

VISHNU - FMS - Tests report



Copyright © 2011 SysFera SAS

This report is provided under the following conditions:

Redistribution and use in source and binary forms, with or without modification, are permitted provided that the following conditions are met:

1. Redistributions of source code must retain the above copyright notice, this list of conditions and the following disclaimer.
2. Redistributions in binary form must reproduce the above copyright notice, this list of conditions and the following disclaimer in the documentation and/or other materials provided with the distribution.

This software is governed by the CECILL licence under French law and abiding by the rules of distribution of free software. You can use, modify and/ or redistribute the software under the terms of the CeCILL license as circulated by CEA, CNRS and INRIA at the following URL "<http://www.cecill.info>".

As a counterpart to the access to the source code and rights to copy, modify and redistribute granted by the license, users are provided only with a limited warranty and the software's author, the holder of the economic rights, and the successive licensors have only limited liability.

In this respect, the user's attention is drawn to the risks associated with loading, using, modifying and/or developing or reproducing the software by the user in light of its specific status of free software, that may mean that it is complicated to manipulate, and that also therefore means that it is reserved for developers and experienced professionals having in-depth computer knowledge. Users are therefore encouraged to load and test the software's suitability as regards their requirements in conditions enabling the security of their systems and/or data to be ensured and, more generally, to use and operate it in the same conditions as regards security.

COLLABORATORS

	<i>TITLE :</i> VISHNU - FMS - Tests report		
<i>ACTION</i>	<i>NAME</i>	<i>DATE</i>	<i>SIGNATURE</i>
WRITTEN BY	Benjamin Isnard, Daouda Traoré, Eugène Pamba Capo-Chichi, Kevin Coulomb, and Ibrahima Cissé	May 2011	

REVISION HISTORY

NUMBER	DATE	DESCRIPTION	NAME
1	06/06/2011	Deliverable version	SYSFERA SAS

Contents

1	Introduction	1
2	Functional tests	2
2.1	F1.CR1-B: Create New files	2
2.2	F1.DE1-B: Delete files	2
2.3	F1.CR2-B: Create New directories	2
2.4	F1.DE2-B: Delete directories	2
2.5	F1.DI1-B: Display head of files	3
2.6	F1.DI2-B: Display tail of files	3
2.7	F1.DI3-B: Display content of files	3
2.8	F1.DI4-B: Display content of directories	3
2.9	F1.DI5-B: Get information about remote files	4
2.10	F1.CH1-B: Change access rights of files	4
3	Stress tests	5
4	Load tests	6
5	Performance tests	7

Chapter 1

Introduction

Author of the test code : Benjamin Isnard

Author of the test report : Eugène Capo-chichi and Ibrahima Cisse

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
 - ssh : OpenSSH_5.5p1 Debian-4ubuntu5, OpenSSL 0.9.8o 01 Jun 2010
 - RAM memory : 1Gb
-

Chapter 2

Functional tests

2.1 F1.CR1-B:Create New files

API command: *createFile*

ID test	Description of the test cases	Output expected	Output gotten	Error
F1.CR1-B	Normal execution of createFile	A file is created	A file is created	0
F1.CR1-E1	The file path is invalid	VishnuException	VishnuException	0
F1.CR1-E2	Not access rights to the file	VishnuException	VishnuException	0
F1.CR1-E3	Bad machine Identifier	VishnuException	VishnuException	0

2.2 F1.DE1-B: Delete files

API command: *removeFile*

ID test	Description of the test cases	Output expected	Output gotten	Error
F1.DE1-B	Normal execution of removeFile	A file is removed	A file is removed	0
F1.DE1-E1	The file path is invalid	VishnuException	VishnuException	0
F1.DE1-E2	Not access rights to the file	VishnuException	VishnuException	0
F1.DE1-E3	Bad machine Identifier	VishnuException	VishnuException	0

2.3 F1.CR2-B:Create New directories

API command: *createDir*

ID test	Description of the test cases	Output expected	Output gotten	Error
F1.CR2-B	Normal execution of createDir	A directory is created	A directory is created	0
F1.CR2-E1	The file path is invalid	VishnuException	VishnuException	0
F1.CR2-E2	Not access rights to the directory	VishnuException	VishnuException	0
F1.CR2-E3	Bad machine Identifier	VishnuException	VishnuException	0

2.4 F1.DE2-B: Delete directories

API command: *removeDir*

ID test	Description of the test cases	Output expected	Output gotten	Error
F1.DE2-B	Normal execution of removeDir	A file is removed	A file is removed	0
F1.DE2-E1	The file path is invalid	VishnuException	VishnuException	0
F1.DE2-E2	Not access rights to the file	VishnuException	VishnuException	0
F1.DE2-E3	Bad machine Identifier	VishnuException	VishnuException	0

