



# Tech Info Library

## Open Transport 1.1.1 Read Me - Part 2 (10/96)

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TOPIC -----

This article is the Open Transport 1.1.1 ReadMe - Part 2 file.

DISCUSSION -----

Open Transport 1.1.1 Read Me - Part 2

What's new in Open Transport 1.1.1 - general  
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- Open Transport can now be used on the Performa and Power Macintosh 52xx, 53xx, 62xx and 63xx product lines. When you install OT 1.1.1 on a 52xx, 53xx, 62xx and 63xx computer, you may get a dialog box indicating a hardware issue was detected. If this alert is displayed, Open Transport cannot be installed or loaded until the Cache/ROM DIMM is replaced. The required repairs are covered under the Apple repair extension program. Please contact an Apple-authorized service provider to have your computer repaired. (Your computer will continue to run classic networking until it is repaired.)
- When running System 7.5.3 on a 68020 computer that has been upgraded using a 68040 accelerator card, Open Transport will now run correctly.
- Memory management is improved. On PowerPC-based computers, memory is no longer fragmented. On 68030 or 68040 computers that have turned on the "Load only when needed" option, memory will not unfragment for 2 minutes after a TCP application completes.
- Performance enhancements for opening and closing endpoints have been added. This is particularly visible on Mac OS computers that are busy Web servers.
- Open Transport now registers and unregisters CRM serial drivers.

- The NuBus version of the DOS Compatibility Card is compatible with Open Transport 1.1.1.
- Infrared-compatible versions of LocalTalk drivers are now installed on all models. Previously these drivers were only installed on PowerBooks.

What's new in Open Transport 1.1.1 - AppleTalk

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- AppleTalk now properly handles Phase I RTMP packets on LocalTalk. This was causing problems using EtherPrint, TeleBridge, and other third-party forwarding technologies.
- Fixed a problem on a PowerBook Duo where AppleTalk would awaken from sleep on the wrong port when docking with an Ethernet MicroDock.
- Fixed a problem in ARA compatibility where Open Transport would sometimes not get the complete zone list from the server.
- Fixed some problems in ARA compatibility where a packet would not get routed properly, causing computers attached to the local cable of the server not to be visible to the ARA client.
- When using ADEVs, Open Transport requests a specific address from the ADEV. Some ADEVs return no error, but modify low memory locations to indicate a different address than that requested. Open Transport now picks up that different address and uses it (however, if the User Defined option is turned on, AppleTalk will not open).
- Some Ethernet-ISDN bridges used for remote LAN-to-LAN connectivity drop the connection when there is no active data transfer, and dial on demand when there is information to be transferred. If a user's local network does not include an AppleTalk router, a message appears each time the connection is dropped. Use the AppleTalk Options control panel to fix the problem. Open the control panel, turn on the "Suppress router-related alerts" option, then close the control panel.

What's new in Open Transport 1.1.1 - TCP/IP

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Server specific fixes and enhancements

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- The performance of opening and closing TCP endpoints has been improved. This improvement will be most noticeable on servers with a high volume of short-duration connections (such as Web servers).
- In OT 1.1, sometimes TCP connections could not be reused. Eventually a server application would not be able to accept incoming connections. This has been fixed.
- Fixed a problem where busy TCP servers sometimes accepted no new inbound connections for about 30 seconds every 4 minutes.

- Fixed a memory leak which occurred when Hosts files were used and TCP/IP was set to "load only when needed." Previously, Hosts file entries were not properly deleted from memory when TCP/IP unloaded.

- Introduced a better DNR cache limitation algorithm. Entries that haven't been used for 15 minutes can now be flushed whenever the DNR is heavily used.

#### Other TCP/IP fixes and enhancements

- Open Transport's MacTCP compatibility now honors the pushFlag parameter to TCPSend call. This is required for some legacy applications to correctly communicate with older, nonconforming hosts. However, no direct control of the TCP pushFlag is or will be provided through the native OT API.

- Entries in the Address and Alias caches now flush when they reach their "time-to-die," and not when they exceed it. TCP/IP also no longer caches resource records with a 0 time to live.

- The DNR now more robustly supports service load-balancing strategies. It no longer maps directly between an alias and the IP address of the host being aliased.

- When dealing with DHCP servers, Open Transport now tries "full-size" packets first, then falls back to "short" packets.

- Fixed a problem with timer overflow on long DHCP leases. Previously, if the lease exceeded 24 days, then TCP/IP connectivity would be lost in a matter of hours.

- Fixed a problem that occurred when one end of a connection closes a "tcp" endpoint, while the other end simultaneously aborts the connection.

- Fixed a problem where a DNR SysInfo request will sporadically fail when a valid reply is mistakenly treated as having been truncated.

- Fixed a hang that occasionally occurred when flushing the DNR address cache.

- Fixed a problem where resolving a bad name sometimes returned no error, when in fact an error occurred.

