

## WEEKLY REPORT

### **Work done in last week ( Attach supporting Documents):**

09/06/2025 Monday

9:30 – 11:30	<i>Completed theoretical overview of Modules 21 &amp; 22: Production Deployment, Security and Performance.</i>
12:00– 2:30	Watched implementation demos and reviewed Fabric network deployment strategies.
3:00– 5:00	<i>Installed required software on Ubuntu (Docker, Node.js, VSCode).</i>

10/06/2025 Tuesday

9:30 – 11:30	<i>Studied Hyperledger Fabric Production Deployment concepts.</i>
12:00– 2:30	Learned security and performance features in Hyperledger Fabric.
3:00– 5:00	<i>Reviewed smart contract architecture in enterprise environments.</i>

11/06/2025 Wednesday

9:30 – 11:30	Read about State-Based Endorsement Policies.
12:00– 2:30	Started setup for test network to deploy state-based chaincode.
3:00– 5:00	Faced setup errors due to Ubuntu crashing during configuration.

12/06/2025 Thursday

9:30 – 11:30	Troubleshoot system issues; Ubuntu not loading properly.
12:00– 2:30	Backed up files and formatted the drive.
3:00– 5:00	<i>Removed Windows OS completely and installed Ubuntu as the sole operating system.</i>

13/06/2025 Friday

9:30 – 11:30	Installed all required development tools on fresh Ubuntu system.
12:00– 2:30	Reinstalled Docker, Fabric samples, and environment dependencies.
3:00– 5:00	Validated development setup and started re-implementation of Fabric chaincode labs.

**Reason for incomplete work:**

1. Hands-on implementation was delayed due to Ubuntu OS failure and the need to completely format the system and install Ubuntu in place of Windows. This caused a setback in lab execution and testing.

**Plans for next week:**

1. Complete pending labs on State-Based Endorsement and Private Data Collections.
2. Begin Fabric CA configuration and implementation.
3. Run Fabric Gateway application integration lab.

