Mac OS X Server FAQ

Q. What is Mac OS X Server?

A. Mac OS X Server is Apple's next-generation server platform, combining the strengths of AppleShare IP with the power and innovation of Mac OS X. It simplifies network administration by integrating services for file sharing, Internet and web serving, networking, client management, email—and more.

Beneath the elegant and easy-to-use Aqua interface, Mac OS X Server is an industrial-strength server platform designed for superior performance, reliability, security, and scalability. A modern open source UNIX-like foundation—called Darwin—delivers powerful features, including systemwide protected memory, full preemptive multitasking, symmetric multiprocessing, advanced memory management, and the latest in security standards. To maximize server uptime, built-in fault tolerance systems automatically restart services in case of a failure.

Q. What services are provided with Mac OS X Server?

A. Mac OS X Server is a complete, integrated server platform, with comprehensive services for file and print, Internet and web serving, networking, client management, and directory services.

Scalable IP-based file services enable native file sharing for Macintosh, Windows, UNIX, and Linux clients, and FTP is supported for Internet file transfers. Versatile PostScript print spooling services are also included with Mac OS X Server.

Powerful Internet and web services are built right into Mac OS X Server. Apache—the world's most popular web server—provides reliable, high-performance delivery of static and dynamically generated web content. Integrated into Apache is WebDAV, bringing drag-and-drop simplicity to web publishing and content management. For dynamic interactive websites, Mac OS X Server offers support for Java Servlets, JavaServer Pages, MySQL, PHP, Perl, and UNIX and Mac CGI scripts. The addition of Secure Sockets Layer (SSL) support enables secure encryption and authentication for e-commerce websites. WebObjects provides the most flexible and scalable way to deploy network applications. An easy-to-use mail server supports Internet standard mail clients. And QuickTime Streaming Server lets you easily and affordably stream your QuickTime digital media on the Internet using industry-standard real-time protocols.

Robust network services in Mac OS X Server allow you to protect network resources from intruders through IP filtering, dynamically assign IP addresses with DHCP, locate Internet resources utilizing DNS, and organize IP-based workgroups with SLP. Client and desktop management services enable the administration of both user accounts and workstations through such popular Apple-designed solutions as NetBoot and Macintosh Manager. Integrated directory services with support for NetInfo and LDAP let you share user accounts between servers, simplifying network administration and offering superior scalability.

Product Info

Q. When will the new Mac OS X Server be available?

A. Mac OS X Server is planned for release shortly after Mac OS X.

Q. How much will Mac OS X Server cost?

A. Pricing for this product has not yet been announced. Please see www.apple.com/macosx/server for updates.

Q. Who is the target customer for Mac OS X Server?

A. Mac OS X Server is designed for use by teachers, media designers, network and workgroup administrators, and professional webmasters. With its integrated administration and reliable open source architecture, Mac OS X Server is simple for new users while maintaining the advanced features that professional webmasters and network administrators require.

Q. What languages does Mac OS X Server support?

A. Mac OS X Server will be available in English, Japanese, French, and German.

Q. Can I easily upgrade to Mac OS X Server?

A. Yes. Mac OS X Server can utilize and maintain existing file and web content, mail data, and user and group information, making the transition from AppleShare IP 6.3 or Mac OS X Server release 1.2 a smooth and easy process.

Q. Are Mac OS X and Mac OS X Server the same?

A. Mac OS X and Mac OS X Server are both based on an open source UNIX-like foundation called Darwin. They both feature the simple and elegant Aqua user interface and legendary Macintosh ease of use. Mac OS X Server provides professional-class IP-based file services for Macintosh, Windows, UNIX, and Linux clients; high-performance PostScript print spooling; services for Internet and web serving; and networking, client management, and directory services. Mac OS X Server features built-in fault tolerance systems to detect and recover from failures of essential system services. It also features remote administration, management, and logging through Apple-designed and open source solutions, including Apache, Apple File Protocol, BIND, Macintosh Manager, MySQL, NetBoot, OpenSSL, PHP, QuickTime Streaming Server, Samba, Tomcat, WebDAV, and WU-FTP.

Q. How does AppleShare IP differ from the new Mac OS X Server?

A. AppleShare IP is a general-purpose, easy-to-use server that combines a fully integrated set of services based on the Mac OS 9 operating system, providing IP-based file sharing, remote administration, web and mail services, and SMB and firewall support.

Mac OS X Server builds on the exceptional ease of use of AppleShare IP while providing greatly expanded services and a new, higher-performance core operating system designed for superior performance, reliability, security, and scalability. This modern UNIX-like foundation—called Darwin—delivers powerful features, including systemwide protected memory, full preemptive multitasking, symmetric multiprocessing, advanced memory management, and support for the latest security standards. Mac OS X Server also features built-in fault tolerance systems to detect and recover from failures of essential system services.

