START HERE: Installing IRIX 6.5.7

Welcome

Print Version

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Before You Install

Before You Install Checklist

1. **Make Sure Your System Can Run 6.5.7**
   See the Minimum Requirements page to confirm that 6.5.7 is supported on your system.

   Because 6.5.*x* (meaning 6.5.1, 6.5.2, etc.) releases are cumulative, you do not need to upgrade to the previous 6.5.*x* release in order to upgrade to a new one.

   Similarly, if you are running a pre–6.5 version of IRIX you can install the 6.5 and 6.5.x software at the same time. For example, by following the CD booklet instructions, you can upgrade directly from 6.2 to 6.5.7.

2. **Check For Important Caveats That Affect Your Installation**
   Review the special Caveats to Read Before You Upgrade. These caveats may include key details that significantly affect your installation process. (You want to print the entire page, because it also contains Caveats to Read After You Upgrade. This way, you will not have to look them up after installation.)

   Beginning with the IRIX 6.5.4 release, the *New_IRIX_Info* icon is included in the Desktop Toolchest. When you click on this icon, a web page opens and provides descriptions of the key new features and changes of this IRIX release.

   After you install IRIX, users can access the *New_IRIX_Info* icon from their desktops through the following pulldown menu:

Toolchest –> Find –> Icon Catalog –> WhatsNew

The information displayed is the same Key New Features and Changes information included in this Start Here (see step 6 below).

Note: The IRIX Welcome product is located on the Installation Tools and Overlays CD (1 of 2) in the */dist* directory; it is installed by default. The IRIX Welcome product must be installed in order for the *New_IRIX_Info* icon to be included in the WhatsNew page of the Icon Catalog.

3. **Confirm That The Applications You Rely On Are Supported**

   If you *rely on* any applications that are not bundled with this release, do not upgrade until you can confirm that they are supported on the 6.5 release family and/or until you have access to the 6.5–compatible version of such applications. Check the Software Product Knowledge Database at the *Supportfolio Online* site (http://support.sgi.com) to help you with 6.5 compatibility questions.

   The best way to confirm application compatibility is to either check the SPK database if you received the application from SGI, or check with the third–party product vendor if you received the application from the product vendor.
   A few examples are given in the Caveats section.

4. **Create A Full System Backup**
   If you are upgrading from a pre–6.5 version of IRIX, then create a full system backup before upgrading to a new operating system. If, for any reason, you need to return to a previous operating system after the upgrade, you can use a full system backup tape or filesystem to do so. If you are upgrading from IRIX 6.5 or 6.5.x to IRIX 6.5.7, a full system backup is not required, but we encourage you to back up your system fully during any operating system installation or upgrade. Instructions for backing up and restoring workstations can be found in the online *Personal System Administration Guide*. For servers, use the backup(1) and restore(1) commands; refer to the online book *IRIX Admin: Backup, Security, and Accounting* for details. If you don't know where to find these books, see the General Documentation section.

5. *(Optional)* **Read About The CDs You Will Use**
   Are you upgrading from IRIX 6.5 or 6.5.x to IRIX 6.5.7?
   Then you only need to install the 6.5.7 CDs, unless you want to switch release streams (in which case you will also need the core 6.5 CDs). (To switch release streams, see the Installation Instructions CD booklet.)

   Are you upgrading a system running a pre−6.5 version of IRIX, or installing onto a clean disk?
   If so, you need to install both the 6.5 and 6.5.7 CDs (except for the 6.5 Installation Tools CD).

   See CD Descriptions.

   See the Software/CD Index for an alphabetical list of the 6.5 software products, including sizes, and the CDs on which they are located for the 6.5 base operating system release.

   See the CD Contents page for a list of contents for the 6.5.7 and 6.5 CDs.

6. *(Optional)* **Check For Key Changes In This Upgrade**
   To find out about key changes in this upgrade, check the Key New Features and Changes list. For specific details about changes in each individual software product, see the product release notes.

7. *(Optional)* **Request A License Password**
   If you need a license password for EnlightenDSM or any of the optional applications that require a license password, you can refer to the License Information Guide site (http://www.sgi.com/Support/Licensing/license_info_guide.html) for details.

Do you have questions that remain unanswered? See the Resources section.

To Install

After you have gone through the checklist above, return to the relevant **installation instructions in the CD Booklet** that came with your CDs.

PDF file of installation CD booklet.

Special Upgrade Instructions for SGI Origin 2000 Systems with 65+ Processors (formerly known as Cray Origin2000 systems)
There are special upgrade instructions for SGI Origin 2000 systems that have 65 or more processors. To receive a copy of these instructions, please send a request to techpubs@sgi.com, specifying the kind of system you have and whether you are going to be upgrading to 6.5.7 or installing 6.5.7 onto a clean disk.

Should you ever need to return to the IRIX 6.5 release, follow the "Installing an Intermediate Release on IRIX 6.5 or Later" instructions given in the CD booklet, but use the selection commands given for switching to the *maintenance* release. Also, use the core 6.5 CDs in addition to any other relevant CDs for the release to which you are downgrading.

Resources

- Supported 3rd–Party Software and Peripherals
- Release Notes
- Using Software Manager or Inst
- Patches
- Supportfolio Online
- General Documentation

Check for **Caveat and Release Note Updates**, which contain late–breaking information, at http://support.sgi.com/6.5/caveat_updates.html

- Customer Support
- Y2K Compliance Status

On Using Software Manager or Inst

Inst is the program used to install the IRIX operating system. Software Manager is a graphical version of Inst. Instructions for installing/upgrading software with these programs are in the Installation Instructions CD Booklet, but here is how to obtain more details:

- For more information on **using Inst**, you have a few options:
  - See the online book, *IRIX Admin: Software Installation and Licensing* (choose Help > Online Books from the Toolchest, or use the Base Documentation CD).
  - Use the help provided in Inst by entering `help help` at the Inst prompt.
  - See the inst(1M) man page.

- For more details on **using Software Manager**, use the Software Manager (swmgr(1M)) Help menu.

Patches

Information about acquiring software patches can be found at the SGI Services and Support Patches page (http://www.sgi.com/support/patch_intro.html).

Supportfolio Online

Supportfolio Online (http://support.sgi.com) offers you the ability to access and download the latest patches, find technical information and open support cases all with an easy–to–use Web interface. You can also sign up for our email notification service to automatically receive updates on new support information and features. Anyone is welcome to become a Supportfolio Online member. To take full advantage of all the features, you must have a support contract with a software component.

General Documentation

Installed | Printed | On the Web

Installed

SGI documentation is installed by default. Most applications have a Help menu or Help button. You can also use the Help menu on the Toolchest.

Some things you will find under Toolchest > Help:

- **InfoSearch:** "One−stop shopping" and searching for virtually all installed documentation, including online books, Man pages and Release Notes. (To launch InfoSearch from the command line, enter `infosearch` in a shell.)
- **Quick Answers:** Quick answers to common questions related to the tasks and tools that are a part of your system's end user software environment, including personal system administration tasks. Includes search capability.
- **Hints and Shortcuts:** A visual overview of hints and shortcuts for the IRIX Interactive Desktop.
- **Online Books:** A searchable library of online books.

Note: You can also access online documentation before (and after) installation, by using the Base Documentation CD.

Printed

Each system comes with an Owner's Guide. Hardware boards and peripherals also come with printed documentation. In addition, some hardware documentation is shipped online, and most hardware documentation can also be found on the Technical Publications Library Web site (listed below).

On the Web

Another place to find general documentation is on the Web:

- `http://techpubs.sgi.com`

  The IRIX 6.5 bookshelf on the Technical Publications Library Web site allows you to access all IRIX 6.5 books on the Web. It includes hardware books as well. You can search for a manual by entering its title or document number in the keyword search. You can download PDF files by clicking on the book's download link.

- `http://www.sgi.com/developers/technology/index.html`

  Tech Focus provides easy access to FAQs (Frequently Asked Questions), Newsgroups and much more.

Customer Support

Complete information about Customer Support, including Worldwide Support Sites, can be found at http://www.sgi.com/support/.

Customer Support Center (CSC)

The CSC is for:

- Hardware and Software telephone technical assistance
- Opening a service call or checking the status of an existing call
- Requests for on−site assistance or replacement parts
- Ordering spare parts
- Registering or obtaining information about our Customer Education courses
- Referral to your local service office for information about our support programs

(Please note that service will be provided in accordance with your system's current level of support. Service varies by warranty coverage and support program)

Phone Number: 1.800.800.4SGI (4744)

Y2K Compliance Status

For information about the Y2K compliance status of SGI products, see http://www.sgi.com/tech/year2000/.

Minimum Requirements and Supported Platforms

Memory and Disk Space Requirements

- **Memory.** The minimum memory requirement for Indy, R4000 Indigo and Indigo2 is 32 megabytes (MB). However, 64MB of memory or more is highly recommended. For all other supported systems, the minimum is 64MB.

- **Disk Space.** A standard, default installation of IRIX 6.5 plus IRIX 6.5.7 occupies approximately 1.5 gigabytes (GB) of disk space.

  A 2GB or larger hard drive is recommended, although it is possible to limit your installations so that you can run 6.5 on less than 1GB, as shown in the example below.

  Example of a "Minimal IRIX" Upgrade
  What follows is an example of how you could install a *very* minimal IRIX 6.5.7 on less than 1GB––by substituting these installation commands for the installation selection part of the IRIX upgrade. This "minimal IRIX" example occupies about 500MB on an Indy, and does not include any of the online books or man pages.

  ```
   Inst> keep *

  Inst> install required

  Inst> install default eoe 4Dwm desktop_base x_eoe desktop_eoe netscape

  Inst> keep *.books *.man

  Inst> install prereqs
  ```

Supported Platforms

You can upgrade from IRIX 5.3, or IRIX 6.2 through 6.5.6.

IRIX 6.5.7 supports all SGI systems with R4x00, R5x00, R8000, and R1x000 CPU types, except Crimson. This includes:

- Challenge S
- Challenge M
- Indigo––see special preinstallation caveat
- Indigo2 ––see special preinstallation caveats
- Indigo2 Extreme
- Indigo2 Impact 10000
- Indy
- O2
- Octane
- Onyx
- Onyx2
- Origin 200
- Origin 2000 (now also includes the Cray Origin 2000 systems)
- Power Challenge
- Power Challenge M

- Power Indigo2
- Power Onyx

Obsolete Peripherals and Software

The following are not supported in 6.5.7:

- Vigra VME audio board
- GIO Token Ring
- GIO Sync Serial Card
- EISA Sync Serial Card
- VME Sync Serial Card
- VME Token Ring Card
- IRIS 5080
- SNAserver
- SX.25
- 4DDN
- 4DLT
- IRIS Channel Adapter
- IRISxfr mainframe software

On this page:

- Caveats to Read Before You Upgrade
    - All−Platform
    - Platform−Specific

- Caveats to Read After You Upgrade

Caveats to Read Before You Upgrade

These caveats make you aware of changes or potential problems that could significantly affect your installation.

Different caveats will be relevant for different types of users; scan the list for

information that is applicable for you.

This is not a complete list of all known bugs, workarounds, or changes, which are documented in the release notes for each individual product. In addition to reviewing this list, you may want to check "Caveat and Release Note Updates" link at http://support.sgi.com/6.5/caveat_updates.html for any late−breaking information.

All−Platform Caveats to Read Before You Upgrade

Confirm that the applications you rely on are supported
(This is also Step 3 of the Preparation Checklist.)

Here are some examples *(not a complete list)* of applications that either need to be upgraded or are not yet supported:

– REACT/Pro: Version 3.2 is incompatible with IRIX 6.5.2 or later releases. REACT/Pro users need to upgrade to version 4.0a to run frame scheduler applications on IRIX 6.5.2 or later.

– HIPPI: Version 3.2 or later is needed to run on IRIX 6.5.*x* releases.To find out how to upgrade, see www.sgi.com/software (under Software Solutions Areas, click Networking, then click HIPPI 3.2).

– IRIS ATM: Version 2.3.6 or later is needed to run on IRIX 6.5.7. The ATM overlay 2.3.6 is available from the /CDROM/dist/unbundled directory of IRIX 6.5.7 Overlays CD (2 of 2), February 2000. This overlay requires that the base ATM 2.3.1 image be installed already, or with the overlay during the same install session. The ATM overlay 2.3.6 can be installed on IRIX 6.5.6 and 6.5.7.

