



Enabling Grids for E-science

EGEE Operations: *Evolution of the Role of the PPS?*

N. Thackray, A. Retico
SA1

EGEE 2007

Budapest, Hungary, 3rd October, 2007

www.eu-egee.org



Information Society
and Media



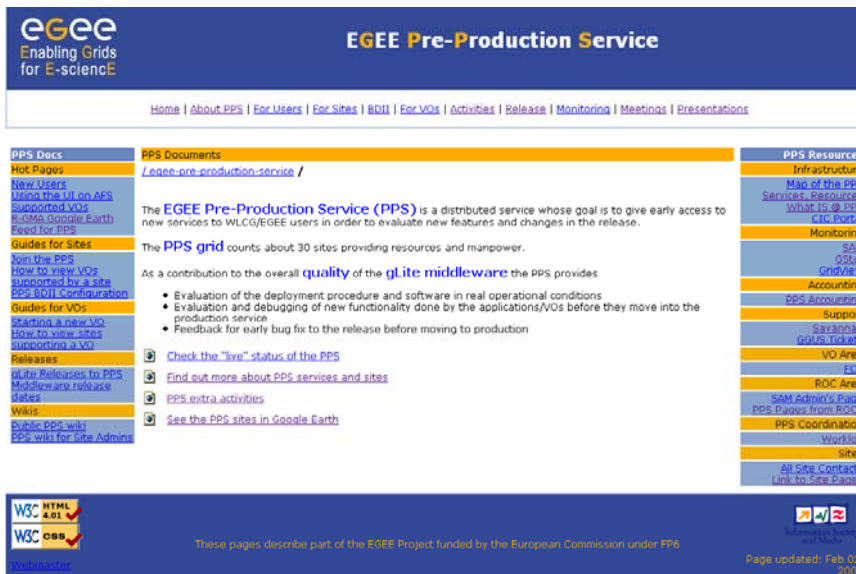
The EGEE Pre-Production Service (PPS) is a distributed service whose goal is to give **early access** to new services to EGEE/WLCG users in order to evaluate new features and changes in the release

The PPS grid counts about 30 sites providing resources and manpower

PPS contributes to the **quality** of gLite middleware:

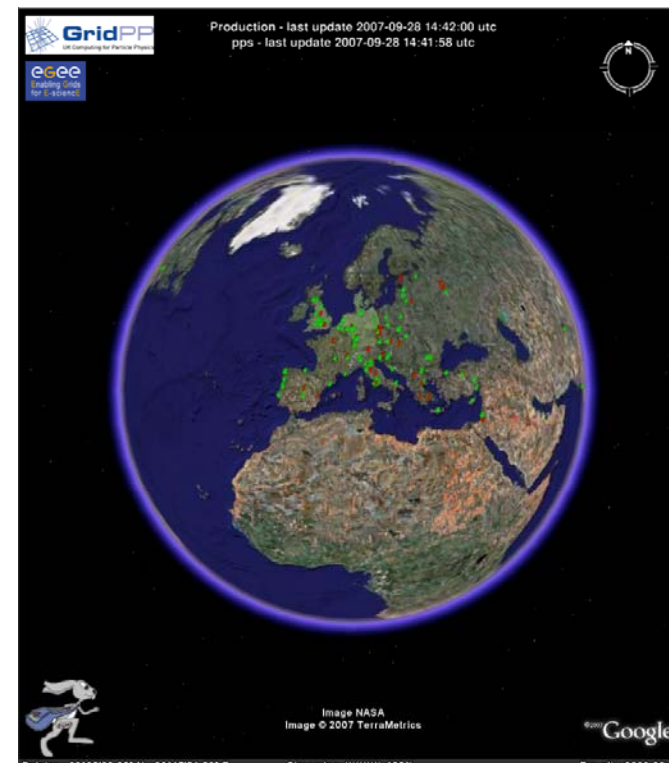
- Software and **release** documentation are **validated** through the operation in a real grid in real conditions
- **e-science applications** from VOs benefit from a scaled environment for validation and debugging before they are moved into prod
- Feedback is given for **early bug fix** to gLite before releasing into production
- Allows site admins to gain **valuable experience** with new middleware before it hits production before releasing into production





