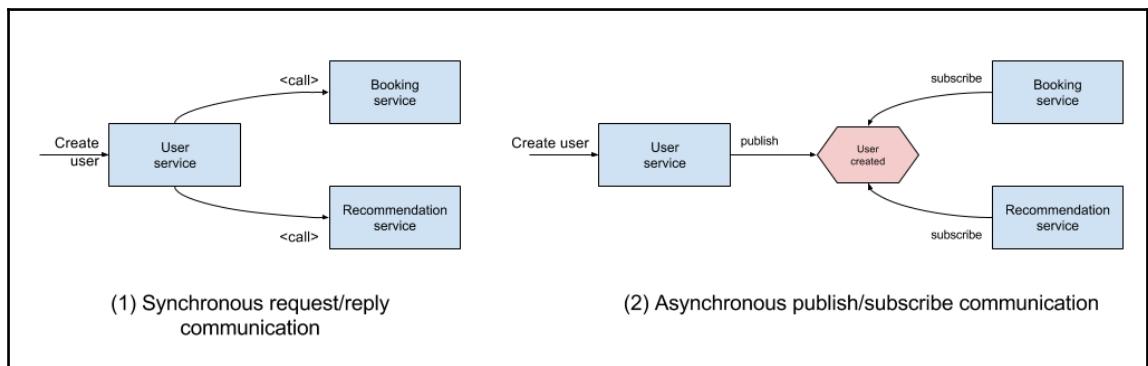
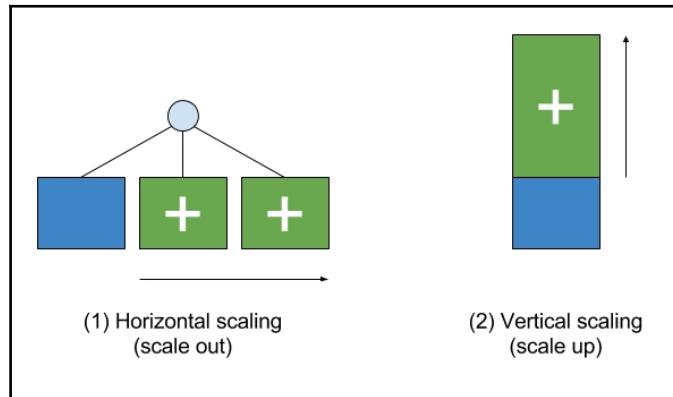
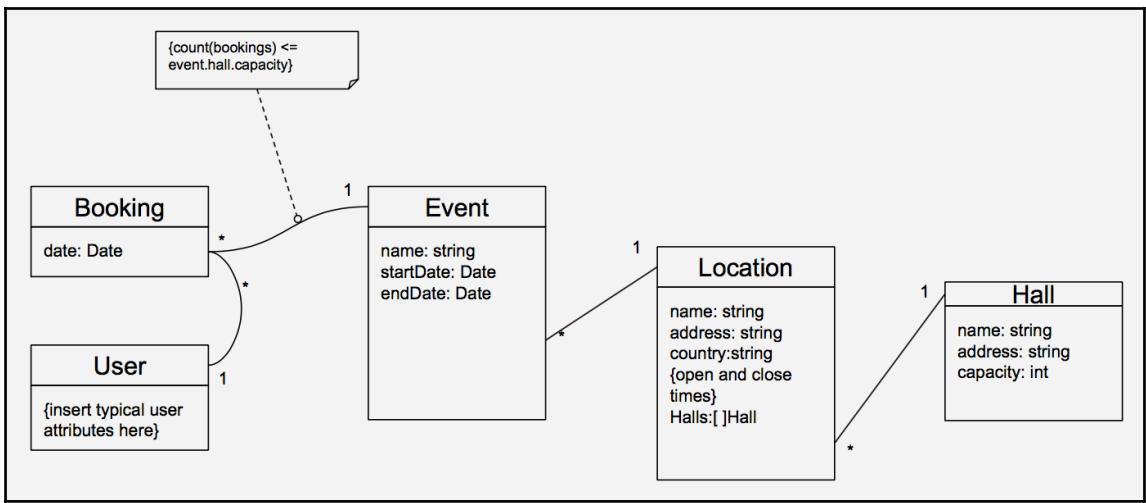
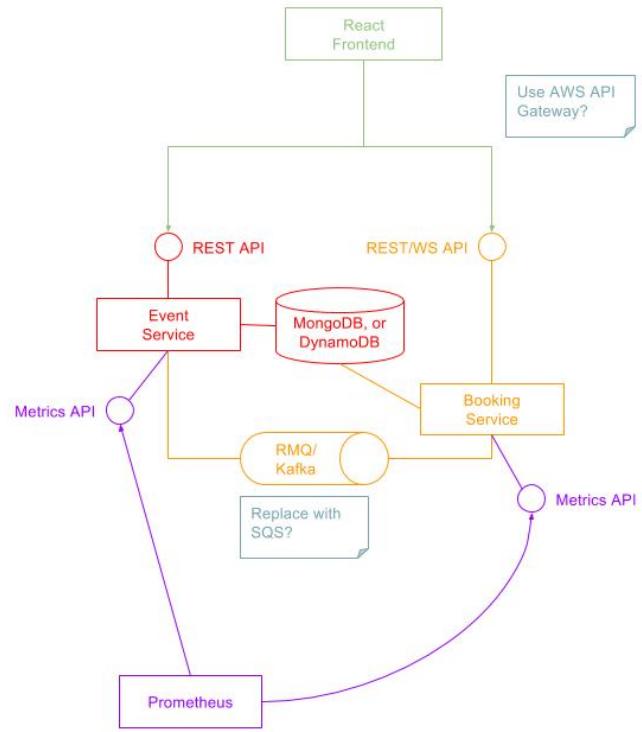


Chapter 1:

Modern Microservice Architectures

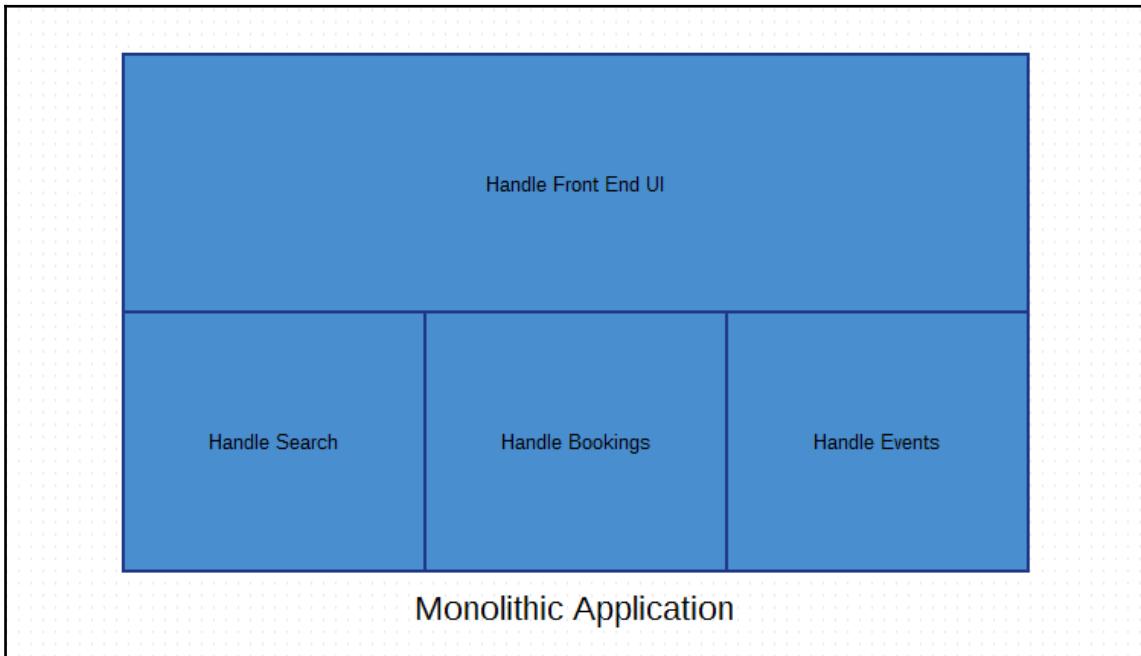


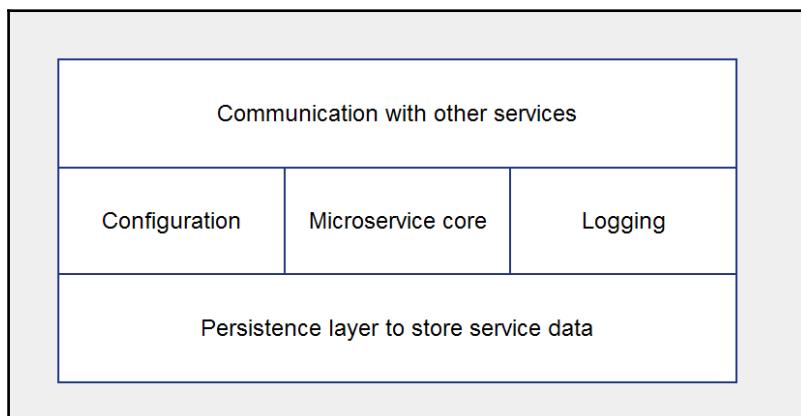
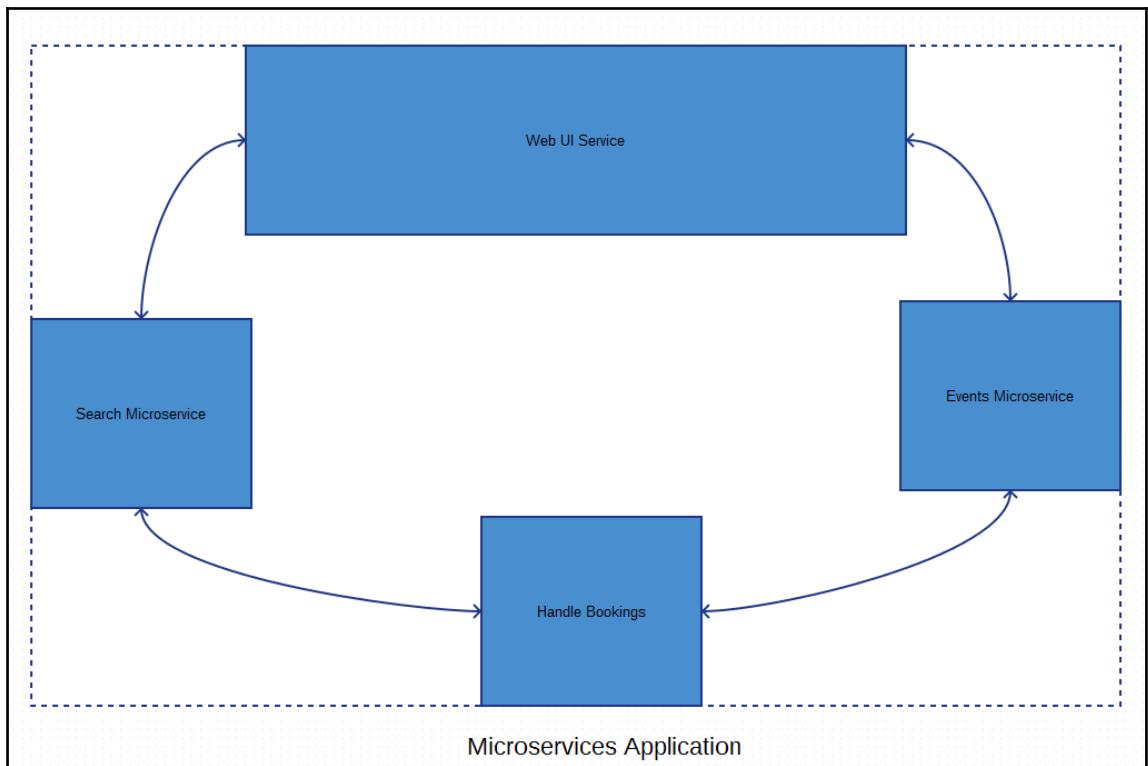


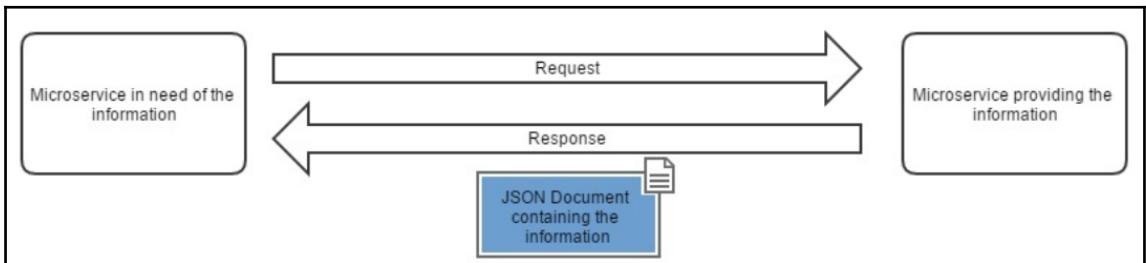
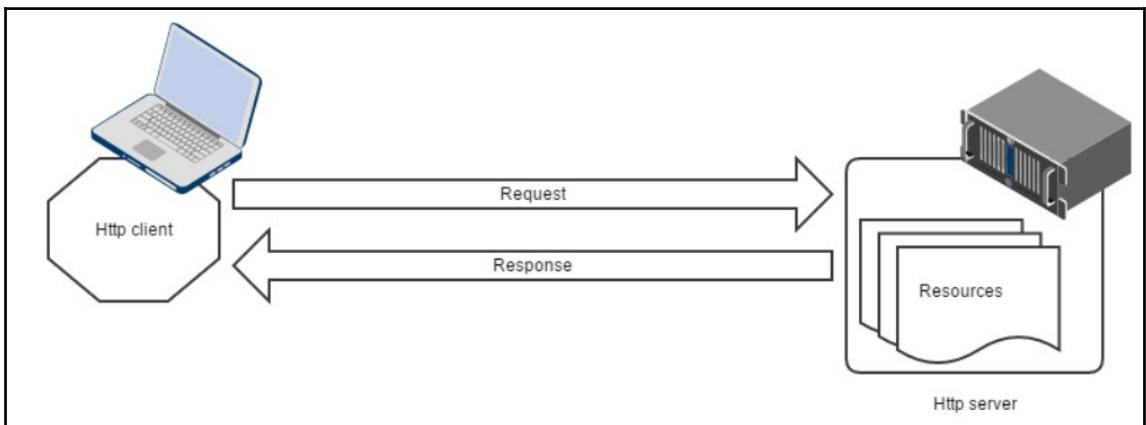
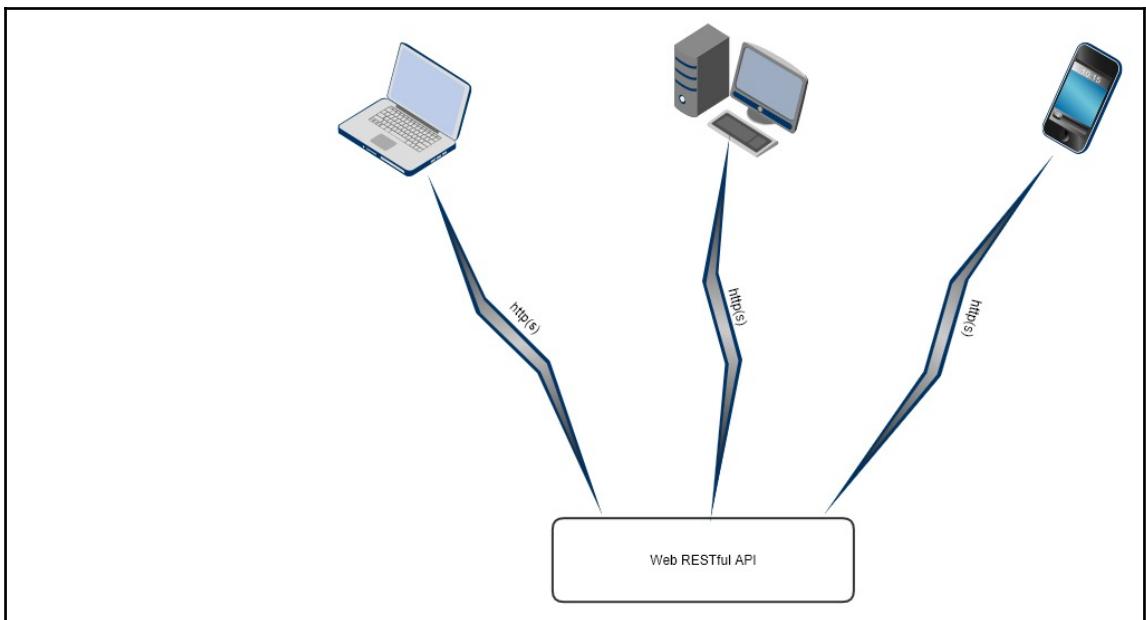


Chapter 2:

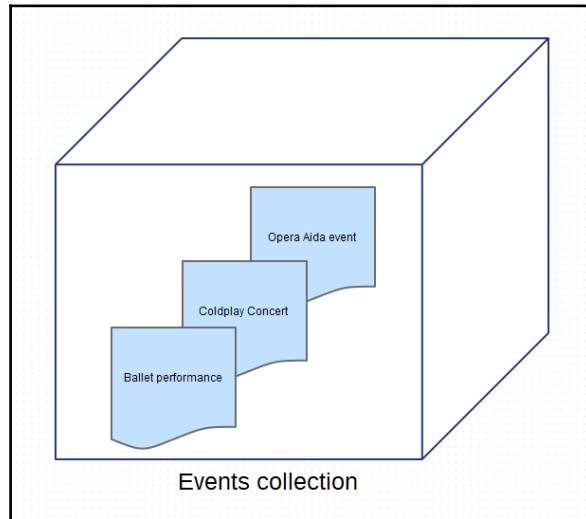
Building Microservices Using Rest APIs

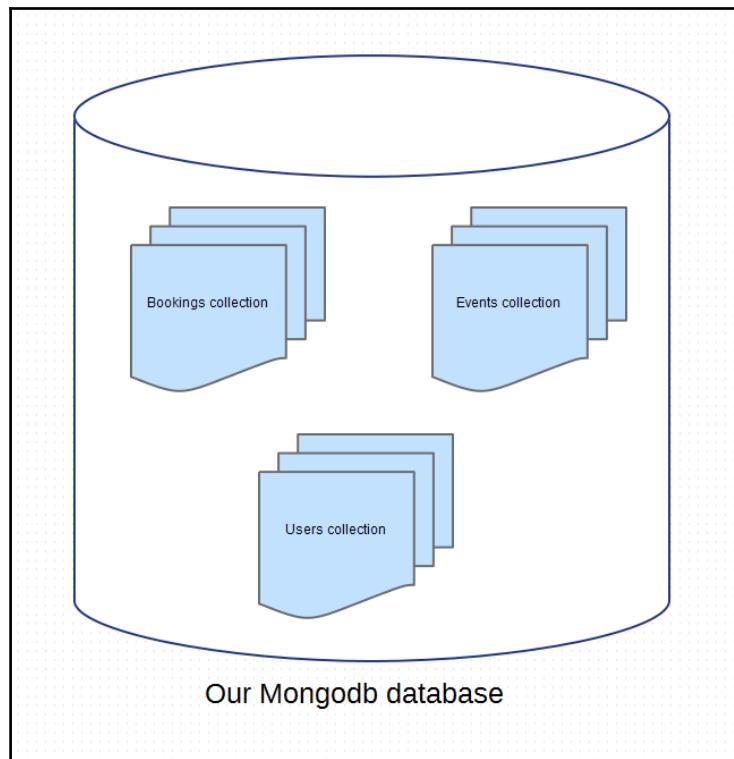






```
[  
    name: "opera aida",  
    startdate: 768346784368,  
    enddate: 43988943,  
    duration: 120, //in minutes  
    location:{  
        id : 3 , //=>assign as an index  
        name: "West Street Opera House",  
        address: "11 west street, AZ 73646",  
        country: "U.S.A",  
        opentime: 7,  
        clostime: 20  
        Hall: {  
            name : "Cesar hall",  
            location : "second floor, room 2210",  
            capacity: 10  
        }  
    }  
]
```

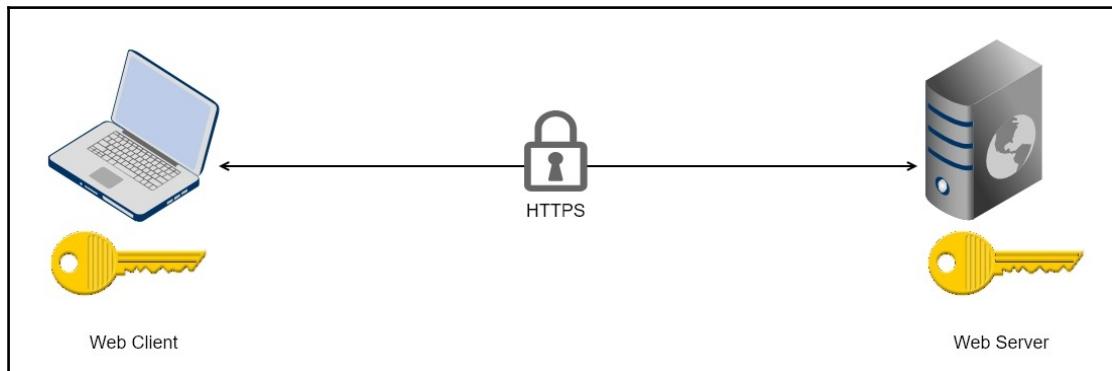
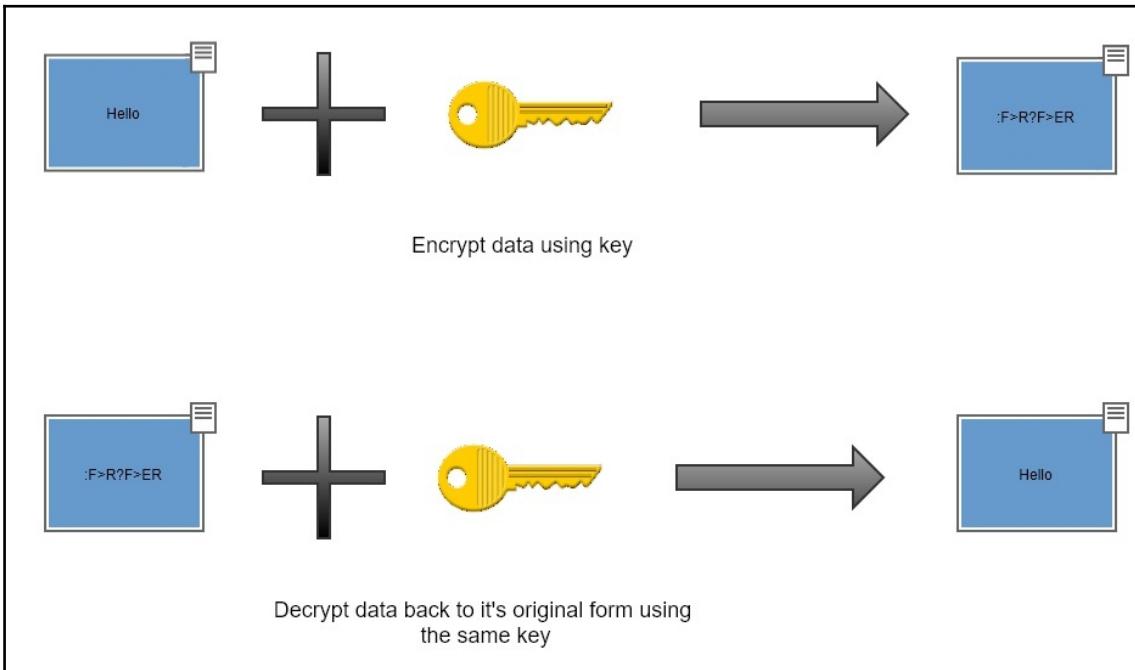