If you are upgrading from IRIX 6.5.4 or have IRIS ATM 2.3.3 installed through some other mechanism, you will get a conflict when you attempt to install this release. If you get this conflict, you can resolve it by using the following set of commands. You will need your IRIS ATM 2.3.1 installation CDROM or a network distribution for it as part of the process. From within your installation session, enter the following commands:

```
open <IRIS ATM 2.3.6+ from /CDROM/dist/unbundled/atm_657+>
open <IRIS ATM 2.3.1 CD>
install atm
set neweroverride on
```

Ensure that you have not selected any other downgrades before proceeding or an incorrect installation may occur. You can check for other downgrades by using the following command:

```
list i D
```

If any subsystems other than `atm` are listed, you must deselect them before you continue.

– Inventor: Version 2.1.6 or later is needed to run on IRIX 6.5.7. The Inventor overlay 2.1.6 is available from the /CDROM/dist/unbundled directory of IRIX 6.5.7 Overlays CD (2 of 2), February 2000. This overlay requires that the base Inventor 2.1.4 image be installed already, or with the overlay during the same install session. The Inventor overlay 2.1.6 can be installed on IRIX 6.5.5, 6.5.6, and 6.5.7 and later.

If you have Inventor 2.1.5 installed through some other mechanism, you will get a conflict when you attempt to install this release. If you get this conflict, you can resolve it by using the following set of commands. You will need your Inventor 2.1.4 installation CDROM or a network distribution for it as part of the process. From within your installation session, enter the following commands:

```
open <Inventor 2.1.6+ from /CDROM/dist/unbundled/inventor_657+>
open <Inventor 2.1.4 from the base IRIX 6.5 CD>
install inventor_eoe
set neweroverride on
```

Ensure that you have not selected any other downgrades before proceeding or an incorrect installation may occur. You can check for other downgrades by using the following command:

```
list i D
```

If any subsystems other than `inventor_eoe` are listed, you must deselect them before you continue.

– Intranet Junction**:** Version 1.0.2 or later is needed to run on IRIX 6.5.*x* releases.

– ClearCase: See the RATIONAL Software site for information on purchasing a version of ClearCase that runs on IRIX 6.5.

– Sybase: Contact Sybase, Inc. for information on purchasing a version of Sybase that runs on IRIX 6.5.

Note: An application supported on any release in the IRIX 6.5 family will run on all subsequent IRIX 6.5 family releases. Additionally, the application will be compatible with all prior releases of the IRIX 6.5 family, as long as the application does not utilize a new feature from a later 6.5.x release.

If you have edited configuration files, check for changed versions at end of installation
Ideally, configuration file differences should be merged prior to restarting the system *at the end* of an installation. Before restarting the system at the end of your installation, use the Inst command "admin config changed" to find out which system configuration files were modified since installation. You can find out more about this command by entering "help config" at the Inst prompt. To avoid compatibility problems, merge configuration files if new versions were created. The "Updating Configuration Files" section of the versions(1M) man page describes configuration file updating, as does the online *IRIX Admin: Software Installation and Licensing* guide.

One example of a file that may need to be merged is the */etc/group* file. If you have edited your */etc/group* file, see the Default group file now reinstalled caveat under Caveats to Read After Upgrading.

Users who have installed ftn_eoe.sw.lib from the MIPSpro 7.3 product before installing the IRIX 6.5.x images may see a downgrade conflict with distribution subsystem ftn_eoe.sw.libeag when they install with the "install maint" command if they also have the original 6.5 Foundation−1 CD open when they do the installation.
If this downgrade conflict occurs, you must specify the "keep ftn_eoe.sw.libeag" command. The conflict occurs because ftn_eoe.sw.libeag was replaced by the 7.3 ftn_eoe.sw.lib, and the install program logic with "install maint" now automatically selects downgrades.

Customers who have the MIPSpro 7.3 compilers installed or who will install MIPSpro 7.3 on R4000 or R4400 platforms running IRIX 6.5.5 should install the new 7.3.1m runtime libraries that are available from Supportfolio at http://support.sgi.com.

Customers enrolled under a valid support contract who do not have web access can obtain these libraries on CD media free of charge upon request from their local support organization.

New for 6.5.7:

- **Installing CXFS and XVM products available in the IRIX 6.5.7 release**
  If you install the CXFS and XVM products that are available in the IRIX 6.5.7 release, it is highly recommended that you check the "Caveat and Release Note Updates" link at http://support.sgi.com/6.5/caveat_updates.html for information on the latest CXFS and XVM patches, CXFS and XVM feature descriptions, and any late−breaking caveats.

- **Information returned by the miser_qinfo command may be inaccurate**
  Due to improvements made to the miser_qinfo command, the information returned by the command is inaccurate under certain circumstances.

- **Using the killall command to terminate all Miser submitted jobs may terminate the Miser daemon**
  Restarting Miser at this point may panic the system. The Miser daemon may also terminate if the miser_kill command is used in a repetitive loop to terminate a sequence of Miser jobs.

- **The miser_qinfo command only reports the first 250 scheduled jobs**
  This limitation is due to the Miser buffer limit and will be fixed in a subsequent release.

- **The miser_qinfo command rounds up the amount of reported available system memory**
  The amount of reported system memory available may be inaccurate by .5 gigabytes (GB) when Miser is configured with more than 1 gigabyte (GB) of memory.

- **Repacking stops scheduled Miser jobs if daemon is restarted**
  If scheduled Miser jobs are in a Miser queue that has a repack scheduling policy, after Miser has been stopped and restarted, the repacking stops for the existing jobs.

- **If the miser_reset command fails due to an invalid or missing Miser configuration file**
  If the miser_reset command fails due to an invalid or missing Miser configuration file, the miser_reset command will hang and the Miser daemon will terminate. While the miser_reset command remains hung, Miser cannot be successfully restarted.

- **Submitting a large number of jobs to a Miser queue**
  If you submit a large number of jobs to a Miser queue, it may result in some of these jobs being hung and failing to terminate.

- **Requesting insufficient memory for a Miser submitted job**
  If you request insufficient memory for a Miser submitted job, it will result in a core dump after the job has been scheduled and run.

Cumulative for 6.5 through 6.5.6, and still applicable for 6.5.7:

- **CXFS and IRIS FailSafe 2.0 cannot both be installed on an IRIX operating system**
  You can install either CXFS **or** IRIS FailSafe 2.0 on an IRIX operating system with applicable licensing. Both products cannot reside on the same system. If you first install IRIS FailSafe, you must deinstall it before you can install CXFS (and vice versa).

  XVM is provided at no additional charge with this release. With future releases, XVM may be packaged, licensed, and supported as an additional software product for use with the IRIX operating system. For more information on how to obtain a license, contact your SGI service provider.

- **Xservers file changes**
  Starting with 6.5, the file */var/X11/xdm/Xservers* **is no longer automatically replaced** when

installing new versions of x_eoe.sw.eoe. Instead, the new version is installed as *Xservers.N*. This allows most users to preserve changes that they have made to their *Xservers* file without having to merge them back in with each new software upgrade.

Also, the Xsgi command line argument *shmnumclients* is no longer supported, and will prevent the X server from coming up if it's specified in the Xserver file. **If you added the shmnumclients flag to the Xservers file, remove the shmnumclients flag before upgrading** to 6.5 or later.

- **"Filesystem too large for device" Error Message**

  "Filesystem too large for device" error message

  If you have repartitioned your disk drive with *fx* but did not create a filesystem with *mkfs*, you may see a message like this (under certain rare conditions) when booting the miniroot:

```
"Mounting file systems:
mount: /dev/dsk/dks0d1s0 on /root: Filesystem too large for device.
mount: giving up on: /root
Unable to mount partition: /dev/dsk/dks0d1s0 on /root.
This is your system disk: without it we have nothing on which to install
software.
Please manually correct your configuration and try again.
Press Enter to invoke C Shell csh:"
```

  This generally indicates that you need to run /sbin/mkfs on the named disk partition. Inside the miniroot, a convenience script (*mrmkfsrc*) is provided to run mkfs.

  For example, for the above failure, you could press Enter and do the following (only if the disk is free of important data, because this procedure will remove all the data on the disk):

```
# mrmkfsrc /dev/dsk/dks0d1s0

# exit
```

  (To exit csh and have the miniroot script try to remount root.)

- **Upgrade the flash prom after installation on diskless systems** (see under O2−specific caveats and Octane−specific caveats)

- **False error message when installing unbundled products on systems running 6.5.2f or 6.5.3f**

  When you install any of the unbundled products that are packaged in separate CDs onto 6.5.2f or 6.5.3f, you will probably see the following error message:

```
"This software distribution is not meant to install on the version of IRIX
currently running on this machine. Sorry."
```

This is a false error message. The products in the dist6.5 directory on the CD are fully compatible.

Workarounds:

  - If you are using Inst, use the command "inst –f /CDROM/dist6.5"
  - If you are using Software Manager, enter "/CDROM/dist6.5" in the Available Software field.

- **During miniroot installation: innocuous Appletalk error messages**

  If you install from the miniroot, the following message may be displayed during the installation of Appletalk. You can safely ignore it.

```
"Command "( if test ‘grep ksd $rbase/var/adm/appletalk/services | wc -l‘ -eq
0; then echo "# Start K-AShare Server\\n/usr/etc/appletalk/ksd -f -o -i
X/usr/bsd/hostnameX" | tr X \\140 >> $rbase/var/adm/appletalk/services; fi
)" failed (return status 127, subsystem appletalk.sw.xinet_base 1429002000)"
```

- **Obsolete software may cause installation conflicts**

  Starting with the 6.5.3 release, the installation process detects some additional software package versions that are obsolete and incompatible with the 6.5 release family. During installation, you may see conflict messages caused by such software. When you see these conflict messages, simply choose to remove the incompatible software or replace it with newer versions (if available).

- **MediaMail now replaced by Netscape mail**

  MediaMail is no longer available from SGI. The Netscape mail program, which is bundled with Netscape Communicator, is the new default installed e–mail program for all SGI systems. SGI recommends a transition to Netscape e–mail (Netscape Messenger) and have included software with Netscape that enables conversion of MediaMail mail to Netscape e–mail format.

  When you transition from MediaMail to Netscape mail:

  - Be sure to check your home directory for a *.forward* file. If you have one that contains a line that mentions */usr/lib/Zmail/bin/reassembler*, remove or rename the *.forward* file **immediately before or after the IRIX installation**, in order to prevent problems with mail delivery to your account. On multi–user systems, each user should check for this file within their own home directory.

  - To learn about getting started with Netscape Mail, see About Netscape Messenger (you can also access this page by choosing Find > WebTools from the Toolchest, and double–clicking the *AboutNetscapeMessenger* icon).

Note: If you still require MediaMail, please contact NetManage, Inc. for product and sales information: http://www.netmanage.com. (Note that NetManage's Z–Mail for UNIX product is the same as MediaMail.) Please be aware that MediaMail is no longer officially supported on IRIX.

- **Appletalk will not work on diskless systems**
  Appletalk (Xinet Macintosh Connectivity) won't work on a diskless system because *appletalk* installs files into */usr/adm*.

- **XFS filesystem is strongly recommended**
  To install this version of IRIX you should have an XFS filesystem. If you want to move a disk with a 6.5 (or later) filesystem to a pre–6.5 system, use the `-d unwritten=0` option when you run *mkfs*, or install the current XFS patches on the pre–6.5 system.

- **Installation error messages about Netscape can be ignored**

  Ignore these messages if they appear during installation:

```
"The Netscape Web Browser is not installed. Please add the following
information to the mailcap file for your Web browser.
 < application/x-enterlicense; /usr/etc/enterlicense %s; \>
 application/x-licensemgr; /usr/etc/LicenseManager %s; \
description="Software License Installation"
 The Netscape Web Browser is not installed. Please add the following
information to the mime.types file for your Web browser.
 type=application/x-enterlicense exts=lic
 >type=application/x-licensemgr exts=licmgr

mbase_client.sw.base: ($rbase/usr/mbase/sbin/streamplayer.exitop)
 streamplayer.exitop: /usr/local/lib/netscape/mailcap not found "
```

- **During miniroot installation: innocuous disk space error messages**
  You may may ignore the following messages if you see them during a miniroot installation:

```
"/proc/pinfo/: no such file or directory"
```

and

```
"Automatically reconfiguring the operating system.
 dks0d1s1: Process [compress] ran out of disk space
 dks0d1s1: Process [compress] ran out of disk space
 No space left on device."
```

"ran out of disk space" refers to space on miniroot. The machine will boot because the kernel is autoconfigured on root. Note that an "out of disk space" message can only be ignored if it is the message that pertains to space on miniroot, as shown above.

