

Splunk Implementation

1. Create virtual machine instance with the Ubuntu Boot Disk

You first need to create virtual machine instance and configure it's boot disk for the Ubuntu System.

The screenshot shows the Google Cloud 'Create an instance' page. The left sidebar lists options: 'New VM instance' (selected), 'New VM instance from template', 'New VM instance from machine image', and 'Marketplace'. The main area is titled 'Create an instance' and contains the following configuration fields:

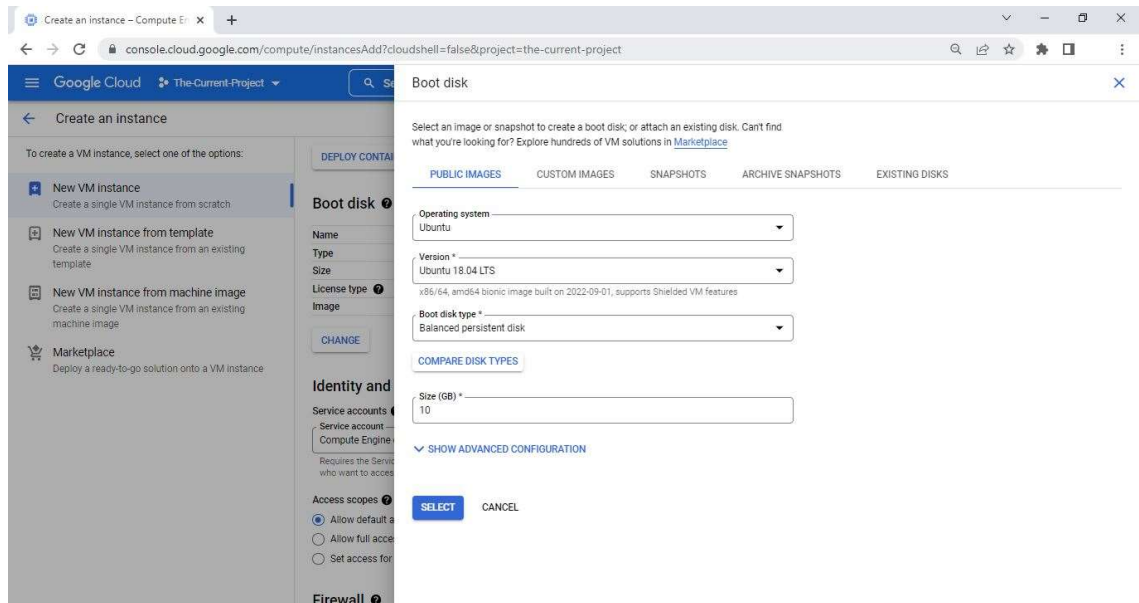
- Name:** instance-1
- Labels:** + ADD LABELS
- Region:** us-west4 (Las Vegas) (Region is permanent)
- Zone:** us-west4-b (Zone is permanent)
- Machine configuration:**
 - Machine family:** GENERAL-PURPOSE (selected), COMPUTE-OPTIMIZED, MEMORY-OPTIMIZED, GPU
 - Series:** E2 (CPU platform selection based on availability)
 - Machine type:** e2-medium (2 vCPU, 4 GB memory)

Below the machine type, a diagram shows the vCPU (1-2 vCPU (1 shared core)) and Memory (4 GB) specifications.

On the right, the 'Monthly estimate' is shown as \$28.65, with a breakdown table:

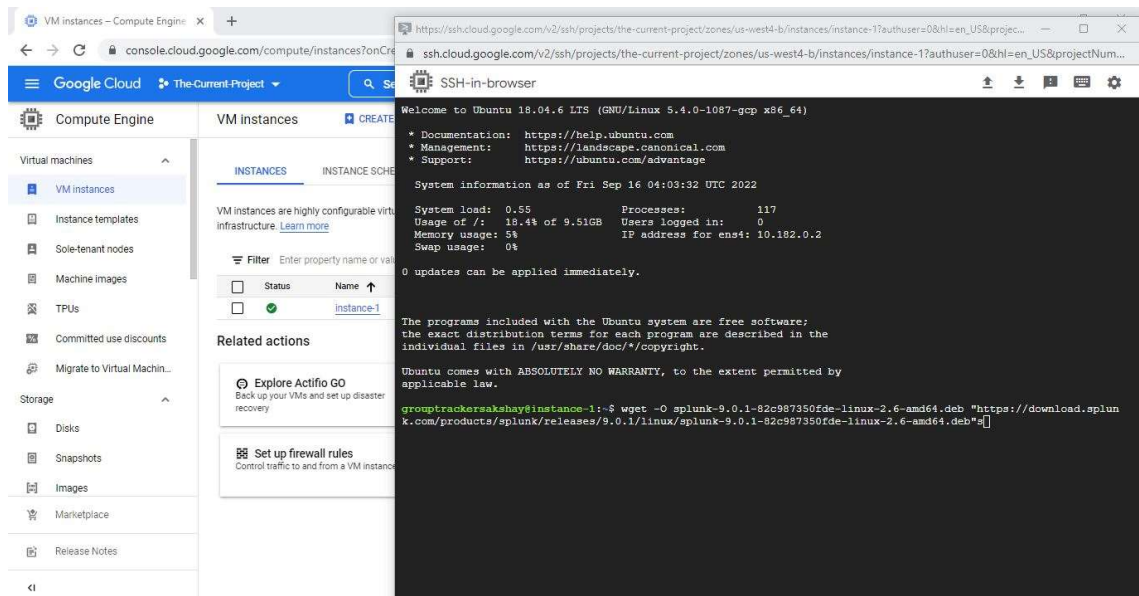
Item	Monthly estimate
2 vCPU + 4 GB memory	\$27.55
10 GB balanced persistent disk	\$1.10
Sustained use discount	-\$0.00
Total	\$28.65

Links for 'Compute Engine pricing' and 'LESS' are also visible.



