

X



(<https://swayam.gov.in>)



(https://swayam.gov.in/nc_details/NPTEL)

NPTEL (<https://swayam.gov.in/explorer?ncCode=NPTEL>) » Google Cloud Computing Foundations
(course)



Course outline

How does an NPTEL online course work?

Week 0:
Welcome to the Course

Week 1: What's the cloud anyway? Start with a solid platform

Week 2: Use GCP to build your apps

Week 3 : Where do I store this Stuff?

Week 4: There's an API for that! You can't secure

Assignment 7

The due date for submitting this assignment has passed.

Due on 2020-11-04, 23:59 IST.

Assignment submitted on 2020-11-04, 10:14 IST

1) What statement best describes infrastructure as code (IaC)?

1 point

- ☒ Automating systems construction using templates
- ☐ Using Java scripts to build your systems
- ☐ Replacing virtual servers with containers
- ☐ Using Templates to build virtual machines

Yes, the answer is correct.

Score: 1

Feedback:

IaC is the practice where infrastructure requirements are defined as code in a template that is human readable and machine consumable. The best example for this is Google Deployment Manager

Accepted Answers:

Automating systems construction using templates

2) True or False. Cloud Deployment Manager allows you to specify all the resources needed for your application in a declarative format using YAML.

1 point

- ☒ True
- ☐ False

Yes, the answer is correct.

the Cloud right?**Week 5 : It helps to Network****Week 6 : It helps to Network (continued)****Week 7 : Let Google keep an eye on things. You have the data, but what are you doing with it**

- ☐ Introduction - Let Google keep an eye on things (unit?unit=96&lesson=97)
- ☒ Introduction to IaC (unit?unit=96&lesson=98)
- ☒ Cloud Deployment Manager (unit?unit=96&lesson=99)
- ☒ Monitoring and Managing Your Services, Apps, and Infra (unit?unit=96&lesson=100)
- ☒ Stackdriver [With Lab] (unit?unit=96&lesson=101)
- ☒ Summary - Let Google keep an eye on things (unit?unit=96&lesson=103)
- ☒ Introduction -

Score: 1

Feedback:

The answer is True. Cloud Deployment Manager is an Infrastructure as Code (IAC) tool, designed for the automated construction, modification, and destruction of cloud infrastructures. Cloud Deployment Manager allows you to specify all the resources needed for your application in a declarative format using YAML

Accepted Answers:

True

3) Which statement accurately describes Google's relationship with open source infrastructure as code (IaC) tools?

1 point

- ☐ Open source tools are currently in beta
- ☒ Google has a team of engineers available to support third-party, open source IaC tools.
- ☐ Open source tools can only be used with a valid license
- ☐ Open source IaC tools cannot be used with Google

Yes, the answer is correct.

Score: 1

Feedback:

Google has a team of engineers dedicated to ensure that GCP support is also available for third-party, open source IaC tools

Accepted Answers:

Google has a team of engineers available to support third-party, open source IaC tools.

4) Which of the Operation services provides visibility of the uptime and overall performance of your app?

1 point

- ☒ Cloud Monitoring
- ☐ Cloud Logging
- ☐ Cloud Debugger
- ☐ Cloud Trace

Yes, the answer is correct.

Score: 1

Feedback:

Cloud Monitoring provides insight into how your applications are performing.

Accepted Answers:

Cloud Monitoring

5) What is the operation service that will store, search, and analyse log files?

1 point

- ☐ Cloud Debugger
- ☐ Cloud Monitoring
- ☒ Cloud Logging
- ☐ Cloud Trace

Yes, the answer is correct.

