# Clock Commands

This module describes the commands used to set and display the internal clock settings in Cisco IOS XR software.

For more information about manually setting the router clock, see .

For more information about configuring the router to synchronize to Network Time Protocol (NTP), see the *Implementing NTP on Cisco IOS XR Software* module in *System Management Configuration Guide for Cisco NCS 5500 Series RoutersSystem Management Configuration Guide for Cisco NCS 540 Series RoutersSystem Management Configuration Guide for Cisco NCS 560 Series Routers*.

# clock read-calendar

To manually copy the hardware clock (calendar) settings into the software clock, use the **clock read-calendar** command in the appropriate mode.

**clock read-calendar**

## Syntax Description

This command has no keywords or arguments.

## Command Default

Read calendar is disabled.

## Command Modes

EXEC

System Admin EXEC

## Command History

| Release | Modification |
|---|---|
| Release 7.0.1 | This command was introduced. |

## Usage Guidelines

The *calendar clock* is a hardware system clock that runs continuously, even if the router is powered off or rebooted. The hardware system clock is separate from the software clock settings, which are erased when the router is power cycled or rebooted.

Use the **clock read-calendar** command to manually copy the hardware clock setting into the software clock.

In the following example, the hardware clock settings are copied to the software clock with the **clock read-calendar** command. The **show clock** command is then entered to display the new software clock settings.

```
sysadmin-vm:0_RP0# clock read-calendar
sysadmin-vm:0_RP0# show clock
  Thu Jul  18 14:56:51.888 UTC
Thu Jul 18 14:56:52 UTC 2013
```

# clock set

To change the software clock settings, use the **clock set** command in EXEC or System Admin EXEC mode.

**clock set** *hh*:*mm*:*ss* {*day month* | *month day*} *year*

## Syntax Description

| | |
|---|---|
| *hh* : *mm* : *ss* | Current time in hours (24-hour format), minutes, and seconds. Colons are required between values. |
| *day* | Current day (by date) in the month. |
| *month* | Current month (by name). |
| *year* | Current year (no abbreviation). Enter a valid four-digit year. |

## Command Default

Clock is not set.

## Command Modes

EXEC

System Admin EXEC

## Command History

| Release | Modification |
|---|---|
| Release 7.0.1 | This command was introduced. |

## Usage Guidelines

Generally, if the system is synchronized by a valid outside timing mechanism, such as a Network Time Protocol (NTP) clock source, or if you have a networking device with calendar capability, you need not set the software clock. Use the **clock set** command if no other time sources are available. The time specified in this command is relative to the configured time zone.

### Setting the Software Clock

This example shows how to set the software clock using the **clock set** command with the *day month* arguments first.

```
RP/0/RP0/CPU0:router# clock set 14:12:00 10 feb 2005

14:12:00.114 JST Fri Feb 10 2009
```

This example shows how to set the software clock using the **clock set** command with the *month day* arguments first.

```
RP/0/RP0/CPU0:router# clock set 14:38:00 feb 10 2005

14:38:00.069 PST Tue Feb 10 2009
```

### Displaying the Clock Settings

This example shows how to display the settings of the software clock:

```
RP/0/RP0/CPU0:router# show clock

14:38:11.292 PST Tue Feb 10 2009
```

This example shows how to use th **clock set** command:

# clock timezone

To set the time zone for display, use the **clock timezone** command in System Admin Config mode or XR Config mode. To remove the time zone setting, use the **no** form of this command.

**clock timezone** *zone region*

## Syntax Description

| | |
|---|---|
| *zone* | Name of the time zone to be displayed when standard time is in effect. |
| *region* | Sets the offset according to the region specified. |

## Command Default

UTC

## Command Modes

System Admin Config mode

XR Config mode

## Command History

| Release | Modification |
|---|---|
| Release 7.0.1 | This command was introduced. |

## Usage Guidelines

This table lists common time zone acronyms used for the *zone* argument.