2. Download Splunk file on the vm ssh terminal and activate the environment

Using the Wget command and the URL of the splunk installation file download the package on SSH terminal and install the environment.



VM instances - Compute Engine

console.cloud.google.com/compute/instances?onCr

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VM instances

INSTANCES

INSTANCE SCHE

VM instances are highly configurable virt...
infrastructure. [Learn more](#)

Filter Enter property name or va

Status	Name
<input type="checkbox"/>	instance-1

Related actions

Explore Actifio GO
Back up your VMs and set up disaster recovery

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

https://ssh.cloud.google.com/v2/ssh/projects/the-current-project/zones/us-west4-b/instances/instance-1?authuser=0&hl=en_US&projec...

ssh.cloud.google.com/v2/ssh/projects/the-current-project/zones/us-west4-b/instances/instance-1?authuser=0&hl=en_US&projectNum...

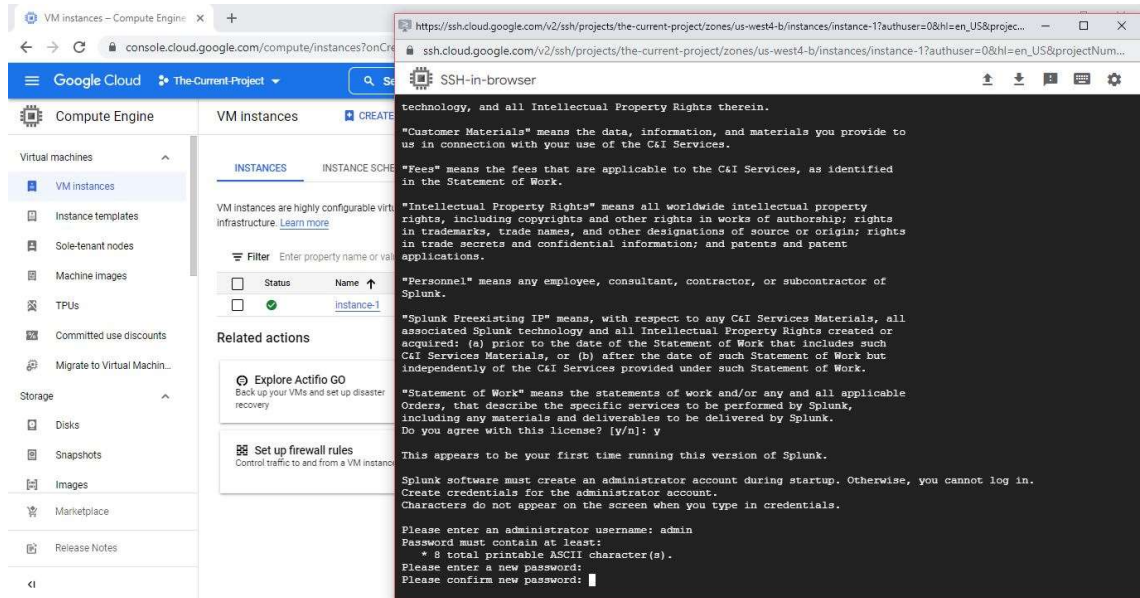
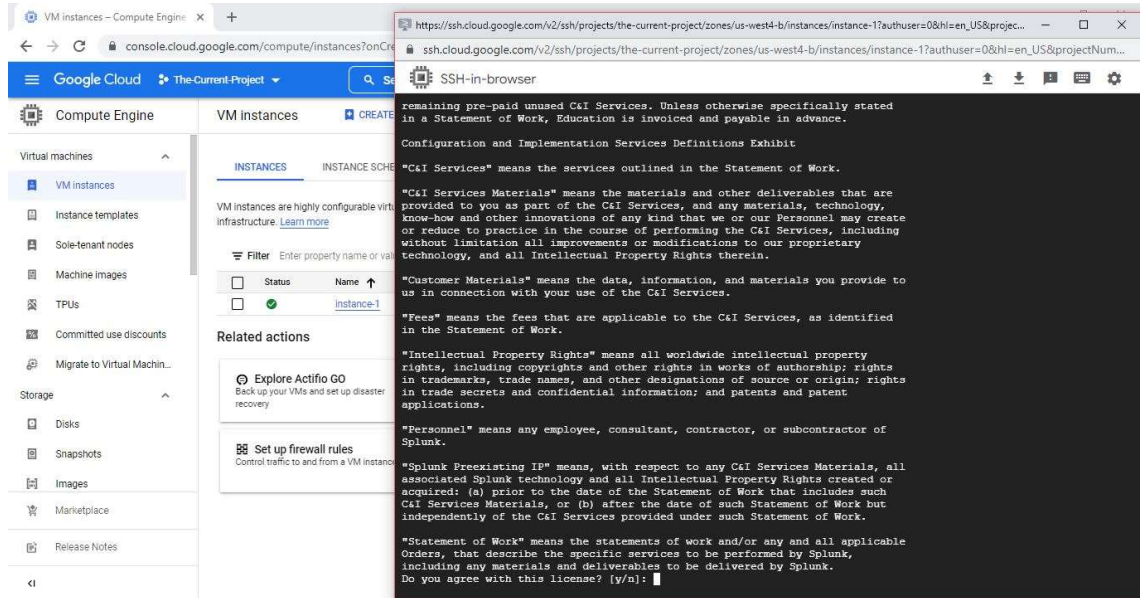
SSH-in-browser

```
grouptrackersakshay@instance-1:~$ wget -O splunk-9.0.1-82c987350fde-linux-2.6-amd64.deb "https://download.splun
k.com/products/splunk/releases/9.0.1/linux/splunk-9.0.1-82c987350fde-linux-2.6-amd64.deb"
--2022-09-16 04:07:02-- https://download.splunk.com/products/splunk/releases/9.0.1/linux/splunk-9.0.1-82c98735
0fde-linux-2.6-amd64.deb
Resolving download.splunk.com (download.splunk.com)... 13.225.142.122, 13.225.142.66, 13.225.142.29, ...
Connecting to download.splunk.com (download.splunk.com)|13.225.142.122|:443... connected.
HTTP request sent, awaiting response... 200 OK
Length: 466804304 (445M) [binary/octet-stream]
Saving to: 'splunk-9.0.1-82c987350fde-linux-2.6-amd64.deb'

splunk-9.0.1-82c987350fde-1 100%[=====] 445.18M 72.6MB/s in 5.6s

2022-09-16 04:07:07 (79.6 MB/s) - 'splunk-9.0.1-82c987350fde-linux-2.6-amd64.deb' saved [466804304/466804304]

grouptrackersakshay@instance-1:~$ sudo su
root@instance-1:/home/grouptrackersakshay# ls
splunk-9.0.1-82c987350fde-linux-2.6-amd64.deb
root@instance-1:/home/grouptrackersakshay# dpkg -i splunk-9.0.1-82c987350fde-linux-2.6-amd64.deb
Selecting previously unselected package splunk.
(Reading database ... 46547 files and directories currently installed.)
Preparing to unpack splunk-9.0.1-82c987350fde-linux-2.6-amd64.deb ...
Unpacking splunk (9.0.1) ...
```



