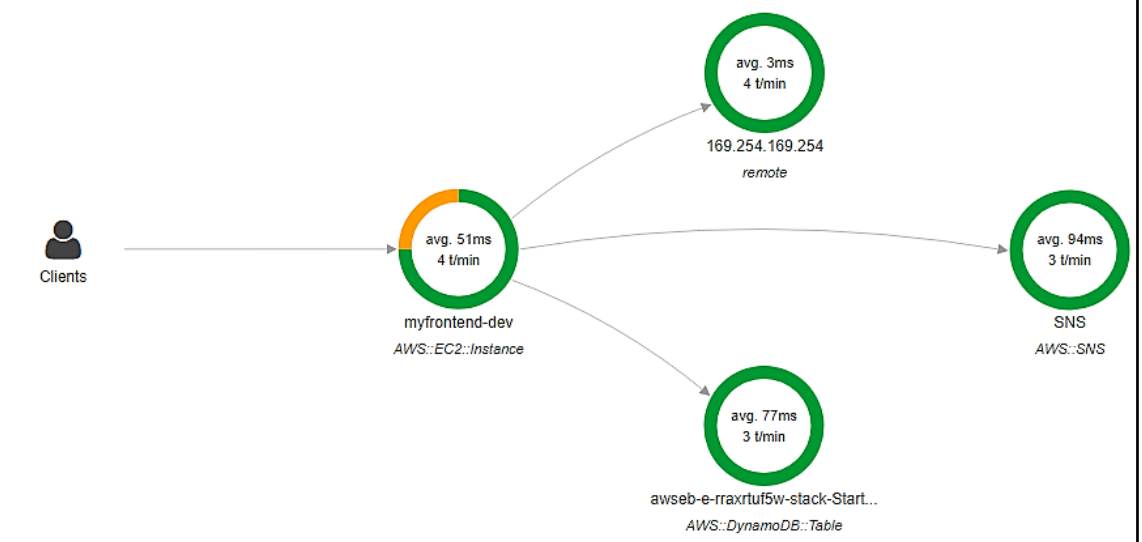
AWS X-Ray Sample Application

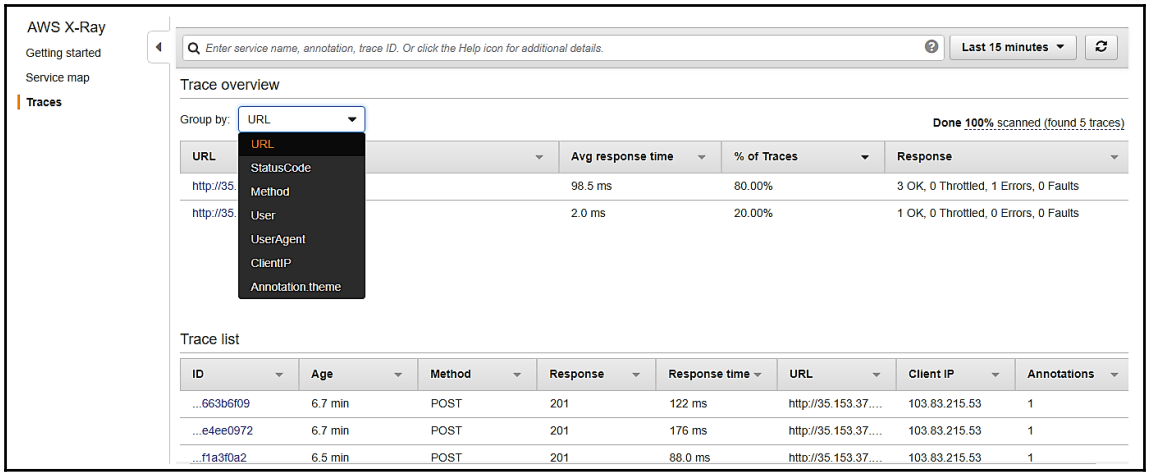
Aww yeah, you've successfully launched the AWS X-Ray sample application. Use the start/stop buttons below to control the generation of signup requests. The application will generate up to 10 signup requests per minute with a duplicate signup each minute. Alternatively, you can use the form below to manually generate signup requests. Once you've generated a few requests, go to the AWS X-Ray Console to view the service map and traces.

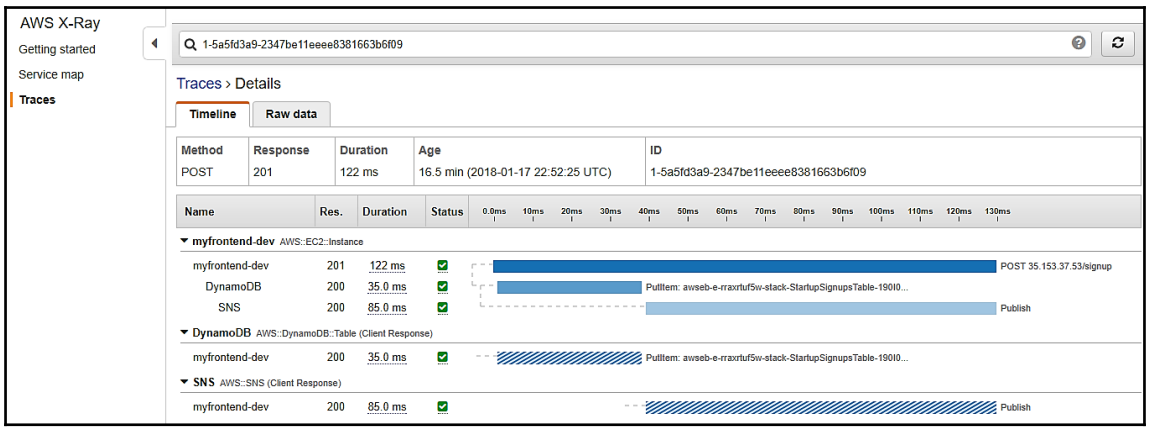
Start Stop

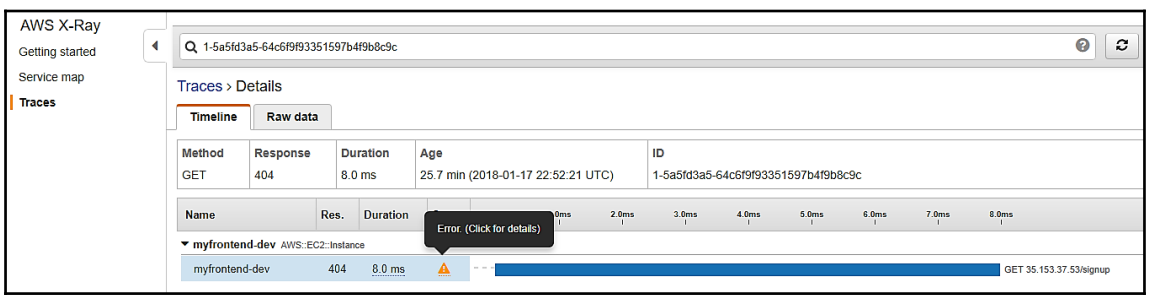
Status: click 'Start' to begin

Service map

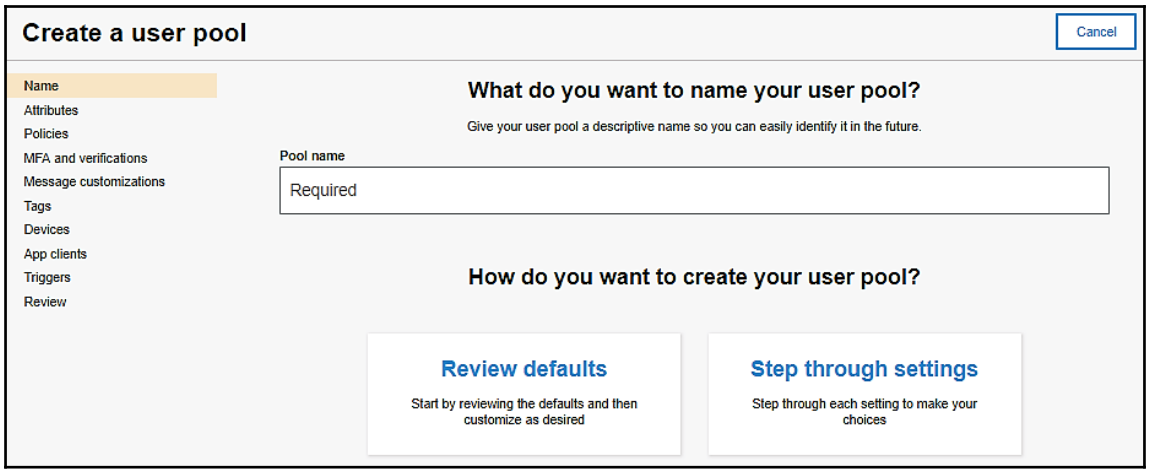


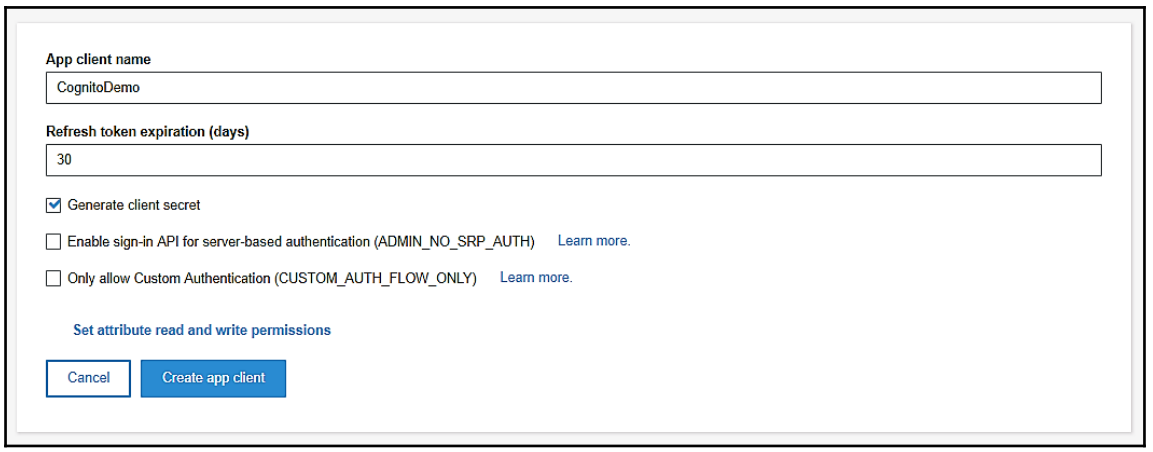

AWS X-Ray
Getting started
Service map
Traces
Enter service name, annotation, trace ID. Or click the Help icon for additional details.
Last 15 minutes
Trace overview
Group by: URL
URL
StatusCode
Method
User
UserAgent
ClientIP
Annotation.theme
Done 100% scanned (found 5 traces)
URL
Avg response time
% of Traces
Response
http://35.
98.5 ms
80.00%
3 OK, 0 Throttled, 1 Errors, 0 Faults
http://35.
2.0 ms
20.00%
1 OK, 0 Throttled, 0 Errors, 0 Faults
Trace list
ID
Age
Method
Response
Response time
URL
Client IP
Annotations
...663b6f09
6.7 min
POST
201
122 ms
http://35.153.37....
103.83.215.53
1
...e4ee0972
6.7 min
POST
201
176 ms
http://35.153.37....
103.83.215.53
1
...f1a3f0a2
6.5 min
POST
201
88.0 ms
http://35.153.37....
103.83.215.53
1

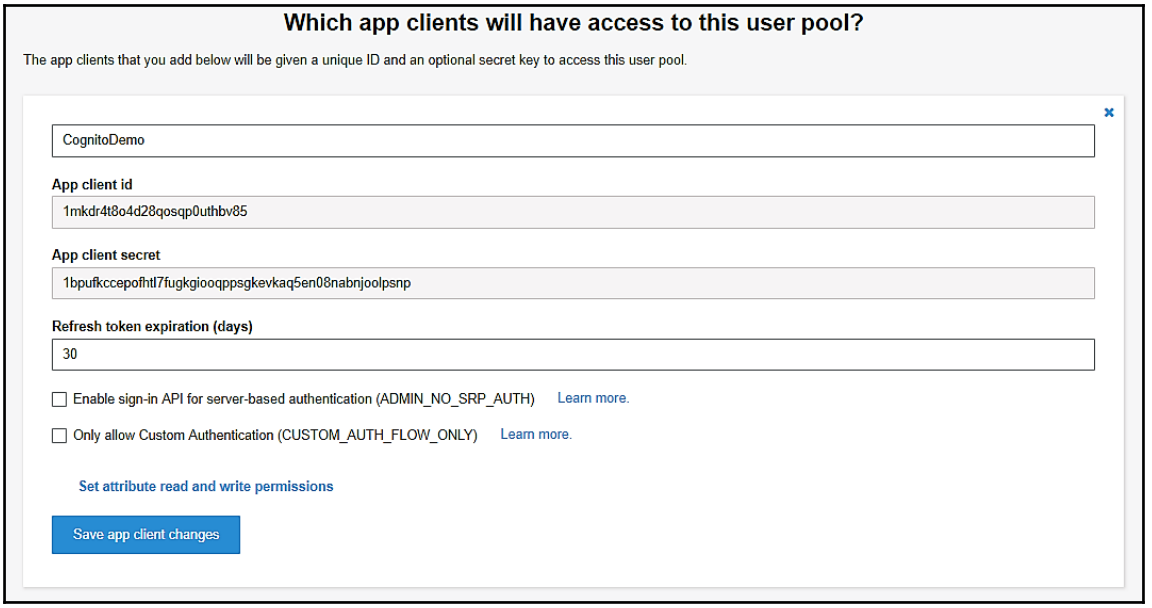

AWS X-Ray
Getting started
Service map
Traces
1-5a5fd3a9-2347be11eeee8381663b6f09
Traces › Details
Timeline
Raw data
Method
POST
Response
201
Duration
122 ms
Age
16.5 min (2018-01-17 22:52:25 UTC)
ID
1-5a5fd3a9-2347be11eeee8381663b6f09
Name
Res.
Duration
Status
0.0ms
10ms
20ms
30ms
40ms
50ms
60ms
70ms
80ms
90ms
100ms
110ms
120ms
130ms
myfrontend-dev AWS::EC2::Instance
myfrontend-dev 201 122 ms
DynamoDB 200 35.0 ms
SNS 200 85.0 ms
POST 35.153.37.53/signup
PutItem: awseb-e-rraxrtuf5w-stack-StartupSignupsTable-190I0...
Publish
DynamoDB AWS::DynamoDB::Table (Client Response)
myfrontend-dev 200 35.0 ms
PutItem: awseb-e-rraxrtuf5w-stack-StartupSignupsTable-190I0...
SNS AWS::SNS (Client Response)
myfrontend-dev 200 85.0 ms
Publish

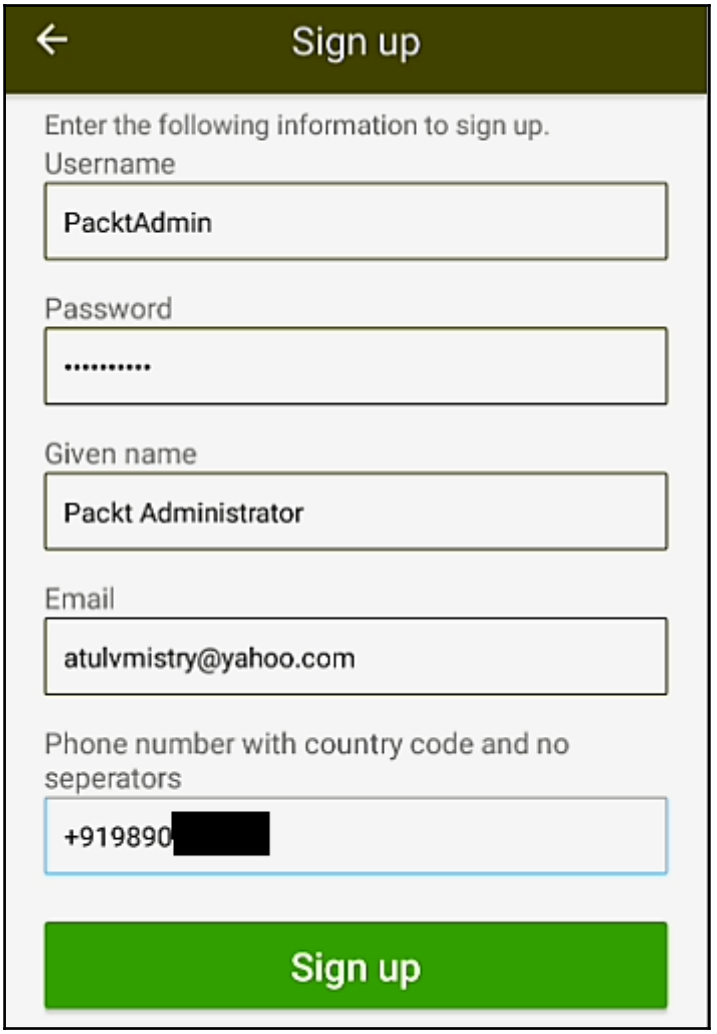

AWS X-Ray
Getting started
Service map
Traces
1-5a5fd3a5-64c6f9f93351597b4f9b8c9c
Traces › Details
Timeline
Raw data
Method
GET
Response
404
Duration
8.0 ms
Age
25.7 min (2018-01-17 22:52:21 UTC)
ID
1-5a5fd3a5-64c6f9f93351597b4f9b8c9c
Name
Res.
Duration
2.0ms
3.0ms
4.0ms
5.0ms
6.0ms
7.0ms
8.0ms
Error. (Click for details)
myfrontend-dev AWS::EC2::Instance
myfrontend-dev 404 8.0 ms
GET 35.153.37.53/signup

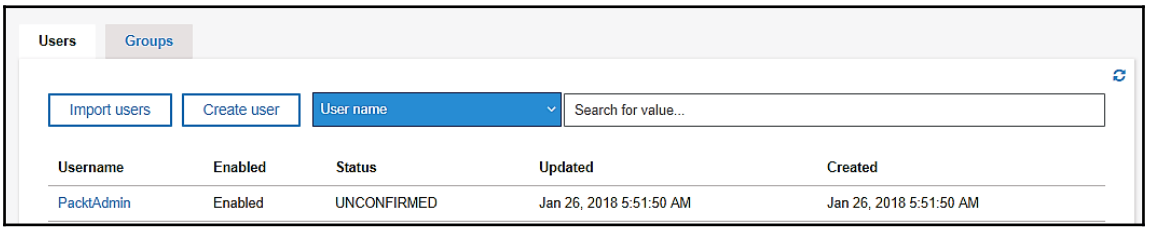
Chapter 6: User Authentication with AWS Cognito


Create a user pool
Cancel
Name
Attributes
Policies
MFA and verifications
Message customizations
Tags
Devices
App clients
Triggers
Review
What do you want to name your user pool?
Give your user pool a descriptive name so you can easily identify it in the future.
Pool name
Required
How do you want to create your user pool?
Review defaults
Start by reviewing the defaults and then customize as desired
Step through settings
Step through each setting to make your choices


App client name
CognitoDemo
Refresh token expiration (days)
30
Generate client secret
Enable sign-in API for server-based authentication (ADMIN_NO_SRP_AUTH)
Learn more.
Only allow Custom Authentication (CUSTOM_AUTH_FLOW_ONLY)
Learn more.
Set attribute read and write permissions
Cancel
Create app client


Which app clients will have access to this user pool?
The app clients that you add below will be given a unique ID and an optional secret key to access this user pool.
CognitoDemo
App client id
1mkdr4t8o4d28qosqp0uthbv85
App client secret
1bpufkccepofhtl7fugkgiooqppsgkevkaq5en08nabnjoolpsnp
Refresh token expiration (days)
30
Enable sign-in API for server-based authentication (ADMIN_NO_SRP_AUTH)
Learn more.
Only allow Custom Authentication (CUSTOM_AUTH_FLOW_ONLY)
Learn more.
Set attribute read and write permissions
Save app client changes


Sign up
Enter the following information to sign up.
Username
PacktAdmin
Password
Given name
Packt Administrator
Email
atulvmistry@yahoo.com
Phone number with country code and no seperators
+919890
Sign up

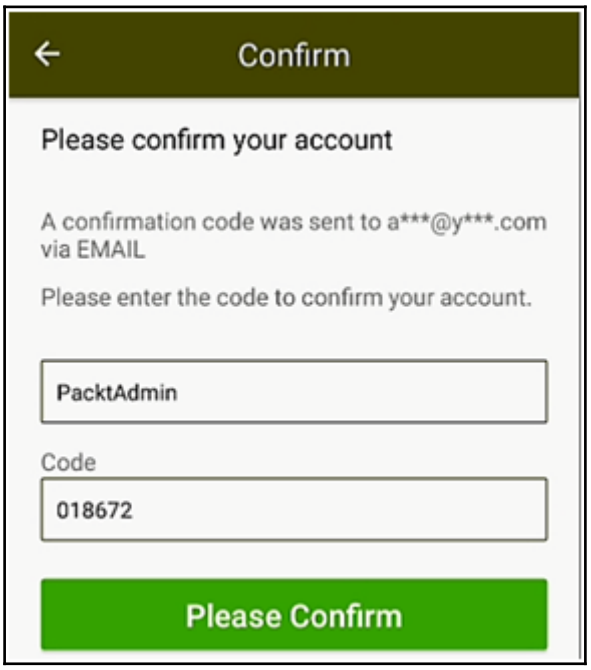

Users
Groups
Import users
Create user
User name
Search for value...
Username
Enabled
Status
Updated
Created
PacktAdmin
Enabled
UNCONFIRMED
Jan 26, 2018 5:51:50 AM
Jan 26, 2018 5:51:50 AM

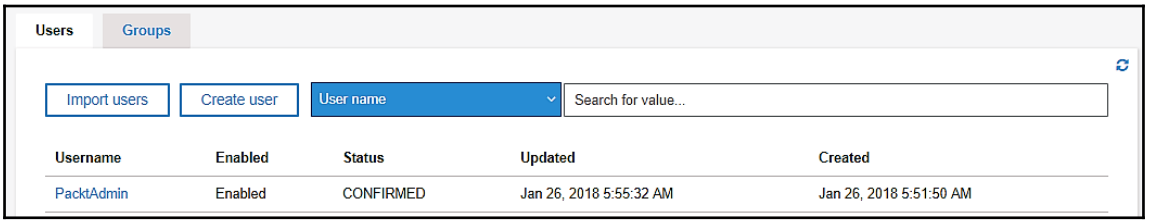
New Packt User Sign Up Verification Code

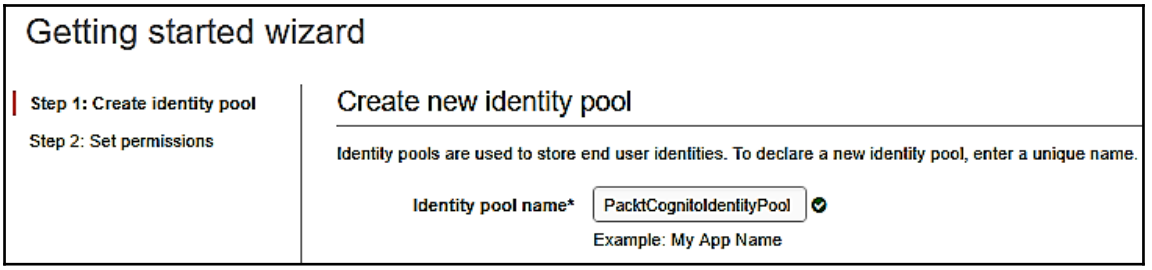
no-reply@verificationemail.com Today at 11:21

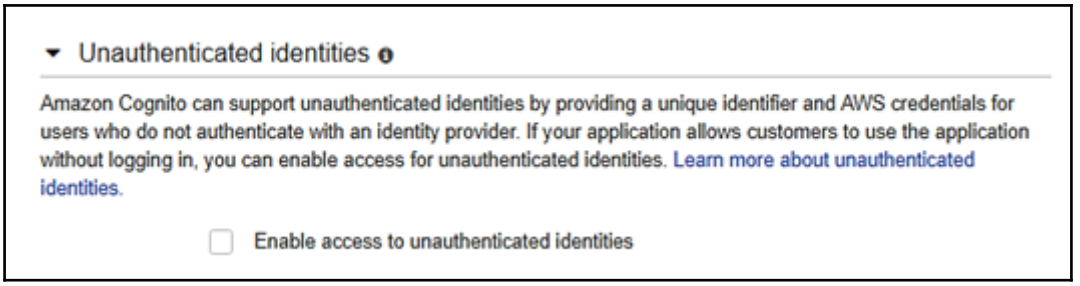
To atulvmistry@yahoo.com

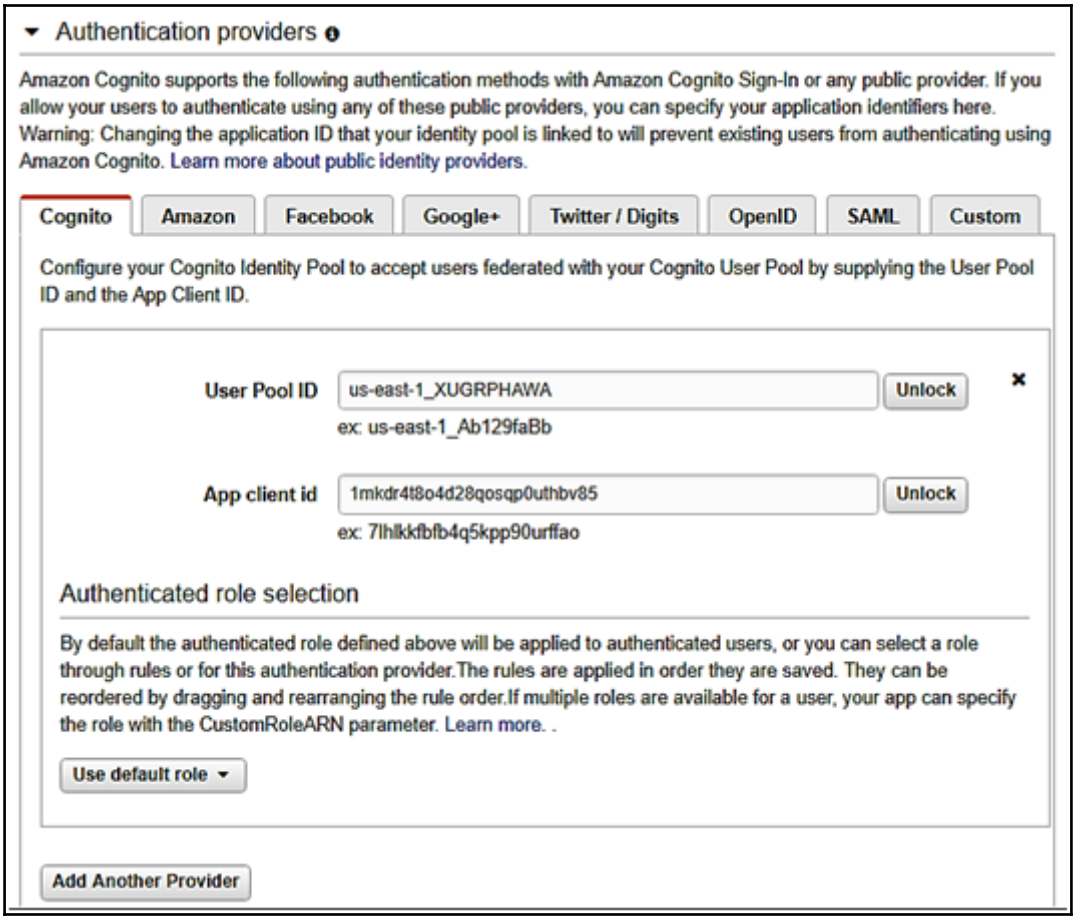
Greetings. Thanks for sign up to Packt. Your Sign up verification code : 018672. Please enter this code for successful login.

