

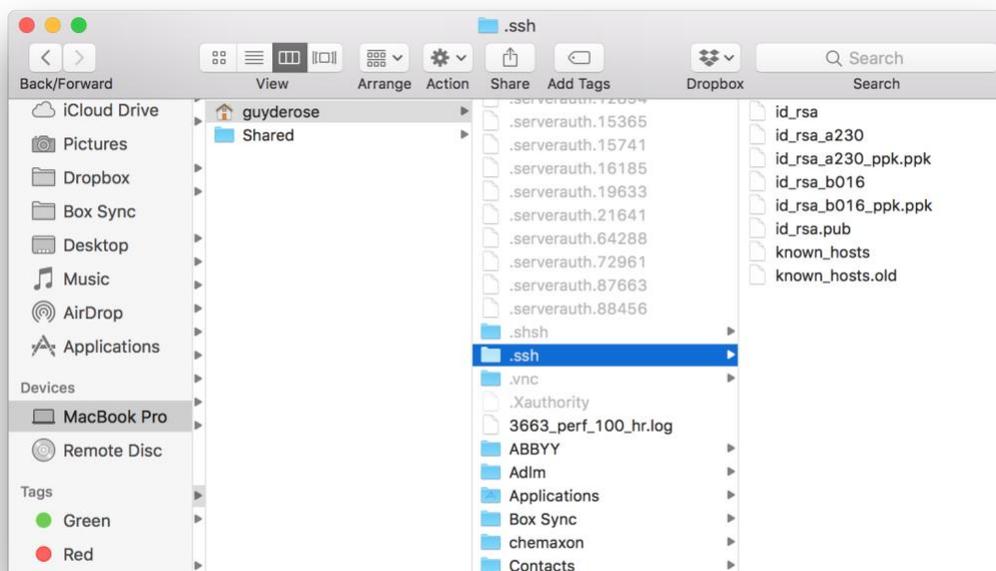
Application Note: Remote access to EBPB computers

Tool: EBPB 5000+ and EBPB 5200

Platform: Mac or Linux terminal

Obtain the RSA keys from the Beamer computer. You will find them in Desktop\RSA_KEYS\RSA_keys. The versions for Mac or Linux have no extensions. The versions with ppk are for Windows clients. In the example shown I have obtained both versions.

Put these in your ~/.ssh folder. You may need to turn on the ability to view hidden folders and files in your Mac. Use CMD + SHIFT + . to toggle that feature.



```
ssh pg@b016.caltech.edu -i ~/.ssh/id_rsa_b016  
passphrase: beamwriterB016
```

```
ssh pg@a230.caltech.edu -i ~/.ssh/id_rsa_a230  
passphrase: beamwriterA230
```

from your CATS account for example. This will give you a text-based terminal on CATS, but not allow using the GUI.

The following (long) line can be run from any non-windows based terminal, like your Mac or a terminal on CATS, for remote access and will also tunnel RGS and X-Windows (i.e., remote cjob).

For B016:

```
ssh -X pg@131.215.50.40 -i ~/.ssh/id_rsa_b016 -L 42966:131.215.50.40:42966
```

you'll be prompted for passphrase.

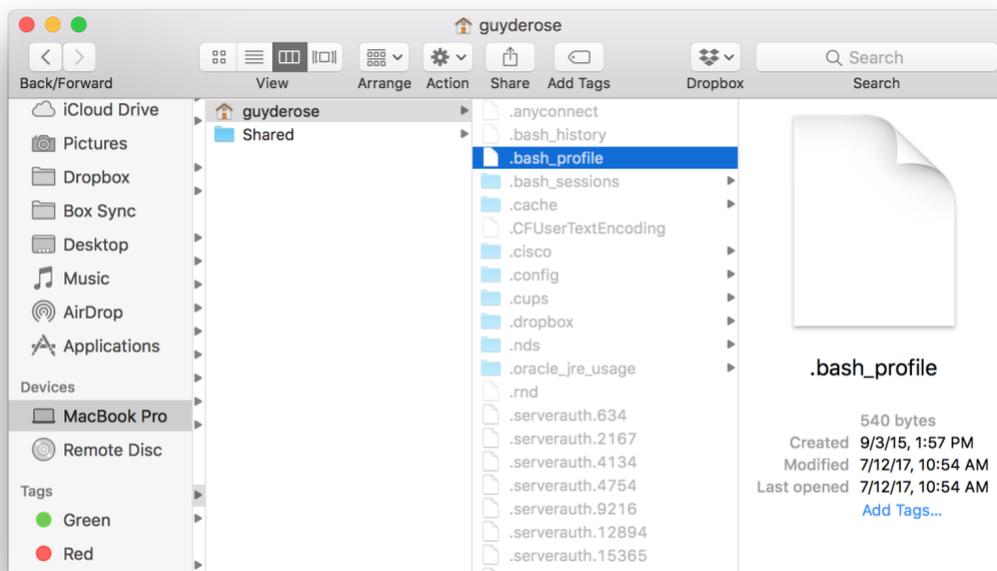
For A230:

```
ssh -X pg@131.215.50.34 -i ~/.ssh/id_rsa_a230 -L 42966:131.215.50.34:42966
```

On a Mac/Linux computer, you can make an alias in `.bash_profile` so you don't have to type in a long command each time from a particular folder.

```
alias ssh_b016='ssh -Y pg@131.215.50.40 -i ~/.ssh/id_rsa_b016 -L 42966:131.215.50.40:42966'
```

```
alias ssh_a230='ssh -Y pg@131.215.50.34 -i ~/.ssh/id_rsa_a230 -L 42966:131.215.50.34:42966'
```





```

# Setting PATH for Python 3.4
# The original version is saved in .bash_profile.pysave
PATH="/Library/Frameworks/Python.framework/Versions/3.4/bin:${PATH}"
export PATH
#next two lines added 20170705 by GAD
alias ssh_b016='ssh -Y pg@131.215.50.40 -i ~/.ssh/id_rsa_b016 -L
42966:131.215.50.40:42966'
alias ssh_a230='ssh -Y pg@131.215.50.34 -i ~/.ssh/id_rsa_a230 -L
42966:131.215.50.34:42966'
alias sftp_a230='sftp -o IdentityFile=~/.ssh/id_rsa_a230 pg@131.215.50.34'
alias sftp_b016='sftp -o IdentityFile=~/.ssh/id_rsa_b016 pg@131.215.50.40'

```

To connect to B016 from that terminal, just type `ssh_b016`. Depending on which version of the operating system you are using, the `-Y` might be a `-X`. The string starting with the `-L` allows tunneling to the remote graphics desktop server. You can leave that part off and still use `cjob`.

to copy files between tools, use `sftp` from the command line. This will also need the key file:

from B016 push onto A230: (using “put” command)

```

sftp -o IdentityFile=~/.ssh/id_rsa_a230 pg@131.215.50.34
sftp -o IdentityFile=~/.ssh/id_rsa_b016 pg@131.215.50.40

```

Just a review of the commands you need to use for the log in and copying files between the 2 tools. Since you wanted the 2 tools to be able to copy files between them I copied the private key of A230 on B016 and vice versa. The `sftp` commands can be saved as an alias as well, as you can see in the example screen shot above.

Please note for security purposes, B016 and A230 only allow access from on Caltech campus (CITNET or Wi-Fi) or through Caltech VPN system.

Updated 12 February 2018 GAD