- **The ftn_eoe.sw.libblas and ftn_eoe.sw64.libblas are no longer marked for default installation.**

If you require these subsystems, you must specifically select them during installation.

- **If you are upgrading from a pre−6.5 release or to a clean disk, you must open the core 6.5 CDs during the installation.**
  The instructions in the Installation Instructions CD booklet will prompt you to do this at the right time.

Platform−Specific Caveats to Read Before You Upgrade

If you have an Indigo R4000, Indigo2, Octane, O2, or Origin 2000, please check the relevant caveats below before you begin your installation.

Indigo R4000 and Indigo2 R4000 Systems

If the system you are upgrading has a separate filesystem for / and */usr*, then the / filesystem must be at least 25MB in order to do the upgrade. Systems shipped with IRIX 4.0.x were shipped with separate / filesystems of approximately 16MB, which is too small for this version of IRIX.

To check, use the command "df −k /"

If the df −k / output looks similar to

```
 Filesystem  Type  kbytes  use   avail  %use  Mounted on

 /dev/root   efs   15275   9492  5783   62%   /
```

the disk will need to be backed up, and repartitioned with the *fx* command before IRIX can be installed.

To do this, refer to the online book *IRIX Admin: Software Installation and Licensing, Troubleshooting* section, *Using fx to Restore the Swap Partition,* for how to do this with the *fx* command. However, before you begin this procedure, make sure you back up important data! And, instead of the last step, *label/create/boot*, use the command */repartition/root*, then press Enter in answer to the prompt:

```
"fx/repartition/rootdrive: type of data partition = (xfs)"
```

Next, when you see

```
"Warning: you will need to re-install all software and restore user
data from backups after changing the partition layout. Changing
partitions will cause all data on the drive to be lost. Be sure you
```

`have the drive backed up if it contains any user data. Continue?"`

press Enter.

The *kbytes* number should be at least 25600 in order to install IRIX, and it is recommended that it be at least 40MB, particularly on systems that support running 64 bit address executables (systems where *uname −s* returns IRIX64, on systems running IRIX 6.2 and later).

Indigo2 Systems

The EISA Token Ring driver is not supported.

Octane Systems

Upgrade the flash prom after installation on diskless systems
On diskless systems, the installation may fail if the flash prom is too old. To upgrade it on an Octane, enter the following lines in a shell:

```
su
/usr/sbin/flash -P /usr/cpu/firmware
```

You can compare the before and after results of "/usr/sbin/flash −V" to confirm the revision change. Reboot afterward.

O2 Systems

- **Upgrade the flash prom after installation on diskless systems**
  On diskless systems, the installation may fail if the flash prom is too old. To upgrade it on an O2, enter the following in a shell:

  ```
  su
   /sbin/flashinst -T -y -q /usr/cpu/firmware/ip32prom.image
  ```

  You can compare the before and after results of "/sbin/flashinst −v" to confirm the revision change. Reboot afterward.

- **If you program device drivers for the O2 PCI expansion slot**, you must use the routines (pciio_pio_*()) described in Chapter 22 of the *6.5 Device Driver Programmers Guide,* under the section"PCI Drivers for the IP32 (O2) Platform," to perform PIO (Program IO) accesses. **You must use the pciio_pio_* routines for all PIO access to the device, including the PCI config space**. These routines were made available in 6.3 via patch 2801 (if your PCI device driver is already using these routines then there is nothing more you need to do).

Origin 2000 Systems

- **System now reboots on panic without stopping at the PROM menu**
  Rebooting on panic without stopping at the PROM menu is the new default

behavior. You can stop the system during reboot by pressing the Esc key at the "Starting Up The System" message.

If the system panics during the reboot, the system will go into a panic/reboot loop. If this should happen, press the Esc key to break the loop.

If you do not want the system to reboot on panic, you can override the default reboot_on_panic variable with the PROM variable rebound. To do this, enter the following at the PROM prompt, accessed via option 5 at the PROM menu:

```
setenv rebound n
```

- **To get the MMSC version number, check the bottom line of the LCS control panel.**
  MMSC version numbers for this version of IRIX operating system should be 1.2.E (or higher). SGI recommends that you upgrade to version 1.2.E if your version is lower.

  A second way to get the version of all the MMSCs is to connect to the alternate console port on one MMSC and enter the following:

  ```
  ^T track * ver
  ```

- **Potential FLEXlm licensing problems**
  The Flexible License Manager (FLEXlm) controls the use of certain software products that are asynchronous to the IRIX operating system.

  A FLEXlm key is generated for each asynchronous software product, based on a unique system identifier. Because the Origin 2000 system does not have a unique system identifier, the FLEXlm host ID of the first system module is used to create a FLEXlm key.

  If an Origin 2000 system is reconfigured, a different module with a different FLEXlm host ID could be located in the first position, causing a previously valid FLEXlm key to fail.

  If a license key problem arises after a system has been reconfigured, a new license must be generated. Contact the vendor of the software product in question and give them the host ID number (the FLEXlm host ID of the first module) of the reconfigured system to generate a new key.

Caveats to Read After You Upgrade

These caveats make you aware of changes or potential problems that could significantly affect your experience after your upgrade.

Different caveats will be relevant for different types of users; scan the list for information that is applicable for you.

This is not a complete list of all known bugs, workarounds, or changes, which are documented in the release notes for each individual product. In addition to reviewing this list, you may want to check "Caveat and Release Note Updates" at http://support.sgi.com/6.5/caveat_updates.html for any late−breaking information.

Cumulative for 6.5 through 6.5.6, and still applicable for 6.5.7:

- **Downgrading using a live (non−miniroot) installation**
  If you are **downgrading** from **feature stream** 6.5.*x* to 6.5 using a live (non−miniroot) installation, *inst/swmgr* will prompt you to continue installing from the miniroot. The prompt is as follows:

  ```
  This software must be installed from the miniroot. The system is about
  to be shut down and automatically booted to the miniroot where the
  installation will continue automatically. Okay to proceed?
  ```

  It is not necessary to perform this type of installation from the miniroot. To avoid this prompt, the user should set the "live_install" preference to "on" before typing go/pressing start.

  If you want to downgrade to an earlier 6.5.*x* version of the feature stream, use the following set of commands:

  ```
  set newoverride on
  k *
  install standard
  install downgrades
  install prereqs
  keep incompleteoverlays
  ```

- **Default group file now reinstalled**
  With release 6.5.3, the default group file, */etc/group*, is reinstalled. The original group file is saved as group.O, which appears only if you have previously edited */etc/group*. This update is necessary because some optional packages, such as nss_fasttrack, require the group "nobody" to be present during the installation process.

  After installation, **users who have defined new groups will have to merge the old group file into the new** group file. When merging, please be sure to **preserve the entry for "nobody."**

The Inst command *admin config change* and the post–installation command *versions changed* will both report any changed configuration files, including the */etc/group* file. As mentioned in the Caveats to Read Before You Upgrade, this should ideally be done before at the end of the installation process, but before you restart the system.

- **New file for setting NIS server**
  It is no longer possible to set the NIS server in the */etc/config/ypbind.options* file. If your system is configured this way, create the file

  /var/yp/binding/<DOMAIN>/ypservers

  where *<DOMAIN>* is the NIS domain name. Type the NIS server on a new line in this file.

  There were several other NIS–related changes in 6.5 that affect customers who upgrade from a pre–6.5 release of the IRIX operating system. For example, the IRIX name services have been completely rewritten. Please refer to the IRIX eoe release notes (chapter 3, Changes and Additions) for details.

- **Remote host display now off by default**
  In the interest of security, the ability to display applications that are running on other systems is now disabled by default. There are a few different ways you can re–enable the remote host display. For details, see "About the Remote Display Feature" in Chapter 13 of the online *Desktop User's Guide.*

- **Printer may not be recognized if turned on after system**
  Even after a printer is configured, it may not function if you turn it on after turning on your system. This is because the printer device is not present in the hardware graph. To work around this problem, perform the following commands in a shell:

```
% su
# cd /dev
# ./MAKEDEV
# ioconfig -f /hw
# exit
```

- **Full hostname now used by default**
  For customers installing IRIX on new systems, or reconfiguring existing systems after IRIX is installed or upgraded: the graphical system administration tools now use the fully qualified hostname by default. This affects scripts that assume that only the partial hostname is used. Scripts may need to be modified to use hostname –s rather than hostname. If you wish, you can override this default and use only the partial hostname.

- **Gang−scheduled graphics processes can cause graphics to hang**
  Graphics programs using the schedctl(2) system call to choose gang scheduling mode (SGS_GANG) may cause the graphics to hang. (Gang−scheduled processes that do not use graphics are not affected by this problem.)

Origin 2000 Caveats

The following caveats are for large (64+ processors) Origin 2000 systems.

Cumulative for 6.5 through 6.5.6, and still applicable for 6.5.7:

- **IRIS FailSafe is not supported on partitioned systems for this release**
  It will be supported in a future release of the IRIX operating system, however.

- **Process Activity Reporter (par) sometimes hangs**
  Par hangs when the system−monitoring daemon, *rtmond,* produces a data stream that overloads the clients. As a result, clients that feed par, like padc, will discard events. If the *process exited* event is discarded by these clients, par hangs. When this happens, you see messages like the following in */var/adm/SYSLOG*:

  ```
  "rtmond[669]: (CPU 0) Client <local>:11:64505 events 1718 dropped (2%) 289
  writes(0% push)for 4720560 bytes, 5 push buffers for 80 KB"
  ```

  As shown in this example, you can tell that par has hung because the message tells you that the dropped count is other than 0.

CD Descriptions

IRIX 6.5.7 CDs

Are you upgrading a system running a pre−6.5 version of IRIX, or installing onto a clean disk?

If so, you need to install both the 6.5 and 6.5.7 CDs (except for the 6.5 Installation Tools CD).

Are you upgrading a system running 6.5 or later to IRIX 6.5.7?
Then you only need to install 6.5.7 CDs, unless you want to switch release streams. (To switch release streams, see the Installation Instructions CD booklet.)

1. **IRIX 6.5.7 (1 of 2) Installation Tools and Overlays CD, February 2000**
   (Open First)
   Contains the miniroot and other components necessary to boot the system into the basic installation environment for operating system installs and upgrades. Contains the "installation tools support for overlays" patch, which is required for live upgrades on systems running 6.5 or later. Also contains the IRIX execution environment. Contains products for both the feature and the maintenance stream.

2. **IRIX 6.5.7 (2 of 2) Overlays CD, February 2000**
   (Must be Installed)
   Contains additional bug fixes, features for feature stream, performance tune ups, and updates for applications in the unbundled directory. Contains products for both the feature and the maintenance stream.

3. **IRIX Applications for 6.5, February 2000**
   (Required for Workstations and Some Servers)
   Contains standard, bundled applications and related documentation. The applications on this CD run on 6.5 and 6.5.*x* releases.

4. **Freeware, February 2000**
   (Optional)
   Miscellaneous freeware. This is the latest update to the Freeware series of CDs. However, there is a web site that will be more current than the CD, so if you need the latest and greatest version of something, check http://freeware.sgi.com/ for newer versions.

5. **Base Documentation CD, February 2000**
   (Not for Installation)
   This CD allows you to view release notes, online books, and man pages before you install or upgrade the operating system. It supersedes any earlier releases of the Base Documentation CD. See the Documentation CD page for details.

Other 6.5.7 CDs

In addition to the CDs listed above, you probably received other CDs with your IRIX 6.5.7 package. If you already have older versions of any of the products on these CDs installed, you should upgrade them during the operating system upgrade. If you do not open them, "conflict" messages (during the upgrade process) will prompt you to open them.

Each of these separate products come with their own installation instructions, and you can load any additional new products or subsystems after the initial operating system upgrade is finished and the system has restarted.

