



Open Science Grid

OSG CE Configuration and Updates

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OSG All Hands Meeting
Durham, NC



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Current Configuration Script

- Done by `configure-osg.sh`
- `Configure-osg.sh` asks for user input
- Confirms input
- Writes to attributes file
- Runs VDT configuration scripts



Problems

- Limited opportunity for correction
- Only basic error checking (responses not blank or in a set of responses)
- `configure-osg.sh`: ~2000 lines of shell script
- Not very user friendly (admin must answer and can't change previous answers without going through entire set of questions again)
- GIP questions are asked during configuration process
- Can't be easily automated

Solution for OSG 1.0

- Rewrite and rearchitect the configuration process
- Replaced `configure-osg.sh` with configuration script written in python
- Change how configuration values are accepted



Advantages

- New configuration systems can be added easily (just create class file and drop in configuration_modules directory)
- Better maintainability (code dealing with configuring a component located in together in a single file)
- Better error checking (more later)



Changes to interaction

- Input is done through solely a configuration following similar to windows ini file
- Output is primarily to vdt-install.log (can be sent to stderr as well)
- Output levels can be altered (log levels supported)



Configuration file

- Similar to windows ini file
- Supports variable substitution within sections or using DEFAULT section
- Supports comments, allowing each configuration parameter to be documented in the configuration file
- A master file can be created and be used to configure multiple CE installs with little or no changes



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Example Config File

```
[DEFAULT]
```

```
;Use this section to define variables for
```

```
;use in other sections
```

```
vdt_location = /opt/osg-0.8.0/
```

```
dcache_root = /pnfs/uchicago.edu/data
```

```
[Example Section]
```

```
config_file = %(vdt_location)s/etc/my_config_file
```

```
dcache_vol_dir = %(dcache_root)s/vol
```

```
dcache_vol2_dir = %(dcache_root)s/vol2
```

```
dcache_vol3_dir = %(dcache_root)s/vol3
```

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Better error checking

- More checks and better checking of values
- Hostnames checked to make sure they resolve
- Email addresses must be in right format and host portion must resolve
- Directories and files are checked to make sure that they exist
- Numbers verified to make sure that they are the correct type (integer, floating point) and that they are in the correct range (e.g. latitude is between -90 and 90)
- Settings in xml files are actually parsed using a xml parser and checked for correctness (e.g. bdi/cemon subscriptions)
- Can verify configuration file before using it to configure a server

Other details

- Separate subversion repository to track changes to code
- Located at <http://vtb-svn.uchicago.edu> with other osg repositories



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Before updating to new minor release

- Backup current install by copying osg install directory to another directory
- In case of error: move current install directory and copy the backup to osg install directory



Updating to a new minor release

- Outlined at <https://twiki.grid.iu.edu/twiki/bin/view/ReleaseDocumentation/VdtUpdateGuide>
- Check current version using `vdt-version` command
- Turn off services (`vdt-control --off`)
- Go to <http://vdt.cs.wisc.edu/releases/1.8.1/release.html> or see email with update information
- For each updated package in notice, run `pacman -update PACKAGE`
- Turn on services (`vdt-control --on`)



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Questions/Comments

- Comments or questions?

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