

### linux中使用date和clock命令查到的时间为什么不一致

date查询和修改的是系统时间，clock查询和修改的是CPU硬件时间，两个时间可以单独修改和查询。可以使用clock -w命令将CPU时间同步到系统时间。

附1: date帮助

```
[root@iVS-VM8000-Server ~]# date --help
```

```
Usage: date [OPTION]... [+FORMAT]
```

```
or: date [-u|--utc|--universal] [MMDDhhmm[[CC]YY][.ss]]
```

Display the current time in the given FORMAT, or set the system date.

```
-d, --date=STRING      display time described by STRING, not 'now'
-f, --file=DATEFILE   like --date once for each line of DATEFILE
-ITIMESPEC, --iso-8601[=TIMESPEC] output date/time in ISO 8601 format.
                        TIMESPEC='date' for date only,
                        'hours', 'minutes', or 'seconds' for date and
                        time to the indicated precision.
                        --iso-8601 without TIMESPEC defaults to 'date'.
-r, --reference=FILE   display the last modification time of FILE
-R, --rfc-2822         output RFC-2822 compliant date string
-s, --set=STRING       set time described by STRING
-u, --utc, --universal print or set Coordinated Universal Time
--help                display this help and exit
--version             output version information and exit
```

FORMAT controls the output. The only valid option for the second form specifies Coordinated Universal Time. Interpreted sequences are:

```
%% a literal %
%a locale's abbreviated weekday name (Sun..Sat)
%A locale's full weekday name, variable length (Sunday..Saturday)
%b locale's abbreviated month name (Jan..Dec)
%B locale's full month name, variable length (January..December)
%c locale's date and time (Sat Nov 04 12:02:33 EST 1989)
%C century (year divided by 100 and truncated to an integer) [00-99]
%d day of month (01..31)
%D date (mm/dd/yy)
%e day of month, blank padded ( 1..31)
%F same as %Y-%m-%d
%g the 2-digit year corresponding to the %V week number
%G the 4-digit year corresponding to the %V week number
%h same as %b
%H hour (00..23)
%I hour (01..12)
%j day of year (001..366)
%k hour ( 0..23)
%l hour ( 1..12)
%m month (01..12)
%M minute (00..59)
%n a newline
%N nanoseconds (000000000..999999999)
%p locale's upper case AM or PM indicator (blank in many locales)
%P locale's lower case am or pm indicator (blank in many locales)
%r time, 12-hour (hh:mm:ss [AP]M)
%R time, 24-hour (hh:mm)
%s seconds since '00:00:00 1970-01-01 UTC' (a GNU extension)
%S second (00..60); the 60 is necessary to accommodate a leap second
%t a horizontal tab
%T time, 24-hour (hh:mm:ss)
%u day of week (1..7); 1 represents Monday
```

%U week number of year with Sunday as first day of week (00..53)  
%V week number of year with Monday as first day of week (01..53)  
%w day of week (0..6); 0 represents Sunday  
%W week number of year with Monday as first day of week (00..53)  
%x locale's date representation (mm/dd/yy)  
%X locale's time representation (%H:%M:%S)  
%y last two digits of year (00..99)  
%Y year (1970...)  
%z RFC-2822 style numeric timezone (-0500) (a nonstandard extension)  
%Z time zone (e.g., EDT), or nothing if no time zone is determinable

By default, date pads numeric fields with zeroes. GNU date recognizes the following modifiers between '%' and a numeric directive.

`-' (hyphen) do not pad the field  
`\_' (underscore) pad the field with spaces

Report bugs to <bug-coreutils@gnu.org>.

[root@iVS-VM8000-Server ~]#

附2: clock帮助

[root@iVS-VM8000-Server ~]# clock --help  
hwclock - query and set the hardware clock (RTC)

Usage: hwclock [function] [options...]

Functions:

--help show this help  
--show read hardware clock and print result  
--set set the rtc to the time given with --date  
--hctosys set the system time from the hardware clock  
--systohc set the hardware clock to the current system time  
--adjust adjust the rtc to account for systematic drift since  
the clock was last set or adjusted  
--getepoch print out the kernel's hardware clock epoch value  
--setepoch set the kernel's hardware clock epoch value to the  
value given with --epoch  
--version print out the version of hwclock to stdout

Options:

--utc the hardware clock is kept in coordinated universal time  
--localtime the hardware clock is kept in local time  
--directisa access the ISA bus directly instead of /dev/rtc  
--badyear ignore rtc's year because the bios is broken  
--date specifies the time to which to set the hardware clock  
--epoch=year specifies the year which is the beginning of the  
hardware clock's epoch value  
--noadjfile do not access /etc/adjtime. Requires the use of  
either --utc or --localtime

[root@iVS-VM8000-Server ~]#