



---

## About Solaris 7 Documentation

---

Sun Microsystems, Inc.  
910 San Antonio Road  
Palo Alto, CA 94043-1100  
U.S.A.

Part No: 805-3224-10  
October, 1998

Copyright 1998 Sun Microsystems, Inc. 901 San Antonio Road, Palo Alto, California 94303-4900 U.S.A. All rights reserved.

This product or document is protected by copyright and distributed under licenses restricting its use, copying, distribution, and decompilation. No part of this product or document may be reproduced in any form by any means without prior written authorization of Sun and its licensors, if any. Third-party software, including font technology, is copyrighted and licensed from Sun suppliers.

Parts of the product may be derived from Berkeley BSD systems, licensed from the University of California. UNIX is a registered trademark in the U.S. and other countries, exclusively licensed through X/Open Company, Ltd.

Sun, Sun Microsystems, the Sun logo, SunSoft, SunDocs, SunExpress, and Solaris are trademarks, registered trademarks, or service marks of Sun Microsystems, Inc. in the U.S. and other countries. All SPARC trademarks are used under license and are trademarks or registered trademarks of SPARC International, Inc. in the U.S. and other countries. Products bearing SPARC trademarks are based upon an architecture developed by Sun Microsystems, Inc.

The OPEN LOOK and Sun™ Graphical User Interface was developed by Sun Microsystems, Inc. for its users and licensees. Sun acknowledges the pioneering efforts of Xerox in researching and developing the concept of visual or graphical user interfaces for the computer industry. Sun holds a non-exclusive license from Xerox to the Xerox Graphical User Interface, which license also covers Sun's licensees who implement OPEN LOOK GUIs and otherwise comply with Sun's written license agreements.

**RESTRICTED RIGHTS:** Use, duplication, or disclosure by the U.S. Government is subject to restrictions of FAR 52.227-14(g)(2)(6/87) and FAR 52.227-19(6/87), or DFAR 252.227-7015(b)(6/95) and DFAR 227.7202-3(a).

DOCUMENTATION IS PROVIDED "AS IS" AND ALL EXPRESS OR IMPLIED CONDITIONS, REPRESENTATIONS AND WARRANTIES, INCLUDING ANY IMPLIED WARRANTY OF MERCHANTABILITY, FITNESS FOR A PARTICULAR PURPOSE OR NON-INFRINGEMENT, ARE DISCLAIMED, EXCEPT TO THE EXTENT THAT SUCH DISCLAIMERS ARE HELD TO BE LEGALLY INVALID.

---

Copyright 1998 Sun Microsystems, Inc. 901 San Antonio Road, Palo Alto, Californie 94303-4900 Etats-Unis. Tous droits réservés.

Ce produit ou document est protégé par un copyright et distribué avec des licences qui en restreignent l'utilisation, la copie, la distribution, et la décompilation. Aucune partie de ce produit ou document ne peut être reproduite sous aucune forme, par quelque moyen que ce soit, sans l'autorisation préalable et écrite de Sun et de ses bailleurs de licence, s'il y en a. Le logiciel détenu par des tiers, et qui comprend la technologie relative aux polices de caractères, est protégé par un copyright et licencié par des fournisseurs de Sun.

Des parties de ce produit pourront être dérivées du système Berkeley BSD licenciés par l'Université de Californie. UNIX est une marque déposée aux Etats-Unis et dans d'autres pays et licenciée exclusivement par X/Open Company, Ltd.

Sun, Sun Microsystems, le logo Sun, SunSoft, SunDocs, SunExpress, Solstice, docs.sun.com, AnswerBook, AnswerBook2, Motif, OpenWindows, ToolTalk, NFS, DeskSet, XGL, XIL, ONC+, JumpStart, ONC, SunOS, OpenBoot, Enterprise Agents, SunSHEILD, Power Management, Java, 100% Pure Java et Solaris sont des marques de fabrique ou des marques déposées, ou marques de service, de Sun Microsystems, Inc. aux Etats-Unis et dans d'autres pays. Toutes les marques SPARC sont utilisées sous licence et sont des marques de fabrique ou des marques déposées de SPARC International, Inc. aux Etats-Unis et dans d'autres pays. Les produits portant les marques SPARC sont basés sur une architecture développée par Sun Microsystems, Inc. KCMS est de marque déposée de Eastman Kodak Company.

L'interface d'utilisation graphique OPEN LOOK et Sun™ a été développée par Sun Microsystems, Inc. pour ses utilisateurs et licenciés. Sun reconnaît les efforts de pionniers de Xerox pour la recherche et le développement du concept des interfaces d'utilisation visuelle ou graphique pour l'industrie de l'informatique. Sun détient une licence non exclusive de Xerox sur l'interface d'utilisation graphique Xerox, cette licence couvrant également les licenciés de Sun qui mettent en place l'interface d'utilisation graphique OPEN LOOK et qui en outre se conforment aux licences écrites de Sun.

CETTE PUBLICATION EST FOURNIE "EN L'ETAT" ET AUCUNE GARANTIE, EXPRESSE OU IMPLICITE, N'EST ACCORDEE, Y COMPRIS DES GARANTIES CONCERNANT LA VALEUR MARCHANDE, L'APTITUDE DE LA PUBLICATION A REpondre A UNE UTILISATION PARTICULIERE, OU LE FAIT QU'ELLE NE SOIT PAS CONTREFAISANTE DE PRODUIT DE TIERS. CE DENI DE GARANTIE NE S'APPLIQUERAIT PAS, DANS LA MESURE OU IL SERAIT TENU JURIDIQUEMENT NUL ET NON AVENU.



# Contents

---

- 1. Getting More Information About Solaris 7 1**
  - Overview of the Solaris Documentation Set 1
  - Viewing Online AnswerBook2 Documentation 2
  - How This Document Is Organized 3
  - Graphical Guide to Documents 3
    - How to use the information in the figures 3
  - List of Printed Documents 10
    - Solaris 7 (Intel Platform Edition) Device Configuration Guide 11
    - Solaris 7 (Intel Platform Edition) Hardware Compatibility List 11
    - Solaris 7 (SPARC or Intel Platform Edition) Installation Library 11
    - Solaris 7 (SPARC or Intel Platform Edition) Start Here 11
    - Solaris 7 (SPARC or Intel Platform Edition) Release Notes 12
  - Document on the Solaris CD 12
    - Solaris 7 SUNWrdm Package Release Documentation 12
  - Online AnswerBook Collections 12
    - Solaris 7 Installation Collection 12
    - KCMS AnswerBook 14
    - OpenBoot Collection 14
    - Solaris Common Desktop Environment Developer AnswerBook 15

Solaris 7 Reference Manual AnswerBook	18
Solaris 7 Software Developer Collection	21
Solaris 7 System Administrator Collection	25
Solaris 7 User Collection	28
Solaris XGL 3.3 AnswerBook	30
Other Information	31

# Getting More Information About Solaris 7

---

This document lists the books and other documentation you might need for installing and using the Solaris™ 7 operating environment. The information is presented in three sections:

- A graphical organization of the documents by task
- Lists of documents with abstracts (brief descriptions of the documents)
- Information on other document sources that can be helpful when using this release

---

## Overview of the Solaris Documentation Set

When you purchase the Solaris 7 product, you receive a documentation set that may include:

- Printed documents that cover installation and configuration. This includes:
  - An installation card to guide you through the installation: *Solaris 7 (Intel Platform Edition) Start Here* or *Solaris 7 (SPARC Platform Edition) Start Here*
  - A book that is a collection of installation documents: *Solaris 7 (SPARC Platform Edition) Installation Library* or *Solaris 7 (Intel Platform Edition) Installation Library*

- Two books that cover Intel Platform Edition device configuration and hardware compatibility: *Solaris 7 (Intel Platform Edition) Device Configuration Guide* and *Solaris 7 (Intel Platform Edition) Hardware Compatibility List*.
- Release notes that contain installation and runtime bugs and issues: *Solaris 7 (SPARC Platform Edition) Release Notes* or *Solaris 7 (Intel Platform Edition) Release Notes*.
- Online Solaris 7 `SUNWrdm` package that covers bugs, late-breaking features, patches, device driver updates, and descriptions of software features that are no longer supported
- Online AnswerBook2™ collections containing the full documentation set for the product

---

**Note** - You may not have printed documents if your software was preinstalled. You may have printed documentation for other products that are packaged with Solaris, but they are not described here.

