Network Management & Monitoring

Configuration Management RANCID
What is RANCID?

The "Really Awesome New Cisco config Differ" – Really!

A configuration management tool:

- Keeps track of changes in the configs of your network equipment (Cisco, HP, Juniper, Foundry, etc.)
- Works on routers and switches
What is RANCID?

Automates retrieval of the configurations and archives them

Functions as:
- Backup tool - “woops, my router burned”
- Audit tool - “how did this error get in?”
- Blame allocation :) - ”who did it?”

The data is stored in a VCS (Version Control System) – supported are:
- CVS (Concurrent Versions Systems)
- SVN (SubVersioN)
What is Version Control?

Three basic principles:

1. Keep a record and history of changes
2. Give public access to the information
3. To maintain different versions from the same data set

What types of data?

- Source code
- Documentation
- Configuration files
- Generally, any type of data…
How does RANCID work?

Run (manually or automated)

Lookup list of groups

For each device in each list of groups

• Connect to the equipment (telnet, ssh, …)
• Run ”show” commands – config, inventory, ...
• Collect, filter/format data
• Retrieve the resulting config files
• CVS check-in the changes
• Generate a diff from the previous version
• E-mail the diff to a mail address (individual or group)
What to use it for?

• Track changes in the equipment configuration
• Track changes in the hardware (S/N, modules)
• Track version changes in the OS (IOS, CatOS versions)
• Find out what your colleagues have done without telling you!
• Recover from accidental configuration errors (anyone have stories?)
Post processing

• Run traditional filtering commands on your configs (grep, sed, for information)
• Re-use the automated login tools to build your own batch tools or do interactive login
• On large configurations, you can parallelize operations
Other applications

- Automated checks (verify configs for strange/inconsistent setup)
- Generate DNS file from equipment list
- Use IP address adjacency to produce a graph of your network
References

• RANCID Project Home Page
  http://www.shrubbery.net/rancid/

• Subversion (SVN) Home Page
  http://subversion.apache.org/

• Good, Short RANCID Presentation
  http://www.shrubbery.net/rancid/NANOG29/

• RANCID HowTo’s