System Controller Software 1.16
Update Guide

System Controller Software 1.16 provides a system control platform for field service and system maintenance applications. It includes the following features:

*   Advanced diagnostic support

*   Maintenance of the SGI® Origin® 3000 and SGI® Altix® 3000 and 4700 system serial number

*   Maintenance of the SGI Origin 3000 and SGI Altix 3000 and 4700 router port enable

*   Console for the L1 and L2 system controllers

You can download the System Controller Software 1.16 package from http://support.sgi.com/apps/ or order it on CD-ROM (P/N 812-1138-017). Contact your SGI account representative if you need assistance obtaining the software package.

This guide contains the following sections:

*   "Components of Release Packages" (page 2)

*   "Related Information" (page 4)

*   "Installing from a Downloaded Package" (page 5)

*   "Installing from the CD-ROM" (page 8)

Components of Release Packages

This section lists the components of each of the following release packages:

- System Controller Software 1.16 (for an L3 controller)
- System Controller Software 1.16 (for the IRIX operating system)
- System Controller Software 1.161.16 (for SGIconsole™)
- System Controller Software 1.16 (for the SGI ProPack™ for Linux operating system)

System Controller Software 1.16 (for an L3 controller) has the following components:

- Kernel software for the Red Hat 6.2 kernel
- L1 USB module for the Red Hat 7.1 kernel
- L1 USB module for the Red Hat 7.2 kernel
- L1 USB module for the Red Hat 7.3 kernel
- L1 USB module for the Red Hat 8.0 kernel

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- L1 USB module for the Red Hat 9.0 kernel
- L1 USB module for the SGI ProPack 1.5 for the Linux kernel
- L1 USB module for the SGI XFS 1.0 kernel
- L1 USB module for the SGI XFS 1.1 kernel (supports Red Hat 7.1 and 7.2 [2.4.9-31] kernel versions)
- L1 USB module for the SGI XFS 1.1 kernel (supports Red Hat 2.4.18 vanilla kernel versions)
- L1 USB module for the SGI XFS 1.0.1 kernel
- L1 USB module for the SGI XFS 1.0.2 kernel
- L3 driver
- L1/L2 firmware utilities
- Installation tool
- Silicon Graphics 230 Red Hat 6.2 reinstallation script
- L1 USB build script
- L1 USB source files (supports Linux 2.4.x and 2.6.x kernels)

System Controller Software 1.16 (for the IRIX operating system) has the following component:

- L1/L2 firmware utilities

System Controller Software 1.16 (for SGIconsole) has the following components:

- • L3 driver
- • L1/L2 firmware utilities
- • SGIconsole l2.loose module
- • Installation tool

System Controller Software 1.16 (for the SGI ProPack for Linux operating system) has the following components:

- • L1/L2 firmware utilities
- • Installation tool

Related Information

For more information about the SGI L1, L2, and L3 controllers, see the following guides:

- • *SGI Origin 3000 L3 Controller Installation Guide* (007-4363-00*x*)
- • *SGI Origin 3000 Series Owner's Guide* (007-4240-00*x*)
- • *SGI L1 and L2 Controller Software User's Guide* (007-3938-00*x*)

Installing from a Downloaded Package

This section explains how to install the System Controller Software 1.16 software from a downloaded package onto the following platforms: an L3 controller, the IRIX operating system, an SGIconsole system, and the SGI ProPack for Linux operating system.