## References:

1. Linux Foundation : [trainingportal.linuxfoundation.org/hyperledger-fabric-design-develop-and-deploy-lfs270](https://trainingportal.linuxfoundation.org/hyperledger-fabric-design-develop-and-deploy-lfs270)

```
trushang@trushang-HP-Laptop-15s-fr5xxx: ~  
trushang@trushang-HP-Laptop-15s-fr5xxx:~$ sudo apt-get update  
[sudo] password for trushang:  
Hit:1 http://archive.ubuntu.com/ubuntu noble InRelease  
Hit:2 http://archive.ubuntu.com/ubuntu noble-updates InRelease  
Hit:3 https://dl.google.com/linux/chrome/deb stable InRelease  
Hit:4 http://security.ubuntu.com/ubuntu noble-security InRelease  
Hit:5 http://archive.ubuntu.com/ubuntu noble-backports InRelease  
Reading package lists... Done  
trushang@trushang-HP-Laptop-15s-fr5xxx:~$
```

```
trushang@trushang-HP-Laptop-15s-fr5xxx: ~  
trushang@trushang-HP-Laptop-15s-fr5xxx:~$ sudo apt-get install git  
[sudo] password for trushang:  
Reading package lists... Done  
Building dependency tree... Done  
Reading state information... Done  
git is already the newest version (1:2.43.0-1ubuntu7.2).  
0 upgraded, 0 newly installed, 0 to remove and 220 not upgraded.  
trushang@trushang-HP-Laptop-15s-fr5xxx:~$ git --version  
git version 2.43.0  
trushang@trushang-HP-Laptop-15s-fr5xxx:~$
```

```
trushang@trushang-HP-Laptop-15s-fr5xxx:~$ sudo apt-get install \
ca-certificates \
curl \
gnupg \
lsb-release
Reading package lists... Done
Building dependency tree... Done
Reading state information... Done
ca-certificates is already the newest version (20240203).
ca-certificates set to manually installed.
curl is already the newest version (8.5.0-2ubuntu10.6).
lsb-release is already the newest version (12.0-2).
lsb-release set to manually installed.
The following additional packages will be installed:
  dirmngr gnupg-l10n gnupg-utils gpg gpg-agent gpg-wks-client gpgconf gpgsm
  gpgv keyboxd
Suggested packages:
  tor parcimonie xloadimage gpg-wks-server scdaemon
The following packages will be upgraded:
  dirmngr gnupg gnupg-l10n gnupg-utils gpg gpg-agent gpg-wks-client gpgconf
  gpgsm gpgv keyboxd
11 upgraded, 0 newly installed, 0 to remove and 204 not upgraded.
Need to get 2,291 kB of archives.
After this operation, 0 B of additional disk space will be used.
Do you want to continue? [Y/n] Y
Get:1 http://archive.ubuntu.com/ubuntu noble-updates/main amd64 gpg-wks-client amd64 2.4.4-2ubuntu17.2 [70.9 kB]
Get:2 http://archive.ubuntu.com/ubuntu noble-updates/main amd64 dirmngr amd64 2.4.4-2ubuntu17.2 [323 kB]
Get:3 http://archive.ubuntu.com/ubuntu noble-updates/main amd64 gnupg-utils amd64 2.4.4-2ubuntu17.2 [109 kB]
Get:4 http://archive.ubuntu.com/ubuntu noble-updates/main amd64 gpgsm amd64 2.4.4-2ubuntu17.2 [232 kB]
Get:5 http://archive.ubuntu.com/ubuntu noble-updates/main amd64 gpg-agent amd64 2.4.4-2ubuntu17.2 [227 kB]
Get:6 http://archive.ubuntu.com/ubuntu noble-updates/main amd64 gpg amd64 2.4.4-2ubuntu17.2 [565 kB]
Get:7 http://archive.ubuntu.com/ubuntu noble-updates/main amd64 gpgconf amd64 2.4.4-2ubuntu17.2 [103 kB]
Get:8 http://archive.ubuntu.com/ubuntu noble-updates/main amd64 gnupg all 2.4.4-2ubuntu17.2 [359 kB]
Get:9 http://archive.ubuntu.com/ubuntu noble-updates/main amd64 keyboxd amd64 2.4.4-2ubuntu17.2 [78.3 kB]
Get:10 http://archive.ubuntu.com/ubuntu noble-updates/main amd64 gpgv amd64 2.4.4-2ubuntu17.2 [158 kB]
Get:11 http://archive.ubuntu.com/ubuntu noble-updates/main amd64 gnupg-l10n all 2.4.4-2ubuntu17.2 [66.1 kB]
Fetched 2,291 kB in 11s (213 kB/s)
(Reading database ... 167072 files and directories currently installed.)
Preparing to unpack .../0-gpg-wks-client_2.4.4-2ubuntu17.2_amd64.deb ...
Unpacking gpg-wks-client (2.4.4-2ubuntu17.2) over (2.4.4-2ubuntu17) ...
Preparing to unpack .../1-dirmngr_2.4.4-2ubuntu17.2_amd64.deb ...
Unpacking dirmngr (2.4.4-2ubuntu17.2) over (2.4.4-2ubuntu17) ...
Preparing to unpack .../2-gnupg-utils_2.4.4-2ubuntu17.2_amd64.deb ...
Unpacking gnupg-utils (2.4.4-2ubuntu17.2) over (2.4.4-2ubuntu17) ...
Preparing to unpack .../3-gpgsm_2.4.4-2ubuntu17.2_amd64.deb ...
Unpacking gpgsm (2.4.4-2ubuntu17.2) over (2.4.4-2ubuntu17) ...
Preparing to unpack .../4-gpg-agent_2.4.4-2ubuntu17.2_amd64.deb ...
Unpacking gpg-agent (2.4.4-2ubuntu17.2) over (2.4.4-2ubuntu17) ...
Preparing to unpack .../5-gpg_2.4.4-2ubuntu17.2_amd64.deb ...
Unpacking gpg (2.4.4-2ubuntu17.2) over (2.4.4-2ubuntu17) ...
Preparing to unpack .../6-gpgconf_2.4.4-2ubuntu17.2_amd64.deb ...
Unpacking gpgconf (2.4.4-2ubuntu17.2) over (2.4.4-2ubuntu17) ...
Preparing to unpack .../7-gnupg-l10n_2.4.4-2ubuntu17.2_all.deb ...
Unpacking gnupg-l10n (2.4.4-2ubuntu17.2) over (2.4.4-2ubuntu17) ...
Preparing to unpack .../8-gnupg_2.4.4-2ubuntu17.2_all.deb ...
Unpacking gnupg (2.4.4-2ubuntu17.2) over (2.4.4-2ubuntu17) ...
Preparing to unpack .../9-keyboxd_2.4.4-2ubuntu17.2_amd64.deb ...
Unpacking keyboxd (2.4.4-2ubuntu17.2) over (2.4.4-2ubuntu17) ...
Preparing to unpack .../10-gpgv_2.4.4-2ubuntu17.2_amd64.deb ...
Unpacking gpgv (2.4.4-2ubuntu17.2) over (2.4.4-2ubuntu17) ...
Setting up gnupg-l10n (2.4.4-2ubuntu17.2) ...
Setting up gpg-wks-client (2.4.4-2ubuntu17.2) ...