---

## Viewing Online AnswerBook2 Documentation

An AnswerBook™ collection is a set of documents that you can view using a browser. Users can share AnswerBook collections across a network through a web-browser-based interface. You can use the AnswerBook2 system as you would any library; you can browse, search, bookmark, and print the information.

To support AnswerBook2, a new script has been added to your operating system. This script does not replace the existing AnswerBook script. The existing AnswerBook script works as it always has, but tells you there is a new script (AnswerBook2) to use to view the documentation. If you run the AnswerBook product, you will be able to view only some subset of Solaris 7 documentation. If you run the AnswerBook2 script, you will be able to view all Solaris 7 documentation installed on your default document server.

For information on how to define your default document server, get started using the AnswerBook2 product, or install an AnswerBook2 document server, see the module "Accessing Online Documentation" in *Solaris 7 (SPARC Platform Edition) Installation Library* or *Solaris 7 (Intel Platform Edition) Installation Library*.

If you do not have access to an AnswerBook2 document server or do not want to install an AnswerBook2 document server locally, you can view all released Solaris documentation at <http://docs.sun.com>. If you want to install an AnswerBook2 server on your machine, you can run a document server directly from the Solaris 7

Documentation CD. For more information on running a document server directly from the Documentation CD, see the module “Accessing Online Documentation” in *Solaris 7 (SPARC Platform Edition) Installation Library* or *Solaris 7 (Intel Platform Edition) Installation Library*.

---

## How This Document Is Organized

This document is organized into the following sections:

- The first section is a graphical listing of document titles arranged by subject. For example, if you are a system administrator, you could look up all the system administration documents in Figure 1-2 and Figure 1-3.
- In the section immediately following the figures, the abstracts for printed (hard copy) documents are listed in alphabetical order by document title.
- In the next section, AnswerBook collections and all documents in each collection are listed in alphabetical order. Each document listed has an abstract.
- The final section lists other sources for Sun documentation.

---

## Graphical Guide to Documents

Use the following figures to find a document by a subject, for instance *system administration*.

### How to use the information in the figures

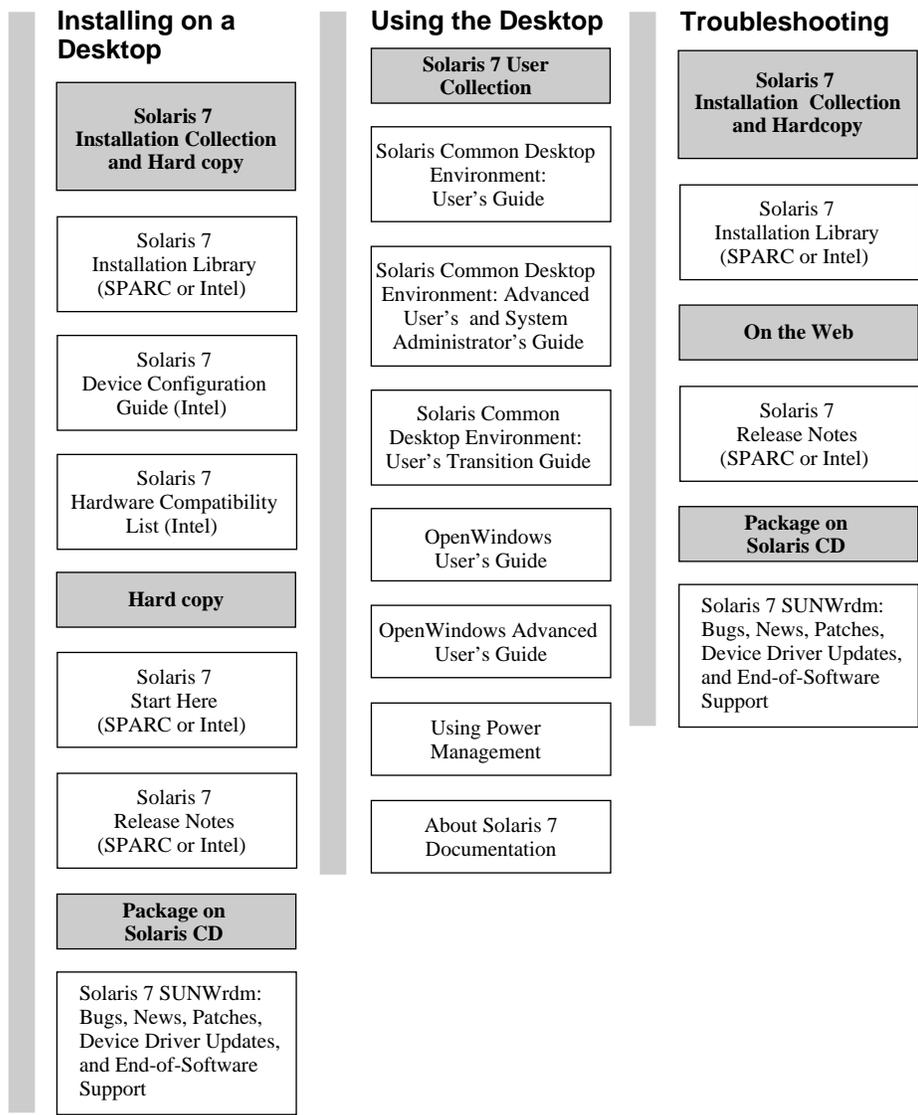
The figures contain book titles arranged by these subjects:

- Desktop: Installing, using and troubleshooting the desktop
- System Administration: Installing servers on a network, system and network administration, and troubleshooting
- Developer: Using and Porting to Non-Networking Interfaces, Using and Developing Network Applications, Using and Writing Desktop Applications, Developing Graphics, multimedia applications, and imaging
- Man Pages: Using man page documentation

The document lists also give you the document format, (AnswerBook collection, hard copy, or other). This will help you find an abstract in the following sections of this book.

For example, in Figure 1-1 you find the *Solaris Common Desktop Environment: User's Guide* under *Desktop Documentation*, and under the subject *Using the Desktop*. You will note that the book is in the *Solaris 7 User Collection*. You can then find the abstract for the book in the *Solaris 7 User Collection* section of this document.

# Solaris 7 Desktop Documentation



**Note:** Online documentation is available on the Solaris 7 Documentation CD except for the SUNWrdm package which is available on the Solaris 7 (SPARC Platform Edition) CD or the Solaris 7 (Intel Platform Edition) CD.

