



DIRAC testbed

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Summary



- Collaborative tools update
- MC production using Severus
- MC production via SuperBDIRAC
- Modifying Severus for DIRAC
- WebUI workflow
- Planning for meeting @ PISA



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)



MC production using Severus



- Status: proof of concept
- mc_production.py
 - get php file generated by WebUI as input
 - parse php and severus conf file
 - Retrieve necessary parameters
 - Launch DIRAC jobs using a modified version of Severus wrapper



MC production using Severus



- Parameters to create production:
 - Production: prod_series
 - Session: session_name
 - Sites: submission_site
 - Start runnum: Minrunnum
 - End runnum: Maxrunnum
 - Number of events: nevents
 - Mode: [test|normal]
 - User: uid
 - Timestamp: ts_prepared
 - Analysys – Generator – Geometry - Background



MC production using Severus



- Test results:
 - Severus works properly via DIRAC
 - SBK5 updated
 - Submission properly visible from WebUI
 - Stagein and stageout via lcg commands
 - Stagein works properly
 - Stageout works properly
 - LFC properly updated
 - Tested jobs running up to 80.000 events
 - MC production must be performed by sb_productionmanager users
 - sb_productionmanager DIRAC group maps user with VOMSRole = ProductionManager



MC production using Severus



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 - Tested jobs running 80.000 events



MC production using Severus



- Issues:
 - Submission must be done via DIRAC webportal
 - Task assignement to SuperBDIRAC/ProductionSystem development
 - WebUI chek selected runnumbers before job submission to avoid dupolicate works
 - Need a query to SBK5 (see next slides)
 - A Python script used by WebUI updating SBK5 for every job
 - Status = submitted
 - ts_submitted = timestamp
 - Need a query SBK5 (see next slides)



MC production using Severus



- Future steps proposal:
 - Solve issues (see next slides)
 - Try Stagein and Stageout via DIRAC on DFC
 - Test DIRAC with both DFC and LFC
 - DFC and LFC synchronization and...
 - Test stagein and stageout via DIRAC on DFC but syncing also LFC
 - Not easy → need interaction with DIRAC developers



MC production via SuperB DIRAC



- Issue: SuperB DIRAC/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 SuperB DIRAC 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



MC production via SuperBDIRAC

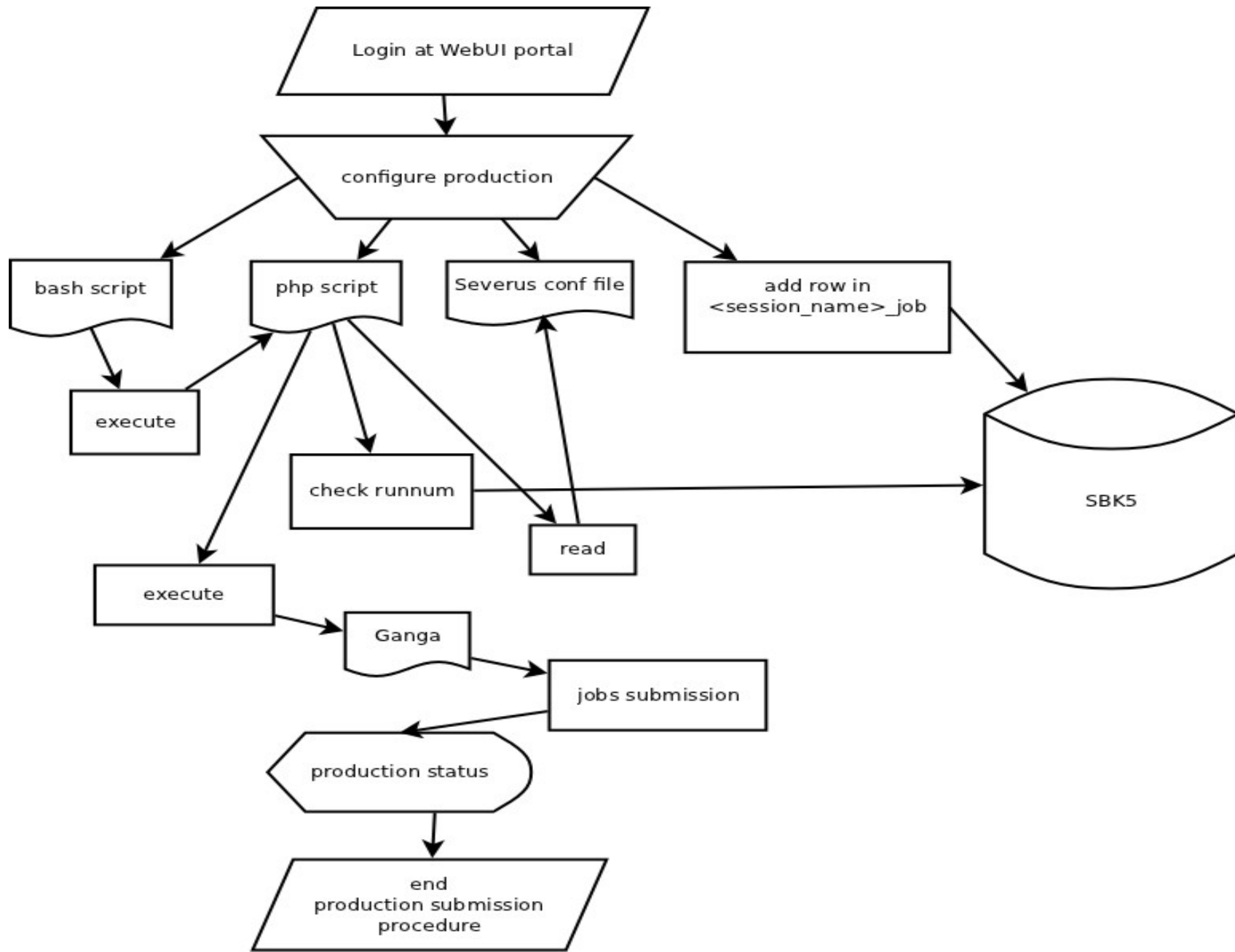


- SBK5 queries to be prepared - via SQLAlchemy and/or REST interface
 - _ SELECT count(runnum) as tot FROM "<session_name>"_Job " WHERE (prod_series = '<prod_series>') AND (runnum BETWEEN "<minrun>" AND "<maxrun>") AND (status!='prepared');
 - _ SELECT * FROM "<session_name>"_Job " WHERE (prod_series = '<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>';

- 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

WebUI workflow





Planning for meeting @ PISA



- Works to be presented regarding DIRAC
 - State of art of DIRAC-SBK5 integration
 - (Mylosz Zdybal ~ 15 min)
 - Report on DIRAC evaluation
 - MC FastSim production using Severus
 - Porting WebUI functionalities into DIRAC Webportal
 - Discussion in 13/09/2012 SuperBDIRAC meeting
 - SuperBDIRAC module
 - (Bruno Santeramo ~ 15 min)



BACKUP SLIDES

- 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/cc?key=0AsjxRpEZ2zEIdHU2cjh4YTdrajdYdlNmajdBVGZWLWc#gid=0>
- **SuperB Production Shifter Guide wiki page**
 - _ http://mailman.fe.infn.it/superbwiki/index.php/Distributed_Computing/Production_Shift_Guide



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