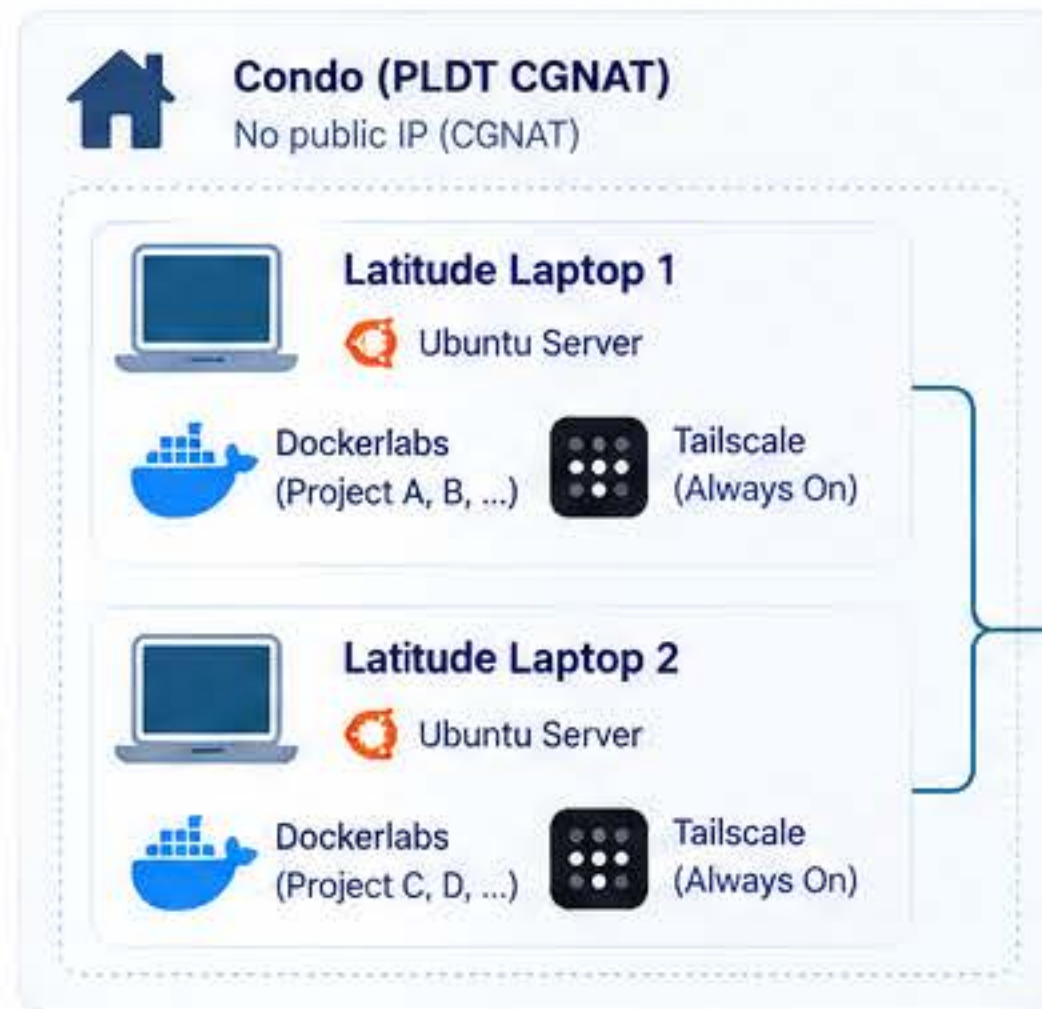


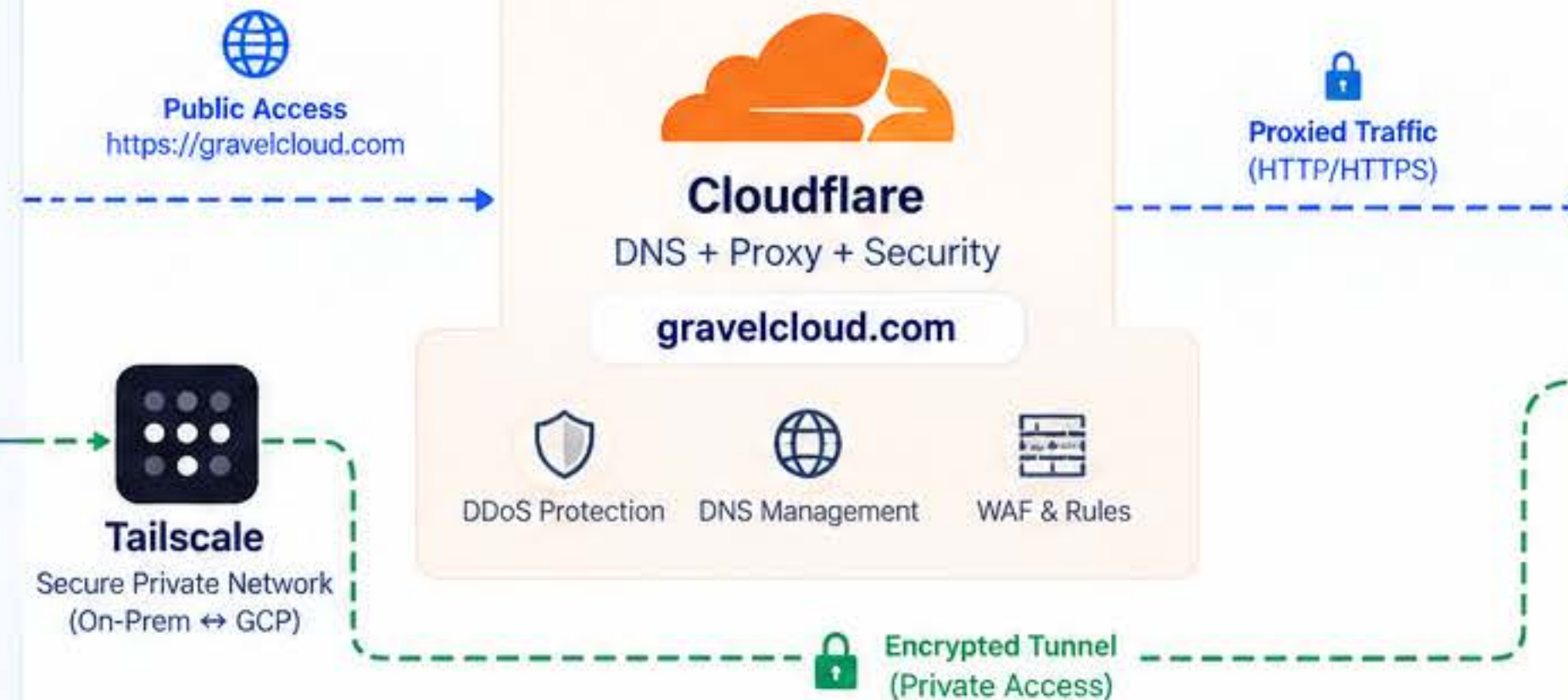
Your Environment

On-Prem (Home / Condo)



