

# Cisco configuration elements

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Network Management Workshop  
intERLab at AIT  
Thailand  
March 11-15, 2008



# Overview

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- 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

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- 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

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- Use the FQDN preferably.
- In config mode:

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

or

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

# DNS configuration

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- Config mode:

```
ip domain-name mgmt.ait.ac.th  
ip name-server 10.10.10.1
```

# NTP + time configuration

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- In config mode:

```
ntp server pool.ntp.org  
clock timezone ICT 7
```

- If needed:

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

- Verify:

```
show clock
```

# SSH

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- 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 xxxxxxxxxxxx
```

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

```
sh crypto key mypubkey rsa
```

- Use at least 768 bits

## SSH (2)

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- 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, and the telnet disabled



# Syslog

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- In config mode:

```
logging noc.mgmt.ait.ac.th  
logging facility local5  
logging trap debugging
```

# SNMP

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- In config mode:

```
snmp-server community xxxxxxxxxx RW
snmp-server community interl4b RO
snmp-server location intERLab, AIT
snmp-server enable traps config
snmp-server enable traps envmon
snmp-server enable traps config-copy
snmp-server enable traps syslog
snmp-server host 10.10.10.1 interl4b
```

# CDP

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- 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 ?

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