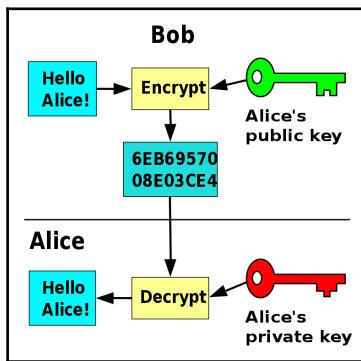
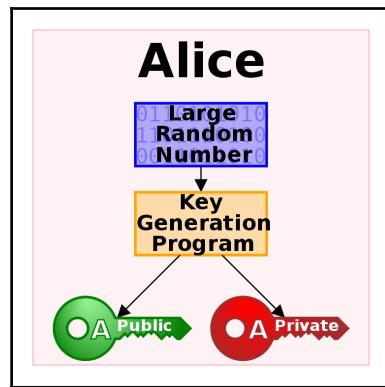


```
//events
{
    name: "opera aida",
    startdate: 768346784368,
    enddate: 43988943,
    duration: 120, //in minutes
    location:{
        id : 3 , //=>assign as an index
        name: "West Street Opera House",
        address: "11 west street, AZ 73646",
        country: "U.S.A",
        opentime: 7,
        clostime: 20
        Hall: {
            name : "Cesar hall",
            location : "second floor, room 2210",
            capacity: 10
        }
    }
}
```

```
[mongodb://][user:pass@]host1[:port1][,host2[:port2],...][[/database][?options]
```

Chapter 3: Securing Microservices

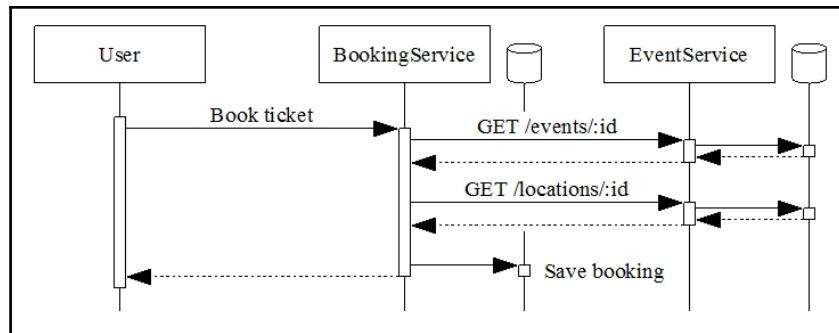
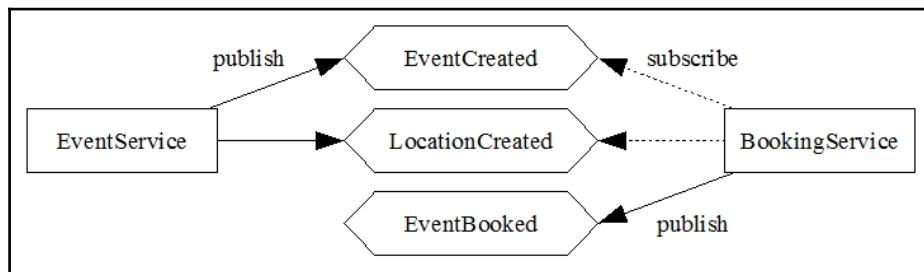
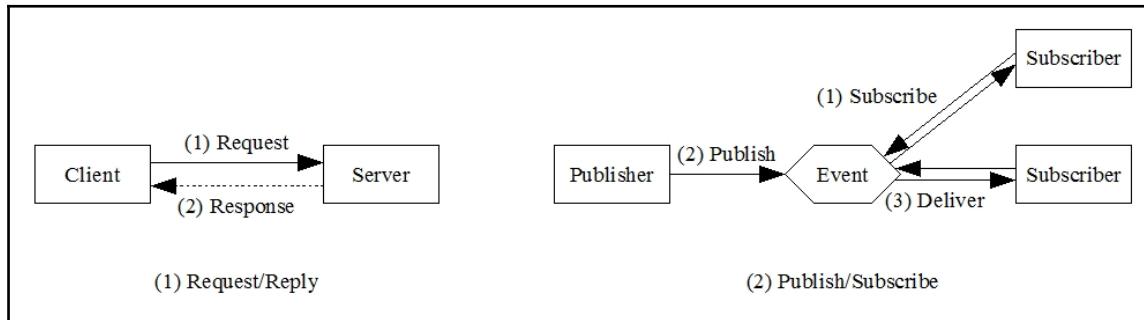


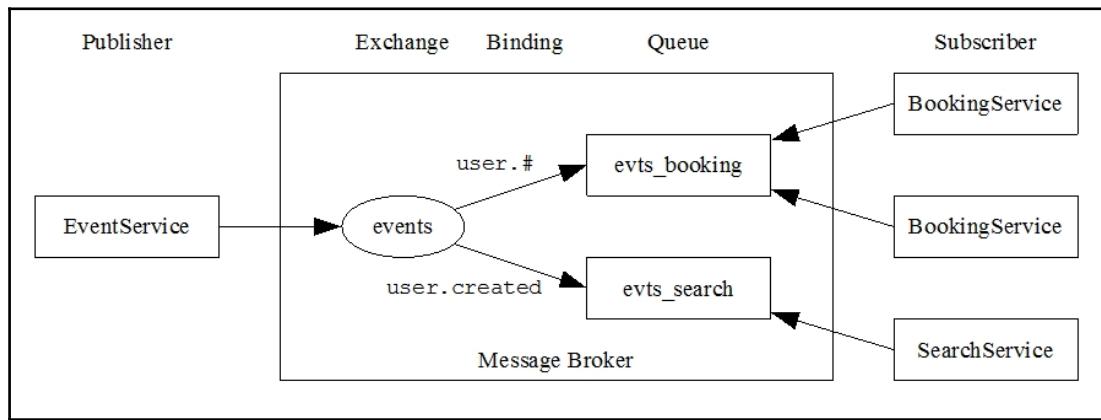
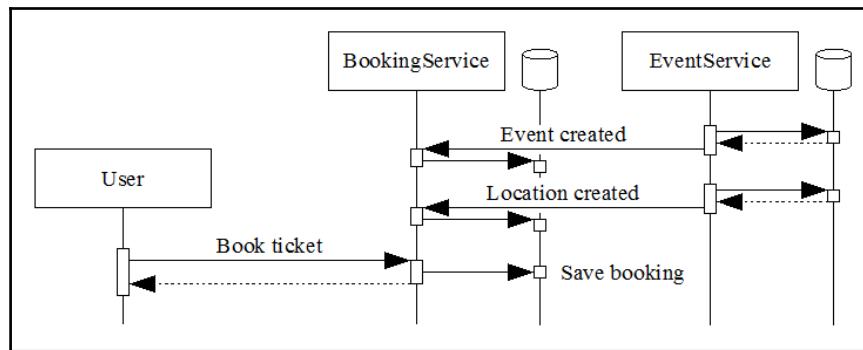


Name	Date modified	Type	Size
testdata	3/10/2017 2:00 AM	File folder	
alert.go	2/16/2017 7:23 PM	GO File	3 KB
cipher_suites.go	2/16/2017 7:23 PM	GO File	14 KB
common.go	2/16/2017 7:23 PM	GO File	33 KB
conn.go	2/16/2017 7:23 PM	GO File	39 KB
conn_test.go	2/16/2017 7:23 PM	GO File	10 KB
example_test.go	2/16/2017 7:23 PM	GO File	4 KB
generate_cert.go	2/16/2017 7:23 PM	GO File	5 KB
handshake_client.go	2/16/2017 7:23 PM	GO File	24 KB
handshake_client_test.go	2/16/2017 7:23 PM	GO File	43 KB
handshake_messages.go	2/16/2017 7:23 PM	GO File	33 KB
handshake_messages_test.go	2/16/2017 7:23 PM	GO File	9 KB
handshake_server.go	2/16/2017 7:23 PM	GO File	24 KB
handshake_server_test.go	2/16/2017 7:23 PM	GO File	45 KB
handshake_test.go	2/16/2017 7:23 PM	GO File	6 KB
key_agreement.go	2/16/2017 7:23 PM	GO File	15 KB
prf.go	2/16/2017 7:23 PM	GO File	11 KB
prf_test.go	2/16/2017 7:23 PM	GO File	6 KB

```
C:\>go run %GOROOT%/src/crypto/tls/generate_cert.go --host=localhost
2017/08/12 20:25:02 written cert.pem
2017/08/12 20:25:02 written key.pem
```

Chapter 4: Asynchronous Microservice Architectures U sing Message Queues





RabbitMQ Management Martin

User: guest Log out
Cluster: rabbit@37379a965fd0 (change)
RabbitMQ 3.6.6, Erlang 19.2

Overview Connections Channels Exchanges Queues Admin

Overview

Totals

Queued messages (chart: last minute) (?)

Currently idle

Message rates (chart: last minute) (?)

Currently idle

Global counts (?)

Connections: 0 Channels: 0 Exchanges: 8 Queues: 0 Consumers: 0

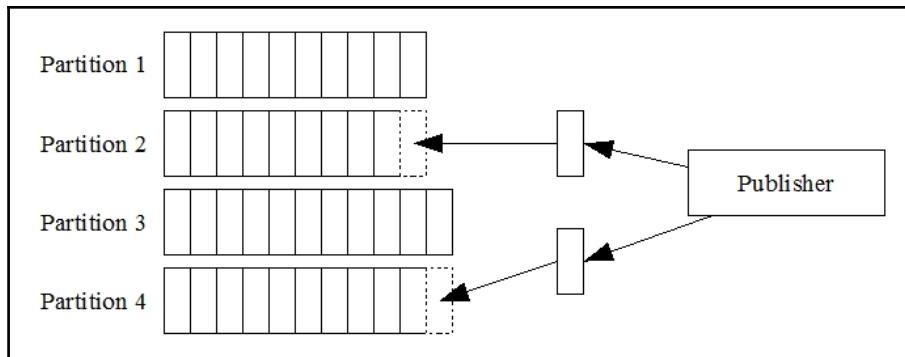
Node

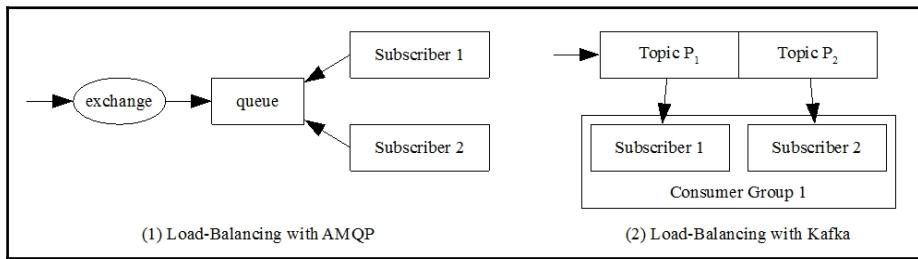
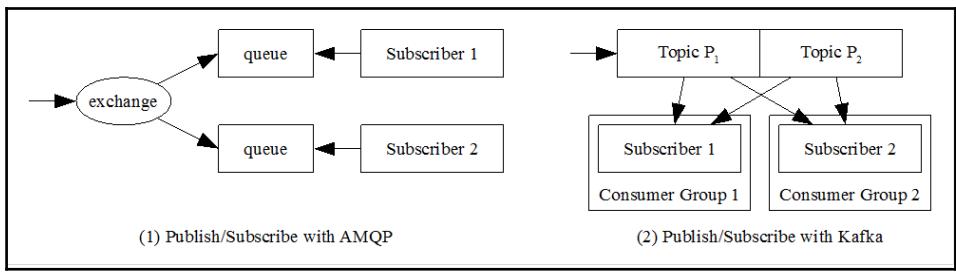
Node: rabbit@37379a965fd0 ([More about this node](#))

File descriptors (?)	Socket descriptors (?)	Erlang processes	Memory	Disk space	Rates mode	Info	+/-
60 1048576 available	0 943626 available	232 1048576 available	62MB 800MB high watermark	51GB 48MB low watermark	basic	Disc 1 Stats	

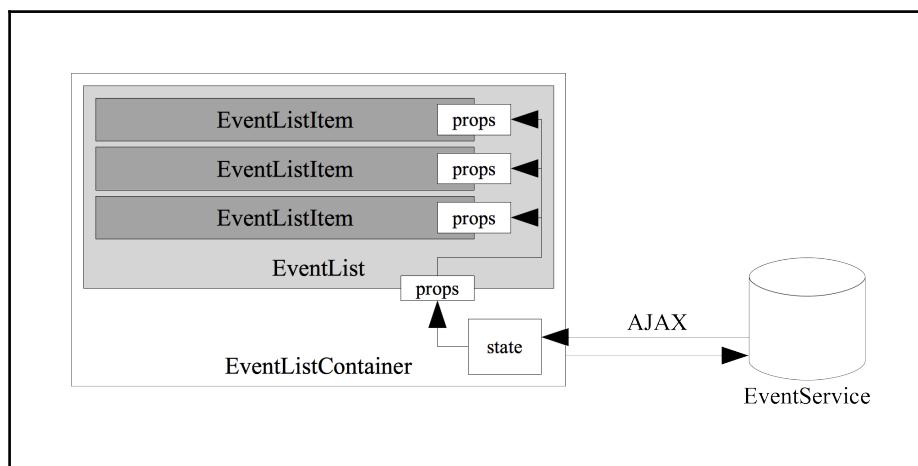
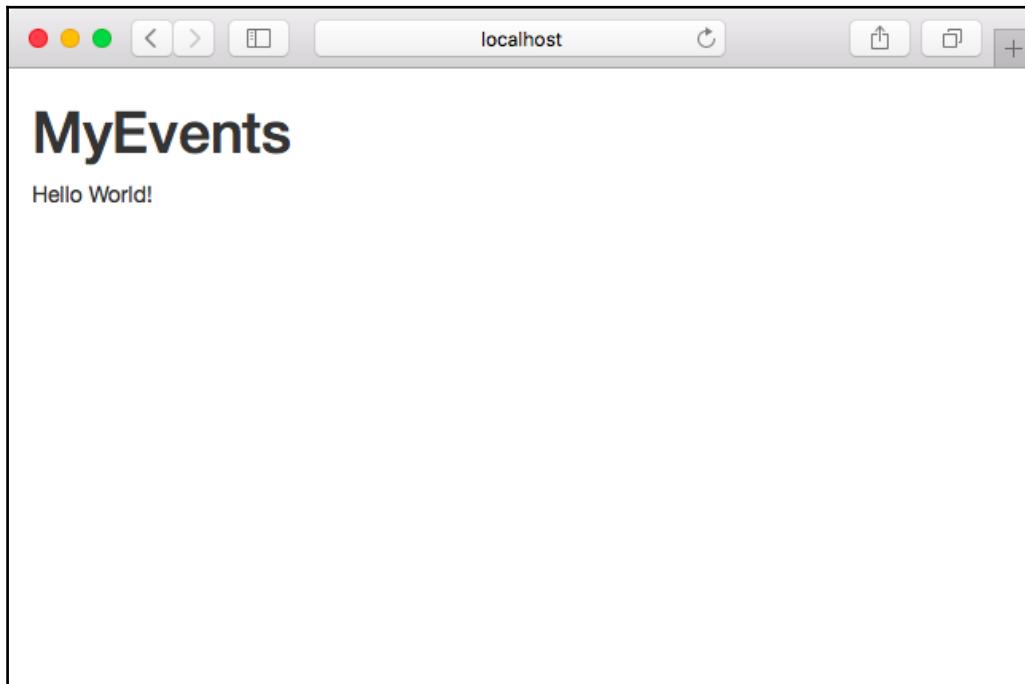
Paths

Config file	/etc/rabbitmq/rabbitmq.config
Database directory	/var/lib/rabbitmq/mnesia/rabbit@37379a965fd0
Log file	tty
SASL log file	tty





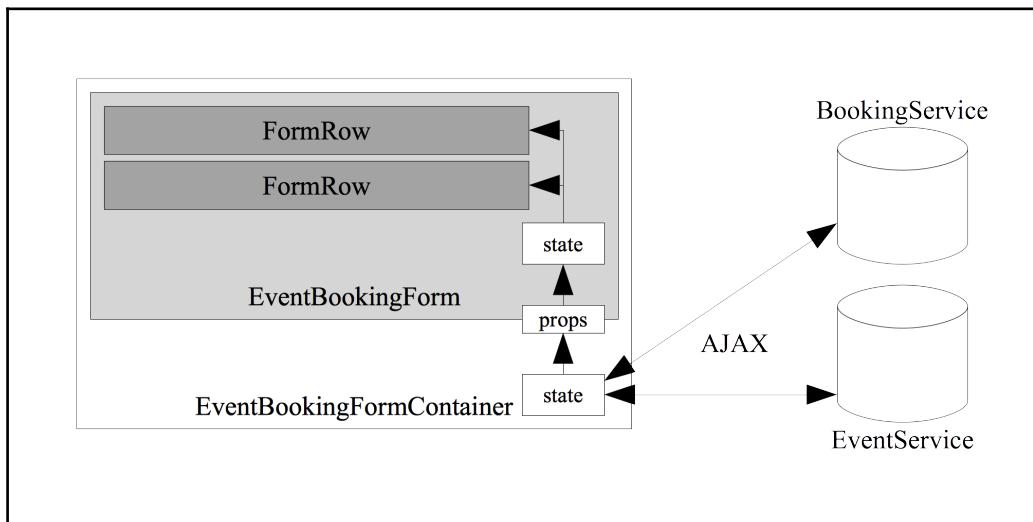
Chapter 5: Building a Frontend with React



localhost

My Events

Name	Where	When (start/end)	Actions
Wacken Open Air	Wacken Cow Pasture	3.8.2017	5.8.2017
Martin's Grindcore Band	Martin's Basement	24.3.2017	24.3.2017



A screenshot of a web browser window titled "localhost". The main content area displays a heading "My Events" followed by a table listing two events. The table has columns for Name, Where, When (start/end), and Actions. Each event row contains a blue "Book now!" button.

Name	Where	When (start/end)	Actions
Wacken Open Air	Wacken Cow Pasture	3.8.2017 5.8.2017	<button>Book now!</button>
Martin's Grindcore Band	Martin's Basement	24.3.2017 24.3.2017	<button>Book now!</button>

A screenshot of a web browser window titled "localhost:8080/#/events/58d545f19cdd4129949". The main content area displays a heading "My Events" followed by a sub-heading "Book tickets for Martin's Grindcore Band!". Below this, there is a form with an "Event" label and a dropdown menu showing "Martin's Grindcore Band". The form also includes a "Number of tickets" input field set to "1" and a "Submit order" button.

Event: Martin's Grindcore Band

Number of tickets: 1

Submit order

Chapter 6:

Deploying Your Application in Containers

```
1. mhelmich@mhelmich-macbook: ~ (zsh)
mhelmich@mhelmich-macbook ➜ ~ docker container run --rm hello-world
Unable to find image 'hello-world:latest' locally
latest: Pulling from library/hello-world
78445dd45222: Pull complete
Digest: sha256:c5515758d4c5e1e838e9cd307f6c6a0d620b5e07e6f927b07d05f6d12a1ac8d7
Status: Downloaded newer image for hello-world:latest

Hello from Docker!
This message shows that your installation appears to be working correctly.

To generate this message, Docker took the following steps:
1. The Docker client contacted the Docker daemon.
2. The Docker daemon pulled the "hello-world" image from the Docker Hub.
3. The Docker daemon created a new container from that image which runs the
   executable that produces the output you are currently reading.
4. The Docker daemon streamed that output to the Docker client, which sent it
   to your terminal.

To try something more ambitious, you can run an Ubuntu container with:
$ docker run -it ubuntu bash

Share images, automate workflows, and more with a free Docker ID:
https://cloud.docker.com/

For more examples and ideas, visit:
https://docs.docker.com/engine/userguide/
```

```
1. mhelmich@mhelmich-macbook: ~ (zsh)
mhelmich@mhelmich-macbook ➜ ~ docker container run -d --name webserver -p 80:80 nginx
Unable to find image 'nginx:latest' locally
latest: Pulling from library/nginx
6d827a3ef358: Pull complete
f8f2e0556751: Pull complete
5c9972dca3fd: Pull complete
451b9524cb06: Pull complete
Digest: sha256:e6693c20186f837fc393390135d8a598a96a833917917789d63766cab6c59582
Status: Downloaded newer image for nginx:latest
83c5c355b930df35d8e833e593169312cc0ea304c107791a95eccaa86825a5817
mhelmich@mhelmich-macbook ➜ ~ docker container ls
CONTAINER ID        IMAGE       COMMAND       CREATED          STATUS          PORTS
S                         NAMES
83c5c355b930        nginx      "nginx -g 'daemon ...'"   8 seconds ago   Up 5 seconds   0.0.
0.0:80->80/tcp, 443/tcp   webserver
mhelmich@mhelmich-macbook ➜ ~
```

```
1. mhelmich@mhelmich-macbook: ~/Spielwiese/Docker (zsh)
mhelmich@mhelmich-macbook > ~/Spielwiese/Docker > vim Dockerfile
mhelmich@mhelmich-macbook > ~/Spielwiese/Docker > docker build -t test-image .
Sending build context to Docker daemon 85.5 kB
Step 1/3 : FROM debian:jessie
jessie: Pulling from library/debian
6d827a3ef358: Already exists
Digest: sha256:72f784399fd2719b4cb4e16ef8e369a39dc67f53d978cd3e2e7bf4e502c7b793
Status: Downloaded newer image for debian:jessie
--> 8cedef9d7368
Step 2/3 : RUN echo 'Hello World!' > /hello.txt
--> Running in 5793312c6f26
--> d1faf20460d7
Removing intermediate container 5793312c6f26
Step 3/3 : CMD cat /hello.txt
--> Running in c6cc24416c29
--> 6e8377d6bf22
Removing intermediate container c6cc24416c29
Successfully built 6e8377d6bf22
mhelmich@mhelmich-macbook > ~/Spielwiese/Docker >
```

```
1. mhelmich@mhelmich-macbook: ~/Spielwiese/Docker (zsh)
mhelmich@mhelmich-macbook > ~/Spielwiese/Docker > docker image ls
REPOSITORY      TAG          IMAGE ID      CREATED       SIZE
test-image      latest        6e8377d6bf22   21 seconds ago  123 MB
nginx          latest        5766334bdaa0    4 days ago    183 MB
debian          jessie        8cedef9d7368    2 weeks ago   123 MB
rabbitmq        3-management  c74093aa9895    5 weeks ago   179 MB
hello-world     latest        48b5124b2768    2 months ago  1.84 kB
spotify/kafka   latest        a9e0a5b8b15e    4 months ago  443 MB
mhelmich@mhelmich-macbook > ~/Spielwiese/Docker >
```

```
1. mhelmich@mhelmich-macbook: ~ (zsh)
mhelmich@mhelmich-macbook > docker network ls
NETWORK ID      NAME          DRIVER      SCOPE
8e5c9ef93271    bridge        bridge      local
25ecb84f3df2    docker_default bridge      local
cb7a3f268d29    host          host       local
fd7b01c615f8    none          null       local
15324dc78860    test          bridge      local
mhelmich@mhelmich-macbook >
```

```

1. mhelmich@mhelmich-macbook: ~ (zsh) ━
mhelmich@mhelmich-macbook ➜ docker container run --network=test appropriate/curl http://web
% Total    % Received % Xferd  Average Speed   Time     Time      Current
          Dload  Upload Total Spent    Left Speed
100  612  100  612    0     0  160k      0  ---:---:---:---:---:--- 597k
<!DOCTYPE html>
<html>
<head>
<title>Welcome to nginx!</title>
<style>
body {
    width: 35em;
    margin: 0 auto;
    font-family: Tahoma, Verdana, Arial, sans-serif;
}
</style>
</head>
<body>
<h1>Welcome to nginx!</h1>
<p>If you see this page, the nginx web server is successfully installed and
working. Further configuration is required.</p>

<p>For online documentation and support please refer to
<a href="http://nginx.org/">nginx.org</a>.<br/>
Commercial support is available at
<a href="http://nginx.com/">nginx.com</a>.</p>

<p><em>Thank you for using nginx.</em></p>
</body>
</html>
mhelmich@mhelmich-macbook ➜

