

VISHNU D1.0 - Command line interface specifications



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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. ###FIXME###

1.2 Document structure

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

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

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 data types used ###FIXME###

1.3 References

TODO - ajouter ref. vers les specs générales

1.4 Glossary

Chapter 2

API specification for User Management System (UMS)

2.1 Command definitions

2.1.1 connect

Description

The connect() function allows the user to open a session

Example of use

```
connect -d sessionInactivityDelay -a substituteUserId login
```

Parameters

Parameter	Type	Option	Description	Required
login	string		login represents the login of the user	YES
password	string		password represents the password of the user, it is an interactive parameter	YES
sessionInactivityDelay	int	d	The sessionInactivityDelay is the maximum delay between two API commands when the CLOSE_ON_TIMEOUT option is set	NO
substituteUserId	string	a	is an option which allows an admin to open a session as he/she was a specific user identified by his/her userId	NO

Environment variables

Name	Parameter	Type	Description	Required
------	-----------	------	-------------	----------

2.1.2 reconnect

Description

The reconnect() function allows the user to get the sessionKey of a session in which he/she was disconnected previously without closing it

Example of use

```
reconnect login sessionId
```

Parameters

Parameter	Type	Option	Description	Required
login	string		login represents the login of the user	YES
password	string		password represents the password of the user, it is an interactive parameter	YES
sessionId	string		sessionId is the identifier of the session defined in the database	YES

Environment variables

Name	Parameter	Type	Description	Required
------	-----------	------	-------------	----------

2.1.3 createUser**Description**

The createUser() function adds a new user in VISHNU

Example of use

```
createUser -w password -f firstname -l lastname -p privilege -m email -s passwordState userId
```

Parameters

Parameter	Type	Option	Description	Required
userId	string		represents the login of the user	YES
password	string	w	is the password of the user. At the beginning, an admin can give a temporary password or it is automatically generated by the System.	NO
firstname	string	f	is the firstname of the user	NO
lastname	string	l	is the lastname of the user	NO
privilege	int	p	is the privilege of the user (admin or simple user)	NO
email	string	m	is the email of the user	NO
passwordState	int	s	is the state of the password which allows the System to inform the user to change his/her password	NO

Environment variables

Name	Parameter	Type	Description	Required
VISHNU_SESSION_KEY	sessionKey	string	The sessionKey is the identifier of the session generated by VISHNU	YES

2.1.4 updateUser**Description**

The updateUser() function updates the user information in VISHNU except login and password

Example of use

```
updateUser -f firstname -l lastname -p privilege -m email userId
```

Parameters

Parameter	Type	Option	Description	Required
userId	string		represents the login of the user	YES

Parameter	Type	Option	Description	Required
firstname	string	f	is an option to update the firstname of the user	NO
lastname	string	l	is an option to update the lastname of the user	NO
privilege	string	p	is an option to update the privilege of the user	NO
email	string	m	is an option to update the email adress of the user	NO

Environment variables

Name	Parameter	Type	Description	Required
VISHNU_SESSION_KEY	sessionKey	string	The sessionKey is the identifier of the session generated by VISHNU	YES

2.1.5 deleteUser

Description

The deleteUser() function removes a user from VISHNU

Example of use

deleteUser login

Parameters

Parameter	Type	Option	Description	Required
login	string		login represents the login of the user which will be deleted from VISHNU	YES

Environment variables

Name	Parameter	Type	Description	Required
VISHNU_SESSION_KEY	sessionKey	string	The sessionKey is the identifier of the session generated by VISHNU	YES

2.1.6 close

Description

The close() function allows a user to close a session

Example of use

close

Parameters

Parameter	Type	Option	Description	Required
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Environment variables

Name	Parameter	Type	Description	Required
VISHNU_SESSION_KEY	sessionKey	string	The sessionKey is the identifier of the session generated by VISHNU	YES

2.1.7 changePassword

Description

The changePassword() function allows the user to change his/her password

Example of use

changePassword login

Parameters

Parameter	Type	Option	Description	Required
login	string		login represents the login of the user	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

Name	Parameter	Type	Description	Required
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2.1.8 resetPassword

Description

The resetPassword() function allows an admin to reset the password of a user identified by his/her userId