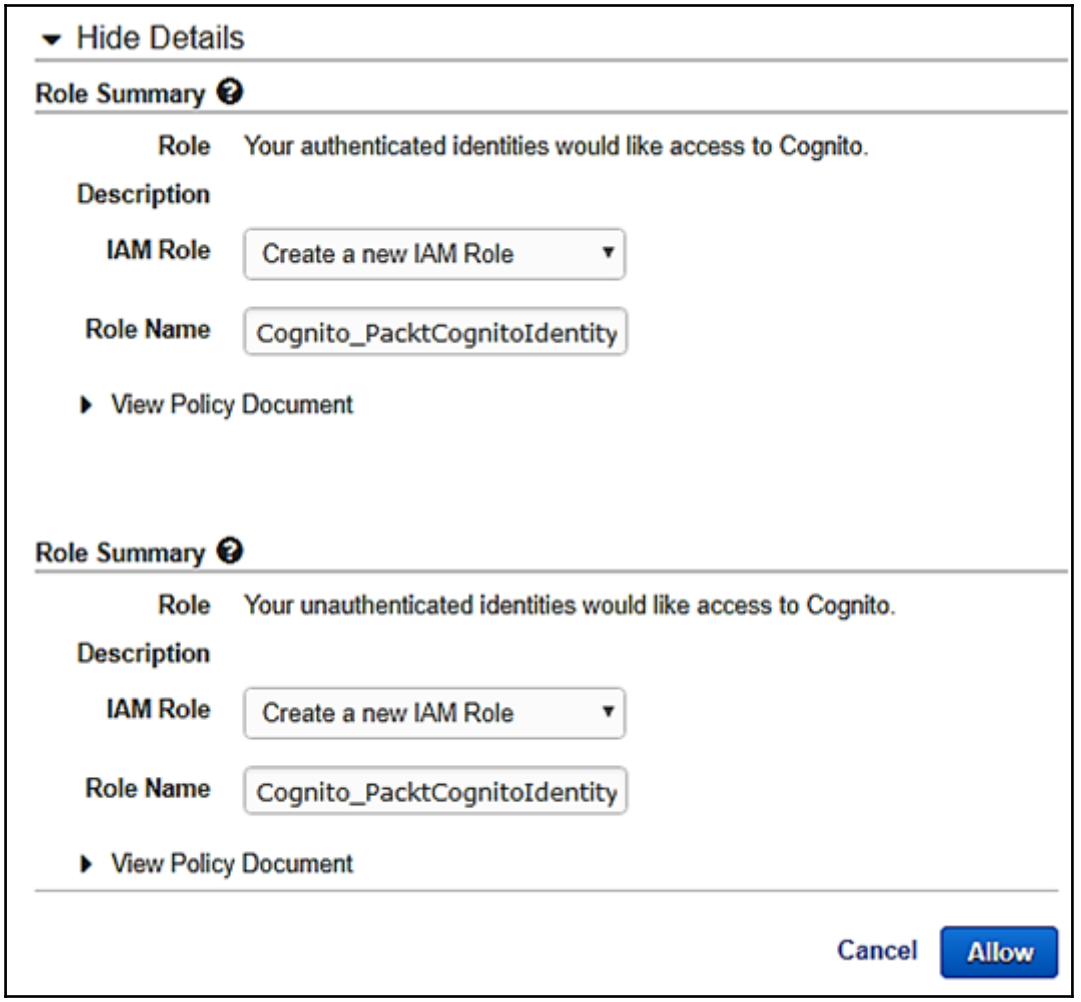


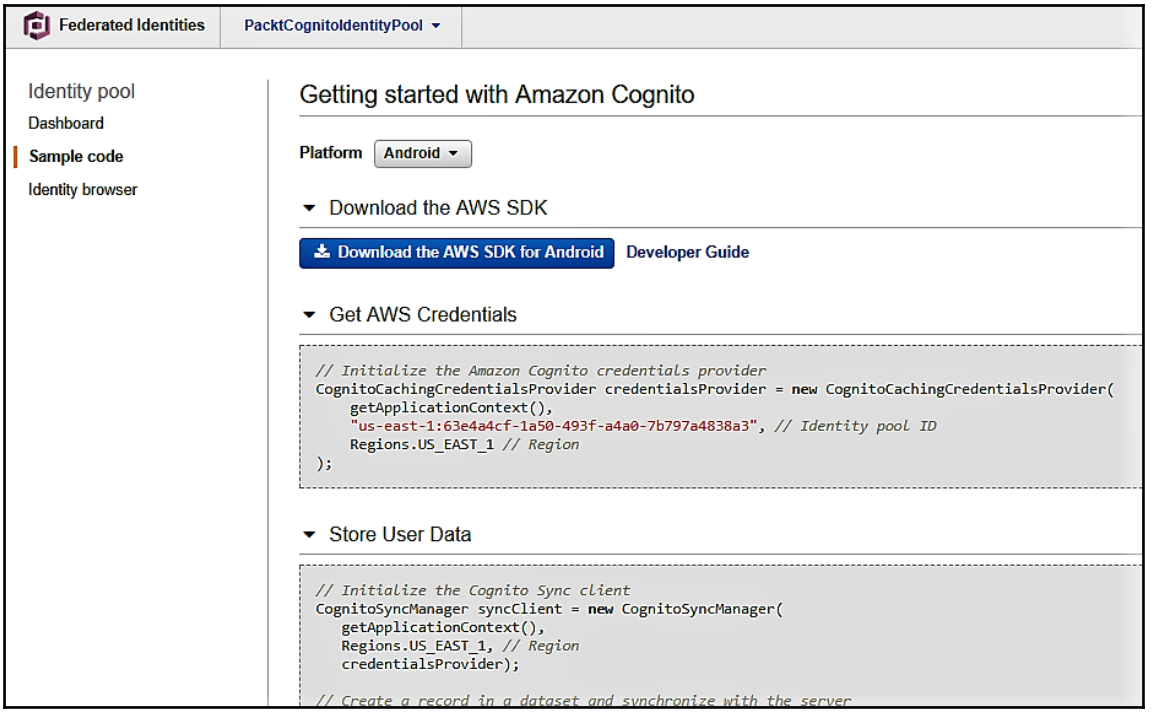


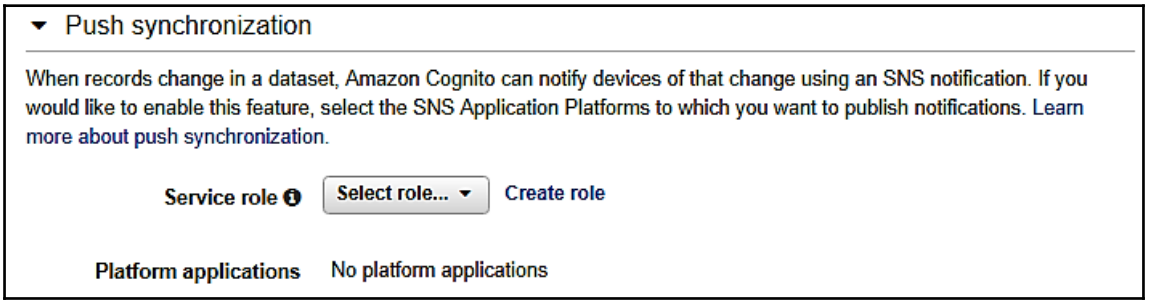

Getting started wizard
Step 1: Create identity pool
Step 2: Set permissions
Create new identity pool
Identity pools are used to store end user identities. To declare a new identity pool, enter a unique name.
Identity pool name*
PacktCognitoIdentityPool
Example: My App Name


Unauthenticated identities
Amazon Cognito can support unauthenticated identities by providing a unique identifier and AWS credentials for users who do not authenticate with an identity provider. If your application allows customers to use the application without logging in, you can enable access for unauthenticated identities. Learn more about unauthenticated identities.
Enable access to unauthenticated identities


Authentication providers
Amazon Cognito supports the following authentication methods with Amazon Cognito Sign-In or any public provider. If you allow your users to authenticate using any of these public providers, you can specify your application identifiers here.
Warning: Changing the application ID that your identity pool is linked to will prevent existing users from authenticating using Amazon Cognito. Learn more about public identity providers.
Cognito
Amazon
Facebook
Google+
Twitter / Digits
OpenID
SAML
Custom
Configure your Cognito Identity Pool to accept users federated with your Cognito User Pool by supplying the User Pool ID and the App Client ID.
User Pool ID
us-east-1_XUGRPHAWA
Unlock
ex: us-east-1_Ab129faBb
App client id
1mkdr4t8o4d28qosqp0uthbv85
Unlock
ex: 7lhlkkfbfb4q5kpp90urffao
Authenticated role selection
By default the authenticated role defined above will be applied to authenticated users, or you can select a role through rules or for this authentication provider.The rules are applied in order they are saved. They can be reordered by dragging and rearranging the rule order.If multiple roles are available for a user, your app can specify the role with the CustomRoleARN parameter. Learn more. .
Use default role
Add Another Provider


Hide Details
Role Summary
Role Description
Your authenticated identities would like access to Cognito.
IAM Role
Create a new IAM Role
Role Name
Cognito_PacktCognitoIdentity
View Policy Document
Role Summary
Role Description
Your unauthenticated identities would like access to Cognito.
IAM Role
Create a new IAM Role
Role Name
Cognito_PacktCognitoIdentity
View Policy Document
Cancel
Allow


Federated Identities
PacktCognitoIdentityPool
Identity pool
Dashboard
Sample code
Identity browser
Getting started with Amazon Cognito
Platform
Android
Download the AWS SDK
Download the AWS SDK for Android
Developer Guide
Get AWS Credentials
// Initialize the Amazon Cognito credentials provider
CognitoCachingCredentialsProvider credentialsProvider = new CognitoCachingCredentialsProvider(
getApplicationContext(),
"us-east-1:63e4a4cf-1a50-493f-a4a0-7b797a4838a3", // Identity pool ID
Regions.US_EAST_1 // Region
);
Store User Data
// Initialize the Cognito Sync client
CognitoSyncManager syncClient = new CognitoSyncManager(
getApplicationContext(),
Regions.US_EAST_1, // Region
credentialsProvider);
// Create a record in a dataset and synchronize with the server


Push synchronization
When records change in a dataset, Amazon Cognito can notify devices of that change using an SNS notification. If you would like to enable this feature, select the SNS Application Platforms to which you want to publish notifications. Learn more about push synchronization.
Service role
Select role...
Create role
Platform applications
No platform applications

Chapter 7: Evaluating the Best Architecture

Exterior Firewall
Hardware or software solution to open standard ports (80,443)

Web Load Balancer
Hardware or software solution to distribute trafiic over web servers

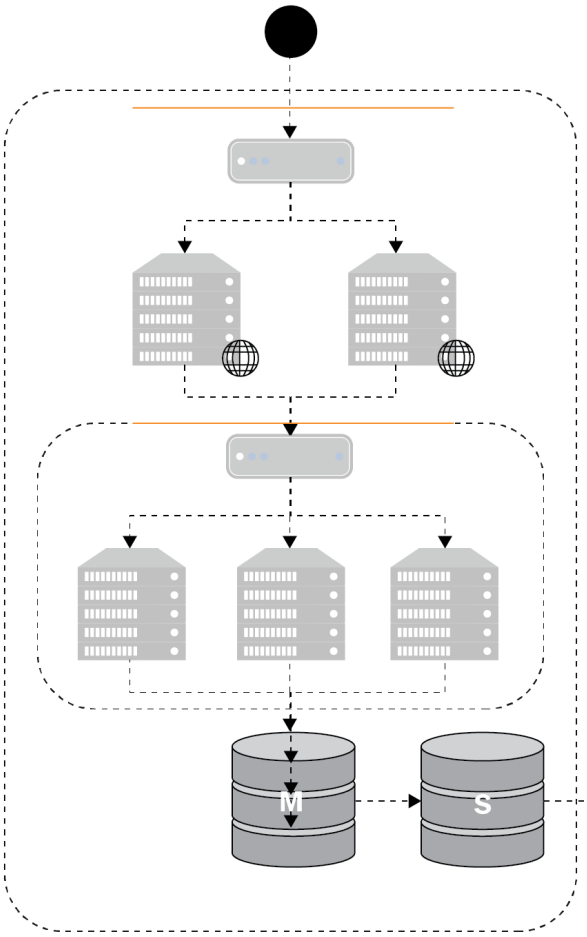
Web Server Tier
Fleet of web servers handling HTTP(S) requests

Interior Firewall
Limits access to application tied from web tier

App Load Balancer
Hardware or software solution to spread traffic over app servers

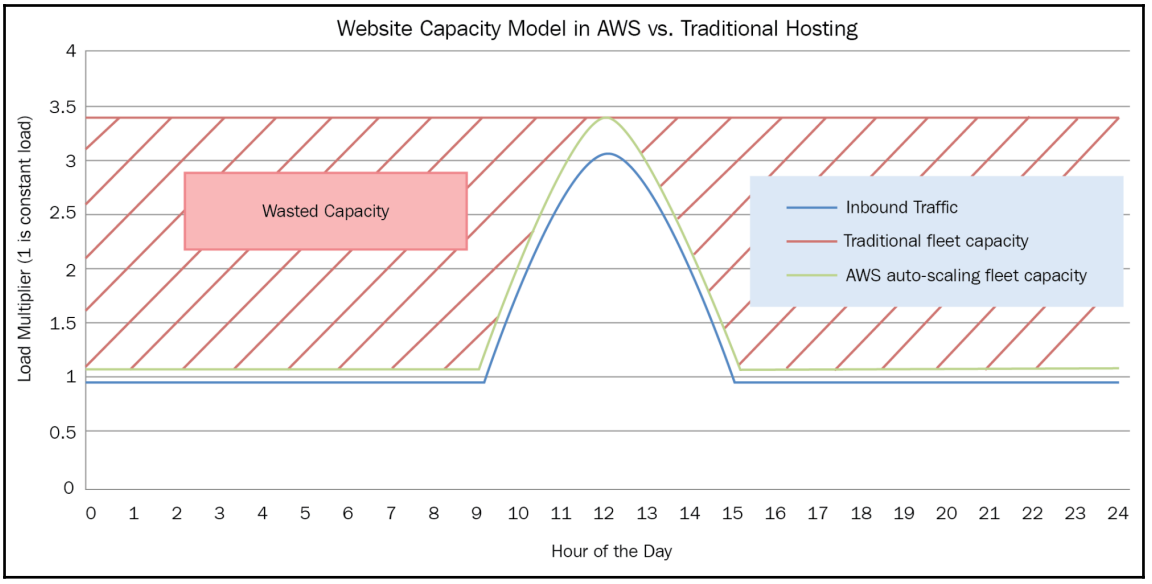
App Server Tier
Fleet of servers handling application-specific workloads

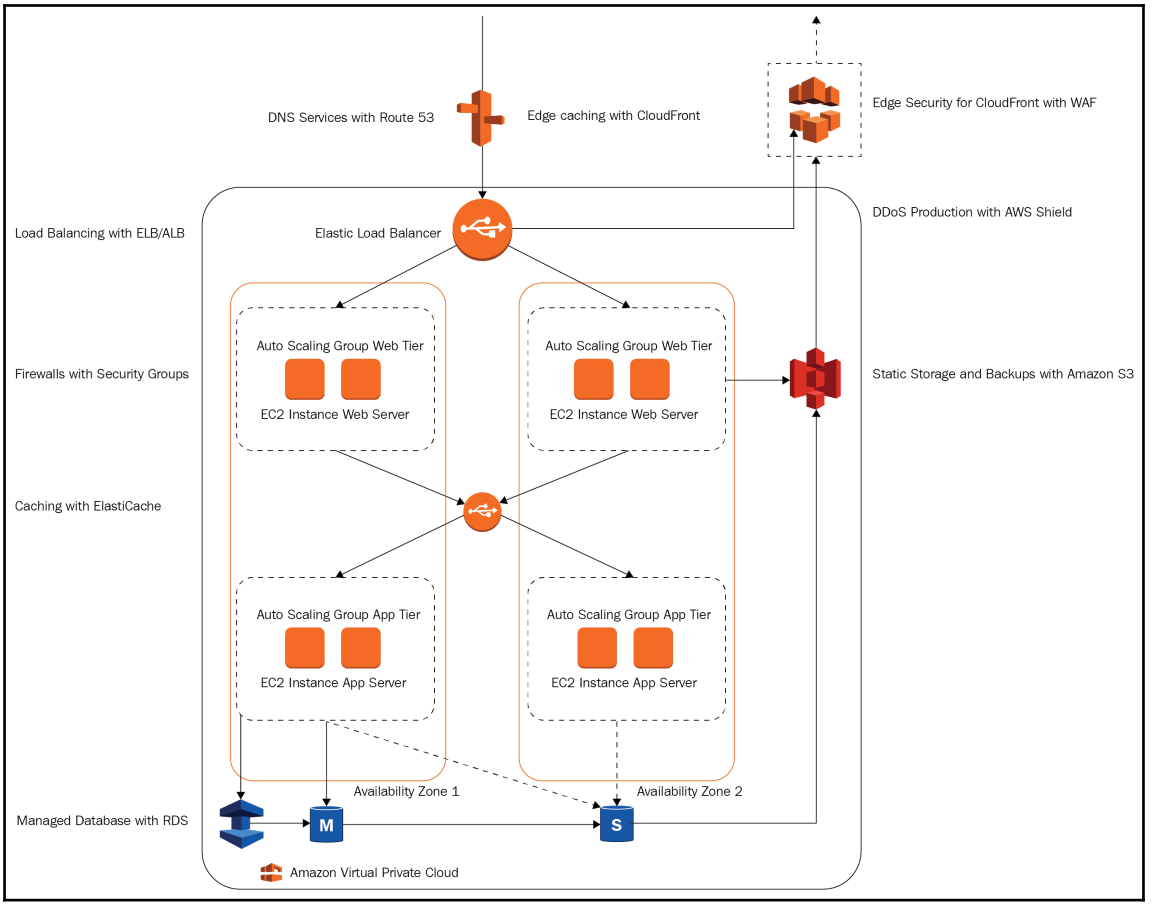
Data Tier
Database server machines with master and local running seperately with network storage for static objects

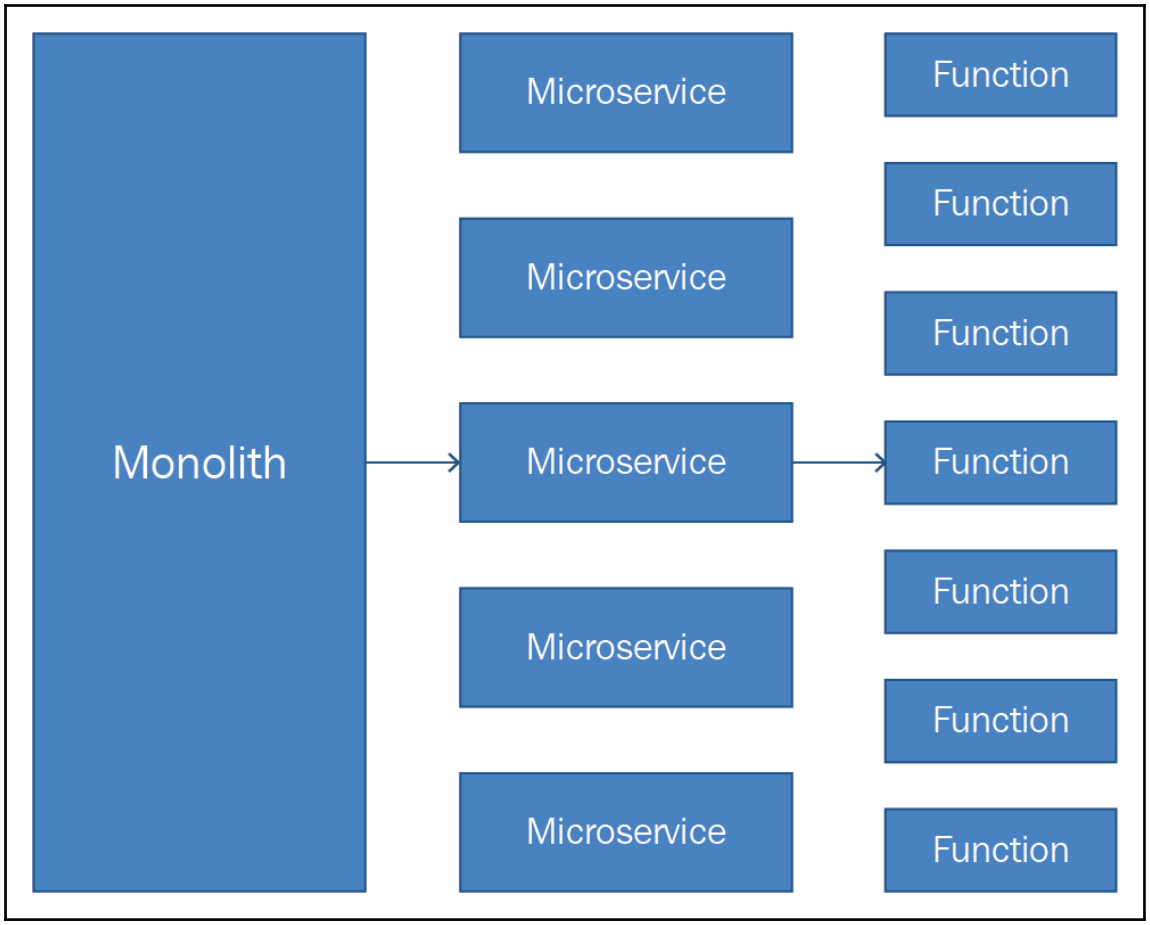


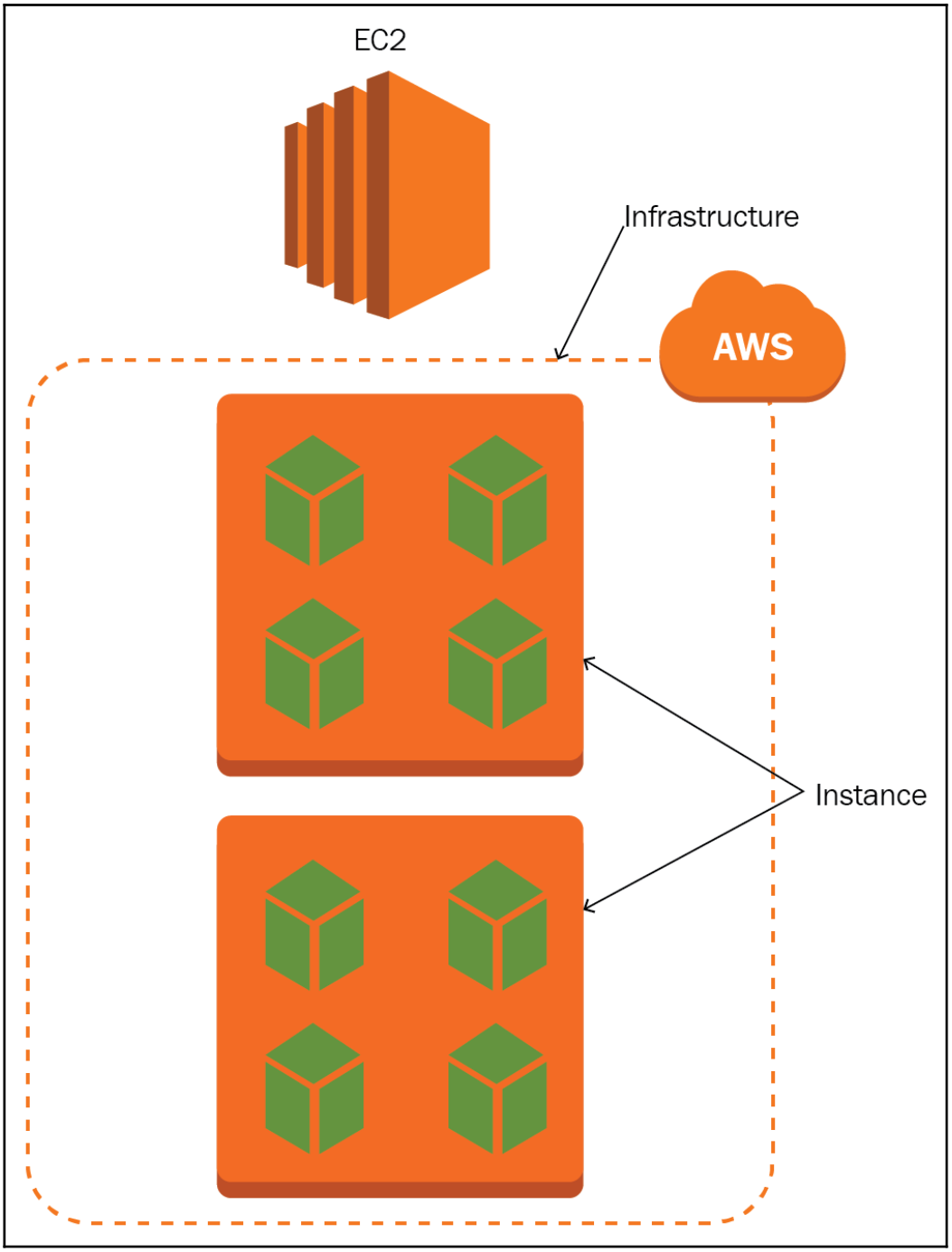
Backup on Tapes
Periodic backups stored on tapes usually managed by third party at their site