Setting up dirmngr (2.4.4-2ubuntu17.2) ...
Setting up gnupg-utils (2.4.4-2ubuntu17.2) ...
Setting up gpgsm (2.4.4-2ubuntu17.2) ...
Setting up gpg-agent (2.4.4-2ubuntu17.2) ...
Setting up gpg (2.4.4-2ubuntu17.2) ...
Setting up gpgconf (2.4.4-2ubuntu17.2) ...
Setting up gnupg (2.4.4-2ubuntu17.2) ...
Setting up keyboxd (2.4.4-2ubuntu17.2) ...
Setting up gpgv (2.4.4-2ubuntu17.2) ...
```

```
trushang@trushang-HP-Laptop-15s-fr5xxx:~$ sudo apt-get install curl
Reading package lists... Done
Building dependency tree... Done
Reading state information... Done
The following NEW packages will be installed:
  curl
0 upgraded, 1 newly installed, 0 to remove and 220 not upgraded.
Need to get 226 kB of archives.
After this operation, 534 kB of additional disk space will be used.
Ign:1 http://archive.ubuntu.com/ubuntu noble-updates/main amd64 curl amd64 8.5.0-2ubuntu10.6
Ign:1 http://archive.ubuntu.com/ubuntu noble-updates/main amd64 curl amd64 8.5.0-2ubuntu10.6
Get:1 http://archive.ubuntu.com/ubuntu noble-updates/main amd64 curl amd64 8.5.0-2ubuntu10.6 [226 kB]
Fetched 226 kB in 1min 29s (2,553 B/s)
Selecting previously unselected package curl.
(Reading database ... 164985 files and directories currently installed.)
Preparing to unpack .../curl_8.5.0-2ubuntu10.6_amd64.deb ...
Unpacking curl (8.5.0-2ubuntu10.6) ...
Setting up curl (8.5.0-2ubuntu10.6) ...
Processing triggers for man-db (2.12.0-4build2) ...
trushang@trushang-HP-Laptop-15s-fr5xxx:~$
```

```
trushang@trushang-HP-Laptop-15s-fr5xxx:~/Desktop/hyperledger$ sudo mkdir -p /etc/apt/keyrings
curl -fsSL https://download.docker.com/linux/ubuntu/gpg | \
  sudo gpg --dearmor -o /etc/apt/keyrings/docker.gpg
File '/etc/apt/keyrings/docker.gpg' exists. Overwrite? (y/N) y
```

```
trushang@trushang-HP-Laptop-15s-fr5xxx:~/Desktop/hyperledger$ echo \
"deb [arch=$(dpkg --print-architecture) \
signed-by=/etc/apt/keyrings/docker.gpg] \
https://download.docker.com/linux/ubuntu \
$(lsb_release -cs) stable" | \
sudo tee /etc/apt/sources.list.d/docker.list > /dev/null
```

```
trushang@trushang-HP-Laptop-15s-fr5xxx:~/Desktop/hyperledger$ sudo apt-get update
sudo apt-get install docker-ce docker-ce-cli containerd.io \
  docker-buildx-plugin docker-compose-plugin
Get:1 https://download.docker.com/linux/ubuntu noble InRelease [48.8 kB]
Hit:2 http://archive.ubuntu.com/ubuntu noble InRelease
Hit:3 https://dl.google.com/linux/chrome/deb stable InRelease
Hit:4 http://archive.ubuntu.com/ubuntu noble-updates InRelease
Get:5 https://download.docker.com/linux/ubuntu noble/stable amd64 Packages [25.8 kB]
Hit:6 http://archive.ubuntu.com/ubuntu noble-backports InRelease
Hit:7 http://security.ubuntu.com/ubuntu noble-security InRelease
Fetched 74.7 kB in 2s (41.2 kB/s)
Reading package lists... Done
Reading package lists... Done
Building dependency tree... Done
Reading state information... Done
The following additional packages will be installed:
  docker-ce-rootless-extras libslirp0 pigz slirp4netns
Suggested packages:
  cgroupfs-mount | cgroup-lite docker-model-plugin
The following NEW packages will be installed:
  containerd.io docker-buildx-plugin docker-ce docker-ce-cli docker-ce-rootless-extras docker-compose-plugin libslirp0 pigz slirp4netns
0 upgraded, 9 newly installed, 0 to remove and 220 not upgraded.
Need to get 121 MB of archives.
After this operation, 444 MB of additional disk space will be used.
```

```

Do you want to continue? [Y/n] Y
Get:1 http://archive.ubuntu.com/ubuntu noble/universe amd64 pigz amd64 2.8-1 [65.6 kB]
Get:2 https://download.docker.com/linux/ubuntu noble/stable amd64 containerd.io amd64 1.7.27-1 [30.5 MB]
Get:3 http://archive.ubuntu.com/ubuntu noble/main amd64 libslirp0 amd64 4.7.0-1ubuntu3 [63.8 kB]
Get:4 http://archive.ubuntu.com/ubuntu noble/universe amd64 slirp4netns amd64 1.2.1-1build2 [34.9 kB]
Get:5 https://download.docker.com/linux/ubuntu noble/stable amd64 docker-ce-cli amd64 5:28.2.2-1~ubuntu.24.04~noble [16.2 MB]
Get:6 https://download.docker.com/linux/ubuntu noble/stable amd64 docker-ce amd64 5:28.2.2-1~ubuntu.24.04~noble [19.5 MB]
Get:7 https://download.docker.com/linux/ubuntu noble/stable amd64 docker-buildx-plugin amd64 0.24.0-1~ubuntu.24.04~noble [34.4 MB]
Get:8 https://download.docker.com/linux/ubuntu noble/stable amd64 docker-ce-rootless-extras amd64 5:28.2.2-1~ubuntu.24.04~noble [6,478 kB]
Get:9 https://download.docker.com/linux/ubuntu noble/stable amd64 docker-compose-plugin amd64 2.36.2-1~ubuntu.24.04~noble [14.0 MB]
Fetched 121 MB in 19s (6,223 kB/s)
Selecting previously unselected package containerd.io.
(Reading database ... 167072 files and directories currently installed.)
Preparing to unpack .../0-containerd.io_1.7.27-1_amd64.deb ...
Unpacking containerd.io (1.7.27-1) ...
Selecting previously unselected package docker-ce-cli.
Preparing to unpack .../1-docker-ce-cli_5%3a28.2.2-1~ubuntu.24.04~noble_amd64.deb ...
Unpacking docker-ce-cli (5:28.2.2-1~ubuntu.24.04~noble) ...
Selecting previously unselected package docker-ce.
Preparing to unpack .../2-docker-ce_5%3a28.2.2-1~ubuntu.24.04~noble_amd64.deb ...
Unpacking docker-ce (5:28.2.2-1~ubuntu.24.04~noble) ...

