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IRIX® 6.5.30 Update Guide
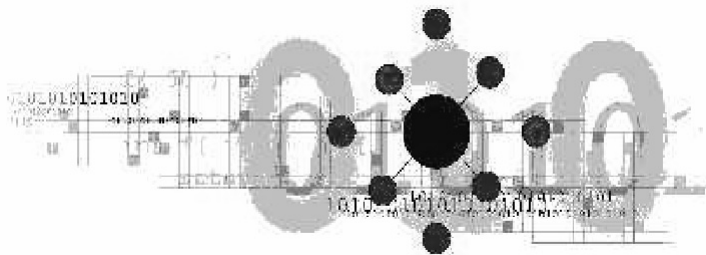
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Dear Valued Customer,

SGI® is pleased to present the new IRIX® 6.5.30 release. Each release is available to customers with a service contract that includes an IRIX support component. This upgrade is part of a family of releases that periodically enhances IRIX 6.5.

There are several benefits to this release strategy: it provides periodic fixes to IRIX, it assists in managing upgrades, and it supports all platforms. Additional information on this strategy and how it affects you is included in the *Installation Instructions* manual contained in this package. If you need assistance, please visit the Supportfolio™ online website at http://support.sgi.com/ or contact your local support provider.

We offer eight modes of service for software supported by SGI: Active, Maintenance, Limited, Legacy, Courtesy, Divested, Retired, and Expired.

Active Mode is our highest level of service. It applies to products that are being actively developed and maintained and are orderable through

general distribution. Software fixes for all levels of problems can be expected.

Maintenance Mode software is maintained and is still an important part of our product mix. No new functionality is added to products in this support mode. Functional fixes for severe problems are generally available. Products in this support mode category are still orderable through general distribution. Software usually stays in this category for approximately 18 months before being moved to a mode of lesser support.

Limited Mode is a restricted level of service developed mainly for products developed and maintained by open source organizations and distributed by SGI.

Legacy Mode software generally runs on out-of-production operating system versions or system platforms that are no longer in active development or maintained. These products are usually distributed with limited availability. New support contracts may be offered and renewed. Services provided with Legacy Mode are limited to providing existing fixes and "workarounds" for reported problems. IRIX® 6.2 is an example of a major operating system release that was supported in this category until January 2000. IRIX® 6.3 and IRIX® 6.4 operating system revisions are examples of major operating system releases that were supported in this category until January 2001.

Courtesy Mode software is not officially part of the software support offerings. Courtesy mode software is not covered by software support contracts, and call center support is not available. An e-mail alias may be provided to facilitate customer communications and to address any technical questions. Response times will vary according to availability of resources. The e-mail alias may be terminated at any time without advance notice. IRIS Showcase™ and Cosmo Worlds™ are examples of products with Courtesy Mode support.

Divested Mode software has been turned over to a third party who assumes all responsibility for support. SGI no longer distributes these products. Calls received at the SGI Call Center for support on divested products will be redirected to the applicable third party. CA Unicenter® TNG and Syntax TAS™ are examples of divested products.

Retired Mode provides restricted support for older software products which are no longer generally distributed by SGI. This level of support has severe limitations on portability to new platforms. Availability of support at this level is limited to existing customers with whom we have existing contractual obligations. This is the final stage before a product is completely removed from the SGI product set. IRIX 6.2, IRIX 6.3, and IRIX 6.4 operating system versions are examples of major operating system releases that are supported in this category beginning January 2003. Software stays in this category for a minimum of 18 months before being moved to Expired Mode.

Expired Mode software products have reached the end of their useful life. These products are not supported or distributed in any form by SGI. Examples are: IRIX® 5.3, IRIXPro™, and Proconf.

Supportfolio Online (http://support.sgi.com/) contains a Power Search capability to locate further information regarding the eight software support modes. Using the Power Search section can also help locate links to the latest customer letters and lists of the various software products that have changed support modes. We thank you for your continued commitment to SGI.

Terry Oberdank

Vice President, Global Services
SGI

Welcome to your SGI IRIX 6.5.30 update. This booklet contains:

- A list of key features in IRIX 6.5.30
- A list of CDs contained in the IRIX 6.5.30 update kit
- A guide to SGI websites

IRIX 6.5.30 Key New Features

The following changes have been incorporated into the core IRIX 6.5.30 overlay CDs and the Applications CDs.

Packaging and Support Changes for IRIX 6.5.30

- **CXFS Support**
  CXFS will be supported with IRIX 6.5.30 as an asynchronous product. The CXFS release for IRIX 6.5.30 must be ordered separately. For more information, consult your SGI service representative.

- **Changes to Fonts, PostScript™ Viewing, and PDF Viewing Tools**
  Several of the fonts were updated for the IRIX 6.5.23 release, and as a result, customers may notice a change in some of the filenames used in the font directories. You may also see some minor changes to the fonts' appearance on the display. Applications that use fonts through the standard mechanisms in X11 should continue to operate correctly. Applications that directly access those font files in the DPS directory, however, may find that the file has been superseded and no longer exists in that location. Developers are encouraged to use the standard X11 mechanisms for accessing fonts to avoid this problem.

