
Subject: Re: Batch mode and ssh...

Posted by [Foldy Lajos](#) on Thu, 22 Jul 2010 09:48:09 GMT

[View Forum Message](#) <> [Reply to Message](#)

On Thu, 22 Jul 2010, Dave wrote:

> I need to execute an idl script that will take ~2 days to run. I'd
> like to run this on a remote system I SSH into in batch mode so that I
> can log off and use my local machine for other things. However, I
> cannot seem to both log off and get useful output from my script. My
> first attempt was to write a batch mode script containing
> (find_model_orich is the lengthy program):

>
> .compile /home/driebel/IDL/Astro_lib/pro/readcol.pro
> .compile find_model_orich
> find_model_orich,/graph
> retall
> exit
>

> I then executed this from the command line using:

>
> nohup nice /opt/rsi/idl/bin/idl < batch_script >& log &
>

> This does execute the program correctly in the background, but I
> cannot logout of the terminal without killing the execution. Thus, my
> laptop is stuck at work, holding open a terminal. The internet
> advised me that this was because of the way SSH interacts with
> background scripts and to try redirecting the output:

>
> nohup nice /opt/rsi/idl/bin/idl batch_script >& /dev/null &
>

> Indeed, I can now logout of the terminal, but ALL my output, such as
> the various graphs and text files my routine should generate (and I
> want, of course), get sent to /dev/null. Is there are way to get IDL
> batch mode to still output my graphs in the background, but to let me
> close my SSH session to the remote machine? Thanks,
> Dave
>

I use GNU screen (<http://www.gnu.org/software/screen/>) for long runs.
You can deattach the terminal and logout, then login later again and
reattach it.

regards,
lajos

Subject: Re: Batch mode and ssh...

Posted by [Dave\[5\]](#) on Thu, 22 Jul 2010 11:22:16 GMT

[View Forum Message](#) <> [Reply to Message](#)

Wow, thanks, lajos. I'm experimenting with screen to see how it works.

I notice that if I ask screen for the processes it's detached from (using screen -list) I see a list of processes that seem to be on my local machine, even though they are executing on the remote system. Perhaps it's a stupid question, but turning my local system off wouldn't kill the execution I started remotely, would it? It's not "dependent" on the local process still?

Dave

On Jul 22, 11:48 am, FÖLDY Lajos <fo...@rmki.kfki.hu> wrote:

> On Thu, 22 Jul 2010, Dave wrote:

>> I need to execute an idl script that will take ~2 days to run. I'd
>> like to run this on a remote system I SSH into in batch mode so that I
>> can log off and use my local machine for other things. However, I
>> cannot seem to both log off and get useful output from my script. My
>> first attempt was to write a batch mode script containing
>> (find_model_orich is the lengthy program):

>
>> .compile /home/driebel/IDL/Astro_lib/pro/readcol.pro
>> .compile find_model_orich
>> find_model_orich,/graph
>> retall
>> exit

>
>> I then executed this from the command line using:

>
>> nohup nice /opt/rsi/idl/bin/idl < batch_script >& log &

>
>> This does execute the program correctly in the background, but I
>> cannot logout of the terminal without killing the execution. Thus, my
>> laptop is stuck at work, holding open a terminal. The internet
>> advised me that this was because of the way SSH interacts with
>> background scripts and to try redirecting the output:

>
>> nohup nice /opt/rsi/idl/bin/idl batch_script >& /dev/null &

>
>> Indeed, I can now logout of the terminal, but ALL my output, such as
>> the various graphs and text files my routine should generate (and I
>> want, of course), get sent to /dev/null. Is there are way to get IDL
>> batch mode to still output my graphs in the background, but to let me
>> close my SSH session to the remote machine? Thanks,
>> Dave

>
> I use GNU screen (<http://www.gnu.org/software/screen/>) for long runs.
> You can deattach the terminal and logout, then login later again and
> reattach it.
>
> regards,
> lajos

Subject: Re: Batch mode and ssh...
Posted by [Foldy Lajos](#) on Thu, 22 Jul 2010 11:37:29 GMT
[View Forum Message](#) <> [Reply to Message](#)

On Thu, 22 Jul 2010, Dave wrote:

> Wow, thanks, lajos. I'm experimenting with screen to see how it
> works.
> I notice that if I ask screen for the processes it's detached from
> (using screen -list) I see a list of processes that seem to be on my
> local machine, even though they are executing on the remote system.
> Perhaps it's a stupid question, but turning my local system off
> wouldn't kill the execution I started remotely, would it? It's not
> "dependent" on the local process still?
>
> Dave

screen must be started on the remote machine:

- login to remote host
- start screen
- start your job
- detach (Ctrl-A d)
- logout from remote host

You'll have no local process connected with your job, you can turn off
your local machine. Then later:

- login to remote host
- reattach (screen -r)

regards,
lajos

Subject: Re: Batch mode and ssh...
Posted by [Dave\[5\]](#) on Thu, 22 Jul 2010 11:45:40 GMT
[View Forum Message](#) <> [Reply to Message](#)

On Jul 22, 1:37 pm, FÖLDY Lajos <fo...@rmki.kfki.hu> wrote:

> On Thu, 22 Jul 2010, Dave wrote:

>> Wow, thanks, lajos. I'm experimenting with screen to see how it

>> works.

>> I notice that if I ask screen for the processes it's detached from

>> (using screen -list) I see a list of processes that seem to be on my

>> local machine, even though they are executing on the remote system.

>> Perhaps it's a stupid question, but turning my local system off

>> wouldn't kill the execution I started remotely, would it? It's not

>> "dependent" on the local process still?

>

>> Dave

>

> screen must be started on the remote machine:

>

> - login to remote host

> - start screen

> - start your job

> - detach (Ctrl-A d)

> - logout from remote host

>

> You'll have no local process connected with your job, you can turn off

> your local machine. Then later:

>

> - login to remote host

> - reattach (screen -r)

>

> regards,

> lajos

Ah. I'm still having trouble logging out of the remote host. I
detach the screen, but logout still hangs. ./ Any ideas?

Subject: Re: Batch mode and ssh...

Posted by [penteado](#) on Thu, 22 Jul 2010 12:16:28 GMT

[View Forum Message](#) <> [Reply to Message](#)

On Jul 22, 8:45 am, Dave <riebe...@gmail.com> wrote:

>

> Ah. I'm still having trouble logging out of the remote host. I

> detach the screen, but logout still hangs. ./ Any ideas?

I have seen it happen when an X program was called from the ssh
session. A ctrl-c ends the hung logout. If all else fails, you can
kill the ssh process.

I have had screen sessions running for months, with dozens of connection cycles. When I am shutting down my laptop I usually do not even bother to detach and exit the ssh. On reconnect, screen can be given the -d switch, to detach the screen from the previous terminal, if it is still attached. Which is another use of screen, to keep the session in the event of a lost network connection.

On a different point, have you checked that your original problem was not due to the input? That is, would

```
nohup nice /opt/rsi/idl/bin/idl batch_script >& log &
```

work?

Subject: Re: Batch mode and ssh...

Posted by [Foldy Lajos](#) on Thu, 22 Jul 2010 12:21:18 GMT

[View Forum Message](#) <> [Reply to Message](#)

On Thu, 22 Jul 2010, Dave wrote:

> Ah. I'm still having trouble logging out of the remote host. I
> detach the screen, but logout still hangs. ./ Any ideas?
>

What does 'ps -flu your_user_name' show before logout?

Pressing Ctrl-C (or killing the ssh command from an other window) helps sometime. Try it and then login again to check your job's status.

regards,
lajos

Subject: Re: Batch mode and ssh...

Posted by [Dave\[5\]](#) on Thu, 22 Jul 2010 12:40:36 GMT

[View Forum Message](#) <> [Reply to Message](#)

On Jul 22, 2:21 pm, FÖLDY Lajos <fo...@rmki.kfki.hu> wrote:

> On Thu, 22 Jul 2010, Dave wrote:
>> Ah. I'm still having trouble logging out of the remote host. I
>> detach the screen, but logout still hangs. ./ Any ideas?
>
> What does 'ps -flu your_user_name' show before logout?
>
> Pressing Ctrl-C (or killing the ssh command from an other window) helps
> sometime. Try it and then login again to check your job's status.