Core IRIX 6.5 CDs

The Software/CD Index provides an alphabetical listing of 6.5 software products, including sizes, and the CDs on which they are located for the 6.5 base operating system release.

Install the IRIX 6.5 CDs if you are:

- Upgrading to IRIX 6.5.7 from a pre−6.5 version of IRIX
- Or, installing onto a clean disk

Follow the procedure in the Installation Instructions CD Booklet that came with your IRIX 6.5.7 software.

1. **IRIX 6.5 Installation Tools CD, June 98**
   (Use Only If Installing 6.5 Separately From 6.5.7)
   Contains the miniroot and other components necessary to boot the system into the basic installation environment for operating system installs and upgrades. Also contains patches.
   Note: To install both 6.5 and 6.5.7 at the same time, do not use the 6.5 Installation Tools CD. Follow the procedure in the Installation Instructions CD booklet.

2. **IRIX 6.5 Foundation 1 CD**
   (Must be Installed)
   Contains the base operating system, base networking, and Application Binary Interfaces (APIs). Includes execution environment ("eoe") components, which are necessary for the execution of most applications.

3. **IRIX 6.5 Foundation 2 CD**
   (Must be Installed)
   Contains additional base operating system/execution environment components.

4. **IRIX 6.5 Applications CD**
   (Required for Workstations and Some Servers)
   Contains standard, bundled applications and related documentation. See the IRIX 6.5 Applications page for more details.

5. **IRIX 6.5 Development Foundation CD**
   (For Developers)
   Contains products necessary for software development, including libraries, header files, a linker, assembler and other common tools required for hosting software development. This CD contains compiler components necessary for use with the MIPSpro C, C++, Fortran 77 and Fortran 90 compilers (which are purchased separately). See the IRIX Development Foundation (IDF) Release notes for compiler installation notes.

6. **IRIX 6.5 Development Libraries CD**
   (For Developers)
   Includes additional libraries, header files, sample source code, and documentation. You may need some of these products for compiling your own source code, while others simplify debugging or writing code. Scientific libraries are included as well as OpenGL and the popular ViewKit user interface library.
   Note: If you intend to use the compilers, dev.sw.lib (and dev.sw.lib64 for 64−bit development) must be installed.

7. **IRIX 6.5 Documentation CD**

(Not for Installation)
This CD allows you to view release notes, online books, and man pages before you install or upgrade the operating system. See the Documentation CD page for details.

Other 6.5 CDs

In addition to the CDs listed above, you probably received other CDs with your IRIX 6.5 package, depending on your configuration. For example, there are separate CDs for NFS, SoftWindows, and demos. If you already have older versions of any of these products installed, you should upgrade them during the operating system upgrade. If you do not open them, "conflict" messages (during the upgrade process) will prompt you to open them.

Each of these separate products come with their own installation instructions, and you can load any additional new products or subsystems after the initial operating system upgrade is finished and the system has restarted.

If you are using the Before You Install checklist, return to Step 6.

Contents of Core 6.5.7 and 6.5 CDs

On this page:

IRIX 6.5.7

- IRIX 6.5.7 (1 of 2) Installation Tools and Overlays CD, February 2000
- IRIX 6.5.7 (2 of 2) Overlays CD, February 2000
- IRIX Applications for 6.5.7, February 2000

IRIX 6.5

- IRIX 6.5 Installation Tools CD, June 98
- IRIX 6.5 Foundation 1 CD, June 98
- IRIX 6.5 Foundation 2 CD, June 98
- IRIX 6.5 Applications CD, June 98
- IRIX 6.5 Development Foundation CD, June 98
- IRIX 6.5 Development Libraries CD, June 98

Contents of IRIX 6.5.7

Key

m = maintenance stream

f = feature stream

6.5.7 (1 of 2) Installation Tools and Overlays, February 2000

/dist directory

Welcome: Customer Welcome, February 2000

eoe_657f: IRIX Execution Environment, 6.5.7f

eoe_657m: IRIX Execution Environment, 6.5.7m

roboinst: RoboInst Tools for Automatic Installations 1.2

installtools directory

patchSG0003622: Installation tools support for overlays patch. Enables live upgrade for systems running 6.5 or later.

6.5.7 (2 of 2) Overlays CD, February 2000

/CDROM/dist directory

FDDIXpress_657m: FDDIXpress, 6.5.7m

Register_657m: On−Line Registration, 2.1

ViewKit21_dev: ViewKit 2.1 (BETA) Development Environment, Version 2.1.0

ViewKit_dev_657m: ViewKit Development Environment, Version 1.5.3

ViewKit_eoe_657m: ViewKit Execution Environment, Version 1.5.3

compiler_eoe_657m: IRIX Standard Execution Environment (Base Compiler Headers and Libraries, 7.2.1.3m)

desktop_base_657f: IRIX Interactive Desktop Base Software, 6.5.7f

desktop_base_657m: IRIX Interactive Desktop Base Software, 6.5.7m

desktop_eoe_657f: IRIX Interactive Desktop, 6.5.7f

desktop_eoe_657m: IRIX Interactive Desktop, 6.5.7m

desktop_tools_657m: Desktop Tools, 6.5.7m

dev_657f: Development System, 7.2.1

dev_657m: Development System, 7.2.1

dmedia_dev_657m: Digital Media Development Environment, 6.5.7m

dmedia_eoe_657m: Digital Media Execution Environment, 6.5.7m

dps_eoe_657m: Display PostScript/X, 2.0.8 based on PostScript Level 2

dvdr_657m: Device Driver, 5.0

dynaweb_657m: Dynaweb (InSight to HTML), 4.2

ftn_eoe_657m: Standard Execution Environment (Fortran Headers and Libraries, 7.2.1.3m)

gl_dev_657m: Graphics Library Development System, 6.5.7m

hwguides_eoe_657m: Hardware Owner's Guides, 1.1

ifl_dev_657m: Image Format Library Development Environment, 1.2.2

ifl_eoe_657m: Image Format Library Execution Only Environment, 1.2.2

il_eoe_657m: ImageVision Library Execution Only Environment, 3.2.1

imgtools: ImageVision Tools, 3.2.1

impr_base_657m: Impressario 2.3.5 Base

impr_dev_657m: Impressario 2.3.5 Developer's Kit

impr_print_657m: Impressario 2.3.5 Print Server

impr_rip_657m: Impressario 2.3.5 PostScript Renderer (Requires Optional Impressario License)

impr_rip_printers_657m: Impressario 2.3.5 Host RIP Printers

infosearch_657m: Information Searching Execution Environment, 6.5.7m

insight_657m: InSight Online Doc Viewer, 4.2.1

insight_base_657m: InSight Online Doc Viewer Base Software, 4.2.1

insight_dev: InSight Online Doc Viewer Development Software, 4.2.1

inst_dev_657m: Software Packager, 1.5

io4prom_657m: IO4prom for 64bit OS systems, 6.5.7m

ip32prom_657m: Flash PROM for IP32 systems, 6.5.7m

irix_dev_657f: IRIX Development Headers/Documentation/Examples, 6.5.7f

irix_dev_657m: IRIX Development Headers/Documentation/Examples, 6.5.7m

isdn_eoe_657m: ISDN Execution Environment, 2.0

java_dev: Java Development Environment 3.1.1 (Sun JDK 1.1.6)

license_dev_657m: License Development Environment 3.4.2

license_eoe_657m: License Tools 3.4.2

media_warehouse_657m: IRIX Interactive Desktop MediaWarehouse 1.2

motif21_dev: IRIX IM 2.1 Development Software, 6.5 (based on OSF/Motif 2.1.10)

motif_dev_657m: IRIX IM Development Software, 6.5 (based on OSF/Motif 1.2.4)

motif_eoe_657m: IRIX IM Execution Software (Motif 1.2 and 2.1 Combined) for 6.5.7m

nfs_657f: Network File System, 6.5.7f

nfs_657m: Network File System, 6.5.7m

pcp_eoe_657m: Performance Co–Pilot Execution Only Environment, 2.0

performer_demo_657m: Performer2.2.4 Demos and Demo Data

performer_eoe_657m: Performer2.2.4 Execution Environment

print_657f: Printing Tools, Release 1.8.5

print_657m: Printing Tools, Release 1.8.5

sgsearch_657m: Fulltext Indexing & Search Environment, 2.3

sysadmdesktop_657f: IRIX Interactive Desktop System Administration, 6.5.7f

sysadmdesktop_657m: IRIX Interactive Desktop System Administration, 6.5.7m

sysmon_657m: Desktop System Monitor, 2.1.3

tooltalk_eoe_657m: ToolTalk 1.3 Execution Only Environment

webviewer_657m: WebViewer library execution only environment, 3.1

webviewer_dev_657m: WebViewer library development environment, 3.1

x_books_657m: O'Reilly & Associates, Inc. developer books, X11R5

x_dev_657m: X11 Development Environment, 3.8 based on X11R6.3

x_eoe_657f: X11 Execution Environment, 3.8 based on X11R6.3

x_eoe_657m: X11 Execution Environment, 3.8 based on X11R6.3

/CDROM/dist/unbundled **directory**

atm_657m: ATM Software, 2.3.6

dba_657m: Database Accelerator, 6.5.7m

dfs_657m: Distributed File System, 6.5.7m

divo_657m: DIVO Video Execution Environment, 6.5.7m

evo_657m: Octane Personal Video Execution Environment, 6.5.7m

galileo_657m: Galileo Video Execution Environment, 6.5.7m

il_dev_657m: ImageVision Library, 3.2.1

impactI2V_657m: Impact Indigo2 Video Execution Environment, 6.5.7m

impactcomp_657m: Impact Compression Execution Environment, 6.5.7m

impactdm_657m: Impact Digital Media Base Execution Environment, 6.5.7m

impactvideo_657m: Impact Video Execution Environment, 6.5.7m

insight_dev_657m: InSight Developer Book Building Tools, 4.2.1

inventor_eoe: Inventor Execution Only Environment, 2.1.6

sirius_657m: Sirius Video Execution Environment, 6.5.7m

IRIX Applications for 6.5.7, February 2000

/CDROM/dist **directory**

InPerson: InPerson Desktop Conferencing, 2.2.1

PeoplePages: PeoplePages − The Indigo Magic Phonebook, 1.2.1

Register: On−Line Registration, 1.4

accessx: Access for Movement−Impaired Users, 1.1

acrobat: Adobe Acrobat Reader, 3.01

annotator: IRIS Annotator 1.2

appletalk: Xinet Macintosh Connectivity 9.02

arraysvcs: Array Services 3.4

cms_eoe: Color Management 2.0.5

cosmocreate: Cosmo Create Authoring Environment, 1.0.3

cosmoplayer: Cosmo Player VRML Viewer 2.1.2 for IRIX 6.5

custlink: CustomerLink Client Software, 2.2.3

demos: Demonstration Programs, 6.5

desktop_eoe: IRIX Interactive Desktop, 6.5

desktop_tools: Desktop Tools, 6.5

dps_eoe: Display PostScript/X, 2.0.8 based on PostScript Level 2

dynaweb: Dynaweb (InSight to HTML), 3.1a

elec_svcs: Customer Support Services Base Software, Rel. 2.2

fddivis: FDDI Visualyzer, 6.5

gateway: Internet Gateway Execution Environment, 3.1

iforark: LicensePower/iFOR IS4.0.1 ARK

iforcrk: LicensePower/iFOR IS4.0.1 CRK

imgtools: ImageVision Tools, 3.2.1

impr_base: Impressario 2.2.5 Base

impr_print: Impressario 2.2.5 Print Server

impr_rip: Impressario 2.2.5 PostScript Renderer (Requires Optional Impressario License)

impr_rip_printers: Impressario 2.2.5 Host RIP Printers

impr_scan: Impressario 2.2.5 Scanner Software

infosearch: Information Searching Execution Environment, 6.5

insight: InSight Online Doc Viewer, 3.1

insight_gloss: IRIS InSight Online Glossary, 3.0.1

java_eoe: Java Execution Environment 3.1.1 (Sun JRE 1.1.6)

java_plugin: Runtime Plug−in for Irix, Java(tm) Edition 1.1.1

license_eoe: License Tools 3.3

macromedia: Macromedia Movie Player, 1.4.1

media_warehouse: IRIX Interactive Desktop MediaWarehouse 1.2

nedit: NEdit V4.0.3.1 − GUI style editor

netscape: Netscape Communicator Client, 4.7A

netwr_client: NetWare Client 1.1

nss_fasttrack: Netscape Fasttrack Server, 3.03

outbox: OutBox Personal Web Site, 1.6

print: Printing Tools, Release 1.7.5

sgips: Adobe Photoshop Performance Package, 1.2

sgsearch: Fulltext Indexing & Search Environment, 2.0

showcase: IRIS Showcase 3.4.2

sitemgr: SiteMgr – Web Content Administration, 1.1

sysadmdesktop: IRIX Interactive Desktop System Administration, 6.5

sysmon: Desktop System Monitor, 2.1.2

vlan: VLAN software 1.0 for IRIX 6.5

websetup: Web Setup and Administration, 3.1.1

webviewer: WebViewer library execution only environment, 3.0

xlators_3d: 3D File Translators 1.1.1

/CDROM/dist/extras **directory**

netscape_lite: Netscape Navigator Client, 4.7A

/CDROM/dev **directory**

insight_dev: InSight Developer Book Building Tools, 4.2.2

java_dev: Java Development Environment 3.1.1 (Sun JDK 1.1.6)