- Fixed a hang that occurred with applications that use the TCPNoCopyRcv call through the MacTCP compatibility interface. This hang occurred when the MacTCP compatibility interface ran out of memory, either due to being given a small buffer by the application, or by receiving enough inbound data to fill most of the inbound buffer space.

- Fixed a memory leak when opening the resolver in MacTCP emulation mode.

- Open Transport 1.1.1 is compatible with NuBus Token Ring adapters. To ensure compatibility with existing NuBus Token-Ring drivers, Open Transport TCP/IP artificially imposes a MTU of 1500 bytes. This limit should be addressed in a future release.

- Open Transport's MacTCP emulation can now abort a connection where the underlying stream is blocked due to flow control. Applications using the native Open Transport API will have to issue an I\_FLUSH ioctl before sending a disconnect when they want to disconnect/abort a flow-controlled connection.

- A new traceroute program for Open Transport/TCP, called "WhatRoute," is now available at <<http://crash.ihug.co.nz/~bryanc/>>. The latest version of Mac TCP Watcher (v2.0) <<ftp://ftp.share.com/peterlewis/>> also now supports traceroute.

#### Known limitations and other issues

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- The AppleTalk control panel displays separate printer and modem ports on the PowerBook 190. LocalTalk will only work correctly when the modem port is selected in the AppleTalk control panel.

- The software that dims the screen of PowerBook Duo computers when the PowerBook is docked and idle is not compatible with Open Transport. Use a third-party screen saver in place of the Apple-provided module.

- In some cases, on a PowerBook 190 configured to use the Infrared Port in the AppleTalk "Connect via" pop-up menu, networking services may become disabled following a sleep/wake or restart. If this happens, try putting the computer to sleep and waking it up again, or use the AppleTalk control panel to temporarily select the modem/printer port before switching back to the infrared port.

- On a IIfx or a Quadra 950, Open Transport can only use the "compatible mode" setting in the Serial Switch control panel. Don't use the "faster mode" setting with LocalTalk.

- On 68030 and 68040 computers, changes in AppleTalk configurations can cause systems running Meeting Maker 3.5 or 3.5.1 to crash. This can occur when changing AppleTalk links, turning AppleTalk off, or bringing ARA connections up or down. This problem will occur on classic networking as well. Apple is working with ON Technology to resolve this problem.

- Open Transport generally requires more memory (RAM) than MacTCP. To conserve memory, you might try some of the following:

- Rename or re-order one or more third-party system extensions (INITs), to change the order in which memory is allocated when your computer starts up. If you use extensions from Global Village, try renaming those extensions so that they load last.
- Especially on PowerPC-based computers, turn on virtual memory.

- When TCP/IP is set to "Load only when needed" (in the control panel's Options window), "pinging" an Open Transport workstation will fail if TCP/IP is not currently being used. To make sure your computer is "pingable" at all times, turn off the "Load only when needed" option (open the TCP/IP control panel and click the Options button, then click the "Load only when needed" checkbox to remove the X) and restart your computer.

- When TCP/IP is set to "Load only when needed" (in the control panel's Options window), the first TCP/IP application opened will cause Open Transport to load into memory. Some older applications don't cause Open Transport to load, and then report errors similar to those encountered when MacTCP is not installed. If this is a problem, turn off the "Load only when needed" option (open the TCP/IP control panel and click the Options button, then click the "Load only when needed" checkbox to remove the X) and restart your computer.
- The TCP/IP control panel is able to obtain and utilize multiple gateway and name server addresses from DHCP and BootP servers. However, it will currently display only the first one. This should be addressed in a future release.
- Generally, you should turn on the "Load only when needed" option in the TCP/IP control panel when using a modem. If TCP/IP is always loaded, your modem may attempt to initiate a dialup connection at startup. Some MDEVs require more system heap memory than is available at startup, which may cause the computer to hang. Also, some Internet service providers charge by connect time, so you may be charged for the connection, even if you weren't using it.
- If you use MacSLIP, you should likewise not configure the MacSLIP control panel to initialize MacSLIP at system startup time. As stated above, this may require more system heap memory than is available at startup, which may cause the computer to hang.
- If you are experiencing problems when using MacSLIP with virtual memory on, increasing your virtual memory size may give you better results. (Use the Memory control panel to increase virtual memory.)
- If you are using Netscape, 16MB or more of built-in memory (RAM) is recommended.
- Some MacTCP-based applications will not function correctly unless the MacTCP DNR file is in its original location at the root level of the System Folder. Do not delete this file when installing or configuring Open Transport.
- You should only specify use of 802.3 framing in the TCP/IP control panel if you have been directed to do so by your network manager, or if you are sure that all other stations on your network segment, including your IP router(s), are also configured to use 802.3 and not Ethernet version 2.0 framing.
- Claris EMailer version 1.1 v3 or later is compatible with Open Transport 1.1.1. Earlier versions of Claris EMailer may not be compatible with Open Transport's "Load only when needed" configuration option. If you experience a system crash 2-3 minutes after quitting EMailer, turn off the "Load only when needed" option. (Open the TCP/IP control panel and click the Options button, then click the "Load only when needed" checkbox to remove the X.) For your convenience, the Claris EMailer version 1.1 v3 patcher and Claris EMailer Lite version 1.1 v3 patcher has been provided in the Open Transport Extras folder.
- The current version of the MacTraceRoute Ethernet LAP does not work on computers running Open Transport.
- NFS/Share versions 1.4.4 or later are compatible with Open Transport.

