

D1.1d - VISHNU Command-line interface specifications



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REVISION HISTORY

| NUMBER | DATE | DESCRIPTION | NAME |
|--------|------------|---|---------|
| 0 | 05/01/2011 | Formatting example | SysFera |
| 1 | 13/01/2011 | First release | SysFera |
| 2 | 10/02/2011 | Removed UMS::SessionStateType. Added UMS::StatusType, UMS::PrivilegeType. Modified UMS::addVishnuUser, UMS::updateUser, UMS::addLocalAccount, UMS::addMachine, UMS::updateMachine, UMS::listSessions, UMS::restoreConfiguration. | SysFera |
| 3 | 18/02/2011 | Renamed all commands to follow C-style command names with vishnu prefix. Added the help option to all commands. Modified update_machine and export_commands. Removed the VISHNU_SESSION_KEY environment variable on all commands. | SysFera |

REVISION HISTORY

| NUMBER | DATE | DESCRIPTION | NAME |
|--------|------------|--|---------|
| 4 | 15/04/2011 | <p>Updates for TMS: Modified description of machineId parameter, vishnu_submit_job service. Modified name of get_all_jobs_output to get_completed_jobs_output. Added input parameter outDir to get_job_output and get_completed_jobs_output. Added vishnu_get_machine_refresh_period service. Removed set_machine_env service. Removed jobPriority option in submit_job.</p> <p>Updates for IMS: Add option in exportCommand, getMetricCurrentValue, getProcesses, getMetricHistory, restart and getSystemThreshold. Add services stop and getSystemInfo.</p> | SysFera |
| 5 | 21/04/2011 | <p>Updates for TMS: Removed vishnu_get_machine_refresh_period and vishnu_set_machine_refresh_period services. Added UNDEFINED status of JobStatus Enum. Added UNDEFINED priority of JobPriority Enum. Removed of outputPah and errorPath of ListJobsOptions. Removed scriptContent in Job class. Added</p> <p>ERRCODE_ALREADY_TERMINATED, ERRCODE_ALREADY_CANCELED, ERRCODE_JOB_IS_NOT_TERMINATED in exception list. Modified values of JobPriority Enum. Modified values of QueuePriority and QueueStatus. Added UNDEFINED priority of QueuePriority. Added option queueName in vishnu_list_queues.</p> | SysFera |
| 6 | 24/05/2011 | <p>Updates of UMS: Added new error code for addLocalAccount and updateLocalAccount.</p> | SysFera |
| 10 | 15/12/2011 | <p>Updates of TMS: Extended vishnu_submit_job options.</p> <p>Updates of FMS: Added recursive option to vishnu_create_dir command.</p> <p>Updates of UMS: Added vishnu_current_session_id command. Added -w option to connect and reconnect command.</p> | SysFera |

REVISION HISTORY

| NUMBER | DATE | DESCRIPTION | NAME |
|--------|------------|--|---------|
| 11 | 10/01/2012 | <p>Updates of TMS:</p> <p>Modified decription of vishnu_submit_job command (to take into account automatic submission).</p> <p>Extended vishnu_submit_job options (added load criterion option for automatic submission, added option to select a queue automatically).</p> <p>Modified decription of vishnu_list_jobs command (to take into account listing of jobs on all machines).</p> <p>Extended vishnu_list_jobs options (added multipleStatus option for combination of several job states, added option to list all jobs submitted by the underlying batch scheduler (VISHNU jobs and jobs submitted out of VISHNU)).</p> | SysFera |
| 12 | 20/01/2012 | <p>Updates of UMS:</p> <p>Added vishnu_connect_m and vishnu_reconnect_m respectively for connection and reconnection using multiple VISHNU accounts defined on the .netrc file.</p> <p>Modified vishnu_list_users option -u to -i for userId and added a new option for user-authentication system.</p> <p>Added vishnu_add_authentication_system, vishnu_update_authentication_system, vishnu_delete_authentication_system, vishnu_list_authentication_system, vishnu_add_auth_account, vishnu_update_auth_account, vishnu_delete_auth_account, vishnu_list_auth_account.</p> <p>Updates of IMS:</p> <p>Added vishnu_define_auth_identifier</p> | SysFera |
| 13 | 21/08/2012 | <p>Updates of TMS:</p> <p>Extended vishnu_list_jobs options (added -l option for listing all information about jobs).</p> <p>Extended vishnu_submit_job options (added -w option for associating a job at a work).</p> | SysFera |
| 14 | 04/12/2012 | Rename of FMS commands according to Posix names. | SysFera |

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Chapter 1

Document presentation

1.1 Document objectives

This document presents the detailed specifications of the VISHNU command line user interface. These specifications include the definition of all commands including administration commands.

1.2 Document structure

The document is divided into 4 parts corresponding to the 4 modules that compose the Vishnu system:

- UMS: Users Management Service
- TMS: Tasks Management Service
- FMS: Files Management Service
- IMS: Information Management Service

Each module corresponds to a chapter in the document, and each chapter contains the following sections:

- A first section describing the definition of all commands provided by the package.
- A second section describing the definition of all enumerated values used as command parameters.

1.3 References

- D1.1a : VISHNU General specifications

1.4 Glossary

- VISHNU admin: any user having the administrator privilege
-

1.5 Generic command definition format

This section presents the generic format used in the following chapters to describe the commands. It also details the environment variables required and the user options.

A commands is defined as follows:

Access

Here is detailed the access level of the command line (i.e. the privilege required to use this command)

Description

Here is detailed the purpose of the command line.

Example of use

Here is detailed an example of the use of the command line which starts by optional arguments preceded by a short letter and the required arguments at the end.

myCommand **-l** acLogin **-s** sshKeyPath userId

Parameters

The following table contains all the input arguments of the command with their type and description, their short letter for options and a required flag.

| Parameter | Type | Option | Description | Required |
|------------|--------|--------|--|----------|
| userId | string | | This is an example of a required argument | YES |
| acLogin | string | l | This is an example of an optional argument | NO |
| sshKeyPath | string | s | This is an example of an optional argument | NO |

The following table contains the list of environment variables information. These environment variables can be mandatory or optional and the value will be overridden by the corresponding command-line option if applicable. When the user option flag is true, the value for this variable can be defined persistently as a user option stored in the database (see the "vishnu_configure_option" command).

Environment variables

| Name | Parameter | Type | Description | Required | User option |
|--------------------|-----------|--------|---|----------|-------------|
| VISHNU_CONFIG_FILE | N/A | string | This is an example of an environment variable | YES | NO |

Note:

For each command line the **-h** option can be used for help.

1.6 Environment variables and options

Here is detailed the way to use the user options which are stored in the database and environment variables in VISHNU.

Example 1.1 Pseudo code

```
if (the option is provided in the command line) {
    optionValue = option
} else {
    if (an environment variable exists) {
        optionValue = EnVariable_Value

    } else {

        if (a value has been defined in the user configuration) {
            optionValue = user_Option
        }
        else {
            //The default value of the option defined by VISHNU admin is used
            optionValue = defaultValueOption
        }
    }
}
```

Chapter 2

Commands specification for User Management Service (UMS)

2.1 Command definitions

2.1.1 vishnu_connect

Access

This command line can be used by any VISHNU user

Description

The vishnu_connect command opens a session

Example of use

```
vishnu_connect [-h] [-p closePolicy] [-d sessionInactivityDelay] [-s substituteUserId] [-u userId]  
[-w password]
```

Parameters

| Parameter | Type | Option | Description | Required |
|------------------------|------------------|--------|--|----------|
| closePolicy | SessionCloseType | p | is an option for closing session automatically | NO |
| sessionInactivityDelay | int | d | is the maximum delay in seconds between two user requests when the CLOSE_ON_TIMEOUT policy is set | NO |
| substituteUserId | string | s | is an admin option which allows an admin to open a session as if she was another user identified by her userId | NO |
| userId | string | u | userId represents the VISHNU user identifier | NO |
| password | string | w | password represents the password of the user | NO |

Environment variables

| Name | Parameter | Type | Description | Required | User option |
|---------------------|-------------|------------------|--|----------|-------------|
| VISHNU_CLOSE_POLICY | closePolicy | SessionCloseType | is an option for closing session automatically | NO | YES |

2.1.2 vishnu_connect_m

Access

This command line can be used by any VISHNU user

Description

The vishnu_connect_m command opens a session by trying multiple couples (userId, password) each in turn

