



About Solaris 9 Documentation

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Preface

About Solaris 9 Documentation lists books and other documentation you might need for installing and using the Solaris™ 9 operating environment.

Note – The Solaris operating environment runs on two types of hardware, or platforms - SPARC™ and IA (Intel Architecture). The Solaris operating environment also runs on both 64-bit and 32-bit address spaces. The information in this document pertains to both platforms and address spaces unless called out in a special chapter, section, note, bullet, figure, table, example, or code example.

Note – In this document the term “IA” refers to the Intel 32-bit processor architecture, which includes the Pentium, Pentium Pro, Pentium II, Pentium II Xeon, Celeron, Pentium III, Pentium III Xeon, and Pentium 4 processors and compatible microprocessor chips made by AMD and Cyrix.

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Fatbrain.com, the Internet’s most comprehensive professional bookstore, stocks select product documentation from Sun Microsystems, Inc.

For a list of documents and how to order them, visit the Sun™ Documentation Center on Fatbrain.com at <http://www1.fatbrain.com/documentation/sun>.

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The docs.sun.comSM Web site enables you to access Sun technical documentation online. You can browse the docs.sun.com archive or search for a specific book title or subject. The URL is <http://docs.sun.com>.

Overview of the Solaris 9 Documentation Set

This chapter describes the Solaris 9 documentation set.

Solaris 9 Documentation Set

The Solaris 9 documentation set provides information on installation and operation of the Solaris 9 operating environment. The documents are provided in both printed and online formats. Printed documents are usually included in the Solaris media kit. Online documents are provided on the Solaris 9 Documentation CD in both HTML and PDF formats. Online documents are also located at <http://docs.sun.com>.

Note – You might not have printed documents if your software was preinstalled. You might have printed documentation for other products that are packaged with the Solaris operating environment, but they are not described here.

The documents on the Solaris 9 Documentation CD are grouped by collection. A collection is a group of documents that cover a similar topic. Documents are grouped into the following collections:

- Solaris 9 What's New Collection
- Solaris 9 Installation Collection
- Solaris 9 Release Documents Collection
- Solaris 9 User Collection
- Solaris 9 Reference Manual Collection
- Solaris 9 System Administrator Collection
- Solaris 9 Software Developer Collection
- Solaris 9 Common Desktop Environment Developer Collection
- Solaris 9 Asian Locales Collection

- KCMS Collection

Additional documents, such as the *Solaris 9 Documentation CD README*, are located on the Documentation CD under the “Supplemental Information” heading.

For a description of changes to the documentation set since the release of the Solaris 8 operating environment, see Chapter 2.

For a list of documents that are grouped by tasks or subjects, see Chapter 3.

Important Changes in the Solaris 9 Documentation Set

This chapter describes changes to the documentation set since the release of the Solaris 8 operating environment.

Documentation Changes

This section describes major changes to the Solaris 9 documentation set. The tables that follow highlight changes that have been made to documentation published in previous Solaris releases. These changes include:

- Documentation reorganizations
- Documentation title changes
- Documentation that is not published as part of the Solaris 9 documentation set
- Documentation that has been moved

Documentation Reorganizations

The following documentation has been reorganized.

TABLE 2-1 Documentation Reorganizations

Documentation	Reorganization
Installation Documentation	<p>The <i>Solaris 9 Installation Guide</i> has incorporated several installation books from the Solaris 8 release into one volume. The revised version combines all of the previous Solaris 8 installation guides: <i>Solaris 8 (SPARC Platform Edition) Installation Guide</i>, <i>Solaris 8 (Intel Platform Edition) Installation Guide</i>, <i>Solaris 8 Advanced Installation Guide</i>, <i>Solaris 8 Installation Supplement</i>.</p> <p>The revision also includes the addition of information about new and enhanced Solaris installation technologies. The focus is on task-based procedures. Reference material appears separately in the guide.</p>
Reference Manual	<p>The section of the <i>SunOS Reference Manual</i> that describes the interface provided by the Device Driver Interface (DDI) Driver-Kernel Interface (DKI) now contains three books instead of four. These books are:</p> <ul style="list-style-type: none">■ <i>DDI and DKI Driver Entry Points</i>■ <i>DDI and DKI Kernel Functions</i>■ <i>DDI and DKI Properties and Data Structures</i> <p>For more information, see the Solaris 9 Reference Manual Collection.</p>
System Administration Guides	<p>Several new guides have been added to the Solaris 9 release. All of the guides focus on task-based procedures as well as providing general reference material.</p> <p>The <i>System Administration Guide, Volume 1</i> has been renamed to <i>System Administration Guide: Basic Administration</i>. The <i>System Administration Guide, Volume 2</i> has been renamed to <i>System Administration Guide: Advanced Administration</i>.</p> <p>The <i>System Administration Guide, Volume 3</i> has been split into the <i>System Administration Guide: IP Services</i> and the <i>System Administration Guide: Resource Management and Network Services</i>. The IP services guide focuses on such technologies as TCP/IP, DHCP, IPv6, Mobile IP and IPSec. The resource management and network services guide includes the following topics: Resource Management, NCA, Mail, NFS, UUCP, and PPP.</p> <p>The <i>System Administration Guide: Naming and Directory Services</i> is a new document that includes information previously documented in the <i>Solaris Naming Administration Guide</i> and the <i>Solaris Naming Setup and Configuration Guide</i>.</p> <p>The <i>System Administration Guide: Security Services</i> includes information from the <i>SunSHIELD Basic Security Module Guide</i>, as well as sections about RBAC, PAM and SEAM.</p>

Changes to Documentation Titles

These documents were published in a previous Solaris release under a different title. They have been renamed in the Solaris 9 documentation set.

