

# Status of Quattor modules

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# Outline

- 1 Introduction
  - General status
  - The generic problem
- 2 Client-side modules
  - CAF
  - LC
  - NCM components
  - CCM
  - ncm-ncd
  - Daemons
- 3 Platform-specific issues
- 4 Conclusion

# Additions

- OFED (Stijn)

## Obsoleted modules

- ncm-http (any users out there?)
- ncm-tomcat (any users out there?)
- ncm-krb4clt

## Personal doubts

- ncm-tomcat2 (what??)
- ncm-rproxy? ncm-squid?
- ncm-smartd? ncm-smartd5?

## Testing, testing, testing

- No serious automated testsuite (except for perl-CAF)
- Testing is time-consuming, and tedious
- Old bugs may reappear

### Example

*Subject: ncm-accounts: pb on SL4*

*From: Michel Jouvin*

*Subject: Re: ncm-accounts: pb on SL4 (PB IS BACK in 5.2)*

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## CAF status

- Components slowly using CAF for running commands and manipulating files
  - Better traceability
- Real test suite.
- Improvements to `CAF::FileEditor` to modify selected lines in a file
  - `replace_lines`, `add_or_replace_lines`
  - Obsolete `NCD::Check::lines`?
- `CAF::FileWriter` restores the SELinux context of any modified files
  - Mandatory for SL6
  - Components handling files out of `CAF::FileWriter` may break services in SL6
- Any other extensions needed?

## LC status

- Manually integrated from  
`/afs/cern.ch/user/c/cons/public/perl/lib/LC`
  - Private RCS repository (no access to any changelog)
  - Not all modules there are relevant to us
- Quattor-specific patch in `LC::File`
  - But don't use `LC::File` directly!!
  - `CAF::FileWriter` and `CAF::FileEditor` are the proper wrappers
- `LC::Process` doesn't expand subshells by default
  - More secure and robust code
  - Intended breakage
  - All core components updated
  - But non-Quattor developers complain
- Patch for splitting in whitespace in SVN

## LC requests

- Ability to run commands as a different user
  - No more `LC::Process::run("su", "foo", "-c", "/bin/ls /");`
  - Waiting for reply

## ncm-accounts

- Rewritten twice in the last two years
  - No more hacks around platform-specific bugs
  - Scalable
- It handles correctly creation of user's home directories
- I hope this time it will last. :)

# ncm-network

## Problems

- Lots of complains in and out of CERN
- Ugly spaghetti code
- Needs rewriting.

# ncm-network

## Use cases

- Defining IP and network for a network card
  - Several IPs per card must be possible
  - DHCP should be possible
- Defining bridge devices
  - Needed for virtualization support
- Tuning device parameters with ethtool
- Configuration of channel bonding
  - But kernel module manipulation is ncm-modprobe's role!
- Must work on diskless servers
  - No more restarting the network just "for test".
- TCP parameters should be controlled by ncm-sysctl
- Anything else?

## ncm-sudo

- CERN needs to configure sudoers.ldap
- The schema supports it, but the implementation is missing



## ncm-useraccess

- No complains outside CERN
- Major pain at CERN because of per-service ACLs.
- Can we remove support for any PAM-based ACLs?

## ncm-authconfig

- Now capable of configuring LDAP authentication in RHEL6
  - Needs a different subtree
- Need a set of functions to hide the different schemas

# ncm-modprobe

- Dropped any support for SL3.
- File locations changed from SL4 to SL6.

## ncm-spma

- Major changes by Victor
- Needs update in 2 phases
  - Procedure for QWG users?
  - Procedure for CERN?
- CERN still needs to patch PrepareInstall
- Solves long-lasting bugs in pkg\_\* functions.

# CCM

- Test suite is broken
- No changes since 2/2009
- Still no support for local profiles
  - Needed for testing automatically (locally?)!!!
- Morgan-Stanley's patches?

## ncm-ncd

- Changes by Nick in September
- CERN should update to 1.3.2
  - Some components won't work with 1.2.X
- Should try to enable `-t` mode to get information on potentially dangerous usages of inputs
  - Done at CERN, some components produce warnings

## cdp-listend and ncm-cdispd

- No changes since June
- Would appreciate if privileges were dropped when possible

## Red Hat 6 stuff

- Yet another platform to maintain
- Introduces Perl 5.12
  - Our first major change in our programming language
  - How long till developers start using its new, incompatible features?
  - How long till access to Perl 5.8.8 becomes difficult ?



## Red Hat 4 phase out

- Some services are dramatically different in RHEL4 and RHEL6
- ncm-modprobe doesn't write in the same locations
  - What are the consequences if we write the same scripts twice?
- Platform-specific code is a terrible source of bugs

## Summarising

- The ability to test locally would save us a lot of time, and improve our quality
- CCM must be fixed to achieve that
- Complete rewrite of ncm-network in the way (by Michel?)
- Need to plan for Perl 5.12
- Need to develop without worrying about old platforms
  - But we must not break them either!
- Can we DELETE obsoleted modules?

...

... plus all we have discussed in this session.