2.5 F1.DI1-B: Display head of files

API command: headOfFile

ID test	Description of the test cases	Output expected	Output gotten	Error
F1.DI1-B	Normal execution of headOfFile	The head of file is returned	The head of file is returned	0
F1.DI1-E1	The file path is invalid	VishnuException	VishnuException	0
F1.DI1-E2	Not access rights to the file	VishnuException	VishnuException	0
F1.DI1-E3	Bad machine Identifier	VishnuException	VishnuException	0

2.6 F1.DI2-B: Display tail of files

API command: tailOfFile

ID test	Description of the test cases	Output expected	Output gotten	Error
F1.DI2-B	Normal execution of tailOfFile	The tail of file is returned	The tail of file is returned	0
F1.DI2-E1	The file path is invalid	VishnuException	VishnuException	0
F1.DI2-E2	Not access rights to the file	VishnuException	VishnuException	0
F1.DI2-E3	Bad machine Identifier	VishnuException	VishnuException	0

2.7 F1.DI3-B: Display content of files

API command: contentOfFile

ID test	Description of the test cases	Output expected	Output gotten	Error
F1.DI3-B	Normal execution of contentOfFile	The tail of file is returned removed	The tail of file is returned removed	0
F1.DI3-E1	The file path is invalid	VishnuException	VishnuException	0
F1.DI3-E2	Not access rights to the file	VishnuException	VishnuException	0
F1.DI3-E3	Bad machine Identifier	VishnuException	VishnuException	0

2.8 F1.DI4-B: Display content of directories

API command: listDir

ID test	Description of the test cases	Output expected	Output gotten	Error
F1.DI4-B	Normal execution of listDir	The directory content is returned	The directory content is returned	0
F1.DI4-E1	The file path is invalid	VishnuException	VishnuException	0
F1.DI4-E2	Not access rights to the file	VishnuException	VishnuException	0
F1.DI4-E3	Bad machine Identifier	VishnuException	VishnuException	0

2.9 F1.DI5-B: Get information about remote files

API command: *getFilesInfo*

ID test	Description of the test cases	Output expected	Output gotten	Error
F1.DI5-B	Normal execution of getFilesInfo	Information about a remote file is returned	Information about a remote file is returned	0
F1.DI5-E1	The file path is invalid	VishnuException	VishnuException	0
F1.DI5-E2	Not access rights to the file	VishnuException	VishnuException	0
F1.DI5-E3	Bad machine Identifier	VishnuException	VishnuException	0

2.10 F1.CH1-B: Change access rights of files

API command: *chMod*

ID test	Description of the test cases	Output expected	Output gotten	Error
F1.CH1-B	Normal execution of chMod	The access rights of files is changed	The access rights of files is changed	0
F1.CH1-E1	The file path is invalid	VishnuException	VishnuException	0
F1.CH1-E2	Not access rights to the file	VishnuException	VishnuException	0
F1.CH1-E3	Bad machine Identifier	VishnuException	VishnuException	0

Chapter 3

Stress tests

ID test	Date	Test description	Command(s) tested	Results
STR-SERV-DOWN	14/06/11	The fms sed is stopped and restarted	copyFileAsync	Success - normal update file transfer status setting
STR-AGENT-DOWN	14/06/11	The SysFera-DS Agent is stopped and restarted		failure

Chapter 4

Load tests

ID test	Date	Test description	Command(s) tested	Results
LOAD-2.1-createFile	13/06/11	Simultaneous launch of 100 commands	createFile	Success - normal execution of all commands launched
LOAD-2.1-listFileTransfers	13/06/11	Success - Simultaneous launch of 100 commands	listFileTransfers	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-vishnu_copy_file	comparison with "scp"	vishnu_copy_file	0,04s	0,02s	Success
CDP-3.1-vishnu_get_file_info	comparison with "ssh host stat "	vishnu_get_file_info	0,04	0,03s	Success

ID test	Test description	Command(s) tested	Consumption	Results
CDP-3.2.1-vishnu_copy_file	memory consumption less than 500 Mb	vishnu_copy_file	1,3% of the RAM	Success
CDP-3.2.1-vishnu_get_file_info	memory consumption less than 500 Mb	vishnu_get_file_info	1,6% of the RAM	Success
CDP-3.2.2-vishnu_copy_file	CPU consumption less than 10%	vishnu_copy_file	0,7% of the CPU	Success
CDP-Memserver	Memory consumption of fms server running during 24 hours	fms server		