SA2 – Development Tools

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Outline

- **ETICS Status and Progress**
  - Improvements since last AHM
    - *ETICS Software*
    - *ETICS Infrastructure*
  - Work during EMI Year 3
  - Next Steps

- **Preparation for Post-EMI**
  - Build from sources
  - Preparation for EPEL and Debian repositories with ETICS
    - *Features and plugins in place*
  - Standard Tools without ETICS
    - *Koji, Bamboo, Jenkins*
  - Migration from ETICS to other Tools
  - Next Steps

Improvements: Infrastructure

- New pool control scripts
  - There is a thread per platform
  - A complete iteration time for starting nodes has been reduced from 40 minutes to 15 minutes
- Monitoring system extended
  - New scripts to mitigate and fix the reliability issues that we have had during the last month

Improvements: Software (I)

- ETICS client
  - Several versions released (from version 1.6.6 to current production 1.6.14)
  - Debian packaging: Native 3.0 format supported
  - Plugin execution improved to allow execution in more phases

- Debian builds
  - Developed a system to aggregate the different subsystem builds in one single report

Improvements: Software (II)

- ETICS Web Portal
  - New filtering options in the Submissions tab
  - Graphical representation of dependencies (to be included in the next release)

- Plugins
  - RPMlint bug fixing
 - Completed Lintian integration

Next steps

- Client updates (if new bug are discovered)

- Lintian plugin tuning

- Release a new version of the portal with the new graphical representation of dependencies

- Improve infrastructure reliability

- Support for EMI-3 and previous versions updates release

Build from sources

- For year 3, every PT should provide their RPM and Debian source packages to be build in ETICS with Mock and Pbuilder

- You can find more information about what packages are needed and the places to put them here: https://twiki.cern.ch/twiki/bin/view/EMI/EmiSa2PackagingPolicy

Preparation for EPEL and Debian

- RPMLint on place to collect information about RPM packages compliance level with EPEL guidelines

- Lintian on place to collect information about DEB packages compliance level with Debian guidelines

- More information in the next presentation

From the survey…

Tools
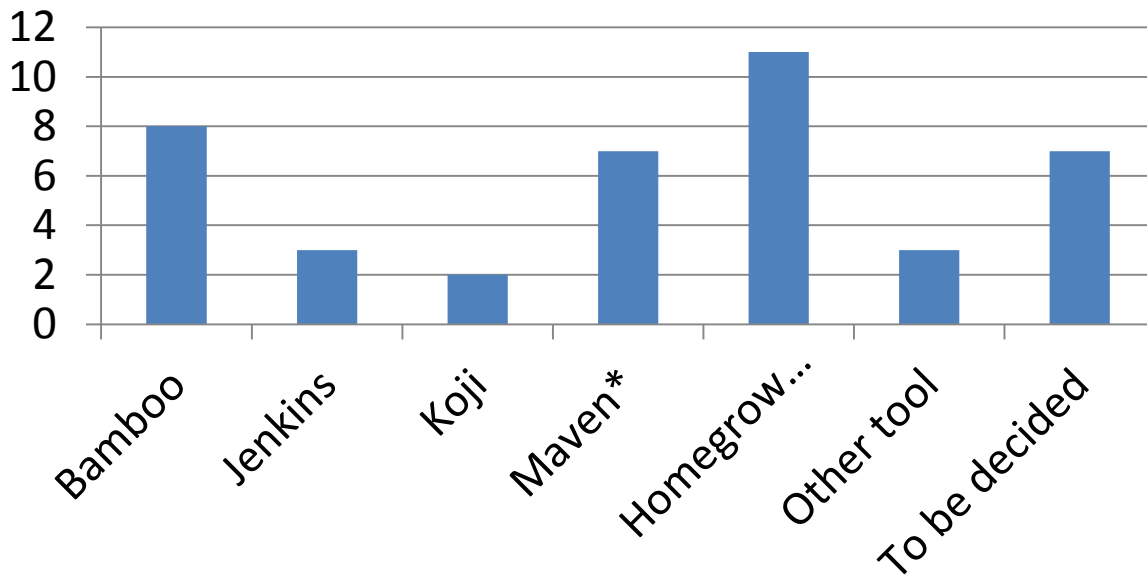
*Maven is used almost always inside Bamboo or Jenkins

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Fedora Koji

- RPM packaging tool used in Fedora to build its RPMs
- Input files are spec and src.rpm files
- Chained builds used to build dependencies
- The project structure is done using tags (collection of packages) and builds targets (where a package should be built and how it should be tagged afterwards)
- Scratch builds: build but do not add the result to the release
- *https://fedoraproject.org/wiki/Using_the_Koji_build_system*

Atlassian Bamboo

- Structured as plans. A plan is a set of tasks to be executed
- No security option for distributed builds
- Several build automatic strategies
- Extensible by plugins
- Many standard tools preconfigured: Maven, ant, etc…
- Possible to set environment variables and properties
- Remote command line access using REST APIs
- http://www.atlassian.com/software/bamboo/overview

Jenkins (Hudson)

- More than 400 free plugins available (including an Eclipse plugin)
- Secure distributed builds using SSH
- Build time order can be specified but manually
- Full access to all the files in the build directory
- There is not a clear project structure as we know it now
- Testing capabilities using plugins
- http://jenkins-ci.org/

Migration from ETICS

- If it is requested by the PTs, we can agree a format to export the existing ETICS configurations

- It would be a common template and every PT should create parsers for the build system that they have selected

Next steps

- PTs that are still building with ETICS should move to build from source

- PTs should have an idea of the tool(s) they are going to use in the post-EMI era

- If they want to keep the configurations that they currently have on ETICS, they should inform EMT