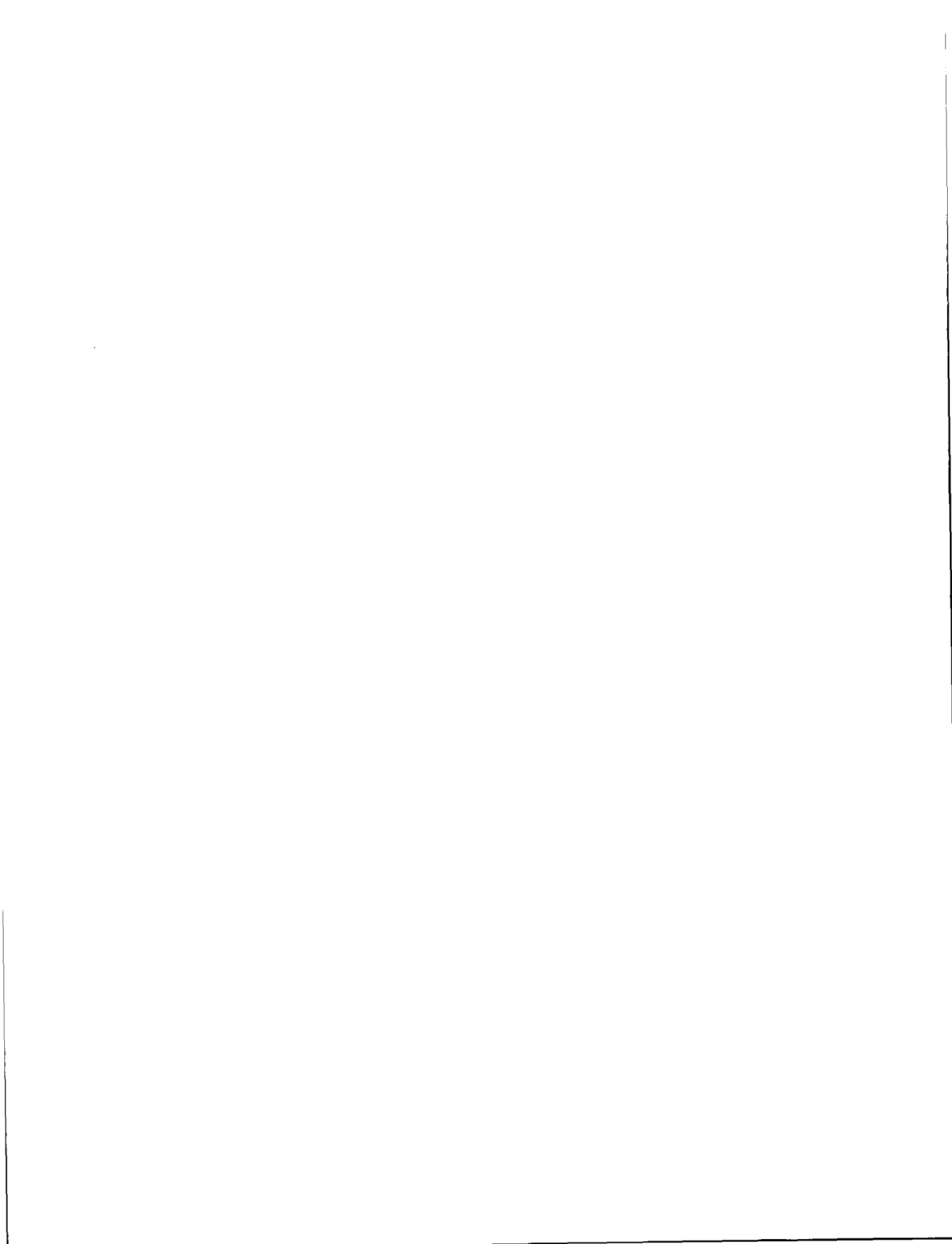


CONVEX

Guide to Exemplar Documentation

Second Edition



Convex Computer Corporation
3000 Waterview Parkway
P.O. Box 833851
Richardson, TX 75083-3851
United States of America
(214) 497-4000



Guide to Exemplar Documentation



Order No. DSW-851

Second Edition
October 1994

Convex Press
Richardson, Texas
United States of America

Guide to Exemplar Documentation

Order No. DSW-851

Copyright © 1994 Convex Computer Corporation
All rights reserved.

This document is copyrighted. This document may not, in whole or part, be copied, duplicated, reproduced, translated, electronically stored, or reduced to machine readable form without prior written consent from Convex Computer Corporation.

Although the material contained herein has been carefully reviewed, Convex Computer Corporation does not warrant it to be free of errors or omissions. Convex reserves the right to make corrections, updates, revisions or changes to the information contained herein. Convex does not warrant the material described herein to be free of patent infringement.

UNLESS PROVIDED OTHERWISE IN WRITING WITH CONVEX COMPUTER CORPORATION (CONVEX), THE PROGRAM DESCRIBED HEREIN IS PROVIDED AS IS WITHOUT WARRANTY OF ANY KIND, EITHER EXPRESSED OR IMPLIED, INCLUDING, BUT NOT LIMITED TO THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE. SOME STATES DO NOT ALLOW THE EXCLUSION OF IMPLIED WARRANTIES. THE ABOVE EXCLUSION MAY NOT BE APPLICABLE TO ALL PURCHASERS BECAUSE WARRANTY RIGHTS CAN VARY FROM STATE TO STATE. IN NO EVENT WILL CONVEX BE LIABLE TO ANYONE FOR SPECIAL, COLLATERAL, INCIDENTAL OR CONSEQUENTIAL DAMAGES, INCLUDING ANY LOST PROFITS OR LOST SAVINGS, ARISING OUT OF THE USE OR INABILITY TO USE THIS PROGRAM. CONVEX WILL NOT BE LIABLE EVEN IF IT HAS BEEN NOTIFIED OF THE POSSIBILITY OF SUCH DAMAGE BY THE PURCHASER OR ANY THIRD PARTY.