  The tools acroread (Adobe Acrobat® Reader), xpsview, and showps have been replaced with the more recent open source tools gsview and xpdf, which are built on top of the Ghostscript® package. These tools can be found on the Applications CD in this

release. Customers who made use of the old tools should ensure that they install the new ones by selecting the images for `gsview`, `xpdf`, and `ghostscript` from the Applications CD. The old tools will no longer be available, and will be replaced with wrapper scripts.

The wrappers for `acroread` and `xpsview`/`showps` will invoke the new `xpdf` or `gsview` commands respectively, but the wrapper scripts will pass all parameters verbatim, and will not attempt any translation. Thus, if an option changes or is not available for the new tool, customers may encounter an error if they use that option with the old command name from inside a script, for instance.

Ghostscript is a registered trademark of Artifex Software, Inc. PostScript is a trademark and Acrobat is a registered trademark of Adobe Systems Incorporated.

New Software Enhancements.

- **GRIO update**
  The IRIX 6.5.30 release includes the following for Guaranteed-Rate I/O version 2 (GRIOv2):

  An extension to the node-level bandwidth allocation, which now has two options:

  – The node receives at most (ceiling) the configured bandwidth (previous behavior)

  – The node receives at least (floor) the configured bandwidth (new)

  The following changes for ggd2:

  – Clarification that the −m option sets per-volume minimum distributed bandwidth allocator (DBA)

  – The new −s option, which sets per-node minimum DBA

  – The new −u option, which specifies the DBA update interval

- **Support for STK T10000A tape drives in mt(1) and hinv(1M) commands**
  For the IRIX 6.5.30 release, the mt(1) and hinv(1M) commands have been updated to display the correct drive type for STK T1000A tape drives, which are supported with APD release 2.12. Without this update, the drive type for an STK Titanium drive with an mt status command would display as "Async Personality Device" and the hinv command would show the drive type as unknown.

- **Secure version of Array Services**
  A secure version of Array Services that is built to make use of secure sockets layer (SSL) and secure shell (SSH) is available with the IRIX 6.5.30 release. The "Array Services" chapter of *IRIX Admin: Resource Administration* has been updated with information about how to install and use Secure Array Services and describes differences between standard Array Services (arraysvcs) and Secure Array Services (sarraysvcs).

- **Support for changes to Daylight Saving Time**
  As of the IRIX 6.5.30 release, the IRIX operating system accounts for changes to Daylight Savings Time in accordance with the amendments to the Uniform Time Act that will take affect in 2007. Starting in 2007, clocks will be set ahead one hour on the second Sunday of March instead of the first Sunday of April. Clocks will be set back one hour on the first Sunday in November rather than the last Sunday of October.

  IRIX 6.5.30 also accounts for changes to Australian Daylight Savings time, in which the end of Daylight Savings Time is extended by one week in 2006 and returns to the last Sunday in March in 2007 and thereafter.

- **New -o argument to nsmount(1M) command**
  The nsmount(1M) now accepts the -o argument to control options for nfs(4) protocol used to communicate to nsd(1M). See the nsmount(1M) and nsd(1M) man pages for details.

- **Greater accuracy of shared memory usage measurement in job limits**

  For the IRIX 6.5.30 release, the job limits code was modified to improve the accuracy of the measurement of shared memory usage within a job. Within the job limits parameters this is called the physmem (physical memory) limit. The new change will not only count the physical memory usage accurately, but in cases where a job container has multiple processes running which share memory space, the physmem calculation will proportion the shared memory usage across the processes involved.

- **Changes to in-core extent list**

  The IRIX 6.5.30 release includes new parameters to xfs_bmapi() and xfs_bunmapi() to have them report the range spanned by modifications to the in-core extent map. The release also includes XFS_BUNMAPI() and XFS_SWAP_EXTENTS() macros that call xfs_bunmapi() and xfs_swap_extents() via the ioops vector. All calls that may modify the in-core extent map for the data fork to go through the ioops vector have been changed. This allows a cache of extent map data to be kept in sync.

SGI Software Product Life Cycle Management

- **IRIX Support Policy**
  In accordance with the SGI software product life cycle management strategy announced in December 2002, SGI will announce support mode changes for various software products on a semi-annual basis. To view customer letters containing support mode changes announced since December 2002, as well as the latest IRIX Support Policy documents, visit the IRIX Support Policy Web page on Supportfolio Online (http://support.sgi.com/).

Applications CD

The following Application and Library packages have been revised or rebuilt on the IRIX 6.5.30 Overlay CDs:

- Image Format Library Execution Only Environment, 1.2.5 (`ifl_eoe` and `ifl_dev`) components:
  - `libpng` upgrade with latest security fixes to version to 1.2.8
  - `libtiff` upgrade with latest security fixes to version to 3.8.2

  `libgeotiff` is changed as a result of `libtiff` changes. All other components are unchanged.
- sendmail 8.12.11 with the latest security fixes.
- MIT Kerberos, 1.3.1c
- NTP, 4.1.1-sgi-rev-1
- OpenGL Performer 3.2.1 Run-Time Environment
- OpenGL Performer 3.2.1 Demos and Demo Data
- OpenLDAP LDAP server and client tools, 2.2.23
- OpenSSL libraries for 6.5.28 and later, 0.9.7e
- Impressario Printing & Scanning Tools 1.18.5

Due to the limitations of available space on the 3rd Overlay CD, the Performer Database samples package is located on the Complementary Apps CD and the Performer Developer package is located on the Applications CD in the /dev directory.