Example of use

```
vishnu_connect_m [-h] [-p closePolicy] [-d sessionInactivityDelay] [-s substituteUserId] userId p-  
wd
```

Parameters

| Parameter | Type | Option | Description | Required |
|------------------------|------------------|--------|---|----------|
| closePolicy | SessionCloseType | p | is an option for closing session automatically | NO |
| sessionInactivityDelay | int | d | is the maximum delay in seconds between two user requests when the CLOSE_ON_TIMEOUT policy is set | NO |
| substituteUserId | string | s | is an admin option which allows an admin to open a session as if she was another user identified by her userId | NO |
| userId | string | | userId represents the VISHNU user identifier. There may be various users id used set alternatively with the corresponding password. | YES |
| pwd | string | | represents the password of the user. There may be various password used set alternatively with the corresponding userId. | YES |

Environment variables

| Name | Parameter | Type | Description | Required | User option |
|---------------------|-------------|------------------|--|----------|-------------|
| VISHNU_CLOSE_POLICY | closePolicy | SessionCloseType | is an option for closing session automatically | NO | YES |

2.1.3 vishnu_reconnect

Access

This command line can be used by any VISHNU user

Description

The vishnu_reconnect command reconnects to a session that is still active

Example of use

```
vishnu_reconnect [-h] [-u userId] [-w password] sessionId
```

Parameters

| Parameter | Type | Option | Description | Required |
|-----------|--------|--------|--|----------|
| sessionId | string | | sessionId is the identifier of the session defined in the database | YES |
| userId | string | u | userId represents the VISHNU user identifier | NO |
| password | string | w | password represents the password of the user | NO |

Environment variables

This command defines no environment variables.

2.1.4 vishnu_reconnect_m

Access

This command line can be used by any VISHNU user

Description

The vishnu_reconnect_m command reconnects to a session that is still active by trying multiple couples (userId, password) each in turn

Example of use

```
vishnu_reconnect_m [-h] sessionId userId pwd
```

Parameters

| Parameter | Type | Option | Description | Required |
|-----------|--------|--------|--|----------|
| sessionId | string | | sessionId is the identifier of the session defined in the database | YES |
| userId | string | | userId represents the VISHNU user identifier | YES |
| pwd | string | | represents the password of the user | YES |

Environment variables

This command defines no environment variables.

2.1.5 vishnu_add_user

Access

This command line can be used by ADMIN users only

Description

The vishnu_add_user command adds a new VISHNU user

Example of use

```
vishnu_add_user [-h] firstname lastname privilege email
```

Parameters

| Parameter | Type | Option | Description | Required |
|-----------|---------------|--------|---|----------|
| firstname | string | | is the firstname of the user | YES |
| lastname | string | | is the lastname of the user | YES |
| privilege | PrivilegeType | | is the privilege of the user (admin or simple user) | YES |
| email | string | | is the email of the user | YES |

Environment variables

This command defines no environment variables.

2.1.6 vishnu_update_user

Access

This command line can be used by ADMIN users only

Description

The vishnu_update_user command updates the user information except the userId and the password

Example of use

```
vishnu_update_user [-h] [-f firstname] [-l lastname] [-p privilege] [-m email] [-s status] userId
```

Parameters

| Parameter | Type | Option | Description | Required |
|-----------|---------------|--------|--|----------|
| userId | string | | represents the VISHNU user identifier | YES |
| firstname | string | f | represents the updated firstname of the user | NO |
| lastname | string | l | represents the updated lastname of the user | NO |
| privilege | PrivilegeType | p | represents the updated privilege of the user | NO |
| email | string | m | represents the updated email address of the user | NO |
| status | StatusType | s | represents the status of the user (LOCKED or ACTIVE) | NO |

Environment variables

This command defines no environment variables.

2.1.7 vishnu_delete_user

Access

This command line can be used by ADMIN users only

Description

The vishnu_delete_user command removes a user from VISHNU

Example of use

```
vishnu_delete_user [-h] userId
```

Parameters

| Parameter | Type | Option | Description | Required |
|-----------|--------|--------|--|----------|
| userId | string | | userId represents the VISHNU user identifier of the user who will be deleted from VISHNU | YES |

Environment variables

This command defines no environment variables.

2.1.8 vishnu_close

Access

This command line can be used by any VISHNU user

Description

The vishnu_close command closes the session

Example of use

```
vishnu_close [-h]
```

Parameters

This command defines no arguments.

Environment variables

This command defines no environment variables.

2.1.9 vishnu_change_password

Access

This command line can be used by any VISHNU user

Description

The vishnu_change_password command changes the password

Example of use

```
vishnu_change_password [-h] userId
```

Parameters

| Parameter | Type | Option | Description | Required |
|-------------|--------|--------|---|----------|
| userId | string | | userId represents the VISHNU user identifier | YES |
| password | string | | password represents the password of the user, it is an interactive parameter | YES |
| passwordNew | string | | passwordNew represents the new password of the user, it is an interactive parameter | YES |

Environment variables

This command defines no environment variables.

2.1.10 vishnu_reset_password

Access

This command line can be used by ADMIN users only

Description

The vishnu_reset_password command resets the password of a user

Example of use

```
vishnu_reset_password [-h] userId
```

Parameters

| Parameter | Type | Option | Description | Required |
|-----------|--------|--------|---|----------|
| userId | string | | userId represents the VISHNU user identifier of the user whose password will be reset | YES |

Environment variables

This command defines no environment variables.

2.1.11 vishnu_add_local_account

Access

This command line can be used by any VISHNU user

Description

The `vishnu_add_local_account` command adds a new local user configuration

Example of use

```
vishnu_add_local_account [-h] userId machineId acLogin sshKeyPath homeDirectory
```

Parameters

| Parameter | Type | Option | Description | Required |
|----------------------------|--------|--------|--|----------|
| <code>userId</code> | string | | The <code>userId</code> represents the VISHNU user identifier of the user of the local user configuration | YES |
| <code>machineId</code> | string | | The <code>MachineId</code> represents the identifier of the machine associated to the local user configuration | YES |
| <code>acLogin</code> | string | | <code>acLogin</code> represents the login of the user on the associated machine | YES |
| <code>sshKeyPath</code> | string | | <code>sshKeyPath</code> is the path of the ssh key of the user on the associated machine | YES |
| <code>homeDirectory</code> | string | | <code>HomeDirectory</code> is the path of the home directory of the user on the associated machine | YES |

Environment variables

This command defines no environment variables.

2.1.12 vishnu_update_local_account**Access**

This command line can be used by any VISHNU user

Description

The `vishnu_update_local_account` command updates a local user configuration

Example of use

```
vishnu_update_local_account [-h] [-l acLogin] [-s sshKeyPath] [-d homeDirectory] userId machineId
```

Parameters

| Parameter | Type | Option | Description | Required |
|----------------------------|--------|--------|--|----------|
| <code>userId</code> | string | | The <code>userId</code> represents the VISHNU user identifier of the user of the local user configuration | YES |
| <code>machineId</code> | string | | The <code>MachineId</code> represents the identifier of the machine associated to the local user configuration | YES |
| <code>acLogin</code> | string | l | <code>acLogin</code> represents the login of the user on the associated machine | NO |
| <code>sshKeyPath</code> | string | s | <code>sshKeyPath</code> is the path of the ssh key of the user on the associated machine | NO |
| <code>homeDirectory</code> | string | d | <code>HomeDirectory</code> is the path of the home directory of the user on the associated machine | NO |

Environment variables

This command defines no environment variables.

2.1.13 vishnu_delete_local_account**Access**

This command line can be used by any VISHNU user

Description

The `vishnu_delete_local_account` command removes a local user configuration (for a given user on a given machine) from VISHNU

Example of use

```
vishnu_delete_local_account [-h] userId machineId
```

Parameters

| Parameter | Type | Option | Description | Required |
|------------------------|--------|--------|---|----------|
| <code>userId</code> | string | | <code>userId</code> represents the VISHNU user identifier of the user whose local configuration will be deleted for the given machine | YES |
| <code>machineId</code> | string | | <code>machineId</code> represents the identifier of the machine whose local configuration will be deleted for the given user | YES |

Environment variables

This command defines no environment variables.

2.1.14 vishnu_save_configuration

Access

This command line can be used by ADMIN users only

Description

The `vishnu_save_configuration` command saves the configuration of VISHNU

Example of use

```
vishnu_save_configuration [-h]
```

Parameters

This command defines no arguments.

Environment variables

This command defines no environment variables.