VM instances - Compute Engine

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VM Instances

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INSTANCE SCHEDULES

VM instances are highly configurable virtual machines that run on Google Cloud infrastructure. [Learn more](#)

Filter Enter property name or value

Status	Name
<input type="checkbox"/>	instance-1

Related actions

- Explore Actifio GO Back up your VMs and set up disaster recovery
- Set up firewall rules Control traffic to and from a VM instance

SSH-in-browser

```
associated Splunk technology and all Intellectual Property Rights created or acquired: (a) prior to the date of the Statement of Work that includes such C&I Services Materials, or (b) after the date of such Statement of Work but independently of the C&I Services provided under such Statement of Work.

"Statement of Work" means the statements of work and/or any and all applicable Orders, that describe the specific services to be performed by Splunk, including any materials and deliverables to be delivered by Splunk.
Do you agree with this license? [y/n]: y

This appears to be your first time running this version of Splunk.

Splunk software must create an administrator account during startup. Otherwise, you cannot log in.
Create credentials for the administrator account.
Characters do not appear on the screen when you type in credentials.

Please enter an administrator username: admin
Password must contain at least:
* 8 total printable ASCII character(s).
Please enter a new password:
Please confirm new password:
Copying /opt/splunk/etc/openldap/ldap.conf.default to '/opt/splunk/etc/openldap/ldap.conf'.
Generating RSA private key, 2048 bit long modulus
+++++
.....+++++
e is 65537 (0x10001)
writing RSA key

Generating RSA private key, 2048 bit long modulus
.....+++++
e is 65537 (0x10001)
writing RSA key

Moving '/opt/splunk/share/splunk/search_mrsparkle/modules.new' to '/opt/splunk/share/splunk/search_mrsparkle/modules'
Init script installed at /etc/init.d/splunk.
Init script is configured to run at boot.
root@instance-1:/opt/splunk/bin#
```

