

Build and Secure Networks in Google Cloud

Advanced 6 Steps 7 hours 42 Credits

Networking is a principle theme of cloud computing. It's the underlying structure of Google Cloud, and it's what connects all your resources and services to one another. This fundamental-level quest will cover essential Google Cloud networking services and will give you hands-on practice with specialized tools for developing mature networks. From learning the ins-and-outs of VPCs, to creating enterprise-grade load balancers, Networking in the Google Cloud will give you the practical experience needed so you can start building robust networks right away. Complete this quest including the the challenge lab at the end to receive an exclusive Google Cloud digital badge. The challenge lab does not provide prescriptive steps, but require solutions to be built with minimal guidance and will put your Google Cloud technology skills to the test!

Infrastructure Security

Prerequisites:

The labs in this quest will teach you networking basics and advanced features incrementally, but hands-on experience with Google Cloud’s core computing and infrastructure services is required before beginning. It is recommended that the students have at least earned a Badge by completing the hands-on labs in the [Google Cloud Essentials](#) Quest.

Quest Outline

User Authentication: Identity-Aware Proxy

Learn how to restrict access selected authenticated users with Identity-Aware Proxy without special programming. Discover how to retrieve user identity information from IAP.

1 hour	Fundamental	5 Credits
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Multiple VPC Networks

In this lab, you create several VPC networks and VM instances and test connectivity across networks.

1 hour 10 minutes Advanced 7 Credits

VPC Networks - Controlling Access

In this lab, you create two nginx web servers and control external HTTP access to the web servers using tagged firewall rules. Then, you explore IAM policies and service accounts.

1 hour Advanced 7 Credits

HTTP Load Balancer with Cloud Armor

In this lab, you configure an HTTP Load Balancer with global backends. Then, you stress test the Load Balancer and blacklist the stress test IP with Cloud Armor.

1 hour Advanced 7 Credits

[Create an Internal Load Balancer](#)

In this lab, you create two managed instance groups in the same region. Then, you configure an Internal Load Balancer with the instances groups as the backends.

50 minutes

Advanced

7 Credits

[Build and Secure Networks in Google Cloud: Challenge Lab](#)

In this lab you will be challenged to secure remote SSH access and implement firewall rules.

1 hour

Expert

9 Credits

Quest Complete!

Congrats! You completed this quest and earned a badge. Become a cloud expert and start another.

