Cisco Router Passwords

Several types of passwords can be configured on a Cisco router, such as the enable password, the secret password for Telnet and SSH connections and the console port as well. All these password locations represent good access locations for passwords, but if you have only one password on only one access location, you should at least have an enable password.

Types of Cisco Router Passwords

1. Enable password

2. Enable Secret

3. Line Console password without User-based Authentication

4. Line Console password with User-based Authentication

5. Line VTY password

Enable password

You use the enable password every time you move from User EXEC mode to Privileged EXEC mode. This password gives you security on your router, because Privileged EXEC mode is where all the dangerous commands are located, including access to Global Configuration mode. To set an enable password, use the following command:

```
Router> enable
Router# configure  terminal
Router(config)# enable  password  <new_password>
```

This command creates an enable password that is stored in your configuration file. To view this password, show the running configuration using the following command:

```
Router> enable
Password:
Router# show  running-config
```

You may immediately see the problem here. The password is stored in plain text in your configuration file, thus anyone who has access to your configuration file can easily read the password.

Enable Secret

Cisco's solution to the enable password's inherent problem was to create a new type of password called the secret password. When you configure both an enable and a secret password, the secret password is the password that will be used to switch from User Exec mode to Priv Exec mode. The following code sets both passwords for your router:

```
Router> enable
Router# configure  terminal
Router(config)# enable  secret <password>
```

To see your enable passwords in your configuration, use the following command:

```
Router> enable
Password:
Router2# show  running-config
```

Most encrypted passwords in your configuration file use a weak reversible encryption and are identified by a 7 in the password line, whereas the secret password is encrypted with a one-way MD5 hash with a 5 denoted in the

password line. You may also see a 0, which identifies it as an unencrypted password.

Line Console password without User-based Authentication

Setting password on Line console allows us to set login authentication on router. It means if you set password on Line console then after the booting process of router you have to enter the password to access User EXEC mode. You can use following commands to set password on Line console:

```
Router> enable
Router# configure  terminal
Router(config)# line  console  0
Router(config-line)# password  <password>
Router(config-line)# login
```

This password stores in plain text format in router configuration file. To see your line console password in your configuration, use the following command:

```
Password:
Router> enable
Router# show  running-config
```

Line Console password with User-based Authentication

Setting password on Line console also allows us to set User-based login authentication on router. It means you have to enter username & its password to access router User EXEC mode. Make sure you have already created a user and also set the password for that particular user before login. You can use following commands to set User-based authentication on router:

```
Router> enable
```

```
Router# configure  terminal
Router(config)# username  <username>  password  <password>
Router(config)# line  console  0
Router(config-line)# login  local
```

This password also stores in plain text format in router configuration file. To see your line console password in your configuration, use the following command:

```
Username:
Password:
Router> enable
Router# show  running-config
```

Line VTY password

Setting password on Line VTY allows us to enable and configure remote access protocols/services (telnet/ssh) on router. If you already set password on Line VTY then client has to provide the password to access your router remotely. To set password use the following commands for Telnet:

```
Router> enable
Router# configure terminal
Router(config)# line  vty 0  2
Router(config-line)# password  <password>
Router(config-line)# login
```

This password also stores in plain text format in router configuration file. To see your line vty password in your configuration, use the following command:

```
Router>enable
Router#show running-config
```

To list all telnet connections:
Router# show users

Removing Router Passwords

Router(config)# no enable password	Removing Enable password
Router(config)# no enable secret	Removing Enable Secret
Router(config)# line console 0 *Router(config-line)# no password* *Router(config-line)# no login* *Router(config-line)# no login local*	Disabling Login Authentication & Removing password from Line Console