```

```

trushang@trushang-HP-Laptop-15s-fr5xxx:~/Desktop/hyperledger$ sudo docker run hello-world
Unable to find image 'hello-world:latest' locally
latest: Pulling from library/hello-world
e6590344b1a5: Pull complete
Digest: sha256:940c619fbd418f9b2b1b63e25d8861f9cc1b46e3fc8b018ccfe8b78f19b8cc4f
Status: Downloaded newer image for hello-world:latest

Hello from Docker!
This message shows that your installation appears to be working correctly.

To generate this message, Docker took the following steps:
1. The Docker client contacted the Docker daemon.
2. The Docker daemon pulled the "hello-world" image from the Docker Hub.
   (amd64)
3. The Docker daemon created a new container from that image which runs the
   executable that produces the output you are currently reading.
4. The Docker daemon streamed that output to the Docker client, which sent it
   to your terminal.

To try something more ambitious, you can run an Ubuntu container with:
$ docker run -it ubuntu bash

Share images, automate workflows, and more with a free Docker ID:
https://hub.docker.com/

For more examples and ideas, visit:
https://docs.docker.com/get-started/

trushang@trushang-HP-Laptop-15s-fr5xxx:~/Desktop/hyperledger$ [[200-docker ps
docker: command not found
trushang@trushang-HP-Laptop-15s-fr5xxx:~/Desktop/hyperledger$ ~
bash: /home/trushang: Is a directory
trushang@trushang-HP-Laptop-15s-fr5xxx:~/Desktop/hyperledger$ docker ps
permission denied while trying to connect to the Docker daemon socket at unix:///var/run/docker.sock: Get "http://%2Fvar%2Frun%2Fdocker.sock/v1.50/containers/json": dial unix /var/run/
docker.sock: connect: permission denied
trushang@trushang-HP-Laptop-15s-fr5xxx:~/Desktop/hyperledger$ sudo docker ps
CONTAINER ID   IMAGE     COMMAND   CREATED   STATUS    PORTS   NAMES
trushang@trushang-HP-Laptop-15s-fr5xxx:~/Desktop/hyperledger$