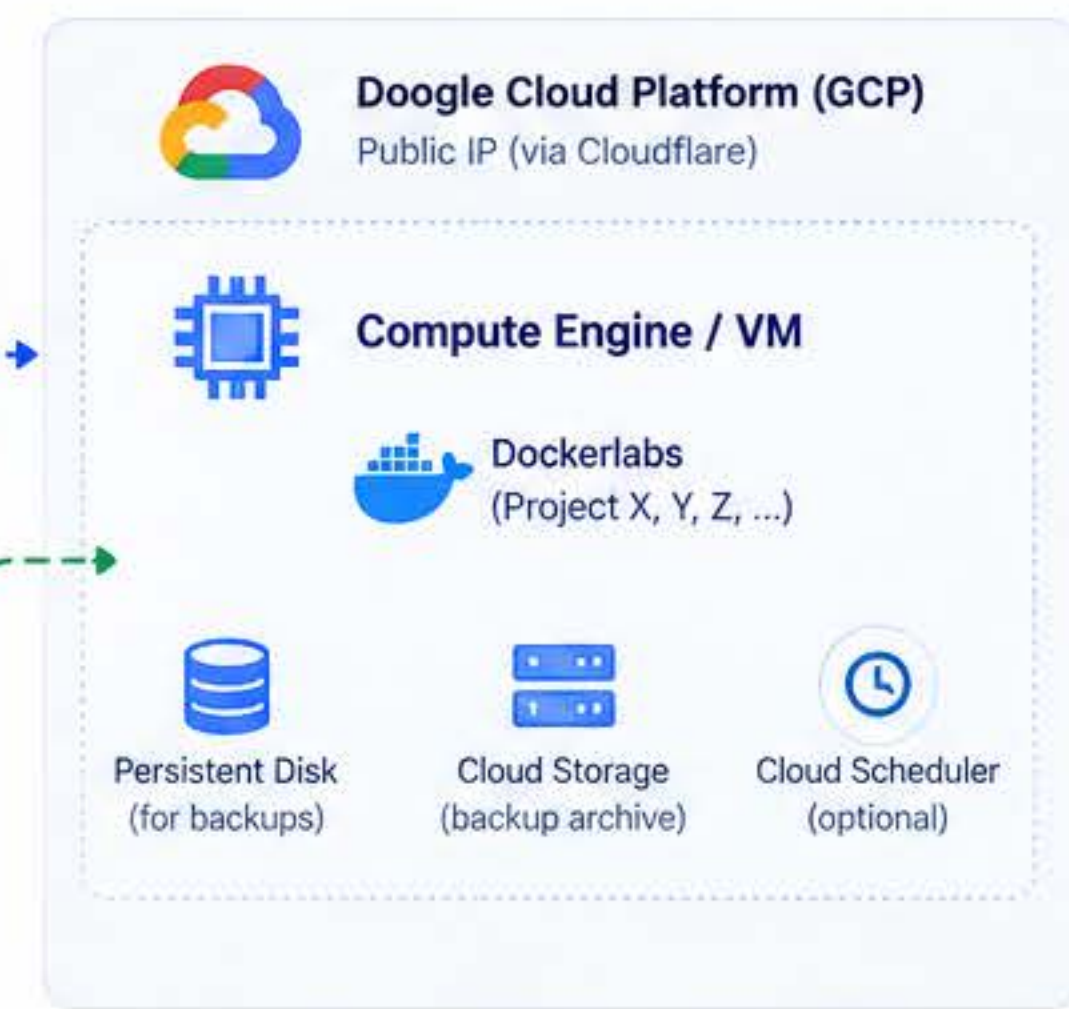
Internet & DNS

Public Access via Cloudflare (gravelcloud.com)



Cloud (GCP)

Dockerlabs in the Cloud



How to Add Your On-Prem Dockerlab to Cloudflare (step-by-step)

1

Ensure your on-prem Dockerlab is running

Confirm the container is accessible locally (e.g. `http://localhost:3000`).

2

Install and configure Tailscale

Install Tailscale on your Ubuntu server and connect to your tailnet.

3

Get the Tailscale IP

Find the Tailscale IP of the machine (e.g. 100.x.x.x) and verify the service is reachable via that IP and port.

4

Create a DNS record in Cloudflare

Go to Cloudflare → DNS → Add Record.

Type: CNAME Name: lab (or any subdomain) Target: <tailscale-ip>.ts.net

Proxy: ON (orange cloud) Example: lab.gravelcloud.com

5

Access your service

Visit `https://lab.gravelcloud.com` and verify it loads.

6

(Optional) Add access rules

Use Cloudflare Access (Zero Trust) to restrict who can access your labs.



Backup & Restore Flow

On-Prem → GCP (Backup)



GCP → On-Prem (Restore)



Will There Be Additional Expenses?

Yes, possibly. Here's what to expect:



GCP storage, bandwidth, and VM usage for backups

You pay for actual usage (e.g. Cloud Storage, egress if downloading).



Cloudflare DNS and basic proxy – Free

Core features (DNS, proxy, SSL) are free. Advanced features (e.g. Cloudflare Access) may have costs.



Tailscale – Free

Free for personal use (up to 100 devices). Paid plans for advanced features.



Your PLDT connection

No additional cost, but upload speed may affect backup time.



Best Practices

- ✓ Use automated backups (e.g. cron + restic/rclone).
- ✓ Keep multiple backup versions.
- ✓ Test restore regularly.
- ✓ Use Cloudflare Access to secure sensitive services.
- ✓ Monitor storage usage to manage costs.

Technologies Used



hub.gravelcloud.com

Rigel G Arcayan, 2026.