Example of use

resetPassword login

Parameters

Parameter	Type	Option	Description	Required
login	string		login represents the login of the user	YES
passwordReset	string		passwordReset represents the new value of the password to be reset, it is an interactive parameter	YES

Environment variables

Name	Parameter	Type	Description	Required
VISHNU_SESSION_KEY	sessionKey	string	The sessionKey is the identifier of the session generated by VISHNU	YES

2.1.9 createLocalAccount

Description

The createLocalAccount() function allows the user to create a new local user config in VISHNU

Example of use

createLocalAccount -l acLogin -s sshKeyPath -h HomeDirectory userId machineId

Parameters

Parameter	Type	Option	Description	Required
userId	string		The userId represents the login of the user of the local user config	YES

Parameter	Type	Option	Description	Required
machineId	string		The MachineId represents the identifier of the machine associated to the local user config	YES
acLogin	string	l	accLogin represents the login of the user on the associated machine	NO
sshKeyPath	string	s	sshKeyPath is the path of the ssh key of the user on the associated machine	NO
HomeDirectory	string	h	HomeDirectory is the path of the home directory the user on the associated machine	NO

Environment variables

Name	Parameter	Type	Description	Required
VISHNU_SESSION_KEY	sessionKey	string	The sessionKey is the identifier of the session generated by VISHNU	YES

2.1.10 updateLocalAccount

Description

The updateLocalAccount() function allows the user to update his/her local user configuration in VISHNU

Example of use

updateLocalAccount -l acLogin -s sshKeyPath -h HomeDirectory userId machineId

Parameters

Parameter	Type	Option	Description	Required
userId	string		The userId represents the login of the user of the local user config	YES
machineId	string		The MachineId represents the identifier of the machine associated to the local user config	YES
acLogin	string	l	accLogin represents the login of the user on the associated machine	NO
sshKeyPath	string	s	sshKeyPath is the path of the ssh key of the user on the associated machine	NO
HomeDirectory	string	h	HomeDirectory is the path of the home directory the user on the associated machine	NO

Environment variables

Name	Parameter	Type	Description	Required
VISHNU_SESSION_KEY	sessionKey	string	The sessionKey is the identifier of the session generated by VISHNU	YES

2.1.11 deleteLocalAccount

Description

The deleteLocalAccount() function allows to remove a local user configuration from VISHNU for a given user on a given machine

Example of use

deleteLocalAccount userId machineId

Parameters

Parameter	Type	Option	Description	Required
userId	string		userId represents the login of the user which will be deleted according to a specific machine	YES
machineId	string		machineId represents the identifier of the machine which will be deleted according to a specific user	YES

Environment variables

Name	Parameter	Type	Description	Required
VISHNU_SESSION_KEY	sessionKey	string	The sessionKey is the identifier of the session generated by VISHNU	YES

2.1.12 saveConfiguration

Description

The saveConfiguration() function allows an admin to save the configuration of VISHNU

Example of use

saveConfiguration

Parameters

Parameter	Type	Option	Description	Required
-----------	------	--------	-------------	----------

Environment variables

Name	Parameter	Type	Description	Required
VISHNU_SESSION_KEY	sessionKey	string	The sessionKey is the identifier of the session generated by VISHNU	YES

2.1.13 restoreConfiguration

Description

The restoreConfiguration() function allows to restores the configuration of VISHNU

Example of use

restoreConfiguration -d descConf

Parameters

Parameter	Type	Option	Description	Required
descConf	string	d	represents the description of the configuration	NO

Environment variables

Name	Parameter	Type	Description	Required
VISHNU_SESSION_KEY	sessionKey	string	The sessionKey is the identifier of the session generated by VISHNU	YES

2.1.14 createMachine

Description

The createMachine() function adds a new machine in VISHNU

Example of use

```
createMachine -n name -s site -d totalDiskSpace -m totalMemory -t machineDescription 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
totalDiskSpace	string	d	represents the total disk space of the machine	NO
totalMemory	string	m	represents the total memory of the machine	NO
machineDescription	string	t	represents the description of the machine	NO

Environment variables

Name	Parameter	Type	Description	Required
VISHNU_SESSION_KEY	sessionKey	string	The sessionKey is the identifier of the session generated by VISHNU	YES

2.1.15 deleteMachine

Description

The deleteMachine() function removes a machine from VISHNU

Example of use