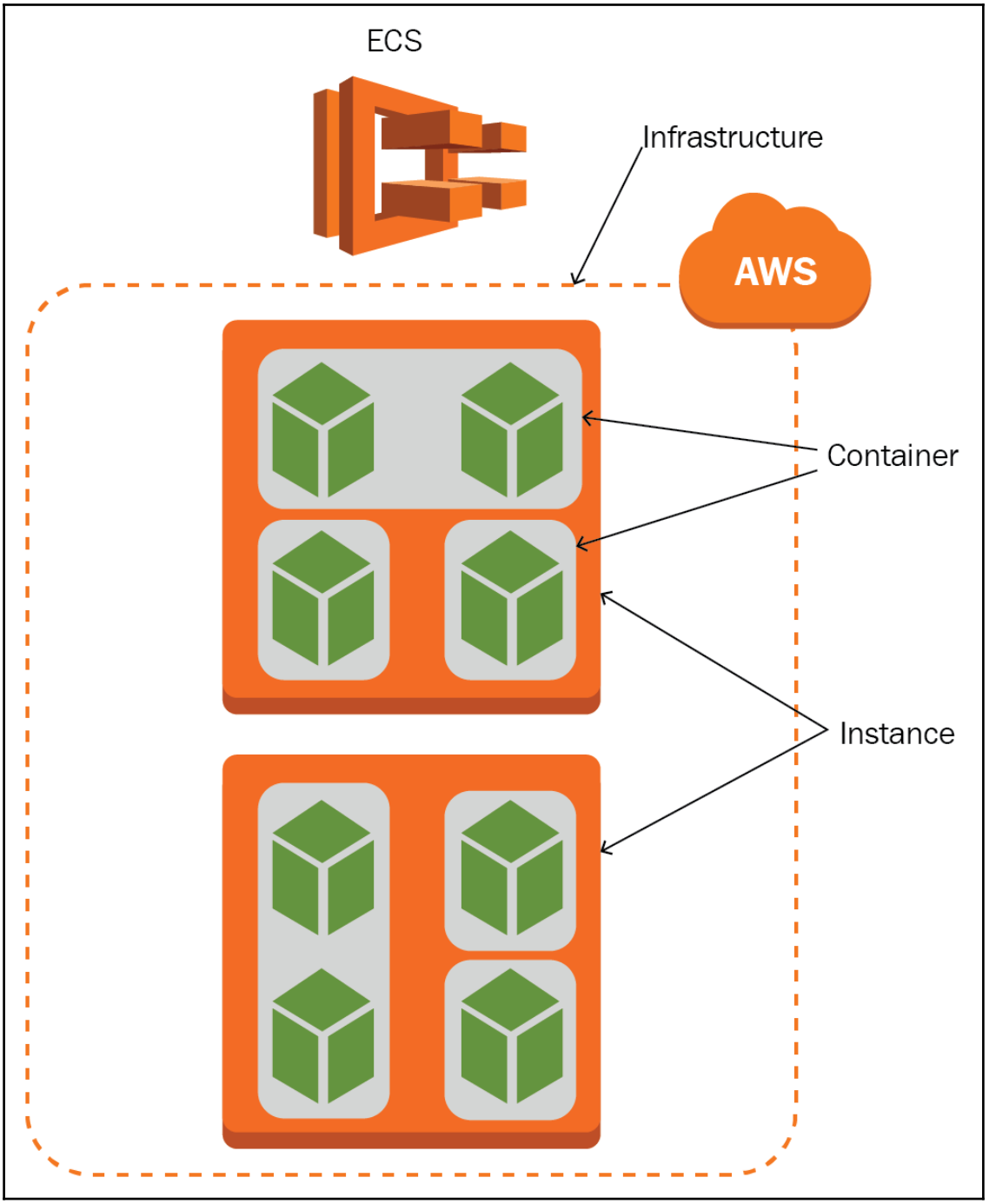
A traditional web hosting architecture

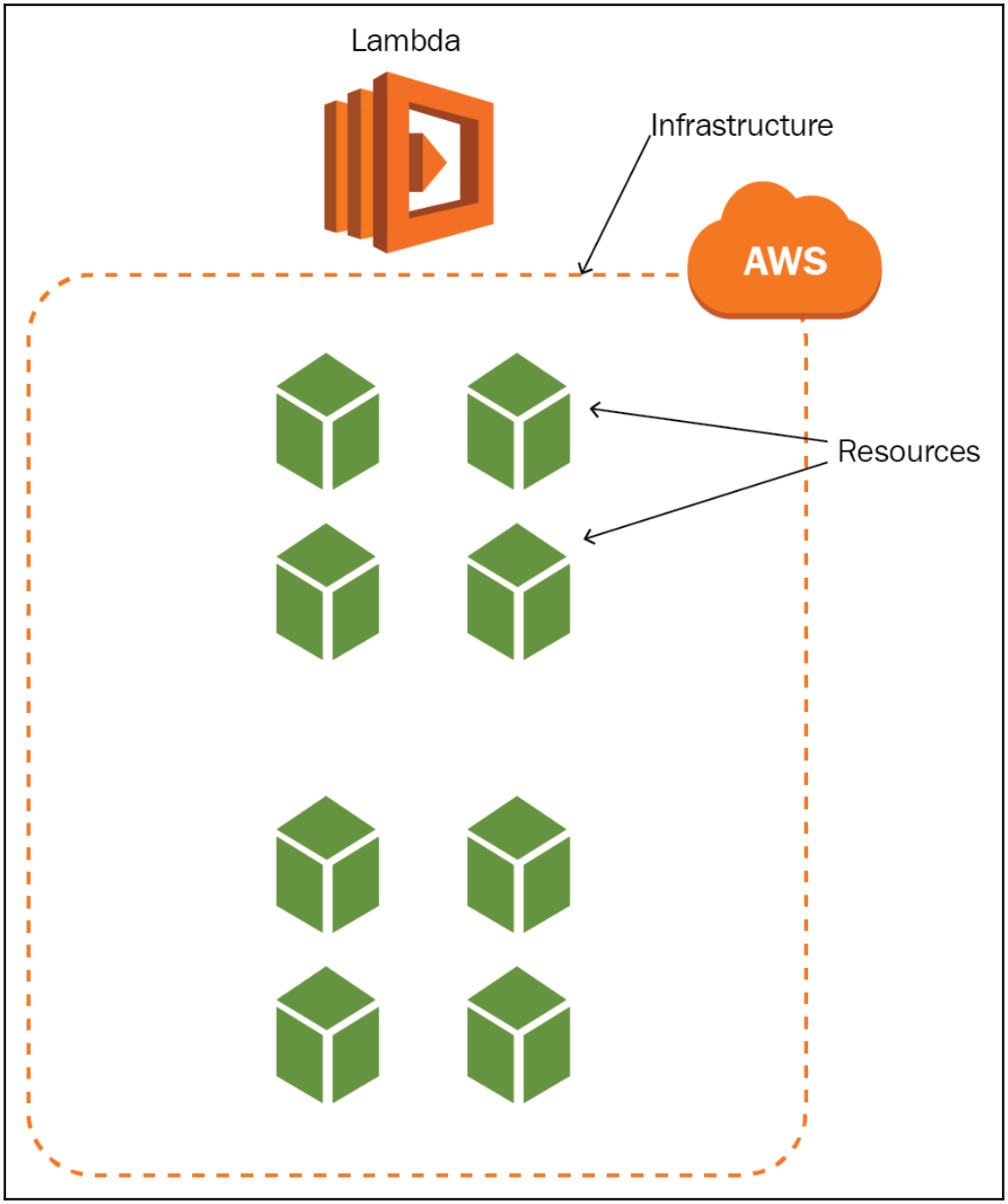

Website Capacity Model in AWS vs. Traditional Hosting
Load Multiplier (1 is constant load)
Hour of the Day
Wasted Capacity
Inbound Traffic
Traditional fleet capacity
AWS auto-scaling fleet capacity
0
0.5
1
1.5
2
2.5
3
3.5
4
0 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24


DNS Services with Route 53
Edge caching with CloudFront
Edge Security for CloudFront with WAF
Load Balancing with ELB/ALB
Elastic Load Balancer
DDoS Production with AWS Shield
Auto Scaling Group Web Tier
EC2 Instance Web Server
Auto Scaling Group Web Tier
EC2 Instance Web Server
Firewalls with Security Groups
Static Storage and Backups with Amazon S3
Caching with ElastiCache
Auto Scaling Group App Tier
EC2 Instance App Server
Auto Scaling Group App Tier
EC2 Instance App Server
Availability Zone 1
Availability Zone 2
Managed Database with RDS
M
S
Amazon Virtual Private Cloud


Monolith
Microservice
Microservice
Microservice
Microservice
Microservice
Function
Function
Function
Function
Function
Function
Function


EC2
Infrastructure
AWS
Instance


ECS
Infrastructure
AWS
Container
Instance


Lambda
Infrastructure
AWS
Resources

Chapter 8: Traditional Web Hosting – Amazon EC2 and Elastic Load Balancing

```
[115981.261711] Out of memory: kill process 20243 (httpd) score 1289779
or a child
[115981.269791] Killed process 1021 (php-cgi) vsz:4645684kB, anon-
rss:101186kB, file-rss:204kB
```

```
Kernel command line:  root=/dev/sda1 ro 4
...
Registering block device major 8
...
Kernel panic - not syncing: VFS: Unable to mount root fs on unknown-block(8,1)
```

```
XENBUS: Timeout connecting to devices!
...
Kernel panic - not syncing: No init found.  Try passing init= option to kernel.
```

Instance type	*Suggestion*
Amazon EBS-backed	Do any action: • Stop the instance. Modify with different and suitable instance type. Start the instance. • Reboot the instance. Problem might fix if you will change the instance type.
Instance store-backed	Do any action: • Terminate the instance. Launch a new instance with different and suitable instance type. • Reboot the instance. Problem might fix if you will change the instance type.

```
[9912662.053217] end_request: I/O error, dev sde, sector 52428288
[9912664.191262] end_request: I/O error, dev sde, sector 52428168
[9912664.191285] Buffer I/O error on device md0, logical block 209713020
[9912664.191297] Buffer I/O error on device md0, logical block 209713021
```

```
...
block drbd1: Local IO failed in request_timer_fn. Detaching...
Aborting journal on device drbd1-8.
block drbd1: IO ERROR: neither local nor remote disk
Buffer I/O error on device drbd1, logical block 557056
lost page write due to I/O error on drbd1
JBD2: I/O error detected when updating journal superblock for drbd1-8.
```

Instancetype	*Suggestion*
Amazon EBS-backed	• Stop the instance than detach the volume. Try to recover the volume. • Re-attach volume to the instance and start the instance. Note: It is good practice that you take the snapshot of your Amazon EBS volume often. It will decrease the data loss risk.
Instance store-backed	Terminate the instance. Launch a new instance. Note: It is good practice that you use Amazon S3 or Amazon EBS to store backup. Instance store volumes are tied with single host and single disk failure.

```
BIOS-provided physical RAM map:
 Xen: 0000000000000000 - 0000000026700000 (usable)
0MB HIGHMEM available.
...
request_module: runaway loop modprobe binfmt-464c
```

```
...
FATAL: kernel too old
Kernel panic - not syncing: Attempted to kill init!
```

```
FATAL: Could not load /lib/modules/2.6.34-4-virtual/modules.dep: No such file or
directory
ALERT! /dev/sda1 does not exist. Dropping to a shell!

BusyBox v1.13.3 (Ubuntu 1:1.13.3-1ubuntu5) built-in shell (ash)
Enter 'help' for a list of built-in commands.
```

```
ERROR Invalid kernel: elf_xen_note_check: ERROR: Will only load images
built for the generic loader or Linux images
xc_dom_parse_image returned -1
```

```
[/sbin/fsck.ext3 (1) -- /mnt/dbbackups] fsck.ext3 -a /dev/sdh
fsck.ext3: No such file or directory while trying to open /dev/sdh

/dev/sdh:
The superblock could not be read or does not describe a correct ext2 filesystem.  If
the device is valid and it really contains an ext2 filesystem (and not swap or ufs or
something else), then the superblock is corrupt, and you might try running e2fsck
with an alternate superblock: e2fsck -b 8193 <device>

[FAILED]

*** An error occurred during the file system check.
*** Dropping you to a shell; the system will reboot
*** when you leave the shell.
Give root password for maintenance
(or type Control-D to continue):
```

```
Checking file systems...fsck from util-linux-ng 2.16.2
/sbin/fsck.xfs: /dev/sdh does not exist
fsck died with exit status 8
```

Instancetype	*Suggestion*
Amazon EBS-backed	Stop the instance. Modify ramdisk and kernel attributes to use new kernel and start the instance.
Instance store-backed	Terminate the instance. Start new instance with kernel and ramdisk as parameters.

```
init: mountall main process (221) terminated with status 1

General error mounting filesystems.
A maintenance shell will now be started.
CONTROL-D will terminate this shell and re-try.
Press enter for maintenance
(or type Control-D to continue):
```

```
Root device '/dev/xvda1' doesn't exist. Attempting to create it.
ERROR: Unable to determine major/minor number of root device '/dev/xvda1'.
You are being dropped to a recovery shell
    Type 'exit' to try and continue booting
sh: can't access tty; job control turned off
```

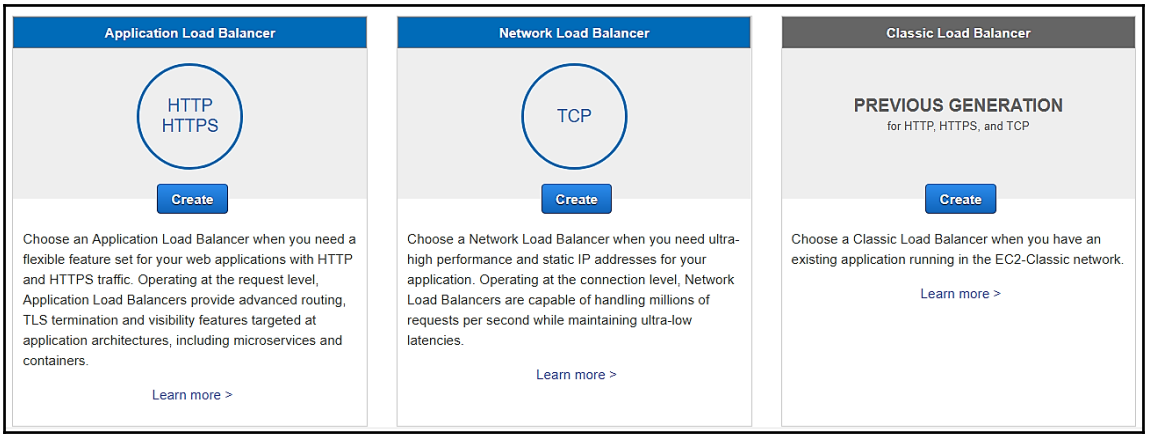
```
XENBUS: Device with no driver: device/vbd/2048
drivers/rtc/hctosys.c: unable to open rtc device (rtc0)
Initalizing network drop monitor service
Freeing unused kernel memory: 508k freed
```

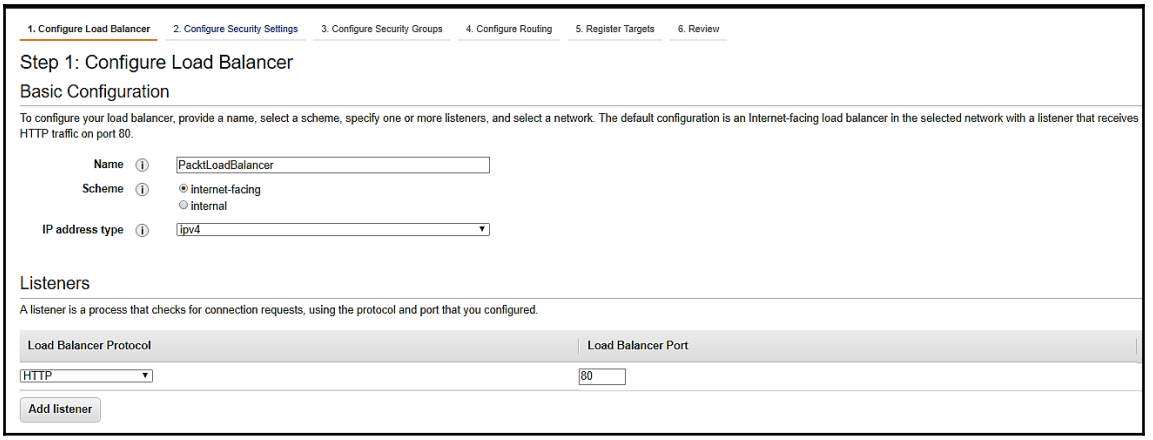
```
...
Bringing up loopback interface:  [  OK  ]

Bringing up interface eth0:  Device eth0 has different MAC address than expected,
ignoring.
[FAILED]

Starting auditd: [  OK  ]
```

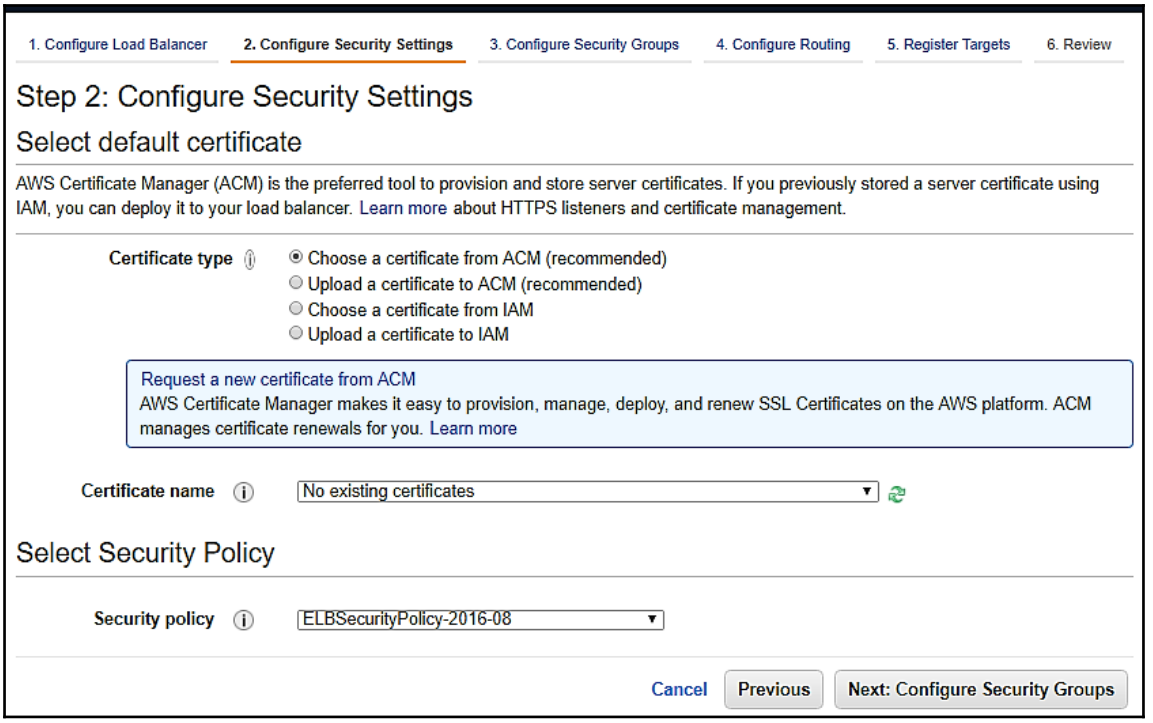
```
audit(1314445302.626:2): enforcing=1 old_enforcing=0 auid=4294947295
Unable to load SELinux Policy. Machine is in enforcing mode. Halting now.
Kernel panic - not syncing: Attempted to kill init!
```

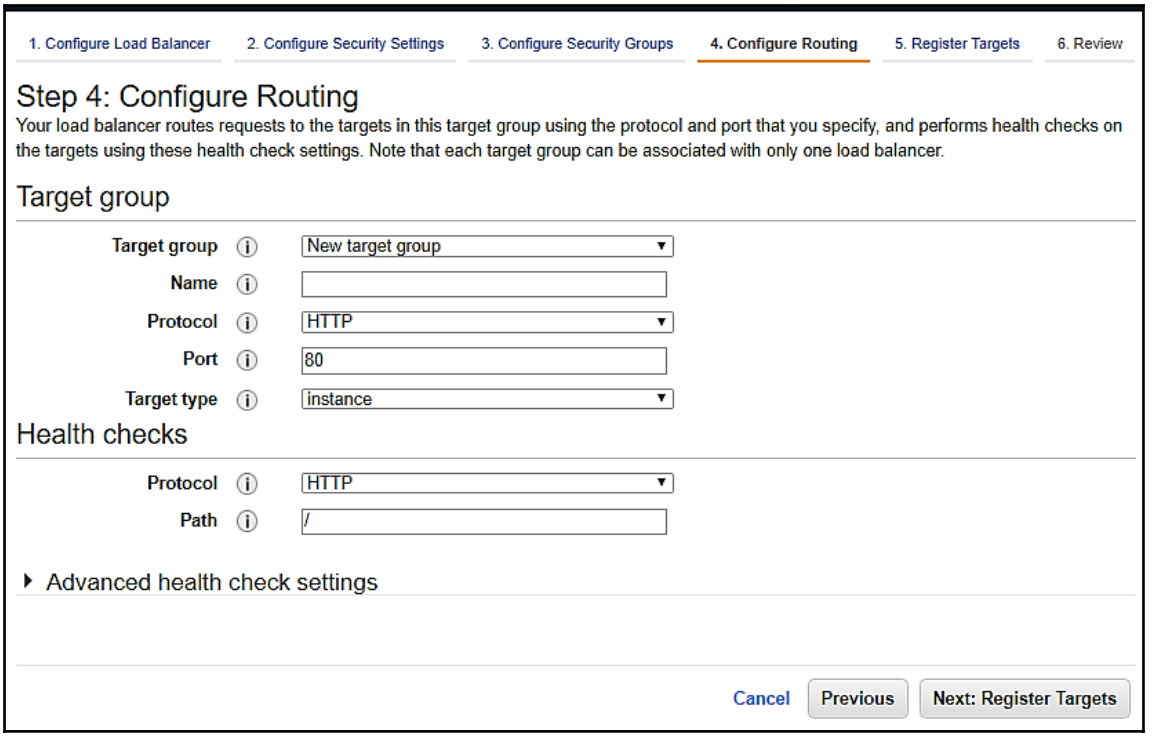
Instance type	*Suggestion*
Amazon EBS-backed	1. Stop the instance and detach the root volume. 2. Attach this volume to a working instance, run filesystem check and fix any errors. 3. Detach the volume from the working instance and attach it to the stopped instance. 4. Start the instance and check the instance status.
Instance store-backed	Start a new instance. Or contact support center for technical assistance.

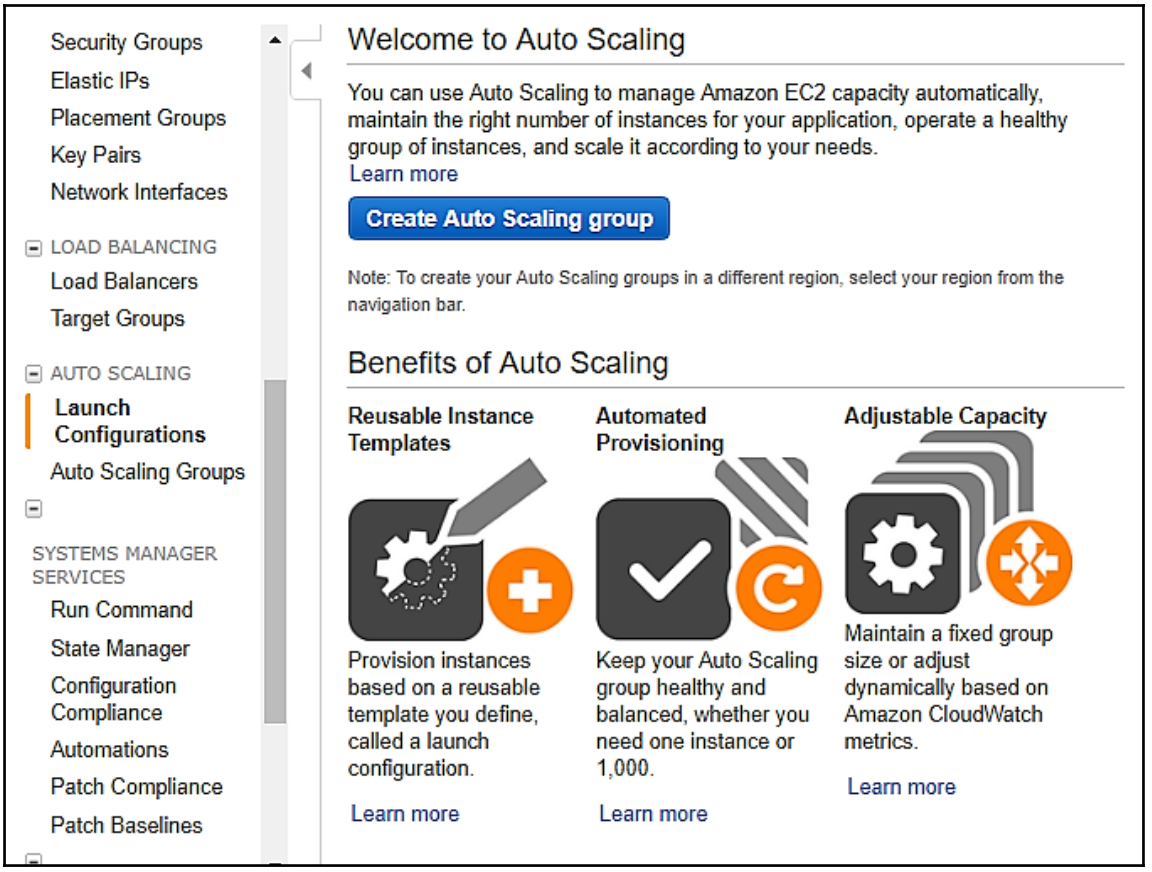
Features	*ALB*	*NLB*	*CLB*
Protocols	HTTP, HTTPS	TCP	HTTP, HTTPS, TCP, SSL
Platforms	VPC	VPC	EC2-Classic, VPC
Health checks, CloudWatch metrics, Logging, Zonal fail-over, Connection draining (deregistration delay)	Yes	Yes	Yes
Load Balancing to multiple ports on the same instance, WebSockets, IP addresses as targets, Load balancer deletion protection	Yes	Yes	No
Path-Based Routing, Host-Based Routing, Native HTTP/2, Server Name Indication (SNI)	Yes	No	No
Configurable idle connection timeout, Cross-zone load balancing, SSL offloading, Sticky sessions, Back-end server encryption	Yes	No	Yes
Static IP, Elastic IP address, Preserve Source IP address	No	Yes	No

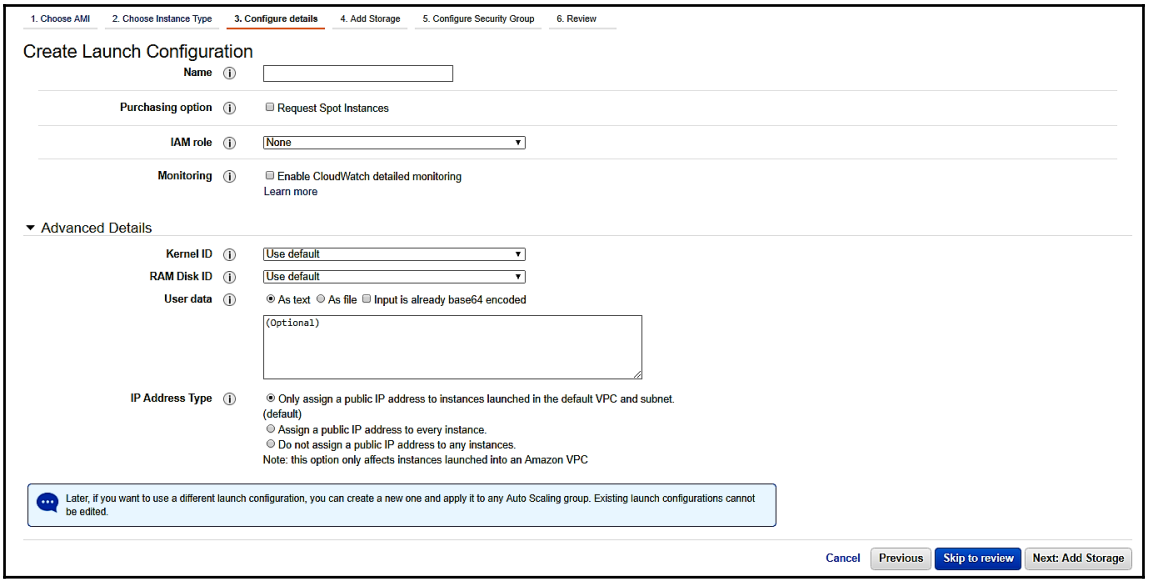



1. Configure Load Balancer
2. Configure Security Settings
3. Configure Security Groups
4. Configure Routing
5. Register Targets
6. Review
Step 1: Configure Load Balancer
Basic Configuration
To configure your load balancer, provide a name, select a scheme, specify one or more listeners, and select a network. The default configuration is an Internet-facing load balancer in the selected network with a listener that receives HTTP traffic on port 80.
Name
PacktLoadBalancer
Scheme
internet-facing
internal
IP address type
ipv4
Listeners
A listener is a process that checks for connection requests, using the protocol and port that you configured.
Load Balancer Protocol
Load Balancer Port
HTTP
80
Add listener

