

SGI® Origin® 3000 Series

L3 Controller 1.8

Update Guide

The L3 software consists of the following components:

- Kernel software
- 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 SGI ProPack 1.5 for Linux kernel
- L1 USB module for the SGI XFS 1.0 kernel
- L1 USB module for the SGI XFS 1.1 kernel
- 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
- L3 install tool
- Silicon Graphics 230 Red Hat 6.2 re-install script

This product provides a system control platform for field service and system maintenance applications. Its features include the following:

- Advanced diagnostic support
- Maintenance of the SGI Origin 3000 system serial number
- Maintenance of the SGI Origin 3000 router port enable
- Console for L1 and L2 controllers

This guide contains the following sections:

- Related Information (page 2)
- Installing the Diagnostic Software from Downloaded Packages (page 3)
- Reinstalling Red Hat Linux on Silicon Graphics 230 (page 3)
- Installing Software on Systems with Pre-installed Red Hat Linux (page 5)
- New Features and Changes (page 6)

Related Information

The Origin 3000 series L3 controller 1.8 is available for download from the following website: <http://www.sgi.com/products/evaluation/>

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

- *SGI Origin 3000 L3 Controller Installation Guide*
- *SGI Origin 3000 Series Owner's Guide*

Installing the Diagnostic Software from Downloaded Packages

To install the diagnostic software, follow these steps:

1. Log on to the L3 platform as root.
2. Enter the following commands to install the diagnostic software:

```
# cd /dir
```

where *dir* is the place you downloaded the software

```
# chmod 755 l3_install
```

```
# l3_install
```
3. To reboot the system, enter the following:

```
# reboot
```
4. After you have completed the product installation, you should remove the files that you downloaded.

Reinstalling Red Hat Linux on Silicon Graphics 230

If you install the L3 controller software on a Silicon Graphics 230 visual workstation, you must perform additional steps to restore the Red Hat Linux 6.2 operating system to the state in which it was installed at the factory. These instructions are provided in the *SGI Origin 3000 L3 Controller Installation Guide*. After performing the steps in the section “Installing the Auxiliary Linux Software” (page 18), follow these steps to install the L3 controller software from downloaded packages:

Note: The `sgi230_13_reinstall` script described in step 1 was available starting with the Origin 3000 series L3 controller 1.5 release.

1. Before executing the `l3_install` script in section 4 of the “Installation Instructions” for the Origin 3000 series L3 controller 1.8 release, on <http://www.sgi.com/products/evaluation>, enter the following command to copy the script to the proper script name:
cp sgi230_13_reinstall-1.0 sgi230_13_reinstall
2. Enter the following command to make the `sgi230_13_reinstall` script executable:
chmod 755 sgi230_13_reinstall
3. Enter the following command to run the script:
./sgi230_13_reinstall

The `sgi230_l3_reinstall` script automatically installs additional Red Hat Linux components that are normally installed in the factory. This script installs additional required packages that are not part of the default Red Hat Linux installation. The script takes several minutes to run; it lists each package that it installs and displays a progress bar as it installs each package.

4. Continue with the steps in section 4 of the “Installation Instructions” on the website that relate to the execution of the `l3_install` script.

Installing Software on Systems with Pre-installed Red Hat Linux

If you install the L3 controller software on a Silicon Graphics 230 visual workstation on which the Red Hat Linux 6.2 operating system was pre-installed during manufacturing, you must perform additional steps. These steps are provided in the *SGI Origin 3000 L3 Controller Installation Guide*.

See the following sections in the *SGI Origin 3000 L3 Controller Installation Guide* for detailed installation instructions:

- Installation Overview (page 2)

- Software Installation Requirements (page 2)
- Installing the Auxiliary Linux Software (page 18)
- Installing the L3 Controller Software (page 19)
- Installing the Software from the Network (page 20)

Note: To configure the network (using the Network Configurator GUI) after the workstation has booted the operating system, see the “Configuring Network Settings” section (page 12). To configure user accounts (using the User Configurator GUI), see the “Configuring the Account” section (page 15). To connect the Silicon Graphics 230 visual workstation to an Origin 3000 series server, see the sections in the back of the *SGI Origin 3000 L3 Controller Installation Guide* that are appropriate for your system configuration (pages 21-27).

