
Subject: Re: Strange IDL Help probelm 6.3
Posted by [JJ](#) on Tue, 06 Feb 2007 20:10:04 GMT
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P.S.

I'm pretty sure it all worked fine when we were running 6.2.

-JJ

Subject: Re: Strange IDL Help probelm 6.3
Posted by [JJ](#) on Tue, 06 Feb 2007 22:07:07 GMT
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Stranger and stranger.

More info.

I found that there is a `~/assistant` directory, which contains files like "contentdb.IDL 6.3 Help" and "indexdb.IDL 6.3 Help".

There is also a `~/qt` directory, which may contain files like: ".idl_assistantrc.lock" and ".idl_assistantrc"

If I remove "`~/qt/idl_assistantrc`" I can get the IDL help to start from one of the non-primary computers. However, when I try and exit the IDL help, it hangs and it does not create a new "`~/qt/idl_assistantrc`".

If "`~/qt/idl_assistantrc`" does not exist, starting IDL help will always determine that it needs to reinitialize the db files in `~/assistant`

This whole thing is quite annoying as I frequently work on computers other than the main server and am fond of using the IDL help.

I'm not even sure what the `.qt` directory is for. I'm not sure what the `.idl_assistantrc.lock` file is doing. Behavior seems to be the same regardless of whether it is there or not.

Any ideas?

Thanks.

-Jonathan

Subject: Re: Strange IDL Help probelm 6.3

Posted by [JD Smith](#) on Wed, 07 Feb 2007 00:00:58 GMT

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On Tue, 06 Feb 2007 14:46:34 -0500, JJ wrote:

>
> I have 3 sun boxes running solaris 8 (64 bit). They all share
> /usr/local, among other things. One of the machines is the IDL license
> server as well as an NIS server.
>
> After installing 6.3, I can run IDL just fine from all 3 machines, and I
> have no trouble invoking IDL help on the primary machine, but when I try
> to get IDL help on the other machines, after printing the message:

Hey JJ. Snowing today?

Is it possible it's a 32bit/64bit issue? Are all the machines you use IDL
on 64bit?

JD

Subject: Re: Strange IDL Help probelm 6.3

Posted by [Nigel Wade](#) on Wed, 07 Feb 2007 09:40:33 GMT

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JJ wrote:

> Stranger and stranger.
>
> More info.
>
> I found that there is a ~/.assistant directory, which contains files
> like "contentdb.IDL 6.3 Help" and "indexdb.IDL 6.3 Help".
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> There is also a ~/.qt directory, which may contain files like:
> ".idl_assistantrc.lock" and "idl_assistantrc"
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> one of the non-primary computers. However, when I try and exit the IDL
> help, it hangs and it does not create a new "~/.qt/idl_assistantrc".
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> determine that it needs to reinitialize the db files in ~/.assistant
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> This whole thing is quite annoying as I frequently work on computers
> other than the main server and am fond of using the IDL help.
>

> I'm not even sure what the .qt directory is for. I'm not sure what the
> .idl_assistantrc.lock file is doing. Behavior seems to be the same
> regardless of whether it is there or not.
>
> Any ideas?
>
> Thanks.
>
> -Jonathan

It's probably file locking over NFS. I don't know how well this is implemented/supported on Solaris.

idl_assistant requests advisory locks [fcntl(fd, F_SETLK, {type=F_RDLCK})] on .qt/.qtrc.lock and .qt/.idl_assistantrc.lock. File locking over NFS is notorious for problems of this kind.

Truss may be able to tell you exactly what system call is causing the program to hang. If I run IDL 6.2 idl_assistant here it seg. faults, and I don't have the 6.3 version for Solaris so I can't test it myself.

--

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Subject: Re: Strange IDL Help problem 6.3
Posted by JJ on Wed, 07 Feb 2007 17:18:55 GMT
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No snow JD :-(but plenty cold. Last night at around 9:30, it was -3 (F) at our house.

I considered the 32/64 bit possibility, but I think they're all 64 biters. I'm not sure the exact incantation to find out, but it looks like the idl_assistant script calls

/bin/isainfo -b

Which gives an answer of 64 on all of the machines. It looks like they all claim they can run both 32 and 64 bit applications based on

/bin/isainfo -v

I'm afraid it might be this NFS file locking issue mentioned by Nigel Wade.

