

Welcome

Architecting with Google Cloud Platform: Design and Process

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Facilities



Parking



Facilities



Food

Course etiquette



Please silence
your phone and
take calls outside



Recording
this class
is prohibited



Ask questions
interactively or
via chat (online)

Cloud Infrastructure Track



Cloud Infrastructure

This track is designed for IT professionals who are responsible for implementing, deploying, migrating and maintaining applications in the cloud.

1

Google Cloud Platform
Fundamentals:
Core Infrastructure

2

Architecting with Google Cloud
Platform:
Infrastructure

3

Architecting with Google
Cloud Platform:
Design and Process



GCP Fundamentals: Core Infrastructure:

<https://cloud.google.com/training/courses/core-fundamentals>

Architecting with Google Cloud Platform: Infrastructure:

<https://cloud.google.com/training/courses/architecting-infrastructure>

Course Objectives

GCP design skills.

Process knowledge and skills.

Prepare you to continue learning by exposing you to concepts and models.

Introduce Deployment Manager as a Cloud Architect tool.

Audience and prerequisites

Target Audiences

1. Cloud Solutions Architects, Site Reliability Engineers, Systems Operations professionals, DevOps Engineers, IT managers.
2. Individuals using Google Cloud Platform to create new solutions or to integrate existing systems, application environments, and infrastructure with the Google Cloud Platform.

Prerequisites and Pre-work

1. Completed Architecting with Google Cloud Platform: Infrastructure or have equivalent experience
2. Basic proficiency with command-line tools and Linux operating system environments
3. Systems Operations experience including deploying and managing applications, either on-premises or in a public cloud environment.

Agenda

Module		Module	
1	Defining the service	5	Design for resiliency, scalability and DR
2	Business logic layer design	6	Design for security
3	Data layer design	7	Capacity planning and cost optimization
4	Presentation layer design	8	Deployment, monitoring and alerting, and incident response