Convex and the Convex logo ("C") are registered trademarks of Convex Computer Corporation.

UNIX is a registered trademark of UNIX System Laboratories, Inc., a wholly owned subsidiary of Novell, Inc.



This entire book is recyclable.

Printed in the United States of America

Revision information for Guide to Exemplar Documentation

Edition	Document No.	Description
Second	710-029130-001	Released October 1994. Includes Convex order numbers for HP manuals that are in the Exemplar core documentation set.
First	710-029130-000	Initial release March, 1994.

Contents

Core documentation and supplementary documentation	vii
Ordering documents	vii
Technical assistance	viii
1 Hardware	1
Exemplar Architecture	2
Exemplar CD Site Preparation and Installation Guide	3
Exemplar Site Preparation Guide	4
Exemplar/XA Installation Guide	5
2 System administration	7
SPP-UX Release Notice	8
Exemplar Software Installation	9
SPP-UX System Administration Guide	10
Exemplar Open Boot Quick Reference	11
3 System software	13
ConvexNQS+ User's Guide for Exemplar Systems	14
ConvexNQS+ Quick Reference for Exemplar Systems	15
ConvexNQS+ System Manager's Guide for Exemplar Systems	16
ConvexTMR Operator's Guide	17
ConvexTMR User's Guide	18
ConvexTMR Administrator's Guide	19
ConvexTMR for Users Quick Reference (non-catalog mode)	20
ConvexTMR for Users Quick Reference (catalog mode)	21
ConvexTMR for Operators Quick Reference	22
4 Networking	23
Administering and Installing FDDI	24
Using NFS Services	25
Installing and Administering NFS Services	26
Programming and Protocols for NFS Services	27
Using ARPA Services	28
Installing and Administering ARPA Services	29
5 SPP-UX general information	31
HP-UX Reference	32
A Beginner's Guide to HP-UX	33
HP-UX Error Message Catalog	34

6 Compilers, assemblers, and program libraries.....	35
Exemplar Programming Guide	36
Fortran User's Guide	37
Fortran Language Reference	38
Fortran Quick Reference	39
C User's Guide	40
C Quick Reference	41
ConvexMLIB User's Guide: LAPACK	42
ConvexMLIB User's Guide: SCILIB	43
ConvexMLIB User's Guide: VECLIB	44
ConvexPVM User's Guide	45
HP-UX Assembly Language Reference Manual	46
PA-RISC 1.1 Architecture and Instruction Set Reference book	47
PA-RISC Procedure Calling Conventions Reference Manual	48
7 Software development tools.....	49
CXdb Reference	50
CXdb Reference: Concepts, Windows, and Messages	51
CXdb Quick Reference	52
CXpa Reference	53
CXpa Quick Reference	54
CXtrace User's Guide	55
8 Supplementary documentation	57
9 Software documentation publishers	59

Preface

The *Guide to Exemplar Documentation* is a catalog of documentation available for users of Convex Exemplar computer systems. This manual lists documentation produced by Convex as well as documentation from other companies.

Core documentation and supplementary documentation

Core documentation is documentation that customers receive from Convex when they purchase a product. All Exemplar customers receive the hardware documentation described in Chapter 1. Customers who purchase SPP-UX receive a set of documentation that includes the manuals listed in Chapters 2, 3, and 4. Customers who purchase compilers and other products listed in Chapters 5 and 6 receive the core documentation for that product. Additional copies of all core documentation are available from Convex.

Supplementary documentation is not required to use the operating system or its major products. Supplementary documentation is available for programs and utilities that are shipped with the operating system, such as text editors, text formatters, mail programs, and products available from other vendors. Convex does not provide supplementary documentation with its products; you can order supplementary documentation from the companies listed in Chapter 6, from the software publishing companies listed in Appendix A, or from a book store that sells technical books.

Ordering documents

To order the current edition of this or any other Convex document, send requests to:

Convex Computer Corporation
Customer Service
P.O. Box 833851
Richardson TX 75083-3851 USA

Please include the order number (DSW, DHW, or DHP number) or the exact title of the document.

Technical assistance

If you have questions that are not answered in this book, contact the Convex Technical Assistance Center (TAC) at the following locations:

- Within the continental U.S., call 1 (800) 952-0379.
- From Canada, call 1 (800) 345-2384.
- All other locations, contact the local Convex office.

You can also use the contact utility, if you would like to report any problems you may have with SPP-UX or its associated documentation. For more information, refer to the contact(1) man page on any Convex computer system.

This chapter describes Exemplar hardware documentation. This documentation covers the architecture and installation of Exemplar systems.

Exemplar Architecture

This manual provides technical information for the evaluation of the Exemplar product line and the optimization of applications that run on the Exemplar system.

Order Number

DHW-014

Audience

General users and programmers

Contents

This manual provides the following information:

- An introduction to the Convex implementation of scalable parallel processing in the Exemplar product line
- Description of memory systems
- Description of messaging mechanisms
- Description of synchronization mechanisms
- Description of exceptions and interrupts
- Description of the I/O subsystem
- Description of performance monitors
- Description of system initialization and booting
- A glossary of terms

Exemplar/CD Site Preparation and Installation Guide

This manual provides technical information needed to prepare a site for the installation of an Exemplar/CD system.