```
deleteMachine machineId
```

Parameters

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

Environment variables

Name	Parameter	Type	Description	Required
VISHNU_SESSION_KEY	sessionKey	string	The sessionKey is the identifier of the session generated by VISHNU	YES

2.1.16 listLocalAccount

Description

The listLocalAccount() function allows the user to get an object which encapsulates the list of the local configuration objects according to the options selected

Example of use

```
listLocalAccount -m machineIdOpt -a AdminListOption -u userId
```

Parameters

Parameter	Type	Option	Description	Required
machineIdOpt	string	m	allows a user to list a local user configuration on a specific machine	NO
AdminListOption	AdminListOptionType	a	is an admin option for listing all information in the database during a list API commands	NO
userId	string	u	is an admin option for listing information about a specific user identified by his/her userId	NO

Environment variables

Name	Parameter	Type	Description	Required
VISHNU_SESSION_KEY	sessionKey	string	The sessionKey is the identifier of the session generated by VISHNU	YES

2.1.17 listMachine

Description

The listMachine() function allows the user to get an object which encapsulates the list of the machine objects according to the options selected

Example of use

```
listMachine -m machineIdOpt -a AdminListOption -u userId
```

Parameters

Parameter	Type	Option	Description	Required
machineIdOpt	string	m	allows a user to list one machine identified by its machineId	NO
AdminListOption	AdminListOptionType	a	is an admin option for listing all information in the database during a list API commands	NO
userId	string	u	is an admin option for listing information about a specific user identified by his/her userId	NO

Environment variables

Name	Parameter	Type	Description	Required
VISHNU_SESSION_KEY	sessionKey	string	The sessionKey is the identifier of the session generated by VISHNU	YES

2.1.18 listHistoryCmd

Description

The listHistoryCmd() function allows the user to get an object which encapsulates the list of the commands objects according to the options selected. By default the commands of current session identified by the session key is listed

Example of use

