



Enabling Grids for E-science

Hands on session: the AMGA Metadata Catalogue

www.eu-egee.org



- **Derived from**
 - *Tony Calanducci*
 - *INFN Catania*
 - *Third EELA Tutorial for Managers and Users*
 - *Rio de Janeiro, 26-30 June 2006*

- Copy a template of config file for the MDC:

```
$ cp $GLITE_LOCATION/etc/mdclient.config  
$HOME/.mdclient.config
```

- Start up the Metadata Catalog Client with

```
$ mdclient
```

- Once logged in, you can list the available commands, typing help.

```
Connected to amga.ct.infn.it:8822
```

```
ARDA Metadata Server 1.2.0
```

```
Query> help
```

```
>> >help [topic]<
```

```
>> >Displays help on a command or a topic.<
```

```
>> >Valid topics are: help metadata metadata-optional directory entry group acl index  
schema sequence user view ticket commands<
```

- Commands are grouped by topic. You can get the list of valid commands for each topic, typing help [topic]
- **Example:** help entry

- **Schema population**

- **addattr dir attr type**

Adds a new attribute to the schema of a directory. Type is the name of an SQL datatype which will translated (if necessary) into a data type understood by the back end DB.

Examples of valid datatypes are `int`, `float`, `varchar(n)`, `timestamp`, `text`, `numeric(p,s)`

Examples: `addattr /gilda/test/films MovieTitle varchar(100)`
`addattr /gilda/test/films Runtime int`
`addattr /gilda/test/films PlotOutline text`

- **Attribute listing**

- **listattr path**

Returns a list of all attributes of the given file/direcory

- **Attribute Removal**

- **removeattr dir attribute**

Removes an attribute from a directory if it is not used by any entry in the directory

- **Browse the contents of a directory**
 - **dir [path]**

Returns the name of all subdirectories and files in the given *path* or in the current directory if not specified
- **Print the current working directory**
 - **pwd**
- **Change the current working directory**
 - **cd directory**

Example: **cd /gilda/tartu/films**
- **Directory creation**
 - **mkdir /parentdir/dir**

Creates the directory *dir* if it does not yet exist but *parentdir* already does

Example: **mkdir /gilda/tartu/films**
- **Directory removal**
 - **rmdir path**

Removes the directory given by path

- **Entry creation**
 - **addentry entry (attribute value)+**
Add a new entry and initializes some attributes
Run this Example with your favourite films., replacing “Madagascar”
`addentry /gilda/tartu/yourdir/madagascar.mov MovieTitle Madagascar`
- **Setting attribute values**
 - **setattr entry (attribute value)+**
Sets one or more attributes of an entry to given values
Example: Enter any run time (say between 50 and 150)
`setattr /gilda/tartu/yourdir/madagascar.mov Runtime 86`
- **Getting attribute values**
 - **getattr pattern (attribute)+**
Returns the entries and all the attributes for every file matching pattern
Example: `getattr /gilda/tartu/films/*.mov MovieTitle`
- **Entry deletion**
 - **rm pattern**
Removes all entries matching pattern
Example: `rm /gilda/tartu/test/m*.mov`

- **find pattern ‘query_condition’**

Returns all entries matching pattern for which query_condition is true

Examples:

```
find /gilda/tartu/films/ 'Runtime > 80'
```

```
find /gilda/tartu/films/ 'like(MovieTitle, "Mad%")'
```

```
find /gilda/tartu/films 'like(MovieTitle, "Mad%") AND Runtime > 80'
```

- **selectattr attr... condition**

Returns the values of given attributes for all files matching condition

Example:

```
cd /gilda/tartu/films
```

```
selectattr .:MovieTitle .:Runtime 'Runtime > 80'
```

```
>> >Madagascar<
```

```
>> >86<
```

Exercise:

- Log into the Metadata Catalog
- Go to the /gilda/tartu/films directory and use commands on the previous slides to add entries and query them
- Create a directory with your username into the /gilda/tartu/ directory
- Add some attributes (Description (varchar(100), Value int, Comment text) to the directory just created
- Add some entries - the entry name could correspond to the LFNs you uploaded and registered - but these are not reused in future practicals
- Fill the attribute fields for the inserted entries
- Query your entries

