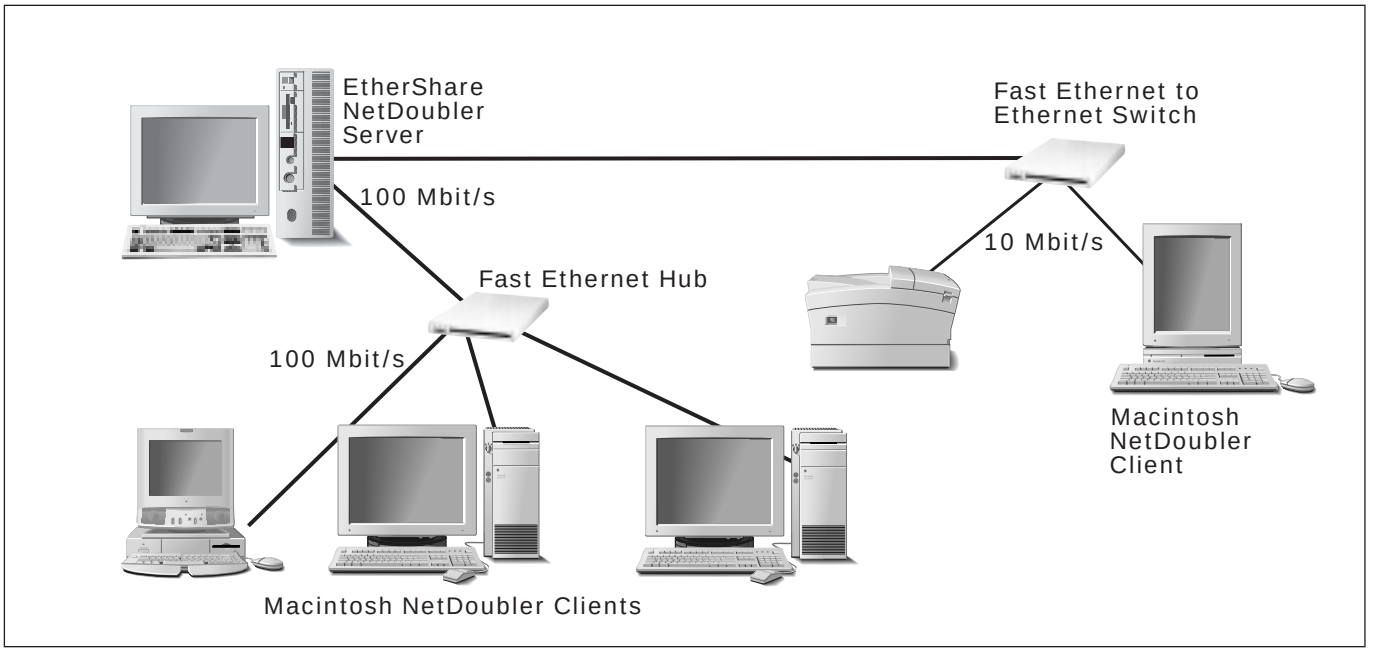
HELIOS

EtherShare NetDoubler

Highest Performance Server – Questions & Answers



EtherShare provides reliable, high performance network services for Apple Macintosh based on powerful Unix/RISC servers. It also gives Unix applications flexible printing options on PostScript devices like Apple LaserWriter. EtherShare is a complete server solution including not only file server and print spooler, but also a fast AppleTalk Router, a PostScript font server, a Macintosh frontend to Unix mail, remote administration, and more. EtherShare sets the standards of high-performance networking for Apple Macintosh. It also acts as platform for EtherShare OPI, a leading print accelerator and color management server for the prepress and printing industry.

EtherShare fully complies with Apple standards and works with any Macintosh out of the box. There is no need to retrain Macintosh users.

With the newly introduced EtherShare NetDoubler, Helios incorporates Asanté Technologies' state-of-the-art NetDoubler network acceleration standard in EtherShare. The EtherShare NetDoubler server is designed, optimized and tested by Helios. Asanté also fine-tuned its NetDoubler client for MacOS machines for optimum performance with EtherShare NetDoubler.