```

```

1. mhelmich@mhelmich-macbook: ~ (zsh)
mhelmich@mhelmich-macbook ➜ docker container ls
CONTAINER ID        IMAGE               COMMAND                  CREATED             STATUS              PORTS               NAMES
d9c41era7271       myevents/bookingservice   "/bookingservice"    15 seconds ago     Up 13 seconds      0.0.0.0:8282->8181/tcp   bookings
e3e4fffd83625      myevents/eventservice     "/eventservice"     6 minutes ago      Up 6 minutes      0.0.0.0:8181->8181/tcp   events
942bb27fd89c       mongo                "docker-entrypoint..."  About an hour ago Up About an hour   27017/tcp           bookings-db
2bf8547eda9a       mongo                "docker-entrypoint..."  About an hour ago Up About an hour   27017/tcp           events-db
e124cbf9134d       spotify/kafka          "supervisord -n"     About an hour ago Up About an hour   2181/tcp, 9092/tcp   kafka
mhelmich@mhelmich-macbook ➜

```

```

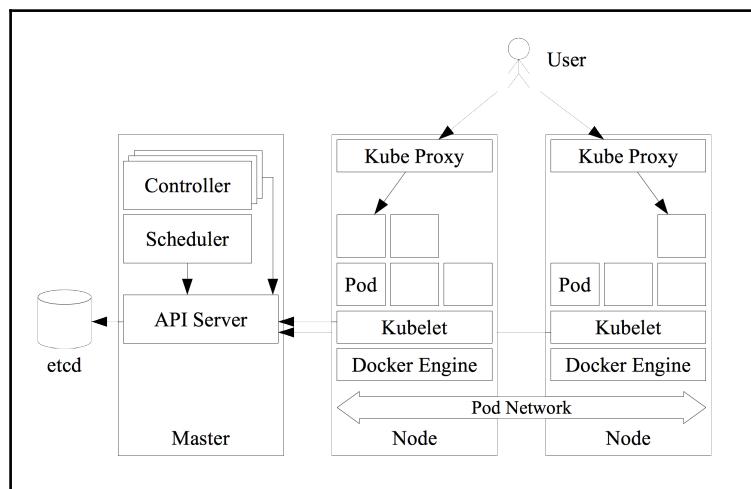
1. mhelmich@mhelmich-macbook: ~ (zsh)
mhelmich@mhelmich-macbook ➜ docker image ls
REPOSITORY          TAG      IMAGE ID            CREATED             SIZE
myevents/bookingservice latest  4226649a23bb  35 hours ago     10.9 MB
myevents/eventservice  latest  d4f46dc54937  35 hours ago     10.7 MB
test-image          latest  6e8377d6bf22  3 days ago       123 MB
golang              1.8.1   c0ccf5f2c036  6 days ago       703 MB
mongo               latest  48e26382080a  6 days ago       360 MB
nginx               latest  5766334bdaa0  7 days ago       183 MB
debian              jessie   8cedef9d7368  3 weeks ago      123 MB
appropriate/curl    latest  76ele1007ad4  5 weeks ago      5.36 MB
rabbitmq            3-management  c74093aa9895  6 weeks ago      179 MB
ubuntu              16.04   0ef2e08ed3fa  6 weeks ago      130 MB
hello-world         latest  48b5124b2768  3 months ago     1.84 kB
spotify/kafka        latest  a9e0a5b8b15e  4 months ago     443 MB
mhelmich@mhelmich-macbook ➜

```

```

1. mhelmich@mhelmich-macbook: ~/Entwicklung/go-workspace/src/bitbucket.org/minamartinteam/myevents (zsh) ━
mhelmich@mhelmich-macbook ➤ myevents ➤ docker-compose up -d
myevents_kafka_1 is up-to-date
myevents_bookings-db_1 is up-to-date
myevents_events-db_1 is up-to-date
Creating myevents_events_1
Creating myevents_bookings_1
mhelmich@mhelmich-macbook ➤ myevents ➤ docker-compose ps
          Name           Command           State        Ports
myevents_bookings-db_1   docker=entrypoint.sh mongod    Up      27017/tcp
myevents_bookings_1       /bookingservice      Up      0.0.0.0:8282->8181/tcp
myevents_events-db_1     docker=entrypoint.sh mongod    Up      27017/tcp
myevents_events_1         /eventservice       Up      0.0.0.0:8181->8181/tcp
myevents_kafka_1          supervisord -n      Up      2181/tcp, 9092/tcp
mhelmich@mhelmich-macbook ➤ myevents ➤

```



```

1. mhelmich@mhelmich-macbook: ~ (zsh) ━
mhelmich@mhelmich-macbook ➤ ~ minikube start
Starting local Kubernetes cluster...
Starting VM...
Downloading Minikube ISO
89.51 MB / 89.51 MB [=====] 100.00% 0s
SSH-ing files into VM...
Setting up certs...
Starting cluster components...
Connecting to cluster...
Setting up kubeconfig...
Kubectl is now configured to use the cluster.
mhelmich@mhelmich-macbook ➤

```

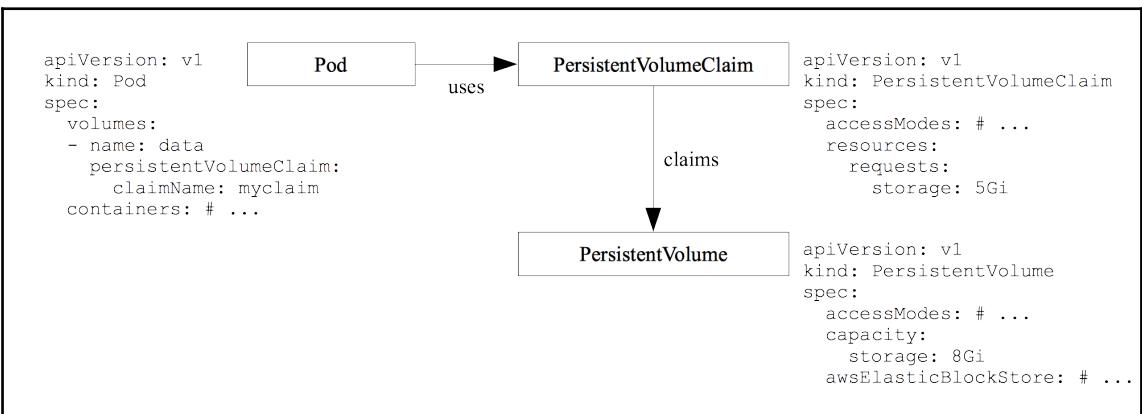
```
mhelmich@mhelmich-macbook ~ (zsh)
mhelmich@mhelmich-macbook ➤ ~ kubectl get nodes
NAME      STATUS    AGE     VERSION
minikube  Ready     23s    v1.6.0
mhelmich@mhelmich-macbook ➤ ~
```

```
mhelmich@mhelmich-macbook ~/Spielwiese/kubernetes (zsh)
mhelmich@mhelmich-macbook ➤ kubernetes ➤ kubectl apply -f nginx-pod.yaml
pod "nginx-test" created
mhelmich@mhelmich-macbook ➤ kubernetes ➤ kubectl get pods
NAME        READY   STATUS    RESTARTS   AGE
nginx-test  0/1     ContainerCreating   0          0s
mhelmich@mhelmich-macbook ➤ kubernetes ➤ kubectl get pods
NAME        READY   STATUS    RESTARTS   AGE
nginx-test  1/1     Running   0          26s
mhelmich@mhelmich-macbook ➤ kubernetes ➤
```

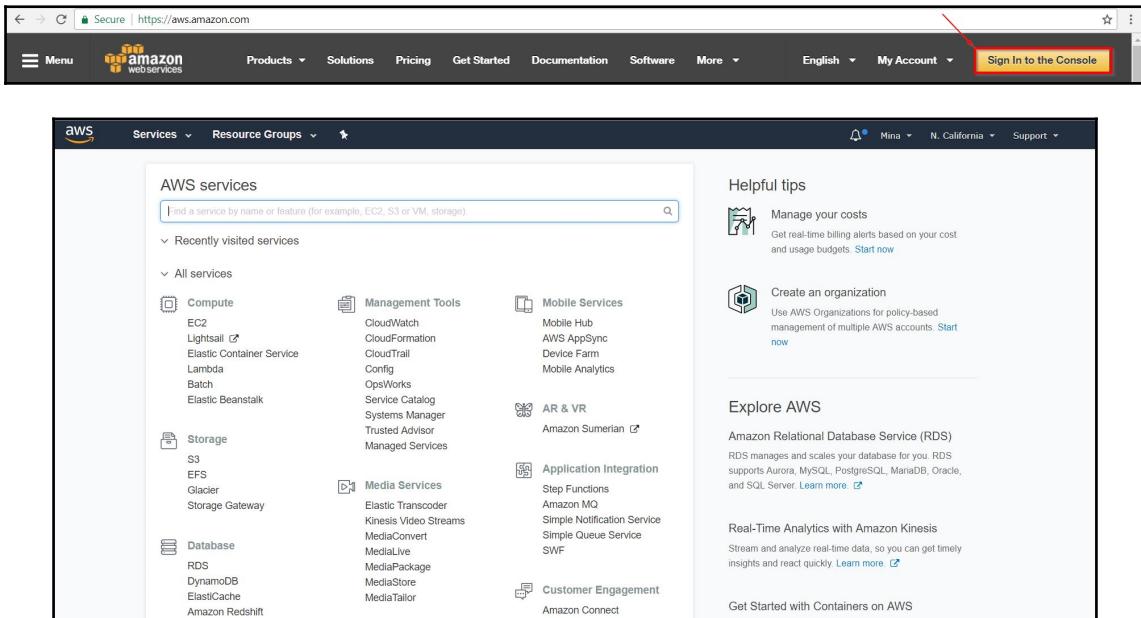
```
mhelmich@mhelmich-macbook ~/Spielwiese/kubernetes (zsh)
mhelmich@mhelmich-macbook ➤ kubernetes ➤ kubectl apply -f nginx-deployment.yaml
deployment "nginx-deployment" created
mhelmich@mhelmich-macbook ➤ kubernetes ➤ kubectl get pods
NAME        READY   STATUS    RESTARTS   AGE
nginx-deployment-1397492275-nl5rx  1/1     Running   0          3s
nginx-deployment-1397492275-qz8k5  1/1     Running   0          3s
mhelmich@mhelmich-macbook ➤ kubernetes ➤
```

```
mhelmich@mhelmich-macbook ~/Spielwiese/kubernetes (zsh)
mhelmich@mhelmich-macbook ➤ kubernetes ➤ kubectl scale --replicas=4 deployment/nginx-deployment
deployment "nginx-deployment" scaled
mhelmich@mhelmich-macbook ➤ kubernetes ➤ kubectl get pods
NAME        READY   STATUS    RESTARTS   AGE
nginx-deployment-1397492275-8srn1  0/1     ContainerCreating   0          <invalid>
nginx-deployment-1397492275-fflnk   0/1     ContainerCreating   0          <invalid>
nginx-deployment-1397492275-nl5rx  1/1     Running   0          10m
nginx-deployment-1397492275-qz8k5  1/1     Running   0          10m
mhelmich@mhelmich-macbook ➤ kubernetes ➤
```

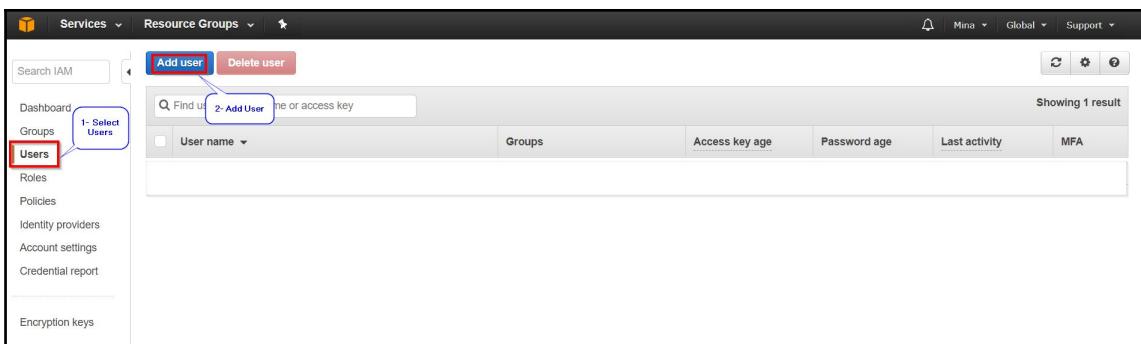
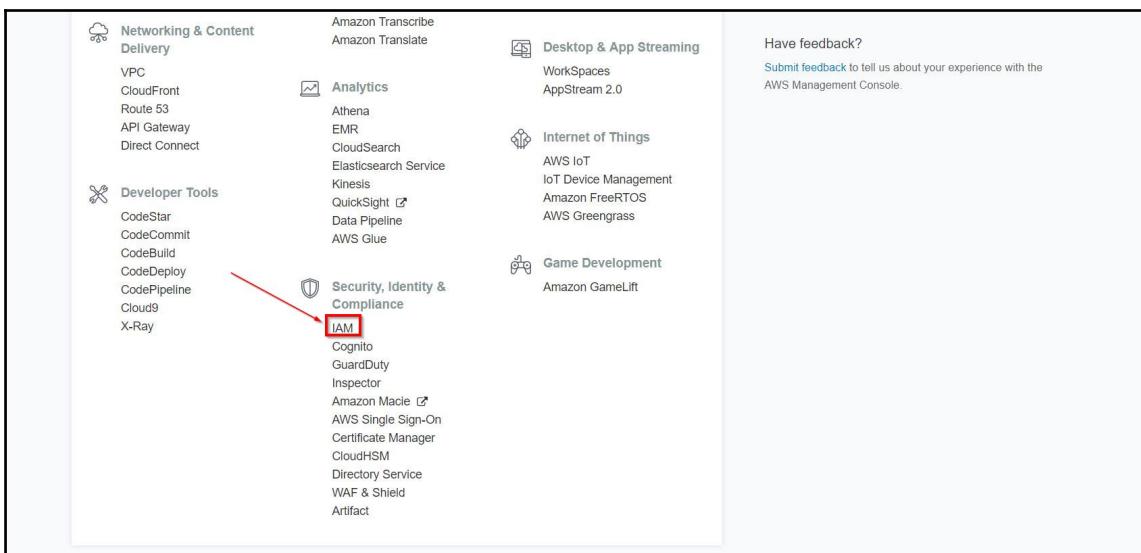
```
1. mhelmich@mhelmich-macbook: ~/Spielwiese/kubernetes (zsh)
mhelmich@mhelmich-macbook ➔ kubernetes ➔ kubectl apply -f nginx-service.yaml
service "nginx" created
mhelmich@mhelmich-macbook ➔ kubernetes ➔ kubectl get services
NAME      CLUSTER-IP   EXTERNAL-IP   PORT(S)      AGE
kubernetes  10.0.0.1    <none>        443/TCP     2h
nginx      10.0.0.223   <nodes>       80:31455/TCP  2s
mhelmich@mhelmich-macbook ➔ kubernetes ➔
```



Chapter 7: AWS I – Fundamentals, AWS SDK for Go, an d EC2



The screenshot shows the AWS Management Console homepage. At the top, there's a navigation bar with links for Menu, Products, Solutions, Pricing, Get Started, Documentation, Software, More, English, My Account, and a prominent orange "Sign In to the Console" button. Below the navigation bar is a search bar labeled "Find a service by name or feature (example, EC2, S3 or VM, storage)". The main content area is titled "AWS services" and contains a grid of service icons and names. The services listed include Compute (EC2, Lightsail, Elastic Container Service, Lambda, Batch, Elastic Beanstalk), Storage (S3, EFS, Glacier, Storage Gateway), Database (RDS, DynamoDB, ElastiCache, Amazon Redshift), Management Tools (CloudWatch, CloudFormation, CloudTrail, Config, OpsWorks, Service Catalog, Systems Manager, Trusted Advisor, Managed Services), Mobile Services (Mobile Hub, AWS AppSync, Device Farm, Mobile Analytics), AR & VR (Amazon Sumerian), Application Integration (Step Functions, Amazon MQ, Simple Notification Service, Simple Queue Service, SWF), Media Services (Elastic Transcoder, Kinesis Video Streams, MediaConvert, MediaLive, MediaPackage, MediaStore, MediaTailor), and Customer Engagement (Amazon Connect). To the right of the service grid are two sections: "Helpful tips" (Manage your costs, Create an organization) and "Explore AWS" (Amazon Relational Database Service (RDS), Real-Time Analytics with Amazon Kinesis, Get Started with Containers on AWS). The top right corner of the "Sign In to the Console" button is highlighted with a red box.



AWS Services Resource Groups Mira Global Support

Add user

1 Details 2 Permissions 3 Review 4 Complete

Set user details

You can add multiple users at once with the same access type and permissions. [Learn more](#)

User name* minaandrawos [+ Add another user](#)

Select AWS access type

Select how these users will access AWS. Access keys and autogenerated passwords are provided in the last step. [Learn more](#)

Access type* **Programmatic access**
Enables an **access key ID** and **secret access key** for the AWS API, CLI, SDK, and other development tools.

AWS Management Console access
Enables a **password** that allows users to sign-in to the AWS Management Console.

Set permissions for minaandrawos

Add user to group Copy permissions from existing user Attach existing policies directly

Add user to an existing group or create a new one. Using groups is a best-practice way to manage user's permissions by job functions. [Learn more](#)

Create group Refresh

Q Search Showing 1 result

Group	Attached policies
S3Group	AmazonSQSFullAccess and 2 more

The screenshot shows the AWS IAM service dashboard. On the left sidebar, the 'Roles' option is selected and highlighted with a red box. A blue box labeled '1-Select Roles' points to the 'Create new role' button at the top of the main content area. The main area displays a table with columns for Role name, Description, and Creation Time. A search bar at the top has a tooltip '2-Choose "Create new role"'.

The screenshot shows the 'Create role' wizard, Step 1: Select role type. The 'AWS Service Role' radio button is selected and highlighted with a red box. A blue box labeled '2-Choose "Create new role"' points to the 'Amazon EC2' role entry, which is also highlighted with a red box. Other service roles listed include AWS Directory Service, AWS Lambda, Amazon Redshift, and AWS Batch Service Role. Below these, three other options are shown: AWS service-linked role, Role for cross-account access, and Role for identity provider access. At the bottom right are 'Cancel' and 'Next Step' buttons.

Create role

[Step 1 : Select role type](#)

[Step 2 : Establish trust](#)

Step 3 : Attach policy

[Step 4 : Set role name and review](#)

Attach Policy

Select one or more policies to attach. Each role can have up to 10 policies attached.

Showing 275 results				
	Policy Name	Attached Entities	Creation Time	Edited Time
<input type="checkbox"/>	AmazonS3FullAccess	1	2015-02-06 10:40 PDT	2015-02-06 10:40 PDT
<input type="checkbox"/>	AWSElasticBeanstalkEnhanced... AWS	1	2016-02-08 15:17 PDT	2016-08-22 13:28 PDT
<input type="checkbox"/>	AWSElasticBeanstalkMulticonta... AWS	1	2016-02-08 15:15 PDT	2016-06-06 16:45 PDT
<input type="checkbox"/>	AWSElasticBeanstalkService AWS	1	2016-04-11 13:27 PDT	2017-06-21 09:49 PDT
<input type="checkbox"/>	AWSElasticBeanstalkWebTier AWS	1	2016-02-08 15:08 PDT	2016-12-20 18:06 PDT
<input type="checkbox"/>	AWSElasticBeanstalkWorkerTier AWS	1	2016-02-08 15:12 PDT	2016-12-20 18:01 PDT
<input type="checkbox"/>	AdministratorAccess AWS	0	2015-02-06 10:39 PDT	2015-02-06 10:39 PDT
<input type="checkbox"/>	AmazonAPIGatewayAdministrator AWS	0	2015-07-09 10:34 PDT	2015-07-09 10:34 PDT
<input type="checkbox"/>	AmazonAPIGatewayInvokeFull... AWS	0	2015-07-09 10:36 PDT	2015-07-09 10:36 PDT
<input type="checkbox"/>	AmazonAPIGatewayPushToClo... AWS	0	2015-11-11 15:41 PDT	2015-11-11 15:41 PDT
<input type="checkbox"/>	AmazonAppStreamFullAccess AWS	0	2015-02-06 10:40 PDT	2015-02-06 10:40 PDT

[Cancel](#) [Previous](#) [Next Step](#)

Create role

[Step 1 : Select role type](#)

[Step 2 : Establish trust](#)

[Step 3 : Attach policy](#)

Step 4 : Set role name and review

Set role name and review

Review the following role information. To edit the role, click an edit link, or click [Create role](#) to finish.

Role name	EC2_S3_API_SQL_Dynamo
Maximum 64 characters. Use alphanumeric and '+-, @-' characters	
Role description	Allows EC2 instances to call AWS services on your behalf.
Maximum 1000 characters.	
Trusted entities	The identity provider(s) ec2.amazonaws.com
Policies	arn:aws:iam::aws:policy/AmazonS3FullAccess arn:aws:iam::aws:policy/AmazonSQSFullAccess arn:aws:iam::aws:policy/AmazonDynamoDBFullAccess arn:aws:iam::aws:policy/AmazonAPIGatewayAdministrator
Change policies	

[Cancel](#) [Previous](#) [Create role](#)

Secure | https://us-west-1.console.aws.amazon.com/console/home?region=us-west-1

Services ▾ Resource Groups ▾ Mina

AWS services

Find a service by name or feature (for example, EC2, S3 or VM, storage).

Recently visited services

- EC2
- S3
- Storage Gateway

All services

Compute	Developer Tools	Internet of Things
EC2	CodeStar	AWS IoT
Amazon Container Service	CodeCommit	AWS Greengrass
Virtual Servers in the Cloud	CodeBuild	
Lightning	CodeDeploy	
Elastic Beanstalk	CodePipeline	Contact Center
Lambda	X-Ray	Amazon Connect
Batch		
Storage	Management Tools	Game Development
S3	CloudWatch	Amazon GameLift
EFS	CloudFormation	
Glacier	CloudTrail	
Storage Gateway	Config	
	OpsWorks	
	Service Catalog	
Database	Trusted Advisor	
RDS	Managed Services	
DynamoDB		
ElastiCache		

Helpful

- M
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Explore

- Apache M
- Get started v
- for deep lea
- Build Appl
- Run and sce
- or C# without
- servers. Lea
- Amazon F

Secure | https://us-west-1.console.aws.amazon.com/ec2/v2/home?region=us-west-1

Services | Resource Groups

EC2 Dashboard

- Events
- Tags
- Reports
- Limits

INSTANCES

- Instances
- Spot Requests
- Reserved Instances
- Dedicated Hosts

IMAGES

- AMIs
- Bundle Tasks

ELASTIC BLOCK STORE

- Volumes
- Snapshots

NETWORK & SECURITY

- Security Groups
- Elastic IPs
- Placement Groups
- Key Pairs
- Network Interfaces

LOAD BALANCING

- Load Balancers

Resources

You are using the following Amazon EC2 resources in the US West (N. California) region:

1 Running Instances	1 Elastic IPs
0 Dedicated Hosts	0 Snapshots
1 Volumes	0 Load Balancers
0 Key Pairs	2 Security Groups
0 Placement Groups	

Just need a simple virtual private server? Get everything you need to jumpstart your project - compute, storage, and networking – for a low, predictable price. [Try Amazon Lightsail for free.](#)

Create Instance

To start using Amazon EC2 you will want to launch a virtual server, known as an Amazon EC2 instance.