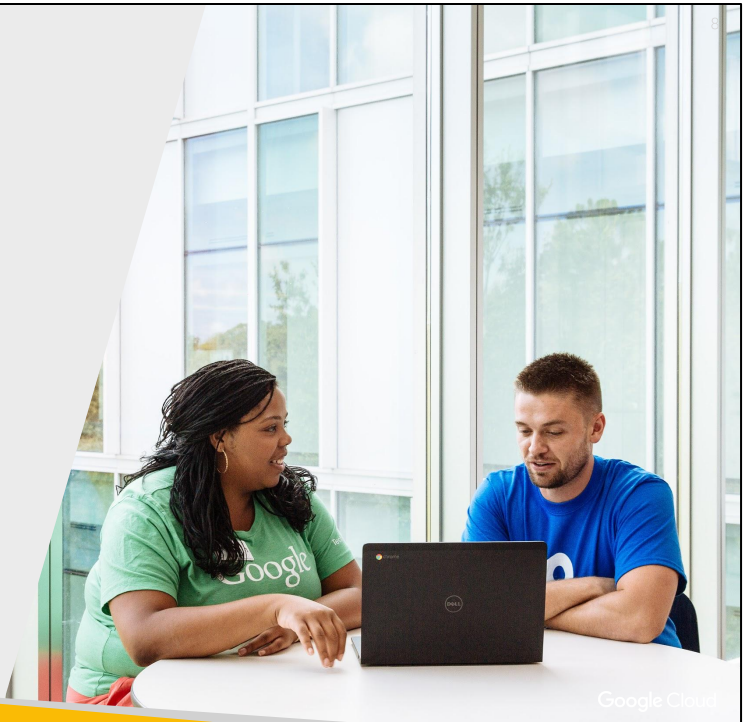
Introductions

Your instructor

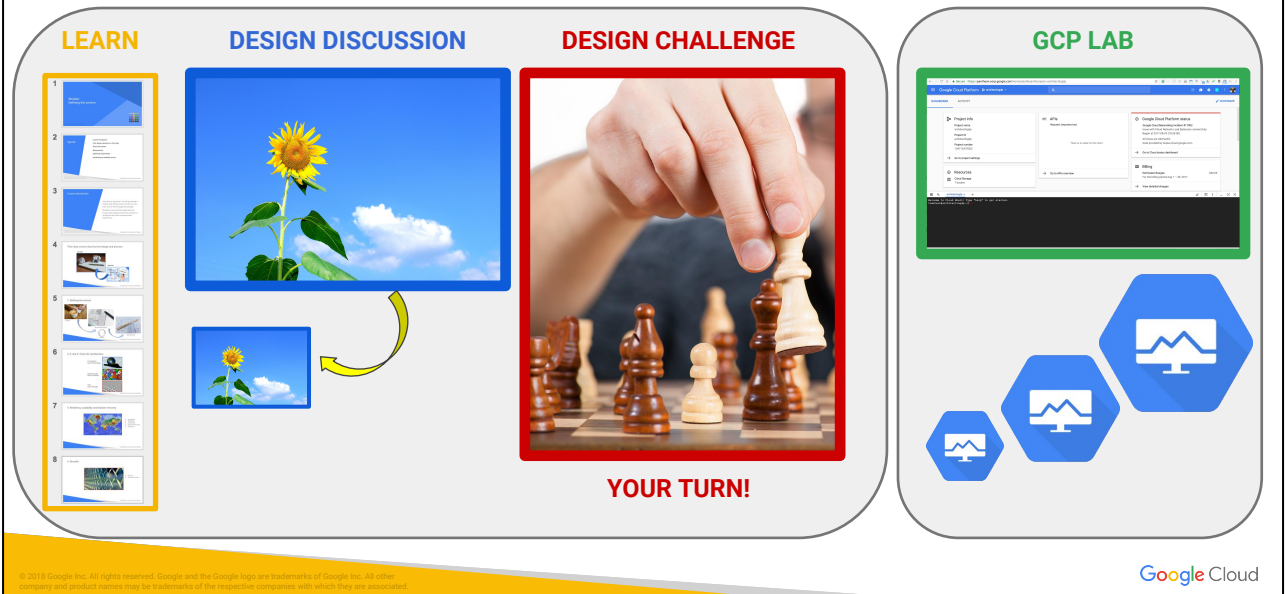
- Organization
- Background
- Course goals

You

- Name
- Organization
- Job role
- Course goals



What to expect...



The slide presentation, design discussions, and design challenges are all related by subject.

The hands-on GCP labs are not by subject. Instead they evolve from the simplest activities to complex deployments using Deployment Manager.

The purpose of the first three parts are to learn Design and Process. The GCP lab parts are to help you learn Deployment Manager, an awesome tool for designers and architects.

<https://pixabay.com/en/summer-sunflower-flowers-sky-cloud-368224/>

<https://pixabay.com/en/the-strategy-win-champion-1080527/>

About the hands-on labs: Deployment Manager



Lab 1: How to create an instance from scratch in Deployment Manager.

Lab 2: How to customize an instance, install software and run an application at boot from Deployment Manager. (Echo application).

Lab 3: How to move from an instance to an instance template, add an instance group, autoscaling, and a load balancer. (Echo application).

Lab 4: A complex and full production deployment with Cloud SQL server, static and active autoscaling. Public templates, build on existing examples. (Logbook application). Start it up and then apply Stackdriver monitoring, uptime checks, alerting and create a dashboard with charts.

Welcome to your lab environment: Qwiklabs

What you get

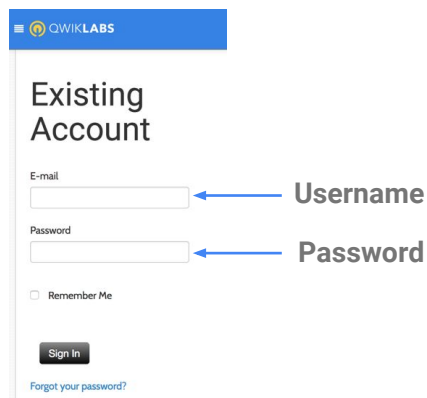


For each lab, Qwiklabs offers:

- A free set of resources for a fixed amount of time
- A clean environment with permissions