Figure 1-1 Desktop Documentation

## Solaris 7 System Administration Documentation

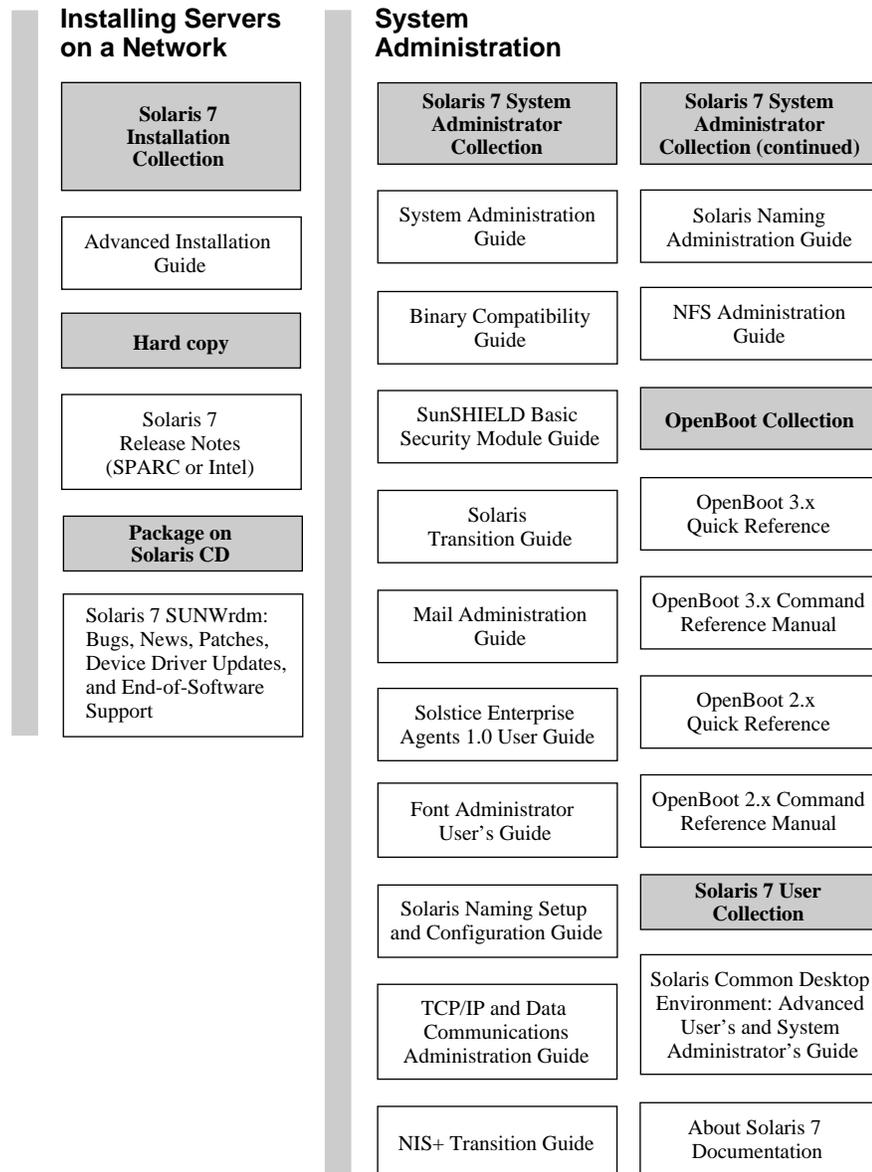


Figure 1-2 System Administration Documentation

## Solaris 7 System Administration Documentation (Continued)

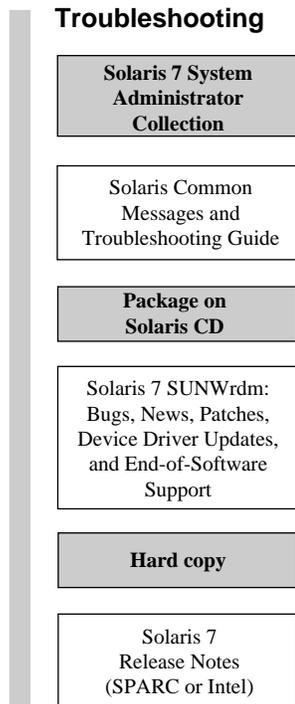


Figure 1-3 System Administration Documentation (Continued)

