

Bluemix Services



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Learning Objectives:

1. Understand the concept of service & service instance lifecycle
2. Be able to manage service lifecycle using CLI and the console

Bluemix Service Catalog

- Developers can provision resources on demand from the CF marketplace e.g., Database on shared or dedicated servers
- Resources = Service Instance
- Service = Factory that delivers service instances



SQL Database
IBM



MQ Light
IBM



Business Rules
IBM



Welcome, **rajeev.**



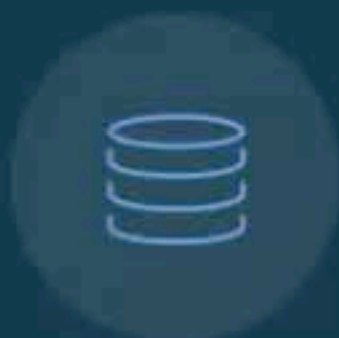
All Categories



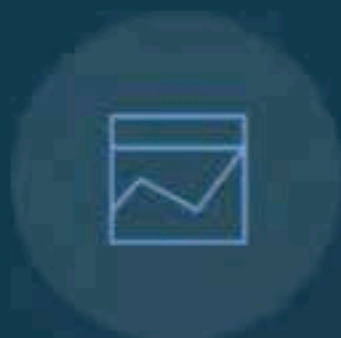
Compute



Network



Storage



Data & Analytics



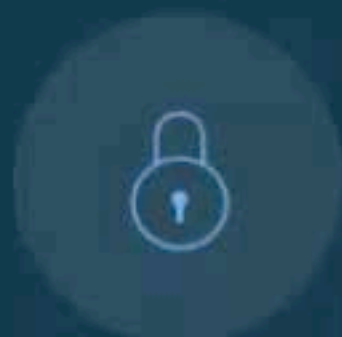
Watson



Integrate



DevOps



Security



Application
Services



Mobile



Internet of Things



APIs



All Categories >

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Boilerplates

Compute

Network

Storage

Data & Analytics

Watson

Integrate

DevOps

Security

Application Services

Mobile

Internet of Things

APIs

Boilerplates



Conversational Agent: Movie Assistant

A sample Watson Developer Cloud application that highlights the

IBM



Internet of Things Platform Starter

Get started with an Internet of Things Platform application using Node-RED

IBM



Java Cloudant Web Starter

Use the Cloudant NoSQL DB service with the 'Liberty for Java™' runtime.

IBM



Java DB Web Starter

Use Java JPA with the SQL Database service and 'Liberty for Java™' runtime.

IBM



Java Workload Scheduler Web Starter

This application demonstrates how to use the Workload Scheduler service, with

IBM



LoopBack Starter

This is a sample StrongLoop LoopBack Node.js application, powered by the

IBM



MobileFirst Services Starter

Start building your next mobile app with mobile services on Bluemix.

IBM



Node.js Cloudant DB Web Starter

Use the Cloudant NoSQL DB service with the 'SDK for Node.js™' runtime.

IBM



Personality Insights Java Web Starter

A simple Java app that uses the Personality Insights service to analyze

IBM



Connect to:

Credentials-1

Leave unbound

[View Docs](#)

AUTHOR IBM
PUBLISHED 03/09/2016
TYPE Service
LOCATION US South

Features

- **Fully Managed**
Allows you to focus on your application instead of worrying about time-consuming administration of your database server.
- **Secure and Private**
SSL encryption will be standard on all plans. Includes advanced security features.
- **Deprecation Notice**
The Free plan will be discontinued on March 21, 2016.
The small plan will be discontinued on March 23, 2016.

Pricing Plans

Monthly prices shown are for country or region: [United States](#)

Plan	Features	Pricing
✓ Free Beta	Limit of 100 MB per instance. 10 concurrent connections.	Free
Each instance provides a single schema in a database. Includes automatic daily backup, SSL encryption, and data encryption on disk.		
Premium	500 GB max storage per instance. 100 concurrent connections.	\$400.00 USD/INSTANCE

SQL Database adds an on-demand relational database to your application. Powered by DB2, it provides a managed database service to handle web and transactional workloads.