2.1.15 vishnu_restore_configuration

Access

This command line can be used by ADMIN users only

Description

The `vishnu_restore_configuration` command restores the configuration of VISHNU

Example of use

```
vishnu_restore_configuration [-h] filePath
```

Parameters

| Parameter | Type | Option | Description | Required |
|-----------|--------|--------|---|----------|
| filePath | string | | The filePath is the path of the file used to restore VISHNU configuration | YES |

Environment variables

This command defines no environment variables.

2.1.16 vishnu_add_machine

Access

This command line can be used by ADMIN users only

Description

The vishnu_add_machine command adds a new machine in VISHNU

Example of use

```
vishnu_add_machine [-h] name site language sshPublicKeyFile machineDescription
```

Parameters

| Parameter | Type | Option | Description | Required |
|--------------------|--------|--------|--|----------|
| name | string | | represents the name of the machine | YES |
| site | string | | represents the location of the machine | YES |
| language | string | | represents the language used for the description of the machine | YES |
| sshPublicKeyFile | string | | contains the path to the SSH public key used by VISHNU to access local user accounts | YES |
| machineDescription | string | | represents the description of the machine | YES |

Environment variables

This command defines no environment variables.

2.1.17 vishnu_update_machine

Access

This command line can be used by ADMIN users only

Description

The vishnu_update_machine command updates machine description

Example of use

```
vishnu_update_machine [-h] [-n name] [-s site] [-d machineDescription] [-l language] [-t status] [--k sshPublicKeyFile] machineId
```

Parameters

| Parameter | Type | Option | Description | Required |
|--------------------|--------|--------|---|----------|
| machineId | string | | represents the identifier of the machine | YES |
| name | string | n | represents the name of the machine | NO |
| site | string | s | represents the location of the machine | NO |
| machineDescription | string | d | represents the description of the machine | NO |
| language | string | l | represents the language used for the description of the machine | NO |

| Parameter | Type | Option | Description | Required |
|------------------|------------|--------|--|----------|
| status | StatusType | t | represents the status of the machine | NO |
| sshPublicKeyFile | string | k | contains the path to the SSH public key used by VISHNU to access local user accounts | NO |

Environment variables

This command defines no environment variables.

2.1.18 vishnu_delete_machine

Access

This command line can be used by ADMIN users only

Description

The vishnu_delete_machine command removes a machine from VISHNU

Example of use

```
vishnu_delete_machine [-h] machineId
```

Parameters

| Parameter | Type | Option | Description | Required |
|-----------|--------|--------|--|----------|
| machineId | string | | machineId represents the identifier of the machine | YES |

Environment variables

This command defines no environment variables.

2.1.19 vishnu_list_local_accounts

Access

This command line can be used by any VISHNU user

Description

The vishnu_list_local_accounts command lists the local user configurations

Example of use

```
vishnu_list_local_accounts [-h] [-a] [-u userId] [-i machineId]
```

Parameters

| Parameter | Type | Option | Description | Required |
|-----------------|---------|--------|--|----------|
| adminListOption | boolean | a | is an admin option for listing all local configurations of all users | NO |
| userId | string | u | is an admin option for listing the local configurations of a specific user | NO |
| machineId | string | i | is an option for listing local user configurations on a specific machine | NO |

Environment variables

This command defines no environment variables.

2.1.20 vishnu_list_machines

Access

This command line can be used by any VISHNU user

Description

The vishnu_list_machines command lists the machines that are accessible through VISHNU

Example of use

```
vishnu_list_machines [-h] [-u userId] [-a] [-m machineId]
```

Parameters

| Parameter | Type | Option | Description | Required |
|----------------|---------|--------|--|----------|
| userId | string | u | is an admin option for listing machines in which a specific user has a local configuration | NO |
| listAllMachine | boolean | a | is an option for listing all VISHNU machines | NO |
| machineId | string | m | is an option for listing information about a specific machine | NO |

Environment variables

This command defines no environment variables.

2.1.21 vishnu_list_history_cmd

Access

This command line can be used by any VISHNU user

Description

The vishnu_list_history_cmd command lists the commands

Example of use

```
vishnu_list_history_cmd [-h] [-a] [-u userId] [-i sessionId] [-s startDateOption] [-e endDateOption]
```

Parameters

| Parameter | Type | Option | Description | Required |
|-----------------|---------|--------|--|----------|
| adminListOption | boolean | a | is an admin option for listing all commands of all users | NO |
| userId | string | u | is an admin option for listing commands launched by a specific user identified by his/her userId | NO |
| sessionId | string | i | lists all commands launched within a specific session | NO |
| startDateOption | long | s | allows the user to organize the commands listed by providing the start date (the UNIX timestamp of the start date is used) | NO |
| endDateOption | long | e | allows the user to organize the commands listed by providing the end date (the timestamp of the end date is used). By default, the end date is the current day | NO |

Environment variables

This command defines no environment variables.

2.1.22 vishnu_list_options

Access

This command line can be used by any VISHNU user

Description

The vishnu_list_options command lists the options of the user

Example of use

```
vishnu_list_options [-h] [-a] [-u userId] [-n optionName]
```

Parameters

| Parameter | Type | Option | Description | Required |
|------------------|---------|--------|--|----------|
| listAllDeftValue | boolean | a | is an option for listing all default option values defined by VISHNU administrator | NO |
| userId | string | u | is an admin option for listing the options of a specific user | NO |
| optionName | string | n | allows the user to get the value of a specific option identified by its name | NO |

Environment variables

This command defines no environment variables.

2.1.23 vishnu_list_users

Access

This command line can be used by ADMIN users only

Description

The vishnu_list_users command lists VISHNU users

Example of use

```
vishnu_list_users [-h] [-u userId] [-i authSystemId]
```

Parameters

| Parameter | Type | Option | Description | Required |
|--------------|--------|--------|---|----------|
| userId | string | u | allows an admin to get information about a specific user identified by his/her userId | NO |
| authSystemId | string | i | is an option to list users who have local user-authentication configurations on a specific user-authentication system | NO |

Environment variables

This command defines no environment variables.

2.1.24 vishnu_list_sessions

Access

This command line can be used by any VISHNU user

Description

The `vishnu_list_sessions` command lists all sessions of the user

Example of use

```
vishnu_list_sessions [-h] [-t status] [-p sessionClosePolicy] [-d sessionInactivityDelay] [-m machineId] [-a] [-u userId] [-i sessionId] [-s startDateOption] [-e endDateOption]
```

Parameters

| Parameter | Type | Option | Description | Required |
|------------------------|------------------|--------|--|----------|
| status | StatusType | t | specifies the status of the sessions which will be listed | NO |
| sessionClosePolicy | SessionCloseType | p | specifies the closure mode of the sessions which will be listed (CLOSE_ON_TIMEOUT or CLOSE_ON_DISCONNECT) | NO |
| sessionInactivityDelay | int | d | specifies the inactivity delay in seconds of the sessions which will be listed | NO |
| machineId | string | m | allows the user to list sessions opened on a specific client's machine by using its name | NO |
| adminListOption | boolean | a | is an admin option for listing all sessions of all users | NO |
| userId | string | u | is an admin option for listing sessions opened by a specific user | NO |
| sessionId | string | i | allows the user to list all commands launched within a specific session | NO |
| startDateOption | long | s | allows the user to organize the commands listed by providing the start date (the UNIX timestamp of the start date is used) | NO |
| endDateOption | long | e | allows the user to organize the commands listed by providing the end date (the timestamp of the end date is used). By default, the end date is the current day | NO |

Environment variables

This command defines no environment variables.

2.1.25 vishnu_configure_default_option

Access

This command line can be used by ADMIN users only

Description

The `vishnu_configure_default_option` command configures a default option value

Example of use

```
vishnu_configure_default_option [-h] optionName value
```

Parameters

| Parameter | Type | Option | Description | Required |
|------------|--------|--------|-----------------------------------|----------|
| optionName | string | | represents the name of an option | YES |
| value | string | | represents the value of an option | YES |

Environment variables

This command defines no environment variables.

2.1.26 vishnu_configure_option

Access

This command line can be used by any VISHNU user

Description

The vishnu_configure_option command configures an option of the user

Example of use

```
vishnu_configure_option [-h] optionName value
```

Parameters

| Parameter | Type | Option | Description | Required |
|------------|--------|--------|-----------------------------------|----------|
| optionName | string | | represents the name of an option | YES |
| value | string | | represents the value of an option | YES |

Environment variables

This command defines no environment variables.