Contents of IRIX 6.5

Contents of IRIX 6.5 Installation Tools CD

Note: The patches on this CD are necessary and are automatically selected for installation; do not deselect any of these patches. This CD also includes installation components, such as the miniroot, which are loaded automatically, and thus are not listed here as installable software.

patchSG0003131: 7.2.1 base compiler runtime environment for IRIX 6.2/6.3/6.4/6.5

patchSG0003139: libmp rollup

patchSG0003140: 7.2.1 FORTRAN runtime for IRIX 6.2/6.3/6.4/6.5 – REQUIRED FOR F90

roboinst: RoboInst Tools for Automatic Installations 1.0

Welcome: Customer Welcome

Contents of IRIX 6.5 Foundation 1 CD

4Dwm: Desktop Window Manager, 6.5

ViewKit_eoe: ViewKit Execution Environment, Version 1.5.2

c++_eoe: Standard Execution Environment (C++ Headers and Libraries, 7.2.1)

compiler_eoe: IRIX Standard Execution Environment (Base Compiler Headers and Libraries, 7.2.1)

desktop_base: IRIX Interactive Desktop Base Software, 6.5

dmedia_eoe: Digital Media Execution Environment, 6.5

eoe: IRIX Execution Environment, 6.5

ftn_eoe: Standard Execution Environment (Fortran Headers and Libraries, 7.2.1)

insight_base: InSight Online Doc Viewer Base Software, 3.1

io4prom: IO4prom for 64bit OS systems, 6.5

ip32prom: Flash PROM for IP32 systems, 6.5

motif_eoe: IRIX IM Execution Only Environment, 6.5 (based on OSF/Motif 1.2.4)

tooltalk_eoe: ToolTalk 1.3 Execution Only Environment

websupport_eoe: WebSupport 1.3 eoe

x_eoe: X11 Execution Environment, 3.8 based on X11R6.3

Contents of IRIX 6.5 Foundation 2 CD

FDDIXpress: FDDIXpress, 6.5

gnu: GNU Software configured & precompiled for IRIX, 1.0

hwguides_eoe: Hardware Owner's Guides, 1.1

ifl_eoe: Image Format Library Execution Only Environment, 1.2.1

il_eoe: ImageVision Library Execution Only Environment, 3.2.1

inventor_eoe: Inventor Execution Only Environment, 2.1.4

isdn_eoe: ISDN Execution Environment, 2.0

javascript_eoe: JavaScript library execution only environment, 1.0

pcp_eoe: Performance Co−Pilot Execution Only Environment, 2.0

performer_demo: Performer2.2.1 Demos and Demo Data

performer_eoe: Performer2.2.1 Execution Environment

sgitcl_eoe: SGI Tcl Execution Environment, 1.1

vfc: Video Format Compiler, 1.2

Contents of IRIX 6.5 Applications CD

InPerson: InPerson Desktop Conferencing, 2.2.1

PeoplePages: PeoplePages − The Indigo Magic Phonebook, 1.2.1

Register: On−Line Registration, 1.4

accessx: Access for Movement−Impaired Users, 1.0

acrobat: Adobe Acrobat Reader, 3.01

annotator: IRIS Annotator 1.2

appletalk: Xinet Macintosh Connectivity 9.02

arraysvcs: Array Services 3.1

cms_eoe: Color Management 2.0.5

cosmocreate: Cosmo Create Authoring Environment, 1.0.3

cosmoplayer: Cosmo Player VRML Viewer 1.1 for IRIX 6.5

custlink: CustomerLink Client Software, 2.2.3

demos: Demonstration Programs, 6.5

desktop_eoe: IRIX Interactive Desktop, 6.5

desktop_tools: Desktop Tools, 6.5

dps_eoe: Display PostScript/X, 2.0.8 based on PostScript Level 2

dynaweb: Dynaweb (InSight to HTML), 4.1

elec_svcs: Customer Support Services Base Software, Rel. 2.2

fddivis: FDDI Visualyzer, 6.5

gateway: Internet Gateway Execution Environment, 3.1

iforark: LicensePower/iFOR IS4.0.1 ARK

iforcrk: LicensePower/iFOR IS4.0.1 CRK

imgtools: ImageVision Tools, 3.2.1

impr_base: Impressario 2.2.5 Base

impr_print: Impressario 2.2.5 Print Server

impr_rip: Impressario 2.2.5 PostScript Renderer (Requires Optional Impressario License)

impr_rip_printers: Impressario 2.2.5 Host RIP Printers

impr_scan: Impressario 2.2.5 Scanner Software

infosearch: Information Searching Execution Environment, 6.5

insight: InSight Online Doc Viewer, 3.1

insight_gloss: IRIS InSight Online Glossary, 3.0

java_eoe: Java Execution Environment 3.1 (Sun JRE 1.1.5)

license_eoe: License Tools 3.4.2

macromedia: Macromedia Movie Player, 1.4.1

mbase_client: WebFORCE MediaBase 2.1 – Client

media_warehouse: IRIX Interactive Desktop MediaWarehouse 1.2

nedit: NEdit V4.0.3i – GUI style editor

netscape: Netscape Communicator Client, 4.05

netscape_lite: Netscape Navigator Client, 4.05

netwr_client: NetWare Client 1.1

ns_admin: Netscape Administration Server, 2.13

ns_fasttrack: Netscape Fasttrack Personal Server, 2.01

ocs_client: WebFORCE MediaBase 2.1 – OCS Client Execution Only Environment

outbox: OutBox Personal Web Site, 1.5

print: Printing Tools, Release 1.7.5

sgips: Adobe Photoshop Performance Package, 1.2

sgsearch: Fulltext Indexing & Search Environment, 2.3

sgimeeting_ext: SGIMeeting Plugins, 1.1

showcase: IRIS Showcase 3.4.2

sitemgr: SiteMgr – Web Content Administration, 1.1

sysadmdesktop: IRIX Interactive Desktop System Administration, 6.5

sysmon: Desktop System Monitor, 2.1.2

vlan: VLAN software 1.0 for IRIX 6.5

websetup: Web Setup and Administration, 3.1

webviewer: WebViewer library execution only environment, 3.0

xlators_3d: 3D File Translators 1.1.1

Contents of IRIX 6.5 Development Foundation CD

CaseVision: CASEVision Environment, Version 2.6.5

ProDev: ProDev WorkShop 2.6 Tutorial

SpeedShop: Developer Magic: SpeedShop 1.3

WorkShop: Developer Magic: WorkShop 2.6.5

WorkShopMPF: WorkShop Pro MPF CASE products, Version 2.8

c++_dev: C++ Headers and Libraries, 7.2.1

c_dev: C Headers and Libraries, 7.2.1

compiler_dev: Base Compiler Development Environment, 7.2.1

ftn77_dev: Fortran 77 Headers and Libraries, 7.2.1

ftn90_dev: Fortran 90 Headers and Libraries, 7.2.1

ftn_dev: Fortran Headers and Libraries, 7.2.1

langtools: Source Code Utilities 1.0

modules: Modules package 2.2.1

Contents of IRIX 6.5 Development Libraries CD

ViewKit_dev: ViewKit Development Environment, Version 1.5.2

cms_dev: Color Management Software 2.0.5 Development

complib_dev: ChallengeComplib, 3.1.1

complib_eoe: ChallengeComplib Execution Environment, 3.1.1

dev: Development System, 7.2.1

dmedia_dev: Digital Media Development Environment, 6.5

dvdr: Device Driver, 5.0

gl_dev: Graphics Library Development System, 6.5

ifl_dev: Image Format Library Development Environment, 1.2.1

impr_dev: Impressario 2.2.5 Developer's Kit

inst_dev: Software Packager, 1.5

irix_dev: IRIX Development Headers/Documentation/Examples, 6.5

java_dev: Java Development Environment 3.1 (Sun JDK 1.1.5)

license_dev: License Development Environment 3.3

motif_books: OSF Motif developer books, 1.2.3

motif_dev: IRIX IM Development Software, 6.5 (based on OSF/Motif 1.2.4)

netscape_dev: Netscape Communicator Developer's Environment, 4.05

webviewer_dev: WebViewer library development environment, 3.0

x_books: O'Reilly & Associates, Inc. developer books, X11R5

x_dev: X11 Development Environment, 3.8 based on X11R6.3

If you are using the Before You Install checklist, return to Step 6.

Key New Features and Changes

The goal of the IRIX 6.5 release family is to provide a high quality and stable operating system for all SGI systems. This release family supports all SGI hardware platforms supported by IRIX 6.2, 6.3, and 6.4, except for Crimson. Significant additional software has been packaged with IRIX 6.5, including some important system and network management and interoperability tools.

The page contains a partial list of the key new features and changes for:

IRIX 6.5.7

IRIX 6.5

Look for information about the IRIX 6.5 release family on Supportfolio Online (http://support.sgi.com) and www.sgi.com.

For details on any of these new features and changes, refer to the release notes.

Please be aware that some features listed here are only applicable for certain software bundles or hardware configurations.

IRIX 6.5.7 Key New Features

The following features are in the core 6.5.7 overlays.

New Hardware Supported

- R12KS CPU on sgi2200, sgi2400, and sgi2800 systems (pending overall product release)
- QLA2200 (both copper and optical) is supported for FC−AL, FC−AL via the Emulex hub or Fabric attach via the Brocade Silkworm 2000 switches (initially supported in 6.5.5)
- 270 Mhz processor for O2 and Silicon Graphics Octane (initially supported in 6.5.4)
- HDTV XIO Board for Silicon Graphics Onyx2 and SGI Origin 2000 systems (this includes systems formerly known as Cray Origin2000 systems) (initially supported in 6.5.4)
- Systems using the MIPS R12000 processor (initially supported in 6.5.3)
- Digital Video Multiplexer option board (DPLEX) for Silicon Graphics Onyx (initially supported in 6.5.3)
- Redundant Power Supply (RPS) (initially supported in 6.5.3)
- 21" Monitor Support for O2 and Octane (initially supported in 6.5.3)
- Flat Panel Monitor for O2 systems (initially supported in 6.5.2)
- 16 pipe InfiniteReality2E systems (initially supported in 6.5.2)
- GSN network adapter (initially supported in 6.5.2)
- Gigabit Ethernet for Octane and SGI Origin systems (initially supported in 6.5.1)
- 128p Metarouter for Origin 2000 systems (formerly known as Cray Origin2000 systems) (initially supported in 6.5.1)
- Dual Channel Display option for O2 systems (initially supported in 6.5.1)
- XR hardware for InfiniteReality2E (initially supported in 6.5.1)
- 225QC for SGI Origin 200 (initially supported in 6.5.1)

Software

Feature Stream Only:

- Support for job limits. You can use this feature if you want to prevent individual users from exceeding specified usage limits; this can improve system throughput and utilization by restricting how much of the machine each user can access. For more information, see *IRIX Admin: Resource Administration* and the jstat(1), jlimit(1), genlimits(1M), and showlimits(1) man pages.