Connect to:

Leave unbound

[View Docs](#)

AUTHOR [IBM](#)
PUBLISHED [03/09/2016](#)
TYPE [Service](#)
LOCATION [US South](#)

Service name:

SQL Database-km

Credential name:

Credentials-1

Features

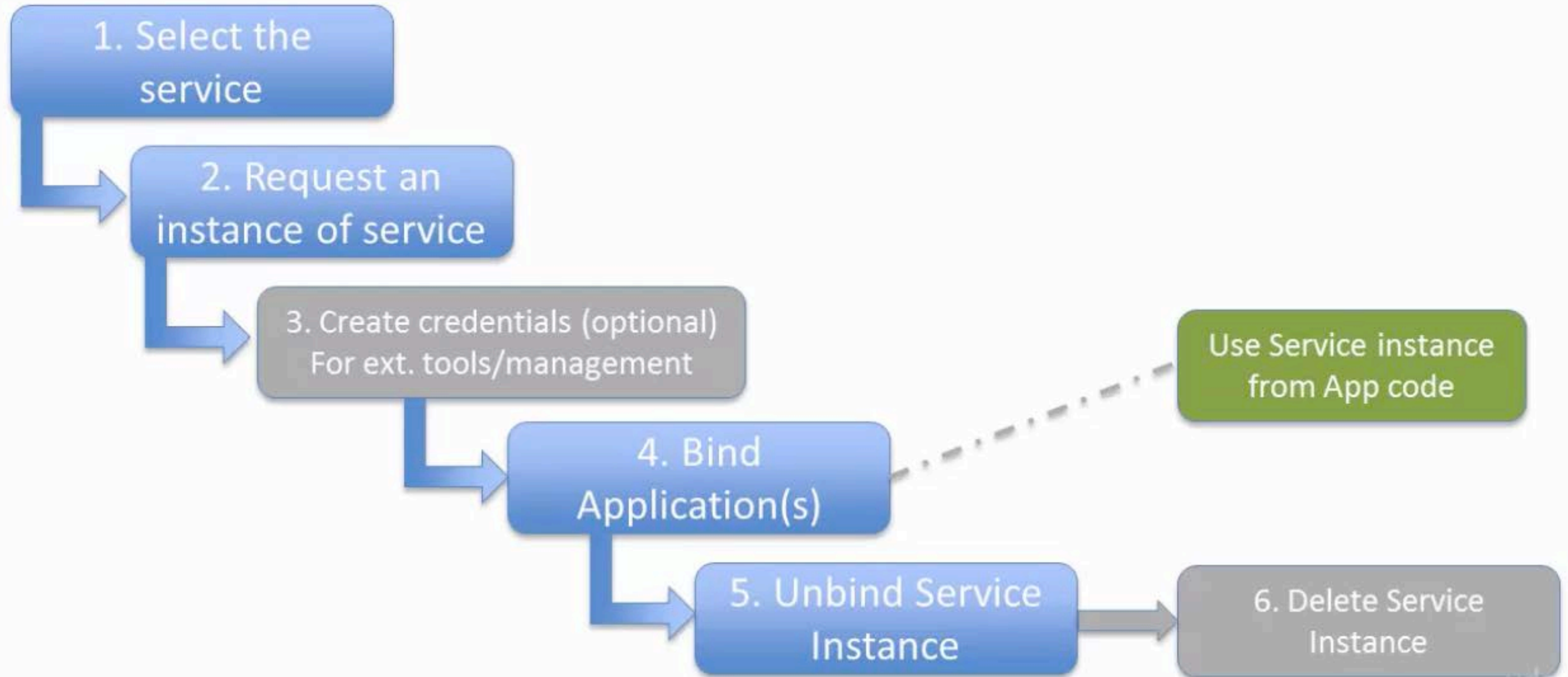
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Using the services



1. Select the service

- Select the services from Bluemix catalog
- Use the cloud foundry CLI command to browse the available services

```
cf marketplace
```