-JJ

JD Smith wrote:

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>
>
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>> /usr/local, among other things. One of the machines is the IDL license
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>> to get IDL help on the other machines, after printing the message:
>
>
> Hey JJ. Snowing today?
>
> Is it possible it's a 32bit/64bit issue? Are all the machines you use IDL
> on 64bit?
>
> JD

Subject: Re: Strange IDL Help probelm 6.3
Posted by [JJ](#) on Wed, 07 Feb 2007 17:20:48 GMT
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I considered the 32/64 bit possibility, but I think they're all 64 bitters. I'm not sure the exacat incantation to find out, but it looks like the idl_assistant script calls

/bin/isainfo -b

Which gives an answer of 64 on all of the machines. It looks like they all claim they can run both 32 and 64 bit applications based on

/bin/isainfo -v

I'm afraid it might this NFS file locking issue mentioned by Nigel Wade.

-JJ

JD Smith wrote:

> Hey JJ. Snowing today?
>
> Is it possible it's a 32bit/64bit issue? Are all the machines you use IDL
> on 64bit?
>
> JD

Subject: Re: Strange IDL Help problem 6.3
Posted by [JJ](#) on Wed, 07 Feb 2007 17:25:35 GMT
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Thanks for this suggestion Nigel.

If it is NFS file locking, I'm not sure what to do. I've tried running the 6.2 assistant, and I get the same problem as with 6.3.

I wonder if it wasn't the upgrade to 6.3 but rather some NFS quirkiness that is causing the problem.

Maybe it was broken in 6.2 though and I just never noticed. Until recently, I have predominantly used the primary server to run IDL - except for memory hog jobs. I'm pretty sure it was working from the other machines at some point though.

I think I'll try running the 6.0 version (I think I still have it around) and see if that works or not.

-Jonathan

Nigel Wade wrote:

>
>
> It's probably file locking over NFS. I don't know how well this is
> implemented/supported on Solaris.
>
> idl_assistant requests advisory locks [fcntl(fd, F_SETLK, {type=F_RDLCK})
> on .qt/.qtrc.lock and .qt/.idl_assistant.lock. File locking over NFS is
> notorious for problems of this kind.
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> Truss may be able to tell you exactly what system call is causing the program to
> hang. If I run IDL 6.2 idl_assistant here it seg. faults, and I don't have the
> 6.3 version for Solaris so I can't test it myself.
>

Subject: Re: Strange IDL Help probelm 6.3
Posted by [JJ](#) on Wed, 07 Feb 2007 17:34:10 GMT
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> I think I'll try running the 6.0 version (I think I still have it
> around) and see if that works or not.

No, I guess 6.0 wasn't using idl_assistant, it was using adobe acrobat reader.

In that case, I'm pretty sure it used to work fine from the non-server machines at some point for 6.2.

Maybe I try stopping and starting the various nfs services and see if that helps at all.

-JJ

Subject: Re: Strange IDL Help probelm 6.3
Posted by [JJ](#) on Wed, 07 Feb 2007 17:43:13 GMT
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> Maybe I try stopping and starting the various nfs services and see if
> that helps at all.

Hey! Praise the all mighty deity of your choice!

Must have just been NFS in a funky state.

I stopped and restarted the NFS servers and clients and now everything works again. Yay! :-)

Thanks Nigel.

-JJ

Subject: Re: Strange IDL Help probelm 6.3
Posted by [David Fanning](#) on Wed, 07 Feb 2007 18:25:49 GMT
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JJ writes:

> Hey! Praise the all mighty deity of your choice!

Madre mia!

Saludo,

David

--

David Fanning, Ph.D.

Fanning Software Consulting, Inc.

Coyote's Guide to IDL Programming: <http://www.dfanning.com/>

Subject: Re: Strange IDL Help probelm 6.3

Posted by [Nigel Wade](#) on Thu, 08 Feb 2007 10:49:59 GMT

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JJ wrote:

>
>> Maybe I try stopping and starting the various nfs services and see if
>> that helps at all.
>
> Hey! Praise the all mighty deity of your choice!
>
> Must have just been NFS in a funky state.
>
> I stopped and restarted the NFS servers and clients and now everything
> works again. Yay! :-)
>
> Thanks Nigel.
>
> -JJ

Good, glad you got it sorted.

NFS and file locking is a mire of obscure problems and nastiness. It relies on a lock manager running on the NFS server, and this lock manager being able to be contacted via RPC calls. If the lock manager falls over then all the lock state is lost and blocking requests for locks will block forever. Firewalls add a whole new level of murkiness to the problem.

To be fair to NFS, it was never designed to handle file locking. NFS is a stateless network file system, designed before file locking was introduced to UNIX in any meaningful way, and file locking is inherently stateful. File locking isn't really a part of NFS, more recently file locking is handled by the NLM protocol and the nlockmgr RPC service. This should operate in tandem with NFS but it is stateful and can fail for various reasons, where NFS, being stateless, manages to continue in the way it was intended.

--

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