```
listHistoryCmd -s startDateOptions -e endDateOptions -i sessionIdOpt -a AdminListOption -u userId
```

Parameters

Parameter	Type	Option	Description	Required
startDateOptions	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

Parameter	Type	Option	Description	Required
endDateOptions	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
sessionIdOpt	string	i	allows the user to list all commands launched in the session identifier by a session Id	NO
AdminListOption	AdminListOptionType	a	is an admin option for listing all information in the database during a list API commands	NO
userId	string	u	is an admin option for listing information about a specific user identified by his/her userId	NO

Environment variables

Name	Parameter	Type	Description	Required
VISHNU_SESSION_KEY	sessionKey	string	The sessionKey is the identifier of the session generated by VISHNU	YES

2.1.19 listOptions

Description

The listOptions() function allows the user to get an object which encapsulates the list of the options

Example of use

listOptions -a AdminListOption -u userId -n optionName

Parameters

Parameter	Type	Option	Description	Required
AdminListOption	AdminListOptionType	a	is an admin option for listing all information in the database during a list API commands	NO
userId	string	u	is an admin option for listing information about a specific user identified by his/her userId	NO
optionName	string	n	represents the name on an option. It allows the user to list a specific option whose name is optionName	NO

Environment variables

Name	Parameter	Type	Description	Required
VISHNU_SESSION_KEY	sessionKey	string	The sessionKey is the identifier of the session generated by VISHNU	YES

2.1.20 listUsers

Description

The listUsers() function allows the user to get an object which encapsulates the list of all users objects of VISHNU

Example of use

listUsers -i userIdOption

Parameters

Parameter	Type	Option	Description	Required
userIdOption	string	i	allows an admin to list one user identified by his/her userId	NO

Environment variables

Name	Parameter	Type	Description	Required
VISHNU_SESSION_KEY	sessionKey	string	The sessionKey is the identifier of the session generated by VISHNU	YES

2.1.21 listSessions

Description

The listSessions() function allows the user to get an object which encapsulates the list of the sessions objects or one session according to the options selected

Example of use

listSessions -t sessionListOption -p sessionClosePolicy -d sessionInactivityDelay -m machineId -s startDateOption -e endDateOption -a AdminListOption -u userId -i sessionIdOpt

Parameters

Parameter	Type	Option	Description	Required
sessionListOption	SessionListOptionType	t	is an option which precise the type of session listed (ACTIVE, INACTIVE or ALL)	NO
sessionClosePolicy	SessionCloseType	p	is an option for closing session automatically	NO
sessionInactivityDelay	int	d	The sessionInactivityDelay is the maximum delay between two API commands when the CLOSE_ON_TIMEOUT option is set	NO
machineId	string	m	represents the identifier of the machine	NO
startDateOption	long	s	allows the user to organize the sessions 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 sessions listed by providing the end date (the UNIX timestamp of the end Date is used). By default, the end date is the current day.	NO
AdminListOption	AdminListOptionType	a	is an admin option for listing all information in the database during a list API commands	NO
userId	string	u	is an admin option for listing information about a specific user identified by his/her userId	NO
sessionIdOpt	string	i	allows the user to list one session by providing its session identifier	NO

Environment variables

Name	Parameter	Type	Description	Required
VISHNU_SESSION_KEY	sessionKey	string	The sessionKey is the identifier of the session generated by VISHNU	YES

2.1.22 configureOption

Description

The configureOption() function allows the users to configure his/her options

Example of use

configureOption 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

Name	Parameter	Type	Description	Required
VISHNU_SESSION_KEY	sessionKey	string	The sessionKey is the identifier of the session generated by VISHNU	YES

2.1.23 configureDefaultOption

Description

The configureDefaultOption() function allows an admin to configure a default option value

Example of use

configureDefaultOption 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

Name	Parameter	Type	Description	Required
VISHNU_SESSION_KEY	sessionKey	string	The sessionKey is the identifier of the session generated by VISHNU	YES

2.2 Parameters definitions

SessionCloseType Enumeration Type

Name	Value
CLOSE_ON_DISCONNECT	0
CLOSE_ON_TIMEOUT	1

AdminListOptionType Enumeration Type

Name	Value
ALL	0

SessionListOptionType Enumeration Type

Name	Value
ACTIVE_SESSION	0
INACTIVE_SESSION	1
ALL_SESSION	2

Chapter 3

API specification for Tasks Management System (TMS)

3.1 Command definitions

3.1.1 submitJob

Description

The submitJob() function submits job on a machine through the use of a script (job_cmd_path). The script is a shell script which will be executed by a command shell such as sh or csh. The object opt parameter of this function allows the user to specify job characteristics options. Also the user can options in the script file.

Example of use

