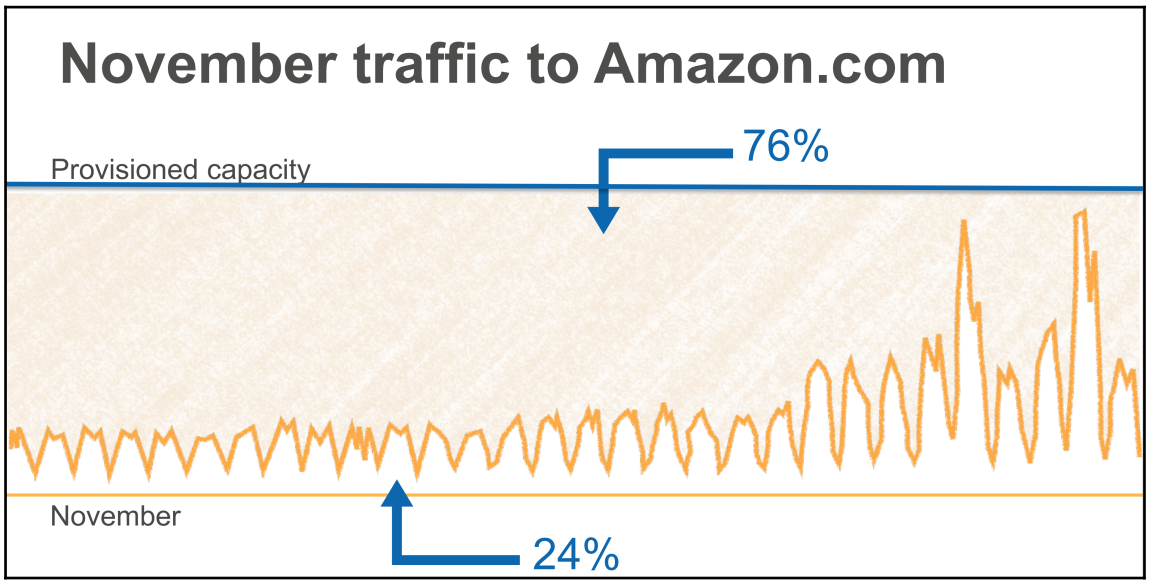
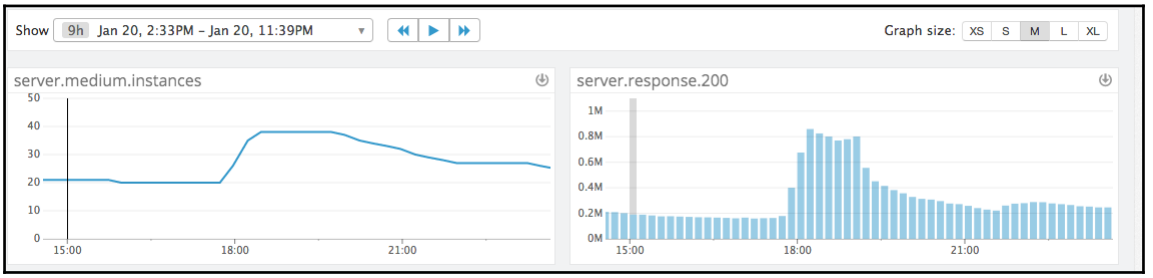
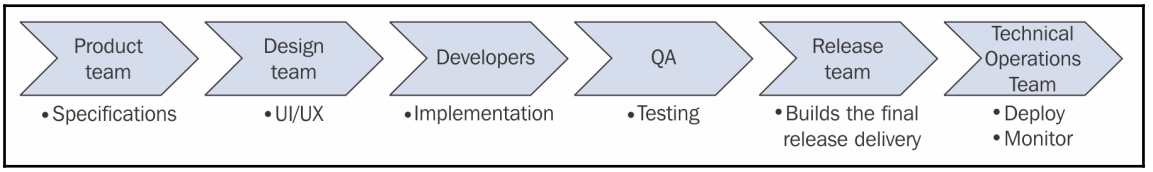
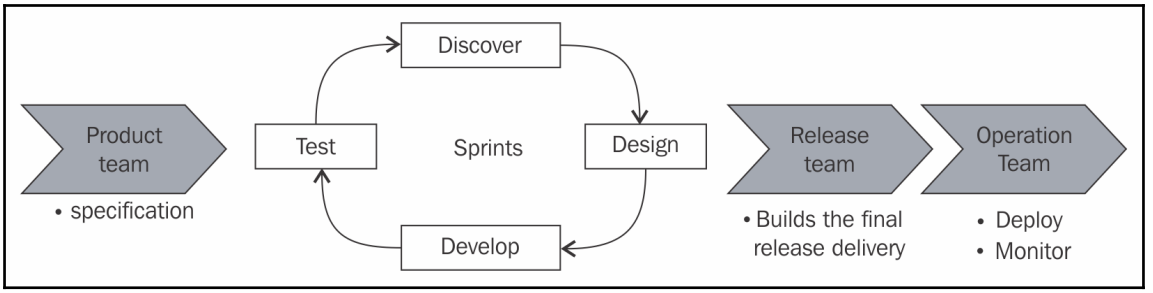
Chapter 01: The Cloud and the DevOps Revolution

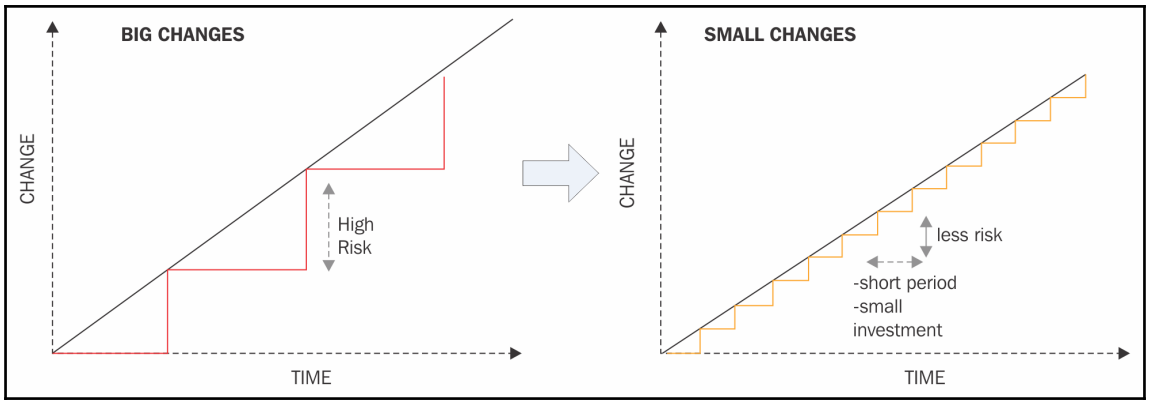


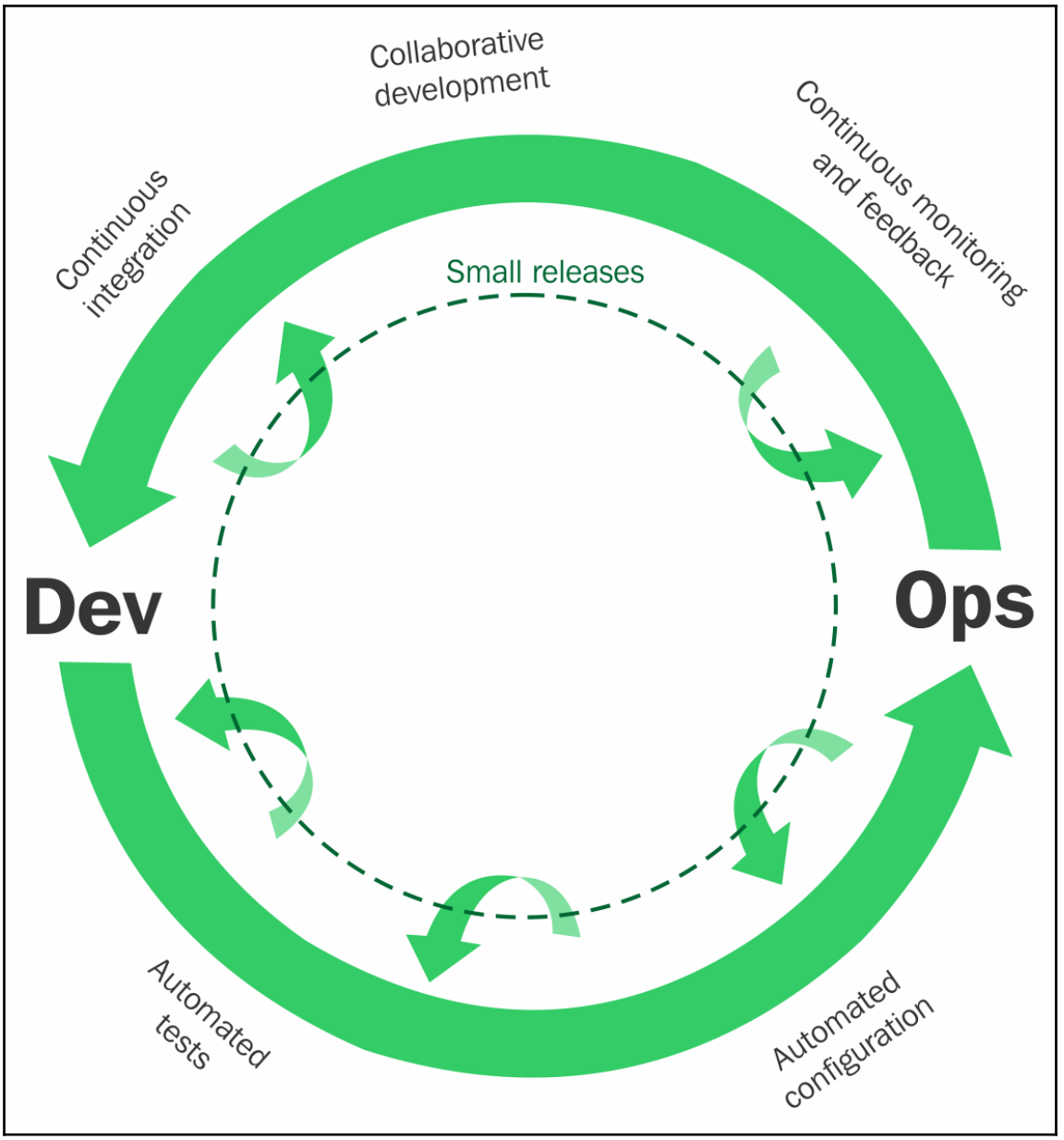
November traffic to Amazon.com
November

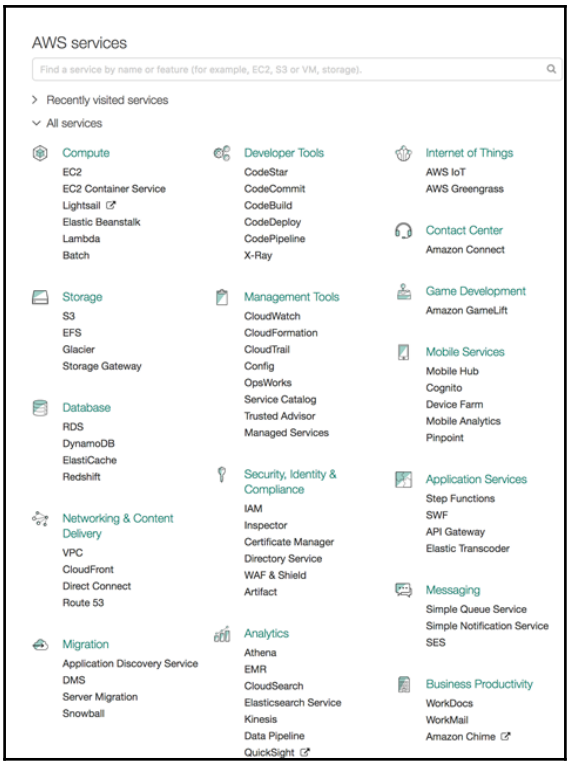

Show
9h
Jan 20, 2:33PM – Jan 20, 11:39PM
Graph size:
XS
S
M
L
XL
server.medium.instances
50
40
30
20
10
0
15:00
18:00
21:00
server.response.200
1M
0.8M
0.6M
0.4M
0.2M
0M
15:00
18:00
21:00


Product team
• Specifications
Design team
• UI/UX
Developers
• Implementation
QA
• Testing
Release team
• Builds the final release delivery
Technical Operations Team
• Deploy
• Monitor

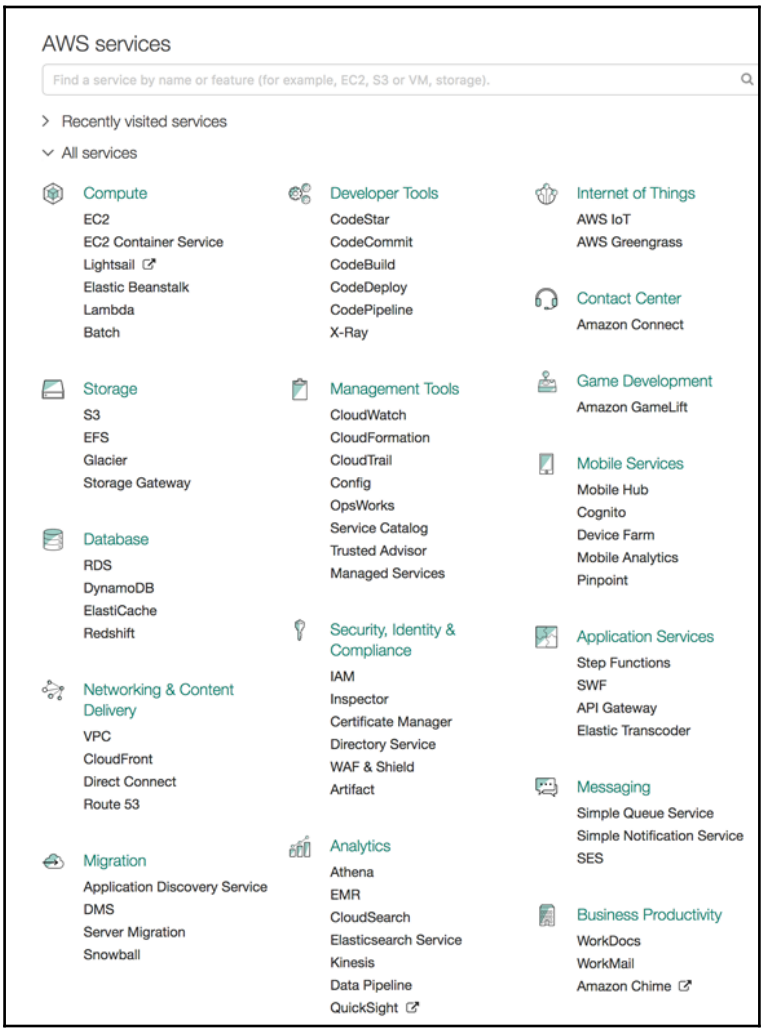

Product team
• specification
Discover
Test
Sprints
Design
Develop
Release team
• Builds the final release delivery
Operation Team
• Deploy
• Monitor

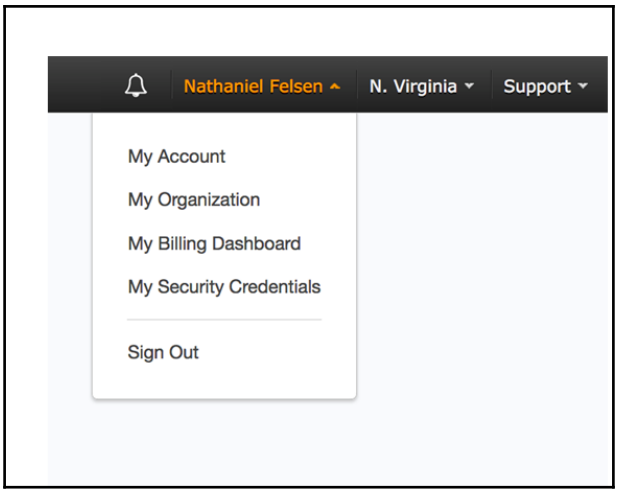

BIG CHANGES
CHANGE
High
Risk
TIME
SMALL CHANGES
CHANGE
less risk
-short period
-small
investment
TIME

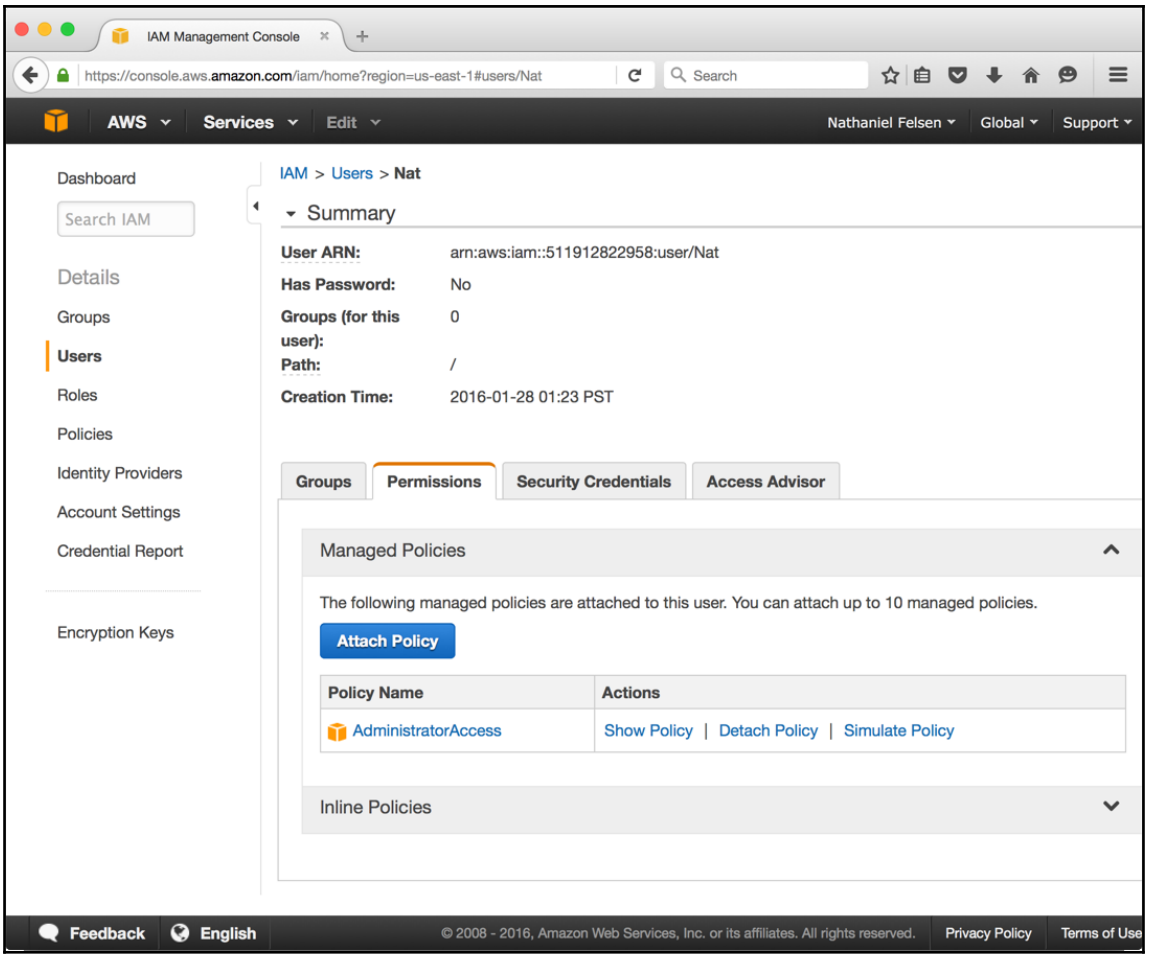

Collaborative development
Continuous integration
Continuous monitoring and feedback
Small releases
Dev
Ops
Automated tests
Automated configuration


AWS services
Find a service by name or feature (for example, EC2, S3 or VM, storage).
Recently visited services
All services
Compute
EC2
EC2 Container Service
Lightsail
Elastic Beanstalk
Lambda
Batch
Storage
S3
EFS
Glacier
Storage Gateway
Database
RDS
DynamoDB
ElastiCache
Redshift
Networking & Content Delivery
VPC
CloudFront
Direct Connect
Route 53
Migration
Application Discovery Service
DMS
Server Migration
Snowball
Developer Tools
CodeStar
CodeCommit
CodeBuild
CodeDeploy
CodePipeline
X-Ray
Management Tools
CloudWatch
CloudFormation
CloudTrail
Config
OpsWorks
Service Catalog
Trusted Advisor
Managed Services
Security, Identity & Compliance
IAM
Inspector
Certificate Manager
Directory Service
WAF & Shield
Artifact
Analytics
Athena
EMR
CloudSearch
Elasticsearch Service
Kinesis
Data Pipeline
QuickSight
Internet of Things
AWS IoT
AWS Greengrass
Contact Center
Amazon Connect
Game Development
Amazon GameLift
Mobile Services
Mobile Hub
Cognito
Device Farm
Mobile Analytics
Pinpoint
Application Services
Step Functions
SWF
API Gateway
Elastic Transcoder
Messaging
Simple Queue Service
Simple Notification Service
SES
Business Productivity
WorkDocs
WorkMail
Amazon Chime

Chapter 02: Deploying Your First Web Application




Nathaniel Felsen
N. Virginia
Support
My Account
My Organization
My Billing Dashboard
My Security Credentials
Sign Out


IAM Management Console
https://console.aws.amazon.com/iam/home?region=us-east-1#users/Nat
Search
AWS
Services
Edit
Nathaniel Felsen
Global
Support
Dashboard
Search IAM
Details
Groups
Users
Roles
Policies
Identity Providers
Account Settings
Credential Report
Encryption Keys
IAM > Users > Nat
Summary
User ARN: arn:aws:iam::511912822958:user/Nat
Has Password: No
Groups (for this user): 0
Path: /
Creation Time: 2016-01-28 01:23 PST
Groups
Permissions
Security Credentials
Access Advisor
Managed Policies
The following managed policies are attached to this user. You can attach up to 10 managed policies.
Attach Policy
Policy Name
Actions
AdministratorAccess
Show Policy | Detach Policy | Simulate Policy
Inline Policies
Feedback
English
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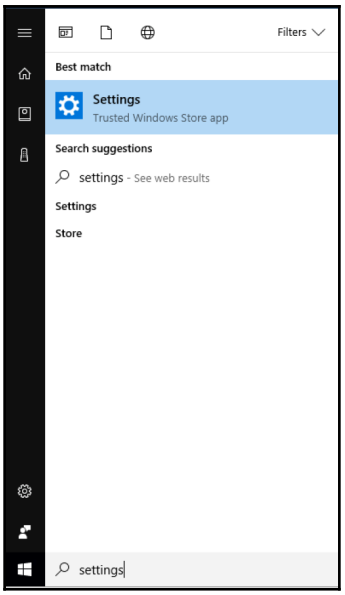
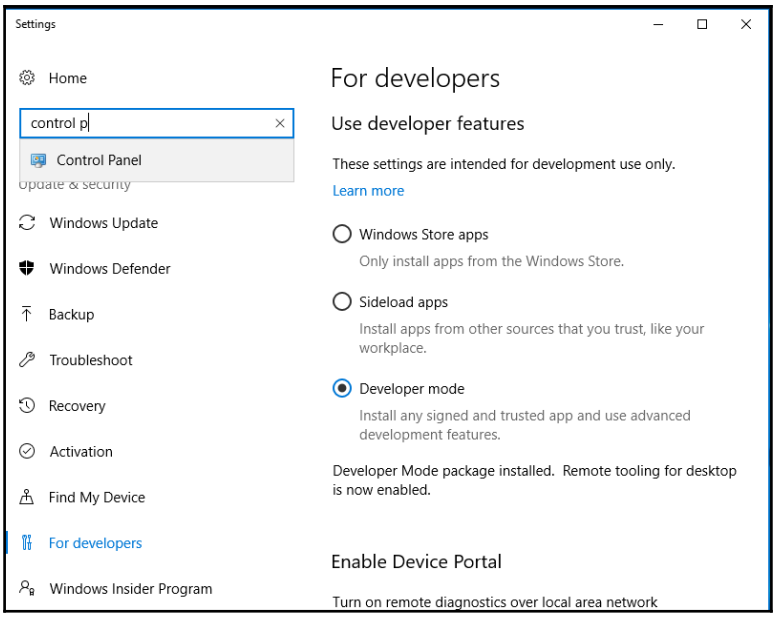
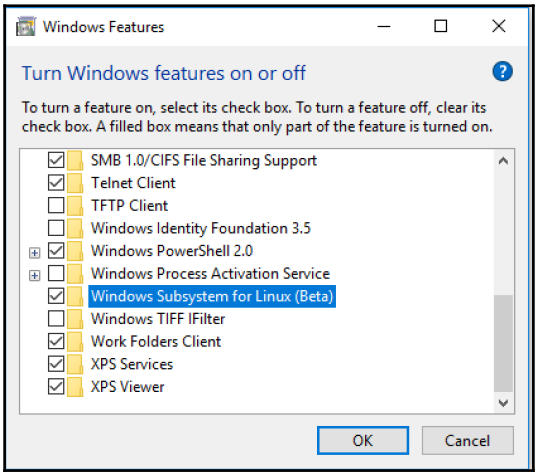
Privacy Policy
Terms of Use

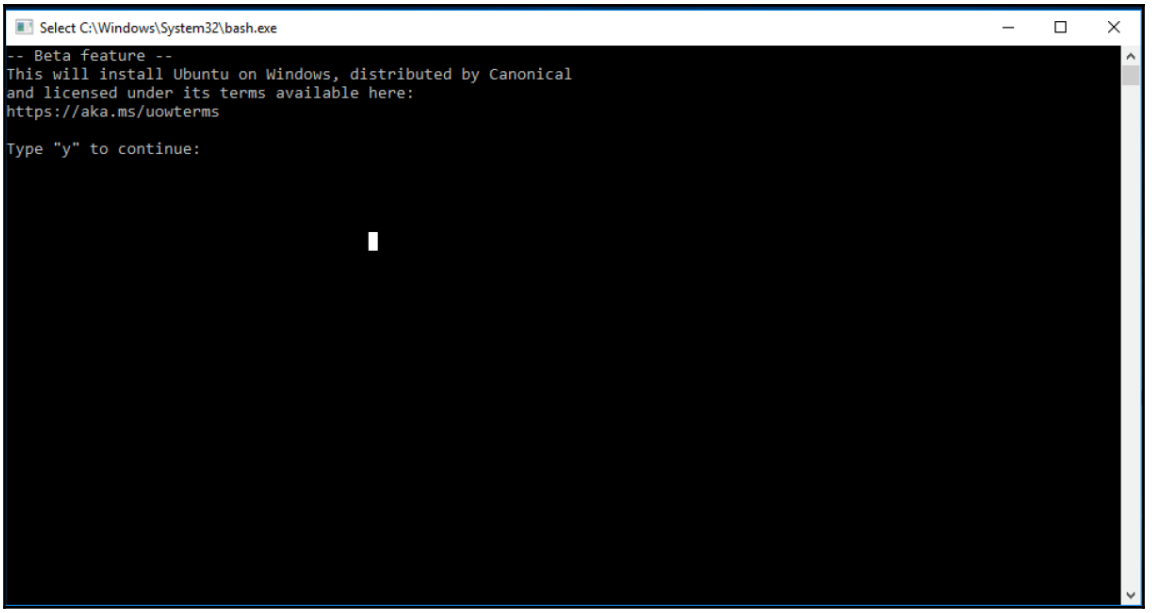

Filters
Best match
Settings
Trusted Windows Store app
Search suggestions
settings - See web results
Settings
Store
settings

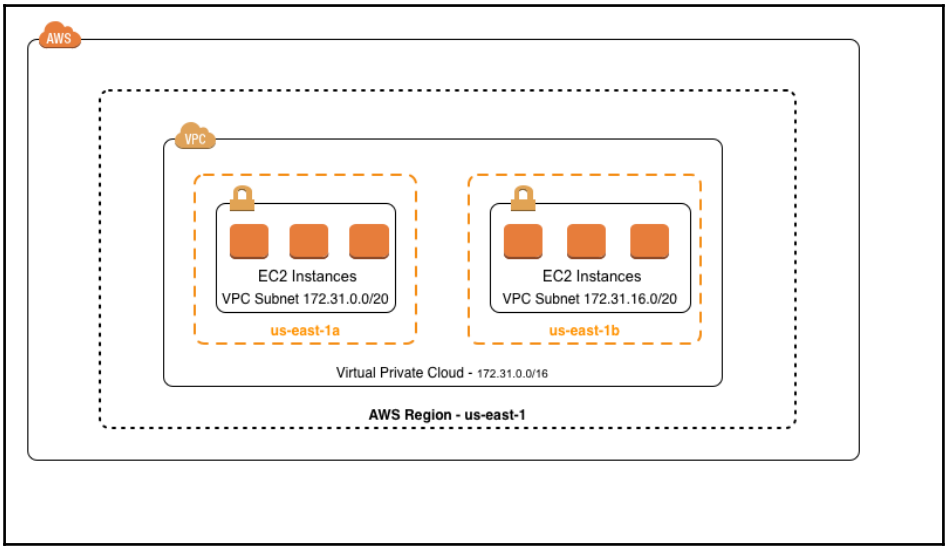
Settings
Windows Settings
windows upda
Windows Update settings
Check for updates
Advanced Windows Update options
View your Update history
System
Display, notifications, power
Personalization
Background, lock screen, colors
Apps
Uninstall, defaults, optional features
Accounts
Your accounts, email, sync, work, family
Time & language
Speech, region, date
Gaming
Game bar, DVR, broadcasting, Game Mode
Windows isn't activated. Activate Windows now.

