Basic Privileged Exec Security

- When you connect over the console or a VTY line you will land at the User Exec prompt which has a very limited set of commands available

- To get superuser access you use the 'enable' command to invoke Privileged Exec mode

- This can be secured with a password

```
R1(config)#enable password Flackbox3
```

Basic Privileged Exec Security

```
R1>enable
Password: <correct password>
R1#
```

Enable Password

- The enable password can be viewed in plain text in the running configuration by default. This can be a security concern.

```
R1#show run
Building configuration...
!
enable password Flackbox3
!
truncated
```

Enable Secret

- An enable secret performs the same function as the enable password

- The enable secret is always shown in an encrypted format in the running configuration

- If both an enable password and enable secret are configured, the enable secret supersedes the enable password which is no longer used

- Best practice is to configure an enable secret but not an enable password

Enable Secret

```
R1(config)#enable secret Flackbox3
The enable secret you have chosen is the same as your
enable password.
This is not recommended. Re-enter the enable secret.
R1(config)#enable secret Flackbox4


R1#show run
!
enable secret 5 $1$mERr$ABB9Y2Fk
enable password Flackbox3
!
```

FLACKBOX
www.flackbox.com

Encrypting Passwords

- Line level passwords can also be viewed in plain text in the running configuration by default.

```
R1#show run
!
enable secret 5 $1$mERr$ABB9Y2FkwbWuPLfUgLUxf1
enable password Flackbox3
!
line con 0
password Flackbox1
login
!
line vty 0 4
password Flackbox2
login
line vty 5 15
password Flackbox2
login
```

Service Password-Encryption

- The service password encryption command encrypts all passwords in the running configuration

- It is best practice to enable this

```
R1(config)#service password-encryption
```

Service Password-Encryption

```
R1#show run
!
service password-encryption
!
enable secret 5 $1$mERr$ABB9Y2FkwbWuPLfUgLUxf1
enable password 7 0807404F0A1207180A58
!
line con 0
password 7 0807404F0A1207180A5A
login
!
line vty 0 4
password 7 0807404F0A1207180A59
login
line vty 5 15
password 7 0807404F0A1207180A59
login
```