```
submitJob -n Name -null priority -null queue -null wallTime -null memory -null nbCpu -null nbNodesAndCpuPerNode -null OutPutPath -null ErrorPath sessionKey machineId scriptFilePath
```

Parameters

Parameter	Type	Option	Description	Required
sessionKey	string		The sessionKey is the identifier of the session generated by VISHNU	YES
machineId	string		Is the id of the machine where 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 name of job path.	NO
priority	JobPriority		Assigns priority of the job.	NO
queue	string		Assigns the queue or class of the job.	NO
wallTime	int		The maximum wall-clock time during which the job can run.	NO
memory	int		The size of memory that the job will use.	NO
nbCpu	int		The number of cpu that the job will use.	NO
nbNodesAndCpuPerNode	int		The number of nodes and processors per node.	NO
OutPutPath	string		Assigns the path and file for job output.	NO
ErrorPath	string		Assigns the path and file for job error.	NO

Environment variables

Name	Parameter	Type	Description	Required
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3.1.2 listJobs

Description

The listJobs() function gets a list of all submitted jobs

Example of use

listJobs -null JobId -null nbCpu -null fromSubmitDate -null toSubmitDate -null owner -null status -null priority -null OutPutPath
-null ErrorPath -null queue sessionKey machineId

Parameters

Parameter	Type	Option	Description	Required
sessionKey	string		The sessionKey is the identifier of the session generated by VISHNU	YES
machineId	string		Machine hash key	YES
JobId	string		To list job which has this id.	NO
nbCpu	int		To list jobs which have this number of cpu.	NO
fromSubmitDate	long		List jobs submitted after this date (unix timestamp).	NO
toSubmitDate	long		List jobs submitted before this date (unix timestamp)	NO
owner	string		To list all jobs submitted by this owner.	NO
status	JobStatus		To list jobs which have this status.	NO
priority	JobPriority		To list jobs which have this priority	NO
OutPutPath	string		Gets the path and file for each job output.	NO
ErrorPath	string		Gets the path and file for each job error.	NO
queue	string		To list jobs which have this queue name.	NO

Environment variables

Name	Parameter	Type	Description	Required
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3.1.3 getJobInfo

Description

The getJobInfo() function gets information on a job from it Id

Example of use

getJobInfo sessionKey machineId jobId

Parameters

Parameter	Type	Option	Description	Required
sessionKey	string		The sessionKey is the identifier of the session generated by VISHNU	YES
machineId	string		Machine hash key	YES
jobId	string		The id of the job	YES

Environment variables

Name	Parameter	Type	Description	Required
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3.1.4 cancelJob

Description

The cancelJob() function cancels a job from it Id

Example of use

cancelJob sessionKey machineId jobId

Parameters

Parameter	Type	Option	Description	Required
sessionKey	string		The sessionKey is the identifier of the session generated by VISHNU	YES
machineId	string		Machine hash key	YES
jobId	string		The Id of the job	YES

Environment variables

Name	Parameter	Type	Description	Required
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3.1.5 getJobOutPut

Description

The getJobOutPut() function gets outputPath and errorPath of a job from it Id

Example of use

getJobOutPut sessionKey machineId jobId

Parameters

Parameter	Type	Option	Description	Required
sessionKey	string		The sessionKey is the identifier of the session generated by VISHNU	YES
machineId	string		Machine hash key	YES
jobId	string		The Id of the job	YES

Environment variables

Name	Parameter	Type	Description	Required
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3.1.6 getAllJobsOutPut

Description

The getAllJobsOutPut() function gets outputPath and errorPath of completed jobs dynamically

Example of use

getAllJobsOutPut sessionKey machineId

Parameters

Parameter	Type	Option	Description	Required
sessionKey	string		The sessionKey is the identifier of the session generated by VISHNU	YES
machineId	string		Machine hash key	YES

Environment variables

Name	Parameter	Type	Description	Required
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3.1.7 listQueues

Description

The listQueues() function gets queues information

Example of use

listQueues sessionKey machineId

Parameters

Parameter	Type	Option	Description	Required
sessionKey	string		The sessionKey is the identifier of the session generated by VISHNU	YES
machineId	string		Machine hash key	YES

Environment variables

Name	Parameter	Type	Description	Required
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3.1.8 setMachineEnv

Description

The setMachineEnv() function sets some environment variables

Example of use

setMachineEnv sessionKey machineId listEnv

Parameters

Parameter	Type	Option	Description	Required
sessionKey	string		The sessionKey is the identifier of the session generated by VISHNU	YES
machineId	string		Represents the machine id	YES
listEnv	string		Represents the list environnement variables	YES

Environment variables

Name	Parameter	Type	Description	Required
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3.1.9 setMachineRefreshPeriod

Description

The setMachineRefreshPeriod() function sets the refresh period of output and error file content

Example of use

setMachineRefreshPeriod sessionKey machineId value

Parameters

Parameter	Type	Option	Description	Required
sessionKey	string		The sessionKey is the identifier of the session generated by VISHNU	YES
machineId	string		The id of the machine	YES
value	int		Is the refresh value	YES

Environment variables

Name	Parameter	Type	Description	Required
------	-----------	------	-------------	----------

3.1.10 getJobProgress

Description

The getJobProgress() function get the progression status of jobs.

Example of use

getJobProgress -null jobId -null jobOwner sessionKey machineId

Parameters

Parameter	Type	Option	Description	Required
sessionKey	string		The sessionKey is the identifier of the session generated by VISHNU	YES
machineId	string		Is the id of the machine to get the jobs progression.	YES
jobId	string		Represents the id of the job that the user wants to see its progression.	NO
jobOwner	string		Represents the owner of the job.	NO

Environment variables

Name	Parameter	Type	Description	Required
------	-----------	------	-------------	----------

3.2 Parameters definitions

JobPriority Enumeration Type

Name	Value
VERY_LOW	100
LOW	200
NORMAL	300
HIGH	400
VERY_HIGH	500

JobStatus Enumeration Type

Name	Value
RUNNING	0
WAITING	1
COMPLETED	2
CANCELED	3
HELD	4
QUEUED	5

Name	Value
FAILED	6
NOT_SUBMITTED	7

Chapter 4

API specification for Information Management System (IMS)

4.1 Command definitions

4.1.1 getUpdateFrequency

Description

The getUpdateFrequency() function gets the update frequency of the IMS database

Example of use