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Related actions

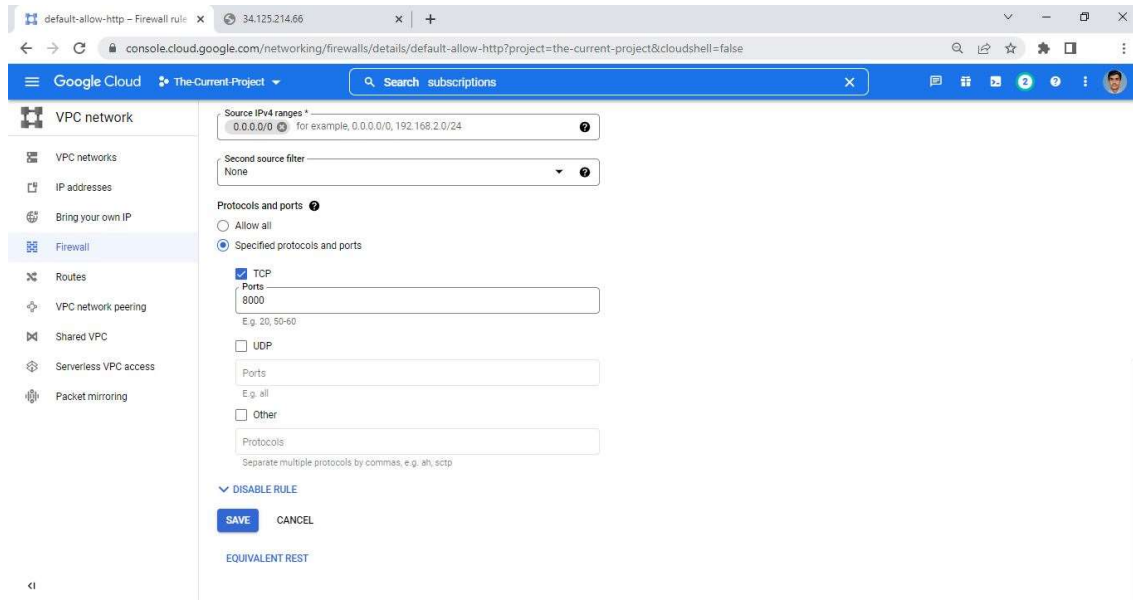
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SSH-in-browser

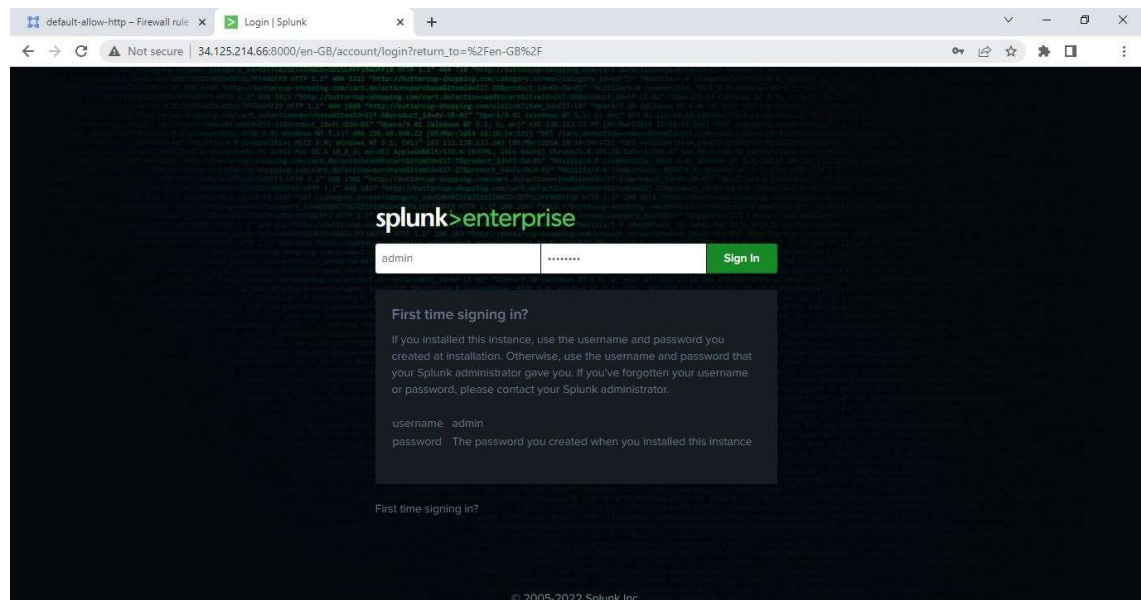
```
Creating: /opt/splunk/var/run/splunk/upload
Creating: /opt/splunk/var/run/splunk/search_telemetry
Creating: /opt/splunk/var/spool/splunk
Creating: /opt/splunk/var/spool/diimoncache
Creating: /opt/splunk/var/lib/splunk/authDb
Creating: /opt/splunk/var/lib/splunk/hashDb
New certs have been generated in '/opt/splunk/etc/auth'.
Checking critical directories... Done
Validated: audit_configtracker_internal_introspection_metrics_metrics_rollup_telemetry_thefishbucket_history_main_summary
Done
Checking filesystem compatibility... Done
Checking conf files for problems... Done
Checking default conf files for edits... Done
Validating installed files against hashes from '/opt/splunk/splunk-9.0.1-82c987350fde-linux-2.6-x86_64-manifest'
All installed files intact.
Done
All preliminary checks passed.
Starting splunk server daemon (splunkd)...
Generating a RSA private key
.....+++++
.....+++++
writing new private key to 'privKeySecure.pem'
Signature ok
subject=/CN=instance-1/O=SplunkUser
Getting CA Private Key
writing RSA key
PYTHONHTTPSVERIFY is set to 0 in splunk-launch.conf disabling certificate validation for the httplib and urllib
libraries shipped with the embedded Python interpreter; must be set to "1" for increased security
Done

Waiting for web server at http://127.0.0.1:8000 to be available.....
```

