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Enabling Grids for E-sciencE

gLite Test and Certification Effort
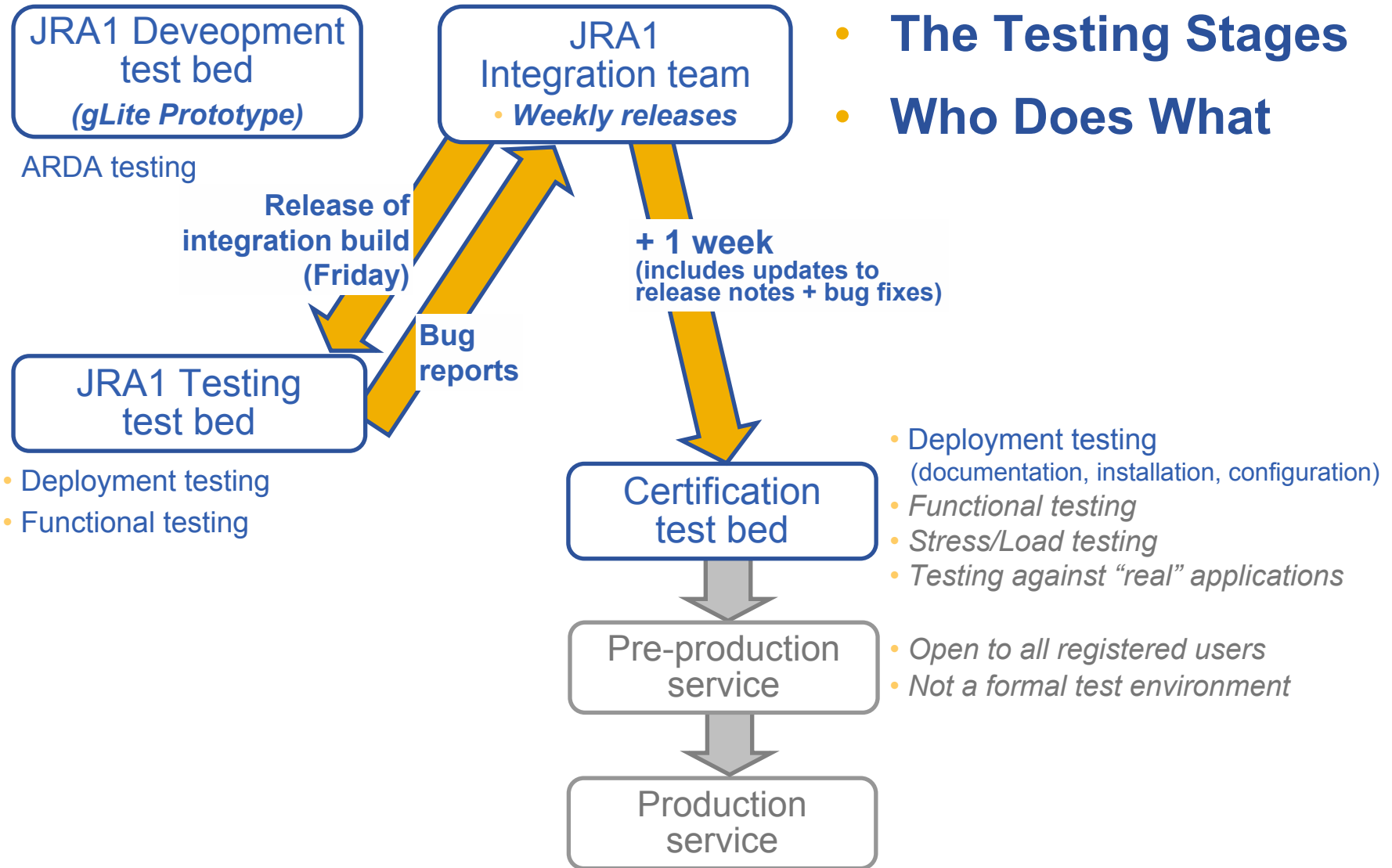