```
getUpdateFrequency
```

Parameters

Parameter	Type	Option	Description	Required
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Environment variables

Name	Parameter	Type	Description	Required
VISHNU_SESSION_KEY	sessionKey	string	The key of the session of the user that submits the command	YES

4.1.2 export

Description

The export() function exports all the commands made by a user during a session

Example of use

```
export oldSessionKey exportType
```

Parameters

Parameter	Type	Option	Description	Required
oldSessionKey	string		The key of the session to export (session has ended)	YES
exportType	ExportType		The format to export	YES

Environment variables

Name	Parameter	Type	Description	Required
VISHNU_SESSION_KEY	sessionKey	string	The key of the session of the user that submits the command (current session key)	YES

4.1.3 replay**Description**

The replay() function replays a script of VISHNU commands

Example of use

replay filename type

Parameters

Parameter	Type	Option	Description	Required
filename	string		A file containing the commands to replay	YES
type	ExportType		The type of the script to execute (python, shell)	YES

Environment variables

Name	Parameter	Type	Description	Required
VISHNU_SESSION_KEY	sessionKey	string	The key of the session of the user that submits the command	YES

4.1.4 getMetricVal**Description**

The getMetricVal() function gets data from a metric

Example of use

getMetricVal machineId startTime endTime metricType

Parameters

Parameter	Type	Option	Description	Required
machineId	string		The id of the machine	YES
startTime	long		The start time to look for the metric	YES
endTime	long		The end time to search	YES
metricType	MetricType		The metric types	YES

Environment variables

Name	Parameter	Type	Description	Required
VISHNU_SESSION_KEY	sessionKey	string	The key of the session of the user that submits the command	YES

4.1.5 getCurrentData**Description**

The getCurrentData() function gets data corresponding to the datatype on a machine

Example of use

getCurrentData machineId dataType

Parameters

Parameter	Type	Option	Description	Required
machineId	string		The id of the machine the user wants the total diskSpace	YES
dataType	MetricType		The type of data the user wants to get	YES

Environment variables

Name	Parameter	Type	Description	Required
VISHNU_SESSION_KEY	sessionKey	string	The key of the session of the user that submits the command	YES

4.1.6 getProcesses

Description

The getProcesses() function gets the list of the processes running over a front machine

Example of use

getProcesses machineId

Parameters

Parameter	Type	Option	Description	Required
machineId	string		The id of the machine the user wants the running processes	YES

Environment variables

Name	Parameter	Type	Description	Required
VISHNU_SESSION_KEY	sessionKey	string	The key of the session of the user that submits the command	YES

4.1.7 setSystemThreshold

Description

The setSystemThreshold() function sets a threshold on a machine of a system

Example of use

setSystemThreshold machineId tresholdType value

Parameters

Parameter	Type	Option	Description	Required
machineId	string		The id of the machine the user wants to set the treshold over	YES
tresholdType	MetricType		The type of the metric to set	YES
value	double		The treshold value	YES

Environment variables

Name	Parameter	Type	Description	Required
VISHNU_SESSION_KEY	sessionKey	string	The key of the session of the user that submits the command	YES

4.1.8 getSystemThreshold

Description

The getSystemThreshold() function gets a System threshold on a machine

Example of use

getSystemThreshold machineId type

Parameters

Parameter	Type	Option	Description	Required
machineId	string		The id of the machine the user wants to get the threshold over	YES
type	MetricType		The threshold type desired	YES

Environment variables

Name	Parameter	Type	Description	Required
VISHNU_SESSION_KEY	sessionKey	string	The key of the session of the user that submits the command	YES

4.1.9 defineUserIdentifier

Description

The defineUserIdentifier() function defines the shape of the identifiers automatically generated for the users

Example of use

defineUserIdentifier format

Parameters

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

Environment variables

Name	Parameter	Type	Description	Required
VISHNU_SESSION_KEY	sessionKey	string	The key of the session of the user that submits the command	YES

