Subject: random number seed initialisation
Posted by Matt Francis on Mon, 10 Feb 2014 02:21:38 GMT

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I have a system that will be used by multiple users that, as a part of it, requires the creation of temporary files that I just give a random file name. I'm not sure how IDL goes about initialising the random seed if you don't supply it, so how can I ensure that different users running concurrently won't use the same initial seed and hence end up with the same file names?

Subject: Re: random number seed initialisation
Posted by David Fanning on Mon, 10 Feb 2014 02:37:57 GMT

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Bogdanovist writes:

> I have a system that will be used by multiple users that, as a part of it, requires the creation of temporary files that I just give a random file name. I'm not sure how IDL goes about initialising the random seed if you don't supply it, so how can I ensure that different users running concurrently won't use the same initial seed and hence end up with the same file names?

Use the RandomNumberGenerator object from the Coyote Library:

   http://www.idlcoyote.com/programs/randomnumbergenerator__def ine.pro

Cheers,

David
--
David Fanning, Ph.D.
Fanning Software Consulting, Inc.
Coyote's Guide to IDL Programming: http://www.idlcoyote.com/
Sepore ma de ni thue. ("Perhaps thou speakest truth.")

Subject: Re: random number seed initialisation
Posted by Matt Francis on Mon, 10 Feb 2014 23:11:03 GMT

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Thanks David, using that keeps me safe within a single session (which I do already although not with as elegant a solution as this), but how does this ensure different seeds across different sessions/users?

Subject: Re: random number seed initialisation
Posted by David Fanning on Mon, 10 Feb 2014 23:22:45 GMT

Bogdanovist writes:

> Thanks David, using that keeps me safe within a single session (which I do already although not with as elegant a solution as this), but how does this ensure different seeds across different sessions/users?

The seed at object initialization is pretty damn, well..., random! The number of seconds after January 1st, 1970 or some such thing. The chance of a sequence repeating itself seems non-existent to me. I understand you can purchase quantum random number generators that rely on the the space vacuum for seed generation for only a couple hundred thousand dollars. In other words, cheap if you need that sort of thing. ;-)

Cheers,

David
--
David Fanning, Ph.D.
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Subject: Re: random number seed initialisation
Posted by Matt Francis on Mon, 10 Feb 2014 23:32:19 GMT

But what if two users init within the same second (not outside the realm of possibility in my application)? I guess I could go to microseconds, that would probably do it.

Subject: Re: random number seed initialisation
Posted by David Fanning on Mon, 10 Feb 2014 23:42:04 GMT

Bogdanovist writes:

> But what if two users init within the same second (not outside the realm of possibility in my application)? I guess I could go to microseconds, that would probably do it.

If you are running a relatively recent version of IDL, I really don't think you have to worry about this. They recently overhauled the way they generate the initial seed to make it more robust. You would have to ask the folks at ExelisVis, but if it were me, I could find a couple of hundred things more compelling to worry about, starting with high avalanche danger on my favorite skiing trails after a weekend of big

snows.

Cheers,

David
--
David Fanning, Ph.D.
Fanning Software Consulting, Inc.
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Sepore ma de ni thue. ("Perhaps thou speakest truth.")

Subject: Re: random number seed initialisation
Posted by   on Tue, 11 Feb 2014 09:34:36 GMT

Den måndagen den 10:e februari 2014 kl. 03:21:38 UTC+1 skrev Bogdanovist:
> I have a system that will be used by multiple users that, as a part of it, requires the creation of temporary files that I just give a random file name. I'm not sure how IDL goes about initialising the random seed if you don't supply it, so how can I ensure that different users running concurrently won't use the same initial seed and hence end up with the same file names?

If you are on a unix-like system, you could spawn a call to mktemp.

Subject: Re: random number seed initialisation
Posted by David Fanning on Tue, 11 Feb 2014 15:22:17 GMT

David Fanning writes:

>> But what if two users init within the same second (not outside the realm of possibility in my application)? I guess I could go to microseconds, that would probably do it.
>
> If you are running a relatively recent version of IDL, I really don't
> think you have to worry about this. They recently overhauled the way
> they generate the initial seed to make it more robust. You would have to
> ask the folks at ExelisVis, but if it were me, I could find a couple of
> hundred things more compelling to worry about, starting with high
> avalanche danger on my favorite skiing trails after a weekend of big
> snows.

I think I was a day early in my concerns. In my Feedly reading list this morning:

   http://www.brainpickings.org/index.php/2014/02/11/brockman-w hat-should-we-be-worried-about/

Cheers,

David
--
David Fanning, Ph.D.
Fanning Software Consulting, Inc.
Coyote's Guide to IDL Programming: http://www.idlcoyote.com/
Sepore ma de ni thue. ("Perhaps thou speakest truth.")