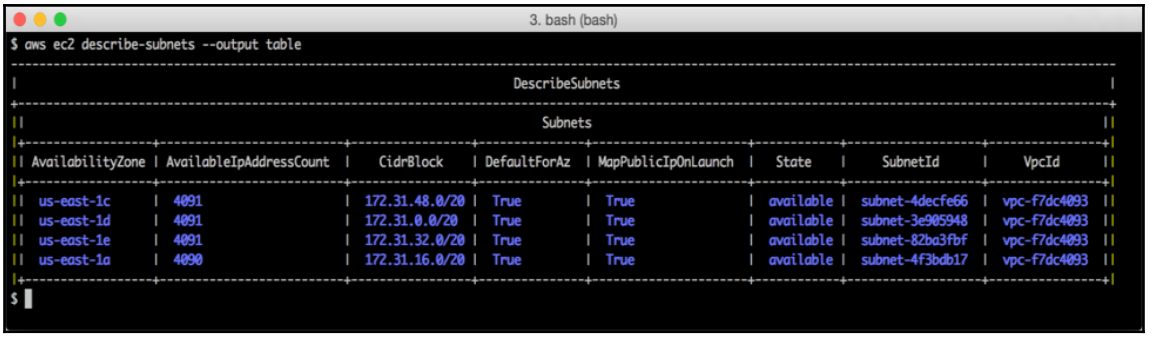

Settings
Home
control p
Control Panel
Update & security
Windows Update
Windows Defender
Backup
Troubleshoot
Recovery
Activation
Find My Device
For developers
Windows Insider Program
For developers
Use developer features
These settings are intended for development use only.
Learn more
Windows Store apps
Only install apps from the Windows Store.
Sideload apps
Install apps from other sources that you trust, like your workplace.
Developer mode
Install any signed and trusted app and use advanced development features.
Developer Mode package installed. Remote tooling for desktop is now enabled.
Enable Device Portal
Turn on remote diagnostics over local area network

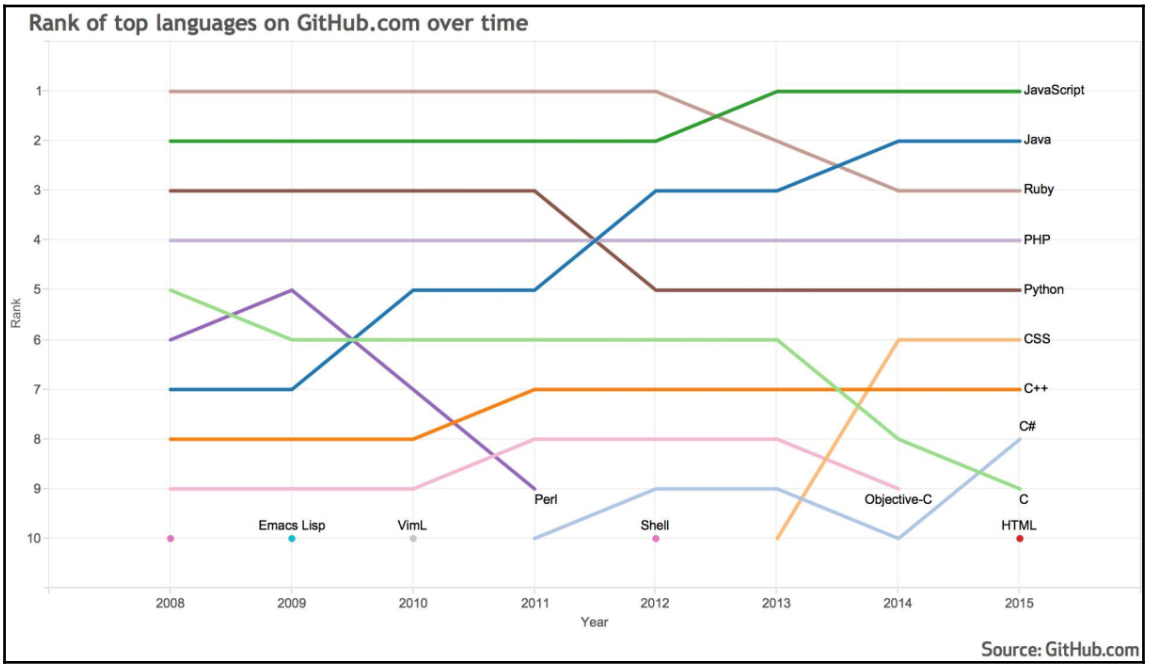
Control Panel
feature
Programs and Features
Turn Windows features on or off

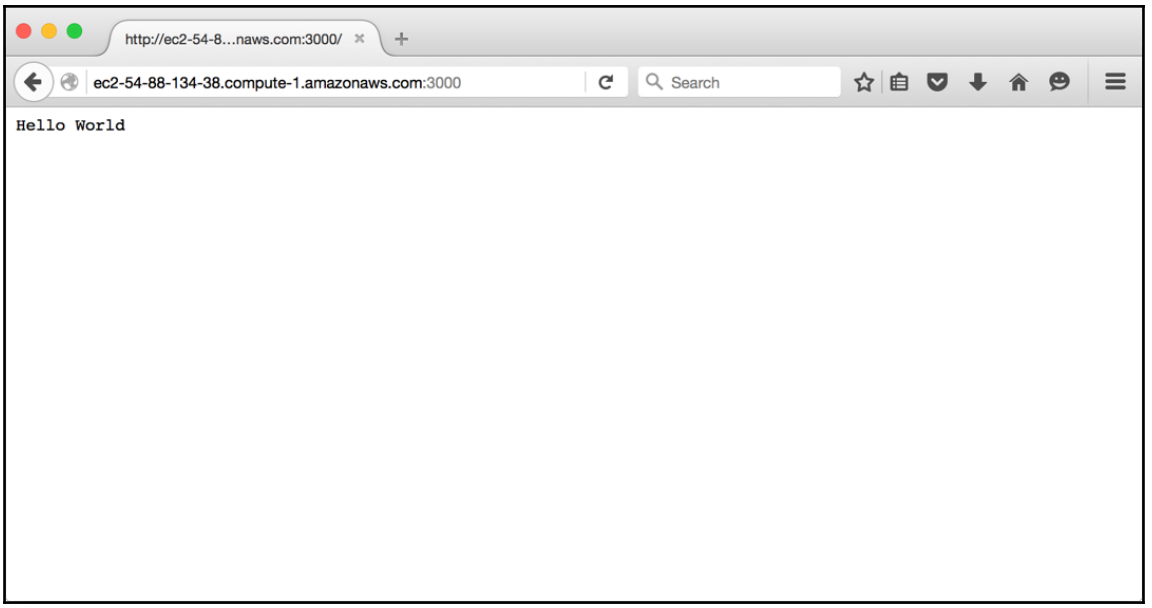

Windows Features
Turn Windows features on or off
To turn a feature on, select its check box. To turn a feature off, clear its check box. A filled box means that only part of the feature is turned on.
SMB 1.0/CIFS File Sharing Support
Telnet Client
TFTP Client
Windows Identity Foundation 3.5
Windows PowerShell 2.0
Windows Process Activation Service
Windows Subsystem for Linux (Beta)
Windows TIFF IFilter
Work Folders Client
XPS Services
XPS Viewer
OK
Cancel


Select C:\Windows\System32\bash.exe
-- Beta feature --
This will install Ubuntu on Windows, distributed by Canonical
and licensed under its terms available here:
https://aka.ms/uowterms
Type "y" to continue:

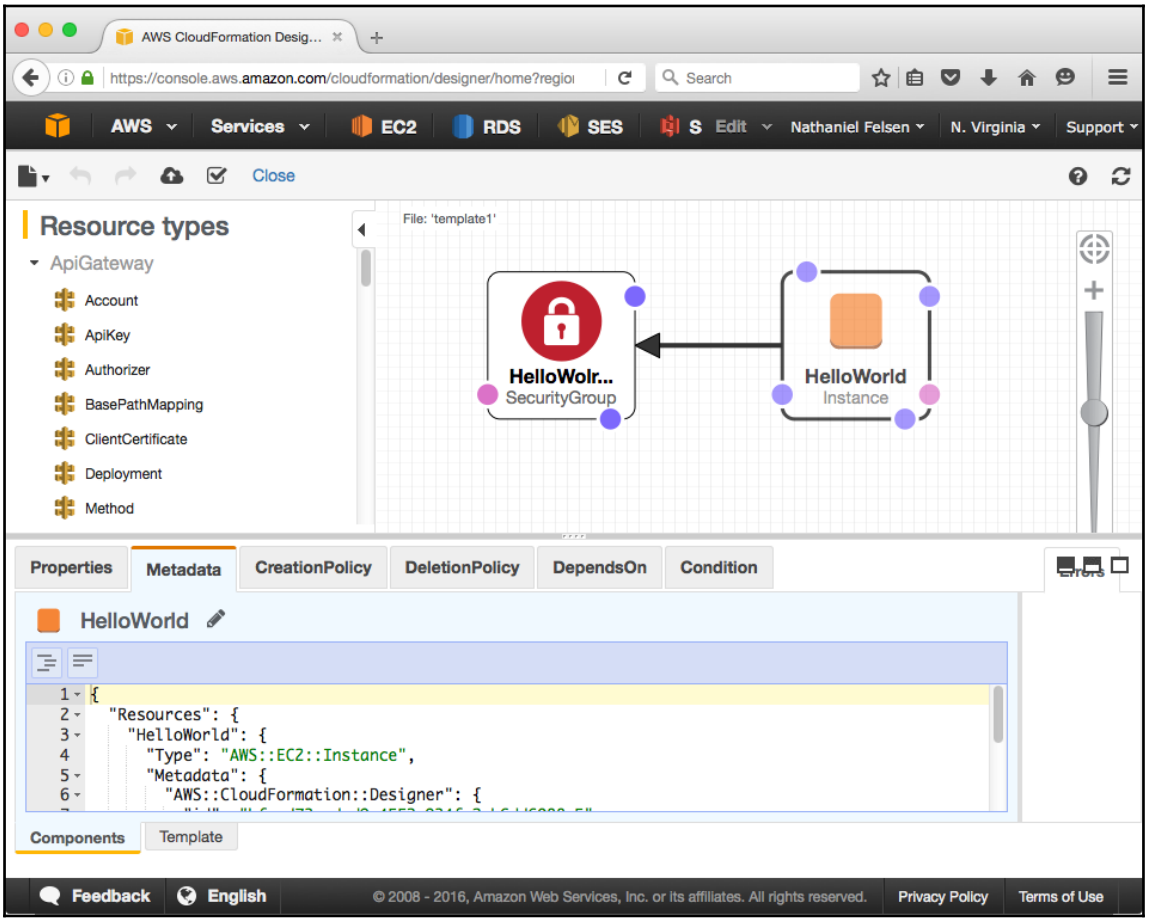

AWS
VPC
EC2 Instances
VPC Subnet 172.31.0.0/20
us-east-1a
EC2 Instances
VPC Subnet 172.31.16.0/20
us-east-1b
Virtual Private Cloud - 172.31.0.0/16
AWS Region - us-east-1

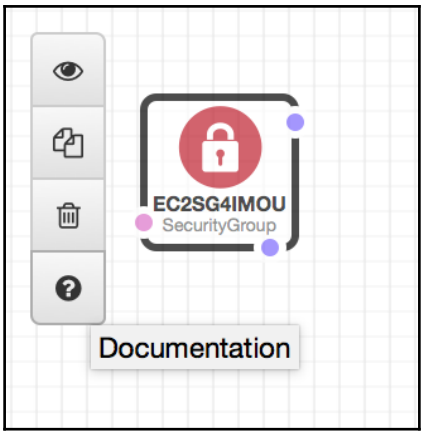

3. bash (bash)
$ aws ec2 describe-subnets --output table
DescribeSubnets
Subnets
AvailabilityZone | AvailableIpAddressCount | CidrBlock | DefaultForAz | MapPublicIpOnLaunch | State | SubnetId | VpcId
us-east-1c | 4091 | 172.31.48.0/20 | True | True | available | subnet-4decfe66 | vpc-f7dc4093
us-east-1d | 4091 | 172.31.0.0/20 | True | True | available | subnet-3e905948 | vpc-f7dc4093
us-east-1e | 4091 | 172.31.32.0/20 | True | True | available | subnet-82ba3fbf | vpc-f7dc4093
us-east-1a | 4090 | 172.31.16.0/20 | True | True | available | subnet-4f3bdb17 | vpc-f7dc4093
$

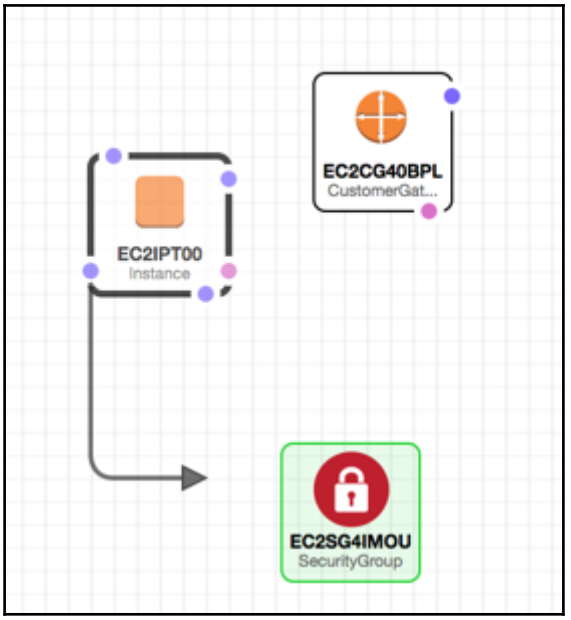

Rank of top languages on GitHub.com over time
Rank
Year
JavaScript
Java
Ruby
PHP
Python
CSS
C++
C#
C
Perl
Objective-C
Emacs Lisp
VimL
Shell
HTML
Source: GitHub.com

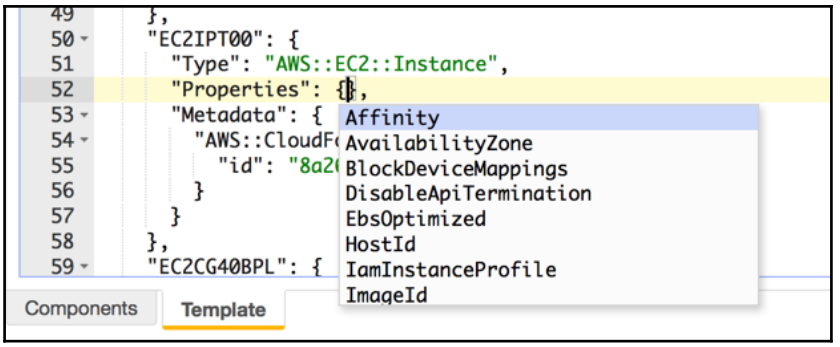

http://ec2-54-8...naws.com:3000/
ec2-54-88-134-38.compute-1.amazonaws.com:3000
Search
Hello World

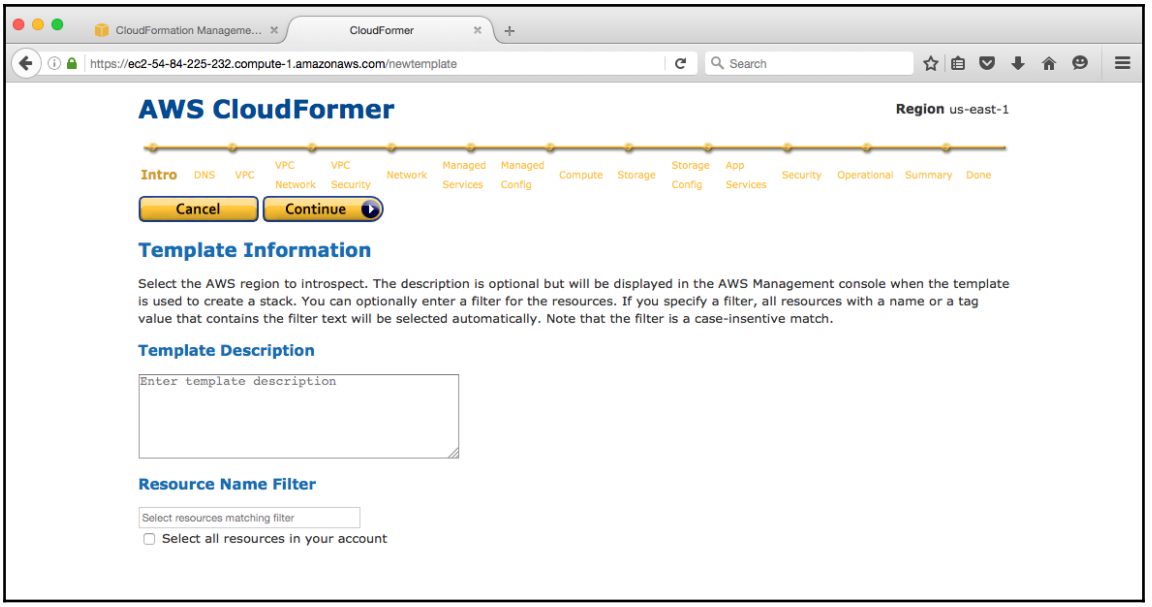
Chapter 03: Treating Your Infrastructure As Code

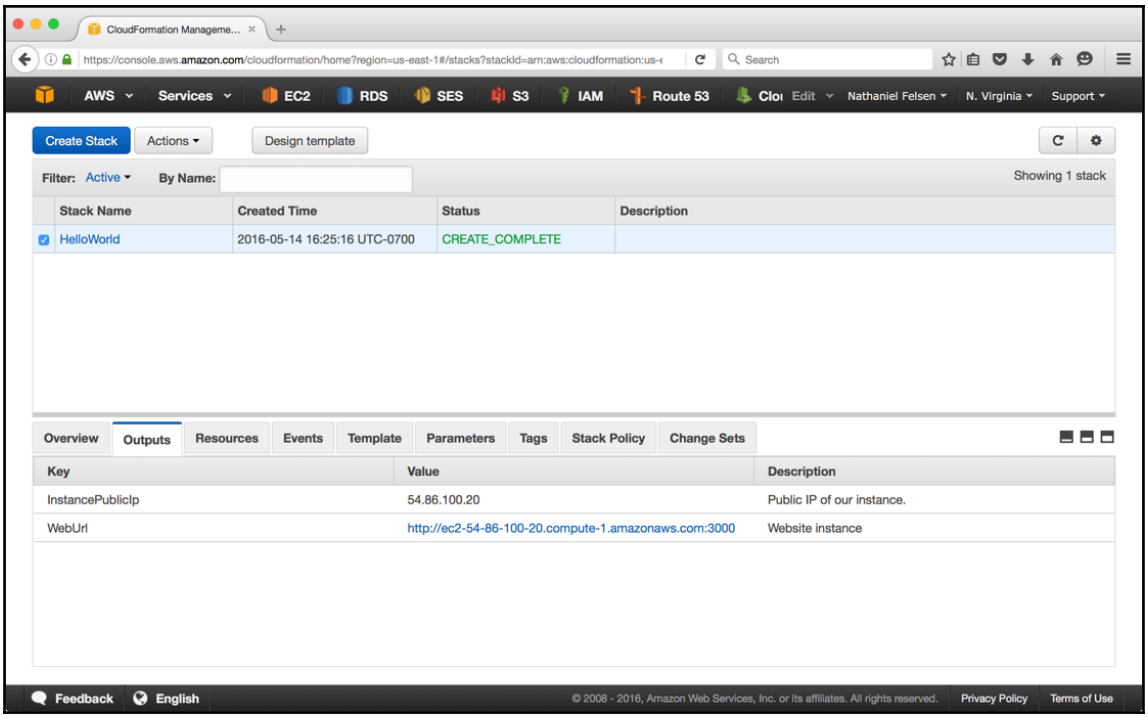



EC2SG4IMOU
SecurityGroup
Documentation


EC2CG40BPL
CustomerGat...
EC2IPT00
Instance
EC2SG4IMOU
SecurityGroup


},
"EC2IPT00": {
"Type": "AWS::EC2::Instance",
"Properties": {},
"Metadata": {
"AWS::CloudF
"id": "8a2
}
}
},
"EC2CG40BPL": {
Affinity
AvailabilityZone
BlockDeviceMappings
DisableApiTermination
EbsOptimized
HostId
IamInstanceProfile
ImageId
Components
Template


CloudFormation Manageme...
CloudFormer
https://ec2-54-84-225-232.compute-1.amazonaws.com/newtemplate
Search
AWS CloudFormer
Region us-east-1
Intro
DNS
VPC
VPC Network
VPC Security
Network
Managed Services
Managed Config
Compute
Storage
Storage Config
App Services
Security
Operational
Summary
Done
Cancel
Continue
Template Information
Select the AWS region to introspect. The description is optional but will be displayed in the AWS Management console when the template is used to create a stack. You can optionally enter a filter for the resources. If you specify a filter, all resources with a name or a tag value that contains the filter text will be selected automatically. Note that the filter is a case-insentive match.
Template Description
Enter template description
Resource Name Filter
Select resources matching filter
Select all resources in your account


