

EGEE

IBERGRID TRANSITION PLAN TO THE NATIONAL GRID INFRASTRUCTURE BASED MODEL

Document identifier:	FILENAME Ibergrid_Transition_Plan_to_EGI_v1.4.doc
Date:	17/02/10
Country:	Spain (ES) and Portugal (PT)
NGI:	Ibergrid: NGI-ES + NGI-PT
Document status:	1st Public Release
Document link:	HYPERLINK "https://edms.cern.ch/document/xxxxxx/" https://edms.cern.ch/document/xxxxxx/

Text in blue italics is included to provide guidance to the author and should be deleted before publishing the document.

Abstract: This document describes the transition plan to migrate Ibergrid infrastructure into EGI. Ibergrid is composed by NGI-ES and NGI-PT.

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EGEE-II ("Enabling Grids for E-science-III") is a project co-funded by the European Commission as an Integrated Infrastructure Initiative within the 6th Framework Programme. EGEE-III began in May 2008 and will run for 2 years.

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Delivery Slip

	Name	Partner/ Activity	Date	Signature
From				
Verified				
Reviewed by				
Approved by				

Document Log

Issue	Date	Comment	Author
1.3	24/01/2010	Initial Draft after Santander's meeting	Javier Lopez
1.4	25/01/2010	Gantt chart and scheduled tasks	Alvaro Simon
1.5	25/01/2010	Explanations and links to previous work	Isabel Campos
1.6	25/01/2010	Add some details about the Portuguese side	Jorge Gomes
1.7	08/02/2010	New time frame graph. Included F2F answers.	Alvaro Simon
1.8	08/02/2010	Addition of O-E-9 transition plan. More comments from the SA1 F2F meeting.	Mario David, Gonçalo Borges
2.0	08/02/2010	Consolidated version to distribute	Isabel Campos
2.1	17/02/2010	Info about RT and Ibergrid configuration server added	Isabel Campos

Document Change Record

Issue	Date	Comment	Author

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1. INTRODUCTION

1.1. PURPOSE OF THIS DOCUMENT

The following planning and calendar of activities intends to provide with a smooth transition plan for the currently EGEE operated infrastructure to the NGI oriented model in the framework of the European Grid Initiative (EGI).

The activities towards the deployment of a National Grid Infrastructure in Spain began by middle of 2008, in the framework of the Spanish Network for e-Science group (<http://www.e-ciencia.es>). As part of the Network activities the group of Grid Infrastructure designed an interoperable framework for all the Grid infrastructures present in the country to be integrated under the umbrella of a Spanish NGI (see http://www.e-ciencia.es/wiki/images/e/ee/Documento_de_Arquitectura.pdf)

As a result, a testbed with a number of NGI dedicated services for monitoring, accounting and user support is in place for more than a year, running grid applications from Spanish research teams in the framework of the activities of the Spanish e-Science Network (see all details in <http://www.e-ciencia.es/wiki/index.php/Portal:Grid>).

The Portuguese NGI lead by LIP has also deployed services oriented to run the grid infrastructure in Portugal. Several core services will be shared by Portugal and Spain in the framework of the Ibergrid collaboration agreement. Also, when the architecture permits, backup services in one country will serve as failover instances to the other country to increase reliability.

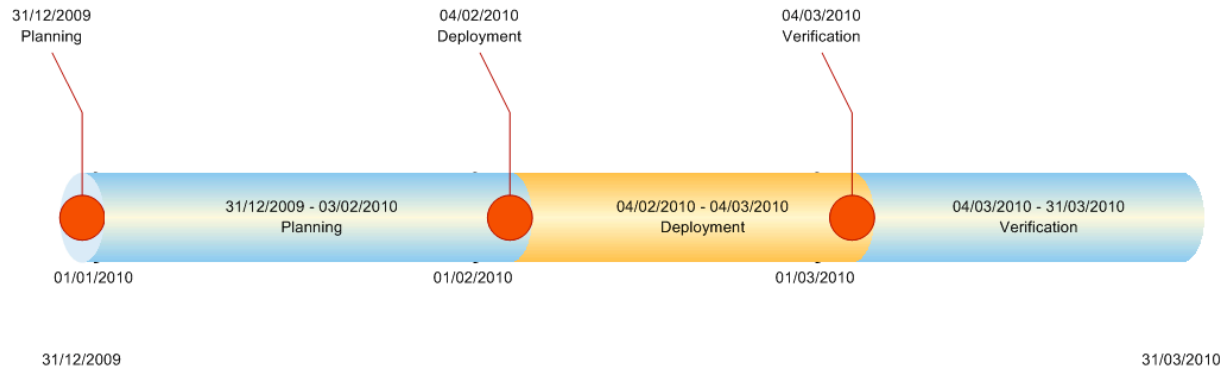
In the upcoming two months, which cover the final months of EGEE, we intend to stabilize the services already deployed in the current NGI testbed, deploy backup services in collaboration with the Portuguese NGI (PT-NGI), and describe the operations policies and strategies which will govern the Spanish and Portuguese NGIs and their integration in EGI