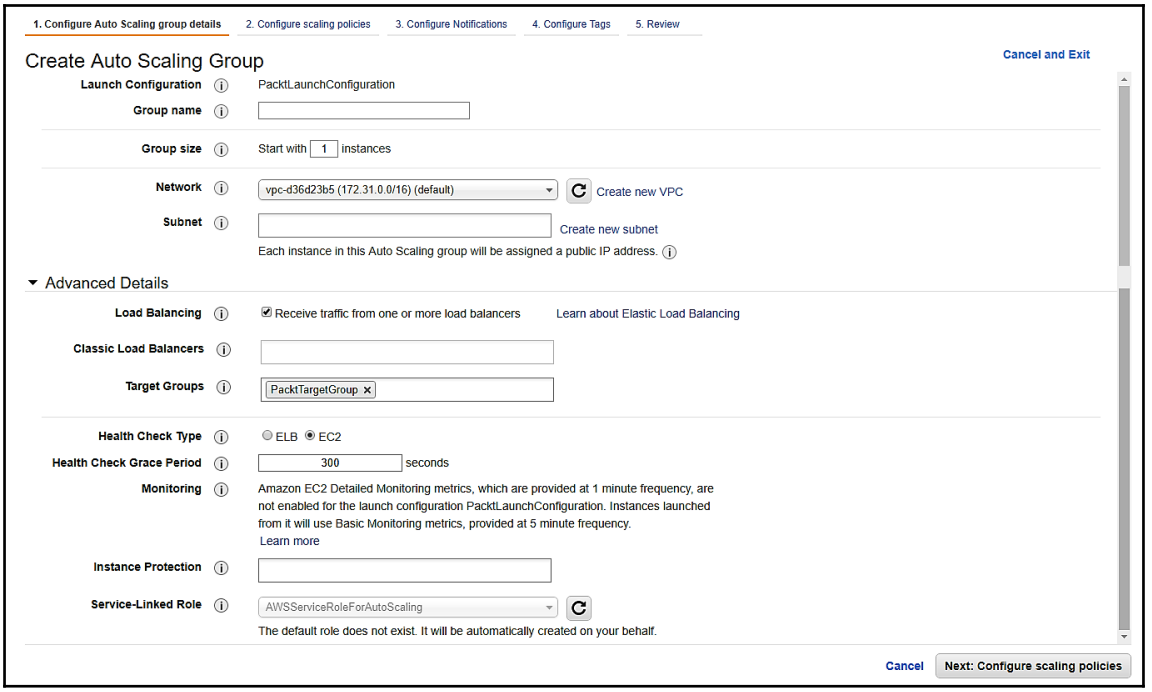

1. Configure Load Balancer
2. Configure Security Settings
3. Configure Security Groups
4. Configure Routing
5. Register Targets
6. Review
Step 2: Configure Security Settings
Select default certificate
AWS Certificate Manager (ACM) is the preferred tool to provision and store server certificates. If you previously stored a server certificate using IAM, you can deploy it to your load balancer. Learn more about HTTPS listeners and certificate management.
Certificate type
Choose a certificate from ACM (recommended)
Upload a certificate to ACM (recommended)
Choose a certificate from IAM
Upload a certificate to IAM
Request a new certificate from ACM
AWS Certificate Manager makes it easy to provision, manage, deploy, and renew SSL Certificates on the AWS platform. ACM manages certificate renewals for you. Learn more
Certificate name
No existing certificates
Select Security Policy
Security policy
ELBSecurityPolicy-2016-08
Cancel
Previous
Next: Configure Security Groups

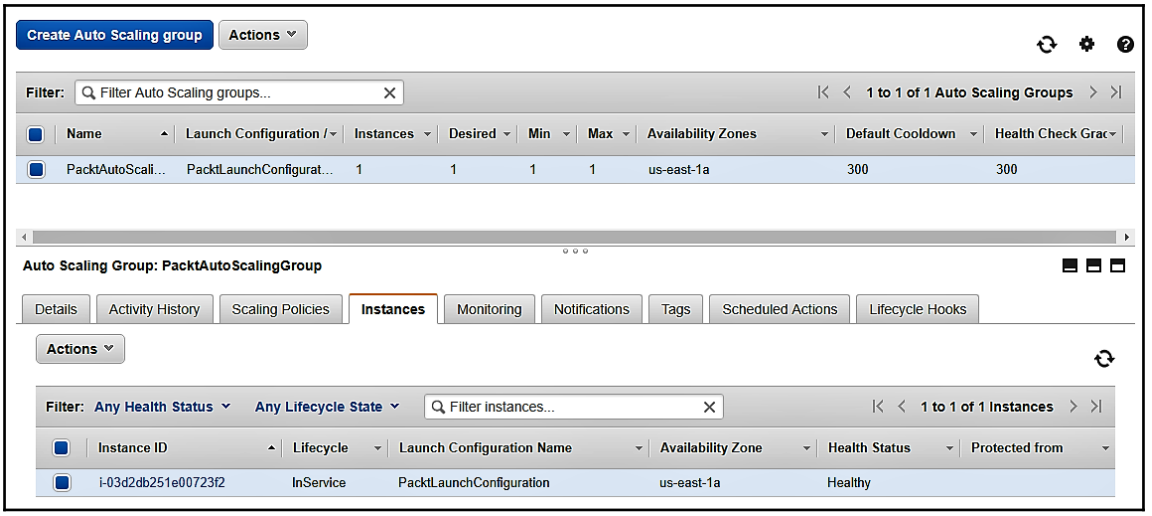

1. Configure Load Balancer
2. Configure Security Settings
3. Configure Security Groups
4. Configure Routing
5. Register Targets
6. Review
Step 4: Configure Routing
Your load balancer routes requests to the targets in this target group using the protocol and port that you specify, and performs health checks on the targets using these health check settings. Note that each target group can be associated with only one load balancer.
Target group
Target group
New target group
Name
Protocol
HTTP
Port
80
Target type
instance
Health checks
Protocol
HTTP
Path
/
Advanced health check settings
Cancel
Previous
Next: Register Targets

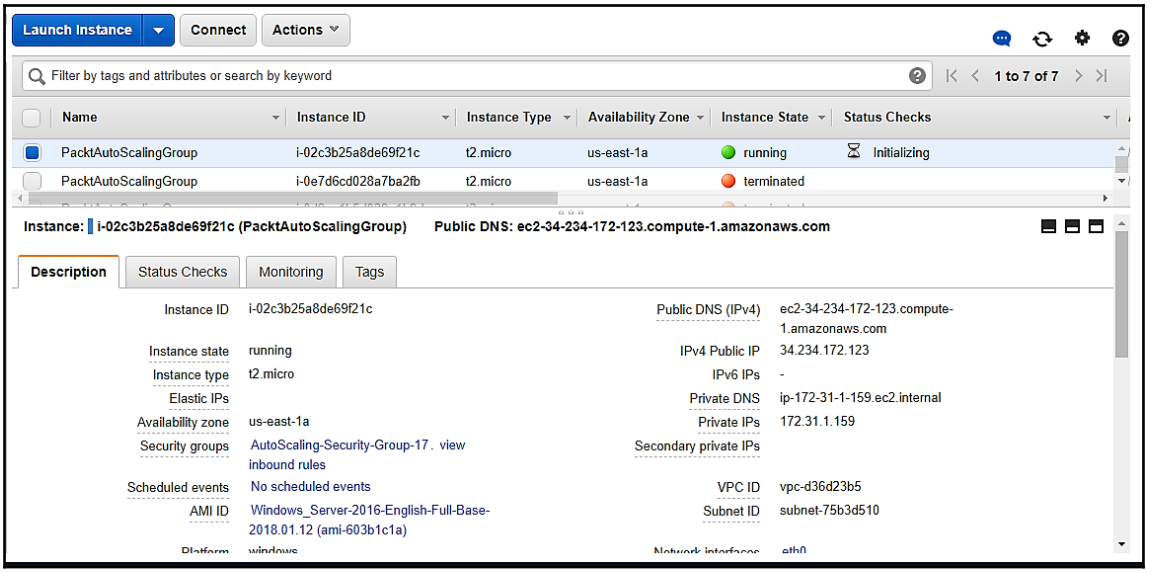

Security Groups
Elastic IPs
Placement Groups
Key Pairs
Network Interfaces
LOAD BALANCING
Load Balancers
Target Groups
AUTO SCALING
Launch Configurations
Auto Scaling Groups
SYSTEMS MANAGER SERVICES
Run Command
State Manager
Configuration Compliance
Automations
Patch Compliance
Patch Baselines
Welcome to Auto Scaling
You can use Auto Scaling to manage Amazon EC2 capacity automatically, maintain the right number of instances for your application, operate a healthy group of instances, and scale it according to your needs.
Learn more
Create Auto Scaling group
Note: To create your Auto Scaling groups in a different region, select your region from the navigation bar.
Benefits of Auto Scaling
Reusable Instance Templates
Provision instances based on a reusable template you define, called a launch configuration.
Learn more
Automated Provisioning
Keep your Auto Scaling group healthy and balanced, whether you need one instance or 1,000.
Learn more
Adjustable Capacity
Maintain a fixed group size or adjust dynamically based on Amazon CloudWatch metrics.
Learn more

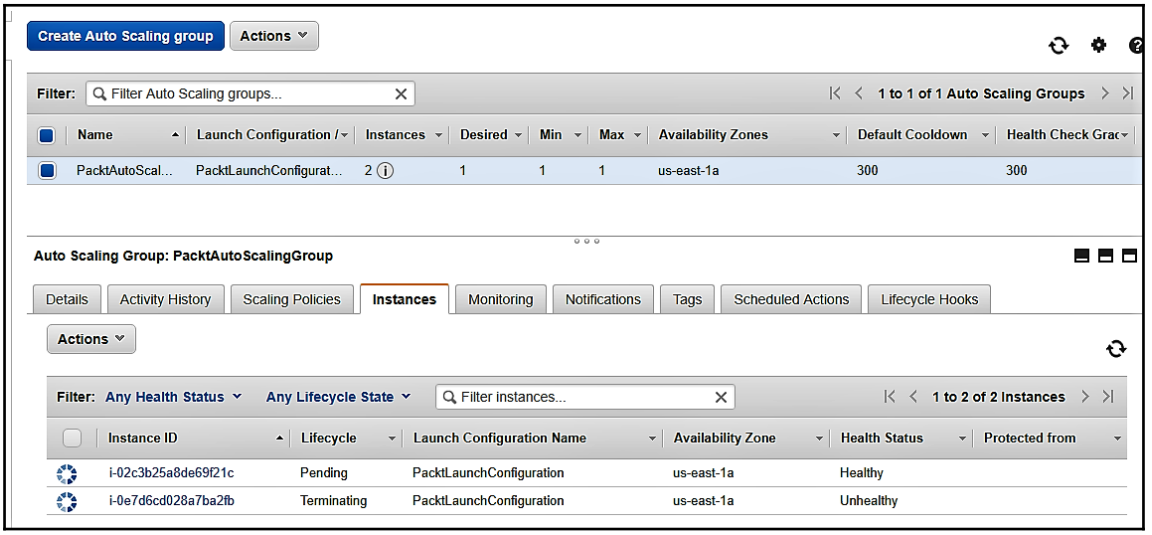

1. Choose AMI
2. Choose Instance Type
3. Configure details
4. Add Storage
5. Configure Security Group
6. Review
Create Launch Configuration
Name
Purchasing option
Request Spot Instances
IAM role
None
Monitoring
Enable CloudWatch detailed monitoring
Learn more
Advanced Details
Kernel ID
Use default
RAM Disk ID
Use default
User data
As text
As file
Input is already base64 encoded
(Optional)
IP Address Type
Only assign a public IP address to instances launched in the default VPC and subnet. (default)
Assign a public IP address to every instance.
Do not assign a public IP address to any instances.
Note: this option only affects instances launched into an Amazon VPC
Later, if you want to use a different launch configuration, you can create a new one and apply it to any Auto Scaling group. Existing launch configurations cannot be edited.
Cancel
Previous
Skip to review
Next: Add Storage

Instance type	*Value for User data*
Amazon Linux & RHEL Amazon EC2 instances	#!/bin/bash yum -y update yum install -y ruby cd /home/ec2-user curl -O https://bucket-name.s3.amazonaws.com/latest/install chmod +x ./install ./install auto
Ubuntu Server Amazon EC2 instances	#!/bin/bash apt-get -y update apt-get -y install ruby apt-get -y install wget cd /home/ubuntu wget https://bucket-name.s3.amazonaws.com/latest/install chmod +x ./install ./install auto
Windows Server Amazon EC2 instances	<powershell> New-Item -Path c:\temp -ItemType "directory" -Force powershell.exe -Command Read-S3Object -BucketName bucket-name/latest -Key codedeploy-agent.msi -File c:\temp\codedeploy-agent.msi Start-Process -Wait -FilePath c:\temp\codedeploy-agent.msi -WindowStyle Hidden </powershell>


1. Configure Auto Scaling group details
2. Configure scaling policies
3. Configure Notifications
4. Configure Tags
5. Review
Create Auto Scaling Group
Cancel and Exit
Launch Configuration
PacktLaunchConfiguration
Group name
Group size
Start with 1 instances
Network
vpc-d36d23b5 (172.31.0.0/16) (default)
Create new VPC
Subnet
Create new subnet
Each instance in this Auto Scaling group will be assigned a public IP address.
Advanced Details
Load Balancing
Receive traffic from one or more load balancers
Learn about Elastic Load Balancing
Classic Load Balancers
Target Groups
PacktTargetGroup
Health Check Type
ELB
EC2
Health Check Grace Period
300
seconds
Monitoring
Amazon EC2 Detailed Monitoring metrics, which are provided at 1 minute frequency, are not enabled for the launch configuration PacktLaunchConfiguration. Instances launched from it will use Basic Monitoring metrics, provided at 5 minute frequency.
Learn more
Instance Protection
Service-Linked Role
AWSServiceRoleForAutoScaling
The default role does not exist. It will be automatically created on your behalf.
Cancel
Next: Configure scaling policies


Create Auto Scaling group
Actions
Filter:
Filter Auto Scaling groups...
1 to 1 of 1 Auto Scaling Groups
Name
Launch Configuration
Instances
Desired
Min
Max
Availability Zones
Default Cooldown
Health Check Grac
PacktAutoScali...
PacktLaunchConfigurat...
1
1
1
1
us-east-1a
300
300
Auto Scaling Group: PacktAutoScalingGroup
Details
Activity History
Scaling Policies
Instances
Monitoring
Notifications
Tags
Scheduled Actions
Lifecycle Hooks
Actions
Filter:
Any Health Status
Any Lifecycle State
Filter instances...
1 to 1 of 1 Instances
Instance ID
Lifecycle
Launch Configuration Name
Availability Zone
Health Status
Protected from
i-03d2db251e00723f2
InService
PacktLaunchConfiguration
us-east-1a
Healthy


Launch Instance
Connect
Actions
Filter by tags and attributes or search by keyword
1 to 7 of 7
Name
Instance ID
Instance Type
Availability Zone
Instance State
Status Checks
PacktAutoScalingGroup
i-02c3b25a8de69f21c
t2.micro
us-east-1a
running
Initializing
PacktAutoScalingGroup
i-0e7d6cd028a7ba2fb
t2.micro
us-east-1a
terminated
Instance: i-02c3b25a8de69f21c (PacktAutoScalingGroup)
Public DNS: ec2-34-234-172-123.compute-1.amazonaws.com
Description
Status Checks
Monitoring
Tags
Instance ID
i-02c3b25a8de69f21c
Instance state
running
Instance type
t2.micro
Elastic IPs
Availability zone
us-east-1a
Security groups
AutoScaling-Security-Group-17. view inbound rules
Scheduled events
No scheduled events
AMI ID
Windows_Server-2016-English-Full-Base-2018.01.12 (ami-603b1c1a)
Public DNS (IPv4)
ec2-34-234-172-123.compute-1.amazonaws.com
IPv4 Public IP
34.234.172.123
IPv6 IPs
-
Private DNS
ip-172-31-1-159.ec2.internal
Private IPs
172.31.1.159
Secondary private IPs
VPC ID
vpc-d36d23b5
Subnet ID
subnet-75b3d510


Create Auto Scaling group
Actions
Filter:
Filter Auto Scaling groups...
1 to 1 of 1 Auto Scaling Groups
Name
Launch Configuration /
Instances
Desired
Min
Max
Availability Zones
Default Cooldown
Health Check Grac
PacktAutoScal...
PacktLaunchConfigurat...
2
1
1
1
us-east-1a
300
300
Auto Scaling Group: PacktAutoScalingGroup
Details
Activity History
Scaling Policies
Instances
Monitoring
Notifications
Tags
Scheduled Actions
Lifecycle Hooks
Actions
Filter:
Any Health Status
Any Lifecycle State
Filter instances...
1 to 2 of 2 Instances
Instance ID
Lifecycle
Launch Configuration Name
Availability Zone
Health Status
Protected from
i-02c3b25a8de69f21c
Pending
PacktLaunchConfiguration
us-east-1a
Healthy
i-0e7d6cd028a7ba2fb
Terminating
PacktLaunchConfiguration
us-east-1a
Unhealthy

Environment configuration

Specify any combination of Auto Scaling groups, Amazon EC2 instances, and on-premises instances to add instances to this deployment group.

Auto Scaling groups | **Amazon EC2 instances** | **On-premises instances**

You can add up to three groups of tags for EC2 instances to this deployment group. Learn more

One tag group : Any instance identified by the tag group will be deployed to.

Multiple tag groups : Only instances identified by all the tag groups will be deployed to.

Tag group 1

	Key	Value	Instances	
1	Name	PacktCodeDeployDemo	1	
2				

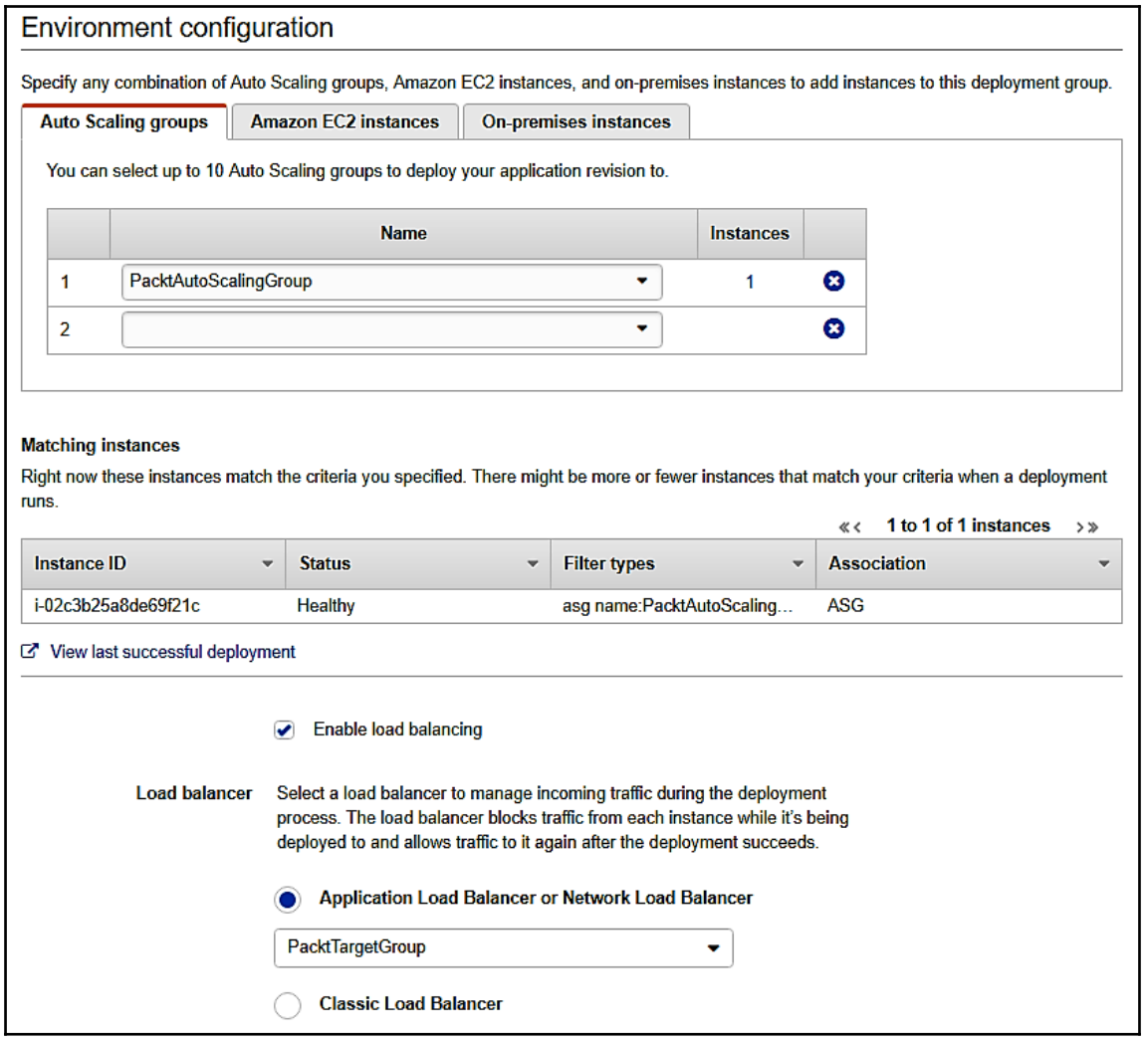
Add tag group

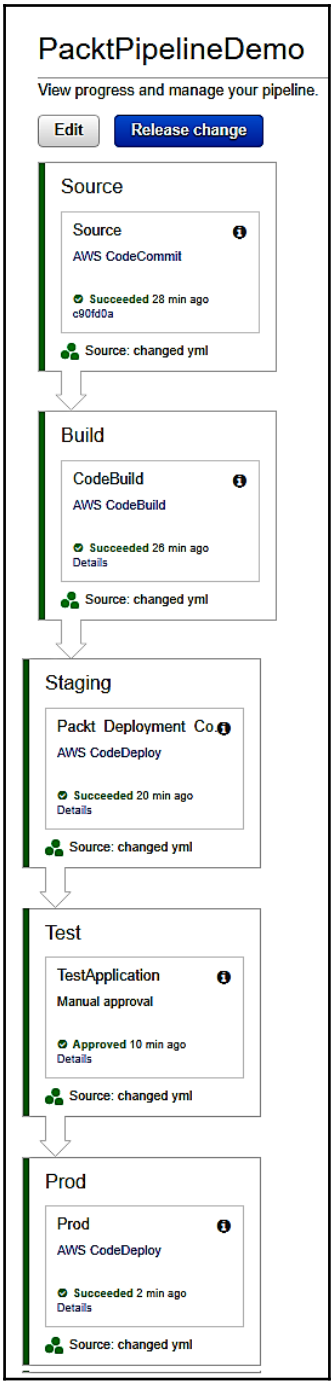
Matching instances

Right now these instances match the criteria you specified. There might be more or fewer instances that match your criteria when a deployment runs.

1 to 1 of 1 instances

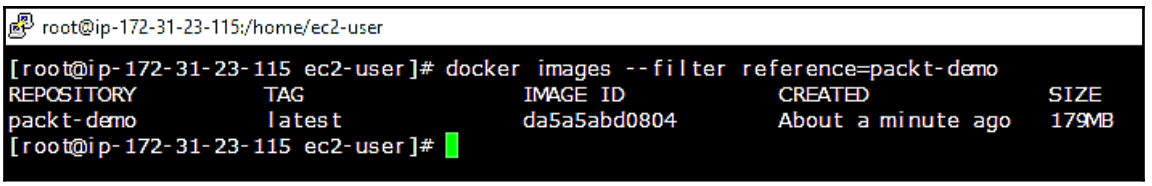
Instance ID	Status	Filter types	Association
i-03ed5b379a4722490	Running	Name:PacktCodeDeployDemo	EC2


Environment configuration
Specify any combination of Auto Scaling groups, Amazon EC2 instances, and on-premises instances to add instances to this deployment group.
Auto Scaling groups
Amazon EC2 instances
On-premises instances
You can select up to 10 Auto Scaling groups to deploy your application revision to.
Name
Instances
1
PacktAutoScalingGroup
1
2
Matching instances
Right now these instances match the criteria you specified. There might be more or fewer instances that match your criteria when a deployment runs.
1 to 1 of 1 instances
Instance ID
Status
Filter types
Association
i-02c3b25a8de69f21c
Healthy
asg name:PacktAutoScaling...
ASG
View last successful deployment
Enable load balancing
Load balancer
Select a load balancer to manage incoming traffic during the deployment process. The load balancer blocks traffic from each instance while it's being deployed to and allows traffic to it again after the deployment succeeds.
Application Load Balancer or Network Load Balancer
PacktTargetGroup
Classic Load Balancer


PacktPipelineDemo
View progress and manage your pipeline.
Edit
Release change
Source
Source
AWS CodeCommit
Succeeded 28 min ago
c90fd0a
Source: changed yml
Build
CodeBuild
AWS CodeBuild
Succeeded 26 min ago
Details
Source: changed yml
Staging
Packt Deployment Co
AWS CodeDeploy
Succeeded 20 min ago
Details
Source: changed yml
Test
TestApplication
Manual approval
Approved 10 min ago
Details
Source: changed yml
Prod
Prod
AWS CodeDeploy
Succeeded 2 min ago
Details
Source: changed yml


Hi From Packt!!!
ec2-34-229-240-183.compute-1.amazonaws.com
Hi From Packt!!!!!