TABLE 2-2 Changes to Documentation Titles

Previous Title	New Title
<i>OpenWindows Advanced User's Guide</i>	<i>Solaris Advanced User's Guide</i>
<i>Solaris Smart Cards Administration Guide</i>	<i>Solaris Smartcard Administration Guide</i>
<i>Solaris WBEM Services Administrator's Guide</i>	<i>Solaris WBEM Services Administration Guide</i>
<i>Sun WBEM Services Developer's Guide</i>	<i>Solaris WBEM Services Developer's Guide</i>
<i>System Administration Guide, Volume 1</i>	<i>System Administration Guide: Basic Administration</i>
<i>System Administration Guide, Volume 2</i>	<i>System Administration Guide: Advanced Administration</i>

Documentation Not in Solaris 9 Documentation Set

These documents are not published as part of the Solaris 9 documentation set. They were previously published as part of the Solaris 8 documentation set and can be found at <http://docs.sun.com>.

TABLE 2-3 Documents Not in Solaris 9 Documentation Set

Document Title	Previous Collection
<i>Binary Compatibility Guide</i>	Solaris 8 System Administrator Collection
<i>JDK 1.1 for Solaris Developer's Guide</i>	Solaris 8 Software Developer Collection
<i>OpenWindows User Guide</i>	Solaris 8 User Collection
<i>Solaris Transition Guide</i>	Solaris 8 System Administrator Collection
<i>Solaris Transition Guide Update</i>	Solaris 8 System Administrator Collection
<i>Source Compatibility Guide</i>	Solaris 8 Software Developer Collection
<i>WebNFS Developer's Guide</i>	Solaris 8 Software Developer Collection

Movement of Documentation

These documents were once published as part of the Solaris documentation set. They are now either published elsewhere, or their content has been moved into a different document.

TABLE 2-4 Movement of Documentation

Document Title	Now Located
<i>IP Network Multipathing Administration Guide</i>	<i>System Administration Guide: IP Services</i>
<i>LDAP Setup and Configuration Guide</i>	<i>System Administration Guide: Naming and Directory Services</i>
<i>Mobile IP Administration Guide</i>	<i>System Administration Guide: IP Services</i>
<i>Network Interface Guide</i>	<i>Programming Interfaces Guide</i>
<i>NIS+ Transition Guide</i>	<i>System Administration Guide: Naming and Directory Services</i>
<i>OpenBoot 2.x Command Reference Manual</i>	Software Supplement for the Solaris 9 Operating Environment CD
<i>OpenBoot 2.x Quick Reference</i>	Software Supplement for the Solaris 9 Operating Environment CD
<i>OpenBoot 3.x Command Reference Manual</i>	Software Supplement for the Solaris 9 Operating Environment CD
<i>OpenBoot 3.x Quick Reference</i>	Software Supplement for the Solaris 9 Operating Environment CD
<i>Service Location Protocol Administration Guide</i>	<i>System Administration Guide: Resource Management and Network Services</i>
<i>Solaris Common Messages and Troubleshooting Guide</i>	man pages and System Administration Guides
<i>Solaris Naming Administration Guide</i>	<i>System Administration Guide: Naming and Directory Services</i>
<i>Solaris Naming Setup and Configuration Guide</i>	<i>System Administration Guide: Naming and Directory Services</i>
<i>Solaris 9 (Intel Platform Edition) Device Configuration Guide</i>	<i>Solaris 9 (Intel Platform Edition) Hardware Compatibility List</i>
<i>SunShield Basic Security Module Guide</i>	<i>System Administration Guide: Security Services</i>
<i>System Interface Guide</i>	<i>Programming Interfaces Guide</i>
<i>Using Power Management</i>	<i>Solaris Common Desktop Environment: User's Guide</i>

TABLE 2-4 Movement of Documentation (Continued)

Document Title	Now Located
<i>Writing FCode 3.x Programs</i>	Software Supplement for the Solaris 9 Operating Environment CD

Finding the Documentation for Your Task

This chapter provides Solaris 9 documentation that is organized by tasks or subjects. The documents are grouped under these subjects:

- “Installing” on page 15
- “Using the Desktop” on page 17
- “Administering Systems, Networks, and Security Mechanisms” on page 19
- “Developing Applications” on page 22
- “Common Desktop Environment” on page 26
- “Asian Locales” on page 29
- “Man Page Documentation” on page 30

Documents available on the Solaris 9 Documentation CD are grouped under collection headings. The table titles list the name of the collection where you will find the document. Printed documents are usually provided in the Solaris 9 software media kits.

