



Enabling Grids for E-scienceE

## Failover Procedures

COD-14  
EGEE07 Conference  
Budapest, 3 October 2007

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Information Society



- **Failover status**
  - Overall news
  - CIC portal
  - GOCDB
  - SAM
  
- **Current plans and parallel sessions achievements**
  - GGUS
  - GOCDB
  - SAMAP
  - SAM


- **Tools Dependency Map**

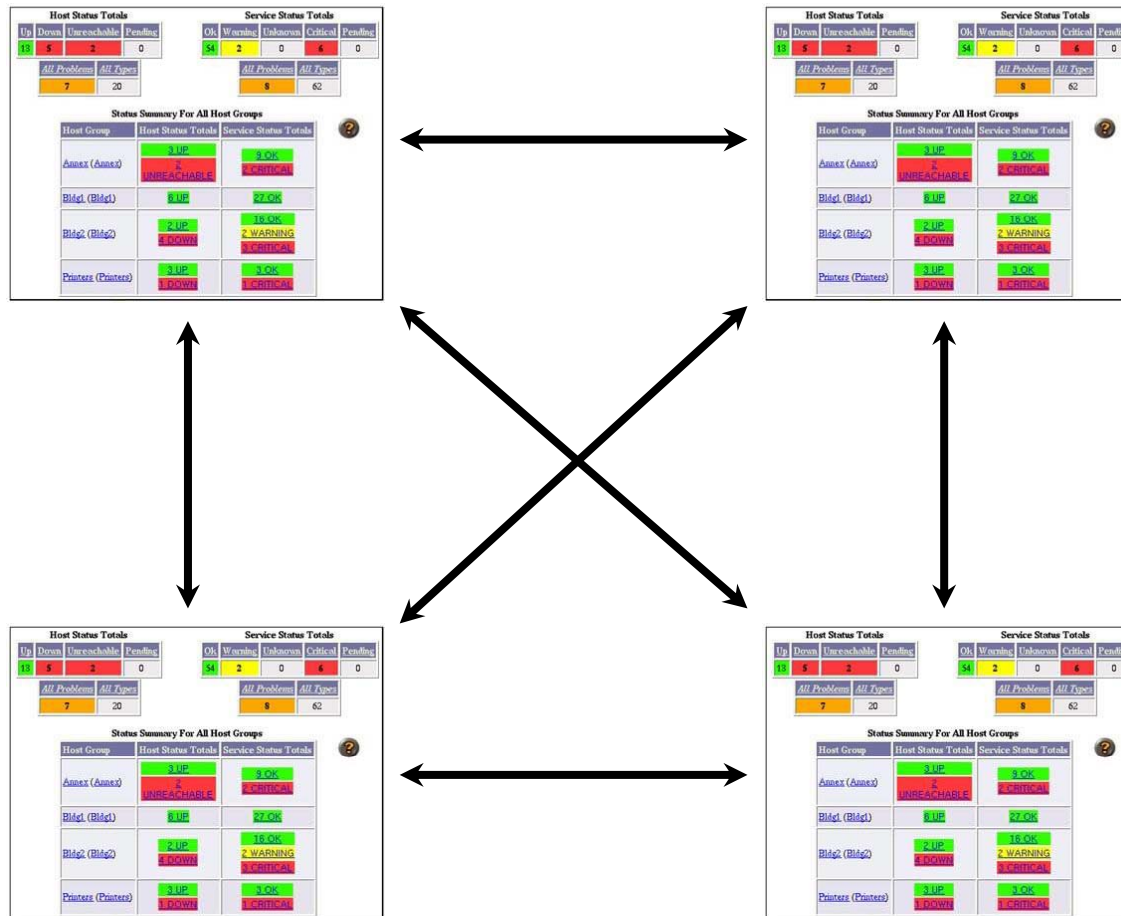
- It is a table, based on detailed descriptions, which underlines the dependencies between the tools. It shows:
  - the kind
  - the direction
  - the reason
  - how critical is a link
- Made upon ROC managers request
- Essential to have a clear view of how each service, when working or in failure, can influence the whole system
- It is an important input to focus the efforts within the failover work

