## 06Elastic Google Cloud Infrastructure: Scaling and Automation

# [Course Introduction](https://www.youtube.com/watch?v=oB8Iro1j8nQ&t=11s)

# [Module Overview](https://www.youtube.com/watch?v=Q0u6bAOOrck&t=1s)

# [Cloud VPN](https://www.youtube.com/watch?v=oVRAkKd-JXA&t=1s)

<https://cloud.google.com/network-connectivity/docs/vpn/concepts/topologies>

<https://cloud.google.com/network-connectivity/docs/vpn/how-to/moving-to-ha-vpn>

# [Lab: Configuring Google Cloud HA VPN](https://www.cloudskillsboost.google/paths/11/course_templates/178/labs/470286)

# [Cloud Interconnect and Peering](https://www.youtube.com/watch?v=IlIEUeSfyfY&t=2s)

# [Cloud Interconnect](https://www.youtube.com/watch?v=vWtRYP8PMgk&t=3s)

# [Peering](https://www.youtube.com/watch?v=dN1vbXinNaY&t=1s)

# [Choosing a connection](https://www.youtube.com/watch?v=3-vAztO2XFU&t=1s)

# [Shared VPC and VPC Peering](https://www.youtube.com/watch?v=pKBtuvt7fiY)

# [Module Overview](https://www.youtube.com/watch?v=K57H2ESAZ1s&t=35s)

[Load balancing and autoscaling module overview](https://www.youtube.com/watch?v=K57H2ESAZ1s&t=35s)

# [Managed instance groups](https://www.youtube.com/watch?v=3Xs3_us5mNU&t=1s)

# [Autoscaling and health checks](https://www.youtube.com/watch?v=Y6qPLCO2hFM)

# [Overview of HTTP(S) load balancing](https://www.youtube.com/watch?v=ai6vf9gdhCs&t=1s)

# [Example: HTTP load balancer'](https://www.youtube.com/watch?v=vTSJ1UpNN6A)

# [HTTP(S) load balancing](https://www.youtube.com/watch?v=F-BiJWsm5a8)

# [Lab: Configuring an HTTP Load Balancer with Autoscaling](https://www.cloudskillsboost.google/paths/11/course_templates/178/labs/470301)

# [Lab Review: Configuring an HTTP Load Balancer with Autoscaling](https://www.youtube.com/watch?v=WojfW6KZUpw)

# [Cloud CDN](https://www.youtube.com/watch?v=scJsKfGmspA)

# [SSL proxy load balancing](https://www.youtube.com/watch?v=HTkMB0A7gXY)

# [TCP proxy load balancing](https://www.youtube.com/watch?v=ZgTf-WdGYwM)

# [Network load balancing](https://www.youtube.com/watch?v=Te_E_gEz14g)

# [Internal load balancing](https://www.youtube.com/watch?v=AEMOqeOboMQ)

# [Lab: Configuring an Internal Load Balancer](https://www.cloudskillsboost.google/paths/11/course_templates/178/labs/470309)

# [Lab Review: Configuring an Internal Load Balancer](https://www.youtube.com/watch?v=6YHAd4YakL0)

# [Choosing a load balancer](https://www.youtube.com/watch?v=tZ3Kjh5Zr28)

# [Module Review](https://www.youtube.com/watch?v=C1TE7ybhgUY&t=6s)

[Infrastructure automation module overview](https://www.youtube.com/watch?v=eGvJtazQ3fo)

# [Terraform](https://www.youtube.com/watch?v=fi50QyizrVU&t=3s)

# [Lab: Automating the Deployment of Infrastructure Using Terraform](https://www.cloudskillsboost.google/paths/11/course_templates/178/labs/470317)

# [Lab Review: Automating the Infrastructure of networks using Terraform](https://www.youtube.com/watch?v=rvl5RC9JOHo&t=1s)

# [Google Cloud Marketplace](https://www.youtube.com/watch?v=sAm9koV3mHA)

# [Demo: Launch Infrastructure Solutions on Google Cloud Marketplace](https://www.youtube.com/watch?v=eYELOYvQad8)

# [Module Review](https://www.youtube.com/watch?v=7VBHokOQUNo)

## 07Getting Started with Google Kubernetes Engine

[Intro](https://www.youtube.com/watch?v=bf6Zr6BFfn0&t=1s)

