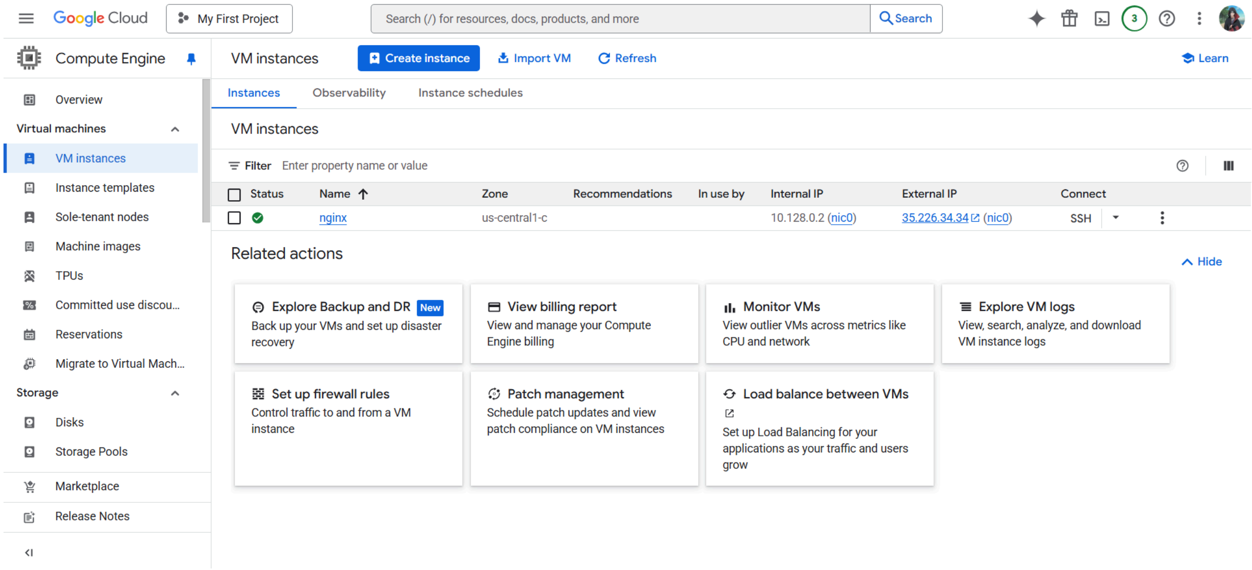
Part II #1



VM instances

☐	Status	Name ↑	Zone	Recommendations	In use by	Internal IP	External IP	Connect
☐	✓	nginx	us-central1-c			10.128.0.2 (nic0)	35.226.34.34 (nic0)	SSH ▾

Related actions

Explore Backup and DR New
Back up your VMs and set up disaster recovery

View billing report
View and manage your Compute Engine billing

Monitor VMs
View outlier VMs across metrics like CPU and network

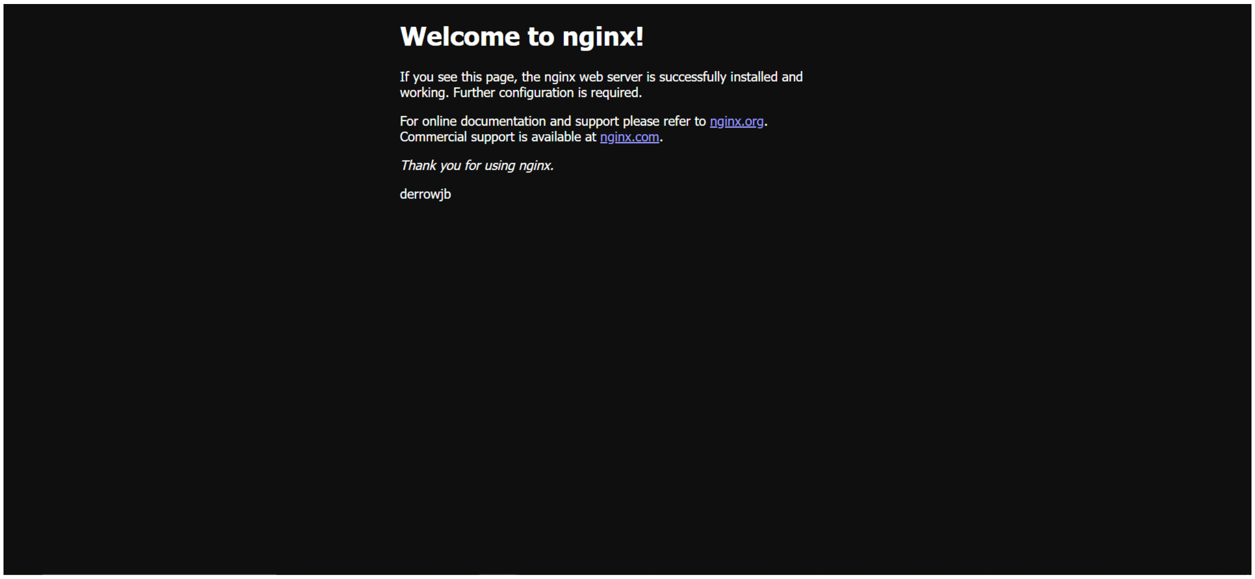
Explore VM logs
View, search, analyze, and download VM instance logs

Set up firewall rules
Control traffic to and from a VM instance

Patch management
Schedule patch updates and view patch compliance on VM instances

Load balance between VMs
Set up Load Balancing for your applications as your traffic and users grow

Part II #5



Welcome to nginx!

