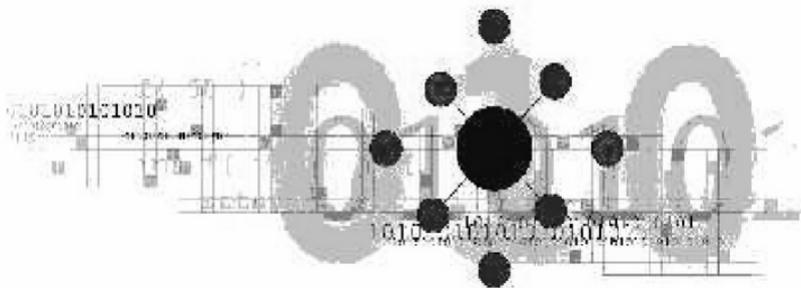




## IRIX® 6.5.27 Update Guide





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Dear Valued Customer,

SGI® is pleased to present the new IRIX® 6.5.27 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 6.5.27 update. This booklet contains:

- A list of key features in IRIX 6.5.27
- A list of CDs contained in the IRIX 6.5.27 update kit
- A guide to SGI websites

## IRIX 6.5.27 Key New Features

The following changes have been incorporated into the core IRIX 6.5.27 overlay CDs and the Applications CDs.

### Packaging and Support Changes for IRIX 6.5.27

- **CXFS Support**

CXFS will be supported with IRIX 6.5.27 as an asynchronous product. The CXFS release for IRIX 6.5.27 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

- **Volatile cpusets**

The IRIX 6.5.27 release supports volatile cpusets, which are cpusets that can be configured, created, and destroyed by regular users. Users that need to isolate work in non-batch environments can use this feature to achieve their needs without root access or the Scheduling. For information, see the `cpuset(1)` and `cpuset(5)` man pages.

- **Tracking priority inheritance**

In the IRIX 6.5.27 release, enabling the “scheduler” event-mask logs priority inheritance actions to `rtmon` logs. Developers can use these new trace records to analyze the real-time behavior of their applications. For information, see the `rtmon-client(1)` man page.

- **NFS over IPv6**

In the IRIX 6.5.27 release, NFS over IPv6 is supported for both client and server.

- **OpenSSH version 3.9p1**

The included OpenSSH protocol suite in the IRIX 6.5.27 release has been upgraded to version 3.9p1.

- **Motif version 2.1.32**

In IRIX 6.5.27, Motif 2.1.20 has been upgraded to Motif 2.1.32. This version is a bug fix and compatibility update.

- **New cpuset\_tobind systune parameter**

The IRIX 6.5.27 release provides the new system tuneable variable, `cpuset_tobind`. This variable limits how the `runon` command and the `sysmp` system call with `MP_MUSTRUN` command can be used. The `cpuset_tobind` variable is a boolean variable with the default setting of 0. Setting this variable to 1 indicates that for a thread to bind to a CPU using `runon`, `sysmp MP_MUSTRUN`, or a related operation, the CPU must be restricted, isolated, or part of a `cpuset`. For information, see the `dplace(1)`, `runon(1)`, `sysmp(2)`, `pthread_setrunon_np(3P)`, and `cpuset(1)` man pages.

- **New parameters to manage highest available file descriptor**

The IRIX 6.5.27 release provides the new system tuneable parameters `rlimit_nofile_cur_clamps_setrlimit` and `rlimit_nofile_cur_clamps_fdhi`. These system variables are boolean, with a default setting of 0 indicating that they are inactive.

The `rlimit_nofile_cur_clamps_setrlimit` variable, if set to 1, controls the behavior of the `setrlimit` and `setrlimit64` system calls. In this case a call to `setrlimit(RLIMIT_NOFILE, &rlimit)` where `rlimit.rlim_cur` will result in leaving open file descriptors with values above the new limit will result in a return of `EINVAL`. For information see the `getrlimit(2)` man page.

The `rlimit_nofile_cur_clamps_fdhi` variable, if set to 1, affects the behavior of the `getdtablehi` system call. In this case if there are open file descriptors with values above the current process limit, then the current process limit is returned. For information, see the `getdtablehi(3C)` man page.

In addition to the new system tuning variables, the `F_CLOSEM` command has been added to the `fcntl` system call. The `F_CLOSEM` command will close all file descriptors greater than or equal to the file descriptor number supplied by the caller. For information, see the `fcntl(2) getdtablehi(3C)` man page.

- **PAM authentication support for SUNOS C2 security NIS master server**

In IRIX 6.5.27, user authentication using PAM now supports IRIX as a client of Sun NIS master servers with C2 security using `passwd.adjunct` NIS maps.

- **pam\_tally module added for login tallying**

In IRIX 6.5.27, `login/rsh/rlogin/telnet` can make use of the `pam_tally` module to maintain a count of unsuccessful login and deny access if too many attempts fail.

## **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 full images have been revised or added on the IRIX 6.5 Applications CD, February 2005:

- Ghostscript, 8.15
- GSview, 4.6b
- OpenGL Performer 3.2 Development Environment
- XPDF viewer, 3.00b

The following Application and Library packages have been revised on the IRIX 6.5.27 Overlay CDs:

- IRIX Interactive Desktop
- IRIX Interactive Desktop Tools
- IRIX Interactive Desktop Administration
- Impresario Printing & Scanning Tools
- MIT Kerberos, 1.3.1b
- OpenLDAP LDAP server and client tools, 2.1.22c
- OpenSSH server and client tools for 6.5.25 and later, 3.9p1
- IRIX IM 2.1 Development Software, 6.5.27 (based on OSF/Motif 2.1.32)

- OpenGL Performer 3.2 Run-Time Environment, Database Samples, Demo Data

The following images have transitioned to Expired support mode and have been removed from the IRIX 6.5 Applications CD:

- Color Management, 2.3

Starting with IRIX 6.5.24, the Impresario 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.

## Key New Features from Previous IRIX Releases

Descriptions of key new features and changes for the IRIX releases from 6.5.1 through 6.5.26 are provided in the Customer Welcome document. This document is available on the IRIX 6.5.27 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 6.5.22 and later are available on Supportfolio Online from the following webpage: [http://support.sgi.com/search\\_request/publications](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 6.5.27 Update Kit Contents

The IRIX 6.5.27 Update Kit contains the following items for both server and workstation system configurations:

- CD Name:
  1. IRIX 6.5.27 Installation Tools & Overlays CD (1 of 3), February 2005
  2. IRIX 6.5.27 Overlays CD (2 of 3), February 2005
  3. IRIX 6.5.27 Overlays CD (3 of 3), February 2005
  4. IRIX 6.5 Applications CD, February 2005
  5. IRIX 6.5 Complementary Applications CD, February 2005
- 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/>

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