

Migration plan for Samgrid services to new server

Introduction:

The existing server samgrid.fnal.gov was given to us by CCF. We got a new server from REX that will replace the existing samgrid.fnal.gov machine. New Samgrid server is more powerful and has more disk space which will reduce our maintenance efforts. This document details the migration plan and the implications of migration on the users.

Migration Plan:

Following steps will be required to move the Samgrid production from old server to new Samgrid server -

1. Setting up the new Samgrid server:

This involves installing Samgrid brokering, scheduling, monitoring and central Samgrid web server on the new server machine and testing the services in the test environment.

2. Shutdown of services on Samgrid:

For the migration to be successful we will need to shutdown the services on the existing server on a specified day. The new server will have same hostname and IP address as the old server. Hence, we cannot have the old and new server running at the same time and a shutdown is required. We can discuss with the users to decide on a convenience time to bring down the Samgrid services. It is highly recommended that there be no running jobs in the Samgrid queue, so that the entire system could be revived as is on the new server. The jobs with running state could be in unstable state.

3. Revival of services on the new server:

- This will involve co-ordination with the network group so that the network traffic is directed to the new server. Steve Timm will be assisting us in this activity. We plan to keep the server name (samgrid.fnal.gov) and the IP address of the old machine (131.225.80.83). This will make sure, the sites that have configured the firewall to allow the old Samgrid server need not make any changes after the migration.
- We will need to copy over the system files and Samgrid specific files to the new machine so that the services come back in the same state. We want to make this migration as transparent as possible to the users. We need to save the state of the grid queues on the old server and replicate it on the new server. So, it is very crucial that there are no jobs in running state while the migration is in process.

Estimated shutdown time: 4hrs (min: 2hrs, max: 1day)

Implications:

1. During the downtime Monitoring and brokering service will be unavailable for all the users.
2. Users submitting jobs to grid queue samgrid.fnal.gov:
Users are requested to make sure that, they have no running jobs in the samgrid.fnal.gov queue. Jobs running during the agreed downtime will be stopped.
3. Users submitting jobs to other grid queues:
During the downtime Samgrid broker will be unavailable. Users using grid queue other than samgrid.fnal.gov will not be able to submit the jobs to their grid queue. Any jobs in the idle state will not be impacted, but these jobs will stay idle till the match making services are back online. Most likely, jobs in running state should not be impacted if you are using xmldb_server local to the site to store the job information.

We do not expect major hiccups. If everything goes smoothly, users will be able to access their recent old jobs and the output sandbox of the jobs.