mc2 CLI Manual

Introduction

The purpose of the mc2 toolset is to provide the simplest environment as possible for configuring and accessing services, without any development or deployment effort by the scientific application developer. Moreover, the toolset offers some specific features not commonly found in the aforementioned solutions and which can be easily enabled or disabled individually for each customer through configuration. Among these features, the toolset offers a command-line user interface for executing and monitoring jobs and also for data management. This tool does not provide features such as file sharing or restricted anonymous access, but it is useful for scripting large scale bag-of-tasks executions.

Configuring the Tool

The mc2 CLI tool offers a set of scripts for Linux and Windows operational systems. These scripts contain the logic for calling the mc2 façade operations on the concrete implementations, but before they are executed some configuration steps must be performed.

1. Configure the CLI environment;
2. configure the CLI properties;
3. and configure the Facade properties.

Configuring the CLI environment

In order of finding all the required information before using the mc2 CLI an environment variable called **CLI_HOME** must be created. This variable must point to a directory with the structure illustrated in Figure 1. Table 1 contains a description of each file on this directory structure.

cli.propeties	Properties file where the facade access and configurations are set
cli.policy	Policy for enabling RMI access
mc2-cli.jar	JAR file with the compiled mc2 CLI version
scripts/<os>[1]	The directory where the startup and shutdown scripts are placed
scripts/<os>/cmds	The directory where the command scripts are placed.

Table 1- mc2 CLI files

[1] <os> identifies the operational system (Linux or Windows)

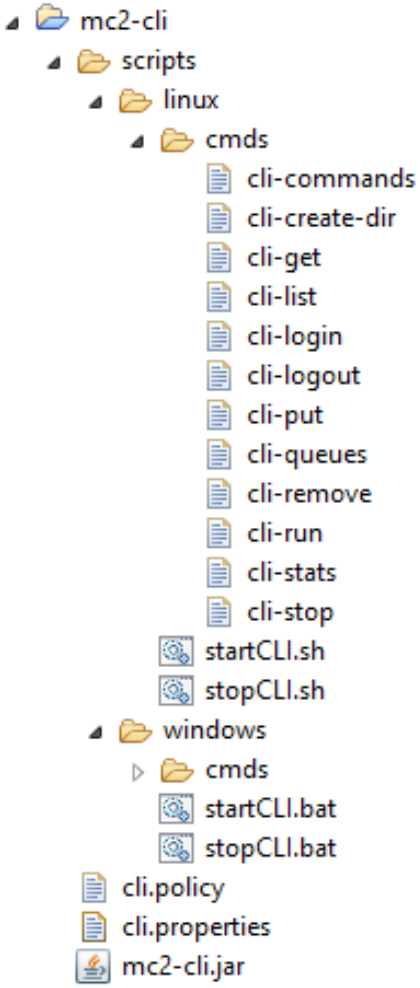

Figure 1- mc2 CLI directory structure

After configuring the **CLI_HOME** environment variable and the directory structure, users may also want to add the *scripts/<os>/cmds* to the operational system path in order of allowing the commands to be executed anywhere in the system.

Configuring the CLI properties

The mc2 CLI properties are responsible for configuring the concrete implementations of the mc2 facade. This properties file is a *key=value* file that must be called **cli.properties** and placed in the correct directory structured, as shown in the previous section. The properties of this file are illustrated in Table 2.

configuration.service	Concrete implementation of the Configuration Service
application.service	Concrete implementation of the Application Service
application.converter.service	Concrete implementation of the Application Converter Service
authentication.service	Concrete implementation of the Authentication Service
file.service	Concrete implementation of the File Service
job.monitoring.service	Concrete implementation of the Job Monitoring Service
resource.monitoring.service	Concrete implementation of the Resource Monitoring Service
job.submission.service	Concrete implementation of the Job Submission Service

Table 2- mc2 CLI properties

Configuring the Facade properties

After configuring all settings that mc2 CLI requires the user must also configure the façade properties. These properties are also in the *key=value* format and are also stored into the **cli.properties** file, described in the previous section. There are two facade implementations available, the CSGrid and the PMES/BES/COMPSS.

The CSGrid facade implementation requires some attributes for properly working, illustrated in Table 3.

openbus.host	The address where the Openbus is hosted
openbus.port	The port which the Openbus is listening
openbus.csgrid.offers.entity	The name of the Openbus offer entity
openbus.ldap.domain	The ID of the domain for LDAP on Openbus
openbus.voms.domain	The ID of the domain for VOMS on Openbus
csgrid.entity	The CSGrid entity of the gateway on Openbus
csgrid.cert	The Openbus certificate path of the CSGrid
ldap.host	The LDAP host
ldap.port	The LDAP port
ldap.dn	The LDAP DN

Table 3 - CSGrid Properties

The PMES/BES/COMPSS facade implementation requires some attributes for properly working, illustrated in Table 4.

bes.address	PMES/BES web service address
bes.credential.user	PMES/BES username
bes.credential.password	PMES/BES password
bes.cdmi.address	CDMI service address
bes.cdmi.username	CDMI service username
bes.cdmi.password	CDMI service password
ldap.host	The LDAP host
ldap.port	The LDAP port
ldap.dn	The LDAP DN

Table 4 - PMES/BES/COMPSS Properties