



Enabling Grids for E-science

The ATLAS software installation system

on behalf of Alessandro De Salvo

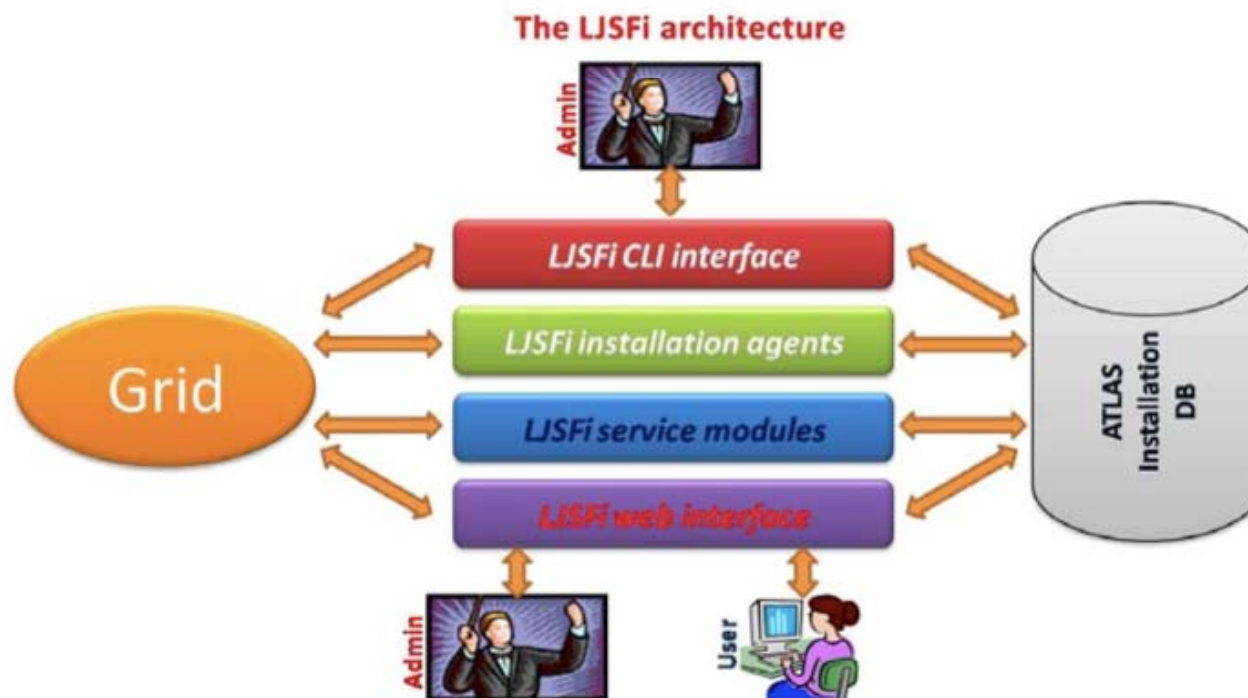
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- **Why:**
 - Huge amount of resources available in the Grids
 - Needed the most up-to-date experimental software on all the sites
- **Based on:**
 - Light Job Submission Framework for Installation (LJSFi)
 - Independent job submission framework
 - Automatic discover, check, install, test and tag the full set of resources
 - Sites can subscribe to new versions or pin old versions
 - Automatic uninstall of old versions (unless pinned)

- **LJSFi architecture**

- LJSFi is a VO-independent framework for job tracking and task management in LCG/EGEE
- Core system based on Installation DB and CLI



- **Site check**
 - Test jobs on site to check the site status/resources
- **Installation task**
 - For each sw release, tag published on CE at the end of the installation task
- **Output validation**
 - LJSFi retrieves job output and exit code from Grid middleware:
 - Job output uploaded into the web server
 - Exit code update the task status into the DB

- **ATLAS software packaged in tarballs and installed using PacMAN**
- **Authentication via certificate**
 - Protection of sensitive information
 - Queries to the web services, e.g.
 - Who requested the installation
 - Who performed the installation
- **Job Tracking**
 - History till the begin (5 years)

- **LJSFi successfully used by ATLAS on EGEE since 2003:**
 - Started with version 1.0, now 1.2: 160'000 installation jobs
 - OSG almost integrated with LJSFi
 - work in progress to integrate NorduGrid

LJSFi system has been proven to be flexible and robust and copes with the software installation needs of the ATLAS experiment