1.2. REFERENCES

Table SEQ "Table" *Arabic 1: Table of references

R 1	XXXX HYPERLINK " https://edms.cern.ch/document/932615/ " https://edms.cern.ch/document/932615/
	HYPERLINK " https://edms.cern.ch/document/934065/ "
	HYPERLINK " http://project-egEE-III-NA1-QA.web.cern.ch/project-EGEE-III-NA1-QA/EGEE-III/Procedures/procedures.html "
	HYPERLINK " https://edms.cern.ch/document/932422/ "
	HYPERLINK " https://edms.cern.ch/document/963281/1 "

2. SCHEDULE



2.1. TIME FRAME

Start Date: 2009.Dec.31

Finish Date: 2010.Mar.30

2.2. TASK LIST

Task	Start	Finish	Resource	Description	Baseline	Actual
Phase 1: Planning	2009.Dec.31	2010.Feb.04	Ibergrid	Planning of the migration process	2010.Jan.01	
	In progress					
Phase 2: Deployment	2010.Feb.05	2010.Mar.04	Ibergrid	Ibergrid deployment task		
Phase 3: Verification	2010.Mar.05	2010.Mar.30	Ibergrid	Verification and migration deadline		

2.3. MILESTONE LIST

Milestone	Date	Baseline
Ibergrid transition plan finished	2010.Feb.04	
Ibergrid infrastructure development finished	2010.Mar.04	
Verification process	2010.Mar.30	

2.4. RESOURCES AND TASK ASSIGNMENT

CALENDAR

Start	Finish	Days	Done	Task
2009.Dec.31	2010.Feb.04	26	0	Phase 1: Planning
2010.Feb.05	2010.Mar.04	20	0	Phase 2: Deployment
2010.Mar.05	2010.Mar.30	18	0	Phase 3: Verification
Total: 64 days scheduled, 0 days completed.				

DEPENDENCIES

- (2010.Feb.05 - 2010.Mar.04) Phase 2: Deployment
 - (2009.Dec.31 - 2010.Feb.04) Phase 1: Planning
- (2010.Mar.05 - 2010.Mar.30) Phase 3: Verification
 - (2010.Feb.05 - 2010.Mar.04) Phase 2: Deployment

Phase 1: Planning (Feb 8)

Phase 2: Deployment (March 7)

Phase 3: Verification (March 31)

IBERGRID TRANSITION SQUAD

Coordinators

Isabel Campos (iscampos@ifca.unican.es),

Carlos Fernandez (carlosf@cesga.es)

Jorge Gomes (jorge@lip.pt)

Technical support queries:

IFCA: Pablo Orviz, Alvaro Lopez and Enol Fernandez (grid.support@ifca.unican.es)

LIP: Goncalo Borges (goncalo@lip.pt) Mario David (mario@lip.pt)

CESGA: Javier Lopez, Alvaro Simón and Esteban Freire (grid-admin@cesga.es)

3. SERVICES

3.1. OPERATIONAL SERVICES

3.1.1. NCG Nagios

Responsible: CESGA

Status: Up and running at <https://rnagios.ngi.cesga.es/nagios>

Comments:

- Nagios will completely replace SAM (currently Nagios could submit similar tests using ops VO).
- New tests will be available, MPI tests are not included yet.
- No 1 to 1 mapping between nagios and sam but globally they should be equivalent, still need some proof and to compare the results, assume presently that nagios can substitute sam.
- Each ROC should try to see and compare both instances of the dashboard.
- They will switch around mid February from SAM to Nagios.
- Plan to switch from central to regional Nagios around mid March.
- We have to check/compare SAM and Nagios in the SWE sites.
- Central OPS VO will allow more people from the regions, but will also be possible to run the Nagios with OPS like regional Vos.
- Use MyEGEE to check that central and regional Nagios gives the same results.
- New Nagios probes will continue on the level of each product team, seems there is funding for it in EMI. James Casey and Co. will follow up, give consultancy, etc.