Installing

The following tables list documentation that describes installation issues, features, and functionality. The table title lists the name of the collection where you will find the document on the Solaris 9 Documentation CD.

TABLE 3-1 Solaris 9 Documentation CD

Document	Description
<i>Solaris 9 Documentation CD README</i>	This document contains information about the use and installation of the Documentation CD.

TABLE 3-2 Solaris 9 What's New Collection

Document	Description
<i>What's New in the Solaris 9 Operating Environment</i>	<p>This book contains high-level feature descriptions of new functionality in the Solaris™ 9 operating environment. Chapters summarize new features for desktop users, system administrators and software developers. The system administration chapter includes Solaris 9 installation features. New Java™ features are also summarized.</p> <p>Feature descriptions are included for both SPARC™ and IA based systems, where appropriate.</p>

TABLE 3-3 Solaris 9 Installation Collection

Document	Description
<i>Solaris 9 Installation Guide</i>	<p>This book describes how to install the Solaris™ operating environment on both networked and non-networked, SPARC™ and IA platform systems. The book describes how to use the Solaris Web Start installation program and the Solaris Interactive Installation Program to install systems interactively. The book contains instructions for using the Web Start Flash or the custom JumpStart™ technology to set up, automate, customize, and automatically install Solaris on any number of systems, primarily in enterprise network environments. This book also describes how to use Solaris Live Upgrade to substantially reduce the usual service outage that is associated with an operating system upgrade.</p>
<i>Solaris 9 (Intel Platform Edition) Hardware Compatibility List</i>	<p>This book provides information about IA hardware requirements and platforms and devices that are supported by Solaris™ <i>Intel Platform Edition</i>. The contents are presented in tables, by manufacturer and model, and the document is designed to be scanned quickly. This book also contains information about how to obtain drivers and supplemental driver documentation that was developed between Solaris <i>Intel Platform Edition</i> product releases.</p>

TABLE 3-4 Solaris 9 Release Documents Collection

Document	Description
<i>Solaris 9 Release Notes</i> for the appropriate platform	<p>These books, published on the Solaris™ 9 Documentation CD and in the Installation Kiosk, describe important installation and runtime issues and bugs. These Release Notes also include new feature descriptions, end-of-software support statements, documentation issues, information about driver updates, and CERT Advisories.</p> <p>For any updates, see the <i>Solaris 9 Release Notes</i> on http://docs.sun.com.</p>

TABLE 3-5 Solaris 9 Printed Documentation

Document	Description
<i>Solaris 9 Installation Release Notes</i> for the appropriate platform	These books, printed and included in the Solaris 9 Media folder, describe critical installation issues and bugs for the Solaris™ 9 operating environment. For runtime issues, see the <i>Solaris 9 Release Notes</i> for the appropriate platform. Also, for any updates, see the <i>Solaris 9 Release Notes</i> on http://docs.sun.com .
<i>Solaris 9 Start Here</i>	This booklet outlines the process of installing the Solaris™ operating environment and related software on both the SPARC™ and IA platforms.

Using the Desktop

The following tables list documentation that describes desktop features and procedures. These documents are relevant to users of workstations, and includes use of the Common Desktop Environment software. The table title lists the name of the collection where you will find the document on the Solaris 9 Documentation CD.

TABLE 3-6 Solaris 9 What's New Collection

Document	Description
<i>What's New in the Solaris 9 Operating Environment</i>	This book contains high-level feature descriptions of new functionality in the Solaris™ 9 operating environment. Chapters summarize new features for desktop users, system administrators and software developers. The system administration chapter includes Solaris 9 installation features. New Java™ features are also summarized. Feature descriptions are included for both SPARC™ and IA based systems, where appropriate.

TABLE 3-7 Solaris 9 User Collection

Document	Description
<i>Solaris Advanced User's Guide</i>	<p>This book is for advanced users of the Solaris operating environment. This book describes how to use the Solaris command line interface to perform the following tasks.</p> <ul style="list-style-type: none">■ Log in and log out of a session■ Enter commands■ Access online documentation■ Work with files and directories■ Search the file system■ Monitor processes and disk usage■ Use the <code>vi</code> editor■ Print documents■ Use the network■ Customize the operating environment■ Modify keyboard equivalents■ Run networked applications
<i>Solaris Common Desktop Environment: Advanced User's and System Administrator's Guide</i>	<p>This book explains the advanced tasks that are needed to customize the appearance and behavior of the Solaris™ Common Desktop Environment (CDE). The book includes chapters on customizing system initialization; login; 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.</p>
<i>Solaris Common Desktop Environment: User's Guide</i>	<p>This book describes the basic features of the Common Desktop Environment (CDE). This book also describes how to use the desktop and desktop applications.</p>
<i>Solaris Common Desktop Environment: User's Transition Guide</i>	<p>This book is for users who are making the transition from the OpenWindows™ environment to the Common Desktop Environment. The book discusses CDE as a graphical operating environment 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.</p>

Administering Systems, Networks, and Security Mechanisms

The following tables list documentation that describes system administration features, procedures, SunOS commands, and security mechanisms. The table title lists the name of the collection where you will find the document on the Solaris 9 Documentation CD.

