

UNICOS[®] Release Letter
RL-5001 10.0.0.3

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Preface

This release letter describes the content of the UNICOS 10.0.0.3 update revision to the UNICOS 10.0 major release. It gives a broad overview of new features, enhancements, and changes in the UNICOS 10.0.0.3 release, as well as compatibilities and differences with the previous, UNICOS 10.0.0.2, release.

Conventions

The following conventions are used throughout this document:

<u>Convention</u>	<u>Meaning</u>																				
<code>command</code>	This fixed-space font denotes literal items such as commands, files, routines, path names, signals, messages, and programming language structures.																				
<code>manpage(x)</code>	Man page section identifiers appear in parentheses after man page names. The following list describes the identifiers: <table><tbody><tr><td>1</td><td>User commands</td></tr><tr><td>1B</td><td>User commands ported from BSD</td></tr><tr><td>2</td><td>System calls</td></tr><tr><td>3</td><td>Library routines, macros, and opdefs</td></tr><tr><td>4</td><td>Devices (special files)</td></tr><tr><td>4P</td><td>Protocols</td></tr><tr><td>5</td><td>File formats</td></tr><tr><td>7</td><td>Miscellaneous topics</td></tr><tr><td>7D</td><td>DWB-related information</td></tr><tr><td>8</td><td>Administrator commands</td></tr></tbody></table>	1	User commands	1B	User commands ported from BSD	2	System calls	3	Library routines, macros, and opdefs	4	Devices (special files)	4P	Protocols	5	File formats	7	Miscellaneous topics	7D	DWB-related information	8	Administrator commands
1	User commands																				
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3	Library routines, macros, and opdefs																				
4	Devices (special files)																				
4P	Protocols																				
5	File formats																				
7	Miscellaneous topics																				
7D	DWB-related information																				
8	Administrator commands																				
<i>variable</i>	Some internal routines (for example, the <code>_assign_asgcmd_info()</code> routine) do not have man pages associated with them. Italic typeface denotes variable entries and words or concepts being defined.																				

- | | |
|-------------------------|---|
| <code>user input</code> | This bold, fixed-space font denotes literal items that the user enters in interactive sessions. Output is shown in nonbold, fixed-space font. |
| [] | Brackets enclose optional portions of a command or directive line. |

The default shell in the UNICOS and UNICOS/mk operating systems, referred to in Cray Research documentation as the *standard shell*, is a version of the Korn shell that conforms to the following standards:

- Institute of Electrical and Electronics Engineers (IEEE) Portable Operating System Interface (POSIX) Standard 1003.2-1992
- X/Open Portability Guide, Issue 4 (XPG4)

The UNICOS and UNICOS/mk operating systems also support the optional use of the C shell.

Definitions of Audiences

Chapters 2 and 3 of this release letter list types of users most affected by the described feature or compatibility issue. The following definitions are used for these audiences:

<u>Term</u>	<u>Definition</u>
End user	Those who use the UNICOS operating system, products, applications, or network software.
Programmer	Those who write or modify system or application code for the purpose of solving computer system, scientific, or engineering problems.
Administrator	Those who perform system administration tasks such as installation, configuration, and basic troubleshooting.
System analyst	Those who perform advanced troubleshooting, tuning, and customization.

Operator	Those who perform operational functions or administer the computer system through an operator workstation.
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Distribution of This Release Letter

A copy of this release letter is included with the UNICOS 10.0.0.3 update release package; you can also order it separately through the Silicon Graphics Minnesota Software Distribution Center. You can access this release letter electronically. ASCII and PostScript files are available on the following systems:

- The CRInform system, which is an online information and problem-solving system for Silicon Graphics customers with Cray products. For more information, see Section 5.3, page 20.
- The Silicon Graphics `craypark` system in the `/home/craypark/release_docs` directory. The `craypark` system is available to Silicon Graphics service personnel.

If you do not have access to these systems but would like a copy of the files, contact your Silicon Graphics representative.

Reader Comments

If you have comments about the technical accuracy, content, or organization of this document, please tell us. You can contact us in any of the following ways:

- Send us e-mail at the following address:

`techpubs@sgi.com`

- Contact your customer service representative and ask that an SPR or PV be filed. If filing an SPR, use `PUBLICATIONS` for the group name, `PUBS` for the command, and `NO-LICENSE` for the release name.
- Call our Software Publications Group in Eagan, Minnesota, through the Customer Service Call Center, using either of the following numbers:
 - +1 800 950 2729 (toll free from the United States and Canada)
 - +1 651 683 5600
- Send a facsimile of your comments to the attention of “Software Publications Group” in Eagan, Minnesota, at fax number +1 651 683 5599.

We value your comments and will respond to them promptly.

Introduction [1]

The *UNICOS Release Letter* is a public document that provides an overview of the UNICOS 10.0.0.3 update release.

Note: If you are planning to upgrade CRAY J90 CPUs to CRAY SV1 CPUs, please contact your Silicon Graphics support representative regarding any additional modifications that are required to support CRAY SV1 CPUs.

1.1 Contents of This Release Letter

This release letter includes the following chapters:

- Chapter 2, page 5, “Software Enhancements”, describes new features and enhancements since the UNICOS 10.0.0.2 update release. This chapter also includes plans for features to be supported in future releases of the UNICOS operating system.
- Chapter 3, page 9, “Compatibilities and Differences”, describes compatibility issues and functionality changes involved in upgrading from UNICOS 10.0.0.2 to UNICOS 10.0.0.3.
- Chapter 4, page 13, “Documentation”, lists the printed and online documentation supporting the UNICOS 10.0.0.3 operating system release.
- Chapter 5, page 19, “Customer Services”, describes the customer services that Silicon Graphics offers to support the UNICOS 10.0.0.3 operating system release. This includes software training, problem reporting, and general service information.
- Chapter 6, page 23, “Release Package”, contains licensing information and a list of release package contents.

1.2 UNICOS 10.0.0.3: Third Update Release to UNICOS 10.0

UNICOS 10.0.0.3 is a general release. It is the third update release to follow the base UNICOS 10.0 operating system release.

1.3 Hardware Supported by the UNICOS 10.0.0.3 Release

The UNICOS 10.0.0.3 release supports the following Silicon Graphics GigaRing platforms:

- CRAY J90se series
- CRAY T90 series with Cray floating point CPUs
- CRAY T90 series with IEEE Std. 754 floating point CPUs
- CRAY SV1 series

The UNICOS 10.0.0.3 release also supports the following Silicon Graphics systems with Model E or Model V IOS:

- CRAY J90 series
- CRAY J90se series
- CRAY C90 series
- CRAY T90 series with Cray floating point CPUs
- CRAY T90 series with IEEE Std. 754 floating point CPUs

1.4 Tested and Supported Upgrade Paths

If your site runs any version of the UNICOS 9.0, UNICOS 9.1, UNICOS 9.2, or UNICOS 9.3 operating system releases, you can upgrade directly to the UNICOS 10.0.0.3 release. The exception to this is if you do not have a GigaRing based system and you wish to upgrade to a GigaRing based system. In this case, you must perform an initial installation.

