

Information Technology for Logistics

About Me

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IT Experiences

- Worked with Thailand Department of Industrial Promotion.
- Promoting digital transformation in Thai local business.
- Primarily introducing *Enterprise Resource Planning (ERP)* software.



Motivation

- Last year, I mainly taught how to use an ERP software (called ERPNext).
 - I feel that it is too limited in the scope for the class "IT".
- This year, I want to expand the scope.

Objectives

- Deploying and managing cloud applications.
 - Web application (PHP)
 - Automation tool (n8n)
 - Enterprise resource planning software (ERPNext)
- Designing integrated IT workflow connecting these systems for logistics operations.

Skills

- Cloud service and networking.
- System administration
- Logistics/business-flow design

Grading

- Assignment (25%)
- Project (25%)

Part 1: Cloud Service

Application Running

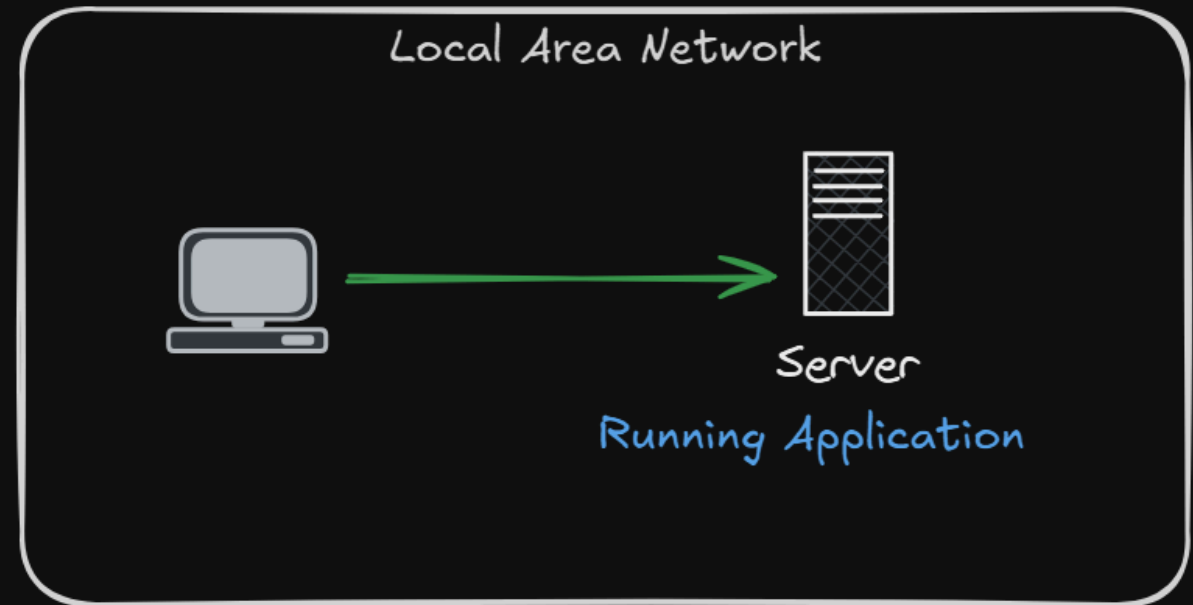


Server

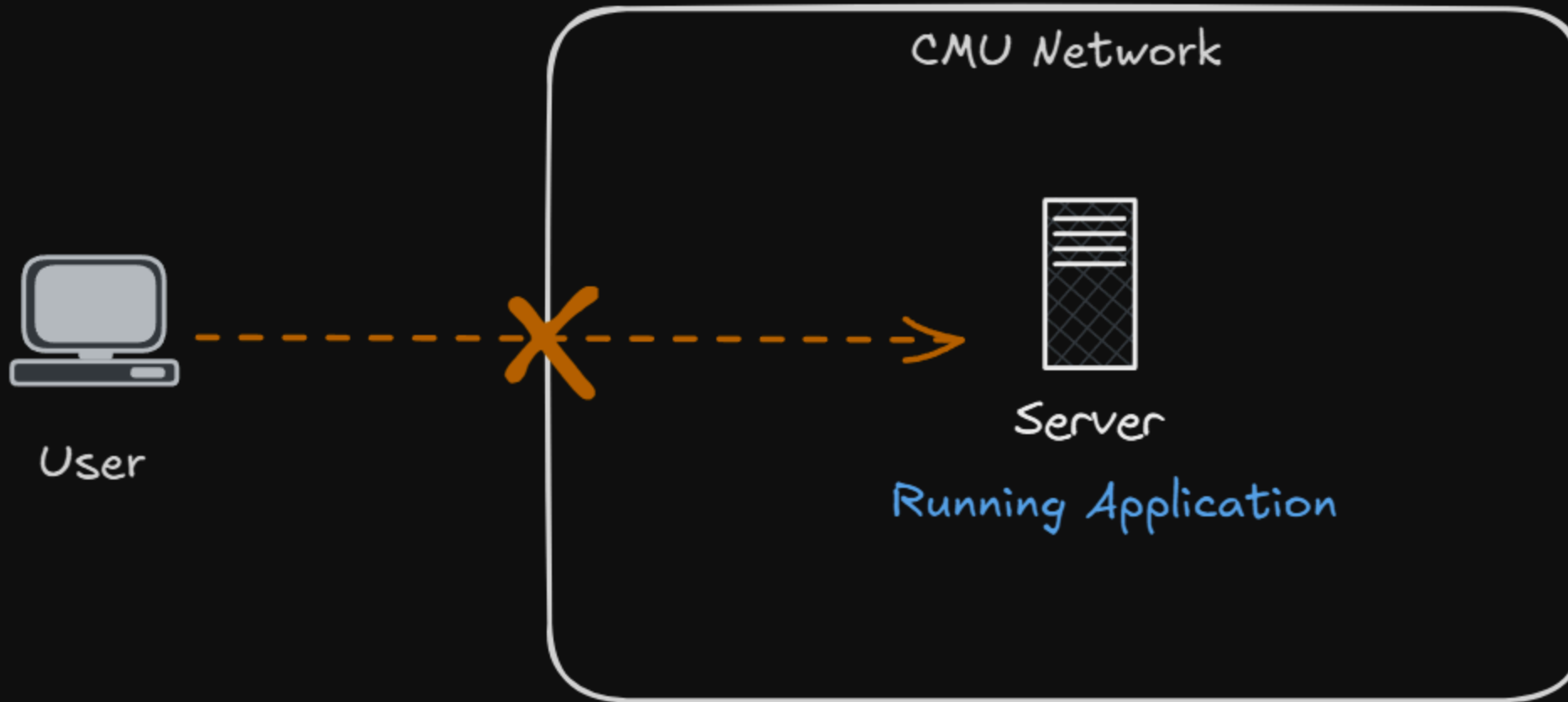
Running Application

LAN Access

- Computers within the same LAN can connect.



External-LAN Access



External-LAN Access

- CMU gateway (router) would not allow it.
 - Security
- Even if CMU gateway allows it, there is still a shared public-IP problem.