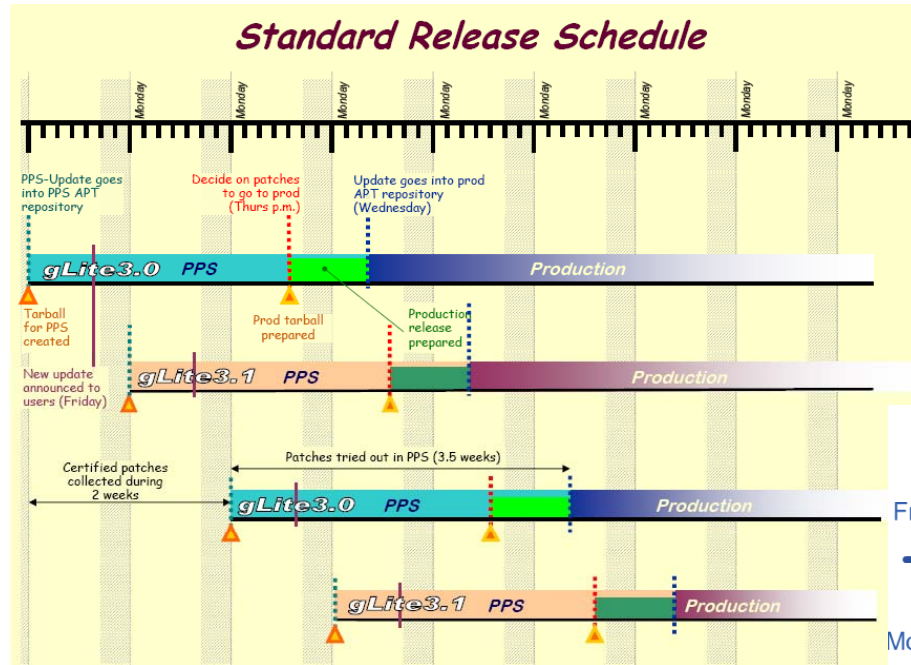
The screenshot shows the EGEE Pre-Production Service website. The header includes the EGEE logo and the text 'EGEE Pre-Production Service'. Below the header is a navigation menu with links like 'Home', 'About PPS', 'For Users', etc. The main content area is divided into three columns: 'PPS Docs', 'PPS Documents', and 'PPS Resources'. The 'PPS Documents' column contains a paragraph describing the PPS: 'The EGEE Pre-Production Service (PPS) is a distributed service whose goal is to give early access to new services to WLCG/EGEE users in order to evaluate new features and changes in the release. The PPS grid counts about 30 sites providing resources and manpower. As a contribution to the overall quality of the glite middleware the PPS provides...' followed by a list of bullet points. The 'PPS Resources' column lists various tools and services like 'Monitoring', 'Accounting', 'Support', etc. At the bottom, there are logos for W3C HTML and W3C CSS, and a footer with the text 'These pages describe part of the EGEE Project funded by the European Commission under FP6' and 'Page updated - Feb 02, 2007'.

- Info: PPS Web
- www.cern.ch/pps



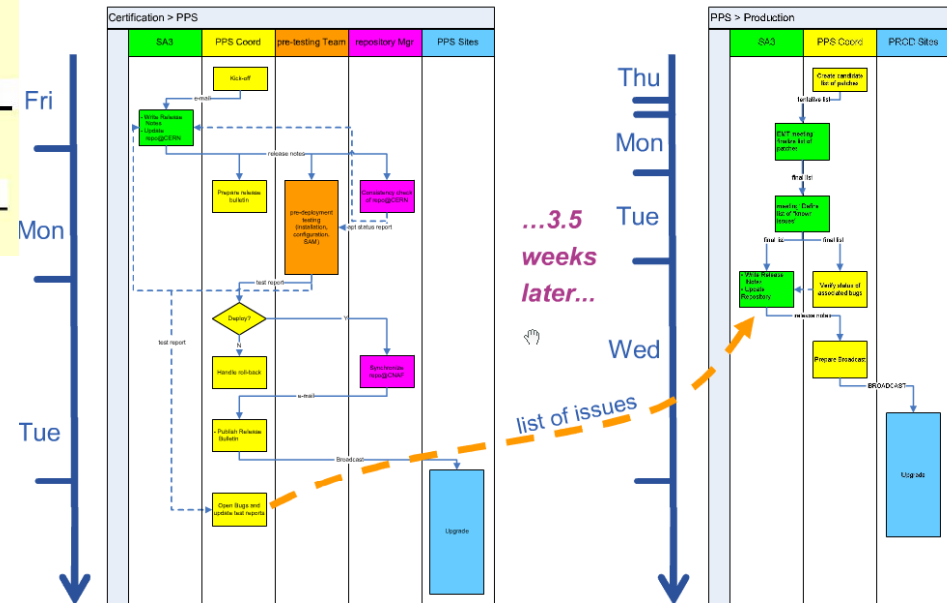
- EGEE Pre-Production Service
 - 16 Countries
 - 30 sites
 - ~50 CEs
 - ~16 WMS
 - 4 FTS
- Run as a SERVICE
(monitoring, tickets, stability concerns)

