



Tech Info Library

TokenTalk: Version 2.4 Eliminates AARP Thrashing

Article Created: 25 March 1992

* RESTRICTED: Apple Internal and Support Providers Only *
Not For General Public Release

TOPIC -----

We have some questions regarding the size of the Address Mapping Table within TokenTalk. We have a huge Token Ring network that's only going to get bigger. We're concerned that as the network grows, the size of the Address Mapping Table won't be adequate to the task and will result in excessive AARP traffic on the network.

We had an AARP broadcast storm on the network. We traced the problem to a Novell Netware 2.1.5 server that was sending everything with AARP. Novell acknowledged that there was a problem with that particular version of their product. We upgraded to Netware 3.0 and everything is fine. However, we're worried about running into a similar situation in the future.

How many entries does the TokenTalk Address Mapping Table hold? What other boundary conditions are we likely to run into as the network expands? What's a realistic limit on the number of nodes on the TokenTalk network?

DISCUSSION -----

The TokenTalk Address Mapping Table (AMT) size is 100.

The problem you describe is a well-known anomaly that has been corrected in the 2.4 version of the TokenTalk driver. Previously (before version 2.4), the TokenTalk driver would glean address mapping information from all data packets present on the network. On networks with more than 100 Macintosh computers, this could result in the table becoming full very quickly. This would then result in what we call "AARP Thrashing." This is when a node needs to send a single data packet, and you also have to send an AARP. This is because the table is full, and some new node's information replaces the entry for the entity you're currently conversing with.

With the introduction of TokenTalk 2.4, we no longer glean addresses from data packets. This results in a much more manageable table, because it holds entries only for nodes with which we are conversing and not for every node on the network. This solution has the down side of now requiring an

AARP before you can connect to a remote device for the first time. This might make the initial connection slightly slower, but results in a much more stable AARP cache and hence a much more stable network.

For Macintosh computers connected to Token Ring networks, and using the TokenTalk 2.4 or later driver, you shouldn't have a problem exceeding the limits of the AMT in normal day-to-day operations. You would have to be connected to 100 entities simultaneously before you started to see any thrashing, and even then it would be very minor in comparison to what could have happened with the previous versions of the driver.

Copyright 1992 Apple Computer, Inc.

Keywords: <None>

=====

This information is from the Apple Technical Information Library.

19960215 11:05:19.00

Tech Info Library Article Number: 9979