2. Request an instance of service

- Bluemix console



Welcome, **rajeev.**



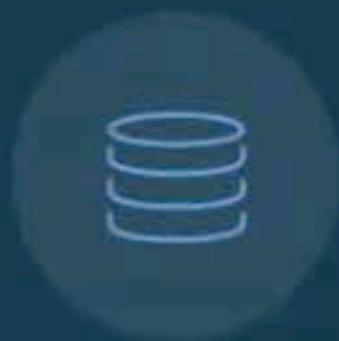
All Categories



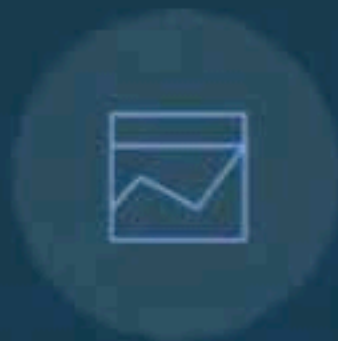
Compute



Network



Storage



Data & Analytics



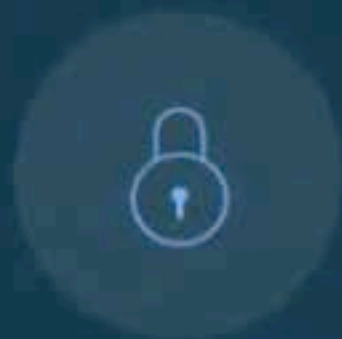
Watson



Integrate



DevOps



Security



Application
Services



Mobile



Internet of Things



APIs

Welcome, **rajeev.**

Region US South

Organization Cloud Rocket

Space Development

[Manage Organizations](#)

[Create a Space](#)

