

**CLOUD COMPUTING**

**LAB REPORT ON**  
**GOOGLE READINESS PROGRAM**

**IN BMS COLLEGE OF ENGINEERING**  
**COMPLETED FROM COURSERA**  
**2019-2020**

**FACULTY GUIDE**  
**PALLAVI G B**

**STUDENT**  
**ROHITH Y V (1BM17CS080)**

**SEMESTER**  
**VI**

**SECTION**  
**B**

# Architecting with Google Compute Engine

-ROHITH Y V (1BM17CS080)

## MODULE 1



Completed by **Rohith Y V**

**April 21, 2020**

**1 week of study, 6-10 hours/week**

**Grade Achieved: 96.2%**

Rohith Y V's account is verified. Coursera certifies their successful completion of [Google Cloud Platform Fundamentals: Core Infrastructure](#).

## Google Cloud Platform Fundamentals: Core Infrastructure



Google Cloud



4.7 (27,820 ratings) | 280K Students Enrolled



04/21/2020

**Rohith Y V**

has successfully completed

**Google Cloud Platform Fundamentals: Core Infrastructure**

an online non-credit course authorized by Google Cloud and offered through Coursera

*Google Cloud Training*

**COURSE  
CERTIFICATE**



Verify at [coursera.org/verify/ZFRGUUS833D9](https://coursera.org/verify/ZFRGUUS833D9)

Coursera has confirmed the identity of this individual and their participation in the course.

## MODULE 2



Completed by **Rohith Y V**

**April 16, 2020**

**2 weeks of study, 3-5 hours/week**

**Grade Achieved: 90.7%**

Rohith Y V's account is verified. Coursera certifies their successful completion of Essential Google Cloud Infrastructure: Foundation.

### Essential Google Cloud Infrastructure: Foundation



Google Cloud



4.7 (11,350 ratings) | 80K Students Enrolled



## MODULE 3



Completed by **Rohith Y V**

**April 18, 2020**

**2 weeks of study, 3-5 hours/week**

**Grade Achieved: 93.3%**

Rohith Y V's account is verified. Coursera certifies their successful completion of Essential Google Cloud Infrastructure: Core Services.

### Essential Google Cloud Infrastructure: Core Services



Google Cloud



4.7 (7,860 ratings) | 65K Students Enrolled



## MODULE 4



Completed by **Rohith Y V**

**April 18, 2020**

**2 weeks of study, 3-5 hours/week**

**Grade Achieved: 93.3%**

Rohith Y V's account is verified. Coursera certifies their successful completion of Elastic Google Cloud Infrastructure: Scaling and Automation.

### Elastic Google Cloud Infrastructure: Scaling and Automation



Google Cloud



4.7 (6,214 ratings) | 55K Students Enrolled



## MODULE 5



Completed by **Rohith Y V**

April 20, 2020

2 weeks of study, 6-8 hours/week

Grade Achieved: 95.1%

Rohith Y V's account is verified. Coursera certifies their successful completion of Reliable Google Cloud Infrastructure: Design and Process.

### Reliable Google Cloud Infrastructure: Design and Process



Google Cloud



4.7 (4,547 ratings) | 44K Students Enrolled





# LAB MODULE 1:

## Google Cloud Platform Fundamentals: Core Infrastructure

### 1. Getting Started with Cloud Marketplace (formerly Cloud Launcher)



#### Getting Started with Cloud Marketplace (formerly Cloud Launcher)

In this lab you will load server log data into BigQuery and perform SQL queries on it.

#### Tips for Course Labs

Get the most out of Coursera and Qwiklabs by trying our tips below.

#### Avoid account confusion with private browsing

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Passed 100%

This course uses a third-party tool, Getting Started with Cloud Marketplace (formerly Cloud Launcher), to enhance your learning experience. The tool will reference basic information like your name, email, and Coursera ID.

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## 2. Getting Started with Compute Engine



### Getting Started with Compute Engine

In this lab you will create virtual machine (VM) instances and connect to them. You will also connect between both instances.

### Tips for Course Labs

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3. Click **End Lab** in Qwiklabs:

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4. Close the Qwiklabs browser window or tab.

Passed 100%

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 Open Tool



### 3. Getting Started with Cloud Storage and Cloud SQL



## Getting Started with Cloud Storage and Cloud SQL

In this lab you will create a Cloud Storage bucket and place an image in it. You also configure an application running in Compute Engine to use a database managed by Cloud SQL and to reference the image in the Cloud Storage bucket.

