
Subject: Re: Strange UNIX or strange IDL?

Posted by [seanosea](#) on Wed, 04 Nov 1998 08:00:00 GMT

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In unix, roughly speaking, pwd returns the environment variable \$PWD, available to all processes.

The IDL command getenv('PWD') asks directly for the environment variable. Unless you've issued system calls, this is the directory IDL was started from.

This is **not** the same as the current directory which IDL is searching for files in, which can be changed by using IDL> cd, 'mydir' If you issue cd and then ask for the environment variable again, it should be the same: only the first item in IDL's internal path "." has changed. To get IDL's current directory, try IDL> cd, CURRENT=curdir

Beannacht,
Sean O'Sea

In article <36409D18.FA925705@ssl.berkeley.edu>,
Harald Frey <hfrey@ssl.berkeley.edu> wrote:

```
> IDL> print,!version
> { sparc sunos unix 5.1 Apr 13 1998}
> IDL> pwd=getenv('PWD')
> IDL> print,pwd
> /disks/sprite/disk1/hfrey/idl/image/wic
> IDL> pwd=getenv('pwd')
> IDL> print,pwd
>
> IDL>
>
> With the name argument of getenv set to capital letters I get the right
> answer, but in small letters 'pwd' returns the null string. However, if
> I use the same command on the UNIX platform I get
>
> image1 [1] pwd
> /disks/sprite/disk1/hfrey/idl/image/wic
> image1 [2] PWD
> PWD: Command not found
>
> and UNIX does not like the capital letter 'PWD'.
>
> Any explanation?
>
> Harald Frey
> hfrey@ssl.berkeley.edu
>
>
```

Subject: Re: Strange UNIX or strange IDL?
Posted by [davidf](#) on Wed, 04 Nov 1998 08:00:00 GMT
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Harald Frey (hfrey@ssl.berkeley.edu) writes:

```
> IDL> print,!version
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> IDL> pwd=getenv('PWD')
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>
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>
> Any explanation?
```

I think you are confusing the command ("pwd"), which in UNIX (a case sensitive operating system) is always expressed in lowercase characters, with the environment variable ("PWD") which is always expressed in uppercase characters. (So you can tell them apart. :-)

Here IDL is doing exactly the correct thing and getting the Environment variable for you. When the environment variable is undefined, you get a null string back.

If you are really just trying to get the current working directory, here is an IDL program for you:

PRO PWD

```
CD, Current=thisDirectory
Print, thisDirectory
END
```

Wouldn't know how to get along without it. :-)

Cheers,

David

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Phone: 970-221-0438, Toll-Free Book Orders: 1-888-461-0155
Coyote's Guide to IDL Programming: <http://www.dfanning.com/>

Note: A copy of this article was e-mailed to the original poster.

Subject: Re: Strange UNIX or strange IDL?
Posted by [davidf](#) on Thu, 05 Nov 1998 08:00:00 GMT
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David Kastrup (dak@neuroinformatik.ruhr-uni-bochum.de) writes:

```
> If you are really just trying to get the current working
> directory, here is an IDL program for you:
>
> PRO PWD
> CD, Current=thisDirectory
> Print, thisDirectory
> END
>
> Wouldn't know how to get along without it. :-)

> What's wrong with

> IDL> $pwd
```

Too UNIX-centric. I like cross-platform solutions in my line of work. :-)

Cheers,

David

not in mine (DU 3.2)

- > 'pwd' is a *command* in the cshell that returns the *value* of the
- > environmental variable 'PWD'. 'PWD' is not any command -unless you are

Yes, pwd is the command, but the variable is called 'cwd'.

pwd is the same as "echo \$cwd"

And 'cwd' is a shell variable (in csh use command "set" to see them)

and not an environment variable (in chs use "printenv"). And since

is not in the environment (of the parent process of IDL) IDL won't getenv it.

And also remember that within IDL you can CD to a different directory without any effect on the shell. So consider the two (IDL and shell) fully disjoint environments.

--

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Subject: Re: Strange UNIX or strange IDL?

