

# RANCID / Version Control

AfNOG 12, Dar Es Salaam,  
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# Agenda



- What is RANCID?
- What can I do with RANCID?
- How does it work
- Setting up RANCID
- A few more considerations

# What is RANCID?

- **Really Awesome New Cisco Config Differ**
  - Not only for Cisco now though
- Monitors a set of routers/devices configuration and hardware status and keeps track of changes
- Keeps configurations in a versioning system (CVS or subversion)
- Can notify by email on configuration changes

# What can I do with RANCID?

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- Backup configurations of your network devices (in case of emergency) and keep inventory
- Keep track of changes (when did we put in this line/this linecard)
- Be informed when someone with access does changes to the ACLs or something similar
- Help with network monitoring
  - Not everything can be checked via SNMP
  - Great ideas in NANOG 2005 techtalk

# How does it work?

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- RANCID is run (manually or automated)
- Lookup list of groups (of devices). For each group
  - Connect to the router (SSH or Telnet)
  - Run show commands (configuration/inventory)
  - Collect/filter/format data (remove passwords etc)
  - Retrieve resulting files, check in changes to CVS/SVN
  - Create a diff between current and last configuration
  - e-mail configuration diff to interested parties

# Setting up RANCID

- Author speaks of an "easy 12-step install process"
- The first two are taken care off with current Ubuntu and apt-get  
(`sudo apt-get install rancid-core rancid-util build-essential expect`)
- We'll go through the rest, but a few concepts:
  - You have groups of devices in `rancid.conf`
  - Every group has a `routers.db` file which lists status
  - Login to devices through a tool called `clogin` (or `jlogin/flogin` etc.), has it's own configuration
  - If you want the email functionality, it uses your MTA (like `sendmail/exim`) so configure that correctly
  - Run it every hour or so by using a cronjob

# A few more considerations

- Security
  - RANCID needs permissions to run "show running-configuration" - on Cisco that means a user with privilege 15
  - Make sure to secure your box (password is in cleartext), and ACL the router, or restrict RANCID user to show commands with TACACS
- clogin/jlogin
  - These tools to login to routers might be useful for yourself if you do it often
  - Same security questions apply
- Seriously, you can do so much more with the data collected
  - Check Stephen Stuart's NANOG 2005 techtalk for a few ideas
  - For example, you can automate checking your configs
  - Or produce graphs of your network based on IPs
  - Or generate nice DNS entries for your routers

# References

- RANCID homepage  
<http://www.shrubbery.net/rancid/>
- NANOG 26, Stephen Stuart's Presentation  
<http://goo.gl/E580>
- Subversion (SVN) Home Page  
<http://subversion.apache.org/>
- NANOG 29 Rancid presentation  
<http://www.shrubbery.net/rancid/NANOG29/>
- HOWTOs:
  - [http://www.linuxhomenetworking.com/wiki/index.php/Quick\\_HOWTO:\\_Ch1:\\_Network\\_Backups\\_With\\_Rancid](http://www.linuxhomenetworking.com/wiki/index.php/Quick_HOWTO:_Ch1:_Network_Backups_With_Rancid)
  - [http://gentoo-wiki.com/HOWTO\\_Rancid](http://gentoo-wiki.com/HOWTO_Rancid)
  - <http://homepage.mac.com/duling/halfdozen/RANCID-Howto.html>
- Exercises for this session