Initial installs of Model V based and GigaRing based systems are supported with this UNICOS release and beyond. Support for initial installs of Model E based systems stopped after the UNICOS 9.1 operating system release.

1.5 Related Publications

This release letter only highlights new features released with the 10.0.0.3 update of the UNICOS operating system. For information about differences among other versions of the UNICOS operating system, see the following publications:

- The *UNICOS Release Letter*, publication RL-5001 10.0.0.2, describes differences between the UNICOS 10.0 and UNICOS 10.0.0.2 operating systems.
- The *UNICOS Release Overview 10.0*, describes differences between the UNICOS 9.0 and UNICOS 10.0 operating systems.
- The *UNICOS Release Letter 9.3*, describes differences between the UNICOS 9.2 and UNICOS 9.3 operating systems.
- The *UNICOS Release Letter 9.2*, describes differences between the UNICOS 9.1 and UNICOS 9.2 operating systems.
- The *UNICOS Release Letter 9.1*, describes differences between the UNICOS 9.0 and UNICOS 9.1 operating systems.

Software Enhancements [2]

This chapter describes the new features and enhancements included since the UNICOS 10.0.0.2 operating system release.

For additional information about upgrading to this release, see Chapter 3, page 9.

2.1 Operating System

The following section describes enhancements to the operating system that are new since the UNICOS 10.0.0.2 release.

2.1.1 CRAY SV1 Support Added

The UNICOS 10.0.0.3 release is the first UNICOS release to support CRAY SV1 systems.

2.1.2 CRAY SV1 MSP Kernel Support (Part 1) Added

The mechanism to bind groups of CRAY SV1 CPUs, called *single-streaming processors* (SSPs), into multi-streaming processors (MSPs) has been added. A gang scheduling facility to allow MSP-targeted tasks to execute on the MSPs has also been added. The initial implementation is a static model of this feature that provides only boot time MSP configurability. Dynamic MSP configurability will be provided by parts 2 and 3 of this feature.

2.1.3 ACID Number Print Option Added to `csacrep(8)` Command

A `-A` option has been added to the `csacrep(8)` command to print the ACID number instead of the ACID name (the default).

This feature closes SPR 711861.

See the `csacrep(8)` man page for more information.

2.1.4 Code Caching Option to Run 8 Megaword Codes on CRAY J90 Added to `SEGLDR`

Several very important applications are approaching or have exceeded the CRAY J90 limit of 4 megawords for code. Segmentation is not an acceptable

solution because: 1) Segmentation is a cumbersome and error prone process, 2) Silicon Graphics is not supporting segmentation in the future, and 3) Even with segmentation, the code may exceed 4 megawords.

A new SEGLDR option, `ORDER=YMP.8MW`, has been added that will allow applications with more than 4 megawords (and less than 8 megawords) of code to run unsegmented on CRAY J90 systems. The code is ordered under the control of user directives so that some code (preferably rarely executed code) resides in data space and then, when needed, a code cache manager linked into the application copies the code into code space for execution.

See the `segldr(1)` man page for more information.

2.1.5 SEGLDR Option for Memory Resident Copy of Segments Added

Performance of segmented applications can be improved significantly on CRAY J90 systems by keeping memory resident copies (in data space) of the segments. This will work on any system where segmentation is supported, but would not be of any particular benefit on systems like the CRAY C90 and CRAY T90 where code space is not limited to 4 megawords.

See the `segldr(1)` man page for more information.

2.1.6 CRAY SV1 Support Added to SEGLDR

The following enhancements add CRAY SV1 support to SEGLDR:

2.1.6.1 SEGLDR Support for CRAY SV1 Target Subtype Added

Two additional bits have been defined in the `a.out` header to support `cray-sv1`, both for cache and for multistreaming. If the `TARGET` is `cray-sv1`, SEGLDR scans and patches for JSE cache problems and sets the cache-safe bit in the `a.out` header. In addition, SEGLDR determines if the version of `libc` linked is 10.0 or later, which allows the `a.out` header to run cache-safe on CRAY SV1 systems even when multitasking. If the `a.out` header is compiled and linked for multistreaming, SEGLDR sets a bit in the `a.out` header to indicate that.

2.1.6.2 Support for CRAY SV1 Subtarget Added

Support has been added to the target library for CRAY SV1 systems. This includes updating the generation environment for CF90, C, C++, Craylibs, CAL, SEGLDR, and `nmake(1)`.

2.1.6.3 SEGLDR Option to Align Common Blocks Added

A SEGLDR option has been added to align common blocks on specified boundaries. Aligning common blocks on cache-line boundaries can help performance. Aligning on other specified boundaries is needed by some (nonportable) coding algorithms.

2.2 Tape Subsystems

There are no enhancements to tape subsystems since the 10.0.0.2 release.

2.3 Networking and Communications

The following section describes enhancements to Networking and Communications that are new since the UNICOS 10.0.0.2 release.

2.3.1 Host to Host (TCP/IP) over GigaRing Channel Added

This feature allows TCP/IP connections for CRAY J90se and CRAY T90 over the GigaRing channel.

2.4 System Installation

There are no enhancements to system installation since the UNICOS 10.0.0.2 release.

2.5 File Systems

The following section describes enhancements to file systems that are new since the UNICOS 10.0.0.2 release.

2.5.1 Support for BDS 2.1 Client Added

The Bulk Data Service (BDS) client has been updated to version 2.1. The most significant feature change for BDS 2.1 is added support for XFS file control with the `fcntl(2)` and `fcntl(5)` man pages. See the `fcntl(2)` and `fcntl(5)` man pages for more information.

2.6 Diagnostics

The following section describes enhancements to diagnostics that are new since the UNICOS 10.0.0.2 release.

2.6.1 `errpt` One-Line Summary for CPU Errors Enhanced

The `errpt(8)` one-line summary for CPU errors has been enhanced by adding more informative fields to the display. These include date, time, error, CPU, UID, PID, and process. A new device type, `cpu`, has also been added to allow the user to select only CPU errors for display with the `-d cpu` option. See the `errpt(8)` man page for more information.

