Testing Report

Purpose:

Runnablility test of Bloombase Spitfire StoreSafe Server on Oracle RAC 10gR2 which running on Oracle unbreakable Linux operating system.

Notes: The runnability test is done by the commands and methods mentioned in the remarks column of the "Testing Results" part.

1. Testing Environment

Oracle RAC

Version	Enterprise Edition, 10gR2 (10.2.0.1)
Storage	Sun Storage 3300
Number of node	2
Server type of each node	Sun Microsystems SunFire V40z
CPU of each node	2 x AMD Opteron(tm) Processor 848 2.2GHz
Memory of each node	3.5 GB
Operation System of each node	Oracle Unbreakable Linux (Enterprise Linux Enterprise Linux Server release 4 update 4, kernel 2.6.9-42.0.0.0.1.ELsmp)

Spitfire StoreSafe Server

Model	Spitfire StoreSafe for Linux version 2.0
Key Management	Built-in Spitfire KeyCastle key management server

2. Test Scenarios

Filesystem Tests

The following tests are carried out at storage hosts to access encrypted iSCSI storage secured by Spitfire StoreSafe server.

Test	Description
Directory creation	Platform equivalence of Linux's mkdir
Directory rename	Platform equivalence of Linux's mv
Directory removal	Platform equivalence of Linux's rm
Directory move	Platform equivalence of Linux's mv
File creation	Platform equivalence of Linux's echo XXX >
File rename	Platform equivalence of Linux's mv
File removal	Platform equivalence of Linux's rm
File move	Platform equivalence of Linux's mv

File append – by character	Platform equivalence of Linux's echo XXX >>
File append – by block	Platform equivalence of Linux's echo XXX >>
File parameters inquiry	File parameters inquiry Platform equivalence of Linux's ls *X
Softlink/Symbolic link removal	Platform equivalence of Linux's rm
Softlink/Symbolic link move	Platform equivalence of Linux's mv

Oracle Database Access Test

Test	Remarks
TPCC query tests	queries

Oracle RAC Database Test

Test	Description
Database instance starts and joins cluster	
Instance failover	Active node network interface inactivated
Database shutdown	
Database creation	
Table creation	
Index creation	
Record insert	
Record select	
Record update	
Record delete	

3. Testing Results

Filesystem Tests

Test	Validation Pass	Remarks
Directory creation (Under directory /ocfs2/storage)	√	mkdir test
Directory rename	√	Mv test sstest
Directory move	√	mv sstest ../
Directory removal	√	rm -r sstest
File creation	√	vi abc.txt
File rename	√	mv abc.txt qwert.txt
File move	√	mv qwert.txt oradata/
File removal	√	rm oradata/qwert.txt
File append – by character	√	echo "good evening" >>abc.txt
File append – by block	√	cat >> abc.txt << eof good eof

File parameters inquiry	√	ls -al
Softlink/Symbolic link removal	√	ln -s /ocfs2/bloombase/ /ocfs2/virtual_storage/
Softlink/Symbolic link move	√	mv /ocfs2/bloombase flash_recovery_area/

Oracle Database Access Test

Test	Validation Pass	Remarks
TPCC query tests	√	Test through jmeter

Oracle RAC Database Test

Test	Validation Pass	Remarks
Database instance starts and joins cluster	√	Setup new database instance through issue 'dbca'. A warning shows "Directory /ocfs2/oradata/sspocc is not on the cluster filesystem shared by rac1, rac2" before move to next step. It disappeared after several trials when click on "next".
Instance failover	√	ifconfig eth0 down
Database shutdown	√	use the "shutdown all" button at Oracle EM
Database creation	√	use dbca to create a new RAC database
Table creation	√	create table orabm.contents (title varchar2(1024) null, link varchar2(1024) null, description clob null, last_upd_dt timestamp null);
Index creation	√	insert into orabm.contents values ("abc", "abc", "abc", 0);
Record insert	√	insert into orabm.contents values ("abc", "abc", "abc", 0);
Record select	√	select * from orabm.contents;
Record update	√	update orabm.contents set title="efg" where title="abc";
Record delete	√	delete from orabm.contents where title="efg";