Savanna Test Plan

MIRANTIS

Rev. 1

Contents

1 Revision History

Date	Author	Comments
04/11/2013	QA team	Initial Draft

2 Introduction

The main goal of this document is to present a detailed test cases for Savanna testing. This test plan includes functional test cases for the features and non-functional test cases for performance, load and compatibility testing types. This document is divided to sections by the testing types.

3 System Under Test Specifications

- TBD

4 QA Team Responsibilities

QA team is responsible to:

- make a test plan contains acceptance, functional, performance, scalability, reliability and compatibility test cases
- add regression test cases to the test plan in case of regression
- define acceptance tests suite for every iteration
- execute acceptance tests for candidate build for every iteration
- execute acceptance and regression tests for release candidate
- execute all functional, scalability, reliability and compatibility test cases on stable nightly builds when corresponding features will be implemented
- maintain test lab infrastructure
- automate as many acceptance tests as possible
- execute automated test suite for each nightly build
- maintain infrastructure for making nightly builds and run automated tests
- notify Dev team about found bugs via bug tracking system
- help Dev team with bug reproduction
- verify bugs fixed by Dev team

4.1 Test Deliverables

The following items should be delivered after product release:

1. test plan
2. test cases specification
3. test cases execution reports
4. project status and metrics

4.2 Test Schedule

1. TBD

4.3 Test Cycles

1. Implemented functionality (pass 1)
2. Working functionality (pass 2)
3. All critical bugs and bugs related to functionality fixed - acceptance for demo (pass 3)

5 Suspension Criteria and Resumption Requirements

The main criteria to suspend the testing for candidate build is having at least one 'Blocker' bug. Resumption criteria in that case is fixing all 'Blocker' bugs and make a new candidate build. Performance testing can be suspended if the product is unstable on the load. Resumption criteria for that case is fixing corresponding bugs and make a new stable build.

6 Risk Areas Evaluation

Risk Areas were evaluated by their severity and priority. These potential risks will be addressed by tests. Number of test cases for each feature is determined by the priorities defined on the basis of severity and probability of risks, related to this feature.

Each test case has a priority according to and probability of a particular risk, related to this test case. Also each test case has a priority for automation.

#	Risk	Severity	Probability	Comments
1	Difference between REST API requirements and implementation	High	Low	The following items must be tested: • Node template requests: create, modify, delete • Cluster requests: create, modify, delete
2	Errors in the REST API implementation	High	High	The following items must be tested: • Deploy acceptance • Hadoop acceptance
3	Errors in the plugin API functionality	High	High	REST API requests should be tested for the following Hadoop implementations: • Apache Hadoop • Hortonworks Ambari • Clouderra Manager • Intel Hadoop
4	Errors in the UI functionality	High	High	The following items must be tested: • Node template requests through Horizon UI: create, modify, delete • Cluster requests through Horizon UI: create, modify, delete • TBD
5	Savanna is not compatible with custom Hadoop images	Medium	High	Create a Hadoop cluster using Hadoop images provided by Hortonworks Ambari, Clouderra Manager, Intel Hadoop, etc
6	Savanna is not compatible with different OpenStack releases	Medium	High	Savanna should be installed on the upcoming OpenStack releases(TBD which)
7	Savanna is not compatible with different versions of Python	High	High	Savanna should be tested on Python 2.6 and 2.7. Also it should be tested on 3.x versions when the OpenStack does support them.
8	Installation problems	High	Low	Savanna supports 2 installation modes: from the sources and using pip utility. Both of them should be tested.
9	Lack of UI performance	Medium	Medium	TBD
10	Low performance of Hadoop deploying	Medium	Medium	TBD

11	Low performance of Apache Hadoop HDFS	Medium	Medium	TBD
12	Low performance of Apache Hadoop MapReduce	Medium	Medium	The following scenarios must be tested: • Pi evaluation • Load test script(TBD name?)

7 Features To Be Tested

7.1 TBD

- TBD

8 Features NOT to be tested

Feature	**Reason**
TBD	TBD

9 Test lab network topology

9.1 Descriptions of network topology and servers destination

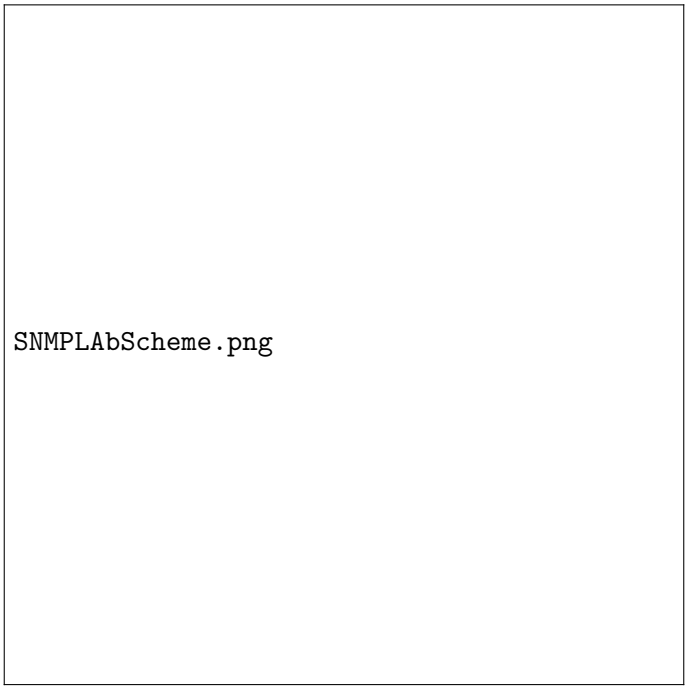
Virtualized infrastructure is used for SNMPv3 testing presented on the Figure 1.

- Vyatta routers and servers with SNMP clients are hosted on ESXi servers (Server 1 and Server 2). VMware is used for virtual network creation between Vyatta routers and servers with SNMP clients.
- For SNMP clients one server is dedicated (Server 3).
- On the hardware server ESXi will be installed. Vyatta will be started from HDD.
- Cisco 3845 will be used for routing/multicast mib testing.

9.2 Network scheme for tests

This scheme is used in all test cases for SNMPv3.

Figure 1: Network scheme for tests



10 Test Cases Requirements

- All possible test cases should be automated.
- At least 70% of the test cases should be automated.