Order Number

DHW-821

Audience

System and facility managers

Contents

This manual provides the following information:

- System definitions and specifications
- Electrical and environmental guidelines
- Facilities guidelines
- Preinstallation survey
- Summary of requirements
- Templates
- Hardware installation instructions
- Diagnostics and utilities

Exemplar Site Preparation Guide

This manual provides technical information needed to prepare a site for the installation of an Exemplar/XA system.

Order Number

DHW-500

Audience

System and facility managers

Contents

This manual provides the following information:

- System definitions and specifications
- Electrical and environmental guidelines
- Facilities guidelines
- Preinstallation survey
- Summary of requirements
- Templates

Exemplar/XA Installation Guide

This manual provides technical information needed to install a new Exemplar/XA system.

Order Number

DHW-823

Audience

System and facility managers

Contents

This manual provides the following information:

- Safety considerations
- AC power requirements
- Installation instructions
- Diagnostics and utilities

System administration

2

This chapter describes SPP-UX system administration documentation. It covers installation and maintenance of the operating system and optional software products.

All documentation described in this chapter is shipped to each SPP-UX customer. Additional copies are available from Convex; see the Preface for ordering information.

SPP-UX Release Notice

This bulletin contains a summary of the features in the current SPP-UX release and other information about the release.

Order Number

Part Number 710-0293530-xxx (the part number is incremented with each release of SPP-UX; the appropriate version of this bulletin is shipped along with the release media containing each new version of SPP-UX)

Audience

System administrators and site managers

Contents

This bulletin provides the following information:

- Hardware and software prerequisites
- Optional software products
- Installation notes
- New features
- Bug fixes

Exemplar Software Installation

This book describes how to install the SPP-UX operating system and optional software products on CONVEX Exemplar computer systems.

Order Number

DSW-852

Audience

System administrators

Contents

Read this book to learn how to:

- Install SPP-UX
- Install optional software products that run under SPP-UX
- Install patches and bug fixes to SPP-UX and optional software products
- Install software on the Exemplar test station

SPP-UX System Administration Guide

This book describes the tasks involved in the administration and maintenance of SPP-UX. The book covers both the command interfaces and graphical user interfaces for system administration.

Order Number

DSW-853

Audience

System administrators

Contents

Read this book to learn how to:

- Start up SPP-UX
- Shut down SPP-UX
- Use the System Administration Manager (SAM)
- Use the Complex Manager to create and manage processor subcomplexes
- Create and manage user login accounts
- Create and manage file systems
- Manage peripheral devices
- Connect and manage a network under SPP-UX
- Collect system accounting data and create system accounting reports

Exemplar Open Boot Quick Reference

This reference booklet summarizes the commands associated with the Exemplar Open Boot firmware.

Order Number

DSW-854

Audience

System administrators and field engineers

Contents

This reference booklet contains a summary of the following Exemplar Open Boot commands and related information:

- Boot commands
- Configuration parameters
- Device tree browsing commands
- Commands for creating and examining device aliases
- Help commands
- File loading commands
- Diagnostic test commands
- FCode (Forth language) interface
- PA RISC register commands
- Assembler and disassembler commands
- Breakpoint commands

Notes

For information about additional Open Boot documentation, see Chapter 7, *Supplementary Documentation*.

System software

3

This chapter describes optional products that add to the capabilities of SPP-UX. It covers the NQS+ and TMR products.

Documentation described in this chapter is shipped to customers along with each product. Additional copies are available from Convex; see the Preface for ordering information.

ConvexNQS+ User's Guide for Exemplar Systems

This book describes how to use the ConvexNQS+ job queuing facility.

Order Number

DSW-861

Audience

ConvexNQS+ users

Contents

Read this book to learn how to:

- Submit job requests
- Control job requests
- Understand request and transaction completion messages

ConvexNQS+ Quick Reference for Exemplar Systems

This reference booklet summarizes the ConvexNQS+ job queuing facility.

Order Number

DSW-862

Audience

ConvexNQS+ users

Contents

This reference booklet summarizes:

- ConvexNQS+ commands
- ConvexNQS+ messages

ConvexNQS+ System Manager's Guide for Exemplar Systems

This book describes how to configure and manage the ConvexNQS+ job queuing facility.

Order Number

DSW-860

Audience

System administrators

Contents

Read this book to learn how to:

- Configure ConvexNQS+
- Control queue operations
- Generate ConvexNQS+ accounting report

ConvexTMR Operator's Guide

This book describes how to perform tape operations with ConvexTMR.

Order Number

DSW-482

Audience

System operators

Contents

Read this book to learn how to:

- Enroll as a ConvexTMR tape operator
- Start, stop, and control the ConvexTMR server
- Handle requests for tape services from users
- Perform tape identification and storage

ConvexTMR User's Guide

This book describes how to use the ConvexTMR tape management product and the ConvexTMR catalog.

Order Number

DSW-481

Audience

General users

Contents

Read this book to learn how to:

- Initiate, manage, and close a tape session
- Use the ConvexTMR catalog
- Create and use tape pools
- Use ANSI and IBM tape formats
- Use special tape privileges
- Generate logs and reports

ConvexTMR Administrator's Guide

This book describes how to manage and maintain the ConvexTMR product.

