# Device Access and Privilege Levels

**Set privilege level for telnet:**

R1# **conf t**

R1(config)# **privilege exec level 2 telnet**

**Create a user with a specific privilege level:**

R1(config)# **username John privilege 2 secret Sexton**

**Configure console access to use local login:**

R1(config)# **line console 0**

R1(config)# **login local**

# Cisco IOS Resilient Configuration Feature

**Secure IOS and configuration files:**

John# conf t

John(config)# secure boot-image

John(config)# secure boot-config

## Using MD5 to Protect OSPF Exchanges

Enable MD5 authentication for OSPF:

R1(config)# router ospf 10

R1(config-router)# area 0 authentication message-digest

Configure MD5 key for an interface:

R1(config)# interface g0/0/0

R1(config-if)# ip ospf message-digest-key 1 md5 cisco123

Fault Logging and Syslog

Configure logging to console:

Router(config)# logging console 3

Configure buffered logging:

Router(config)# logging buffered 2

Configure logging to a specific host:

Router(config)# logging host 172.16.3.9

Router(config)# logging trap 1

Network Time Protocol (NTP)

Set timezone and summer-time:

R1(config)# clock timezone EST -5

R1(config)# clock summer-time EDT recurring

Set the actual time:

R1# clock set 20:52:49 21 October 201

Configure NTP server and client mode:

R1(config)# ntp server 172.16.2.2

Configure NTP master:

R3(config)# ntp master 2

Show NTP associations:

R1# show ntp associations

Cisco Discovery Protocol (CDP)

Show CDP neighbors detail:

R1# show cdp neighbors detail

SNMPv3 Security Configuration Example

Standard ACL:

Step 1. ACL PERMIT-ADMIN

Create SNMP view:

Step 2. SNMP-RO view

Configure SNMP group:

Step 3. ADMIN group with SNMPv3

Configure SNMP user:

Step 4. User BOB with SHA authentication and AES 256 encryption

Secure Copy Protocol (SCP)

Create SSH encryption:

R1(config)# hostname R1

R1(config)# ip domain-name sexton.com

R1(config)# crypto key generate rsa general-keys modulus 1024

Create a local user:

R1(config)# username Bob privilege 15 secret Cisco1234

Enable local AAA server:

R1(config)# aaa new-model

R1(config)# aaa authentication login default local

R1(config)# aaa authorization exec default local

Enable SCP:

R1(config)# ip scp server enable

Cisco Password Recovery

Show version and config register:

R1# show version

Change config register to 0x2142 and reload:

rommon> confreg 0x2142

rommon> boot

Copy startup-config to running-config:

Router# copy start run

Change config register back to 0x2102:

Router(config)# config-register 2102

Save changes:

Router# copy run start