Score: 1

Feedback:

Google Cloud's operations suite is designed to monitor, troubleshoot, and improve cloud infrastructure, software, and application performance. It provides cloud monitoring, logging,

You have the data, but what are you doing with it?
(unit?unit=96&lesson=104)

- Intro to Big Data Managed Services in the Cloud
(unit?unit=96&lesson=105)
- Leverage Big Data Operations with Cloud Dataproc [With Labs]
(unit?unit=96&lesson=106)
- Build ETL Pipelines using Cloud Dataflow [With Labs]
(unit?unit=96&lesson=107)
- BigQuery Googles Enterprise Data Warehouse
(unit?unit=96&lesson=108)
- Summary - You have the data, but what are you doing with it?
(unit?unit=96&lesson=110)
- Google Cloud Computing Foundations Course : Week 7 Feedback Form
(unit?unit=96&lesson=111)
- Quiz : Assignment 7

profiling, error reporting, debugging, and tracing services to GCP. The Cloud Logging service allows you to store, search, and analyse log files.

Accepted Answers:
Cloud Logging

6) What is the purpose of Cloud Debugger?

1 point

- ☐ Write code tools to interrogate issues
- ☐ Slow down an application and step through the code
- ☐ Report on bugs and send notifications to users
- ☒ Investigate the behavior of application in production.

Yes, the answer is correct.
Score: 1

Feedback:

Cloud Debugger allows you to inspect the state of a running application in real time, without stopping or slowing the application down

Accepted Answers:
Investigate the behavior of application in production.

7) You want to automatically perform a test every 5 minutes to ensure your public web servers are up and running. Which of the following is the best option?

1 point

- ☐ Open Cloud Shell and periodically ping the servers
- ☐ Write a script and use cron to schedule when it runs
- ☒ Create an uptime check in Cloud Monitoring to periodically test if the web servers are reachable
- ☐ When a web server goes down, have it send a log entry to Cloud Monitoring to alert on the outage

Yes, the answer is correct.
Score: 1

Feedback:

Uptime checks can be configured to periodically test the connection to servers from several remote locations

Accepted Answers:
Create an uptime check in Cloud Monitoring to periodically test if the web servers are reachable

8) What is the purpose of Cloud Error Reporting?

1 point

- ☐ To inject errors into an application for testing.
- ☒ To count, analyze, and aggregate crashes in running cloud services in real time
- ☐ To report on storage issues with persistent disks.
- ☐ To send notifications when an Instance crashes.

Yes, the answer is correct.
Score: 1

Feedback:

Cloud Error Reporting counts, analyzes, and aggregates the crashes in your running cloud services in real time

Accepted Answers:

(assessment?name=131) To count, analyze, and aggregate crashes in running cloud services in real time

Let machines do
the work

Download
Videos

Text Transcripts

9) What is the purpose of Cloud Trace?

1 point

- ☐ Send latency statistics to the Cloud Error Reporting dashboard.
- ☐ Inject errors in an application so the error can be traced.
- ☒ Find performance bottlenecks in production
- ☐ Create uptime check to monitor the application status

Yes, the answer is correct.

Score: 1

Feedback:

With Cloud Trace, you can inspect detailed latency information for a single request or view aggregate latency for your entire application.

Accepted Answers:

Find performance bottlenecks in production

10) True or False. Operation suite is a partner product that is easily installed through the GCP Console

1 point

- ☐ True
- ☒ False

Yes, the answer is correct.

Score: 1

Feedback:

The answer is False. Google Cloud's Operation Suite is a Google solution.

Accepted Answers:

False

11) What service leverages the Apache Beam SDK to perform ETL operations?

1 point

- ☐ Cloud Dataproc
- ☐ Cloud Dataprep
- ☒ Cloud Dataflow
- ☐ Cloud Firestore

Yes, the answer is correct.

Score: 1

Feedback:

Cloud Dataflow leverages the Apache Beam SDK to build pipelines to perform ETL operations on batch and streaming data.

Accepted Answers:

Cloud Dataflow

12) You want to make your Cloud Dataproc cluster disposable while keeping your data safe. Which of the following is the best option?

1 point

- ☐ Leverage persistent disks.
- ☐ Have the cluster stream data to filestore
- ☒ Replace your HDFS filesystem with Cloud Storage.
- ☐ Keep the cluster and continue to use HDFS.

