Preface

This manual documents UNICOS release 10.0.0.2 running on Cray Research systems. It contains information on the administration of networking facilities supported by the UNICOS operating system.

Warning: Starting with the UNICOS 10.0 release, the term *Cray ML-Safe* replaced the term *Trusted UNICOS*, which referred to the system configuration used to achieve the UNICOS 8.0.2 release evaluation. Because of changes to available software, hardware, and system configurations since the UNICOS 8.0.2 system release, the term *Cray ML-Safe* does not imply an evaluated product, but refers to the currently available system configuration that closely resembles that of the evaluated Trusted UNICOS 8.0.2 system.

For the UNICOS 10.0 release and subsequent releases of the UNICOS operating system, the functionality of the Trusted UNICOS system has been retained, but the `CONFIG_TRUSTED` option, which enforces conformance to the strict B1 configuration, is no longer available.

UNICOS System Administration Publications

Information on the structure and operation of a Cray Research computer system running the UNICOS operating system, as well as information on administering various products that run under the UNICOS operating system, is contained in the following documents:

- *General UNICOS System Administration*, publication SG–2301, contains information on performing basic administration tasks as well as information about system and security administration using the UNICOS multilevel (MLS) feature. This publication contains chapters documenting file system planning, UNICOS startup and shutdown procedures, file system maintenance, basic administration tools, crash and dump analysis, the UNICOS multilevel security (MLS) feature, and administration of online features.

- *UNICOS Resource Administration*, publication SG–2302, contains information on the administration of various UNICOS features available to all UNICOS systems. This publication contains chapters documenting accounting, automatic incident reporting (AIR), the fair-share scheduler, file system quotas, file system monitoring, system activity and performance monitoring, and the Unified Resource Manager (URM).

- *UNICOS Configuration Administrator's Guide*, publication SG–2303, provides information about the UNICOS kernel configuration files and the run-time configuration files and scripts.

- *UNICOS Networking Facilities Administrator's Guide*, publication SG–2304, contains information on administration of networking facilities supported by the UNICOS operating system. This publication contains chapters documenting TCP/IP for the UNICOS operating system, the UNICOS network file system (NFS) feature, and the network information system (NIS) feature.

- *NQE Administration*, publication SG–2150, describes how to configure, monitor, and control the Cray Network Queuing Environment (NQE) running on a UNIX system.

- *Kerberos Administrator's Guide*, publication SG–2306, contains information on administration of the Kerberos feature, a set of programs and libraries that provide distributed authentication over an open network. This publication contains chapters documenting Kerberos implementation, configuration, and troubleshooting.

- *Tape Subsystem Administration*, publication SG–2307, contains information on administration of UNICOS and UNICOS/mk tape subsystems. This publication contains chapters documenting tape subsystem administration commands, tape configuration, administration issues, and tape troubleshooting.

Related publications

The following man page manuals contain additional information that may be helpful.

Note: For the UNICOS 10.0.0.2 release, man page reference manuals are not orderable in printed book form. Instead, they are available as printable PostScript files provided on the same DynaWeb CD as the rest of the supporting documents for this release. Individual man pages are still available online and can be accessed by using the man(1) command.

- *UNICOS User Commands Reference Manual*, publication SR–2011

- *UNICOS System Calls Reference Manual*, publication SR–2012

- *UNICOS File Formats and Special Files Reference Manual*, publication SR–2014

- *UNICOS Administrator Commands Reference Manual*, publication SR–2022

- *UNICOS System Libraries Reference Manual*, publication SR–2080

The following ready references are available in printed form from the Distribution Center:

- *UNICOS User Commands Ready Reference*, publication SQ–2056

- *UNICOS System Libraries Ready Reference*, publication SQ–2147

- *UNICOS System Calls Ready Reference*, publication SQ–2215

- *UNICOS Administrator Commands Ready Reference*, publication SQ–2413

Design specifications for the UNICOS multilevel security (MLS) feature are based on the trusted computer system evaluation criteria developed by the U. S. Department of Defense (DoD). If you require more information about multilevel security on UNICOS, you may find the following sources helpful:

- DoD Computer Security Center. *A Guide to Understanding Trusted Facility Management* (DoD NCSC-TG-015). Fort George G. Meade, Maryland: 1989.

- DoD Computer Security Center. *Department of Defense Trusted Computer System Evaluation Criteria* (DoD 5200.28-STD). Fort George G. Meade, Maryland: 1985. (Also known as the *Orange book.*)

- DoD Computer Security Center. *Trusted Network Interpretation of the Trusted Computer System Evaluation Criteria* (DoD NCSC-TG-005-STD). Fort George G. Meade, Maryland: 1987. (Also known as the *Red book.*)

- DoD Computer Security Center. *Summary of Changes, Memorandum for the Record* (DoD 5200.28-STD). Fort George G. Meade, Maryland: 1986.

- DoD Computer Security Center. *Password Management Guidelines* (CSC-STD-002-85). Fort George G. Meade, Maryland: 1985.

- Wood, Patrick H. and Stephen G. Kochan. *UNIX System Security.* Hasbrouck Heights, N.J.: Hayden Book Company, 1985.

    Note: If your site wants to purchase the optional SecurID card used with UNICOS MLS network security, the necessary hardware, software, and user publications can be obtained from Security Dynamics, Inc., 2067 Massachusetts Avenue, Cambridge, MA, 02140, (617) 547-7820.

Ordering Cray Research Publications

The *User Publications Catalog*, publication CP–0099, describes the availability and content of all Cray Research hardware and software documents that are available to customers. Cray Research customers who subscribe to the Cray Inform (CRInform) program can access this information on the CRInform system.

To order a document, 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).

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

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

Conventions

The following conventions are used throughout this document:

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

Some internal routines (for example, the `_assign_asgcmd_info()` routine) 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 or directive line.
...	Ellipses indicate that a preceding element can be repeated.

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

Term	Definition
Cray PVP systems	All configurations of Cray parallel vector processing (PVP) systems.
Cray MPP systems	All configurations of the CRAY T3D series. The UNICOS operating system is not supported on CRAY T3E systems. CRAY T3E systems run the UNICOS/mk operating system.

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.

Cray UNICOS Version 10.0 is an X/Open Base 95 branded product.

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