# Connecting Servers to VLAN

## Objective

* Obtain for Ethernet Ports Names
* Configure the ports to allow them to connect to the VLAN
* Physically connect every port on all servers to their designated interface range on the switch. Please refer to Configuring VLAN for the port numbers being used.

Now that we are at the final home stretch of setting up the internal infrastructure of the CDG project, all that is left for us is configuring each port on our server and plugging them all in.

**Log into each server and repeat all steps below**

## Find Ethernet Port Names

$ ip link show

## Create Net Plan File

To be able to allow other devices on the switch to ping the server, you will need to configure you network configuration files. For Ubuntu, you can find the new configuration files at **/etc/netplan/\*.yaml**. Ubuntu server generates Netplan configuration file for system-networkd named **01-netcfg.yaml**.

$ sudo nano /etc/netplan/01-netcfg.yaml

This will bring you to a yaml file you’ll need to configure. YAML is a human-readable data serialization language and is commonly used for configuration files and saving application state. It is similar to other languages such as XML and JSON.

*Example*

network:  
 Version: 2  
 Renderer: NetworkManager/ networkd  
 ethernets:  
 DEVICE\_NAME:  
 Dhcp4: yes/no  
 Addresses: [IP\_ADDRESS/NETMASK]  
 Gateway: GATEWAY  
 Nameservers:  
 Addresses: [NAMESERVER\_1, NAMESERVER\_2]

Where

* **DEVICE\_NAME**: Name of the interface.
* **Dhcp4**: **yes** or **no** depending upon dynamic or static IP addressing
* **Addresses**: IP address of the device in prefix notation. Do not use netmask.
* **Gateway**: Gateway IP address to connect to an outside network (other VLANs)
* **Nameservers**: Address of DNS name servers

## Configure Net Plan File

### Network Plan for Controller Node (Dell PowerEdge 710 A)

network:

version: 2

renderer: networkd

ethernets:

eno1:

dhcp4: no

addresses: [10.0.11.10/24]

gateway4: 10.0.11.1

nameservers:

addresses: [8.8.8.8, 8.8.4.4]

eno2:

dhcp4: no

addresses: [10.0.11.20/24]

eno3:

dhcp4: no

addresses: [10.0.11.30/24]

eno4:

dhcp4: no

addresses: [10.0.11.40/24]

### Network Plan for Network Node (Dell PowerEdge 710 B)

network:

version: 2

renderer: networkd

ethernets:

eno1:

dhcp4: no

addresses: [10.0.21.10/24]

gateway4: 10.0.21.1

nameservers:

addresses: [8.8.8.8, 8.8.4.4]

eno2:

dhcp4: no

addresses: [10.0.21.20/24]

eno3:

dhcp4: no

addresses: [10.0.21.30/24]

eno4:

dhcp4: no

addresses: [10.0.21.40/24]

### Network Plan for Compute/Storage Node (Dell PowerEdge 730)

version: 2

renderer: networkd

ethernets:

eno1:

dhcp4: no

addresses: [10.0.31.10/24]

gateway4: 10.0.31.1

nameservers:

addresses: [8.8.8.8, 8.8.4.4]

eno2:

dhcp4: no

addresses: [10.0.31.20/24]

eno3:

dhcp4: no

addresses: [10.0.31.30/24]

eno4:

dhcp4: no

addresses: [10.0.31.40/24]