## Solaris 7 Developer Documentation

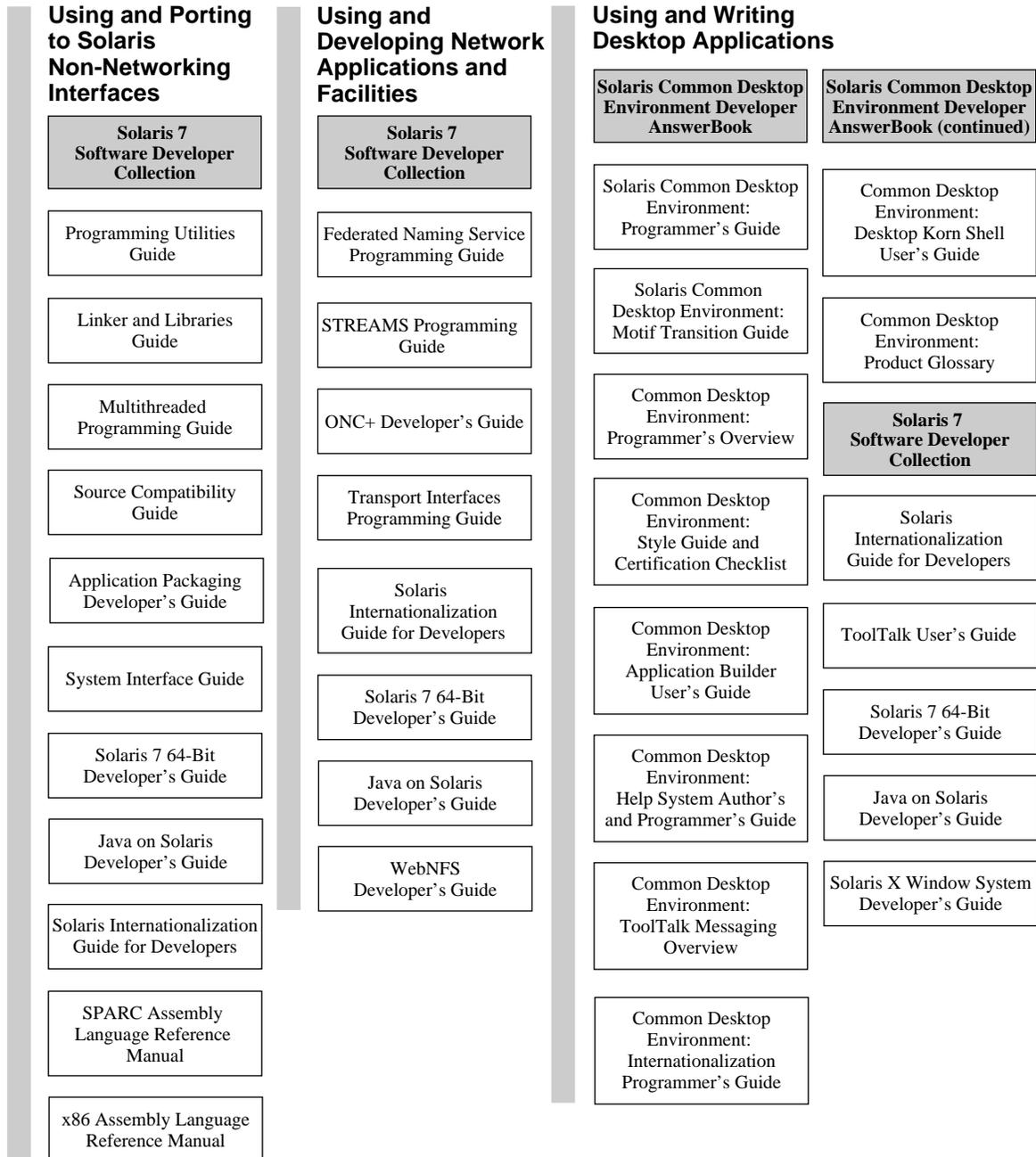


Figure 1-4 Developer Documentation

## Solaris 7 Developer Documentation (Continued)

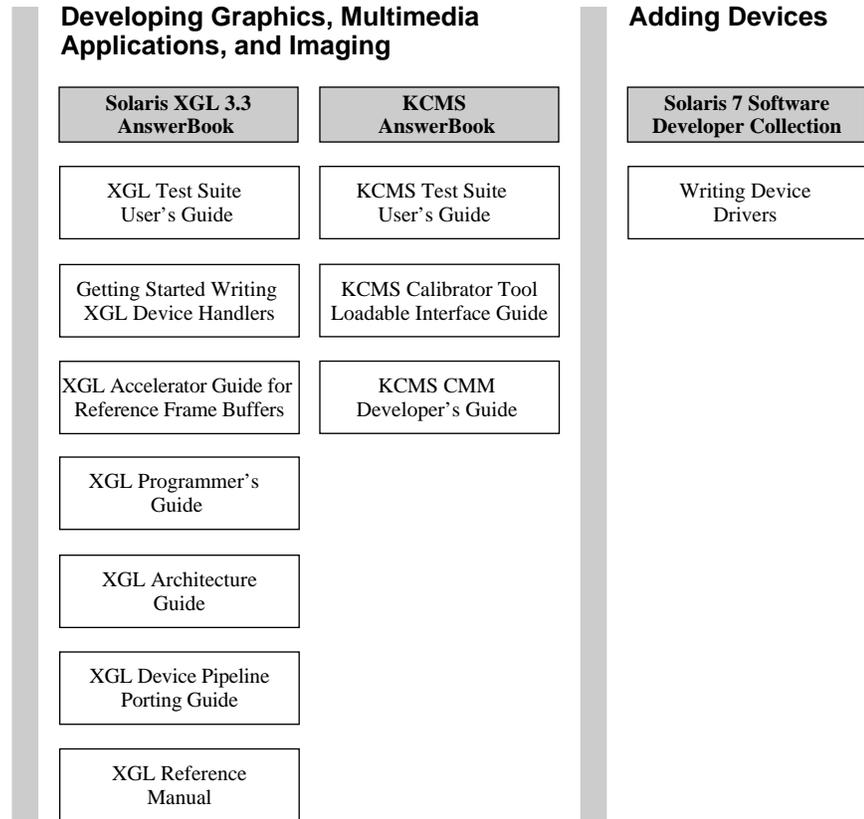


Figure 1-5 Developer Documentation (Continued)

## Solaris 7 Man Page Documentation

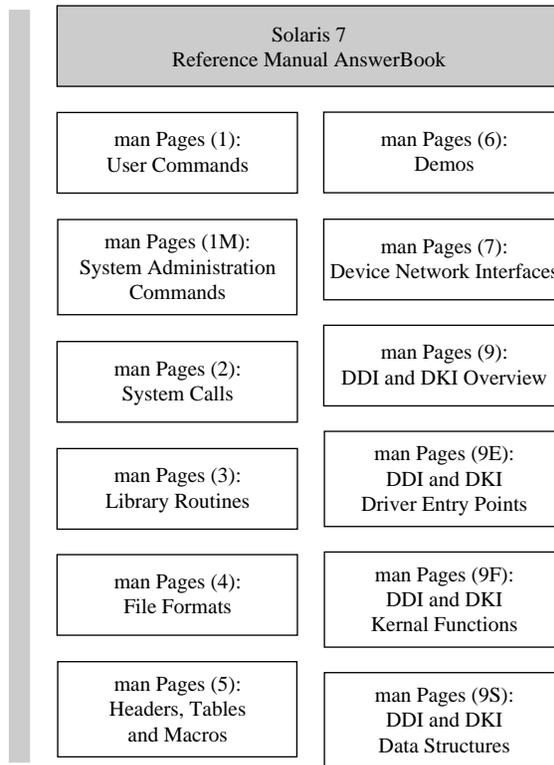


Figure 1-6 Man Page Documentation

---

## List of Printed Documents

The following documents are provided in printed (hard copy) format. (For documents that are online, refer to the section “Online AnswerBook Collections” on page 12).

---

**Note** - You may not have printed documents if your software was preinstalled. You may have printed documentation for other products that are packaged with Solaris, but they are not described here.

---

## Solaris 7 (Intel Platform Edition) Device Configuration Guide

The *Solaris 7 (Intel Platform Edition) Device Configuration Guide* contains guidelines and procedures to use when configuring x86 devices to run with the Solaris operating environment, and individual Device Reference Pages for hardware that needs to be configured to run in the Solaris operating environment. This book is also online in the Solaris 7 Installation Collection.

## Solaris 7 (Intel Platform Edition) Hardware Compatibility List

The *Solaris 7 (Intel Platform Edition) Hardware Compatibility List* provides information about general x86 hardware requirements, supported x86 system platforms, and supported x86 devices for *Solaris Intel Platform Edition*. This book is also online in the Solaris 7 Installation Collection.

## Solaris 7 (SPARC or Intel Platform Edition) Installation Library

The *Solaris 7 (SPARC Platform Edition) Installation Library* or *Solaris 7 (Intel Platform Edition) Installation Library* provide information about installing the Solaris operating environment and related software. The first section contains step-by-step instructions on how to plan an installation. The steps point to other sections in the Installation Library. Planning an installation guarantees that you do not run into problems because of unsupported devices or not enough disk space, and ensures that you have gathered system information required during the installation. They are also provided as printed documents.

## Solaris 7 (SPARC or Intel Platform Edition) Start Here

This card guides you through the installation process. This is the place to start when you are installing Solaris software.

## Solaris 7 (SPARC or Intel Platform Edition) Release Notes

Release notes for the Intel or SPARC platform cover important installation issues and include runtime bugs and issues that arrived too late to be included in the `SUNWrdm` online package.

---

## Document on the Solaris CD

Much of the release notes information is in a package on the Solaris CD.

## Solaris 7 `SUNWrdm` Package Release Documentation

Most of the release documentation is contained in online files on the Solaris CD in the `SUNWrdm` package. The file contains bugs, new features, patches, device driver updates, and descriptions of software features that are no longer supported. The package should be installed on a client (desktop) and on a network server so it can be accessed. Package installation instructions and last minute bugs and release information received too late to be included on the CD are documented in the printed *Solaris 7 (SPARC Platform Edition) Release Notes* or *Solaris 7 (Intel Platform Edition) Release Notes*.

---

## Online AnswerBook Collections

The following sections alphabetically list the AnswerBook online documentation on the Solaris 7 Documentation CD. After each title is an abstract of the document. For information on viewing the contents of the AnswerBook collections, refer to the section “Viewing Online AnswerBook2 Documentation ” on page 2.

## Solaris 7 Installation Collection

The *Solaris 7 Installation Collection* contains manuals relevant to installing on a desktop or a network. These books are also provided in a printed version (hard copy). An abstract of each document contained in this collection follows.

---

**Note** - The books in the Installation Collection are also available in French, German, Italian, Swedish, and Spanish in the following packages:

- Collection de manuels d'installation Solaris 7
  - Solaris 7 Installation-Dokumentationsreihe
  - Installationssamling för Solaris 7
  - Solaris 7: Colección de instalación
  - Collezione per l'installazione di Solaris 7
- 

## Solaris 7 (Intel Platform Edition) Device Configuration Guide

The *Solaris 7 (Intel Platform Edition) Device Configuration Guide* contains guidelines and procedures to use when configuring x86 devices to run with the Solaris operating environment, and individual Device Reference Pages for hardware that needs to be configured to run in the Solaris operating environment.