Launch Instance

Note: Your instances will launch in the US West (N. California) region

Service Health

Scheduled Events

Service Status: **US West (N. California):**

Find free software trial products in the AWS Marketplace

From the FOO

Account Attributes

Supported Platforms

VPC

Default VPC

vpc-bdd10dd9

Resource ID length management

Additional Information

Getting Started Guide

Documentation

All EC2 Resources

Forums

Pricing

Contact Us

AWS Marketplace

Step 1: Choose an Amazon Machine Image (AMI)

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
- Free tier only ⓘ

Image	Name	Description	Select	64-bit
	Amazon Linux AMI 2017.03.1 (HVM), SSD Volume Type - ami-3a674d5a	The Amazon Linux AMI is an EBS-backed, AWS-supported image. The default image includes AWS command line tools, Python, Ruby, Perl, and Java. The repositories include Docker, PHP, MySQL, PostgreSQL, and other packages.	Select	64-bit
	SUSE Linux Enterprise Server 12 SP2 (HVM), SSD Volume Type - ami-32c8e552	SUSE Linux Enterprise Server 12 Service Pack 2 (HVM), EBS General Purpose (SSD) Volume Type. Public Cloud, Advanced Systems Management, Web and Scripting, and Legacy modules enabled.	Select	64-bit
	Red Hat Enterprise Linux 7.4 (HVM), SSD Volume Type - ami-66eec506	Red Hat Enterprise Linux version 7.4 (HVM), EBS General Purpose (SSD) Volume Type	Select	64-bit
	Ubuntu Server 16.04 LTS (HVM), SSD Volume Type - ami-09d2fb69	Ubuntu Server 16.04 LTS (HVM), EBS General Purpose (SSD) Volume Type. Support available from Canonical (http://www.ubuntu.com/cloud/services).	Select	64-bit

Step 2: Choose an Instance Type

Amazon EC2 provides a wide selection of instance types optimized to fit different use cases. Instances are virtual servers that can run applications. They have varying combinations of CPU, memory, storage, and networking capacity, and give you the flexibility to choose the appropriate mix of resources for your applications. Learn more about instance types and how they can meet your computing needs.

Filter by: All instance types Current generation Show/Hide Columns

Currently selected: t2.micro (Variable ECUs, 1 vCPUs, 2.5 GHz, Intel Xeon Family, 1 GiB memory, EBS only)

Family	Type	vCPUs ⓘ	Memory (GB)	Instance Storage (GB) ⓘ	EBS-Optimized Available ⓘ	Network Performance ⓘ	IPv6 Support ⓘ
General purpose	t2.nano	1	0.5	EBS only	-	Low to Moderate	Yes
General purpose	t2.micro ⓘ	1	1	EBS only	-	Low to Moderate	Yes
General purpose	t2.small	1	2	EBS only	-	Low to Moderate	Yes
General purpose	t2.medium	2	4	EBS only	-	Low to Moderate	Yes
General purpose	t2.large	2	8	EBS only	-	Low to Moderate	Yes
General purpose	t2.xlarge	4	16	EBS only	-	Moderate	Yes
General purpose	t2.2xlarge	8	32	EBS only	-	Moderate	Yes
General purpose	m4.large	2	8	EBS only	Yes	Moderate	Yes

Cancel **Previous** **Review and Launch** **Next: Configure Instance Details**

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

Configure the instance to suit your requirements. You can launch multiple instances from the same AMI, request Spot Instances to take advantage of the lower pricing, assign an access management role to the instance, and more.

Number of instances	<input type="text" value="1"/>	Launch into Auto Scaling Group
Purchasing option	<input checked="" type="checkbox"/> Request Spot instances	
Network	vpc-bdd10dd9 (default)	<input type="button" value="Create new VPC"/>
Subnet	No preference (default subnet in any Availability Zone)	<input type="button" value="Create new subnet"/>
Auto-assign Public IP	<input type="checkbox"/> Use subnet setting (Enable)	
IAM role	EC2_S3_API_SQL_Dynamo	<input type="button" value="Create new IAM role"/>
Shutdown behavior	<input type="checkbox"/> Stop	
Enable termination protection	<input type="checkbox"/> Protect against accidental termination	
Monitoring	<input type="checkbox"/> Enable CloudWatch detailed monitoring Additional charges apply.	
Tenancy	Shared - Run a shared hardware instance Additional charges will apply for dedicated tenancy.	
Advanced Details		
Cancel Previous Review and Launch Next: Add Storage		

1. Choose AMI 2. Choose Instance Type 3. Configure Instance 4. Add Storage 5. Add Tags 6. Configure Security Group 7. Review

Step 7: Review Instance Launch

Please review your instance launch details. You can go back to edit changes for each section. Click **Launch** to assign a key pair to your instance and complete the launch process.

AMI Details	Edit AMI														
 Amazon Linux AMI 2017.03.1 (HVM), SSD Volume Type - ami-3a674d5a <small>Free tier eligible</small> The Amazon Linux AMI is an EBS-backed, AWS-supported image. The default image includes AWS command line tools, Python, Ruby, Perl, and Java. The repositories include Docker, PHP, MySQL, PostgreSQL, and other packages. Root Device Type: ebs Virtualization type: hvm															
Instance Type	Edit instance type														
<table border="1"> <thead> <tr> <th>Instance Type</th> <th>ECUs</th> <th>vCPUs</th> <th>Memory (GiB)</th> <th>Instance Storage (GB)</th> <th>EBS-Optimized Available</th> <th>Network Performance</th> </tr> </thead> <tbody> <tr> <td>t2.micro</td> <td>Variable</td> <td>1</td> <td>1</td> <td>EBS only</td> <td>-</td> <td>Low to Moderate</td> </tr> </tbody> </table>		Instance Type	ECUs	vCPUs	Memory (GiB)	Instance Storage (GB)	EBS-Optimized Available	Network Performance	t2.micro	Variable	1	1	EBS only	-	Low to Moderate
Instance Type	ECUs	vCPUs	Memory (GiB)	Instance Storage (GB)	EBS-Optimized Available	Network Performance									
t2.micro	Variable	1	1	EBS only	-	Low to Moderate									
Security Groups	Edit security groups														
Security group name: launch-wizard-1 Description: launch-wizard-1 created 2017-08-20T01:25:16.655-07:00															
Type	Protocol	Port Range	Source												
This security group has no rules															
Cancel Previous Launch															

Select an existing key pair or create a new key pair

A key pair consists of a **public key** that AWS stores, and a **private key file** that you store. Together, they allow you to connect to your instance securely. For Windows AMIs, the private key file is required to obtain the password used to log into your instance. For Linux AMIs, the private key file allows you to securely SSH into your instance.

Note: The selected key pair will be added to the set of keys authorized for this instance. Learn more about [removing existing key pairs from a public AMI](#).

Choose an existing key pair ▾

Select a key pair

No key pairs found ▾



No key pairs found

You don't have any key pairs. Please create a new key pair by selecting the [Create a new key pair](#) option above to continue.

[Cancel](#)

[Launch Instances](#)

Select an existing key pair or create a new key pair

A key pair consists of a **public key** that AWS stores, and a **private key file** that you store. Together, they allow you to connect to your instance securely. For Windows AMIs, the private key file is required to obtain the password used to log into your instance. For Linux AMIs, the private key file allows you to securely SSH into your instance.

Note: The selected key pair will be added to the set of keys authorized for this instance. Learn more about [removing existing key pairs from a public AMI](#).

Create a new key pair ▾

Choose an existing key pair

Create a new key pair

Proceed without a key pair

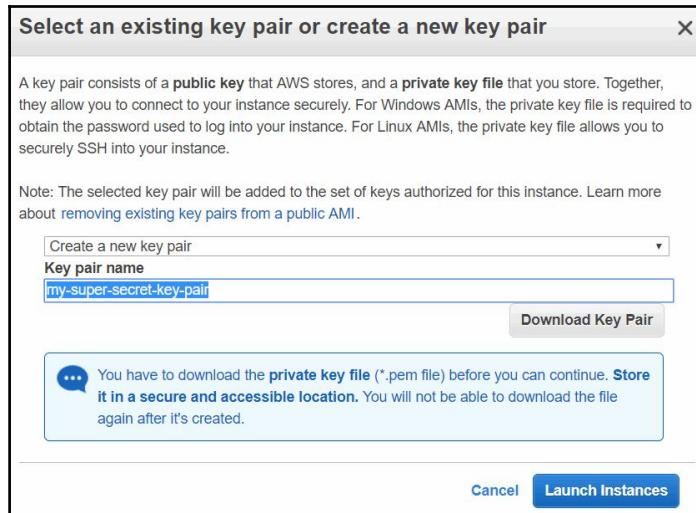
[Download Key Pair](#)



You have to download the **private key file** (*.pem file) before you can continue. [Store it in a secure and accessible location](#). You will not be able to download the file again after it's created.

[Cancel](#)

[Launch Instances](#)



The screenshot shows the AWS Launch Status page. At the top, there are navigation links: Services, Resource Groups, Mina, N. California, Support. Below that is a section titled 'Launch Status' with a green box containing the message: 'Your instances are now launching. The following instance launches have been initiated: i-01f01a71836fbee48 View launch log'. There is also a blue info icon with the text: 'Get notified of estimated charges. Create billing alerts to get an email notification when estimated charges on your AWS bill exceed an amount you define (for example, if you exceed the free usage tier).' Below this is a section titled 'How to connect to your instances' with a note: 'Your instances are launching, and it may take a few minutes until they are in the running state, when they will be ready for you to use. Usage hours on your new instances will start immediately and continue to accrue until you stop or terminate your instances.' It also says: 'Click [View Instances](#) to monitor your instances' status. Once your instances are in the running state, you can [connect](#) to them from the Instances screen. Find out how to connect to your instances.' A collapsed section titled 'Here are some helpful resources to get you started' lists: 'How to connect to your Linux Instance', 'Learn about AWS Free Usage Tier', 'Amazon EC2: User Guide', and 'Amazon EC2: Discussion Forum'. At the bottom, there are links for Feedback, English, Privacy Policy, and Terms of Use.

EC2 Dashboard

- Events
- Tags
- Reports
- Limits
- INSTANCES**
 - Instances** (highlighted with a red box)
 - Spot Requests
 - Reserved Instances
 - Dedicated Hosts
- IMAGES
- AMIs
- Bundle Tasks
- ELASTIC BLOCK STORE
- Volumes
- Snapshots
- NETWORK & SECURITY
- Security Groups
- Elastic IPs
- Placement Groups
- Key Pairs
- Network Interfaces
- LOAD BALANCING

Resources

You are using the following Amazon EC2 resources in the US West (N. California) region:

2 Running Instances	1 Elastic IPs
0 Dedicated Hosts	0 Snapshots
2 Volumes	0 Load Balancers
2 Key Pairs	3 Security Groups
0 Placement Groups	

Just need a simple virtual private server? Get everything you need to jumpstart your project - compute, storage, and networking – for a low, predictable price. [Try Amazon Lightsail for free.](#)

Create Instance

To start using Amazon EC2 you will want to launch a virtual server, known as an Amazon EC2 instance.

Launch Instance

Note: Your instances will launch in the US West (N. California) region

Service Health

Service Status:

- US West (N. California): This service is operating normally

Availability Zone Status:

- us-west-1b: Availability zone is operating normally

Scheduled Events

US West (N. California): No events

EC2 Dashboard

- Events
- Tags
- Reports
- Limits
- INSTANCES**
 - Instances** (highlighted with a red box)
 - Spot Requests
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 - Dedicated Hosts
- IMAGES
- AMIs
- Bundle Tasks
- ELASTIC BLOCK STORE
- Volumes
- Snapshots
- NETWORK & SECURITY
- Security Groups
- Elastic IPs

Actions

Launch Instance | Connect | Actions ▾

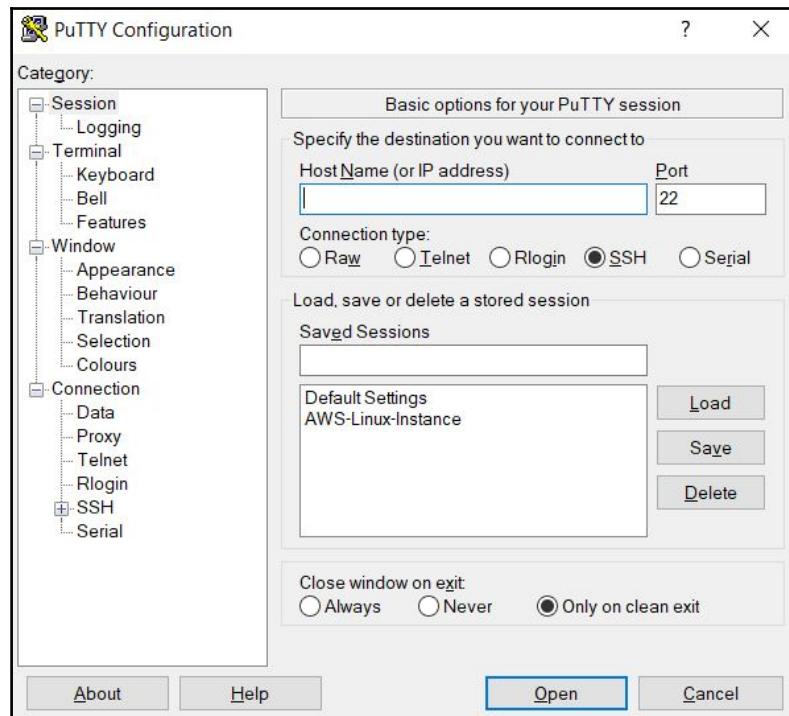
Filter by tags and attributes or search by keyword

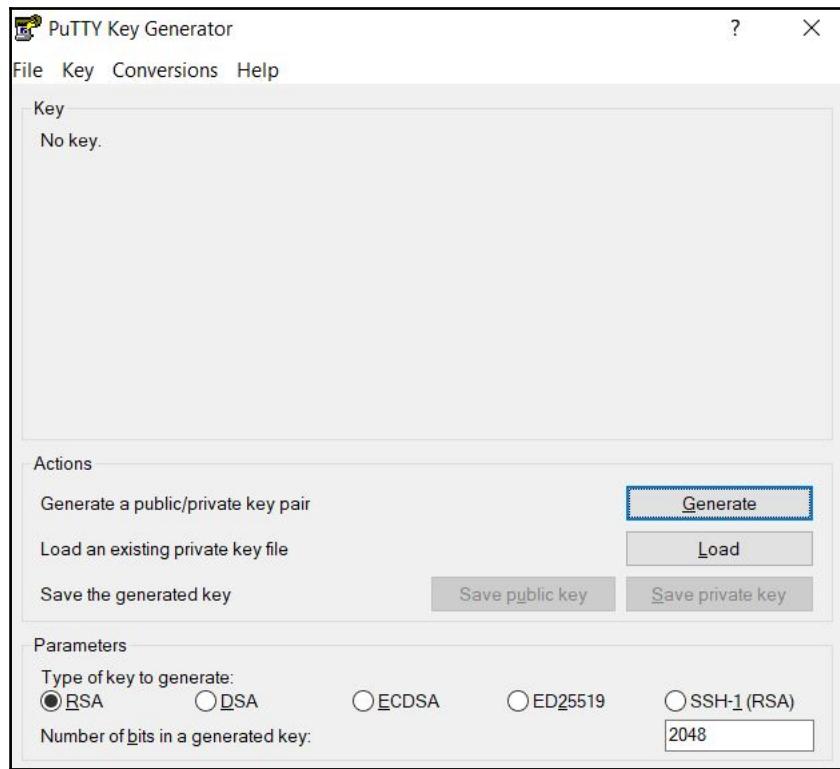
Name	Instance ID	Instance Type	Availability Zone	Instance State	Status Checks	Alarm Status	Public DNS (IPv4)	IPv4 Public IP	IPv6 IPs
i-01f01a718361bee48	i-01f01a718361bee48	t2.micro	us-west-1b	running	2/2 checks ...	None	ec2-54-193-5-28.us-we...	54.193.5.28	-
Sample-env	i-032f6151130f09fe2	t1.micro	us-west-1c	running	2/2 checks ...	None	ec2-54-67-83-36.us-we...	54.67.83.36	-

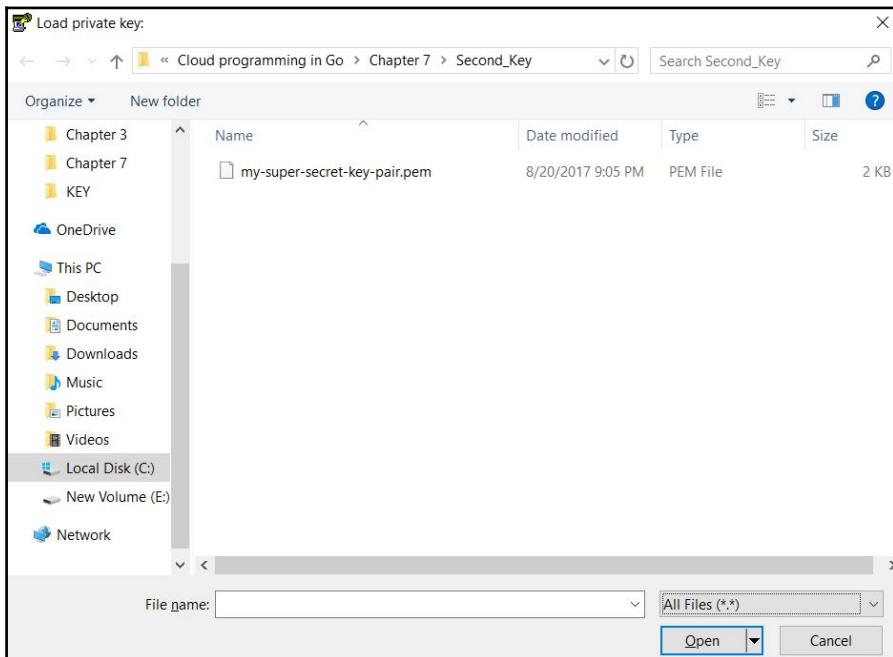
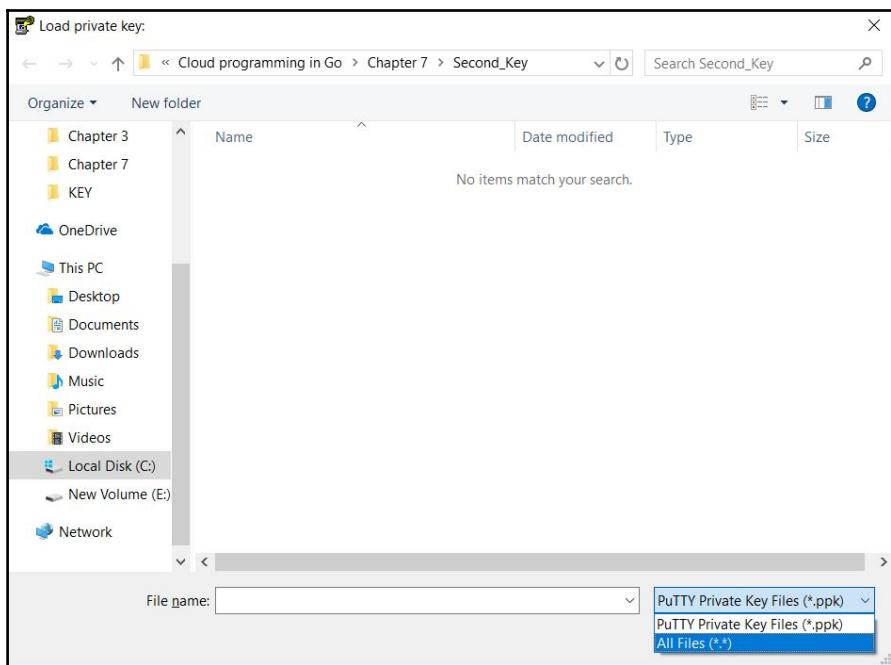
Select an instance above

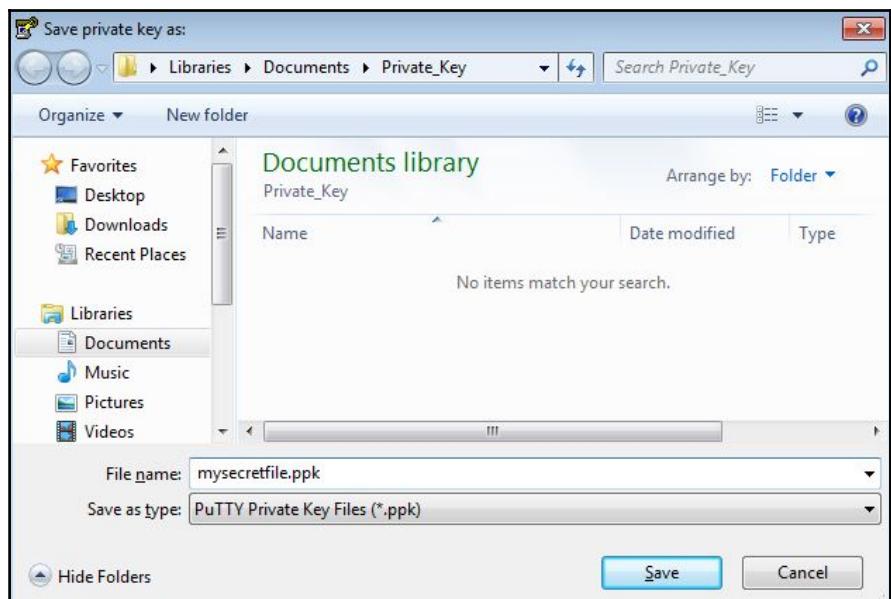
The screenshot shows the AWS EC2 Instances page. On the left, there's a sidebar with various navigation links like EC2 Dashboard, Events, Tags, Reports, Limits, Instances, Images, Elastic Block Store, Network & Security, and more. The main area shows a table of instances. One instance, 'i-01f01a71836bee48', is selected and its details are shown in a modal. The modal has tabs for Description, Status Checks, Monitoring, and Tags. The Description tab is active, displaying fields such as Instance ID, Instance state, Instance type, Availability zone, Security groups, Scheduled events, AMI ID, Platform, IAM role, and Key pair name. A red box highlights the 'Public DNS (IPv4)' field, which contains the value 'ec2-54-193-5-28.us-west-1.compute.amazonaws.com'.