TABLE 3-8 Solaris 9 What's New Collection

Document	Description
<i>What's New in the Solaris 9 Operating Environment</i>	<p>This book contains high-level feature descriptions of new functionality in the Solaris™ 9 operating environment. Chapters summarize new features for desktop users, system administrators and software developers. The system administration chapter includes Solaris 9 installation features. New Java™ features are also summarized.</p> <p>Feature descriptions are included for both SPARC™ and IA based systems, where appropriate.</p>

TABLE 3-9 Solaris 9 Release Documents Collection

Document	Description
<i>Solaris 9 Release Notes</i> for the appropriate platform	<p>These books, published on the Solaris™ 9 Documentation CD and in the Installation Kiosk, describe important installation and runtime issues and bugs. These Release Notes also include new feature descriptions, end-of-software support statements, documentation issues, information about driver updates, and CERT Advisories.</p> <p>For any updates, see the <i>Solaris 9 Release Notes</i> on http://docs.sun.com.</p>

TABLE 3-10 Solaris 9 System Administrator Collection

Document	Description
<i>Font Administrator User's Guide</i>	<p>This book provides detailed instructions for managing fonts in the X Window System. The audience for this book is the end user and system administrator.</p>

TABLE 3–10 Solaris 9 System Administrator Collection (Continued)

Document	Description
<i>Solaris Java Plug-in User's Guide</i>	This book describes the Java™ Plug-in component of the Java 2 Platform for the Solaris™ operating environment. This book contains information that is useful to applet developers and web site managers who host applets on their web pages. The Java Plug-in component is an add-on product for Netscape Navigator™ and Netscape™ Communicator web browser. This component enables Java applets to run in Web pages that use the latest version of the Java Runtime Environment rather than the default Java Runtime Environment that ships with the browser.
<i>Solaris Smartcard Administration Guide</i>	This book is intended for Solaris™ system and network administrators who are responsible for setting up smartcards on systems or applications that require secure login authentication. Although no new software features are in this release, obsolete or inaccurate references have been removed from the documentation, bug fixes have been incorporated, and some new explanatory text has been added.
<i>Solaris Tunable Parameters Reference Manual</i>	This book provides reference information on Solaris™ tunable parameters. It is intended for experienced Solaris system administrators who might need to change kernel tunable parameters in certain situations.
<i>Solaris Volume Manager Administration Guide</i>	This book provides instructions on using Solaris™ Volume Manager to manage disk storage. This book describes the creation, modification, and use of RAID 0 (concatenation and stripe), RAID 1 (mirror), and RAID 5 volumes, in addition to soft partitions and transactional logging devices.
<i>Solaris WBEM Services Administration Guide</i>	This book explains Common Information Model (CIM) concepts and describes how to administer Web-Based Enterprise Management (WBEM) services in the Solaris™ operating environment.
<i>Solstice Enterprise Agents 1.0 User Guide</i>	This book covers Solstice Enterprise Agents™, an extensible agent technology that uses the Simple Network Management Protocol (SNMP) to manage different components and applications separately within a device. The book describes how to install and configure Solstice Enterprise Agents components, how to invoke Master Agents and subagents, and how to use the Desktop Management Interface (DMI).
<i>System Administration Guide: Basic Administration</i>	<p>This book is for anyone responsible for administering one or more systems that run the Solaris 9 release. The book covers 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, managing software (packages and patches), managing disks and devices, managing file systems, and backing up and restoring data.</p> <p>Topics are described for both SPARC™ and IA based systems, where appropriate.</p>

TABLE 3–10 Solaris 9 System Administrator Collection (Continued)

Document	Description
<i>System Administration Guide: Advanced Administration</i>	<p>This book is for anyone responsible for administering one or more systems that run the Solaris 9 release. The book covers a broad range of Solaris™ system administration topics such as managing printing services, working with remote systems (<i>rlogin</i>, <i>ftp</i>, and <i>rcp</i>), managing terminals and modems, managing system security, managing system resources (disk quotas, accounting, and <i>crontabs</i>), managing system performance, and troubleshooting Solaris software problems.</p> <p>Topics are described for both SPARC™ and IA based systems, where appropriate.</p>
<i>System Administration Guide: IP Services</i>	<p>This book is for anyone responsible for administering one or more systems that run the Solaris™ 9 release. The book covers a broad range of Internet Protocol (IP) network administration services. These services include managing TCP/IP networks, IPv4, IPv6, DHCP, IP Security, Mobile IP, and IP Network Multipathing.</p> <p>Topics are described for both SPARC™ and IA based systems, where appropriate.</p>
<i>System Administration Guide: Resource Management and Network Services</i>	<p>This book is for anyone responsible for administering one or more systems that run the Solaris 9 release. The book covers a broad range of Solaris™ network administration topics such as resource management, modems, remote file systems, mail, and PPP.</p> <p>Topics are described for both SPARC™ and IA systems, where appropriate.</p>
<i>System Administration Guide: Naming and Directory Services</i>	<p>This book covers the setup and administration of the naming and directory services that are currently supported in the Solaris™ operating environment: LDAP, DNS, NIS, NIS+ and FNS.</p>
<i>System Administration Guide: Security Services</i>	<p>This book is for anyone responsible for administering the security requirements for one or more systems that run the Solaris 9 release. The book covers a broad range of Solaris™ security related topics such as auditing, PAM, RBAC, and SEAM.</p> <p>Topics are described for both SPARC™ and IA systems, where appropriate.</p>