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 8)
- L2 Firmware (page 11)
- L3 Software (page 13)

Note: BEFORE INSTALLING THE L1 OR L2 FIRMWARE, FOLLOW THE INSTRUCTIONS IN SERVICE BULLETIN GIB 200215. If you are currently running L1 firmware version 1.4.1 or older, upgrading to this version of L1 firmware enables router port security and system serial number security features. If your system is not configured properly, these features can cause your R-bricks not to power on or boot.

L1 Firmware

This section lists the added commands, changed commands, added features, other changes, and bugs addressed for the L1 firmware.

Added Commands

<code>cpu <0-3></code> <code>enable disable</code>	Support has been added for R16K 600-MHz PIMM boards built as R14KA 600-MHz PIMMs (P/N 030-1823-001).
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Changed Commands

<code>bedrock *</code>	Added the "bedrock" command as an alias to all "junkbus" commands to support previous versions of firmware.
<code>env altitude</code> <code>high low</code>	Eliminated invalid error messages that occurred when the command succeeded.

Added Features

Improved record of power up/down, reset, and NMI activities in the L1 log. Log now shows all power up, power down, reset and NMI actions

with a tag indicating what requested the action: COMMAND (user command), OS (OS request), PANEL (L1 display) or ENV (environment monitor requested).

Added an OS request to allow PROM to power-cycle a brick in the L1 portion of the R14K[A] PLLWAR.

Added support for recognizing new L1 brick type: PX-brick.

Added pad to circumvent data pattern sensitivity when flashing via the USB port to bricks with older USB parts.

Other Changes

Fixed the L1 reboot/panic when executing the L1 command margin high/low/norm on Origin 300 bricks.

Fixed the IP45 power-on voltage ramp issue and added Origin 300 PSC codes for the PIMM types: R14K/500-MHz/2-MB, R14KA/600-MHz/4-MB, and R14KA/600-MHz/4-MB.

Added R14KA/600-MHz/4-MB PIMM type support for Silicon Graphics Fuel systems.

Fixed the speed versus temperature curves on Silicon Graphics Fuel systems to eliminate the fan speed oscillations when the temperature would rise.

Removed extraneous "response <number> error Unknown Module..." messages from the L1 NVRAM log.

Bugs Addressed

- 855374 Issuing "margin" commands on O300 bricks causes L1 to reboot
- 855375 L1 command "bedrock" changed to "junkbus" in v1.12.3
- 855378 L1 log fills with "response XXX error Unknown Module..." messages
- 853341 L1 Command env altitude low/high doesn't work.
- 850838 asterix system noise to high
- 839378 O3K 600MHZ CPUs missing at PROM Bootup after a powercycle

L2 Firmware

This section lists the changed commands, changes, and bugs addressed for the L2 firmware.

Changed Commands

- `date tz <string>` The timezone string is converted to uppercase before being used.
- `nmi | reset | pwr d` When issued with an "*" destination (for example, "* reset"), these commands now verify that the destination does not span multiple partitions in a partitioned system.
- `pbat <command>` These commands can no longer be broadcasted to multiple L2s. The L2, on which the command was issued, will handle the execution sequencing of the `pbat` command to all L1s in the system or the portion of the system specified by the command destination.
- `sel filter on` Console output filtering can now be enabled on partitioned systems. When console output filtering is enabled, only output from the console brick is displayed and only for the console brick of the selected partition, if partitioning is enabled.

Changes

Fixed the problem of the L2 modem port hanging after an L2 reboot. (The modem port is used by FailSafe.)

Fixed the core dump problem that occurred when performing a
<rack>.<slot> nmi |reset command.

Bugs Addressed

856825 L2 does not respond to commands after L2 reboot

852137 L2 date timezone command is upper/lower case sensitive

L3 Software

This section lists the changed applications for the L3 software.

Changed Applications

- 12 The changes listed for the L2 firmware in the “L2 Firmware” section on page 11 also apply to the L2 emulator.

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