The link for the availability calculated from Nagios metrics is here:

<http://gvdev.cern.ch/NAGIOS/same_index.php>.

It can be compared against the similar SAM page:

<http://gridview.cern.ch/GRIDVIEW/same_index.php>.

Actions required from all sites:

- Sites need to follow the instructions in this link in order to enter in the monitorization system
 - <http://www.e-ciencia.es/wiki/index.php/Monitorizacion>

3.1.2. GSTAT

Responsible: TBD

Status: Not available

Comments:

- Gstat 2.0 will be used in EGL.
- Regionalization is not clear.
- New Nagios version executes siteBDII sanity checks (org.bdii.Freshness, org.gstat.CE... etc)
- Gstat information is Nagios independent.

3.1.3. GOCDB

Responsible: CESGA

Status: Waiting for regional GOCDB to be available.

Comments:

- GOCDB+mySQL not available yet (until EGI start).
- Regional GOCSB+Oracle available by the end of February.
- Ongoing parallel work with external systems (HGSM).
- GOCDB4 available but v3 still there as backup.
- After regional GOCDB is tested it will be decided if we continue using HGSM or we move to GOCDB.
- Some trend answering requests from some NGIs to have regionalized views in the GOCDB.

3.1.4. HGSM

Responsible: CESGA

Status: Up and running at <https://rnagios.ngi.cesga.es/hgsm>

Pending integration with GOCDB.

Comments: None

Actions required from all sites:

- Site admins need to enlist in the HGSM system according to the instructions here
 - <http://www.e-ciencia.es/wiki/index.php/Monitorizacion>

3.1.5. Accounting Portal

Responsible: CESGA

Status: Up and running at http://www.ngi.cesga.es/gridsite/accounting/CESGA/ngi_view.php

Actions required from all sites:

- Site admins need to configure the site for accounting according to the instructions here
 - <http://www.e-ciencia.es/wiki/index.php/Accounting>

3.1.6. Operations Portal

Responsible: LIP

Status: To be installed. Regional Dashboard rpms have been released for installation.

Comments: Some talk that failover instances of the several ops tools can be put into the cloud, in the end this should be the choice of the NGIs. No clear answer for easy support of failover.

3.1.7. Request Tracker

Responsible: RedIris/IFCA/IFIC

Status: Installed at <https://rt-ngi.rediris.es/>

To be integrated with GGUS. In the mean time SWE Regional Helpdesk and GGUS will be used.

Actions required from all sites:

The site administrators and/or site responsible for the NGI should log in the web page with their PKIRISGRID certificate loaded in the browser. In case of trouble contact carlos.fuentes@rediris.es

The address of the RT of the NGI is: <https://rt-ngi.rediris.es>

Comments:

- Other NGIs already deployed RT (like UKI and SEE-GRID), they can provide useful information for the deployment and integration.
- IFCA may help on RT configuration if needed.

Ongoing actions:

- A list for the support teams in RT must be set (action on IFCA)

3.1.8. SWE Regional Helpdesk

Responsible: IFIC

Status: Up and running (already integrated with GGUS) at <http://swegus.ific.uv.es/helpdesk/>

3.2. CENTRAL SERVICES

3.2.1. Top BDII

Responsible: IFCA/LIP/CESGA

Status: Special configuration already deployed at CESGA allows to see both NGI and EGEE sites. IFCA and LIP will provide TopBDII with similar configurations. While automatic synchronization with regional HGSM/GOCDB is not available list of site TopBDII's will be kept in a web page. LIP will be responsible for the web page of Portuguese sites and IFCA will maintain the page with the list of Spanish sites. The current services are operative in Spain already:

IFCA: gridii01.ifca.es

CESGA: bdii.egee.cesga.es

Requirements to all sites:

- Current sites will need to use one of the two above mentioned TopBDIIs
- New sites joining the NGI will be certified by IFCA and included in the TopBDII by hand. Automatic process should be in place later in time and should permit to grab data from the HGSM or GOCDB (see below).

