System Controller Software 1.10
Update Guide

System Controller Software 1.10 provides a system control platform for field service and system maintenance applications. It includes the following features:

- Advanced diagnostic support

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

- Maintenance of the SGI Altix and SGI Origin 3000 router port enable

- Console for the L1 and L2 system controllers

You can download the System Controller Software 1.10 package from http://support.sgi.com/apps/ or order it on CD-ROM (P/N 812-1138-011). 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 1.10 (for an L3 controller)

- System Controller Software 1.10 (for the IRIX operating system)

- System Controller Software 1.10 (for SGIconsole™)

- System Controller Software 1.10 (for the SGI ProPack™ for Linux operating system)

System Controller Software 1.10 (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

2

- 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 1.10 (for the IRIX operating system) has the following component:

- L1/L2 firmware utilities

System Controller Software 1.10 (for SGIconsole) has the following components:

- L3 driver
- L1/L2 firmware utilities
- Installation tool

System Controller Software 1.10 (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 1.10 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 1.10 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 1.10 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 6.5.12-28pre_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 1.10 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 1.10 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 1.10 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 1.10 components on an L3 controller, follow these steps:

1. Log on to the L3 controller as root.

2. Insert the System Controller Software 1.10 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 1.10 components for the IRIX operating system, follow these steps:

1. Log on to the IRIX system as root.

2. Insert the System Controller Software 1.10 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 1.10 components on an SGIconsole system, follow these steps:

1. Log on to the SGIconsole system as root.

2. Insert the System Controller Software 1.10 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 1.10 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 1.10 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 1.10 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 1.10 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 1.10 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 1.10 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 1.10 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 1.10 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)

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 1.10 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.

Added Features

- Release support for Silicon Graphics Prism™ and Silicon Graphics Prism Extreme systems.

- Release support for SGI® Altix® 350 configurations with NUMAlink™ 4 routers.

Other Changes

- Improved link reset sequencing to prevent intermittent link problems on a power-up or reset from the L1 or L2.

- Fixed the DHCP server functionality on the Linux-based L1. SGI® Altix® 3700 Bx2, Silicon Graphics Prism, and NUMAlink 4 router bricks will now function correctly as a DHCP server when the USB-ethernet adapter is installed.

- Fixed System Serial Number propagation issues on Altix 3700 Bx2, NUMAlink 4 router, and Silicon Graphics Prism systems in the previous System Controller Software 1.9 release.

- Added support for setting a network gateway address on the Linux-based L1 (via the integrated L2 Controller functionality). See the "L2 Firmware" "Other Changes" section for details.

- For bricks with integrated L2 support (via a USB-ethernet adapter), the "Other Changes" noted in the "L2 Firmware" section apply to the integrated L2 Controller.

Bugs Addressed

918719   ALERT: unconfigured temperature interrupt monitor: 10 input: 2

920785   L1 Losing DIMM Slot 0 on Vortix

926986   mca records after a reset.

927513   Bad LED status for cpus disabled by POD

928860   L1 version 1.34.3 does not propagate system serial number correctly

929203   A350 bricks with old rev riser card failing pci diagnostics

929252   L1 v1.34.3 not bootable on 2UPX bricks

929306   Second router L2 looses connection to 2 bricks when upgrading L1 to 1.34.3

929451   L2 resetting router on partitioned system

929607   Silicon Graphics Tezro™ 1PIC systems can't find BaseIO

930676   L2 serial automatically assigned to L1 after 'rtr spare'

930847   Looses scsi drives on a boot to prom.

930882   usb_device_init() could not get preliminary device descriptor

L2 Firmware

This section lists the changes in the L2 firmware.

Added Commands

`ip gw|gateway <addr>`Command allows a gateway address to be set when a static IP is used.

Other Changes

- Silicon Graphics Prism bricks now display a brick type of "g" in the `cfg` command output.

Bugs Addressed

926093   L2 emulation in version 1.32.6 does not function as a DHCP server

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.