Posted by [Vap User](#) on Fri, 06 Nov 1998 08:00:00 GMT

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Harald Frey <hfrey@ssl.berkeley.edu> writes:

- > IDL> print,!version
- > { sparcsunos unix 5.1 Apr 13 1998}
- > IDL> pwd=getenv('PWD')

- > IDL> print,pwd
- > /disks/sprite/disk1/hfrey/idl/image/wic
- > IDL> pwd=getenv('pwd')
- > IDL> print,pwd
- >
- > IDL>
- >

Getenv returns the value of the input argument, provided there is an environmental variable currently defined matching that argument. It returns a null string if there isn't. PWD is always defined in the Cshell (not sure about sh, but I think it must be true for it as well). These environmental variables are, by convention, uppercase. Getenv('pwd') returns null because the environmental variable is 'PWD', not 'pwd'.

> With the name argument of getenv set to capital letters I get the right
> answer, but in small letters 'pwd' returns the null string. However, if
> I use the same command on the UNIX platform I get
>
> image1 [1] pwd
> /disks/sprite/disk1/hfrey/idl/image/wic
> image1 [2] PWD
> PWD: Command not found
>
> and UNIX does not like the capital letter 'PWD'.
>
> Any explanation?
>

'pwd' is a *command* in the cshell that returns the *value* of the
environmental variable 'PWD'. 'PWD' is not any command -unless you are
unwise enough to have to have a shell script or binary in your path
with that name - so attempting to execute it at the command line will
result in complaints from the shell.

> Harald Frey
> hfrey@ssl.berkeley.edu
>

All of this is very unix-centric and will probably not work on a
non-unix machine. If you want portable code, try...

```
pro pwd
cd,current=current & print,current
end
```

which should work whatever the platform.

--

I don't speak for JPL, it doesn't speak for me.

Well, not all the time, at least.

William Daffer <vapuser@haifung.jpl.nasa.gov>

Subject: Re: Strange UNIX or strange IDL?

Posted by [Vap User](#) on Mon, 09 Nov 1998 08:00:00 GMT

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LC's No-Spam Newsreading account <nospam@ifctr.mi.cnr.it> writes:

> On 6 Nov 1998, Vap User wrote:
 >
 >> Harald Frey <hfrey@ssl.berkeley.edu> writes:
 >>
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 > Yes, pwd is the command, but the variable is called 'cwd'.
 > pwd is the same as "echo \$cwd"
 > And 'cwd' is a shell variable (in csh use command "set" to see them)
 > and not an environment variable (in chs use "printenv"). And since
 > is not in the environment (of the parent process of IDL) IDL won't getenv
 > it.

Actually, in the cshell, the PWD environmental variable is updated
 everytime the cwd shell variable changes. See 'setenv' in
 csh(1). However, this information doesn't help us in our current
 problem, although I thought it did, until a short while ago.

> And also remember that within IDL you can CD to a different directory
 > without any effect on the shell.
 >

But not without effect on where files get written, for instance.

> So consider the two (IDL and shell)
 > fully disjoint environments.
 >

Boy, am I glad I messed around with this for a moment or two. I was
 about to shoot myself in the foot, bigtime.

I think I have a handle on this now. It turns out that neither of us
 are completely right, though Harald had a more *functionally*
 complete understanding than I. I don't think it has anything to do
 with which shell you're using or the way shells keep track of
 PWD.. Since IDL is a compiled program, and is exec'd (if not
 fork/exec'd) it has to keep track of the current working directory,
 defined in my 'C A Reference Manual' as the directory where default
 output will occur, and it does this. It even makes this information
 available via 'cd,cur=cur & print,cur' should we want it. It just

doesn't update the PWD environmental variable, the way you can in Perl when using the 'chdir' of the 'Cwd' module.

This problem arises because PWD is the one of the few, if not the only, environmental variables that are mutable over short time spans, unlike say, USER.

While it is useful to have a handle on how environmental variables are affected while in IDL, since this discussion started with the question of how to get the current working directory, the best suggestion remains...

```
pro pwd
  cd,cur=cur & print,cur
end
```

This should work whatever the machine, whatever the shell.

whd

```
> --
> -----
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> Users can disclose their e-mail address in the article if they wish so.
>
```

```
--
I don't speak for JPL, it doesn't speak for me.
Well, not all the time, at least.
William Daffer <vapuser@haifung.jpl.nasa.gov>
```