Order Number

DSW-480

Audience

System administrators

Contents

Read this book to learn how to:

- Configure ConvexTMR and its server
- Control administrator and operator privileges
- Enroll as a tape administrator
- Manage ConvexTMR databases
- Use ConvexTMR accounting data and log files

ConvexTMR for Users Quick Reference (non-catalog mode)

This reference booklet describes the user commands for the ConvexTMR tape management product.

Order Number

DSW-483

Audience

General users

Contents

This booklet describes:

- ConvexTMR user commands
- How to display messages
- How to send messages to the operator
- How to display configuration information and tape management status

ConvexTMR for Users Quick Reference (catalog mode)

This reference booklet describes the user commands for the catalog-mode operations in the ConvexTMR tape management product.

Order Number

DSW-484

Audience

General users

Contents

This booklet describes how to:

- Work with directories
- Work with volumes and volumesets
- Work with files
- Access tapes
- Set object permissions
- Change ownership of a tape object
- Move volumesets, files, and directories
- Name files and volumesets
- Work with pools
- Work with rotations

ConvexTMR for Operators Quick Reference

This reference booklet describes the operator commands for the ConvexTMR tape management product.

Order Number

DSW-485

Audience

System operators

Contents

This booklet describes how to:

- Enroll as a tape operator
- Control the ConvexTMR server
- Control domain servers
- Control devices
- Use the command-line request monitor
- Use the full-screen request monitor
- Conduct library operations
- Perform catalog-mode operations

Networking

4

This chapter describes SPP-UX networking documentation. It covers installation, configuration, and maintenance of Local Area Networks and network software products.

All documentation described in this chapter is shipped to each SPP-UX customer for each release of the operating system. Additional copies are available from Convex; see the Preface for ordering information.

Administering and Installing FDDI

This book describes how to install and administer Fiber Distributed Data Interface (FDDI) networks.

Order Number

DHP-171

Audience

Network administrators

Contents

Read this book to learn how to:

- Load and configure FDDI network software
- Maintain FDDI network software
- Troubleshoot an FDDI network
- Perform network logging
- Perform network tracing

Notes

The FDDI installation procedures described in this book differ significantly from the installation procedures under SPP-UX. For information on FDDI installation under SPP-UX, see the SPP-UX Installation and Upgrade book.

The `fdinet`, `fdostat`, `lanscan`, and `linkloop` commands described in this book are *not* implemented in SPP-UX.

Using NFS Services

This book describes NFS Services and common NFS commands.

Order Number

DHP-172

Audience

Network administrators, NFS programmers, and NFS users

Contents

Read this book to learn how to use:

- RPC Program Compiler
- Lock Manager
- Remote Execution Service (REX)
- HP-UX Access Control List
- Network Status Monitor
- Network Information Service (NIS)
- Virtual Home Environment (VHE)

Notes

The following portions of this book are *not* applicable to SPP-UX:

- Using named pipes and device files (Chapter 2)
- Using NFS in an HP-UX cluster environment (Chapter 3)
- References to the Local HP-UX product (Appendix A)
- Moving from RFA to NFS (Appendix B)

Installing and Administering NFS Services

This book describes how to install, configure, and maintain the NFS Services product software. It also includes information for configuring and maintaining the Network Information Service (NIS) and for using the automounter.

Order Number

DHP-173

Audience

Network administrators and NFS users

Contents

Read this book to learn how to:

- Install NFS
- Configure and maintain NFS
- Configure and maintain NIS

Notes

The following portions of this book are not applicable to SPP-UX/SPP-UX:

- References to the Local HP-UX product (Appendix A)
- Moving from RFA to NFS (Appendix B)
- NFS in an HP-UX cluster environment (Appendix C)

Programming and Protocols for NFS Services

This book contains overviews of Remote Procedure Call (RPC), External Data Representation (XDR), and Network Information Services (NIS). An RPC programming guide is also included, along with protocol specifications for RPC, XDR, and NIS.

Order Number

DHP-174

Audience

Network programmers

Contents

Read this book to learn how to:

- Create programs using remote procedure calls (RPCs) and the remote procedure call compiler (RPCGEN)
- Use the External Data Representation (XDR) protocol
- Use the Network Information Services (NIS) protocol

Notes

Routines and protocols described in this book are applicable to SPP-UX. SPP-UX does not support NFS in an HP-UX cluster environment.

Using ARPA Services

This book contains introductory information about the ARPA and Berkeley Services, a user's overview of internetwork mailing, and information on how to use the ARPA and Berkeley Services.

Order Number

DHP-175

Audience

Users of ARPA and Berkeley Services

Contents

Read this book to learn how to:

- Route network mail
- Log on to a remote host
- List remote host information
- List remote user information
- Perform remote file transfers using FTP or RCP
- Copy files on a remote host
- Execute commands remotely

Installing and Administering ARPA Services

This book describes how to install, configure, and maintain the NFS Services product software.

Order Number

DHP-176

Audience

ARPA network administrators

Contents

Read this book to learn how to:

- Install ARPA Services
- Maintain ARPA Services
- Configure, maintain, and troubleshoot the HP Berkeley Internet Name Domain (BIND) server
- Configure and troubleshoot `gated` (a daemon that determines packet routing)
- Configure and troubleshoot `sendmail` (an internet mail routing service)
- Troubleshoot ARPA Services

Notes

References to utilities using `/dev/lanx` are *not* applicable to SPP-UX.

SPP-UX general information

5

This chapter describes the general end-user documentation for SPP-UX.

All documentation described in this chapter is shipped to each SPP-UX customer for each release of the operating system. Additional copies are available from Convex; see the Preface for ordering information.

HP-UX Reference

This three-volume set of books describes commands, system calls, subroutine libraries, file formats, device files, and miscellaneous features of the HP-UX operating system.