Mac OS X Server provides additional features not available with AppleShare IP, such as Apache web server for delivery of both static and dynamically generated web content, including support for WebDAV, Java Servlets, JavaServer Pages, MySQL, PHP, Perl, and UNIX CGI scripts. WebObjects is included for deployment of network applications. NetBoot server software supports easy setup and administration of numerous Mac systems. The addition of Secure Sockets Layer (SSL) support enables secure encryption and authentication for e-commerce web sites. The advanced Mac OS X Server file services provide native file access for Macintosh, Windows, UNIX, and Linux clients. Also included with Mac OS X Server is a QuickTime Streaming Server for real-time streaming of digital media.

Operating System

Q. What is the foundation for Mac OS X Server?

A. At the heart of Mac OS X Server is Darwin, the open source UNIX-like operating system based on the Mach 3.0 kernel and an implementation of Berkeley Standard Distribution (BSD) 4.4.

Q. What is Darwin?

A. Darwin is an advanced, open source UNIX-like operating system based on the Mach 3.0 kernel and an implementation of BSD 4.4. As the foundation of Mac OS X Server, Darwin delivers the advanced features you'd expect in a modern operating system, including protected memory, preemptive multitasking, symmetric multiprocessing, and advanced memory management.

Apple has made the full source code to Darwin available online, creating a model for the foundation of state-of-the art technologies and the evolution of operating system design. For more information about Darwin, see www.opensource.apple.com.

Q. Is Mac OS X Server based on UNIX?

A. Mac OS X Server is built on UNIX technologies and implements most of the POSIX APIs, making it easy to port UNIX applications, particularly those from a BSD heritage. The main exception is applications with a graphical user interface, since Mac OS X Server doesn't include the X Window System user interface toolkits. Mac OS X Server is built around a graphical interface, unlike traditional UNIX systems that rely on the command line. However, Mac OS X Server cannot be called a UNIX operating system, as it does not fully comply with the POSIX and X/Open specifications required for use of the UNIX trademark.

Q. Does Mac OS X Server use a command line interface?

A. Mac OS X Server utilizes the new Aqua user interface, and includes graphical server administration tools for service configuration. For administrators who prefer the command line interface or make use of SSH for remote administration, a Terminal application and several UNIX shells are included.

Q. Does configuring Mac OS X Server require editing configuration files?

A. No. Mac OS X Server provides a friendly Setup Assistant and a rich set of graphical server administration tools. Editing configuration files is not required for normal use of any core services. Use of certain components of Mac OS X Server, such as MySQL or Tomcat, may require editing of configuration files.

Q. What fault tolerance systems are provided in Mac OS X Server?

A. To maximize server uptime, Mac OS X Server features built-in fault tolerance systems to detect and recover from failures of essential system services. If an included service fails, fault tolerance systems can auto-restart the service, bringing it back online. In the unlikely event of an operating system failure, fault tolerance systems work with the electrical systems of the new Macintosh Server G4, Power Mac G4, and Power Mac G4 Cube to power cycle and reboot the server hardware, bringing it back online with minimal downtime.

Services

Q. What file services are included with Mac OS X Server?

A. Mac OS X Server provides support for native Macintosh, Windows, UNIX, and Linux file sharing. Protocols supported include:

- Apple file services (AFP 3.0) from any AppleShare client over TCP/IP
- Windows (SMB) file sharing
- Network File System (NFS) for UNIX and Linux file access
- FTP for general Internet file sharing

Q. What print spooling services are included?

A. Built-in print services can spool files to any PostScript-capable network printer over either TCP/IP or AppleTalk. Macintosh customers can use the LPR support in Print Center or the Desktop Printer utility to connect to a Mac OS X Server–based print spooler. Windows users can use their native SMB protocol to connect to a Mac OS X Server–based print spooler.

Q. What is QuickTime Streaming Server?

A. QuickTime Streaming Server is the fast, convenient, and affordable way to deliver rich QuickTime content over the Internet. QuickTime Streaming Server can support more than 2,000 simultaneous streams to Internet (28.8-Kbps modem) clients, all with the fidelity and convenience of QuickTime. QuickTime streaming is built around industry-standard Internet protocols such as RTP, RTSP, and HTTP, and is fully integrated with Mac OS X Server to make it easy to set up, use, and administer streaming. For more information, visit www.apple.com/quicktime.

Q. What networking services are included in Mac OS X Server?

A. Mac OS X Server provides a suite of powerful networking services, including IP filtering, DHCP, DNS, and SLP.

IP filtering scans incoming IP packets and rejects or accepts these packets based on a set of filters you create—preventing unauthorized network and server access. You can restrict access to all IP services running on the server, and you can customize filters for individual IP services.

Dynamic Host Configuration Protocol (DHCP) support makes it easier to set up and administer computers on IP-based networks. With a DHCP server on your network, IP addresses can be automatically assigned and "leased" to computers as they are added to your network.

When your clients want to connect to a network resource such as a web or file server, they can request it by its domain name or IP address. The Domain Name System (DNS) is the distributed database that maps IP addresses to host and domain names, making it easier for you to remember and find resources on the Internet.

