



Module 0 Fundamental Huawei VRP

Part 1: Installation of eNSP.

If we are using Huawei simulator eNSP (enterprise Network Simulator Platform), eNSP can only be installed on **Windows OS** (Windows XP or later).

Installation steps:

1. Install Oracle Virtual Box (Lastest Version, i.e. VirtualBox-5.0.20-106931-Win in Jun 2016)
2. Install eNSP file

After eNSP is installed properly, we can build the topology, start devices and log in to CLI.

Part 2: Logging in Using the CLI and Prepare the Router with no Previous Config.

Step 2.1 Clear the Previous Config.

```
<Huawei> reset saved-configuration
Warning: The action will delete the saved configuration in the device.
The configuration will be erased to reconfigure. Continue? [Y/N]:y
Warning: Now clearing the configuration in the device.
<Huawei> reboot
Info: The system is now comparing the configuration, please wait.
Warning: All the configuration will be saved to the configuration file for
the next startup, Continue?[Y/N]:n
Info: If want to reboot with saving diagnostic information, input 'N' and
then execute 'reboot save diagnostic-information'.
System will reboot! Continue?[Y/N]:y
```

Step 2.2 Enter the System View.

Run the `system-view` command and press Enter in the user view. The system view is displayed.

```
<Huawei> system-view
Enter system view, return user view with Ctrl+Z.
[Huawei]
```

Step 2.3 Configure the Name of the Router.

```
[Huawei] sysname Router1
[Router1]
```

Step 2.4 Log in by Telnet.

Create a user account, username: training, password: apnic. This user account is used for telnet.

```
<Router1> system-view
[Router1] aaa
[Router1-aaa] local-user training password cipher apnic
Info: Add a new user
[Router1-aaa] local-user training privilege level 0
[Router1-aaa] local-user training service-type telnet
```

Configure user interface

```
[Router1-aaa] quit
[Router1] user-interface vty 0 4
[Router1-ui-vty0-4] authentication-mode aaa
```

Set the password for changing the user from a lower level to a higher level.



```
[Router1-ui-vty0-4] quit  
[Router1] super password level 3 cipher abcd1234
```

Now you can telnet to the router Router1 from other reachable routers:

```
<Router1> telnet 172.16.15.1  
Trying 172.16.15.1 ...  
Press CTRL+K to abort  
Connected to 172.16.15.1 ...  
  
Login authentication  
  
Username:training  
Password:  
<Router1>
```

Now you have logged in to the router, but only with the set privilege 1.
You can get higher privilege by using super command.

```
<Router1> super  
Password:  
Now user privilege is 3 level, and only those commands whose level is equal  
to or less than this level can be used.  
Privilege note: 0-VISIT, 1-MONITOR, 2-SYSTEM, 3-MANAGE  
<Router1> system-view  
[Router1]
```

Step 2.5 Check the Current Running Configuration:

```
[Router1] display current-configuration
```

Step 2.6 Exit System View and Save the Configuration:

```
[Router1] quit  
<Router1>
```

In the user view, we can save the configuration to be .zip or .cfg file on the storage of routers.

```
<Router1> save router1.cfg
```

To view file system from the current directory:

```
<Router1> dir
```

Step 2.7 Set the Saved File to be Next Starting Configuration:

```
<Router1> startup saved-configuration router1.cfg
```

```
<Router1> display startup
```

Step 2.8 Restart the Router:

```
<Router1> reboot
```



Part 3: Experimenting with the CLI's Operational and Verify Configuration.

Step 3.1 Host name

Router hostname which is an FQDN name mapped into a DNS server. There is a common practice about router hostname which is a domain name then 3 digit airline city code then region/pop then a name etc. Example: router1.pop1reg1.BNE.apnic.net. Please use your router name according the topology diagram.

```
<Huawei> system-view
[Huawei] sysname router1.pop1reg1.BNE.apnic.net
```

Step 3.2 Exit system view

You can run the `quit` command to return from the current view to an upper-level view.

```
[Huawei-aaa] quit
[Huawei] quit
<Huawei>
```

You can also run the `return` command to return directly to the user view.

```
[Huawei-aaa] return
<Huawei>
```

Step 3.3 Set clock

Set your router clock according to your local time zone. We used AEST 10 to reflect APNIC office where it is located and corresponding time zone. Clock is set in user view not system view.

```
<Huawei> clock timezone AEST minus 10
<Huawei> clock datetime 09:13:00 2016-06-16
```

Step 3.4 Check the configuration

From the CLI to check the config, normally all display commands execute from user view (prompt "<>") or system view (prompt "[]").

Check the current running configurations:

```
<Huawei> display current-configuration
[Huawei] display current-configuration
```

Check the configuration under any view:

```
[Huawei-GigabitEthernet0/0/2] display this
[Huawei-bgp] display this
```

Step 3.5 Check the interface status, detail, brief, up, down etc.

```
<Huawei> display interface
<Huawei> display interface gigabitethernet 2/0/0
<Huawei> display interface | include [or begin]
<Huawei> display interface brief
```

Step 3.6 Check system version, licensing, uptime, CPU load, memory use, system environment, ping etc.

```
<Huawei> display version
<Huawei> display cpu-usage
```



```
<Huawei> display access-user

<Huawei> free user-interface vty 1
#to disconnect a specified user's terminal from the device. After the command is executed, the device logs
out the user.

<Huawei> display device

<Huawei> display diagnostic-information

<Huawei> display ip statistics verbose

<Huawei> display fan

<Huawei> display health

<Huawei> display memory-usage

<Huawei> display power

<Huawei> display temperature

<Huawei> display license

<Huawei> ping 172.16.10.2

<Huawei> ping -a 172.16.15.1 172.16.10.2
#ping with the source address 172.16.15.1

<Huawei> ping -s 61580 172.16.10.2
#ping with packet size of 61580 bytes

<Huawei> debugging ip packet

<Huawei> debugging ip icmp
```