Any properly configured Apple Macintosh or MacOS compatible computer with Asanté NetDoubler client 1.3 or newer will automatically benefit from NetDoubler acceleration when accessing an EtherShare NetDoubler file server.

EtherShare NetDoubler is an ideal server for all Macintosh workgroups which work with huge files. This holds true especially in prepress and printing where large images are used during scanning and retouching. Those images are opened in a fraction of time with NetDoubler acceleration. Single Macintosh read and write files faster than six megabytes per second over Fast Ethernet. Aggregate server throughput reaches 17 MByte/s using two Fast Ethernet interfaces in a dual processor Sun Ultra Enterprise 2.

EtherShare NetDoubler is incorporated in EtherShare 2.5 and available as a free test drive for EtherShare 2.2. The test drive is installed as Helios update and runs through May 1, 1997.

Helios – Smart Ideas for Better Networking

Features & Benefits

Performance

- ✔ Full Ethernet speed between server and Macintosh NetDoubler client
- ✔ Over 6 MByte/s throughput with Fast Ethernet between server and one Macintosh NetDoubler client
- ✔ Up to 17 MByte/s server throughput with six Macintosh NetDoubler clients on two Fast Ethernet
- ✔ Reduced server CPU load

Reliability

- ✔ Implemented by Helios as robust, well-integrated EtherShare module

Ease of Use

- ✔ Macintosh look-and-feel to user
- ✔ Easy server installation; no config.

Flexibility

- ✔ For EtherShare servers running on Sun, IBM, HP, SGI, DG, Digital, Apple Network Server, …
- ✔ Supports Ethernet, Fast Ethernet, and FDDI connections
- ✔ Accelerates multiple sessions to many NetDoubler clients
- ✔ Accelerates multiple network adapters in the server at the same time

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System Requirements

Server
- Helios EtherShare 2.5 on one of the following Unix systems: SunSPARC Solaris 1 or 2, IBM RS/6000, HP PA-RISC HP-UX, Silicon Graphics Irix, Data General AViiON and Intel AViiON, Digital Alpha Unix, Apple Network Server, or other PowerPC AIX systems
- Optionally for a test, EtherShare 2.2 with updates u0094 & u0096 (resp. u0095 & u0097 for AIX)
- 16 MB RAM; 800 KB RAM per active client
- At least one activated network adapter; Fast Ethernet or FDDI interfaces and/or multiple network adapters for load balancing recommended

Client
- Apple Macintosh or compatible computer with MacOS 7.5 and Open Transport 1.1.1 or newer
- Asanté NetDoubler client 1.3 or newer
- Valid TCP/IP configuration

Network
- Any network connection – usually Ethernet, Fast Ethernet, or FDDI – between NetDoubler client and EtherShare NetDoubler server which is transparent for AppleTalk as well as for TCP/IP.
- The AppleTalk and TCP/IP links between client and server may also be different.

Product Availability and Installation

Product Availability
- The EtherShare NetDoubler test drive is available through Helios' regional distributors and resellers or over the Internet from http://www.helios.de. The test drive runs through August 1, 1997, after which the new EtherShare 2.5 version offers an integrated EtherShare NetDoubler server.
- NetDoubler client 1.3 or newer is available from Asanté Technologies, http://www.asante.com.

The NetDoubler client is included in Asanté's networking cards for Macintosh; stand-alone packages are available, too. Vendors of MacOS compatible computers may also offer the NetDoubler client with their products.

Server Installation
- EtherShare NetDoubler is easily installed by the installer on the Helios distribution CD-ROM.
- EtherShare NetDoubler automatically recognizes whether a client can be NetDoubler-accelerated or not without special configuration or set-up.
- The server must be configured properly for TCP.

Client Installation
- Just follow Asanté's instructions how to install the NetDoubler client.
- The client must be configured properly for TCP.