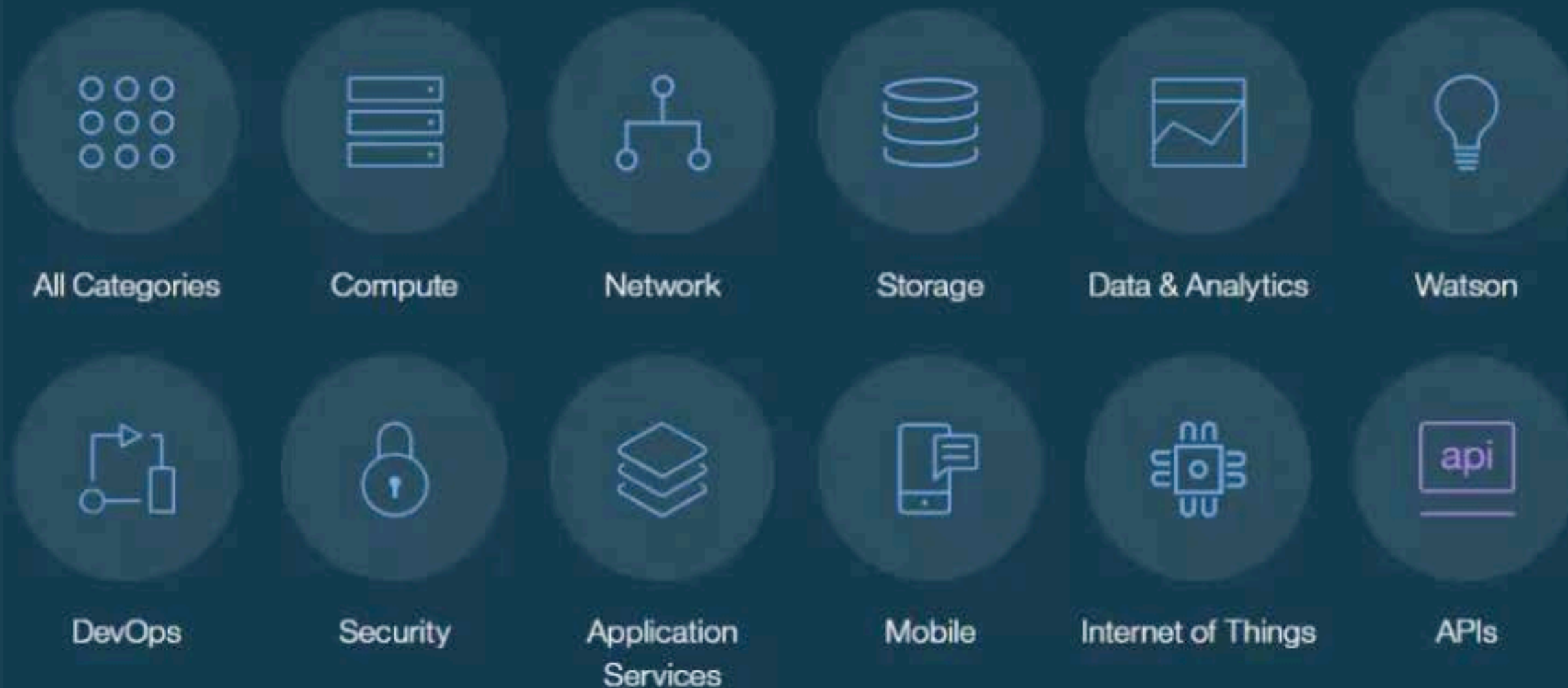
Notifications

You have no new notifications

Support

[Get help](#)
Get help on anything from technical support to sales inquiries.

[Submit an Idea](#)
Help us help you. Submit ideas for improvements to Bluemix!





← View all

SQL Database

SQL Database adds an on-demand relational database to your application. Powered by DB2, it provides a managed database service to handle web and transactional workloads.

Connect to:

Loading...

[View Docs](#)

AUTHOR IBM
PUBLISHED 03/09/2016
TYPE Service
LOCATION US South

Service name:

SQL Database-ou

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Pricing Plans

Monthly prices shown are for country or region: [United States](#)

Plan

Features

Pricing

udemy

PUBLISHED 03/03/2016
TYPE Service
LOCATION US South

worrying about time-consuming administration of your database server.

advanced security features.

- **Deprecation Notice**

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[Terms](#)

PUBLISHED: 04/04/2016
TYPE: Service
LOCATION: US South

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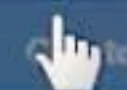
[Terms](#)

Need Help?

[Contact Bluemix Sales](#)

Estimate Monthly Cost

[Cost Calculator](#)



CloudRocketDb

Manage

Service Credentials

Connections

SQL Database

LAUNCH

Use the managed SQL database to handle your web and transactional workloads. Launch the web console to start quickly managing your data.

Kick the Tires

Try the easy-to-use relational data store for your application. It provides basic relational database support.

Manage Your Data

Easily load your data into the cloud and work with your database tables. Run simple queries against your data.

Get Started

Welcome to the SQL Database console

Choose a topic below to get started.



Load Data



Work with Tables



Run Queries

Create, drop, and work with tables

For existing tables, you can view details, browse data, and export data.

+

-

↺

Schema	Table Name
--------	------------

Select an Excel file or a CSV file to define the table.

 Browse

Edit the DDL statements. Use the semicolon character ; as the statement terminator.

```
CREATE TABLE MYTABLE
(
  COL1 INT,
  COL2 VARCHAR(5)
);
```




CF Applications

0 B / 512 GB Used

AppCloudRocket

[CloudRocket.mybluemix.net](#)

●

Stopped

Services

4 / 2000 Used





AppCloudRocket

CloudRocket.mybluemix.net



Stopped



Services

4/2000 Used



CloudRocketDb

sqldb



Plan: Sqldb_free



CloudRocketLogs

Plan: N/A



CloudRocketStorage

Object-Storage

Plan: Beta



MemcachedRocket

memcachedcloud

Plan: 30mb





AppCloudRocket

Status: ● Your app is stopped

View App

Getting Started

Overview

Runtime

Connections

Logs

Monitoring

Connect Existing

Connect New



No Connected Services

Click the Connect Existing or Connect New button to add an item to your app.