- Support for the Scheduled Transfers (ST) protocol. The ST protocol is an ANSI Standard level two through four protocol suite designed to support extremely high performance data movement. ST provides a socket–based interface to applications, which lets you directly port the existing networking applications to ST. ST also supports the OS Bypass mode of operation, which allows smaller messages to be sent and received with extremely low latencies. In this initial release of ST, only the Gigabyte System Network (GSN) network adapter is supported. This feature was initially added in 6.5.6.
- Support for the CXFS product, which provides a cluster file system that allows file sharing between machines. CXFS includes the following capabilities:
    - High resiliency and availability
    - Reduced storage costs
    - Scalable high performance

  The 6.5.7 release contains metadata server recovery. See the *CXFS Software Installation and Administration Guide* for the administrative shutdown procedures and additional troubleshooting information. This feature was initially added in 6.5.6.

- Motif 2.1/ViewKit 2.1 (initially added in 6.5.2)
- IRIX Oplock Support (initially added in 6.5.2)
- Support for Non EUC encoding and locales (sjis/big5/gbk/utf8) (initially added in 6.5.2)

Maintenance and Feature Stream:

- Support for the IRIX sendmail mail system based on sendmail version 8.8.8, which is the version supplied on previous IRIX 6.5.*x* releases. Due to customer demand, the current sendmail.org release, which is sendmail version 8.9.3 (see http://www.sendmail.org), is supplied via patch 3865. SGI intends to support sendmail 8.9.3 (or above) as the standard released sendmail in a future IRIX release (tentatively planned for IRIX 6.5.9).

  There are many differences between IRIX sendmail version 8.8.8 and version 8.9.3. Some of the new functions in version 8.9.3 are as follows:

    - The major difference between sendmail versions 8.8.8 and 8.9.3 is their configuration file. The configuration file in sendmail version 8.9.3 is configured with the *sendmail.mc* file which is processed with the m4 macro processor to create the *sendmail.cf* file.
    - A new version of configmail configures the *sendmail.mc* file and provides features similar to the configmail utility in previous versions of IRIX. This version of configmail also processes the *sendmail.mc* file into *sendmail.cf* by using the m4 macro processor.
    - Sendmail 8.9.3 includes many new features requested by IRIX users, such as anti–relay features which can be used to control spam messages.

  For more information on the 8.9.3 version of sendmail, see the *IRIX Administration: Networking and Mail* manual provided with the patch. For more information on how to configure sendmail 8.9.3, see http://www.sendmail.org/m4/readme.html.

- Integration of the fsr_xfs(1M) command into the fsr(1M) command. With previous releases of IRIX, the fsr command could be run only on EFS filesystems and the fsr_xfs command could be run only on XFS filesystems. Both commands reorganize filesystems so that the layout of the extents is improved. This improves the performance of mounted filesystems that have become fragmented over time. With this release, the fsr command invokes fsr_xfs when it encounters XFS filesystems. With this change, the default crontab(1M) entry that calls fsr, also reorganizes XFS filesystems. For information on the fsr command and the fsr_xfs and fsr_efs options, see the fsr(1M), fsr_xfs(1M), and fsr_efs(1M) man pages.
- Support for the −u option of the sat_interpret utility that writes unbuffered output. You can use this new option if you are using the sat_interpret utility to process system audit trail data, and then you can pipe this output to another filter utility. For more information, see the sat_interpret(1M) man page.
- Support for bzero error recovery; this RAS feature prevents the kernel from panicking when a memory Multiple Bit Error (MBE) is encountered while the kernel is zeroing out a new page in the virtual memory fault handler (vfault). The kernel will now discard the page with the memory error, grab a new page, and continue its task.
- Support for the 66 MHz qLogic 2200 controller. This feature provides fibre channel disk connectivity for the O2 systems, for both arbitrated loops and Storage Area Networks (SANs). This capability already exists on the SGI Origin systems.
- Support for the FC−Tape on a Storage Area Network (fabric) using the qLogic 2200 fibre channel controller to the tpsc driver. This feature lets you attach tape drives with the fibre channel interface to the fibre channel switch and use these tape drives. For more information on the fibre channel tapes, see the tps(7M) man page.
- Support for a multithreaded version of the automatic filesystem mount daemon *autofsd*. This enhanced functionality allows for simultaneous multiple automounts. If a particular server for an automounted filesystem is not running or is slow to respond, one *autofsd* thread can wait for that server while other *autofsd* threads mount filesystems from other servers. This capability improves the automount performance and simultaneously provides longer wait times for downed servers, which should lead to a decrease in automount failures. This feature was initially added in 6.5.6.
- Embedded Support Partner, which is an integral part of the IRIX operating system, provides system administrators with a way to monitor various events (such as system events, changes in system hardware and software configuration, and system performance) that can occur on their system. Embedded Support Partner consists of a set of daemons that perform the monitoring activities. These include an event monitoring daemon (eventmond), an event management daemon (espemd), and a database daemon (espdbd). Embedded Support Partner provides single system monitoring capabilities as a standard part of IRIX. Optionally, Embedded Support Partner can be configured to receive event and system configuration data from all systems contained within a system group. Embedded Support Partner is controlled through a Web browser that is connected to the Configurable Web Server that is included in the Embedded Support Partner package. For more information, see the *Embedded Support Partner Overview*, the *Embedded Support Partner User’s Guide*, and the Embedded Support Partner man pages. This feature was initially added in 6.5.5.
- Support for the version 2 XFS directory format; this format provides you with the capability to choose a filesystem block size to match the distribution of data file sizes without adversely affecting directory operation performance. The directory format is specified with the −n

parameter of the *mkfs* command. For more information, see the *IRIX Admin: Disks and Filesystems* and the mkfs_xfs(1M) man page. This feature was initially added in 6.5.5.

- SCSL is widely used in scientific and technical compute intensive applications and is intended to be a follow on product to Challengecomplib on all supported IRIX platforms at the next major IRIX release. Features such as convolution/correlation and filter routines to the Signal Processing functionality previously only available in Challengecomplib are now incorporated into the SCSL version 1.2 release. Additional IRIX features added to SCSL for this release are improved ordering techniques for the sparse linear solvers, performance enhancements for the MIPS R12000 processor, rollup bug fixes from SCSL 1.1, and all other Challengecomplib 3.1 functionality. SCSL can be downloaded free of charge from the Download Cool Software page at http://www.sgi.com/Products/Evaluation/. For customers who do not have web access and are enrolled under a valid support contract, CD media can be requested free of charge from their local support center. Non−contract customers can order SCSL from their local sales representative. For more information on SCSL, see http://www.sgi.com/software/scsl.html. This feature was initially added in 6.5.5.
- Support for Automated Performance Monitoring. Together with Embedded Support Partner, the base performance monitoring services in the pcp_eoe product have been extended to include an inference engine for evaluating rules about system−level performance and raising alarms. Also provided is a parameterized set of standard rules that can be selectively enabled and tuned to meet local requirements and to choose alternative alarm notification mechanisms. These features are of most value to operations staff running production IRIX systems. For more information, see the pmie(1) and pmieconf(1) man pages, and the *Performance Co−Pilot*(TM) *IRIX Base Software Administrator's Guide*. This feature was initially added in 6.5.5.
- Two new options were added to the "miser_create_cpuset" command. These options allow additional restrictions on memory assignment for processes running on a cpuset. These options are documented in the miser_cpuset(4) man pages. This feature was initially added in 6.5.5.
- Support for SAN addressing (initially added in 6.5.5)
- Support for the Miser queue repack policy. When a job finishes execution prior to the end of its schedule, the system resources it was using are released. This policy attempts to reschedule the jobs using earlier start and end times in order to take advantage of these released system resources. The order of the scheduled jobs will be maintained. This feature can be used by all Miser users running IRIX 6.5.4m or f. For more information, see the miser(4) and miser(5) man pages, and the *IRIX Admin: System Configuration and Operation*, Chapter 7 "Managing User Processes." (initially added in 6.5.4)
- Distributed Computing Environment (DCE) Client for accessing shared resources in distributed computing DCE/DFS serving environments (initially added in 6.5.4)
    - Kernel libraries only
    - Requires installation of DCE/DFS 1.2.2a software for full functionality
- (Octane systems only) The worst−case interrupt response time is guaranteed to be less than one millisecond on properly configured Octane systems (initially added in 6.5.3)
- Support for the X security and appgroup extensions (combined with a new Netscape plugin, these allow the embedding of X applications in Web pages) (initially added in 6.5.3)
- Extra support for European fonts, including the new Euro currency symbol (initially added in 6.5.3)
- New Software Manager and Inst commands to simplify selections for upgrades (initially added in 6.5.3)

- New Software Manager and Inst configuration variable to more easily handle cases where configuration files are upgraded. See the "smart_config_handling" preference in inst or swmgr for more information (initially added in 6.5.4)
- LDAP 3.0 now supported (initially added in 6.5.3)
- AutoFS extended to use UNS for map information (initially added in 6.5.2)
- Support for DCShare application sharing extension (initially added in 6.5.2)
- Fibre channel support to Dmnet (initially added in 6.5.2)
- Three new HP printer drivers (initially added in 6.5.2)

Applications CD:

- SGImeeting and SGImeeting Extensions are now both licensed products and are no longer available on the Applications CD. For more information on SGImeeting, see http://www.sgi.com/software/sgimeeting. The latest version can be obtained from http://www.sgi.com/Products/Evaluation. For additional assistance, contact your local SGI sales representative.
- Upgrade to Netscape Communicator 4.7; for details, see http://home.netscape.com/communicator/v4.5/tour/index.html (initially added in 6.5.6)
- CosmoPlayer 2.1.1 release (initially added in 6.5.5)
- Netscape FastTrack Server 3.03 contains an updated version of the Administration Server 3.52 (initially added in 6.5.5)
- WebViewer Library Execution only Environment 3.0 release (initially added in 6.5.5)

  For more information about the bundled software that is included with this release, see CD Contents and the Bundled Software and Licenses web page that you can access from the Welcome web page.

IRIX 6.5 Key New Features

IRIX 6.5 feature categories:

Binary Compatibility

Desktop

Digital Media

Documentation Content and Delivery

Graphics

I/O

Networking

New Hardware Support

Origin Database

Origin Enterprise System Management

Origin Reliability, Availability, Serviceability (RAS)

Personal System Management

Scheduling

Security

Software Distribution

Standards

Workgroup System Management

X11/Motif

Binary Compatibility

Includes both a 32–bit and a 64–bit runtime environment. Systems that use the 64–bit runtime environment support both 32–bit and 64–bit applications; systems that use the 32–bit runtime environment, such as the O2, will only support 32–bit applications.

