

GridPP
UK Computing for Particle Physics

DPM information publishing

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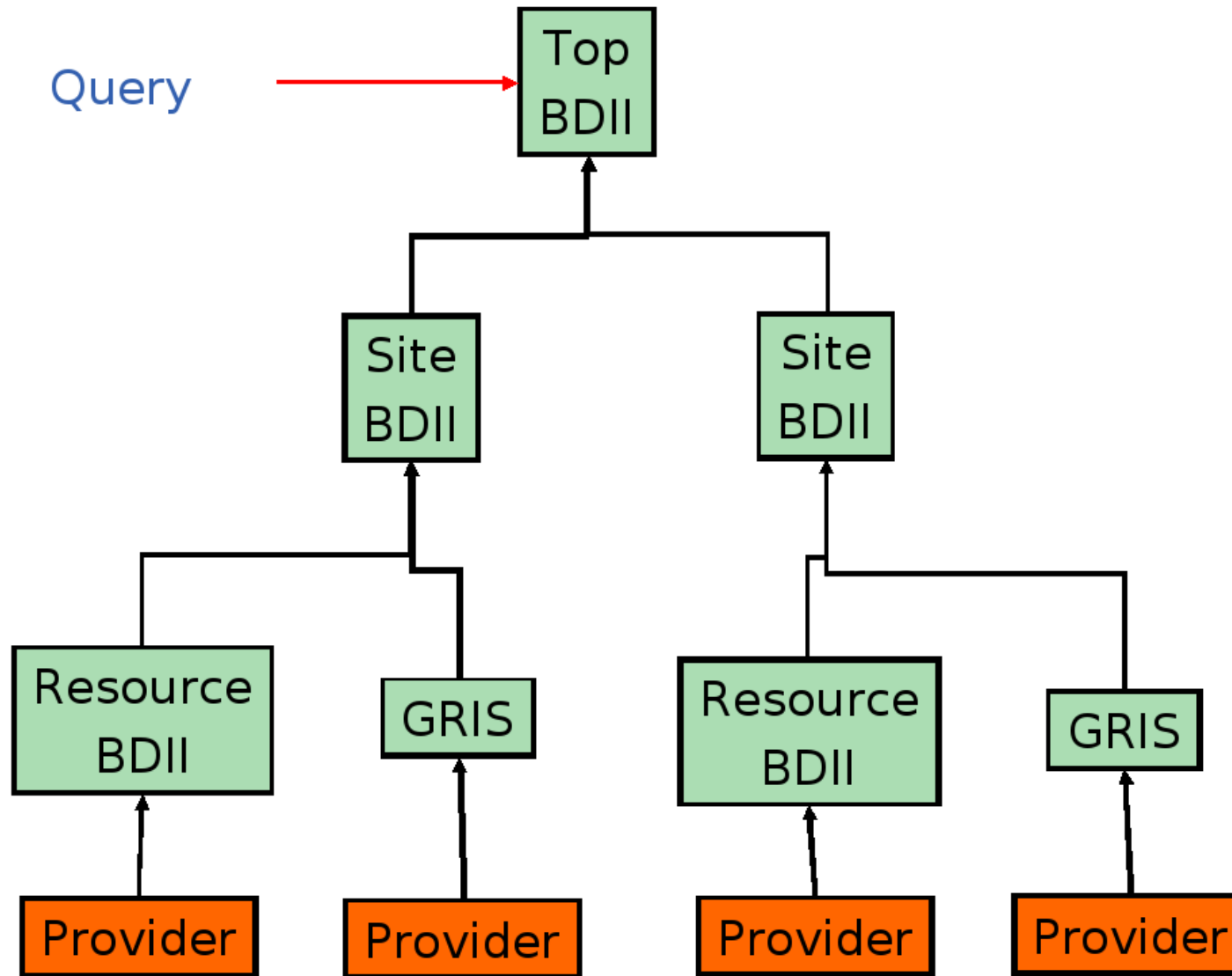
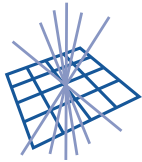


- DPM and the grid information system.
 - Explanation of terms
 - Configuration files
 - Troubleshooting

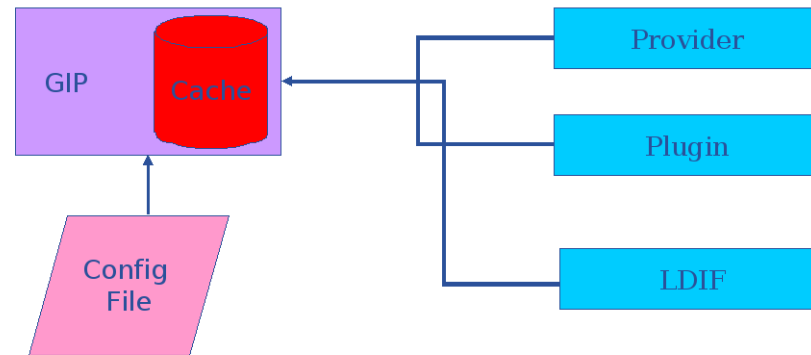
<http://lfield.web.cern.ch/lfield/public/presentations/Information-Tutorial.ppt>

- Provides data about grid services.
- Used for service discovery by client tools (i.e., `lcg-cr`).
- Resource selection.
- Basic monitoring (GStat).

