Cisco configuration elements

Network Management Tutorial

Overview

- Basic things that we need to make sure are configured on a Cisco router (and switch) to do proper network management

- These apply to other network equipment manufacturers of course, and to servers and workstations

Elements

- Hostname   hostname of the device

- SSH   enable secure shell

- DNS   domain name lookup

- NTP   time synchronization

- Syslog   syslog messages

- SNMP   SNMP configuration

- SNMP traps   Where to send traps

- CDP   Cisco discovery protocol

Hostname

- Use the FQDN preferably.

- In config mode:

  hostname *net*-gw.XYZ.domain.name

  or

  hostname *net*-sw-XYZ.domain.name

DNS configuration

- Config mode:

```
ip domain-name .tldX
ip name-server 192.168.128.10
```

NTP + time configuration

- In config mode:

```
ntp server pool.ntp.org
clock timezone EEST 3
```

- If needed:

```
clock summer-time XXX recurring
last Sun Mar 2:00 last Sun Oct
3:00
```

SSH

- Only crypto version of IOS/CatOS have support for SSH – there are export restrictions… In config mode:

```
aaa new-model
crypto key generate rsa
username inst secret 0 xxxxxxxxx
```

- … above is required to be allowed to enable SSH. Verify creation with:

SSH (2)

- Enforce ssh (disabling telnet) on vty lines:

```
host# conf t
host(config)# line vty 0 4
host(config-line)# transport
input ssh
^Z
host#
```

- SSH is now enabled

- Telnet is not necessary

Syslog

- In config mode, enable logging to your NOC machine (X is your TLD)

```
logging 192.168.X.1
logging facility local5
logging trap debugging
```

SNMP

- In config mode:

```
snmp-server community xxxxxxxx
RW
snmp-server community afnog RO
snmp-server location Cairo
snmp-server enable traps config
snmp-server enable traps envmon
snmp-server enable traps config-
copy
snmp-server enable traps syslog
snmp-server host 192.168.X.Y afnog
```

CDP

- Cisco Discovery Protocol

- Normally enabled by default nowadays

- Otherwise, enabled with "cdp enable" or "cdp run"

- tcpdump and tools like cdpr will show you CDP announcements

- check neighbor announcement with:

  show cdp neighbors

Questions ?