Systems that support a 32–bit runtime environment with 64–bit extensions*:

- Indigo R4000
- Indigo2
- Indy
- Challenge S/M R4000
- Indy/Challenge
- O2
- O2 R10000

**64–bit extensions include support for XFS filesystem and 64–bit long integers, excluding 64–bit address spaces.*

Systems that support a 64–bit runtime environment:

- Challenge R4000
- Onyx R4000
- Power Indigo2
- Power Challenge
- Power Onyx
- Indigo2 Extreme 10000
- Indigo2 Impact 10000
- Origin 200
- Origin 2000
- Onyx2
- Octane

Desktop

Products:

- Site Manager 1.1, for web content validation and version control, workflow support, 3D visualization, and server traffic statistics
- Adobe Acrobat 3.0, for viewing PDF documents
- Nedit, new default text editor; jot is also available
- Accessibility Panel, new graphical interface for AccessX software, allowing movement–impaired users to use the keyboard and mouse more efficiently
- WebViewer 3.0 now supports CSS1 Style sheets, Netscape plug–ins, JavaScript, history mechanism, animated GIFs (WebViewer is embedded in System Manager, File Manager,

Software Manager, InfoSearch, EZ–setup, Site Manager, Out of Box Experience, and SGIHelp)
- Netscape Communicator 4.05 provides support for Navigator (browser), Messenger (e–mail), Composer (content creation), and Collabra (news reader); MediaMail no longer supported–see preinstallation caveat
- Netscape Communicator Lite 4.05 provides support for Navigator (browser) only

General Changes:

- Desktop now called IRIX Interactive Desktop (previously Indigo Magic)
- For security, ability to display applications that are running on other systems is now off by default (see the online *Desktop User's Guide*, "About the Remote Display Feature," for details)
- Performance improvements in application startup
- Impressario now supports PostScript Printer Description (PPD); HP and Lexmark PPD drivers are included with software

Digital Media

- Media Player now supports movies played to video output
- Movielib file now supports Quicktime MJPEG–A files
- Movielib, Media Player, and Movie Maker now support DV DIF files
- Sony DAT Qualification (LibDatAudio)
- Support new Audio Subcode I/O
- Hardware generated audio events, sample rate changes
- O2 and Octane Digital Media Buffers (dmbuffers) now support the same interface––the Octane 6.4 interface (for compatibility, the O2 IRIX 6.3 interface will continue to be supported)
- For compatibility, VL Buffers continues to be supported for IRIX 6.2 and earlier applications (dmbuffers are recommended for new application development)

Documentation Content and Delivery

- InfoSearch, new and improved online viewer and search engine for books, man pages, and Release Notes
- New on the Toolchest: Help > Quick Answers; Help > Hints and Shortcuts
- See Resources section for comprehensive overview of useful information and support

Graphics

- Support for OpenGL 1.1 on all systems
- Imaging performance increased for O2
    - Increased performance for luminance (8 and 16–bit) and RGB images
    - Increased performance for general and separable convolves
    - Increased throughput through the imaging engine

I/O

- Guaranteed Rate I/O (GRIO) support
- Project quotas
- User space serial I/O
- Fibre channel Arbitrated Loop Topology (AL)

Networking

- Simple Network Management Protocol (SNMP) version 2
- (Origin systems only) HP−UX MIB/SNMP provides network manageability in enterprise environments
- Unified Name Service now supports yp services
- NFS for data−serving
- (Origin systems only) Distributed Computing Environment (DCE) Client for accessing shared resources in distributed computing DCE/DFS serving environments

Origin Database

- Database Accelerator (DBA)

Origin Enterprise System Management

- Computer Associates Unicenter® TNG(TM) Framework(TM)

Origin Reliability, Availability, Serviceability (RAS)

- SBE reporting mechanism
- Automatic disabling of failing components while booting
- Extended memory error handling

Origin Scalability Features

- Single system environment consisting of up to 128 processors
    - Single system image
    - Support for balanced batch and timeshare workloads
    - Single administrative entity
- Partitioned system environment consisting of up to 128 processors
    - Partitioned system image with firewalls between each origin partition
    - Application availability with Failsafe (option)
    - Administration through IRIS Console

PC & Macintosh Interoperability

- (O2 systems only) SoftWindows 95 for Windows 3.1 and Windows 95 terminal emulation on

IRIX

- Xinet Appletalk for Macintosh file and print sharing
- Novell Netware
- (Origin systems only) Syntax TAS provides instant interoperability with Windows 95 (Server Message Block), Macintosh, and Novell clients
- SAMBA (on Freeware CD) provides interoperability with Server Message Block (SMB) clients

PCI

- Support for multifunction cards
- User−level PCI drivers can now be developed for Octane

Personal System Management

Products:

- New and improved personal system administration interactive guides and tools (accessible from the System Manager)
- Process Manager, graphical tool to manage processes
- Hosts Guide, graphical tool to setup your network

General Changes:

- Startup login screen is user configurable (for example, user icons can be replaced with any image)
- Support for personal filetypes−−allows users to create custom icons for their desktops
- Keyword search now supported in System Manager
- Backup and Restore graphical tool now uses *cpio*

Scheduling

- (Origin systems, Onyx2 systems only) The worst−case interrupt response time is guaranteed to be less than one millisecond on properly configured Origin and Onyx2 systems with up to eight CPUs
- Miser predictive batch scheduler
- Share II resource manager (option)

Security

- Most features of the Commercial Security Pack are now bundled into IRIX 6.5
- Least Privilege (POSIX P1003.1e), which allows allocation of system privileges individually (rather than setuid)
- Access Control List
- Single Sign−on via Distributed Computing Environment (DCE)

Software Distribution Features

- Inst now supports ISO 9660 CDs

Standards

Standards compliance under IRIX 6.4 will be extended, with the addition of:

- Year 2000 compliance as defined by the X/Open group
- UNIX 95 Certified Single UNIX Specification − Spec 1170/UNIX 95
- DII−COE Kernel Version 3.2 available for development projects
- Full pthreads support, including system scope

Workgroup System Management

- (Origin systems only) EnlightenDSM Workgroup Server provides Distributed System Management for small enterprises and workgroups.
- (O2, Octane, Onyx2 systems only) EnlightenDSM Workgroup Client provides Distributed System Management for small enterprises and workgroups

X11/Motif

- Improved performance for X11 and Motif
- Thread−safe Xlib and Xt
- Support for X11R6.3 server and libraries (previously X11R6.1), including support for Low−Bandwidth X
- Continue to support Motif 1.2.4
- Improvements to the hardware colormap implementation minimizes colormap flashing for Impact and Octane graphics systems

> If you are using the Before You Install checklist, return to Step 7.

Using the Base Documentation CD

About This CD

For customers with new systems that shipped with this release, new and updated documentation can be viewed offline using the IRIX 6.5 Base Documentation CD, February 2000.

The IRIX 6.5 Base Documentation CD allows you to access standard release notes, online books, and man pages before you install the system software. You view the documentation directly from the CD; you do not use this CD to install documentation. No license is required to use the tools provided on the CD. (Documentation is installed, by default, with software CDs. To find out about accessing *installed* documentation see General Documentation.)

The IRIX 6.5 Base Documentation CD is not shipped with the IRIX 6.5.*x* Update Kits. Corresponding book documentation, release note, and man page information can be viewed by customers who have purchased SGI systems through the web on the *Supportfolio Online* site (http://support.sgi.com/surfzone/search).

Note: There is a duplicate copy of Start Here on the Base Documentation CD.

Tip: This CD is an ISO9660 standard CD, which means that it can be used in most CD−ROM drives. This allows your IRIX−based system to mount the CD from a variety of remote CD−ROM drives (as long as they are connected to operating systems that support exporting ISO9660 filesystems).

How to Use This CD

1. Login and insert the Base Documentation CD into your CD-ROM drive.

2. Open a shell:
   From the Toolchest, choose Desktop > Open Unix Shell.

3. Go to the CDROM directory:

   Use the *cd* command:

   ```
   % cd /CDROM
   ```

   Inside of the directory are the six different CD scripts, which you can see listed with the *ls* command:

   ```
   % ls
   CDgrelnotes   CDinsight  CDrelnotes
   CDinfosearch  CDman      CDsgihelp
   ```

4. Use the CD scripts to access the documentation on the CD. To run any of the scripts, in a UNIX shell, enter `./` followed by the script name.

   For example:

   ```
   % ./CDgrelnotes
   ```

   What follows are descriptions of what each of the scripts do:

   - **`./CDgrelnotes`** – launches *[g]relnotes*, which you can use to view Release Notes. You can specify the product name in the command. For example, to view the release notes for Netscape you would enter: `./CDgrelnotes netscape`

- `./CDman` – displays man pages when used like the *man* command. For example, to see the man page on *inst*, enter `./CDman inst`

- `./CDinsight` – launches the online book viewer, *InSight.* Displays the online book library on the CD. **Note:** If you are running IRIX 6.2 on your workstation, you must have version 3.0 of InSight or higher in order for this to work.

- `./CDsgihelp` – displays *instructions* for making *sgihelp* work with the content on the CD. (Involves setting a couple of X–resources in a local *.Xdefaults* file.)

- `./CDinfosearch` – displays *instructions* for making Infosearch work with the content on the CD. (Involves editing some configuration files.) InfoSearch is used for searching and viewing all online books, release notes, and man pages. **You must already be running 6.5 for *CDinfosearch* to work with the content of this CD.**

If you are using the Before You Install checklist, return to Step 5.

6.5 Software/CD Index

This page provides an alphabetical list of the IRIX 6.5 software shipped by SGI at the time of the base 6.5 operating system release. You can use this page to look up the CD location, size, or full name of individual products.

Note: Subject to change; some software may not be listed here. Also, **this index is for the 6.5 base operating system only**. It does not include any 6.5.*x* product information. 6.5.7 listings are on the CD Contents page.

LISTING KEY
Software Name: Full Product Name, **CD Name** Approximate Product Size (Kbytes)

Note: The CD names that appear in all capital letters are the core IRIX 6.5 CDs; asterisks (*) indicate other types of CDs for 6.5. Different configurations receive different CD packages, and some software is sold separately.

Software on IRIX 6.5 CDs

4Dwm: Desktop Window Manager, 6.5 FOUNDATION 1 481 Kbytes

accessx: Access for Movement–Impaired Users, 1.0 6.5 APPLICATIONS 270 Kbytes

acrobat: Adobe Acrobat Reader, 3.01 6.5 APPLICATIONS 7136 Kbytes

annotator: IRIS Annotator 1.2 6.5 APPLICATIONS 22928 Kbytes

appletalk: Xinet Macintosh Connectivity 9.02 6.5 APPLICATIONS 8526 Kbytes

arraysvcs: Array Services 3.1 6.5 APPLICATIONS 1048 Kbytes

aso: Audio/Serial Option Card Serial Support 1.3 for Audio Serial Option* 537 Kbytes

aso_audio: Audio/Serial Option Card Audio Support 1.3 for Audio Serial Option* 451 Kbytes

c++_dev: C++ Headers and Libraries, 7.2.1 DEVELOPMENT FOUNDATION 11054 Kbytes

c++_eoe: Std. Exec. Environ. (C++ Headers & Libraries, 7.2.1) FOUNDATION 1 973 Kbytes

CaseVision: CASEVision Environment, Version 2.6.5 DEVELOPMENT FOUNDATION 2024 Kbytes

cms_dev: Color Management Software 2.0.5 Development DEVELOPMENT LIBRARIES 445 Kbytes

cms_eoe: Color Management 2.0.5 6.5 APPLICATIONS 3101 Kbytes

compiler_dev: Base Compiler Development Environment, 7.2.1 DEVELOPMENT FOUNDATION 39102 Kbytes

compiler_eoe: IRIX Standard Execution Environment (Base Compiler Headers and Libraries, 7.2.1) FOUNDATION 1 20954 Kbytes

complib_dev: ChallengeComplib, 3.1.1 DEVELOPMENT LIBRARIES 76182 Kbytes

complib_eoe: ChallengeComplib Execution Environment, 3.1.1 DEVELOPMENT LIBRARIES 78814 Kbytes

cosmocreate: Cosmo Create Authoring Environment, 1.0.3 6.5 APPLICATIONS 9623 Kbytes

cosmoplayer: Cosmo Player VRML Viewer 2.1 for IRIX 6.3, 6.5 APPLICATIONS 4213 Kbytes

custlink: CustomerLink Client Software, 2.2.3 6.5 APPLICATIONS 4848 Kbytes

c_dev: C Headers and Libraries, 7.2.1 DEVELOPMENT FOUNDATION 2261 Kbytes

demos: Demonstration Programs, 6.5 APPLICATIONS 235436 Kbytes

demos_O2: O2 Demonstration Programs, 1.2 O2 Demos* 414384 Kbytes

demos_octane: Octane Demonstration Programs, 1.2 Octane Demos* 479967 Kbytes

desktop_base: IRIX Interactive Desktop Base Software, 6.5 FOUNDATION 1 3956 Kbytes

desktop_eoe: IRIX Interactive Desktop, 6.5 APPLICATIONS 5853 Kbytes

desktop_tools: Desktop Tools, 6.5 APPLICATIONS 1102 Kbytes

dev: Development System, 7.2.1 DEVELOPMENT LIBRARIES 22735 Kbytes

divo: DIVO Video Execution Environment, 1.1 for IRIX 6.5 DIVO Video Execution Environment* 6628 Kbytes

dmedia_dev: Digital Media Development Environment, 6.5 DEVELOPMENT LIBRARIES 26575 Kbytes

dmedia_eoe: Digital Media Execution Environment, 6.5 FOUNDATION 1 89064 Kbytes

dps_eoe: Display PostScript/X, 2.0.8 based on PostScript Level 2 6.5 APPLICATIONS 2571 Kbytes

dvdr: Device Driver, 4.1 DEVELOPMENT LIBRARIES 3601 Kbytes

dynaweb: Dynaweb (InSight to HTML), 3.1a 6.5 APPLICATIONS 2231 Kbytes

elec_svcs: Customer Support Services Base Software, Rel. 2.2 6.5 APPLICATIONS 332 Kbytes

