

SGI® Quick Start for the Intel® Cluster Checker Option

This document briefly describes the Intel Cluster Checker option for SGI Altix XE cluster systems. The Intel Cluster Checker is a software tool used to verify the configuration and performance of Linux-based clusters. It also checks compliance to the Intel Cluster Ready Specification version 1.0 (and 1.0.x).

SGI has factory installed Cluster Checker and completed the Cluster Checker tests. This Quick Start provides step-by-step instructions for running Cluster Checker and validating its performance output.

Important Tips for Running Cluster Checker

Cluster Checker should be one of the first things you run across the cluster. This validates the cluster is functioning as it did in the SGI factory. Always run Cluster Checker **before** changing the *Hostname/IP/Gateway/DNS* of the cluster. For best results, run Cluster Checker for the “first time” in the same configuration it was in the SGI factory. SGI recommends running Cluster Checker after a fresh reboot of the entire cluster. This avoids any residual processes interfering with Cluster Checker diagnostics or its performance.

Cluster Checker can take one to three hours to run. Run time is dependent on the configuration and network fabrics available.

Baseline Output File

SGI runs Cluster Checker prior to shipment to ensure the system meets the cluster ready specifications. This test creates a baseline output file that is located on the head node’s system disk in the following directory:

/home/clck/cluster-check/clck-config-user-xxxx.xxx.out

Make note of this file before running Cluster Checker. It is used to compare your cluster’s test results and performance.

Important Configuration Notes

The following configuration features are important to successfully running the Cluster Checker option.

The Cluster Checker application is located on the head node’s system disk at:

/opt/intel/clck/1.1/cluster-check

There is a *nodelist* file that is required to run Cluster Checker. As the filename suggests, it’s a list of compute nodes that Cluster Checker uses to test. This *nodelist* file is already configured with all of the compute nodes in your cluster.

Optionally, this list can be modified to test a smaller subset of nodes. The head node’s disk has the *nodelist* file at:

/opt/intel/clck/1.1/nodelist

Cluster Checker must be run with a *config.xml* file as a command line argument. SGI recommends you run Cluster Checker with the same *config.xml* file that was used at the SGI factory. This provides consistent results when comparing the Cluster

Checker's baseline output file (described previously) to your results. The *config.xml* file is located on the head node system disk at: */home/clck/cluster-check/clck-config-user.xml*

Note: For more details on Cluster Checker and the *config.xml* file, please reference the *Intel® Cluster Checker User Guide and Module Reference Guide* available as a soft copy on the head node's system disk at: */opt/intel/clck/1.1/doc*

Running Intel Cluster Checker

You must run Cluster Checker as a “non-root” user. SGI has created a special user called “clck” for this purpose. After a fresh reboot of your cluster, do the following:

1. Log into the head node as root.
2. Switch user to “clck”: **su – clck**
3. Then: **cd cluster-check**
4. Run Cluster Check: **cluster-check clck-config-user.xml**

As previously mentioned, Intel Cluster Checker can take one to three hours (sometimes longer) to run. You should factor this time into your system operation plans.

When Cluster Checker completes, it will generate a *.out* file (i.e. *clck-config-xxx.out*). This output file can be viewed for errors and compared to the *.out* file originally generated by SGI manufacturing test, (see the “Baseline Output File” subsection).

SGI Cluster Training Classes

SGI offers customer training classes covering all current systems, including clusters. If you have a maintenance agreement in place with SGI, contact SGI Customer Education at 1-800-361-2621 for information on the time, location and cost of the applicable training course you are interested in. Or, go to the following URL site for more education information: <http://www.sgi.com/support/custeducation/>

Customers with support contracts can also obtain information from: <https://support.sgi.com/login>

© 2008, Silicon Graphics, Inc. All rights reserved.

SGI and Altix are registered trademarks of Silicon Graphics, Inc. Intel is a registered trademark of the Intel Corporation or its subsidiaries in the United States and other countries. InfiniBand is a trademark of the InfiniBand trade association. Linux is a registered trademark of Linus Torvalds. All other trademarks mentioned herein are the property of their respective owners.