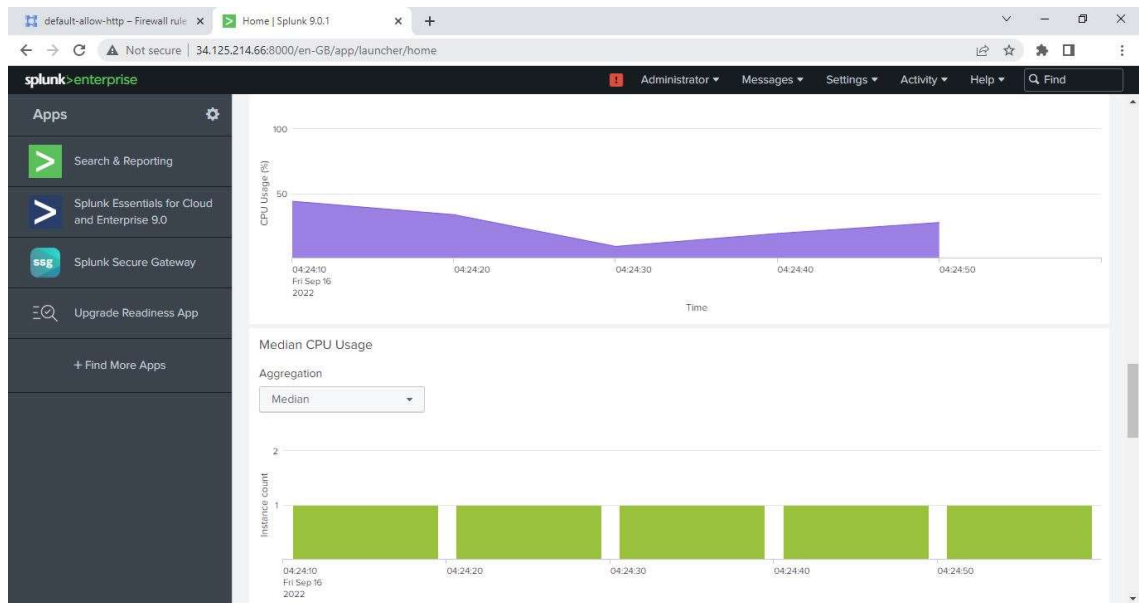

3. In the firewall rules allow http traffic to port 8000
Change the port of http firewall rule to TCP 8000, which is required to launch splunk admin website to browser.



4. open the splunk admin panel. Login with the username and password which was set while creating splunk environment.