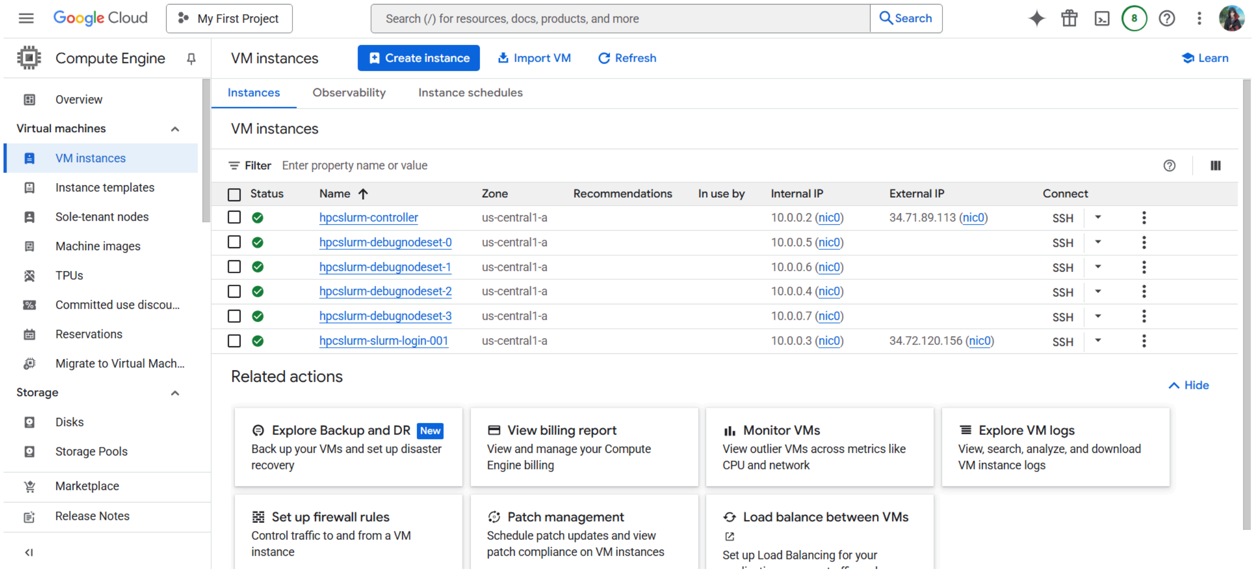
If you see this page, the nginx web server is successfully installed and working. Further configuration is required.

For online documentation and support please refer to nginx.org.
Commercial support is available at nginx.com.

Thank you for using nginx.

derrowjb

Part III #5



VM instances

Status	Name	Zone	Recommendations	In use by	Internal IP	External IP	Connect
✓	hpcslurm-controller	us-central1-a			10.0.0.2 (nic0)	34.71.89.113 (nic0)	SSH
✓	hpcslurm-debugnodeset-0	us-central1-a			10.0.0.5 (nic0)		SSH
✓	hpcslurm-debugnodeset-1	us-central1-a			10.0.0.6 (nic0)		SSH
✓	hpcslurm-debugnodeset-2	us-central1-a			10.0.0.4 (nic0)		SSH
✓	hpcslurm-debugnodeset-3	us-central1-a			10.0.0.7 (nic0)		SSH
✓	hpcslurm-slurm-login-001	us-central1-a			10.0.0.3 (nic0)	34.72.120.156 (nic0)	SSH

