1. Means of dynamically identifying instances to apply firewall rules.

Network tags

1. The resource for storing sensitive information in Kubernetes.

Secrets

1. A service used to run web applications on a managed platform.

App Engine

1. The flag to use that will allow you to determine the price of a BigQuery query without actually running the query.

--dry-run

1. The command to create a new Spanner database.

`gcloud spanner databases create`

1. The load balancer to use for TCP traffic with SSL offload.

SSL Proxy

1. A way to analyze spending data.

Billing Exports sent to BigQuery.

1. When using `gcloud compute ssh`, which flag shows the underlying SSH command?

--dry-run

1. Interfaces for interacting with Google Cloud.

- Directly to the REST API

- Cloud SDK

- Client libraries

- Console

1. Command to list Kubernetes services.

kubectl get svc

1. The Compute Engine metadata key that allows you to run code at startup.

startup-script

1. The App Engine, app.yaml handler property that allows directories to be static.

static\_dir

1. Flag to use when deploying to app engine that will prevent the version from getting 100% of the traffic.

--no-promote

1. Service that can ingest event streams. Commonly used with IoT.

Pub/Sub

1. The purpose of this command:

`gcloud compute firewall-rules create "a-firewall-rule" --network $SERVICES\_NETWORK --allow tcp:22`

Open port 22 to the internet

1. Why can't Cloud Storage objects be changed?

They are immutable

1. Command to update a Kubernetes deployment that was created with the `kubectl create` command.

kubectl apply

1. The two available operating systems to use on a Kubernetes Engine node.

Container-Optimized OS (COS) or Ubuntu.

1. The command to deploy an App Engine application.

gcloud app deploy app.yaml

1. Types of available roles.

Primitive, Pre-defined, Custom

1. The Cloud Storage metadata key to set to the MIME type.

Content-type

1. A `kubectl` flag that allows you to specify the JSON path of properties in JSON output.

`-o` along with the `jsonpath` value.

`kubectl get svc -o jsonpath`

1. IAM stands for what?

Identity and Access Management

1. A special account used for authenticating between different services.

Service account

1. Google's infrastructure as code service.

Deployment Manager

1. A mechanism that allows you to extract data from logs and track it.

Custom logging metric.

1. The name of the Kubernetes Deployment that ensures a single instance of a pod will run on each node.

DaemonSet

1. NoSQL's realtime database.

Firebase Realtime Database

1. A service used for executing code in response to events.

Cloud function

1. Google's horizontally scalable SQL database.

Spanner

1. The command to list subnets.

gcloud compute networks subnets list

1. Command to make a bucket.

gsutil mb gs://testbucket

1. The command for creating a new Kubernetes Secret.

kubectl create secret

1. Billing export formats.

CSV, JSON, BigQuery

1. The way to enable point-in-time recovery for MySQL databases on Cloud SQL.

Enable binary logging

1. The command to create a Kubernetes Cluster.

gcloud container clusters create

1. A common protocol and port used to connect to Linux instances.

SSH Over port 22

1. A sparsely populated database.

Bigtable

1. Scaling modes supported by App Engine.

Manual, Automatic, and Basic\*

\*Only with standard environments

1. The command to list networks.

`gcloud compute networks list`

1. Name of a point-in-time backup of a persistent disk.

Snapshots

1. The command to create a Cloud Function.

gcloud functions deploy

1. The command to get Pod logs in Kubernetes.

kubectl get logs

1. The name of the Kubernetes Controller that provides declarative updates for pods.

Deployments

1. A feature that allows you to see all network traffic.

Flow logs

1. A Kubernetes concept that represents the smallest unit of deployment.

Pod

1. How to write to Stackdriver logs from a Cloud Function.

Use the logging package or write to standard out.

1. The compute services provided by Google Cloud.

Compute Engine, App Engine, Kubernetes Engine, and Cloud Functions.

1. The command to set the CORS configuration on a bucket.

gsutil cors set

1. App Engine traffic can be split by:

IP address, Cookie, Random

1. Command to run commands from inside a container that is running on Kubernetes.

kubectl exec

1. Key-value pairs of configuration data that are accessible from code running in a Cloud Function.

Environment variables

1. Service that supports monitoring, logging, and debugging.

Stackdriver

1. A feature that allows you to set the exact amount of memory and CPU.

Custom machine type

1. Compute Services that directly support running Docker containers.

- App Engine - Flexible Environments

- Kubernetes

- Compute Engine - Use COS to run a single container per instance

- Cloud Functions - Not yet GA

1. The command to add an IAM binding policy.

`gcloud projects add-iam-policy-binding`

1. A common protocol and port used to connect to a Windows instance.

RDP over port 3389.

1. A type of short-lived, reduced price instance commonly used for batch processing.

Preemptible instances

1. The database commonly paired with App Engine.

Datastore

1. The command to list the current configuration for `gcloud`.

gcloud config list

1. A tool that warns you when you're spending too much.

Billing Alerts

When creating firewall rules, the lower the number the \_\_\_\_\_\_ the priority.