2.1.27 vishnu_current_session_id

Access

This command line can be used by any VISHNU user

Description

The vishnu_current_session_id command display the session id

Example of use

```
vishnu_current_session_id [-h]
```

Parameters

This command defines no arguments.

Environment variables

This command defines no environment variables.

2.1.28 vishnu_add_auth_system

Access

This command line can be used by ADMIN users only

Description

The vishnu_add_auth_system command adds a new user-authentication system in VISHNU

Example of use

```
vishnu_add_auth_system [-h] [-b ldapBase] name URI authLogin authPassword userPasswordEncryption  
type
```

Parameters

| Parameter | Type | Option | Description | Required |
|-----------|--------|--------|--|----------|
| name | string | | corresponds to the user-authentication system's name | YES |

| Parameter | Type | Option | Description | Required |
|------------------------|------------------|--------|--|----------|
| URI | string | | is the URI of the user-authentication systems (by the form host:port for LDAP) | YES |
| authLogin | string | | is the login used to connect to the user-authentication system | YES |
| authPassword | string | | is the password used to connect to the user-authentication system | YES |
| userPasswordEncryption | EncryptionMethod | | represents the encryption method used to encrypt user's password | YES |
| type | AuthType | | represents the type of the user-authentication systems | YES |
| ldapBase | string | b | is an option for user-authentication system based on LDAP which specifies the DN of the root entry | NO |

Environment variables

This command defines no environment variables.

2.1.29 vishnu_update_auth_system

Access

This command line can be used by ADMIN users only

Description

The vishnu_update_auth_system command updates a user-authentication system in VISHNU

Example of use

```
vishnu_update_auth_system [-h] [-n name] [-i URI] [-u authLogin] [-w authPassword] [-e userPasswordEncryption] [-t type] [-s status] [-b ldapBase] authSystemId
```

Parameters

| Parameter | Type | Option | Description | Required |
|------------------------|------------------|--------|--|----------|
| authSystemId | string | | is the identifier, generated by VISHNU, of the user-authentication system | YES |
| name | string | n | corresponds to the user-authentication system's name | NO |
| URI | string | i | is the URI of the user-authentication systems (by the form host:port for LDAP) | NO |
| authLogin | string | u | is the login used to connect to the user-authentication system | NO |
| authPassword | string | w | is the password used to connect to the user-authentication system | NO |
| userPasswordEncryption | EncryptionMethod | e | represents the encryption method used to encrypt user's password | NO |
| type | AuthType | t | represents the type of the user-authentication system | NO |
| status | StatusType | s | represents the status of the user-authentication system | NO |
| ldapBase | string | b | is an option for user-authentication system based on LDAP which specifies the DN of the root entry | NO |

Environment variables

This command defines no environment variables.

2.1.30 vishnu_delete_auth_system

Access

This command line can be used by ADMIN users only

Description

The vishnu_delete_auth_system command removes a user-authentication system from VISHNU

Example of use

```
vishnu_delete_auth_system [-h] authSystemId
```

Parameters

| Parameter | Type | Option | Description | Required |
|--------------|--------|--------|--|----------|
| authSystemId | string | | authSystemId is the identifier of the user-authentication system | YES |

Environment variables

This command defines no environment variables.

2.1.31 vishnu_list_auth_systems

Access

This command line can be used by any VISHNU user

Description

The vishnu_list_auth_systems command lists VISHNU user-authentication systems

Example of use

```
vishnu_list_auth_systems [-h] [-a] [-f] [-u userId] [-i authSystemId]
```

Parameters

| Parameter | Type | Option | Description | Required |
|--------------------|---------|--------|---|----------|
| listAllAuthSystems | boolean | a | is an option for listing all VISHNU user-authentication systems | NO |
| listFullInfo | boolean | f | is an admin option for listing full VISHNU user-authentication systems information such as all concerned only the administrator: authLogin, authPassword and userPasswordEncryption | NO |
| userId | string | u | is an admin option for listing all user-authentication systems in which a specific user has local user-authentication configs | NO |
| authSystemId | string | i | is an option for listing a specific user-authentication system | NO |

Environment variables

This command defines no environment variables.

2.1.32 vishnu_add_auth_account

Access

This command line can be used by any VISHNU user

Description

The `vishnu_add_auth_account` command adds a new local user-authentication configuration

Example of use

```
vishnu_add_auth_account [-h] [-u userId] authSystemId acLogin
```

Parameters

| Parameter | Type | Option | Description | Required |
|---------------------------|--------|----------------|--|----------|
| <code>authSystemId</code> | string | | is the identifier of the user-authentication system | YES |
| <code>userId</code> | string | <code>u</code> | represents an admin option to add a user-authentication account of a specific user | NO |
| <code>acLogin</code> | string | | <code>acLogin</code> represents the login of the user on the associated user-authentication system | YES |

Environment variables

This command defines no environment variables.

2.1.33 vishnu_update_auth_account

Access

This command line can be used by any VISHNU user

Description

The `vishnu_update_auth_account` command updates a local user-authentication configuration

Example of use

```
vishnu_update_auth_account [-h] [-u userId] [-l acLogin] authSystemId
```

Parameters

| Parameter | Type | Option | Description | Required |
|---------------------------|--------|----------------|---|----------|
| <code>authSystemId</code> | string | | is the identifier of the user-authentication system | YES |
| <code>userId</code> | string | <code>u</code> | represents an admin option to add a user-authentication account of a specific user | NO |
| <code>acLogin</code> | string | <code>l</code> | is an option to change the login of the user on the associated user-authentication system | NO |

Environment variables

This command defines no environment variables.

2.1.34 vishnu_delete_auth_account

Access

This command line can be used by any VISHNU user

Description

The `vishnu_delete_auth_account` command removes a local user-authentication configuration from VISHNU

Example of use

```
vishnu_delete_auth_account [-h] [-u userId] authSystemId
```

Parameters

| Parameter | Type | Option | Description | Required |
|--------------|--------|--------|---|----------|
| authSystemId | string | | authSystemId is the identifier of the user-authentication system | YES |
| userId | string | u | is an admin option which represents the VISHNU identifier of the user whose local user-authentication configuration will be deleted | NO |

Environment variables

This command defines no environment variables.

2.1.35 vishnu_list_auth_accounts

Access

This command line can be used by any VISHNU user

Description

The vishnu_list_auth_accounts command lists local user-authentication configurations

Example of use

```
vishnu_list_auth_accounts [-h] [-a] [-u userId] [-i authSystemId]
```

Parameters

| Parameter | Type | Option | Description | Required |
|--------------|---------|--------|---|----------|
| listAll | boolean | a | is an admin option for listing all local user-authentication configurations of VISHNU | NO |
| userId | string | u | is an admin option for listing all local user-authentication configurations of a specific user identified by his/her userId | NO |
| authSystemId | string | i | is an option for listing local user-configuration of a specific user-authentication system | NO |

Environment variables

This command defines no environment variables.

2.1.36 vishnu_set_ssh_key

Access

This command line can be used by any VISHNU user

Description

The vishnu_set_ssh_key command allows to add or remove a given key to/from the authorized keys of a user's remote account.

Example of use

```
vishnu_set_ssh_key [-h] [-a] [-r] rlogin sshPubKey
```

Parameters

| Parameter | Type | Option | Description | Required |
|--------------|---------|--------|---|----------|
| rlogin | string | | A ssh-compliant form of login information in the remote account (e.g. user@machine) | YES |
| sshPubKey | string | | The key add to the remote account | YES |
| addOption | boolean | a | option for adding a key | NO |
| removeOption | boolean | r | option for removing a key | NO |

Environment variables

This command defines no environment variables.

2.2 Parameters definitions

Enumeration UMS::AuthType Type

| Name | Value |
|-----------|-------|
| UNDEFINED | -1 |
| LDAP | 0 |

Enumeration UMS::CommandStatusType Type

| Name | Value |
|---------|-------|
| FAILURE | 0 |
| SUCCESS | 1 |

Enumeration UMS::EncryptionMethod Type

| Name | Value |
|-----------|-------|
| UNDEFINED | -1 |
| SSHA | 0 |

Enumeration UMS::PrivilegeType Type

| Name | Value |
|-------|-------|
| USER | 0 |
| ADMIN | 1 |

Enumeration UMS::SessionCloseType Type

| Name | Value |
|---------------------|-------|
| DEFAULT | 0 |
| CLOSE_ON_TIMEOUT | 1 |
| CLOSE_ON_DISCONNECT | 2 |

Enumeration UMS::StatusType Type

| Name | Value |
|-----------|-------|
| UNDEFINED | -1 |
| INACTIVE | 0 |
| ACTIVE | 1 |

Chapter 3

Commands specification for Tasks Management Service (TMS)

3.1 Command definitions

3.1.1 vishnu_submit_job

Access

This command line can be used by any VISHNU user

Description

The vishnu_submit_job command allows to submit a job consisting in running a given script on a machine.