Order Number

DHP-177

Audience

General users, programmers, and system administrators

Contents

This book is a compilation of the man pages that are available on line through the man command. It is intended for users who know how to use the system and need to know specific details such as command syntax or file formats.

Notes

This book does not contain any man pages that describe features of SPP-UX that differ from HP-UX. To see a list of book pages that have been modified or created specifically for SPP-UX or other Convex software products, enter the following command on your SPP-UX system:

```
man convex
```

Wherever there is a Convex man page for a topic, read the Convex book page instead of the version in the *HP-UX Reference*.

HP-UX Error Message Catalog

This catalog describes error messages related to HP-UX system commands and system calls. Error messages for compilers and other products are not included.

Order Number

DHP-179

Audience

General users and system administrators

Contents

Use this catalog to help perform the following tasks:

- Correct syntax errors in system commands and system calls
- Identify and report system problems to your system administrator

Notes

This catalog does not include error messages that are unique to SPP-UX or other Convex products.

Compilers, assemblers, and program libraries

6

This chapter describes documentation for Convex compilers, assemblers, and program libraries that work under SPP-UX.

Documentation described in this chapter is shipped to customers along with each product. Additional copies of Convex books are available from Convex; see the Preface for ordering information.

Exemplar Programming Guide

This book describes efficient programming techniques for Exemplar systems.

Order Number

DSW-067

Audience

C and Fortran programmers

Contents

This book covers:

- A comparison of Exemplar systems, traditional vector/parallel computers, clusters, and other MPP systems
- The Exemplar programming model
- A programmer's overview of the Exemplar architecture
- Exemplar compiler optimizations
- Exemplar data partitioning
- Basic and advanced shared memory programming
- Message passing programming
- Exemplar optimization reports

Fortran User's Guide

This book describes how to compile, run, debug, and analyze Convex Fortran programs.

Order Number

DSW-038

Audience

Fortran programmers

Contents

Read this book to learn how to:

- Compile, load, and execute a Fortran program
- Use Convex I/O facilities
- Call routines from other programming languages in Convex Fortran
- Use the Convex runtime library and runtime error processing
- Use Convex Fortran compiler directives
- Understand Convex Fortran calling conventions and data representation

Notes

This book describes both the Convex Exemplar and Convex C Series implementations of Convex Fortran. Differences between the two implementations are noted.

Fortran Language Reference

This book provides a complete description of the Convex Fortran language.

Order Number

DSW-037

Audience

Experienced Fortran programmers

Contents

Read this book for information about the following topics:

- Fortran program elements and program unit format
- Data types, constants, and variables
- Arrays and substrings
- Specification statements
- The DATA statement
- Assignment statements
- Control statements
- Files, units, and I/O statements
- Format specification descriptors
- Functions and subprograms
- Exemplar-specific synchronization features
- Compatibility between Convex Fortran and other Fortran implementations

Notes

This book describes both the Convex Exemplar and Convex C Series implementations of Convex Fortran. Differences between the two implementations are noted.

Fortran Quick Reference

This reference booklet summarizes the elements of the Convex Fortran language and the interface to the Convex Fortran compiler.

Order Number

DSW-037

Audience

Experienced Fortran programmers

Contents

Use this booklet to see a summary of the following topics:

- Compiler options
- Compiler directives
- Convex Fortran language statements

Notes

This reference booklet describes both the Convex Exemplar and Convex C Series implementations of Convex Fortran. Differences between the two implementations are noted where appropriate.

C User's Guide

This book describes how to compile, run, debug, and analyze Convex C programs.

Order Number

DSW-086

Audience

C programmers

Contents

Read this book to learn how to:

- Compile, load, and execute a C program
- Use Convex I/O facilities
- Call routines from other programming languages in Convex C
- Use the Convex runtime library and runtime error processing
- Use C pragmas
- Understand compatibility between Convex C and other C implementations

Notes

This book describes both the Convex Exemplar and Convex C Series implementations of Convex C. Differences between the two implementations are noted.

C Quick Reference

This reference booklet summarizes the elements of the Convex C language and the interface to the Convex C compiler. It is intended to be used as a reference for experienced C programmers.

Order Number

DSW-087

Audience

Experienced C programmers

Contents

Use this booklet to see a summary of the following topics:

- Compiler options
- Compiler directives
- Convex C language statements

Notes

This reference booklet describes both the Convex Exemplar and Convex C-Series implementations of Convex C. Differences between the two implementations are noted where appropriate.

ConvexMLIB User's Guide: LAPACK

This book describes the Convex LAPACK software library. LAPACK is a collection of Fortran-callable subprograms for mathematical applications involving linear algebra, including linear equations, least squares, eigenvalue problems, and singular value decomposition.

Order Number

DSW-036

Audience

Fortran programmers

Contents

This book describes Fortran-callable routines for:

- Simple drivers for linear equations
- Expert drivers for linear equations
- Computational subprograms for linear equations
- Drivers for linear least squares problems
- Computational subprograms for orthogonal factorizations
- Simple drivers for ordinary eigenvalue problems
- Expert drivers for ordinary eigenvalue problems
- Drivers for generalized eigenvalue problems
- Drivers for the singular value decomposition
- LAPACK auxiliary subprograms

Notes

This book describes all implementations of Convex LAPACK. Differences between the various implementations are noted where appropriate.

ConvexMLIB User's Guide: SCILIB

This book describes the Convex SCILIB software library. SCILIB is a collection of Fortran-callable, Cray-compatible mathematical subprograms for scientific applications.

