

# The ifplatform package

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## 1 About

This package provides the following conditionals to test which operating system is being used to run  $\mathrm{T}_{\mathrm{E}}\mathrm{X}$ :

- `\ifwindows`
- `\iflinux`
- `\ifmacosx`

$\mathrm{T}_{\mathrm{E}}\mathrm{X}$  must be invoked with the `-shell-escape` option (or equivalent) for the package to work. `\ifshellescape` is also provided to check whether this is the case.

Also, the `\platformname` command is defined to expand to a macro that represents the operating system. Default definitions are (respectively):

<code>\windowsname</code>	→	'Windows'
<code>\linuxname</code>	→	'Linux'
<code>\macosxname</code>	→	'Mac OS X'
<code>\unknownplatform</code>	→	<i>whatever is returned by uname</i>

Redefine these macros to customise the output of `\platformname`. This documentation was compiled on Mac OS X.

## 2 Other platforms

If greater granularity is required to differentiate between various UNIX-like operating systems, then `\unknownplatform` can be interrogated for the platform based on the output of `uname`. Table 1 lists possible outputs for a range of operating systems.

For example, to test whether the AIX operating system is being used, you could use the following code:

```

\def\@tempa{aix6}
\ifx\unknownplatform\@tempa
... AIX is being used ....
\else
... or not ...
\fi

```

The `ifthen` and `xifthen` packages might be of interest to those who prefer more  $\text{\LaTeX}$ -like methods of conditional testing.

Platform	uname string
AIX	aix6
Cray UNICOS	sn5176
FreeBSD	FreeBSD
HPUX	HP-UX
IRIX	IRIX64
Solaris	SunOS
OpenBSD	OpenBSD

Table 1: List of operating systems and their `uname` strings. Adapted from <http://en.wikipedia.org/wiki/Uname>.

### 3 Implementation

```
1 \ProvidesPackage{ifplatform}
2 [2007/11/18 v0.2 Testing for the operating system]
```

Conditionals we provide:

```
3 \newif\ifshellescape
4 \newif\ifwindows
5 \newif\ifmacosx
6 \newif\iflinux
```

Names of operating systems:

```
7 \newcommand\windowsname{Windows}
8 \newcommand\linuxname{Linux}
9 \newcommand\macosxname{Mac\,OS\,X}
10 \newcommand\unknownplatform{[Unknown]}
```

Define test file name and define a hopefully unique string:

```
11 \edef\ip@file{\jobname.w18}
12 \edef\ip@sig{write18-test-\the\year\the\month\the\day\the\time}
13 \edef\ip@win{'\ip@sig'}
```

Macro to read in a one-line file into a temporary location:

```
14 \def\ip@read@file{%
15   \newread\instream
16   \openin\instream=\ip@file
17   \@tempcnta=\endlinechar
18   \endlinechar=-1
19   \read\instream to\@tempa
20   \endlinechar=\@tempcnta
21   \closein\instream}
```

Use echo to (maybe) write a test file. If it succeeds, continue; else, bail.

```
22 \immediate\write18{echo \ip@win >"\ip@file"}
23 \IfFileExists{\ip@file}{\shellescapetrue}{\shellescapefalse\endinput}
```

Now read the test file into a macro:

```
24 \ip@read@file
```

The contents of the test file reveals several things:

- test string correct with single quotes: Windows,
- test string correct without single quotes: Linux/Mac OS X,
- test string not correct: did not really write test file, so \write18 is not enabled. (This should never happen.)

\ifwindows First test for Windows.

```
25 \ifx\@tempa\ip@sig
26   \windowsfalse
27 \else
28   \ifx\@tempa\ip@win
```

```

29     \windowstrue
30 \else
31     \PackageError{ifplatform}
32     {There is a problem. Please delete the file \ip@file.}
33     {Somehow an old file is lying around telling me the wrong things.
34     \MessageBreak This should never happen. Please let us know when it does!}
35 \fi
36 \fi

```

\iflinux Now test for the others; directly test for Linux and Mac OS X; but what about  
\ifmacosx Solaris or FreeBSD or ... ? Define \unknownplatform as the output of uname  
rather than enumerate the possibilities.

```

37 \ifwindows\else
38     \immediate\write18{uname -s > "\ip@file"}
39     \ip@read@file
40     \def\@tempb{Linux}
41     \ifx\@tempa\@tempb
42         \linuxtrue
43     \else
44         \def\@tempb{Darwin}
45         \ifx\@tempa\@tempb
46             \macosxtrue
47         \else
48             \edef\unknownplatform{\@tempa}
49         \fi
50     \fi
51 \fi

```

\platformname Defined in terms of macros so the output is user-customisable.

```

52 \edef\platformname{%
53     \ifwindows\noexpand\windowsname\else
54     \iflinux    \noexpand\linuxname\else
55     \ifmacosx   \noexpand\macosxname\else
56                 \noexpand\unknownplatform
57     \fi\fi\fi}

```

Clean up:

```

58 \immediate\write18{\ifwindows del \else rm -- \fi "\ip@file"}

```