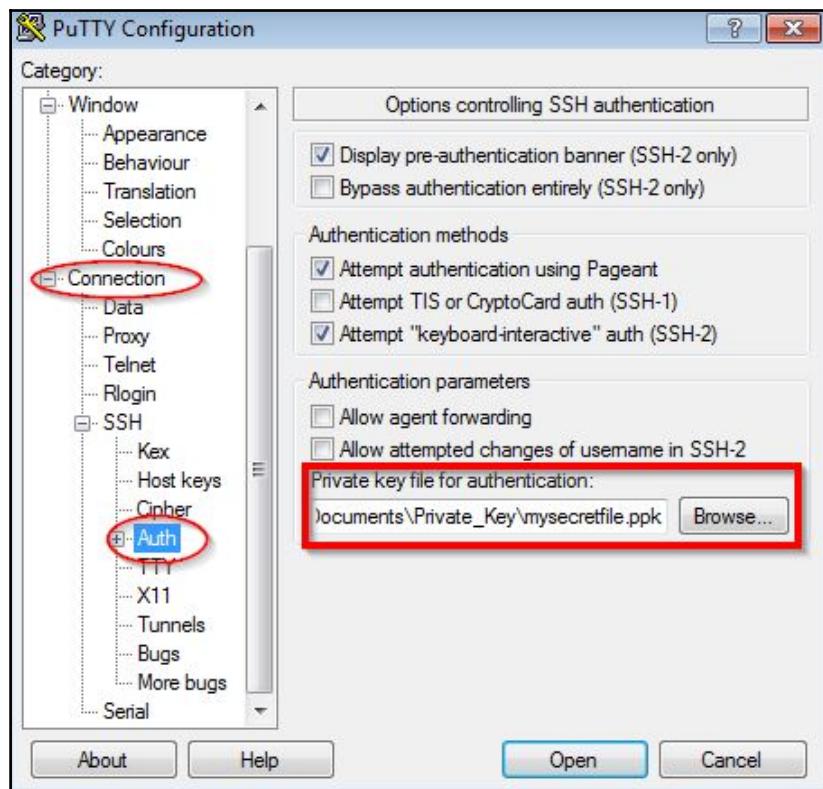
```
 _-|(_-|_)_ ) Amazon Linux AMI
   _\|_\_|_|
https://aws.amazon.com/amazon-linux-ami/2017.03-release-notes/
[ec2-user@ip-172-31-2-79 ~]$
```

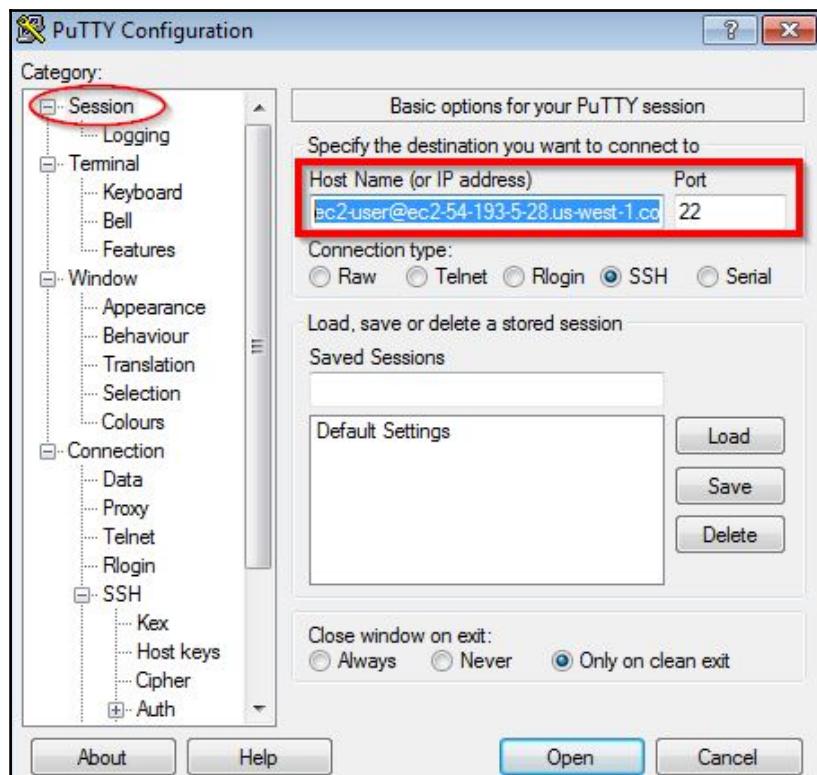








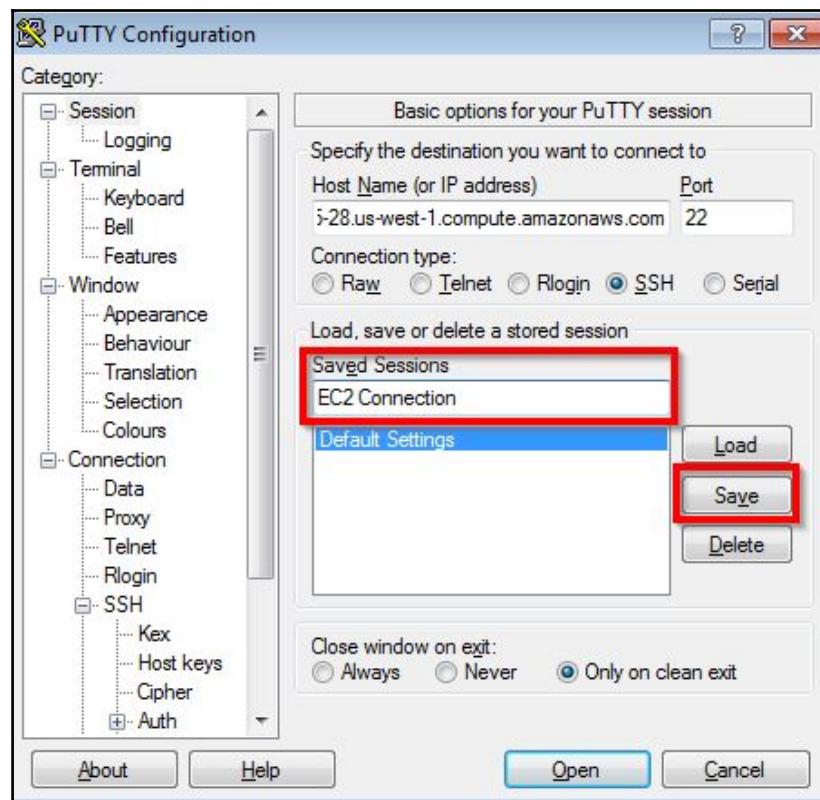




A screenshot of a terminal window titled "ec2-user@ip-172-31-2-79:~". The window shows the following text:

```
Using username "ec2-user".
Authenticating with public key "imported-openssh-key"
Last login: Sun Aug 27 07:15:11 2017 from c-73-92-226-127.hsd1.ca.comcast.net
[ec2-user@ip-172-31-2-79 ~]$
```

The window has a blue border and standard window controls (minimize, maximize, close) at the top right. A vertical scroll bar is visible on the right side of the terminal area.



The screenshot shows the AWS Resource Groups interface. On the left, a navigation menu lists various services under 'Services'. A red arrow points to the 'Security Groups' option under 'NETWORK & SECURITY'. The main content area displays a summary of EC2 resources: 2 Running Instances, 1 Elastic IP, 0 Dedicated Hosts, 0 Snapshots, 2 Volumes, 0 Load Balancers, 2 Key Pairs, 5 Security Groups, and 0 Placement Groups. Below this, a callout box promotes Amazon Lightsail. The right side features sections for 'Account Attributes' (Supported Platforms: VPC, Default VPC: vpc-bdd10dd9, Resource ID length management), 'Additional Information' (Getting Started Guide, Documentation, All EC2 Resources, Forums, Pricing, Contact Us), and 'AWS Marketplace' (Find free software trial products). At the bottom, there are links for Service Health, Scheduled Events, Feedback, English (US) language selection, Privacy Policy, and Terms of Use.

Resources

You are using the following Amazon EC2 resources in the US West (N. California) region:

2 Running Instances	1 Elastic IPs
0 Dedicated Hosts	0 Snapshots
2 Volumes	0 Load Balancers
2 Key Pairs	5 Security Groups
0 Placement Groups	

Just need a simple virtual private server? Get everything you need to jumpstart your project - compute, storage, and networking – for a low, predictable price. Try [Amazon Lightsail](#) for free.

Create Instance

To start using Amazon EC2 you will want to launch a virtual server, known as an Amazon EC2 instance.

[Launch Instance](#)

Note: Your instances will launch in the US West (N. California) region

Service Health [Scheduled Events](#)

Feedback English (US)

Privacy Policy Terms of Use

Account Attributes

Supported Platforms
VPC

Default VPC
vpc-bdd10dd9

Resource ID length management

Additional Information

Getting Started Guide

Documentation

All EC2 Resources

Forums

Pricing

Contact Us

AWS Marketplace

Find free software trial products in the

The screenshot shows the AWS Management Console interface for managing security groups. The left sidebar navigation includes:

- Bundle Tasks
- ELASTIC BLOCK STORE
 - Volumes
 - Snapshots
- NETWORK & SECURITY
 - Security Groups** (selected)
 - 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

The main content area displays the "Resource Groups" page for Security Groups. A red arrow points to the "Create Security Group" button at the top right of the list table. The table lists five existing security groups:

Name	Group ID	Group Name
sg-286de04f	sg-286de04f	default
sg-30a02456	sg-30a02456	HTTP Access
Sample-env	sg-9f48c4f8	awseb-e-e3b2haerkg-stack-launch-wizard-1
sg-a53591c3	sg-a53591c3	launch-wizard-1
sg-d176ccb7	sg-d176ccb7	TCP 8080

Below the table, a modal window is open for the selected security group "sg-286de04f". The modal has tabs for Description, Inbound, Outbound, and Tags. The Inbound tab is selected, showing the rule "Group name default".

At the bottom of the page, there are links for Feedback, English (US), Privacy Policy, and Terms of Use.

Create Security Group

Security group name Description VPC

Security group rules:

Inbound Outbound

Type	Protocol	Port Range	Source	Description
This security group has no rules				

Add Rule

Cancel Create

Create Security Group

Security group name Description VPC

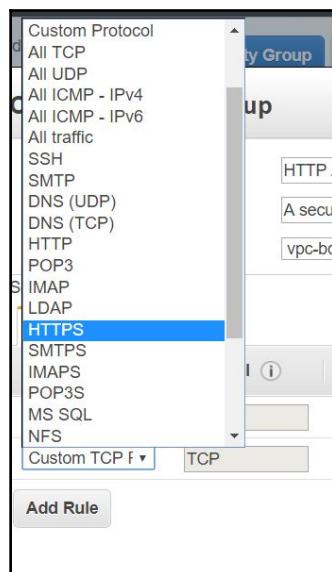
Security group rules:

Inbound Outbound

Type	Protocol	Port Range	Source	Description
HTTP	TCP	80	Custom	0.0.0.0/0, ::/0 e.g. SSH for Admin Desktop

Add Rule

Cancel Create



A screenshot of the AWS EC2 Dashboard under the 'NETWORK & SECURITY' section, specifically the 'Security Groups' tab. The left sidebar shows navigation links for EC2 Dashboard, Events, Tags, Reports, Limits, Instances, Images, Elastic Block Store, and Key Pairs. The 'Security Groups' link is highlighted with an orange bar. The main area displays a table of security groups:

Name	Group ID	Group Name	VPC ID	Description
sg-286de04f		default	vpc-bdd10dd9	default VPC security group
sg-30a02456		HTTP Access	vpc-bdd10dd9	A security group to enable HTTP access
Sample-env	sg-9f48c4f8	awseb-e-e3b2haerkg-stack-...	vpc-bdd10dd9	SecurityGroup for ElasticBeanstalk envir...
	sg-a53591c3	launch-wizard-1	vpc-bdd10dd9	launch-wizard-1 created 2017-08-20T20:5...
	sg-d176ccb7	TCP 8080	vpc-bdd10dd9	TCP port 8080

The row for 'HTTP Access' has a red outline around it. Below the table, a message says 'Select a security group above'. The top navigation bar includes 'Services', 'Resource Groups', and user information.

The screenshot shows the AWS EC2 Dashboard. On the left, there's a sidebar with various navigation options like EC2 Dashboard, Events, Tags, Reports, Limits, Instances, Spot Requests, Reserved Instances, Dedicated Hosts, AMIs, Bundle Tasks, Volumes, Snapshots, Security Groups, Elastic IPs, Placement Groups, and Key Pairs. The 'Instances' section is currently selected and highlighted with an orange border. In the main content area, there's a table of instances. One instance, 'ec_app_test' (ID i-01f01a71836fbbee48), is selected and shown in more detail below the table. An 'Actions' dropdown menu is open over this instance, with 'Networking' selected. A sub-menu from 'Networking' includes 'Change Security Groups', which is also highlighted with a red box. Other options in the 'Networking' submenu are 'Attach Network Interface', 'Detach Network Interface', 'Disassociate Elastic IP Address', 'Change Source/Dest. Check', and 'Manage IP Addresses'. The main table shows two instances: 'ec_app_test' in 'running' state in 'us-west-1b' and another instance in 'running' state in 'us-west-1c'. The 'Change Security Groups' option in the submenu is also highlighted with a red box.

Services ▾ Resource Groups ▾

EC2 Dashboard Launch Instance Connect Actions ▾

Events Tags Reports Limits

Instances

Spot Requests Reserved Instances Dedicated Hosts

Images AMIs Bundle Tasks

Elastic Block Store Volumes Snapshots

Network & Security Security Groups

Elastic IPs Placement Groups Key Pairs

Change Security Groups

Instance ID: i-01f01a71836fbee48
Interface ID: eni-04429907

Select Security Group(s) to associate with your instance

Security Group ID	Security Group Name	Description
sg-9f48c4f8	awseb-e-e3b2haerkg-stack-AWSEBS... SecurityGroup for ElasticBeanstalk environment.	
sg-286de04f	default	default VPC security group
<input checked="" type="checkbox"/> sg-30a02456	HTTP Access	A security group to enable HTTP access
<input checked="" type="checkbox"/> sg-a53591c3	launch-wizard-1	launch-wizard-1 created 2017-08-20T20:56:24.128-07:00
<input checked="" type="checkbox"/> sg-d176ccb7	TCP 8080	TCP port 8080

Cancel Assign Security Groups

Scheduled events: No scheduled events

AMI ID: amzn-ami-hvm-2017.03.1.20170812-x86_64-gp2

VPC ID: vpc-bdd10dd9 Subnet ID: subnet-802996d8

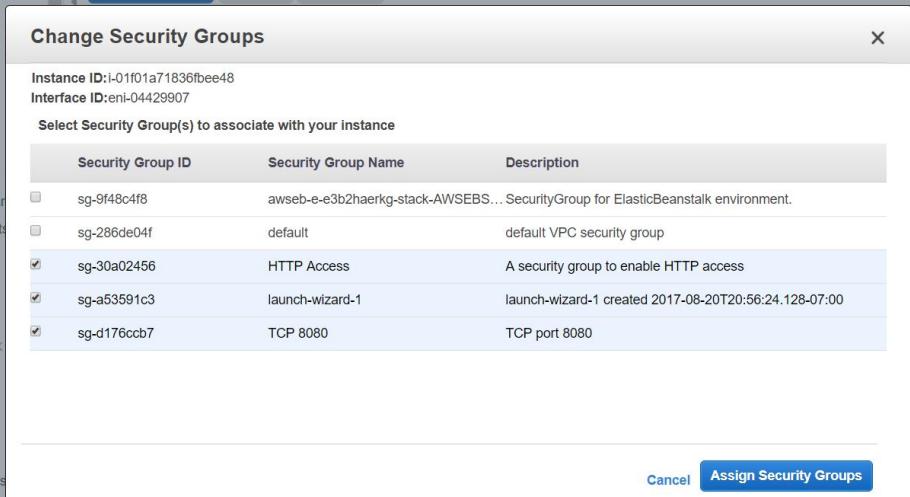
Feedback English (US)

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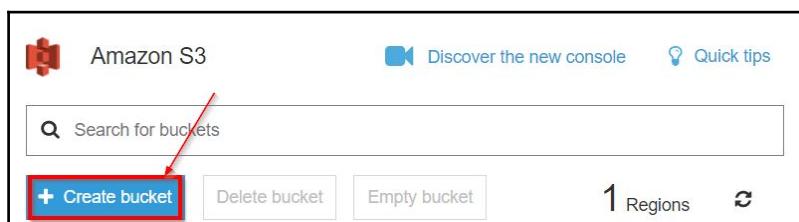
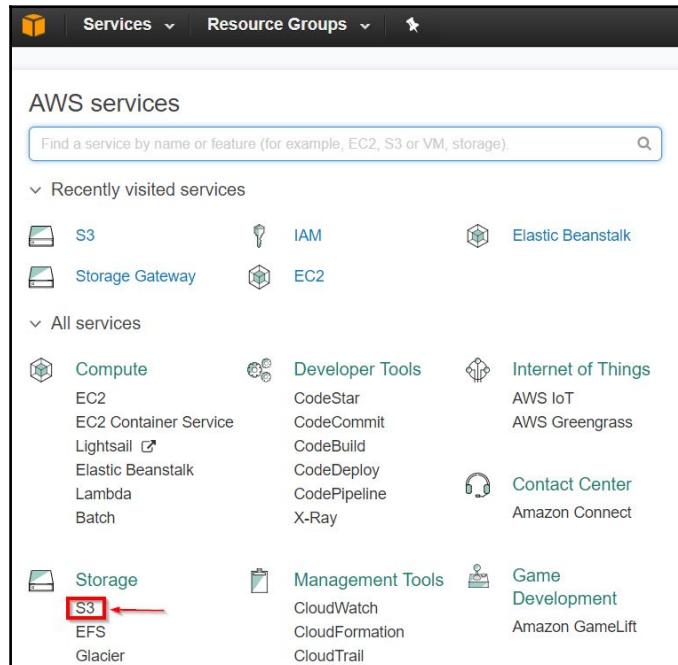
2 of 2 >|

Status Public D

ec2-54-1 ec2-54-6



Chapter 8: AWS II—S3, SQS, API Gateway, and Dynamo DB



aws Services Resource Groups ★

Amazon Glacier now offers expedited retrievals, typically in 1-5 minutes. [Learn More »](#)

Documentation

Amazon S3

Search for buckets

+ Create bucket Delete bucket Empty bucket

Bucket name: mnandbucket

Access: Not public * Region: US West (N. California) Date created: Aug 28, 2017 10:01:50 PM GMT-0700

Discover the new console Quick tips

2 Buckets 0 Public 1 Regions

A red arrow points from the 'mnandbucket' entry in the list to the 'mnandbucket' link in the breadcrumb navigation bar above.

Services Resource Groups ★

Amazon S3 > mnandbucket

Overview Properties Permissions Management

Type a prefix and press Enter to search. Press ESC to clear.

Upload Create folder More

US West (N. California)

A red box highlights the 'Create folder' button in the top navigation bar.

The 'Simple Queue Service' icon is highlighted with a red box and a red arrow points to it from the bottom right of the main content area.

Category	Service	Description		
Database	Glacier	CloudTrail	Run and scale code for Python, Node.js, Java, or C# without provisioning or managing servers. Learn more .	
	Storage Gateway	Config	Mobile Services	Amazon DynamoDB
		OpsWorks	Mobile Hub	Fast and flexible NoSQL database service for any scale. Learn more .
		Service Catalog	Cognito	
		Trusted Advisor	Device Farm	
		RDS	Managed Services	Mobile Analytics
		DynamoDB		Pinpoint
		ElastiCache		
		Amazon Redshift		
			Security, Identity & Compliance	
Networking & Content Delivery		IAM	Application Services	AWS Marketplace
		Inspector	Step Functions	Discover, procure, and deploy popular software products that run on AWS. Learn more .
		Certificate Manager	SWF	
		VPC	API Gateway	
		CloudFront	Directory Service	
		Direct Connect	WAF & Shield	
		Route 53	Elastic Transcoder	
			Artifact	
			Amazon Macie	
			CloudHSM	
Migration			Messaging	Have feedback?
			Simple Queue Service	Submit feedback to tell us about your experience with the AWS Management Console.
			Simple Notification Service	
			Simple Email Service	
Analytics		Analytics		
		Athena	Business Productivity	
		EMR	WorkDocs	
		CloudSearch	WorkMail	
		Elasticsearch Service	Amazon Chime	
		Kinesis		
		Data Pipeline		
		QuickSight		
		AWS Glue	Desktop & App Streaming	
			WorkSpaces	

Create New Queue

What do you want to name your queue?

Queue Name ⓘ
 Type the queue name.

Region ⓘ US West (N. California)

For more information, see the [Amazon SQS FAQs](#) and the [Amazon SQS Developer Guide](#).

You can change these default parameters.

Queue Attributes

Default Visibility Timeout ⓘ	30	seconds	Value must be between 0 seconds and 12 hours.
Message Retention Period ⓘ	4	days	Value must be between 1 minute and 14 days.
Maximum Message Size ⓘ	256	KB	Value must be between 1 and 256 KB.
Delivery Delay ⓘ	0	seconds	Value must be between 0 seconds and 15 minutes.
Receive Message Wait Time ⓘ	0	seconds	Value must be between 0 and 20 seconds.

Create New Queue Queue Actions

Filter by Prefix: Enter Text... X 1 to 1 of 1 items

Name	Messages Available	Messages In Flight	Created
eventqueue	0	0	2017-09-03 13:22:24 GMT-07:00

1 SQS Queue selected

Details Permissions Redrive Policy Monitoring Tags

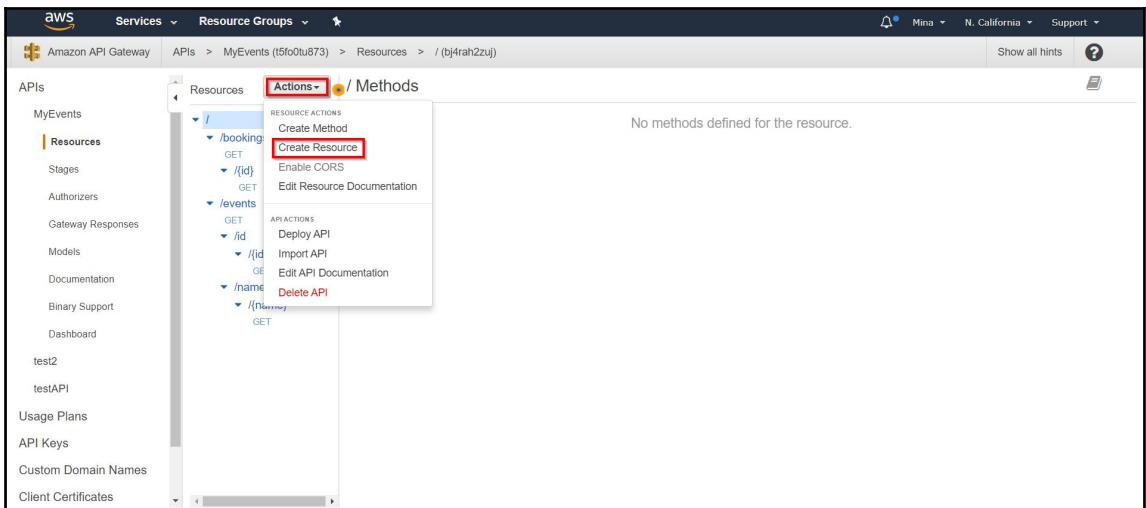
Name: eventqueue
URL: <https://sqs.us-west-1.amazonaws.com/395512779847/eventqueue>
ARN: arn:aws:sqs:us-west-1:395512779847:eventqueue
Created: 2017-09-03 13:22:24 GMT-07:00
Last Updated: 2017-09-03 13:22:24 GMT-07:00
Delivery Delay: 0 seconds
Messages Delayed: 0

Default Visibility Timeout: 30 seconds
Message Retention Period: 4 days
Maximum Message Size: 256 KB
Receive Message Wait Time: 0 seconds
Messages Available (Visible): 0
Messages in Flight (Not Visible): 0

The screenshot shows the AWS Management Console Services page. The API Gateway service is highlighted with a red box and a red arrow pointing to it from the top right. Other services listed include ElastiCache, Amazon Redshift, Networking & Content Delivery (VPC, CloudFront, Direct Connect, Route 53), Migration (AWS Migration Hub, Application Discovery Service, Database Migration Service, Server Migration Service, Snowball), Security, Identity & Compliance (IAM, Inspector, Certificate Manager, Directory Service, WAF & Shield, Artifact, Amazon Macie, CloudHSM), Application Services (Step Functions, SWF, API Gateway, Elastic Transcoder), Messaging (Simple Queue Service, Simple Notification Service, Simple Email Service), Analytics (Athena, EMR, CloudSearch, Elasticsearch Service), Business Productivity (WorkDocs, WorkMail, Amazon Chime), and AWS Marketplace.

The screenshot shows the AWS API Gateway service list page. Three APIs are listed: MyEvents (Created on 9/7/2017, No description, Endpoint Configuration: Edge Optimized), test2 (Created on 9/9/2017, No description, Endpoint Configuration: Edge Optimized), and testAPI (Created on 2/25/2017, No description, Endpoint Configuration: Edge Optimized). A red box highlights the '+ Create API' button at the top right of the list.

The screenshot shows the 'Create new API' wizard step. The left sidebar lists APIs: MyEvents, testAPI, Usage Plans, API Keys, Custom Domain Names, Client Certificates, VPC Links, and Settings. The main area shows the 'Create new API' form with the title 'Create new API'. It explains what an API is and provides four creation options: New API (selected), Clone from existing API, Import from Swagger, and Example API. The 'Settings' section asks for a friendly name and description, with 'API name*' set to 'My API' and 'Description' left empty. A note at the bottom says '* Required'. A blue 'Create API' button is at the bottom right.