Example of use

```
vishnu_submit_job [-h] [-n name] [-q queue] [-t wallTime] [-m memory] [-P nbCpu] [-N nbNodesAndCpuPerNode] [-o outputPath] [-e errorPath] [-M mailNotification] [-u mailNotifyUser] [-g group] [-D workingDir] [-T cpuTime] [-Q] [-L loadType] [-F fileParams] [-V textParams] [-w workId] [-S specificParams] machineId scriptFilePath
```

Parameters

| Parameter | Type | Option | Description | Required |
|----------------------|--------|--------|---|----------|
| machineId | string | | Is the id of the machine on which the job must be submitted | YES |
| scriptFilePath | string | | The path to the file containing the characteristics (job command, and batch scheduler directive required or optional) of the job to submit | YES |
| name | string | n | Assigns a job name. The default is the path of job | NO |
| queue | string | q | Assigns the queue or class of the job | NO |
| wallTime | int | t | The maximum wall-clock time during which the job can run (in seconds) | NO |
| memory | int | m | Is the memory size that the job requires (in MegaBytes) | NO |
| nbCpu | int | P | The number of cpu per node that the job requires | NO |
| nbNodesAndCpuPerNode | string | N | The number of nodes and processors per node (in the format nbNodes:nbCpuPerNode). For example if you want to use 4 nodes with 3 cpus for each node, you must specify these numbers by "4:3" | NO |
| outputPath | string | o | Assigns the path and file for job output | NO |

| Parameter | Type | Option | Description | Required |
|------------------|----------|--------|---|----------|
| errorPath | string | e | Assigns the path and file for job error | NO |
| mailNotification | string | M | Assigns the notification type of the job. Valid type values are BEGIN, END, ERROR, and ALL (any state change) | NO |
| mailNotifyUser | string | u | The name of user to receive email notification of state changes as defined by the option mailNotification. The default value is the submitting user | NO |
| group | string | g | Assigns a job group name. | NO |
| workingDir | string | D | Assigns a job remote working dir | NO |
| cpuTime | string | T | Assigns a job cpu limit time (in seconds or in the format [[HH:]MM:]SS) | NO |
| selectQueueAutom | boolean | Q | allows to select automatically a queue which has the number of nodes requested by the user | NO |
| loadType | LoadType | L | The criterion to automatically submit a job (for now three criterions are used: minimum number of waiting jobs, minimum number of running jobs and the total number of jobs). This option is used only if the machine identifier is equal to autom (this keyword is used to submit automatically a job) | NO |
| fileParams | string | F | Sets a list of local files as parameters for the script. These files will be uploaded onto the server before computing the script. At the execution time, each path can be accessed through an environment variable. E.g. --fileParams "PFILE1=/path/to/file1 PFILE2=/path/to/file2" or -F "PFILE1=/path/to/file1 PFILE2=/path/to/file2". At the execution, the environment variable \$PFILE1, for example, will point to the uploaded copy of the file /path/to/file1. The option --fileParam or -f allows to set each file individually. NOTE: The name of parameter as well as those of the corresponding environment are case-insensitive. | NO |
| textParams | string | V | Sets a list of parameters for the script so at the execution, each of parameter can be used as an environment variable. E.g. --textParams "PARAM1=value1 PARAM2=value2" or -F "PARAM1=value1 PARAM2=value2", will set the environment variables named PARAM1 and PARAM2 with value1 and value2, respectively. The option --textParam or -v allows to set each file individually. NOTE: The name of parameter as well as those of the corresponding environment are case-insensitive. | NO |
| workId | long | w | Sets the identifier of the Work to which the job is related | NO |

| Parameter | Type | Option | Description | Required |
|----------------|--------|--------|---|----------|
| specificParams | string | S | Sets a list of specific parameters for the batch scheduler so at the job submission, each of parameter can be used by the batch scheduler. E.g. --specificParams "PARAM1=value1 PARAM2=value2" or -S "PARAM1=value1 PARAM2=value2", will set the batch parameter named PARAM1 and PARAM2 with value1 and value2, respectively. NOTE: The name of parameter as well as those of the corresponding environment are case-insensitive. | NO |

Environment variables

This command defines no environment variables.

3.1.2 vishnu_get_job_info

Access

This command line can be used by any VISHNU user

Description

The vishnu_get_job_info command gets information on a job from its id

Example of use

```
vishnu_get_job_info [-h] machineId jobId
```

Parameters

| Parameter | Type | Option | Description | Required |
|-----------|--------|--------|--|----------|
| machineId | string | | Is the id of the machine on which the job is running | YES |
| jobId | string | | The id of the job | YES |

Environment variables

This command defines no environment variables.

3.1.3 vishnu_get_job_progress

Access

This command line can be used by any VISHNU user

Description

The vishnu_get_job_progress command gets the progression status of jobs

Example of use

```
vishnu_get_job_progress [-h] [-i jobId] [-u jobOwner] machineId
```

Parameters

| Parameter | Type | Option | Description | Required |
|-----------|--------|--------|--|----------|
| machineId | string | | Is the id of the machine to get the jobs progression | YES |

| Parameter | Type | Option | Description | Required |
|-----------|--------|--------|--|----------|
| jobId | string | i | Specifies the id of the job whose progression the user wants to see. | NO |
| jobOwner | string | u | Specifies the owner of the job. | NO |

Environment variables

This command defines no environment variables.

3.1.4 vishnu_list_queues

Access

This command line can be used by any VISHNU user

Description

The vishnu_list_queues command gets queues information

Example of use

```
vishnu_list_queues [-h] [-q queueName] machineId
```

Parameters

| Parameter | Type | Option | Description | Required |
|-----------|--------|--------|---|----------|
| machineId | string | | Is the id of the machine that the user wants to list queues | YES |
| queueName | string | q | if it is given, listQueues gives information only of this queue | NO |

Environment variables

This command defines no environment variables.

3.1.5 vishnu_list_jobs

Access

This command line can be used by any VISHNU user

Description

The vishnu_list_jobs command gets a list of all submitted jobs on a machine.

Example of use

```
vishnu_list_jobs [-h] [-i jobId] [-P nbCpu] [-d fromSubmitDate] [-D toSubmitDate] [-u owner] [-s s-  
tatus] [-p priority] [-q queue] [-S multipleStatus] [-b] [-w workId] [-l] machineId
```

Parameters

| Parameter | Type | Option | Description | Required |
|----------------|--------|--------|--|----------|
| machineId | string | | Is the id of the machine on which the jobs are running | YES |
| jobId | string | i | lists the job with the specified id | NO |
| nbCpu | int | P | lists the jobs with the specified number of CPUs per node | NO |
| fromSubmitDate | long | d | lists the jobs submitted after the specified date (UNIX timestamp) | NO |
| toSubmitDate | long | D | lists jobs submitted before the specified date (UNIX timestamp) | NO |

| Parameter | Type | Option | Description | Required |
|----------------|-------------|--------|---|----------|
| owner | string | u | lists the jobs submitted by the specified owner | NO |
| status | JobStatus | s | lists the jobs with the specified status | NO |
| priority | JobPriority | p | lists the jobs with the specified priority | NO |
| queue | string | q | the jobs with the specified queue name | NO |
| multipleStatus | string | S | lists the jobs with the specified status (combination of multiple status). Its format contains the first letter or the value (interger) of each chosen status. For example to list the cancelled and terminated jobs, you use the format CT or 65 | NO |
| batchJob | boolean | b | allows to select all jobs submitted through the underlying batch scheduler (jobs submitted through vishnu and out of vishnu) | NO |
| workId | long | w | Allows to gather information about jobs related to a given Work. | NO |
| listAll | boolean | l | lists all information of the job | NO |

Environment variables

This command defines no environment variables.

3.1.6 vishnu_get_job_output

Access

This command line can be used by any VISHNU user

Description

The vishnu_get_job_output command gets standard output and error output files of a job given its id

Example of use

```
vishnu_get_job_output [-h] [-o outDir] machineId jobId
```

Parameters

| Parameter | Type | Option | Description | Required |
|-----------|--------|--------|--|----------|
| machineId | string | | gets outputPath and errorPath of a job from its id | YES |
| jobId | string | | The Id of the job | YES |
| outDir | string | o | The output directory where the files will be stored (default is current directory) | NO |

Environment variables

This command defines no environment variables.