To install the System Controller Software 1.16 components on an L3 controller, follow these steps:

1. Log on to the L3 controller as root.

2. Enter the following commands:
    ```
    # cd /dir
    ```
    where *dir* is the directory in which you downloaded the software
    ```
    # chmod 755 install
    # chmod 755 sgi230_l3_reinstall
    # ./install
    ```

3. To reboot the system, enter the following command:
    ```
    # reboot
    ```

4. After the system reboots, remove the files that you downloaded.

To install the System Controller Software 1.16 components for the IRIX operating system, follow these steps:

1. Log on to the IRIX system as root.

2. Enter the following commands:

    ```
    # cd /dir
    ```
    where *dir* is the directory in which you downloaded the software
    ```
    # tar -xf 6.5.12-30_field_diags_sysco.tar
    # inst -f field_diags_sysco
    ```

3. After the installation is complete, remove the files that you downloaded.

To install the System Controller Software 1.16 components on an SGIconsole system, follow these steps:

1. Log on to the SGIconsole system as root.

2. Enter the following commands:

    ```
    # cd /dir
    ```
    where *dir* is the directory in which you downloaded the software
    ```
    # chmod 755 install
    # ./install
    ```

3. After the installation is complete, remove the files that you downloaded.

To install the System Controller Software 1.16 components for the SGI ProPack for Linux operating system, follow these steps:

1. Log on to the SGI ProPack system as root.

2. Enter the following commands:
   ```
   # cd /dir
   ```
   where *dir* is the directory in which you downloaded the software
   ```
   # chmod 755 install
   # ./install
   ```

3. After the installation is complete, remove the files that you downloaded.

Installing from the CD-ROM

This section explains how to install the System Controller Software 1.16 software from the CD-ROM onto the following platforms: an L3 controller, the IRIX operating system, an SGIconsole system, and the SGI ProPack for Linux operating system.

To install the System Controller Software 1.16 components on an L3 controller, follow these steps:

1. Log on to the L3 controller as root.

2. Insert the System Controller Software 1.16 CD-ROM into the CD-ROM drive.

3. Enter the following commands:
   ```
   # cd /mnt/cdrom/RPMS/i386
   # ./install
   ```

4. Remove the CD-ROM from the CD-ROM drive.

5. To reboot the system, enter the following command:
   ```
   # reboot
   ```

To install the System Controller Software 1.16 components for the IRIX operating system, follow these steps:

1. Log on to the IRIX system as root.

2. Insert the System Controller Software 1.16 CD-ROM into the CD-ROM drive.

3. Enter the following commands:
   ```
   # cd /mnt/cdrom/dist
   # inst -f field_diags_sysco
   ```

4. Remove the CD-ROM from the CD-ROM drive.

To install the System Controller Software 1.16 components on an SGIconsole system, follow these steps:

1. Log on to the SGIconsole system as root.

2. Insert the System Controller Software 1.16 CD-ROM into the CD-ROM drive.

3. Enter the following commands:
   ```
   # cd /mnt/cdrom/RPMS/i386
   # ./install
   ```

4. Remove the CD-ROM from the CD-ROM drive.

To install the System Controller Software 1.16 components for the SGI ProPack for Linux operating system, follow these steps:

1. Log on to the SGI ProPack system as root.

2. Insert the System Controller Software 1.16 CD-ROM into the CD-ROM drive.

3. Enter the following commands:
    ```
    # cd /mnt/cdrom/RPMS/ia64
    # ./install
    ```

4. Remove the CD-ROM from the CD-ROM drive.

Reinstalling on a
Silicon Graphics® 230 Visual Workstation

If you install System Controller Software 1.16 for an L3 controller on a Silicon Graphics 230 visual workstation and later need to restore the workstation to the original factory configuration and reload the system controller software, you must complete the following steps:

1. Complete the steps in the "Installing the Auxiliary Linux Software" section of the *SGI Origin 3000 L3 Controller Installation Guide*. (The section starts on page 18 of that document.)

2. To run the `sgi230_l3_reinstall` script, enter the following command:

    # **./sgi230_l3_reinstall**

    The `sgi230_l3_reinstall` script automatically installs additional Red Hat Linux components that are normally installed at the factory. The script takes several minutes to run; it lists each package it installs and displays a progress bar as it installs each package.

3. Perform one of the following actions:

    - To install System Controller Software 1.16 from a downloaded package, complete steps 2 through 4 of the procedure for installing the software for an L3 controller in the "Installing from a Downloaded Package" section on page 5 of this document.