New Child Resource

Use this page to create a new child resource for your resource.

Configure as proxy resource

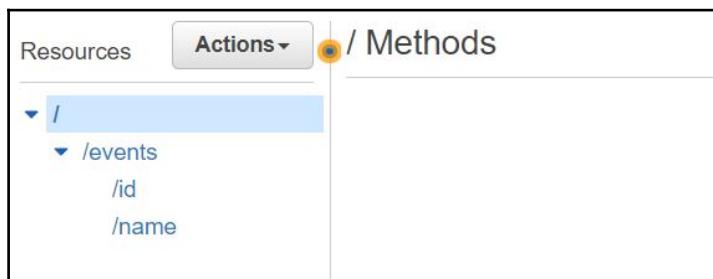
Resource Name*

Resource Path*

You can add path parameters using brackets. For example, the resource path `{username}` represents a path parameter called 'username'. Configuring `/{proxy+}` as a proxy resource catches all requests to its sub-resources. For example, it works for a GET request to `/foo`. To handle requests to `/`, add a new ANY method on the / resource.

Enable API Gateway CORS

* Required



New Child Resource

Use this page to create a new child resource for your resource.

Configure as proxy resource

Resource Name* id

Resource Path* /events/{id}/{name}

You can add path parameters using brackets. For example, the resource path `{username}` represents a path parameter called 'username'. Configuring `/events/{id}/proxy+` as a proxy resource catches all requests to its sub-resources. For example, it works for a GET request to `/events/{id}/foo`. To handle requests to `/events/{id}`, add a new ANY method on the `/events/{id}` resource.

Enable API Gateway CORS

* Required

Create Resource

/events/name/{name} Methods

No methods defined for the resource.

Amazon API Gateway APIs > test2 (e516142n6) > Resources > /events/name/{name} (iby1x6)

Actions /events/name/{name} Methods

RESOURCE ACTIONS

- Create Method (highlighted with a red box)
- Create Resource
- Enable CORS
- Edit Resource Documentation
- Delete Resource

API ACTIONS

- Deploy API
- Import API
- Edit API Documentation
- Delete API

No methods defined for the resource.

Resources Actions /events Methods

No methods defined for the resource.

/events

GET

Resources Actions **/events - GET - Setup**

Choose the integration point for your new method.

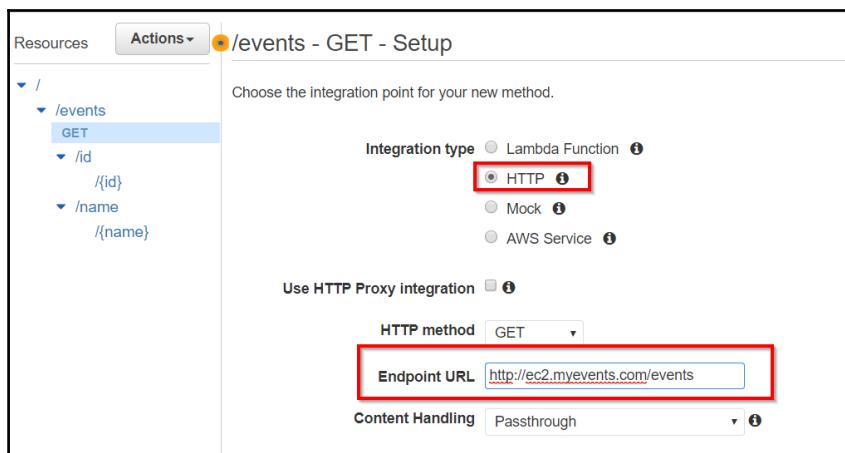
Integration type Lambda Function [i](#)
 HTTP [i](#)
 Mock [i](#)
 AWS Service [i](#)

Use HTTP Proxy integration [i](#)

HTTP method [GET](#)

Endpoint URL <http://ec2.myevents.com/events>

Content Handling [Passthrough](#)



Resources Actions **/events/id/{id} - GET - Setup**

Choose the integration point for your new method.

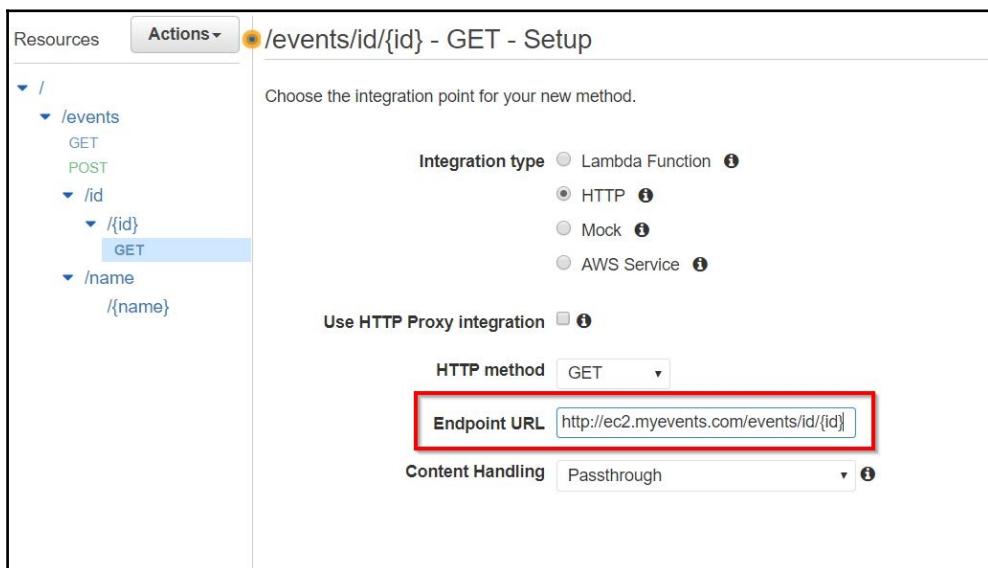
Integration type Lambda Function [i](#)
 HTTP [i](#)
 Mock [i](#)
 AWS Service [i](#)

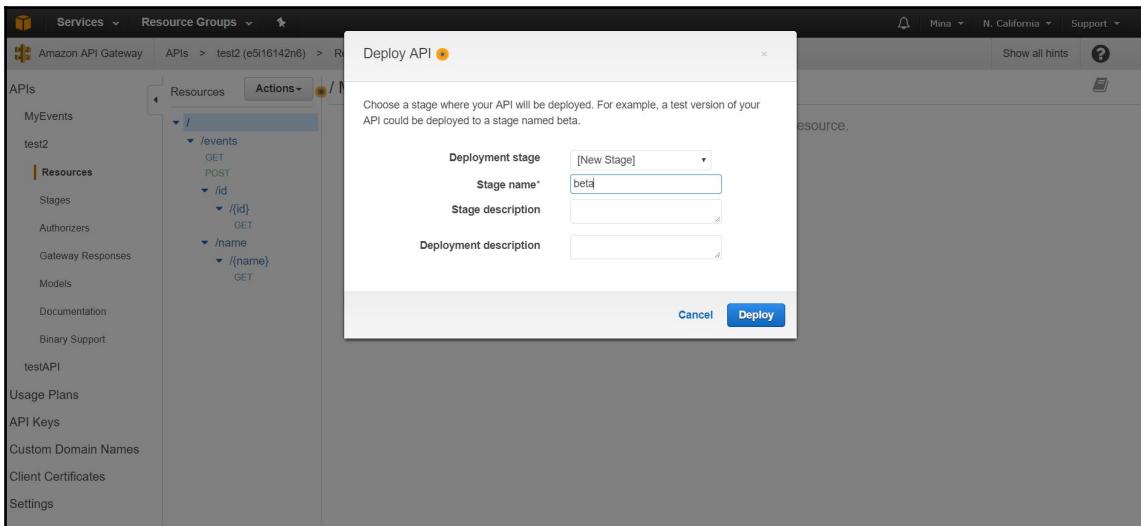
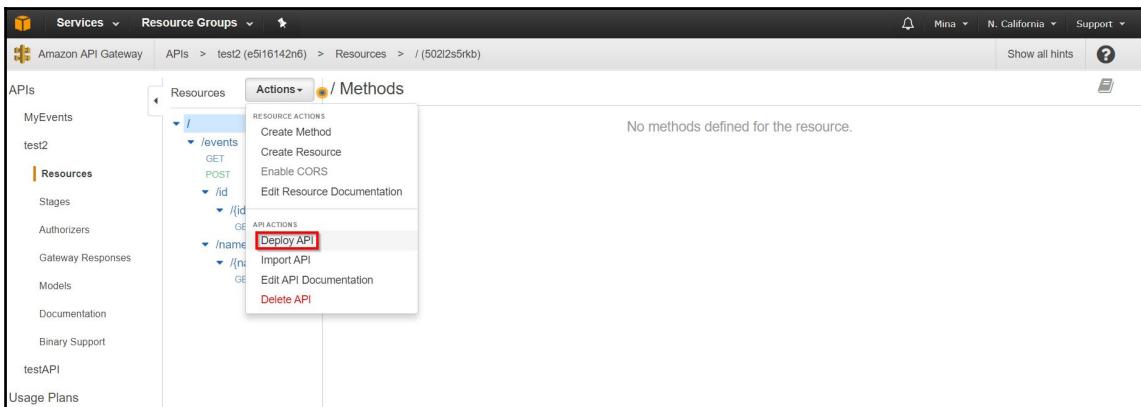
Use HTTP Proxy integration [i](#)

HTTP method [GET](#)

Endpoint URL <http://ec2.myevents.com/events/id/{id}>

Content Handling [Passthrough](#)





The screenshot shows the AWS API Gateway interface. On the left, there's a sidebar with 'APIs' listed: MyEvents, test2, Resources, and Stages (which is highlighted with a red box). Below these are Authorizers, Gateway Responses, Models, Documentation, Dashboard, Settings, test3, and testAPI. The main area is titled 'beta - GET - /events'. It shows a tree structure of API resources: / (POST, GET), /events (POST, GET), /events/{id} (GET), /events/{name} (GET). A red box highlights the 'Invoke URL: https://e5f16142n6.execute-api.us-west-1.amazonaws.com/beta/events' field. Below it are 'Settings' options: 'Inherit from stage' (radio button selected) and 'Override for this method'. At the bottom right is a 'Save Changes' button.

The screenshot shows the 'All services' page in the AWS Management Console. It's organized into several categories: Compute, Developer Tools, Internet of Things, Storage, Management Tools, Game Development, Database, Mobile Services, Networking & Content Delivery, Security, Identity & Compliance, Application Services, and various other services like CodeStar, CodeCommit, CodeBuild, CodeDeploy, CodePipeline, X-Ray, S3, EFS, Glacier, Storage Gateway, RDS, DynamoDB (highlighted with a red box and a red arrow pointing to it), ElastiCache, Amazon Redshift, CloudWatch, CloudFormation, CloudTrail, Config, OpsWorks, Service Catalog, Trusted Advisor, Managed Services, IAM, Inspector, Certificate Manager, Directory Service, WAF & Shield, Artifact, Amazon Macie, VPC, CloudFront, Direct Connect, Route 53, Step Functions, SWF, API Gateway, and Elastic Transcoder.

aws Services Resource Groups

DynamoDB

- Dashboard
- Tables
- Reserved capacity

DAX

- Dashboard
- Clusters
- Subnet groups
- Parameter groups
- Events

Create table

Amazon DynamoDB is a fully managed non-relational database service that provides fast and predictable performance with seamless scalability.

Create table

Recent alerts

No CloudWatch alarms have been triggered.
[View all in CloudWatch](#)

Total capacity for US West (N. California)

Provisioned read capacity	10
Provisioned write capacity	10
Reserved read capacity	0
Reserved write capacity	0

Service health

Current Status
✓ Amazon DynamoDB (N. California)

 Services ▾ Resource Groups ▾ 

Create DynamoDB table

Tutorial ?

DynamoDB is a schema-less database that only requires a table name and primary key. The table's primary key is made up of one or two attributes that uniquely identify items, partition the data, and sort data within each partition.

Table name* 

Primary key* Partition key

ID 
Binary ▾

Add sort key

Table settings

Default settings provide the fastest way to get started with your table. You can modify these default settings now or after your table has been created.

Use default settings

- No secondary indexes.
- Provisioned capacity set to 5 reads and 5 writes.
- Basic alarms with 80% upper threshold using SNS topic "dynamodb".

Services ▾ Resource Groups ▾

ID Binary

Add sort key

Table settings

Default settings provide the fastest way to get started with your table. You can modify these default settings now or after your table has been created.

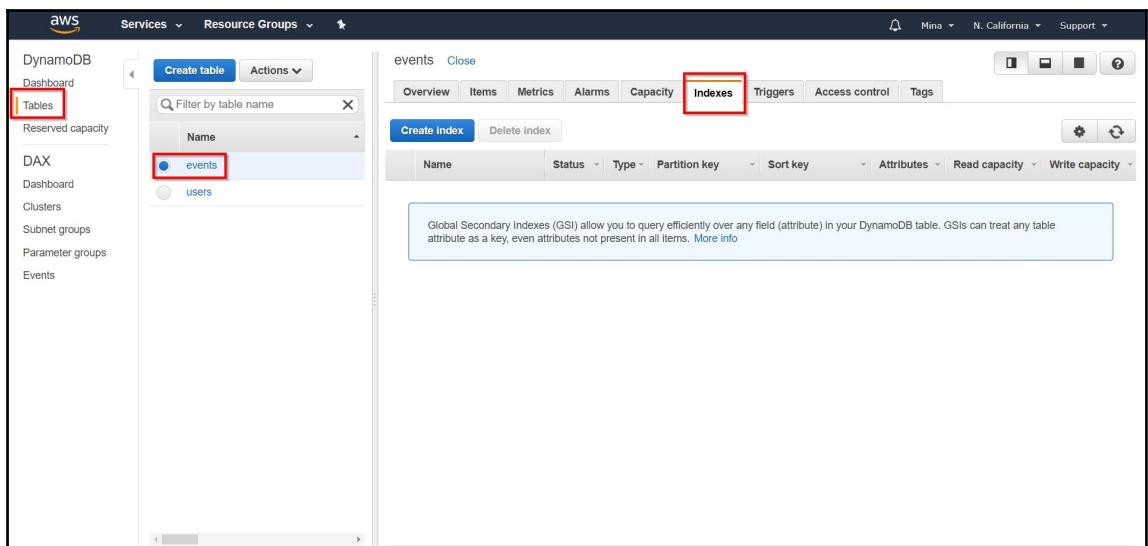
Use default settings

- No secondary indexes.
- Provisioned capacity set to 5 reads and 5 writes.
- Basic alarms with 80% upper threshold using SNS topic "dynamodb".

You do not have the required role to enable Auto Scaling by default.
Please refer to documentation.

Additional charges may apply if you exceed the AWS Free Tier levels for CloudWatch or Simple Notification Service. Advanced alarm settings are available in the CloudWatch management console.

Cancel



Create index

Primary key* Partition key
EventName String i

Add sort key

Index name* EventName-index i

Projected attributes All i

Read capacity units 5 **Write capacity units** 5

Estimated cost \$3.24 / month ([Capacity calculator](#))

Approximate creation time is **5 minutes**. Additional write capacity may decrease creation time. A notification will be sent to the SNS topic dynamodb once the index creation is complete. Basic Alarms with 80% upper threshold using SNS topic 'dynamodb' will be automatically created. Additional charges may apply if you exceed the AWS Free Tier levels for CloudWatch or Simple Notification Service. Advanced configuration for alarms can be done in the alarms tab.

[Cancel](#) [Create index](#)

```
▲ src
  ▶ bookingservice
  ▶ contracts
  ▶ eventservice
  ▶ frontend
  ▲ lib
    ▶ configuration
    ▶ helper
    ▶ msgqueue
    ▲ persistence
      ▶ dblayer
      ▲ dynamolayer
        📜 dynamolayer.go
```

Chapter 9: Continuous Delivery

```
1. mhelmich@mhelmich-macbook: ~/Entwicklung/go-workspace/src/bitbucket.org/minamartinteam/myevents (zsh)
mhelmich@mhelmich-macbook > myevents > master > glide init .
[INFO] Generating a YAML configuration file and guessing the dependencies
[INFO] Attempting to import from other package managers (use --skip-import to skip)
[INFO] Scanning code to look for dependencies
[INFO] --> Found reference to github.com/Shopify/sarama
[INFO] --> Found reference to github.com/aws/aws-sdk-go/service/dynamodb
[INFO] --> Found reference to github.com/gorilla/handlers
[INFO] --> Found reference to github.com/gorilla/mux
[INFO] --> Found reference to github.com/mitchellh/mapstructure
[INFO] --> Found reference to github.com/nu7hatch/gouuid
[INFO] --> Found reference to github.com/streadway/amqp
[INFO] --> Found reference to gopkg.in/mgo.v2
[INFO] --> Adding sub-package bson to gopkg.in/mgo.v2
[INFO] Writing configuration file (glide.yaml)
[INFO] Would you like Glide to help you find ways to improve your glide.yaml configuration?
[INFO] If you want to revisit this step you can use the config-wizard command at any time.
[INFO] Yes (Y) or No (N)?
y
[INFO] Looking for dependencies to make suggestions on
[INFO] --> Scanning for dependencies not using version ranges
[INFO] --> Scanning for dependencies using commit ids
[INFO] Gathering information on each dependency
[INFO] --> This may take a moment. Especially on a codebase with many dependencies
[INFO] --> Gathering release information for dependencies
[INFO] --> Looking for dependency imports where versions are commit ids
[INFO] Here are some suggestions...
[INFO] The package github.com/Shopify/sarama appears to have Semantic Version releases (http://semver.org).
[INFO] The latest release is v1.11.0. You are currently not using a release. Would you like
[INFO] to use this release? Yes (Y) or No (N)
```

```
1. glide update (glide)
mhelmich@mhelmich-macbook > myevents > master > glide update
[INFO] Downloading dependencies. Please wait...
[INFO] --> Fetching github.com/gorilla/mux.
[INFO] --> Fetching updates for github.com/streadway/amqp.
[INFO] --> Fetching gopkg.in/mgo.v2.
[INFO] --> Fetching github.com/Shopify/sarama.
[INFO] --> Fetching github.com/aws/aws-sdk-go.
[INFO] --> Fetching github.com/gorilla/handlers.
[INFO] --> Fetching github.com/mitchellh/mapstructure.
[INFO] --> Fetching github.com/nu7hatch/gouuid.
[INFO] --> Detected semantic version. Setting version for github.com/gorilla/handlers to v1.2.
[INFO] --> Detected semantic version. Setting version for github.com/Shopify/sarama to v1.11.0.
[INFO] --> Detected semantic version. Setting version for github.com/gorilla/mux to v1.3.0.
[INFO] --> Detected semantic version. Setting version for github.com/aws/aws-sdk-go to v1.8.19.
[INFO] Resolving imports
[INFO] --> Fetching github.com/davecgh/go-spew.
[INFO] --> Fetching github.com/eapache/go-resiliency.
[INFO] --> Fetching github.com/eapache/go-xerial-snappy.
[INFO] --> Fetching github.com/eapache/queue.
[INFO] --> Fetching github.com/klauspost/crc32.
[INFO] --> Fetching github.com/pierrec/lz4.
[INFO] --> Fetching github.com/rcrowley/go-metrics.
[INFO] --> Fetching github.com/gorilla/context.
[INFO] --> Fetching github.com/golang/snappy.
[INFO] --> Fetching github.com/pierrec/xxHash.
[INFO] --> Fetching github.com/jmespath/go-jmespath.
```

Martin Helmich - Profile - Trav x

Travis CI GmbH [DE] | <https://travis-ci.org/profile/martin-helmich>

Travis CI Blog Status Help Martin Helmich

 Martin Helmich
Repositories 67

Token: [@](#)

Beta Features

[See what's new!](#)

Organizations

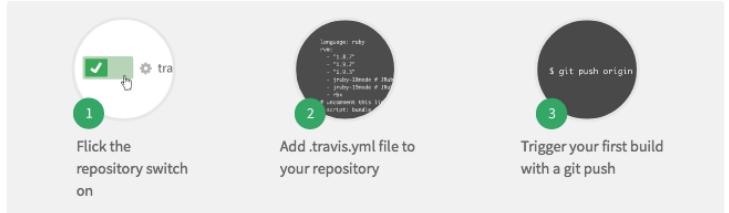
 Mittwald CM Service
Repositories 27

Is an organization missing?
[Review and add your authorized organizations.](#)



Martin Helmich

We're only showing your public repositories. You can find your private projects on travis-ci.com.


1 Flick the repository switch on
2 Add .travis.yml file to your repository
3 git push origin

 martin-helmich/myevents
 martin-helmich/myevents-frontend

mittwald/kubernetes-secret-gs X Martin

← → C ⌂ https://travis-ci.org/martin-helmich/myevents Martin

Travis CI Blog Status Help Martin Helmich

Search all repositories

My Repositories +

- ✓ martin-helmich/myevents # 11
⌚ Duration: 6 min 43 sec
📅 Finished: 5 minutes ago
- ✓ mittwald/typo3_forum # 220
⌚ Duration: 2 min 51 sec
📅 Finished: 5 days ago
- ✓ martin-helmich/martin-helmic # 42
⌚ Duration: 2 min 12 sec
📅 Finished: 15 days ago
- ✓ mittwald/kubernetes-secret-gs # 11
⌚ Duration: 6 min 43 sec
📅 Finished: 18 days ago
- ✓ martin-helmich/typo3-typoscr # 97

martin-helmich / myevents  build passing

Current Branches Build History Pull Requests More options

master Provide correct deployment example -> #11 passed  Restart build

Commit 8e6401a
Compare dbb245e..8e6401a
Branch master
Martin Helmich authored and committed

Ran for 2 min 56 sec
Total time 6 min 43 sec
5 minutes ago

Build Jobs

#	Language	Go Version	Environment Variables	Duration	Actions
11.1	Go	1.6	no environment variables set	2 min 25 sec	
11.2	Go	1.7	no environment variables set	2 min 33 sec	
11.3	Go	1.8	no environment variables set	1 min 45 sec	

Job #11.3 - mittwald/kubernetes

Travis CI GmbH [DE] | https://travis-ci.org/martin-helmich/myevents/jobs/220913146

Duration: 2 min 12 sec | Finished: 15 days ago

mittwald/kubernetes-secret: # 11

Duration: 6 min 43 sec | Finished: 18 days ago

martin-helmich/typo3-typocr: # 97

Duration: 5 min 44 sec | Finished: 20 days ago

mittwald/typo3-web2pdf: # 44

Duration: 11 min 34 sec | Finished: 25 days ago

mittwald/salt-microservices: # 75

Duration: 1 min 45 sec | Finished: about a month ago

mittwald/typo3-varnishcache: # 7

Duration: 1 min 50 sec | Finished: about a month ago

martin-helmich/prometheus-n: # 37

Duration: 1 min 32 sec

Worker information

Build system information

```

1 $ export DEBIAN_FRONTEND=noninteractive
2 $ git clone --depth=50 --branch=master https://github.com/martin-helmich/myevents.git
3 $ GIMME_OUTPUT=$(gimme 1.8) && eval "$GIMME_OUTPUT"
4 go version go1.8 linux/amd64
5
6 $ export GOPATH=$HOME/gopath
7 $ export PATH=$HOME/gopath/bin:$PATH
8 $ mkdir -p $HOME/gopath/src/github.com/martin-helmich/myevents
9 $ rsync -az ${TRAVIS_BUILD_DIR}/ $HOME/gopath/src/github.com/martin-helmich/myevents/
10 $ export TRAVIS_BUILD_DIR=$HOME/gopath/src/github.com/martin-helmich/myevents
11 $ cd $HOME/gopath/src/github.com/martin-helmich/myevents
12
13 $ gimme version
14 v0.2.2
15 $ go version
16 go version go1.8 linux/amd64
17
18 $ go env
19 $ true
20 $ go vet $(go list ./... | grep -v vendor)
21
22 The command "go vet $(go list ./... | grep -v vendor)" exited with 0.
23 $ go build
24
25 The command "go build" exited with 0.
26
27 Done. Your build exited with 0.
  