4.1.10 defineMachineIdentifier

Description

The defineMachineIdentifier() function defines the shape of the identifiers automatically generated for the machines

Example of use

defineMachineIdentifier format

Parameters

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

Environment variables

Name	Parameter	Type	Description	Required
VISHNU_SESSION_KEY	sessionKey	string	The key of the session of the user that submits the command	YES

4.1.11 defineJobIdentifier

Description

The defineJobIdentifier() function defines the shape of the identifiers automatically generated for the jobs

Example of use

defineJobIdentifier format

Parameters

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

Environment variables

Name	Parameter	Type	Description	Required
VISHNU_SESSION_KEY	sessionKey	string	The key of the session of the user that submits the command	YES

4.1.12 defineTransferIdentifier

Description

The defineTransferIdentifier() function defines the shape of the identifiers automatically generated for the file transfers

Example of use

defineTransferIdentifier format

Parameters

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

Environment variables

Name	Parameter	Type	Description	Required
VISHNU_SESSION_KEY	sessionKey	string	The key of the session of the user that submits the command	YES

4.1.13 loadShed

Description

The loadShed() function loads shed a machine, 2 modes are available, soft or hard. Soft flushes the machine, hard stops the machine

Example of use

loadShed machineId loadShedType

Parameters

Parameter	Type	Option	Description	Required
machineId	string		The id of the machine to stop	YES
loadShedType	LoadShedType		Type of load shedding	YES

Environment variables

Name	Parameter	Type	Description	Required
VISHNU_SESSION_KEY	sessionKey	string	The key of the session of the user that submits the command	YES

4.1.14 setUpdateFrequency

Description

The setUpdateFrequency() function sets the update frequency of the IMS tables

Example of use

setUpdateFrequency freq

Parameters

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

Environment variables

Name	Parameter	Type	Description	Required
VISHNU_SESSION_KEY	sessionKey	string	The key of the session of the user that submits the command	YES

4.1.15 notifyOverflow

Description

The notifyOverflow() function sends a mail to the admin responsible for the limite whose treshold has been reached

Example of use

notifyOverflow machineId message

Parameters

Parameter	Type	Option	Description	Required
machineId	string		The id of the machine with an overflow	YES
message	string		The message to send	YES

Environment variables

Name	Parameter	Type	Description	Required
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4.1.16 restart

Description

The restart() function restarts the whole VISHNU infrastructure. Actions are saved and restarted from the beginning once the infrastructure has been restarted

Example of use

restart -n componentName type

Parameters

Parameter	Type	Option	Description	Required
type	RestartType	t	The type of restart desired	YES
componentName	string	n	If not restarting all, the name of the component to restart	NO

Environment variables

Name	Parameter	Type	Description	Required
VISHNU_SESSION_KEY	sessionKey	string	The key of the session of the user that submits the command	YES

4.1.17 updateMachine

Description

The updateMachine() function updates the machines information in the database (diskspace and memory)

Example of use

updateMachine -l lang machineId CompoMachine

Parameters

Parameter	Type	Option	Description	Required
machineId	string		The id of the machine to update	YES
CompoMachine	CompoMachine		A description of the type of component to change	YES
lang	string	l	For machine description, the language used	NO

Environment variables

Name	Parameter	Type	Description	Required
VISHNU_SESSION_KEY	sessionKey	string	The key of the session of the user that submits the command	YES

4.2 Parameters definitions

ExportType Enumeration Type

Name	Value
PYTHON	0
SHELL	1

MetricType Enumeration Type

Name	Value
CPUNBR	0
CPUUSE	1
DISKSPACE	2
FREEDISKSPACE	3
MEMORY	4
FREEMEMORY	5

LoadShedType Enumeration Type

Name	Value
SOFT	0
HARD	1

RestartType Enumeration Type

Name	Value
ALL	0
SED	1
AGENT	2
DAEMON	3
MACHINE	4

CompoMachine Enumeration Type

Name	Value
DESC	0
DISKSPACE	1
RAM	2