TABLE 3–11 Solaris 9 User Collection

Document	Description
<i>Solaris Common Desktop Environment: Advanced User's and System Administrator's Guide</i>	This book explains the advanced tasks that are needed to customize the appearance and behavior of the Solaris™ Common Desktop Environment (CDE). The book includes chapters on customizing system initialization; login; 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.

Developing Applications

The following tables list documentation that describes software development features and procedures. The table title lists the name of the collection where you will find the document on the Solaris 9 Documentation CD.

TABLE 3–12 Solaris 9 What's New Collection

Document	Description
<i>What's New in the Solaris 9 Operating Environment</i>	<p>This book contains high-level feature descriptions of new functionality in the Solaris™ 9 operating environment. Chapters summarize new features for desktop users, system administrators and software developers. The system administration chapter includes Solaris 9 installation features. New Java™ features are also summarized.</p> <p>Feature descriptions are included for both SPARC™ and IA based systems, where appropriate.</p>

TABLE 3–13 Solaris 9 Software Developer Collection

Document	Description
<i>Application Packaging Developer's Guide</i>	This book provides step-by-step instructions and relevant background information for designing, building, and verifying packages. This document also includes information on, and examples of, advanced techniques that you might find helpful during the package creation process.
<i>Federated Naming Service Programming Guide</i>	This book provides support for flexible composition of different, autonomous naming systems into a single service that you can access with a single, simple naming system interface.

TABLE 3-13 Solaris 9 Software Developer Collection (Continued)

Document	Description
<i>GSS-API Programming Guide</i>	This book instructs developers on how to use the Generic Security Services Application Programming Interface (GSS-API) to make their network-based programs secure. The GSS-API provides developers with a way to use installed security mechanisms such as Kerberos v5 for authentication, integrity, and confidentiality in protecting data that is sent over networks. The GSS-API eliminates the need to write programs that are specifically tailored to any security mechanism or platform.
<i>IA-32 Assembly Language Reference Manual</i>	This book describes the assembler that generates code for the Intel 32-bit processor architecture (IA-32) and translates source files that are in assembly language format into object files in linking format. The text in this book is current to Solaris™ 7 software.
<i>International Language Environments Guide</i>	<p>This book describes internationalization features in the Solaris™ 9 operating environment. The book contains important information on how to use Solaris 9 software to build software products that support various languages and cultural conventions. This book also contains guidelines for developers on how to use Solaris 9 software to write applications for international markets.</p> <p>The euro is introduced, along with such concepts as Codeset Independence (CSI), keyboard support, how to localize the multilingual Solaris product, printing support for European and Asian printing, and Unicode local support features.</p>
<i>Java 2 SDK for Solaris Developer's Guide</i>	This book gives developers information about using the Java™ programming language in the Solaris™ 9 operating environment. The book includes overviews and descriptions of the new features and enhancements in the Java 2 Platform for Solaris, with notes about compatibility issues.
<i>Linker and Libraries Guide</i>	This book describes the operations of the Solaris™ link-editor and runtime linker, and the objects on which they operate. The book covers the Link-Editor: <code>ld(1)</code> , the Runtime Linker: <code>ld.so.1(1)</code> , Shared Objects (sometimes referred to as Shared Libraries), and the ELF object file format.
<i>Multithreaded Programming Guide</i>	<p>This book covers the POSIX and Solaris™ threads APIs, programming with synchronization objects, compiling multithreaded programs, and finding analysis tools for multithreaded programs.</p> <p>This book is for developers who want to use multithreading to separate a process into many independent execution threads to improve application performance and structure.</p>

TABLE 3-13 Solaris 9 Software Developer Collection (Continued)

