

VISHNU - UMS - Tests report



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| WRITTEN BY | Benjamin Isnard, Daouda Traoré, Eugène Pamba Capo-Chichi, Kevin Coulomb, and Ibrahima Cissé | September 2012 | |

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| 1 | 14/03/2012 | First version | SYSFERA SA |
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Chapter 1

Introduction

Author of the test code : Eugène PAMBA CAPO-CHICHI and Kevin COULOMB

Author of the test report : Kevin COULOMB

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

- Database used : PostgreSQL 8.4
 - OS used for the test : Ubuntu 11.04
 - Cmake version : V2.8
 - gcc version : V4.4.5
 - DIET version : V2.8
 - RAM memory : 4Gb
-

Chapter 2

Functional tests

2.1 U1.1 - Connexion

API command: connect

| ID test | Description of the test cases | Output expected | Output gotten | Error |
|---------|-------------------------------------|---------------------|---------------------|-------|
| U1.1-B | Normal connexion login/password | A session is opened | A session is opened | 0 |
| U1.1-B2 | Normal connexion using a netrc file | A session is opened | A session is opened | 0 |
| U1.1-E1 | Bad user id | VishnuException | VishnuException | 0 |
| U1.1-E2 | Bad password | VishnuException | VishnuException | 0 |
| U1.1-E3 | No netrc file defined | VishnuException | VishnuException | 0 |
| U1.1-E4 | Bad permission on the netrc file | VishnuException | VishnuException | 0 |
| U1.1-E5 | No vishnu machine in the netrc file | VishnuException | VishnuException | 0 |
| U1.1-E6 | No login in the netrc file | VishnuException | VishnuException | 0 |
| U1.1-E7 | No password in the netrc file | VishnuException | VishnuException | 0 |
| U1.1-E8 | Invalid account in the netrc file | VishnuException | VishnuException | 0 |

2.2 U1 - Close a session

API command: close

| ID test | Description of the test cases | Output expected | Output gotten | Error |
|---------|---------------------------------|-----------------------|-----------------------|-------|
| U1-B1 | Close a session on disconnexion | The session is closed | The session is closed | 0 |
| U1-B2 | Close a session on timeout | The session is closed | The session is closed | 0 |
| U1-E1 | Invalid closure mode | VishnuException | VishnuException | 0 |
| U1-E2 | There is no open session | VishnuException | VishnuException | 0 |

2.3 U1.5 - Reconnexion

API command: reconnect

| ID test | Description of the test cases | Output expected | Output gotten | Error |
|---------|---------------------------------------|---------------------|---------------------|-------|
| U1.1-B | Normal reconnexion login/password | A session is opened | A session is opened | 0 |
| U1.1-B2 | Normal reconnexion using a netrc file | A session is opened | A session is opened | 0 |
| U1.1-E1 | Bad user id | VishnuException | VishnuException | 0 |
| U1.1-E2 | Bad password | VishnuException | VishnuException | 0 |
| U1.1-E3 | No netrc file defined | VishnuException | VishnuException | 0 |

| ID test | Description of the test cases | Output expected | Output gotten | Error |
|---------|-------------------------------------|-----------------|-----------------|-------|
| U1.1-E4 | Bad permission on the netrc file | VishnuException | VishnuException | 0 |
| U1.1-E5 | No vishnu machine in the netrc file | VishnuException | VishnuException | 0 |
| U1.1-E6 | No login in the netrc file | VishnuException | VishnuException | 0 |
| U1.1-E7 | No password in the netrc file | VishnuException | VishnuException | 0 |
| U1.1-E8 | Invalid account in the netrc file | VishnuException | VishnuException | 0 |

2.4 U1.3.5 - List the sessions

API command: *listSession*

| ID test | Description of the test cases | Output expected | Output gotten | Error |
|-----------|-------------------------------|-------------------------|-------------------------|-------|
| U1.3.5-B | list the sessions | The sessions are listed | The sessions are listed | 0 |
| UA5.1-B | list the sessions as an admin | The sessions are listed | The sessions are listed | 0 |
| U1.3.5-E1 | Bad session key | VishnuException | VishnuException | 0 |
| UA5.1-E1 | Bad session identifier | VishnuException | VishnuException | 0 |
| UA5.1-E2 | Bad user identifier | VishnuException | VishnuException | 0 |