## Solaris 7 (Intel Platform Edition) Hardware Compatibility List

The *Solaris 7 (Intel Platform Edition) Hardware Compatibility List* provides information about general x86 hardware requirements, supported x86 system platforms, and supported x86 devices for *Solaris Intel Platform Edition*.

## Solaris 7 (SPARC or Intel Platform Edition) Installation Library

The *Solaris 7 (SPARC Platform Edition) Installation Library* or the *Solaris 7 (Intel Platform Edition) Installation Library* provide information about installing the Solaris operating environment and related software. The first section contains step-by-step instructions on how to plan an installation. The steps point to other sections in the Installation Library. Planning an installation guarantees that you do not run into problems because of unsupported devices or not enough disk space, and ensures that you have gathered system information required during the installation. They are also provided as printed documents.

## Solaris Advanced Installation Guide

The *Advanced Installation Guide* describes how to install the Solaris operating environment on both networked and non-networked systems. Although this book can be used to perform one-time installations, it provides detailed information on the

Solaris advanced installation features that should be used for enterprise sites that have a large install base. The advanced Solaris installation features include setting up network installations, preconfiguring system information, and automating installations with the custom JumpStart technology.

## KCMS AnswerBook

The *KCMS AnswerBook* contains manuals relevant for software developers using the KCMS (Kodak Color Management System) application program interface. An abstract of each KCMS AnswerBook document follows.

## KCMS CMM Developer's Guide

The *KCMS CMM Developer's Guide* describes how to create a KCMS color management module (CMM). It provides information on how to use the KCMS foundation library, which is a graphics porting interface (GPI) implemented in C++. These interfaces link the device-independent layer of the KCMS library with the color module and enable the flow of data from the application to the color module. Read this book if you are a driver developer who is writing a color module for color management technology.

## KCMS Calibrator Tool Loadable Interface Guide

The *KCMS Calibrator Tool Loadable Interface Guide* describes how to create a dynamically loadable device handler module that provides the KCMS Calibrator Tool with color correction data to update ICC format files. The book presents an overview of the interaction between the dynamically loadable module and the KCMS Calibrator Tool.

## KCMS Test Suite User's Guide

The *KCMS Test Suite User's Guide* describes a suite of test scripts and the testing facility the CMM developer can use to ensure that a CMM is KCMS-framework compliant. The book is also a reference for anyone interested in the development and use of the KCMS framework.

## OpenBoot Collection

The *OpenBoot Collection* contains manuals that are relevant to those who use OpenBoot to configure and debug systems. An abstract of each manual follows.

## OpenBoot 2.x Command Reference Manual

The *OpenBoot 2.x Command Reference Manual* describes the OpenBoot™ 2.x firmware that is part of the boot PROM in Sun™ systems. The features of the OpenBoot firmware allow it to be used by end users as well as by system administrators and developers. This manual is for all such users who want to use the OpenBoot 2.x firmware to configure and debug their systems.

## OpenBoot 2.x Quick Reference

The *OpenBoot 2.x Quick Reference Card* is a companion document to the OpenBoot 2.x Command Reference Manual. The card has a convenient fold-out format, and provides useful tables from the Command Reference Manual.

## OpenBoot 3.x Command Reference Manual

The *OpenBoot 3.x Command Reference Manual* describes how to use Sun systems that implement firmware that responds as described by IEEE Standard 1275-1994. This manual is written for all users, from systems designers to systems administrators and end users, who want to use OpenBoot to configure and debug their systems.

## OpenBoot 3.x Quick Reference

The *OpenBoot 3.x Quick Reference Card* is a companion document to the *OpenBoot 3.x Command Reference Manual*. The card is a brief summary of the OpenBoot 3.x commands that can be used to administer and develop for hardware that includes OpenBoot firmware.

## Solaris Common Desktop Environment Developer AnswerBook

The *Solaris Common Desktop Environment Developer AnswerBook* contains manuals relevant for software developers programming in the Common Desktop Environment (CDE). An abstract of each document follows.

## Common Desktop Environment: Application Builder User's Guide

The *Common Desktop Environment: Application Builder User's Guide* introduces the Application Builder and shows you how to use it. The Application Builder is an interactive tool for developing applications. It provides features that facilitate both

the construction of an application's graphical user interface and the incorporation of CDE's desktop services, including the Help System, ToolTalk™ messaging, drag and drop, and the Session Manager.

## Common Desktop Environment: Desktop KornShell User's Guide

The *Common Desktop Environment: Desktop KornShell User's Guide* explains how to use the Desktop KornShell to create Motif applications. It introduces basic `dtksh` skills and provides several sample scripts. The samples are presented in order of increasing complexity, so you can gradually build your understanding of how `dtksh` works. The guide also includes a list of the commands supported by `dtksh` and their syntaxes.

## Common Desktop Environment: Help System Author's and Programmer's Guide

The *Common Desktop Environment: Help System Author's and Programmer's Guide* describes how to develop online help for Common Desktop Environment application software. It covers how to create help topics and how authors and developers collaborate to integrate online help into a Motif application. For authors, this book is a step-by-step guide to creating and testing online help that can contain multiple text styles, graphics, and hyperlinks. For application developers, this book describes the Help System application programming interface that allows the application to invoke help topics. It explains the help dialog widgets, how to respond to help requests, and how to navigate the hyperlink data.

## Common Desktop Environment: Internationalization Programmer's Guide

The *Common Desktop Environment: Internationalization Programmer's Guide* provides information for internationalizing an application so that it can be localized to support various languages and cultural conventions in a consistent user interface. This book contains guidelines and hints for developers on how to write applications for worldwide distribution, an overall view of internationalization topics that span different layers within the desktop, and pointers to reference and more detailed documentation.

## Common Desktop Environment: Product Glossary

The *Common Desktop Environment: Product Glossary* provides a comprehensive list of terms used in the Common Desktop Environment to act as a source and reference

base for all users of CDE. Glossary definitions can include information about the audience, where the term originated, the CDE component that uses the term in its graphical user interface, and terms marked *Do not use* with an alternate preferred term.

## Common Desktop Environment: Programmer's Overview

The *Common Desktop Environment: Programmer's Overview* provides a high-level view of the Common Desktop Environment development environment and the developer documentation set. Read this book first before starting application design and development. Application developers can use this book before developing a new Common Desktop Environment application, or integrating an existing Motif or OPEN LOOK™ application into the desktop. Managers, architects, or project leads should read this book if they are interested in designing a project involving applications that will run on the Common Desktop Environment desktop. This book is complemented by a Solaris specific book *Solaris Common Desktop Environment: Programmer's Guide*, which explains programming issues that relate only to developing for Solaris CDE.

## Common Desktop Environment: Style Guide and Certification Checklist

The *Common Desktop Environment: Style Guide and Certification Checklist* provides application design style guidelines and the list of requirements for Common Desktop Environment application-level certification. This book provides information to assist the application designer in developing consistent applications and behaviors within the applications. By default, this checklist assumes that your application is being designed for a left-to-right language environment in an English-language locale. These style requirements consist of the Motif 2.1 requirements with Solaris Common Desktop Environment-specific additions. Though Solaris 7 software predates the Open Group's CDE 2.1 standard, you may also want to consult the Style Guide Set published by The Open Group for additional style considerations.

## Common Desktop Environment: ToolTalk Messaging Overview

The *Common Desktop Environment: ToolTalk Messaging Overview* describes the ToolTalk components, commands, and error messages offered as routines to enable your application to conform to the Media Exchange and Desktop Services message set conventions. This book is for developers who create or maintain applications that use the ToolTalk service to interoperate with other applications in the Common Desktop Environment.