CloudFormation Manageme...
https://console.aws.amazon.com/cloudformation/home?region=us-east-1#/stacks?stackId=arn:aws:cloudformation:us-
Search
AWS
Services
EC2
RDS
SES
S3
IAM
Route 53
Edit
Nathaniel Felsen
N. Virginia
Support
Create Stack
Actions
Design template
Filter: Active
By Name:
Showing 1 stack
Stack Name
Created Time
Status
Description
HelloWorld
2016-05-14 16:25:16 UTC-0700
CREATE_COMPLETE
Overview
Outputs
Resources
Events
Template
Parameters
Tags
Stack Policy
Change Sets
Key
Value
Description
InstancePublicIp
54.86.100.20
Public IP of our instance.
WebUrl
http://ec2-54-86-100-20.compute-1.amazonaws.com:3000
Website instance
Feedback
English
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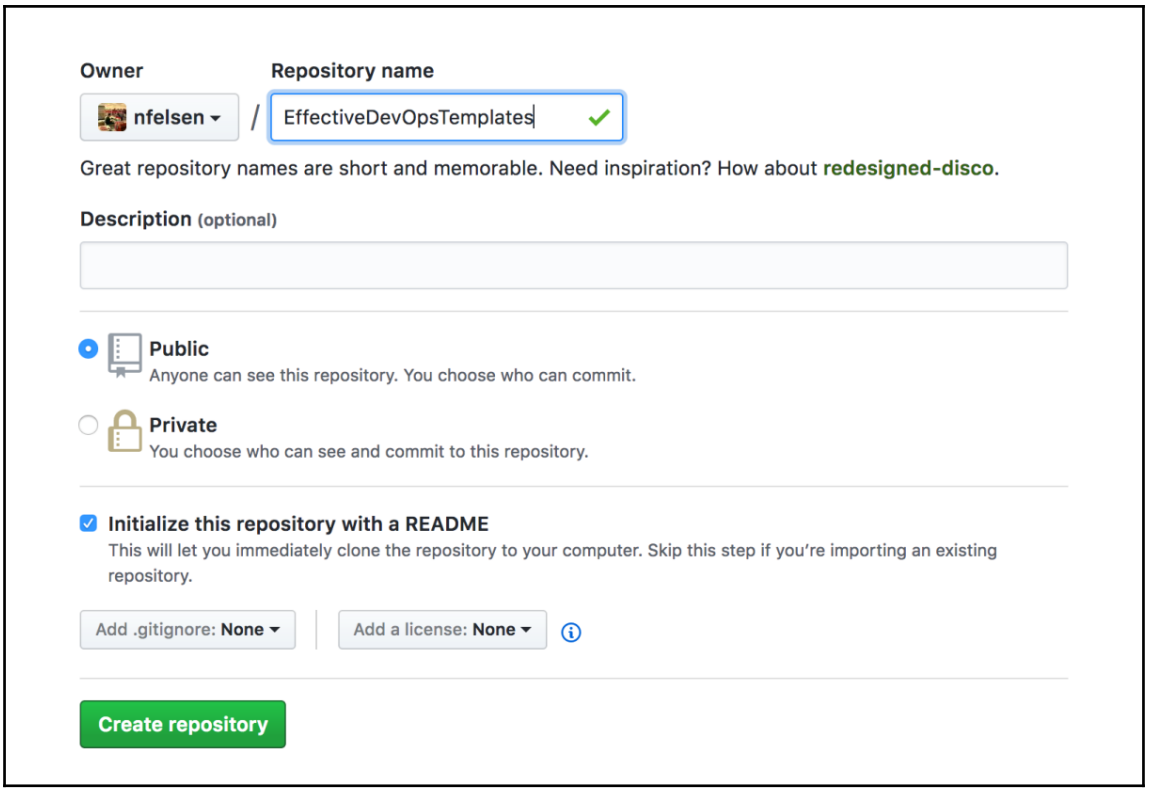
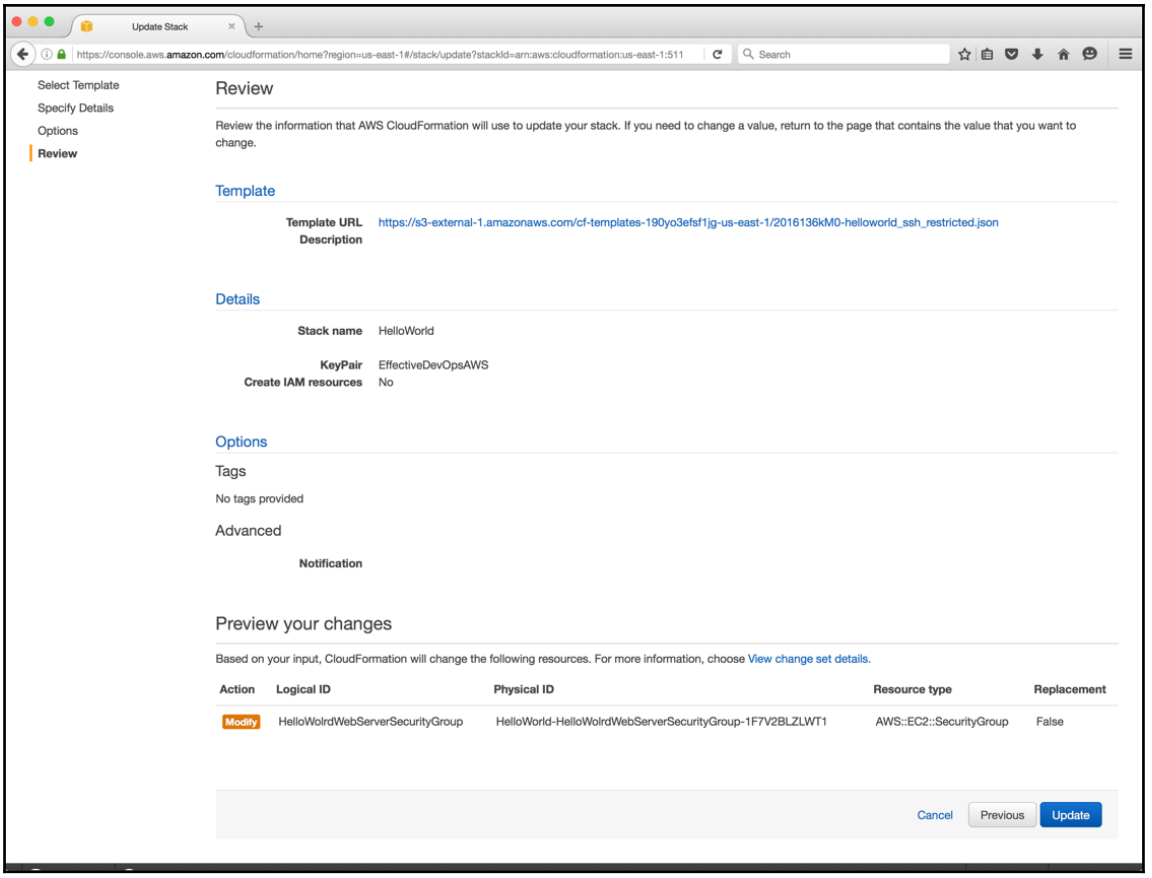
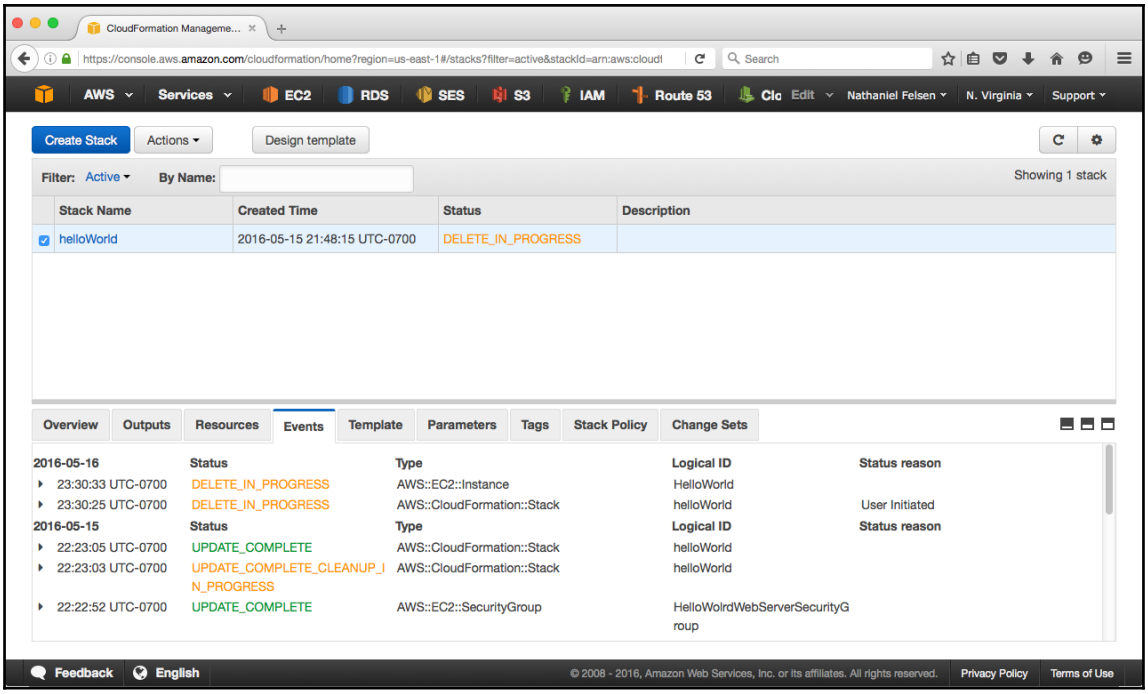
Privacy Policy
Terms of Use


Owner
Repository name
nfelsen
/
EffectiveDevOpsTemplates
Great repository names are short and memorable. Need inspiration? How about redesigned-disco.
Description (optional)
Public
Anyone can see this repository. You choose who can commit.
Private
You choose who can see and commit to this repository.
Initialize this repository with a README
This will let you immediately clone the repository to your computer. Skip this step if you're importing an existing repository.
Add .gitignore: None
Add a license: None
Create repository


Update Stack
https://console.aws.amazon.com/cloudformation/home?region=us-east-1#/stack/update?stackId=arn:aws:cloudformation:us-east-1:511
Search
Select Template
Specify Details
Options
Review
Review
Review the information that AWS CloudFormation will use to update your stack. If you need to change a value, return to the page that contains the value that you want to change.
Template
Template URL https://s3-external-1.amazonaws.com/cf-templates-190yo3efsf1jg-us-east-1/2016136kM0-helloworld_ssh_restricted.json
Description
Details
Stack name HelloWorld
KeyPair EffectiveDevOpsAWS
Create IAM resources No
Options
Tags
No tags provided
Advanced
Notification
Preview your changes
Based on your input, CloudFormation will change the following resources. For more information, choose View change set details.
Action Logical ID Physical ID Resource type Replacement
Modify HelloWolrdWebServerSecurityGroup HelloWorld-HelloWolrdWebServerSecurityGroup-1F7V2BLZLWT1 AWS::EC2::SecurityGroup False
Cancel
Previous
Update


CloudFormation Manageme...
https://console.aws.amazon.com/cloudformation/home?region=us-east-1#/stacks?filter=active&stackId=arn:aws:cloudf
Search
AWS
Services
EC2
RDS
SES
S3
IAM
Route 53
Clo
Edit
Nathaniel Felsen
N. Virginia
Support
Create Stack
Actions
Design template
Filter: Active
By Name:
Showing 1 stack
Stack Name
Created Time
Status
Description
helloWorld
2016-05-15 21:48:15 UTC-0700
DELETE_IN_PROGRESS
Overview
Outputs
Resources
Events
Template
Parameters
Tags
Stack Policy
Change Sets
2016-05-16
Status
Type
Logical ID
Status reason
23:30:33 UTC-0700
DELETE_IN_PROGRESS
AWS::EC2::Instance
HelloWorld
23:30:25 UTC-0700
DELETE_IN_PROGRESS
AWS::CloudFormation::Stack
helloWorld
User Initiated
2016-05-15
Status
Type
Logical ID
Status reason
22:23:05 UTC-0700
UPDATE_COMPLETE
AWS::CloudFormation::Stack
helloWorld
22:23:03 UTC-0700
UPDATE_COMPLETE_CLEANUP_IN_PROGRESS
AWS::CloudFormation::Stack
helloWorld
22:22:52 UTC-0700
UPDATE_COMPLETE
AWS::EC2::SecurityGroup
HelloWolrdWebServerSecurityGroup
Feedback
English
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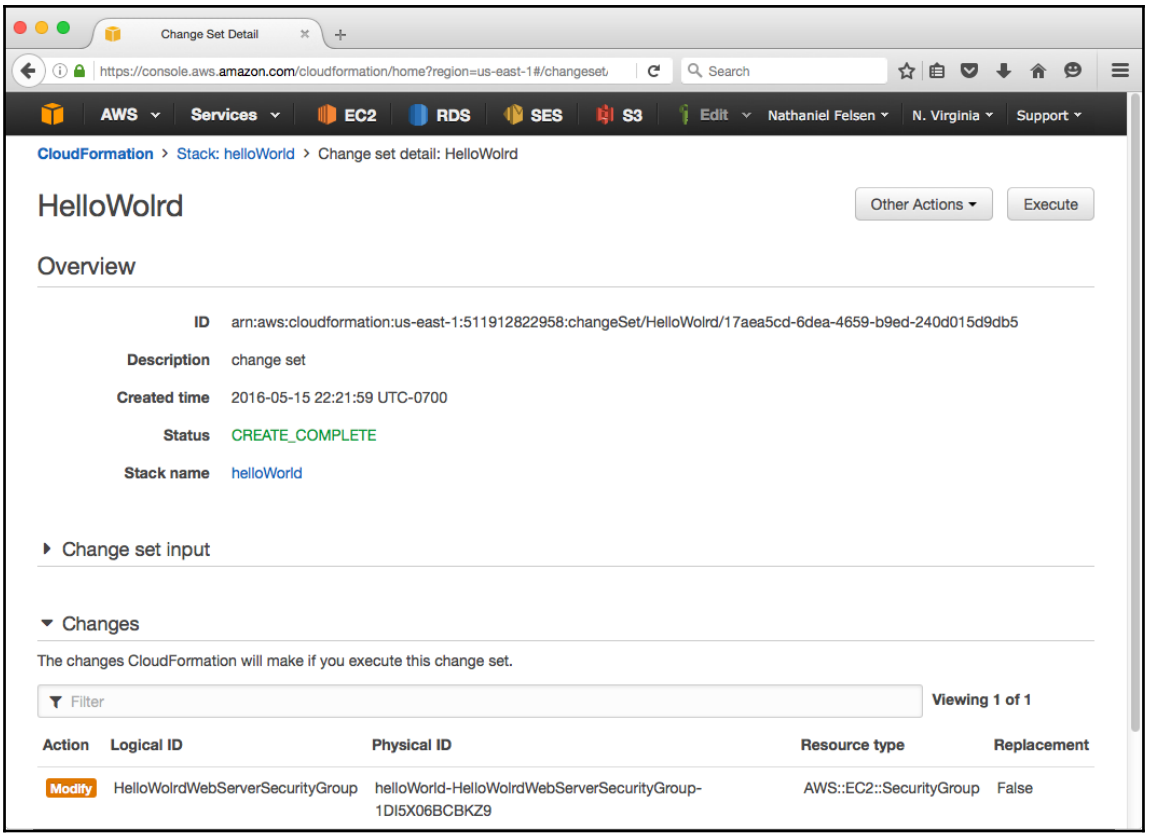
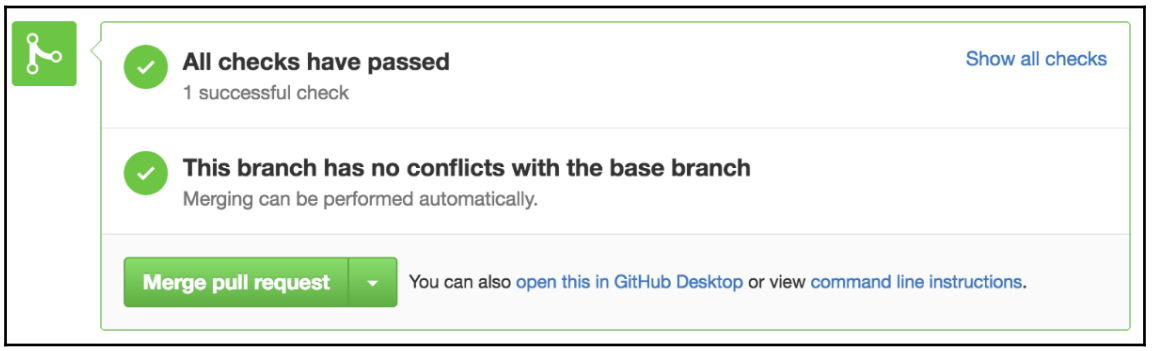
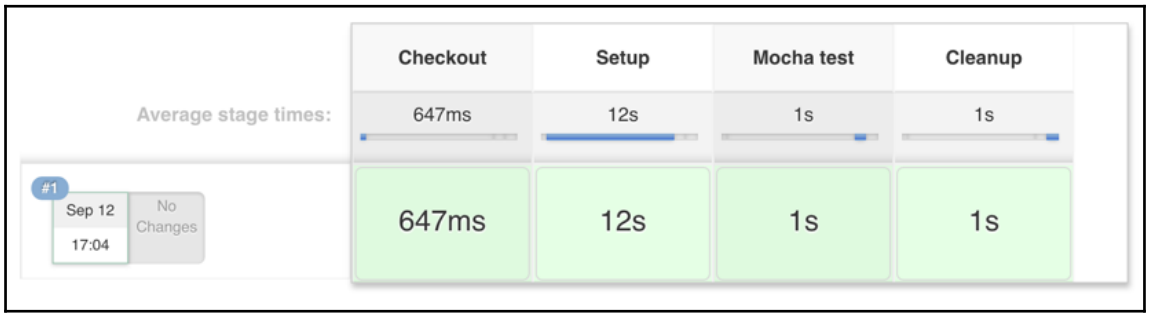
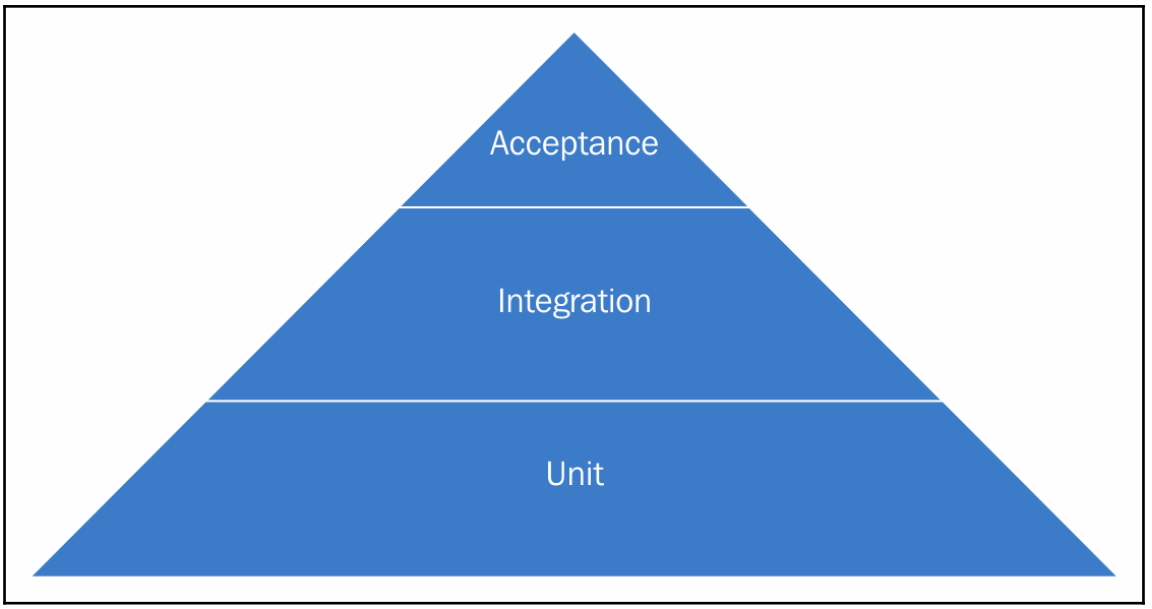
Privacy Policy
Terms of Use


Change Set Detail
https://console.aws.amazon.com/cloudformation/home?region=us-east-1#/changeset/
Search
AWS
Services
EC2
RDS
SES
S3
Edit
Nathaniel Felsen
N. Virginia
Support
CloudFormation › Stack: helloWorld › Change set detail: HelloWolrd
HelloWolrd
Other Actions
Execute
Overview
ID
arn:aws:cloudformation:us-east-1:511912822958:changeSet/HelloWolrd/17aea5cd-6dea-4659-b9ed-240d015d9db5
Description
change set
Created time
2016-05-15 22:21:59 UTC-0700
Status
CREATE_COMPLETE
Stack name
helloWorld
Change set input
Changes
The changes CloudFormation will make if you execute this change set.
Filter
Viewing 1 of 1
Action
Logical ID
Physical ID
Resource type
Replacement
Modify
HelloWolrdWebServerSecurityGroup
helloWorld-HelloWolrdWebServerSecurityGroup-1DI5X06BCBKZ9
AWS::EC2::SecurityGroup
False

Chapter 04: Adding Continuous Integration and Continuous Deployment



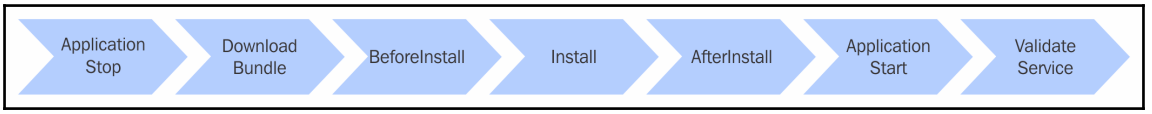


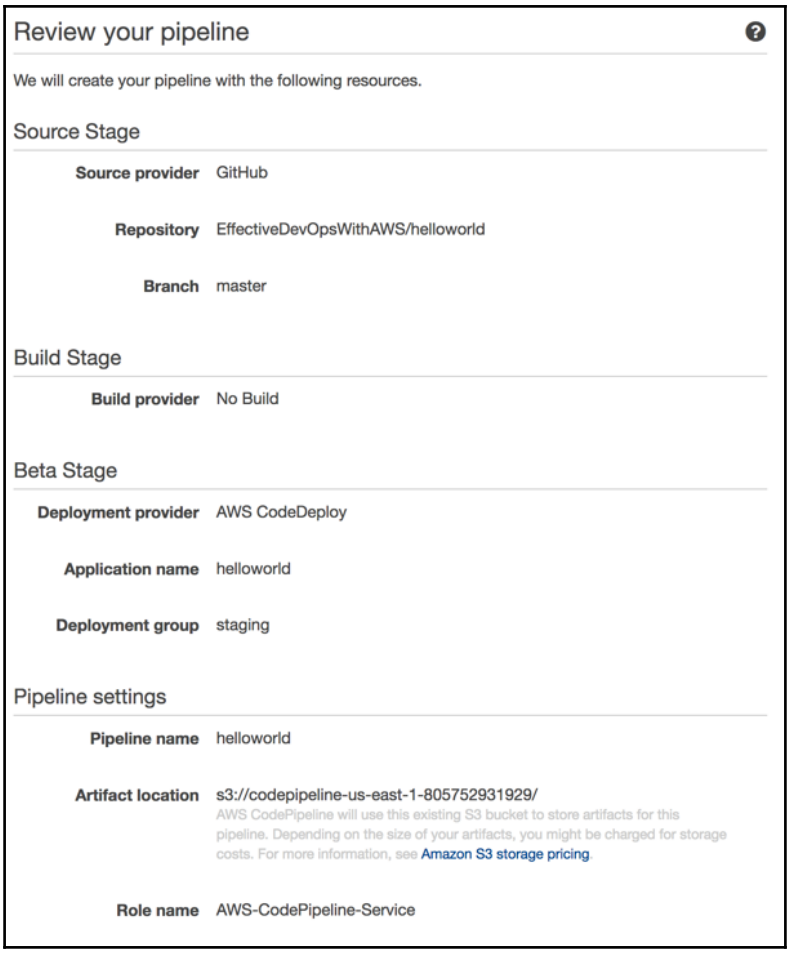


Search by Tags

	Tag Type	Key	Value	Instances	
1	Amazon EC2	:loudformation:stack-name	helloworld-staging	1	
2	Amazon EC2				

Total Matching Instances: 1

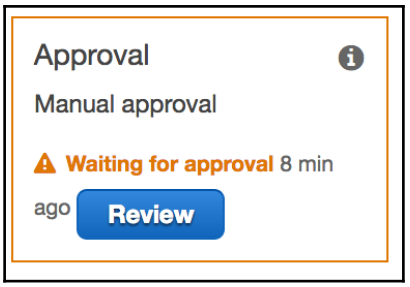


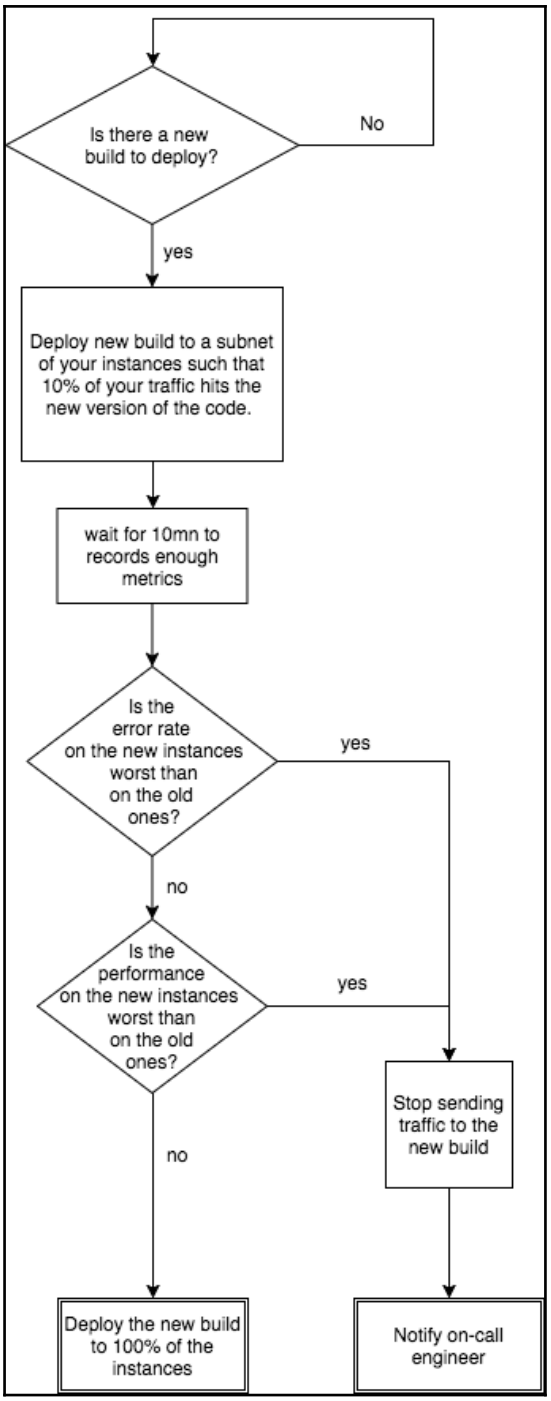


Preview your changes

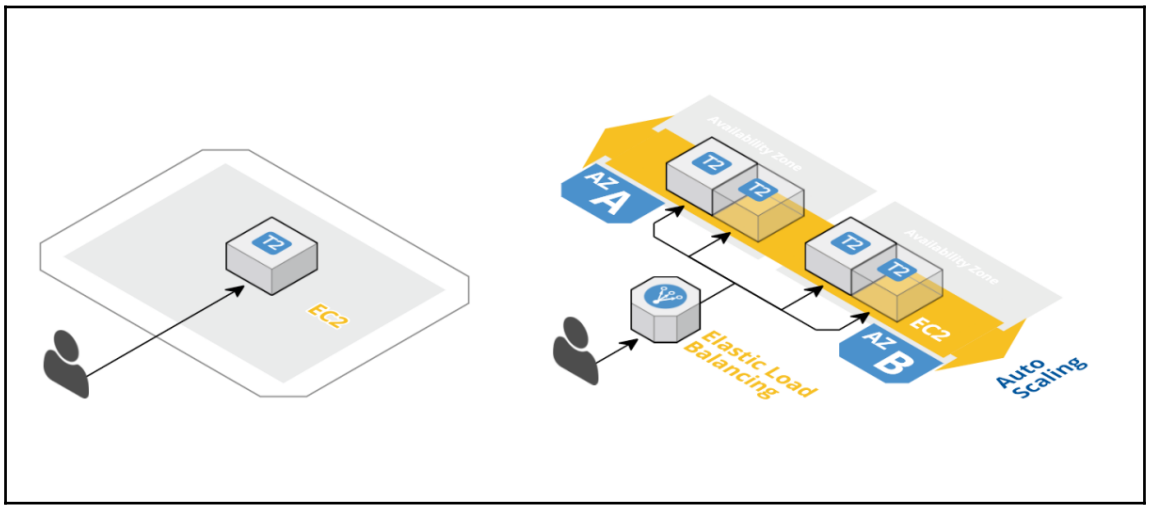
Based on your input, CloudFormation will change the following resources. For more information, choose View change set details.