2.5 U1.3.4 - List history command

API command: *listHistoryCommand*

| ID test | Description of the test cases | Output expected | Output gotten | Error |
|-----------|--|----------------------------------|----------------------------------|-------|
| U1.3.4-B | Normal execution of listHistoryCommand | The list of commands is returned | The list of commands is returned | 0 |
| U1.3.4-E1 | Bad session key | VishnuException | VishnuException | 0 |
| U1.3.4-E2 | Bad session Identifier | VishnuException | VishnuException | 0 |

2.6 UA1 - Add a user command

API command: *addUser*

| ID test | Description of the test cases | Output expected | Output gotten | Error |
|---------|-------------------------------|-------------------|-------------------|-------|
| UA1-B | Normal execution of addUser | The user is added | The user is added | 0 |
| UA1-E1 | Bad session key | VishnuException | VishnuException | 0 |
| UA1-E2 | Not an administrator | VishnuException | VishnuException | 0 |

2.7 UA4.1 - Update a user command

API command: *updateUser*

| ID test | Description of the test cases | Output expected | Output gotten | Error |
|----------|--------------------------------|---------------------|---------------------|-------|
| UA4.1-B | Normal execution of updateUser | The user is updated | The user is updated | 0 |
| UA4.1-E1 | Bad user identifier | VishnuException | VishnuException | 0 |
| UA4.1-E2 | Bad session key | VishnuException | VishnuException | 0 |
| UA4.1-E3 | Not an administrator | VishnuException | VishnuException | 0 |

2.8 UA4.2 - Delete a user

API command: *deleteUser*

| ID test | Description of the test cases | Output expected | Output gotten | Error |
|----------|--------------------------------|---------------------|---------------------|-------|
| UA4.2-B | Normal execution of deleteUser | The user is deleted | The user is deleted | 0 |
| UA4.2-E1 | Bad user identifier | VishnuException | VishnuException | 0 |
| UA4.2-E2 | Not an administrator | VishnuException | VishnuException | 0 |

2.9 UA5.2 - list the users

API command: *listUser*

| ID test | Description of the test cases | Output expected | Output gotten | Error |
|----------|-------------------------------|-------------------|-------------------|-------|
| UA5.2-B | Normal execution of listUser | The list of users | The list of users | 0 |
| UA5.2-E1 | No open session | VishnuException | VishnuException | 0 |
| UA4.2-E2 | Not an administrator | VishnuException | VishnuException | 0 |

2.10 U1.3.3 - Change the password

API command: *changePassword*

| ID test | Description of the test cases | Output expected | Output gotten | Error |
|-----------|---------------------------------|-------------------------|-------------------------|-------|
| U1.3.3-B | Change the password of the user | The password is changed | The password is changed | 0 |
| U1.3.3-E1 | Invalid user | VishnuException | VishnuException | 0 |

2.11 UA2 - Reset the password

API command: *resetPassword*

| ID test | Description of the test cases | Output expected | Output gotten | Error |
|---------|--------------------------------|-------------------------|-------------------------|-------|
| UA2-B | Reset the password of the user | The password is changed | The password is changed | 0 |
| UA2-E1 | Invalid user | VishnuException | VishnuException | 0 |
| UA2-E2 | Not an administrator | VishnuException | VishnuException | 0 |

2.12 U4 - Add a local account

API command: *addLocalAccount*

| ID test | Description of the test cases | Output expected | Output gotten | Error |
|---------|-------------------------------|--------------------------|--------------------------|-------|
| U4-B | Add a local account | A local account is added | A local account is added | 0 |
| U4-E1 | Invalid user | VishnuException | VishnuException | 0 |
| U4-E2 | Invalid machine | VishnuException | VishnuException | 0 |