Related actions

Explore Backup and DR New
Back up your VMs and set up disaster recovery

View billing report
View and manage your Compute Engine billing

Monitor VMs
View outlier VMs across metrics like CPU and network

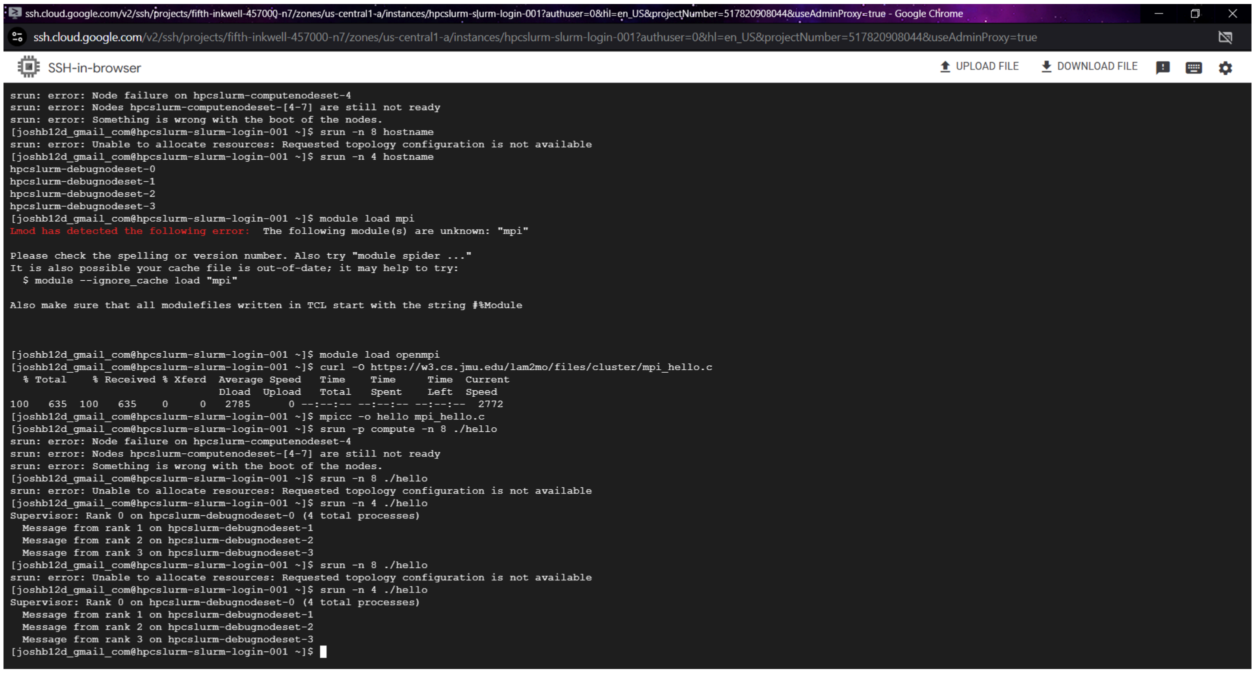
Explore VM logs
View, search, analyze, and download VM instance logs

Set up firewall rules
Control traffic to and from a VM instance

Patch management
Schedule patch updates and view patch compliance on VM instances

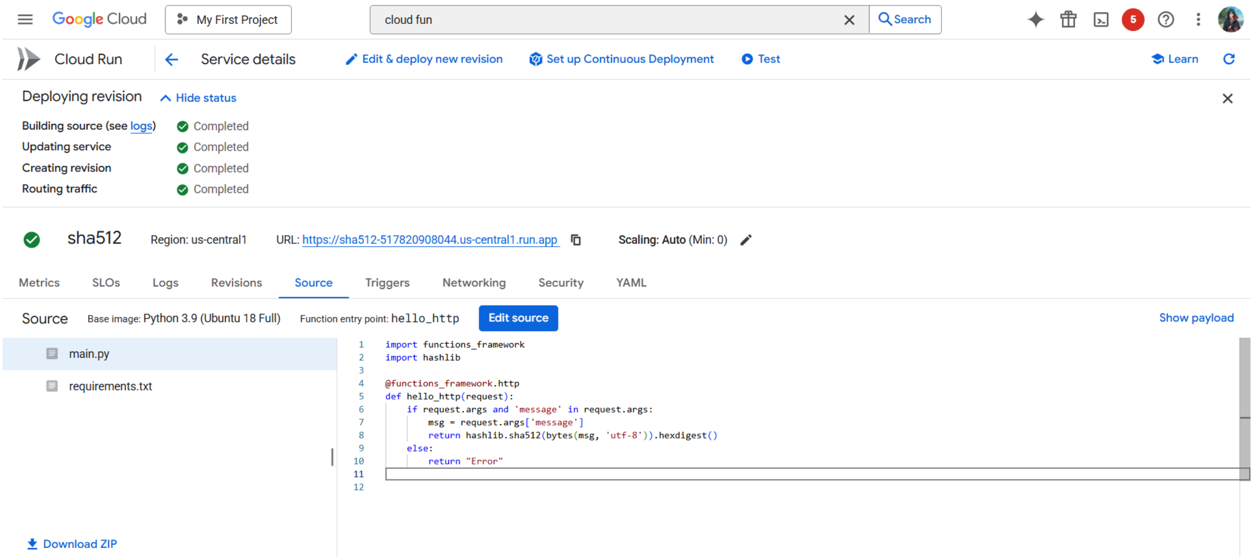
Load balance between VMs
Set up Load Balancing for your