Action	Logical ID	Physical ID	Resource type
Add	Policy		AWS::IAM::Policy


Approval
Manual approval
Waiting for approval 8 min ago
Review


Is there a new build to deploy?
No
yes
Deploy new build to a subnet of your instances such that 10% of your traffic hits the new version of the code.
wait for 10mn to records enough metrics
Is the error rate on the new instances worst than on the old ones?
yes
no
Is the performance on the new instances worst than on the old ones?
yes
no
Stop sending traffic to the new build
Deploy the new build to 100% of the instances
Notify on-call engineer

Chapter 05: Scaling Your Infrastructure



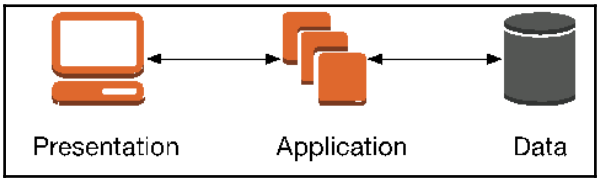
Parameters

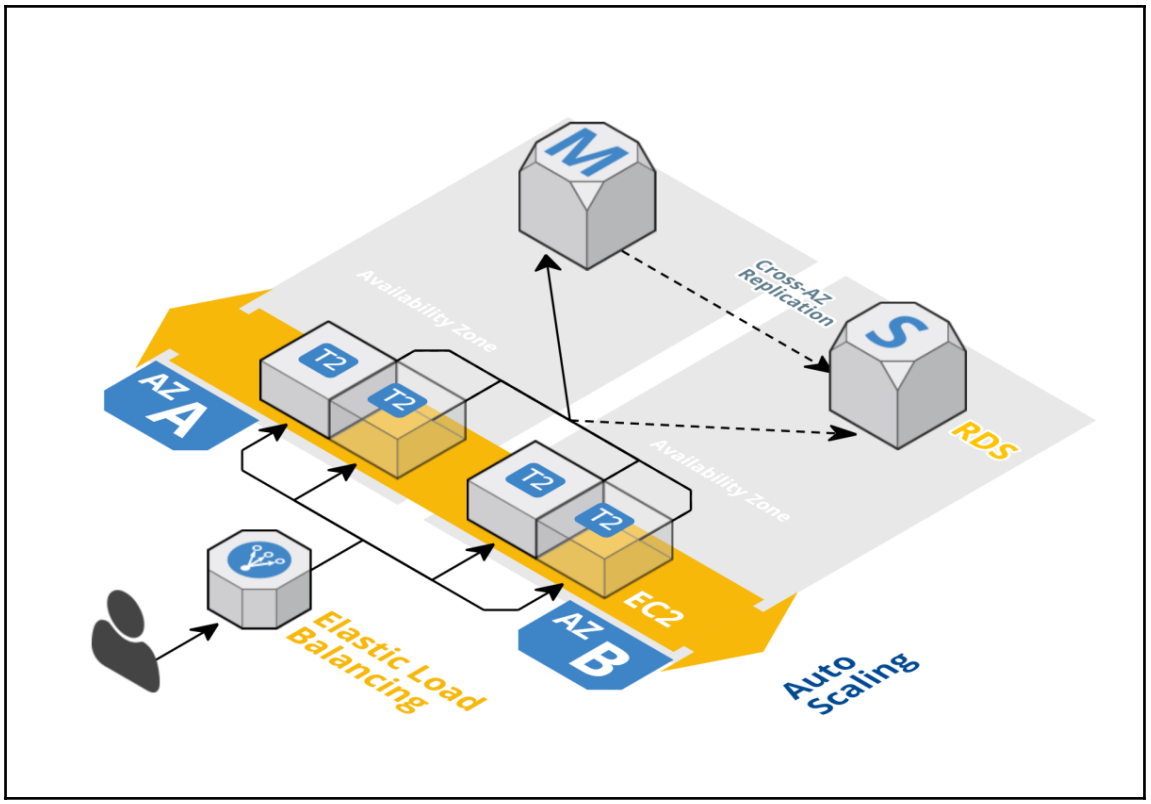
InstanceType	t2.micro	WebServer EC2 instance type
KeyPair	EffectiveDevOpsAWS	Name of an existing EC2 KeyPair to SSH
PublicSubnet	subnet-3e905948 (172.31.0.0/20) × subnet-4decfe66 (172.31.48.0/20) × subnet-4f3bdb17 (172.31.16.0/20) × subnet-82ba3fbf (172.31.32.0/20) ×	PublicSubnet
ScaleCapacity	3	Number servers to run
VpcId	vpc-f7dc4093 (172.31.0.0/16)	

Preview your changes

Based on your input, CloudFormation will change the following resources. For more information, choose View change set details.

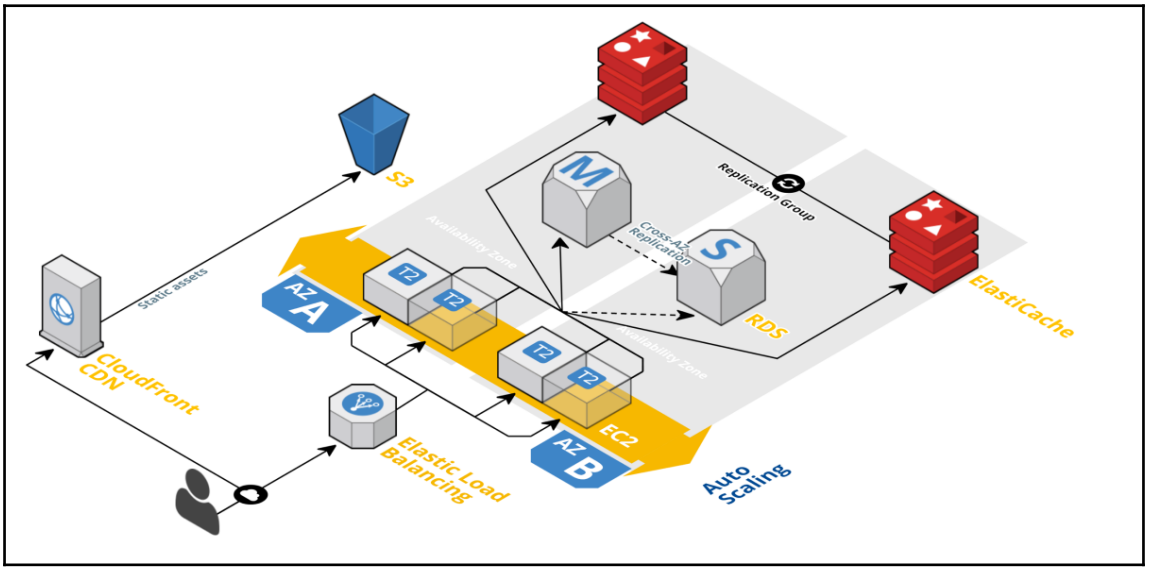
Action	Logical ID	Physical ID	Resource type	Replacement
Add	AutoscalingGroup		AWS::AutoScaling::AutoScalingGroup	
Add	CPUTooHigh		AWS::CloudWatch::Alarm	
Add	CPUTooLow		AWS::CloudWatch::Alarm	
Add	LaunchConfiguration		AWS::AutoScaling::LaunchConfiguration	
Add	LoadBalancer		AWS::ElasticLoadBalancing::LoadBalancer	
Add	LoadBalancerSecurityGroup		AWS::EC2::SecurityGroup	
Add	ScaleDownPolicy		AWS::AutoScaling::ScalingPolicy	
Add	ScaleUpPolicy		AWS::AutoScaling::ScalingPolicy	
Modify	SecurityGroup	helloWorld-SecurityGroup-63BOXIT1L6PV	AWS::EC2::SecurityGroup	True
Remove	instance	i-c10c64cf	AWS::EC2::Instance	

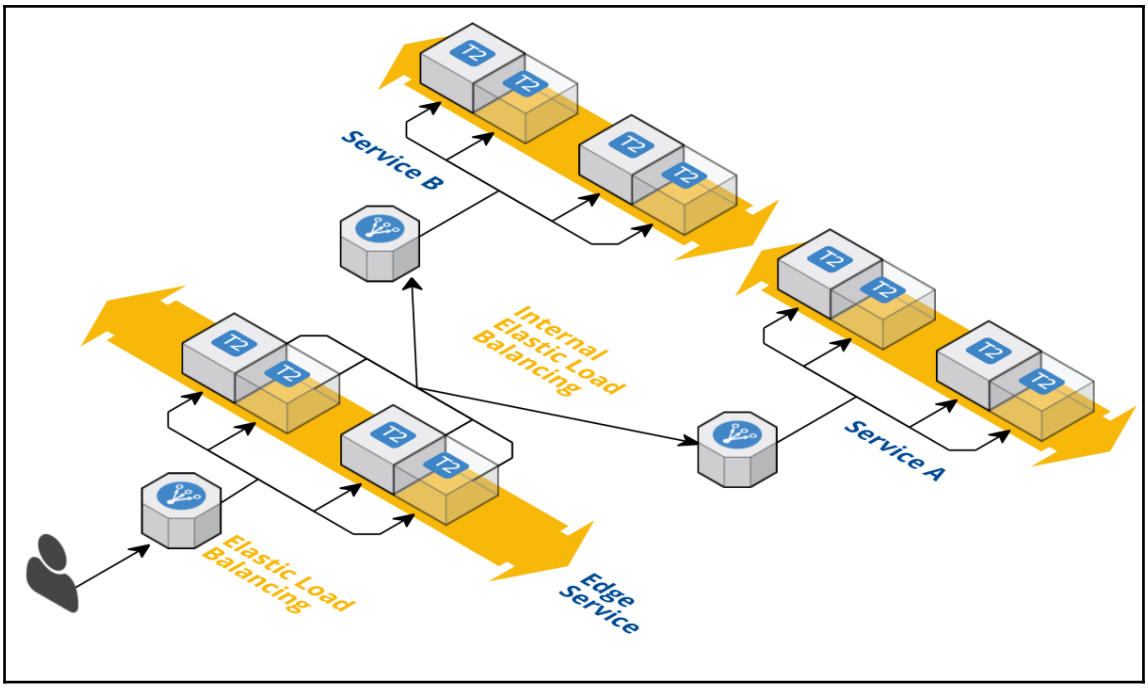


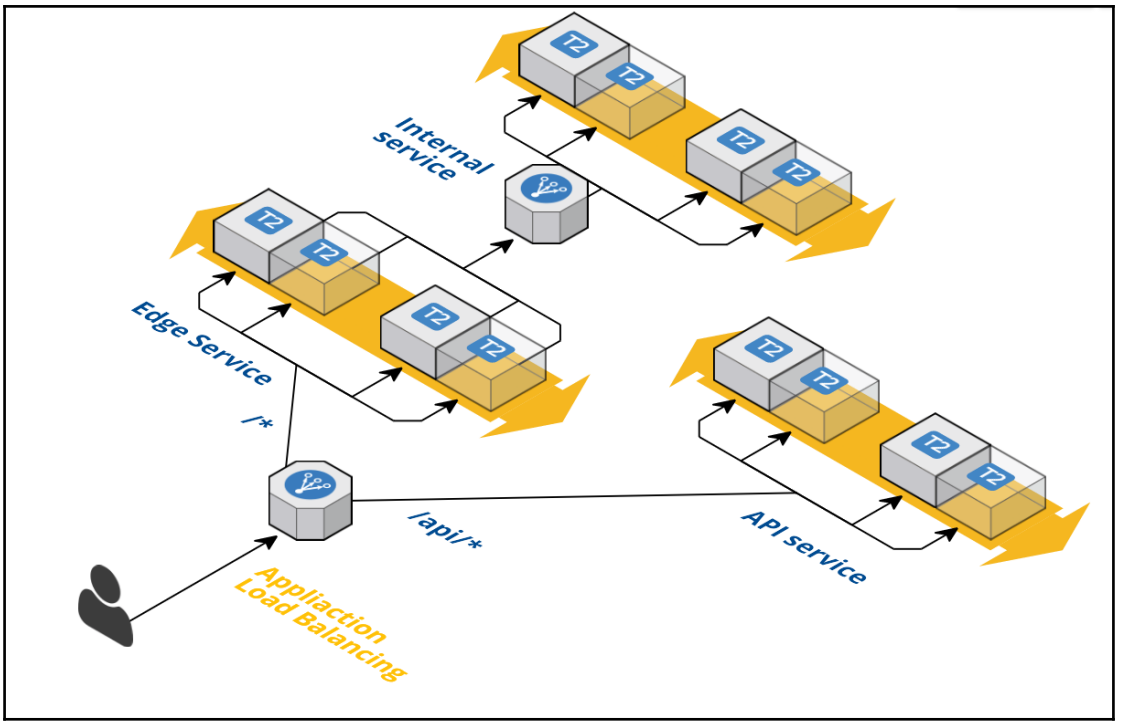

M
S
Cross-Az
Replication
RDS
Availability Zone
Availability Zone
AZ A
AZ B
T2
T2
T2
T2
EC2
Elastic Load
Balancing
Auto
Scaling

Origin servers

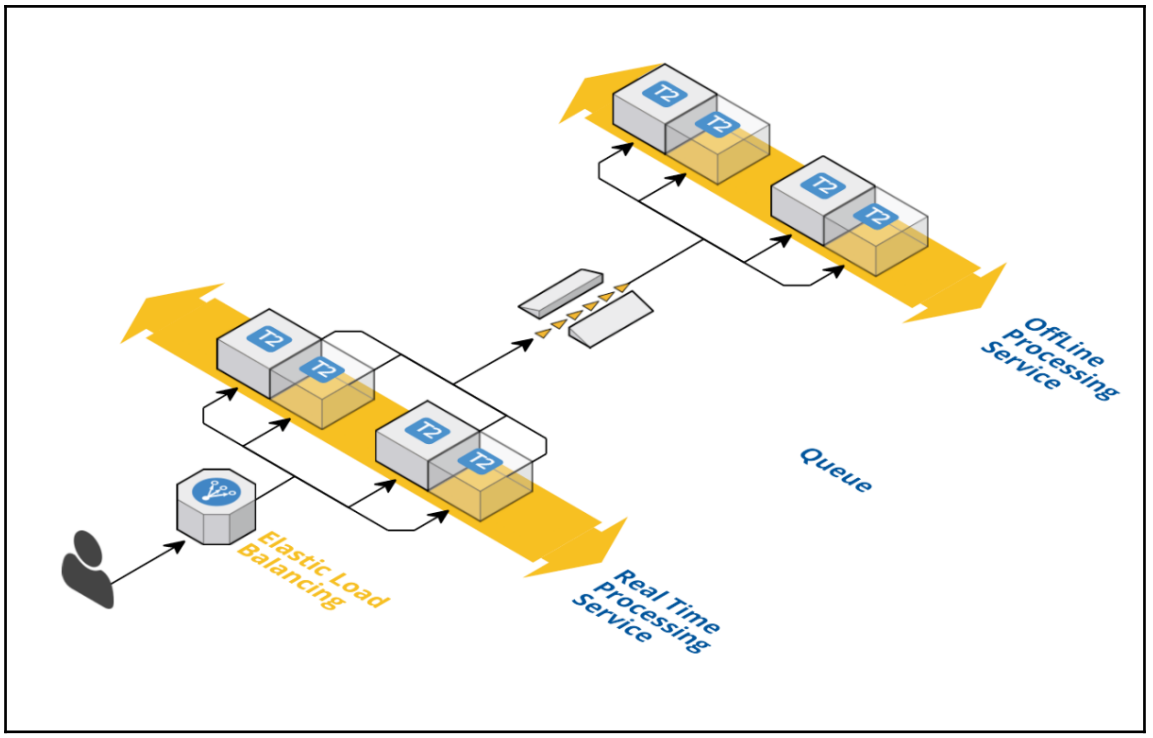
Origin servers
CDN edges
Origin servers

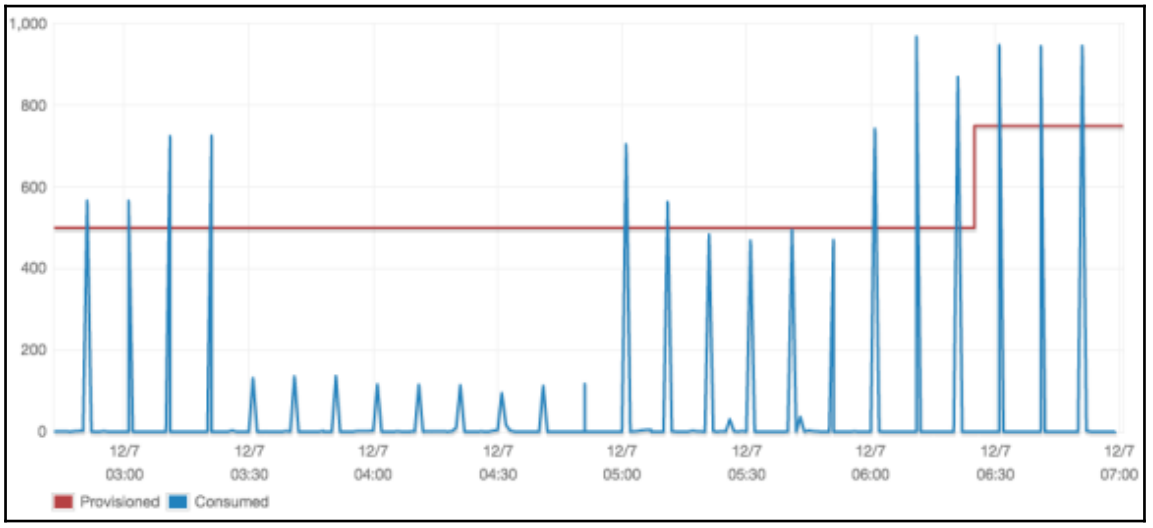

S3
Static assets
CloudFront CDN
Elastic Load Balancing
Auto Scaling
AZ A
AZ B
T2
EC2
Availability Zone
Cross-AZ Replication
RDS
Replication Group
ElastiCache

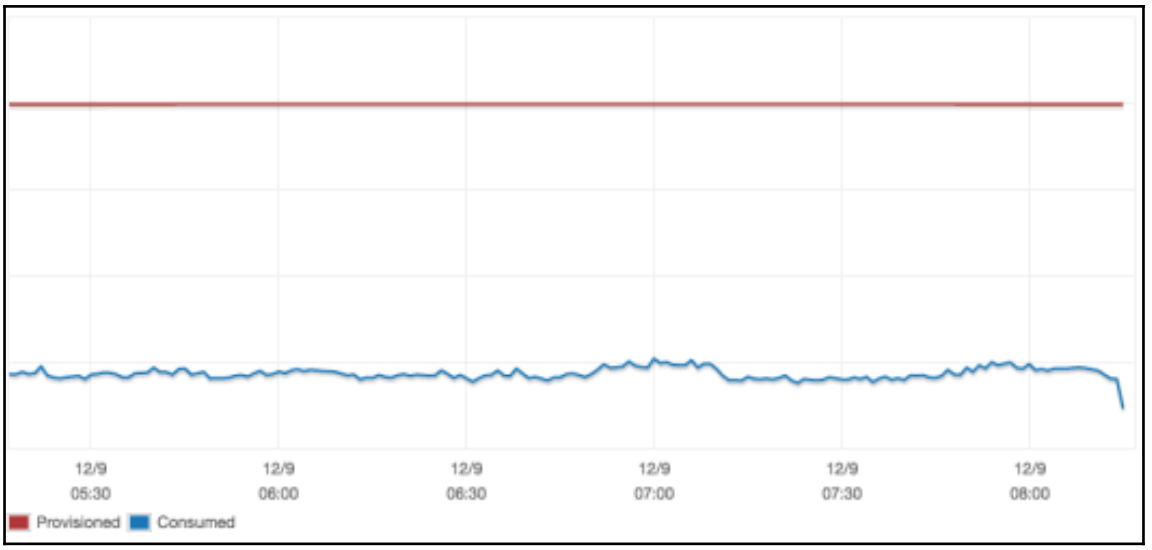

T2
Service B
Internal
Elastic Load
Balancing
Service A
Elastic Load
Balancing
Edge
Service

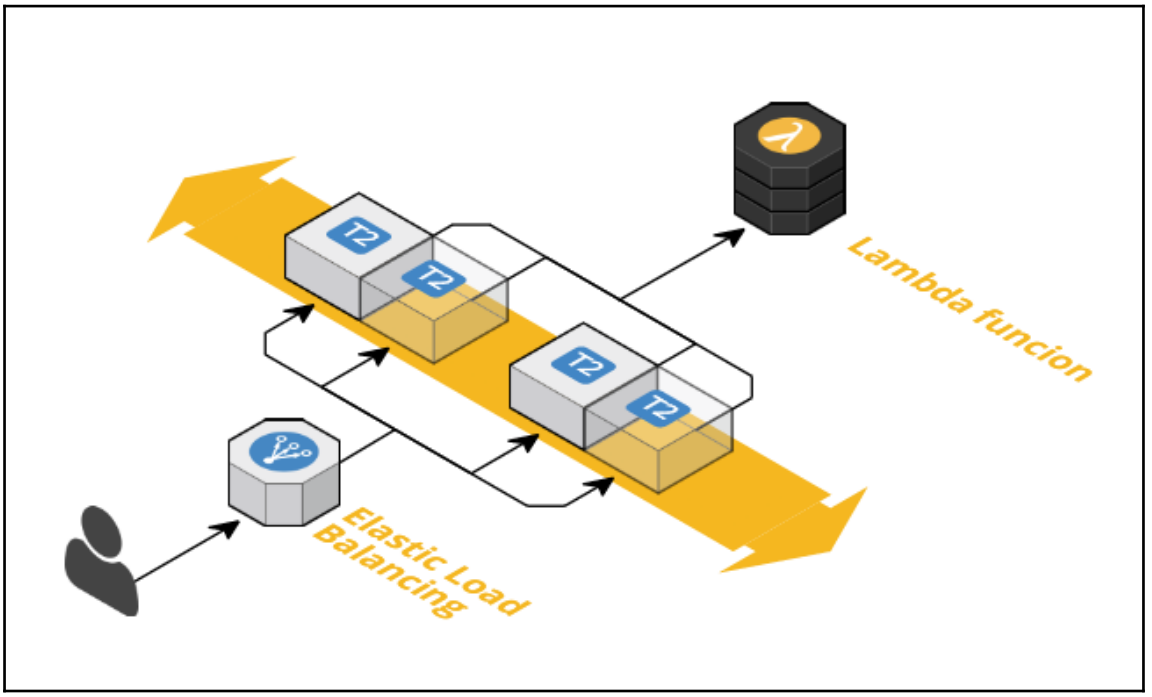

Internal service
Edge Service
/*
/api/*
API service
Appliaction Load Balancing

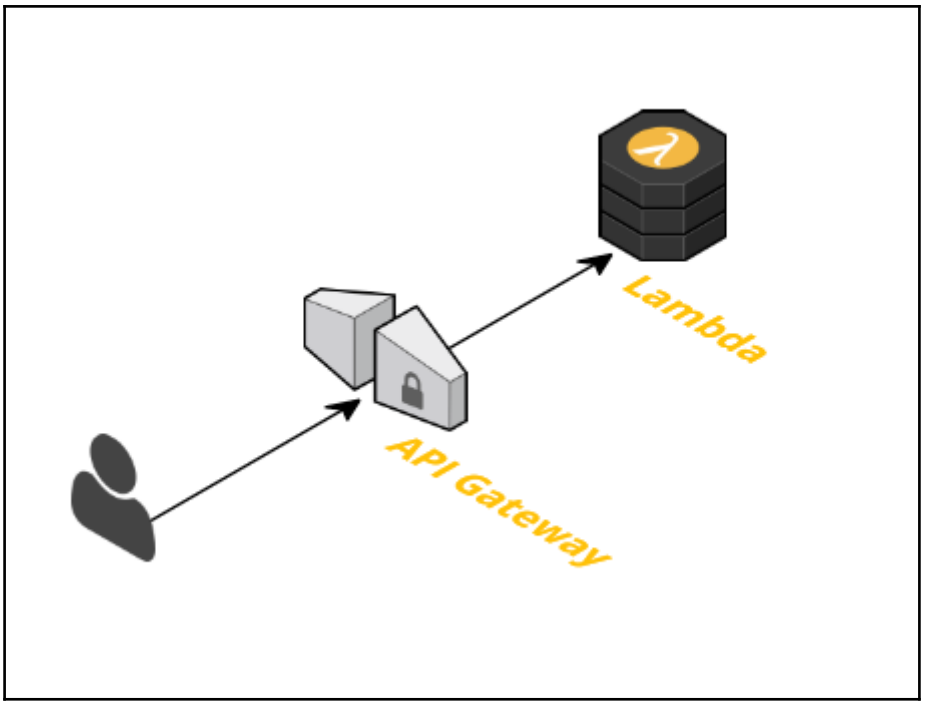
Like Like

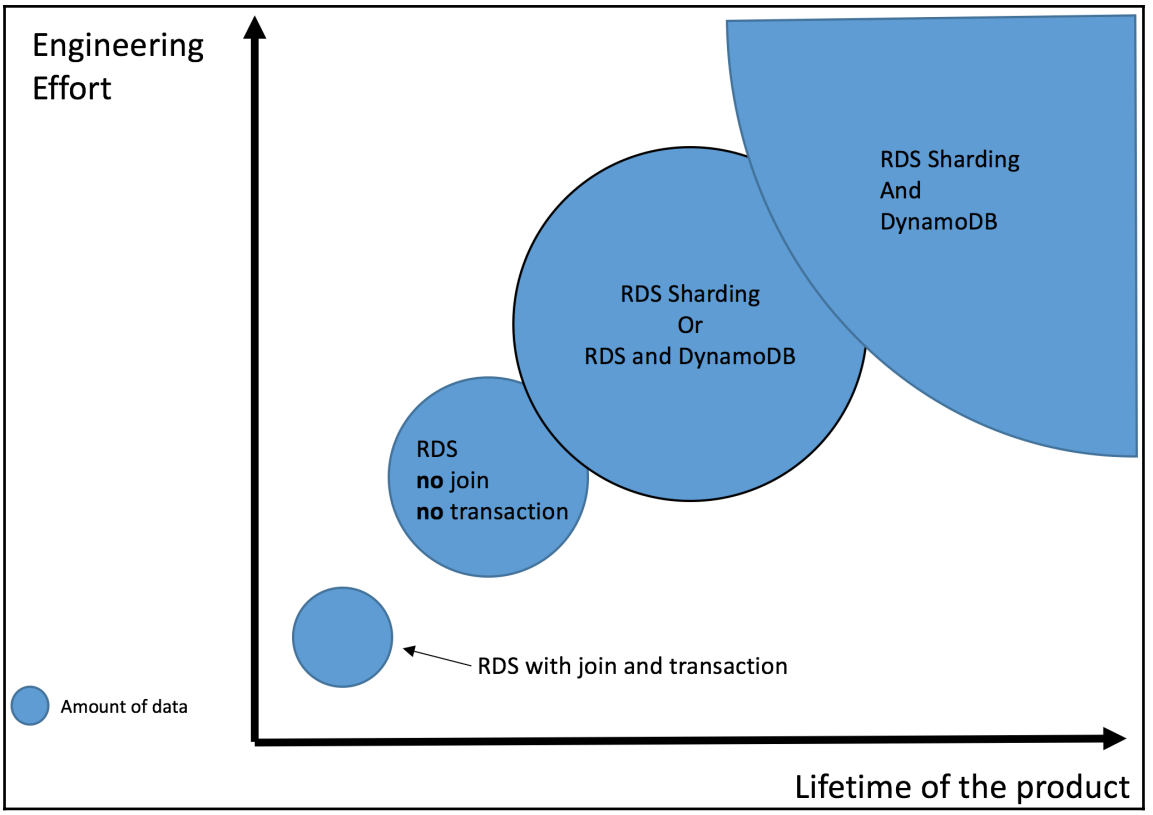

T2
Elastic Load Balancing
Real Time Processing Service
Queue
OffLine Processing Service