5. You can monitor instance utilization graphs over dashboard.

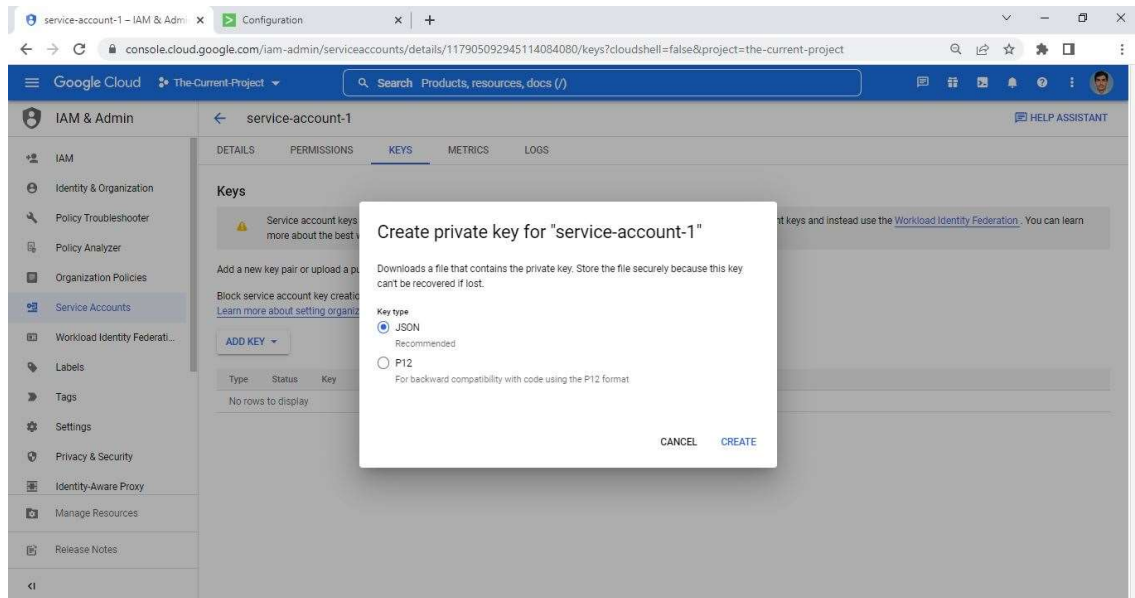


6. Create service account from GCP console with PUB/SUB publisher role.

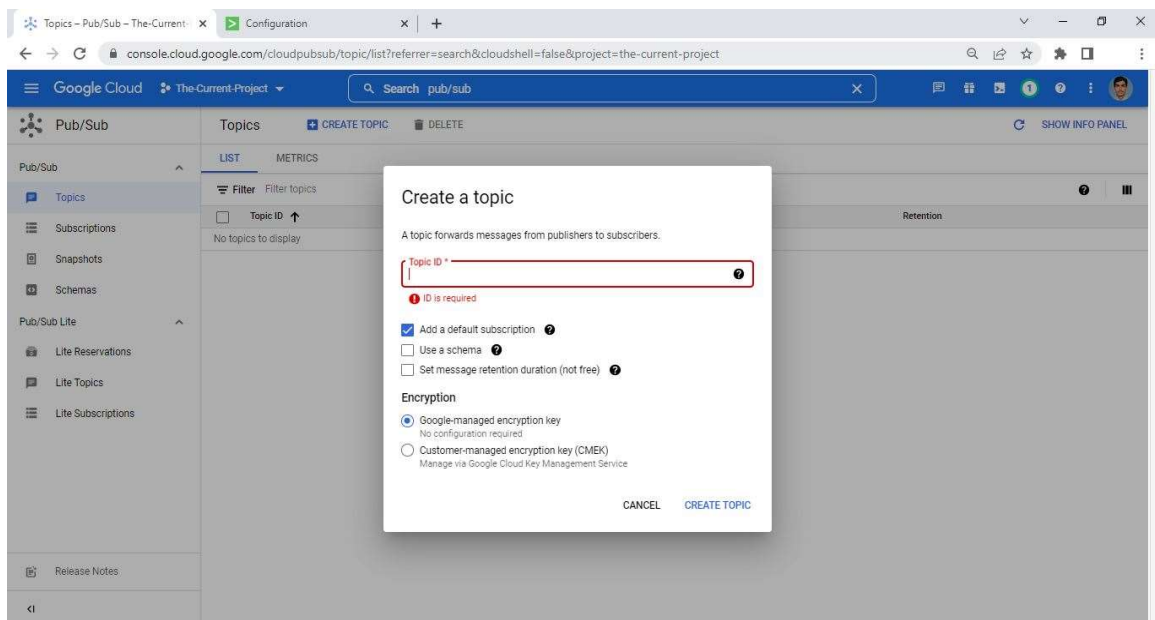
The screenshot shows the Google Cloud IAM & Admin console. The left sidebar contains navigation options: IAM, Identity & Organization, Policy Troubleshooter, Policy Analyzer, Organization Policies, Service Accounts (selected), Workload Identity Federati..., Labels, Tags, Settings, Privacy & Security, Identity-Aware Proxy, Manage Resources, Release Notes, and a link to IAM. The main content area is titled 'Create service account' and contains three sections. The first section, 'Service account details', has fields for 'Service account name' (service-account-1), 'Service account ID' (service-account-1-657), and 'Service account description'. The second section, 'Grant this service account access to project (optional)', and the third section, 'Grant users access to this service account (optional)', are both empty. At the bottom of the first section is a 'CREATE AND CONTINUE' button. At the bottom of the third section are 'DONE' and 'CANCEL' buttons.