Part III #7


ssh.cloud.google.com/v2/ssh/projects/fifth-inkwell-457000-n7/zones/us-central1-a/instances/hpcslurm-slurm-login-001?authuser=0&hl=en_US&projectNumber=517820908044&useAdminProxy=true - Google Chrome
ssh.cloud.google.com/v2/ssh/projects/fifth-inkwell-457000-n7/zones/us-central1-a/instances/hpcslurm-slurm-login-001?authuser=0&hl=en_US&projectNumber=517820908044&useAdminProxy=true
SSH-in-browser
UPLOAD FILE
DOWNLOAD FILE

```
srun: error: Node failure on hpcslurm-computenodeset-4
srun: error: Nodes hpcslurm-computenodeset-[4-7] are still not ready
srun: error: Something is wrong with the boot of the nodes.
[joshb12d_gmail_com@hpcslurm-slurm-login-001 ~]$ srun -n 8 hostname
srun: error: Unable to allocate resources: Requested topology configuration is not available
[joshb12d_gmail_com@hpcslurm-slurm-login-001 ~]$ srun -n 4 hostname
hpcslurm-debugnodeset-0
hpcslurm-debugnodeset-1
hpcslurm-debugnodeset-2
hpcslurm-debugnodeset-3
[joshb12d_gmail_com@hpcslurm-slurm-login-001 ~]$ module load mpi
Lmod has detected the following error:  The following module(s) are unknown: "mpi"

Please check the spelling or version number. Also try "module spider ..."
It is also possible your cache file is out-of-date; it may help to try:
  $ module --ignore_cache load "mpi"

Also make sure that all modulefiles written in TCL start with the string #%Module



[joshb12d_gmail_com@hpcslurm-slurm-login-001 ~]$ module load openmpi
[joshb12d_gmail_com@hpcslurm-slurm-login-001 ~]$ curl -O https://w3.cs.jmu.edu/lam2mo/files/cluster/mpi_hello.c
  % Total    % Received % Xferd  Average Speed   Time    Time     Time  Current
                                 Dload  Upload   Total   Spent    Left  Speed
100   635  100   635    0     0   2785      0 --:--:-- --:--:-- --:--:--  2772
[joshb12d_gmail_com@hpcslurm-slurm-login-001 ~]$ mpicc -o hello mpi_hello.c
[joshb12d_gmail_com@hpcslurm-slurm-login-001 ~]$ srun -p compute -n 8 ./hello
srun: error: Node failure on hpcslurm-computenodeset-4
srun: error: Nodes hpcslurm-computenodeset-[4-7] are still not ready
srun: error: Something is wrong with the boot of the nodes.
[joshb12d_gmail_com@hpcslurm-slurm-login-001 ~]$ srun -n 8 ./hello
srun: error: Unable to allocate resources: Requested topology configuration is not available
[joshb12d_gmail_com@hpcslurm-slurm-login-001 ~]$ srun -n 4 ./hello
Supervisor: Rank 0 on hpcslurm-debugnodeset-0 (4 total processes)
  Message from rank 1 on hpcslurm-debugnodeset-1
  Message from rank 2 on hpcslurm-debugnodeset-2
  Message from rank 3 on hpcslurm-debugnodeset-3
[joshb12d_gmail_com@hpcslurm-slurm-login-001 ~]$ srun -n 8 ./hello
srun: error: Unable to allocate resources: Requested topology configuration is not available
[joshb12d_gmail_com@hpcslurm-slurm-login-001 ~]$ srun -n 4 ./hello
Supervisor: Rank 0 on hpcslurm-debugnodeset-0 (4 total processes)
  Message from rank 1 on hpcslurm-debugnodeset-1
  Message from rank 2 on hpcslurm-debugnodeset-2
  Message from rank 3 on hpcslurm-debugnodeset-3
[joshb12d_gmail_com@hpcslurm-slurm-login-001 ~]$ 
```

Part IV #3



Deploying revision

Building source (see logs) Completed
Updating service Completed
Creating revision Completed
Routing traffic Completed

sha512 Region: us-central1 URL: https://sha512-517820908044.us-central1.run.app Scaling: Auto (Min: 0)

Source Base image: Python 3.9 (Ubuntu 18 Full) Function entry point: hello_http

```python
import functions_framework
import hashlib

@functions_framework.http
def hello_http(request):
    if request.args and 'message' in request.args:
        msg = request.args['message']
        return hashlib.sha512(bytes(msg, 'utf-8')).hexdigest()
    else:
        return "Error"

```

Part IV #5

3615f80c9d293ed7402687f94b22d58e529b8cc7916f8fac7fddf7fbd5af4cf777d3d795a7a00a16bf7e7f3fb9561ee9baae480da9fe7a18769e71886b03f315