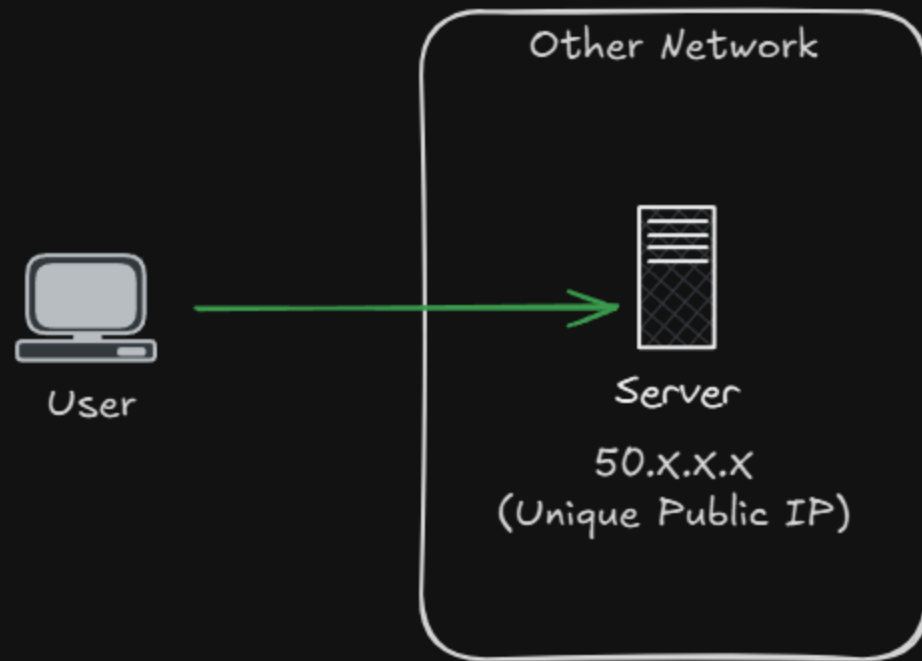
Test Connectivity - ping

- `ping google.com` (working)
- Trying `ping` your computer's public IP.

DNS

- *Domain Name System*
- Internet protocol that translates human-readable domain names (like example.com) into machine-readable IP addresses (like 93.184.216.34)
- `dig google.com`

