

Acceptance Tests and Sanity checks for Oracle DB hardware

This page details a lists of tests and checks performed on arrival of the new hardware before adding it to the Oracle 10g RAC infrastructure for Physics Services.

Network Switches

Network switches are used for: public network connectivity, interconnect network 1 and interconnect network 2. Gigabit switches are used. The connectivity to the public network currently used are 4gpbs and 10gbps. Basic functionality and performance tests:

- High throughput tests are run for a period of a few days by connecting Linux servers to a significant percentage of the switch ports and transferring large amounts of data between Linux servers (that is using the switches close to their maximum throughput)
- An Oracle RAC cluster is then installed using the switch infrastructure under tests and to check for possible transmission or latency issues.

SAN switches

SAN switches are used to connect the Linux servers to the Storage. Basic functionality and performance tests:

- throughput tests are run for a period of few days by connecting already consolidated servers and storage arrays to the switches.
- Oracle ORION test tool or similar are used to stress tests the storage across the SAN infrastructure. Results are compared to the baseline performance for the storage arrays.
- Latency, IOPS and throughput are considered
- These tests are repeated using several ports of the switches to check their functionality. The tests span a few days to test for stability.
- Fucntionality test of the inter-switch 10Gb connection

Servers

The following parameters are checked:

- Number of CPUs
- Amount of memory installed
- Compatibility with Linux RHEL 3 and/or 4 (64 bit where applicable)
- Stress tests over a period of few days to check for system stability

Storage

Basic functionality and performance tests:

- throughput tests are run for a period of few days by connecting servers and storage arrays to a large number of ports and then transferring large amounts of data (that is using the switches at their maximum throughput)
 - ◆ The Oracle ORION test tool is used to stress tests the storage across the SAN infrastructure. Results are compared to the baseline performance for the storage arrays.
 - ◆ Latency, IOPS and throughput are measured against for increasing storage load
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