3.1.7 vishnu_get_completed_jobs_output

Access

This command line can be used by any VISHNU user

Description

The vishnu_get_completed_jobs_output command gets standard output and error output files of completed jobs (applies only once for each job)

Example of use

```
vishnu_get_completed_jobs_output [-h] [-o outDir] machineId
```

Parameters

| Parameter | Type | Option | Description | Required |
|-----------|--------|--------|---|----------|
| machineId | string | | Is the id of the machine on which the jobs are been submitted | YES |
| outDir | string | o | Specifies the output directory where the files will be stored (by default, the current directory) | NO |

Environment variables

This command defines no environment variables.

3.1.8 vishnu_cancel_job

Access

This command line can be used by any VISHNU user

Description

The vishnu_cancel_job command allows to cancel a job submitted on a given machine.

Example of use

```
vishnu_cancel_job [-h] machineId jobId
```

Parameters

| Parameter | Type | Option | Description | Required |
|-----------|--------|--------|--|----------|
| machineId | string | | Is the id of the machine on which the job is running | YES |
| jobId | string | | The Id of the job | YES |

Environment variables

This command defines no environment variables.

3.1.9 vishnu_add_work

Access

This command line can be used by any VISHNU user

Description

The vishnu_add_work command allows to create a work consisting in running jobs.

Example of use

```
vishnu_add_work [-h] [-a applicationId] [-n subject] [-l priority] [-u owner] [-e estimatedHour] [-d description] [-p projectId] [-m machineId] [-n nbCPU]
```

Parameters

| Parameter | Type | Option | Description | Required |
|---------------|--------|--------|---|----------|
| applicationId | string | a | Is the id of the machine on which the job has been submitted. | NO |
| subject | string | n | Represents the name assigned to the work. | NO |
| priority | int | l | Represents the work priority. | NO |
| owner | string | u | Represents the job owner. | NO |

| Parameter | Type | Option | Description | Required |
|---------------|--------|--------|--|----------|
| estimatedHour | long | e | Is the maximum wall-clock time during which the job can run (in seconds) | NO |
| description | string | d | Is the textual description of the job. | NO |
| projectId | string | p | Is the id of the session that contained the job submission command | NO |
| machineId | string | m | Is the id of the session that contained the job submission command | NO |
| nbCPU | int | n | The current status of the job. | NO |

Environment variables

This command defines no environment variables.

3.2 Parameters definitions

Enumeration TMS::JobPriority Type

| Name | Value |
|-----------|-------|
| UNDEFINED | -1 |
| VERY_LOW | 1 |
| LOW | 2 |
| NORMAL | 3 |
| HIGH | 4 |
| VERY_HIGH | 5 |

Enumeration TMS::JobStatus Type

| Name | Value |
|--------------------|-------|
| UNDEFINED | -1 |
| SUBMITTED | 1 |
| QUEUED | 2 |
| WAITING | 3 |
| RUNNING | 4 |
| TERMINATED | 5 |
| CANCELLED | 6 |
| ALREADY_DOWNLOADED | 7 |

Enumeration TMS::LoadType Type

| Name | Value |
|---------------------|-------|
| USE_NB_WAITING_JOBS | 0 |
| USE_NB_JOBS | 1 |
| USE_NB_RUNNING_JOBS | 2 |

Enumeration TMS::QueuePriority Type

| Name | Value |
|-----------|-------|
| UNDEFINED | -1 |
| VERY_LOW | 1 |
| LOW | 2 |
| NORMAL | 3 |
| HIGH | 4 |

| Name | Value |
|-----------|-------|
| VERY_HIGH | 5 |

Enumeration TMS::QueueStatus Type

| Name | Value |
|-------------|-------|
| NOT_STARTED | 0 |
| STARTED | 1 |
| RUNNING | 2 |

Chapter 4

Commands specification for Information Management Service (IMS)

4.1 Command definitions

4.1.1 vishnu_export_commands

Access

This command line can be used by any VISHNU user

Description

The vishnu_export_commands command exports all the commands made by a user during a session

Example of use

```
vishnu_export_commands [-h] [-t exportType] oldSessionId
```

Parameters

| Parameter | Type | Option | Description | Required |
|--------------|------------|--------|---|----------|
| oldSessionId | string | | The id of the session to export (session has ended) | YES |
| exportType | ExportType | t | The type to export | NO |

Environment variables

This command defines no environment variables.

4.1.2 vishnu_get_metric_current_value

Access

This command line can be used by any VISHNU user

Description

The vishnu_get_metric_current_value command displays the current values of system metrics

Example of use

```
vishnu_get_metric_current_value [-h] [-t metricType] machineId
```

Parameters

| Parameter | Type | Option | Description | Required |
|------------|------------|--------|------------------------|----------|
| machineId | string | | The id of the machine | YES |
| metricType | MetricType | t | The type of the metric | NO |

Environment variables

This command defines no environment variables.

4.1.3 vishnu_get_metric_history

Access

This command line can be used by any VISHNU user

Description

The vishnu_get_metric_history command displays the history of values of a system metric

Example of use

```
vishnu_get_metric_history [-h] [-s startTime] [-e endTime] [-t type] machineId
```

Parameters

| Parameter | Type | Option | Description | Required |
|-----------|------------|--------|-----------------------------------|----------|
| machineId | string | | The id of the machine | YES |
| startTime | long | s | The start time to get the history | NO |
| endTime | long | e | The end time to get the history | NO |
| type | MetricType | t | The type of metric searched | NO |

Environment variables

This command defines no environment variables.

4.1.4 vishnu_get_processes

Access

This command line can be used by ADMIN users only

Description

The vishnu_get_processes command displays the list of the VISHNU processes running on machines

Example of use

```
vishnu_get_processes [-h] [-p machineId]
```

Parameters

| Parameter | Type | Option | Description | Required |
|-----------|--------|--------|-----------------------|----------|
| machineId | string | p | The id of the machine | NO |

Environment variables

This command defines no environment variables.

4.1.5 vishnu_set_system_info

Access

This command line can be used by ADMIN users only

Description

The `vishnu_set_system_info` command updates the system information of a machine

Example of use

```
vishnu_set_system_info [-h] [-m memory] [-d diskSpace] machineId
```

Parameters

| Parameter | Type | Option | Description | Required |
|-----------|--------|--------|--|----------|
| memory | long | m | Amount of RAM memory available on the machine (in Bytes) | NO |
| diskSpace | long | d | Amount of disk space available on the machine (in Bytes) | NO |
| machineId | string | | The id of the machine | YES |

Environment variables

This command defines no environment variables.

4.1.6 vishnu_set_system_threshold

Access

This command line can be used by ADMIN users only

Description

The `vishnu_set_system_threshold` command sets a threshold on a machine of a system

Example of use

```
vishnu_set_system_threshold [-h] value machineId type handler
```

Parameters

| Parameter | Type | Option | Description | Required |
|-----------|-------------------|--------|---|----------|
| value | long | | The value of the threshold | YES |
| machineId | string | | The machine ID the threshold is available | YES |
| type | MetricType | | The type of the threshold | YES |
| handler | string | | The userId of the admin responsible for handling the threshold problems | YES |

Environment variables

This command defines no environment variables.

4.1.7 vishnu_get_system_threshold

Access

This command line can be used by ADMIN users only

Description

The `vishnu_get_system_threshold` command gets a system threshold on a machine

Example of use

```
vishnu_get_system_threshold [-h] [-m machineId] [-t metricType]
```

Parameters

| Parameter | Type | Option | Description | Required |
|------------|-------------------|--------|---|----------|
| machineId | string | m | The id of the machine where the metric is defined | NO |
| metricType | MetricType | t | The type of the metric | NO |

Environment variables

This command defines no environment variables.

4.1.8 vishnu_define_user_identifier

Access

This command line can be used by ADMIN users only

Description

The vishnu_define_user_identifier command defines the shape of the identifiers automatically generated for the users

Example of use

```
vishnu_define_user_identifier [-h] format
```

Parameters

| Parameter | Type | Option | Description | Required |
|-----------|--------|--------|-----------------------|----------|
| format | string | | The new format to use | YES |

Environment variables

This command defines no environment variables.

