



N Commands

This chapter describes the Cisco NX-OS system management commands that begin with the letter N.

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ntp abort

To abort the Network Time Protocol (NTP) configuration, use the **ntp abort** command.

ntp abort

Syntax Description This command has no arguments or keywords.

Defaults None

Command Modes Global configuration mode

SupportedUserRoles network-admin
network-operator
vdc-admin
vdc-operator

Command History	Release	Modification
	4.1(1)	This command was introduced.

Usage Guidelines This command does not require a license.

Examples This example shows how to abort the NTP configuration:

```
switch# ntp abort
No changes to abort
switch#
```

Related Commands	Command	Description
	ntp commit	Commits the NTP configuration.
	ntp distribute	Enables Cisco Fabric Services (CFS) distribution for NTP.

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ntp access-group

To configure an access group to control Network Time Protocol (NTP) access, use the **ntp access-group** command. To remove the NTP peer access group, use the **no** form of this command.

ntp access-group {peer | serve | serve-only | query-only} *access-list-name*

no ntp access-group {peer | serve | serve-only | query-only} *access-list-name*

Syntax Description		
peer		Allows the device to receive time requests and NTP control queries to synchronize itself to the servers specified in the access list.
serve		Allows the device to receive time requests and NTP control queries from the servers specified in the access list but not to synchronize itself to the specified servers.
serve-only		Allows the device to receive only time requests from servers specified in the access list.
query-only		Allows the device to receive only NTP control queries from the servers specified in the access list.
<i>access-list-name</i>		Name of the NTP access group. The name can be any alphanumeric string up to 32 characters, including special characters.

Defaults If you do not configure any access groups, NTP access is granted to all devices.

Command Modes Global configuration mode

Supported User Roles network-admin
vdc-admin

Command History	Release	Modification
	5.2(1)	Added the serve , serve-only , and query-only keywords.
	5.0(1)	This command was introduced.

Usage Guidelines Make sure that you are in the correct virtual device context (VDC). To change the VDC, use the **switchto vdc** command.

This command does not require a license.

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Examples

This example shows how to configure a peer access group for NTP:

```
switch# config t
switch(config)# ntp access-group peer Admin_Group_123
switch(config)#
```

This example shows how to remove an NTP peer access group:

```
switch# config t
switch(config)# no ntp access-group peer Admin_Group_123
switch(config)#
```

Related Commands

Command	Description
feature ntp	Enables the NTP on a VDC.
show ntp access-groups	Displays the NTP access groups.

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ntp authenticate

To enable Network Time Protocol (NTP) authentication, use the **ntp authenticate** command. To disable NTP authentication, use the **no** form of this command.

ntp authenticate

no ntp authenticate

Syntax Description This command has no arguments or keywords.

Defaults Disabled

Command Modes Global configuration (config)

SupportedUserRoles network-admin
network-operator
vdc-admin
vdc-operator

Command History	Release	Modification
	5.0(1)	This command was introduced.

Usage Guidelines Make sure that you are in the correct virtual device context (VDC). To change the VDC, use the **switchto vdc** command.

This command does not require a license.

Examples This example shows how to enable NTP authentication:

```
switch(config)# ntp authenticate
switch(config)#
```

This example shows how to disable NTP authentication:

```
switch(config)# no ntp authenticate
switch(config)#
```

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Related Commands	Command	Description
	ntp authentication-key	Configures an NTP authentication key.
	ntp trusted-key	Configures one or more keys that a time source must provide in its NTP packets in order for the device to synchronize to it.
	show ntp authenticaion-status	Displays the status of NTP authentication.

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ntp authentication-key

To configure a Network Time Protocol (NTP) authentication key, use the **ntp authentication-key** command. To remove the NTP authentication key, use the **no** form of this command.

ntp authentication-key *number md5 md5-string*

no ntp authentication-key *number md5 md5-string*

Syntax Description		
	<i>number</i>	Authentication key number. The range is from 1 to 65535.
	md5	Specifies the MD5 algorithm for authentication.
	<i>md5-string</i>	MD5 string. The MD5 string can be up to eight alphanumeric characters.

Defaults Disabled

Command Modes Global configuration (config)

SupportedUserRoles network-admin
network-operator
vdc-admin
vdc-operator

Command History	Release	Modification
	5.0(1)	This command was introduced.

