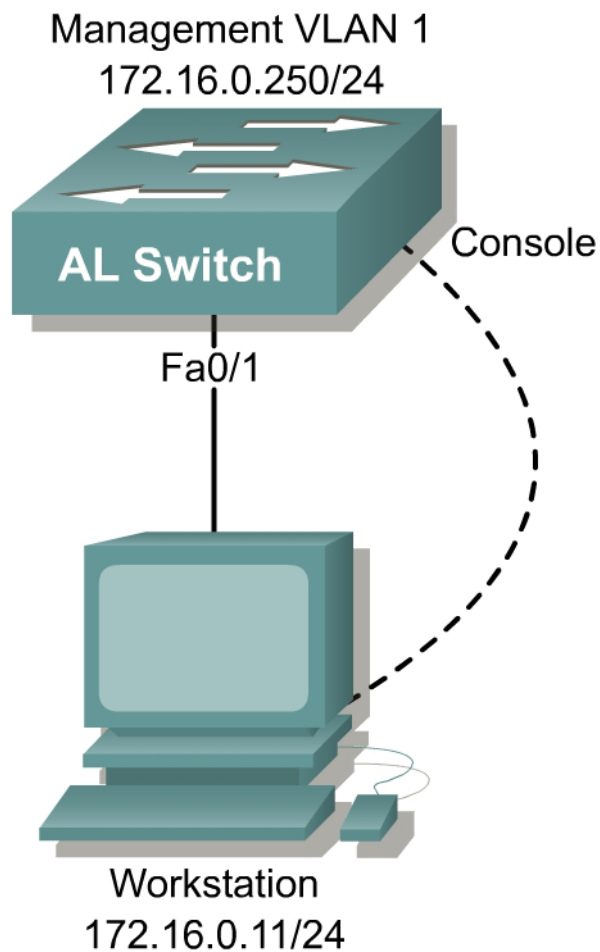


## Lab 9.9.5 Using Local Usernames and Passwords



### Objective

In this lab, students will configure multiple local usernames with passwords. These will be used for login authentication on the console port and virtual terminal lines.

### Equipment

The following equipment is required to complete this lab:

- Catalyst 3550 series or 2950 series switch
- IOS 12.1(11)EA1

### Scenario

Corporate headquarters wants to increase network security by implementing individual user accounts on the switches for the network administrators Alice, Bob, and Carol. A directive has been

issued for regional staff members to secure local Ethernet switches with local usernames and passwords on the switches. This will prevent unauthorized access to the network and provide better logging information about access to the network switches. All passwords that are saved in the switch configuration must also be encrypted for added security.

### Step 1

Build and configure the network according to the diagram. Use the `ping` command to verify the Ethernet connection to the switch.

### Step 2

Enter global configuration mode to create a user account for Alice, Bob, and Carol. The password for Alice is fantastic. The password for Bob is switching. The password for Carol is equipment.

```
ALSwitch(config)#username Alice password fantastic
ALSwitch(config)#username Bob password switching
ALSwitch(config)#username Carol password equipment
```

### Step 3

Enter line configuration mode for line console 0.

Enable login authentication using local accounts on the console port.

```
ALSwitch(config)#line console 0
ALSwitch(config-line)#login local
ALSwitch(config-line)#exit
```

Enable login authentication using local accounts on the virtual terminal lines.

```
ALSwitch(config)#line vty 0 15
ALSwitch(config-line)#login local
ALSwitch(config-line)#exit
```

### Step 4

Check the running configuration on the switch to confirm that the passwords have been entered correctly.

```
--output omitted--
ALSwitch(config)#end
ALSwitch#
00:14:52: %SYS-5-CONFIG_I: Configured from console by console
ALSwitch#show running-config
Building configuration...

Current configuration : 1069 bytes
!
version 12.1
no service pad
service timestamps debug uptime
service timestamps log uptime
no service password-encryption
!
hostname ALSwitch
!
!
```

```
username Alice password 0 fantastic
username Bob password 0 switching
username Carol password 0 equipment
```

```
'--output omitted--
!
line con 0
  login local
line vty 0 4
  login local
line vty 5 15
  login local
!
'--output omitted--
```

1. What does the 0 mean in the output `username Carol password 0 equipment`?
- 

## Step 5

Re-enter global configuration mode and enable password encryption on the switch.

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

Check the running configuration again.

```
ALSwitch#show running-config
Building configuration...

Current configuration : 1111 bytes
!
version 12.1
no service pad
service timestamps debug uptime
service timestamps log uptime
service password-encryption
!
hostname ALSwitch
!
!
username Alice password 7 104808171116011F0507
username Bob password 7 071C36455A0A110C1915
username Carol password 7 06031E34455E041C0B03
'--output omitted--
```

Notice that the clear-text passwords have now been encrypted. The numbers used to represent the encrypted password may not be the same as the numbers shown.

2. What does the 7 mean in the output `username Carol password 7 06031E34455E041C0B03`?
- 

## Step 6

Log out of the switch and reconnect to the console to test the user accounts and passwords.

**Note:** Passwords are case sensitive.

```
ALSwitch con0 is now available
```

```
Press RETURN to get started.
User Access Verification
Username: Bob
Password:
ALSwitch>
```

Log in at least once with each user account and password. Test what happens when incorrect passwords and user names are entered.

## Step 7

Enter global configuration mode. Return to privileged mode without making any changes to the switch configuration.

```
ALSwitch#conf t
Enter configuration commands, one per line. End with CNTL/Z.
ALSwitch(config)#end
ALSwitch#
00:29:47: %SYS-5-CONFIG_I: Configured from console by Bob on console
```

3. What changes in the log message after exiting global configuration mode?
- 

## Step 8

Connect to the switch using either the console port or a Telnet session and remove the user account settings.

```
ALSwitch(config)#no username Bob
ALSwitch(config)#no username Alice
ALSwitch(config)#no username Carol
ALSwitch(config)#line console 0
ALSwitch(config-line)#no login
ALSwitch(config-line)#line vty 0 15
ALSwitch(config-line)#no login
ALSwitch(config-line)#end
ALSwitch#
00:36:31: %SYS-5-CONFIG_I: Configured from console by Bob on console
ALSwitch#show running-config
Building configuration...

Current configuration : 953 bytes
!
version 12.1
no service pad
service timestamps debug uptime
service timestamps log uptime
service password-encryption
!
hostname ALSwitch
!--output omitted--
!
!
ip subnet-zero

!
line con 0
line vty 0 4
  no login
line vty 5 15
  no login
!
```