3.2.2. WMS

Responsible: IFCA/LIP/CESGA

Status: Needs to be reconfigured to point to one of the NGI TopBDIIs.

Currently configured this way

- IFCA: gridxb01.ifca.es
- CESGA: wms01.egee.cesga.es

Need to point to the correct TOP-BDII

- IFIC: **wms01.ific.uv.es**
- More ?

Ongoing Actions:

- IFCA:
 - The following page in the wiki will be updated as soon as more Brokers become available:
 - http://www.e-ciencia.es/wiki/index.php/Gestores_de_trabajos

3.2.3. VOMS

Responsible: IFCA/LIP/CESGA

Status: Up and running. The instance at IFCA is the main one for NGI-ES and LIP the main one for NGI-PT and Ibergrid VOs. CESGA provides a backup instance that it is automatically synchronized with the two main servers.

Available VOMS:

- IFCA: **<https://voms01.ifca.es:8443/vomses>**
- LIP: **<https://voms01.ncg.ingrid.pt:8443/vomses>**
- CESGA backup server (read-only) of both: **<https://voms.egee.cesga.es:8443/vomses>**

Ongoing Actions:

- Other existing VOMS should be identified and listed.
- Fusion VO users should be changed to a NGI supported VOMS.

3.2.4. LFC

Responsible: IFCA/LIP/CESGA

Status: Up and running. The instance at IFCA is the main one for NGI-ES and LIP the main one for NGI-PT. CESGA provides a backup instance that it is automatically synchronized with the two main servers.

Comments:

- The backup at CESGA must be read-only to avoid sites writing there information that will be lost when main LFC comes back.
- Later we could check if it is possible to have distributed database with Oracle (or if MySQL supports this configuration).

Currently available

- IFCA: gridlfc01.ifca.es
- LIP: lfc01.ncg.ingrid.pt (also supports some IBERGRID VOs)

Actions:

- A read-only backup will be setup by CESGA

3.2.5. MyProxy

Responsible: LIP

Status: Up and running.

Currently available:

LIP: px01.ncg.ingrid.pt

IFCA: gridpx01.ifca.es

3.2.6. R-GMA Registry and Flexible Archiver

Responsible: CESGA

Status: Up and running

Comments:

- Changes in the service foreseen with the future migration from RGMA to ActiveMQ.
- More information needed to know when this will occur and to understand the migration process.
- ActiveMQ currently in certification.
- Before the end of EGEE: RGMA-based clients replaced by ActiveMQ, Central server supporting both methods (no date for decommission of the RGMA server).
- Meanwhile sites could publish using RGMA or ActiveMQ.

All core services should be reconfigured to support new Ibergrid VOs and TopBDIIs (LIP will coordinate and monitor this task).

3.3. LOCAL SERVICES

All sites are requested to support the following VOs:

- Operational Ibergrid VO used for monitoring: *ops.vo.ibergrid.eu*
- General Ibergrid VOs: *iber.vo.ibergrid.eu*, *vo.general.es-ngi.eu*

More information in: http://www.e-ciencia.es/wiki/index.php/IBERGRID_INITIATIVE

Additionally a small number of sites (to be decided later) should support the training VOs and the training CAs from Spain and Portugal. The sites supporting training need to have special requirements of Quality of Service.

- Training Ibergrid VO: *tut.vo.ibergrid.eu* (*Worthless CA for training certificates run by LIP*)
- Training Spain VO: *vo.formacion.es-ngi.eu* (*Worthless CA for training certificates run by IFCA*)

Sites should configure machines to use both VOMS servers (main and backup in case of failure of the main one. Notice the backup service is read-only.

3.4. SECURITY

3.4.1. Infrastructure Security

Responsible: RedIris (NGI-ES), LIP (NGI-PT)

Status: Check current procedures. Update them if necessary.

3.4.2. Middleware Security

Responsible: UAB (Miquel A. Senar)

Status: Involved also in EMI in this task.