## Tips for Course Labs

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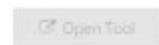
4. Close the Qwiklabs browser window or tab.

Passed 67%

This course uses a third-party tool, Getting Started with Cloud Storage and Cloud SQL, to enhance your learning experience. The tool will reference basic information like your name, email, and Coursera ID.

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## 4. Qwiklabs – Getting Started with Kubernetes Engine



### Qwiklabs – Getting Started with Kubernetes Engine

In this lab you create a Kubernetes Engine cluster containing several containers, each containing a web server. You place a load balancer in front of the cluster and view its contents.

### Tips for Course Labs

Get the most out of Coursera and Qwiklabs by trying our tips below.

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4. Close the Qwiklabs browser window or tab.

Passed 100%

This course uses a third-party tool, Qwiklabs – Getting Started with Kubernetes Engine, to enhance your learning experience. The tool will reference basic information like your name, email, and Coursera ID.

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## 5. Getting Started with App Engine



### Getting Started with App Engine

In this lab you will create a simple App Engine application using the Cloud Shell local development environment and then deploy it to App Engine.

### Tips for Course Labs

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3. Click **End Lab** in Qwiklabs:

A red rectangular button with the text "END LAB" in white.

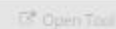
4. Close the Qwiklabs browser window or tab.

Passed 100%

This course uses a third-party tool, Getting Started with App Engine, to enhance your learning experience. The tool will reference basic information like your name, email, and Coursera ID.

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A grey rectangular button with a white icon of a document with a checkmark and the text "Open Tool" in white.

## 6. Getting Started with Deployment Manager and Stackdriver



### Getting Started with Deployment Manager and Stackdriver

In this lab you will create a deployment using Cloud Deployment Manager and use it to maintain a consistent state of your deployment. You will also view resource usage in a VM instance using Google Stackdriver.

### Tips for Course Labs

Get the most out of Coursera and Qwiklabs by trying our tips below.

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3. Click **End Lab** in Qwiklabs:

A red rectangular button with the text "END LAB" in white.

4. Close the Qwiklabs browser window or tab.

**Passed 100%**

This course uses a third-party tool, Getting Started with Deployment Manager and Stackdriver, to enhance your learning experience. The tool will reference basic information like your name, email, and Coursera ID.

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## 7. Getting Started with BigQuery



### Getting Started with BigQuery

In this lab you will load server log data into BigQuery and perform SQL queries on it.

### Tips for Course Labs

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3. Click **End Lab** in Qwiklabs:



4. Close the Qwiklabs browser window or tab.

Passed 100%

This course uses a third-party tool, Getting Started with BigQuery, to enhance your learning experience. The tool will reference basic information like your name, email, and Coursera ID.

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## LAB MODULE 2:

### Essential Google Cloud Infrastructure: Foundation

#### 1. Lab: Console and Cloud Shell



#### Lab: Console and Cloud Shell

In this lab, you become familiar with the Google Cloud Platform (GCP) web-based interface. There are two integrated environments: a GUI (graphical user interface) environment called the GCP Console, and a CLI (command-line interface) called Cloud Shell. In this class you use both environments.

### Tips for Course Labs

Get the most out of Coursera and Qwiklabs by trying our tips below.

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2. Complete the lab in Qwiklabs.

3. Click **End Lab** in Qwiklabs:



4. Close the Qwiklabs browser window or tab.

**Passed** 100%

## 2. Lab: VPC Networking



### Lab: VPC Networking

In this lab, you create an auto mode VPC network with firewall rules and two VM instances. Then, you convert the auto mode network to a custom mode network and create other custom mode networks as shown in the network diagram below. You also test connectivity across networks.

## Tips for Course Labs

Get the most out of Coursera and Qwiklabs by trying our tips below.

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4. Close the Qwiklabs browser window or tab.

**Passed** 100%

### 3. Lab: Bastion Host



## Lab: Bastion Host

A best practice for infrastructure administration is to limit access to the resources. In this lab, you learn one method of hardening an infrastructure called a Bastion Host.