Document	Description
<i>ONC+ Developer's Guide</i>	<p>This book describes the ONC+™ distributed services that were developed at Sun Microsystems. ONC+ technologies consist of a family of technologies, services, and tools. The technologies include</p> <ul style="list-style-type: none">■ Transport-independent remote procedure call (TI-RPC) was developed to make RPC applications transport-independent.■ External data representation (XDR) is an architecture-independent specification for representing data.■ Network Information Services Plus (NIS+) is the enterprise naming service in the Solaris environment. This service provides a scalable and secure information base.
<i>Programming Interfaces Guide</i>	<p>This book presents the most basic interfaces that allow an application developer to construct networking applications: Internet domain sockets, XTI and TLI, transport selection, and mappings between names and addresses. This book also provides information on other fundamental networking technology. The <i>ONC+ Developer's Guide</i> explains higher-level networking interfaces.</p>
<i>Solaris 64-bit Developer's Guide</i>	<p>This book is written primarily for the application developer and provides guidance on choosing whether to use the 32-bit or 64-bit Solaris™ application programming environment. The book explains the similarities and differences between the 32-bit and 64-bit application environments and explains how to write code that is portable between the two environments. This book also describes some of the tools that are provided by the operating system for developing 64-bit applications.</p>
<i>Solaris DHCP Service Developer's Guide</i>	<p>This book provides information for developers who want to support a new data service for storing Solaris™ DHCP service information.</p>
<i>Solaris Modular Debugger Guide</i>	<p>This book describes the Solaris™ Modular Debugger (MDB), which is a general—purpose debugging tool for the Solaris operating environment. The primary feature of MDB is its extensibility. This book describes how to use MDB to debug complex software systems, with a particular emphasis on the facilities available for debugging the Solaris kernel and associated device drivers and modules. The book also includes a complete reference for and discussion of the MDB language syntax, debugger features, and MDB Module Programming API.</p>
<i>Solaris WBEM SDK Developer's Guide</i>	<p>This book describes the components of the Sun™ WBEM Software Development Kit (SDK) and explains how to use the components to develop WBEM-enabled applications and programs.</p>
<i>Solaris X Window System Developer's Guide</i>	<p>This book provides detailed information for software developers who are designing applications for 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.</p>

TABLE 3–13 Solaris 9 Software Developer Collection (Continued)

Document	Description
<i>SPARC Assembly Language Reference Manual</i>	This book 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. The text in this book is current to Solaris™ 7 software.
<i>STREAMS Programming Guide</i>	This book describes the STREAMS facilities for UNIX® system communications services in the Solaris™ environment. For application developers, this book includes information about constructing, using, and dismantling a stream; messaging; administration; and using STREAMS-based pipes and named pipes. For module and driver developers, this book describes the STREAMS framework, messaging, driver design, module design, configuration, multithreading, and multiplexing.
<i>ToolTalk User's Guide</i>	This book describes the ToolTalk™ service and how to modify applications to send and receive ToolTalk messages. This document 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 book assumes familiarity with Solaris™ operating environment commands, system administrator commands, and system terminology.
<i>Writing Device Drivers</i>	This book provides information on developing device drivers for character-oriented devices, block-oriented devices, and SCSI HBA devices for the Solaris™ operating environment. This book discusses how to develop multithreaded reentrant device drivers for all architectures that conform to the Solaris DDI/DKI. A common driver programming approach is described that enables drivers to be written without concern for platform-specific issues such as endianness and data ordering. Additional topics include porting Solaris drivers to a 64-bit environment, cluster-aware drivers, and hardened drivers.

TABLE 3–14 Solaris 9 KCMS Collection

Documentation	Description
<i>KCMS Application Developer's Guide</i>	This book describes the Kodak Color Management System™ (KCMS™) framework application programming interface (API). The KCMS framework enables the accurate reproduction, and improves the appearance of, digital color images on desktop computers and associated peripherals. With this API, you can write applications that perform correct color conversions and manipulations.

TABLE 3-14 Solaris 9 KCMS Collection (Continued)

Documentation	Description
<i>KCMS Calibrator Tool Loadable Interface Guide</i>	This book 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 document presents an overview of the interaction between the dynamically loadable module and the KCMS Calibrator Tool. Read this document if you are a driver developer who is writing a color module for color management technology.
<i>KCMS CMM Developer's Guide</i>	This book describes how to create a KCMS™ color management module (CMM). This book provides information on how to use the KCMS foundation library, which is a graphics porting interface (GPI) that is 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 document if you are a driver developer who is writing a color module for color management technology.
<i>KCMS CMM Reference Manual</i>	This book describes each C++ class in the KCMS™ foundation library. This library is a graphics porting interface implemented that is in C++ for creating KCMS color modules. Read this document if you are a driver developer who is writing a color module for color management technology.
<i>KCMS Test Suite User's Guide</i>	This book describes a suite of test scripts and the testing facility the CMM developer can use to ensure that a CMM is compliant with the KCMS™ framework. The document is also a reference for anyone who is interested in the development and use of the KCMS framework.

Common Desktop Environment

The following tables list documentation relevant for software developers who are programming in the Common Desktop Environment (CDE). The table title lists the name of the collection where you will find the document on the Solaris 9 Documentation CD.

