

This publication documents the segment loader (SEGLDR) release 9.0 on Cray PVP systems running under the Cray Research UNICOS 9.0 operating system. SEGLDR is a loader for segmented and nonsegmented programs produced by the following Cray Research assemblers and compilers:

- Cray Research Fortran CFT77 compiler
- Cray Research Fortran CF90 compiler
- Cray Pascal
- Cray C compiler
- Cray Standard C compiler
- Cray Ada

This reference manual describes the operation of the SEGLDR loader, method of code execution, common block use, and common block assignment. The glossary defines SEGLDR terminology. Readers are assumed to be experienced programmers who understand overlays and are familiar with loaders.

Additionally, this manual documents the UNICOS command `ld`, which is an interface to the segment loader in the style of traditional UNIX system loaders.

Related publications

Other Cray Research, Inc. (CRI) publications that you may find useful are as follows:

Language processor documentation:

- *Pascal Reference Manual*, publication SR-0060
- *Cray Standard C Reference Manual*, publication SR-2074
- *Cray Assembly Language (CAL) for Cray PVP Systems Reference Manual*, publication SR-3108

- *CF77 Fortran Language Reference Manual*, publication SR-3772
- *CF90 Fortran Language Reference Manual*, publication SR-3902

Operating system documentation:

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

Library documentation:

- *UNICOS System Calls Reference Manual*, publication SR-2012
- *UNICOS System Libraries Reference Manual*, publication SR-2080
- *Scientific Libraries Reference Manual*, publication SR-2081
- *Remote Procedure Call (RPC) Reference Manual*, publication SR-2089
- *Math Library Reference Manual*, publication SR-2138
- *Application Programmer's Library Reference Manual*, publication SR-2165
- *Compiler Information File (CIF) Reference Manual*, publication SR-2401
- *Kerberos User's Guide*, publication SG-2409

General documentation:

- *UNICOS CDBX Symbolic Debugger Reference Manual*, publication SR-2091
- *UNICOS Macros and Opdefs Reference Manual*, publication SR-2403

All publications referenced in this manual are Cray Research publications unless otherwise noted.

The *User Publications Catalog*, publication CP-0099, lists 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 (612) 683-5907 or send a facsimile of your request to fax number (612) 452-0141. Cray Research employees may choose to send electronic mail to `order.desk` (UNIX system users) or `order.desk` (HPDesk users).

Conventions

The following conventions are used throughout this manual:

| <u>Convention</u> | <u>Meaning</u> |
|--|---|
| <u>UNDERSCORED</u> <u>UPPERCASE</u> | Underscored uppercase words in command lines indicate default values. |
| <code>command</code> | This fixed-space font denotes literal items such as commands, files, routines, path names, signals, messages, and programming language structures. |
| <code>routine()</code> | Routine names followed by an empty set of parentheses designate a library or kernel routine; for example, <code>ddcntl()</code> . Kernel routines do not have man pages associated with them. |
| <i>variable</i> | 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. |
| A B | A vertical bar in a command format separates two or more possible choices, one of which you may specify. |

| <u>Convention</u> | <u>Meaning</u> |
|--------------------------|--|
| Case | UNICOS commands and file names can be either in uppercase or lowercase. The UNICOS operating system distinguishes between the two: MYFILE and myfile are two different files. |
| Global | Global SEGLDR directives affect the entire program. |
| Segment | Segment SEGLDR directives affect only the segment in which they are located. |
| O' | These characters indicate an octal number. For example, O'177777 means 177777 octal. |
| Command-line equivalents | These are found at the end of some subsections that describe individual SEGLDR directives. Command-line equivalents are the UNICOS segldr command-line options that perform the same function as the SEGLDR directive being described. |

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

| <u>Term</u> | <u>Definition</u> |
|------------------|---|
| Cray PVP systems | <p>All configurations of Cray parallel vector processing (PVP) systems, including the following:</p> <p>CRAY C90 series (CRAY C916, CRAY C92A, CRAY C94, CRAY C94A, and CRAY C98 systems)</p> <p>CRAY C90D series (CRAY C92AD, CRAY C94D, and CRAY C98D systems)</p> <p>CRAY EL series (CRAY Y-MP EL, CRAY EL92, CRAY EL94, and CRAY EL98 systems)</p> <p>CRAY J90 series (CRAY J916 and CRAY J932 systems)</p> <p>CRAY T90 series (CRAY T94, CRAY T916, and CRAY T932 systems)</p> |

| <u>Term</u> | <u>Definition</u> |
|---------------------------|--|
| | 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) |
| 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:

pubs0066@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:

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