>
> regards,
> lajos

As Paulo mentions, I think it has something to do with the X server.
Ps -flu immediately before logout gives me:

```
driebel mars 23> ps -flu driebel
F S UID      PID  PPID  C PRI  NI ADDR SZ WCHAN  STIME TTY
TIME CMD
5 S driebel  26861 26857  0  75   0 - 22568 stext  07:38 ?
00:00:00 sshd: driebel@notty
0 S driebel  26862 26861  0  85   0 - 17676 rt_sig  07:38 ?
00:00:00 tcsh -c /usr/libexec/openssh/sftp-server
0 S driebel  26914 26862  0  75   0 - 14031 -    07:38 ?
00:00:00 /usr/libexec/openssh/sftp-server
1 S driebel  28872   1  0  76   0 - 6444 stext  07:55 ?
00:00:00 SCREEN
0 S driebel  28873 28872  0  75   0 - 2387 -    07:55 pts/38
00:00:00 -usr/bin/tcsh
5 S driebel  30715 30711  0  75   0 - 22735 stext  08:36 ?
00:00:00 sshd: driebel@pts/16
0 S driebel  30738 30715  0  75   0 - 17744 rt_sig  08:36 pts/16
00:00:00 -tcsh
1 S driebel  30813   1  0  76   0 - 6444 stext  08:37 ?
00:00:00 SCREEN
0 S driebel  30814 30813  0  76   0 - 2387 -    08:37 pts/41
00:00:00 -usr/bin/tcsh
0 S driebel  30862 30814 28  79   4 - 84446 643279 08:37 pts/41
00:00:07 /opt/rsi/idl/bin/bin.linux.x86_64/idl script_test
0 R driebel  30907 30738  0  76   0 - 3674 -    08:38 pts/16
00:00:00 ps -flu driebel
driebel mars 24>
```

Previously, ctrl-c has indeed unhung logout, but doing so kills the
remote IDL script.

Subject: Re: Batch mode and ssh...
Posted by [Dave\[5\]](#) on Thu, 22 Jul 2010 12:47:55 GMT
[View Forum Message](#) <> [Reply to Message](#)

On Jul 22, 2:40 pm, Dave <riebe...@gmail.com> wrote:
> On Jul 22, 2:21 pm, FÖLDY Lajos <fo...@rmki.kfki.hu> wrote:
>
>> On Thu, 22 Jul 2010, Dave wrote:
>>> Ah. I'm still having trouble logging out of the remote host. I

```

>>> detach the screen, but logout still hangs. ./ Any ideas?
>
>> What does 'ps -flu your_user_name' show before logout?
>
>> Pressing Ctrl-C (or killing the ssh command from an other window) helps
>> sometime. Try it and then login again to check your job's status.
>
>> regards,
>> lajos
>
> As Paulo mentions, I think it has something to do with the X server.
> Ps -flu immediately before logout gives me:
>
> driebel mars 23> ps -flu driebel
> F S UID      PID PPID  C PRI  NI ADDR SZ WCHAN  STIME TTY
> TIME CMD
> 5 S driebel  26861 26857  0  75   0 - 22568 stext  07:38 ?
> 00:00:00 sshd: driebel@notty
> 0 S driebel  26862 26861  0  85   0 - 17676 rt_sig  07:38 ?
> 00:00:00 tcsh -c /usr/libexec/openssh/sftp-server
> 0 S driebel  26914 26862  0  75   0 - 14031 -    07:38 ?
> 00:00:00 /usr/libexec/openssh/sftp-server
> 1 S driebel  28872   1  0  76   0 - 6444 stext  07:55 ?
> 00:00:00 SCREEN
> 0 S driebel  28873 28872  0  75   0 - 2387 -    07:55 pts/38
> 00:00:00 -usr/bin/tcsh
> 5 S driebel  30715 30711  0  75   0 - 22735 stext  08:36 ?
> 00:00:00 sshd: driebel@pts/16
> 0 S driebel  30738 30715  0  75   0 - 17744 rt_sig  08:36 pts/16
> 00:00:00 -tcsh
> 1 S driebel  30813   1  0  76   0 - 6444 stext  08:37 ?
> 00:00:00 SCREEN
> 0 S driebel  30814 30813  0  76   0 - 2387 -    08:37 pts/41
> 00:00:00 -usr/bin/tcsh
> 0 S driebel  30862 30814 28  79   4 - 84446 643279 08:37 pts/41
> 00:00:07 /opt/rsi/idl/bin/bin.linux.x86_64/idl script_test
> 0 R driebel  30907 30738  0  76   0 - 3674 -    08:38 pts/16
> 00:00:00 ps -flu driebel
> driebel mars 24>
>
> Previously, ctrl-c has indeed unhung logout, but doing so kills the
> remote IDL script.