Order Number

DSW-360

Audience

Fortran programmers

Contents

This book describes Fortran-callable routines for:

- Vector operations
- Matrix operations
- Linear equation solutions
- Eigenvalue and eigenvector computation
- Fast Fourier transforms
- Correlation and convolution
- Linear recurrences
- Sorting

Notes

This book describes all implementations of Convex SCILIB. Differences between the various implementations are noted where appropriate.

ConvexMLIB User's Guide: VECLIB

This book describes the Convex VECLIB software library. VECLIB is a collection of Fortran-callable mathematical subprograms for scientific applications.

Order Number

DSW-132

Audience

Fortran programmers (also C and Ada programmers)

Contents

This book describes Fortran-callable routines:

- Dense and sparse vector operations, including the Basic Linear Algebra Subprograms (BLAS)
- Matrix operations, including the Level 2 and Level 3 BLAS
- Linear equation solutions, including LINPACK
- Eigensystem problems, including EISPACK
- Sparse symmetric linear equation solutions
- Sparse symmetric ordinary and generalized eigensystem problems
- Skyline linear equation solutions
- Discrete Fourier transforms
- Convolution and correlation
- Linear recurrences
- Sorting and generating random numbers

Notes

This book describes all implementations of Convex VECLIB. Differences between various implementations are noted where appropriate.

Although VECLIB routines were designed for use in Fortran programs, C and Ada programs can call VECLIB subprograms, as described in Appendixes A and B of this book, respectively.

ConvexPVM User's Guide

This book describes the ConvexPVM (Parallel Virtual Machine) product. ConvexPVM is a library of C- and Fortran-callable routines for message-passing programming.

Order Number

DSW-811

Audience

C and Fortran programmers

Contents

Read this book for information on the following topics:

- Starting ConvexPVM
- ConvexPVM library routines
- Writing PVM applications
- ConvexPVM implementation details
- Using the CXtrace package, which consists of the `pvmon3` debugging and analysis tool and the `xttrace3` trace file viewing tool.

HP-UX Assembly Language Reference Manual

This manual describes the HP-UX Assembler for the PA-RISC processor.

Order Number

DHP-180

Audience

Assembly language programmers

Contents

This manual describes the HP-UX Assembler interface, statements, and macros.

Notes

The Convex Exemplar Assembler is based on the HP-UX Assembler. The information in this book is applicable to the Convex Assembler. For a description of Convex-specific extensions to the assembler, see the `as(1)` man page.

PA-RISC 1.1 Architecture and Instruction Set Reference book

This book describes the architecture and the instruction set of the Hewlett Packard PA-RISC processor.

Order Number

DHP-181

Audience

Assembly language programmers

Contents

Read this book for information on the following topics:

- Organization of the PA-RISC processor
- Addressing and access control
- Flow control interruptions
- Instruction set
- Floating-point coprocessor

Notes

The Convex SPP-UX Assembler is based on the HP-UX Assembler. The information in this book is applicable to the Convex assembler.

PA-RISC Procedure Calling Conventions Reference Manual

This manual describes the conventions for creating PA-RISC assembly language procedure calls.

Order Number

DHP-182

Audience

Assembly language programmers

Contents

Read this manual to learn how to:

- Use the procedure stack
- Use PA-RISC registers
- Pass parameters
- Create standard procedure calls
- Create intermodule (external) procedure calls
- Create millicode procedure calls
- Unwind the stack

This manual has appendixes containing information on:

- Standard procedure calls for higher-level languages
- PA-RISC Assembler procedure control
- The stack unwind library
- The stack unwind process

Notes

The Convex SPP-UX Assembler is based on the HP-UX Assembler. The information in this book is applicable to the Convex Assembler.

Software development tools

7

This chapter describes documentation for the Convex software development tools that work under SPP-UX.

Documentation described in this chapter is shipped to customers along with each product. Additional copies are available from Convex; see the Preface for ordering information.

CXdb Reference

This book is a general reference for the Convex Visual Debugger (CXdb). CXdb is an interactive debugger for Convex C and Fortran code. This book is a two-volume set.

Order Number

DSW-472

Audience

C and Fortran programmers

Contents

Volume 1 provides the following information about each CXdb command:

- A description of the command
- The syntax of the command
- Examples illustrating use of the command
- Related concepts, parameters, and windows

Volume 2 provides the following information:

- Concepts of CXdb
- Information on using CXdb windows, dialogs, and menus
- A list of all CXdb messages, along with explanations and suggestions for corrective action

Notes

This book describes both the Convex Exemplar and C Series implementations of CXdb. Differences between the two implementations are noted.

CXdb Quick Reference

This reference booklet summarizes the Convex CXdb product.

Order Number

DSW-474

Audience

Experienced C and Fortran programmers

Contents

Use this reference booklet to see a summary of:

- Compiling your program for CXdb
- Getting started with CXdb
- Syntax and description of each CXdb command
- CXdb command aliases and abbreviations
- CXwindows mouse functions

Notes

This booklet describes both the Convex Exemplar and C Series implementations of CXdb. Differences between the two implementations are noted.

CXpa Reference

This book describes how to use the Convex CXpa product. CXpa is an interactive profiler for programs compiled by the Convex Ada, C, and Fortran compilers. CXpa allows the programmer to profile selected parts of a program, control a program's execution, and view performance information in reports or graphs.

