A sample ETS configuration for the STP is shown in Figure 8-2.

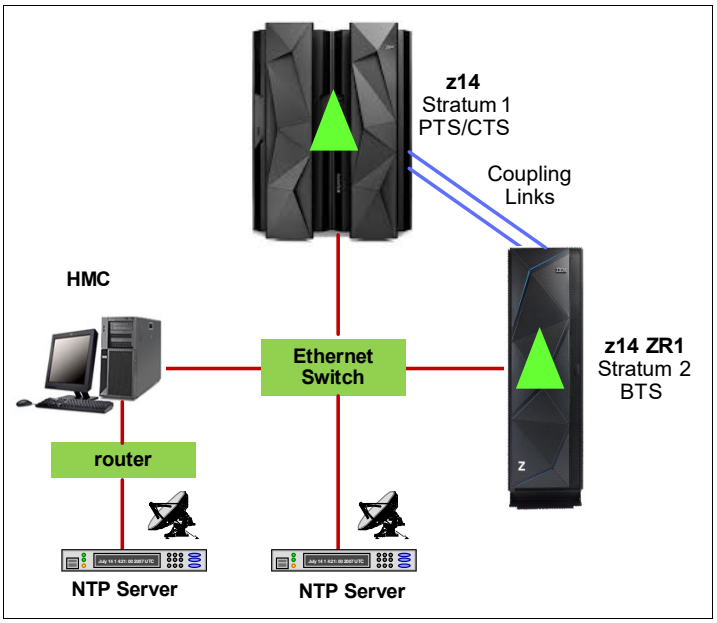

Figure 8-2 Example configuration: NTP server on the HMC

Especially for the financial markets, tight time accuracy is demanded by the authorities of various countries. Therefore, the US Financial Industry Regulatory Authority (FINRA) announced that computer clocks that are used to record events in national market system (NMS) securities and over-the-counter (OTC) equity securities must be synchronized to within a 50-millisecond drift tolerance of the National Institute of Standards and Technology (NIST) atomic clock. Also, the European Union demands in their Markets in Financial Instruments Directive (MIFID) II regulation that the maximum divergence from UTC is to be 100 microseconds.

Unfortunately, the accuracy of the interface with an NTP server to maintain Coordinated Server Time accuracy that is provided by STP is 100 milliseconds to the time provided by the NTP server. To meet the clock synchronization requirements of FINRA and MIFID II, the NTP server must have a pulse per second (PPS) output signal that can achieve time accuracy within 10 microseconds. If your configuration requires the NTP server with pulse per second capability, the NTP server that is configured as the ETS must be attached directly to the SE network.

For more information, see the Techdoc, *STP and FINRA clock synchronization requirements*.

8.4 Configuring the HMC as an NTP server

This section describes how to set up the HMC as an NTP server to be used as ETS for your CTN. The HMC can synchronize its time to an NTP server that is connected to the corporate network or available from the NTP pool on the internet.

The NTP server capability on the HMC addresses the potential security concerns that might arise if an external or internet NTP server is connected directly to the HMC/SE network. However, when you use the NTP server on the HMC as ETS for your CTN, no pulse-per-second capability is available.