Higher

1. Tool that exists in the Console allowing terminal access.

Cloud shell

1. The way to ensure the nodes in a Kubernetes Engine cluster are running the latest version of Kubernetes.

Enable the "Automatic node upgrades" option.

1. A way to run Compute Engine instance based on templates.

Managed Instance Groups

1. The name of the notation used for specifying IP address ranges.

CIDR

1. Where do container images need to exist for Kubernetes to work with them?

Container Registry

1. The fully managed platform that supports running web applications inside a Docker container.

App Engine Flexible Enviroments

1. The load balancer to use for global HTTP(S) traffic.

HTTP(S) Load Balancer

1. The App Engine feature that allows fast rollbacks, A/B testing, and canary deployments.

Traffic Splitting

1. The identity providers that Cloud IAM can use.

G Suite, and Cloud Identity, Google Groups, Gmail accounts, Service Accounts

1. The command to enable an API.

gcloud services enable [ID]

1. The thing that is attached to a project so that you can pay for resources.

Billing Account

1. A way to group different instances together.

Unmanaged Instance group

1. The command to list projects.

gcloud projects list

1. The command to create a Deployment Manager deployment.

gcloud deployment-manager deployments create

1. Key-value pairs that you can set and interact with in a Compute Engine instance.

Metadata

1. Cloud functions should be written in an \_\_\_\_\_\_\_\_\_\_ way.

Idempotent

1. Tool for live code debugging.

Stackdriver Debug - doesn't support all languages.

1. A mechanism that allows you to track custom information in code and save it to Stackdriver.

Custom monitoring metric.

1. The command to update a Deployment Manager deployment.

gcloud deployment-manager deployments update

1. A feature of Cloud Storage that allows objects to be accessed temporarily.

Signed URLS

1. `gcloud-wide` flag to suppress interactive prompts.

-q or --quiet

1. Command to list gcloud configurations.

gcloud config configurations list

1. The format used for Kubernetes resource files.

YAML

1. A Kubernetes resource that exposes deployments.

Service

1. The fully managed version of Redis.

Cloud MemoryStore

1. Where SSH keys for connecting to Compute Engine instances are stored.

Project or Instance metadata.

1. The service that allows you to run a MySQL or Postgres database.

Cloud SQL

1. "One-click" way to install common applications to Compute Engine instances.

Cloud Launcher

1. A fully managed data warehouse.

BigQuery

1. A downloadable key allowing code to authenticate against Google Cloud services.

Service Account Key

The command to list the current configuration for `gcloud`.

1. gcloud config list
2. What is the purpose of this command:`gcloud iam service-accounts create...`

It creates a new service account.

1. Supported persistent disk types.

HDD, SSD, and Local SSD.

1. The binary to interact with Cloud Storage.

gsutil

1. A feature of Cloud Shell that allows you to browse to port 8080.

Web Preview

1. Mounted directories that are accessible from inside containers.

Volumes

1. A tool that helps estimate costs.

Pricing Calculator

1. Fully managed NoSQL database with a limited query syntax.

Datastore

1. The command to copy files to and from Cloud Storage.

gsutil cp

The meaning of this CIDR address range: 0.0.0.0/0

1. This represents all IP addresses that exist.
2. The way to change an App Engine region.

You can't. You need to create a new project.

1. Command to list buckets.

gsutil ls

1. Command: List BigQuery jobs

bq ls

1. Command: Schedule a SQL Backup

gcloud sql instances patch <instance name> -backup-start-time HH:MM

1. Command: Set a service account for an instance

gcloud compute instances set-service-account <instance name>

1. How can service accounts gain access across projects?

Service accounts can be granted access across projects by adding the SA Email address as an IAM member in another project

1. Command: Disable a SQL Backup

gcloud sql instances patch <instance name> -no-backup

1. Command: Upgrade GKE node version

gcloud container clusters upgrade <cluster name> -cluster-version <version#>

1. Command: List IAM assignments

gcloud projects get-iam-policy <project ID>

1. Command: Create a Firewall rule

gcloud compute firewall-rules create "rule-name"

1. Command: Update GKE deployment from a yaml manifest

kubectl apply -f manifest.yaml

1. Command: View BigQuery jobs

bq show -j <job>

Command: Create a Cloud SQL Backup

1. gcloud sql backups create -async-instance <instance name>
2. Command: Delete a disk snapshot

gcloud compute snapshots delete <name>

1. Command: List cloud components

gcloud components list

1. Command: Move objects between GCS buckets

gsutil mv gs://<origin> gs://<destination>

1. Command: Remove gcloud components

gcloud components remove <component ID>

1. Command: Delete a VM Instance

gcloud compute instances delete <instance name>

1. What do Google Cloud logs audit?

Audit logs capture System Events, Admin Activity, and Data Access

1. Command: Update an existing Deployment

gcloud demployment-manager deployments update <deployment name> -config <template.yaml>

1. Command: Create a GKE pod in a deployment

kubectl run

1. Command: Set IAM roles for members of a project

gcloud add-iam-policy binding <resource> -member user:EMAIL -role <Role ID>

1. Instance Autoscaling Parameter: Use of target\_cpu\_utilization parameter

target\_cpu\_utilization defines the CPU usage threshold that will start new instances