Open Qwiklabs













- 1 **Open an incognito window**
(or private/anonymous window)
- 2 **Go to the Qwiklabs URL** your instructor provides
- 3 **Sign In** and launch the course
(with credentials you used to register for the course)



The image shows a screenshot of the Qwiklabs login page. At the top is a blue header with the Qwiklabs logo. Below it, the heading "Existing Account" is displayed. There are two input fields: "E-mail" and "Password". A blue arrow points from the text "Username" to the E-mail field, and another blue arrow points from the text "Password" to the Password field. Below the password field is a checkbox labeled "Remember Me". A black "Sign In" button is positioned below the checkbox. At the bottom of the form, there is a link that says "Forgot your password?".

Use of an incognito browser window reduces the risk that you will accidentally do the labs using your own GCP account rather than Qwiklabs's.

View your labs

Class Details	
Class Guides	  Qwiklabs and Access to Google Cloud Platform
	  Console and Cloud Shell
Labs	  Projects <i>Currently Inactive</i>
	  Infrastructure Preview <i>Currently Inactive</i>
	  Bastion Host <i>Currently Inactive</i>
	  Google App Engine Development <i>Currently Inactive</i>

← **Lab Completed**

← **Active Lab**

← **Not yet available**

Select a lab

The screenshot shows the Google Cloud Labs interface. On the left, a sidebar lists 'Class Guides' and 'Labs'. The 'Labs' section is expanded, showing a list of labs. The 'Console and Cloud Shell' lab is highlighted. A callout box provides details for this lab:

Console and Cloud Shell	
In this lab you will become familiar with the GCP web-based interface including Console, the GUI (graphical user interface)	Duration: 30 min.
	Access Time: 30 min.
	Setup Time: 0 min.
	Level: introductory

You won't be able to pause and restart



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Google Cloud

Note the lab's access time on the right and click **Select** to open the lab instructions.

Once you start a lab, you won't be able to pause and restart it, so you'll need a continuous block of time to complete the work.

Run a lab

- Click 
- Note the following
- Click  and sign in
- Accept terms and note the project

Google Console Details

GCP Project ID : qwiklabs-gcp-6d778cbeb42cdbda

Username : gcpstaging1406-student@qwiklabs.net

Password : yZ5ZP9WrH

 qwiklabs-gcp-6d778cbeb4...

When ready to begin:

1. Click **Start Lab**
2. Note the lab's username, password, and project ID
3. Click **Open Google Console** and sign in to Cloud Console with these credentials
4. Accept the terms and note the project set for you.

End a lab

- When done, click  to free your resources

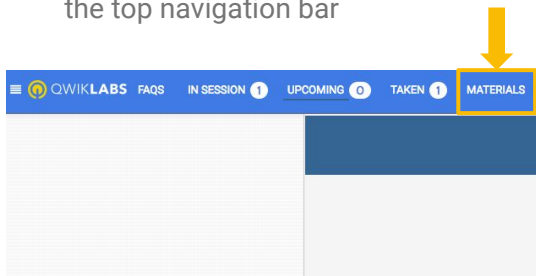
Some labs may require you to NOT End lab, and the instructor will inform you.

When done, click End. The account will be wiped out and removed. You'll lose all work you have in the project.

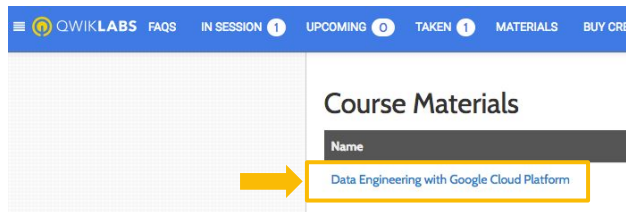
Most labs are designed to be standalone, that is, you need to end lab when you finish each lab. Some labs may require you to NOT End lab, and the instructor will inform you.

End of class - materials...

- 1 Click on **Materials** on the top navigation bar



- 2 Select the class from the Course Materials list



Materials are available for 2 years following the completion of a course.



Google Cloud Training and Certification

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