Order Number

DSW-253

Audience

Ada, C, and Fortran programmers

Contents

Read this book to learn how to:

- Use the GUI, line mode, and batch mode CXpa interfaces
- Create basic block reports, loop reports, parallel region reports, and routine reports
- Create two- and three-dimensional performance graphs
- Monitor events specific to Exemplar systems, including local and global read accesses, and network hits and misses

Notes

This book describes both the Convex Exemplar and C Series implementations of CXpa. Differences between the two implementations are noted.

CXtrace User's Guide

This book describes the CXtrace performance analyzer. CXtrace is a trace-based analysis tools for measuring and displaying a program's performance.

Order Number

DSW-856

Audience

C and Fortran programmers

Contents

Read this book to learn how to:

- Insert performance monitoring routines into source code using `xinstrument`
- Use the CXtrace runtime performance monitoring library to measure and record aspects of program performance
- Use the `VK` (view kernel), `TV` (trace view) and `tally` tools to display program execution data

Supplementary documentation

8

This chapter lists documentation for features and products that are part of SPP-UX.

Documentation about some of these topics is available from third-party sources. A list of publishers is provided in Appendix A.

Table 1 lists documentation available from Hewlett Packard that is applicable to SPP-UX users. This documentation is not available from Convex.

Table 1 Hewlett Packard documentation

Title	Order number
The Ultimate guide to the vi and ex Text Editors	97005-90015
HP Open View Software Distributor Administrator's Guide	J2325-90001
Remote Access: User's Guide	B1862-90011
Mail Access: User's Guide	B1862-90012
Terminal Control: User's Guide	B1862-90013
Text Formatting: User's Guide	B1862-90014
Number Formatting: User's Guide	B1862-90015
Text Formatting: User's Guide	B1862-90016
Shells: User's Guide	B1862-90017
FORTTRAN/9000 Reference	B2408-90003
HP C/HP-UX Reference Manual	92453-90024
C Programming Tools	B1864-90009
ADB Tutorial	92432-90001

Table 2 lists documentation available from Sun Microsystems Computer Corporation that is applicable to SPP-UX system administrators and field engineers. Copies of this documentation are available from the Convex technical operations center (TAC); see the Preface for more information..

Table 2 Sun Microsystems documentation

Title	Order number
Open Boot PROM Architecture	none
Open Boot Command Reference	none
Open Boot Client Program Developer's Guide	none

Software documentation publishers

A

This appendix lists publishing companies that produce books on topics of interest to SPP-UX users.

Addison Wesley
One Jacob Way
Reading, MA 01867

Addison Wesley publishes the International Computer Science series dealing with UNIX-related operating systems, programming languages, and networking.

Hayden Books
11711 North College
Carmel, IN 46032

The Hayden Books UNIX System Library covers topics dealing with UNIX-related operating systems and C language programming.

O'Reilly & Associates, Inc.
632 Petaluma Avenue
Sebastopol, CA 95472
1-800-338-6887

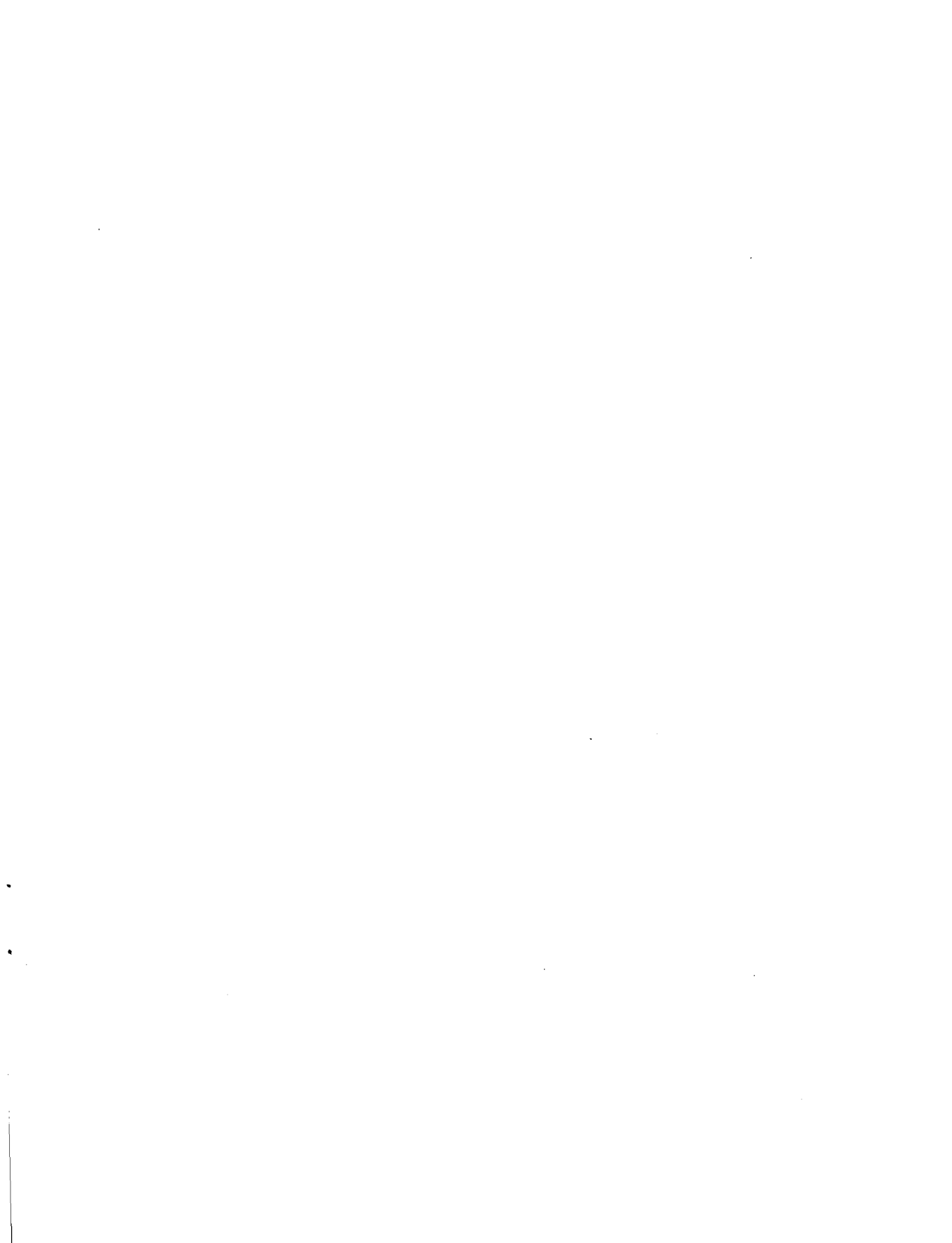
O'Reilly publishes the Nutshell Handbooks on topics dealing with UNIX-related operating systems, as well as the X Window System series.