2.13 U4.1 - Update a local account

API command: *updateLocalAccount*

| ID test | Description of the test cases | Output expected | Output gotten | Error |
|---------|-------------------------------|-----------------------------|-----------------------------|-------|
| U4.1-B | Update a local account | A loccal account is updated | A loccal account is updated | 0 |
| U4.2-E1 | Invalid machine | VishnuException | VishnuException | 0 |
| U4.1-E2 | Invalid user | VishnuException | VishnuException | 0 |

2.14 U4.2 - Delete a local account

API command: *deleteLocalAccount*

| ID test | Description of the test cases | Output expected | Output gotten | Error |
|---------|-------------------------------|-----------------------------|-----------------------------|-------|
| U4.2-B | Delete a local account | A loccal account is deleted | A loccal account is deleted | 0 |
| U4.2-E1 | Invalid machine | VishnuException | VishnuException | 0 |
| U4.2-E2 | Invalid user | VishnuException | VishnuException | 0 |

2.15 UA3 - Save a configuration

API command: *saveConfiguration*

| ID test | Description of the test cases | Output expected | Output gotten | Error |
|---------|-------------------------------|--|--|-------|
| UA3-B | Save a configuration | The current configuration is saved in a file | The current configuration is saved in a file | 0 |
| UA3-E1 | Invalid file | VishnuException | VishnuException | 0 |

2.16 UA4 - Restore a configuration

API command: *restoreConfiguration*

| ID test | Description of the test cases | Output expected | Output gotten | Error |
|---------|-------------------------------|-------------------------------|-------------------------------|-------|
| UA4-B | Restore a configuration | The configuration is restored | The configuration is restored | 0 |
| UA4-E1 | Invalid file | VishnuException | VishnuException | 0 |

2.17 U4.3 - List the local account

API command: *listLocalAccount*

| ID test | Description of the test cases | Output expected | Output gotten | Error |
|---------|-------------------------------|--------------------------------|--------------------------------|-------|
| U4.3-B | List the local account | The local account are returned | The local account are returned | 0 |
| U4.3-E1 | Invalid machine | VishnuException | VishnuException | 0 |
| U4.3-E1 | Invalid user | VishnuException | VishnuException | 0 |

2.18 UA7 - Configure default option

API command: *configureDefaultOpt*

| ID test | Description of the test cases | Output expected | Output gotten | Error |
|---------|-------------------------------|-------------------|-------------------|-------|
| UA7-B | Configure a default option | The option is set | The option is set | 0 |
| UA7-E1 | Invalid option name | VishnuException | VishnuException | 0 |
| UA7-E2 | Invalid option value | VishnuException | VishnuException | 0 |

2.19 U1.3.2 - List options

API command: *listOptions*

| ID test | Description of the test cases | Output expected | Output gotten | Error |
|-----------|-------------------------------|--------------------------|--------------------------|-------|
| U1.3.2-B | List the options | The options are returned | The options are returned | 0 |
| U1.3.2-E1 | Invalid option name | VishnuException | VishnuException | 0 |

2.20 U1.3.1 - Configure option

API command: *configureOption*

| ID test | Description of the test cases | Output expected | Output gotten | Error |
|-----------|-------------------------------|-------------------|-------------------|-------|
| U1.3.1-B | Configure an option | The option is set | The option is set | 0 |
| U1.3.1-E1 | Invalid option name | VishnuException | VishnuException | 0 |
| U1.3.1-E2 | Invalid option value | VishnuException | VishnuException | 0 |

2.21 UA6.1 - Add a machine

API command: *addMachine*

| ID test | Description of the test cases | Output expected | Output gotten | Error |
|----------|-------------------------------|--------------------|--------------------|-------|
| UA6.1-B | Add a machine | A machine is added | A machine is added | 0 |
| UA6.1-E1 | Invalid session | VishnuException | VishnuException | 0 |

2.22 UA6.1 - Update a machine

API command: *updateMachine*

| ID test | Description of the test cases | Output expected | Output gotten | Error |
|----------|-------------------------------|----------------------|----------------------|-------|
| UA6.4-B | Update a machine | A machine is updated | A machine is updated | 0 |
| UA6.4-E1 | Invalid session | VishnuException | VishnuException | 0 |