4.1.9 vishnu_define_machine_identifier

Access

This command line can be used by ADMIN users only

Description

The vishnu_define_machine_identifier command defines the shape of the identifiers automatically generated for the machines

Example of use

```
vishnu_define_machine_identifier [-h] format
```

Parameters

| Parameter | Type | Option | Description | Required |
|-----------|--------|--------|-----------------------|----------|
| format | string | | The new format to use | YES |

Environment variables

This command defines no environment variables.

4.1.10 vishnu_define_job_identifier

Access

This command line can be used by ADMIN users only

Description

The `vishnu_define_job_identifier` command defines the shape of the identifiers automatically generated for the jobs

Example of use

```
vishnu_define_job_identifier [-h] format
```

Parameters

| Parameter | Type | Option | Description | Required |
|-----------|--------|--------|-----------------------|----------|
| format | string | | The new format to use | YES |

Environment variables

This command defines no environment variables.

4.1.11 vishnu_define_transfer_identifier

Access

This command line can be used by ADMIN users only

Description

The `vishnu_define_transfer_identifier` command defines the shape of the identifiers automatically generated for the file transfers

Example of use

```
vishnu_define_transfer_identifier [-h] format
```

Parameters

| Parameter | Type | Option | Description | Required |
|-----------|--------|--------|-----------------------|----------|
| format | string | | The new format to use | YES |

Environment variables

This command defines no environment variables.

4.1.12 vishnu_define_auth_identifier

Access

This command line can be used by ADMIN users only

Description

The `vishnu_define_auth_identifier` command defines the shape of the identifiers automatically generated for the authentication system

Example of use

```
vishnu_define_auth_identifier [-h] format
```

Parameters

| Parameter | Type | Option | Description | Required |
|-----------|--------|--------|-----------------------|----------|
| format | string | | The new format to use | YES |

Environment variables

This command defines no environment variables.

4.1.13 vishnu_load_shed

Access

This command line can be used by ADMIN users only

Description

The vishnu_load_shed command sheds load on a machine

Example of use

```
vishnu_load_shed [-h] machineId loadShedType
```

Parameters

| Parameter | Type | Option | Description | Required |
|--------------|--------------|--------|---|----------|
| machineId | string | | The id of the machine to stop | YES |
| loadShedType | LoadShedType | | Selects a load shedding mode (SOFT: stops all services and they can be restarted, HARD: stops all services, they cannot be restarted) | YES |

Environment variables

This command defines no environment variables.

4.1.14 vishnu_set_update_frequency

Access

This command line can be used by ADMIN users only

Description

The vishnu_set_update_frequency command sets the update frequency of the IMS tables

Example of use

```
vishnu_set_update_frequency [-h] freq
```

Parameters

| Parameter | Type | Option | Description | Required |
|-----------|------|--------|---|----------|
| freq | int | | Frequency the data are updated, in second | YES |

Environment variables

This command defines no environment variables.

4.1.15 vishnu_get_update_frequency

Access

This command line can be used by any VISHNU user

Description

The vishnu_get_update_frequency command gets the update frequency of the IMS database

Example of use

```
vishnu_get_update_frequency [-h]
```

Parameters

This command defines no arguments.

Environment variables

This command defines no environment variables.

4.1.16 vishnu_stop

Access

This command line can be used by ADMIN users only

Description

The vishnu_stop command to stop (and do not try to relaunch) a SeD

Example of use

```
vishnu_stop [-h] processName machineId
```

Parameters

| Parameter | Type | Option | Description | Required |
|-------------|--------|--------|--|----------|
| processName | string | | The name of the process (the name of the executable) | YES |
| machineId | string | | The id of the machine | YES |

Environment variables

This command defines no environment variables.

4.1.17 vishnu_get_system_info

Access

This command line can be used by any VISHNU user

Description

The vishnu_get_system_info command to get the system info on a machine

Example of use

```
vishnu_get_system_info [-h] [-m machineId]
```

Parameters

| Parameter | Type | Option | Description | Required |
|-----------|--------|--------|----------------|----------|
| machineId | string | m | The machine id | NO |

Environment variables

This command defines no environment variables.

4.1.18 vishnu_restart

Access

This command line can be used by ADMIN users only

Description

The vishnu_restart command to restart a SeD or a MA

Example of use

```
vishnu_restart [-h] [-v vishnuConf] [-t sedType] machineId
```

Parameters

| Parameter | Type | Option | Description | Required |
|------------|---------|--------|---|----------|
| machineId | string | | The id of the machine where to restart | YES |
| vishnuConf | string | v | The path to the vishnu configuration file | NO |
| sedType | SeDType | t | The type of the vishnu sed | NO |

Environment variables

This command defines no environment variables.

4.1.19 vishnu_define_work_identifier

Access

This command line can be used by ADMIN users only

Description

The vishnu_define_work_identifier command defines the shape of the identifiers automatically generated for the work

Example of use

```
vishnu_define_work_identifier [-h] format
```

Parameters

| Parameter | Type | Option | Description | Required |
|-----------|--------|--------|-----------------------|----------|
| format | string | | The new format to use | YES |

Environment variables

This command defines no environment variables.

4.2 Parameters definitions

Enumeration IMS::ExportType Type

| Name | Value |
|-----------|-------|
| UNDEFINED | 0 |
| SHELL | 1 |

Enumeration IMS::LoadShedType Type

| Name | Value |
|-----------|-------|
| UNDEFINED | 0 |
| HARD | 1 |
| SOFT | 2 |

Enumeration IMS::MetricType Type

| Name | Value |
|-----------|-------|
| UNDEFINED | 0 |

| Name | Value |
|---------------|-------|
| CPUUSE | 1 |
| FREEDISKSPACE | 2 |
| FREEMEMORY | 3 |

Enumeration IMS::ProcessState Type

| Name | Value |
|-----------|-------|
| UNDEFINED | 0 |
| RUNNING | 1 |
| DOWN | 2 |
| DELETED | 3 |

Enumeration IMS::SeDType Type

| Name | Value |
|-----------|-------|
| UNDEFINED | 0 |
| UMS | 1 |
| TMS | 2 |
| FMS | 3 |
| IMS | 4 |

Chapter 5

Commands specification for File Management Service (FMS)

5.1 Command definitions

5.1.1 vishnu_touch

Access

This command line can be used by any VISHNU user

Description

The vishnu_touch command creates files on remote machines.

Example of use

```
vishnu_touch [-h] path
```

Parameters

| Parameter | Type | Option | Description | Required |
|-----------|--------|--------|---|----------|
| path | string | | The file to create following the pattern [host:]file path | YES |

Environment variables

This command defines no environment variables.

5.1.2 vishnu_mkdir

Access

This command line can be used by any VISHNU user

Description

The vishnu_mkdir command creates directories on remote machines.

Example of use

```
vishnu_mkdir [-h] [-p] path
```

Parameters

| Parameter | Type | Option | Description | Required |
|-------------|---------|--------|---|----------|
| path | string | | The directory to create following the pattern [host:]directory path | YES |
| isRecursive | boolean | p | It specifies when the create command is recursive (create parent directory also) or not | NO |

Environment variables

This command defines no environment variables.

5.1.3 vishnu_rm

Access

This command line can be used by any VISHNU user

Description

The vishnu_rm command removes files from remote hosts.

Example of use

```
vishnu_rm [-h] [-r] path
```

Parameters

| Parameter | Type | Option | Description | Required |
|-------------|---------|--------|--|----------|
| path | string | | The file to remove following the pattern [host:]file path | YES |
| isRecursive | boolean | r | It specifies when the remove command is recursive (case of directory) or not | NO |

Environment variables

This command defines no environment variables.

5.1.4 vishnu_rmdir

Access

This command line can be used by any VISHNU user

Description

The vishnu_rmdir command removes directories (and subdirectories) from remote machines.

Example of use

```
vishnu_rmdir [-h] path
```

Parameters

| Parameter | Type | Option | Description | Required |
|-----------|--------|--------|---|----------|
| path | string | | The directory to remove following the pattern [host:]directory path | YES |

Environment variables

This command defines no environment variables.

5.1.5 vishnu_chgrp

Access

This command line can be used by any VISHNU user

Description

The vishnu_chgrp command changes group owner of remote files/directories.

Example of use

```
vishnu_chgrp [-h] group path
```

Parameters

| Parameter | Type | Option | Description | Required |
|-----------|--------|--------|---|----------|
| group | string | | the new group owner of file/directory | YES |
| path | string | | The file/directory following the pattern [host:]file path | YES |

Environment variables

This command defines no environment variables.