- **Information Providers (IP)**
 - Scripts that get the information and return LDIF (ldap interchange format)
- **Grid Resource Information Service (GRIS)**
 - Daemon that runs the IP and answers LDAP queries
 - Register to a GIIS
- **Grid Information Index Service (GIIS)**
 - Answers LDAP queries by querying registered GRIS's or GIIS's.



Generic Information Provider (GIP)



- Provides information about the grid service.
 - Outputs LDIF information in accordance to the Glue Schema to stdout.
- Information can be provided by:
 - dynamic providers from the providers directory.
 - static files from the ldif directory.
 - dynamic plugins from the plugin directory.
- `/opt/glite/etc/gip/glite-info-generic.conf`

Berkely Database Information Index

- ≥ 2 or more standard LDAP databases that are populated by an update process.
- Port forwarding is used to ensure one database is available to serve data while the other is refreshing.
- Information can be updated by running a script to generate LDIF file to be inserted into the database.

<https://twiki.cern.ch/twiki//bin/view/EGEE/BDII>

- Daemon `/etc/rc.d/init.d/bdii`
- Configuration file `/opt/bdii/etc/bdii.conf`
- Log file `/opt/bdii/var/bdii.log`
- Format of `bdii-update.conf`

```
Site1 ldap://<hostname>:2170/mds-vo-name=site1,o=grid
```

```
Resource1 ldap://<hostname>:2170/mds-vo-name=resource,o=grid
```

```
Resource2 ldap://<hostname>:2135/mds-vo-name=local,o=grid
```

```
Resource3 file://opt/glite/libexe/glite-info-wrapper
```


- DPM now using the BDII as its information provider. By default, runs on port 2170.
 - This replaces globus-mds on port 2135.
- Tutorial machines run DPM 1.6.7 and BDII 3.9.1-4 on SL4.
- Note that many things that were previously in `/opt/lcg` now in `/opt/glite` and called `glite-*`.
- Configuration is simple since it is handled by YAIM.
 - But you should know what the relevant files are, just in case.

- `bdii.conf` contains information about ports, usernames, passwords for DB.
- Interesting stuff in `bdii-update.conf`.

```
$ cat /opt/bdii/bdii-update.conf
GIP file:///opt/glite/libexec/glite-info-wrapper

$ cat /opt/glite/libexec/glite-info-wrapper
#!/bin/sh

export LANG=C

/opt/glite/libexec/glite-info-generic
/opt/glite/etc/gip/glite-info-generic.conf
```

http://twiki.cern.ch/twiki/bin/view/LCG/TheLCGTroubleshootingGuide#Information_System_and_EGEE_BDII

- GIP problems:

- Run `glite-info-wrapper` as the `edguser`.

- * Permissions problems are a common source of errors.

- Run the `{providers/plugins}` in

- `/opt/glite/etc/gip/{provider,plugin}`

- Look for errors in the output.

- BDII problems:

- Is the URL that provides this information in the `bdi-update.conf`?

- * Does this URL return the required information?

- * The URL could time out , (check the `bdi` log file).

- Need to publish correct information about SRM2.2 endpoints, spaces etc.
 - Must conform to GLUE1.3 schema.
 - See Stephen Burke's talk from yesterday.
- There will be a SAM test to check that the SRM is publishing correctly.
 - You have been warned!

Publishing space tokens with DPM

- GIP written by Michel Jouvin (GRIF) to publish statically reserved spaces in DPM into BDII.
 - Static means a reservation made by site admin.
- GIP directly connects to the DPM database (perl-DBI).
- Future version will use the DPM python bindings.
 - Ensures that it will be independent of DPM database schema changes.
 - Recommended to wait for this version.
- Not official, but have a look at what is possible.

<https://twiki.cern.ch/twiki/bin/view/LCG/GSSDDPMInfo>

- Information system helps to bind services together.
- Important that what is published by your resources is correct.
- For DPM, the resource BDII is configured automatically by YAIM.
 - But configuration by hand is not difficult.
- Follow the trail of scripts and configuration files to debug problems. Watch out for permissions!