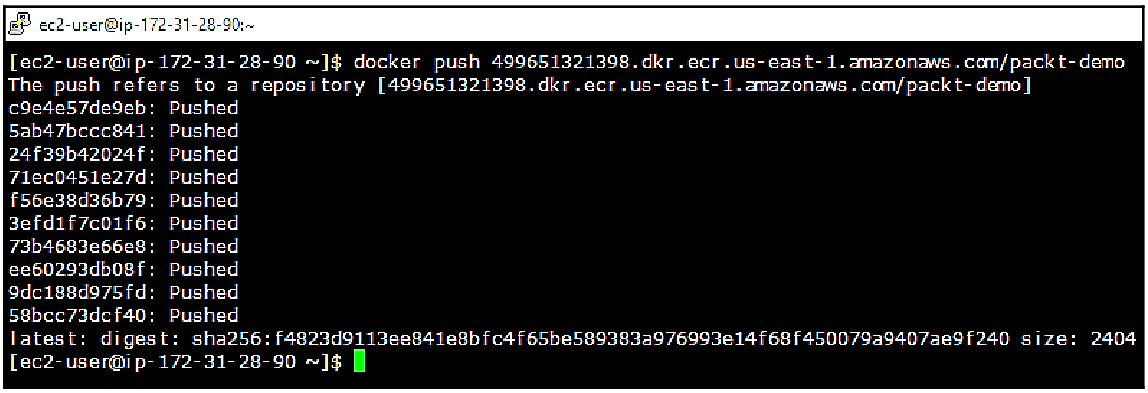
Chapter 9: Amazon EC2 Container Service

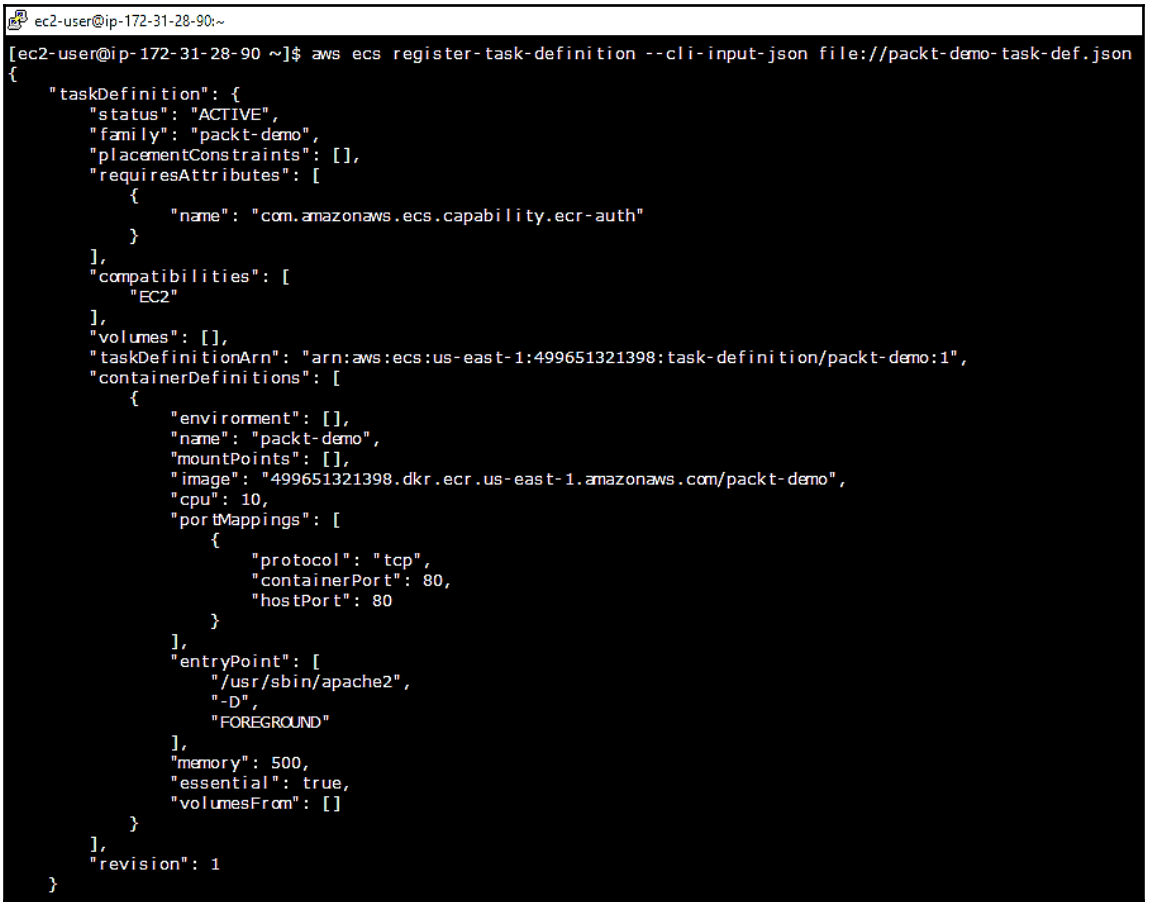


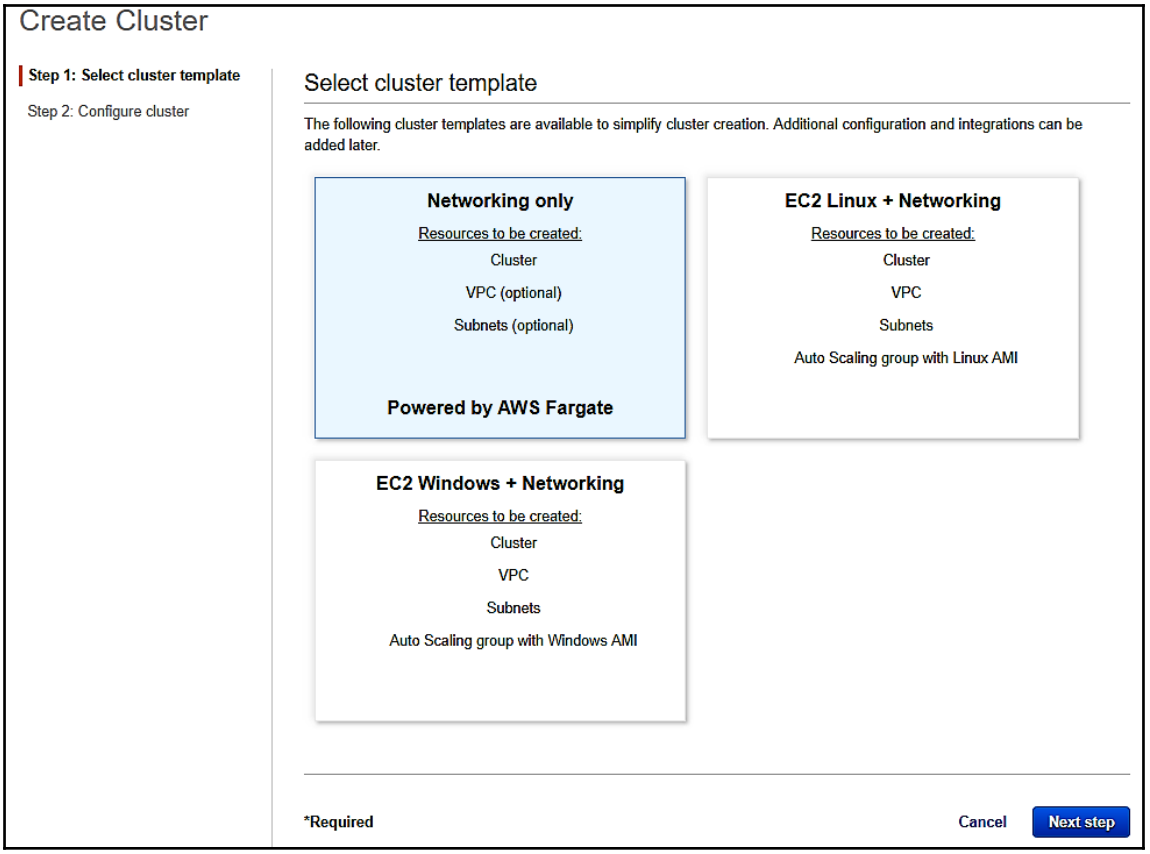

ec2-54-198-240-92.comp
ec2-54-198-240-92.compute-1.amazonaws.com
Hi from Packt!!!

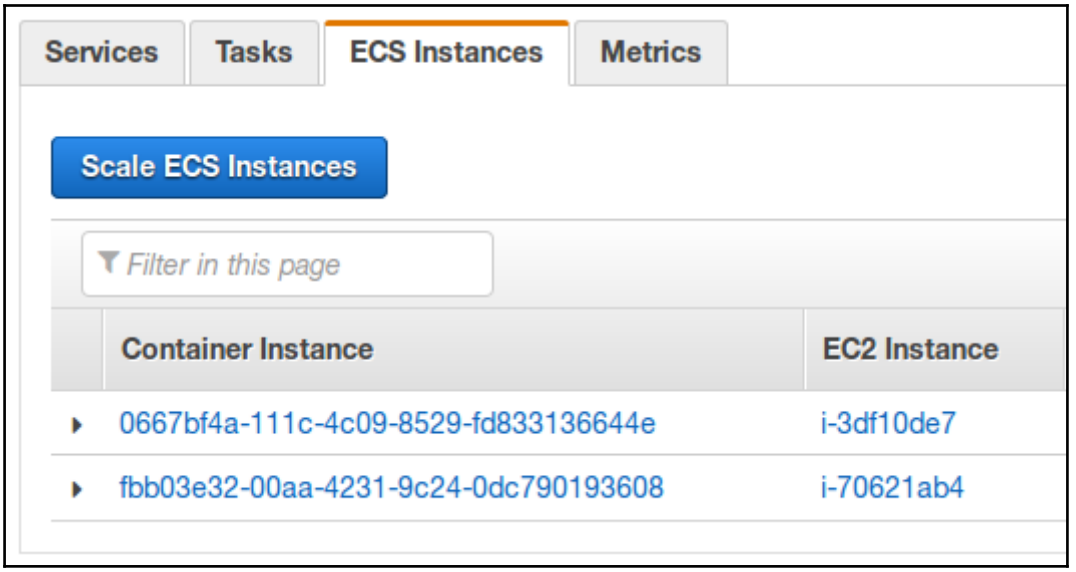

ec2-user@ip-172-31-28-90:~
[ec2-user@ip-172-31-28-90 ~]$ aws ecr get-login --no-include-email
[ec2-user@ip-172-31-28-90 ~]$

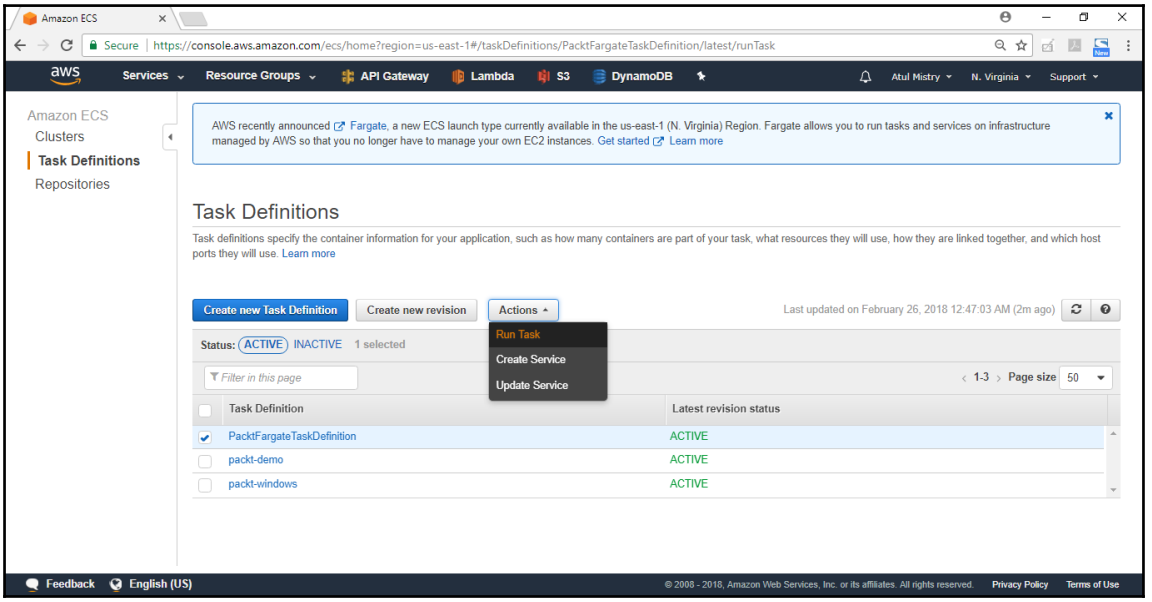

ec2-user@ip-172-31-28-90:~
WARNING! Using --password via the CLI is insecure. Use --password-stdin.
Login Succeeded
[ec2-user@ip-172-31-28-90 ~]$

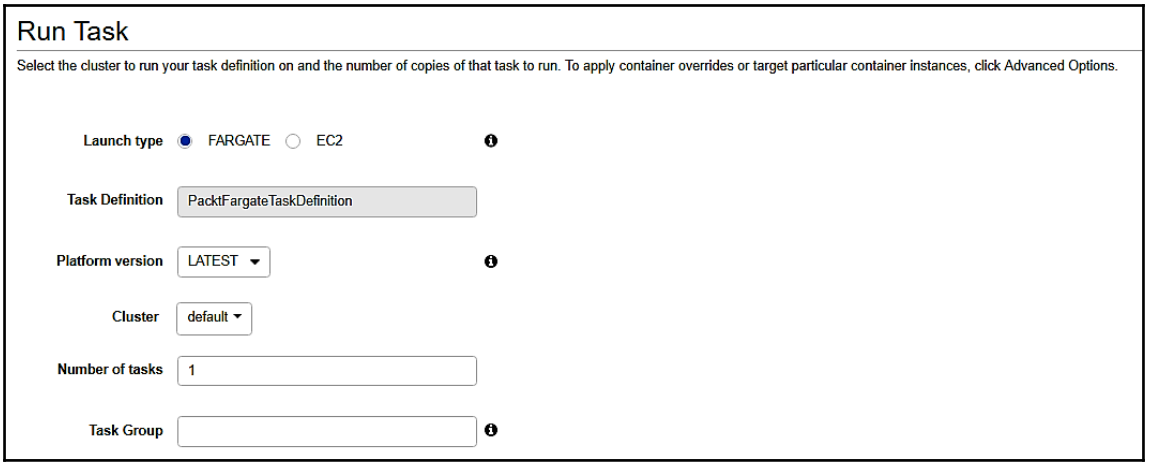

ec2-user@ip-172-31-28-90:~
[ec2-user@ip-172-31-28-90 ~]$ docker push 499651321398.dkr.ecr.us-east-1.amazonaws.com/packt-demo
The push refers to a repository [499651321398.dkr.ecr.us-east-1.amazonaws.com/packt-demo]
c9e4e57de9eb: Pushed
5ab47bccc841: Pushed
24f39b42024f: Pushed
71ec0451e27d: Pushed
f56e38d36b79: Pushed
3efd1f7c01f6: Pushed
73b4683e66e8: Pushed
ee60293db08f: Pushed
9dc188d975fd: Pushed
58bcc73dcf40: Pushed
latest: digest: sha256:f4823d9113ee841e8bfc4f65be589383a976993e14f68f450079a9407ae9f240 size: 2404
[ec2-user@ip-172-31-28-90 ~]$

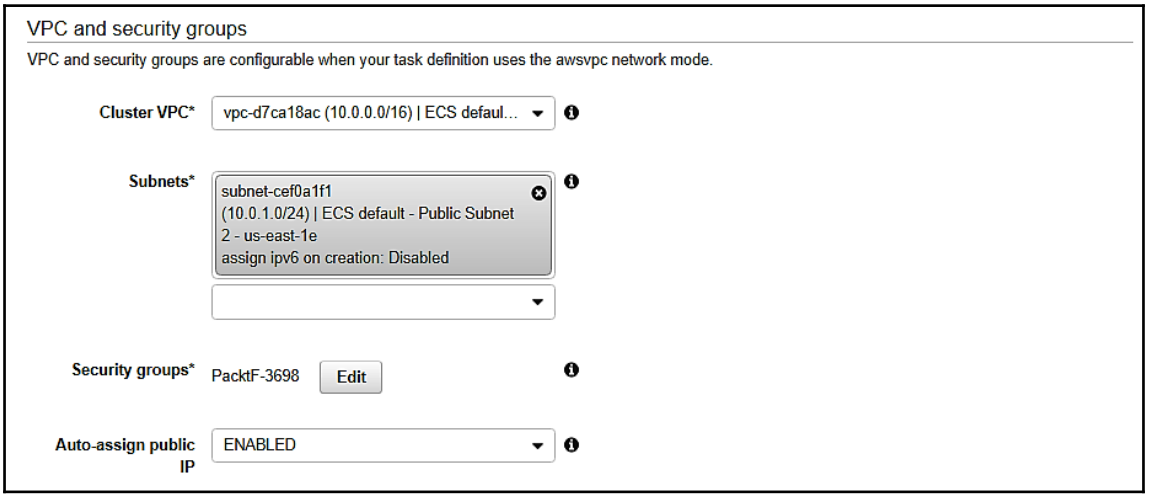

ec2-user@ip-172-31-28-90:~
[ec2-user@ip-172-31-28-90 ~]$ aws ecs register-task-definition --cli-input-json file://packt-demo-task-def.json
{
"taskDefinition": {
"status": "ACTIVE",
"family": "packt-demo",
"placementConstraints": [],
"requiresAttributes": [
{
"name": "com.amazonaws.ecs.capability.ecr-auth"
}
],
"compatibilities": [
"EC2"
],
"volumes": [],
"taskDefinitionArn": "arn:aws:ecs:us-east-1:499651321398:task-definition/packt-demo:1",
"containerDefinitions": [
{
"environment": [],
"name": "packt-demo",
"mountPoints": [],
"image": "499651321398.dkr.ecr.us-east-1.amazonaws.com/packt-demo",
"cpu": 10,
"portMappings": [
{
"protocol": "tcp",
"containerPort": 80,
"hostPort": 80
}
],
"entryPoint": [
"/usr/sbin/apache2",
"-D",
"FOREGROUND"
],
"memory": 500,
"essential": true,
"volumesFrom": []
}
],
"revision": 1
}

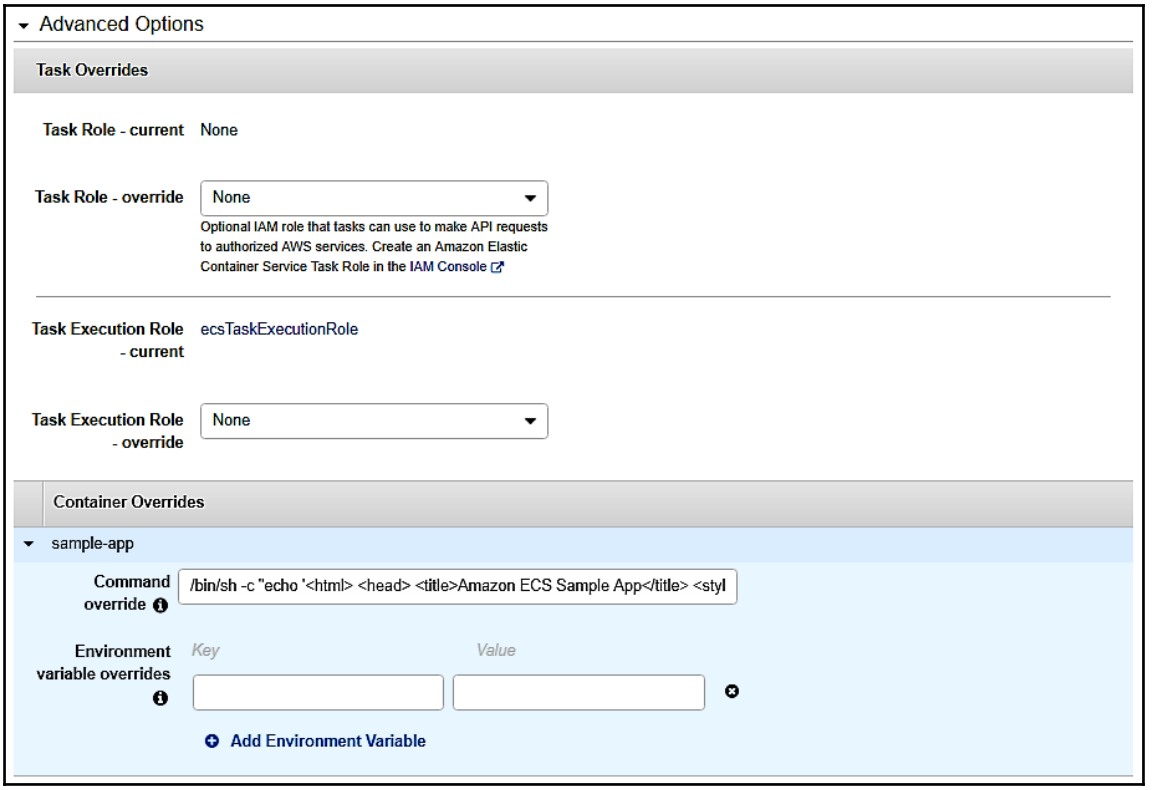

Create Cluster
Step 1: Select cluster template
Step 2: Configure cluster
Select cluster template
The following cluster templates are available to simplify cluster creation. Additional configuration and integrations can be added later.
Networking only
Resources to be created:
Cluster
VPC (optional)
Subnets (optional)
Powered by AWS Fargate
EC2 Linux + Networking
Resources to be created:
Cluster
VPC
Subnets
Auto Scaling group with Linux AMI
EC2 Windows + Networking
Resources to be created:
Cluster
VPC
Subnets
Auto Scaling group with Windows AMI
*Required
Cancel
Next step

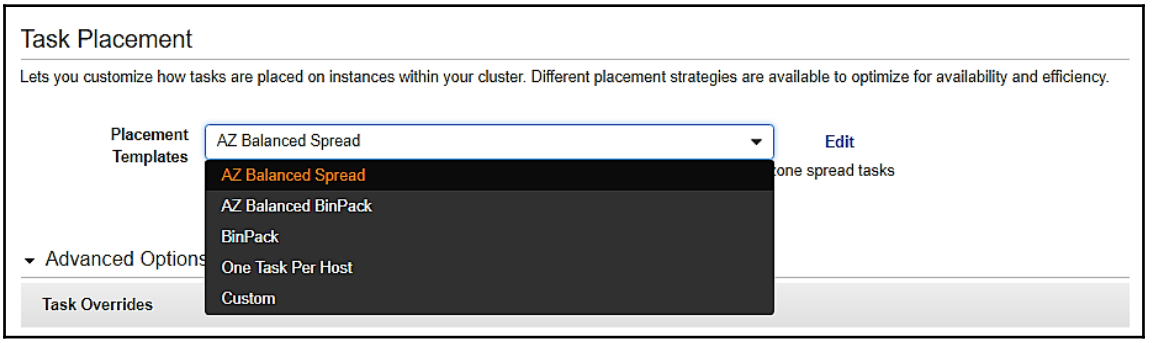

Services
Tasks
ECS Instances
Metrics
Scale ECS Instances
Filter in this page
Container Instance
EC2 Instance
0667bf4a-111c-4c09-8529-fd833136644e
i-3df10de7
fbb03e32-00aa-4231-9c24-0dc790193608
i-70621ab4


Amazon ECS
Secure
https://console.aws.amazon.com/ecs/home?region=us-east-1#/taskDefinitions/PacktFargateTaskDefinition/latest/runTask
aws
Services
Resource Groups
API Gateway
Lambda
S3
DynamoDB
Atul Mistry
N. Virginia
Support
Amazon ECS
Clusters
Task Definitions
Repositories
AWS recently announced Fargate, a new ECS launch type currently available in the us-east-1 (N. Virginia) Region. Fargate allows you to run tasks and services on infrastructure managed by AWS so that you no longer have to manage your own EC2 instances. Get started Learn more
Task Definitions
Task definitions specify the container information for your application, such as how many containers are part of your task, what resources they will use, how they are linked together, and which host ports they will use. Learn more
Create new Task Definition
Create new revision
Actions
Run Task
Create Service
Update Service
Last updated on February 26, 2018 12:47:03 AM (2m ago)
Status: ACTIVE INACTIVE 1 selected
Filter in this page
1-3
Page size 50
Task Definition
Latest revision status
PacktFargateTaskDefinition
ACTIVE
packt-demo
ACTIVE
packt-windows
ACTIVE
Feedback
English (US)
© 2008 - 2018, Amazon Web Services, Inc. or its affiliates. All rights reserved.
Privacy Policy
Terms of Use


Run Task
Select the cluster to run your task definition on and the number of copies of that task to run. To apply container overrides or target particular container instances, click Advanced Options.
Launch type
FARGATE
EC2
Task Definition
PacktFargateTaskDefinition
Platform version
LATEST
Cluster
default
Number of tasks
1
Task Group


VPC and security groups
VPC and security groups are configurable when your task definition uses the awsvpc network mode.
Cluster VPC*
vpc-d7ca18ac (10.0.0.0/16) | ECS defaul...
Subnets*
subnet-cef0a1f1
(10.0.1.0/24) | ECS default - Public Subnet
2 - us-east-1e
assign ipv6 on creation: Disabled
Security groups*
PacktF-3698
Edit
Auto-assign public IP
ENABLED


Advanced Options
Task Overrides
Task Role - current
None
Task Role - override
None
Optional IAM role that tasks can use to make API requests to authorized AWS services. Create an Amazon Elastic Container Service Task Role in the IAM Console
Task Execution Role - current
ecsTaskExecutionRole
Task Execution Role - override
None
Container Overrides
sample-app
Command override
/bin/sh -c "echo '<html> <head> <title>Amazon ECS Sample App</title> <styl
Environment variable overrides
Key
Value
Add Environment Variable


Task Placement
Lets you customize how tasks are placed on instances within your cluster. Different placement strategies are available to optimize for availability and efficiency.
Placement Templates
AZ Balanced Spread
Edit
AZ Balanced Spread
AZ Balanced BinPack
BinPack
One Task Per Host
Custom
one spread tasks
Advanced Options
Task Overrides

Create scheduled task

Run Amazon ECS tasks on a cron-like schedule using CloudWatch Events rules and targets.

