



DIRAC testbed

SuperBDIRAC development

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Summary



- SuperBDIRAC project status
- Next SuperBDIRAC meeting
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- Marseille meeting presentation
- DIRAC testbed status
- Webportal development next steps proposal
- Milestone proposal
- Discussion time



What means DIRAC project ?



- DIRAC project is a collection of “extensions”
 - Extensions are: DIRAC itself, webportal, VMDIRAC, etc..
- **A project define a group of extensions**
- A project release define, foreach extension used, the version to be used and dependencies
 - e.g. Both VMDIRAC and Webportal rely on DIRAC
- Obviously, every “DIRAC based” project rely on DIRAC itself
- e.g. SuperBDIRAC project depends on DIRAC
 - SuperBDIRAC v1-pre2 depends on DIRAC v6r5p8



SuperBDIRAC project status



- SuperBDIRAC → prototype
 - <https://github.com/managai/SuperBDIRAC> (testing purpose)
 - https://github.com/managai/DIRAC_tmp (helping purpose)
 - add menu in webportal named "Production Manager" with same page's structure of WebUI
- Installation procedure
 - **Normal procedure** (just editing a configuration file)
 - **Perfectly working** (thanks to Adrian Casajus)



Summary from DIRAC User Meeting

- Indico page: <https://indico.in2p3.fr/conferenceTimeTable.py?confId=7169#all.detailed>
 - About 20 participants
- DIRAC consortium is coming
- DIRAC: from Grid to Distributed Computing
 - DIRAC as “Interware”
- Development moved on GitHub
- Interface enhancements
 - Webportal
 - RESTful API
- Better performance



Selected slides from DIRAC User Meeting



- Status of the Project
 - <https://indico.in2p3.fr/getFile.py/access?contribId=7&sessionId=1&resId=0&materialId=slides&confId=7169>
- Core Services
 - <https://indico.in2p3.fr/getFile.py/access?contribId=27&sessionId=1&resId=0&materialId=slides&confId=7169>
- REST interface
 - <https://indico.in2p3.fr/getFile.py/access?contribId=27&sessionId=1&resId=2&materialId=slides&confId=7169>
- WMS
 - <https://indico.in2p3.fr/getFile.py/access?contribId=1&sessionId=1&resId=0&materialId=slides&confId=7169>
- DIRAC File catalog
 - <https://indico.in2p3.fr/getFile.py/access?contribId=5&sessionId=1&resId=0&materialId=slides&confId=7169>
- Transformation System
 - <https://indico.in2p3.fr/getFile.py/access?contribId=29&sessionId=1&resId=0&materialId=slides&confId=7169>
- LHCb Production System
 - <https://indico.in2p3.fr/getFile.py/access?contribId=8&sessionId=2&resId=0&materialId=slides&confId=7169>



DIRAC Webportal renewal



- Current Webportal based on not more supported framework (Pylon)
- Pyramid (prosecutor of Pylon) offer too much features
 - DIRAC doesn't use about 90% of this features
- Current webportal not too fast nor easily customizable
- LHCb (and others) requests a new webportal from scratch
- Within December new framework will be choosen
- Current Webportal maintance and bugfixing guaranteed until new webportal ready (at least on year)



DIRAC Webportal renewal



- How this task affect SuperBDIRAC development ?
 - Current webportal will be supported for at least one year
 - LHCb will continue to use current webportal until newest ready and well tested
 - Webportal extension is mandatory to finalize SuperBDIRAC goal: porting WebUI functionalities in DIRAC
 - We can be involved in new webportal framework choice and development (contact Matvey Sapunov and DIRAC Development Forum)
- Until new webportal production ready, we can continue developing SuperBDIRAC using current webportal
 - As suggested by entire DIRAC community



Next SuperB DIRAC meeting



- SuperB DIRAC meeting bi-weekly scheduled
- Normally next meeting scheduled in 21 November, but...
 - Several news from DIRAC User Meeting
 - Just one month for Frascati meeting
 - Can we plan next meeting in 14 November ?



DIRAC testbed status



- bbrbuild01.cr.cnaf.infn.it
 - SuperBDIRAC v1-pre2
 - production
- sb-serv04.cr.cnaf.infn.it
 - V63r5p5 → can I remove it and install SuperBDIRAC ?
 - Test
 - Webportal menu and page addiction
 - SQLAlchemy class based new commands
 - Sites info import
- gridtest-05.ba.infn.it
 - None
 - Still installation test



Webportal development next steps proposals



- Replicate WebUI menu and page structure
 - https://bbr-serv09.cr.cnaf.infn.it:8443/~webui_sb5/
- Prepare “Hello Word” working page
- Prepare a test page to interface with SBK service
 - Display list of sites



Milestone proposal



- October
 - SuperB DIRAC installation
 - SBK5 insert query via SQLAlchemy
 - Sbkprodrhas only read permission
 - Write and update permission necessary to replicate Site Management page
- October
 - Transformation System testing
 - Should be useful for workflow and Massive Data Transfers
 - Site Management porting under SuperB DIRAC
 - First FastSim job submission via SuperB DIRAC
 - Prototype (Expert or Shift) Init page
- November
 - Manage permission rules for Operations via SuperB DIRAC web interface
 - Production Requests page
 - Monitoring functionalities in SuperB DIRAC
- December
 - SuperB DIRAC able to perform complete MC production stack



Next meeting reminder



- SuperB Collaboration Meeting @ Frascati
 - December 2012
 - Who plan to participate ?



Discussion time



- Proposal ?
- Suggestion ?
- Something not clear ?