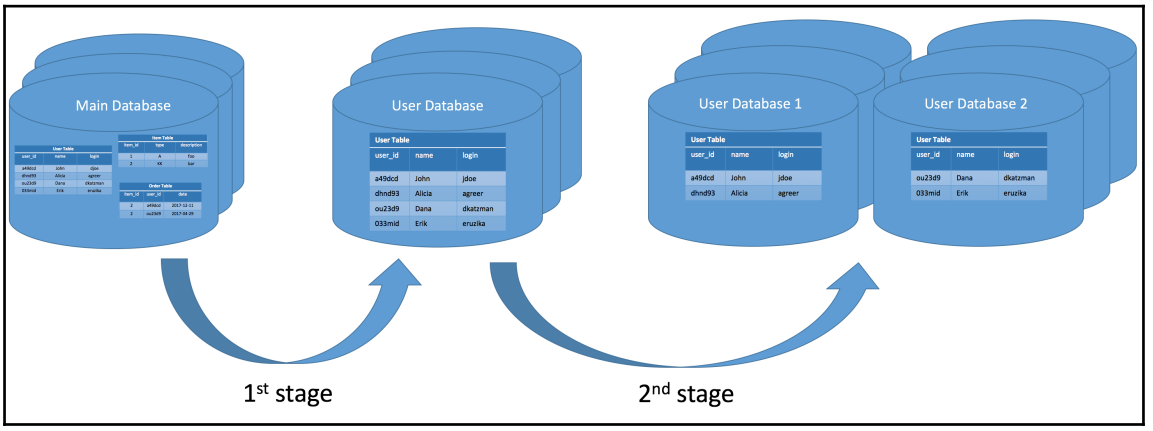

1,000
800
600
400
200
0
12/7 03:00
12/7 03:30
12/7 04:00
12/7 04:30
12/7 05:00
12/7 05:30
12/7 06:00
12/7 06:30
12/7 07:00
Provisioned
Consumed

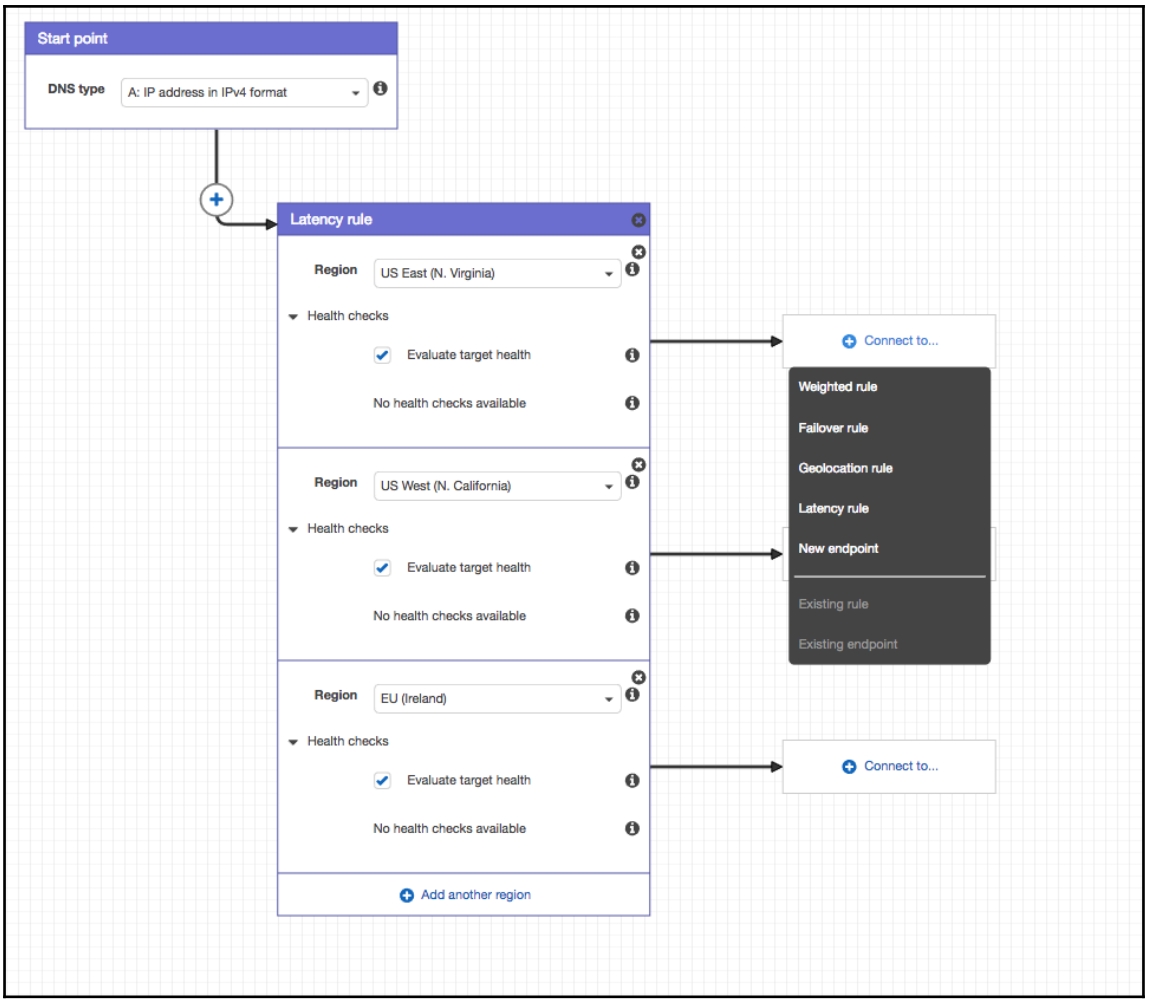

12/9
05:30
12/9
06:00
12/9
06:30
12/9
07:00
12/9
07:30
12/9
08:00
Provisioned
Consumed


Lambda funcion
Elastic Load Balancing

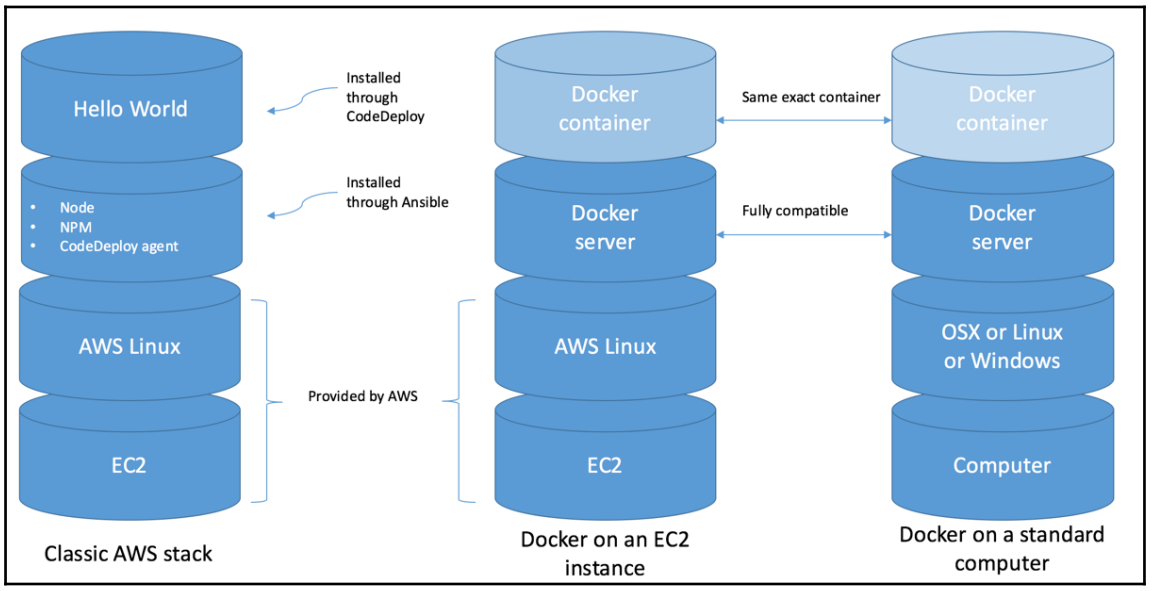

Lambda
API Gateway

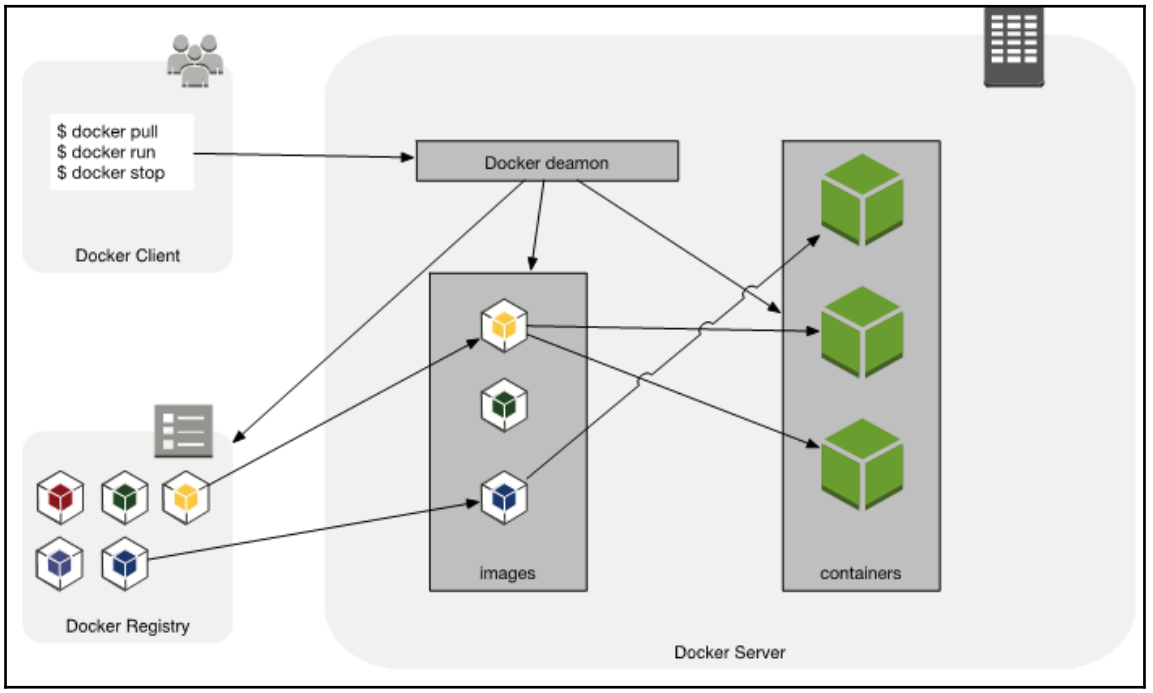

Engineering Effort
RDS Sharding And DynamoDB
RDS Sharding Or RDS and DynamoDB
RDS no join no transaction
RDS with join and transaction
Amount of data
Lifetime of the product


Main Database
User Database
User Database 1
User Database 2
1st stage
2nd stage


Start point
DNS type
A: IP address in IPv4 format
Latency rule
Region
US East (N. Virginia)
Health checks
Evaluate target health
No health checks available
Region
US West (N. California)
Health checks
Evaluate target health
No health checks available
Region
EU (Ireland)
Health checks
Evaluate target health
No health checks available
Add another region
Connect to...
Weighted rule
Failover rule
Geolocation rule
Latency rule
New endpoint
Existing rule
Existing endpoint
Connect to...

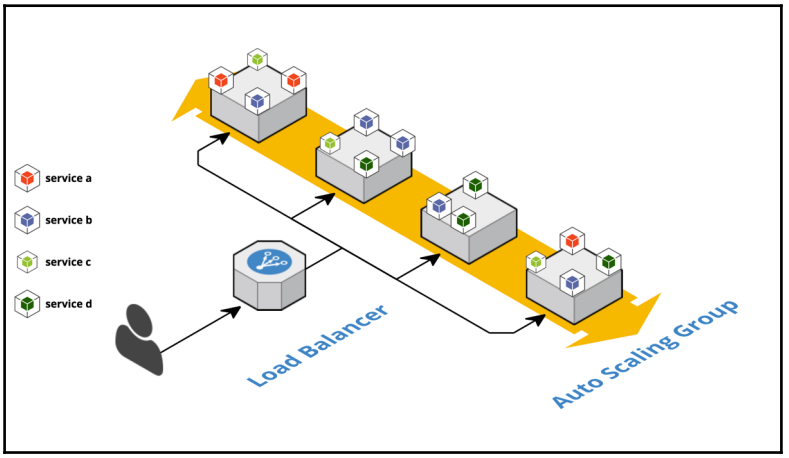
Chapter 06: Running Containers in AWS

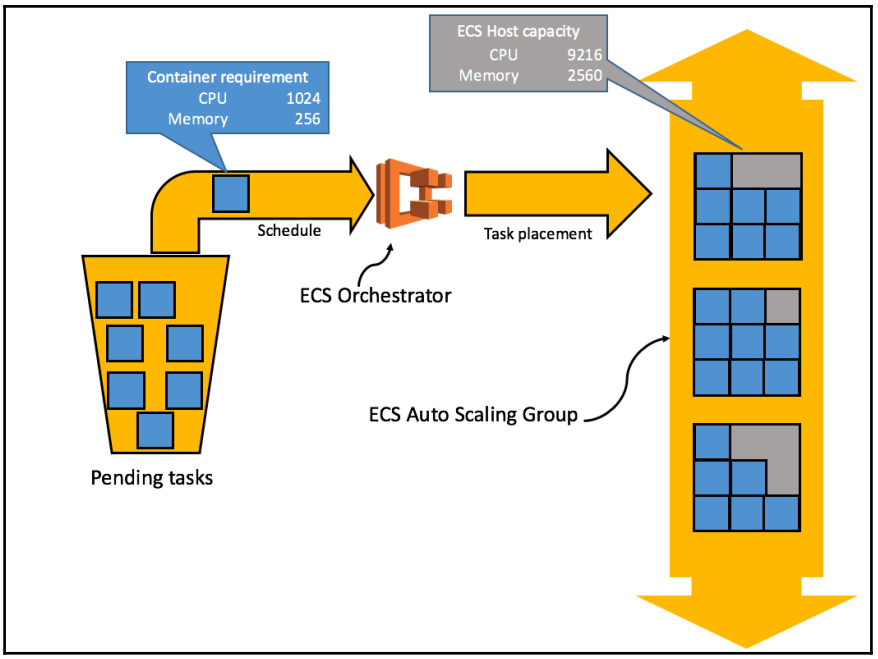


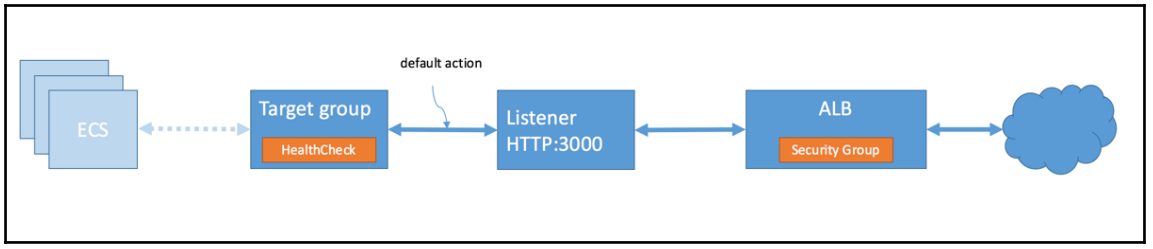


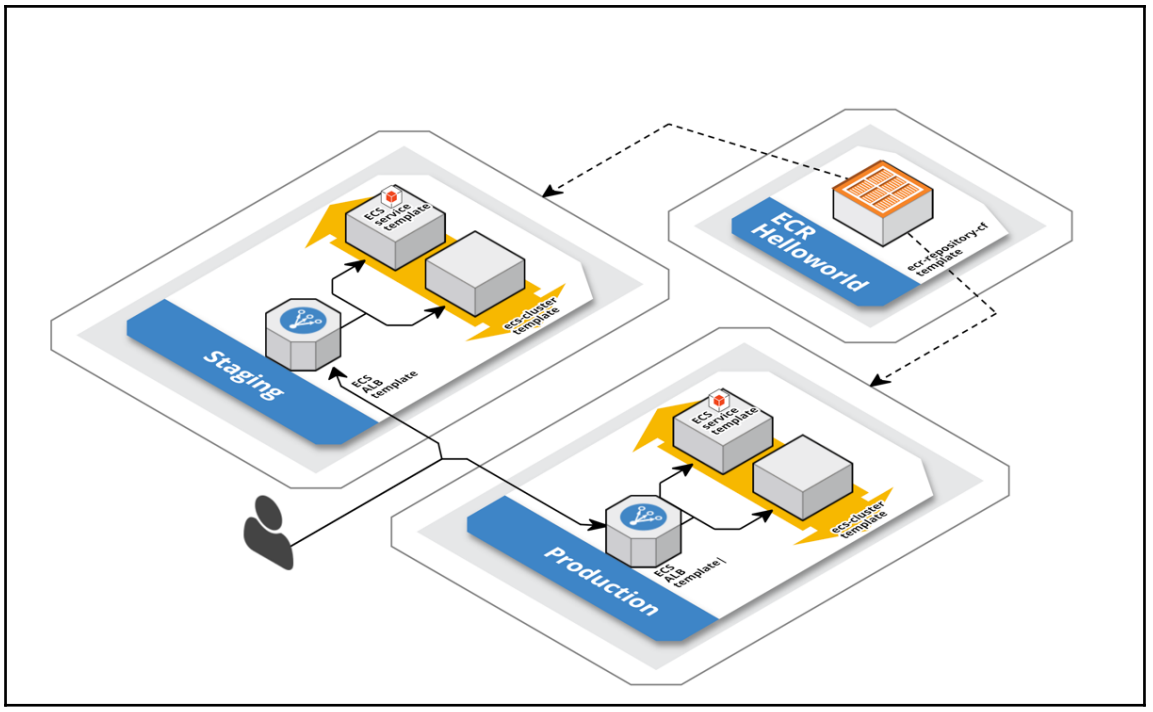
Supported tags and respective `Dockerfile` links

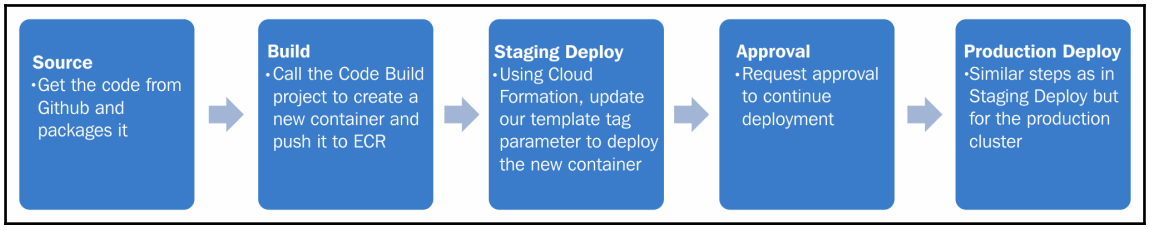
- `7.4.0`, `7.4`, `7`, `latest` (*7.4/Dockerfile*)
- `7.4.0-alpine`, `7.4-alpine`, `7-alpine`, `alpine` (*7.4/alpine/Dockerfile*)
- `7.4.0-onbuild`, `7.4-onbuild`, `7-onbuild`, `onbuild` (*7.4/onbuild/Dockerfile*)
- `7.4.0-slim`, `7.4-slim`, `7-slim`, `slim` (*7.4/slim/Dockerfile*)
- `7.4.0-wheezy`, `7.4-wheezy`, `7-wheezy`, `wheezy` (*7.4/wheezy/Dockerfile*)
- `6.9.4`, `6.9`, `6`, `boron` (*6.9/Dockerfile*)
- `6.9.4-alpine`, `6.9-alpine`, `6-alpine`, `boron-alpine` (*6.9/alpine/Dockerfile*)
- `6.9.4-onbuild`, `6.9-onbuild`, `6-onbuild`, `boron-onbuild` (*6.9/onbuild/Dockerfile*)
- `6.9.4-slim`, `6.9-slim`, `6-slim`, `boron-slim` (*6.9/slim/Dockerfile*)
- `6.9.4-wheezy`, `6.9-wheezy`, `6-wheezy`, `boron-wheezy` (*6.9/wheezy/Dockerfile*)
- `4.7.2`, `4.7`, `4`, `argon` (*4.7/Dockerfile*)
- `4.7.2-alpine`, `4.7-alpine`, `4-alpine`, `argon-alpine` (*4.7/alpine/Dockerfile*)
- `4.7.2-onbuild`, `4.7-onbuild`, `4-onbuild`, `argon-onbuild` (*4.7/onbuild/Dockerfile*)
- `4.7.2-slim`, `4.7-slim`, `4-slim`, `argon-slim` (*4.7/slim/Dockerfile*)
- `4.7.2-wheezy`, `4.7-wheezy`, `4-wheezy`, `argon-wheezy` (*4.7/wheezy/Dockerfile*)




ECS Host capacity
CPU 9216
Memory 2560
Container requirement
CPU 1024
Memory 256
Schedule
Task placement
ECS Orchestrator
ECS Auto Scaling Group
Pending tasks

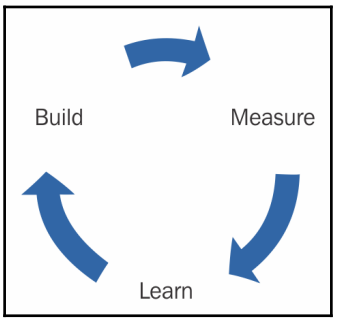

default action
ECS
Target group
HealthCheck
Listener
HTTP:3000
ALB
Security Group

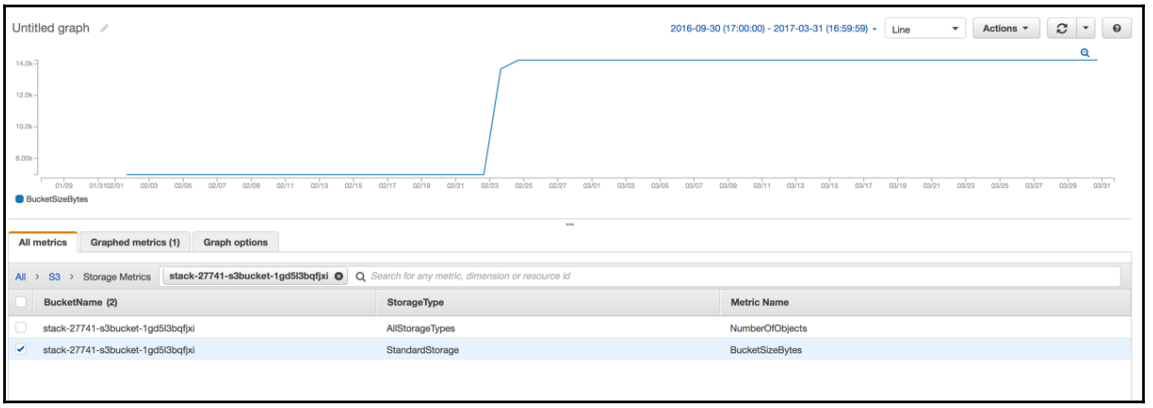

ECS service template
ecs-cluster template
Staging
ECS ALB template
ECR Helloworld
ecr-repository-cf template
ECS service template
ecs-cluster template
Production
ECS ALB template1

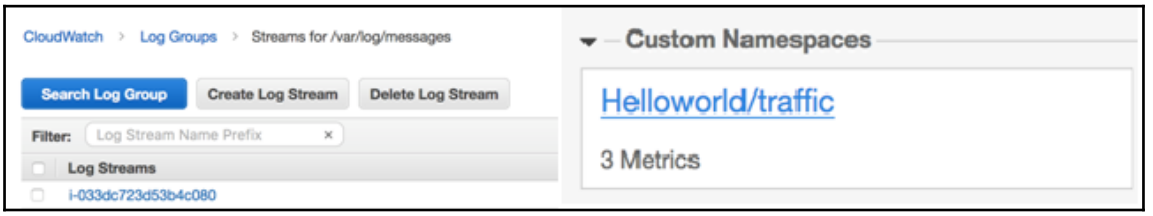

Source
•Get the code from Github and packages it
Build
•Call the Code Build project to create a new container and push it to ECR
Staging Deploy
•Using Cloud Formation, update our template tag parameter to deploy the new container
Approval
•Request approval to continue deployment
Production Deploy
•Similar steps as in Staging Deploy but for the production cluster

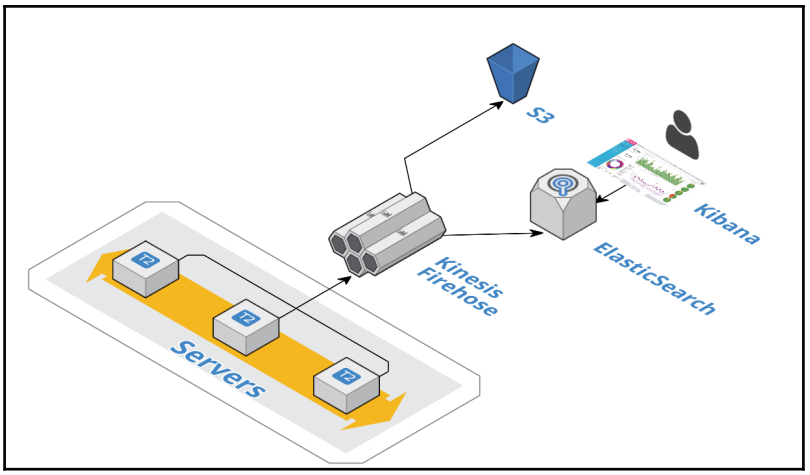
Source
GitHub

Chapter 07: Monitoring and Alerting





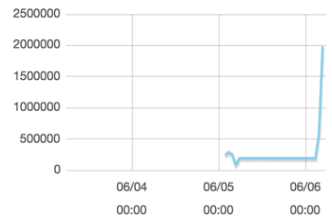




Delivery Stream metrics

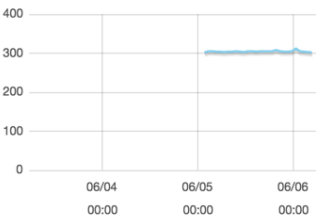
Go to CloudWatch for a complete list of Firehose metrics. Learn more.
All graphs are displayed in UTC time zone.