2.6.2 Online CPU Tests Enhanced

The online CPU tests (`olcfpt(8)`, `olcm(8)`, `olcrit(8)`, `olcsvc(8)`, `olibuf(8)`, and `olsbt(8)`) have been enhanced so that these tests no longer try to run on dead CPUs. This enhancement prevents filling the `cron(8)` queue with unrunnable jobs. See the `olcfpt(8)` man page for more information on the online CPU tests.

2.7 Disk and Storage Device Enhancements

There are no enhancements to disk and storage devices since the UNICOS 10.0.0.2 release.

Compatibilities and Differences [3]

This chapter describes compatibility issues and functionality changes involved in upgrading from the UNICOS 10.0 major release and UNICOS 10.0.0.2 update release to the UNICOS 10.0.0.3 update release. This chapter also includes early information about changes planned for future UNICOS releases.

3.1 Compatibility Statement

To meet user requirements for compatibility between releases of Silicon Graphics software, upward compatibility is provided in subsequent releases of the system and products in the following areas:

- UNICOS user commands
- Standard language syntax, semantics, and Silicon Graphics extensions
- Absolute binary code
- Relocatable binary code

This chapter describes any incompatible changes that were introduced in this release for the following reasons:

- Hardware changes
- Third-party software changes
- Improved software design or numerical techniques
- Bugfixes

If possible, both the old and new software are provided for one release. In other cases, compatibility bridging is provided through special compatibility software for the duration of one major release.

3.2 Operating System

The following section describes a compatibility issue that affects the UNICOS operating system beginning with the 10.0.0.3 release.

3.2.1 Maintenance Support of UNICOS 9.0 Release for All Systems Ends 11/25/98

As announced at the Cray User Group (CUG) Conference in Stuttgart, Germany, maintenance support of the UNICOS 9.0 release for all system architectures will end on November 25, 1998, one year after the initial release of UNICOS 10.0. The Software Release Policy defines the support policy for operating systems, as follows:

Each Major Operating System release level is supported for one year beyond the introduction of the next Major release level.

The full text of the Software Release Policy, published in the May 1992 *Cray Research Service Bulletin* (CRSB), is available online in the CRInform system at the following URL:

<http://crinform.cray.com/crsb/articles/MAY.1992/intro.txt>

All sites are strongly encouraged to upgrade as soon as possible to the UNICOS 10.0 release, which provides Year 2000 support, new features, and fixes. UNICOS 10.0.0.3 provides support for the following systems (which includes CRAY SV1 systems):

- IOS model V systems, as follows:
 - CRAY J90
 - CRAY J90se
- IOS model E systems, as follows:
 - CRAY T90
 - CRAY T90 IEEE
 - CRAY C90
- GigaRing channel systems, as follows:
 - CRAY T90
 - CRAY T90 IEEE
 - CRAY J90se
 - CRAY SV1

Note: The UNICOS 10.0 release does not support CRAY Y-MP model E or CRAY EL systems.

UNICOS 9.0.2.9, the final update of UNICOS 9.0, is scheduled for release on October 26, 1998. The UNICOS 9.0.2.9 release will provide fixes to support CRAY Y-MP model E, CRAY C90, and CRAY T90 systems. The UNICOS 9.0.2.9 release will not contain any new features.

Note: Because the UNICOS 10.0 release supports CRAY J90 systems, the UNICOS 9.0.2.9 release will not support CRAY J90 systems. Also, because no fixes specifically for the CRAY EL system are included in the UNICOS 9.0.2.9 release, it will not support CRAY EL systems. (The “CRAY J90 IOS-V and CRAY EL UNICOS issues” article in the November 1997 *Cray Research Service Bulletin* (CRSB) described support for those systems.)

Note: If any critical UNICOS 9.0 maintenance support issues for CRAY Y-MP model E and CRAY EL systems are required after November 25, 1998, contact your Silicon Graphics Branch Service Manager or service representative.

3.2.2 `/etc/shutdown.sh` Script Changed

Between UNICOS 9.0 and UNICOS 10.0, the `/etc/shutdown.sh` script was changed to address problems seen at some sites in which users needed a user exit prior to shutting down the network from the mainframe. The change adds support for an `/etc/shutdown.mid` script. This script could be useful to sites that have NQS jobs that are being taken care of on NFS disks.

The script will be called after all user processes have been stopped, but the networks are still up. For more information about this change and the options available for the shutdown process, refer to *General UNICOS Administration*.

3.3 Networking and Communications

The following section describes a compatibility issue that affects network connectivity and communications for the UNICOS operating system beginning with the 10.0.0.3 release.

3.3.1 Internet Protocol Version 6 (IPv6) Not Supported

The UNICOS 10.0.0.2 operating system did not include support for Internet Protocol version 6 (IPv6), also known as next generation Internet protocol, as was announced in the *UNICOS Release Letter* for the UNICOS 10.0.0.2 operating system release. It is also not supported in the UNICOS 10.0.0.3 operating system release.

IPv6 will be supported in a future UNICOS release.

3.4 Programming Environments

There are no compatibility issues affecting programming environments from previous system releases for the UNICOS 10.0.0.3 operating system release.

3.5 Installation

There are no compatibility issues affecting the installation process from previous system releases for the UNICOS 10.0.0.3 operating system release.

3.6 Packaging

There are no changes to media, licensing, or packaging from previous system releases for the UNICOS 10.0.0.3 operating system release.

This chapter describes the documentation that supports the UNICOS 10.0.0.3 release.

4.1 Printed Documentation — All Platforms

The following is a list of publications that are packaged in printed form with the UNICOS 10.0.0.3 operating system release package. These publications apply to all platforms.

- *UNICOS Release Letter*
- *Common Installation Tool (CIT) Reference Card*
- *UNICOS System Configuration Using ICMS*

4.2 Printed Documentation — Platform-Specific

The following is a list of platform-specific publications that are packaged in printed form with the UNICOS 10.0.0.3 operating system release package.

- *UNICOS Notes/Errata for CRAY T90 Model E Systems*
- *UNICOS Installation Guide for CRAY C90, CRAY T90, and CRAY T90 IEEE Model E based Systems*
- *UNICOS Notes/Errata for CRAY J90 Model V based Systems*
- *UNICOS Installation Guide for CRAY J90, CRAY J90se, and CRAY SV1 Model V based Systems*
- *UNICOS Notes/Errata for Cray GigaRing Based Systems*
- *UNICOS Installation Guide for CRAY J90, CRAY J90se, and CRAY SV1 GigaRing based Systems*
- *UNICOS Installation Guide for CRAY T90 and CRAY T90 IEEE GigaRing based Systems*

4.3 Online Documentation — All Platforms

The UNICOS 10.0.0.3 release package includes a DynaWeb documentation CD which includes documentation written for all platforms supported by this release. The following publications are included on this CD in PostScript and PDF format.