Schedule rule name*

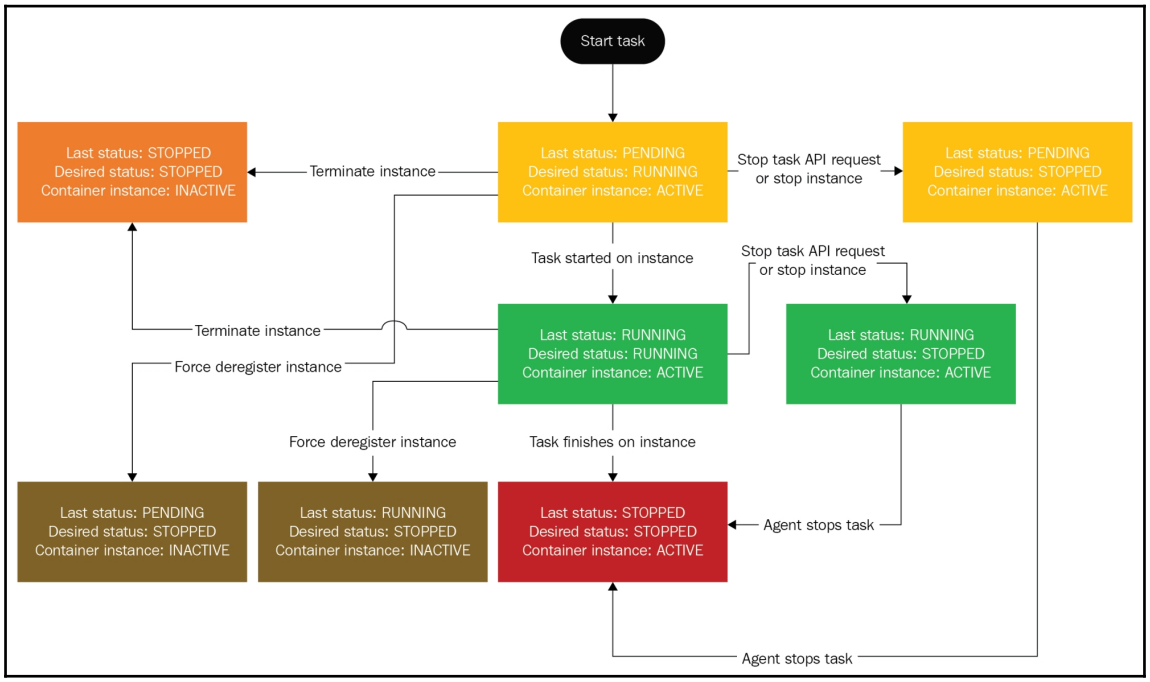
Schedule rule enabled*

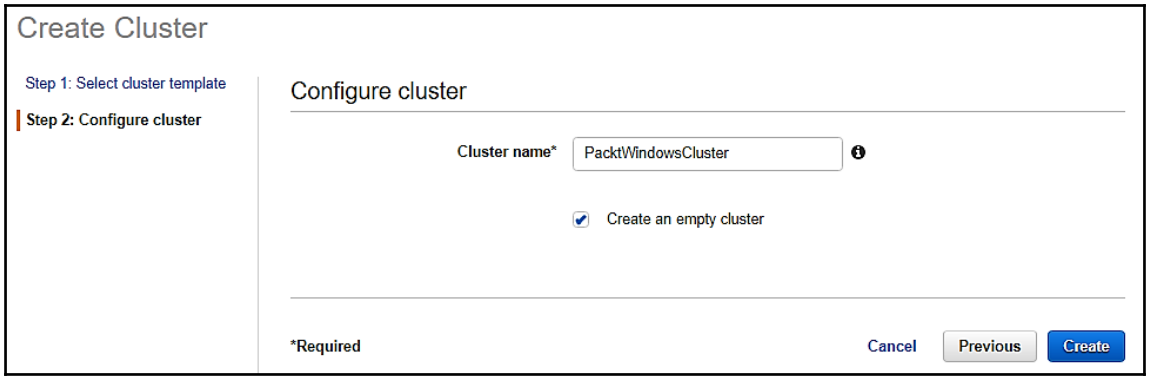
Schedule rule description

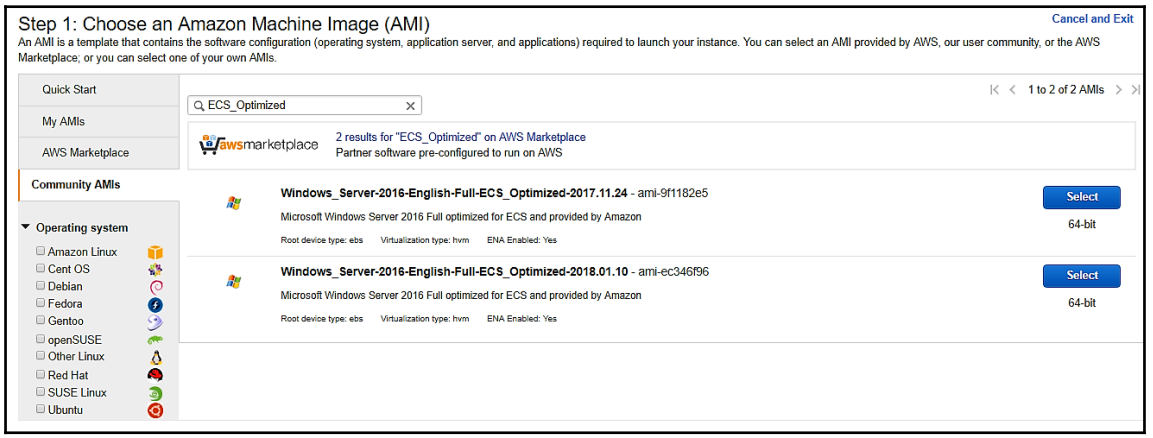
Schedule rule type Run at fixed interval

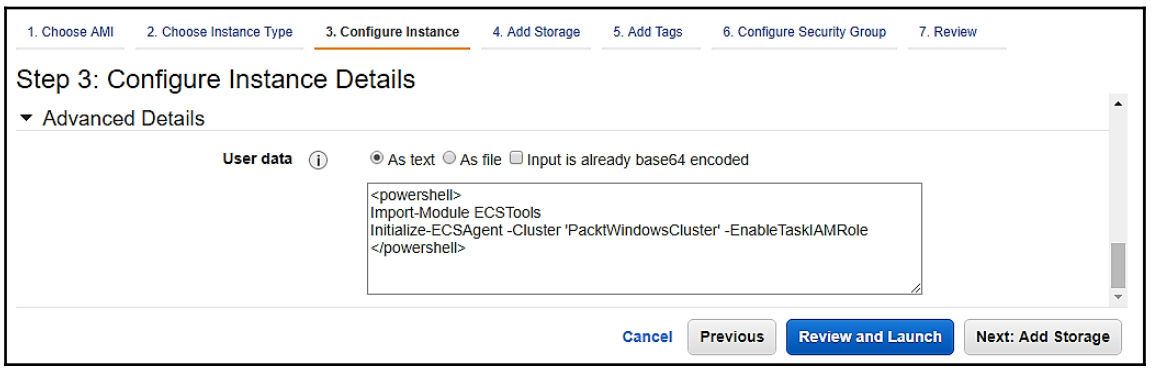
Cron expression

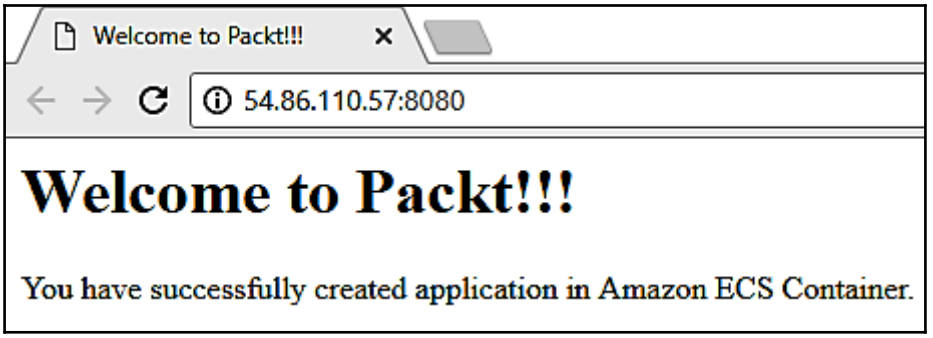
Run at fixed interval* 24 hour(s)

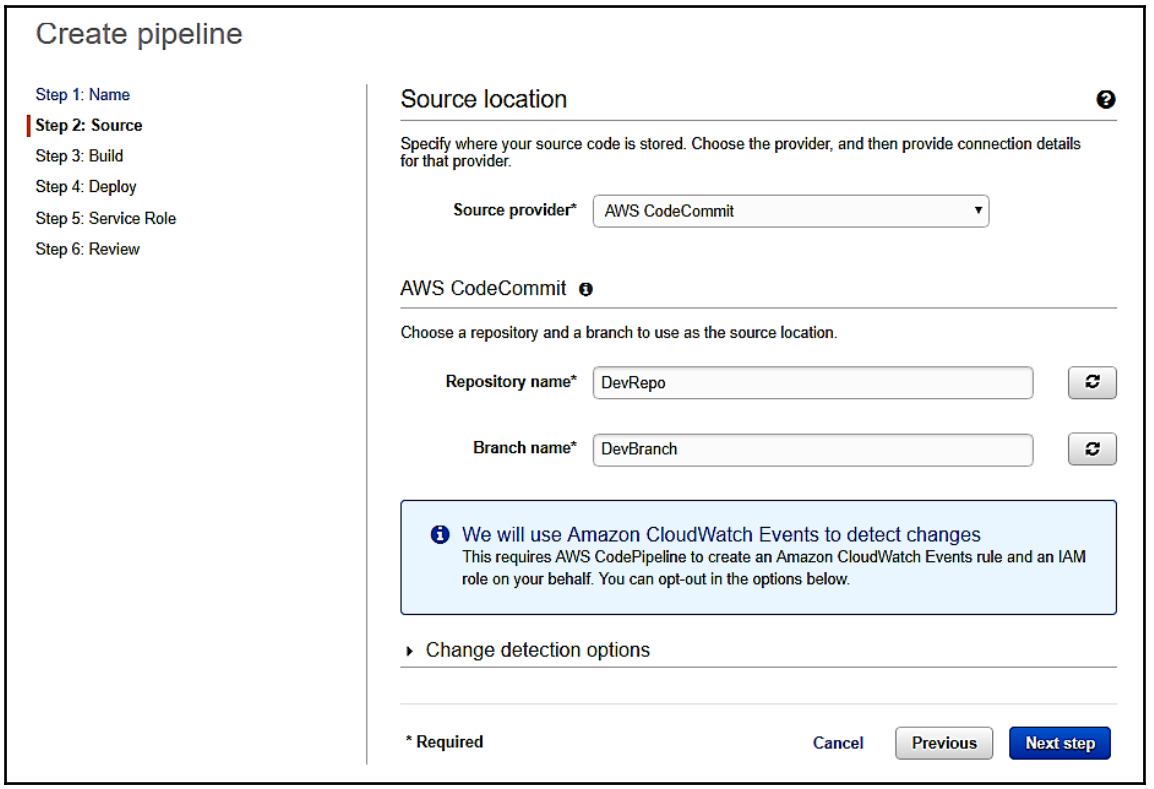


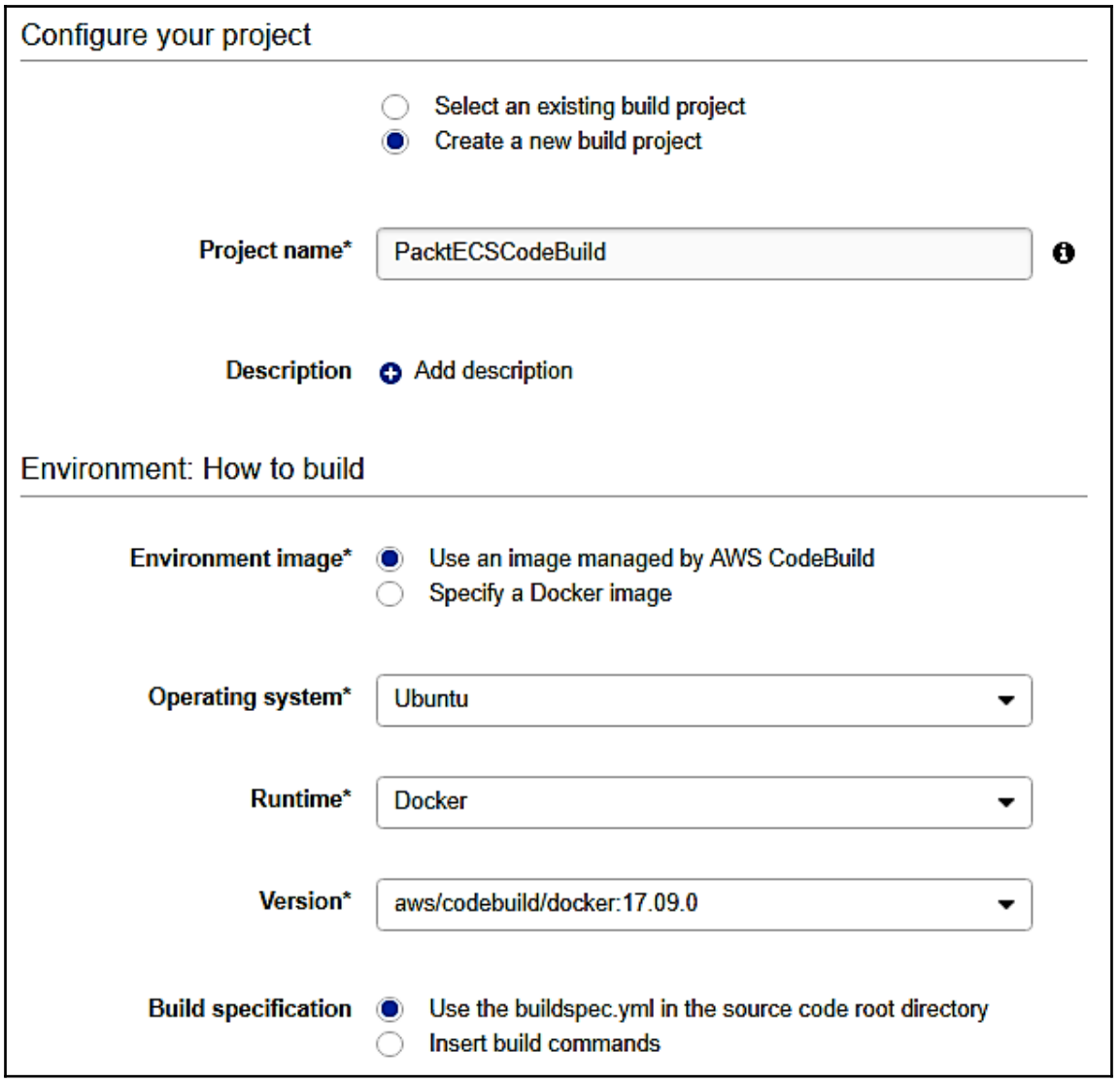

Create Cluster
Step 1: Select cluster template
Step 2: Configure cluster
Configure cluster
Cluster name*
PacktWindowsCluster
Create an empty cluster
*Required
Cancel
Previous
Create

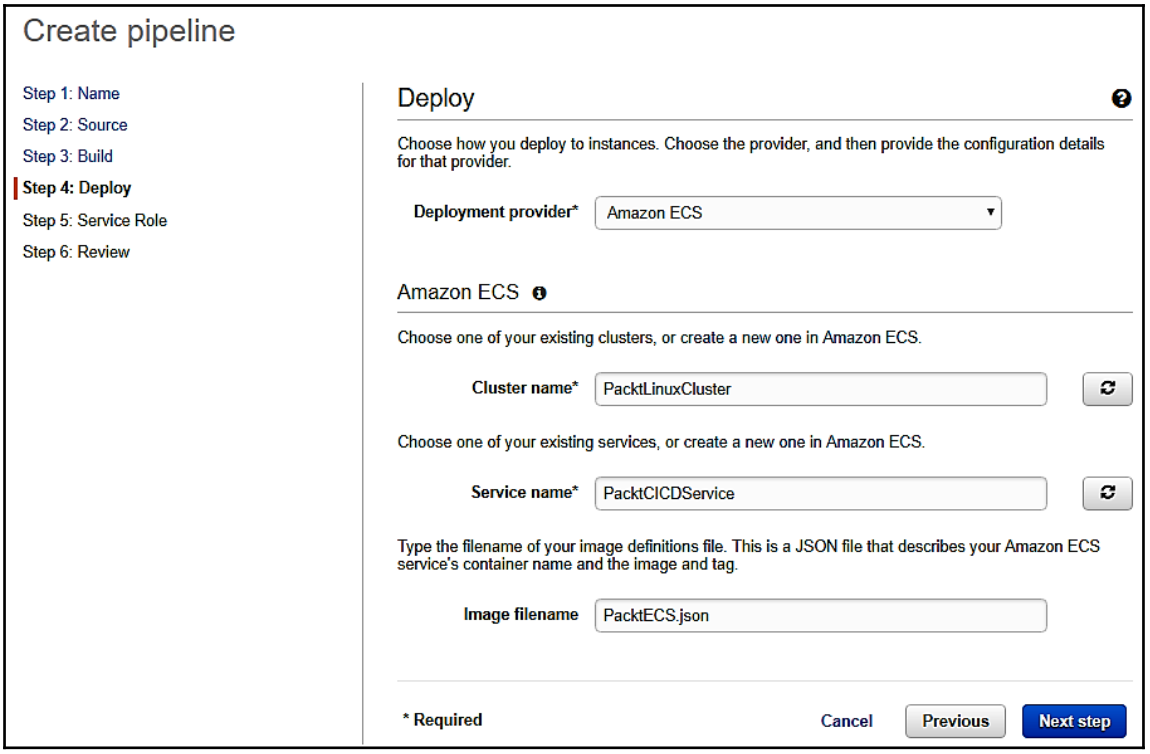

Step 1: Choose an Amazon Machine Image (AMI)
Cancel and Exit
An AMI is a template that contains the software configuration (operating system, application server, and applications) required to launch your instance. You can select an AMI provided by AWS, our user community, or the AWS Marketplace; or you can select one of your own AMIs.
Quick Start
My AMIs
AWS Marketplace
Community AMIs
Operating system
Amazon Linux
Cent OS
Debian
Fedora
Gentoo
openSUSE
Other Linux
Red Hat
SUSE Linux
Ubuntu
ECS_Optimized
1 to 2 of 2 AMIs
2 results for "ECS_Optimized" on AWS Marketplace
Partner software pre-configured to run on AWS
Windows_Server-2016-English-Full-ECS_Optimized-2017.11.24 - ami-9f1182e5
Microsoft Windows Server 2016 Full optimized for ECS and provided by Amazon
Root device type: ebs Virtualization type: hvm ENA Enabled: Yes
Select
64-bit
Windows_Server-2016-English-Full-ECS_Optimized-2018.01.10 - ami-ec346f96
Microsoft Windows Server 2016 Full optimized for ECS and provided by Amazon
Root device type: ebs Virtualization type: hvm ENA Enabled: Yes
Select
64-bit

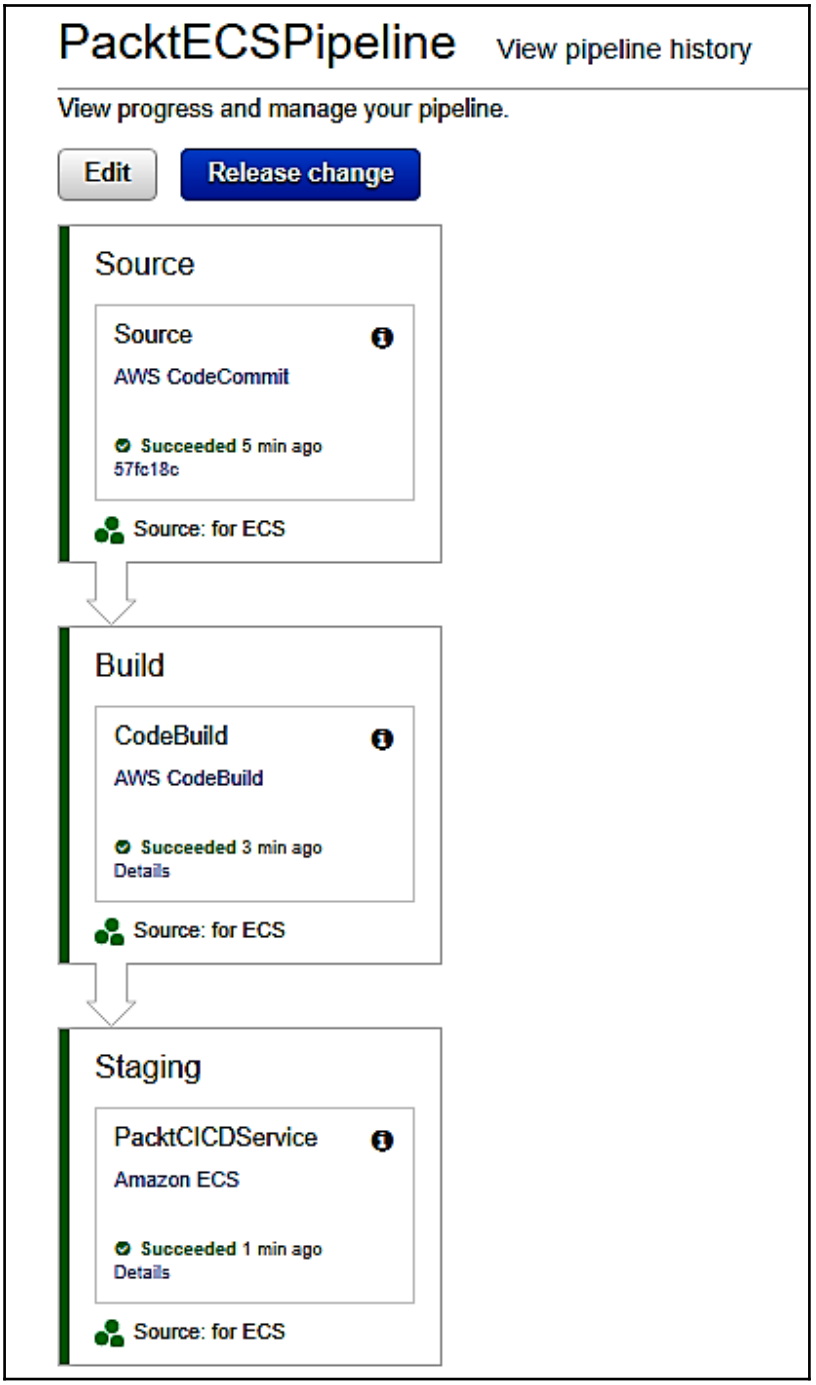

1. Choose AMI
2. Choose Instance Type
3. Configure Instance
4. Add Storage
5. Add Tags
6. Configure Security Group
7. Review
Step 3: Configure Instance Details
Advanced Details
User data
As text
As file
Input is already base64 encoded
<powershell>
Import-Module ECSTools
Initialize-ECSAgent -Cluster 'PacktWindowsCluster' -EnableTaskIAMRole
</powershell>
Cancel
Previous
Review and Launch
Next: Add Storage


Welcome to Packt!!!
54.86.110.57:8080
Welcome to Packt!!!
You have successfully created application in Amazon ECS Container.

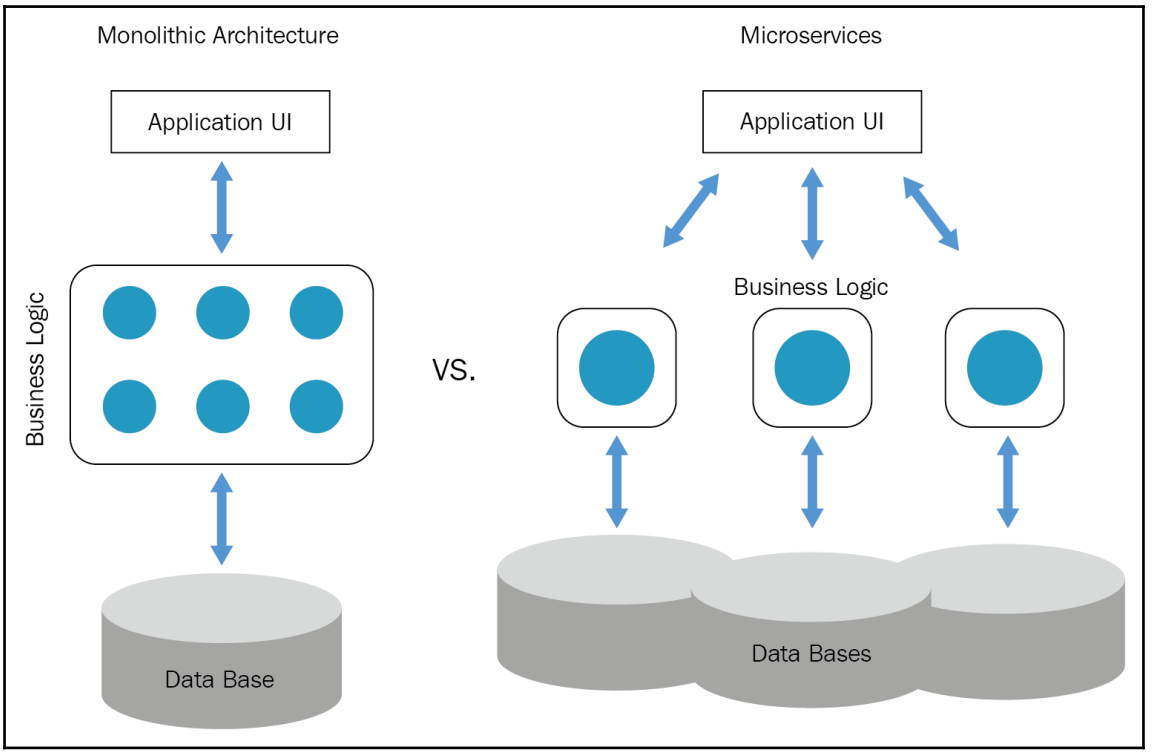

Create pipeline
Step 1: Name
Step 2: Source
Step 3: Build
Step 4: Deploy
Step 5: Service Role
Step 6: Review
Source location
Specify where your source code is stored. Choose the provider, and then provide connection details for that provider.
Source provider*
AWS CodeCommit
AWS CodeCommit
Choose a repository and a branch to use as the source location.
Repository name*
DevRepo
Branch name*
DevBranch
We will use Amazon CloudWatch Events to detect changes
This requires AWS CodePipeline to create an Amazon CloudWatch Events rule and an IAM role on your behalf. You can opt-out in the options below.
Change detection options
* Required
Cancel
Previous
Next step

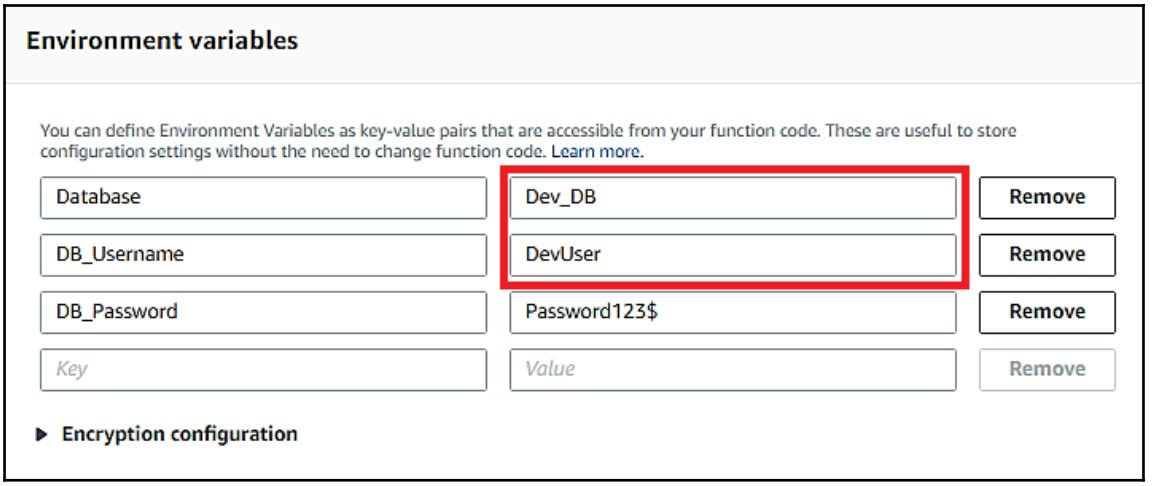

Configure your project
Select an existing build project
Create a new build project
Project name*
PacktECSCodeBuild
Description
Add description
Environment: How to build
Environment image*
Use an image managed by AWS CodeBuild
Specify a Docker image
Operating system*
Ubuntu
Runtime*
Docker
Version*
aws/codebuild/docker:17.09.0
Build specification
Use the buildspec.yml in the source code root directory
Insert build commands

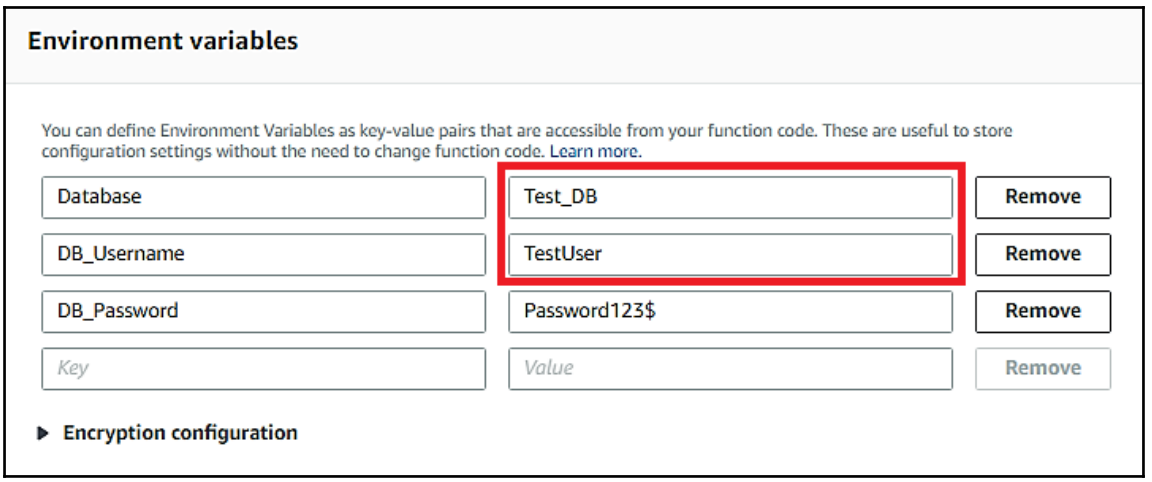

Create pipeline
Step 1: Name
Step 2: Source
Step 3: Build
Step 4: Deploy
Step 5: Service Role
Step 6: Review
Deploy
Choose how you deploy to instances. Choose the provider, and then provide the configuration details for that provider.
Deployment provider*
Amazon ECS
Amazon ECS
Choose one of your existing clusters, or create a new one in Amazon ECS.
Cluster name*
PacktLinuxCluster
Choose one of your existing services, or create a new one in Amazon ECS.
Service name*
PacktCICDService
Type the filename of your image definitions file. This is a JSON file that describes your Amazon ECS service's container name and the image and tag.
Image filename
PacktECS.json
* Required
Cancel
Previous
Next step