## Tips for Course Labs

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3. Click **End Lab** in Qwiklabs:



4. Close the Qwiklabs browser window or tab.

**Passed** 100%

#### 4. Lab: Creating virtual machines



### Lab: Creating virtual machines

In this lab, you will explore the Virtual Machine instance options and create several VMs with different characteristics.

## Tips for Course Labs

Get the most out of Coursera and Qwiklabs by trying our tips below.

### Avoid account confusion with private browsing

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3. Click **End Lab** in Qwiklabs:



4. Close the Qwiklabs browser window or tab.

**Passed** 100%

## 5. Lab: Working with Virtual Machines



### Lab: Working with Virtual Machines

In this lab, you set up a game application—a Minecraft server.

## Tips for Course Labs

Get the most out of Coursera and Qwiklabs by trying our tips below.

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4. Close the Qwiklabs browser window or tab.

**Passed** 100%



## LAB MODULE 3:

### Essential Google Cloud Infrastructure: Core Services

#### 1. Lab: Cloud IAM



#### Lab: Cloud IAM

In this lab, you learn how to use the Service Account User role and how to grant roles.

#### Tips for Course Labs

Get the most out of Coursera and Qwiklabs by trying our tips below.

#### Avoid account confusion with private browsing


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2. Complete the lab in Qwiklabs.
3. Click **End Lab** in Qwiklabs:

A red rectangular button with the text "END LAB" in white capital letters.

4. Close the Qwiklabs browser window or tab.

#### To interact with other learners:

If you're finding any difficulty with the labs, you're encouraged to post about it in the discussion forums of this course. If you have no problems with the labs, consider browsing the discussion forums for opportunities to help your fellow learners.

#### To submit a support request:


If you're running into technical issues with the labs or the grading, please submit a support request here: <https://qwiklab.zendesk.com/hc/en-us/requests/new>

Passed 80%

This course uses a third-party tool, Lab: Cloud IAM, to enhance your learning experience. The tool will reference basic information like your name, email, and Coursera ID.

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## 2. Lab: Cloud Storage



### Lab: Cloud Storage

Cloud Storage is a fundamental resource in GCP, with many advanced features. In this lab, you exercise many Cloud Storage features that could be useful in your designs. You explore Cloud Storage using both the console and the gsutil tool.

## Tips for Course Labs

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### To submit a support request:

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<https://qwiklab.zendesk.com/hc/en-us/requests/new>

Passed 86%

This course uses a third-party tool, Lab: Cloud Storage, to enhance your learning experience. The tool will reference basic information like your name, email, and Coursera ID.

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### 3. Lab: Examining Billing Data with BigQuery



## Lab: Examining Billing Data with BigQuery

In this lab, you learn how to use BigQuery to analyze billing data.

### Tips for Course Labs

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**Passed 100%**

This course uses a third-party tool, Lab: Examining Billing Data with BigQuery, to enhance your learning experience. The tool will reference basic information like your name, email, and Coursera ID.

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## 4. Lab: Resource Monitoring



### Lab: Resource Monitoring

In this lab, you learn how to use Cloud Monitoring to gain insight into applications that run on Google Cloud Platform.

### Tips for Course Labs

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#### To submit a support request:


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Passed 100%

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## 5. Lab: Error Reporting and Debugging



### Lab: Error Reporting and Debugging

In this lab, you learn how to use Cloud Error Reporting and integrated Cloud Debugger.

#### Tips for Course Labs

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2. Complete the lab in Qwiklabs.

3. Click **End Lab** in Qwiklabs:

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4. Close the Qwiklabs browser window or tab.

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##### To submit a support request:

If you're running into technical issues with the labs or the grading, please submit a support request here:


<https://qwiklab.zendesk.com/hc/en-us/requests/new>

Passed 100%

This course uses a third-party tool, Lab: Error Reporting and Debugging, to enhance your learning experience. The tool will reference basic information like your name, email, and Coursera ID.

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## LAB MODULE 4:

### Elastic Google Cloud Infrastructure: Scaling and Automation

#### 1. Lab: Virtual Private Networks (VPN)



#### Lab: Virtual Private Networks (VPN)

In this lab, you establish VPN tunnels between two networks in separate regions such that a VM in one network can ping a VM in the other network over its internal IP address.

#### Tips for Course Labs

Get the most out of Coursera and Qwiklabs by trying our tips below.