    - To install System Controller Software 1.16 from the CD-ROM, complete steps 2 through 5 of the procedure for installing the software for an L3 controller in the "Installing from the CD-ROM" section on page 8 of this document.

Installing on a Silicon Graphics 230 Visual Workstation Preinstalled with Red Hat Linux

To install System Controller Software 1.16 for an L3 controller on a Silicon Graphics 230 visual workstation preinstalled with the Red Hat Linux 6.2 operating system, you must load additional software packages before you can load the L3 controller software. Follow these steps:

1. Complete the steps in the "Installing the Auxiliary Linux Software" section of the *SGI Origin 3000 L3 Controller Installation Guide*. (This section ends on page 18 of that document.)

2. Perform one of the following actions:

   - To install System Controller Software 1.16 from a downloaded package, complete steps 2 through 4 of the procedure for installing the software for an L3 controller in the "Installing from a Downloaded Package" section on page 5 of this document.

   - To install System Controller Software 1.16 from the CD-ROM, complete steps 2 through 5 of the procedure for installing the software for an L3 controller in the "Installing from the CD-ROM" section on page 8 of this document.

Note: To use the Network Configurator GUI to configure the network after the workstation has booted the operating system, see the "Configuring Network Settings" section on page 12 of the *SGI Origin 3000 L3 Controller Installation*

Guide. To use the User Configurator GUI to configure user accounts, see the "Configuring the Account" section on page 15. To connect the Silicon Graphics 230 visual workstation to an SGI Origin 3000 series server, see pages 21-27 of the *SGI Origin 3000 L3 Controller Installation Guide* for the sections that are appropriate for your system configuration.

New Features and Changes

This section lists the new features and changes included in this release for firmware and software in the following sections:

- "L1 Firmware" (page 15)
- "L2 Firmware" (page 17)
- "L3 Software" (page 18)
- "IA64 Software" (page 19)

Caution: Before you install the L1 or L2 firmware, follow the instructions in service bulletin GIB 200215. If you currently have L1 firmware version 1.4.1 or older installed, upgrade to the L1 firmware in System Controller Software 1.16 release. This release enables the router port security and system serial number security features. If the system is not configured properly, these features may prevent R bricks from powering on or booting.

L1 Firmware

This section lists the changes in the L1 firmware.

Changed Commands

`linkerr s`   Get NUMAlink™ 4 router link error status.

Added Features

- The conditions of the L1 boot are logged when the L1 starts.

Other Changes

- Enhanced NUMAlink™ 4 router error checking code.

- Added NUMAlink™ 4 router error checking to QDR, 191010, and 1955 chassis bricks.

- Fixed L1 panic on reset introduced in version 1.46.4.

- Improved IA2 blade revision 002 margining.

Bugs Addressed

927142   NL4R needs error monitoring.

951089   SH2:PI Hung cpus on orbit - running memstress.

957060   CPU power pod failure not detected with "env messages faultsonly" set

957283   L2 Command line checking needs improving.

957320   Quad router 1.85 volt at the R-asic is not at 1.85, it is 1.81.

957327   I3X blade not correctly detecting 66MHz cards intermittently.

957329   I2X blade, bus attributes swapped between CP0 and CP1.

957331   IA/IA2 blade pwr_good LED status inaccurate.

957464   I4E and I2E need a mode bit to set for additional debug data.

957465   QDRTR with 2177-001 boards running at wrong voltage

952528   L1 1.42.6 Commands from L1 serial port to L2 fail

957762   FRU dump on fully plugged 191010 fails.

L2 Firmware

This section lists the changes in the L2 firmware.

Other Changes

- No changes were applied for this release.

L3 Software

This section lists the changes in the L3 software.

Changes from Previous Release

All changes listed above for the L2 firmware also apply to the L2 emulator.

IA64 Software

This section lists the changes in the IA64 software.

Changes from Previous Release

- All changes for `snxsc_firmware-1.48.x-1.i386.rpm` also apply to the IA64 software package `snxsc_firmware-1.48.x-1.ia64.rpm`.