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Lesson Plan

5. Compute Engine

5.1. Services and APIs

5.2. Create Instance by gcloud

5.3. Filter

5.4. Set machine type and default zone

5.5. GCE With Console

5.1 Services and APIs

1a. Get selected project name

1b. Set default project

2a. List all enabled services by default

2a. List all enabled services

2a. List all available services

3. Web based list of all available API(s)

Search > Compute Engine API > Enable

1. Open cloud shell and set config

a. `# gcloud config get-value project`

b. `# gcloud config set project myProjectId`

2. Perform compute operations:

a. `# gcloud services list`

b. `# gcloud services list --enabled`

c. `# gcloud services list --available`

d. `# gcloud services list --available | grep
compute`

3. console > API & Services > Library

5.2 Create Instance by gcloud

1a. List all vm instances

1b. Create vm instance

1c. Delete vm instance

1d. Get help summary

1e. Get help detailed

1. Perform compute operations:

a. `# gcloud compute instances list`

b. `# gcloud compute instances create myvm`

c. `# gcloud compute instances delete myvm`

d. `# gcloud compute instances create -h`

e. `# gcloud compute instances create --help`

5.3 Filter

1a. List all machine types

1b. Get filter expressions

1c. Apply filter on machine type list

1d. Apply filter on machine type list only
free tier zone

- Copy [us-central1-a]
- Copy [machine type] name

1. Search using filters:

- a. # gcloud compute machine-type list
- b. # gcloud topic filters
- c. # gcloud compute machine-types list
--filter="NAME:f1-micro"
- d. # gcloud compute machine-types list
--filter="NAME:f1-micro AND
ZONE~us-central"

5.4 Set machine type and default zone

1a. Set default **zone**

1b. Set default **region**

1c. Create machine with copied machine type and in default zone.

1d. Secure shell connection with myvm

- Type to ping newly create vm with internal / external ip and vmname
- See service account create

1. Set defaults:

- # gcloud config set compute/zone us-central1-a
- # gcloud config set compute/region us-central1
- # gcloud compute instances create --machine-type=f1-micro myvm"
- # gcloud compute ssh myvm

5.5 GCE With Console

1a. Set default **zone** and **region**

1c. View Metadata and SSH keys

1d. Start creating VM Instance with GUI

- Analyse the Create Form
- Create/Edit Instance

Preemptible options

Startup Scripts

SSH Instance

1. Set defaults from console:

- Console > Compute Engine > Settings
- Console > Compute Engine > Metadata
- Console > Compute Engine > VM Instances > Create
- Console > Compute Engine > VM Instances > Detail > Create Similar