2. Request an instance of service

- Bluemix console
- CLI command

```
cf create-service SERVICE PLAN SERVICE_INSTANCE
```

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- Bluemix console
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```
cf create-service SERVICE PLAN SERVICE_INSTANCE
```

Name of service

Provider offer services with different plans – free, \$, \$\$

Name of service instance

3. Create credentials

- Managed manually or provided automatically to the application
- Use from external tools requires manual management of keys



- Some services may support credentials only through binding
- Manage the credentials using CLI command

```
cf create-service-key  
cf service-key
```

```
cf service-keys  
cf delete-service-key
```


4. Bind Application(s)

- Developer declares to Cloud foundry that application will use the service instance
- Binding triggers credentials to be provisioned for the service
 - Credentials delivered to application runtime via VCAP_SERVICES
 - Credentials are unique to application (in most services)
 - Application restart is needed

0 B/512 GB Used



AppCloudRocket

CloudRocket.mybluemix.net

●

Stopped

🔗



AppCloudRocket

Status: ● Your app is stopped

View App

Getting Started

Overview

Runtime

Connections

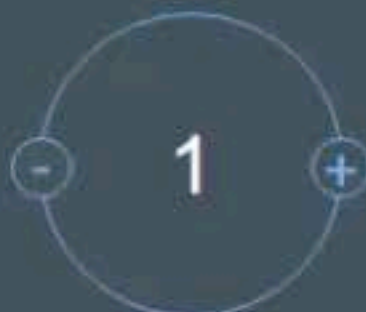
Logs

Monitoring

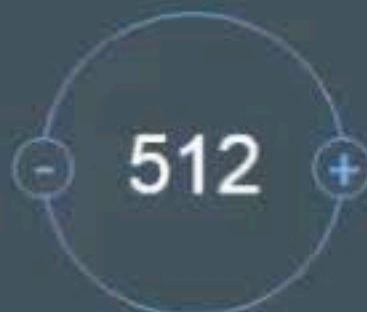
Runtime



BUILDPACK
Liberty for Java™



INSTANCES
Stopped: 1 | Running: 0
Health is 0%



MB PER INSTANCE



TOTAL MB ALLOCATION
524288 MB still available

Activity Log

- stopped AppCloudRocket app
4/4/2016 6:25 PM | sakhuja4@gmail.com
- started AppCloudRocket app
4/4/2016 11:32 AM | sakhuja4@gmail.com
- stopped AppCloudRocket app
4/4/2016 11:32 AM | sakhuja4@gmail.com

Connections

No services are connected to this app

Continuous Delivery

Continuous delivery is not configured for this app

Cost





AppCloudRocket

Status: ● Your app is stopped

View App

Getting Started

Overview

Runtime

Connections

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Monitoring

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BUILDPACK
Liberty for Java™



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AppCloudRocket

Status: ● Your app is stopped

View App

Getting Started

Overview

Runtime

Connections

Logs

Monitoring

Connect Existing

Connect New



No Connected Services

Click the Connect Existing or Connect New button to add an item to your app.

Connect Existing Service



Services



CloudRocketLogs



MemcachedRocket
Redis Labs



CloudRocketDb
IBM



Select compatible service to connect to AppCloudRocket

Connect



udemy

Connect Existing Service



Services



CloudRocketLogs



MemcachedRocket
Redis Labs



CloudRocketDb
IBM



Select compatible service to connect to AppCloudRocket

Connect



Connect Existing Service



Services



CloudRocketLogs



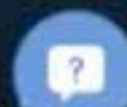
MemcachedRocket
Redis Labs



CloudRocketDb
IBM

Connect CloudRocketDb to AppCloudRocket?

Connect



udemy



AppCloudRocket

Status: ● Your app is stopped

View App

Getting Started

Overview

Runtime

Connections

Logs

Monitoring

Restage Application

Your 'AppCloudRocket' app must be restaged to use the new 'CloudRocketDb' service. Restaging makes this service available for use. Do you want to restage it now?

Cancel

Restage

View Credentials

Docs



AppCloudRocket

Status: ● Your app is stopped

View App

Getting Started

Overview

Runtime

Connections

Logs

Monitoring

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Restage

View Credentials

Docs



← CF Applications



AppCloudRocket

Status: ● Your app is stopped

[View App](#)

[Getting Started](#)

[Overview](#)

[Runtime](#)

[Connections](#)

[Logs](#)

[Monitoring](#)

[Connect Existing](#)

[Connect New](#)



CloudRocketDb

SQL Database

sqldb_free

[View Credentials](#)

[Docs](#)

4. Bind Application(s)

- CLI command

