

Oh Crap My Site Broke

... What now?

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Situation

— [You get an email at 4:30 PM from a user saying your site is broken.

— [What's the most likely problem? What logs do you need to monitor to fix things?

— [Assumptions:

— I'll assume the hardware (CE, NFS server, network) isn't the problem; something in the grid stack is.

Authentication problems?

— [95% percent of problems are due to authentication difficulties.

— [Test authentication with a simple command:

— `globusrun -a -r my.osg.server.hostname`

Problems and Fixes

— [**Problem:** Connecting to the job manager failed. It looks like a network error.

> globusrun -a -r red.unl.edu

GRAM Authentication test failure: connecting to the job manager failed. Possible reasons: job terminated, invalid job contact, network problems, ...

— [**Solution:** This is not a network error. The most likely problem is that your CRL is out of date, or the user is using an oddball CA. Make sure fetch-crl cron is working and CAs are up-to-date

The real network error

— [This is the actual network error:

— GRAM Authentication test failure: the connection to the server failed (check host and port)

Solutions:

— [To run CRL updater:

`$VDT_LOCATION/fetch-crl/share/doc/fetch-crl-2.6.2/fetch-crl.cron`

— [Directions to update CAs:

<http://grid.iu.edu/news/news.php?id=70>

Problems and Fixes

- [Nothing wrong with certificates, but user still can't go.

- [Check contents of globus GRAM log file:

 - `$VDT_LOCATION/globus/var/globus-gatekeeper.log`

- [Fairly verbose information about user's login attempts.

- [If using gridmap file, there should be a clear error about the user not being listed.

Problems and Fixes

- [GUMS is another “highly problematic” component; if it fails, users will notice right away.

- [Try restarting it:

- \$VDT_LOCATION/post-install/tomcat-5 [start | stop]

- [Lots of logs:

- \$VDT_LOCATION/tomcat/v5/logs/gums-service-admin.log

More GUMS Testing

— [GUMS has a webpage which allows you to manually map users if you know their DN. Try: <http://your.gums.server:8443/gums>

— [Click “Map User”

— Fill in the host’s name (red.unl.edu)

— Fill in the user’s DN (/DC=org/DC=doegrids/OU=People/CN=Brian Bockelman 504307).

— Click button. Resulting map should not be user “null”.

— Resulting unix user **should exist**.

— Refer to OSG documentation on how to add VOs to GUMS.

Site Verify is Your Friend

— [The `site_verify` script referenced in Horst's talk is one of the best admin tools for debugging problems. It will show you exactly what works and what doesn't.

— [Use this once authentication is working, but other problems exist.

— [Should show any batch system-related problems the user is experiencing.

Log file rotation

- [The current version of OSG (0.6.0) does a wonderful job of rotating logs. No longer have to worry about logs filling your partition.
- [Information is kept in `$VDT_LOCATION/vdt/etc/vdt.logrotate`

Sample logrotate

```
# Rotate daily
daily
# Keep a week's worth
rotate 7
# Compress old files
compress
compressoptions -9f
# Truncate, instead of moving, files to avoid problems with apps
copytruncate
# Just ignore it if they're not there
missingok
# Rotate these files
/storage/local/data1/osg-ce/globus/var/grid-info-system.log {}
/storage/local/data1/osg-ce/globus/var/accounting.log {}
/storage/local/data1/osg-ce/globus/var/globus-gatekeeper.log {}
/storage/local/data1/osg-ce/globus/var/log/gridftp.log {}
.... So on and so forth
```

Things to watch / Checklist

— [Here are stupid things which have crashed Nebraska:

- Routing problems on worker nodes (did your NAT break when you rebooted it?).
- Full partitions on CE's root drive.
 - Make sure all your logs are rotated properly.
- Full partition on shared file system.
- Shared file system mounted on CE but not worker nodes.
- GUMS running out of memory and dying
- Host certificates expiring. GUMS host certificates expiring.
- Services didn't get restarted on reboot (BDII/LDAP)
- NFS, NFS, and more NFS problems.
- NTP not working / clock skew.

Other log files of note

— [This page replicates a table on

— <https://twiki.grid.iu.edu/bin/view/ReleaseDocumentation/CEInstallGuide>

— [MonaLisa: `$VDT_LOCATION/MonaLisa/Service/VDTFarm/MLO.log`

— [Gratia: `$VDT_LOCATION/gratia/var/logs/....`

— [GUMS: `$VDT_LOCATION/tomcat/v5/logs/gums-service-admin.log`

— [Apache (rarely needed): `$VDT_LOCATION/apache/logs/ssl_request_log`

— [Globus/GRAM: `$VDT_LOCATION/globus/var/globus-gatekeeper.log`

— [CEMon: `$VDT_LOCATION/tomcat/v5/logs/glite-ce-monitor.log`

Changing Services

— [The script `vdt-control` now adds and removes services. Works just like `chkconfig`:

— [To list services:

— `vdt-control -list`

— [To add/remove:

— `vdt-control [-on | -off] SERVICE_NAME`