Note: For further information about the DynaWeb documentation CD, see *Online Software Publications Installation Guide* and *Online Software Publications Administrator's Guide*.

- *UNICOS Release Overview*
- *UNICOS Release Letter*
- *Common Installation Tool (CIT) Reference Card*
- *OLNET Online Diagnostic Network Communications Program Maintenance Manual for UNICOS*
- *UNICOS under UNICOS Administrator's Guide*
- *Asynchronous Transfer Mode (ATM) Administrator's Guide*
- *General UNICOS System Administration*
- *UNICOS Resource Administration*
- *UNICOS Networking Facilities Administrator's Guide*
- *UNICOS Configuration Administrator's Guide*
- *UNICOS Basic Administration Guide for CRAY J90, CRAY J90se, and CRAY SV1 Model V based Systems*
- *UNICOS Basic Administration Guide for CRAY J90, CRAY J90se, and CRAY SV1 GigaRing based Systems*
- *Tape Subsystem User's Guide*
- *Tape Subsystem Administration*
- *UNICOS Multilevel Security (MLS) Feature User's Guide*
- *Segment Loader (SEGLDR) and ld Reference Manual*
- *TCP/IP Network User's Guide*
- *Remote Procedure Call (RPC) Reference Manual*

- *Cray Message System Programmer's Guide*
- *UNICOS X Window System Reference Manual*
- *Cray Assembly Language (CAL) for Cray PVP Systems Reference Manual*

4.4 Man Page Manuals

Man pages changed for releases following the UNICOS 10.0 release are available only online through the `man(1)` command. To view a man page, enter the following:

```
% man <command>
```

PostScript and PDF files of the following man page manuals supporting the UNICOS 10.0 release are included on the UNICOS 10.0.0.3 DynaWeb CD. You may also order them in printed form from the Silicon Graphics Minnesota Software Distribution Center.

- *UNICOS User Commands Reference Manual*
- *UNICOS System Calls Reference Manual*
- *UNICOS File Formats and Special Files Reference Manual*
- *UNICOS Administrator Commands Reference Manual*
- *UNICOS System Libraries Reference Manual*

4.5 Man Page Ready References

The following are UNICOS man page ready references that support the UNICOS 10.0 operating system release. These may be ordered from the Silicon Graphics Minnesota Software Distribution Center.

- *UNICOS User Commands Ready Reference*
- *UNICOS System Libraries Ready Reference*
- *UNICOS System Calls Ready Reference*
- *UNICOS Administrator Commands Ready Reference*

4.6 Documents for Separately Licensed Products

The following documents are for separately licensed products.

The following document is available in online format only:

Shared File System (SFS) Administrator's Guide

The following document is available in printed format only:

Kerberos Enigma Installation Guide

The following documents are included on the DynaWeb documentation CD in PostScript and PDF format:

- *Kerberos Administrator's Guide*
- *Kerberos User's Guide*

4.7 Online Information

The following online information sources are available to UNICOS 10.0.0.3 update release customers:

- The *User Publications Catalog* describes Cray product documentation available to customers. Customers who subscribe to the CRInform program can access this information on CRInform. For additional information about the CRInform program, see Section 5.3, page 20. Silicon Graphics personnel can access the catalog at:

<http://www.sdiv.cray.com/PUBLIC/pubs>

- The DynaWeb server enables you to view manuals on the World Wide Web. See your Silicon Graphics system administrator for the local URL of the DynaWeb server.
- Silicon Graphics maintains information on publicly available Cray product documents at the following URL:

<http://www.cray.com/swpubs/>

This web site contains information that allows you to browse documents online and send feedback to Silicon Graphics.

- Man pages, which describe a particular element of the UNICOS operating system or a compatible product. To see a detailed description of a particular command or routine, use the `man(1)` command.

- Online message system, which provides explanations of error messages. To see an explanation of a message, use the `explain(1)` command.
- UNICOS online glossary, which explains the terms used in a manual. To get a definition, use the `define(1)` command.

4.8 Ordering Additional UNICOS Publications

To order additional copies of the UNICOS publications that are available in printed form, call the Silicon Graphics Minnesota Software Distribution Center at +1 651 683 5907. Silicon Graphics employees may send e-mail to `orderdsk@sgi.com` (UNIX system users).

Customers outside of the United States and Canada should contact their local service organization for information on ordering documentation.

Customer Services [5]

This chapter describes the following customer services that Silicon Graphics offers to support the UNICOS 10.0.0.3 release:

- Customer Education Services support
- Software problem reporting and resolution process
- CRInform program
- *Cray Research Service Bulletin* (CRSB)

5.1 Customer Education Services Support

Silicon Graphics Customer Education provides both lecture/lab and self-paced IRIX and UNICOS training. You can attend one of several Silicon Graphics IRIX/UNICOS education centers in the U.S. or Canada.

To view the online catalog, which contains a description and schedule of current courses held at the United States or Canadian Education Centers, visit the public Silicon Graphics Education World Wide Web site at the following URL:

<http://www.sgi.com/support/custeducation>

You can also call one of the following:

U.S. Customer Education Hotline: +1 800 800 4SGI, option 4

Canadian Customer Education Hotline: +1 800 466 4308

On-site and customized courses are also available in the U.S. and Canada. Contact either the U.S. or Canadian Customer Education Hotline for more information on pricing and scheduling of on-site or customized courses.

5.2 Software Problem Reporting and Resolution Process

If you experience problems with the UNICOS operating system, contact your Silicon Graphics service representative: your service representative will work with you to resolve the problem. If you choose to have full-time or part-time on-site support, your on-site support personnel are your primary contacts for service. If you have elected not to have on-site support, please call your Silicon Graphics Technical Assistance Center (SGI TAC) and report your problem to

them or submit a request for technical assistance (RTA) through the CRInform program.

For current information on the status of all SPRs, see the CRInform / Software Problem Report (SPR) database.

5.3 CRInform Program

The CRInform program is a World Wide Web-based information and problem-reporting service for Silicon Graphics customers with Cray products. Using the CRInform program, you can do the following:

- Report software problems
- Request technical assistance
- Communicate directly with other Silicon Graphics customers with Cray products
- Read about software problems similar to yours reported at other sites
- Learn about solutions to various problems
- Find out about classes
- Read about new products, and more

The CRInform program automatically logs as news items those events that are pertinent to your site, so you do not have to search through the system for new information. The logged events include changes in Software Problem Report (SPR) or request for technical assistance (RTA) activity, new orderable software, new issues of the *Cray Research Service Bulletin* (CRSB), new field notices (FNs), new software release documents, new software problem fix information, new marketing information, and new CRInform program information. You can also get automatic e-mail notification of any or all of the news items.

