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 <a href="mailto:hfrey@ssl.berkeley.edu">hfrey@ssl.berkeley.edu</a> 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 Frev
> 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
```

- > { 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?

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 tying to get the current working directory, here is an IDL program for you:

PRO PWD

Print, thisDirectory END
Wouldn't know how to get along without it. :-)
Cheers,
David
David Fanning, Ph.D. Fanning Software Consulting E-Mail: davidf@dfanning.com 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.
Troto. 7. copy of time distance was a manea to the original poster.
Subject: Re: Strange UNIX or strange IDL? Posted by davidf on Thu, 05 Nov 1998 08:00:00 GMT View Forum Message <> Reply to Message
David Kastrup (dak@neuroinformatik.ruhr-uni-bochum.de) writes:
 If you are really just tying 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

David Fanning, Ph.D.

Fanning Software Consulting E-Mail: davidf@dfanning.com

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

Subject: Re: Strange UNIX or strange IDL?
Posted by David Kastrup on Thu, 05 Nov 1998 08:00:00 GMT
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davidf@dfanning.com (David Fanning) writes:

- > If you are really just tying 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

?

David Kastrup

Phone: +49-234-700-5570

Email: dak@neuroinformatik.ruhr-uni-bochum.de Fax: +49-234-709-4209 Institut fi¿½r Neuroinformatik, Universiti;½tsstr. 150, 44780 Bochum, Germany

Subject: Re: Strange UNIX or strange IDL?

Posted by LC's No-Spam Newsread on Fri. 06 N

Posted by LC's No-Spam Newsread on Fri, 06 Nov 1998 08:00:00 GMT

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On 6 Nov 1998, Vap User wrote:

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

>

- > returns a null string if there there isn't. PWD is always defined in
- > the Cshell (not sure about sh, but I think it must be true for it as

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 getenvit.

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.

nospam@ifctr.mi.cnr.it is a newsreading account used by more persons to avoid unwanted spam. Any mail returning to this address will be rejected. Users can disclose their e-mail address in the article if they wish so.

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
- > { 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>

>

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 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 evnrionmental 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
View Forum Message <> Reply to Message

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:
- >>
- >> returns a null string if there there isn't. PWD is always defined in
- >> the Cshell (not sure about sh, but I think it must be true for it as
- 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.

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 that 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 arrises 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

- > --
- > nospam@ifctr.mi.cnr.it is a newsreading account used by more persons to
- > avoid unwanted spam. Any mail returning to this address will be rejected.
- > 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>