S1E3 - Introduction to the Arista CLI

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NANOCAT

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(and a bit about how it works with containerlab and docker)

Tech Stack overview

- VM in the Hetzner Cloud (named "netlab.nanocat.net")
- .. running Linux (Debian 11)
- .. and docker
- .. and containerlab
- containerlab creates containers based on a YAML file

    - https://code.nanocat.net/nickm/networking-workshops/

- and runs EOS images (called cEOS) that I downloaded from Arista.com
- (and also tiny Linux images, to act as "PCs" in the LAB)

Connecting to the lab server

Connect to the lab server:

```
local$ ssh-keygen -R netlab.nanocat.net
local$ ssh lab@netlab.nanocat.net
Password: (see discord)
```

Connect to your router:

```
lab@netlab$ list-devices
lab@netlab$ connect DEVICE
```

enable and disable modes

You will almost always enter `enable` as your first command after logging into your EOS (or IOS) device.

enable (privileged) mode

```
router>enable
router#
```

- `prompt#`
- changes to the configuration possible
- more access to detailed `show` commands

disable (unprivileged) modes

```
router#disable
router>
```

- `prompt>`
- no configuration changes possible
- safe, even for public access (search the web for "bgp looking glass telnet")

? **and** `<TAB>`

- `?` and `<TAB>` are used for help and command completion respectively. Try entering these commands:

    - `show ?`
    - `show ip ?`
    - `show ip route ?`
    - `sh<TAB> ip ro<TAB>`

- Commands can be abbreviated to their shortest unambiguous length. Try these:

    - `show running-config`
    - `show running`
    - `show run`
    - `sh run`
    - `sh ru`

The `show` **command**

Show commands tell us about the device hardware status, its protocols, software version, and so on.

Try these commands:

```
show version
show running-config
show interface
show interface status
show ip interface
show ip interface brief
```

Changing the Configuration

Entering "Global Configuration Mode":

```
router#configure
router(config)#
```

Configuring an interface:

```
router(config)#interface ethernet1
router(config-if-eth1)#description This interface connects to the switch
router(config-if-eth1)#
```

Exiting interface configuration, back to global config, then exit config mode:

```
router(config-if-eth1)#exit
router(config)#exit
router#
```

Look at the configuration:

```
router#show running-config
```

Configuring an interface

Configuring an IP address on an ethernet interface:

```
router#configure
router(config)#interface ethernet1
router(config-if)#ip address 172.17.0.1/24
! IP configuration will be ignored while interface Ethernet1 is not a routed port.
router(config-if)#no switchport
router(config-if)#exit
router(config)#exit
router#show ip interface brief
...
```

Reconfiguring an interface

Changing an IP address on an ethernet interface:

```
router#configure
router(config)#interface ethernet1
router(config-if-eth1)#ip address 10.0.0.1/24
router(config-if-eth1)#end
router#show ip interface brief
...
```

Reconfiguring an interface, again

Removing the IP address from an ethernet interface:

```
router#configure
router(config)#interface ethernet1
router(config-if-eth1)#no ip address
router(config-if-eth1)#end
router#show ip int brief
...
```

Discovering our neighbours

Checking our LLDP neighbours:

```
router#show lldp neighbor
...
```

Ping another device:

```
router#ping 10.0.0.4
...
```