

```
;;; Loading "/home/pjb/src/lisp/check-pathnames/check-pathnames.lisp" .. comment .. comment -*-
mode:rst -*- .. comment
```

Output of this script should be formatted as a reStructured text, so that it can be rendered nicely and readably.

# 1 check-pathnames of ECL (10.7.1)

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## 1.2 Introduction

Test and probe conforming logical pathnames, and their translation to unix physical pathnames.

We want to check the good working of logical pathnames, and the translation of logical pathnames to physical pathnames, in a semi-standard way on unix systems.

Namely, given the logical hosts and their translations:

```
(setf (logical-pathname-translations "LOGICAL") nil)
(setf (logical-pathname-translations "LOGICAL")
```

```

'((#P"LOGICAL:**;*.*)" #P"/tmp/**/*.*")
  (#P"LOGICAL:**;*" #P"/tmp/**/*"))
(setf (logical-pathname-translations "LOG1") nil)
(setf (logical-pathname-translations "LOG1")
'((#P"LOG1:**;*.*)" #P"/tmp/log1/**/*.*")
(setf (logical-pathname-translations "LOG2") nil)
(setf (logical-pathname-translations "LOG2")
'((#P"LOG2:**;*.*)" #P"/tmp/log2/**/*.*"))

```

Then:

```
#P"LOGICAL:DIR;SUBDIR;NAME.TYPE.NEWEST"
```

must be the same as:

```

(make-pathname :host "LOGICAL"
  :directory '(:absolute "DIR" "SUBDIR")
  :name "NAME" :type "TYPE" :version :newest
  :case :common)

```

and must translate to: #P"/tmp/dir/subdir/name.type" on unix.

Merging physical pathnames specified with :case :common is also tested:

```

(merge-pathnames (make-pathname :directory '(:relative "DIR" "SUBDIR")
  :name "NAME" :type "TYPE" :version :newest
  :case :common :default #1=#P"/tmp/")
  #1# nil)

```

must give #P"/tmp/dir/subdir/name.type" on unix.

(An empty section means that all tests passed successfully).

### 1.3 Preliminary checks

With ECL (10.7.1) on Linux, the customary case for the file system of the host NIL of the pathname "/tmp/name.type" seems to be lower case. Which was expected.

```

*FEATURES* = (:LINUX :FORMATTER :LONG-LONG :UINT64-T :UINT32-T :UINT16-T
  :RELATIVE-PACKAGE-NAMES :LONG-FLOAT :UNICODE :CLOS-STREAMS
  :CMU-FORMAT :UNIX :ECL-PDE :DLOPEN :CLOS :BOEHM-GC :ANSI-CL
  :COMMON-LISP :IEEE-FLOATING-POINT :PREFIXED-API :FFI :X86_64
  :COMMON :ECL)

```

### 1.4 Pathname Accessor Checks with :CASE :COMMON

We're considering the pathname built with:

```

(MAKE-PATHNAME :HOST
  "LOGICAL"
  :DEVICE
  :UNSPECIFIC
  :DIRECTORY
  (:ABSOLUTE "DIR" "SUBDIR")
  :NAME
  "NAME"
  :TYPE
  "TYPE")

```

:VERSION  
:NEWEST  
:CASE  
:COMMON)

is a LOGICAL-PATHNAME: #P"LOGICAL:DIR;SUBDIR;NAME.TYPE.NEWEST"  
The fields of this pathname with :case :common are:

Host : "logical"  
Device : :UNSPECIFIC  
Directory : (:ABSOLUTE "dir" "subdir")  
Name : "name"  
Type : "type"  
Version : :NEWEST

#### **1.4.1 Check LOGICAL-HOST-MUST-BE-UPPER-CASE**

Failed assertion:

(STRING= (PATHNAME-HOST PATH :CASE :COMMON) HOST)  
LEFT ARGUMENT = (PATHNAME-HOST PATH :CASE :COMMON) =  
"logical"  
RIGHT ARGUMENT = HOST =  
"LOGICAL"

19.2.2.1.2 makes no exception for pathname-host of logical pathnames.

