

Server Test Process

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Document History

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SERVER TEST PROCESS

1.0 GENERAL

This document describes the protocol to test the redundancy of the LSL servers

2.0 PURPOSE

This document is intended to provide an overview of the procedure to check the redundancy of the LSL servers for HPE NIMBLE Infrastructure (VMWARE), paying special attention to:

- The necessary requirements to perform the test
- The procedure to follow for the test

3.0 REQUIREMENTS

3.1 Verify status/connectivity between both VMware Hosts & Datastores

LSL-CLU-01 | ACTIONS

Summary Monitor Configure Permissions **Hosts** VMs Datastores Networks Updates

Hosts Resource Pools

Filter

Name	State	Status	Cluster	Consumed CPU %	Consumed
10.0.3.17	Connected	✓ Normal	LSL-CLU-01	6%	79%
10.0.3.15	Connected	✓ Normal	LSL-CLU-01	13%	74%

Export | 2 items

LSL-CLU-01 | ACTIONS

Summary Monitor Configure Permissions Hosts VMs **Datastores** Networks Updates

Datastores Datastore Clusters

Filter

Name	Status	Type	Datastore Cl...	Capacity	Free
10.0.3.15-Local-Datastore	✓ Normal	VMFS 6		271.75 GB	265.57 GB
10.0.3.17-Local-Datastore	✓ Normal	VMFS 6		271.75 GB	265.57 GB
LS-DS-03	✓ Normal	VMFS 6		5 TB	4.88 TB
LSL-DS-01	✓ Normal	VMFS 6		15 TB	5.29 TB
Reserved-Service-Datastore-1	✓ Normal	VMFS 6		500 GB	498.59 GB

Export | 6 items

3.2 Verify VM Cluster CPU and RAM resources

LSL-CLU-01 | ACTIONS

Summary **Monitor** Configure Permissions Hosts VMs Datastores Networks Updates

Total Processors: 64
Total vMotion Migrations: 18

CPU: Used: 10.94 GHz, Free: 123.14 GHz, Capacity: 134.08 GHz
Memory: Used: 592.18 GB, Free: 175.13 GB, Capacity: 767.31 GB
Storage: Used: 9.85 TB, Free: 11.06 TB, Capacity: 21.51 TB

3.3 Verify vSphere HA status, Datastores Heartbeats & Configuration Issues

vSphere HA ^

Admission Control: Disabled

Proactive HA: Disabled

Host Monitoring: Enabled

VM Monitoring: VM Monitoring Only

Summary

REFRESH

Hosts ^



Master	10.0.3.15
Hosts connected to master	1
Hosts not connected to master	0
vSphere HA agent not reachable	0
vSphere HA agent configuration error	0
Hosts failed	0
Network isolated	0
Network partitioned	0
vSphere HA agent initializing	0
Disconnected from vCenter	0
Standby mode	0
Maintenance mode	0
vSphere HA agent unconfiguration failures	0

Virtual Machines ^

Protected	46
Unprotected	0

Heartbeat

Datastores selected by vCenter Server for heartbeating.

Name	Datastore Cluster	Hosts Mounting Datastore ↓
 Reserved-Service-Datastore-1	N/A	2
 Reserved-Service-Datastore-2	N/A	2

- Identify which host has been elected as **Master** and Slave

Summary

REFRESH

Hosts

Master	10.0.3.15
Hosts connected to master	1
Hosts not connected to master	0
vSphere HA agent not reachable	0
vSphere HA agent configuration error	0
Hosts failed	0
Network isolated	0

- Verify if Virtual machines are running on **Master host or Slave Host**

BI_MEDIATIZ

Summary Monitor Configure Permissions Datastores Networks Updates

Powered On

Launch Web Console

Launch Remote Console

Guest OS: Microsoft Windows Server 2012 (64-bit)

Compatibility: ESXi 6.5 and later (VM version 13)

VMware Tools: Not running, not installed

DNS Name:

IP Addresses:

Host: 10.0.3.17

CPU USAGE: 83 MHz

MEMORY USAGE: 245 MB

STORAGE USAGE: 277.35 GB

10.0.3.17

Summary Monitor Configure Permissions VMs Datastores Networks Updates

Virtual Machines VM Templates

Filter

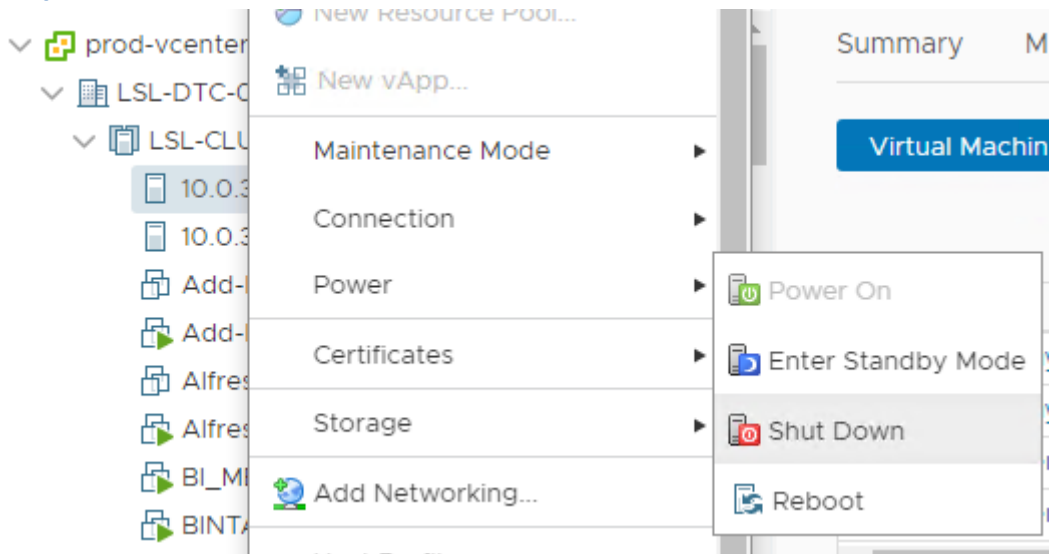
Name	State	Status	Provisioned Space	Used Space	Host CPU	Host Mem
BI_MEDIATIZ	Powered On	Normal	624.1 GB	277.35 GB	104 MHz	24.12 GB
BINTALGAPP01	Powered On	Normal	732.1 GB	109.73 GB	104 MHz	22.11 GB
BINTALGNDB01	Powered On	Normal	1.56 TB	793.22 GB	125 MHz	24.88 GB
Business Publications Backup Server	Powered On	Normal	327.89 GB	32.88 GB	335 MHz	4.05 GB

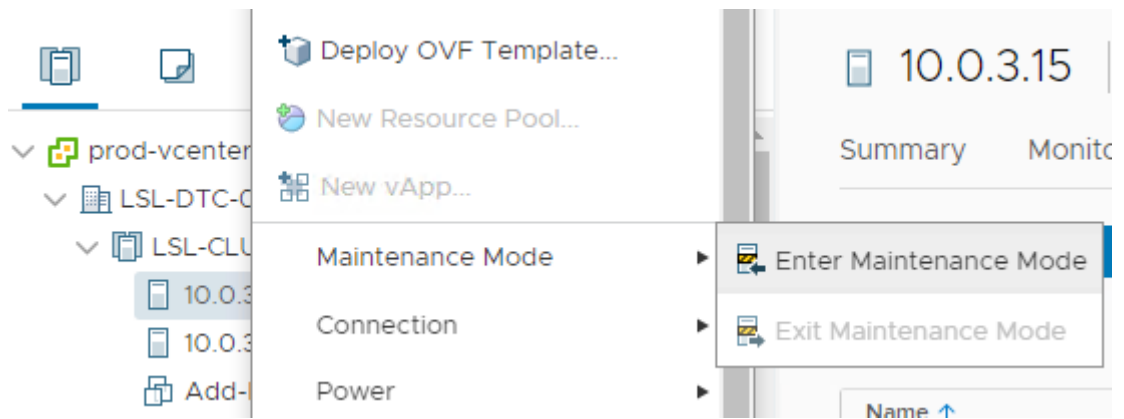
4.0 TEST PROCEDURE

4.1 Identify which is the Master / Slave VMware host

Hosts	
Master	10.0.3.15
Hosts connected to master	1
Hosts not connected to master	0
vSphere HA agent not reachable	0
vSphere HA agent configuration error	0
Hosts failed	0
Network isolated	0
Network partitioned	0
vSphere HA agent initializing	0
Disconnected from vCenter	0
Standby mode	0

4.2 Test Failover on Master host or Slave Host by either (Rebooting, Shutting down of host, Manual force shut down, Removing of power cables, Removing of Ethernet cables or put Host into Maintenance Mode)





- When the Host has been disconnected, a new Master Host will be elected
- Virtual machines running on powered off host will be registered & restarted onto the secondary host
- Test Virtual machines connectivity through ping results
- After all Virtual machines have been successfully restarted, power on disconnected host
- Powered on vSphere host will be elected as Slave host
- VM Cluster issues need to be Acknowledged / Reset Triggered alarms to green
- Verify Status of Cluster and Configuration issues of vSphere HA after Host has been powered back ON
- Test failover again with the same procedures above on the newly elected Master host

In a vSphere HA cluster, three types of host failure are detected:

- Failure. A host stops functioning.
- Isolation. A host becomes network isolated.
- Partition. A host loses network connectivity with the primary host.

Below are the pre-sets for failure detection interval: -

	Failure Interval	Minimum uptime	Maximum per-VM resets	Maximum resets time window
Low	120 secs	480 secs	3	7 days
Medium	60 secs	240 secs	3	24 hrs
High	30 secs	120 secs	3	1 hr

Actual vSphere HA VM monitoring sensitivity has been set to high: -

VM monitoring sensitivity

Preset

Low High

Custom

Failure interval seconds

Minimum uptime seconds

Maximum per-VM resets

Maximum resets time window

No window

Within hrs

As per vSphere HA: -

- The default value for isolation failure detection (Shutdown, Power cut) is **15 seconds**. (*das.failuredetectiontime*) In other words the failed or isolated host will be declared dead by the other hosts in the HA cluster on the fifteenth second and a restart will be initiated by the failover coordinator.
- The time taken for the HA Agent to detect a network failure/heartbeat on a Host & HA to get into action is around **25-50 seconds**
- After vSphere HA detects the failure, a shutdown command is sent to the VMs and the restart of each VM takes around **30-50 Seconds**