Questions and Answers

Q: How does EtherShare NetDoubler achieve its impressive performance?
A: EtherShare NetDoubler is based on Asanté's state-of-the-art NetDoubler acceleration technology which Helios licensed from Asanté Technologies, Inc. and which is not publicly disclosed. On more general terms, NetDoubler makes intelligent use of IP network packets instead of AppleTalk datagrams in many instances.

Q: Do I have to use Fast Ethernet to benefit from EtherShare NetDoubler?
A: No, it works as well with 10 Mbit/s Ethernet, but you are limited to a total of apx. 1 MByte/s for each of your segments.
A well designed network will be configured with e.g. an Asanté Fast Ethernet hub for 100 Mbit/s nodes and a Fast Ethernet to standard Ethernet switch for existing 10 Mbit/s nodes.

Q: Will EtherShare NetDoubler speed up FDDI?
A: Yes. You can use the NetDoubler client software to speed up a direct Macintosh FDDI connection to the server. You can also use FDDI just as connection between EtherShare server and a switched hub and use standard Ethernet in your Macintosh.

Q: What is the fastest network configuration?
A: Macintosh get best performance if they are equipped with Fast Ethernet cards and have direct Fast Ethernet links to the EtherShare NetDoubler server. You can use multiple Fast Ethernet cards in the server to balance network load.

Q: What do I need to purchase?
A: Customers can freely test EtherShare NetDoubler until May 1st, 1997. The new EtherShare 2.5 comes with integrated NetDoubler server.
You need Asanté's Fast Ethernet cards for your Macintosh and a hub to start. For your server you need a Fast Ethernet interface, too. More and more Unix/RISC servers have now Fast Ethernet onboard, e.g. Sun Ultra or SGI O2 and Origin.

Q: Can I use Fast Ethernet equipment from other vendors than Asanté?
A: Yes. Asanté offers the NetDoubler client software as an add-on for other Macintosh network cards or built-in standard Ethernet. Asanté bundles NetDoubler client with its Macintosh network cards; Helios received excellent performance using them.

Q: How much is EtherShare NetDoubler?
A: It is included without further charges in EtherShare 2.5. Existing Helios customers with software update service agreement will automatically receive NetDoubler support as part of the EtherShare 2.5 update. Helios generally recommends to sign update agreements with initial purchases. The EtherShare 2.5 update is also available as retail product.

Q: What are the differences to RunShare for EtherShare?
A: EtherShare NetDoubler is developed and supported by HELIOS Software GmbH. It is available for all Helios supported Unix/RISC platforms and offers several times more performance using Fast Ethernet. It utilizes the standard TCP/IP protocol in parallel with AppleTalk and can therefore fully exploit the network media. And last, but not least, EtherShare NetDoubler is less expensive.
On the other hand, RunShare for EtherShare is strictly AppleTalk based and therefore does not bother users with any TCP/IP set-up.

Q: What about AppleShare IP, "AFP over TCP"?
A: Apple recently announced that an upcoming new AppleShare IP product will also make use of TCP/IP as transport mechanism. Helios is committed to support new AppleShare protocol enhancements like e.g. "AFP over TCP". Unfortunately, as of beginning of 1997, "AFP over TCP" is not shipping yet; Asanté NetDoubler and Helios EtherShare NetDoubler are.
The major new Apple software module which yields this great EtherShare NetDoubler performance is OpenTransport 1.1.1 which is shipping for a while.

Q: Can I use EtherShare NetDoubler with MacTCP?
A: No. Only OpenTransport 1.1.1 or newer will work reliably and with excellent performance.

Q: Which application was used to benchmark EtherShare NetDoubler?
A: Helios upgraded its well-known LanTest application to version 2.0 so that it now supports also 30 MB files instead of 3 MB files for read and write tests. Transfers of small files do not last long enough to get reliable EtherShare NetDoubler results.

EtherShare is a product of

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