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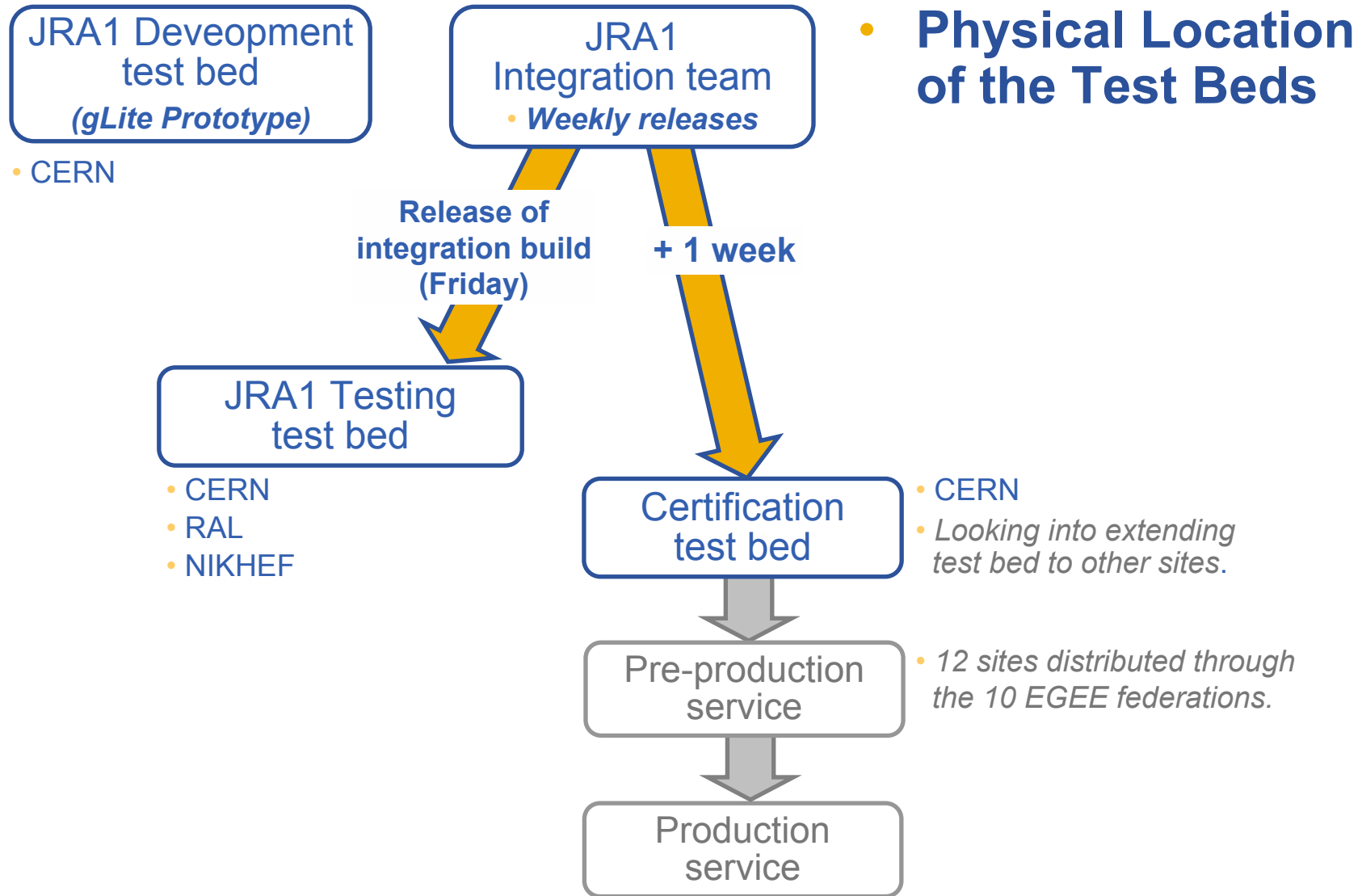**Enabling Grids for E-sciencE**