Version 5.0 of the CRInform program is available through the World Wide Web. You need access to the CRInform web server and a browser (such as Mosaic, Netscape, or Lynx), which allows you to view information or make service requests. You can use your own site's browser, or use either the Mosaic or Lynx browsers available on the CRInform system.

5.4 Cray Research Service Bulletin (CRSB)

The *Cray Research Service Bulletin* (CRSB) is a bimonthly publication that supplies information about the software products and services of Silicon Graphics for Cray products. It includes information about new software releases, new features, new software tools, usage, tuning and performance enhancements, training and documentation, and symptoms of software problems and how to resolve them.

The *Cray Research Service Bulletin* is intended for those who administer Cray systems and for those who support users. To subscribe to the *Cray Research Service Bulletin*, contact your Silicon Graphics service representative.

The *Cray Research Service Bulletin* is available on the World Wide Web through the CRInform program.

Release Package [6]

This chapter contains the following information about the UNICOS 10.0.0.3 release package:

- UNICOS 10.0.0.3 release hardware and software requirements
- Licensing information
- Optional software
- Release package contents
- Ordering UNICOS 10.0.0.3 release package

6.1 UNICOS 10.0.0.3 Release Hardware and Software Requirements

The following sections cover the hardware platforms that support the UNICOS 10.0.0.3 release, and the software required with this release.

6.1.1 Silicon Graphics Systems Supported

The UNICOS 10.0.0.3 release supports the following Silicon Graphics GigaRing platforms:

- CRAY J90se series
- CRAY T90 series with Cray floating point CPUs
- CRAY T90 series with IEEE Std. 754 floating point CPUs
- CRAY SV1 series

The UNICOS 10.0.0.3 release also supports the following Silicon Graphics systems with Model E or Model V IOS:

- CRAY J90 series
- CRAY J90se series
- CRAY C90 series
- CRAY T90 series with Cray floating point CPUs
- CRAY T90 series with IEEE Std. 754 floating point CPUs

6.1.2 Tested and Supported Upgrade Paths

If your site runs any version of the UNICOS 9.0, UNICOS 9.1, UNICOS 9.2, or UNICOS 9.3 operating system releases, you can upgrade directly to the UNICOS 10.0.0.3 release. The exception to this is if you do not have a GigaRing based system and you wish to upgrade to a GigaRing based system. In this case, you must perform an initial installation.

Initial installs of Model V based and GigaRing based systems are supported with this UNICOS release and beyond. Support for initial installs of Model E based systems stopped after the UNICOS 9.1 operating system release.

For more information, see the following platform-specific installation and upgrade publications:

- *UNICOS Installation Guide for CRAY J90, CRAY J90se, and CRAY SV1 Model V based Systems*
- *UNICOS Installation Guide for CRAY J90, CRAY J90se, and CRAY SV1 GigaRing based Systems*
- *UNICOS Installation Guide for CRAY C90, CRAY T90, and CRAY T90 IEEE Model E based Systems*
- *UNICOS Installation Guide for CRAY T90 and CRAY T90 IEEE GigaRing based Systems*

Contact your Silicon Graphics representative for further information.

6.1.3 OWS, IOS-E, and SWS-ION Software

For Silicon Graphics systems with an IOS-E and for the CRAY T90 series, it is recommended that you upgrade to the IOS-E 9.0.1.3/015 and the OWS 9.0.1.3/015 releases, plus the getfix packages for FN2547 and FN2574.

For information about ordering the IOS-E 9.0 and OWS 9.0 releases, see the 9.0 version of the *Support System and IOS-E Release Overview*.

UNICOS 10.0.0.3 supports SWS-ION version 3.8 or later for GigaRing sites. However, SWS-ION version 3.10 is recommended.

6.1.4 Fortran Run-time Libraries

Sites that install the UNICOS 10.0.0.3 release must upgrade to the Programming Environment 3.0 or later release to obtain Fortran run-time libraries. This is

because these libraries were no longer released with the UNICOS system beginning with UNICOS 9.0.

Note: Sites running the UNICOS 8.3 *restricted* release also have this requirement. These libraries were not released with UNICOS 8.3.

6.2 Asynchronous Software Products Supported with This Release

The following sections list the software products most commonly used in conjunction with the UNICOS operating system. The product release level required with UNICOS 10.0.0.3, if any, is specified. For information about other products, contact your Silicon Graphics representative.

6.2.1 Programming Environments Supported

The UNICOS 10.0.0.3 release supports the following Silicon Graphics programming environments, which are released asynchronously or otherwise separately from the UNICOS 10.0.0.3 release.

- CF90 Programming Environment 3.0 or later for Cray PVP and MPP systems. See the *Programming Environment Releases Overview* for additional information.
- Cray C++ Programming Environment 3.0 or later for Cray PVP and MPP systems. This package includes Cray Standard C. See the *Programming Environment Releases Overview* for additional information.
- C++ MathPack 3.0 for Cray PVP and MPP systems. See the *Cray C++ Library Products Technical Note* for additional information.
- C++ Tools 3.0 for Cray PVP and MPP systems. See the *Cray C++ Library Products Technical Note* for additional information.
- CAL 9.1 (Cray Assembly Language for Cray PVP Systems). See the *Cray Assembly Language (CAL) for Cray PVP Systems Reference Manual* for additional information.

6.2.2 Distributed Computing and Networking Software Supported

The UNICOS 10.0.0.3 release supports the following Silicon Graphics distributed computing and networking software products, which are released asynchronously or otherwise separately from the UNICOS 10.0.0.3 release.

- Distributed Computing Environment (DCE) 1.1 or later

Customers wishing to use the Cray Distributed Computing Environment (DCE) Client Services, must purchase a DCE Client Services license. DCE 1.1 or later required with UNICOS 10.0.0.3. For more information about DCE licensing or to purchase a DCE license, contact your Silicon Graphics representative.

For information describing this product, see the *Cray DCE Client Services/Cray DCE DFS Server Release Overview* or contact your Silicon Graphics representative.

- Distributed File System (DFS) 1.1 or later

To use the Cray DCE Distributed File System (DFS), sites must purchase a DFS Server license, as well as a DCE Client Services prerequisite license. For more information about DFS licensing or to purchase a DFS license, contact your Silicon Graphics representative.

For information describing this product, see the *Cray DCE Client Services/Cray DCE DFS Server Release Overview* or contact your Silicon Graphics representative.

- Network Queuing Environment (NQE) 3.3 or later

The Cray Network Queuing Environment (NQE) is a set of clients and servers that allows batch requests to be executed across a load-balanced network of hosts. UNICOS 10.0.0.3 supports NQE version 3.3 or later.

For more information about NQE or to purchase an NQE license, contact your Silicon Graphics representative, or see the *NQE Release Overview*.