#### **1.4.2 Check LOGICAL-PATHNAME-DIRECTORY**

Failed assertion:

(DIRLIST= (PATHNAME-DIRECTORY PATH :CASE :COMMON) DIRECTORY)  
LEFT ARGUMENT = (PATHNAME-DIRECTORY PATH :CASE :COMMON) =  
(:ABSOLUTE "dir" "subdir")  
RIGHT ARGUMENT = DIRECTORY =  
(:ABSOLUTE "DIR" "SUBDIR")

#### **1.4.3 Check LOGICAL-PATHNAME-NAME**

Failed assertion:

(STRING= (PATHNAME-NAME PATH :CASE :COMMON) NAME)  
LEFT ARGUMENT = (PATHNAME-NAME PATH :CASE :COMMON) =  
"name"  
RIGHT ARGUMENT = NAME =  
"NAME"

#### **1.4.4 Check LOGICAL-PATHNAME-TYPE**

Failed assertion:

(STRING= (PATHNAME-TYPE PATH :CASE :COMMON) TYPE)  
LEFT ARGUMENT = (PATHNAME-TYPE PATH :CASE :COMMON) =  
"type"  
RIGHT ARGUMENT = TYPE =  
"TYPE"

## 1.5 Pathname Accessor Checks with :CASE :LOCAL (customary case is lower)

We're considering the pathname built with:

```
(MAKE-PATHNAME :HOST
                "logical"
                :DEVICE
                :UNSPECIFIC
                :DIRECTORY
                (:ABSOLUTE "dir" "subdir")
                :NAME
                "name"
                :TYPE
                "type"
                :VERSION
                :NEWEST
                :CASE
                :LOCAL)
```

is a LOGICAL-PATHNAME: #P"LOGICAL:DIR;SUBDIR;NAME.TYPE.NEWEST"

The fields of this pathname with :case :common are:

```
Host : "logical"
Device : :UNSPECIFIC
Directory : (:ABSOLUTE "dir" "subdir")
Name : "name"
Type : "type"
Version : :NEWEST
```

### 1.5.1 Check LOGICAL-HOST-MUST-BE-UPPER-CASE

Failed assertion:

```
(STRING= (PATHNAME-HOST PATH :CASE :COMMON) HOST)
LEFT ARGUMENT = (PATHNAME-HOST PATH :CASE :COMMON) =
"logical"
RIGHT ARGUMENT = HOST =
"LOGICAL"
```

19.2.2.1.2 makes no exception for pathname-host of logical pathnames.

### 1.5.2 Check LOGICAL-PATHNAME-DIRECTORY

Failed assertion:

```
(DIRLIST= (PATHNAME-DIRECTORY PATH :CASE :COMMON) DIRECTORY)
LEFT ARGUMENT = (PATHNAME-DIRECTORY PATH :CASE :COMMON) =
(:ABSOLUTE "dir" "subdir")
RIGHT ARGUMENT = DIRECTORY =
(:ABSOLUTE "DIR" "SUBDIR")
```

### 1.5.3 Check LOGICAL-PATHNAME-NAME

Failed assertion:

```
(STRING= (PATHNAME-NAME PATH :CASE :COMMON) NAME)
LEFT ARGUMENT = (PATHNAME-NAME PATH :CASE :COMMON) =
```

"name"

RIGHT ARGUMENT = NAME =  
"NAME"

#### **1.5.4 Check LOGICAL-PATHNAME-TYPE**

Failed assertion:

(STRING= (PATHNAME-TYPE PATH :CASE :COMMON) TYPE)  
LEFT ARGUMENT = (PATHNAME-TYPE PATH :CASE :COMMON) =  
"type"  
RIGHT ARGUMENT = TYPE =  
"TYPE"

## **1.6 Logical Pathname Construction Checks**

## **1.7 Logical Pathname Translation Checks**

## **1.8 Unix Pathname Construction Checks**

## **1.9 Checking Translations between logical pathnames**

### **1.9.1 Check TRANSLATE-PATHNAME/LOGICAL/SELF/A1/TYP**

Failed assertion:

(AND (PATHNAMEP TRANSLATED) (PATHNAME-EQUAL TRANSLATED EXPECTED :CASE :COMMON))

Logical-Pathname PATH = #P"LOG1:ABC;DEF;NAME.TYP"  
is a LOGICAL-PATHNAME: #P"LOG1:ABC;DEF;NAME.TYP"  
The fields of this pathname with :case :common are:

Host : "log1"  
Device : :UNSPECIFIC  
Directory : (:ABSOLUTE "abc" "def")  
Name : "name"  
Type : "typ"  
Version : NIL