## Solaris Common Desktop Environment: Motif Transition Guide

The *Solaris Common Desktop Environment: Motif Transition Guide* addresses issues of concern to Sun Motif developers: how to run existing OPEN LOOK and Motif applications on the OpenWindows and Solaris Common Desktop Environment desktops; and porting OPEN LOOK and Motif applications to the Solaris CDE environment. This manual assumes you are familiar with OPEN LOOK or Motif programming.

## Solaris Common Desktop Environment: Programmer's Guide

The *Solaris Common Desktop Environment: Programmer's Guide* describes the Solaris Common Desktop Environment development environment. Use this guide if you are a programmer interested in integrating an existing application into Solaris CDE, or in developing a new application that uses the features and functionality of Solaris CDE. Some sections of this guide assume that you are familiar with Motif, X, UNIX<sup>®</sup>, or C programming. It is intended for use alongside the *Common Desktop Environment: Programmer's Overview*, and the *Motif Programmer's Reference Set* published by The Open Group.

## Solaris 7 Reference Manual AnswerBook

The *Solaris 7 Reference Manual AnswerBook* contains the *Sun OS Reference Manual* man pages. These sections are in SGML format.

### *man Pages(1): User Commands*

This section describes the commands and utilities available with this operating system, including commands found only in the SunOS/BSD Compatibility Package; commands for communicating with other systems; commands associated with the Form and Menu Language Interpreter (FMLI); and commands specific to the SunOS system.

The available options, arguments, and operands for each command are provided in accordance with standard rules of command syntax, along with availability attributes, diagnostic information, and cross-references to other manual pages and reference material with relevant information.

The intended audience includes all UNIX system users.

### *man Pages(1M): System Administration Commands*

This section describes the Solaris system administration and maintenance utilities and is for system and network administrators.

### *man Pages(2): System Calls*

This section describes the system calls. A system call is a C library function that requests kernel services. Readers of this section should be familiar with C programming language constructs.

### *man Pages(3): Library Routines*

This section describes the functions in the various C libraries. Those functions that request kernel services are not included in this section, but can be found in man pages (2). Readers of this section should be familiar with C programming language constructs.

### *man Pages(4): File Formats*

This section outlines the formats of various files including the C structure declarations where applicable. The headers containing these structure declarations are generally found in the directories `/usr/include` or `/usr/include/sys`.

In the pages that outline the various library structures, both public and private interfaces are listed. A public interface provides a stable, committed set of symbols for application development; private interfaces are for internal use only, and may change at any time.

The intended audience for this section is software engineers.

### *man Pages(5): Headers, Tables and Macros*

This section describes miscellaneous subjects, including headers, environments, macro packages, character sets, and standards. These descriptions provide further elaboration on Solaris constructs described elsewhere in this section.

### *man Pages(6): Demos*

This section describes audio and video games and demos provided by Solaris software.

### *man Pages(7): Device and Network Interfaces*

This section describes the various device and network interfaces available on the system. It includes descriptions of character and block devices, STREAMS modules, network protocols, file systems and `ioctl()` requests for driver subsystems and classes.

The intended audience for this section is software engineers who write, maintain or modify device drivers.

### *man Pages(9): DDI and DKI Overview*

This section describes the reference information required to write device drivers, which control data transferred to and received from peripheral devices, and are developed independently from the kernel.

The intended audience for this section are software engineers who write, modify or maintain device drivers. Readers should be familiar with the C programming language as well as system internals.

### *Man Pages(9E): DDI and DKI Driver Entry Points*

This section describes entry-point routines a developer may use to provide calling and return syntax from the kernel to the device driver.

This section is intended for software engineers who write, modify or maintain device drivers. Readers should be familiar with the C programming language as well as system internals.

### *man Pages(9F): DDI and DKI Kernel Functions*

This section describes functions a developer may use to provide calling and return syntax from a device driver to the kernel.

The intended audience for this section is software engineers who write, modify, or maintain device drivers. Readers should be familiar with the C programming language as well as system internals.

### *man Pages(9S): DDI and DKI Data Structures*

This section describes the data structures used by drivers to share information between the kernel and device drivers.

This section is intended for software engineers who write, modify, or maintain device drivers. Readers should be familiar with the C programming language as well as system internals.

## Solaris 7 Software Developer Collection

The *Solaris 7 Software Developer Collection* contains manuals relevant to software developers working in the Solaris environment. An abstract of each document follows.

### Applications Packaging Developer's Guide

The *Application Packaging Developer's Guide* provides step-by-step instructions and relevant background information for designing, building, and verifying packages. This guide also includes information on, and examples of, advanced techniques that you may find helpful during the package creation process.

### Federated Naming Service Programming Guide

The *Federated Naming Service Programming Guide* provides support for flexible composition of different, autonomous naming systems into a single service, accessible using a single, simple naming system interface. Federated Naming Service (FNS) facilitates coherent naming by encouraging the use of common naming policies. These interfaces and policies are shared by systems and applications, such as the file service and print service, to provide a coherent view of the global and enterprise-wide namespaces in the Solaris environment.

FNS exports the XFN X/Open( Federated Naming) programming interface and policies, an open standard actively supported by other vendors. This enhances the portability of applications that use FNS. FNS consists of XFN libraries, administration tools, and a set of XFN-conformant naming systems implemented using NIS+ for naming organizations, users, hosts, sites, services, and files within the enterprise.

### Java on Solaris Developer's Guide

This *Java on Solaris 7 Developer's Guide* gives Java™ developers information about using Java in the Solaris 2.6 and Solaris 7 environment, including overviews and descriptions of the important components of Java on Solaris, their benefits for developers, and how to use Java on Solaris to get the best performance for your applications. In addition, this document covers compatibility and style issues.

### Linker and Libraries Guide

The *Linker and Libraries Guide* describes the operations of the Solaris link-editor and runtime linker, and the objects on which they operate. The main areas this guide covers are: the Link-Editor: `ld(1)`, the Runtime Linker: `ld.so.1(1)`, Shared Objects (sometimes referred to as Shared Libraries), and the ELF object file format.

## Multithreaded Programming Guide

The *Multithreaded Programming Guide* covers the POSIX and Solaris threads APIs, programming with synchronization objects, compiling multithreaded programs, and finding analysis tools for multithreaded programs.

This guide is for developers who want to use multithreading to separate a process into many independent execution threads, improving application performance and structure.

## ONC+ Developer's Guide

The *ONC+ Developer's Guide* describes the programming interfaces to remote procedure call (RPC) and to NIS+ (a network name service), which belong to the ONC+™ distributed services developed at Sun Microsystems.

The guide assists you in converting an existing single-computer application to a networked, distributed application, or in developing and implementing distributed applications.

## Programming Utilities Guide

The *Programming Utilities Guide* covers the new TNF utilities for tracing program performance and execution, as well as the familiar utilities `lex`, `yacc`, `make`, `sccs`, and `m4`.

## SPARC Assembly Language Reference Manual

The *SPARC Assembly Language Reference Manual* describes the assembler that runs on the SPARC architecture and translates source files that are in assembly language format into object files in linking format.

## Solaris 7 64-bit Developer's Guide

The *Solaris 7 64-bit Developer's Guide* is written for the application developer, and provides guidance on how to determine whether an application should be 32-bit or 64-bit. It lists the similarities and differences between the 32-bit and 64-bit application environments, explains how to write code that is portable between the two environments, and describes the tools provided by the operating system for developing 64-bit applications. It explains the differences between the Solaris 32-bit and 64-bit build and runtime environments. It is written to help the application developer determine if and when it is appropriate to convert code to be 64-bit safe.