- SUPERLINK/VMS 1.4

SUPERLINK for DEC VAX/VMS Systems provides a link between DEC VAX/VMS systems and the UNICOS operating system on Cray PVP systems. UNICOS 10.0.0.3 supports the 1.4 version of SUPERLINK/VMS.

Note: You must purchase a SUPERLINK/VMS license to use this product.

For information describing this product, see the *SUPERLINK for DEC VAX OpenVMS and Alpha AXP Systems 1.4 Release Overview*.

Note: This product has been placed in maintenance mode. Maintenance mode means that this product has been stabilized and there will be no future development of this product. Silicon Graphics will no longer be issuing any feature updates or new releases to this product, and publications will not be updated.

Silicon Graphics will, however, continue to support this product for those customers who have current service contracts. Those customers will continue to receive telephone technical assistance, and bugfix packages will be provided on an “as needed” basis. Critical and urgent SPRs are candidates to be fixed in accordance with the SPR Response Guidelines.

- Cray Visualization Toolkit (CVT) 3.1

The Cray Visualization Toolkit is a collection of tools that allows users to create visual interfaces for Silicon Graphics system applications. CVT software is appropriate for all CRAY C90, CRAY T90, CRAY J90 and CRAY T3E computer systems. UNICOS 10.0.0.3 supports the 3.1 version of CVT.

Note: You must purchase a CVT license to use this product.

- Remote Queuing System (RQS/VMS) 2.0

The Remote Queuing System (RQS) for DEC VAX/VMS Systems is used for remote job submission and control to Cray PVP systems from a DEC VAX/VMS running VMS 5.4 or later. UNICOS 10.0.0.3 supports the 2.0 release of RQS/VMS.

Note: You must purchase an RQS/VMS license to use this product.

For information describing this product, see the *RQS for DEC VAX/VMS Systems Release Overview*

Note: This product has been placed in maintenance mode. Maintenance mode means that this product has been stabilized and there will be no future development of this product. Silicon Graphics will no longer be issuing any feature updates or new releases to this product, and publications will not be updated.

Silicon Graphics will, however, continue to support this product for those customers who have current service contracts. Those customers will continue to receive telephone technical assistance, and bugfix packages will be provided on an “as needed” basis. Critical and urgent SPRs are candidates to be fixed in accordance with the SPR Response Guidelines.

- Front End Servicing for IBM/MVS Systems (FES MVS) 2.0

The Front End Servicing for IBM/MVS Systems (FES MVS) integrates UNICOS online tape management on CRAY J90, CRAY C90 or CRAY T90 systems running UNICOS with tape management systems for other computer systems running the IBM/MVS operating system. UNICOS 10.0.0.3 supports the 2.0 version of this product.

Note: You must purchase an FES MVS license to use this product.

For information on FES MVS see the *FES MVS Installation and Administration Guide*.

Note: This product has been placed in maintenance mode. Maintenance mode means that this product has been stabilized and there will be no future development of this product. Silicon Graphics will no longer be issuing any feature updates or new releases to this product, and publications will not be updated.

Silicon Graphics will, however, continue to support this product for those customers who have current service contracts. Those customers will continue to receive telephone technical assistance, and bugfix packages will be provided on an “as needed” basis. Critical and urgent SPRs are candidates to be fixed in accordance with the SPR Response Guidelines.

6.3 Storage Management Software Supported

The UNICOS 10.0.0.3 release supports the following Silicon Graphics storage management software products. These are released asynchronously or otherwise separately from the UNICOS 10.0.0.3 release.

- Data Migration Facility

The Cray Data Migration Facility (DMF) ensures the availability of file system space by moving selected files from online disk to an offline storage medium. DMF 2.5 is the level of DMF required with UNICOS 10.0.0.3.

Note: You must purchase a DMF license to use this product.

- HIPPI disk support software

Silicon Graphics will supply HIPPI disk software free of charge to customers purchasing disks from Silicon Graphics. If customers choose to purchase their disks from another vendor, HIPPI disk support software must be licensed and purchased from Silicon Graphics.

- Cray REELibrarian (CRL)

CRL is a client/server volume management system that controls a centrally stored library of tapes (or volumes) and allows requests for tape mounts. UNICOS 10.0.0.3 supports the 2.0.9 release of CRL.

Note: You must purchase a CRL Client or CRL Server license to use this product.

For additional software availability, contact your Silicon Graphics representative.

6.4 Licensing Information

The UNICOS operating system is licensed under a software contract by Silicon Graphics to its customers. The UNICOS 10.0.0.3 release is available as follows:

- For CRAY T90 and CRAY C90 systems, UNICOS 10.0.0.3 is available in both source and binary code formats.
- For CRAY J90 systems (including J90se systems), UNICOS 10.0.0.3 is available in binary format only. CRAY J90se customers may, however, obtain an optional J90 UNICOS Source Materials package, providing they obtain a separate J90 UNICOS Source Materials license.

Note: The UNICOS 10.0.0.3 release package requires a UNICOS System Software license; customers with a UNICOS System Software license do not need additional Silicon Graphics licenses to receive the standard UNICOS 10.0.0.3 release package (see Section 6.4.2, page 32 for information on UNIX license requirements). Software for programming environments (compilers) and the Data Migration Facility (DMF) are licensed separately from the UNICOS System Software license. Other functionality is also offered as separately licensed products.

Customers outside the United States and Canada must sign a Letter of Assurance before software can be shipped. Address all questions regarding which customers have signed a Letter of Assurance, or which software requires this letter to Alan Benfell, at the following address:

Alan Benfell
International Administration
Silicon Graphics, Inc.
655F Lone Oak Drive
Eagan, MN 55121
Telephone: +1 651 683 7460

Fax: +1 651 683 7509
E-mail: benfa@sgi.com

6.4.1 Products That Require Flexible License Manager Keys

The UNICOS 10.0.0.3 release includes the Flexible License Manager (FLEXlm), which controls the use of certain products in the UNICOS operating system. In UNICOS 10.0.0.3, the following products are licensed through FLEXlm:

- ONC+
- UNICOS shared file system
- CRSTK/STKRED
- CRIBM/IBM 3495 (implementation of IBM 3495 Tape Library Dataserver support is deferred)
- CREMS/DTDL and CREMS/ER90
- BDS (Bulk Data Services) Client
- BDS (Bulk Data Services) Server
- NQE (Network Queuing Environment)

Whether products are packaged with the UNICOS operating system or separately packaged, the license keys are generated by the Silicon Graphics order desk during the product order cycle. After the order desk has received notice of the order, it issues the contracted license keys. The license keys and installation instructions are sent by e-mail.