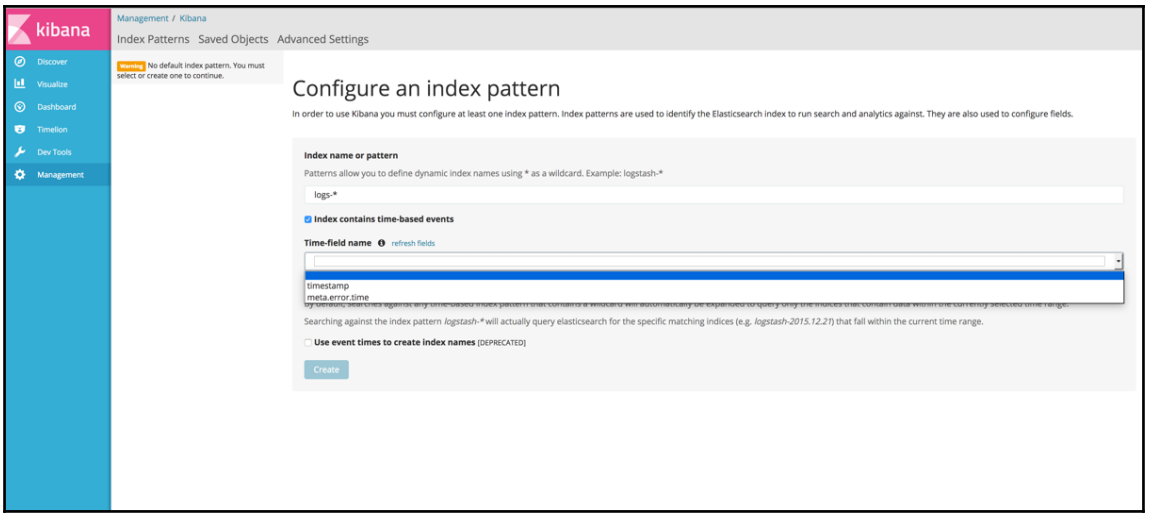
IncomingBytes (Sum)

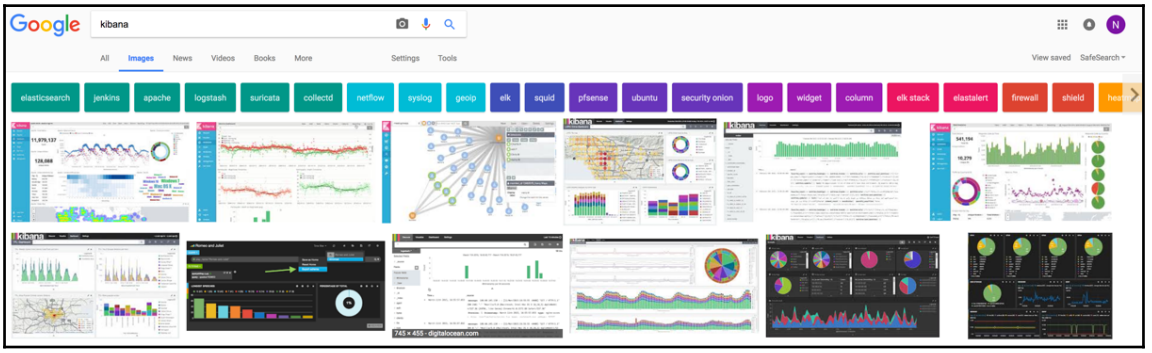


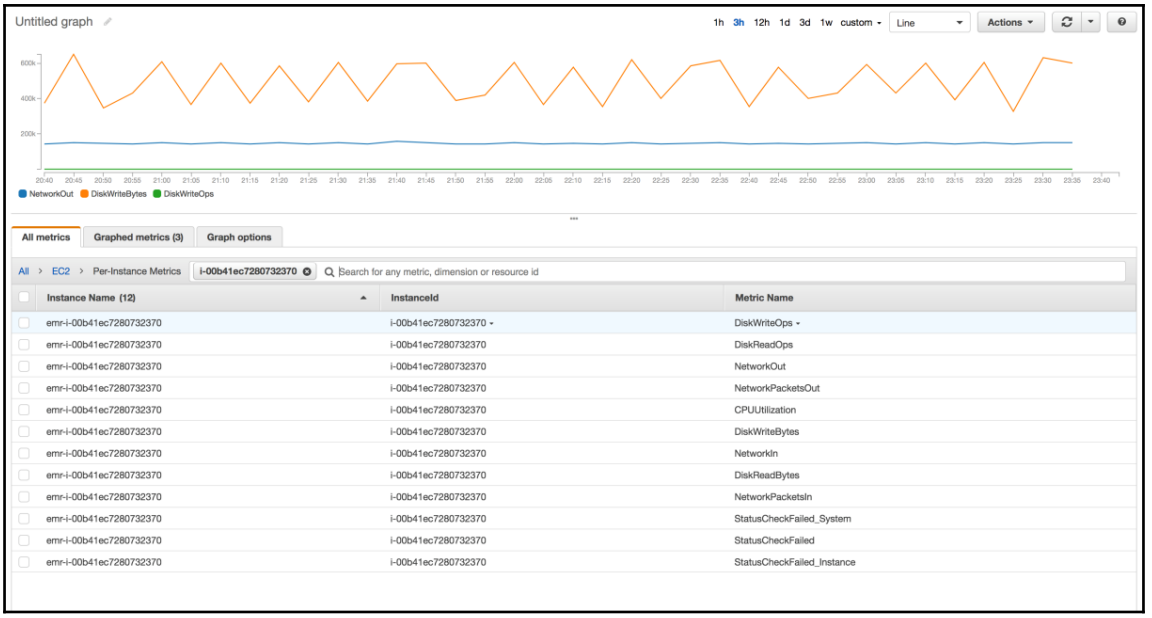
IncomingRecords (Sum)

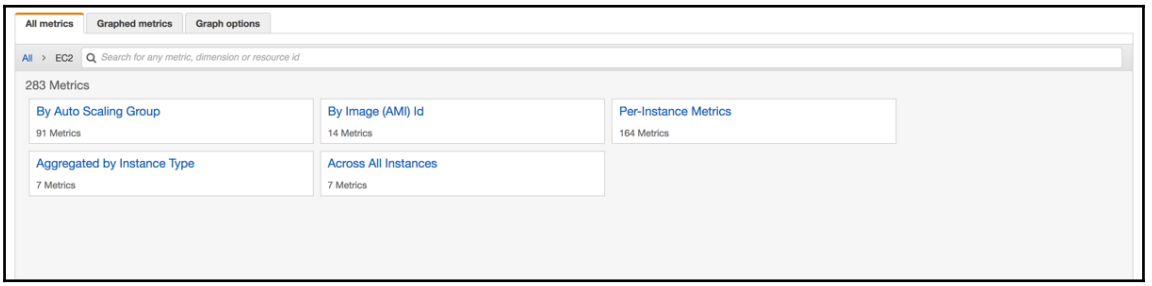
DeliveryToS3 DataFreshness (Maximum)

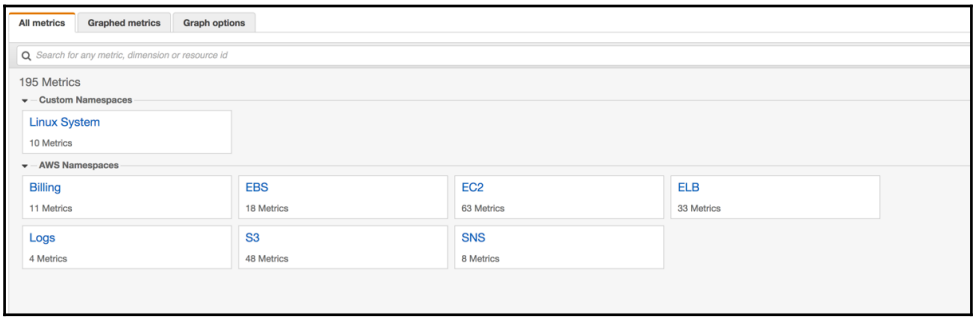


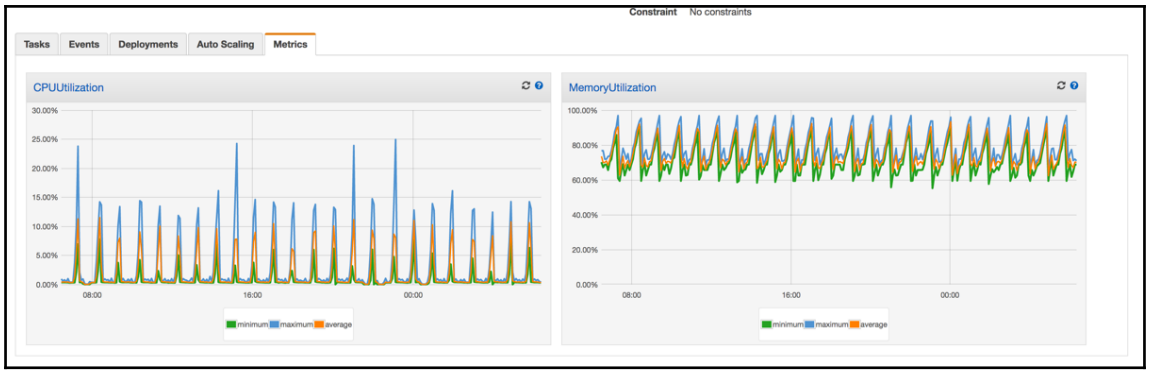

kibana
Management / Kibana
Index Patterns Saved Objects Advanced Settings
Discover
Visualize
Dashboard
Timelion
Dev Tools
Management
Warning No default index pattern. You must select or create one to continue.
Configure an index pattern
In order to use Kibana you must configure at least one index pattern. Index patterns are used to identify the Elasticsearch index to run search and analytics against. They are also used to configure fields.
Index name or pattern
Patterns allow you to define dynamic index names using * as a wildcard. Example: logstash-*
logs-*
Index contains time-based events
Time-field name refresh fields
timestamp
meta.error.time
Searching against the index pattern logstash-* will actually query elasticsearch for the specific matching indices (e.g. logstash-2015.12.21) that fall within the current time range.
Use event times to create index names [DEPRECATED]
Create

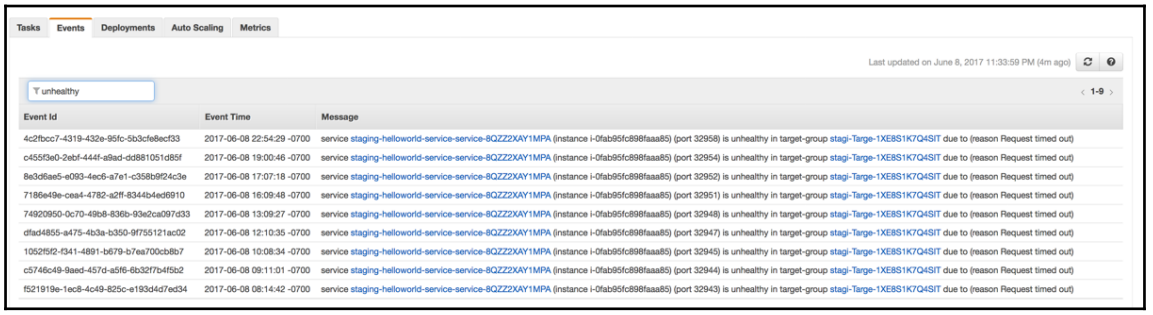

Google
kibana
All Images News Videos Books More Settings Tools
View saved SafeSearch
elasticsearch jenkins spache logstash suricata collectd netflow syslog geoip elk squid pfsense ubuntu security onion logo widget column elk stack elastalert firewall shield
745 × 455 · digitalocean.com

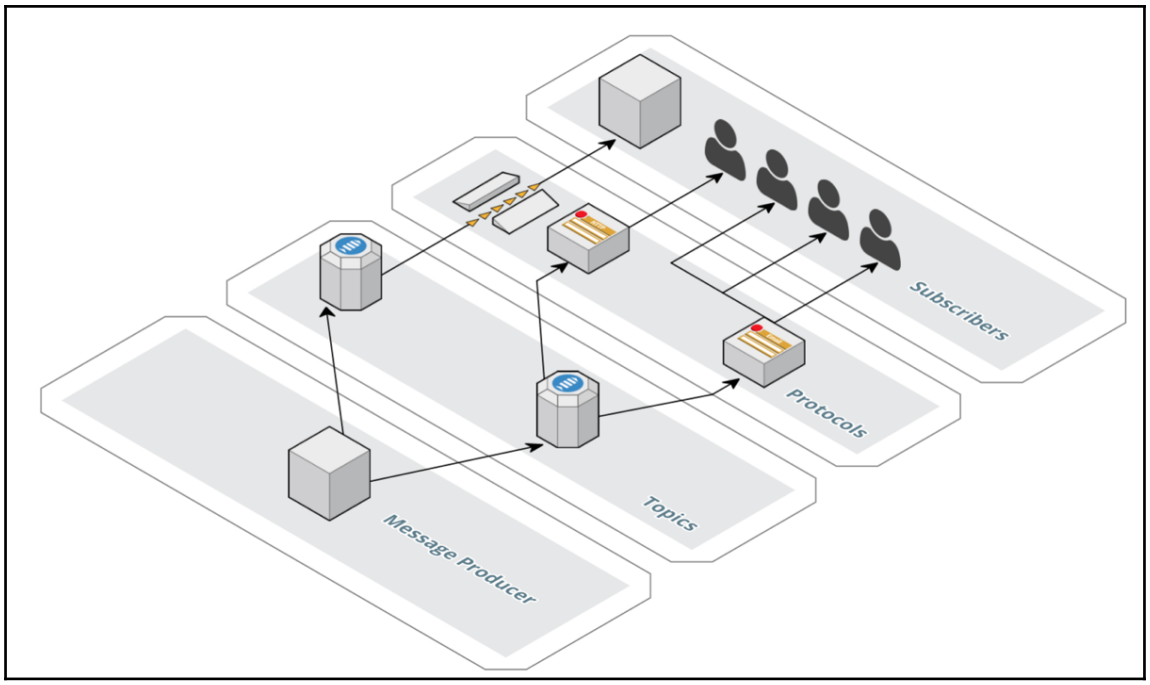

Untitled graph
1h 3h 12h 1d 3d 1w custom
Line
Actions
600k
400k
200k
20:40 20:45 20:50 20:55 21:00 21:05 21:10 21:15 21:20 21:25 21:30 21:35 21:40 21:45 21:50 21:55 22:00 22:05 22:10 22:15 22:20 22:25 22:30 22:35 22:40 22:45 22:50 22:55 23:00 23:05 23:10 23:15 23:20 23:25 23:30 23:35 23:40
NetworkOut
DiskWriteBytes
DiskWriteOps
All metrics
Graphed metrics (3)
Graph options
All > EC2 > Per-Instance Metrics
i-00b41ec7280732370
Search for any metric, dimension or resource id
Instance Name (12)
InstanceId
Metric Name
emr-i-00b41ec7280732370 i-00b41ec7280732370 DiskWriteOps
emr-i-00b41ec7280732370 i-00b41ec7280732370 DiskReadOps
emr-i-00b41ec7280732370 i-00b41ec7280732370 NetworkOut
emr-i-00b41ec7280732370 i-00b41ec7280732370 NetworkPacketsOut
emr-i-00b41ec7280732370 i-00b41ec7280732370 CPUUtilization
emr-i-00b41ec7280732370 i-00b41ec7280732370 DiskWriteBytes
emr-i-00b41ec7280732370 i-00b41ec7280732370 NetworkIn
emr-i-00b41ec7280732370 i-00b41ec7280732370 DiskReadBytes
emr-i-00b41ec7280732370 i-00b41ec7280732370 NetworkPacketsIn
emr-i-00b41ec7280732370 i-00b41ec7280732370 StatusCheckFailed_System
emr-i-00b41ec7280732370 i-00b41ec7280732370 StatusCheckFailed
emr-i-00b41ec7280732370 i-00b41ec7280732370 StatusCheckFailed_Instance


All metrics
Graphed metrics
Graph options
All > EC2
Search for any metric, dimension or resource id
283 Metrics
By Auto Scaling Group
91 Metrics
By Image (AMI) Id
14 Metrics
Per-Instance Metrics
164 Metrics
Aggregated by Instance Type
7 Metrics
Across All Instances
7 Metrics


All metrics
Graphed metrics
Graph options
Search for any metric, dimension or resource id
195 Metrics
Custom Namespaces
Linux System
10 Metrics
AWS Namespaces
Billing
11 Metrics
EBS
18 Metrics
EC2
63 Metrics
ELB
33 Metrics
Logs
4 Metrics
S3
48 Metrics
SNS
8 Metrics


Constraint No constraints
Tasks
Events
Deployments
Auto Scaling
Metrics
CPUUtilization
30.00%
25.00%
20.00%
15.00%
10.00%
5.00%
0.00%
08:00
16:00
00:00
minimum
maximum
average
MemoryUtilization
100.00%
80.00%
60.00%
40.00%
20.00%
0.00%
08:00
16:00
00:00
minimum
maximum
average


Tasks
Events
Deployments
Auto Scaling
Metrics
Last updated on June 8, 2017 11:33:59 PM (4m ago)
T unhealthy
1-9
Event Id
Event Time
Message
4c2fbcc7-4319-432e-95fc-5b3cfe8ecf33 2017-06-08 22:54:29 -0700 service staging-helloworld-service-service-8QZZ2XAY1MPA (instance i-0fab95fc898faaa85) (port 32958) is unhealthy in target-group stagi-Targe-1XE8S1K7Q4SIT due to (reason Request timed out)
c455f3e0-2ebf-444f-a9ad-dd881051d85f 2017-06-08 19:00:46 -0700 service staging-helloworld-service-service-8QZZ2XAY1MPA (instance i-0fab95fc898faaa85) (port 32954) is unhealthy in target-group stagi-Targe-1XE8S1K7Q4SIT due to (reason Request timed out)
8e3d6ae5-e093-4ec6-a7e1-c358b9f24c3e 2017-06-08 17:07:18 -0700 service staging-helloworld-service-service-8QZZ2XAY1MPA (instance i-0fab95fc898faaa85) (port 32952) is unhealthy in target-group stagi-Targe-1XE8S1K7Q4SIT due to (reason Request timed out)
7186e49e-cea4-4782-a2ff-8344b4ed6910 2017-06-08 16:09:48 -0700 service staging-helloworld-service-service-8QZZ2XAY1MPA (instance i-0fab95fc898faaa85) (port 32951) is unhealthy in target-group stagi-Targe-1XE8S1K7Q4SIT due to (reason Request timed out)
74920950-0c70-49b8-836b-93e2ca097d33 2017-06-08 13:09:27 -0700 service staging-helloworld-service-service-8QZZ2XAY1MPA (instance i-0fab95fc898faaa85) (port 32948) is unhealthy in target-group stagi-Targe-1XE8S1K7Q4SIT due to (reason Request timed out)
dfad4855-a475-4b3a-b350-9f755121ac02 2017-06-08 12:10:35 -0700 service staging-helloworld-service-service-8QZZ2XAY1MPA (instance i-0fab95fc898faaa85) (port 32947) is unhealthy in target-group stagi-Targe-1XE8S1K7Q4SIT due to (reason Request timed out)
1052f5f2-f341-4891-b679-b7ea700cb8b7 2017-06-08 10:08:34 -0700 service staging-helloworld-service-service-8QZZ2XAY1MPA (instance i-0fab95fc898faaa85) (port 32945) is unhealthy in target-group stagi-Targe-1XE8S1K7Q4SIT due to (reason Request timed out)
c5746c49-9aed-457d-a5f6-6b32f7b4f5b2 2017-06-08 09:11:01 -0700 service staging-helloworld-service-service-8QZZ2XAY1MPA (instance i-0fab95fc898faaa85) (port 32944) is unhealthy in target-group stagi-Targe-1XE8S1K7Q4SIT due to (reason Request timed out)
f521919e-1ec8-4c49-825c-e193d4d7ed34 2017-06-08 08:14:42 -0700 service staging-helloworld-service-service-8QZZ2XAY1MPA (instance i-0fab95fc898faaa85) (port 32943) is unhealthy in target-group stagi-Targe-1XE8S1K7Q4SIT due to (reason Request timed out)

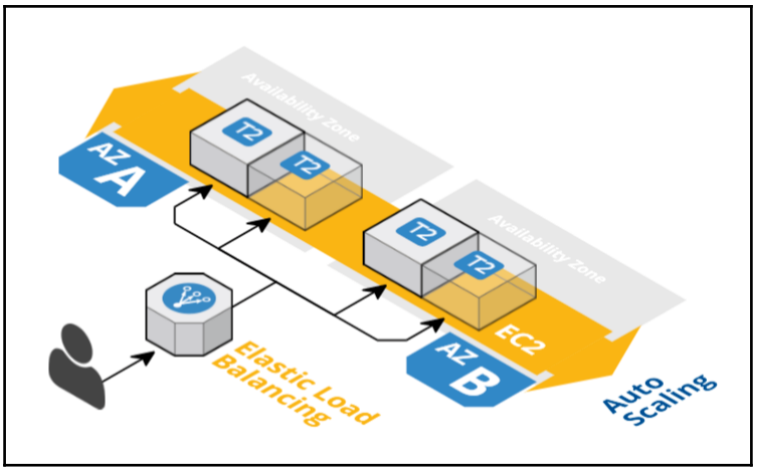


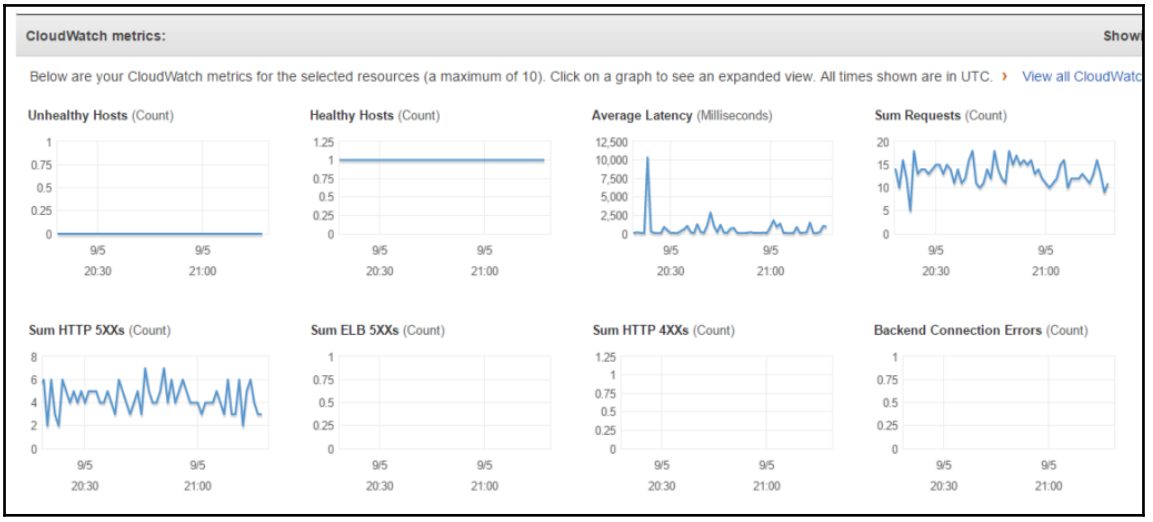
AWS Notifications <no-reply@sns.amazonaws.com>
to me

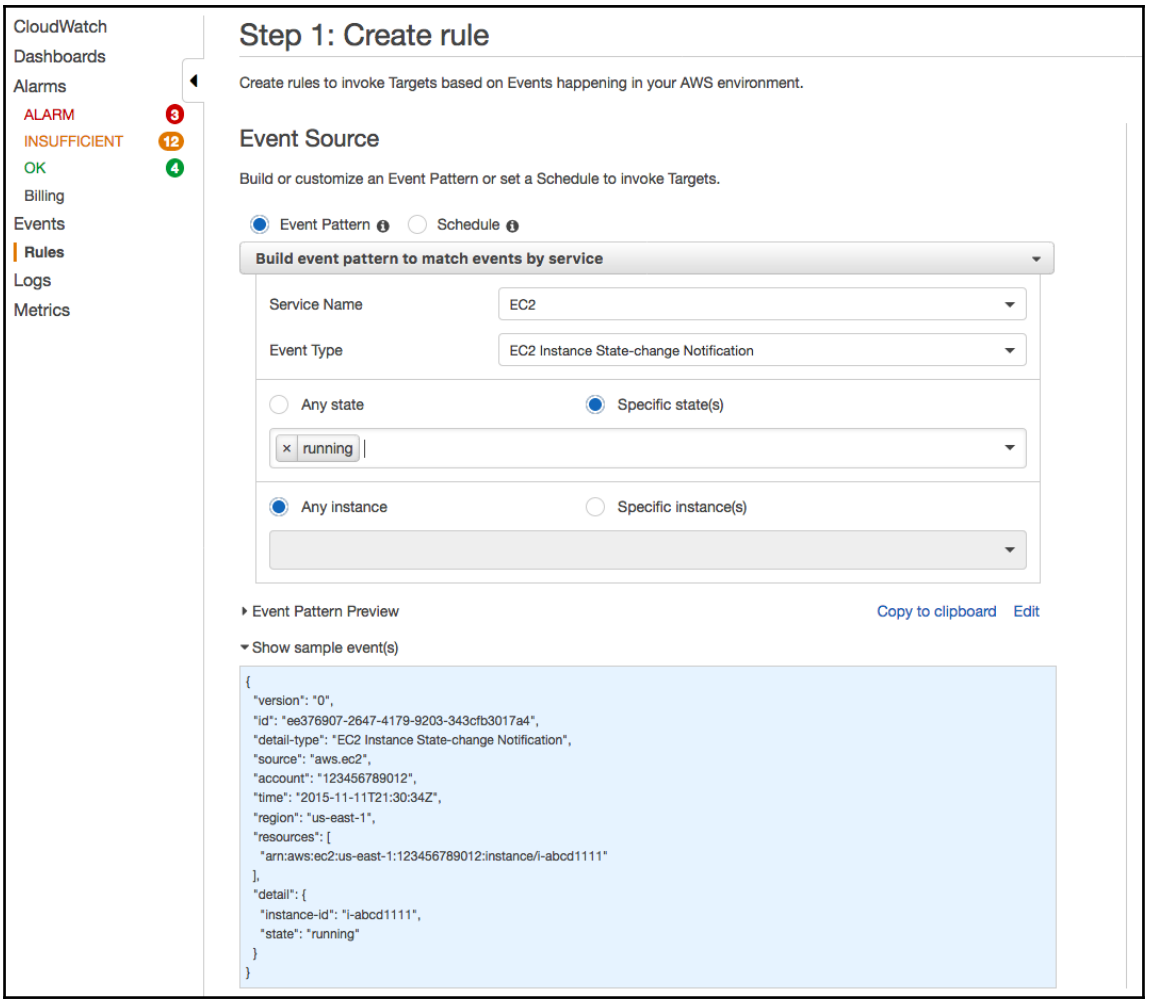
You have chosen to subscribe to the topic:
arn:aws:sns:us-east-1:511912822958:alert-email

To confirm this subscription, click or visit the link below (If this was in error no action is necessary):
Confirm subscription

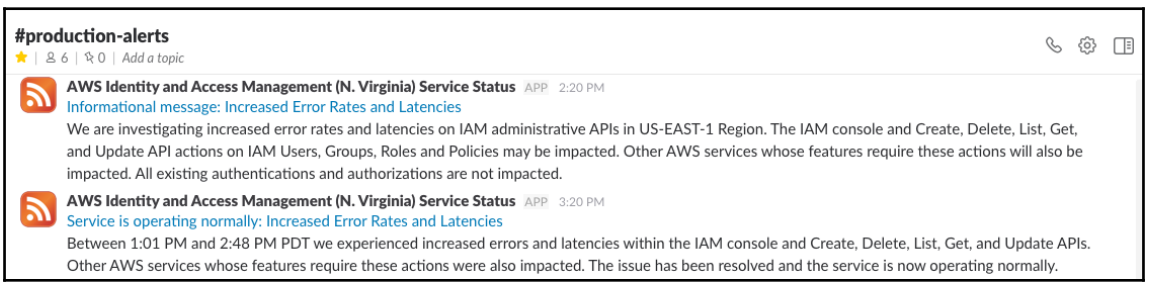
Please do not reply directly to this email. If you wish to remove yourself from receiving all future SNS subscription confirmation requests please send an email to sns-opt-out