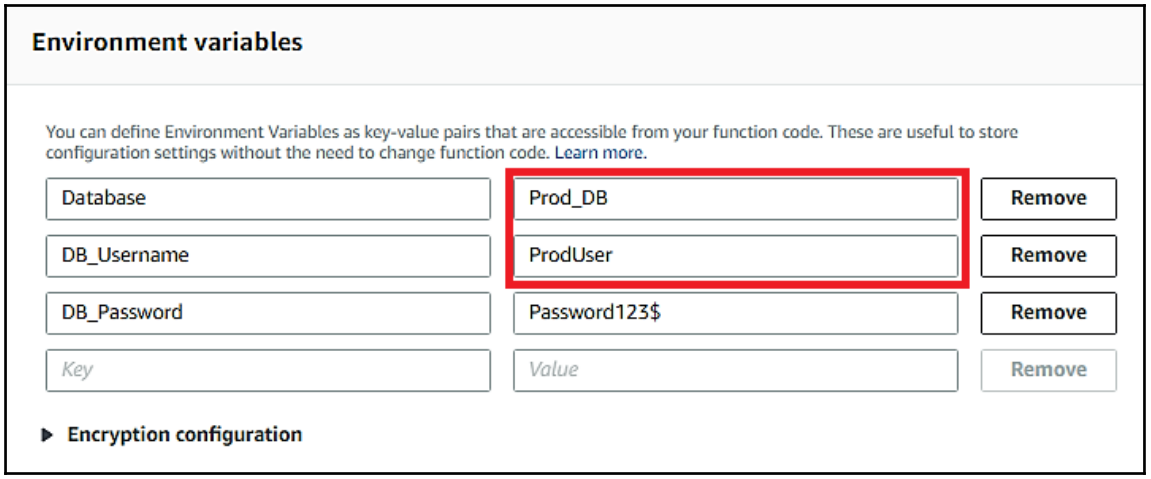

PacktECSPipeline
View pipeline history
View progress and manage your pipeline.
Edit
Release change
Source
Source
AWS CodeCommit
Succeeded 5 min ago
57fc18c
Source: for ECS
Build
CodeBuild
AWS CodeBuild
Succeeded 3 min ago
Details
Source: for ECS
Staging
PacktCICDService
Amazon ECS
Succeeded 1 min ago
Details
Source: for ECS

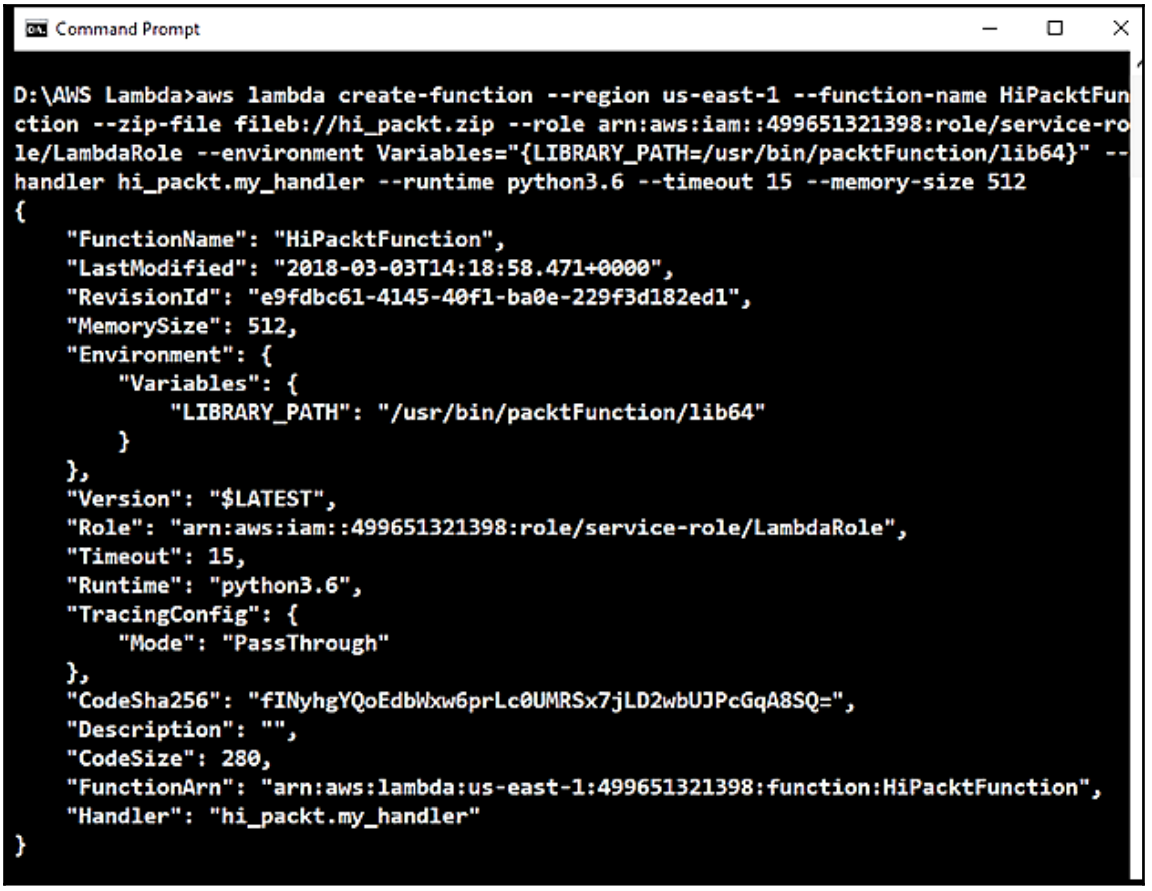
Chapter 10: Amazon Lambda – AWS Serverless Architecture

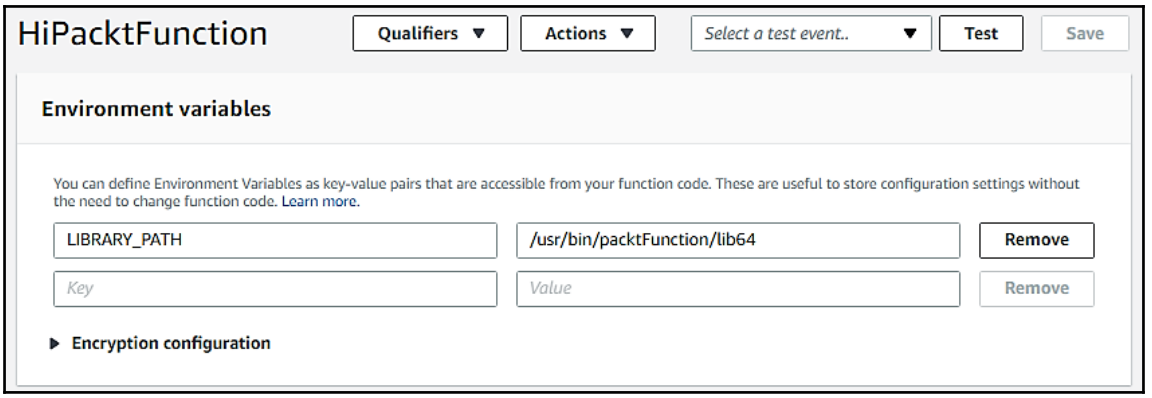


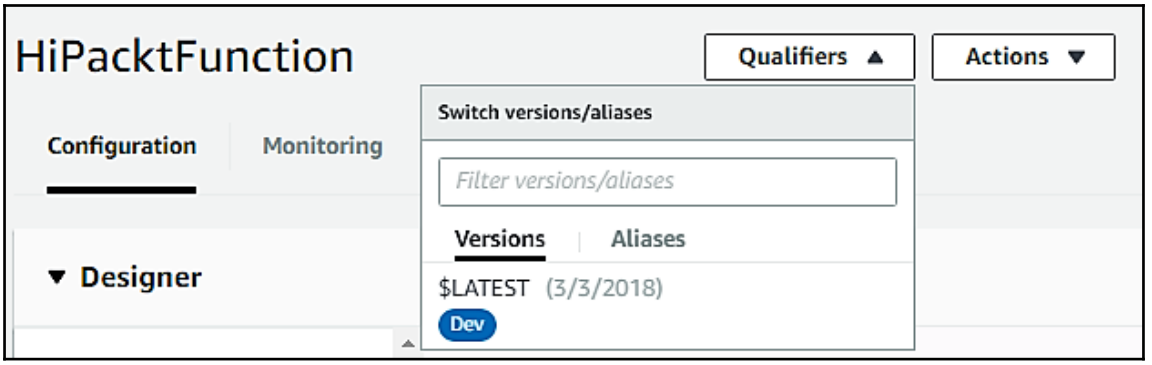

Environment variables
You can define Environment Variables as key-value pairs that are accessible from your function code. These are useful to store configuration settings without the need to change function code. Learn more.
Database
Dev_DB
Remove
DB_Username
DevUser
Remove
DB_Password
Password123$
Remove
Key
Value
Remove
Encryption configuration

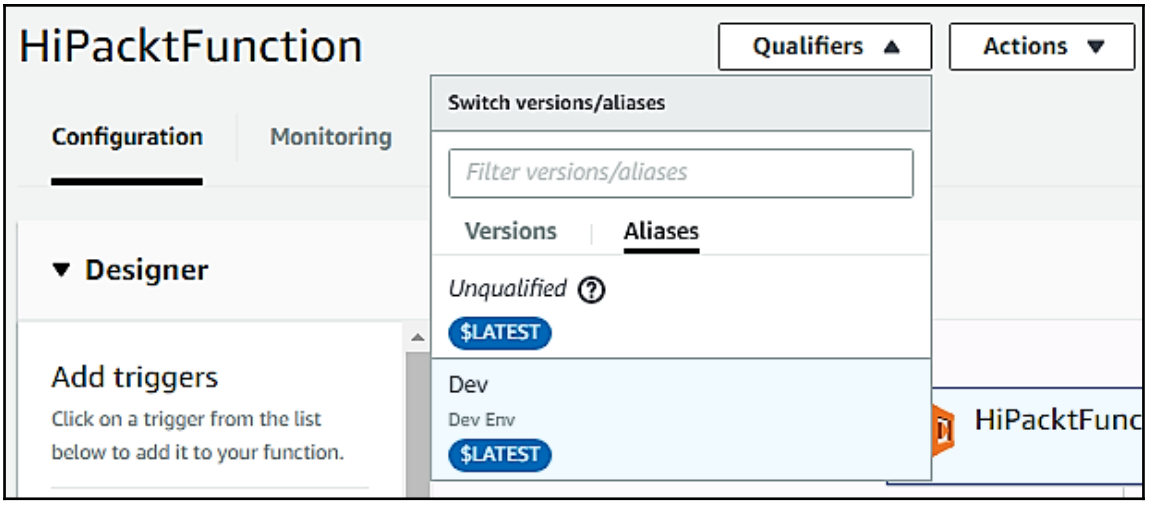

Environment variables
You can define Environment Variables as key-value pairs that are accessible from your function code. These are useful to store configuration settings without the need to change function code. Learn more.
Database
Test_DB
Remove
DB_Username
TestUser
Remove
DB_Password
Password123$
Remove
Key
Value
Remove
Encryption configuration

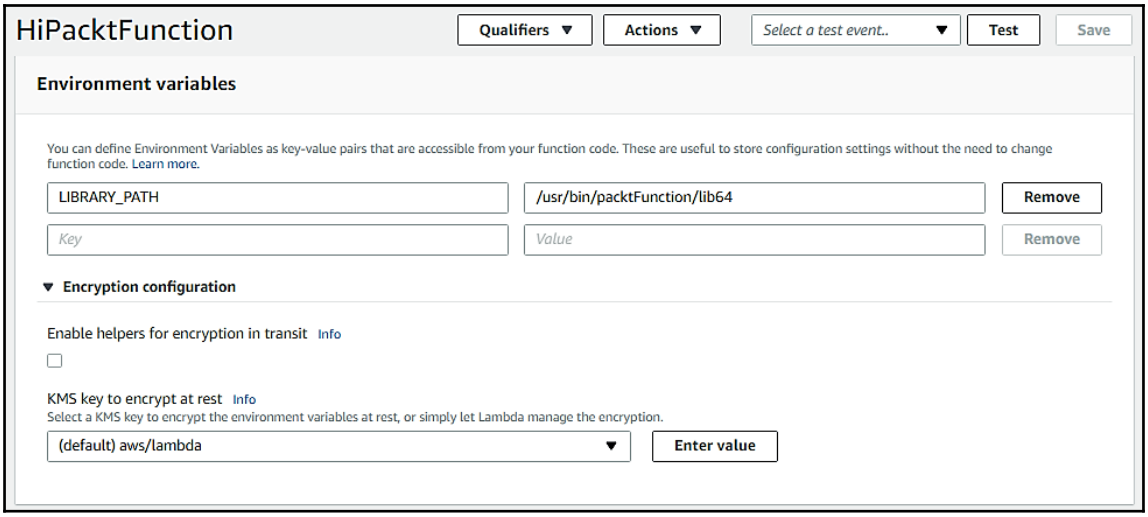

Environment variables
You can define Environment Variables as key-value pairs that are accessible from your function code. These are useful to store configuration settings without the need to change function code. Learn more.
Database
Prod_DB
Remove
DB_Username
ProdUser
Remove
DB_Password
Password123$
Remove
Key
Value
Remove
Encryption configuration

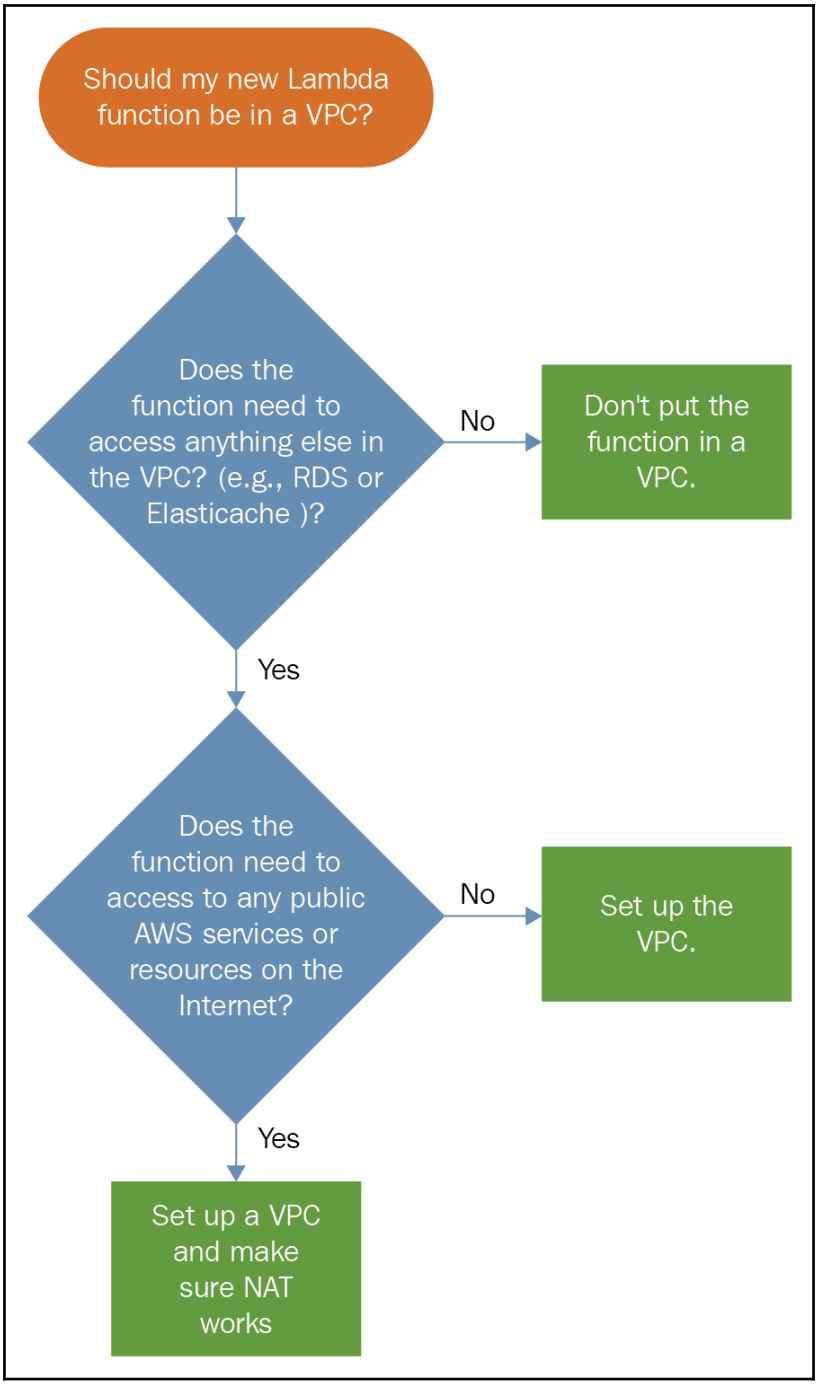

Command Prompt
D:\AWS Lambda>aws lambda create-function --region us-east-1 --function-name HiPacktFun
ction --zip-file fileb://hi_packt.zip --role arn:aws:iam::499651321398:role/service-ro
le/LambdaRole --environment Variables="{LIBRARY_PATH=/usr/bin/packtFunction/lib64}" --
handler hi_packt.my_handler --runtime python3.6 --timeout 15 --memory-size 512
{
"FunctionName": "HiPacktFunction",
"LastModified": "2018-03-03T14:18:58.471+0000",
"RevisionId": "e9fdbc61-4145-40f1-ba0e-229f3d182ed1",
"MemorySize": 512,
"Environment": {
"Variables": {
"LIBRARY_PATH": "/usr/bin/packtFunction/lib64"
}
},
"Version": "$LATEST",
"Role": "arn:aws:iam::499651321398:role/service-role/LambdaRole",
"Timeout": 15,
"Runtime": "python3.6",
"TracingConfig": {
"Mode": "PassThrough"
},
"CodeSha256": "fINyhgYQoEdbWxw6prLc0UMRSx7jLD2wbUJPcGqA8SQ=",
"Description": "",
"CodeSize": 280,
"FunctionArn": "arn:aws:lambda:us-east-1:499651321398:function:HiPacktFunction",
"Handler": "hi_packt.my_handler"
}

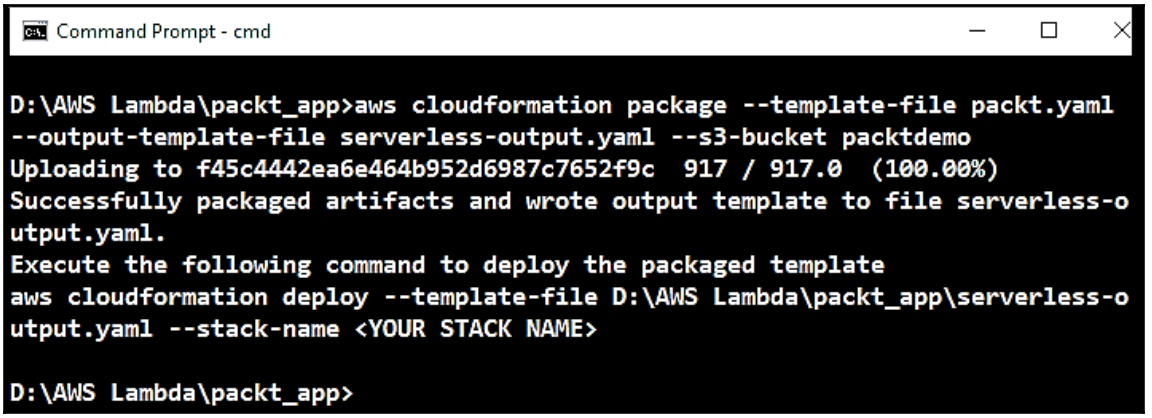

HiPacktFunction
Qualifiers
Actions
Select a test event..
Test
Save
Environment variables
You can define Environment Variables as key-value pairs that are accessible from your function code. These are useful to store configuration settings without the need to change function code. Learn more.
LIBRARY_PATH
/usr/bin/packtFunction/lib64
Remove
Key
Value
Remove
Encryption configuration

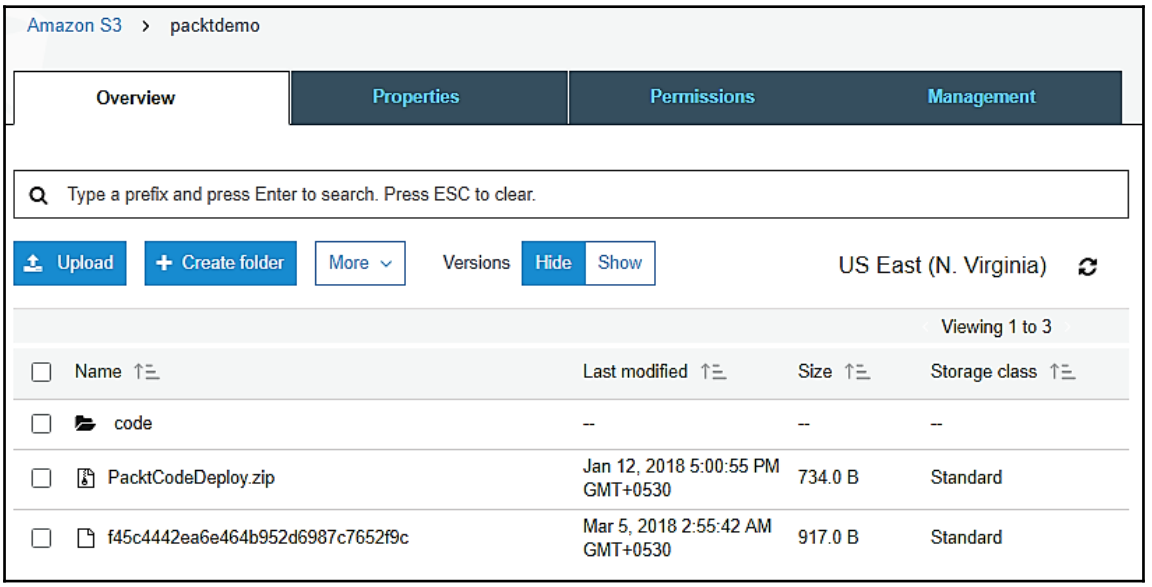

HiPacktFunction
Qualifiers
Actions
Configuration
Monitoring
Switch versions/aliases
Filter versions/aliases
Versions
Aliases
$LATEST (3/3/2018)
Dev
Designer

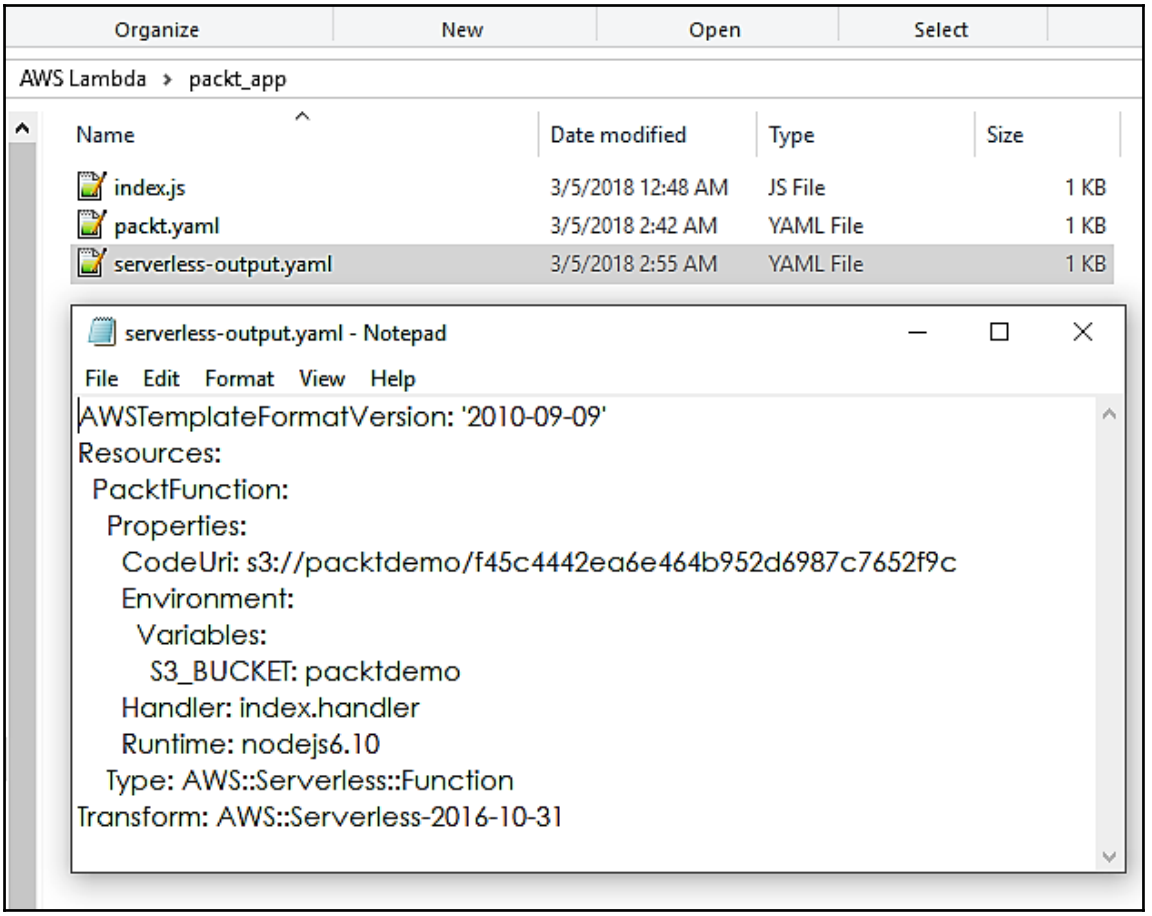

HiPacktFunction
Qualifiers
Actions
Configuration
Monitoring
Switch versions/aliases
Filter versions/aliases
Versions
Aliases
Unqualified
$LATEST
Dev
Dev Env
$LATEST
Designer
Add triggers
Click on a trigger from the list
below to add it to your function.
HiPacktFunc