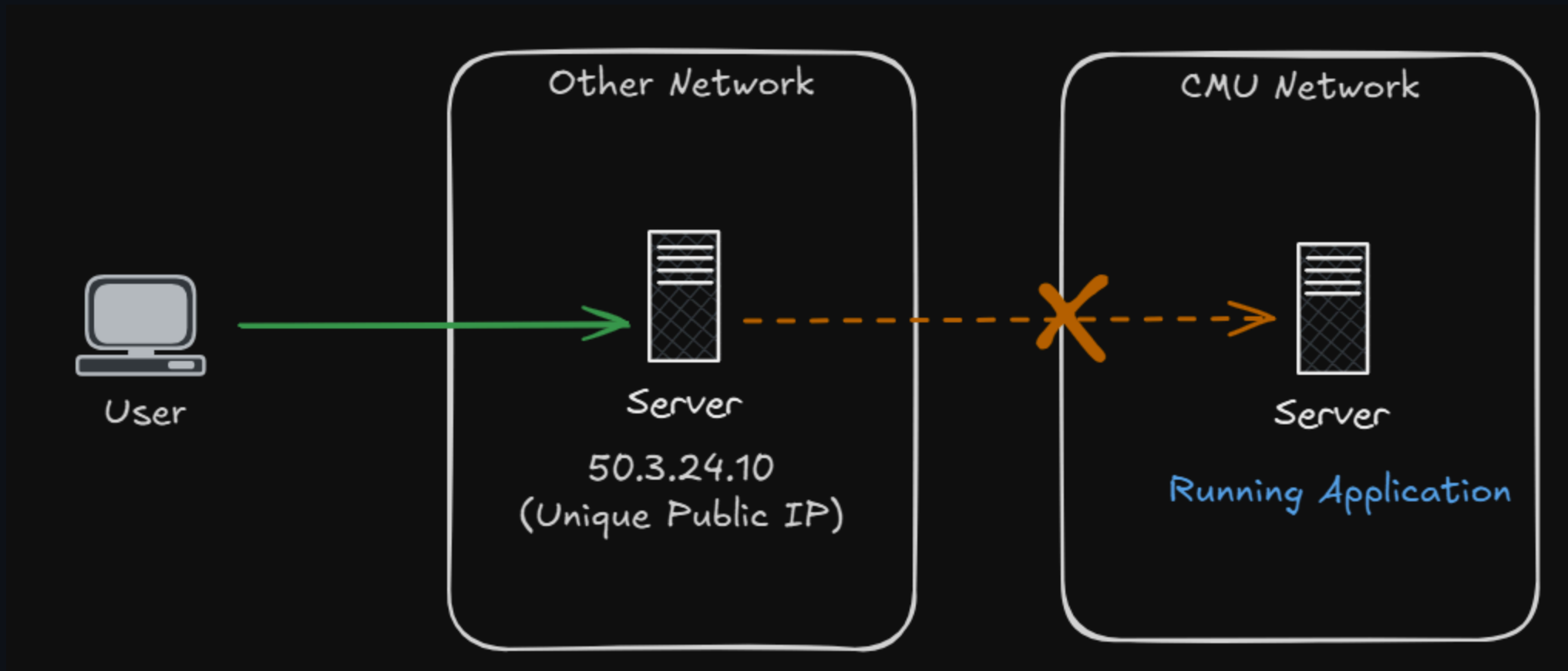
Server with Public IP



Test Server Connection

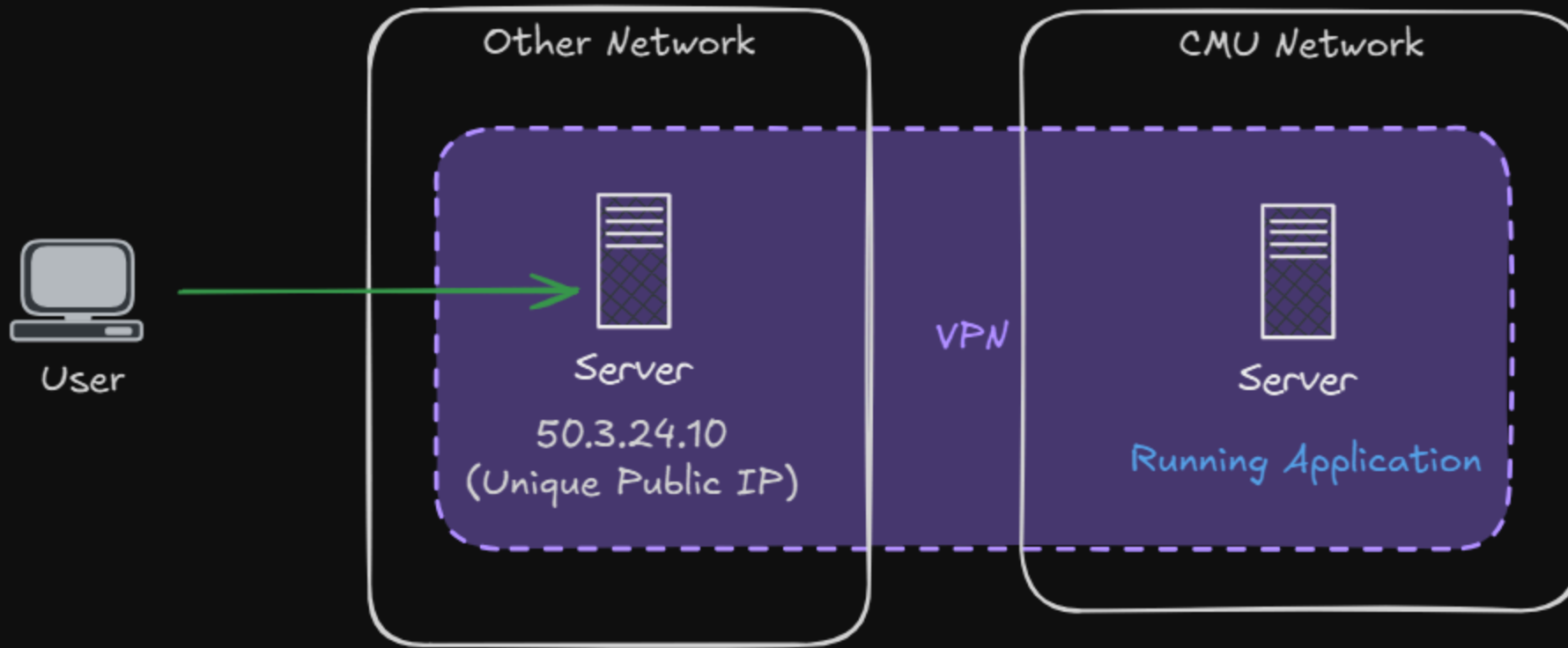
- `ping iecmu.com`
- Can you find out what the ip address is?