The following full images have been revised or added on the IRIX 6.5 Applications CD, August 2006:

- Ghostscript, 8.50
- XPDF viewer, 3.00pl3
- MozillaSuite, 1.7.12
- SGI Web Server based on Apache, 1.3.35
    - with mod_ssl 2.8.26-1.3.35
- OpenGL Performer 3.2.1 Development Environment
- SGI Array Services Version 3.7 (synchronized with Linux version)

The following images have been revised for the IRIX 6.5 Complementary Applications CD, August 2006:

- ESP Print Pro, 4.5.5
- Printing Tools, Release 1.18.5 printpro_desktop Companion
- MozillaSuite Developer, 1.7.12
- OpenGL Performer 3.2.1 Database Samples

The following images have been added for the IRIX 6.5 Complementary Applications CD, August 2006:

• SGI Secure Array Services Version 3.7 (synchronized with Linux version).

Starting with IRIX 6.5.24, the Impressario PostScript render engine and Host RIP printers have been removed. If you require non-PostScript printer support look on the Complementary Applications CD for the Easy Software ESP PrintPro package and the 33 printer driver packages. You can obtain a 21-day demo license for this software by going to the ESP web site at http://www.easysw.com/license-demo.php.

IRIX OS Bundled Software

For information about the bundled software that is included with this release, see the Bundled software and licenses webpage that you can access from the Welcome webpage.

Freeware CDs

For information about the freeware that is supported for this release, including a complete list of the freeware packages, see http://freeware.sgi.com/. As of the IRIX 6.5.22 release, IRIX Freeware CDs are no longer included with the IRIX Update kit.

Documentation

The following manuals have been revised for this release.

- *Guaranteed-Rate I/O Version 2 Guide* (007-4244-002) has been updated to include documentation for the new extension to the node-level bandwidth allocation and changes for ggd2.

- *IRIX Admin: Resource Administration* (007-3700-016) has been updated with information about how to install and use Secure Array Services and describes differences between standard Array Services (arraysvcs) and Secure Array Services (sarraysvcs).

Key New Features from Previous IRIX Releases

Descriptions of key new features and changes for the IRIX releases from 6.5.1 through 6.5.29 are provided in the Customer Welcome document. This document is available on the IRIX 6.5.30 Overlay CDs and can be accessed in any of the following ways:

- Insert Installation Tools and Overlays into the CD-ROM drive and point a web browser at file:///CDROM/WhatsNew/yoursystem.html. Note that you enter the literal yourSystem.html; do not type your actual system name.

- After completing an install, click on the Guide button of the web browser. Holding the button down yields a menu with Welcome as the first item.

- After completing an install, double click the "Welcome to SGI" icon on the desktop.

Descriptions of new features for IRIX 6.5.25 and later are available on Supportfolio Online from the following webpage: http://support.sgi.com/search_request/publications. After logging in to Supportfolio, enter "Start Here" as the keyword and select "IRIX OS Docs " as the Publication type. Select a Start Here document and follow the "Key New Features and Changes" link for information on the new features for the release selected.

IRIX 6.5.30 Update Kit Contents

The IRIX 6.5.30 Update Kit contains the following items for both server and workstation system configurations:

- CD Name:
    1. IRIX 6.5.30 Installation Tools & Overlays CD (1 of 3), August 2006
    2. IRIX 6.5.30 Overlays CD (2 of 3), August 2006
    3. IRIX 6.5.30 Overlays CD (3 of 3), August 2006
    4. IRIX 6.5 Applications CD, August 2006
    5. IRIX 6.5 Complementary Applications CD, August 2006
- The IRIX CD booklet *Installation Instructions: Installing an Intermediate (Overlay) Release, Installing Applications, Installing Software Licenses*

SGI Websites

IRIX 6.5-Related Websites

- SGI product information
  http://www.sgi.com/products/
- IRIX 6.5 datasheet
  http://www.sgi.com/software/irix6.5/datasheet.pdf
- Supportfolio Online, IRIX 6.5 content
  http://support.sgi.com/irix/6.5

Services

- Customer Education Services
  http://www.sgi.com/support/custeducation/
- Professional Services
  http://www.sgi.com/services/

Online Tools

- Customer Registration

  http://www.sgi.com/support/custreg.html

- Software Licensing/Key-O-Matic

  http://www.sgi.com/support/licensing/

- Online documentation - Technical Publications Library

  http://docs.sgi.com/

- Supportfolio Online

  http://support.sgi.com/

Other Sites

- Download Cool Software

  http://www.sgi.com/products/evaluation/

- Free Software

  http://freeware.sgi.com/