- **Description of the testing process**
  - The testing stages
  - Who does what
  - Physical location of test beds

- **Organisation of the testing effort**

- **Goals, Priorities and Timelines**

- **Current status**

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JRA1 Deveopment test bed
(gLite Prototype)

ARDA testing

JRA1 Integration team
• *Weekly releases*

Release of integration build (Friday)

+ 1 week
(includes updates to release notes + bug fixes)

Bug reports

JRA1 Testing test bed

• Deployment testing
• Functional testing

Certification test bed

• Deployment testing (documentation, installation, configuration)
• *Functional testing*
• *Stress/Load testing*
• *Testing against "real" applications*

Pre-production service

• *Open to all registered users*
• *Not a formal test environment*

Production service

• **The Testing Stages**
• **Who Does What**

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JRA1 Deveopment test bed
(gLite Prototype)

- CERN

JRA1 Integration team
- *Weekly releases*

Release of integration build (Friday)

+ 1 week

JRA1 Testing test bed

- CERN
- RAL
- NIKHEF

Certification test bed

- **Physical Location of the Test Beds**

- CERN
- *Looking into extending test bed to other sites.*

Pre-production service

- *12 sites distributed through the 10 EGEE federations.*

Production service

- **Since mid February JRA1, SA1, NA4 and ARDA have been co-ordinated in their testing efforts.**

- **Daily morning meeting**
  - status briefings from each group
  - Discussions on "hot" topics
  - minutes at
    http://egee-docs.web.cern.ch/egee-docs/list.php?dir=.\Testing\Meeting%20minutes\&

- **Weekly status reports**
  - http://egee-docs.web.cern.ch/egee-docs/list.php?dir=.\Testing\Testing%20Reports\&

- **#1 Goal:**
  To have a working version of gLite on the pre-production service by the end of March 2005!
  – The pre-production service will then be used to compare gLite to LCG-2 and identify any areas where improvements need to be made to the gLite middleware.

- **Priorities**
  1) To port the current LCG-2 certification test suite to gLite (by 23 March)
     - The test cases will be as close as possible to those in the LCG-2 certification test suite.
     - Some of the tests need to be re-written.
     - JRA1, SA1 and NA4 are all contributing to this effort.
  2) Continue testing on the JRA1 test bed and Certification.
  3) Create a working gLite cluster against which tests can be written and tested (by 11 March).
  4) To port the Site Functional Test suite to work with gLite (11 March).
     - SFT is a set of tests, run on a daily basis on the LCG production service, that are used to monitor the state of middleware services.

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- **gLite code is frozen except for File Transfer Service and File Placement Service.**

- **UI is not yet released to Certification**
  - This is expected in today's release.
  - Currently using afs based gLite UI.

- **FTS and FPS is expected to be stable within 1-2 weeks.**

- **Integration builds containing bug fixes are released weekly.**

- **Need to write 14 tests for Certification test suite.**
  - 5 of these test the FTS/FPS.

- **Need to review priority of bugs to escalate those which will cause the certification tests to fail.**
  - We would anyway expect these to be high priority bugs.

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- **A basic set of functional test suites developed (gLite I/O, Fireman Catalog, WMS). Included in the releases.**

- **Weekly releases from integration deployed in the testbed (all services, ~20 machines). Installation and configuration tested.**

- **With each release deployed, run existing functional test suites (gLite I/O, Fireman Catalog, WMS).**

- **Report found bugs, write weekly report with results. See:**

  - WMS: https://edms.cern.ch/document/567478

  - Fireman catalog: https://edms.cern.ch/document/568048

  - gLite I/O: https://edms.cern.ch/document/571060

- **Some efforts reassigned to port LCG certification test suite.**

- **Fireman catalog functional test suite continues to be evolved with new tests**

- **Functional tests will start to be written for VOMS and R-GMA _if_ people are made available for this task.**

  - There are currently no functional tests available to cover these areas

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- **Certification test team do not yet have working gLite service (build I20050218)**
  - As of Friday the jobs were failing in workload management (proxy not passed from WMS to WN). This is under investigation with JRA1.

- **There is currently no gLite User Guide (due end February)**

- **Site configuration model is good and meets SA1 requirements. However, drawbacks were introduced with build I20050218:**
  - Large file: flat file of about 2000 lines to configure 10 services (scales with the number of WNs)
  - Logical separation of User, Advanced, and System level parameters (strong point in the previous configuration model) has been broken.
  - Concurrent editing of the site configuration file is difficult.
  - File is published on an unprotected public web server.
  - These points are being discussed with the JRA1 Integration team.

- **Deployment testing (installation and configuration) of last release to Certification showed up no significant bugs in this area.**

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- **NA4 have been writing tests for workload management.**
  - These tests might be re-used for the Certification test suite.

- **NA4 testers received 2 day informal "training" last week, with JRA1 and ARDA.**
  - Covered gLite

- **NA4 will now start writing some of the data management tests needed for the certification test suite.**

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- **ARDA testers have raised questions about the relative performance of LCG File Catalogue and the Fireman file catalogue.**

  – Further testing is being undertaken to obtain data which will give a clear and fair comparison of the services.

- **ARDA testers have also seen a job failure rate of around 10% for "hello world" jobs which are submitted to empty queues (in push mode).**

  – This is on the JRA1 development test bed (gLite Prototype). Certification team will carry out similar testing.

- **In addition, ARDA team saw an average job start up time of 9 minutes for the above jobs.**