2.23 UA6.2 - Delete a machine

API command: *deleteMachine*

| ID test | Description of the test cases | Output expected | Output gotten | Error |
|----------|-------------------------------|----------------------|----------------------|-------|
| UA6.2-B | Delete a machine | A machine is deleted | A machine is deleted | 0 |
| UA6.4-E1 | Invalid machine identifier | VishnuException | VishnuException | 0 |

2.24 UA6.3 - List a machine

API command: *listMachine*

| ID test | Description of the test cases | Output expected | Output gotten | Error |
|----------|-------------------------------|---------------------------|---------------------------|-------|
| UA6.3-B | List the machines | The machines are returned | The machines are returned | 0 |
| UA6.3-E1 | Invalid session | VishnuException | VishnuException | 0 |

2.25 UA8 - Add an authentication system

API command: *addAuthSystem*

| ID test | Description of the test cases | Output expected | Output gotten | Error |
|---------|----------------------------------|-----------------------------------|-----------------------------------|-------|
| UA8-B | Add an authentication system | An authentication system is added | An authentication system is added | 0 |
| UA8-E1 | Invalid session | VishnuException | VishnuException | 0 |
| UA8-E2 | Not an admin | VishnuException | VishnuException | 0 |
| UA8-E3 | Already existing system | VishnuException | VishnuException | 0 |
| UA8-E4 | Unknown encryption method | VishnuException | VishnuException | 0 |
| UA8-E5 | Missing ldapbase for ldap system | VishnuException | VishnuException | 0 |

2.26 UA8.1 - Update an authentication system

API command: *updateAuthSystem*

| ID test | Description of the test cases | Output expected | Output gotten | Error |
|----------|---|-------------------------------------|-------------------------------------|-------|
| UA8.1-B | Update an authentication system | An authentication system is updated | An authentication system is updated | 0 |
| UA8.1-E1 | Invalid session | VishnuException | VishnuException | 0 |
| UA8.1-E2 | Invalid authentication system | VishnuException | VishnuException | 0 |
| UA8.1-E3 | Unknown encryption method | VishnuException | VishnuException | 0 |
| UA8.1-E4 | The system is already locked when trying to lock it | VishnuException | VishnuException | 0 |
| UA8.1-E5 | Missing username variable in ldapbase field | VishnuException | VishnuException | 0 |

2.27 UA8.2 - Delete an authentication system

API command: *deleteAuthSystem*

| ID test | Description of the test cases | Output expected | Output gotten | Error |
|----------|---------------------------------|-------------------------------------|-------------------------------------|-------|
| UA8.2-B | Delete an authentication system | An authentication system is deleted | An authentication system is deleted | 0 |
| UA8.2-E1 | Invalid authentication system | VishnuException | VishnuException | 0 |

2.28 U5 - List the authentication system

API command: *listAuthSystem*

| ID test | Description of the test cases | Output expected | Output gotten | Error |
|---------|--------------------------------|--|--|-------|
| U5-B | List the authentication system | The authentication system are returned | The authentication system are returned | 0 |
| U5-E1 | Invalid session | VishnuException | VishnuException | 0 |

2.29 U6 - Add an authentication account

API command: *addAuthAccount*

| ID test | Description of the test cases | Output expected | Output gotten | Error |
|---------|--|-------------------------------------|-------------------------------------|-------|
| U6-B | Add an authentication account | The authentication account is added | The authentication account is added | 0 |
| U6-E1 | Invalid authentication system | VishnuException | VishnuException | 0 |
| U6-E2 | Invalid user identifier | VishnuException | VishnuException | 0 |
| U6-E3 | Cannot add as someone else if not an admin | VishnuException | VishnuException | 0 |

2.30 U6.1 - Update an authentication account

API command: *updateAuthAccount*

| ID test | Description of the test cases | Output expected | Output gotten | Error |
|---------|--|---------------------------------------|---------------------------------------|-------|
| U6.1-B | Update an authentication account | The authentication account is updated | The authentication account is updated | 0 |
| U6.1-E1 | Invalid authentication system | VishnuException | VishnuException | 0 |
| U6.1-E2 | Invalid user identifier | VishnuException | VishnuException | 0 |
| U6.1-E3 | Cannot add as someone else if not an admin | VishnuException | VishnuException | 0 |
| U6.1-E4 | Unknown authentication account | VishnuException | VishnuException | 0 |