```
cf bind-service APP SERVICE_INSTANCE
```

- Bind with the manifest file
- Service information made available to app via environment variable VCAP_SERVICES



AppCloudRocket

Status: ● Your app is stopped

[View App](#)

[Getting Started](#)

[Overview](#)

[Runtime](#)


[Connections](#)

[Logs](#)

[Monitoring](#)

[Connect Existing](#)

[Connect New](#)



CloudRocketDb
SQL Database
sqldb_free

[View Credentials](#) [Docs](#)



CloudRocketDb

SQL Database

sqldb_free

View Credentials

Docs

CloudRocketDb

Service Credentials

```
{
  "sqldb": [
    {
      "name": "CloudRocketDb",
      "label": "sqldb",
      "plan": "sqldb_free",
      "credentials": {
        "hostname": "75.126.155.153",
        "password": "l04RsuH0fZe5",
        "port": 50000,
        "host": "75.126.155.153",
        "jdbcurl": "jdbc:db2://75.126.155.153:50000/SQLDB",
        "uri": "db2://user17436:l04RsuH0fZe5@75.126.155.153:50000/SQLDB",
        "db": "SQLDB",
        "username": "user17436"
      }
    }
  ]
}
```

Close



CloudRocketDb

SQL Database

sqldb_free

View Credentials

Docs

CloudRocketDb

Service Credentials

```
{
  "sqldb": [
    {
      "name": "CloudRocketDb",
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        "uri": "db2://user17436:l04RsuH0fZe5@75.126.155.153:50000/SQLDB",
        "db": "SQLDB",
        "username": "user17436"
      }
    }
  ]
}
```

Close

5. Un Bind Service from app

- Removes service credentials from the VCAP_SERVICES
- CLI command

```
cf unbind-service APP SERVICE_INSTANCE
```



0 B/512 GB Used



AppCloudRocket
[CloudRocket.mybluemix.net](#)

●

 Stopped





0 B/512 GB Used



AppCloudRocket

CloudRocket.mybluemix.net

 Stopped 



AppCloudRocket

Status: ● Your app is stopped

View App

Getting Started

Overview

Runtime

Connections

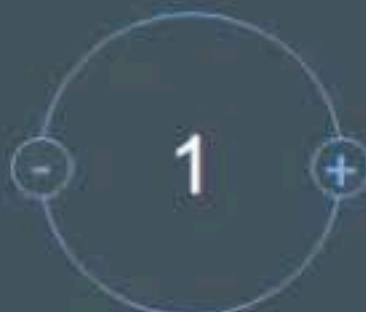
Logs

Monitoring

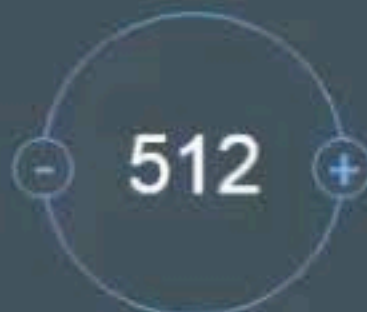
Runtime



BUILDPACK
Liberty for Java™



INSTANCES
Stopped: 1 | Running: 0
Health is 0%



MB PER INSTANCE

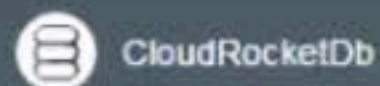


TOTAL MB ALLOCATION
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Connections (1)



Continuous Delivery

Continuous delivery is not configured for this app

Cost



← [CF Applications](#)



AppCloudRocket

Status: ● Your app is stopped

[View App](#)

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[Connect New](#)



CloudRocketDb

SQL Database

sqldb_free

[View Credentials](#)

[Docs](#)

← CF Applications



AppCloudRocket

Status: ● Your app is stopped

View App

Getting Started

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Connect Existing

Connect New



CloudRocketD
SQL Database
sqldb_free

Unbind Service

Rename Service

Delete Service

View Credentials

Docs



AppCloudRocket

Status: ● Your app is stopped

View App

Getting Started

Overview



CloudRocketDb

SQL Database
sqldb_free

View Credentials

Remove Service from Application

This is the only application that is using this service instance. Do you want to delete the service instance from Bluemix?

Note: Deleting the instance will delete all of its data and make it unavailable for future use. Deleting the instance cannot be undone.

☒ Delete the service instance.

Cancel

OK



AppCloudRocket

Status: ● Your app is stopped

View App

Getting Started

Overview



CloudRocketDb

SQL Database

sqldb_free

View Credentials

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Cancel





AppCloudRocket

Status: ● Your app is stopped

View App

Getting Started

Overview



CloudRocketDb

SQL Database

sqldb_free

View Credentials

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Cancel





AppCloudRocket

Status: ● Your app is stopped

View App

Getting Started

Overview

Runtime

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Logs

Monitoring

Restage Application

Your 'AppCloudRocket' app needs to be restaged. Do you want to restage it now?

Cancel

Restage

Connect Existing

Connect New

No Connected Services

Click the Connect Existing or Connect New button to add an item to your app.



AppCloudRocket

Status: ● Your app is stopped

View App

Getting Started

Overview

Runtime

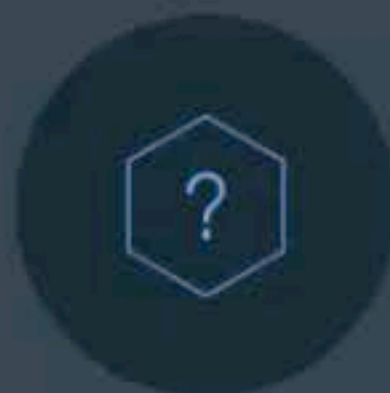
Connections

Logs

Monitoring

Connect Existing

Connect New



No Connected Services

Click the Connect Existing or Connect New button to add an item to your app.

6. Delete Service Instance

- Deleting the service instance
 - Application specific data/information/configuration will be lost

- CLI command