5.1.6 vishnu_chmod

Access

This command line can be used by any VISHNU user

Description

The vishnu_chmod command changes access rights of remote files/directories.

Example of use

```
vishnu_chmod [-h] mode path
```

Parameters

| Parameter | Type | Option | Description | Required |
|-----------|--------|--------|---|----------|
| mode | mode_t | | the access rigths of file/directory in octal system | YES |
| path | string | | The file/directory following the pattern [host:]file path | YES |

Environment variables

This command defines no environment variables.

5.1.7 vishnu_head

Access

This command line can be used by any VISHNU user

Description

The vishnu_head command displays a few first lines of files located on remote machines.

Example of use

```
vishnu_head [-h] [-n nline] path
```

Parameters

| Parameter | Type | Option | Description | Required |
|-----------|--------|--------|---|----------|
| path | string | | The file following the pattern [host:]file path | YES |
| nline | int | n | the number of line to get | NO |

Environment variables

This command defines no environment variables.

5.1.8 vishnu_tail

Access

This command line can be used by any VISHNU user

Description

The vishnu_tail command displays a few last lines of files located on remote machines

Example of use

```
vishnu_tail [-h] [-n nline] path
```

Parameters

| Parameter | Type | Option | Description | Required |
|-----------|--------|--------|---|----------|
| path | string | | The file following the pattern [host:]file path | YES |
| nline | int | n | the number of line to get | NO |

Environment variables

This command defines no environment variables.

5.1.9 vishnu_more

Access

This command line can be used by any VISHNU user

Description

The vishnu_more command displays content of files located on remote machines

Example of use

```
vishnu_more [-h] path
```

Parameters

| Parameter | Type | Option | Description | Required |
|-----------|--------|--------|--|----------|
| path | string | | The file to display following the pattern [host:]file path | YES |

Environment variables

This command defines no environment variables.

5.1.10 vishnu_ls

Access

This command line can be used by any VISHNU user

Description

The vishnu_ls command displays the content of a remote directory

Example of use

```
vishnu_ls [-h] [-l] [-a] path
```

Parameters

| Parameter | Type | Option | Description | Required |
|------------|---------|--------|--|----------|
| path | string | | The directory to list following the pattern [host:]directory path | YES |
| longFormat | boolean | l | It specifies the long display format (all available file informations) | NO |
| allFiles | boolean | a | Allows to display all files including hidden files | NO |

Environment variables

This command defines no environment variables.

5.1.11 vishnu_cp**Access**

This command line can be used by any VISHNU user

Description

The vishnu_cp command executes a synchronous copy of file.

Example of use

```
vishnu_cp [-h] [-r] [-t trCommand] src dest
```

Parameters

| Parameter | Type | Option | Description | Required |
|-------------|-----------------|--------|--|----------|
| src | string | | The source file to copy following the pattern [host:]file path | YES |
| dest | string | | The path of the destination file | YES |
| isRecursive | boolean | r | It specifies when the copy is recursive (case of directory) or not | NO |
| trCommand | TransferCommand | t | the command to use to perform file transfer | NO |

Environment variables

| Name | Parameter | Type | Description | Required | User option |
|---------------------|-----------|-----------------|---|----------|-------------|
| VISHNU_TRANSFER_CMD | trCommand | TransferCommand | the command to use to perform file transfer | NO | YES |

5.1.12 vishnu_acp**Access**

This command line can be used by any VISHNU user

Description

The vishnu_acp command executes an asynchronous copy of file.

Example of use

```
vishnu_acp [-h] [-r] [-t trCommand] src dest
```

Parameters

| Parameter | Type | Option | Description | Required |
|-------------|-----------------|--------|--|----------|
| src | string | | The source file to copy following the pattern [host:]file path | YES |
| dest | string | | The path of the destination file | YES |
| isRecursive | boolean | r | It specifies when the copy is recursive (case of directory) or not | NO |
| trCommand | TransferCommand | t | the command to use to perform file transfer | NO |

Environment variables

| Name | Parameter | Type | Description | Required | User option |
|---------------------|-----------|-----------------|---|----------|-------------|
| VISHNU_TRANSFER_CMD | trCommand | TransferCommand | the command to use to perform file transfer | NO | YES |

5.1.13 vishnu_mv

Access

This command line can be used by any VISHNU user

Description

The vishnu_mv command executes a synchronous move of file.

Example of use

```
vishnu_mv [-h] [-r] [-t trCommand] src dest
```

Parameters

| Parameter | Type | Option | Description | Required |
|-------------|-----------------|--------|--|----------|
| src | string | | The source file to move following the pattern [host:]file path | YES |
| dest | string | | The path of the destination file | YES |
| isRecursive | boolean | r | It specifies when the copy is recursive (case of directory) or not | NO |
| trCommand | TransferCommand | t | the command to use to perform file transfer | NO |

Environment variables

| Name | Parameter | Type | Description | Required | User option |
|---------------------|-----------|-----------------|---|----------|-------------|
| VISHNU_TRANSFER_CMD | trCommand | TransferCommand | the command to use to perform file transfer | NO | YES |

5.1.14 vishnu_amv

Access

This command line can be used by any VISHNU user

Description

The vishnu_amv command executes an asynchronous move of file.

Example of use

```
vishnu_amv [-h] [-r] [-t trCommand] src dest
```

Parameters

| Parameter | Type | Option | Description | Required |
|-------------|-----------------|--------|--|----------|
| src | string | | The source file to move following the pattern [host:]file path | YES |
| dest | string | | The path of the destination file | YES |
| isRecursive | boolean | r | It specifies when the copy is recursive (case of directory) or not | NO |
| trCommand | TransferCommand | t | the command to use to perform file transfer | NO |

Environment variables

| Name | Parameter | Type | Description | Required | User option |
|---------------------|-----------|-----------------|---|----------|-------------|
| VISHNU_TRANSFER_CMD | trCommand | TransferCommand | the command to use to perform file transfer | NO | YES |

5.1.15 vishnu_stop_file_transfer

Access

This command line can be used by any VISHNU user

Description

The vishnu_stop_file_transfer command stops an execution of a set of file transfers.

Example of use

```
vishnu_stop_file_transfer [-h] [-i transferId] [-m fromMachineId] [-u userId]
```

Parameters

| Parameter | Type | Option | Description | Required |
|---------------|--------|--------|--|----------|
| transferId | string | i | a given transfer id | NO |
| fromMachineId | string | m | the machine that is the source or destination of the file transfer | NO |
| userId | string | u | allows an admin to stop file transfers of a specific user | NO |

Environment variables

This command defines no environment variables.

5.1.16 vishnu_list_file_transfers

Access

This command line can be used by any VISHNU user

Description

The vishnu_list_file_transfers command displays the history of all file transfers submitted by User.

Example of use

```
vishnu_list_file_transfers [-h] [-t transferId] [-m fromMachineId] [-u userId] [-s status]
```

Parameters

| Parameter | Type | Option | Description | Required |
|---------------|--------|--------|--|----------|
| transferId | string | t | a given transfer id | NO |
| fromMachineId | string | m | the machine that is the source of the file transfer | NO |
| userId | string | u | allows the admin to list file transfers initiated by a specific user | NO |
| status | Status | s | the file transfer status | NO |

Environment variables

This command defines no environment variables.

5.1.17 vishnu_stat

Access

This command line can be used by any VISHNU user

Description

The vishnu_stat command displays the information of files.

Example of use

```
vishnu_stat [-h] path
```

Parameters

| Parameter | Type | Option | Description | Required |
|-----------|--------|--------|--|----------|
| path | string | | The file whose inode information will be displayed | YES |

Environment variables

This command defines no environment variables.

5.2 Parameters definitions

Enumeration FMS::FileType Type

| Name | Value |
|--------------|-------|
| BLOCK | 0 |
| CHARACTER | 1 |
| DIRECTORY | 2 |
| SYMBOLICLINK | 3 |
| SCKT | 4 |
| FIFO | 5 |
| REGULAR | 6 |

Enumeration FMS::Status Type

| Name | Value |
|------------|-------|
| INPROGRESS | 0 |
| COMPLETED | 1 |

| Name | Value |
|-----------|-------|
| CANCELLED | 2 |
| FAILED | 3 |
| UNDEFINED | 4 |

Enumeration FMS::TransferCommand Type

| Name | Value |
|-----------|-------|
| SCP | 0 |
| RSYNC | 1 |
| UNDEFINED | 2 |