Usage Guidelines Make sure that you are in the correct virtual device context (VDC). To change the VDC, use the **switchto vdc** command.

The device does not synchronize to a time source unless the source has one of these authentication keys and the key number is specified by the **ntp trusted-key** command.

This command does not require a license.

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Examples

This example shows how to configure an NTP authentication key:

```
switch# config t
switch(config)# ntp authentication-key 42 md5 aNiceKey
switch(config)#
```

This example shows how to remove the NTP authentication key:

```
switch# config t
switch(config)# no ntp authentication-key 42 md5 aNiceKey
switch(config)#
```

Related Commands

Command	Description
show ntp authentication-key	Configures one or more keys that a time source must provide in its NTP packets in order for the device to synchronize to it.

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ntp commit

To commit the Network Time Protocol (NTP) configuration, use the **ntp commit** command.

ntp commit

Syntax Description This command has no arguments or keywords.

Defaults None

Command Modes Global configuration mode

SupportedUserRoles network-admin
network-operator
vdc-admin
vdc-operator

Command History	Release	Modification
	4.1(1)	This command was introduced.

Usage Guidelines This command does not require a license.

Examples This example shows how to commit the NTP configuration:

```
switch# ntp commit
switch#
```

Related Commands	Command	Description
	ntp abort	Aborts the NTP configuration.
	ntp distribute	Enables Cisco Fabric Services (CFS) distribution for NTP.

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ntp distribute

To enable Cisco Fabric Services (CFS) distribution for the Network Time Protocol (NTP), use the **ntp distribute** command. To disable this feature, use the **no** form of this command.

ntp distribute

no ntp distribute

Syntax Description This command has no arguments or keywords.

Defaults None

Command Modes Global configuration mode

SupportedUserRoles network-admin
network-operator
vdc-admin
vdc-operator

Command History	Release	Modification
	4.1(1)	This command was introduced.

Usage Guidelines This command does not require a license.

Examples This example shows how to distribute the active NTP configuration to the fabric:

```
switch(config)# ntp distribute
switch(config)#
```

This example shows how to stop distribution of the active NTP configuration to the fabric:

```
switch(config)# no ntp distribute
switch(config)#
```

Related Commands	Command	Description
	ntp abort	Aborts the NTP configuration.
	ntp commit	Commits the NTP configuration.

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ntp enable

To enable Network Time Protocol (NTP), use the **ntp enable** command. To disable NTP, use the **no** command form.

ntp enable

no ntp enable

Syntax Description This command has no arguments or keywords.

Defaults Enabled

Command Modes Global configuration

SupportedUserRoles network-admin
vdc-admin

Command History	Release	Modification
	5.2(1)	This command was deprecated.
	4.0(3)	This command was introduced.

Usage Guidelines NTP must be configured in the default VDC. It cannot be configured in any other VDC. This command does not require a license.

Examples This example shows how to disable NTP:

```
switch# no ntp enable
```

Related Commands	Command	Description
	ntp server	Configures a remote NTP server.

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ntp logging

To enable Network Time Protocol (NTP) logging, use the **ntp logging** command. To disable NTP logging, use the **no** form of this command.

ntp logging

no ntp logging

Syntax Description This command has arguments or keywords.

Defaults Disabled

Command Modes Global configuration (config)

SupportedUserRoles network-admin
network-operator
vdc-admin
vdc-operator

Command History	Release	Modification
	5.0(1)	This command was introduced.

Usage Guidelines This command does not require a license.
Make sure that you are in the correct virtual device context (VDC). To change the VDC, use the **switchto vdc** command.

Examples This example shows how to enable NTP logging:

```
switch# config t
switch(config)# ntp logging
switch(config)#
```

This example shows how to disable NTP logging:

```
switch# config t
switch(config)# no ntp logging
switch(config)#
```

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Related Commands	Command	Description
	show ntp logging-status	Displays the NTP logging status.
	show ntp statistics	Displays the NTP statistics.

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ntp master

To configure the device to act as an authoritative Network Time Protocol (NTP) server, use the **ntp master** command. To remove the device as an authoritative NTP server, use the **no** form of this command.

ntp master [*stratum*]

no ntp master [*stratum*]

Syntax Description	<i>stratum</i> (Optional) Stratum level. The range is from 1 to 15.
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Defaults	None
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Command Modes	Global configuration mode
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SupportedUserRoles	network-admin vdc-admin
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Command History	Release	Modification
	5.2(1)	This command was introduced.