***Table 1: Common Time Zone Acronyms***

| Acronym | Time Zone Name and UTC Offset |
|---|---|
| **Europe** | |
| GMT | Greenwich Mean Time, as UTC. |
| BST | British Summer Time, as UTC plus 1 hour. |
| IST | Irish Summer Time, as UTC plus 1 hour. |
| WET | Western Europe Time, as UTC. |
| WEST | Western Europe Summer Time, as UTC plus 1 hour. |
| CET | Central Europe Time, as UTC plus 1 hour. |
| CEST | Central Europe Summer Time, as UTC plus 2 hours. |
| EET | Eastern Europe Time, as UTC plus 2 hours. |
| EEST | Eastern Europe Summer Time, as UTC plus 3 hours. |
| MSK | Moscow Time, as UTC plus 3 hours. |

| Acronym | Time Zone Name and UTC Offset |
|---|---|
| MSD | Moscow Summer Time, as UTC plus 4 hours. |
| **United States and Canada** | |
| AST | Atlantic Standard Time, as UTC minus 4 hours. |
| ADT | Atlantic Daylight Time, as UTC minus 3 hours. |
| ET | Eastern Time, either as EST or EDT, depending on place and time of year. |
| EST | Eastern Standard Time, as UTC minus 5 hours. |
| EDT | Eastern Daylight Saving Time, as UTC minus 4 hours. |
| CT | Central Time, either as CST or CDT, depending on place and time of year. |
| CST | Central Standard Time, as UTC minus 6 hours. |
| CDT | Central Daylight Saving Time, as UTC minus 5 hours. |
| MT | Mountain Time, either as MST or MDT, depending on place and time of year. |
| MST | Mountain Standard Time, as UTC minus 7 hours. |
| MDT | Mountain Daylight Saving Time, as UTC minus 6 hours. |
| PT | Pacific Time, either as PST or PDT, depending on place and time of year. |
| PST | Pacific Standard Time, as UTC minus 8 hours. |
| PDT | Pacific Daylight Saving Time, as UTC minus 7 hours. |
| AKST | Alaska Standard Time, as UTC minus 9 hours. |
| AKDT | Alaska Standard Daylight Saving Time, as UTC minus 8 hours. |
| HST | Hawaiian Standard Time, as UTC minus 10 hours. |
| **Australia** | |
| WST | Western Standard Time, as UTC plus 8 hours. |
| CST | Central Standard Time, as UTC plus 9.5 hours. |
| EST | Eastern Standard/Summer Time, as UTC plus 10 hours (plus 11 hours during summer time). |

This table lists an alternative method for referring to time zones, in which single letters are used to refer to the time zone difference from UTC. Using this method, the letter Z is used to indicate the zero meridian,

equivalent to UTC, and the letter J (Juliet) is used to refer to the local time zone. Using this method, the International Date Line is between time zones M and Y.

*Table 2: Single-Letter Time Zone Designators*

| Letter Designator | Word Designator | Difference from UTC |
|---|---|---|
| Y | Yankee | UTC minus 12 hours. |
| X | Xray | UTC minus 11 hours. |
| W | Whiskey | UTC minus 10 hours. |
| V | Victor | UTC minus 9 hours. |
| U | Uniform | UTC minus 8 hours. |
| T | Tango | UTC minus 7 hours. |
| S | Sierra | UTC minus 6 hours. |
| R | Romeo | UTC minus 5 hours. |
| Q | Quebec | UTC minus 4 hours. |
| P | Papa | UTC minus 3 hours. |
| O | Oscar | UTC minus 2 hours. |
| N | November | UTC minus 1 hour. |
| Z | Zulu | Same as UTC. |
| A | Alpha | UTC plus 1 hour. |
| B | Bravo | UTC plus 2 hours. |
| C | Charlie | UTC plus 3 hours. |
| D | Delta | UTC plus 4 hours. |
| E | Echo | UTC plus 5 hours. |
| F | Foxtrot | UTC plus 6 hours. |
| G | Golf | UTC plus 7 hours. |
| H | Hotel | UTC plus 8 hours. |
| I | India | UTC plus 9 hours. |
| K | Kilo | UTC plus 10 hours. |
| L | Lima | UTC plus 11 hours. |
| M | Mike | UTC plus 12 hours. |

This example shows how to set the time zone to IST Asia/Calcutta:

```
sysadmin-vm:0_RP0# config
sysadmin-vm:0_RP0(config)# clock timezone IST Asia/Calcutta
```

# locale country

To set the default country of use, use the **locale country** command in XR Config mode. To remove the country setting, use the **no** form of this command.

