

Accurate time is essential for the security and trustworthiness of the Internet.



We believe that the security of the Internet's time synchronization infrastructure has a direct impact on the overall trustworthiness of the global Internet. We're working to promote global deployment of time security protocols and to encourage operational best practices.

Accurate Time is an Essential Foundation for Online Security

Many systems that we regularly interact with rely on accurate time to function properly. Financial transactions, transportation, electricity and industrial production processes are just a few of these things. Accurate time also provides an essential foundation for online security, and many security mechanisms, such as Transport Layer Security (TLS) and digital signature creation and verification, depend on accurate timekeeping.

Contributing to a More Secure and Trustworthy Internet through Open Standards

Network Time Protocol (NTP) is one of the oldest Internet protocols in use. It enables the synchronization of clocks on computer networks to within a few milliseconds of standard universal coordinated time (UTC). It is an important component of Internet security.

The NTP's security mechanisms were designed back in an era when the risk of attack was unlikely. Due to the continued expansion of the Internet, these mechanisms have become outdated. Work has been underway for many years in the Internet Engineering Task Force (IETF) to develop replacement technology – Network Time Security (NTS) – which will help to secure the Internet's time synchronization infrastructure well into the future.

What We're Doing

Helping to increase NTS deployment: We're developing a distributed testbed to help implementors and operators test the performance and security characteristics of NTS so they can prepare for implementation on their own networks. We'll also organize virtual test events to facilitate troubleshooting.

Building an information repository: We're building a repository of information to help support and promote the worldwide deployment of NTS. Documentation, Best Common Practice (BCP) documents, implementation guidelines and the latest Time Security news and developments will be available on our standalone project website.

Find out more

- Learn more about the [Time Security Project](#).
- Take a look at what the [IETF NTP Working Group](#) is working on and find out [how to participate](#).
- Become an [Internet Society Member](#) and stay up to date with regular member project updates.
- Contact TimeSecurityProject@isoc.org to get involved.

The IETF and Open Standards

The Internet Engineering Task Force (IETF) is the premier Internet standards body, developing [open standards](#) through open processes to make the Internet work better. The Internet Society believes open standards are a cornerstone of the Internet. They are key to allowing devices, services, and applications to work together across a wide and dispersed network of networks. In addition to the standards themselves, the open processes and principles on which they are developed ensure the continued evolution of Internet technologies that meet the need of the growing number of devices and uses that empower people around the world.



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