



Enabling Grids for E-science

Run Grid services for Production & Pre-Production

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What are Grid services?

- *TOP-Level BDII*
- *WMS + LB*
- *LFC*
- *VOMS*
- *MyProxy*
- *FCR*
- *RB (not supported anymore)*

Other activity-related services:

- *Webpages, monitoring, communication*

Grid Services (at) CE: current status

Top-level BDII:	3 in 1
WMS machines:	2 instances
LB Servers:	2 instances
VOMSes:	2 instances
MyProxy:	3 instances
LFC:	3 instances
RB:	3 instances

Run Production Services

- Deliver stable and usable services mainly for regional sites & users but not limited to
- Keep users informed
- Share knowledge between admins

Run Pre-Production Services

- Activities:
 - Monitoring services
 - Pre-deployment tests
 - Client/Service testing

Run Production Services

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Run Pre-Production Services

- Activities:
 - Monitoring services
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Production Services

- **Provide good quality services**
 - When is service production ready?
 - Service monitoring and notifications
 - High Availability mechanisms
 - Failure management procedures
 - Upgrade procedures
 - Knowledge sharing, writing documentation
- **Interaction with users**
 - Keep users & VOs informed about available services
 - Problem reporting and handling

Production Services

- **Provide good quality services**
 - When is service production ready?
 - Service monitoring and notifications
 - HA mechanisms ;)
 - Failure management procedures
 - Upgrade procedures
 - Knowledge sharing, writing documentation
- **Interaction with users**
 - Keep users & VOs informed about available services
 - Problem reporting and handling (regional RT?)
 - Convince people in region to use our (regional) service instances

Testing and Monitoring

Nagios

- Tests for most services are implemented
- Ability to publish results to SAM
- Notifications via mail, jabber, etc.
- Nice webUI
- Availability monitoring and reporting

Custom regional SAM tests (to consider)

- Tests are easy to write
- Periodical submission
- Questionable added value

Service Usage Statistics

- Who and how is using our services?
- Isn't my service bored/overloaded?

Statistics collection: Cacti

- regional instance
- few templates needs to be written

Source of metrics

- SNMP daemon with dedicated plugins
- CGI page (apache + bash script)
 - Easy to deploy
 - Simple but effective
- *The same metric collection plugins for CGI and SNMP*

Reliable and stable services

Methods

- DNS load distribution (stateless only) + dynamic zone updates
- Built-in failover features (LB failover in WMS)
- Clear and Sane upgrade and testing procedures
- Service Administrator specialization

Documentation

- Service status page for general outlook
- For users
 - *List of available services for my vo (general info page)*
 - *How to override site configuration to use them*
- For admins
 - *List of services that my site can use*
 - *How to configure my site to use them*
- How to keep documentation up to date?

Task coordination and evaluation

- Meetings (every 2 weeks)
- Mailing lists for spreading information
- Wiki pages for reports and documentation
- Instant messaging (obligatory?) (jabber)

Clear and well defined roles and tasks for every partner.

What am I expected to Do in Production? Specialization proposal

Duties for primary service providers

- Run and maintain (**PROD**)
- Keep documentation for users up to date
 - *Write Instructions for users*
 - *Write Instructions for site admins*
- Verify and sanitize installation/upgrade procedures
- Support for administrators of the same service type
 - *Most frequent problems -> WIKI*
- Write plugins for metrics collection
- Install and check new release as first in ROC
(*accounted as PPS activity*)

Secondary Service

- **Run and maintain**
- **Follow procedures**



Specialization

There are 6 service types which need primary sites

- WMS
- MyPROXY
- LB
- LFC
- BDII
- VOMS

Suggested locations will be presented in 5 minutes

Pre Production Services

Activities

- Pre-deployment tests
 - *TEST REPORT (AND SHUTDOWN ?)*
 - *No need for permanent site*
- Client testing
 - *Automated (unattended)*
 - *Attended mode (admin effort required)*
- Providing Monitoring Services
 - *eg. SAM client*

How to do PPS optimally

Painless PPS

- Locate Pre-* grid services (mainly) on specialized sites
 - *Service Know-how*
 - *Minimized effort*
 - *Less time needed*

What to do

- Install/Setup/Test
- Give feedback
- Shutdown (?)
- And wait for next release...

Questions/Discussion