

SURA Cyberinfrastructure Workshop Series:
Grid Application Planning & Implementation, Dec 05, TACC, UT Austin

Breakout notes (Thursday, Dec. 9): **Grid Operations and Support**

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OSG model:

GOC: Grid Operations Center interfaces with the Support Center
common infrastructure
grid-wide services
ticketing
SW docs
Knowledge base
Security Incident handling
How to develop Security Vulnerability/Audit capabilities and ways to share relevant info

SC: Support Center
Interfaces with VOs and their apps
Interfaces with Sites/facilities Rscrs.

VO=people and their applications

Alan likes the integration testbed that is part of OSG. Also the blueprint process. Phased rollout.

Informally, the GOC is heavily involved with the OSG integration testbed.

Blueprint: Architectural and VO and application requirements.

... given to the Deployment activity ... filter against existing capabilities

... Make a Deployment document (Release description)

(the functional list of services required)

Then the technical groups look at the release description.

Integration TestBed (ITB) is formed around the Release description.

(Does the application work in xxx environment?)

... readiness plans for services

... sw packaging

...deploy grid-wide services

...middleware deployment

...scalability tests

... give to VOs – ask them to test against middleware environment.

If good – go to Operation as a release candidate

If not good – feedback to developers.

Gary Crane: What is the division of responsibilities? (between GOC and SC and VOs)
How do you manage the overlap? E.g., escalating a problem.

Example: A resource is suddenly dead. A VO user reports this (if to RES, not scalable, so rpt to his own Support Center. SC talks to relevant SC, if problem not resolved, then escalate.)

DB about who to contact where for different problems, IS part of registration process.

Distributed users need distributed diagnosis (Hypothesis)

1. Grid-wide services have grid-wide status. Check the grid-wide monitor.
2. people want a global grid ID, but there isn't one.
3. Support Centers for VOs provide some context. Index services collect info from resources and then push to a grid-wide service.

Alan:

Activities are shorter lived.

WG are longer lived.

VOs make practical decisions. The GOC doesn't set policy. There is also community-level support. (People-based vs. resource-based.)

Economy is the watchword. There is a Usage Agreement: at minimum, everybody has to have the same elements. 6 paragraphs suffices.

Things are different in Europe vs. US. Personal info remains the responsibility of whoever gets it in Europe.

Push the support closer to the user seems the best approach. Quality depends on the folks or the escalation process.

e.g. USCMS has application administrators who validate installation of applications on resources.

WLCG does have a GOC. (associated with LHC and EGEE)

EGEE group is one of the groups starting to talk about edge services. Defining them is difficult. Maybe a VOBOX Definition: LCG has regional operation centers (9geographic) have resources attached to them. These resources have VOs associated with them. So they add extra UCSCMS functionality in a VOBOX. Functionality includes dbs and authorization... A VOBOX is edge services for a VO.

Alan Sill: In TIGRE there are ALCIE users. ALICE is a heavy ion experiment at CERN that uses its own sw stack. They want to add a VOBOX to TIGRE.

GIP: Generic Information Provider (an OpenLDAP db that describes resources) based on GLUE schema. LCG based. Uses MVS and OpenLDAP to characterize resources. Goes through Resource Broker.

VOMS handles mapping of user identities.

International Grid Trust Federation: contains a few dozens of accepted CAs. EUGridPMA, AsiaPacificGrid, TAGPMA, concentrates only on authentication.

VOMS also provides attribute based authorization.

Get rid of gridmapfiles in favor of policy decision point databases. And attribute-based authorization.

GPLAZMA under dev at UCSD schedules by time. SRM Storage Resource Manager has hooks similar to PRIMA for callouts. VOBOX software.

Is SURA an R&D grid or a production grid?

Gary Crane: SCOOP is maturing and they have an operational model for some predictive products. They need a production service to support that.

So we need an ITB (integration testbed environment).

Lavanya

Alan Sill: Make a TIGRE/SCOOP sub-VO.

?dataset mgr? queue mgr?

At the Jan OSG mtg – the SCOOP app will be used to ‘move forward’ SURA’s interaction with OSG. To provide a development environment. Historical datasets. Event-driven trigger.

Push standards by adding functionality.

Operationally, when you encounter different use cases, ...

Conclusions:

Security issues are very important to grid operations

- The community needs a (secure) forum for discussing security issues, shared brainstorming environment, security audits
- This needs to be a predictive rather than reactive function and needs to be carefully managed (controlled membership)

Separation of production and development environments is very important

Distributed support is difficult (very difficult is over large geography, i.e. the planet) and is implemented by OSG as a distributed system with loose central control.

Scaling issues are very important.