Logical-Pathname FROM-PAT = #P"LOG1:\*\*;\*.\*\*"  
is a LOGICAL-PATHNAME: #P"LOG1:\*\*;\*.\*\*"  
The fields of this pathname with :case :common are:

Host : "log1"  
Device : :UNSPECIFIC  
Directory : (:ABSOLUTE :WILD-INFERIORS)  
Name : :WILD  
Type : :WILD  
Version : NIL

Logical-Pathname TO-PAT = #P"LOG1:\*\*;\*.PYT"  
is a LOGICAL-PATHNAME: #P"LOG1:\*\*;\*.PYT"  
The fields of this pathname with :case :common are:

Host : "log1"  
Device : :UNSPECIFIC  
Directory : (:ABSOLUTE :WILD-INFERIORS)

Name : :WILD  
Type : "pyt"  
Version : NIL

TRANSLATED = (CHECKED-TRANSLATE-PATHNAME PATH FROM-PAT TO-PAT) =  
(:ERROR

"Number of wildcards in #P\"LOG1:\*\*;\*. \*\" do not match #P\"LOG1:\*\*;\*.PYT\"")

Logical-Pathname EXPECTED = #P\"LOG1:ABC;DEF;NAME.PYT\"  
is a LOGICAL-PATHNAME: #P\"LOG1:ABC;DEF;NAME.PYT\"  
The fields of this pathname with :case :common are:

Host : "log1"  
Device : :UNSPECIFIC  
Directory : (:ABSOLUTE "abc" "def")  
Name : "name"  
Type : "pyt"  
Version : NIL

translate-pathname should work within the same logical host.

### **1.9.2 Check TRANSLATE-PATHNAME/LOGICAL/SELF/A2/NAME**

Failed assertion:

(AND (PATHNAMEP TRANSLATED) (PATHNAME-EQUAL TRANSLATED EXPECTED :CASE  
:COMMON))

Logical-Pathname PATH = #P\"LOG1:ABC;DEF;NAME.TYP\"  
is a LOGICAL-PATHNAME: #P\"LOG1:ABC;DEF;NAME.TYP\"  
The fields of this pathname with :case :common are:

Host : "log1"  
Device : :UNSPECIFIC  
Directory : (:ABSOLUTE "abc" "def")  
Name : "name"  
Type : "typ"  
Version : NIL

Logical-Pathname FROM-PAT = #P\"LOG1:\*\*;\*. \*\"  
is a LOGICAL-PATHNAME: #P\"LOG1:\*\*;\*. \*\"  
The fields of this pathname with :case :common are:

Host : "log1"  
Device : :UNSPECIFIC  
Directory : (:ABSOLUTE :WILD-INFERIORS)  
Name : :WILD  
Type : :WILD  
Version : NIL

Logical-Pathname TO-PAT = #P\"LOG1:\*\*;EMAN.\*\"  
is a LOGICAL-PATHNAME: #P\"LOG1:\*\*;EMAN.\*\"  
The fields of this pathname with :case :common are:

Host : "log1"  
Device : :UNSPECIFIC  
Directory : (:ABSOLUTE :WILD-INFERIORS)  
Name : "eman"  
Type : :WILD  
Version : NIL

TRANSLATED = (CHECKED-TRANSLATE-PATHNAME PATH FROM-PAT TO-PAT) =  
(:ERROR

"Number of wildcards in #P\LOG1:\*\*;\*.\*)" do not match #P\LOG1:\*\*;EMAN.\*\")

Logical-Pathname EXPECTED = #P"LOG1:ABC;DEF;EMAN.TYP"  
is a LOGICAL-PATHNAME: #P"LOG1:ABC;DEF;EMAN.TYP"  
The fields of this pathname with :case :common are:

Host : "log1"  
Device : :UNSPECIFIC  
Directory : (:ABSOLUTE "abc" "def")  
Name : "eman"  
Type : "typ"  
Version : NIL

translate-pathname should work within the same logical host.