```

Remove log | Raw log

worker.info | system.info

fix.CVE-2015-7547 | git.checkout | 2.15s | 5.00s

go.env | install | 0.01s | 3.05s

51.55s

Top ▲

martin-helmich / myevents

build passing

Current Branches Build History Pull Requests

More options

Settings (selected)

Requests

Caches

✓ master Provide correct deployment example -O #11 passed

Commit 8e6401a Ran for 2 min 56 sec

Compare dbb245e..8e6401a Total time 6 min 43 sec

Environment Variables

Notice that the values are not escaped when your builds are executed. Special characters (for bash) should be escaped accordingly.

DOCKER_PASSWORD	*****	Delete
DOCKER_USER	martinhelmich	OFF
		Display value in build log
		Add

The screenshot shows a web browser window for 'GitLab' at the URL 192.168.2.125/users/password/edit?reset_password_token=hQyeWPGQm_JH9Vx-ykLK. The page title is 'GitLab Community Edition'. A blue header bar says 'Please create a password for your new account.' Below it, the main content area features the GitLab logo and the heading 'GitLab Community Edition'. A sub-section titled 'Open source software to collaborate on code' describes managing Git repositories with access controls, code reviews, and merge requests. To the right, a form titled 'Change your password' contains fields for 'New password' and 'Confirm new password', with a 'Change your password' button below. At the bottom, links for 'Request a new one' and 'Sign in' are visible.

The screenshot shows a web browser window for 'New Project · GitLab' at the URL 192.168.2.125/projects/new. The page title is 'Projects'. The 'New project' section allows creating or importing projects from GitHub, Bitbucket, GitLab.com, Google Code, Fogbugz, Gitea, or a git Repo by URL. It includes a 'Project path' field set to 'http://192.168.2.125/ root' and a 'Project name' field containing 'myevents'. A note about creating a group for multiple projects is present. The 'Import project from' section lists the same services. Below, a 'Project description (optional)' field is shown with a 'Description format' dropdown. The 'Visibility Level' section offers three options: 'Private' (selected), 'Internal', and 'Public'. The 'Create project' button is at the bottom left, and a 'Cancel' button is at the bottom right.

Administrator / myevents-frontend

Project Repository Issues 0 Merge Requests 0 Pipelines Wiki Snippets Settings

Files Commits Branches Tags Contributors Graph Compare Charts

master myevents-frontend / +

Name Last commit > adb5c746 about a minute ago - Fix Dockerfile History Last Update

Name	Last commit	History	Last Update
src	Finalize booking form		3 weeks ago
.gitignore	Initial commit		3 weeks ago
Dockerfile	Fix Dockerfile		about a minute ago
index.html	Finalize booking form		3 weeks ago
package.json	Initial commit		3 weeks ago
tsconfig.json	Initial commit		3 weeks ago
webpack.config.js	Initial commit		3 weeks ago

Admin Area · GitLab

Overview Monitoring Messages System Hooks Applications Abuse Reports 0

Overview Projects Users Groups Jobs Runners Cohorts

To register a new Runner you should enter the following registration token. With this token the Runner will request a unique Runner token and use that for future communication.

Registration token is `zrQM56xxJSVC_Ga6TYQR`

You can reset runners registration token by pressing a button below.

A 'Runner' is a process which runs a job. You can setup as many Runners as you need. Runners can be placed on separate users, servers, even on your local machine.

Each Runner can be in one of the following states:

- **shared** - Runner runs jobs from all unassigned projects
- **specific** - Runner runs jobs from assigned projects
- **locked** - Runner cannot be assigned to other projects
- **paused** - Runner will not receive any new jobs

Runner description or Runners with last contact more than a minute ago: 0

```
1. mhelmich@mhelmich-macbook: ~ (zsh)
mhelmich@mhelmich-macbook ➜ ~ docker container exec gitlab-runner gitlab-runner register -n --url http://192.168.2.125 --registration-token zrGMs6xxJSVc_Ga6TYQR --executor docker --description "GitLab CI Runner" --docker-image ubuntu:16.04
Running in system-mode.

Registering runner... succeeded
runner=zrGMs6xx
Runner registered successfully. Feel free to start it, but if it's running already the config
should be automatically reloaded!
mhelmich@mhelmich-macbook ➜ ~
```

Admin Area · GitLab Martin

192.168.2.125/admin/runners

A 'Runner' is a process which runs a job. You can setup as many Runners as you need. Runners can be placed on separate users, servers, even on your local machine.

Each Runner can be in one of the following states:

- **shared** - Runner runs jobs from all unassigned projects
- **specific** - Runner runs jobs from assigned projects
- **locked** - Runner cannot be assigned to other projects
- **paused** - Runner will not receive any new jobs

Runner description or Search Runners with last contact more than a minute ago: 1

Type	Runner token	Description	Version	Projects	Jobs	Tags	Last contact	Actions
shared	83596902	c1dbba267b2b	1.11.4	n/a	0		3 minutes ago	<button>Edit</button> <button>Pause</button> <button>Remove</button>

Pipelines · Administrator / myevents Martin

192.168.2.125/root/myevents/pipelines

Martin Helmich / myevents ▾ This project Search Pipelines Wiki Snippets Settings

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Pipelines Jobs Environments Charts

All 2 Pending 0 Running 0 Finished 2 Branches Tags Run Pipeline Ci Lint

Status	Pipeline	Commit	Stages	Duration	Time Ago	Actions
passed	#2 by latest	master -> af7aeb03 Fix Gitlab, again	✓	00:00:16	7 minutes ago	<button>Details</button>
failed	#1 by latest	master -> 3be75880 Add Gitlab CI config	✗	00:00:19	16 minutes ago	<button>Details</button>

build:eventservice (#4) · Jobs X Martin

← → ⌂ ⌂ 192.168.2.125/root/myevents/builds/4

Martin Helmich / myevents v This project Search Pipelines Wiki Snippets Settings

Pipelines Jobs Environments Charts

Job #4 in pipeline #2 for commit af7aeb03 from master by Martin Helmich 10 minutes ago Retry job

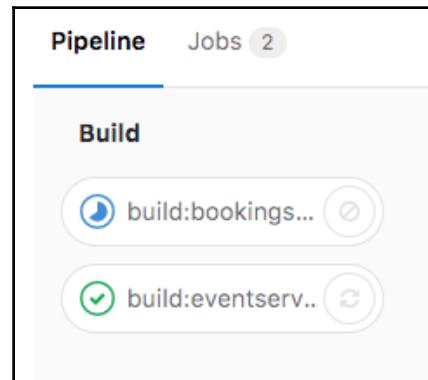
Job artifacts The artifacts will be removed in 4 weeks Keep Download Browse

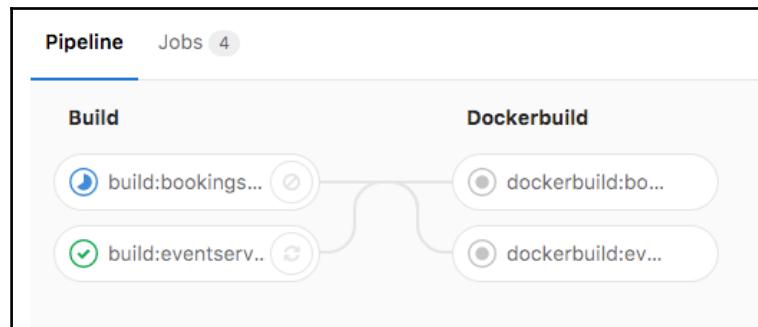
Job details Duration: 16 seconds Finished: 10 minutes ago Runner: #2 Raw Erase

Commit title Fix Gitlab, again

→ build:eventservice

```
Running with gitlab-ci-multi-runner 1.11.4 (7e2b646)
on a680f6a9cabb (d740d3d4)
Using Docker executor with image golang:1.8.1 ...
Pulling docker image golang:1.8.1 ...
Running on runner-d740d3d4-project-1-concurrent-0 via a680f6a9cabb...
Fetching changes...
Removing src/eventservice eventdata
HEAD is now at 3be7588 Add Gitlab CI config
From http://192.168.2.125/root/myevents
 3be7588..af7aeb0 master      -> origin/master
Checking out af7aeb03 as master...
Skipping Git submodules setup
$ mkdir -p $GOPATH/src/bitbucket.org/minamartinteam
$ ln -nfs $PWD $GOPATH/src/bitbucket.org/minamartinteam/myevents
$ cd $GOPATH/src/bitbucket.org/minamartinteam/myevents/src/eventservice
$ CGO_ENABLED=0 go build
Uploading artifacts...
src/eventservice eventdata: found 1 matching files
Uploading artifacts to coordinator... ok          id=4 responseStatus=201 Created token=Fc9TrLCZ
Job succeeded
```





Secret Variables

These variables will be set to environment by the runner.

So you can use them for passwords, secret keys or whatever you want.

The value of the variable can be visible in job log if explicitly asked to do so.

Add a variable

Key: DOCKER_USER

Value: martinhelmich

Add new variable

Your variables (1)

Key	Value
DOCKER_PASSWORD	*****

Reveal Values

Pipeline - Administrator / myevents

192.168.2.125/root/myevents/pipelines/10

Martin Helmich / myevents

This project Search 🔍 + # 🌐 ⚙️

Project Repository Issues 0 Merge Requests 0 Pipelines Wiki Snippets Settings

Pipelines Jobs Environments Charts

Pipeline #10 triggered about a minute ago by Martin Helmich Cancel running

Configure Kubernetes deployment

6 jobs from v1.0.2 (queued for 2 seconds)

b734c530

Pipeline Jobs 6

Build

build:bookings... → dockerbuild:bo... → publish → deploy

build:eventserv... → dockerbuild:ev...

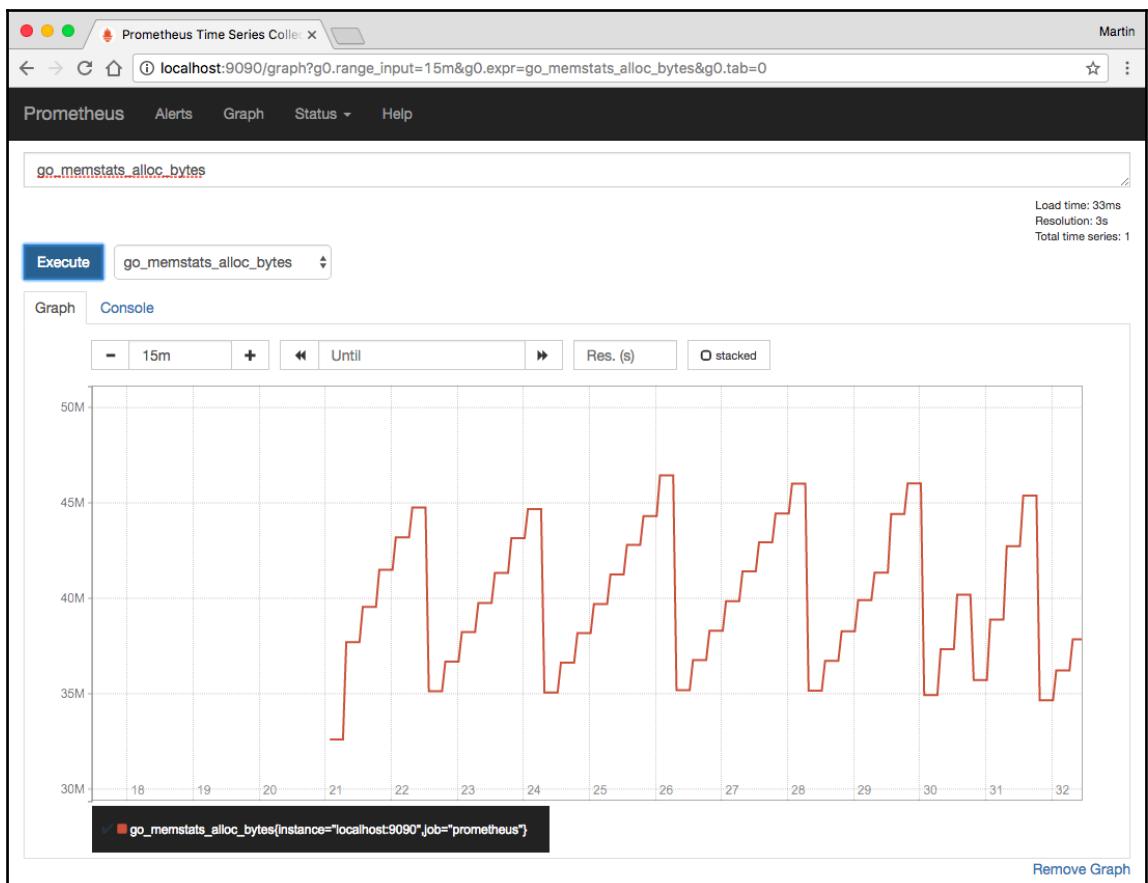
```
graph LR; subgraph Build [Build]; A1[build:bookings...]; A2[build:eventserv...]; end; subgraph Dockerbuild [Dockerbuild]; B1[dockerbuild:bo...]; B2[dockerbuild:ev...]; end; subgraph Publish [Publish]; C1[publish]; end; subgraph Deploy [Deploy]; D1[deploy]; end; A1 --> B1; A2 --> B2; B1 --> C1; B2 --> C1; C1 --> D1;
```

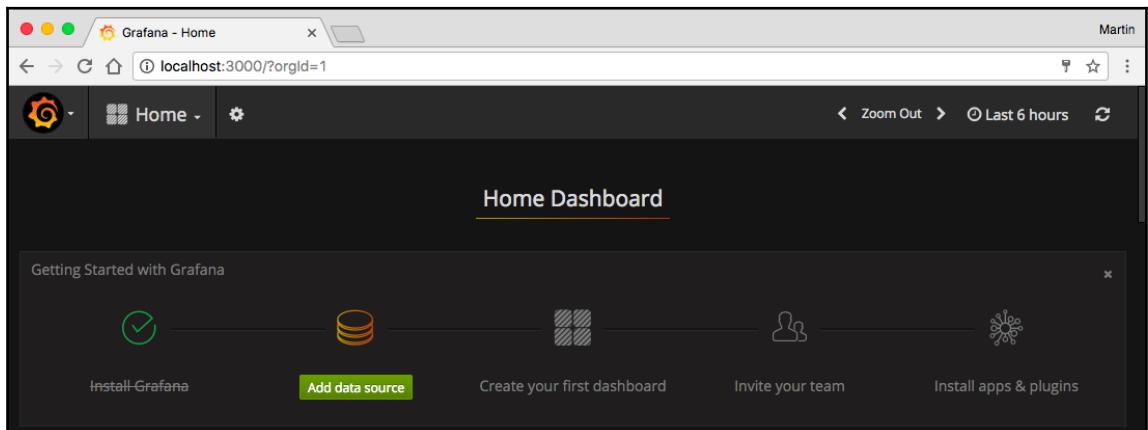
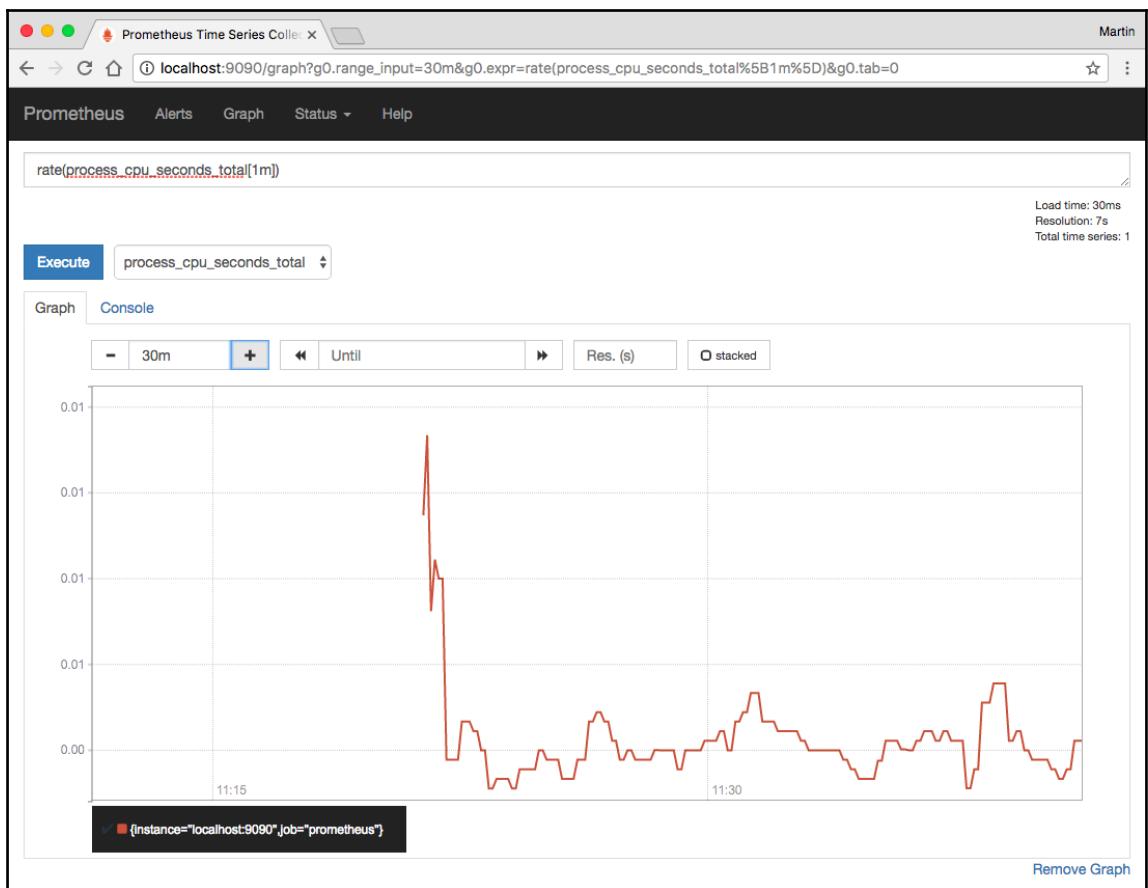
Chapter 10: Monitoring Your Application

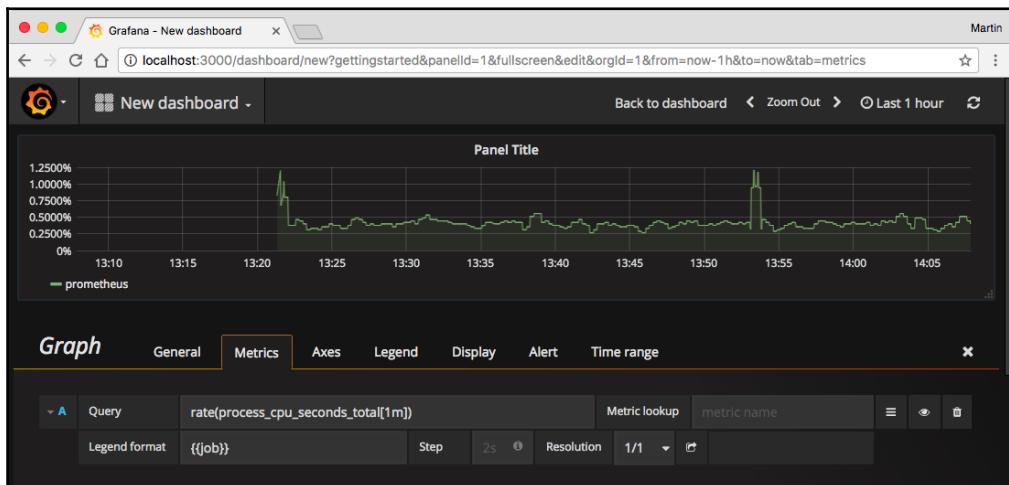
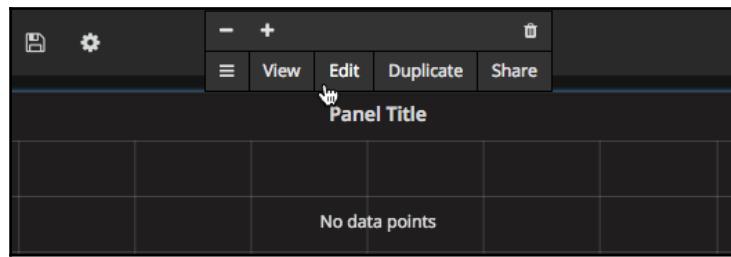
The screenshot shows the Prometheus Graph interface at localhost:9090/graph. The top navigation bar includes links for Prometheus, Alerts, Graph, Status, and Help. The main area features an "Expression" input field with placeholder text "press Shift+Enter for newlines". Below it is an "Execute" button and a dropdown menu set to "- insert metric at cursor -". There are two tabs: "Graph" (selected) and "Console". A table displays a single row with "Element" and "Value" columns, both showing "no data". A "Remove Graph" button is located to the right of the table. At the bottom left is an "Add Graph" button.

The screenshot shows the Prometheus Targets interface at localhost:9090/targets. The top navigation bar includes links for Prometheus, Alerts, Graph, Status, and Help. The main area has a title "Targets" and a section header "prometheus". A table lists a single target entry:

Endpoint	State	Labels	Last Scrape	Error
http://localhost:9090/metrics	UP	Instance="localhost:9090"	14.259s ago	





A screenshot of a browser window displaying a list of Prometheus metrics for a Go application. The URL is 'localhost:9100/metrics'. The output is as follows:

```
# TYPE go_goroutines gauge
go_goroutines 11
# HELP go_memstats_alloc_bytes Number of bytes allocated and still in use.
# TYPE go_memstats_alloc_bytes gauge
go_memstats_alloc_bytes 975448
# HELP go_memstats_alloc_bytes_total Total number of bytes allocated, even if freed.
# TYPE go_memstats_alloc_bytes_total counter
go_memstats_alloc_bytes_total 975448
# HELP go_memstats_buck_hash_sys_bytes Number of bytes used by the profiling bucket hash table.
# TYPE go_memstats_buck_hash_sys_bytes gauge
go_memstats_buck_hash_sys_bytes 2483
# HELP go_memstats_frees_total Total number of frees.
# TYPE go_memstats_frees_total counter
go_memstats_frees_total 1412
# HELP go_memstats_gc_sys_bytes Number of bytes used for garbage collection system metadata.
# TYPE go_memstats_gc_sys_bytes gauge
go_memstats_gc_sys_bytes 131072
# HELP go_memstats_heap_alloc_bytes Number of heap bytes allocated and still in use.
# TYPE go_memstats_heap_alloc_bytes gauge
go_memstats_heap_alloc_bytes 975448
# HELP go_memstats_heap_idle_bytes Number of heap bytes waiting to be used.
# TYPE go_memstats_heap_idle_bytes gauge
go_memstats_heap_idle_bytes 319488
# HELP go_memstats_heap_inuse_bytes Number of heap bytes that are in use.
# TYPE go_memstats_heap_inuse_bytes gauge
go_memstats_heap_inuse_bytes 1.384448e+06
# HELP go_memstats_heap_objects Number of allocated objects.
# TYPE go_memstats_heap_objects gauge
go_memstats_heap_objects 11073
```

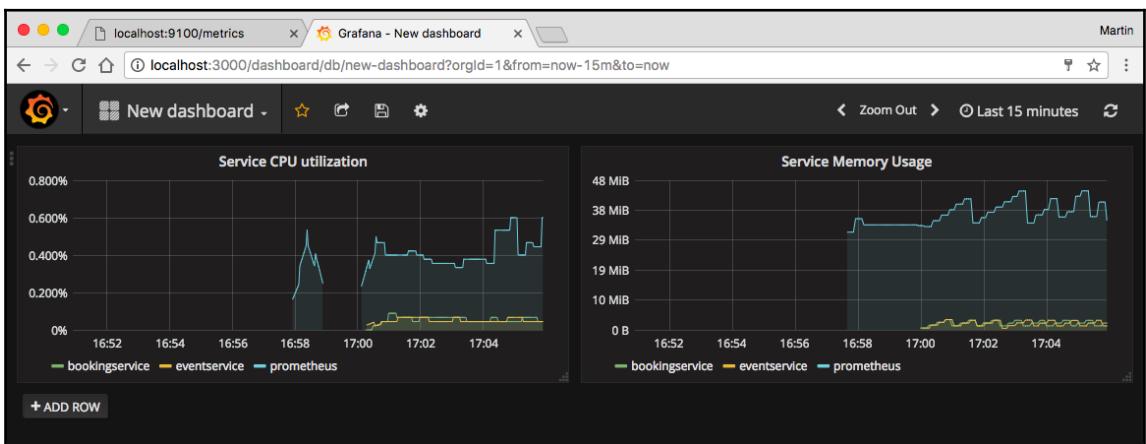
Screenshot of the Prometheus Targets page (localhost:9090/targets) showing the status of three services: bookingservice, eventservice, and prometheus.