For a complete list of products that operate with UNICOS software, contact your Silicon Graphics representative.

If a licensed product has been installed and a problem arises that is suspected to be related to the license key, it is possible to get an emergency key from the Customer Service Call Center in the United States or from the service organization in other countries.

6.4.1.1 ONC+

To use ONC+ technology, sites must purchase an ONC+ license. For more information about ONC+ licensing or to purchase an ONC+ license, contact your Silicon Graphics representative.

For information describing this product, see the *UNICOS 9.0 Release Letter* or contact your Silicon Graphics representative.

6.4.1.2 UNICOS Shared File Systems

To use UNICOS shared file systems (SFS), sites must purchase an SFS license. For more information about SFS licensing or to purchase an SFS license, contact your Silicon Graphics representative.

For information describing this product, see the *UNICOS 9.0 Release Letter* or contact your Silicon Graphics representative.

6.4.1.3 CRSTK/STKRED

To use StorageTek RedWood drive autoloader cartridge system support, sites must purchase a CRSTK/STKRED license. For more information about CRSTK/STKRED licensing or to purchase a CRSTK/STKRED license, contact your Silicon Graphics representative.

For additional information, see the *UNICOS 9.0 Release Letter* or contact your Silicon Graphics representative.

6.4.1.4 CRIBM/IBM 3495

To use IBM 3495 support software, sites must purchase a CRIBM/IBM 3495 license. For more information about CRIBM/IBM 3495 licensing or to purchase a CRIBM/IBM 3495 license, contact your Silicon Graphics representative.

Implementation of IBM 3495 Tape Library Dataserver support is deferred.

6.4.1.5 CREMS/DTDLD and CREMS/ER90

To use the EMASS robotic and ER90 device products, sites must purchase a CREMS/DTDLD license. For more information about CREMS/DTDLD licensing or to purchase a license, contact your Silicon Graphics representative.

6.4.1.6 BDS (Bulk Data Services) Server

The BDS Server data transfer product is available for Cray PVP systems for UNICOS 10.0.0.3. BDS Server is controlled by FLEXlm and requires a separate license for access.

For more information on this product, see the `bds(8)` man page, or contact your Silicon Graphics representative.

6.4.1.7 BDS (Bulk Data Services) Client

The BDS Client data transfer product is available for Cray PVP systems for UNICOS 10.0.0.3. BDS Client is controlled by FLEXlm and requires a separate license for access.

For more information on this product, see the `bds(8)` man page, or contact your Silicon Graphics representative.

6.4.1.8 NQE (Network Queuing Environment)

UNICOS 10.0.0.3 supports the 3.3 release of NQE. You are required to have a FLEXlm license for NQE 3.3 only if you did not purchase NQE 3.1.

For information describing this product, see the *NQE Release Overview* or contact your Silicon Graphics representative.

6.4.2 UNICOS Source Code License

To receive a UNICOS 10.0.0.3 source code license, customers must first obtain a UNIX source code license for the UNIX System V, Release 4.0 (SVR 4.0). Customers can obtain these rights through Cray Research/Silicon Graphics, or through The Santa Cruz Operation, Inc. (SCO).

Note: Customers with UNIX rights that allow them to receive the UNICOS 9.0 release do not need additional UNIX licensing for the UNICOS 10.0.0.3 release.

For information on who to contact if you have licensing questions, or if your site has not signed all appropriate Silicon Graphics software license agreements, see Section 6.4.3 or Section 6.4.4.

For information about available optional software products that are included with your UNICOS license but which you must order to receive with your UNICOS 10.0.0.3 release package, see Section 6.5, page 36.

For more information about the FLEXlm license manager, or for information about products that are included in the UNICOS 10.0.0.3 release software but which require a FLEXlm license key to access the product, see Section 6.4.1, page 30.

6.4.2.1 UNIX System V Licenses for CRAY J90 Systems

CRAY J90 customers that have a standard binary release of UNICOS 10.0.0.3 must have a UNIX System V, Release 4.0 *binary* license, available only through Silicon Graphics.

CRAY J90 customers with the J90 Source Materials Option need an additional UNIX System V, Release 4.0 *source* license, available through Silicon Graphics, or through The Santa Cruz Operation, Inc. (SCO).

6.4.3 Licensing Contacts for Customers in the U.S.

For more information on the licensing and pricing of the UNICOS 10.0.0.3 release, customers in the United States should contact their account representative or one of the following contract negotiators:

Americas Government Region

Collin Rust
Silicon Graphics, Inc.
655F Lone Oak Drive
Eagan, MN 55121
Telephone: +1 651 683 7307
Fax: +1 651 683 7297
E-mail: rustcc@sgi.com

Americas West Region

Tim Frush
Silicon Graphics, Inc.
3000 Executive Parkway
Suite 410
San Ramon, CA 94583
Telephone: +1 510 824 1762
Fax: +1 510 277 1982
E-mail: frusht@sanramon.sgi.com

Americas East Region

Kent Randolph
Silicon Graphics, Inc.
4041 Powder Mill Road
Suite 600
Calverton, MD 20705
Telephone: +1 301 595 2631
Fax: +1 301 595 2647
E-mail: krandolp@clubfed.sgi.com

Raquel Jackson
Silicon Graphics, Inc
4041 Powder Mill Road
Suite 600
Calverton, MD 20705
Telephone: +1 301 595 2685
Fax: +1 301 595 2647
E-mail: jackrc@clubfed.sgi.com

6.4.4 Licensing Contacts for Customers outside the U.S.

Customers outside the U.S. may obtain further licensing and export information by contacting their account representative or the individuals listed in the following sections.

6.4.4.1 Silicon Graphics European Regional Contract Negotiators

Customers in Europe can direct licensing inquiries to the following Regional Contract Negotiators/Specialists:

Europe North Sales Region (including UK / Ireland / Russia / Poland / Denmark / Finland / Norway / Sweden / Netherlands)

Nick Jacobs
Silicon Graphics Limited
1530 Arlington Business Park
Theale
Reading
Berkshire, RG7 4SB, England
Telephone: +44 118 925 70 41
Fax: +44 118 925 77 16
E-mail: niknik@reading.sgi.com

Rest of Europe and South Africa

Simon Locke
Silicon Graphics Limited
1530 Arlington Business Park
Theale
Reading
Berkshire, RG7 4SB, England
Telephone: +44 118 925 70 49
Fax: +44 118 925 79 46
E-mail: srl@sgi.com

Europe Central (including Germany and Austria)

Thomas Wegener

Silicon Graphics GmbH

Am Hochacker 3

85630 Grasbrunn-Neukeferloh

Germany

Telephone: +089 46108 321

Fax: +089 46108 322

E-mail: thomasw@munich.sgi.com

Europe South Sales Region (including France)

Cecile Goachet / Patricia Guillerm-Brillet

Silicon Graphics France

21, rue Albert Calmette

78351 Jouy en Josas

France

Telephone: +33 01 34 88 82 51

Fax: +33 01 34 65 96 19

E-mail: cecile@sgi.com and pguiller@paris.sgi.com

6.4.4.2 Silicon Graphics Japan Contracts / Legal

Customers in Japan can direct licensing inquiries to Shinji Uekusa or Yuko Hizume at the following addresses:

Shinji Uekusa

Nihon Silicon Graphics Cray K.K.