## Solaris Internationalization Guide for Developers

The *Solaris Internationalization Guide For Developers* describes new internationalization features in Solaris 7 software. It contains important information on how to use Solaris 7 software to build global software products that support various languages and cultural conventions. It contains guidelines and hints for developers on how to use Solaris 7 software to write applications for international markets, and includes pointers to more detailed documentation.

## Solaris X Window System Developer's Guide

This book provides detailed information for software developers interested in interfacing with the Solaris X server. Read this book for detailed information about features of the Solaris X server, the DPS imaging system, supported display devices, authorization schemes and protocols for server connections, and differences from and enhancements to the X Consortium sample server.

## Source Compatibility Guide

The *Source Compatibility Guide* describes installation, use, and the components of the *SunOS/BSD Source Compatibility Package*. The optional *SunOS/BSD Source Compatibility Package* provides many SunOS 4.1 and BSD interfaces not otherwise available in the SunOS 5.x operating environment and other interfaces that might differ in functionality between the SunOS 4.1 and SunOS 5.x releases.

## STREAMS Programming Guide

The *STREAMS Programming Guide* provides a full introduction to the STREAMS facility for UNIX system communications services in the Solaris environment. It covers STREAMS mechanisms, modules, drivers, pipes, polling, signalling, and multiplexing; and includes examples.

## System Interface Guide

The *System Interface Guide* is the most general of a set that describes the major elements of the Application Programming Interface. This guide introduces the Application Programming Interface concept and describes the process control, scheduling control, file input/output, System V interprocess communication, memory management, and real time interfaces.

Other manuals in the set are the *STREAMS Programming Guide*, the *Multithreaded Programming Guide*, and the *Transport Interfaces Programming Guide*.

## ToolTalk User's Guide

The *ToolTalk User's Guide* describes the ToolTalk service and how to modify applications to send and receive ToolTalk messages. This book is for developers who create or maintain applications that use the ToolTalk service to interoperate with other applications; it is also useful for system administrators who set up workstations. This guide assumes familiarity with Solaris operating environment commands, system administrator commands, and system terminology.

## Transport Interfaces Programming Guide

The *Transport Interfaces Programming Guide* describes the programmatic interfaces to transport services in the Solaris operating environment. Developing a network-distributed application using the Solaris operating environment is covered. Topics include the sockets interface at the transport layer, the UNIX System V Transport Interface, and the network selection mechanisms used by applications in selecting a network transport and its configuration.

## WebNFS Developer's Guide

The *WebNFS Developer's Guide* is bundled for the first time with Solaris 7, and includes information about the following topics:

- Extended file system API classes that provide a common interface for multiple file system types and allow for dynamic loading of file system implementations. The API also provides a means to access file and file system-specific information.
- WebNFS Client SDK, including Java class libraries that provide a way to access files using the same UI for local and remote file access.
- NFS classes for the extended file system that is the first implementation of remote file system access for Java applications to provide 100% Pure Java™ compatibility.

## Writing Device Drivers

*Writing Device Drivers* describes how to write character and block device drivers for the Solaris operating environment. It includes information on hardware and software issues relevant to device driver writing. It provides information on the data access interfaces that allow device drivers to be written independent of endianness and data ordering. It also provides information on porting Solaris drivers to a 64-bit environment.

## x86 Assembly Language Reference Manual

The *x86 Assembly Language Reference Manual* describes the assembler that runs on the x86 architecture and translates source files that are in assembly language format into object files in linking format.

## Solaris 7 System Administrator Collection

The *Solaris 7 System Administrator Collection* contains online documents covering all aspects of system administration and SunOS commands. An abstract of each document follows.

### Binary Compatibility Guide

The *Binary Compatibility Guide* emulates SunOS 4.x. This allows executables compiled and linked on SunOS 4.x to execute on Solaris. The guide describes how to use the package. It also describes the limits that an executable must stay within to be run under the Binary Compatibility Package.

### Font Administrator User's Guide

The *Font Administrator User's Guide* provides detailed instructions for managing fonts in the OpenWindows environment.

### Mail Administration Guide

The *Mail Administration Guide* presents the concepts and procedures required to establish and maintain electronic mail services. Special focus is given to the configuration files needed for `sendmail`. This guide is intended for the system administrator whose responsibilities include setting up and maintaining mail services.

### NFS Administration Guide

The *NFS Administration Guide* presents the administrative tasks required for the successful operation of the Sun Microsystems NFS™ distributed file system. This resource-sharing product enables you to share files and directories between a number of computers on a network. Also included in this book is how to set up and use `autofs` (formerly called the automounter) to automatically mount and unmount NFS file systems.

## NIS+ Transition Guide

The *NIS+ Transition Guide* describes how to convert a site running the NIS name service to a site running the NIS+ name service. It provides an introduction and overview of the transition process, information about designing a new NIS+ namespace, planning security measures, and running NIS+ in NIS-compatibility mode. It includes the prerequisites and steps required to implement a NIS-to-NIS+ transition.

## Solaris Transition Guide

The *Solaris Transition Guide* focuses on the Solaris 7 operating environment (the distributed computing solution from Sun Microsystems), which consists of SunOS Release 5.6 with the ONC™, OpenWindows, ToolTalk, DeskSet™, and OPEN LOOK features as well as other utilities. This guide focuses on the differences between the SunOS release 4.x and operating environments, for users already familiar with the SunOS release 4.x operating environment. This guide also describes other aspects of the operating environment that can help end users, developers, and system administrators through the transition.

## Solaris Common Messages and Troubleshooting Guide

The *Solaris Common Messages and Troubleshooting Guide* lists causes, solutions, background information, and references for more than 250 common Solaris error messages.

## Solaris Naming Administration Guide

The *Solaris Naming Administration Guide* describes how to customize and administer existing NIS+, NIS, FNS, and DNS namespaces. It provides overview descriptions of these four name services, conceptual information describing how they work, and step-by-step descriptions and explanations of how to perform common namespace administration tasks. This guide also includes common namespace error messages and a troubleshooting appendix.

## Solaris Naming Setup and Configuration Guide

The *Solaris Naming Administration Guide* describes how to set up and configure NIS+, NIS, FNS, and DNS name services in a Solaris environment. It provides network planning instructions and step-by-step set up and configuration instructions for each of the four name services. It also describes the name service switch file (`nsswitch.conf`) and how to use it to coordinate the use of multiple naming services in a single environment.

## Solstice Enterprise Agents 1.0 User Guide

The *Solstice Enterprise Agents 1.0 User Guide* introduces the product and explains how to install, configure, and administer the Solstice™ Enterprise Agents™ runtime environment and associated subagents. This document is targeted at system administrators. It gives an overview of the product architecture, functions, features, and components.

## SunSHIELD Basic Security Module Guide

The *SunSHIELD Basic Security Module Guide* is intended for the system administrator whose duties include setting up and maintaining the SunSHIELD™ Basic Security Module (BSM). The product provides the security features defined as C2 in the Trusted Computer System Evaluation Criteria (TCSEC). The manual includes installation instructions, explains how to administer auditing using BSM, provides audit trail analysis processes, and describes how to allocate devices. In addition, it contains a detailed description of the audit records.

## System Administration Guide, Vol. I and II

The *System Administration Guide, Volume I* and the *System Administration Guide, Volume II* cover a broad range of Solaris system administration topics such as managing user accounts and groups; managing server and client support; shutting down and booting a system; managing removable media (CDs, diskettes, and PCMCIA cards); managing software (packages and patches); managing disks and devices; managing file systems, backing up and restoring data; managing printing services; working with remote systems (`rlogin`, `ftp`, and `rcp`); managing terminals and modems; managing system security; managing system resources (disk quotas, accounting, and crontabs); managing system performance; and troubleshooting Solaris software problems.