TABLE 3-15 Solaris 9 Common Desktop Environment Developer Collection

Document	Description
<i>Common Desktop Environment: Application Builder User's Guide</i>	This book introduces the Application Builder and shows you how to use it. The Application Builder is an interactive tool for developing applications. This tool 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.
<i>Common Desktop Environment: Desktop KornShell User's Guide</i>	This book explains how to use the Desktop KornShell to create Motif applications. It introduces basic <code>dtksh</code> skills and provides several sample scripts. The samples are presented in order of increasing complexity so that you can gradually build your understanding of how <code>dtksh</code> works. The guide also includes a list of the commands that are supported by <code>dtksh</code> and their syntaxes.
<i>Common Desktop Environment: Help System Author's and Programmer's Guide</i>	This book describes how to develop online help for Common Desktop Environment application software. The book explains how to create help topics and how authors and developers collaborate to integrate online help into a Motif application. For authors, this document 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 document describes the Help System application programming interface that allows the application to invoke help topics. The book explains the help dialog widgets, how to respond to help requests, and how to navigate hyperlink data.
<i>Common Desktop Environment: Internationalization Programmer's Guide</i>	This book provides information for internationalizing an application so that it can support various languages and cultural conventions in a consistent user interface. This document 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.
<i>Common Desktop Environment: Product Glossary</i>	This book provides a comprehensive list of terms that are used in the Common Desktop Environment and is a resource 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 a preferred term where appropriate.
<i>Common Desktop Environment: Programmer's Overview</i>	This book provides a high-level discussion of the CDE development environment and the developer documentation set. The book also contains an architectural overview of the entire CDE desktop.

TABLE 3–15 Solaris 9 Common Desktop Environment Developer Collection (Continued)

Document	Description
<i>Common Desktop Environment: Style Guide and Certification Checklist</i>	This book provides application design style guidelines and the list of requirements for Common Desktop Environment application-level certification. This document 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 9 software predates the Open Group's CDE 2.1 standard, you can also consult the Style Guide Set that is published by the Open Group for additional style considerations.
<i>Common Desktop Environment: ToolTalk Messaging Overview</i>	This book 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 document is for developers who create or maintain applications that use the ToolTalk service to interoperate with other applications in the Common Desktop Environment.
<i>Solaris Common Desktop Environment: Motif Transition Guide</i>	This book 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 document assumes familiarity with OPEN LOOK or Motif programming.
<i>Solaris Common Desktop Environment: Programmer's Guide</i>	This book is for programmers who are interested in integrating an existing application into the Common Desktop Environment (CDE), or in developing a new application that uses the features and functionality of CDE. This book describes the CDE development environment, and assumes that you are familiar with Motif, X, UNIX®, or C programming.

TABLE 3–16 Solaris 9 User Collection

Document	Description
<i>Solaris Common Desktop Environment: Advanced User's and System Administrator's Guide</i>	This book explains the advanced tasks that are needed to customize the appearance and behavior of the Solaris™ Common Desktop Environment (CDE). This book includes chapters on customizing system initialization; login; 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.

TABLE 3–16 Solaris 9 User Collection (Continued)

Document	Description
<i>Solaris Common Desktop Environment: User's Guide</i>	This book describes the basic features of the Common Desktop Environment (CDE). This book also describes how to use the desktop and desktop applications.
<i>Solaris Common Desktop Environment: User's Transition Guide</i>	This book is for users who are making the transition from the OpenWindows™ environment to the Common Desktop Environment. The book discusses CDE as a graphical operating environment 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.

Asian Locales

The following table lists the documentation that provides information specific to Simplified Chinese, Traditional Chinese, and Korean locales in English. The table title lists the name of the collection where you will find the document on the Solaris 9 Documentation CD.

TABLE 3–17 Solaris 9 Asian Locales Collection

Document	Description
<i>Simplified Chinese Solaris Release Overview</i>	This book summarizes the localized features of the Simplified Chinese Solaris™ operating environment.
<i>Simplified Chinese Solaris System Administrator's Guide</i>	This book provides system administration information specific to the Simplified Chinese Solaris™ operating environment. The book also includes additional information that advanced users and developers can use to access and control features of the operating environment.
<i>Simplified Chinese Solaris User's Guide</i>	This book describes the locale-specific desktop tools and user utilities that are provided by the Simplified Chinese Solaris™ operating environment. These tools and utilities include Simplified Chinese input methods, fonts, and printing.
<i>Traditional Chinese Solaris Release Overview</i>	This book summarizes the localized features of the Traditional Chinese Solaris™ operating environment.
<i>Traditional Chinese Solaris System Administrator's Guide</i>	This book provides system administration information specific to the Traditional Chinese Solaris™ operating environment. The book also includes additional information that advanced users and developers can use to access and control features of the operating environment.

TABLE 3–17 Solaris 9 Asian Locales Collection (Continued)

Document	Description
<i>Traditional Chinese User's Guide</i>	This book provides system administration information specific to the Traditional Chinese Solaris™ operating environment. The book also includes additional information that advanced users and developers can use to access and control features of the operating environment.
<i>Korean Solaris Release Overview</i>	This book summarizes the localized features of the Korean Solaris™ operating environment.
<i>Korean Solaris System Administrator's Guide</i>	This book provides system administration information specific to the Korean Solaris™ operating environment. The book also includes additional information that advanced users and developers can use to access and control features of the operating environment.
<i>Korean Solaris User's Guide</i>	This book provides system administration information specific to the Korean Solaris™ operating environment. The book also includes additional information that advanced users and developers can use to access and control features of the operating environment.

