

## FIELD SERVICE BULLETIN



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2300 Orchard Parkway  
 San Jose, CA 95131-1017  
 Customer Assistance Center: 1-408-428-7907  
[TechSupport.ttm@symmetricom.com](mailto:TechSupport.ttm@symmetricom.com)

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**System:** Microsoft Windows XP and NTP Time Servers NTS-150, NTS-200 and TimeVault

<b><u>Product Identity:</u></b>	<b><u>Product Code:</u></b>
NTS-150	NTS-150
NTS-200	NTS-200
TimeVault	6000-100

**Customer Service:** 1-888-367-7966 (1) (1) Toll free – North America  
 1-408-428-7907 (1) (1) Worldwide

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## Microsoft Windows® XP and the Network Time Protocol

### Symptom:

Microsoft integrated a network time client into Windows XP that adds the ability to automatically update the system clock from time obtained over the Internet. By selecting the time source (see screen snap) the user can choose one of two predefined time sources, or they can enter the IP address of a desired network time server. If the IP address is set to a network time server other than the two predefined choices, the XP client will most likely fail to synchronize.

### Problem:

The failure to synchronize with a standard network time server is due to the Microsoft implementation of the Network Time Protocol (NTP) not adhering to the existing standard. Ordinary clients are expected to send a client request (mode 3) and receive a server response (mode 4), as defined in rfc-1305 and rfc-2030. The XP client sends a symmetric active (mode 1) request, which by specification invites the server to mobilize a symmetric passive (mode 2) association. If the request is accepted, the XP client would be considered a legitimate time source in itself, possibly synchronizing the server in error and creating havoc for the server and its clients. Some public servers, in particular time.nist.gov, have been modified so this hazard does not exist. Other network time servers that encounter an unauthenticated mode 1 packet may conclude this is an attempted security violation and not respond. Symmetricom network time servers behave this way and will not respond to the Windows XP client request for time.

### Solution:

Unless time.nist.gov or time.microsoft.com is the preferred time source, the solution is to turn off the XP client's automatic time update and install an NTP time client such as Symmetricom's SymmTime or Domain Time II. By doing this you will be able to synchronize with the network time server(s) of your choosing and have a far better time synchronization solution than you would otherwise with Windows XP.

SymmTime is a stand alone freeware time client provided by Symmetricom and can be downloaded from the Symmetricom IP Network Timing Products web site (<http://www.ntp-systems.com>). The Symmetricom Domain Time II time client is part of Symmetricom's comprehensive network time synchronization solution that maintains excellent time synchronization in addition to offering time saving remote configuration, management and network time monitoring functions.

Symmetricom network time servers will accommodate the Windows XP time client behavior via a firmware update expected to be available in October 2002. The firmware update will be for the NTS-150, NTS-200, and TimeVault models only.