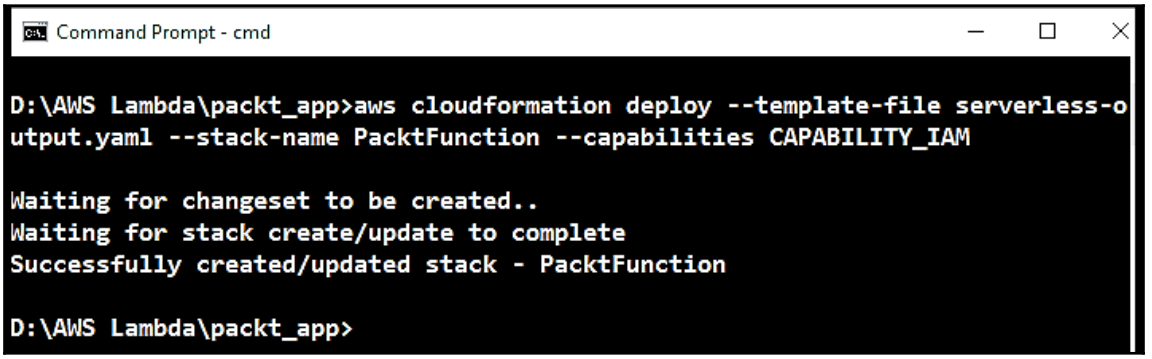

HiPacktFunction
Qualifiers
Actions
Select a test event..
Test
Save
Environment variables
You can define Environment Variables as key-value pairs that are accessible from your function code. These are useful to store configuration settings without the need to change function code. Learn more.
LIBRARY_PATH
/usr/bin/packtFunction/lib64
Remove
Key
Value
Remove
Encryption configuration
Enable helpers for encryption in transit Info
KMS key to encrypt at rest Info
Select a KMS key to encrypt the environment variables at rest, or simply let Lambda manage the encryption.
(default) aws/lambda
Enter value

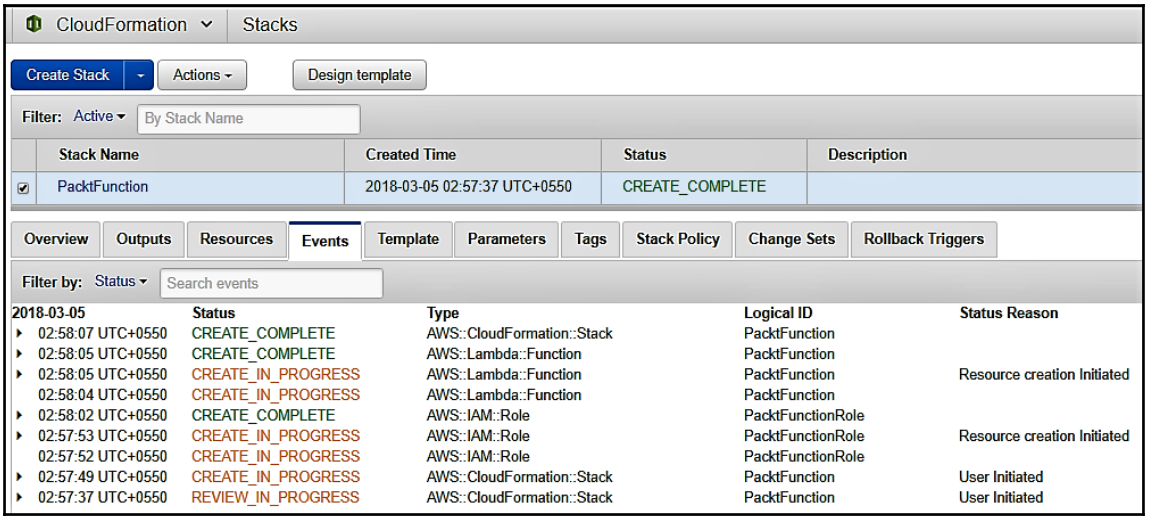

Should my new Lambda function be in a VPC?
Does the function need to access anything else in the VPC? (e.g., RDS or Elasticache)?
No
Don't put the function in a VPC.
Yes
Does the function need to access to any public AWS services or resources on the Internet?
No
Set up the VPC.
Yes
Set up a VPC and make sure NAT works

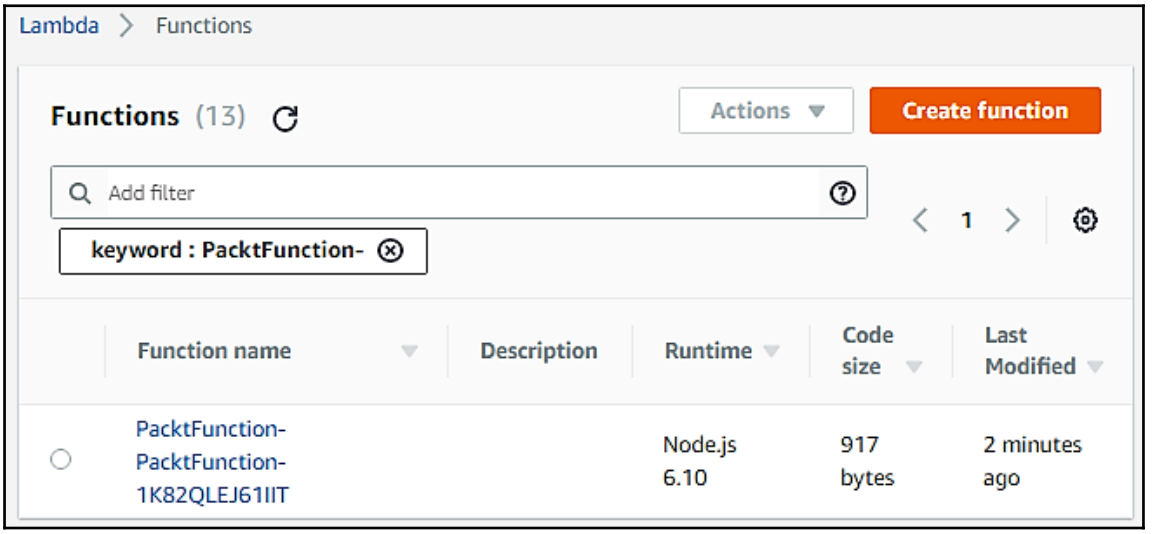

Command Prompt - cmd
D:\AWS Lambda\packt_app>aws cloudformation package --template-file packt.yaml
--output-template-file serverless-output.yaml --s3-bucket packtdemo
Uploading to f45c4442ea6e464b952d6987c7652f9c 917 / 917.0 (100.00%)
Successfully packaged artifacts and wrote output template to file serverless-o
utput.yaml.
Execute the following command to deploy the packaged template
aws cloudformation deploy --template-file D:\AWS Lambda\packt_app\serverless-o
utput.yaml --stack-name <YOUR STACK NAME>
D:\AWS Lambda\packt_app>

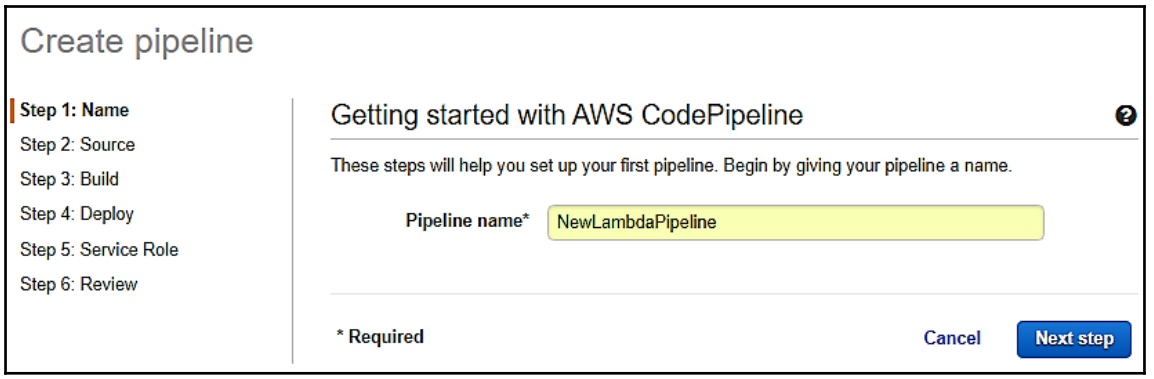

Amazon S3 > packtdemo
Overview
Properties
Permissions
Management
Type a prefix and press Enter to search. Press ESC to clear.
Upload
Create folder
More
Versions
Hide
Show
US East (N. Virginia)
Viewing 1 to 3
Name
Last modified
Size
Storage class
code
--
--
--
PacktCodeDeploy.zip
Jan 12, 2018 5:00:55 PM GMT+0530
734.0 B
Standard
f45c4442ea6e464b952d6987c7652f9c
Mar 5, 2018 2:55:42 AM GMT+0530
917.0 B
Standard

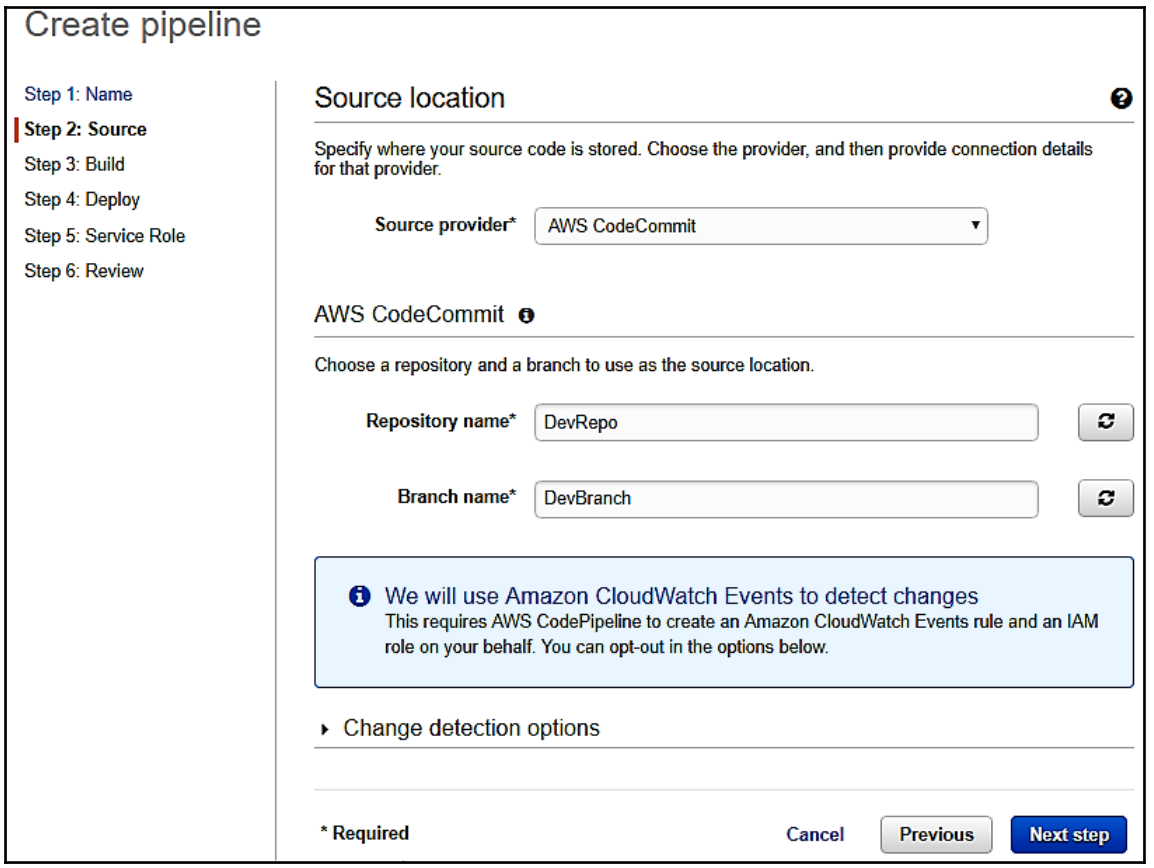

Organize
New
Open
Select
AWS Lambda › packt_app
Name
Date modified
Type
Size
index.js
3/5/2018 12:48 AM
JS File
1 KB
packt.yaml
3/5/2018 2:42 AM
YAML File
1 KB
serverless-output.yaml
3/5/2018 2:55 AM
YAML File
1 KB
serverless-output.yaml - Notepad
File Edit Format View Help
AWSTemplateFormatVersion: '2010-09-09'
Resources:
PacktFunction:
Properties:
CodeUri: s3://packtdemo/f45c4442ea6e464b952d6987c7652f9c
Environment:
Variables:
S3_BUCKET: packtdemo
Handler: index.handler
Runtime: nodejs6.10
Type: AWS::Serverless::Function
Transform: AWS::Serverless-2016-10-31

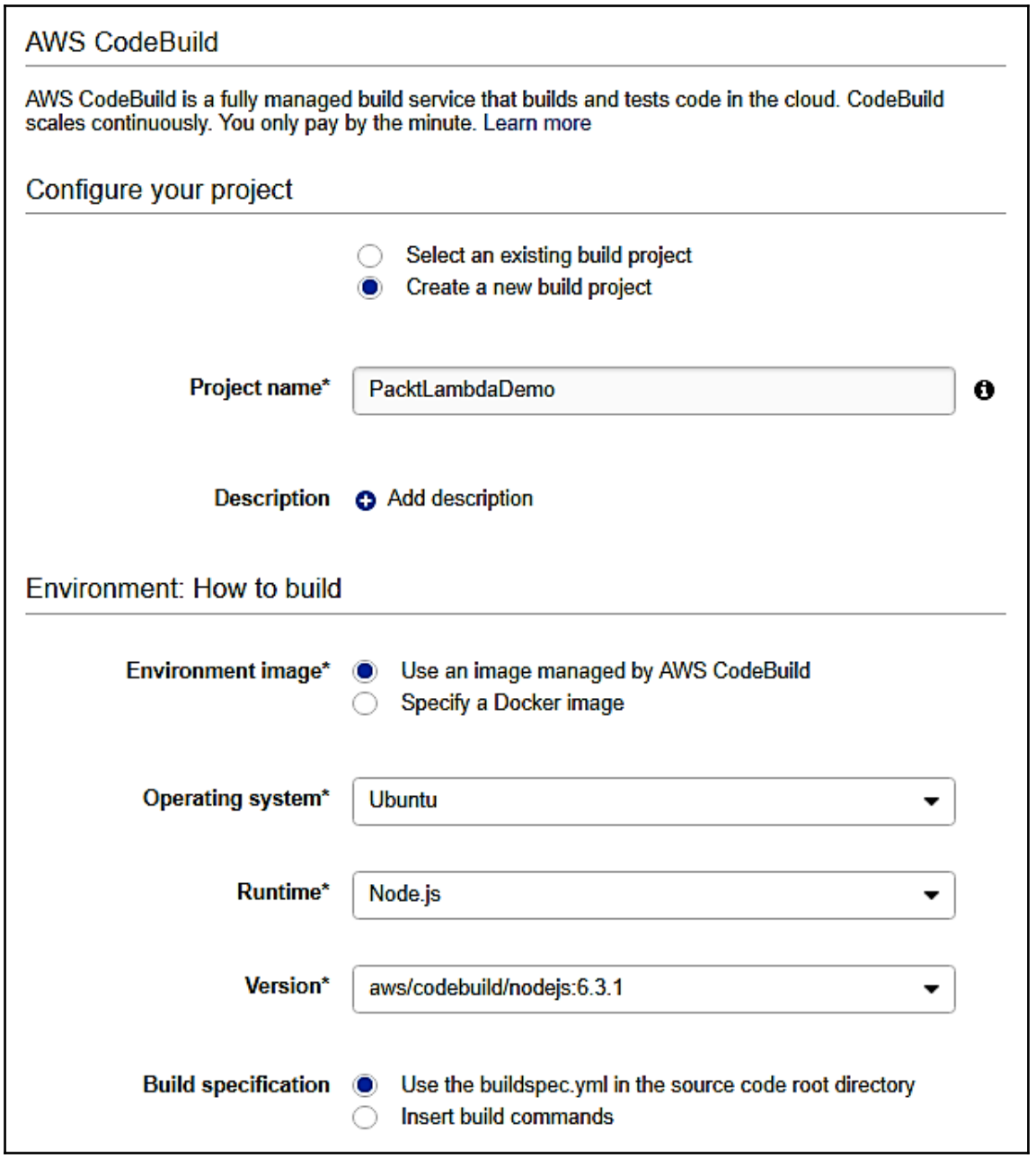

Command Prompt - cmd
D:\AWS Lambda\packt_app>aws cloudformation deploy --template-file serverless-output.yaml --stack-name PacktFunction --capabilities CAPABILITY_IAM
Waiting for changeset to be created..
Waiting for stack create/update to complete
Successfully created/updated stack - PacktFunction
D:\AWS Lambda\packt_app>

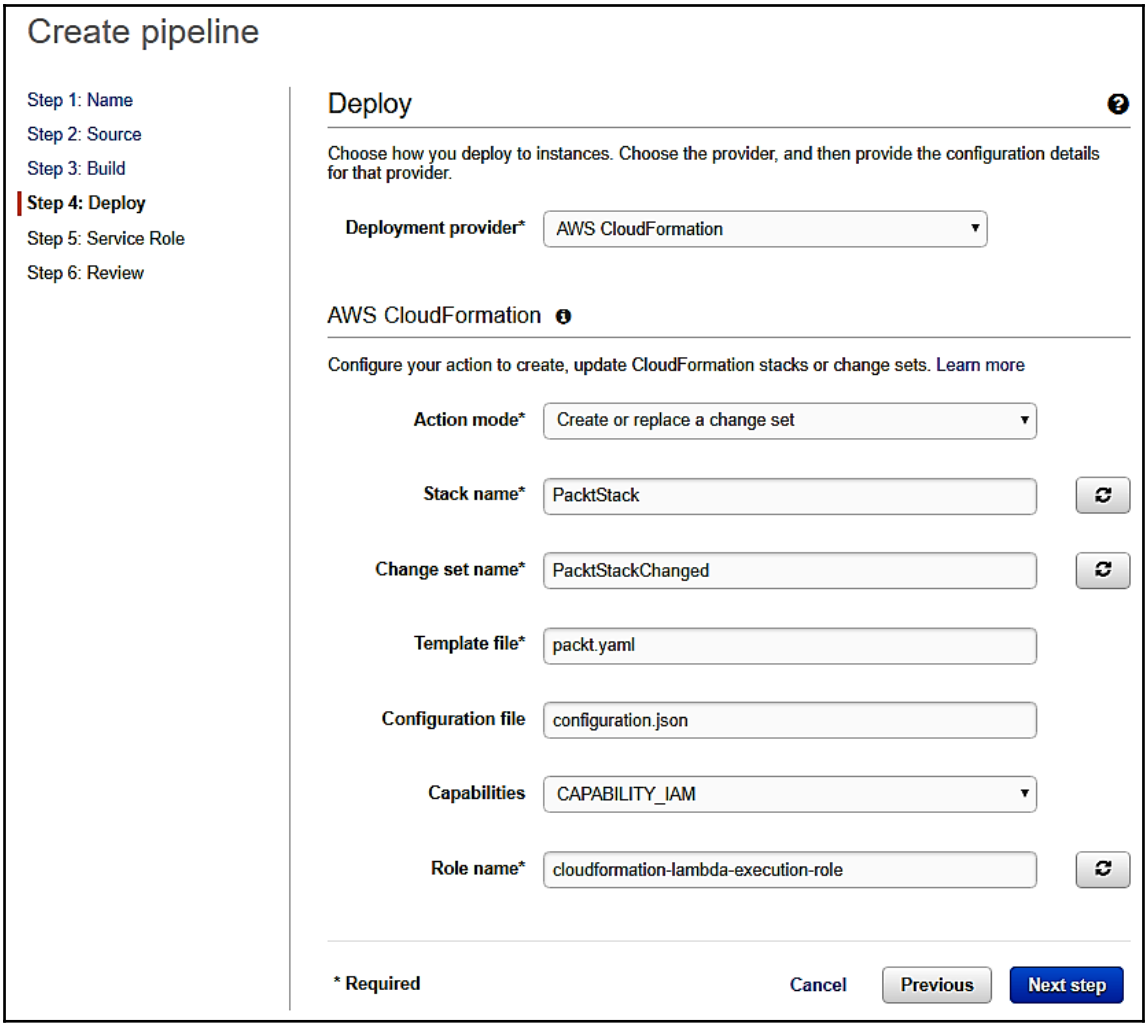

CloudFormation
Stacks
Create Stack
Actions
Design template
Filter: Active
By Stack Name
Stack Name
Created Time
Status
Description
PacktFunction
2018-03-05 02:57:37 UTC+0550
CREATE_COMPLETE
Overview
Outputs
Resources
Events
Template
Parameters
Tags
Stack Policy
Change Sets
Rollback Triggers
Filter by: Status
Search events
2018-03-05
Status
Type
Logical ID
Status Reason
02:58:07 UTC+0550 CREATE_COMPLETE AWS::CloudFormation::Stack PacktFunction
02:58:05 UTC+0550 CREATE_COMPLETE AWS::Lambda::Function PacktFunction
02:58:05 UTC+0550 CREATE_IN_PROGRESS AWS::Lambda::Function PacktFunction Resource creation Initiated
02:58:04 UTC+0550 CREATE_IN_PROGRESS AWS::Lambda::Function PacktFunction
02:58:02 UTC+0550 CREATE_COMPLETE AWS::IAM::Role PacktFunctionRole
02:57:53 UTC+0550 CREATE_IN_PROGRESS AWS::IAM::Role PacktFunctionRole Resource creation Initiated
02:57:52 UTC+0550 CREATE_IN_PROGRESS AWS::IAM::Role PacktFunctionRole
02:57:49 UTC+0550 CREATE_IN_PROGRESS AWS::CloudFormation::Stack PacktFunction User Initiated
02:57:37 UTC+0550 REVIEW_IN_PROGRESS AWS::CloudFormation::Stack PacktFunction User Initiated

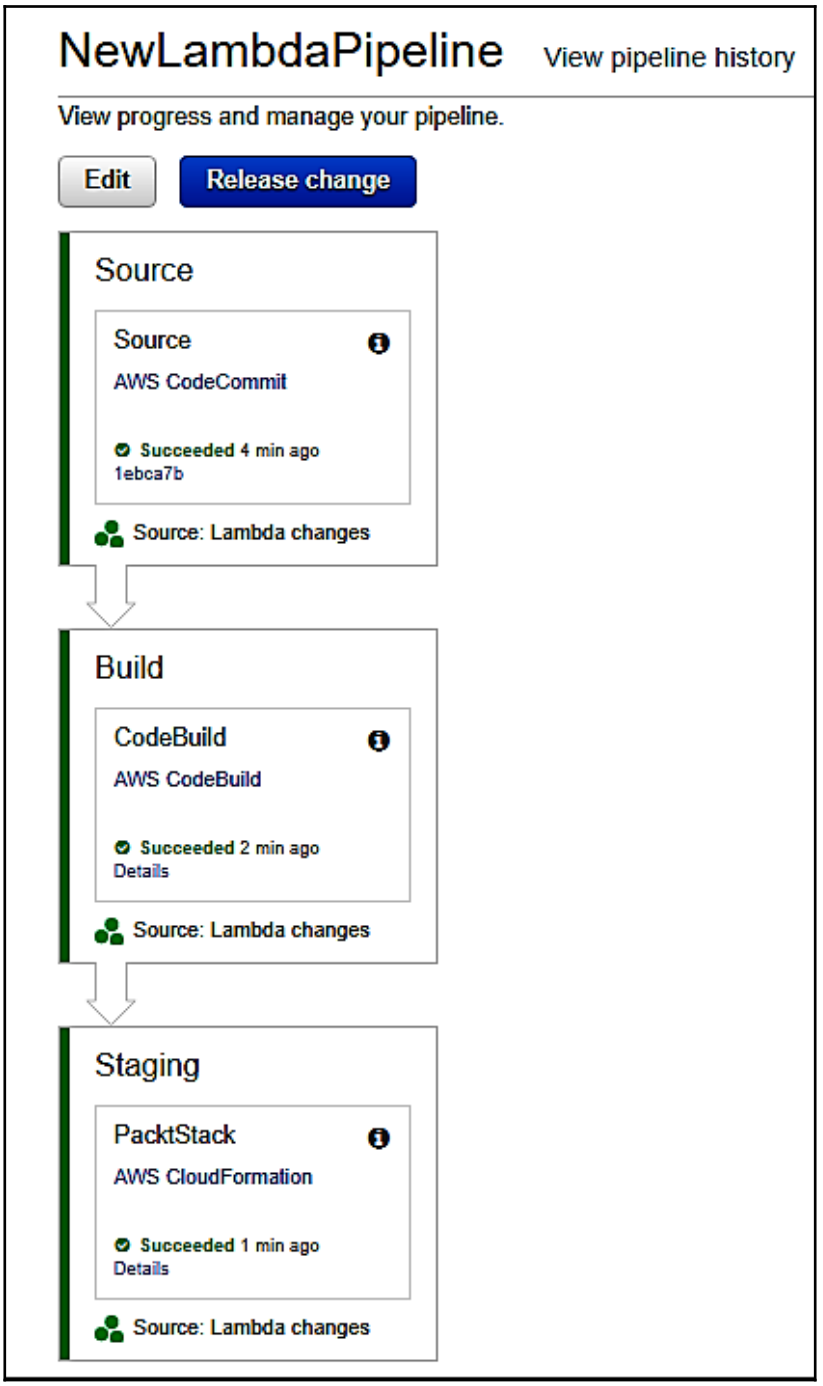

Lambda
Functions
Functions (13)
Actions
Create function
Add filter
keyword : PacktFunction-
1
Function name
Description
Runtime
Code size
Last Modified
PacktFunction-PacktFunction-1K82QLEJ61IIT
Node.js 6.10
917 bytes
2 minutes ago


Create pipeline
Step 1: Name
Step 2: Source
Step 3: Build
Step 4: Deploy
Step 5: Service Role
Step 6: Review
Getting started with AWS CodePipeline
These steps will help you set up your first pipeline. Begin by giving your pipeline a name.
Pipeline name*
NewLambdaPipeline
* Required
Cancel
Next step


Create pipeline
Step 1: Name
Step 2: Source
Step 3: Build
Step 4: Deploy
Step 5: Service Role
Step 6: Review
Source location
Specify where your source code is stored. Choose the provider, and then provide connection details for that provider.
Source provider*
AWS CodeCommit
AWS CodeCommit
Choose a repository and a branch to use as the source location.
Repository name*
DevRepo
Branch name*
DevBranch
We will use Amazon CloudWatch Events to detect changes
This requires AWS CodePipeline to create an Amazon CloudWatch Events rule and an IAM role on your behalf. You can opt-out in the options below.
Change detection options
* Required
Cancel
Previous
Next step


AWS CodeBuild
AWS CodeBuild is a fully managed build service that builds and tests code in the cloud. CodeBuild scales continuously. You only pay by the minute. Learn more
Configure your project
Select an existing build project
Create a new build project
Project name*
PacktLambdaDemo
Description
Add description
Environment: How to build
Environment image*
Use an image managed by AWS CodeBuild
Specify a Docker image
Operating system*
Ubuntu
Runtime*
Node.js
Version*
aws/codebuild/nodejs:6.3.1
Build specification
Use the buildspec.yml in the source code root directory
Insert build commands


Create pipeline
Step 1: Name
Step 2: Source
Step 3: Build
Step 4: Deploy
Step 5: Service Role
Step 6: Review
Deploy
Choose how you deploy to instances. Choose the provider, and then provide the configuration details for that provider.
Deployment provider*
AWS CloudFormation
AWS CloudFormation
Configure your action to create, update CloudFormation stacks or change sets. Learn more
Action mode*
Create or replace a change set
Stack name*
PacktStack
Change set name*
PacktStackChanged
Template file*
packt.yaml
Configuration file
configuration.json
Capabilities
CAPABILITY_IAM
Role name*
cloudformation-lambda-execution-role
* Required
Cancel
Previous
Next step


NewLambdaPipeline
View pipeline history
View progress and manage your pipeline.
Edit
Release change
Source
Source
AWS CodeCommit
Succeeded 4 min ago
1ebca7b
Source: Lambda changes
Build
CodeBuild
AWS CodeBuild
Succeeded 2 min ago
Details
Source: Lambda changes
Staging
PacktStack
AWS CloudFormation
Succeeded 1 min ago
Details
Source: Lambda changes