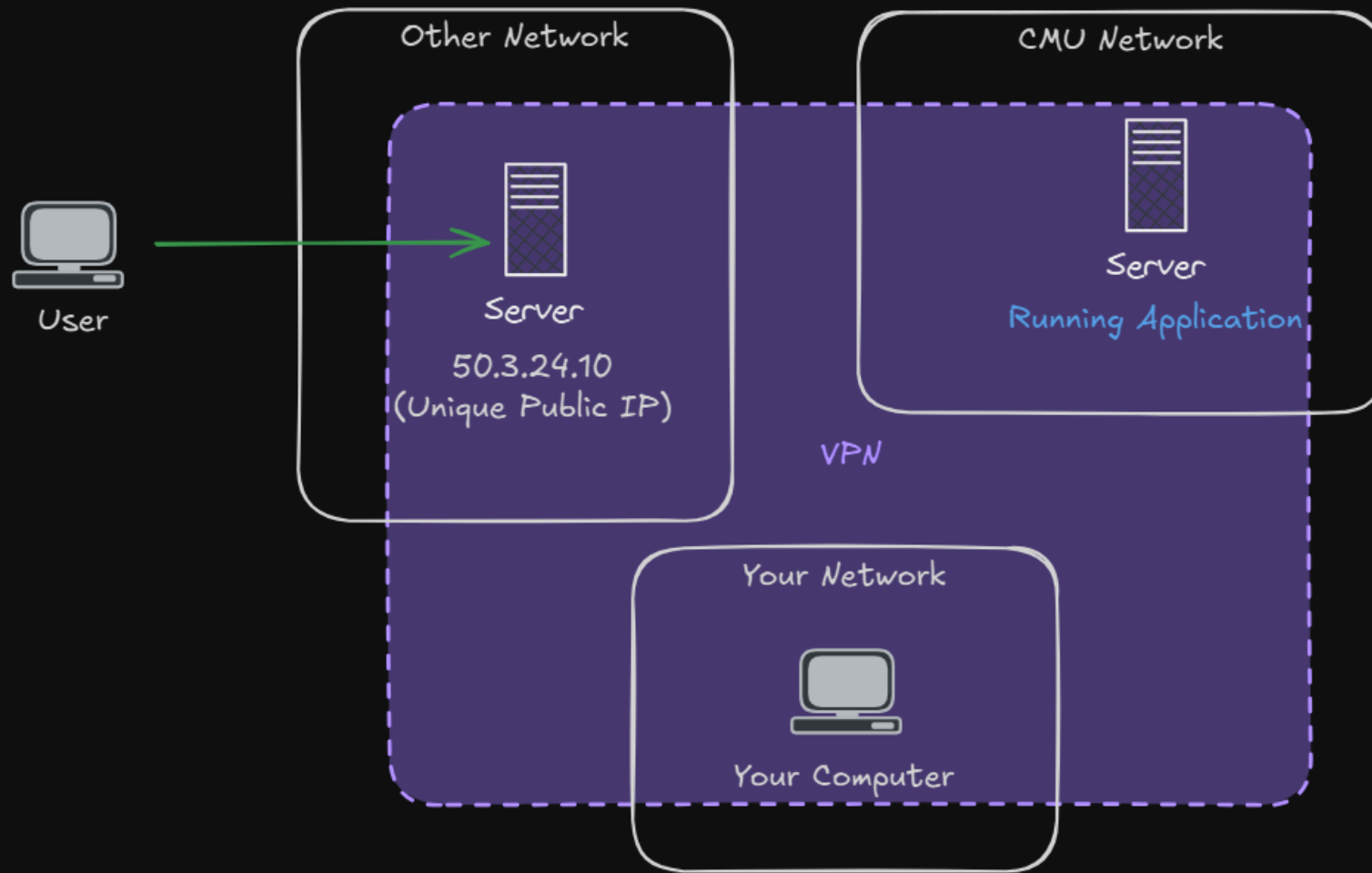
Same Problem



VPN

- Virtual Private Network
- Technology that creates a secure, encrypted connection over the internet
 - Allowing private network access from remote or public locations.
- As if computers are in the same LAN.





Task: VPN Connection

- Connect to VPN.
- You should be able to `ping` the server IP and local URL.
- Can you find out the ip address in the VPN?

Linux fundamentals

- Log into the your server.
 - `ssh admin@10.66.66.x`
- Perform basic tasks
 - Navigation
 - `nano`
 - `sudo` concept