```

```

root@trushang-HP-Laptop-15s-fr5xxx:/home/trushang/Desktop/hyperledger# docker run hello-world

Hello from Docker!
This message shows that your installation appears to be working correctly.

To generate this message, Docker took the following steps:
1. The Docker client contacted the Docker daemon.
2. The Docker daemon pulled the "hello-world" image from the Docker Hub.
   (amd64)
3. The Docker daemon created a new container from that image which runs the
   executable that produces the output you are currently reading.
4. The Docker daemon streamed that output to the Docker client, which sent it
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To try something more ambitious, you can run an Ubuntu container with:
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https://hub.docker.com/

For more examples and ideas, visit:
https://docs.docker.com/get-started/

root@trushang-HP-Laptop-15s-fr5xxx:/home/trushang/Desktop/hyperledger# sudo curl -L "https://github.com/docker/compose/releases/download/1.29.2/docker-compose-$(uname -s)-$(uname -m)"
-o /usr/local/bin/docker-compose
curl: (3) URL rejected: Port number was not a decimal number between 0 and 65535
root@trushang-HP-Laptop-15s-fr5xxx:/home/trushang/Desktop/hyperledger# sudo curl -L "https://github.com/docker/compose/releases/download/1.29.2/docker-compose-$(uname -s)-$(uname -m)"
-o /usr/local/bin/docker-compose
  % Total    % Received % Xferd  Average Speed   Time    Time     Time  Current
                                 Dload  Upload   Total   Spent    Left   Speed
  0     0    0     0    0     0      0  0 --:--:-- --:--:-- --:--:--    0
100 12.1M 100 12.1M    0     0 1115k      0  0:00:11 0:00:11 --:--:-- 1711k
root@trushang-HP-Laptop-15s-fr5xxx:/home/trushang/Desktop/hyperledger# sudo chmod +x /usr/local/bin/docker-compose
root@trushang-HP-Laptop-15s-fr5xxx:/home/trushang/Desktop/hyperledger# docker-compose --version
docker-compose version 1.29.2, build 5becea4c
root@trushang-HP-Laptop-15s-fr5xxx:/home/trushang/Desktop/hyperledger# docker --version
Docker version 28.2.2, build e6534b4
root@trushang-HP-Laptop-15s-fr5xxx:/home/trushang/Desktop/hyperledger#

```

```

root@trushang-HP-Laptop-15s-fr5xxx:/home/trushang/Desktop/hyperledger# wget https://go.dev/dl/go1.22.3.linux-amd64.tar.gz
sudo tar -C /usr/local -xzf go1.22.3.linux-amd64.tar.gz
--2025-06-19 20:29:06-- https://go.dev/dl/go1.22.3.linux-amd64.tar.gz
Resolving go.dev (go.dev)... 2001:4860:4802:36::15, 2001:4860:4802:32::15, 2001:4860:4802:34::15, ...
Connecting to go.dev (go.dev)|2001:4860:4802:36::15|:443... connected.
HTTP request sent, awaiting response... 302 Found
Location: https://dl.google.com/go/go1.22.3.linux-amd64.tar.gz [following]
--2025-06-19 20:29:08-- https://dl.google.com/go/go1.22.3.linux-amd64.tar.gz
Resolving dl.google.com (dl.google.com)... 2404:6800:4009:807::200e, 142.250.183.78
Connecting to dl.google.com (dl.google.com)|2404:6800:4009:807::200e|:443... connected.
HTTP request sent, awaiting response... 200 OK
Length: 68958945 (66M) [application/x-gzip]
Saving to: 'go1.22.3.linux-amd64.tar.gz'

go1.22.3.linux-amd64.tar.gz          100%[=====] 65.76M  2.40MB/s   in 27s

2025-06-19 20:29:37 (2.41 MB/s) - 'go1.22.3.linux-amd64.tar.gz' saved [68958945/68958945]

root@trushang-HP-Laptop-15s-fr5xxx:/home/trushang/Desktop/hyperledger#