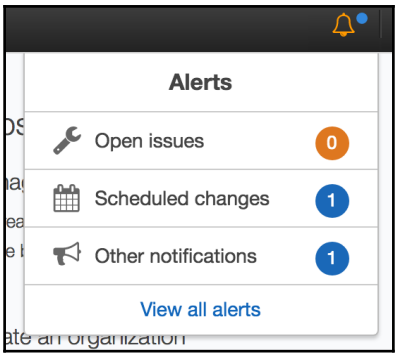

Availability Zone
AZ A
T2
T2
Availability Zone
T2
T2
EC2
AZ B
Elastic Load Balancing
Auto Scaling


CloudWatch metrics:
Show
Below are your CloudWatch metrics for the selected resources (a maximum of 10). Click on a graph to see an expanded view. All times shown are in UTC. › View all CloudWatc
Unhealthy Hosts (Count)
Healthy Hosts (Count)
Average Latency (Milliseconds)
Sum Requests (Count)
Sum HTTP 5XXs (Count)
Sum ELB 5XXs (Count)
Sum HTTP 4XXs (Count)
Backend Connection Errors (Count)
9/5 20:30
9/5 21:00

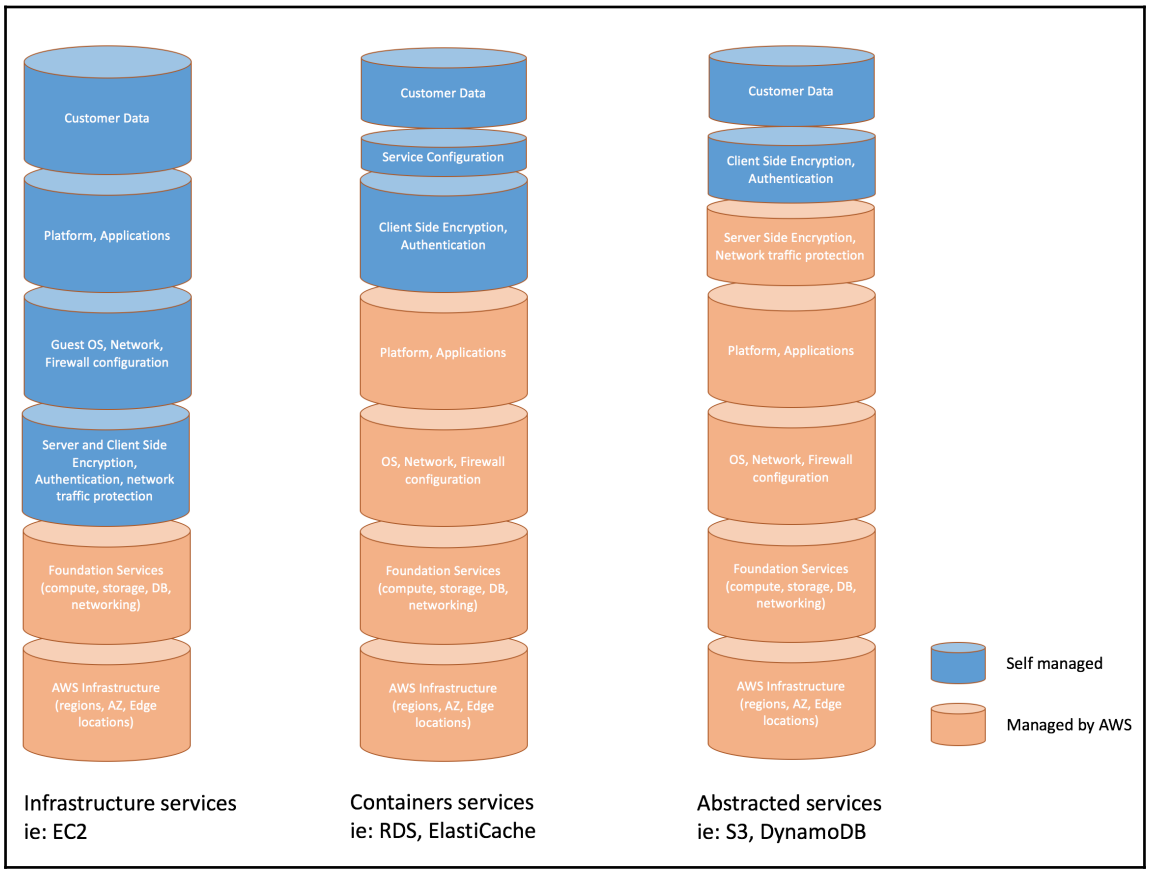


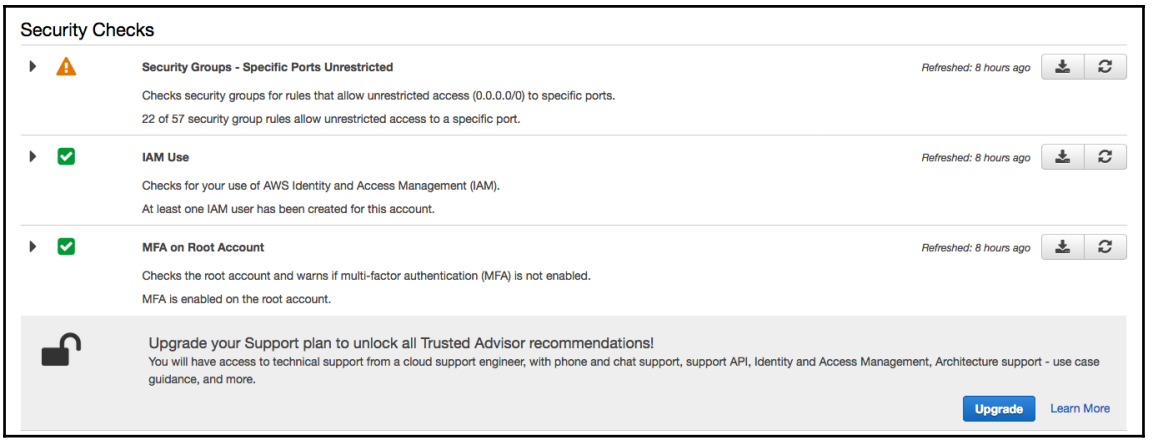
☐	OK	DiskSpaceUtilization-i-01d531a579ddb3b09-alert-sms	DiskSpaceUtilization >= 80 for 10 minutes
☐	OK	DiskSpaceUtilization-i-01d531a579ddb3b09-alert-email	DiskSpaceUtilization >= 60 for 10 minutes

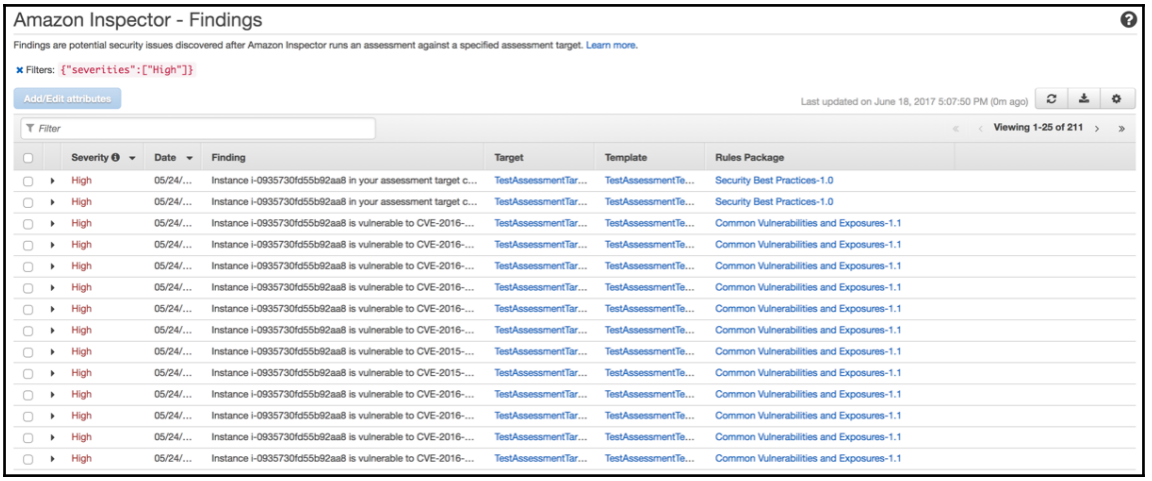


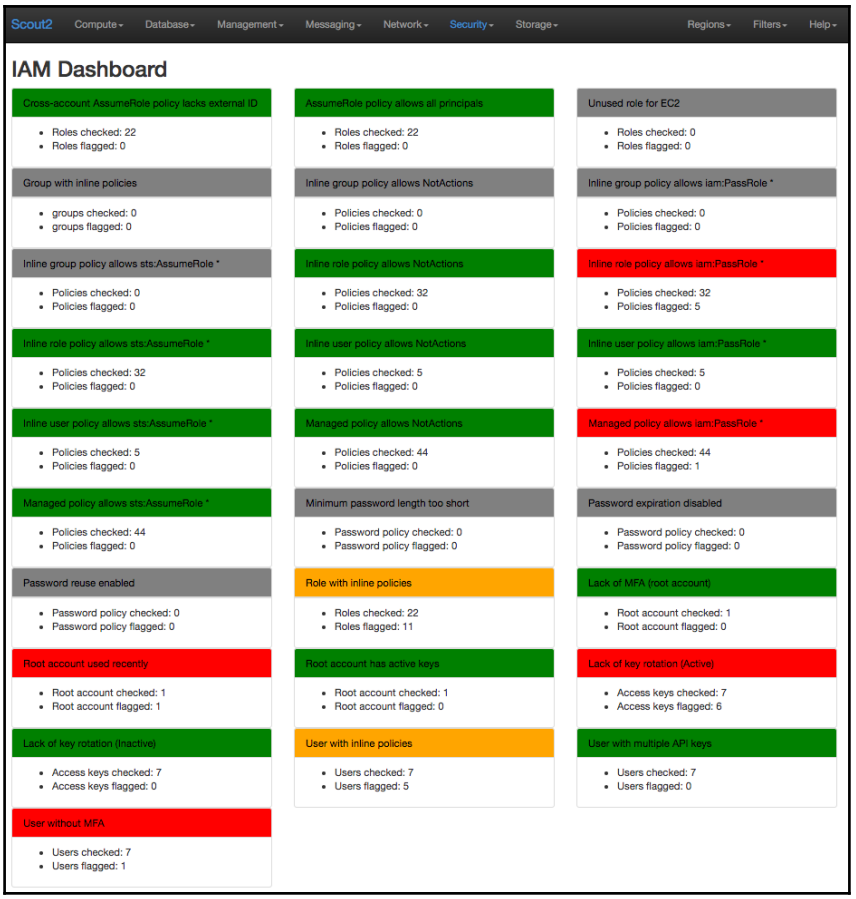

Alerts
Open issues
0
Scheduled changes
1
Other notifications
1
View all alerts

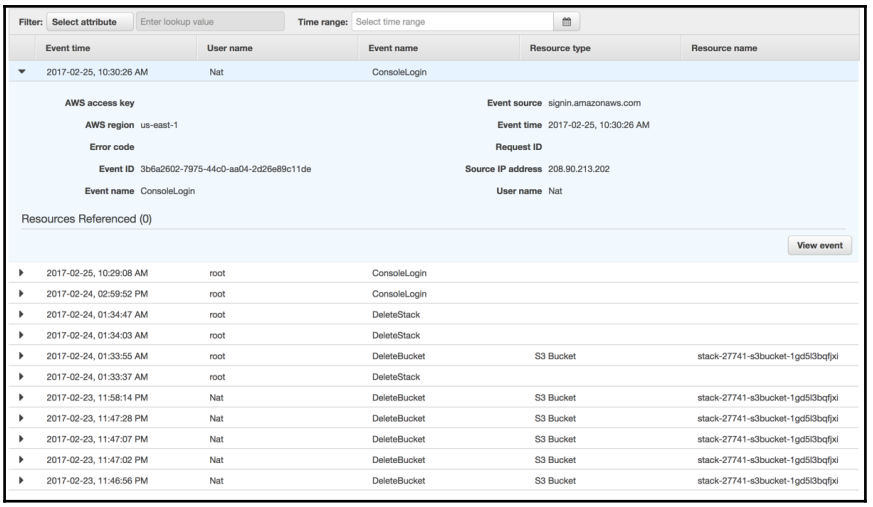
Chapter 08: Hardening the Security of Your AWS Environment

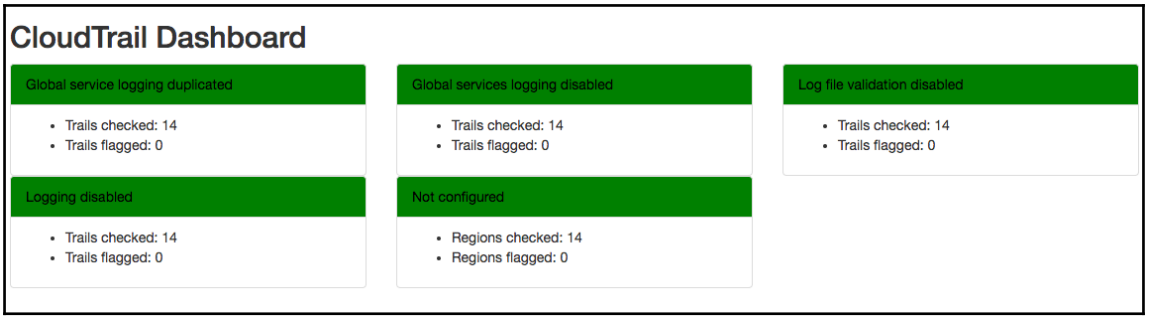


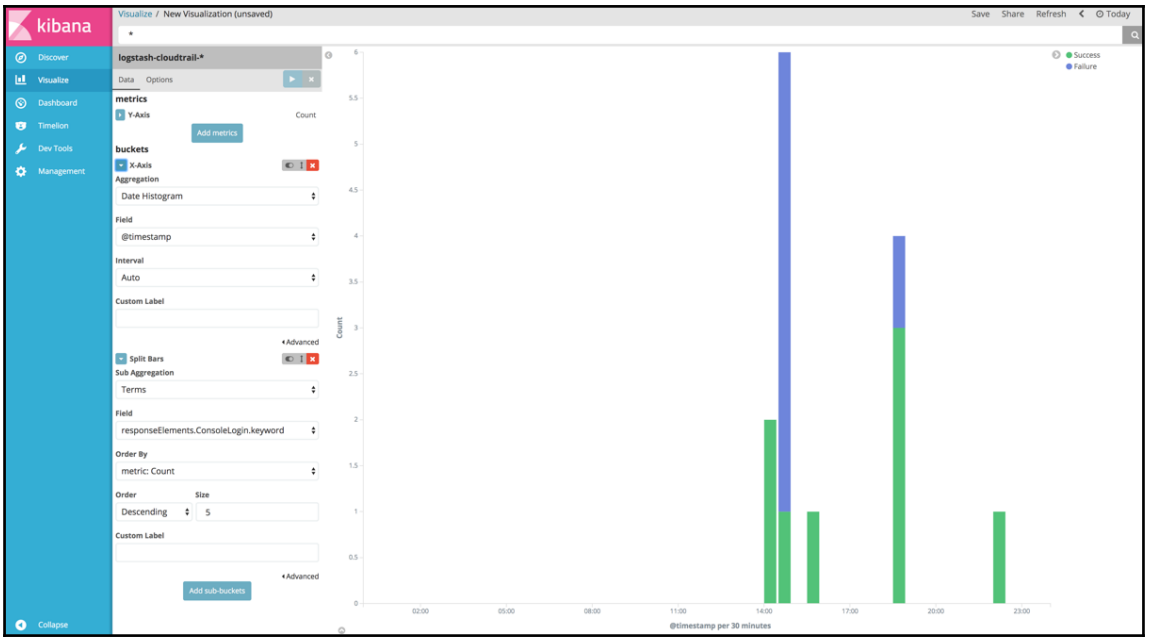

Security Checks
Security Groups - Specific Ports Unrestricted
Refreshed: 8 hours ago
Checks security groups for rules that allow unrestricted access (0.0.0.0/0) to specific ports.
22 of 57 security group rules allow unrestricted access to a specific port.
IAM Use
Refreshed: 8 hours ago
Checks for your use of AWS Identity and Access Management (IAM).
At least one IAM user has been created for this account.
MFA on Root Account
Refreshed: 8 hours ago
Checks the root account and warns if multi-factor authentication (MFA) is not enabled.
MFA is enabled on the root account.
Upgrade your Support plan to unlock all Trusted Advisor recommendations!
You will have access to technical support from a cloud support engineer, with phone and chat support, support API, Identity and Access Management, Architecture support - use case guidance, and more.
Upgrade
Learn More

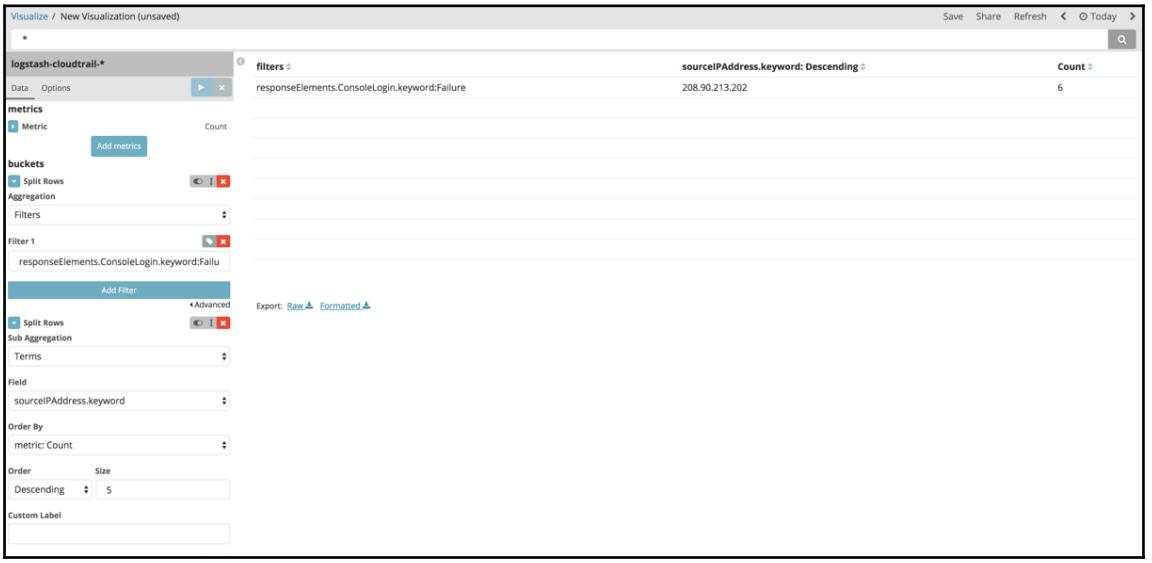

Amazon Inspector - Findings
Findings are potential security issues discovered after Amazon Inspector runs an assessment against a specified assessment target. Learn more.
Filters: {"severities":["High"]}
Add/Edit attributes
Last updated on June 18, 2017 5:07:50 PM (0m ago)
Filter
Viewing 1-25 of 211
Severity
Date
Finding
Target
Template
Rules Package
High 05/24/... Instance i-0935730fd55b92aa8 in your assessment target c... TestAssessmentTar... TestAssessmentTe... Security Best Practices-1.0
High 05/24/... Instance i-0935730fd55b92aa8 in your assessment target c... TestAssessmentTar... TestAssessmentTe... Security Best Practices-1.0
High 05/24/... Instance i-0935730fd55b92aa8 is vulnerable to CVE-2016-... TestAssessmentTar... TestAssessmentTe... Common Vulnerabilities and Exposures-1.1
High 05/24/... Instance i-0935730fd55b92aa8 is vulnerable to CVE-2016-... TestAssessmentTar... TestAssessmentTe... Common Vulnerabilities and Exposures-1.1
High 05/24/... Instance i-0935730fd55b92aa8 is vulnerable to CVE-2016-... TestAssessmentTar... TestAssessmentTe... Common Vulnerabilities and Exposures-1.1
High 05/24/... Instance i-0935730fd55b92aa8 is vulnerable to CVE-2016-... TestAssessmentTar... TestAssessmentTe... Common Vulnerabilities and Exposures-1.1
High 05/24/... Instance i-0935730fd55b92aa8 is vulnerable to CVE-2016-... TestAssessmentTar... TestAssessmentTe... Common Vulnerabilities and Exposures-1.1
High 05/24/... Instance i-0935730fd55b92aa8 is vulnerable to CVE-2016-... TestAssessmentTar... TestAssessmentTe... Common Vulnerabilities and Exposures-1.1
High 05/24/... Instance i-0935730fd55b92aa8 is vulnerable to CVE-2015-... TestAssessmentTar... TestAssessmentTe... Common Vulnerabilities and Exposures-1.1
High 05/24/... Instance i-0935730fd55b92aa8 is vulnerable to CVE-2015-... TestAssessmentTar... TestAssessmentTe... Common Vulnerabilities and Exposures-1.1
High 05/24/... Instance i-0935730fd55b92aa8 is vulnerable to CVE-2016-... TestAssessmentTar... TestAssessmentTe... Common Vulnerabilities and Exposures-1.1
High 05/24/... Instance i-0935730fd55b92aa8 is vulnerable to CVE-2016-... TestAssessmentTar... TestAssessmentTe... Common Vulnerabilities and Exposures-1.1
High 05/24/... Instance i-0935730fd55b92aa8 is vulnerable to CVE-2016-... TestAssessmentTar... TestAssessmentTe... Common Vulnerabilities and Exposures-1.1
High 05/24/... Instance i-0935730fd55b92aa8 is vulnerable to CVE-2016-... TestAssessmentTar... TestAssessmentTe... Common Vulnerabilities and Exposures-1.1

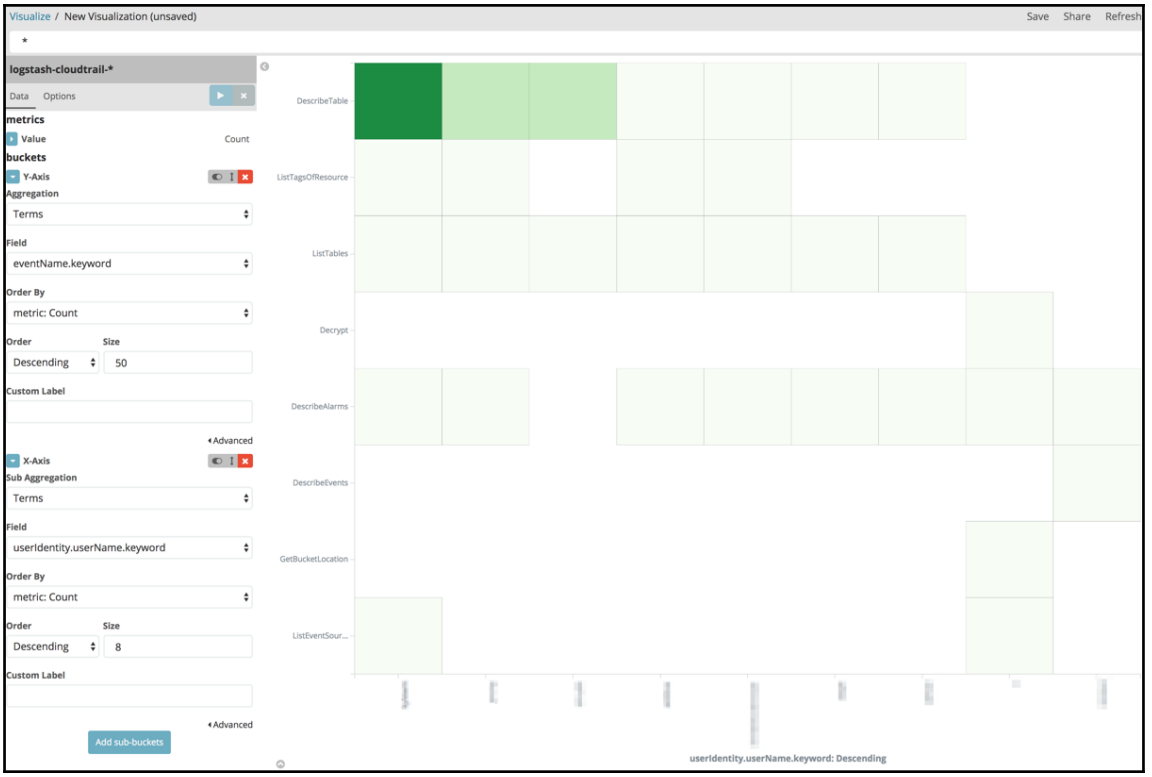

Scout2
Compute
Database
Management
Messaging
Network
Security
Storage
Regions
Filters
Help
IAM Dashboard
Cross-account AssumeRole policy lacks external ID
Roles checked: 22
Roles flagged: 0
AssumeRole policy allows all principals
Roles checked: 22
Roles flagged: 0
Unused role for EC2
Roles checked: 0
Roles flagged: 0
Group with inline policies
groups checked: 0
groups flagged: 0
Inline group policy allows NotActions
Policies checked: 0
Policies flagged: 0
Inline group policy allows iam:PassRole *
Policies checked: 0
Policies flagged: 0
Inline group policy allows sts:AssumeRole *
Policies checked: 0
Policies flagged: 0
Inline role policy allows NotActions
Policies checked: 32
Policies flagged: 0
Inline role policy allows iam:PassRole *
Policies checked: 32
Policies flagged: 5
Inline role policy allows sts:AssumeRole *
Policies checked: 32
Policies flagged: 0
Inline user policy allows NotActions
Policies checked: 5
Policies flagged: 0
Inline user policy allows iam:PassRole *
Policies checked: 5
Policies flagged: 0
Inline user policy allows sts:AssumeRole *
Policies checked: 5
Policies flagged: 0
Managed policy allows NotActions
Policies checked: 44
Policies flagged: 0
Managed policy allows iam:PassRole *
Policies checked: 44
Policies flagged: 1
Managed policy allows sts:AssumeRole *
Policies checked: 44
Policies flagged: 0
Minimum password length too short
Password policy checked: 0
Password policy flagged: 0
Password expiration disabled
Password policy checked: 0
Password policy flagged: 0
Password reuse enabled
Password policy checked: 0
Password policy flagged: 0
Role with inline policies
Roles checked: 22
Roles flagged: 11
Lack of MFA (root account)
Root account checked: 1
Root account flagged: 0
Root account used recently
Root account checked: 1
Root account flagged: 1
Root account has active keys
Root account checked: 1
Root account flagged: 0
Lack of key rotation (Active)
Access keys checked: 7
Access keys flagged: 6
Lack of key rotation (Inactive)
Access keys checked: 7
Access keys flagged: 0
User with inline policies
Users checked: 7
Users flagged: 5
User with multiple API keys
Users checked: 7
Users flagged: 0
User without MFA
Users checked: 7
Users flagged: 1

