

Working with Dates and Times with R

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1 System Time and Date

```
> Sys.time()
[1] "2014-06-17 11:04:46 BST"
> ## print with possibly greater accuracy:
> op <- options(digits.secs=6)
> Sys.time()
[1] "2014-06-17 11:04:46.641917 BST"
> options(op)
>
> ## locale-specific version of date()
> format(Sys.time(), "%a %b %d %X %Y")
[1] "Tue Jun 17 11:04:46 2014"
>
> Sys.Date()
[1] "2014-06-17"
> Sys.time()
[1] "2014-06-17 11:05:06 BST"
```

2 Date-Time Classes

Description of the classes `POSIXlt` and `POSIXct` representing calendar dates and times (to the nearest second).

2.1 A subsection

```
> (z <- Sys.time())           # the current date, as class "POSIXct"
[1] "2014-06-17 10:54:24 BST"
>
> Sys.time() - 3600           # an hour ago
[1] "2014-06-17 09:54:25 BST"
>
> as.POSIXlt(Sys.time(), "GMT") # the current time in GMT
[1] "2014-06-17 09:54:25 GMT"
```

```

> format(.leap.seconds)          # all 24 leap seconds in your timezone
[1] "1972-07-01 01:00:00" "1973-01-01 00:00:00" "1974-01-01 00:00:00"
[4] "1975-01-01 00:00:00" "1976-01-01 00:00:00" "1977-01-01 00:00:00"
[7] "1978-01-01 00:00:00" "1979-01-01 00:00:00" "1980-01-01 00:00:00"
[10] "1981-07-01 01:00:00" "1982-07-01 01:00:00" "1983-07-01 01:00:00"
[13] "1985-07-01 01:00:00" "1988-01-01 00:00:00" "1990-01-01 00:00:00"
[16] "1991-01-01 00:00:00" "1992-07-01 01:00:00" "1993-07-01 01:00:00"
[19] "1994-07-01 01:00:00" "1996-01-01 00:00:00" "1997-07-01 01:00:00"
[22] "1999-01-01 00:00:00" "2006-01-01 00:00:00" "2009-01-01 00:00:00"

```

```

> print(.leap.seconds, tz="PST8PDT") # and in Seattle's
[1] "1972-07-01 01:00:00 BST" "1973-01-01 00:00:00 GMT"
[3] "1974-01-01 00:00:00 GMT" "1975-01-01 00:00:00 GMT"
[5] "1976-01-01 00:00:00 GMT" "1977-01-01 00:00:00 GMT"
[7] "1978-01-01 00:00:00 GMT" "1979-01-01 00:00:00 GMT"
[9] "1980-01-01 00:00:00 GMT" "1981-07-01 01:00:00 BST"
[11] "1982-07-01 01:00:00 BST" "1983-07-01 01:00:00 BST"
[13] "1985-07-01 01:00:00 BST" "1988-01-01 00:00:00 GMT"
[15] "1990-01-01 00:00:00 GMT" "1991-01-01 00:00:00 GMT"
[17] "1992-07-01 01:00:00 BST" "1993-07-01 01:00:00 BST"
[19] "1994-07-01 01:00:00 BST" "1996-01-01 00:00:00 GMT"
[21] "1997-07-01 01:00:00 BST" "1999-01-01 00:00:00 GMT"
[23] "2006-01-01 00:00:00 GMT" "2009-01-01 00:00:00 GMT"
>
> ## look at *internal* representation of "POSIXlt" :
> leapS <- as.POSIXlt(.leap.seconds)
> names(leapS) ; is.list(leapS)
NULL
[1] TRUE
> utils::str(unclass(leapS), vec.len = 7)

```