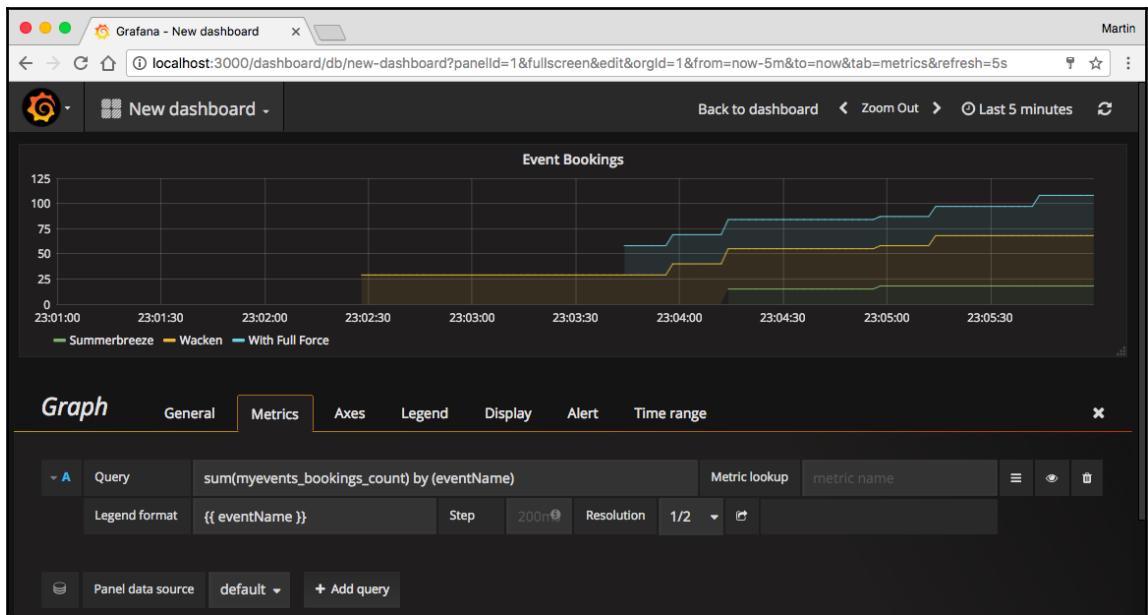
Targets

bookingservice				
Endpoint	State	Labels	Last Scrape	Error
http://bookings:9100/metrics	UP	Instance="bookings:9100"	3.716s ago	

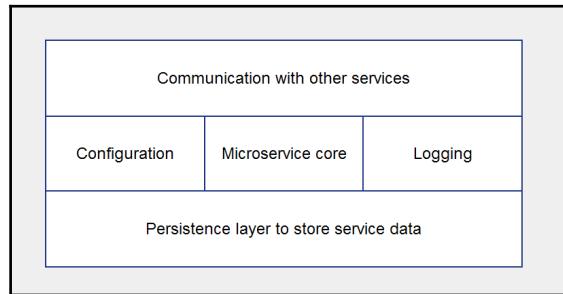
eventservice				
Endpoint	State	Labels	Last Scrape	Error
http://events:9100/metrics	UP	Instance="events:9100"	948ms ago	

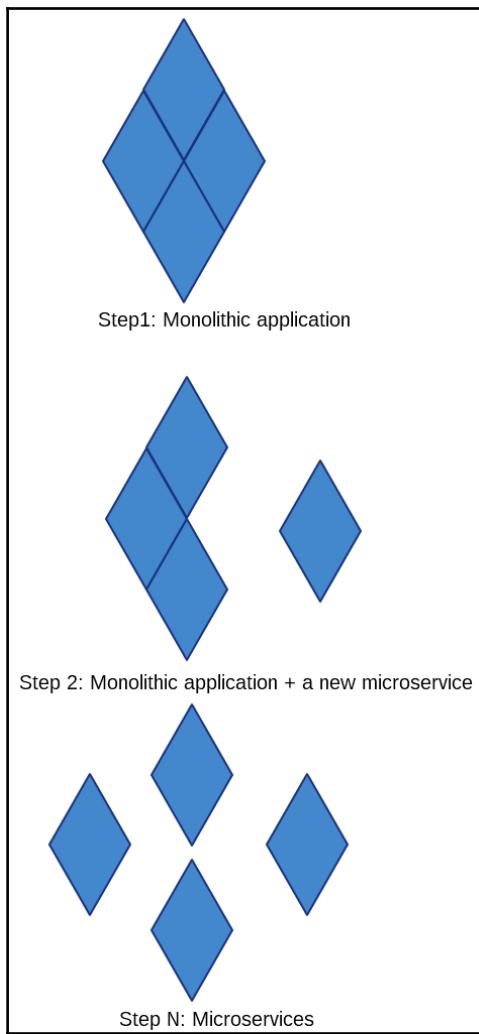
prometheus				
Endpoint	State	Labels	Last Scrape	Error
http://localhost:9090/metrics	UP	Instance="localhost:9090"	11.213s ago	

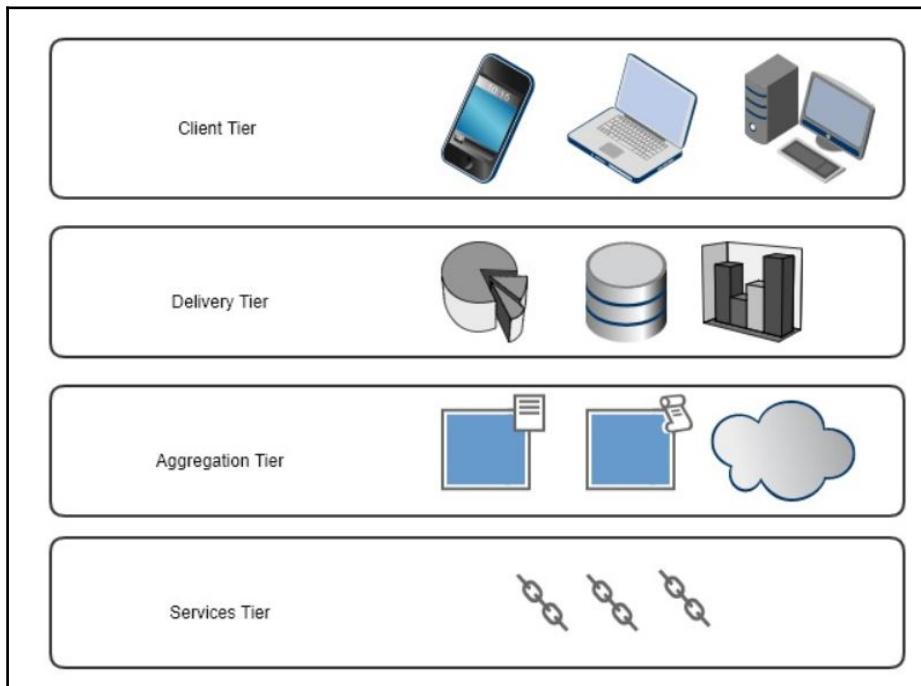
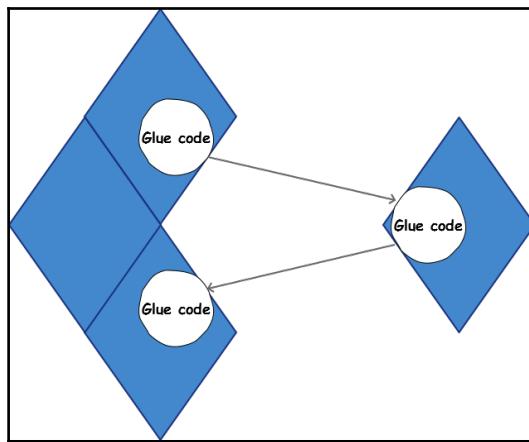


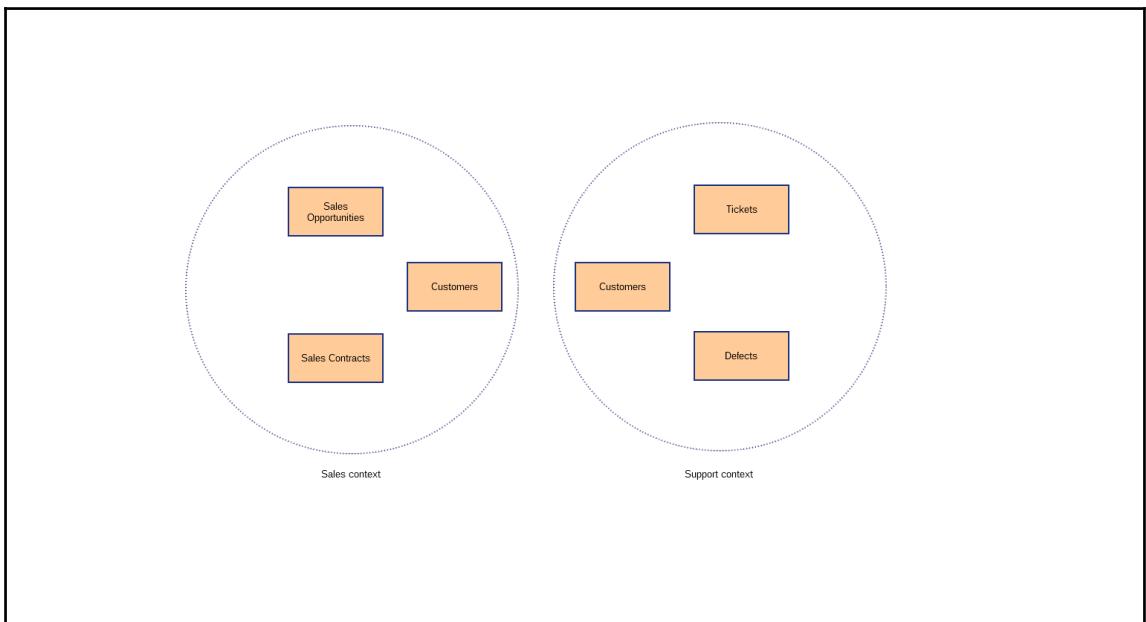
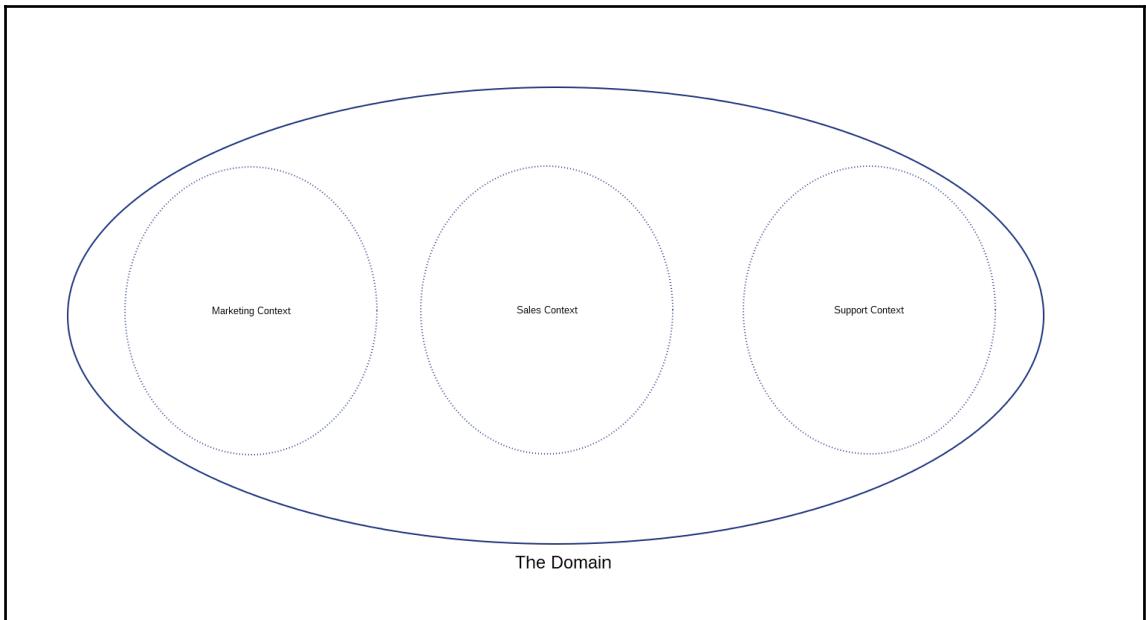


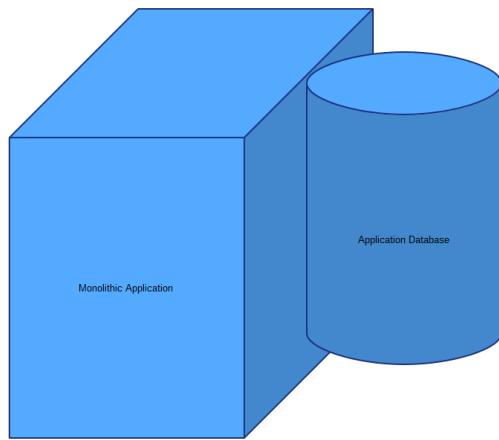
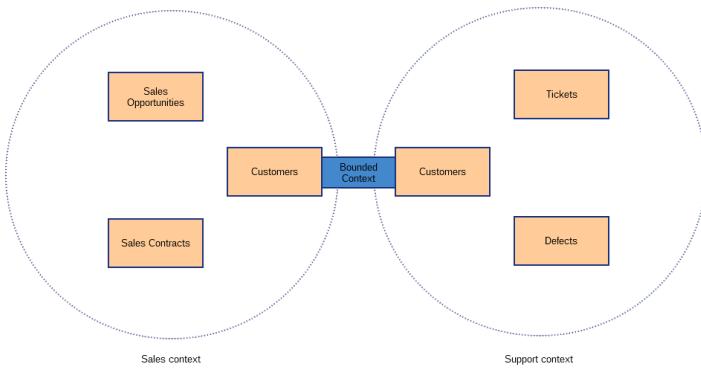
Chapter 11: Migration

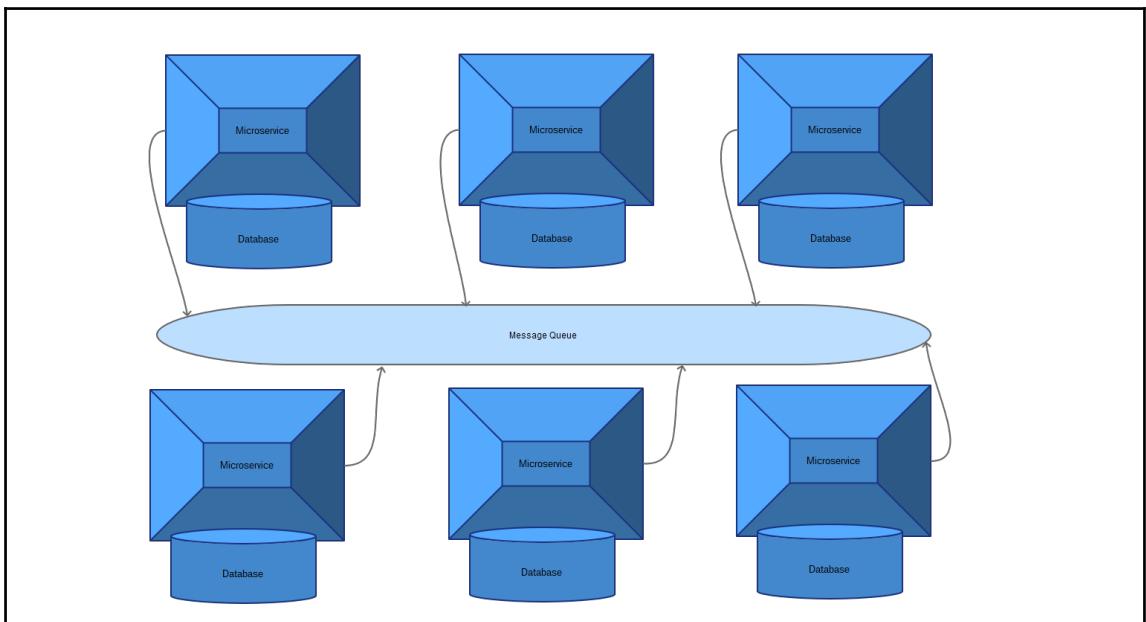
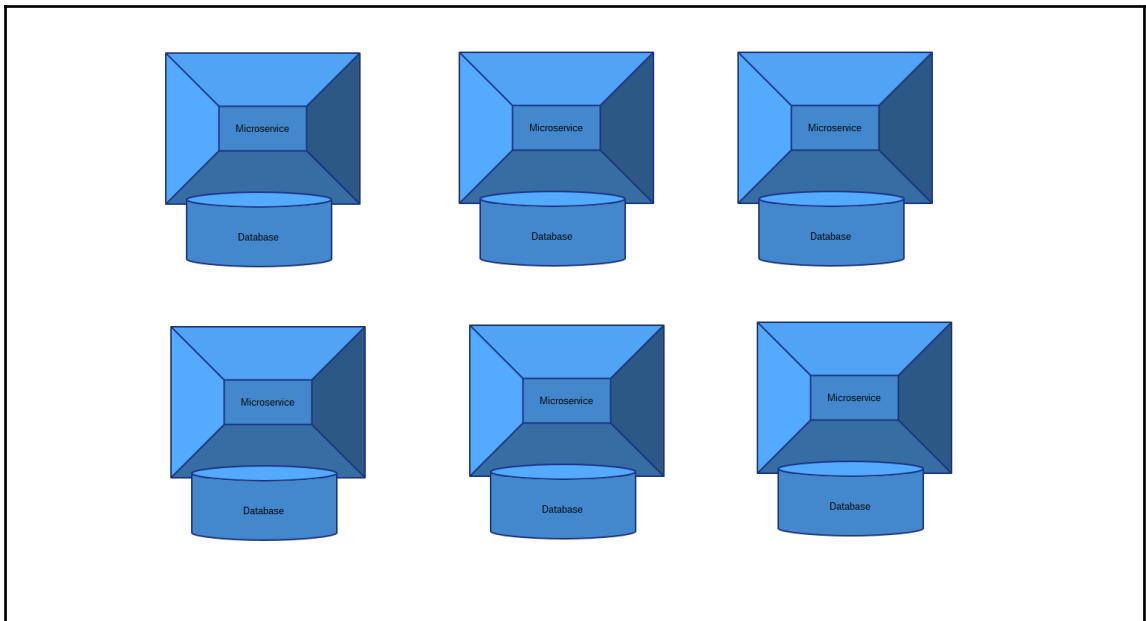












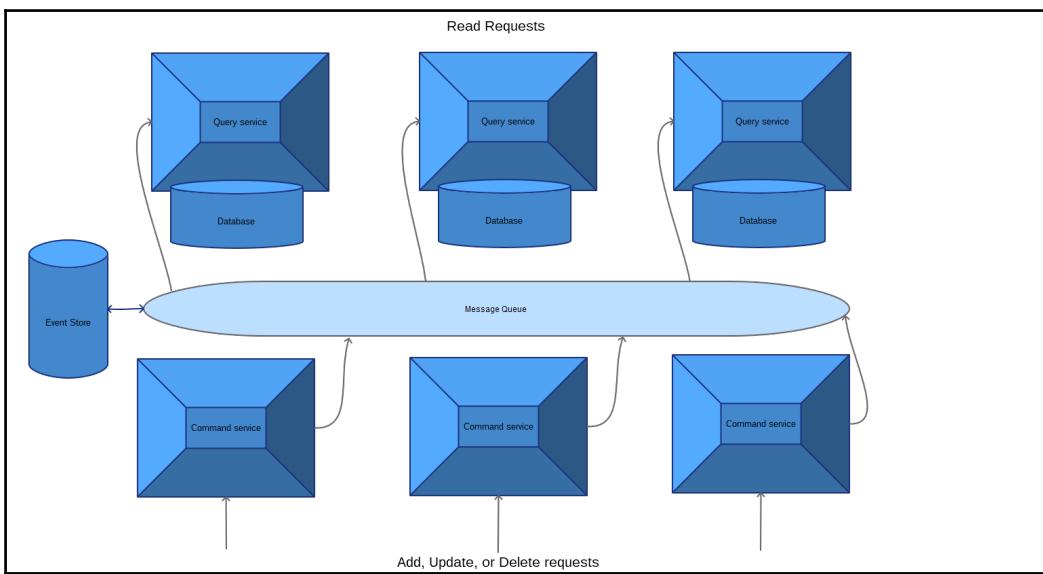
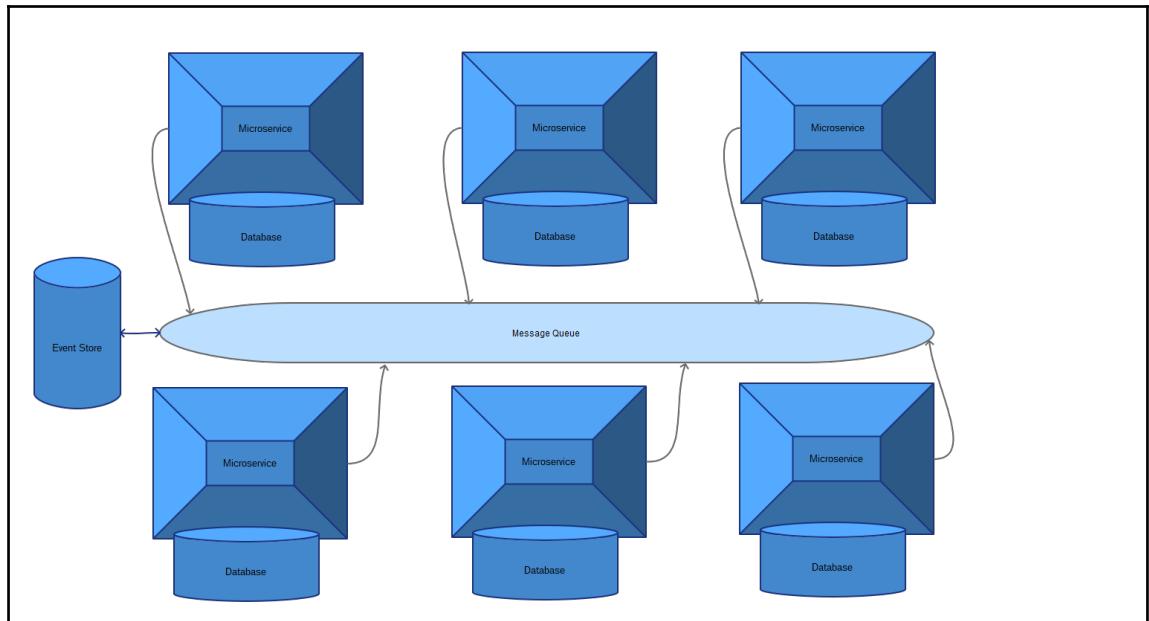


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