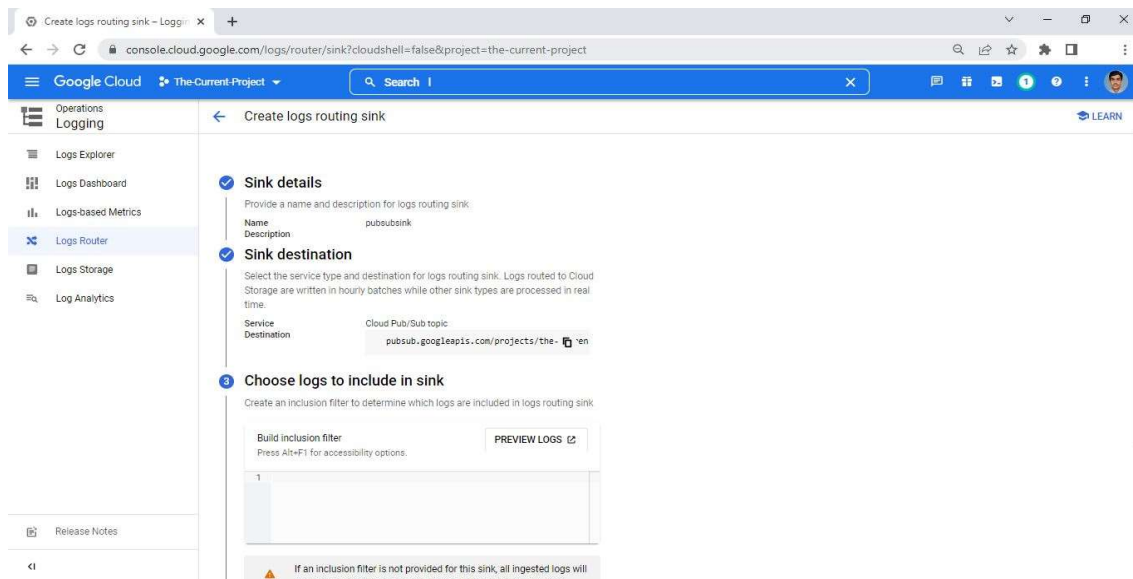
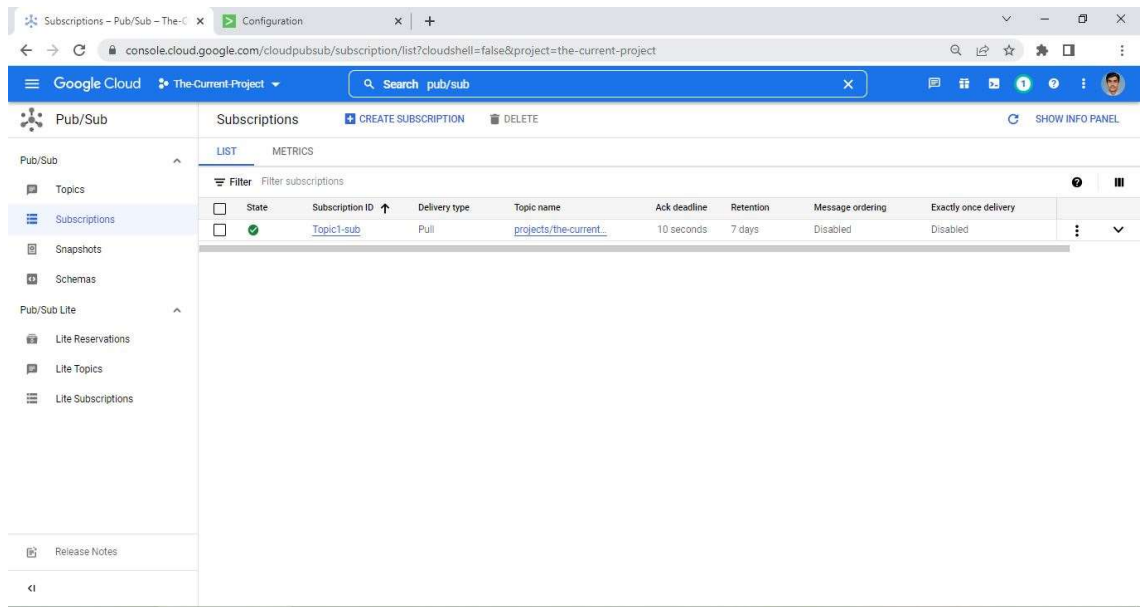
Field	Value
Service account name	service-account-1
Service account ID	service-account-1-657
Service account description	

7. In the key section of Service Account create a private key of service account in Json format.



8. Create a PUB/SUB topic and subscription for the same topic and route the subscription to get logging information.

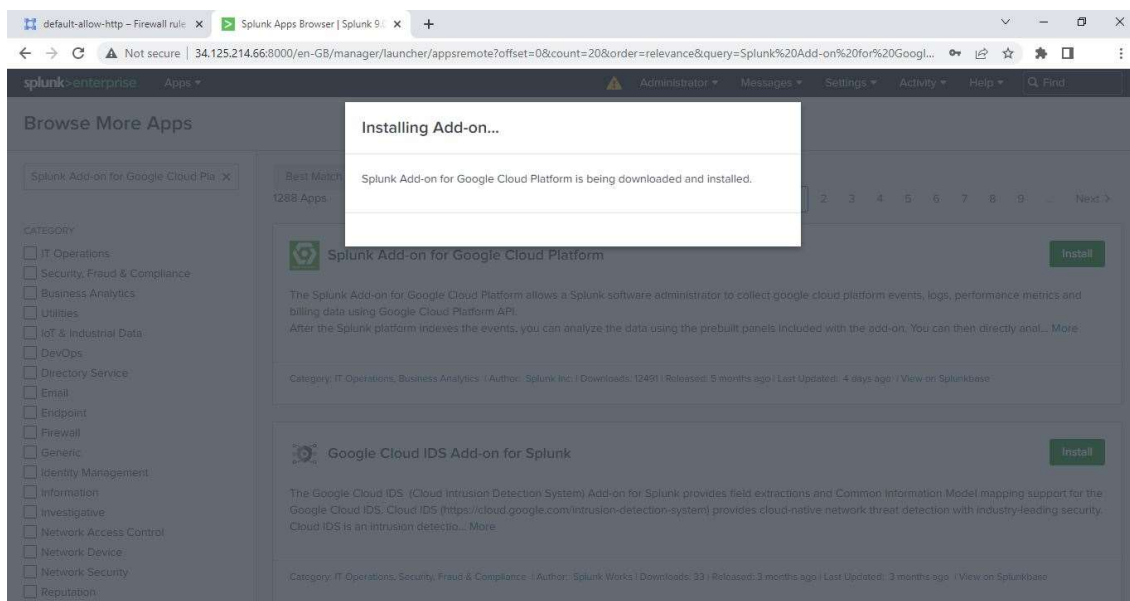
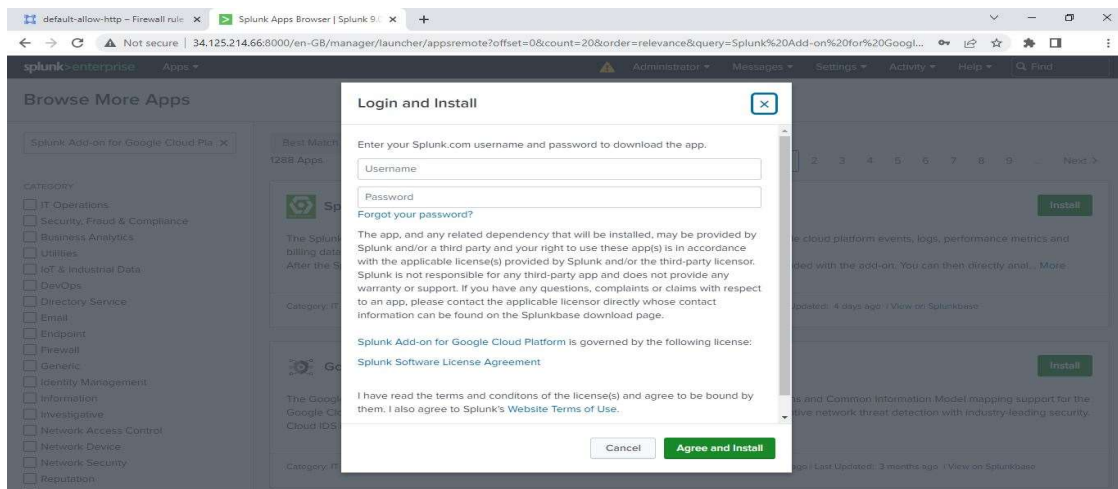