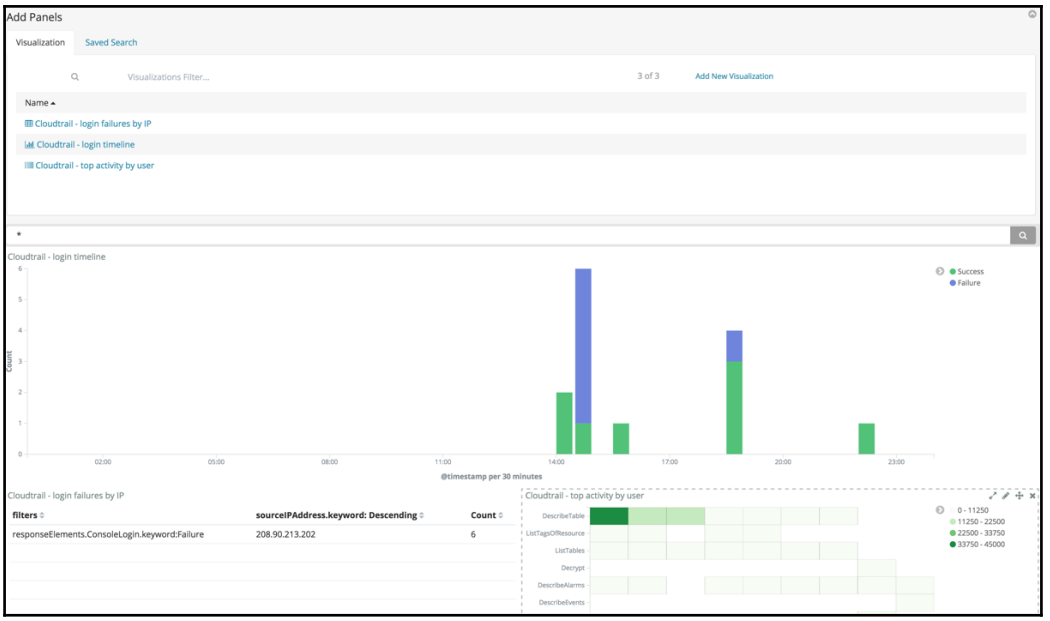

Filter: Select attribute
Enter lookup value
Time range: Select time range
Event time
User name
Event name
Resource type
Resource name
2017-02-25, 10:30:26 AM
Nat
ConsoleLogin
AWS access key
AWS region us-east-1
Error code
Event ID 3b6a2602-7975-44c0-aa04-2d26e89c11de
Event name ConsoleLogin
Event source signin.amazonaws.com
Event time 2017-02-25, 10:30:26 AM
Request ID
Source IP address 208.90.213.202
User name Nat
Resources Referenced (0)
View event
2017-02-25, 10:29:08 AM root ConsoleLogin
2017-02-24, 02:59:52 PM root ConsoleLogin
2017-02-24, 01:34:47 AM root DeleteStack
2017-02-24, 01:34:03 AM root DeleteStack
2017-02-24, 01:33:55 AM root DeleteBucket S3 Bucket stack-27741-s3bucket-1gd5l3bqfjxi
2017-02-24, 01:33:37 AM root DeleteStack
2017-02-23, 11:58:14 PM Nat DeleteBucket S3 Bucket stack-27741-s3bucket-1gd5l3bqfjxi
2017-02-23, 11:47:28 PM Nat DeleteBucket S3 Bucket stack-27741-s3bucket-1gd5l3bqfjxi
2017-02-23, 11:47:07 PM Nat DeleteBucket S3 Bucket stack-27741-s3bucket-1gd5l3bqfjxi
2017-02-23, 11:47:02 PM Nat DeleteBucket S3 Bucket stack-27741-s3bucket-1gd5l3bqfjxi
2017-02-23, 11:46:56 PM Nat DeleteBucket S3 Bucket stack-27741-s3bucket-1gd5l3bqfjxi

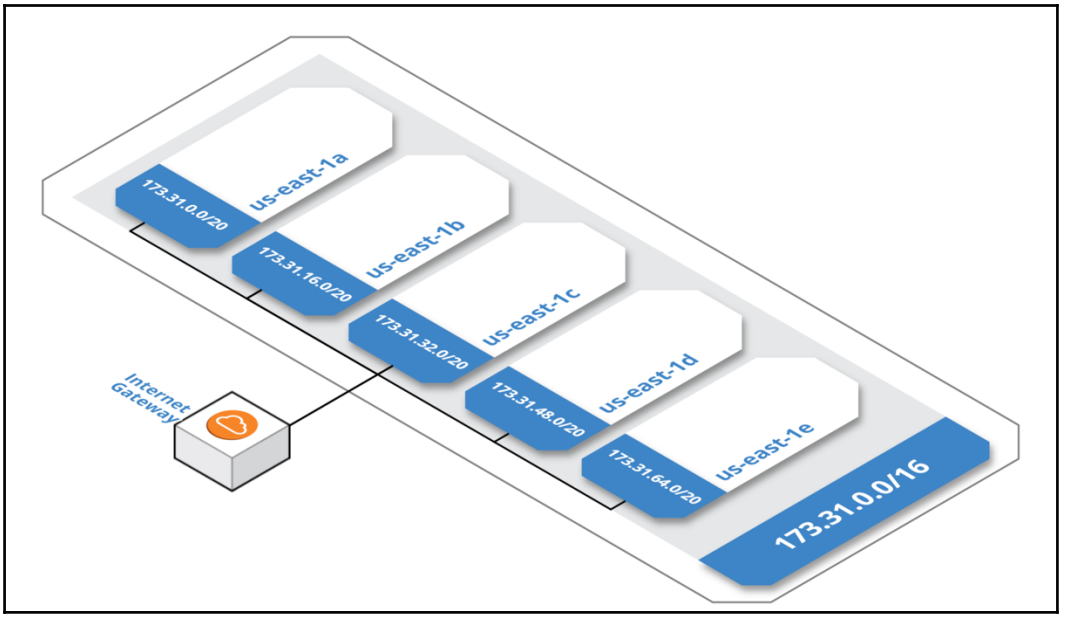

CloudTrail Dashboard
Global service logging duplicated
Trails checked: 14
Trails flagged: 0
Global services logging disabled
Trails checked: 14
Trails flagged: 0
Log file validation disabled
Trails checked: 14
Trails flagged: 0
Logging disabled
Trails checked: 14
Trails flagged: 0
Not configured
Regions checked: 14
Regions flagged: 0

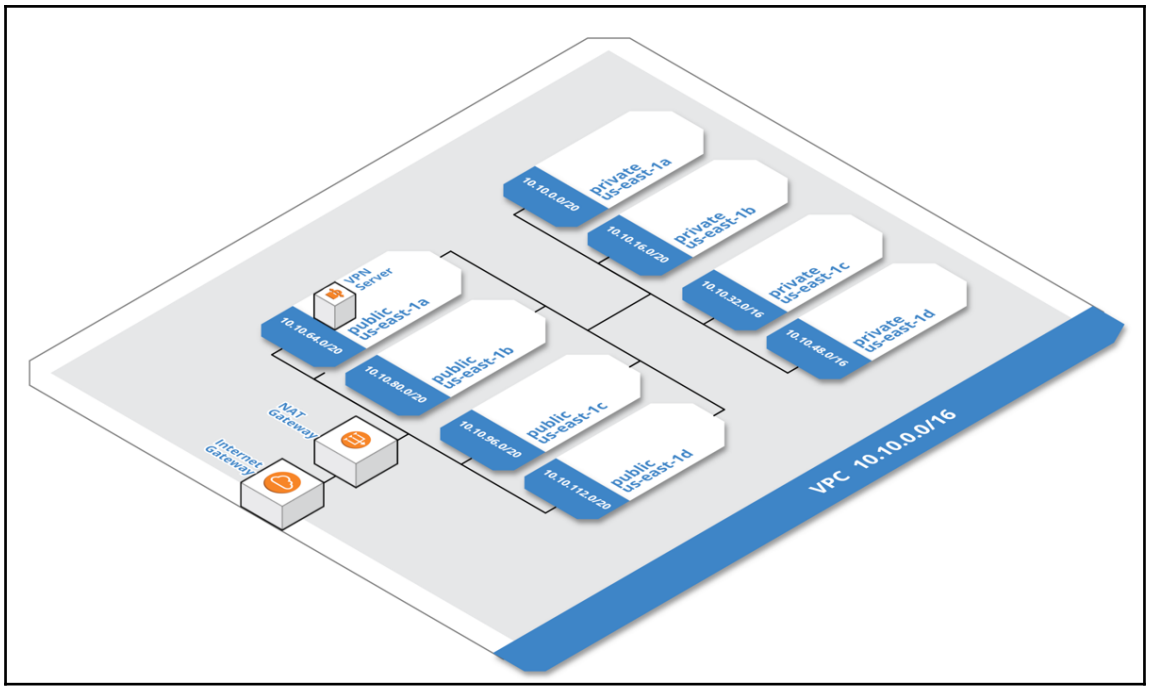

kibana
Visualize / New Visualization (unsaved)
Save
Share
Refresh
Today
Discover
Visualize
Dashboard
Timelion
Dev Tools
Management
Collapse
logstash-cloudtrail-*
Data
Options
metrics
Y-Axis
Count
Add metrics
buckets
X-Axis
Aggregation
Date Histogram
Field
@timestamp
Interval
Auto
Custom Label
Advanced
Split Bars
Sub Aggregation
Terms
Field
responseElements.ConsoleLogin.keyword
Order By
metric: Count
Order
Size
Descending
5
Custom Label
Advanced
Add sub-buckets
Success
Failure
Count
@timestamp per 30 minutes


Visualize / New Visualization (unsaved)
Save
Share
Refresh
Today
logstash-cloudtrail-*
Data
Options
metrics
Metric
Count
Add metrics
buckets
Split Rows
Aggregation
Filters
Filter 1
responseElements.ConsoleLogin.keyword:Failu
Add Filter
Advanced
Split Rows
Sub Aggregation
Terms
Field
sourceIPAddress.keyword
Order By
metric: Count
Order
Size
Descending
5
Custom Label
filters
sourceIPAddress.keyword: Descending
Count
responseElements.ConsoleLogin.keyword:Failure
208.90.213.202
6
Export: Raw Formatted


Visualize / New Visualization (unsaved)
Save
Share
Refresh
*
logstash-cloudtrail-*
Data
Options
metrics
Value
Count
buckets
Y-Axis
Aggregation
Terms
Field
eventName.keyword
Order By
metric: Count
Order
Size
Descending
50
Custom Label
Advanced
X-Axis
Sub Aggregation
Terms
Field
userIdentity.userName.keyword
Order By
metric: Count
Order
Size
Descending
8
Custom Label
Advanced
Add sub-buckets
DescribeTable
ListTagsOfResource
ListTables
Decrypt
DescribeAlarms
DescribeEvents
GetBucketLocation
ListEventSour...
userIdentity.userName.keyword: Descending


Add Panels
Visualization
Saved Search
Visualizations Filter...
3 of 3
Add New Visualization
Name
Cloudtrail - login failures by IP
Cloudtrail - login timeline
Cloudtrail - top activity by user
Cloudtrail - login timeline
Success
Failure
Count
@timestamp per 30 minutes
Cloudtrail - login failures by IP
filters
sourceIPAddress.keyword: Descending
Count
responseElements.ConsoleLogin.keyword:Failure
208.90.213.202
6
Cloudtrail - top activity by user
DescribeTable
ListTagsOfResource
ListTables
Decrypt
DescribeAlarms
DescribeEvents
0 - 11250
11250 - 22500
22500 - 33750
33750 - 45000


us-east-1a
173.31.0.0/20
us-east-1b
173.31.16.0/20
us-east-1c
173.31.32.0/20
us-east-1d
173.31.48.0/20
us-east-1e
173.31.64.0/20
173.31.0.0/16
Internet Gateway


VPC 10.10.0.0/16
Private us-east-1a
10.10.0.0/20
Private us-east-1b
10.10.16.0/20
Private us-east-1c
10.10.32.0/16
Private us-east-1d
10.10.48.0/16
VPN Server
Public us-east-1a
10.10.64.0/20
Public us-east-1b
10.10.80.0/20
Public us-east-1c
10.10.96.0/20
Public us-east-1d
10.10.112.0/20
NAT Gateway
Internet Gateway

Parameters

InstanceType	t2.micro	WebServer EC2 instance type
KeyPair	EffectiveDevOpsAWS Name of an existing EC2 KeyPair to SSH	
PrivateSubnet	subnet-8386e5cb (10.10.48.0/20) (vpc-10 Private D) subnet-a6b1bdc3 (10.10.16.0/20) (vpc-10 Private B) subnet-ff3a8fd3 (10.10.32.0/20) (vpc-10 Private C) subnet-a41cbefe (10.10.0.0/20) (vpc-10 Private A) PrivateSubnet	
PublicSubnet	subnet-2aed4070 (10.10.64.0/20) (vpc-10 Public A) subnet-c98be881 (10.10.112.0/20) (vpc-10 Public D) subnet-d0b6bab5 (10.10.80.0/20) (vpc-10 Public B) subnet-1d259031 (10.10.96.0/20) (vpc-10 Public C) PublicSubnet	
ScaleCapacity	2	Number servers to run
VpcId	vpc-2bac0452 (10.10.0.0/16) (vpc-10) VPC	

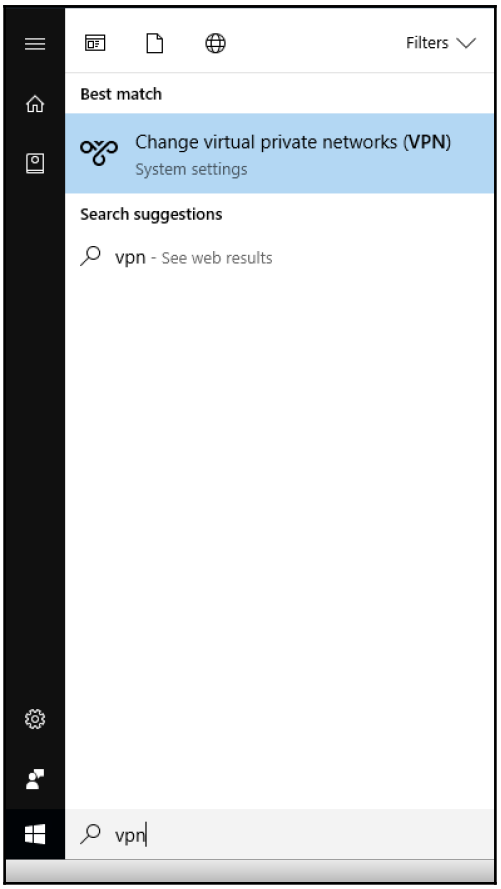
Public DNS (IPv4)	ec2-54-221-43-80.compute-1.amazonaws.com
IPv4 Public IP	54.221.43.80
IPv6 IPs	-
Private DNS	ip-172-31-62-32.ec2.internal
Private IPs	172.31.62.32
Secondary private IPs	
VPC ID	vpc-f7dc4093
Subnet ID	subnet-4decfe66
Network interfaces	eth0
Source/dest. check	True
EBS-optimized	False
Root device type	ebs
Root device	/dev/xvda
Block devices	/dev/xvda

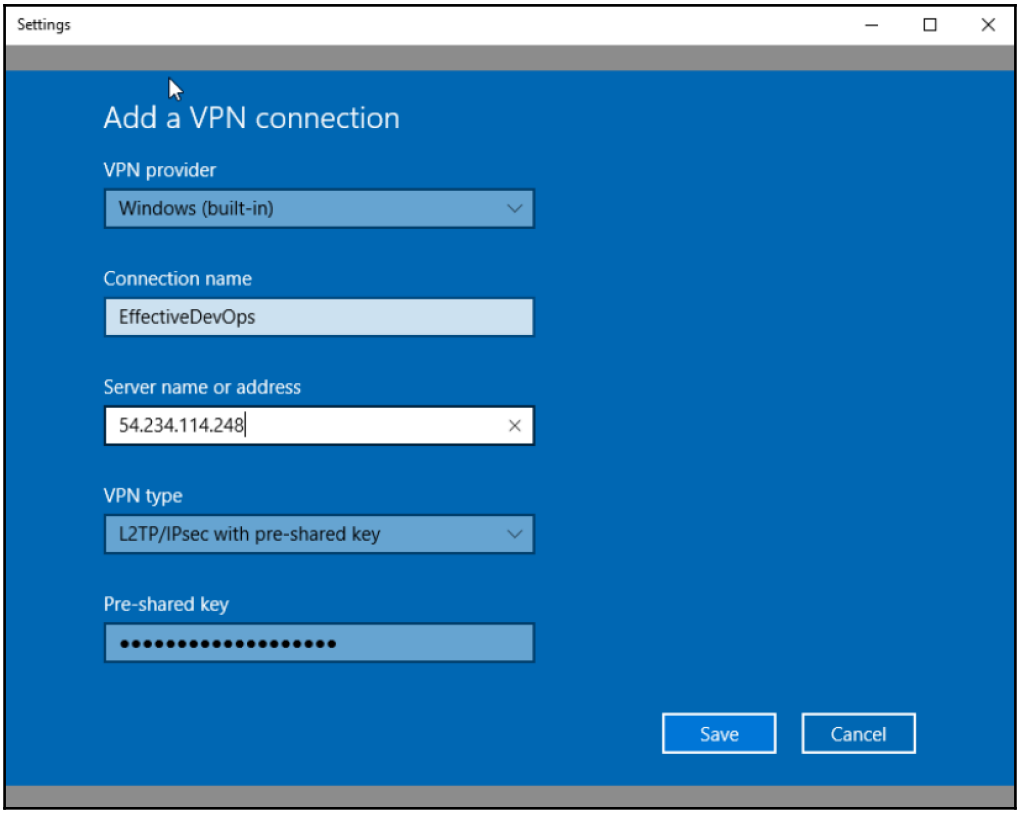
Public DNS (IPv4)	-
IPv4 Public IP	-
IPv6 IPs	-
Private DNS	ip-10-10-14-60.ec2.internal
Private IPs	10.10.14.60
Secondary private IPs	
VPC ID	vpc-2bac0452
Subnet ID	subnet-a41cbefe
Network interfaces	eth0
Source/dest. check	True
EBS-optimized	False
Root device type	ebs
Root device	/dev/xvda
Block devices	/dev/xvda

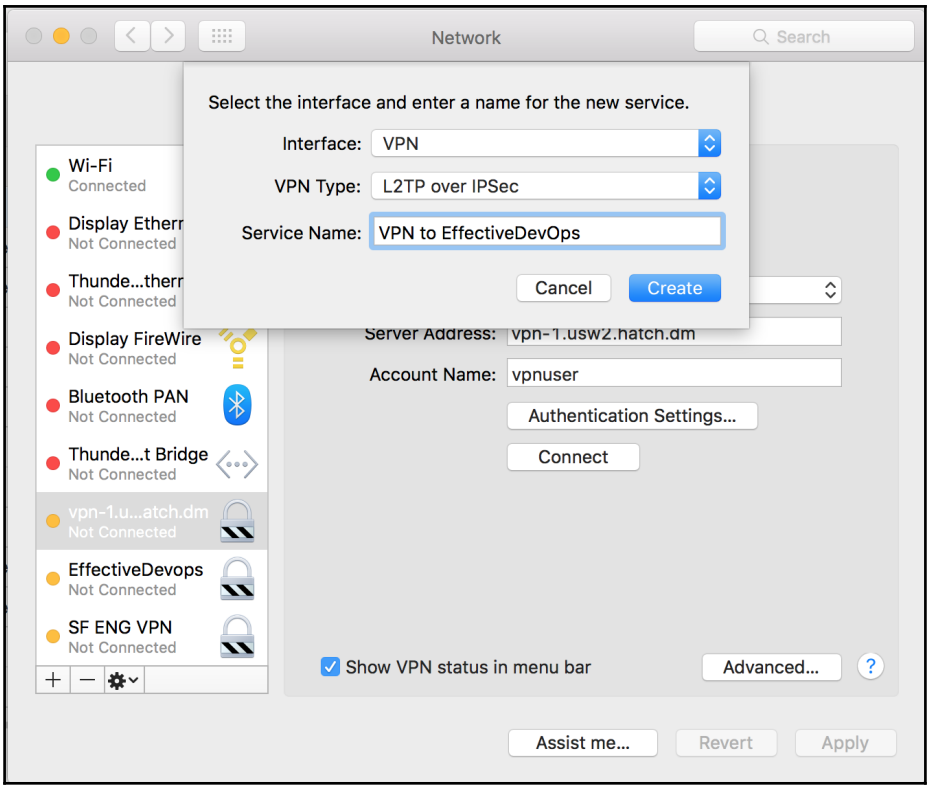
SoftEther L2TP/IPsec VPN server

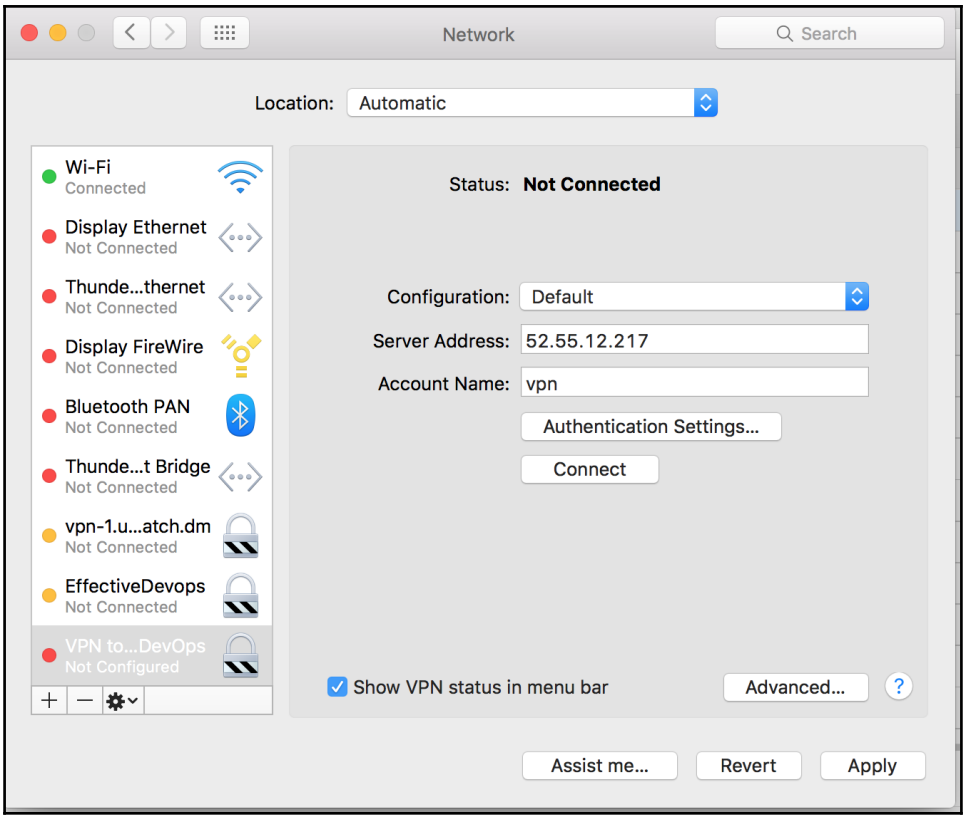
Sold by: C0sh0 W0rk

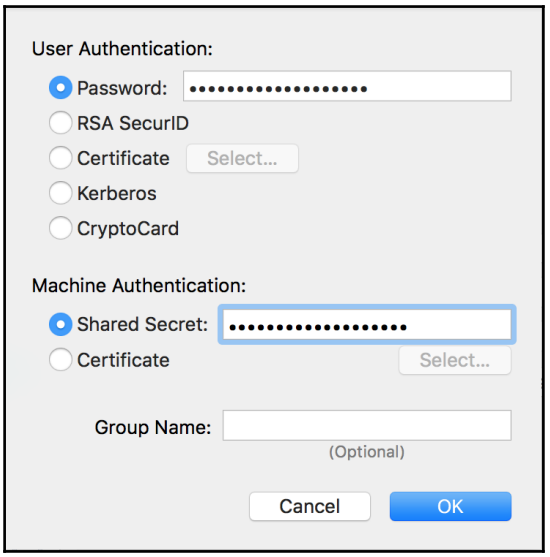
SoftEther VPN ("SoftEther" means "Software Ethernet") is one of the world's most powerful and easy-to-use multi-protocol VPN software. It runs on Windows, Linux, Mac, FreeBSD and Solaris. If you have smartphones, tablets or laptop PCs, SoftEther VPN's L2TP/IPsec server function will help you to establish a remote-access VPN from your local network. SoftEther VPN's L2TP VPN Server has strong compatible with Windows, Mac, iOS and Android.

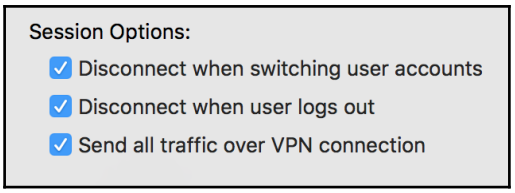

Filters
Best match
Change virtual private networks (VPN)
System settings
Search suggestions
vpn - See web results
vpn


Settings
Add a VPN connection
VPN provider
Windows (built-in)
Connection name
EffectiveDevOps
Server name or address
54.234.114.248
VPN type
L2TP/IPsec with pre-shared key
Pre-shared key
Save
Cancel


Network
Search
Select the interface and enter a name for the new service.
Interface: VPN
VPN Type: L2TP over IPSec
Service Name: VPN to EffectiveDevOps
Cancel
Create
Wi-Fi
Connected
Display Etherr
Not Connected
Thunde...therr
Not Connected
Display FireWire
Not Connected
Bluetooth PAN
Not Connected
Thunde...t Bridge
Not Connected
vpn-1.u...atch.dm
Not Connected
EffectiveDevops
Not Connected
SF ENG VPN
Not Connected
Server Address: vpn-1.usw2.hatch.dm
Account Name: vpnuser
Authentication Settings...
Connect
Show VPN status in menu bar
Advanced...
Assist me...
Revert
Apply


Network
Search
Location: Automatic
Wi-Fi
Connected
Display Ethernet
Not Connected
Thunde...thernet
Not Connected
Display FireWire
Not Connected
Bluetooth PAN
Not Connected
Thunde...t Bridge
Not Connected
vpn-1.u...atch.dm
Not Connected
EffectiveDevops
Not Connected
VPN to...DevOps
Not Configured
Status: Not Connected
Configuration: Default
Server Address: 52.55.12.217
Account Name: vpn
Authentication Settings...
Connect
Show VPN status in menu bar
Advanced...
Assist me...
Revert
Apply


User Authentication:
Password:
RSA SecurID
Certificate
Select...
Kerberos
CryptoCard
Machine Authentication:
Shared Secret:
Certificate
Select...
Group Name:
(Optional)
Cancel
OK


Session Options:
Disconnect when switching user accounts
Disconnect when user logs out
Send all traffic over VPN connection