VISHNU - IMS - Tests report

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	TITLE : VISHNU - IMS - Tests report		
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Contents

Chapter 1

Introduction

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The tests which follows have been done in the following environment:

- Database used : PostgreSQL 8.4
- OS used for the test : Ubuntu 10.10
- Cmake version : V2.6
- gcc version : V4.3.3
- DIET version : V2.6.1
- Batch scheduler : TORQUE V2.5
- RAM memory : 4Gb

Chapter 2

Functional tests

2.1 I2-B: Get metric data

API command: getMetricHistory

ID test	Description of the test cases	Output expected	Output gotten	Error
I2-B	Normal execution of getMetricHistory	The list of FREEMEMORY metric is returned	The list of FREEMEMORY metric is returned	0
I2-E1	Bad machine Identifier	VishnuException	VishnuException	0
I2-E2	Bad metric type	VishnuException	VishnuException	0

2.2 I4-B: Get data on the infrastructure

API command: getMetricCurrentValue

ID test	Description of the test cases	Output expected	Output gotten	Error
I4-B	Normal execution of getMetricCurrentValue	The list of current value of metric is returned	The list of current value of metric is returned	0

2.3 IA2.1-B: Get a system load threshold

API command: getSystemThreshold

ID test	Description of the test cases	Output expected	Output gotten	Error
IA2.1-B	Normal execution of getSystemThreshold	The threshold of the metric FREEDISKSPACE is returned	The threshold of the metric FREEDISKSPACE is returned	0
IA2.1-E1	Bad machine Identifier	VishnuException	VishnuException	0
IA2.1-E2	Bad metric value	VishnuException	VishnuException	0
IA2.1-E3	getSystemThreshold is launched by a user who is not an administrator	VishnuException	VishnuException	0

2.4 IA2-B[1-3]: Define a system load threshold (CPUUSE, FREE_DISK_SPACE and FREE_MEMORY)

API command: setSystemThreshold

ID test	Description of the test cases	Output expected	Output gotten	Error
IA2-B[1-3]	Normal execution of setSystemThreshold	The threshold for the corresponding metric is set	The threshold for the corresponding metric is set	0
IA2-E1	Bad machine Identifier	VishnuException	VishnuException	0
IA2-E2	Bad metric value	VishnuException	VishnuException	0
IA2-E3	getSystemThreshold is launched by a user who is not an administrator	VishnuException	VishnuException	0

2.5 I1-B: Get the update frequency

API command: getUpdateFrequency

ID test	Description of the test cases	Output expected	Output gotten	Error
I1-B	Normal execution of getUpdateFrequency	The update's frequency is returned	The update's frequency is returned	0

2.6 IA6-B: Set the update frequency

API command: setUpdateFrequency

ID test	Description of the test cases	Output expected	Output gotten	Error
IA6-B	Normal execution of setUpdateFrequency	The update's frequency is set	The update's frequency is set	0
IA6-E1	The frequency is zero	VishnuException	VishnuException	0
IA6-E2	The frequency is negative	VishnuException	VishnuException	0
IA2-E3	setUpdateFrequency is launched by a user who is not an administrator	VishnuException	VishnuException	0

Remarks T2.7-B : there is a failure when the script's execution is very fast (under one seconds).

2.7 IA3-B: Define User/Machine/Job/FileTransfer identifier

API command: define[User|Machine|Job|Transfer]Identifier

ID test	Description of the test cases	Output expected	Output gotten	Error
IA3-B	Normal execution of define[User|Machine|Job]Identifier	The corresponding identifier is set	The corresponding identifier is set	0
IA3-E1	Bad format identifier	VishnuException	VishnuException	0
IA3-E2	define[User|Machine|Job]Identifier is launched by a user who is not an administrator	VishnuException	VishnuException	0

Remarks IA3-B : In this version of tests, only define[User|Machine|Job]Identifier is tested.