```
cf delete-service SERVICE_INSTANCE -f
```



Welcome, **rajeev.**



All Categories



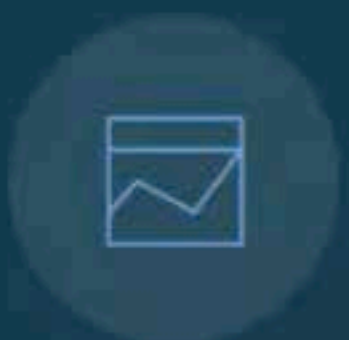
Compute



Network



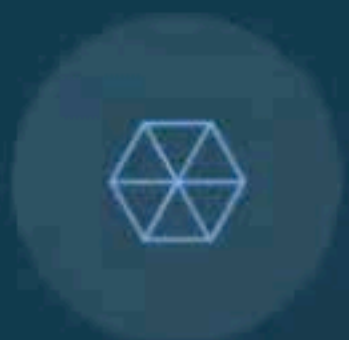
Storage



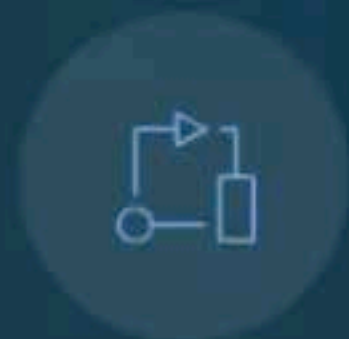
Data & Analytics



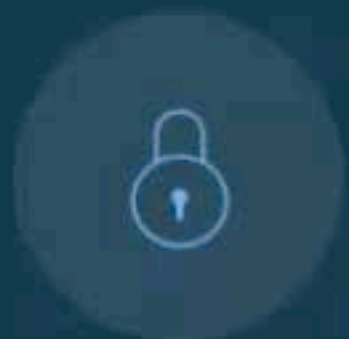
Watson



Integrate



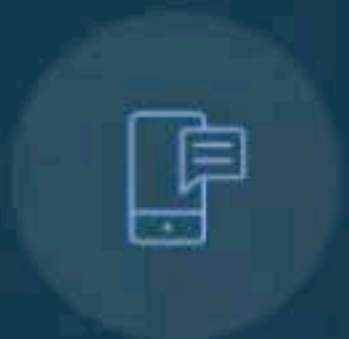
DevOps



Security



Application
Services



Mobile



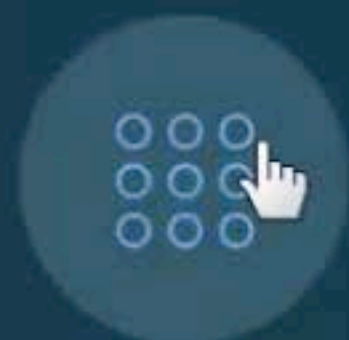
Internet of Things



APIs



Welcome, **rajeev.**



All Categories



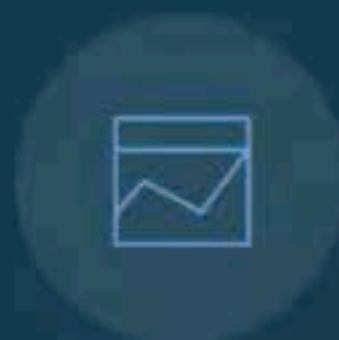
Compute



Network



Storage



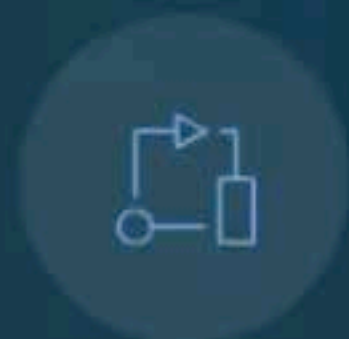
Data & Analytics



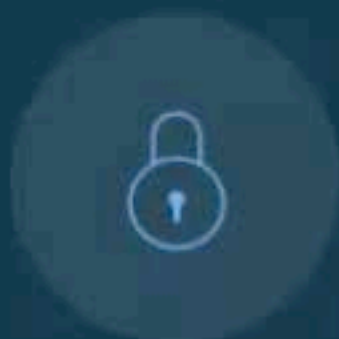
Watson



Integrate



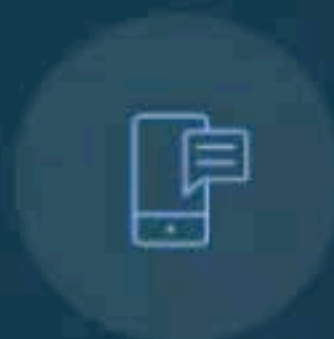
DevOps



Security



Application
Services



Mobile



Internet of Things



APIs



AppCloudRocket
CloudRocket.mybluemix.net

Stopped

Services

4/2000 Used

CloudRocketDb
sqladb

Plan: Sqladb_free

CloudRocketLogs