31F, Yebisu Garden Place, 4-20-3

Ebisu, Shibuya-ku

Tokyo

Japan 150

Telephone: +81 3 54 88 56 92

Fax: +81 3 54 20 18 67

E-mail: uekus@nsg.sgi.com

Yuko Hizume

Nihon Silicon Graphics Cray K.K.

P.O. Box 5011 Yebisu Garden Place Tower

4-20-3, Ebisu

Shibuya-ku, Tokyo 150

Japan

Telephone: +81 3 54 88 18 19

Fax: +81 3 54 20 70 20

E-mail: hizume@nsg.sgi.com

6.4.4.3 Other Customers

International customers outside Europe and Japan should direct licensing inquiries to their respective country attorneys.

6.5 Optional Software

You can order the following software products on your UNICOS 10.0.0.3 software order form as optional software when you order your UNICOS 10.0.0.3 release package.

Note: These products are included with your UNICOS license, but they are not automatically shipped as part of the UNICOS 10.0.0.3 release package. If you want any of the following products, you must order them on the UNICOS 10.0.0.3 order form.

The products described are as follows:

- Kerberos Enigma software
- DWB

For a complete list of Silicon Graphics products that operate with the UNICOS 10.0.0.3 operating system, contact your Silicon Graphics representative.

6.5.1 Kerberos Enigma Software

The Kerberos Enigma software contains software for CRYPT and Kerberos. The Kerberos Enigma tape replaces the CRYPT and RPC Enigma tapes. The Kerberos Enigma software is available in both binary and source code, depending on the license terms with each customer and on-site location.

6.5.1.1 Kerberos Enigma Software Shipped within the U.S. and Canada

For shipments of Kerberos Enigma software within the United States and Canada, order it as optional software on the UNICOS 10.0.0.3 software order form.

Customers in the United States and Canada receive tapes that include versions of the Kerberos programs that support data stream encryption. The software is available in either source or binary form, depending on the license terms with each customer.

6.5.1.2 Kerberos Enigma Software Shipped outside of the U.S. or Canada

Customers outside the United States and Canada receive binary software regardless of whether their site has a source or binary UNICOS license. With this software, customers outside the United States and Canada can run Kerberos without support for data stream encryption. To order this software, use the UNICOS 10.0.0.3 software order form.

An export license from the U.S. Department of Commerce is required for software shipments outside the United States or Canada. This export license is required in addition to the Department of Commerce export license necessary for Silicon Graphics hardware. If a U.S. Department of Commerce export license is **not** in place for the customer serial number for which the Kerberos Enigma software is desired, a U.S. Department of Commerce Application Request for Kerberos Enigma is required before an export license can be processed. If an export license already exists, the statement is **not** required. The Kerberos Enigma binary software order form contains a U.S. Department of Commerce Application Request for Kerberos Enigma.

Note: Jurisdiction for exporting Kerberos has recently changed from the U.S. Department of State to the U.S. Department of Commerce. Customers who currently hold export licenses with the Department of State do not need to reapply for new licenses with the Department of Commerce. Current Department of State licenses are still valid through the expiration date listed on the license, or until the maximum number of copies of Kerberos allowed under the license are shipped.

You can obtain a U.S. Department of Commerce export license for UNICOS from Alan Benfell at the following address:

Alan Benfell
International Administration
Silicon Graphics, Inc.
655F Lone Oak Drive
Eagan, MN 55121
Telephone: +1 651 683 7460
Fax: +1 651 683 7509
E-mail: benfa@sgi.com

6.5.2 DWB

DWB is based on Documenter's Workbench from Novell, Inc. Only binary software is provided.

DWB is packaged separately from the UNICOS operating system. To receive DWB, order it using the “Additional Software” section of the UNICOS 10.0.0.3 software order form.

Note: A separate license is not required for DWB. UNICOS System Software and UNICOS Set licenses include binary licenses for DWB.

6.6 Release Package Contents

The UNICOS 10.0.0.3 release package includes the following:

- Software media that contains the UNICOS 10.0.0.3 release. IOS-E sites automatically receive the OWS 9.0.1.3/015 and IOS 9.0.1.3/015 release package when the UNICOS 10.0.0.3 release is ordered.

Note: If your site is licensed for supported UNICOS source code, you will receive a source code package, which lets you modify your code locally. For major releases, you can load source code into your system together with binary code packages before generation.

- Online man page files. To display these files, use the `man(1)` command.
- A CD-ROM that contains the DynaWeb server and the UNICOS publications.
- A set of printed publications.

6.7 Ordering the UNICOS 10.0.0.3 Release Package

UNICOS is distributed by order only to sites that have signed a Silicon Graphics software license agreement for the UNICOS product. The most current revision of the release package is supplied.

Please make sure your site has signed a Silicon Graphics software license agreement before you order the UNICOS 10.0.0.3 release package (see Section 6.4, page 29, for details).

You can order the UNICOS 10.0.0.3 release package using one of the following methods:

- Customers who subscribe to the CRInform program can order software release packages electronically by using the `Order Cray Software` option.

- Customers can contact the order desk at the Silicon Graphics Minnesota Software Distribution Center by telephone (+1 651 683 5907 or 1 800 284 2729 extension 35907) or e-mail (orderdesk@sgi.com).
- Customers outside of the United States and Canada should contact their local service organization for ordering and documentation information.

Software will be shipped by ground service or 5-day international service unless otherwise requested.

Sites outside the United States may be required to provide a customer-signed Letter of Assurance before this software can be shipped. Address questions about which customers must sign Letters of Assurance or which software requires such a letter to Alan Benfell at the following address:

Alan Benfell
International Administration
Silicon Graphics, Inc.
655F Lone Oak Drive
Eagan, MN 55121
Telephone: +1 651 683 7460
Fax: +1 651 683 7509
E-mail: benfa@sgi.com

6.7.1 Further Information

If you have questions, or if your site has not signed a Silicon Graphics software license agreement, either contact your regional contract negotiator or contact Jenny Gross at the following address:

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655F Lone Oak Drive
Eagan, MN 55121 USA
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