2.8 I5-B: Get system info

API command: getSystemInfo

ID test	Description of the test cases	Output expected	Output gotten	Error
I5-B	Normal execution of getSystemInfo	The system information (disk space and memory) is returned	The system information (disk space and memory) is returned	0
I5-E1	Bad machine Identifier	VishnuException	VishnuException	0

2.9 IA5-B: Set system info

API command: setSystemInfo

ID test	Description of the test cases	Output expected	Output gotten	Error
IA5-B	Normal execution of setSystemInfo	The memory and the disk space of the corresponding machine is set	The memory and the disk space of the corresponding machine is set	0
IA5-E1	Bad machine Identifier	VishnuException	VishnuException	0
IA5-E2	Bad metric value (negative memory and disk space)	VishnuException	VishnuException	0
IA5-E3	setSystemInfo is launched by a user who is not an administrator	VishnuException	VishnuException	0

2.10 IA1-B: Get the running processes

API command: getProcesses

ID test	Description of the test cases	Output expected	Output gotten	Error
IA5-B	Normal execution of getProcesses	The list of running processes is returned	The list of running processes is returned	0 ERROR: critical check tmssed-Found == true failed
IA5-E1	Bad machine Identifier	VishnuException	VishnuException	0
IA5-E2	getProcesses is launched by a user who is not an administrator	VishnuException	VishnuException	0

2.11 IA4.1-B: Load schedding

API command: loadShed

ID test	Description of the test cases	Output expected	Output gotten	Error
IA5-B Soft Load schedding	Normal execution of loadShed with LoadShedType SOFT	The jobs launched on the corresponding batch scheduler are stopped	The jobs launched on the corresponding batch scheduler are stopped	0 A tester

ID test	Description of the test cases	Output expected	Output gotten	Error
IA5-B Hard Load schedding	Normal execution of loadShed with LoadShedType HARD	All VISHNU elements are stopped	All VISHNU elements are stopped	0 A tester
IA5-E1	Bad machine Identifier	VishnuException	VishnuException	0

Chapter 3

Stress tests

ID test	Date	Test description	Command(s) tested	Results
STR-SERV-DOWN	05/05/11	The tms sed is stopped and restarted	submitJob	Success - normal job submission
STR-AGENT-DOWN	05/05/11	The SysFera-DS Agent is stopped and restarted		failure
STR-BATCH-DOWN	05/05/11	The batch scheduler is stopped and the command submitJob is launched	submitJob	Success - the corresponding error message is returned

Chapter 4

Load tests

ID test	Date	Test description	Command(s) tested	Results
LOAD-2.1-submitJob	05/05/11	Simultaneous launch of 100 commands	submitJob	Success - normal execution of all commands launched
LOAD-2.1-listJobs	05/05/11	Success - Simultaneous launch of 100 commands	listJobs	Success - normal execution of all commands launched
LOAD-2.1-listQueues	05/05/11	Simultaneous launch of 100 commands	listQueues	Success - normal execution of all commands launched

Chapter 5

Performance tests

ID test	Test description	Command(s) tested	VISHNU execution time	SSH execution time	Results
CDP-3.1-submitJob	comparison with " ssh localhost qsub "	submitJob	0,30s	0,17s	Failure
CDP-3.1-cancelJob	comparison with " ssh localhost qsub "	cancelJob	0,25s	0,21s	Failure
CDP-3.1-listJobs	comparison with " ssh localhost qstat "	listJobs	0,08s	0,17s	Success
CDP-3.2.1-listQueues	execution time less than "ssh localhost qstat -Q"	listQueues	0,10s	0,16s	Success

ID test	Test description	Command(s) tested	Memory comsumption	Results
CDP-3.2.2-submitJob	memory consumption	submitJob	0,8% of the RAM memory	Success
CDP-Memserver	Memory consumption of tms server running during 24 hours	tms server	0,7% of the RAM memory	Success