Service Location Protocol (SLP) Directory Agent (DA) service makes finding IP services easy. With SLP DA, you can organize your IP-based network services into scopes, or groupings. Scopes are analogous to AppleTalk zones. They can be a logical grouping of computers, such as all the computers used in the production department; or a physical grouping, such as all computers located on the first floor. With SLP DA, you can provide structure to services and resources on your IP-based networks.

Q. What is NetBoot?

A. Apple's exciting NetBoot software enables a network of Macintosh computers using Mac OS 9 to run from the same shared System Folder and applications volumes stored on the NetBoot server. Just update the NetBoot server, and all the other computers have instant access to the new configuration. New to NetBoot are support for obtaining IP addresses from existing DHCP servers and support for multiple NetBoot servers per subnet.

Q. What services are supported by Apache in Mac OS X Server?

A. In addition to providing HTTP 1.1 protocol compliance, Apache has been extended to support SSL for secure, high-grade, encrypted, and authenticated connections; WebDAV for web publishing and content management; and Java Servlets, JavaServer Pages, MySQL, PHP, Perl, and UNIX and Mac CGI scripts for dynamic web content. Apple-designed Apache modules are included for Sherlock search and relevancy ranking, MacBinary content encoding, and directory service authentication support.

Q. What is WebDAV?

A. Web-based Distributed Authoring and Versioning, or WebDAV, allows users to collaboratively edit and manage files on remote web servers. Your clients can check out web pages, make changes, then check them back in while the web site is running. WebDAV turns your web server into an Internet file server. Computers running Mac OS X can connect and mount WebDAV-enabled web servers in the Finder as if they were a normal file server. WebDAV brings true drag-and-drop simplicity to web publishing.

Q. What is PHP?

A. PHP Hypertext Preprocessor (PHP) is a server-side, cross-platform, HTML-embedded scripting language. Mac OS X Server includes the latest generation of PHP, version 4. Utilizing PHP, webmasters can create dynamically generated web solutions for banner ad management, auctions, chat and discussion boards, counters, database management, email systems, tests and quizzes, stock quotes, postcards, and much more.

Q. What is MySQL?

A. MySQL is a high-performance relational database management system. With MySQL, webmasters and network administrators can add, access, and process data stored in computer databases. MySQL can be used with middleware applications and scripting languages such as AppleScript and PHP.

Q. What are Java Servlets and JavaServer Pages?

A. Java Servlets and JavaServer Pages (JSP) enable web developers and designers to rapidly develop and easily maintain information-rich, dynamic web pages that leverage existing resources. With these technologies, developers can use tools and interfaces to develop and deploy platform-independent dynamic web sites. For more information, see www.java.sun.com.

Q. What is Macintosh Manager?

A. Macintosh Manager is a client/server technology for storing the user's computing environment on the server, so the user can obtain his or her environment from any Macintosh on the network. This environment can include application preferences, desktop patterns, and fonts, depending on the level of customization allowed by the administrator. System administrators can use Macintosh Manager to serve both NetBoot and non-NetBoot clients, and to enforce system policies and security access.

Q. What's new in Macintosh Manager 2.0?

A. Macintosh Manager 2.0 improves on system management and user configuration with support for directory services. Now user accounts can be entered once and shared between Apple file services and Macintosh Manager. Macintosh Manager 2.0 introduces a new "backpack" check-out feature that enables students to take a portable computer and work assignments home with them.

Q. What client systems are supported by Macintosh Manager 2.0?

A. Macintosh Manager 2.0 is designed to support client systems running Mac OS 8.1 (PowerPC and 64040 processor–based Macintosh computers) through Mac OS 9.1. Macintosh Manager 2.0 does not yet provide support for management of Mac OS X systems.

Hardware

Q. What are the hardware requirements for Mac OS X Server?

A. Mac OS X Server requires a Macintosh Server G4, Power Mac G4, Power Mac G4 Cube, iMac, Macintosh Server G3, or Power Macintosh G3 with at least 128MB of RAM and a 4GB hard disk (operating system fault tolerance requires a Macintosh Server G4, or a Power Mac G4 released in January 2001 or later). For high-demand servers running multiple services, at least 256MB of RAM is recommended.

Q. Does Mac OS X Server support Gigabit Ethernet?

A. Yes. Mac OS X Server is built on a high-performance I/O subsystem for quickly moving large amounts of data, and it is designed to take full advantage of the ultra-high-speed 10/100/1000BASE-T Ethernet interface on the Macintosh Server G4 and Power Mac G4.

Q. Does Mac OS X Server support the dual processor Power Mac G4?

A. Yes. Mac OS X Server is designed to take full advantage of a dual processor Power Mac G4. Mac OS X Server includes support for symmetric multiprocessing (SMP), which enables the use of both processors. Applications and services benefit from SMP support because tasks are efficiently scheduled between both processors.

For More Information

For more information about the Mac OS X Server, visit www.apple.com/macosx/server.

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