9. On the splunk website search for “splunk add-on for google cloud platform” and install the add-on.

The screenshot shows the Splunk Apps Browser interface. The browser's address bar displays the URL: `34.125.214.66:8000/en-GB/manager/launcher/appsremote?offset=0&count=20&order=relevance&query=Splunk%20Add-on%20for%20Google%20...`. The Splunk logo and 'enterprise' label are visible in the top left. The top navigation bar includes links for 'Administrator', 'Messages', 'Settings', 'Activity', and 'Help', along with a 'Find' search bar. The main heading is 'Browse More Apps'. A search bar contains the text 'Splunk Add-on for Google Cloud Pla'. Below the search bar, a list of categories is shown with checkboxes: IT Operations, Security, Fraud & Compliance, Business Analytics, Utilities, IoT & Industrial Data, DevOps, Directory Service, Email, Endpoint, Firewall, Generic, Identity Management, Information, Investigative, Network Access Control, Network Device, Network Security, and Reputation. The search results are displayed in a grid. The first result is 'Splunk Add-on for Google Cloud Platform', which includes a description: 'The Splunk Add-on for Google Cloud Platform allows a Splunk software administrator to collect google cloud platform events, logs, performance metrics and billing data using Google Cloud Platform API. After the Splunk platform indexes the events, you can analyze the data using the prebuilt panels included with the add-on. You can then directly anal... More'. It also shows metadata: 'Category: IT Operations, Business Analytics | Author: Splunk Inc. | Downloads: 12491 | Released: 5 months ago | Last Updated: 4 days ago | View on Splunkbase'. A green 'Install' button is present. The second result is 'Google Cloud IDS Add-on for Splunk', with a description: 'The Google Cloud IDS (Cloud Intrusion Detection System) Add-on for Splunk provides field extractions and Common Information Model mapping support for the Google Cloud IDS. Cloud IDS (https://cloud.google.com/intrusion-detection-system) provides cloud-native network threat detection with industry-leading security. Cloud IDS is an intrusion detectio... More'. It also shows metadata: 'Category: IT Operations, Security, Fraud & Compliance | Author: Splunk Works | Downloads: 33 | Released: 3 months ago | Last Updated: 3 months ago | View on Splunkbase'. A green 'Install' button is also present.

10. While installing add-on you need to validate your account credentials.



11. In the google credential section add the name of your choice and service account credentials stored in Json file.

The screenshot shows a web browser window with the URL `34.125.214.66:8000/en-GB/app/Splunk_TA_google-cloudplatform/configuration`. The page title is "Configuration". A modal dialog box titled "Add Google Credentials" is open. It contains two input fields: "Name" and "Google Service Account Creds", both marked as "Required". Below the "Google Service Account Creds" field, there is a note: "Provide credentials in JSON format". At the bottom of the dialog, there are "Cancel" and "Add" buttons.

The screenshot shows the "Configuration" page in the Splunk interface. The page title is "Configuration". Below the title, there is a sub-header "Configure your Google credentials, settings, proxy and node information". The "Google Credentials" tab is selected. Below the tab, there is a table with 1 item. The table has columns for "Name", "Google Credentials", and "Actions". The first row has the value "G-1" in the "Name" column, a redacted value in the "Google Credentials" column, and a redacted value in the "Actions" column.

Name	Google Credentials	Actions
G-1	*****	*****

12. In the Input section create new input and add necessary details to it.

