

Study Guide:

- Basic concepts of Linux Distros, package managers, text editors as well as CLI fundamentals, including directory navigation, file/user administration and networking troubleshooting tools. e.g chmod, ping, curl, tcpdump, ping, etc.
- REST API and HTTP Client-Server model and Authentication Protocols
- Version control systems, Git/GitHub: Basic Git concepts: Repository, commit (writing meaningful commit messages), branch, and merge.
- Programming Logic Fundamentals (algorithms, variables, data types, conditionals, loops.)
- TCP/IP and OSI Model Fundamentals, including PDUs and protocols per layer.
- IP Addressing and subnetting fundamentals including IaaS Networking (Google Cloud VPCs) configuration basics and security essentials. e.g firewall rules configuration in Google Cloud Platform and best practices.
- Familiarity with transfer media concepts: Ethernet, Fiber, Wi-Fi IEEE 802.1
- Networking concepts such as: latency, bandwidth, throughput, packets, encapsulation, decapsulation.
- Google Cloud Platform Fundamentals, SaaS | PaaS | IaaS (Resource, Networking and Serverless solution basic concepts.)
- IAM and resource hierarchy in Google Cloud Platform. Access management and role-based permissions.
- Virtualization in Google Cloud Platform (IaaS)
- Basic understanding of container runtime and orchestration with Kubernetes
- Storage offerings in Google Cloud Platform, categories and best use cases. Blobs/Objects, SQL/Nosql DBs,
- Serverless offerings in Google Cloud Platform (PaaS) e.g AppEngine, CloudFunctions

Resources:

Linux:

[Introduction to Linux] <https://www.digitalocean.com/community/tutorials/an-introduction-to-linux-basics>

[Linux commands] <https://www.digitalocean.com/community/tutorials/linux-commands>

[Linux filesystem structure] <https://www.linuxfoundation.org/blog/blog/classic-sysadmin-the-linux-filesystem-explained>

[Linux file permissions] <https://www.redhat.com/sysadmin/linux-file-permissions-explained>

[Managing users in Linux] <https://www.freecodecamp.org/news/how-to-manage-users-in-linux/>

[Networking commands] <https://www.youtube.com/watch?v=rurs7cdT5cc>

Networking:

[IP addresses and subnetting]

<https://www.cisco.com/c/en/us/support/docs/ip/routing-information-protocol-rip/13788-3.html>

[OSI Model] https://en.wikipedia.org/wiki/OSI_model

[TCP/IP Model] <https://www.geeksforgeeks.org/tcp-ip-model/>

[Guide to Network Troubleshooting in Linux] <https://linuxblog.io/guide-to-network-troubleshooting-in-linux/>

[LAN, PAN, WAN] <https://www.geeksforgeeks.org/types-of-area-networks-lan-man-and-wan/>

Programing:

[Rest API] <https://www.redhat.com/en/topics/api/what-is-a-rest-api>

[Protocol] <https://www.cloudflare.com/learning/network-layer/what-is-a-protocol/>

[Version Control] <https://git-scm.com/book/en/v2/Getting-Started-About-Version-Control>

[Git commands] <https://git-scm.com/docs>

[GitHub] <https://en.wikipedia.org/wiki/GitHub>

[Introduction to Python] <https://www.python.org/about/gettingstarted/>

[What is an algorithm?] <https://www.geeksforgeeks.org/introduction-to-algorithms/>

[What is a function?] <https://medium.com/@ezinneanne/what-is-a-function-programming-7ff2a61dea8d>

[Global vs Local variables in Python] <https://www.geeksforgeeks.org/global-local-variables-python/>

[Conditionals] https://www.w3schools.com/js/js_if_else.asp

[Switch] https://www.w3schools.com/js/js_switch.asp

[Loops (For & While)] https://www.w3schools.com/js/js_loop_for.asp and

https://www.w3schools.com/js/js_loop_while.asp

[Operators] https://www.w3schools.com/js/js_operators.asp

[Data types] https://www.w3schools.com/js/js_datatypes.asp

Cloud computing:

GCP Support Hub] <https://cloud.google.com/support-hub>

[IAM roles] <https://cloud.google.com/iam/docs/roles-overview>

[Resource Hierarchy] <https://cloud.google.com/resource-manager/docs/cloud-platform-resource-hierarchy>

[Compute Engine VM instances] <https://cloud.google.com/compute/docs/instances>

[Google Cloud Storage overview] <https://cloud.google.com/storage/docs/introduction>

[Cloud SQL overview] <https://cloud.google.com/sql/docs/introduction>

[Cloud Spanner] <https://cloud.google.com/spanner/docs>

[VPC Networks] <https://cloud.google.com/vpc/docs/vpc>

[Cloud Firewall] <https://cloud.google.com/firewall/docs/firewalls>