The above topics are described for both SPARC and x86 systems where appropriate.

This book is intended for anyone responsible for administering one or more systems running the Solaris release.

## TCP/IP and Data Communications Administration Guide

The *TCP/IP and Data Communications Administration Guide* explains how to set up, maintain, and expand a network using the Solaris implementation of the TCP/IP protocol suite. The text assumes that you are familiar with the Solaris environment and defines tasks involved in network planning, configuration, and administration. Sections are devoted to communication with remote machines using Point-to-Point Protocol (PPP) and UNIX-to-UNIX Copy Program (UUCP).

Part 4 on Dynamic Host Configuration Protocol (DHCP) was added for the Solaris 2.6 release. Appendix A was also added for DHCP.

## Solaris 7 User Collection

The *Solaris 7 User Collection* contains manuals relevant to users of workstations, including use of the Common Desktop Environment software, the OpenWindows DeskSet tools, and tasks performed at the command line that are common to any desktop environment. An abstract of each document follows.

---

**Note** - The books in the User Collection are also available in French, German, Italian, Swedish, and Spanish in the following packages:

- Solaris 7 Userbook-Dokumentationsreihe
  - Collection de manuels utilisateur Solaris 7
  - Användarboksamling för Solaris 7
  - Solaris 7: Colección de instalación
  - Collezione per l'utente di Solaris 7
- 

## About Solaris 7 Documentation

The *About Solaris 7 Documentation* is this book. It lists the documentation needed to install and use Solaris 7 software. It also provides a graphical organization of the documents by task, abstracts for these documents, and information on other sources that might be helpful when using this release of Solaris.

## OpenWindows Advanced User's Guide

The *OpenWindows Advanced User's Guide* provides detailed instructions for managing fonts in the OpenWindows environment.

This guide is for users of the Solaris system software which consists of SunOS and OpenWindows. Use this guide to learn how to log in and out, start OpenWindows, use basic SunOS commands including `man` to get more information, work with files and directories, search your file system, use passwords, monitor processes and disk usage, use the `vi` editor, send electronic mail, print documents, use the network, and customize your environment. The *Solaris Advanced User's Guide* also provides information about making the transition to OpenWindows 3.3 and Solaris 2.5, modifying keyboard behavior, running networked applications, and using PCMCIA cards.

## OpenWindows User's Guide

The *OpenWindows User's Guide* provides new and experienced users with the basic information to get started with the Solaris user environment (using OpenWindows and DeskSet applications). You can become familiar with the OpenWindows environment and learn to perform tasks such as using the mouse, icons, windows, and menus. You'll find out how to use the pushpin on pinnable windows, choose exclusive or non-exclusive choice items, select items in a scrolling list, select multiple objects, and use scrollbars. Additional topics covered in this book include how to modify the OpenWindows Workspace, troubleshooting, and how to access AnswerBook to view documents online.

## Solaris Common Desktop Environment: Advanced User's and System Administrator's Guide

The *Solaris Common Desktop Environment: Advanced User's and System Administrator's Guide* explains advanced tasks involved in customizing the appearance and behavior of the CDE. It includes chapters on customizing system initialization, login, and session initiation, adding applications and providing interface representations for applications and their data, configuring desktop processes, applications, and data across the network, and customizing desktop services such as window management, printing, colors, and fonts.

## Solaris Common Desktop Environment: User's Guide

The *Solaris Common Desktop Environment: User's Guide* describes the basic features of the CDE. It describes how to use the desktop and desktop applications.

## Solaris Common Desktop Environment: User's Transition Guide

The *Solaris Common Desktop Environment: User's Transition Guide* can help users who are making the transition from the OpenWindows™ environment to the Common Desktop Environment. It discusses CDE as a graphical operating environment under standard headings and, where helpful, identifies the differences in behavior between OpenWindows and CDE. The answers to frequently asked questions have been integrated into the relevant topics.

This book gives only an overview of CDE features and functions. You will find more complete information in *Solaris Common Desktop Environment: User's Guide* and the CDE online help volumes.

## Using Power Management

The *Using Power Management* book describes use of Power Management™ software features on desktop machines. These features allow the machine to shut down or reduce power consumption when it has been idle, according to conditions you set with this software. This book covers use of the GUI (run by the `dtpower` command) and command line operations, and activation of Suspend-Resume features through the keyboard.

## Solaris XGL 3.3 AnswerBook

The *Solaris XGL 3.3 AnswerBook* contains manuals relevant for software developers using the XGL™ graphics library. An abstract of each document follows.

## Getting Started Writing XGL Device Handlers

The *Getting Started Writing XGL Device Handlers* provides step-by-step instructions for modifying the skeleton pipeline template files to create an XGL graphics handler. The skeleton pipeline is designed to enable a hardware developer to implement pixel-level rendering and accelerated primitives in a few simple steps. This book is for driver developers who are writing a device handler to port a hardware device to the XGL graphics library.

## XGL Accelerator Guide for Reference Frame Buffers

The *XGL Accelerator Guide for Reference Frame Buffers* describes how to make efficient use of XGL primitives and attributes on Sun Microsystems reference frame buffers. It also provides information on techniques that an application programmer can use to improve performance on all XGL platforms. This book is for application developers who create or maintain XGL applications.

## XGL Architecture Guide

The *XGL Architecture Guide* provides an architectural overview of the XGL graphics porting interface. It presents information about the design of the XGL loadable pipelines and provides details about the implementation of some key aspects of the architecture. This guide is for driver developers who are writing a device handler to port a hardware device to the XGL graphics library.

## XGL Device Pipeline Porting Guide

The *XGL Device Pipeline Porting Guide* describes how to create an XGL graphics handler. It presents information about the XGL graphics porting interfaces and utilities. These interfaces link the device-independent component of the XGL library with the graphics handler and enable the flow of data from the application to the graphics handler. This book is for driver developers who are writing a device handler to port a hardware device to the XGL graphics library.

## XGL Programmer's Guide

The *XGL Programmer's Guide* describes the XGL application programming interface provided for graphics applications. It includes sample programs to assist an application programmer in writing an XGL program. This book is for application developers who create or maintain XGL applications.

## XGL Reference Manual

The *XGL Reference Manual* provides man pages that describe the syntax for using the operators (functions) and attributes in the Graphics Library. Special sections describe the enumerated types, macro values, point list structures, and data structures. The other sections describe, in alphabetical order, the attributes and operators.

## XGL Test Suite User's Guide

The *XGL Test Suite User's Guide* provides instructions about how to set up, install, and run a set of graphics verification programs. It also lists 740 test programs that test every XGL function defined at the API and the major internal components of the XGL library. This book is for application developers who want to test the accuracy of a particular XGL implementation.

---

## Other Information

Additional sources of information about Solaris 7 products and technologies are available. The following is a brief list of places to look for information when working with Solaris 7 software.

- `docs.sun.com`<sup>™</sup>—The `docs.sun` web site allows you to access the full text of many Sun technical documents online. As of the Solaris 7 release, `docs.sun` provides all 7 documentation, as well as a large collection of older documentation — software and hardware. Documentation is provided in all available languages, and the user interface is multilingual. A variety of browsing and searching styles

are supported, as well as powerful print capabilities. To visit the `docs.sun` site, type in this URL on any browser: `http://docs.sun.com`.

- Sun Microsystems Press—Publishes third-party books about Solaris topics. To visit the web site, see `http://www.sun.com/books`.