Cisco configuration elements

APRICOT 2008
Network Management
Taipei, Taiwan
February 20-24, 2008
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**: and where to send traps
- **CDP**: Cisco discovery protocol
Hostname

- Use the FQDN preferably.
- In config mode:

  hostname gw|sw-XYZ[.domain.name]
DNS configuration

• Config mode:

  ip domain-name mgmt.conference.apricot.net
  ip name-server 169.223.2.2
In config mode:

ntp server pool.ntp.org
clock timezone CWT 8

If needed:

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

Verify:

show clock
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 xxxxxxxxxxx
  ```

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

  ```
  sh crypto key mypubkey rsa
  ```

- Use at least 768 bits
• Enforce ssh (disabling telnet) on vty lines:

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

• SSH is now enabled, and the telnet disabled
• In config mode:

    logging noc.mgmt.conference.apricot.net
    logging facility local5
    logging trap debugging
In config mode:

```plaintext
snmp-server community xxxxxxxxxx RW
snmp-server community apricot08 RO
snmp-server location Taipei, room 403
snmp-server enable traps config
snmp-server enable traps envmon
snmp-server enable traps config
snmp-server enable traps syslog
snmp-server host xxx (see cisco doc)
```
• Cisco Discovery Protocol
• Normally enabled by default nowadays
• Otherwise, enabled with "cdp enable"
• tcpdump and tools like cdpr will show you CDP announcements