



Enabling Grids for E-scienceE

AMGA : Hands On session

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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 1.1.0
```

```
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*

- **Valid topic**
 - help
 - metadata
 - metadata-optional
 - directory
 - replication
 - entry
 - group
 - acl
 - index
 - schema
 - sequence
 - user
 - view
 - ticket
 - commands

- >> **mkdir /parentdir/dir [option]**
- >> Creates a new directory. It can inherit the parent dirs schema.
- >> **rm pattern**
- >> Removes entries matching pattern.
- >> **ln file link**
- >> Creates a link to another file or to an external URL.
- >> **ls [directory]**
- >> List a directory.
- >> **ls -l [directory]**
- >> List the entries (not the collections!) in a directory.
- >> **stat filepattern**
- >> Shows the statistics of an enty or a directory.
- >> **chown file owner**
- >> Changes the owner of a file or directory.
- >> **chmod file access-rights**
- >> Changes the access mode of a file or directory.
- >> **rmdir directory**
- >> Removes a directory.
- >> **find [dir]**
- >> Creates a recursive dump starting at dir, default is /.

- **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/madrid`
- **Directory creation**
 - **mkdir /parentdir/dir**
Creates the directory *dir* if it does not yet exist but *parentdir* already does
Example: `mkdir /gilda/madrid/tcaland`
- **Directory removal**
 - **rmdir path**
Removes the directory given by path

- **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/madrid/tcaland MovieTitle varchar(100)`
`addattr /gilda/madrid/tcaland Runtime int`
`addattr /gilda/madrid/tcaland 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

- **Entry creation**
 - **addentry entry (attribute value)+**
Add a new entry and initializes some attributes
Example: `addentry /gilda/madrid/tcaland/madagascar.mov` MovieTitle
Madagascar
- **Setting attribute values**
 - **setattr entry (attribute value)+**
Sets one or more attributes of an entry to given values
Example: `setattr /gilda/madrid/tcaland/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/madrid/tcaland/*.mov` Title
- **Entry deletion**
 - **rm pattern**
Removes all entries matching pattern
Example: `rm /gildav/madrid/m*.mov`

- **find pattern ‘query_condition’**

Returns all entries matching pattern for which query_condition is true

Examples:

```
find /gilda/madrid/tcaland/ 'Runtime > 80'
```

```
find /gilda/madrid/tcaland/ 'like(MovieTitle, "Mad%")'
```

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

- **selectattr attr... condition**

Returns the values of given attributes for all files matching condition

Example:

```
cd /gilda/madrid/tcaland
```

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

```
>> >Madagascar<
```

```
>> >86<
```

Exercise:

- Log into the Metadata Catalog
- Create a directory with your surname into the /gilda/madrid directory
- Add some attributes (Description (varchar(100), Value int, Comment text) to the directory just created
- Add some entries using as entry name the LFNs you uploaded and registered into the File Catalog during the DMS hands-on session
- Fill the attribute fields for the inserted entries
- Look for the entry with Value > 50

