

*Quattor: core modules status
update*

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quattor *Major CERN developments...*

(Not including CERN-specific developments!)

◆ Support for Namespaces (done)

- Default template set
- NCM components' templates

done

◆ SOAP-layer improvements (ongoing)

- Latest SOAP-Lite under testing
 - Still problems with badly escaped sequences (base64 works around)
 - Huge memory consumption

WIP

◆ CDB backend (ongoing)

- Current SQL-based back-end is slow, and a...
- Rewriting CDB2SQL in multithreaded Python with a fast XML parsing library

No progress

◆ SWRepSOAP (ongoing, with BARC India)

- Several enhancements done

done



quattor ...Major CERN developments

- ◆ CCM extensions (started) WIP
 - CCM to accept non-local profiles
 - Essentially, what AII does, but fully CCM-integrated
- ◆ Release build framework (ongoing) WIP
 - 99%-automated procedure (see "Quattor Release Process" slides)
 - ETICS integration still missing
- ◆ Release 1.3 under preparation WIP
 - Namespaces + cumulated fixes + core modules and components enhancements
- ◆ NOTD WIP
 - First version in CVS, not functional yet (?)
- ◆ CERN manpower *still* limited ☹️ No change
 - ~1.4 FTE (counting 1 FTE contributed by CNAF, and 0.2 FTE contributed by BARC India)



quattor *Developers' and users' wish list*

◆ CDB

- Restrict template naming per namespace

Pending

◆ CDB2SQL

- Direct back-end interfacing, like native XML DB and Oracle

→ Avoid re-parsing XML profile just generated by

No progress

◆ PAN Compiler

- Easier programmatic IF integration by adding a new 'data' type template

→ Template type where only key-value entries can be defined for parsing/writing by applications

still requested?

◆ NCM

- Automated web-based documentation for component

WIP

- Generic 'provides' for NCM components (#17681)

→ Request for "meta-components"

Pending

◆ We probably need a new indirection level for device identification

- Device identifiers (e.g. 'eth0', 'sdc') depend on the kernel (2.4 vs. 2.6)

Pending



quattor *Developments at CERN: CCM*

- ◆ UTF8 support (thanks to Cal)
- ◆ `getRecHash()` function for converting config tree to Perl data structure
- ◆ Correct handling of `--force` option
- ◆ No more crashes on stale locks
- ◆ Better handling of HTTP 304 "no change"



quattor *Developments at CERN: NCM*

◆ `cdispd`

- PID now recorded in a file (thanks to Uwe)
- Log-rotation (thanks to Uwe)
- Avoid instantiating twice the same configuration with same PID

◆ `ncd`

- Log `ccm-fetch` information into log file when running `ncm_wrapper`
- Avoid locking when called with `--list`
- Backup now optional in `NCM::Check::lines`

◆ `template`

- Added tags `<LFOREACH>...<ENDLFOR>`, `<PACKAGELIST>` and modified `<PACKAGEPATH>` (thanks to Ronald)



Developments at CERN:

quattor NCM components

◆ Namespace support

- Template conversion through `ncmtplconvert` (shipped with `quattor-sw-util`):

```
$ ncmtplconvert --line-model "match-this-line"\  
> --map-rule="this=that" --dont-touch="foo_must_stay"\  
> foo_bar_quux.tpl
```

- Build framework integration via `make tplconvert`

- New tree structure:

```
components/  
├── -- foo  
│   ├── -- config.tpl  
│   ├── -- functions.tpl  
│   └── -- schema.tpl  
└── -- quux  
    ├── -- config.tpl  
    └── -- schema.tpl
```

◆ When to get rid of old templates

- Next quattor 1.3 update? Quattor 1.4?

◆ Many new components! Thanks to contributors

- Review needed



Developments at CERN:

quattor *pan-templates*

◆ New namespace structure

```
-- clusters
  |-- mycluster
  |   |-- config.tpl
  |   |-- software.tpl
  |-- components
  |   |-- aii
  |   |   |-- config.tpl
  |   |   |-- schema.tpl
  |-- hardware
  |   |-- card
  |   |   |-- nic
  |   |   |   |-- intel_e100.tpl
  |   |-- cpu
  |   |   |-- GenuineIntel_Pentium_4_2600.tpl
  |   |-- disk
  |   |   |-- STD_80.tpl
  |   |-- machines
  |   |   |-- asus_terminator_p4_533a.tpl
  |   |-- ram
  |   |   |-- 1024.tpl
  |-- os
  |   |-- i386_sl3
  |   |   |-- aii.tpl
  |   |   |-- rpms
  |   |       |-- base.tpl
  |   |       |-- defaults.tpl
  |   |       |-- quattor.tpl
  |   |       |-- user.tpl
  |-- pan
  |   |-- functions
  |   |   |-- filesystem.tpl
  |   |   |-- general.tpl
  |   |   |-- network.tpl
  |   |   |-- validation.tpl
  |   |-- profile_base.tpl
  |   |-- structures
  |   |   |-- structures.tpl
  |   |-- types.tpl
  |   |-- units.tpl
  |-- profiles
  |   |-- mynode.tpl
  |-- quattor
  |   |-- repository_cleanup.tpl
  |-- repository
  |   |-- myrep_i386_sl3.tpl
  |   |-- myrep_x86_64_sl4.tpl
  |-- site
  |   |-- aii.tpl
  |   |-- config.tpl
  |   |-- repositories.tpl
```

◆ When to get rid of old templates

- Next quattor 1.3 update? Quattor 1.4?



◆ SPMA/rpmt

- Support for checking RPM signatures... mmh, buggy ☹

◆ SWRepSOAP

- Can now upload the same package to multiple platforms
- Added check for empty packages
- Added authorship info in **find** and **query** commands
- New **chtag** command to move packages across "areas"
- Support for source RPMs
- Support for last-updated timestamp
- Support for operation authorship
- Package integrity checking via MD5
- Support for authentication with Kerberos 5



quattor *Developments at CERN: tools*

◆ wassh

- Now distributed with quattor, ready for next release
 - Support for multiple clusters and subclusters
- Useful as a manual notification tool... don't abuse of it ;-)
`wassh -l root --cluster lxplus 'ncm-ncd --configure foo'`
- Is anyone using it?

◆ pangraph

- Graph representation of Pan templates (virtually, any kind of inclusion-based hierarchy)

```
$ /usr/lib/perl/quattor-sw-util/pangraph\  
--base-dir <cvcs-checkout>/pan-templates/namespaces\  
--format png --tpl-file-ext .tpl.cin profiles/mynode.tpl.cin\  
> graph.png
```
- First step towards a Web-based template navigator?
 - Integration with Lemon's XML parser, which will be donated to quattor
- Try it 😊



quattor *Developments at CERN: others*

- ◆ Work in progress on new partitioning scheme
 - See Luis' presentation
- ◆ CDB update
 - See Marco Emilio's presentation
- ◆ Plan for developments @ CERN can be found under:
 - <http://quattor.org/documentation/management/quattor-plans-Q42006-Q42007.htm>

 quattor



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<http://quattor.org>