Usage Guidelines	<p>This command enables the device to distribute time even when it is not synchronized to an existing time server.</p> <p>Make sure that you are in the correct virtual device context (VDC). To change the VDC, use the switchto vdc command.</p> <p>This command does not require a license.</p>
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Examples	This example shows how to configure the device to act as an authoritative NTP server:
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```
switch# configure terminal
switch(config)# feature ntp
switch(config)# ntp master 5
```

This example shows how to remove a device as an authoritative NTP server:

```
switch# configure terminal
switch(config)# no ntp master 5
```

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Related Commands	Command	Description
	feature ntp	Enables NTP on a virtual device context (VDC).
	show running-config ntp	Displays information about the NTP configuration that is currently running on the switch.

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ntp peer

To configure a device as a Network Time Protocol (NTP) peer, use the **ntp peer** command. To remove the device as an NTP peer, use the **no** form of this command.

```
ntp peer {ip-address | ipv6-address | dns-name} [key key-id] [prefer] [use-vrf vrf-name]
```

```
no ntp peer {ip-address | ipv6-address | dns-name} [key key-id] [prefer] [use-vrf vrf-name]
```

Syntax Description	
<i>ip-address</i>	IPv4 address.
<i>ipv6-address</i>	IPv6 address.
<i>dns-name</i>	Domain Name Server (DNS) name.
key	(Optional) Specifies the key to be used for associating with a server.
<i>key-id</i>	Key ID. The range is from 1 to 65535.
prefer	(Optional) Specifies the given NTP server as the preferred one.
use-vrf	(Optional) Specifies the virtual routing and forwarding (VRF) name.
<i>vrf-name</i>	VRF name. The VRF name can be default , management , or any case-sensitive, alphanumeric string up to 32 characters.

Defaults None

Command Modes Global configuration (config)

Supported User Roles

- network-admin
- vdc-admin
- network-operator
- vdc-operator

Command History	Release	Modification
	5.0(1)	This command was introduced.

Usage Guidelines Make sure that you are in the correct virtual device context (VDC). To change the VDC, use the **switchto vdc** command.

You can configure multiple peer associations.

If you configure a key to be used while communicating with the NTP server, make sure that the key exists as a trusted key on the device.

This command does not require a license.

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Examples

This example shows how to configure an NTP peer:

```
switch(config)# config t  
switch(config)# ntp peer 190.0.2.1 key 123 prefer use-vrf RED  
switch(config)#
```

This example shows how to remove an NTP peer:

```
switch# config t  
switch(config)# no ntp peer 190.0.2.1  
switch(config)#
```

Related Commands

Command	Description
ntp server	Configures an NTP server.
show ntp peers	Displays all the NTP peers.
show ntp peer-status	Displays the status for all the server/peers.

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ntp server

To configure a Network Time Protocol (NTP) server, use the **ntp server** command. To remove the NTP server, use the **no** form of this command.

```
ntp server {ip-address | ipv6-address | dns-name} [key key-id] [prefer] [use-vrf vrf-name]
```

```
no ntp server {ip-address | ipv6-address | dns-name} [key key-id] [prefer] [use-vrf vrf-name]
```

Syntax Description

<i>ip-address</i>	IPv4 address.
<i>ipv6-address</i>	IPv6 address.
<i>dns-name</i>	Domain Name Server (DNS) name.
key	(Optional) Specifies the key to be used for associating with a server.
<i>key-id</i>	Key ID. The range is from 1 to 65535.
prefer	(Optional) Specifies the given NTP server as the preferred one.
use-vrf	(Optional) Specifies the virtual routing and forwarding (VRF) name.
<i>vrf-name</i>	VRF name. The VRF name can be default , management , or any case-sensitive, alphanumeric string up to 32 characters.

Defaults

None

Command Modes

Global configuration (config)

Supported User Roles

network-admin
network-operator
vdc-admin
vdc-operator

Command History

Release	Modification
5.0(1)	This command was introduced.

Usage Guidelines

Make sure that you are in the correct virtual device context (VDC). To change the VDC, use the **switchto vdc** command.

If you configure a key to be used while communicating with the NTP server, make sure that the key exists as a trusted key on the device.

This command does not require a license.

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Examples

This example shows how to configure an NTP server:

```
switch(config) config t
switch(config)# ntp server 190.0.2.10 key 123 prefer use-vrf RED
switch(config)#
```

This example shows how to remove an NTP server:

```
switch# config t
switch(config)# no ntp server 190.0.2.10 key 123 prefer use-vrf RED
switch(config)#
```

Related Commands

Command	Description
ntp peer	Configures a device as an NTP peer.
show ntp peer-status	Displays the status of all NTP servers and peers.
show ntp peers	Displays all the NTP peers.

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ntp source

To configure the Network Time Protocol (NTP) source, use the **ntp source** command. To remove the NTP source, use the **no** form of this command.

ntp source *addr*

no ntp source *addr*

Syntax Description	<i>addr</i>	IPv4 or IPv6 address of the source. The IPv4 address format is dotted decimal, x.x.x.x. The IPv6 address format is hex A:B::C:D.
Defaults	None	
Command Modes	Global configuration (config)	
Supported User Roles	network-admin vdc-admin	
Command History	Release	Modification
	4.0(1)	This command was introduced.
Usage Guidelines	This command does not require a license.	
Examples	<p>This example shows how to configure the NTP source:</p> <pre>switch(config)# ntp source 192.0.2.3</pre> <p>This example shows how to remove the NTP source:</p> <pre>switch(config)# no ntp source 192.0.2.3</pre>	
Related Commands	Command	Description
	show ntp source	Displays information about the NTP source.

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ntp source-interface

To configure the Network Time Protocol (NTP) source interface, use the **ntp source-interface** command. To remove an NTP source interface, use the **no** form of this command.

ntp source-interface *if_index*

no ntp source-interface *if_index*

Syntax Description	<i>if_index</i>	Source interface.
Defaults	None	
Command Modes	Global configuration (config)	
SupportedUserRoles	network-admin vdc-admin	
Command History	Release	Modification
	4.1(3)	This command was introduced.
Usage Guidelines	This command does not require a license.	
Examples	<p>This example shows how to configure an NTP source interface:</p> <pre>switch(config)# ntp source-interface loopback 1 switch(config)#</pre> <p>This example shows how to remove an NTP source configuration:</p> <pre>switch(config)# no ntp source-interface loopback 1 switch(config)#</pre>	
	Command	Description
	show ntp source-interface	Displays information about the NTP source interface.

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ntp sync-retry

To resynchronize the Network Time Protocol (NTP) with configured NTP servers, use the **ntp sync-retry** command.

ntp sync-retry

Syntax Description This command has no arguments or keywords.

Defaults None

Command Modes Any command mode

SupportedUserRoles network-admin
network-operator
vdc-admin
vdc-operator

Command History	Release	Modification
	4.0(1)	This command was introduced.

Usage Guidelines This command does not require a license.

Examples This example shows how to resynchronize NTP:

```
switch# ntp sync-retry
```

Related Commands	Command	Description
	ntp server	Configures a remote NTP server.

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ntp trusted-key

To configure one or more keys that a time source must provide in its Network Time Protocol (NTP) packets in order for the device to synchronize to it, use the **ntp trusted-key** command. To remove the NTP trusted key, use the **no** form of this command.

ntp trusted-key *number*

no ntp trusted-key *number*

Syntax Description	<i>number</i>	Trusted key number. The range is from 1 to 65535.
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Defaults	None
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Command Modes	Global configuration (config)
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SupportedUserRoles	network-admin network-operator vdc-admin vdc-operator
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Command History	Release	Modification
	5.0(1)	This command was introduced.

Usage Guidelines	Make sure that you are in the correct virtual device context (VDC). To change the VDC, use the switchto vdc command.
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This command provides protection against accidentally synchronizing the device to a time source that is not trusted.

This command does not require a license.

Examples	This example shows how to configure an NTP trusted key:
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```
switch# config t
switch(config)# ntp trusted-key 42
switch(config)#
```

This example shows how to remove the NTP trusted key:

```
switch# config t
switch(config)# no ntp trusted-key 42
switch(config)#
```

■ ntp trusted-key

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Related Commands

Command	Description
show ntp trusted-keys	Displays the status of NTP authentication.
