Network Management & Monitoring

Configuration Management RANCID

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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/SVN 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/
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  2. http://gentoo-wiki.com/HOWTO_Rancid
  3. http://homepage.mac.com/duling/halfdozen/RANCID-Howto.html