

Product Brief

Sun™ ONE Directory Server

Version 5.2

816-6733-10
June 2003

Copyright © 2003 Sun Microsystems, Inc., 4150 Network Circle, Santa Clara, California 95054, U.S.A. All rights reserved.

U.S. Government Rights - Commercial software. Government users are subject to the Sun Microsystems, Inc. standard license agreement and applicable provisions of the FAR and its supplements. This distribution may include materials developed by third parties. 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 in other countries, exclusively licensed through X/Open Company, Ltd. Sun, Sun Microsystems, the Sun logo, Java, Solaris, SunTone, Sun[tm] ONE, The Network is the Computer, the SunTone Certified logo and the Sun[tm] ONE logo are trademarks or registered trademarks 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 architecture developed by Sun Microsystems, Inc. Mozilla, Netscape, and Netscape Navigator are trademarks or registered trademarks of Netscape Communications Corporation in the United States and other countries. Products covered by and information contained in this service manual are controlled by U.S. Export Control laws and may be subject to the export or import laws in other countries. Nuclear, missile, chemical biological weapons or nuclear maritime end uses or end users, whether direct or indirect, are strictly prohibited. Export or reexport to countries subject to U.S. embargo or to entities identified on U.S. export exclusion lists, including, but not limited to, the denied persons and specially designated nationals lists is strictly prohibited.

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 © 2003 Sun Microsystems, Inc., 4150 Network Circle, Santa Clara, California 95054, Etats-Unis. Tous droits réservés.

Droits du gouvernement américain, utilisateurs gouvernementaux - logiciel commercial. Les utilisateurs gouvernementaux sont soumis au contrat de licence standard de Sun Microsystems, Inc., ainsi qu'aux dispositions en vigueur de la FAR (Federal Acquisition Regulations) et des suppléments à celles-ci. Cette distribution peut comprendre des composants développés par des tierces parties. Des parties de ce produit pourront être dérivées des systèmes 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, Java, Solaris, SunTone, Sun[tm] ONE, The Network is the Computer, le logo SunTone Certified et le logo Sun[tm] ONE sont des marques de fabrique ou des marques déposées 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. Mozilla, Netscape, et Netscape Navigator sont des marques de Netscape Communications Corporation aux Etats-Unis et dans d'autres pays. Les produits qui font l'objet de ce manuel d'entretien et les informations qu'il contient sont régis par la législation américaine en matière de contrôle des exportations et peuvent être soumis au droit d'autres pays dans le domaine des exportations et importations. Les utilisations finales, ou utilisateurs finaux, pour des armes nucléaires, des missiles, des armes biologiques et chimiques ou du nucléaire maritime, directement ou indirectement, sont strictement interdites. Les exportations ou réexportations vers des pays sous embargo des États-Unis, ou vers des entités figurant sur les listes d'exclusion d'exportation américaines, y compris, mais de manière non exclusive, la liste de personnes qui font objet d'un ordre de ne pas participer, d'une façon directe ou indirecte, aux exportations des produits ou des services qui sont régi par la législation américaine en matière de contrôle des exportations et la liste de ressortissants spécifiquement désignés, sont rigoureusement interdites.

LA DOCUMENTATION EST FOURNIE "EN L'ÉTAT" ET TOUTES AUTRES CONDITIONS, DECLARATIONS ET GARANTIES EXPRESSES OU TACITES SONT FORMELLEMENT EXCLUES, DANS LA MESURE AUTORISÉE PAR LA LOI APPLICABLE, Y COMPRIS NOTAMMENT TOUTE GARANTIE IMPLICITE RELATIVE A LA QUALITE MARCHANDE, A L'APTITUDE A UNE UTILISATION PARTICULIERE OU A L'ABSENCE DE CONTREFAÇON.

Product Brief

Sun ONE Directory Server 5.2 is a powerful and scalable distributed directory server based on the industry-standard Lightweight Directory Access Protocol (LDAP). Directory Server software is part of the Sun Open Net Environment (Sun ONE), Sun's standards-based software vision, architecture, platform, and expertise for building and deploying services on demand.

Directory Server is the cornerstone for building a centralized and distributed data repository that can be used in your intranet, over your extranet with your trading partners, or over the public Internet to reach your customers.

This booklet introduces Sun ONE Directory Server 5.2 and contains the following sections:

- [What is Sun ONE Directory Server?](#)
- [Key Features and Benefits](#)
- [Support for Platforms and Standards](#)
- [Documentation Resources](#)

What is Sun ONE Directory Server?

Sun ONE Directory Server provides global directory services, meaning it provides information to a wide variety of applications. Until recently, many applications bundled their own proprietary databases, each with information about the users specific to that application. While a proprietary database can be convenient if you use only one application, multiple databases become an administrative burden if the databases manage the same information.

For example, suppose your network supports multiple proprietary E-mail systems, each system with its own proprietary directory service. If users change their passwords in one directory, the changes are not automatically replicated in the others. Managing multiple instances of the same information results in increased hardware and personnel costs, a situation referred to as the *n+1 directory problem*.

A global directory service solves the n+1 directory problem by providing a single, centralized repository of directory information that any application can access. Offering a wide variety of applications access to the directory requires that those applications be able to communicate with the directory over the network in a standard way. Sun ONE Directory Server provides two standard protocols through which applications can access its global directory: Lightweight Directory Access Protocol (LDAP), and Directory Services Markup Language (DSML).

Key Features and Benefits

Sun ONE Directory Server 5.2 software provides the foundation for the new generation of e-business applications and Web services, bringing you the features needed to deploy extensible, secure, highly-available, global directory services.