**locale country** *country*

## Syntax Description

| | |
|---|---|
| *country* | Country, where *country* is a two-character country code. Case is not important. |

## Command Default

No default behavior or values

## Command Modes

XR Config

## Command History

| Release | Modification |
|---|---|
| Release 7.0.1 | This command was introduced. |

## Usage Guidelines

To display a complete listing of the available country codes, use the online help ( **?** ) function:

```
RP/0/RP0/CPU0:router(config)# locale country ?

   AD    Andorra
   AE    United Arab Emirates
   AF    Afghanistan
   AG    Antigua and Barbuda
   AI    Anguilla
   AL    Albania
   AM    Armenia
   AN    Netherlands Antilles
   AO    Angola
   AQ    Antarctica
   AR    Argentina
   AS    American Samoa
   AT    Austria
   AU    Australia
   AW    Aruba
   AZ    Azerbaijan
   BA    Bosnia and Herzegovina
   BB    Barbados
   BD    Bangladesh
   BE    Belgium
  --More--
```

The following example shows how to set the country of use to Australia:

```
RP/0/RP0/CPU0:router(config)# locale country au
```

# locale language

To set the default language of use, use the **locale language** command in XR Config mode. To remove the language setting, use the **no** form of this command.

**locale language** *language*

## Syntax Description

| | |
|---|---|
| *language* | Two-character code that specifies the language. Case is not important. |

## Command Default

No default behavior or values

## Command Modes

XR Config

## Command History

| Release | Modification |
|---|---|
| Release 7.0.1 | This command was introduced. |

## Usage Guidelines

To display a complete listing of the available language codes, use the online help (?) function:

```
RP/0/RP0/CPU0:router(config)# locale language ?

aa    Afar
ab    Abkhazian
af    Afrikaans
am    Amharic
ar    Arabic
as    Assamese
ay    Aymara
  --More--
```

The following example shows how to set the language of use to English:

```
RP/0/RP0/CPU0:router(config)# locale language en
```

# show clock

To display the system clock, use the **show clock** command in EXEC or XR EXEC mode.

**show clock** [**detail**]

**Syntax Description**

| | |
|---|---|
| **detail** | (Optional) Indicates the time zone, time source, and current summer time setting (if any). |

**Command Default**

No default behavior or values.

**Command Modes**

EXEC

XR EXEC

**Command History**

| Release | Modification |
|---|---|
| Release 7.0.1 | This command was introduced. |

**Usage Guidelines**

The system clock keeps an "authoritative" flag that indicates whether the time is authoritative (believed to be accurate). If the system clock has been set by a timing source, such as system calendar or Network Time Protocol (NTP), the flag is set. If the time is not authoritative, it is used only for display. Until the clock is authoritative and the "authoritative" flag is set, the flag prevents peers from synchronizing to the clock when the peers have invalid times.

The leading symbols that precede the **show clock** command display are shown in this table

***Table 3: show clock Display Leading Symbol Descriptions***

| Symbol | Description |
|---|---|
| * | Time is not authoritative. |
| (blank) | Time is authoritative. |
| . | Time is authoritative, but NTP is not synchronized. |

The following sample output shows the current clock settings:

```
RP/0/RP0/CPU0:router# show clock

16:18:28.927 PST Tue Feb 10 2009
```

The following sample output shows the current clock detail, including the time zone and time source:

```
RP/0/RP0/CPU0:router# show clock detail

16:18:07.164 PST Tue Feb 10 2009
Timezone: PST8PST Timesource: User configured
```

# clock update-calendar

To copy the software clock settings to the hardware clock (calendar), use the **clock update-calendar** command in EXEC mode or Admin EXEC mode.

**clock update-calendar**

## Syntax Description

This command has no keywords or arguments.

## Command Default

No default behavior or values

## Command Modes

EXEC

Admin EXEC

## Command History

| Release | Modification |
|---|---|
| Release 7.0.1 | This command was introduced. |

## Usage Guidelines

To use this command, you must be in a user group associated with a task group that includes appropriate task IDs. If the user group assignment is preventing you from using a command, contact your AAA administrator for assistance.

The hardware clock (calendar) runs continuously, even if the router is powered off or rebooted. If the software clock and calendar are not synchronized and the software clock is more accurate, use this command to update the hardware calendar clock to the correct date and time.