# [Google Cloud compute offerings](https://www.youtube.com/watch?v=yYxlKS8G3PA)

# [Cloud computing and Google Cloud](https://www.youtube.com/watch?v=y265d3oreJw)

# [The Google network](https://www.youtube.com/watch?v=fBSCJ3YgFMs&t=3s)

# [Resource management](https://www.youtube.com/watch?v=6Igov5qBjXc&t=19s)

# [Interacting with Google Cloud](https://www.youtube.com/watch?v=Pu4QWTfAzNc)

# [Containers](https://www.youtube.com/watch?v=YzMZADRadxM&t=7s)

# [Container images](https://www.youtube.com/watch?v=ouJkiVaSxN4&t=1s)

# [Lab: Working with Cloud Build](https://www.cloudskillsboost.google/paths/11/course_templates/2/labs/464493)v

# [Kubernetes](https://www.youtube.com/watch?v=oNioR_IRGAg)

# [Google Kubernetes Engine](https://www.youtube.com/watch?v=n-Dfo1Br3wY&t=1s)

# [Introduction](https://www.youtube.com/watch?v=-KN2QQpxnPw)v

# [Kubernetes concepts](https://www.youtube.com/watch?v=aSi6Aq1bhI0)

# [Kubernetes components](https://www.youtube.com/watch?v=259yjNVLXJQ)

# [GKE Autopilot and GKE standard](https://www.youtube.com/watch?v=qcwBpoGFpDo)

# [Object management](https://www.youtube.com/watch?v=Z7l9l1tNfN0)

# [Lab: Deploying GKE Autopilot Clusters](https://www.cloudskillsboost.google/paths/11/course_templates/2/labs/464503)

# [Course summary](https://www.youtube.com/watch?v=tANIhUO0XrA)v

## 08

# Logging and Monitoring in Google Cloud

# [Course Introduction](https://www.youtube.com/watch?v=EBfveWqLL4I&t=4s)

[Module Overview](https://www.youtube.com/watch?v=IpcWn2-ZOJ0&t=1s)

# [Need for Google Cloud observability](https://www.youtube.com/watch?v=HKhHmF11sLg)

# [Cloud Monitoring](https://www.youtube.com/watch?v=W1QZMgJ9VH8)

# [Cloud Logging](https://www.youtube.com/watch?v=E6re4onA_l0)

# [Error reporting](https://www.youtube.com/watch?v=JK_mMqOxfgM)

# [Application Performance Management Tools](https://www.youtube.com/watch?v=-mnmydALNLU)

# [Module Summary](https://www.youtube.com/watch?v=gZuzsMlOeV8)

# [Module Overview](https://www.youtube.com/watch?v=I_6ckDveyn0&t=58s)

# [Monitoring Overview](https://www.youtube.com/watch?v=n0JuU8O8JsI)

# [Cloud Monitoring achitecture patterns](https://www.youtube.com/watch?v=1jM0o2XVhIM)

# [Monitoring multiple projects](https://www.youtube.com/watch?v=h-SxD2HTFDw)

# [Data model and dashboards](https://www.youtube.com/watch?v=NegakPEBJwQ&t=1s)

# [Query metrics](https://www.youtube.com/watch?v=QJGwauzXJEE&t=1s)

# [Uptime checks](https://www.youtube.com/watch?v=1vgSvTi11fQ&t=1s)

# [Lab: Monitoring and Dashboarding Multiple Projects](https://www.cloudskillsboost.google/paths/11/course_templates/99/labs/432493)

# [Module summary](https://www.youtube.com/watch?v=75VGCoW-PL0)

[**Alerting overview**](https://www.youtube.com/watch?v=WpqC7wfb2cQ)

# [SLI, SLO, and SLA](SLI,%20SLO,%20and%20SLA)

# [Developing an alterting strategy - YouTube](https://www.youtube.com/watch?v=2Eh1qx8bY9M)

[Creating alerts - YouTube](https://www.youtube.com/watch?v=dvHuUQe9Slo)

# [Lab: Alerting in Google Cloud](https://www.cloudskillsboost.google/paths/11/course_templates/99/labs/432500)

# [Service Monitoring](https://www.youtube.com/watch?v=a4e3fv40saE)

# [Lab: Service Monitoring](https://www.cloudskillsboost.google/paths/11/course_templates/99/labs/432502)

[Module Overview (youtube.com)](https://www.youtube.com/watch?v=KkUcR4OVPEk)

[Cloud Logging overview and architecture (youtube.com)](https://www.youtube.com/watch?v=7BGkqyfCUNc)

[Log types and collection - YouTube](https://www.youtube.com/watch?v=0imGTXK7FFo)

[Storing, routing and exporting the logs - YouTube](https://www.youtube.com/watch?v=83IhRtWZfwc)

[Query and view logs - YouTube](https://www.youtube.com/watch?v=SldxCU_5FnA)

[Using log-based metrics (youtube.com)](https://www.youtube.com/watch?v=p7Ga8Qya-KM&t=1s)

[Log analytics - YouTube](https://www.youtube.com/watch?v=KiJxEyihP_M)

# [Lab: Log Analytics on Google Cloud](https://www.cloudskillsboost.google/paths/11/course_templates/99/labs/432511)

[Module Summary (youtube.com)](https://www.youtube.com/watch?v=ahHvY0Nfv-w&t=1s)

[Module Overview - YouTube](https://www.youtube.com/watch?v=OFkPbOMIKDM)

[Cloud Audit Logs - YouTube](https://www.youtube.com/watch?v=pztIuhKpXo0&t=1s)

[Data Access audit logs - YouTube](https://www.youtube.com/watch?v=scnZDs1Egmw)

[Audit logs entry format (youtube.com)](https://www.youtube.com/watch?v=Bie2Vj1HTeE)

