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### Architecting GCP: Infrastructure

# Essential Infrastructure

- Cloud Virtual Networking
- Virtual Machines
- Cloud IAM
- Data Storage Services
- Resource Management
- Resource Monitoring

# Augmented Infrastructure

- Interconnecting Networks
- Load Balancing
- Autoscaling
- Infrastructure Automation with Cloud API
- Infrastructure Automation with Deployment Manager
- Managed Services

# Application Infrastructure

- Application Infrastructure Services
- Application Development Services
- Containers



#### This class is in three parts:

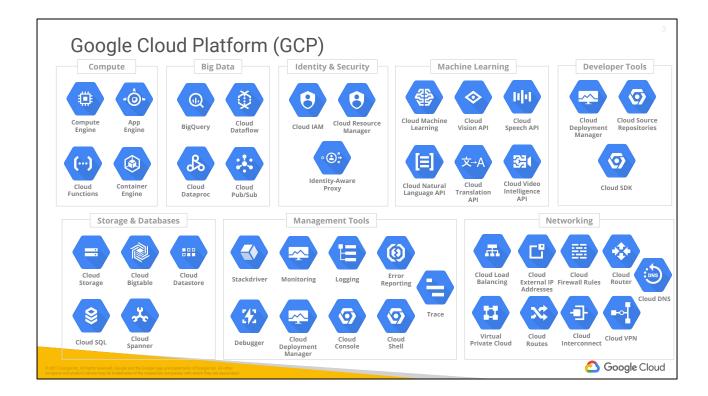
- 1. Essential Infrastructure the basic building blocks
- 2. Augmented Infrastructure systems built on top of the basics that multiply their power
- 3. Application Infrastructure services specifically provided to make it easier to develop applications for your users

#### Details:

- Essential Infrastructure the basic technologies and building blocks of all solutions in GCP
- Augmented Infrastructure building on top of the base infrastructure for leverage, scale, and power
  - Building on top of networking, first connecting networks, then load balancing for high availability
  - Autoscaling is a bridge subject, it creates identical VMs in response to network load ... leading to the topic of Automation
  - Building up from Autoscaling, there are three kinds of automation
    - Programmatic automation using the Cloud API to create objects in GCP - programming in a supported language
    - Deployment Manager automation. A template approach using YAML files, python, and jinja to create objects in GCP.
    - Managed services with visibility to servers and clusters
    - Managed services without visibility to servers or clusters (serverless or NoOps)

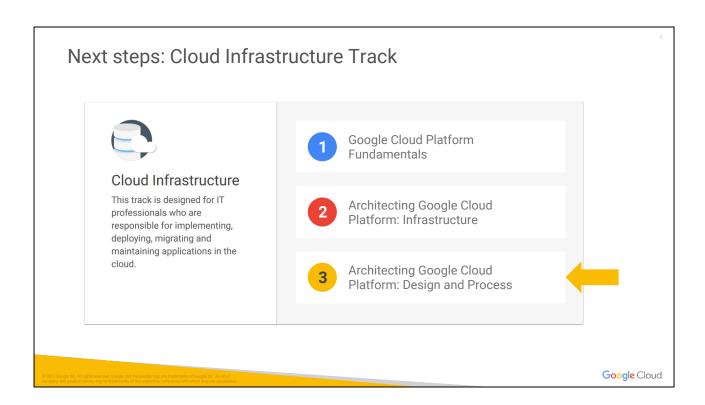
#### Application Infrastructure

- We don't teach software development in this class, there is a track for that, but we do address the infrastructure services available to developers
- Infrastructure Services Services that help you connect the parts of your application together
- Development Services Services that help developers create code --"code first" services
- o Containers More complexity for greater portability

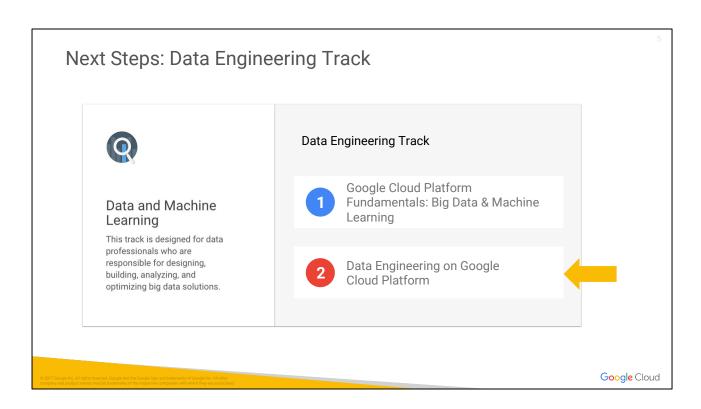


CONGRATULATIONS! In the last three days you've learned about 70 subjects.