M&T Books
501 Galveston Drive
Redwood City, CA 94063
1-800-533-4372

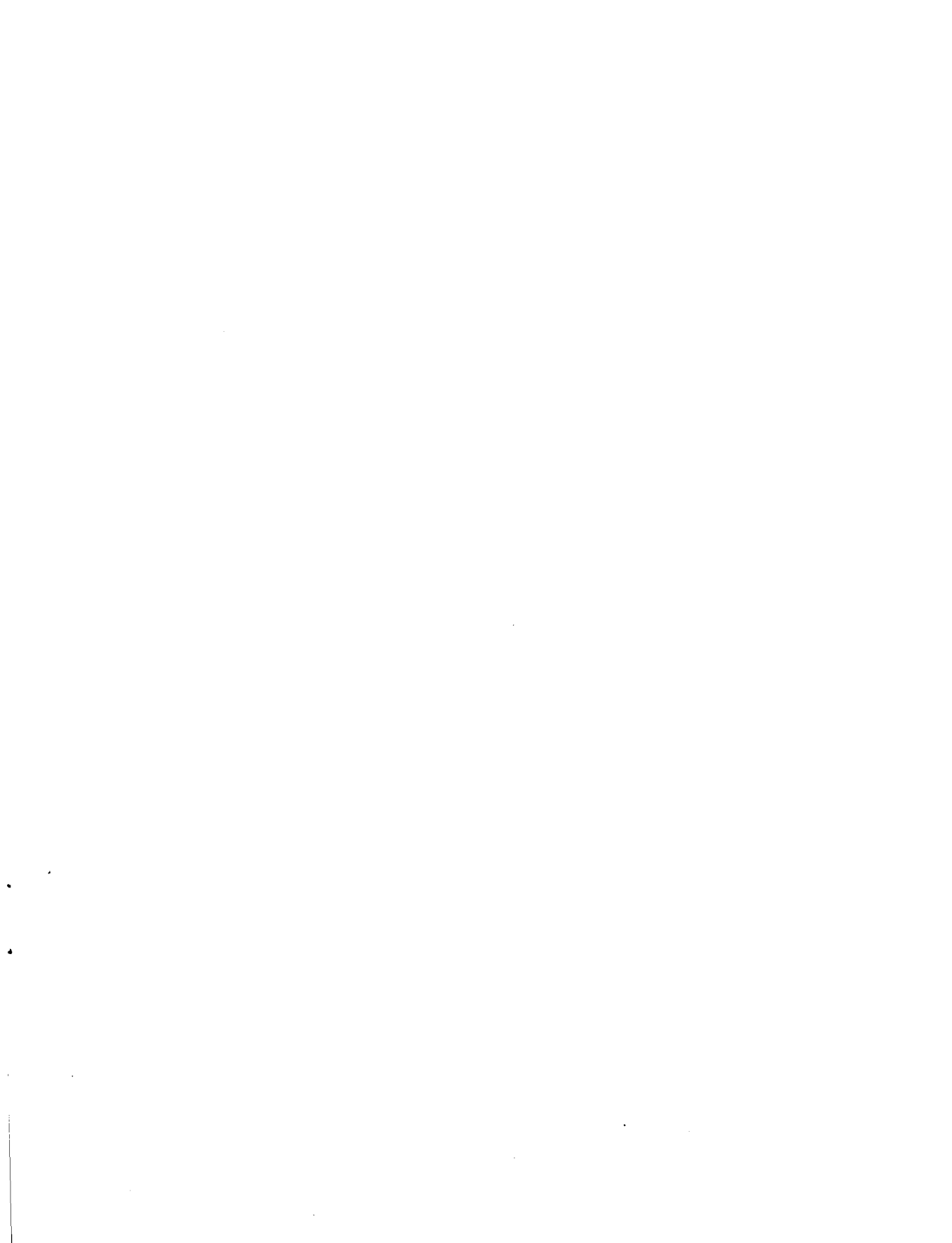
M&T publishes technical books dealing with computer networking and computer languages.

PTR Prentice Hall
113 Sylvan Avenue
Englewood Cliffs, NJ 07632
201-592-2863

Prentice Hall publishes the Hewlett-Packard Professional Books series that covers topics related to the HP-UX operating system and Hewlett-Packard computer systems. Prentice Hall also publishes books dealing with operating systems, programming languages, and common applications programs.













ORDER NUMBER
DSW-851

DOCUMENT NUMBER
710-029130-001