[Best practices (youtube.com)](https://www.youtube.com/watch?v=ryhVhjRwnwc)

# [Lab: Cloud Audit Logs](https://www.cloudskillsboost.google/paths/11/course_templates/99/labs/432519)

[Course1 Summary (youtube.com)](https://www.youtube.com/watch?v=6Iu8WXYp7j0)

## 09Observability in Google Cloud

[Course Introduction - YouTube](https://www.youtube.com/watch?v=kZ_V-_LYAao)

[Module Overview (youtube.com)](https://www.youtube.com/watch?v=okmNY520VYo)

[Introduction to Ops Agent (youtube.com)](https://www.youtube.com/watch?v=F3EcdgXXdu0)

[Non-VM resources (youtube.com)](https://www.youtube.com/watch?v=lAGDAeQEqNo&t=1s)

[Cloud Operations for GKE (youtube.com)](https://www.youtube.com/watch?v=PvRM1maZcF0)

[Google Cloud Managed Service for Prometheus (youtube.com)](https://www.youtube.com/watch?v=Tr1pdwnfxl4)

[Exposing user-defined metrics (youtube.com)](https://www.youtube.com/watch?v=S_-ArsQu39A)

# [Lab: Monitoring a Compute Engine by using Ops Agent](https://www.cloudskillsboost.google/paths/11/course_templates/864/labs/467971)

[Module Summary - YouTube](https://www.youtube.com/watch?v=bdlayEQoEio&t=1s)

[Module Overview (youtube.com)](https://www.youtube.com/watch?v=XZ5Zryd7xoA)

[VPC Flow Logs - YouTube](https://www.youtube.com/watch?v=EqpMIPywh3w)

[Firewall Rules Logging - YouTube](https://www.youtube.com/watch?v=EkFPUy78djw)

[Load balancer logs (youtube.com)](https://www.youtube.com/watch?v=FkYYGSMJxz8)

[Cloud NAT Logs - YouTube](https://www.youtube.com/watch?v=CX4ubkdNgnA)

[Packet Mirroring - YouTube](https://www.youtube.com/watch?v=ebtw40TUYJE)

[Network Intelligence Center (youtube.com)](https://www.youtube.com/watch?v=PwV23yKmcRo)

# [Lab: Analyzing Network Traffic with VPC Flow Logs](https://www.cloudskillsboost.google/paths/11/course_templates/864/labs/467981)

[Module summary - YouTube](https://www.youtube.com/watch?v=V4LwEoe2k0U)

[Module Introduction (youtube.com)](https://www.youtube.com/watch?v=R50GaO9G7OI)

[Error Reporting (youtube.com)](https://www.youtube.com/watch?v=cbH-KUs-7UY&t=1s)

[Trace - YouTube](https://www.youtube.com/watch?v=kiCuOvQB0EU&t=1s)

# [Lab: View application latency with Cloud Trace](https://www.cloudskillsboost.google/paths/11/course_templates/864/labs/467987)

[Profiler - YouTube](https://www.youtube.com/watch?v=gfxBdeOO_bg)

[Module summary (youtube.com)](https://www.youtube.com/watch?v=KbDfEbiE7RY)

[Module Overview - YouTube](https://www.youtube.com/watch?v=MDo-nhtVOQU)

[Costs and pricing (youtube.com)](https://www.youtube.com/watch?v=66Ewxwyujlg)

[Bill Estimation - YouTube](https://www.youtube.com/watch?v=RhHwGcFzW4M)

[Cost Control Best Practices - YouTube](https://www.youtube.com/watch?v=6X_XmzlGOlQ)

[Module summary - YouTube](https://www.youtube.com/watch?v=dg9gKlBvP2Y)

[Course Summary (youtube.com)](https://www.youtube.com/watch?v=AvKv-eW0rC0)

<https://storage.googleapis.com/cloud-training/T-STACKD-B/v2.0/en/on-demand/T-STACKD2-B/T-STACKD-B_00_Course2_introduction.pdf>

<https://storage.googleapis.com/cloud-training/T-STACKD-B/v2.0/en/on-demand/T-STACKD2-B/T-STACKD-B_01_Configuring%20Google%20Cloud%20Services%20for%20Observability.pdf>

<https://storage.googleapis.com/cloud-training/T-STACKD-B/v2.0/en/on-demand/T-STACKD2-B/T-STACKD-B_02_Monitoring%20Google%20Cloud%20Network.pdf>

<https://storage.googleapis.com/cloud-training/T-STACKD-B/v2.0/en/on-demand/T-STACKD2-B/T-STACKD-B_03_Investigating_Application_Performance_Issues.pdf>

<https://storage.googleapis.com/cloud-training/T-STACKD-B/v2.0/en/on-demand/T-STACKD2-B/T-STACKD-B_04_Optimizing_the_Costs_for_Operations_Suite.pdf>

<https://storage.googleapis.com/cloud-training/T-STACKD-B/v2.0/en/on-demand/T-STACKD2-B/T-STACKD-B_00_Course2_summary.pdf>