### 1.9.3 Check TRANSLATE-PATHNAME/LOGICAL/SELF/A3/DIRECTORY

Failed assertion:

(AND (PATHNAMEP TRANSLATED) (PATHNAME-EQUAL TRANSLATED EXPECTED :CASE :COMMON))

Logical-Pathname PATH = #P"LOG1:ABC;DEF;NAME.TYP"  
is a LOGICAL-PATHNAME: #P"LOG1:ABC;DEF;NAME.TYP"  
The fields of this pathname with :case :common are:

Host : "log1"  
Device : :UNSPECIFIC  
Directory : (:ABSOLUTE "abc" "def")  
Name : "name"  
Type : "typ"  
Version : NIL

Logical-Pathname FROM-PAT = #P"LOG1:\*\*;\*.\*)" "  
is a LOGICAL-PATHNAME: #P"LOG1:\*\*;\*.\*)" "  
The fields of this pathname with :case :common are:

Host : "log1"  
Device : :UNSPECIFIC  
Directory : (:ABSOLUTE :WILD-INFERIORS)  
Name : :WILD  
Type : :WILD  
Version : NIL

Logical-Pathname TO-PAT = #P"LOG1:UVW;XYZ;\*.\*)" "  
is a LOGICAL-PATHNAME: #P"LOG1:UVW;XYZ;\*.\*)" "  
The fields of this pathname with :case :common are:

Host : "log1"  
Device : :UNSPECIFIC  
Directory : (:ABSOLUTE "uvw" "xyz")  
Name : :WILD  
Type : :WILD  
Version : NIL

TRANSLATED = (CHECKED-TRANSLATE-PATHNAME PATH FROM-PAT TO-PAT) = (:ERROR

"Number of wildcards in #P\LOG1:\*\*;\*.\*)" do not match #P\LOG1:UVW;XYZ;\*.\*)"")

Logical-Pathname EXPECTED = #P"LOG1:UVW;XYZ;NAME.TYP"  
is a LOGICAL-PATHNAME: #P"LOG1:UVW;XYZ;NAME.TYP"  
The fields of this pathname with :case :common are:

Host : "log1"  
Device : :UNSPECIFIC  
Directory : (:ABSOLUTE "uvw" "xyz")  
Name : "name"  
Type : "typ"  
Version : NIL

translate-pathname should work within the same logical host.

#### **1.9.4 Check TRANSLATE-PATHNAME/LOGICAL/SELF/C4/DIRECTORY**

Failed assertion:

(AND (PATHNAMEP TRANSLATED) (PATHNAME-EQUAL TRANSLATED EXPECTED :CASE :COMMON))

Logical-Pathname PATH = #P"LOG1:ABC;DEF;NAME.TYP"  
is a LOGICAL-PATHNAME: #P"LOG1:ABC;DEF;NAME.TYP"  
The fields of this pathname with :case :common are:

Host : "log1"  
Device : :UNSPECIFIC  
Directory : (:ABSOLUTE "abc" "def")  
Name : "name"  
Type : "typ"  
Version : NIL

Logical-Pathname FROM-PAT = #P"LOG1:\*,\*,\*."  
is a LOGICAL-PATHNAME: #P"LOG1:\*,\*,\*."  
The fields of this pathname with :case :common are:

Host : "log1"  
Device : :UNSPECIFIC  
Directory : (:ABSOLUTE :WILD :WILD)  
Name : :WILD  
Type : :WILD  
Version : NIL

Logical-Pathname TO-PAT = #P"LOG1:UVW;\*,\*,\*."  
is a LOGICAL-PATHNAME: #P"LOG1:UVW;\*,\*,\*."  
The fields of this pathname with :case :common are:

Host : "log1"  
Device : :UNSPECIFIC  
Directory : (:ABSOLUTE "uvw" :WILD "xyz")  
Name : :WILD  
Type : :WILD  
Version : NIL

TRANSLATED = (CHECKED-TRANSLATE-PATHNAME PATH FROM-PAT TO-PAT) = (:ERROR

"Number of wildcards in #P"LOG1:\*,\*,\*." do not match #P"LOG1:UVW;\*,\*,\*."")

Logical-Pathname EXPECTED = #P"LOG1:UVW;ABC;XYZ;NAME.TYP"  
is a LOGICAL-PATHNAME: #P"LOG1:UVW;ABC;XYZ;NAME.TYP"  
The fields of this pathname with :case :common are:

Host : "log1"  
Device : :UNSPECIFIC  
Directory : (:ABSOLUTE "uvw" "abc" "xyz")  
Name : "name"  
Type : "typ"



Version : NIL

translate-pathname should work within the same logical host.