```

More info:

I am directing output to a logfile using:

```
nohup nice /opt/rsi/idl/bin/idl batch_script >& log &
```

I detach this screen, and then attempt to logout of the remote

machine. Logout hangs, and I kill it using ctrl-C. This breaks my IDL script, and the logfile tells me why:
X connection to localhost:19.0 broken (explicit kill or server shutdown).

So it definitely has something to do with the X server. Even if I'm running IDL inside a screen on the remote machine, the X server is still being run on my local laptop. I confess, this level of window management/X servers is a little beyond my level of computer knowledge. I don't know how to make the X server be hosted by the remote computer.

Dave

Subject: Re: Batch mode and ssh...
Posted by [Foldy Lajos](#) on Thu, 22 Jul 2010 13:07:49 GMT
[View Forum Message](#) <> [Reply to Message](#)

On Thu, 22 Jul 2010, Dave wrote:

> I detach this screen, and then attempt to logout of the remote
> machine. Logout hangs, and I kill it using ctrl-C. This breaks my
> IDL script, and the logfile tells me why:
> X connection to localhost:19.0 broken (explicit kill or server
> shutdown).
>
> So it definitely has something to do with the X server. Even if I'm
> running IDL inside a screen on the remote machine, the X server is
> still being run on my local laptop. I confess, this level of window
> management/X servers is a little beyond my level of computer
> knowledge. I don't know how to make the X server be hosted by the
> remote computer.

The graphical counterpart of screen is Xvnc (vncserver). I use it with openSUSE 11.2, but I think other distros are similar:

- login to the remote host
- vncserver
 this prints something like:
 ...
 New 'X' desktop is remote:1
 ...
- logout

On your local machine:

- vncviewer remote:1

- open a terminal, start your job, ...

After exiting vncviewer, you can turn off your local machine.

regards,
lajos

Subject: Re: Batch mode and ssh...

Posted by [Dave\[5\]](#) on Thu, 22 Jul 2010 13:50:19 GMT

[View Forum Message](#) <> [Reply to Message](#)

On Jul 22, 3:07 pm, FÖLDY Lajos <fo...@rmki.kfki.hu> wrote:

> On Thu, 22 Jul 2010, Dave wrote:

>> I detach this screen, and then attempt to logout of the remote
>> machine. Logout hangs, and I kill it using ctrl-C. This breaks my
>> IDL script, and the logfile tells me why:

>> X connection to localhost:19.0 broken (explicit kill or server
>> shutdown).

>

>> So it definitely has something to do with the X server. Even if I'm
>> running IDL inside a screen on the remote machine, the X server is
>> still being run on my local laptop. I confess, this level of window
>> management/X servers is a little beyond my level of computer
>> knowledge. I don't know how to make the X server be hosted by the
>> remote computer.

>

> The graphical counterpart of screen is Xvnc (vncserver). I use it with
> openSUSE 11.2, but I think other distros are similar:

>

> - login to the remote host

> - vncserver

> this prints something like:

> ...

> New 'X' desktop is remote:1

> ...

> - logout

>

> On your local machine:

>

> - vncviewer remote:1

> - open a terminal, start your job, ...

>

> After exiting vncviewer, you can turn off your local machine.

>

> regards,

> lajos

SUCCESS! Thanks so much for your help. I used a slightly different order than you suggested, but it worked, and my script is now running. And with the X server being on the same machine as the actual script, it's running MUCH faster than before. It looks to be on pace to finish in ~2 hours instead of ~2 days.

My method was:

log in to remote machine

start vncserver

logout

log back in (I couldn't get my local vncviewer to find the remote server)

start vncviewer

open a screen within the vncviewer

run script

detach the screen

close the vncviewer

logout of remote machine

script is still running

I'm not sure if all that is strictly necessary, especially the screen within the vncviewer, but it works, and that is my primary concern. I'll worry about elegance later.

Dave