- When using Netware Client version 5.11 configured for NetwareIP service, the first login may yield a Netware Configuration error message. To avoid this error, open the NetwareIP control panel and change the value under Domain SAP Server (DSS) Retry Attempts from 1 to 2. You can also change Open Transport TCP/IP control panel to always load TCP/IP into memory (open the TCP/IP control panel, click the Options button, and click the "Load only when needed" box to remove the X).
- eXodus 5.2.2 and later are compatible with Open Transport.
- Versions of Anarchie prior to 1.6 have a data corruption problem when used with Open Transport. Make sure you are using Anarchie 1.6 or later.
- If an Apple Remote Access (ARA) user is on a non-routed, extended (Ethernet) network, and there are devices on the local network with the same network number as devices on the remote network, the user won't be able to see the local devices. This problem can be fixed by installing a router. Another workaround is to clear the PRAM on the ARA computer. (Hold down the Control, Option, and P keys simultaneously while starting up the computer). Clearing PRAM causes the computer to start up with a new network number, which should not conflict with the remote network number.
- Daemon 1.0.0 & Daemon Killer 1.0 are not compatible with Open Transport.
- MudDweller 1.2 is not completely compatible with Open Transport. You can open new connections, but the "reconnect" choice does not work correctly.
- The system will crash during launch of NetPresentz if Open Transport TCP/IP is configured to use MacIP and the selected zone has no MacIP server.
- Current versions of VersaTerm SLIP are not compatible with Open Transport.
- Problems can occur with old versions of the KeyServer package from Sassafras Software when TCP/IP is configured to "Load only when needed" (in the control panel's Options window). Contact Sassafras for the latest revisions at <<http://www.sassafras.com>>.
- The combination of Open Transport 1.1.1, LocalTalk Bridge 2.1f2, Global Village Toolbox and GlobalFax extensions causes a crash. This also happens when using classic networking. The workaround is to move the LocalTalk Bridge file to the Extension folder, renaming it to "aLocalTalk Bridge." You can make an alias and rename the alias as desired. Put the alias wherever you want, including the Control Panels folder. This will allow the LocalTalk Bridge to load before Global Village and avoid the cause of the crash.
- To use the CSI Hurdler serial card with Open Transport, contact CSI to get a copy of their preference file patch. This will enable the card to be compatible with Open Transport 1.1.1.
- After installing Open Transport 1.1.1 over a network while using Classic AppleTalk, open the Open Transport 1.1.1 AppleTalk control panel. If you are not using an infrared device, open the "Connect via" pop-up menu and choose Serial

Port.

- The current official release of the MPW shell will hang the system when used with virtual memory and Open Transport. When using the MPW shell and Open Transport, turn off virtual memory. The ETO #21 pre-release MPW shell, version 3.4.2b2, fixes this problem.

#### System 7.5.3 notes

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- System 7.5.3 includes both classic and Open Transport networking.
- The Network Software Selector (NSS) utility, included in the Apple Extras folder with System 7.5.3, provides an easy way to specify either classic or Open Transport networking. The computer must be restarted for a change to take effect.
- During system startup, System 7.5.3 checks for the stored preference for networking software. The load process then causes the appropriate control panels—"Network" and "MacTCP" for classic networking, "AppleTalk" and "TCP/IP" for Open Transport—to become visible. Those control panels associated with the disabled network software are hidden.
- Prior to installing OT 1.1, it was technically possible to install the older MacTCP on a computer running Open Transport. With OT 1.1 and later this is no longer possible.
- If it becomes necessary to reinstall MacTCP or the Network System Installer (NSI) on a 68030, 68040, or NuBus PowerPC-based computers running System 7.5.3 and Open Transport, you must first use NSS to specify classic networking and restart. After restarting, MacTCP and the other components of classic networking are visible.
- If you have a PCI-based computer connected to a Novell Netware network and are using the Netware 5.1 client software, you should also install the Ethernet Compatibility extension version 1.0.3. This extension is available only through a Custom Install from the System Update 2.0 installer, selecting the Ethernet Driver Update. This corrects a problem that could cause your system to crash at shutdown when using MacIPX. However, there will be a two-minute delay in shutting down the computer.
- Network Time v2.0.1 is not compatible with the AutoPower On/Off control panel version 1.0 on a NuBus Power Macintosh with Open Transport. To use Network Time v2.0.1, remove the AutoPower On/Off control panel.

#### Article Change History:

23 Oct 1996 - Changed distribution status.

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