1. Command: Install gcloud components

gcloud components install <component ID>

1. Command: View quotas for compute

gcloud compute project-info describe -project <project name>

1. Command: Create an Instance Template

gcloud compute instance-template create <template name>

1. Command: View running GKE nodes

kubectl get nodes

1. Command: List GKE deployments

kubectl get deployments

1. Command: Create a custom IAM role

gcloud iam roles create <role name>

1. Command: View the details of an instance

gcloud compute instances describe <instance ID>

1. Command: View GKE container images detail

gcloud container images describe <image name>

1. Command: SSH into a Linux Instance on GCP

gcloud compute ssh <instance>

1. Command: View GKE node details

kubectl describe node <name>

1. Where can log sinks be exported?

GCS, BigQuery, or Cloud Pub/Sub

1. Command: Update a VM Instance

gcloud compute instances update <instance name>

1. Command: Enable APIs

gcloud services enable <component>.googleapis.com

1. How are SSH keys uploaded to a project or instance

SSH Keys are uploaded to projects or instances as metadata

1. Command: Deploy a GKE cluster

gcloud container clusters create <cluster name>

1. Command: Create a GKE deployment from a yaml manifest

kubectl create -f manifest.yaml

1. Command: Update a GKE deployment from a yaml manifest

kubectl apply -f manifest.yaml

Command: Create a Service Account

1. gcloud iam service-accounts create <name> -display-name "Display Name"
2. Command: Delete a service account

gcloud iam service-accounts delete SA-Name@project-ID.iam.gserviceaccounts.com

1. Command: List APIs

(Available) gcloud services list -available

(Enabled) gcloud services list -enabled

1. Why would you use the -dry-run flag when running bq?

Use the -dry-run flag with BigQuery to get an estimate of the amount of data that will be read by the query

1. Command: Create a new Deployment

gcloud deployment-manager deployments create <deployment name> -config <template.yaml>

1. What is a key requirement for creating a Managed Instance Group?

Managed Instance Groups require an Instance Template to define how the instance will be created when added to the group

1. Command: Start a VM Instance

gcloud compute instances start <instance name>

1. Command: Create a Managed Instance Group

gcloud compute instance-groups managed create <name> -template <template name>

1. What is Deployment Manager

Deployment Manager is Google's Infrastructure as Code (IaC) service.

Deployment Manager uses Yaml, Jinja, and Python deployment templates

1. Command: List service accounts

gcloud iam service-accounts list

1. Command: View GKE cluster details

kubectl cluster-info <cluster name>

1. Command: Create GCE Instance

gcloud compute instances create <instance name> -machine-type <type> -zone <zone>

1. Command: Create a snapshot of a disk

gcloud compute disks snapshot <disk name> -region <region> : to add a snapshot of a regional disk

1. Command: Get the external IP address of an instance, and View currently running VMs

gcloud compute instances list

1. Command: Create project

gcloud projects create <project ID>

1. Command: Expand a VPC subnet range

gcloud compute networks subnets expand-ip-range

1. Command: Create a VM Image

gcloud compute images create <image name>

-source-disk or -source-image : to create from an existing disk or image

--source-uri : GCS Path

1. Command: Split GAE traffic between different versions

gcloud app services set-traffic -splits v#=x.x,v#=x.x

-split-by <Ip, cookie, random>

1. How are Cloud Launcher resources provisioned?

Deployment Manager is used behind the scenes to configure Cloud Launcher resources

1. Command: Describe Dataproc job details

gcloud dataproc jobs describe <job>

1. Command: Deploy a Cloud Function

gcloud functions deploy <function name>

1. What format are GCS configuration files in?

GCS configuration files are in JSON

1. Command: Resize GKE clusters, add or remove nodes

gcloud container clusters resize <cluster name> -size=#

1. Command: Set GCS lifecycle

gsutil lifecycle set LIFECYCLE\_CONFIG\_FILE gs://<bucket>

1. Command: Set an internal IP when creating an instance

gcloud compute instances create <instance name> -private-network-ip <IP address>

1. Command: Create an external IP address

gcloud compute addresses create

1. Command: List Dataproc jobs

gcloud dataproc jobs list

1. What are the core components in Cloud SDK?

gcloud, gsutil, bq, kubectl

1. Command: Link a billing account to a project

gcloud billing projects link <Project ID> -billing-account=ID

1. How do you set a custom Stackdriver Monitoring Metric?

Set a custom Stackdriver Monitoring Metric by extracting data from logs to use as a metric

1. What are the 3 types of Load Balancers GCP offers?

HTTP(S), TCP, UDP

1. What is the name of the project that contains stackdriver meta data?

Host Project

1. How long does it take for a project to be deleted?

30 days

1. When are projects billed? How are they billed?

Self served

- Monthly or when threshold reached

Invoice

- Monthly, Check/Wire Transfer, Need to setup with Google Cloud Sales Team