



# Cluster NTP

## ONTAP 9.11.1 REST API reference

NetApp  
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# Cluster NTP

## Cluster NTP endpoint overview

### Overview

ONTAP uses the Network Time Protocol (NTP) for world clock time synchronization of the cluster. Some functional services require the time to be correct to within one second for all the nodes in the cluster.

The success and speed of this synchronization depends on the number, alignment, and consistent network latency of external time servers. It is a best practice to configure ONTAP with four independent external time servers.

To aid set up, the Pre-Cluster API of POST `/cluster` supports a list of NTP time servers using either the host name, IPv4 address, or IPv6 address.

You can enhance time security by acquiring private keys from external time servers, recording those keys and configuring the entries that match the external time servers to use those keys.

To use NTP symmetric authentication keys (keys), the shared private key must be recorded first using the `/cluster/ntp/keys` API associated with the server and enabled to be used.

### APIs

There are three sets of APIs. The most basic set is part of the `/api/cluster` APIs, in which a set of NTP servers are provided. The next two sets are used to manage the NTP servers in more detail and optionally record keys to enable NTP symmetric authentication.

#### [/api/cluster](#)

More details can be found under the documentation for [/api/cluster](#). This API supports a list of NTP servers to start with. It does not take any individual configuration values for the NTP servers themselves.

#### [/api/cluster/ntp/servers](#)

You can use this API for a more detailed configuration of NTP servers. You must use this API to set and enable NTP symmetric authentication keys.

#### [/api/cluster/ntp/keys](#)

You can use this API to manage shared NTP symmetric keys that are provided by the remote NTP time server by using the key identifier (ID), type of key, and the private shared key.

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