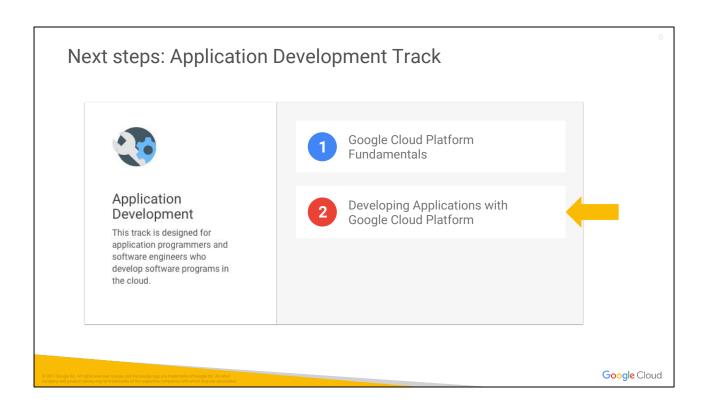
You have learned about, been exposed to, or experienced in labs just about everything on Google Cloud Platform.



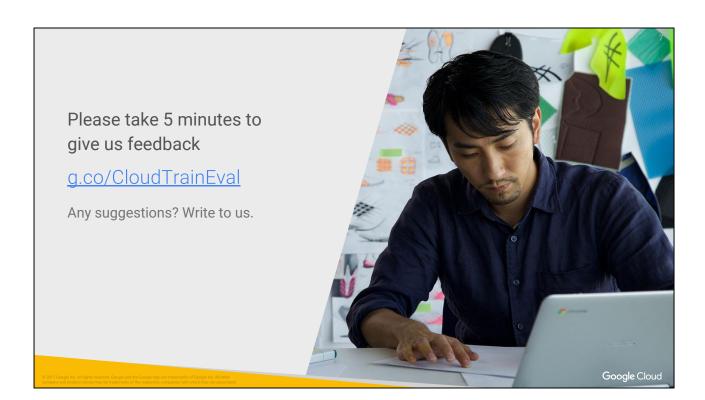
Architecting Google Cloud Platform: Infrastructure <a href="https://cloud.google.com/training/courses/architecting-design-process">https://cloud.google.com/training/courses/architecting-design-process</a>

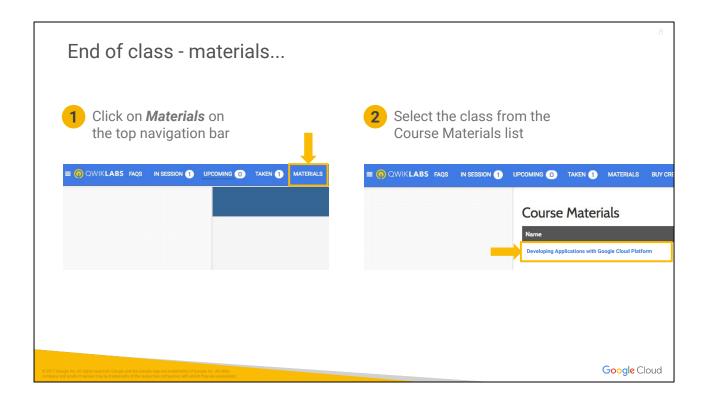


Data Engineering on Google Cloud Platform <a href="https://cloud.google.com/training/courses/data-engineering">https://cloud.google.com/training/courses/data-engineering</a>



Developing Applications with Google Cloud Platform <a href="https://cloud.google.com/training/courses/developing-applications">https://cloud.google.com/training/courses/developing-applications</a>





- (1) Available for 2 years following the completion of a course.
- (2) Labs currently available for reference. May not work outside of Qwiklabs environment. No support provided. Qwiklabs lab time not currently available for sale separate from the class.
- (3) class material will appear only at the end of class, provided the student has completed at least one lab in the course.

