AppleTalk Internet Router

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TOPIC ---

This article gives general information on the AppleTalk Internet Router. It
includes common questions with answers.

DISCUSSION ------------------------------------

The AppleTalk Internet Router is a software router that interconnects
AppleTalk networks, including LocalTalk, EtherTalk, and TokenTalk networks,
to form an AppleTalk internet. The router moves data from one network to
another transparently, so the internet functions like a single network. This
means that users access file, print, and mail resources across the internet
in the same way they access these resources on a single network.

The AppleTalk Internet Router is fully compatible with AppleTalk Phase 2.
As specified in the AppleTalk Phase 2 protocols, you can use the AppleTalk
Internet Router to assign a range of network numbers and a list of zone
names to a single EtherTalk or TokenTalk network.

The AppleTalk Internet Router has four main purposes:

- It connects two to eight networks, allowing users access to services on
  other networks. The connected networks can be LocalTalk, EtherTalk, or
  TokenTalk networks.

- It isolates traffic on different parts of an internet. Although
  AppleTalk Phase 2 supports very large, single AppleTalk networks,
  performance can be improved by using a router to break up such a network.
  The router isolates local traffic and passes traffic onto the
  internet only when necessary.

- It creates zones that conceptually partition the internet, so that
  users can more efficiently access shared services.

- It enlarges a network that has reached its maximum length or number of
  devices. The number of devices per network is an issue for LocalTalk
  networks. The maximum length is an issue for LocalTalk networks and thin
  Ethernet networks.

The AppleTalk Internet Router runs on the Macintosh Plus, SE, SE/30, and
Macintosh II family of computers. It runs transparently in the background
of other processes running on the same system. You can run the router on a
machine that is also running the AppleShare File Server, the AppleShare
Print Server, and various electronic mail servers. To run the router on the
same machine as one or more servers, you must have 2MB of memory.

The AppleTalk Internet Router ships with the "AppleTalk Internet Router
Administrator's Guide". The guide has complete information on how to set up
the router, when to create an internet, how to plan the physical layout,
where to place a router, when to use a backbone network, and so on. It also
gives advice on network numbering and zone names. Observing certain
guidelines in identifying networks can help maintain order as the internet
grows.

The AppleTalk Internet Router also ships with a document titled "AppleTalk
Phase 2 Introduction and Upgrade Guide". This booklet describes AppleTalk
Phase 2 for the lay person and describes how to upgrade an AppleTalk
internet to Phase 2.

The Upgrade Utility will be packaged with the AppleTalk Internet Router for
a limited period. The Upgrade Utility permits AppleTalk Phase 2 and Phase 1
routers to operate on the same internet. Upgrading an AppleTalk internet to
Phase 2 requires that all routers be upgraded to Phase 2 versions. However,
it may not be feasible for customers with very large internets to upgrade
all their routers at once. For this reason, Apple has written the Upgrade
Utility that runs in the background of the AppleTalk Internet Router and
enables that router (and its connected networks) to be part of an internet
on which 1.0 routers still exist.

The Node Identification Utility also ships with the AppleTalk Internet
Router. It enables you to determine which nodes on an internet have been
upgraded to AppleTalk Phase 2.

Customers must buy a copy of the AppleTalk Internet Router for every
machine that will run the software. Site licenses will not be available.

Questions and Answers on the AppleTalk Internet Router

Q. Does the AppleTalk Internet Router support TCP/IP or DECnet routing?
A. No. The AppleTalk Internet Router supports routing of AppleTalk
protocols only. It can be run in parallel with a second non-Apple router
that supports other network protocols.

Q. How many networks can be interconnected with the AppleTalk Internet
Router?
A. The AppleTalk Internet Router allows from two to eight networks to be
interconnected. By exchanging information with other routers on the
internet, the AppleTalk Internet Router can learn about 1024 other networks
in the internet. Each of these 1024 networks can contain multiple
AppleTalk Phase 2 "virtual networks."

Q. How many zone names can I assign to one EtherTalk or TokenTalk network?
A. 256.

Q. How can I configure eight networks on the AppleTalk Internet Router?
A. You need to use a Macintosh II or IIx that handles up to six network
cards and the two LocalTalk ports to be used by the router. You can use the
router without a video card or monitor. To administer such a router, you
can use the Timbuktu product from Farallon.

Q. Does the router degrade the performance of the AppleShare File Server
or Print Server when run in the background?
A. Yes. The amount of degradation depends on the traffic passing through
the router. Typically the router has to be extremely busy to noticeably
affect server performance.

Q. Because the AppleTalk Internet Router is a Phase 2 router, will
third-party router manufacturers need to upgrade their routers to
communicate with Apple's router?
A. Yes. Apple has worked very carefully with all the major third-party
router manufacturers. All of them plan to offer Phase 2 upgrades to their
products.
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