## Task ID

| Task ID | Operations |
|---|---|
| host-services | execute |

The following example shows how to copy the current time from the software clock to the hardware clock:

```
RP/0/RP0/CPU0:router# clock update-calendar
```

# confdConfig cli timezone local

To specify the timezone that must be used when displaying the time in the CLI, use the **confdConfig cli timezone local** command in System Admin Config mode.

**confdConfig cli timezone local**

## Syntax Description

| | |
|---|---|
| *timezone* | Specifies the timezone that must be used when displaying the time in the CLI. If **local** is specified then the timezone that is configured on the device is used. |

## Command Default

The default value is **local**.

## Command Modes

System Admin Config

## Command History

| Release | Modification |
|---|---|
| Release 7.0.1 | By default, the sysadmin **confdConfig** configuration is visible in the sysadmin running configuration. |

## Usage Guidelines

This command is available in Cisco IOS XR 64 bit OS.

This example shows you how to configure the timezone:

```
sysadmin-vm:0_RP0# config
Thu May  23 23:19:47.567 UTC+00:00
Entering configuration mode terminal
sysadmin-vm:0_RP0(config)# confdconfig cli timezone local
Thu May  23  23:19:47.567 UTC+00:00
```

# confdConfig cli utcOffset

To specify the UTC offset measured in minutes, use the **confdConfig cli utcOffset** command in System Admin Config mode.

**confdConfig cli utcOffset** *integer*

## Syntax Description

| | |
|---|---|
| *integer* | Specifies the UTC offset measured in minutes. |

## Command Default

The default value is **0**.

## Command Modes

System Admin Config

## Command History

| Release | Modification |
|---|---|
| Release 7.0.1 | By default, the sysadmin **confdConfig** configuration is visible in the sysadmin running configuration. |

## Usage Guidelines

This command is available in Cisco IOS XR 64 bit OS.

This example shows you how to configure the UTC offset:

```
sysadmin-vm:0_RP0# config
Thu May  23 23:19:47.567 UTC+00:00
Entering configuration mode terminal
sysadmin-vm:0_RP0(config)# confdconfig cli utcOffset 0
Thu May  23  23:19:47.567 UTC+00:00
```

# confdConfig cli idleTimeout

To specify the maximum idle time before terminating a CLI session, use the **confdConfig cli idleTimeout** command in System Admin Config mode.

**confdConfig cli idleTimeout** *time*

## Syntax Description

| | |
|---|---|
| *time* | Specifies the idle timeout value. It must be in this format: (nYnMnDnHnMnS). |

## Command Default

The default value is **PT10M**, which is 10 minutes. **PT0M** means no timeout.

## Command Modes

System Admin Config

## Command History

| Release | Modification |
|---|---|
| Release 7.0.1 | By default, the sysadmin **confdConfig** configuration is visible in the sysadmin running configuration. |

## Usage Guidelines

This command is available in Cisco IOS XR 64 bit OS.

This example shows you how to configure the idle timeout of 25 minutes:

```
sysadmin-vm:0_RP0# config
Thu May  23 23:19:47.567 UTC+00:00
Entering configuration mode terminal
sysadmin-vm:0_RP0(config)# confdconfig cli idleTimeout 25m
Thu May  23  23:19:47.567 UTC+00:00
```

# confdConfig cli timestamp

To enable or disable the display of timestamps, use the **confdConfig cli timestamp** command in System Admin Config mode.

**confdConfig cli timestamp** {*enabled* | *disabled*}

## Syntax Description

| | |
|---|---|
| *enabled* | Enables the display of timestamps. |
| *disabled* | Disables the display of timestamps. |

## Command Default

The default value is **enabled**.

## Command Modes

System Admin Config

## Command History

| Release | Modification |
|---|---|
| Release 7.0.1 | By default, the sysadmin **confdConfig** configuration is visible in the sysadmin running configuration. |

## Usage Guidelines

This command is available in Cisco IOS XR 64 bit OS.

This example shows you how to enable the display of timestamp:

```
sysadmin-vm:0_RP0# config
Thu May  23 23:19:47.567 UTC+00:00
Entering configuration mode terminal
sysadmin-vm:0_RP0(config)# confdconfig cli timestamp enabled
Thu May  23  23:19:47.567 UTC+00:00
sysadmin-vm:0_RP0(config)# confdConfig cli timestamp
clock24 clock24 is either 'true' or 'false'.
disabled enabled is either 'true' or 'false'.
enabled enabled is either 'true' or 'false'.
```