- <http://www.cern.ch/pps/maps/index.html>



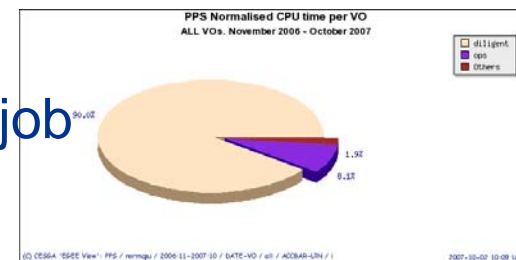
- Weekly update schedule
- Alternate baseline gLite3.0/3.1

- Certification → PPS → Prod



- <http://www.cern.ch/pps/index.php?dir=./release/process/>

- Diligent VO is using PPS as production infrastructure since Sep 2005
- E.g. Data challenge (July, August, September)
 - Extraction of features from pictures downloaded from flickr
 - > 38M images processed and received
 - ~500 jobs per day (through 2 WMSs)
 - 50 Mb of disk space and > 512 of RAM per job
 - 4000h of CPU time accounted
- Results of DC:
 - http://dlib-services.isti.cnr.it/datachallenge/log_count_dlib.html
- 90% of total “production” of PPS (the rest is OPS)
- No big deal compared to HEP VO but continuity, availability, reliability of PPS required



- **Usage by larger VOs (esp. HEP VOs) is sporadic**
 - No regular nor continuous activity ever accounted in PPS to LCG VOs
- **Three peaks of usage seen in 2007**
 - March: Test of SLC4 WNs
 - May: Deployment of SRMv2
 - May: Test of VOViews tag for Job Priority
- **Limited in time and scope**
- **Most of the PPS resources deployed are un-used**



- **Production area (PROD) = PS + PPS**
- **~ 11% of the number of sites in production area are PPS**
 - Does not mean 11% of WLCG/EGEE infrastructure manpower dedicated to PPS
- **~19% of bugs in production area are found in PPS**
- **This even with PPS not being used**
 - Bugs in PPS mainly submitted by PPS site admins
- **So, yes, the (few) PPS people are *in general* good at catching bugs**

- **We asked the VOs for input to understand why PPS is not used:**
 - Existing technical barriers
 - Needed improvements.
- **One written reply from LHCb**
- **One meeting with CMS**
- **Meeting with Atlas after EGEE07**
- **Alice presented at yesterday's PPS meeting**

- **Both LHCb and CMS agree on manpower as the main issue:**
 - A lot of effort needed by the VO to maintain and operate two parallel submission infrastructures in two “universes”
- **LHCb: Size of PPS “by definition” does not allow to spot problems**

- **Clients**

- Early distribution: as soon as built and module-tested by developers
- Always backward-compatible to be tested by the VO against production services

- **Services**

- Available in production BDII but “flagged” as PPS
- By default not used by other production services
- CEs and SEs to see the same Back-end resources as in production

- **Shares with LHCb the idea of deployment in production of “flagged” PPS services**
 - GlueStatus != ‘Production’
- **Staging of deployment to production**
- **“Task-force” usage model**
 - very focused and on-demand bursts of activity involving a limited number of PPS service instances
 - no strict need for service continuity out of these “peaks”
- **Proposal to make CMS test suites available in PPS**
 - Need for someone (in PPS) to run and check them

- **PPS is there, operated as a service**
 - Fulfilled (installed, maintained, debugged)
 - Assured (continuity/availability/reliability cared)
 - Accounted
- **The service runs mostly unused**
- **So now the hard question...**

- **How do we adapt the PPS?**

- **Shift the emphasis of the PPS to meet the needs of SA1**
 - Extend the deployment testing to formally cover most common site configurations
 - Run some automated testing to sanity check new middleware services and updates
 - SAM + any tests that can be begged, borrowed or stolen from certification, VOs, etc.
 - Think of any other areas we want to cover, then...
 - Re-size the PPS to meet the needs and so as not to waste resources
- **What about service testing by the VOs?**
 - In reality they already do this in production
 - WMS, FTS, VOViews, ...
 - Suggest we formalize this with a clear process to clarify and control how this is done in the future
 - Treat on case-by-case basis
 - Appoint a coordinator to plan, organize and coordinate the testing
 - Require the official sign-off of the VO(s) requesting the testing