Yes, the answer is correct.

Score: 1

Feedback:

Cloud Storage can be used as a replacement for the HDFS. In this example, the cluster can be destroyed without losing data

Accepted Answers:

Replace your HDFS filesystem with Cloud Storage.

13) Which of the following is a managed service for processing both batch and streaming data? **1 point**

- ☒ BigQuery
- ☐ Cloud Dataflow
- ☐ Cloud Dataprep
- ☐ Cloud Dataproc

No, the answer is incorrect.

Score: 0

Feedback:

Cloud Dataflow is a fully managed streaming analytics service that minimizes latency, processing time, and cost through autoscaling and batch processing

Accepted Answers:

Cloud Dataflow

14) True or False. Data can be loaded into BigQuery using the BigQuery Web UI, the BigQuery API, or the BQ command line. **1 point**

- ☒ True
- ☐ False

Yes, the answer is correct.

Score: 1

Feedback:

The answer is True. BigQuery is a fully managed data warehouse and analytics engine. The user will never have to build servers or manage storage to make use of BigQuery. Loading data into the data warehouse can be easily completed by using the GCP Console, The BigQuery REST based APIs, or through the use of the BigQuery command line (bq) via the SDK.

Accepted Answers:

True

15) What code can Cloud Dataflow be written in? **1 point**

- ☐ Go
- ☒ Java
- ☐ PHP
- ☒ Python
- ☐ Ruby

Partially Correct.

Score: 0.67

Feedback:

Cloud Dataflow code can be written in Go, Java, and Python

Accepted Answers:

Go

Java

Python

16) Google provides quick start templates for Cloud Dataflow. Why would you use them? **1 point**

- ☐ To help get started coding.
- ☐ To make it easier to use Spark.
- ☒ To rapidly deploy data pipelines without programming expertise
- ☐ To build pipelines using Cloud Deployment Manager.

Yes, the answer is correct.

Score: 1

Feedback:

Google provides quick start templates for Cloud Dataflow to allow you to rapidly deploy a number of useful data pipelines without requiring any Apache Beam programming expertise.

Accepted Answers:

To rapidly deploy data pipelines without programming expertise

17) Which of the following services is a fully managed data warehouse service in GCP? **1 point**

- ☐ Cloud SQL
- ☐ Cloud Bigtable
- ☐ Cloud Datastore
- ☒ BigQuery

Yes, the answer is correct.

Score: 1

Feedback:

BigQuery is a fully managed data warehouse and analytics engine. The user will never have to build servers or manage storage to make use of BigQuery

Accepted Answers:

BigQuery

18) Which of the following statements regarding BigQuery is accurate? **1 point**

- ☐ BigQuery is a SQL database and requires a tight schema.
- ☐ BigQuery is a drop-in replacement for Oracle
- ☐ Before using BigQuery, you have to build a cluster
- ☒ BigQuery is a NoOps managed service.

Yes, the answer is correct.

Score: 1

Feedback:

BigQuery is a fully managed service. No operations on your part are required

Accepted Answers:

BigQuery is a NoOps managed service.

19) Which of the following is a managed solution to run Spark, Pig, Hive, and MapReduce in a batch environment with a managed cluster? **1 point**

- ☒ Cloud Dataproc

- ☐ Cloud Dataprep
- ☐ Cloud Dataflow
- ☐ Cloud Runner

Yes, the answer is correct.

Score: 1

Feedback:

Cloud Dataproc is a managed Hadoop Cluster where customers can run their Spark, Hive, Pig, and MapReduce environments

Accepted Answers:

Cloud Dataproc

20) True or False, 'Track' is one of the pipeline components for Cloud Dataflow.

1 point

- ☐ True
- ☒ False

Yes, the answer is correct.

Score: 1

Feedback:

The answer is False. Cloud Dataflow uses a Source of information, a series of PCollections that hold data, and a Sink, where the data will be stored or sent. PCollections are the input and output of every transform operation.

Accepted Answers:

False