eoe: IRIX Execution Environment, 6.5 FOUNDATION 1 284757 Kbytes

evo: Octane Personal Video Execution Environment, 6.5 Octane Personal Video Execution Environment* 19080 Kbytes

fddivis: FDDIVisualyzer, 6.5 APPLICATIONS 393 Kbytes

FDDIXPress: FDDIXPress, 6.5 FOUNDATION 2 1344 Kbytes

ftn77_dev: Fortran 77 Headers and Libraries, 7.2.1 DEVELOPMENT FOUNDATION 4319 Kbytes

ftn90_dev: Fortran 90 Headers and Libraries, 7.2.1 DEVELOPMENT FOUNDATION 6855 Kbytes

ftn_dev: Fortran Headers and Libraries, 7.2.1 DEVELOPMENT FOUNDATION 46975 Kbytes

ftn_eoe: Standard Execution Environment (Fortran Headers and Libraries, 7.2.1) FOUNDATION 1 55136 Kbytes

galileo: Galileo Video Execution Environment, 6.5 Galileo Video Execution Environment* 3143 Kbytes

gateway: Internet Gateway Execution Environment, 3.1 6.5 APPLICATIONS 1339 Kbytes

gl_dev: Graphics Library Development System, 6.5 DEVELOPMENT LIBRARIES 37562 Kbytes

gnu: GNU Software configured & precompiled for IRIX, 1.0 FOUNDATION 2 46140 Kbytes

hwguides_eoe: Hardware Owner's Guides, 1.1 FOUNDATION 2 45891 Kbytes

ifl_dev: Image Format Library Development Environment, 1.2.1 DEVELOPMENT LIBRARIES 8840 Kbytes

ifl_eoe: Image Format Library Execution Only Environment, 1.2.1 FOUNDATION 2 8111 Kbytes

iforark: LicensePower/iFOR IS4.0.1 ARK 6.5 APPLICATIONS 4051 Kbytes

iforcrk: LicensePower/iFOR IS4.0.1 CRK 6.5 APPLICATIONS 579 Kbytes

il_eoe: ImageVision Library Execution Only Environment, 3.2.1 FOUNDATION 2 19546 Kbytes

imgtools: ImageVision Tools, 3.2.1 6.5 APPLICATIONS 2495 Kbytes

impactcomp: Impact Compression Execution Environment 6.5 Impact Compression Execution Environment* 2518 Kbytes

impactvideo: Impact Video Execution Environment, 6.5 Impact Video Execution Environment* 3487 Kbytes

impr_base: Impressario 2.2.5 Base 6.5 APPLICATIONS 3052 Kbytes

impr_dev: Impressario 2.2.5 Developer's Kit DEVELOPMENT LIBRARIES 9921 Kbytes

impr_print: Impressario 2.2.5 Print Server 6.5 APPLICATIONS 5498 Kbytes

impr_rip: Impressario 2.2.5 PostScript Renderer (Requires Optional Impressario License) 6.5 APPLICATIONS 2360 Kbytes

impr_rip_printers: Impressario 2.2.5 Host RIP Printers 6.5 APPLICATIONS 7098 Kbyte

impr_scan: Impressario 2.2.5 Scanner Software 6.5 APPLICATIONS 326 Kbytes

infosearch: Information Searching Execution Environment, 6.5 APPLICATIONS 36832 Kbytes

InPerson: InPerson Desktop Conferencing, 2.2.1 6.5 APPLICATIONS 4505 Kbytes

insight: InSight Online Doc Viewer, 3.1 6.5 APPLICATIONS 7165 Kbytes

insight_base: InSight Online Doc Viewer Base Software, 3.1 FOUNDATION 1 9836 Kbytes

insight_gloss: IRIS InSight Online Glossary, 3.0 6.5 APPLICATIONS 372 Kbytes

inst_dev: Software Packager, 1.5 DEVELOPMENT LIBRARIES 1570 Kbytes

inventor_dev: Inventor 3D Development Toolkit, 2.1.4 Inventor* 41770 Kbytes

inventor_eoe: Inventor Execution Only Environment, 2.1.4 FOUNDATION 2 19734 Kbytes

inventor_games: Inventor Games, Release 1.3 Inventor* 13446 Kbytes

io4prom: IO4prom for 64bit OS systems, 6.5 FOUNDATION 1 3089 Kbytes

ip32prom: Flash PROM for IP32 systems, 6.5 FOUNDATION 1 266 Kbytes

irix_dev: IRIX Development Examples, 6.5 DEVELOPMENT LIBRARIES 1314 Kbytes

isdn_eoe: ISDN Execution Environment, 2.0 FOUNDATION 2 1603 Kbytes

javascript_eoe: JavaScript library execution only environment, 1.0 FOUNDATION 2 550 Kbytes

ava_dev: Java Development Environment 3.1 (Sun JDK 1.1.5) DEVELOPMENT LIBRARIES 20066 Kbytes

java_eoe: Java Execution Environment 3.1 (Sun JRE 1.1.5) 6.5 APPLICATIONS 10078 Kbytes

langtools: Source Code Utilities 1.0 DEVELOPMENT FOUNDATION 507 Kbytes

license_dev: License Development Environment 3.3 DEVELOPMENT LIBRARIES 1802 Kbytes

license_eoe: License Tools 3.3 6.5 APPLICATIONS 1402 Kbytes

macromedia: Macromedia Movie Player, 1.4.1 6.5 APPLICATIONS 1776 Kbytes

mbase_client: SGI MediaBase 2.1 – Client 6.5 APPLICATIONS 6516 Kbytes

media_warehouse: IRIX Interactive Desktop MediaWarehouse 1.2 6.5 APPLICATIONS 550 Kbytes

modules: Modules package 2.2.1 DEVELOPMENT FOUNDATION 253 Kbytes

motif_books: OSF Motif developer books, 1.2.3 DEVELOPMENT LIBRARIES 14068 Kbytes

motif_dev: IRIX IM Development Software, 6.5 (based on OSF/Motif 1.2.4) DEVELOPMENT LIBRARIES 28608 Kbytes

motif_eoe: IRIX IM Execution Only Environment, 6.5 (based on OSF/Motif 1.2.4) FOUNDATION 1 8098 Kbytes

nedit: NEdit V4.0.3i – GUI style editor 6.5 APPLICATIONS 687 Kbytes

netscape: Netscape Communicator Client, 4.51 6.5 APPLICATIONS 19318 Kbytes

netscape_dev: Netscape Communicator Developer's Environment, 4.05 DEVELOPMENT LIBRARIES 17 Kbytes

netscape_lite: Netscape Navigator Client, 4.05 6.5 APPLICATIONS 15702 Kbytes

netwr_client: NetWare Client 1.1 6.5 APPLICATIONS 1564 Kbytes

nfs: Network File System, 6.5 ONC3/NFS version 3* 11604 Kbytes

ns_admin: Netscape Administration Server, 2.13 6.5 APPLICATIONS 2351 Kbytes

ns_fasttrack: Netscape Fasttrack Personal Server, 2.01 6.5 APPLICATIONS 14112 Kbytes

ocs_client: SGI MediaBase 2.1 – OCS Client Execution Only Environment 6.5 APPLICATIONS 2439 Kbytes

outbox: OutBox Personal Web Site, 1.5 6.5 APPLICATIONS 456 Kbytes

OutOfBox: O2 OutOfBox Experience, version 2.2 O2 Out Of Box Experience* 4515 Kbytes

patchSG0003131: Patch SG0003131: 7.2.1 base compiler runtime environment for IRIX 6.2/6.3/6.4/6.5 INSTALLATION TOOLS 16761 Kbytes

patchSG0003139: Patch SG0003139: libmp rollup INSTALLATION TOOLS 2023 Kbytes

patchSG0003140: Patch SG0003140: 7.2.1 FORTRAN runtime for IRIX 6.2/6.3/6.4/6.5 – REQUIRED FOR F90 INSTALLATION TOOLS 146809 Kbytes

pcnfsd: PC–NFS 2.0.2 Server Components ONC3/NFS version 3* 53 Kbytes

pcp_eoe: Performance Co–Pilot Execution Only Environment, 2.0 FOUNDATION 2 3428 Kbytes

PeoplePages: PeoplePages – The Indigo Magic Phonebook, 1.2.1 6.5 APPLICATIONS 620 Kbytes

performer_demo: Performer2.2.1 Demos and Demo Data FOUNDATION 2 9109 Kbytes

performer_eoe: Performer2.2.1 Execution Environment FOUNDATION 2 77908 Kbytes

print: Printing Tools, Release 1.7.5 6.5 APPLICATIONS 2073 Kbytes

ProDev: ProDev WorkShop 2.6 Tutorial DEVELOPMENT FOUNDATION 33729 Kbytes

react: REACT/pro IRIX Realtime Extensions, Release 3.2 React* 1546 Kbytes

Register: On−Line Registration, 1.4 6.5 APPLICATIONS 3060 Kbytes

roboinst: RoboInst Tools for Automatic Installations 1.0 INSTALLATION TOOLS 586 Kbytes

sgips: Adobe Photoshop Performance Package, 1.2 6.5 APPLICATIONS 206 Kbytes

sgitcl_eoe: SGI Tcl Execution Environment, 1.1 FOUNDATION 2 6219 Kbytes

sgsearch: Fulltext Indexing & Search Environment, 2.0 6.5 APPLICATIONS 300 Kbytes

showcase: IRIS Showcase 3.4.2 6.5 APPLICATIONS 29221 Kbytes

sirius: Sirius Video Execution Environment, 6.5 Sirius Video Execution Environment* 2395 Kbytes

sitemgr: SiteMgr − Web Content Administration, 1.1 6.5 APPLICATIONS 1931 Kbytes

SpeedShop: Developer Magic: SpeedShop 1.3 DEVELOPMENT FOUNDATION 5304 Kbytes

sysadmdesktop: IRIX Interactive Desktop System Administration, 6.5 APPLICATIONS 7974 Kbytes

sysmon: Desktop System Monitor, 2.1.2 6.5 APPLICATIONS 525 Kbytes

tooltalk_dev: ToolTalk 1.3 Development Environment Tooltalk* 4626 Kbytes

tooltalk_eoe: ToolTalk 1.3 Execution Only Environment FOUNDATION 1 3093 Kbytes

trix_eoe: Trusted IRIX Execution Environment, 6.5 Trusted IRIX* 2704 Kbytes

vfc: Video Format Compiler, 1.2 FOUNDATION 2 907 Kbytes

ViewKit_dev: ViewKit Development Environment, Version 1.5.2 DEVELOPMENT LIBRARIES 14055 Kbytes

ViewKit_eoe: ViewKit Execution Environment, Version 1.5.2 FOUNDATION 1 2899 Kbytes

vlan: VLAN software 1.0 for IRIX 6.5 APPLICATIONS 66 Kbytes

websetup: Web Setup and Administration, 3.1 6.5 APPLICATIONS 752 Kbytes

websupport_eoe: WebSupport 1.3 eoe FOUNDATION 1 2776 Kbytes

webviewer: WebViewer library execution only environment, 3.0 6.5 APPLICATIONS 4722 Kbytes

webviewer_dev: WebViewer library development environment, 3.0 DEVELOPMENT LIBRARIES 11951 Kbytes

Welcome: Customer Welcome, Jun. 98 INSTALLATION TOOLS

windview: WindView system visualization for IRIX, 1.2 React* 3636 Kbytes

WorkShop: Developer Magic: WorkShop 2.6.5 DEVELOPMENT FOUNDATION 62098 Kbytes

WorkShopMPF: WorkShop Pro MPF CASE products, Version 2.8 DEVELOPMENT FOUNDATION 9349 Kbytes

xlators_3d: 3D File Translators 1.1.1 6.5 APPLICATIONS 5191 Kbytes

x_books: O'Reilly & Associates, Inc. developer books, X11R5 DEVELOPMENT LIBRARIES 6563 Kbytes

x_dev: X11 Development Environment, 3.8 based on X11R6.3 DEVELOPMENT LIBRARIES 8369 Kbytes

x_eoe: X11 Execution Environment, 3.8 based on X11R6.3 FOUNDATION 1 50344 Kbytes

If you are using the Before You Install checklist, return to Step 6.