Office of the National Coordinator for Health Information Technology

Network Time Protocol (NTP) Reference Document

Version 1.0 Updated on 05-03-2024

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Revision History

Version #	Description of Change	Version Date
1.0	Initial publication	05-03-2024

Requirements

Network Time Protocol (NTP) Test

The Health IT Module is able to synchronize a clock in accordance with any NTP standard.

Standard(s) Referenced

170.210(g) Synchronized clocks. The date and time recorded utilize a system clock that has been synchronized using any Network Time Protocol (NTP) standard.

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Clarifications:

- The Health IT Module may synchronize its clock to the operating system (which itself is synchronized to a time server) or synchronize directly to a time server. Demonstration of either method is acceptable for testing purposes.

For testing purposes, a Health IT Module may but is not required to use a NIST Internet Time Service (ITS) time server for synchronizing its clock. For example, a Health IT Module may use an internal time server. However, if not using a NIST ITS time server, the health IT developer must document how the time server used by the Health IT Module (either directly or indirectly via the operating system) is synchronized to UTC (NIST), the official NIST time.

Required Tests

System Under Test	Test Lab Verification
Configure NTP 1. The health IT developer chooses a time server and adds it to the Health IT Module's or operating system's software configuration. 2. The health IT developer waits the amount of time necessary to ensure clock synchronization occurs. **Verify NTP** 1. The health IT developer demonstrates at least one of the following: • If the Health IT Module is synchronizing its clock directly to the chosen time server, the health IT developer demonstrates using	**Verify NTP** 1. The tester verifies at least one of the following: • If the Health IT Module is synchronizing its clock directly to the chosen time server, the tester verifies using NTP logs that the Health IT Module's clock is accurate to within 5 seconds of the chosen time server. If the Health IT Module is synchronizing its clock to the operating system, the tester verifies the Health IT Module's clock is accurate to within 5 seconds of the system clock.

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System Under Test	Test Lab Verification
NTP logs that the Health IT Module's clock is accurate to within 5 seconds of the chosen time server. • If the Health IT Module is synchronizing its clock to the operating system, the health IT developer demonstrates the Health IT Module's clock is accurate to within 5 seconds of the system clock.	