
NAME

mrtim - convert tim values to timestamps and timestamps to tim values

SYNOPSIS

mrtim [**--eula**] [**--help** or **-?**] [**--initrc**] [**--license**] [**--listrc**] [**--man**] [**--precision=*n***] [**--rc=*file***] [**--touch** or **-t**] [**--tz=*zone***] [**--unit=*x*** or **-ux**] [**--version**] [(*tim* | *timestamp* | **now**) ...]

DESCRIPTION

mrtim is useful for converting human-readable timestamps into Oracle *tim* values used in Oracle extended SQL trace files, and vice-versa. Using **mrtim now** is the equivalent of specifying **mrtim "date"** (using the quoted output of the Unix **date** command); it will return the *tim* value corresponding to the current time. The default unit of measure for interpreting and expressing *tim* values is 1 microsecond. You can change this unit with the **-u** or **--unit** option.

mrtim converts each numeric argument to an ISO 8601 timestamp (e.g., 2008-04-01T08:00:00.000000+0000) in your local time zone (see *TZ*), and it converts each non-numeric argument to a *tim* value. If no arguments are specified on the command line, then **mrtim** reads from the standard input device.

mrtim is able to interpret any string timestamp that the Perl **str2time** function can interpret (see the Perl **Date::Parse** module). Unlike **str2time**, it can also understand Oracle trace file timestamps in the "2008-04-01 08:00:00.000" format.

OPTIONS**--eula**

Display the license information and exit.

--help or **-?**

Display usage information and exit.

--initrc

Use **--noinitrc** to prevent **mrtim** from opening the default rcfiles in your home directory or current working directory (see *ENVIRONMENT*). The default value is **--initrc**. Use **--noinitrc** if you don't want to run the default rcfiles.

--license

Display license content and exit.

--listrc

List rcfile names and exit. The default value is **--nolistrc**.

--man

Print the manual page and exit.

--precision=*n*

Round durations to *n* digits to the right of the decimal point. The default value is **--precision=3**.

--rc=*file*

Process command line options listed in *file*. See the **mrskew** manual page for details.

--touch or **-t**

When the input is a *tim* value, print the output timestamp in CCYYMMDDhhmm.SS format required by **touch -t**.

--tz=*zone*

When the input is a *tim* value, print the output timestamp in the time zone specified by *zone*.

When the input is a timestamp, interpret the timestamp as being in time zone *zone*. However, if the input timestamp contains a time zone specification, then that time zone specification is used, and `--tz` is ignored.

When the input is **now**, `--tz` is ignored.

Acceptable time zone specifications include strings like **cst**, **CST**, and **-0600**. If you specify a nonsensical time zone string like **abc**, then **mrtim** will use **UTC**. Default value `--tz=""` means to use the shell's default time zone.

`--unit=x` or `-ux`

Use *x* seconds as the unit for interpreting and expressing *tim* values. **mrtim** understands common subsecond unit names, so `-u1us` or `--unit=1us` means to use units of 1 microsecond (.000_001 seconds). Likewise, `-u1024ns` and `-u1.024us` mean the same thing. (See **mrtimfix** for details on why you might want to use a unit of 1024ns instead of 1000ns.) **mrtim** understands the following unit names:

```
ns    .000_000_001 seconds (1 nanosecond)
us    .000_001 seconds (1 microsecond)
ms    .001 seconds (1 millisecond)
cs    .01 seconds (1 centisecond)
s     1 second
```

Default is `--unit=1us`.

`--version`

Display the program version number and exit.

.RC FILES

A `.rc` file allows you to change the default behavior of a Method R Tools program. For example:

```
$ cat ~/.mrtim.rc
--tz=CST6CDT
--unit=1024ns
```

See the **mrskew** manual page for details.

EXAMPLES

The following command will show the *tim* value, expressed in microseconds, associated with the given date (note that in this case the quotation marks are required because the argument `--an` Oracle-format datetime stamp contains a space):

```
mrtim "2008-04-01 08:00:00.000001"
```

These (functionally identical) commands will show the same *tim* value, expressed in 1024-nanosecond units:

```
mrtim "2008-04-01 08:00:00.000001" -u1024ns
mrtim "2008-04-01 08:00:00.000001" -u1.024us
mrtim "2008-04-01 08:00:00.000001" -u.000001024
```

This command will show the date corresponding to the given *tim* value:

```
mrtim 1207054800000001
```

This command will show the date corresponding to the given *tim* value, regarding the *tim* in seconds instead of microseconds:

```
mrtim -uls 1207054800
```

To print a timestamp representing the present time as an ISO 8601 string, use:

```
mrtim now | mrtim
```

To print a timestamp representing the present time as an ISO 8601 string in UTC, use:

```
mrtim now | mrtim --tz=utc
```

mrtim is valuable for finding what time a line of trace data represents. Consider a trace file with the following line:

```
CLOSE #4:c=1,e=52,dep=0,type=3,tim=1238753862358018
```

To find what time the **close** call ended and began, you could use:

```
mrtim 1238753862358018 # call end time
echo 1238753862358018-52 | bc | mrtim # call begin time
```

LIMITATIONS

mrtim can convert only dates between 1970-01-01T00:00:00.000000Z and 2038-01-17T00:00:00.999999Z, and only *tim* values in the range $0 \leq tim < (2147299200.999999 - offset)$ seconds, where *offset* is the time zone offset from Coordinated Universal Time (UTC) for your system, in seconds. See *TZ* for more details.

mrtim cannot convert *tim* values and timestamps for Oracle Database ports that use *tim* values that are not based on the Unix epoch (for example, Oracle Database trace files generated on Sun Solaris and Microsoft Windows operating systems).

DIAGNOSTICS

Exit status is 0 on successful completion, and >0 if an error or warning occurs.

ENVIRONMENT

.mrtim.rc

By default, **mrtim** will execute the options listed in the following files, in the following order, before the options you actually list on your command line:

```
~/mrtim.rc
./mrtim.rc
```

If you do not wish to execute the options in these files, then specify **--noinitrc** on the command line.

MRTOOLS_RCPATH

See the **mrskew** manual page for details.

TZ

mrtim always regards *tim* values as time that has elapsed since the Unix epoch, 1970-01-01T00:00:00Z. The UTC time zone (denoted by 'Z') is thus built into the notion of what a *tim* value is.

When you specify a timestamp value to **mrtim**, you have the choice of naming a time zone; for example, "2008-04-01T08:00:00-06" specifies the Americas Central Standard Time timezone. If you specify a timestamp value to **mrtim** without naming a time zone (such as Oracle does when it emits a string like "2008-04-01 08:00:00" into a trace file), **mrtim** interprets the timestamp value in the context of your local time zone, as defined by the setting of your **TZ** environment variable. If **TZ** is unset, **mrtim** interprets a timestamp as a Coordinated Universal Time (UTC) value.

Likewise, when **mrtim** prints an ISO 8601 timestamp, the time zone of the timestamp it prints is

determined by your **TZ** environment variable setting.

Here are a few examples of timezone settings:

```
export TZ=CST6CDT
export TZ=Europe/Copenhagen
export TZ=UTC
```

AUTHORS

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SUPPORT

mrtim version 8.0.5.0

Contact <support@method-r.com> at Method R Corporation for support, or visit <http://method-r.com> for more information.

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