

# Configuration Management with RANCID

Network Startup Resource Center  
[www.nsrc.org](http://www.nsrc.org)



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# What is RANCID?

The “Really Awesome New Cisco config Differ”!

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 configs & 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, either of:

- 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. 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)

# Why Use RANCID?

- 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

```
$ for device in bdr1 core1 dist1-b1 dist1-b2; do /usr/lib/rancid/bin/clogin  
-x <commands> $device.campus.ws.nsrc.org; done
```


- On large configurations, you can parallelize operations



- Browser interface for CVS and Subversion version control repositories
- Start at <http://www.viewvc.org/>, code at <https://github.com/viewvc/viewvc/>
- Allows us to view router config differences side-by-side
- Will install as part of our RANCID lab.
- Visible at

<http://localhost/cgi-bin/viewvc.cgi/rancid/>

[/\[rancid\]/routers/configs](#)



### Index of /routers/configs

Files shown: 5  
Directory revision: [13](#) (of [13](#))  
Sticky Revision:

File ^	Rev.	Age	Author	Last log entry
<a href="#">Parent Directory</a>				
<a href="#">.cvsignore</a>	<a href="#">4</a>	11 minutes	rancid	set svn:ignores
<a href="#">bdr1.campus6.ws.nsrc.org</a>	<a href="#">13</a>	3 minutes	rancid	updates
<a href="#">core1.campus6.ws.nsrc.org</a>	<a href="#">13</a>	3 minutes	rancid	updates
<a href="#">dist1-b1.campus6.ws.nsrc.org</a>	<a href="#">13</a>	3 minutes	rancid	updates
<a href="#">dist1-b2.campus6.ws.nsrc.org</a>	<a href="#">13</a>	3 minutes	rancid	updates

### Properties

Name	Value
svn:ignore	.old *.new *.raw

Powered by [ViewVC 1.1.22](#)

[ViewVC Help](#)



# Alternate to RANCID: Oxidized

- Oxidized is a network device configuration backup tool.
- RANCID Replacement
- From <https://github.com/ytti/oxidized>

*“Light and extensible, Oxidized supports more than 120 operating system types.”*

- Installation:  
<https://github.com/ytti/oxidized/blob/master/README.md#debian-and-ubuntu>

# Questions

?

# References

RANCID Project: <http://www.shrubby.net/rancid/>

Subversion (SVN): <http://subversion.apache.org/>

Good, Short RANCID Presentation  
<http://www.shrubby.net/rancid/NANOG29/>

## RANCID HowTos

1. [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)
2. [http://gentoo-wiki.com/HOWTO\\_Rancid](http://gentoo-wiki.com/HOWTO_Rancid)
3. <http://homepage.mac.com/duling/halfdozen/RANCID-Howto.html>