- **Further steps in the monitoring agents definitions:**

- Nagios based, exploiting the Nagios capabilities: communication between servers, very flexible to add functions (scripts)
- Inspired by the theory of Byzantine Generals (Lamport)
- Based on 4 monitoring installations, to count on a decision based on 3 in case of one faulty agent

[http://goc.grid.sinica.edu.tw/gocwiki/Failover\\_mechanisms/OptoolsMap](http://goc.grid.sinica.edu.tw/gocwiki/Failover_mechanisms/OptoolsMap)

	CIC PORTAL	eNOC	FCR	GGUS	GOCDB	GSTAT	SAM	TOP BDII's	WMS FOR SAMAP
BDII CONF GEN					CRIT DB				
CIC PORTAL				CRIT WS	CRIT DB	FAIR.CRIT HTTP	CRIT WS	CRIT LDAP	
FCR					FAIR.CRIT DB				
GOCDB	NON-CRIT DB-receive (TODO)	NON-CRIT DB-receive							
GRIDICE					NON-CRIT DB				
GSTAT					FAIR.CRIT DB		FAIR.CRIT WS		
SAM	NON-CRIT HTTP(S)?				FAIR.CRIT DB				
SAM ADMIN					CRIT DB		CRIT WS		CRIT wms/gsi ftp
TOP BDII's			FAIR.CRIT HTTP						
OTHER TOOLS									
CENTRAL EUROPE NAGIOS					FAIR.CRIT DB		FAIR.CRIT HTTPS		



Current idea:

- 4 Nagios instances
- Quorum of 3 to take decisions
- Every one is able to decide and act (DNS etc.)
- We will hopefully test with 4 virtual Nagios installation, with the help of Emir Imamagic

- **CIC portal**
  - Portal/Lavoisier always available for switchover
  - Portal (+SAMAP) code automatically updated
  - DB still needs **manual** dump
  - Discussion with Oracle@IN2P3 in June:
    - no time for the team to dedicate to complex Oracle setups
    - Need to investigate how the portal code could help in keeping the backup DB up-to-date (SQL dumps?)
- **GOCDB**
  - 2 sites failover in UK work in progress
  - ITWM front-end ready
  - CNAF DB is waiting for an up-to-date dump from UK

- **CYFRONET officially candidate to host SAM replica**
- **Very good work of SAM instance evaluation under stress at CYFRONET, thanks Marcin & colleagues:**
  - <http://galaxy.agh.edu.pl/~radecki/sam-cyfronet-stress.pdf>
- **No good news last June from Dirk Duellmann (LCG-3D)**
  - He talked with Ian Bird too: it's difficult to add complex tasks like this to the already overloaded teams
- **Need to technically define why and what we want to do with SAM, to see then if we can push it**
  - **No time found** for SAM Failover parallel session

- **GGUS**

- Change to VMware solution for the GGUS failover (in test)
- VMware servers are connected with 2 separate network switches
- This will be extended at backbone level in future
- This will provide the possibility to clone and move machines

- **GOCDB**

- Work on Streams in progress by UK DBA between the 2 UK sites
- Oracle installed in Daresbury
- Streams configuration still in progress
- We will try together to set-up an automatic script to weekly upload an up-to-date GOCDB to be imported by CNAF

- **SAMAP**

- Identified the proper commands to upgrade SAMAP submission from the old NetworkServer to WMPProxy



- **The discussion will follow by phone very soon with the following plan:**
  - 1. SAM status**
    - 1.1 CERN updates**
    - 1.2 CYFRONET updates**
  - 2. Use-case analysis**
    - 2.1 When a switch could happen**
    - 2.2 What has/has not sense to replicate**
    - 2.3 In case, what part of the replicated framework could be commonly used, to avoid too many sleeping nodes.**
  - 3. Design**
    - 3.1 Current list of needed nodes/components (compare with my past notes)**
    - 3.2 SAM DB details (tables size, update schemes, access schemes, etc...)**
    - 3.3 Network requirements**
    - 3.4 CPU/disk requirements**
  - 4. Implementation**
    - 4.1 Coordinator**
    - 4.2 SAM-side responsible person**
    - 4.3 CYFRONET-side r.p.**
    - 4.4 CERN LCG-3D r.p. (not present at EGEE07)**
    - 4.5 Deadlines**