2.31 U6.2 - Delete an authentication account

API command: *deleteAuthAccount*

| ID test | Description of the test cases | Output expected | Output gotten | Error |
|---------|--|---------------------------------------|---------------------------------------|-------|
| U6.2-B | Delete an authentication account | The authentication account is deleted | The authentication account is deleted | 0 |
| U6.2-E1 | Invalid authentication system | VishnuException | VishnuException | 0 |
| U6.2-E2 | Invalid user identifier | VishnuException | VishnuException | 0 |
| U6.2-E3 | Cannot add as someone else if not an admin | VishnuException | VishnuException | 0 |
| U6.2-E4 | Unknown authentication account | VishnuException | VishnuException | 0 |

2.32 U6.3 - List the authentication accounts

API command: *deleteAuthAccount*

| ID test | Description of the test cases | Output expected | Output gotten | Error |
|---------|--|---|---|-------|
| U6.3-B | List the authentication accounts | The authentication account are returned | The authentication account are returned | 0 |
| U6.3-E | Invalid authentication system | VishnuException | VishnuException | 0 |
| U6.2-E1 | Invalid user identifier | VishnuException | VishnuException | 0 |
| U6.2-E3 | Cannot add as someone else if not an admin | VishnuException | VishnuException | 0 |

2.33 Tests for version management

API commands: *connect, reconnect, changePassword*

Compatible versions : means couple of versions in which the major of the client and the server are the same or couple of versions in which the minor of the client's version is lower than server's version.

| ID test | Description of the test cases | Output expected | Output gotten | Error |
|--|---|-------------------------|-------------------------|-------|
| Connect with compatible versions between client and server | Normal connection with compatible versions | A session is opened | A session is opened | 0 |
| Reconnect with compatible versions between client and server | Normal reconnection with compatible versions | A session is opened | A session is opened | 0 |
| Change password of the user with compatible versions between client and server | Normal change of the user password with compatible versions | The password is changed | The password is changed | 0 |
| Connect with no compatible version between client and server | Normal connection with no compatible versions | VishnuException | VishnuException | 0 |
| Reconnect with compatible version between client and server | Normal reconnection with compatible no version | VishnuException | VishnuException | 0 |

| ID test | Description of the test cases | Output expected | Output gotten | Error |
|--|---|-----------------|-----------------|-------|
| Change password of the user with no compatible version between client and server | Normal change of the user password with no compatible version | VishnuException | VishnuException | 0 |

Chapter 3

Stress tests

| ID test | Date | Test description | Command(s) tested | Results |
|----------------|----------|---|-------------------|----------------------------|
| STR-SERV-DOWN | 14/03/12 | The ums sed is stopped and restarted | connect | Success - normal connexion |
| STR-AGENT-DOWN | 14/03/12 | The SysFera-DS Agent is stopped and restarted | | failure |

Chapter 4

Load tests

| ID test | Date | Test description | Command(s) tested | Results |
|--------------|----------|-------------------------------------|-------------------|---|
| LOAD-connect | 14/03/12 | Simultaneous launch of 100 commands | connect | 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-connect | Cannot guarantee the performance if ldap or multiple authentication system are used | connect | - | - | - |
| CDP-3.1-close | comparison with "ssh localhost uname " | close | 0,1s | 0,4s | Success |
| CDP-3.1-listSession | comparison with "ssh localhost uname " | listJobs | 0,04s | 0,4s | Success |
| CDP-3.2.1-listUsers | execution time less than "ssh localhost uname" | listUsers | 0,04s | 0,4s | Success |

| ID test | Test description | Command(s) tested | Memory consumption | Results |
|-------------------|--|-------------------|------------------------|---------|
| CDP-3.2.1-connect | memory consumption | connect | 0,5% of the RAM memory | Success |
| CDP-Memserver | Memory consumption of tms server running during 24 hours | ums server | 0,9% of the RAM memory | Success |