Preface

This publication documents the Cray Research, Inc. (CRI) implementation of Sun Microsystems' remote procedure call (RPC) facility for all Cray Research systems. Using the External Data Representation (XDR) data definition language, RPC provides the means for communicating across diverse network environments. These procedures are a standard part of the UNICOS operating system. This RPC facility can interface with any network file system (NFS) implementation.

Readers of this manual should be familiar with the C programming language and with the administration of User Datagram Protocol/Internet Protocol (UDP/IP) and Transmission Control Protocol/Internet Protocol (TCP/IP) networks in a Berkeley UNIX environment.

Note: The Trusted UNICOS system is a configuration of the UNICOS MLS system that supports processing at multiple security labels and system administration using only non-super user administrative roles. The Trusted UNICOS system consists of the subset of UNICOS software that offers these capabilities. The Trusted UNICOS name does not imply maintenance of the UNICOS 8.0.2 security evaluation.

For the UNICOS 10.0 release, the functionality of the Trusted UNICOS system will be retained, but the `CONFIG_TRUSTED` option, which enforces conformance to the strict B1 configuration, will no longer be available. All references to the Trusted UNICOS system will be removed from the UNICOS 10.0 documentation. See the *UNICOS 9.0 Release Overview*, RO–5000 9.0, for more information.

Related publications

The following documents contain additional information that may be helpful:

- *UNICOS User Commands Reference Manual*, publication SR–2011
- *UNICOS Networking Facilities Administrator's Guide,* publication SG–2304
- *UNICOS Administrator Commands Reference Manual*, publication SR–2022
- *ONC+ Technology for the UNICOS Operating System*, publication SG–2169

The *User Publications Catalog*, publication CP–0099, describes the availability and content of all Cray Research hardware and software manuals that are available to customers.

To order a manual, either call the Distribution Center in Mendota Heights, Minnesota, at +1–612–683–5907 or send a facsimile of your request to fax number +1–612–452–0141. Cray Research employees may send electronic mail to `orderdsk` (UNIX system users).

Conventions

The following conventions are used throughout this manual:

Convention	Meaning
`command`	This fixed-space font denotes literal items such as commands, files, routines, path names, signals, messages, and programming language structures.
`manpage`(*x*)	Man page section identifiers appear in parentheses after man page names. The following list describes the identifiers: 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
`routine`()	Routine names followed by an empty set of parentheses designate a library or kernel routine; for example, `ddcntl`(). Kernel routines do not have man pages associated with them.
variable	Italic typeface denotes variable entries and words or concepts being defined.
`user input`	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 line.
...	Ellipses indicate that a preceding command-line element can be repeated.

Convention	Meaning
KEY	This convention indicates a key on the keyboard.
<KEY>	On man pages, this convention indicates a key on the keyboard.

The following machine naming conventions may be used throughout this manual:

Term	Definition
Cray PVP systems	All configurations of Cray parallel vector processing (PVP) systems, including the following: CRAY C90 series (CRAY C916, CRAY C92A, CRAY C94, CRAY C94A, and CRAY C98 systems) CRAY C90D series (CRAY C92AD, CRAY C94D, and CRAY C98D systems) CRAY EL series (CRAY Y-MP EL, CRAY EL92, CRAY EL94, and CRAY EL98 systems) CRAY J90 series (CRAY J916 and CRAY J932 systems) CRAY T90 series (CRAY T94, CRAY T916, and CRAY T932 systems) CRAY Y-MP E series (CRAY Y-MP 2E, CRAY Y-MP 4E, CRAY Y-MP 8E, and CRAY Y-MP 8I systems) CRAY Y-MP M90 series (CRAY Y-MP M92, CRAY Y-MP M94, and CRAY Y-MP M98 systems)
Cray MPP systems	All configurations of Cray massively parallel processing (MPP) systems, including the CRAY T3D series (CRAY T3D MC, CRAY T3D MCA, and CRAY T3D SC systems)

Term	Definition
All Cray Research systems	All configurations of Cray PVP and Cray MPP systems that support this release
SPARC systems	All SPARC platforms that run the Solaris operating system version 2.3 or later

The default shell in the UNICOS 9.0 release, 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 Company Standard XPG4

The UNICOS 9.0 operating system also supports the optional use of the C shell.

The POSIX standard uses *utilities* to refer to executable programs that Cray Research documentation usually refers to as *commands*. Both terms appear in this document.

In this publication, *Cray Research*, *Cray*, and *CRI* refer to Cray Research, Inc. and/or its products.

Online information

The following types of online information products are available to Cray Research customers:

- CrayDoc online documentation reader, which lets you see the text and graphics of a manual online. The CrayDoc reader is available on workstations. To start the CrayDoc reader at your workstation, use the `cdoc`(1) command.
- Docview text-viewer system, which lets you see the text of a manual online. The Docview system is available on the Cray Research mainframe. To start the Docview system, use the `docview`(1) command.
- 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.

- UNICOS message system, which provides explanations of error messages. To see an explanation of a message, use the `explain`(1) command.
- Cray Research online glossary, which explains the terms used in a manual. To get a definition, use the `define`(1) command.
- `xhelp` help facility. This online help system is available within tools such as the Program Browser (`xbrowse`) and the MPP Apprentice tool.

For detailed information on these topics, see the *User's Guide to Online Information*, publication SG–2143.

Reader comments

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

- Send us electronic mail from a UNICOS or UNIX system, using the following UUCP address:

  `uunet!cray!publications`

- Send us electronic mail from any system connected to Internet, using the following Internet addresses:

  `pubs2089@timbuk.cray.com` (comments on this manual)

  `publications@timbuk.cray.com` (general comments)

- Contact your Cray Research representative and ask that a Software Problem Report (SPR) be filed. 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 Technical Support Center, using either of the following numbers:

  1–800–950–2729 (toll free from the United States and Canada)

  +1–612–683–5600

- Send a facsimile of your comments to the attention of "Software Publications Group" in Eagan, Minnesota, at fax number +1–612–683–5599.
- Use the postage-paid Reader's Comment Form at the back of the printed manual.

We value your comments and will respond to them promptly.