New Functionality in Version 5.2

New in Directory Server 5.2:

- Up to 4-way multi-master replication over wide-area networks (MMR/WAN) for high write availability over multiple data centers
- Simplified migration steps for easier upgrades
- 64-bit large cache support for high volume deployments
- Support for multiple, configurable password policies
- Fractional replication for replicating a selected subset of attributes
- Configurable encryption for all attributes, not only `userPassword`
- Enhanced server management console for simplified handling of configuration and directory data
- Directory access through DSML v2 for web services
- Improvements to replication failover
- Increased concurrent access for replication updates

- Replication monitoring and management tools to handle large topologies
- Flexible role scope for unified management of static and dynamic groups
- Support for StartTLS on Windows platforms
- Support for virtual attributes in search filters
- Full support for both IPv4 and IPv6
- Support for obtaining effective access control rights
- Sun Cluster agents for additional high availability services
- Performance improvements to handle higher rates of mixed update and search operations

Additional Features

The following are a sample of further features included with Directory Server 5.2:

- Flexible, scalable replication with transaction logging for failure recovery
- Support for online, remote installation and maintenance, including backups, configuration changes, schema updates, and indexing
- Open standards support as indicated in [Table 2 on page 7](#)
- Support for multiple platforms as noted in [Table 1 on page 6](#)
- Automatic replication of access control rules and schema definitions
- Large horizontal and vertical scalability, allowing use of multiple databases
- Support for replication with previous versions of Directory Server
- Support for managed, filtered, and nested roles
- Support for class of service, enabling entries to share attribute values
- Support for server-to-server chaining (client request forwarding)
- Configurable account inactivation
- Extensibility through a rich, fully supported server plug-in API
- Development tools for building directory client applications

Directory Server 5.2 product documentation covers what you need to know to use these features and more. Refer to [“Documentation Resources” on page 7](#) for more information.

Support for Platforms and Standards

Sun ONE Directory Server 5.2 supports a variety of platforms, hardware architectures, and industry standards, so you can build an extensible global directory service that fits your existing infrastructure.

Supported Platforms

Sun ONE Directory Server 5.2 offers support for platforms listed in [Table 1](#).

Table 1 Supported Platforms and Architectures

Platforms	Architectures
Sun Solaris™ 9 Operating Environment	SPARC® processors in 32-bit and 64-bit mode Supported x86 processors
Sun Solaris 8 Operating Environment	UltraSPARC® processors in 32-bit and 64-bit mode
Sun Linux 5.0	Sun LX50 servers
Hewlett Packard HP-UX 11i	PA-RISC 2.0 processors in 32-bit and 64-bit mode
IBM AIX 5.1	PowerPC processors
Microsoft Windows 2000 Server, SP 3	Pentium II or later IA-32 processors
Microsoft Windows 2000 Advanced Server, SP 3	
Red Hat Linux 7.2	Pentium II or later IA-32 processors

Supported Standards

Sun ONE Directory Server 5.2 supports a wide variety of industry standards, including those listed in [Table 2](#).

Table 2 Supported Industry Standards

Standard	Description
DSML v2	Directory Services Markup Language, an open standard for web services using Simple Object Access Protocol (SOAP) and Hypertext Transfer Protocol (HTTP) to provide access to directory information
LDAP search filters	The String Representation of LDAP Search Filters, RFC 2254, for searching on attribute value presence, equality, inequality, substring, approximate, greater than, less than, and Boolean combinations thereof
LDAP URLs	An LDAP URL Format, RFC 2255
LDAP v3	Lightweight Directory Access Protocol (v3), RFC 2251, the Internet standard protocol for accessing directory information
LDIF	LDAP Data Interchange Format, RFC 2849, for exchanging directory information
SASL	Simple Authentication and Security Layer, RFC 2222, providing for extensible authentication
SNMP v2	Simple Network Management Protocol for network management and monitoring
SSL/TLS	Secure Sockets Layer and Transport Layer Security, industry standards for securing data on the network
X.509 v3	Standard for public key certificate formats enabling secure authentication

The list of supported standards in [Table 2](#) is by no means exhaustive.

Documentation Resources

Sun ONE Directory Server 5.2 product documentation can be found under the following URL:

http://docs.sun.com/coll/S1_DirectoryServer_52

It is recommended that you read the *Sun ONE Directory Server Getting Started Guide* and *Sun ONE Directory Server Deployment Guide* before you begin the installation process.

Directory Server product documentation includes the following documents delivered in both HTML and PDF:

- *Sun ONE Directory Server Getting Started Guide* - Provides a quick look at many key features of Directory Server 5.2.
- *Sun ONE Directory Server Deployment Guide* - Explains how to plan directory topology, data structure, security, and monitoring, and discusses example deployments.
- *Sun ONE Directory Server Installation and Tuning Guide* - Covers installation and upgrade procedures, and provides tips for optimizing Directory Server performance.
- *Sun ONE Directory Server Administration Guide* - Gives the procedures for using the console and command-line to manage your directory contents and configure every feature of Directory Server.
- *Sun ONE Directory Server Reference Manual* - Details the Directory Server configuration parameters, commands, files, error messages, and schema.
- *Sun ONE Directory Server Plug-In API Programming Guide* - Demonstrates how to develop Directory Server plug-ins.
- *Sun ONE Directory Server Plug-In API Reference* - Details the data structures and functions of the Directory Server plug-in API.
- *Sun ONE Server Console Server Management Guide* - Discusses how to manage servers using the Administration Server and Java based console.
- *Sun ONE Directory Server Resource Kit Tools Reference* - Covers installation and features of the Sun ONE Directory Server Resource Kit, including many useful tools.