Plan: N/A

CloudRocketStorage
Object-Storage

Plan: Beta

MemcachedRocket
memcachedcloud

Plan: 30mb



AppCloudRocket

CloudRocket.mybluemix.net

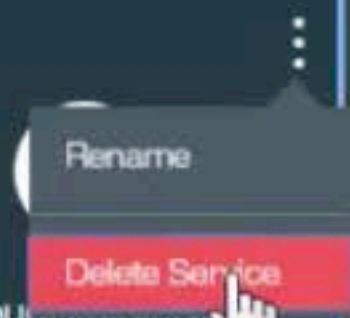


Stopped



Services

4/2000 Used



Rename

Delete Service

CloudRocketLogs
sqlldb

Plan: Sqlldb_free



CloudRocketLogs

Plan: N/A



CloudRocketStorage

Object-Storage

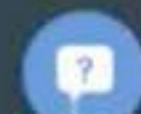
Plan: Beta



MemcachedRocket

memcachedcloud

Plan: 30mb



Delete Service

Deleting the service will remove it from all apps that are using it. In addition, all of its data will be permanently deleted. Are you sure you want to delete the 'CloudRocketDb' service?

Cancel

Delete

Summary

- Service instance needs to be created and bound to the application
- Service instance credentials are created manually for use from external tools
- Service instance unbinding is not the same as service instance deletion
- Service instance makes credentials available through VCAP_SERVICES environment variable