4. EGI GLOBAL TASKS

Within the EGI-InSPIRE proposal, the Ibergrid consortium has the duty to perform a number of tasks on behalf of the whole EGI-InSPIRE consortium. The proposal is currently under evaluation by the European Commission, and therefore subject to modifications. Anyway the tasks are being analyzed for future prospective.

Operations

O-E-2: Accounting Repositories: UK & Spain

O-E-9: Middleware Rollout: Spain & Portugal

Middleware & User

U-E-5: User Technical Services: Spain & Portugal

M-E-1, M-E-3: Document & Quality Criteria: IBERGRID (O-E-9)

4.1.1. O-E-2: Accounting Repositories

Responsible: CESGA (NGI-ES), RAL (UKI)

Comments: CESGA is already maintaining the accounting portal

4.1.2. O-E-9: Middleware Rollout

Purpose: Coordination of the middleware roll-out task in EGI

Responsible: LIP +CESGA+IFIC + possibly other teams from Ibergrid countries interested in deploying services with testing purposes along with their production infrastructure.

Contacts ongoing between the current Rollout coordinators and Ibergrid team.

4.1.3. U-E-5: User Technical Services

Purpose: Creation of wiki pages to inform the users about all the tools available in the grid

Responsible: UPV (Ignacio Blanquer) + LIP (Hugo Gomes) contacts have been established.

4.1.4. M-E-1: Documentation of the Overall Process

Purpose: Document global process of interaction of EGI with EMI

Responsible: IFCA/LIP/CESGA

Notes: Documentation will be based on ITIL best practices.

4.1.5. M-E-3: Definition and Assessment of Criteria

Purpose: Quality Assurance of the global process

Responsible: IFCA/LIP/CESGA

Notes: Documentation will be based on ITIL best practices.

5. INTERNATIONAL TASKS

NGI International Tasks are those necessary to have the NGI resources integrated in EGI. The tasks can be grouped in the following items.

O-N-1: Operations of the NGI Grid topology and configuration repository

O-N-2: Operation of the NGI accounting repository

O-N-3: Operation of monitoring and performance repositories

O-N-4: Operations of the NGI Operations Portal

O-N-5: NGI infrastructure oversight, Operators on duty, etc...

O-N-6: Operations of the NGI ticketing system and gathering of new requirements

O-N-7: Regional Helpdesk

O-N-8: Operation of production core services for international VOs, catch-all CA,...

O-N-9: Operations Coordination at the NGI level

5.1.1. O-N-1: Operations of the NGI Grid topology and configuration repository

Responsible: CESGA

Services involved: HGSM (regional GOCDB when available)

Status: Up and running

5.1.2. O-N-2: Operation of the NGI accounting repository

Responsible: CESGA

Services involved: Ibergrid RGMA Registry/Flexible Archiver

Status: Up and running

5.1.3. O-N-3: Operation of monitoring and performance repositories

Purpose: Operate metrics portal, gstat, and future ActiveMQ repository. Further definition required (SA1 F2F, ask this). (NAGIOS + metrics portal) -> CESGA

5.1.4. O-N-4: Operations of the NGI Operations Portal

Purpose: Operate regional operations dashboard

Responsible: LIP

5.1.5. O-N-5: NGI infrastructure oversight, Operators on duty, etc...

Purpose: rotatory. A procedure will be written (LIP)

Responsible: LIP, IFCA, IFIC, CESGA (Isabel will ask if there are more partners interested)

Notes: Regional COD on Duty (should be an Ibergrid task). We need to adapt COD procedure to regional work (action on Gonçalo)

5.1.6. O-N-6: Operations of the NGI ticketing system and gathering of new requirements

RT / GGUS -> RedIris

Responsible: RedIris, IFCA, IFIC

5.1.7. O-N-7: Regional Helpdesk

Purpose: Support units.

Responsible: Isabel will ask which partners are interested and Support Units should be defined.

5.1.8. O-N-8: Operation of production core services for international VOs, catch-all CA, ...

Responsible: Several partners depending on the service. Responsibilities per service already defined in Section 3.

5.1.9. O-N-9: Operations Coordination at the NGI level

Responsible: LIP/IFCA/CESGA