Man Page Documentation

The following table lists the sections of the *Solaris 9 Reference Manual*. To access these documents, use the `man` command, or refer to the Solaris 9 Reference Manual Collection on the Solaris 9 Documentation CD.

TABLE 3–18 Solaris 9 Reference Manual Sections and Content

Section	Description
<i>man pages section 1: User Commands</i>	<p>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.</p> <p>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 document pages and reference material with relevant information.</p> <p>This section is for all UNIX® system users.</p>
<i>man pages section 1M: System Administration Commands</i>	This section describes the Solaris™ system administration and maintenance utilities and is for system and network administrators.

TABLE 3-18 Solaris 9 Reference Manual Sections and Content (Continued)

Section	Description
<i>man pages section 2: System Calls</i>	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.
<i>man pages section 3: Library Interfaces and Headers</i>	This section describes the interface libraries that are implemented as shared objects and the headers that are used by the functions that make up these libraries. Headers contain function prototypes, definitions of symbolic constants, common structures, preprocessor macros, and defined types. Readers of this section should be familiar with C programming language constructs.
<i>man pages section 3: Basic Library Functions</i>	This section describes the core library functions found in the standard C library (<code>libc</code>), the dynamic linking library (<code>libdl</code>), the SunOS™/BSD compatibility library (<code>libcub</code>), and the various memory allocation libraries. Readers of this section should be familiar with C programming language constructs.
<i>man pages section 3: Networking Library Functions</i>	This section describes the functions in the various networking libraries, including the Kerberos library (<code>libkrb</code>), the Lightweight Directory Access Protocol (LDAP) library (<code>libldap</code>), the network service library (<code>libnsl</code>), the remote asynchronous calls library (<code>librac</code>), the resolver library (<code>libresolv</code>), the remote procedure call libraries (<code>librpcsvc</code> and <code>librpcsoc</code>), the sockets library (<code>libsocket</code>), the X/Open Federated Naming (XFN) library (<code>libxfn</code>), and the X/Open network service library (<code>libxnet</code>). Readers of this section should be familiar with C programming language constructs.
<i>man pages section 3: Threads and Real-time Library Functions</i>	This section describes the functions in the threads libraries (<code>libthread</code> and <code>libpthread</code>), the real-time library (<code>librt</code>), and other related libraries. Readers of this section should be familiar with C programming language constructs.
<i>man pages section 3: Extended Library Functions</i>	This section describes the functions in the various specialized libraries, including device ID (<code>libdevicid</code>) and device information (<code>libdevinfo</code>) libraries, executable and linking format (ELF) library (<code>libelf</code>), kernel statistics (<code>libkstat</code>) and kernel VM (<code>libkvm</code>) libraries, and the mathematical library (<code>libm</code>). Readers of this section should be familiar with C programming language constructs.
<i>man pages section 3: Curses Library Functions</i>	This section describes the functions in the libraries that provide graphics and character screen updating capabilities, including the curses library (<code>libcurses</code>), the forms library (<code>libform</code>), the menus library (<code>libmenu</code>), the panels library (<code>libpanel</code>), and the graphics interface library (<code>libplot</code>). Readers of this section should be familiar with C programming language constructs.

TABLE 3-18 Solaris 9 Reference Manual Sections and Content (Continued)

Section	Description
<i>man pages section 4: File Formats</i>	<p>This section outlines the formats of various files that include the C structure declarations, where applicable. The headers containing these structure declarations are generally found in the directories <code>/usr/include</code> or <code>/usr/include/sys</code>.</p> <p>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 can change at any time.</p> <p>This section is for software developers.</p>
<i>man pages section 5: Standards, Environments, and Macros</i>	<p>This section describes miscellaneous subjects, including headers, environments, macro packages, character sets, and standards. These descriptions provide further elaboration on Solaris™ constructs that are described elsewhere in this section.</p>
<i>man pages section 6: Demos</i>	<p>This section describes audio and video games and demos that are provided by Solaris™ software.</p>
<i>man pages section 7: Device and Network Interfaces</i>	<p>This section describes the various device and network interfaces available on the system. The section includes descriptions of character and block devices, STREAMS modules, network protocols, file systems, and <code>ioctl()</code> requests for driver subsystems and classes.</p> <p>This section is for software developers who write, maintain, or modify device drivers.</p>
<i>man pages section 9: DDI and DKI Driver Entry Points</i>	<p>This section describes entry-point routines a developer can use to provide call and return syntax from the kernel to the device driver.</p> <p>This section is for software developers who write, modify, or maintain device drivers. Readers should be familiar with the C programming language as well as system internals.</p>
<i>man pages section 9: DDI and DKI Kernel Functions</i>	<p>This section describes functions a developer can use to provide call and return syntax from a device driver to the kernel.</p> <p>This section is for software developers who write, modify, or maintain device drivers. Readers should be familiar with the C programming language as well as system internals.</p>
<i>man pages section 9: DDI and DKI Properties and Data Structures</i>	<p>This section describes the data structures that are used by drivers to share information between the kernel and device drivers.</p> <p>This section is for software developers who write, modify, or maintain device drivers. Readers should be familiar with the C programming language as well as system internals.</p>