```



```
root@trushang-HP-Laptop-15s-fr5xxx:/home/trushang/Desktop/hyperledger# wget https://go.dev/dl/go1.22.3.linux-amd64.tar.gz
sudo tar -C /usr/local -xzf go1.22.3.linux-amd64.tar.gz
--2025-06-19 20:29:06-- https://go.dev/dl/go1.22.3.linux-amd64.tar.gz
Resolving go.dev (go.dev)... 2001:4860:4802:36::15, 2001:4860:4802:32::15, 2001:4860:4802:34::15, ...
Connecting to go.dev (go.dev)|2001:4860:4802:36::15|:443... connected.
HTTP request sent, awaiting response... 302 Found
Location: https://dl.google.com/go/go1.22.3.linux-amd64.tar.gz [following]
--2025-06-19 20:29:08-- https://dl.google.com/go/go1.22.3.linux-amd64.tar.gz
Resolving dl.google.com (dl.google.com)... 2404:6800:4009:807::200e, 142.250.183.78
Connecting to dl.google.com (dl.google.com)|2404:6800:4009:807::200e|:443... connected.
HTTP request sent, awaiting response... 200 OK
Length: 68958945 (66M) [application/x-gzip]
Saving to: 'go1.22.3.linux-amd64.tar.gz'

go1.22.3.linux-amd64.tar.gz      100%[=====>] 65.76M  2.40MB/s   in 27s

2025-06-19 20:29:37 (2.41 MB/s) - 'go1.22.3.linux-amd64.tar.gz' saved [68958945/68958945]

root@trushang-HP-Laptop-15s-fr5xxx:/home/trushang/Desktop/hyperledger# echo 'export PATH=$PATH:/usr/local/go/bin' >> ~/.bashrc
source ~/.bashrc
root@trushang-HP-Laptop-15s-fr5xxx:/home/trushang/Desktop/hyperledger#
```

```
root@trushang-HP-Laptop-15s-fr5xxx:/home/trushang/Desktop/hyperledger# sudo apt-get install jq
Reading package lists... Done
Building dependency tree... Done
Reading state information... Done
jq is already the newest version (1.7.1-3build1).
jq set to manually installed.
0 upgraded, 0 newly installed, 0 to remove and 220 not upgraded.
root@trushang-HP-Laptop-15s-fr5xxx:/home/trushang/Desktop/hyperledger#
```



```

root@trushang-HP-Laptop-15s-fr5xxx:/home/trushang/Desktop/hyperledger# curl -sLO https://raw.githubusercontent.com/hyperledger/fabric/main/scripts/install-fabric.sh && chmod +x install-fabric.sh
root@trushang-HP-Laptop-15s-fr5xxx:/home/trushang/Desktop/hyperledger# ./install-fabric.sh
No options selected: Getting all samples, binaries, and docker images
Abort now if not the intention

Clone hyperledger/fabric-samples repo

====> Cloning hyperledger/fabric-samples repo
Cloning into 'fabric-samples'...
remote: Enumerating objects: 14810, done.
remote: Counting objects: 100% (258/258), done.
remote: Compressing objects: 100% (177/177), done.
remote: Total 14810 (delta 138), reused 81 (delta 81), pack-reused 14552 (from 5)
Receiving objects: 100% (14810/14810), 23.80 MiB | 3.83 MiB/s, done.
Resolving deltas: 100% (8106/8106), done.
fabric-samples v2.5.12 does not exist, defaulting to main. fabric-samples main branch is intended to work with recent versions of fabric.

Pull Hyperledger Fabric binaries

====> Downloading version 2.5.12 platform specific fabric binaries
====> Downloading: https://github.com/hyperledger/fabric/releases/download/v2.5.12/hyperledger-fabric-linux-amd64-2.5.12.tar.gz
====> Will unpack to: /home/trushang/Desktop/hyperledger/fabric-samples
  % Total    % Received % Xferd  Average Speed   Time    Time     Time  Current
                                 Dload  Upload   Total   Spent    Left   Speed
  0     0     0     0     0     0      0      0 --:--:-- --:--:-- --:--:--    0
100 118M 100 118M     0     0 4725k      0  0:00:25  0:00:25 --:--:-- 6155k
==> Done.
====> Downloading version 1.5.15 platform specific fabric-ca-client binary
====> Downloading: https://github.com/hyperledger/fabric-ca/releases/download/v1.5.15/hyperledger-fabric-ca-linux-amd64-1.5.15.tar.gz
====> Will unpack to: /home/trushang/Desktop/hyperledger/fabric-samples
  % Total    % Received % Xferd  Average Speed   Time    Time     Time  Current
                                 Dload  Upload   Total   Spent    Left   Speed
  0     0     0     0     0     0      0      0 --:--:--  0:00:01 --:--:--    0
100 30.0M 100 30.0M     0     0 2908k      0  0:00:10  0:00:10 --:--:-- 5913k
==> Done.

Pull Hyperledger Fabric docker images

FABRIC_IMAGES: peer orderer ccenv baseos
====> Pulling fabric Images
====> ghcr.io/hyperledger/fabric-peer:2.5.12
2.5.12: Pulling from hyperledger/fabric-peer
9cb31e2e37ea: Pull complete
db23127575f9: Pull complete
4b40033c0070: Pull complete