BACKUP SLIDES



Credits



- Armando Fella – Pisa
- Bruno Santeramo – Bari
- Christian De Santis - Rome
- Giacinto Donvito - Bari
- Marcin Chrzaszcz - Kracow
- Miłosz Zdybał - Kracow
- Rafał Grzymkowski - Kracow

Thanks to DIRAC developers, especially to
Andrei Tsaregorodtsev, Federico Stagni, Matvey Sapunov,
Krzysztof Daniel Ciba, Ricardo Graciani, Adrian Casajus



Groups



Groups and Role in VO and DIRAC

Group/Role	Type	Description	VO share	DIRAC mapping
/superbvo.org	Standard User	Generic user group	0	sb_user
/superbvo.org/Role=ProductionManager	Production Manager	User role related to MC production management	20	sb_productionmanager
/superbvo.org/Role=SoftwareManager	Software Manager	VO Software administrator	0	sb_softwaremanager
/superbvo.org/Role=Analysis	Standard User	User role related to analysis task	0	sb_analysis
	DIRAC administrator	DIRAC administrator		dirac_admin
	DIRAC pilot job	Useful for DIRAC		sb_pilot



Collaborative tools update



- SVN: <https://sbrepo.pd.infn.it:8911/projects/WebUi/browser/trunk/DIRAC>
 - Uploaded SuperBDIRAC module
 - Uploaded Severus (modified to work with DIRAC)

- Severus/version24/modules/fileManager.py
 - Line 109
 - Original
 - *out = self.lcgUtil.lfcLs(path)*
 - Modified
 - *out = self.lcgUtils.lcgLs(path)*
 - Why?: Workaround because surl starting with lfn:/ supposed to be accessed from CNAF (so Severus drop initial lfn:/ from surl and try to access input file locally)

- DIRAC job wrapper install its own python environment
 - Python version 2.6.6
- Severus tested to work with Python 2.4
 - Severus perform an intial python version check
 - Version24 directory contains all components
- Proposal
 - Test modified Severus with Python 2.6
 - New code under version26 directory
 - Modify severus.py to enable Python 2.6 usage

- SBK5 queries to be prepared - via SQLAlchemy and/or REST interface
 - SELECT count(runnum) as tot FROM "<session_name>"_Job " WHERE (prod_series = '<prod_series>') AND (runnum BETWEEN "<minrun>" AND "<maxrun>") AND (status!='prepared');
 - SELECT * FROM "<session_name>"_Job " WHERE (prod_series = '<prod_series>') AND runnum = '<runnum>';
 - UPDATE "<session_name>"_Job SET grid_job_id = "<job_id>", status = 'submitted', ts_submitted = cast(now) as timestamp(0) WHERE prod_series = '<prod_series>' AND runnum = "<runnum>" AND status = 'prepared';
 - UPDATE "<session_name>"_Submission SET bulk_job_id || ('<site>' => '<bulk_job_id>') WHERE uid = '<uid>' AND ts_prepared = '<timestamp>';



MC production via SuperBDIRAC



- Issue: SuperBDIRAC/ProductionSystem need to interact with SBK5
 - N.B. Now Severus can be properly launched only from CNAF (?)
 - SBK5 psql-like access only from CNAF
 - SBK5 access outside CNAF only via REST interface
 - Solution proposal:
 - Create a Service (temporary named SBK5Service) into SuperBDIRAC to cope (all?) SBK5 queries
 - Each site equipped with a DIRAC server and SBK5Service must be able to directly query SBK5
 - Enhance SBK5 REST interface by adding some views to simply perform needed queries from every DIRAC Server Instance
 - No changes to SBK5 access policy

- DIRAC webportal must replicate all WebUI features
- DIRAC/WebUI operations
 - Production creation → write
 - Production data retrieve → read
 - Request creation → write
 - Request data retrieve → read
 - Bulk job creation → write
 - Bulk job submission → read data for Severus
- Severus job wrapper
 - Job status report → write
 - Job Log registration → write



DIRAC API



- DIRAC offers a powerful set of API
 - We need a good quality documentation to speed up development
- API documentation
 - <http://diracgrid.org/files/docs/CodeDocumentation/API/index.html>
 - Epydoc generated – updated – maintained by developers



Useful links



- **DIRAC official site**
 - <http://diracgrid.org/>
- **DIRAC official forum**
 - <https://groups.google.com/forum/?hl=en&fromgroups#!forum/diracgrid-forum>
- **DIRAC repository**
 - <https://github.com/DIRACGrid>
- **DIRAC API documentation**
 - <http://diracgrid.org/files/docs/CodeDocumentation/API/index.html>
- **DIRAC testbed for SuperB wiki page**
 - http://mailman.fe.infn.it/superbwiki/index.php/Distributed_Computing/Dirac_testbed
- **DIRAC testbed webportals:**
 - bbrbuild01.cr.cnaf.infn.it
 - <https://bbrbuild01.cr.cnaf.infn.it:8443/DIRAC/>
 - sb-serv04.cr.cnaf.infn.it
 - <https://sb-serv04.cr.cnaf.infn.it:8443/DIRAC/>
- **Production WebUI**
 - https://bbr-serv09.cr.cnaf.infn.it:8443/~webui_sb5/
- **SuperB resources (google Doc)**
 - <https://docs.google.com/spreadsheet/ccc?key=0AsjxRpEZ2zEIIdHU2cjh4YTdrajdYdlNmajdBVGZWLWc#gid=0>
- **SuperB Production Shifter Guide wiki page**
 - http://mailman.fe.infn.it/superbwiki/index.php/Distributed_Computing/Production_Shift_Guide

WebUI workflow