#### Avoid account confusion with private browsing

**Close this page and log back in to Coursera in Incognito mode** before moving on. When you return to this course and lab instructions page, click **Open Tool** to continue. Avoid account confusion with private browsing

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Detailed instructions for using Incognito mode in Google Chrome are [available here](#). Depending on your browser, Incognito mode might also be called Private Browsing or InPrivate Browsing.

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4. Close the Qwiklabs browser window or tab.

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<https://qwiklab.zendesk.com/hc/en-us/requests/new>

Passed 100%

This course uses a third-party tool, Lab: Virtual Private Networks (VPN), to enhance your learning experience. The tool will reference basic information like your name, email, and Coursera ID.

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## 2. Lab: Configuring an HTTP Load Balancer with Autoscaling



### Lab: Configuring an HTTP Load Balancer with Autoscaling

In this lab, you configure an HTTP load balancer. Then, you stress test the load balancer to demonstrate global load balancing and autoscaling.

### Tips for Course Labs

Get the most out of Coursera and Qwiklabs by trying our tips below.

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4. Close the Qwiklabs browser window or tab.

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#### To submit a support request:

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<https://qwiklab.zendesk.com/hc/en-us/requests/new>

Passed 96%

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This course uses a third-party tool, Lab: Configuring an HTTP Load Balancer with Autoscaling, to enhance your learning experience. The tool will reference basic information like your name, email, and Coursera ID.

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### 3. Lab: Configuring an Internal Load Balancer



## Lab: Configuring an Internal Load Balancer

In this lab, you create two managed instance groups in the same region. Then you configure and test an internal load balancer with the instances groups as the backends.

## Tips for Course Labs

Get the most out of Coursera and Qwiklabs by trying our tips below.

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### To submit a support request:

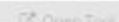
If you're running into technical issues with the labs or the grading, please submit a support request here: <https://qwiklab.zendesk.com/hc/en-us/requests/new>

Passed 100%

This course uses a third-party tool, Lab: Configuring an Internal Load Balancer, to enhance your learning experience. The tool will reference basic information like your name, email, and Coursera ID.

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## 4. Lab: Automating the Infrastructure of networks using Terraform



### Lab: Automating the Infrastructure of networks using Terraform

In this lab, you create a Terraform configuration with a module to automate the deployment of GCP infrastructure. Specifically, you deploy one auto mode network with a firewall rule and two VM instances.

### Tips for Course Labs

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<https://qwiklab.zendesk.com/hc/en-us/requests/new>

**Passed 100%**

This course uses a third-party tool, Lab: Automating the Infrastructure of networks using Terraform, to enhance your learning experience. The tool will reference basic information like your name, email, and Coursera ID.

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## LAB MODULE 5:

### Reliable Google Cloud Infrastructure: Design and Process

#### 1. Lab: Building a DevOps Pipeline



#### Lab: Building a DevOps Pipeline

In this lab, you will build a continuous integration pipeline using Cloud Source Repositories, Cloud Build, build triggers, and Container Registry.

#### Tips for Course Labs

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4. Close the Qwiklabs browser window or tab.

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<https://qwiklab.zendesk.com/hc/en-us/requests/new>

**Passed 100%**

This course uses a third-party tool, Lab: Building a DevOps Pipeline, to enhance your learning experience. The tool will reference basic information like your name, email, and Coursera ID.

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## 2. Lab: Deploying Apps to Google Cloud



### Lab: Deploying Apps to Google Cloud

In this lab, you will deploy applications to the Google Cloud services App Engine, Kubernetes Engine, and Cloud Run.

#### Tips for Course Labs

Get the most out of Coursera and Qwiklabs by trying our tips below.

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<https://qwiklab.zendesk.com/hc/en-us/requests/new>

Passed 100%

This course uses a third-party tool, Lab: Deploying Apps to Google Cloud, to enhance your learning experience. The tool will reference basic information like your name, email, and Coursera ID.

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### 3. Lab: Monitoring Applications in Google Cloud



#### Lab: Monitoring Applications in Google Cloud

In this lab, you will deploy an application to Google Cloud and then use the tools provided by Google Cloud to monitor it. You will use Cloud Logging, Trace, Profiler, and dashboards and create uptime checks and alerting policies.

#### Tips for Course Labs

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**Passed 75%**

This course uses a third-party tool, Lab: Monitoring Applications in Google Cloud, to enhance your learning experience. The tool will reference basic information like your name, email, and Coursera ID.

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