```

```

root@trushang-HP-Laptop-15s-fr5xxx:/home/trushang/Desktop/hyperledger# wget https://go.dev/dl/go1.22.3.linux-amd64.tar.gz
sudo tar -C /usr/local -xzf go1.22.3.linux-amd64.tar.gz
--2025-06-19 20:29:06-- https://go.dev/dl/go1.22.3.linux-amd64.tar.gz
Resolving go.dev (go.dev)... 2001:4860:4802:36::15, 2001:4860:4802:32::15, 2001:4860:4802:34::15, ...
Connecting to go.dev (go.dev)|2001:4860:4802:36::15|:443... connected.
HTTP request sent, awaiting response... 302 Found
Location: https://dl.google.com/go/go1.22.3.linux-amd64.tar.gz [following]
--2025-06-19 20:29:08-- https://dl.google.com/go/go1.22.3.linux-amd64.tar.gz
Resolving dl.google.com (dl.google.com)... 2404:6800:4009:807::200e, 142.250.183.78
Connecting to dl.google.com (dl.google.com)|2404:6800:4009:807::200e|:443... connected.
HTTP request sent, awaiting response... 200 OK
Length: 68958945 (66M) [application/x-gzip]
Saving to: 'go1.22.3.linux-amd64.tar.gz'

go1.22.3.linux-amd64.tar.gz          100%[=====] 65.76M  2.40MB/s  in 27s

2025-06-19 20:29:37 (2.41 MB/s) - 'go1.22.3.linux-amd64.tar.gz' saved [68958945/68958945]

root@trushang-HP-Laptop-15s-fr5xxx:/home/trushang/Desktop/hyperledger# echo 'export PATH=$PATH:/usr/local/go/bin' >> ~/.bashrc
source ~/.bashrc
root@trushang-HP-Laptop-15s-fr5xxx:/home/trushang/Desktop/hyperledger# go version
go version go1.22.3 linux/amd64
root@trushang-HP-Laptop-15s-fr5xxx:/home/trushang/Desktop/hyperledger#

```

```
root@trushang-HP-Laptop-15s-fr5xxx:/home/trushang/Desktop/hyperledger# sudo apt-get update
Hit:1 https://download.docker.com/linux/ubuntu noble InRelease
Hit:2 http://security.ubuntu.com/ubuntu noble-security InRelease
Hit:3 https://dl.google.com/linux/chrome/deb stable InRelease
Hit:4 http://archive.ubuntu.com/ubuntu noble InRelease
Hit:5 http://archive.ubuntu.com/ubuntu noble-updates InRelease
Hit:6 http://archive.ubuntu.com/ubuntu noble-backports InRelease
Reading package lists... Done
root@trushang-HP-Laptop-15s-fr5xxx:/home/trushang/Desktop/hyperledger#
```

**Signature of External Guide**

**Signature of Internal Guide**

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