Managing network configuration with RANCID

Network Management Workshop

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What is RANCID ?

- Configuration management tool
- Keeps track of changes in the configs of your network equipment (Cisco, HP, Juniper, Foundry)
- routers and switches

What is RANCID ?

- Automates retrieval of the configurations and rchives 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 and SVN (SubVersion)

How does it 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(1) from the previous version
    - E-mail the diff to a mail address (individual or group)

What to use it for

- Track changes in the 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

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

- `http://www.shrubbery.net/rancid/`
- `http://www.shrubbery.net/rancid/NANOG29/`
- `http://www.linuxhomenetworking.com/wiki/index.php/Quick_HOWTO_:_Ch1_:_Network_Backups_With_Rancid`
- `http://gentoo-wiki.com/HOWTO_Rancid`
- `http://homepage.mac.com/duling/halfdozen/RANCID-Howto.html`