Samba for IRIX®

Providing Seamless Data Interoperability between Windows® and UNIX® Environments

Silicon Graphics has adopted the award-winning Samba, the world's most popular open source software for serving files to Windows clients from UNIX servers. Samba enables Origin™ servers to provide file and print services to Windows clients via the native Windows file sharing protocols, SMB (Server Message Block) and CIFS (Common Internet File System). Silicon Graphics now offers Samba as a supported product for IRIX.

Samba for IRIX solves the difficult problem of sharing data between Windows and UNIX clients. It does this without requiring any additional software on Windows desktop systems. Powerful, scalable Origin servers can serve files to all clients in your network, greatly reducing the need for additional hardware, software, and network administration. Users become more productive with Samba for IRIX.

PC-to-UNIX Connectivity

Samba for IRIX is a suite of programs that work together to provide Windows for Workgroups 3.11, Windows 95/98, Windows NT®, Linux, and OS/2 clients access to an Origin server's filespace and printers via the SMB/CIFS protocol. After you install and configure Samba for IRIX, any of your Windows clients can connect to shares on your IRIX machine. (A share is a directory plus its contents, including subdirectories, that is made available to clients.) This connectivity lets Windows clients interact with files as if they were local to the client machine.

Data Integrity between UNIX and Windows Clients

Samba for IRIX offers a powerful feature that allows data to be safely accessed simultaneously via NFS™ and SMB/CIFS. File locks and file opens are visible between both protocols, thus ensuring that PC clients are aware of UNIX changes to the data and vice versa. This means that files cannot be corrupted when more than one client is accessing or editing the same file at the same time.

Fastest Multiprotocol File Serving Solution

Samba for IRIX, combined with the Origin server, delivers the industry's best performance for serving Windows clients. Based on runs of the NetBench®* benchmark in Silicon Graphics testing labs, a Silicon Graphics four-processor Origin200™ 225QC server produced throughput rates as high as 193Mb per second (serving 60 Windows PC clients). Origin has clearly proven itself to be the industry's fastest file server for serving Windows clients.

Security and File Access

System administrators can define access to SMB/CIFS shares on a UNIX system with NFS-like export permissions, such as granting access to groups of users based on IP addresses. Access to a file served by Samba is governed by both UNIX permissions and Samba configuration parameters. Thus, users trying to access files from a Samba server need valid UNIX logons (with the possible exception of browsing public shares from a valid guest account).

The default Samba security level is USER, which means clients must first log into a Samba server with a valid username and password. Protection is applied to individual files in each share and is based on user access rights.

An alternative Samba security level is SHARE. In this case (typically for DOS-based clients), Samba can emulate a LAN Manager server that requires no logons but instead needs a password to access a particular share. (Note that Samba always respects UNIX security practices and will map a user to a valid UNIX username and require a valid password.)

In the Samba security level SERVER setting, Samba will try to validate the username and password by passing the username/password to another SMB/CIFS server on the network, such as a Windows NT server. If this fails, Samba will revert to security level USER.

The Samba security level can also be set to DOMAIN, which will work correctly only if the Samba server has been added as a member of a Windows NT domain. In this mode Samba will try to validate the username and password by passing the username/password to a Windows NT primary or backup domain controller. (Note that from the clients' point of view, the SERVER or DOMAIN security level is the same as USER. These security levels only affect how the server deals with user authentication.)

Web-Based Administration

Samba for IRIX administration is simplified through the Samba Web Administration Tool (SWAT). SWAT is a Web-based tool that enables easy management and administration of key configuration files for Samba server setup. Because SWAT is Web-based, administration of Samba servers can be accomplished using standard Web browser software from any computer in the network.

Samba for IRIX Customer Support

Silicon Graphics brings you the best in customer support. Samba for IRIX includes one year (renewable annually) of Silicon Service telephone support. Electronic assistance is also provided to streamline the support process.

Answers to your Samba software questions are just a phone call away. Our team of skilled professionals will help you maintain high productivity by quickly resolving any issues that may arise. Coverage hours are from 8 a.m. to 5 p.m. local time, Monday through Friday, excluding Silicon Graphics holidays.

Samba for IRIX customers will receive software updates on a timely basis to ensure that they are working with current revisions, bug fixes, utilities, and performance enhancements.

Samba for IRIX

Features and Benefits/Technical Specifications

FEATURE	BENEFIT
SMB/CIFS protocol support	File and print sharing between UNIX and Windows clients (using native protocols) for improved user productivity
smbd (SMB server)	Provides connections to clients and interfaces with the authentication database for file permission and username work
nmbd (NetBIOS name server)	Helps clients locate servers for browsing work and managing domains
Browsing and BrowseMaster support	Windows Network Neighborhood view of available shares for easy access to files on the network
WINS support	Cross-subnet browsing and name resolution
Kernel Oplocks† support	File locks and file opens are visible between both protocols (NFS and SMB/CIFS users), thus ensuring data integrity between UNIX and PC clients
Domain member server	Allows a Samba server to join a Windows NT domain and pass all authentication to a Windows NT primary domain controller in the same way an NT server would do it
Samba Web Administration Tool (SWAT)	Web-based interface for easy setup and administration
64-bit file support	Allows clients to manipulate large files
Change notify	Offloads client polling when making filesystem changes; reduces network traffic
Blocking locks	Allows PC clients to wait for UNIX processes to release file locks; essential for serving a mixed environment of UNIX and PC desktops
Highly scalable	Investment protection, allowing you to grow capacity without adding additional server hardware
Reliable	Assured business continuity
High performance	Increased user productivity (NetBench performance)

TECHNICAL SPECIFICATIONS	
Technology	Samba for IRIX v2.0 software suite for SMB/CIFS on IRIX
Product span†	For IRIX 6.5 systems and later
Suggested memory	128MB or greater
Required disk space	5MB
Protocol	SMB/CIFS
System administration	SWAT
High availability	Supported with IRIS FailSafe™ 2.0 (available in 1999)

SUPPORT COVERAGE

- Hours of coverage: Monday through Friday, 8 a.m. to 5 p.m. local time, excluding holidays
- Software telephone technical assistance
- Periodic software updates
- Supportfolio™: industry-leading suite of online tools containing information on technical assistance, publications, and software patches
- *Pipeline:* Silicon Graphics' bimonthly newsletter of technical tips and suggestions

*NetBench 5.01 is a portable benchmark program that measures how well a file server handles file I/O requests from DOS, 32-bit Windows, 16-bit Windows, and Mac® OS systems. The clients send the server requests for network file operations. Each client tallies how many bytes of data it moves to and from the server and how long the process takes. The client uses this information to calculate its throughput for that test mix. NetBench adds all the client throughputs together to produce the overall throughput for a server (from ZDNet "NetBench® 5.01," *www.zdnet.com/zdbop/netbench/netbench.html*).

†Kernel Oplock support in Samba for IRIX requires IRIX 6.5.2f or later.

SiliconGraphics
Computer Systems

Corporate Office
2011 N. Shoreline Boulevard
Mountain View, CA 94043
(650) 960-1980
www.sgi.com

U.S. 1(800) 800-7441
Europe (44) 118-925.75.00
Asia Pacific (81) 3-54.88.18.11
Latin America 1(650) 933.46.37

Canada 1(905) 625-4747
Australia/New Zealand (61) 2.9879.95.00
SAARC/India (91) 11.621.13.55
Sub-Saharan Africa (27) 11.884.41.47

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