Enable Remote Login to Start SSH Server in Mac OS X

Sep 30, 2011 - **15 Comments**

Remote Login is a feature in Mac OS X's Sharing preferences that allow remote users to connect to a Mac in a secure fashion by using the OpenSSH protocols. Essentially, it starts an SSH server on a Mac, which includes the ability to accept incoming SSH connections, which is the secure replacement for telnet. Additionally, it includes and enables the SFTP server, which is the secure replacement for FTP, and finally it also enables SCP, for secure remote copying. If this sounds complicated or confusing, it's really not, and we'll walk through exactly how to quickly enable and set up the SSH server on a Mac so that it can accept inbound secured ssh, sftp, and scp connections.

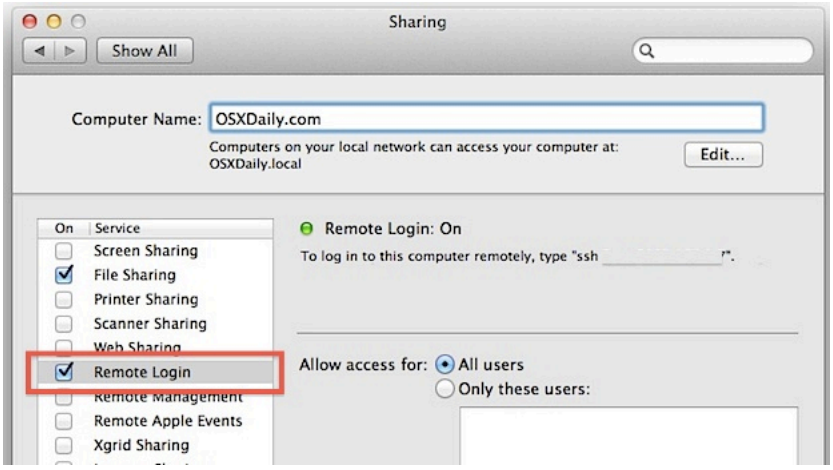
The inclusion of SSH, and thereby SFTP, through Remote Login also explains why Apple ditched the **FTP server in Lion onward** onward (this remains the same in Mavericks and Mountain Lion), as they opted for the infinitely more secure and encrypted SSH and SFTP options, and bundled it within Sharing's "Remote Login" option as part of the entire SSH package.

Using Remote Login to Start the SSH / SFTP Server in Mac OS X

These instructions are the same for enabling remote login and accompanying SSH servers in OS X Yosemite (10.10, OS X Mavericks 10.9, 10.8 Mountain Lion, 10.7 Lion, and 10.6 Snow Leopard:

1. Open System Preferences from the Apple menu, and click on the "Sharing" preference panel
2. Select the checkbox next to "Remote Login" to enable it, like the screenshot indicates

   Clicking the checkbox will instantly start the various remote login servers, including sftp and ssh.



If you want to limit incoming SSH access to certain users, you can do so in the same preference panel by ticking “Only these users” and then manually adding them by clicking on the + icon. This brings up a list of Users & Groups on the Mac that you can select from. Think of this as an extra security step, although SSH by default is quite secure as is due to the nature of the protocol.

Now that the SSH server has been enabled, you can verify they have enabled if you’d like. The easiest way to do this is to visit Terminal app and type either ‘ssh localhost’ or ‘sftp localhost’, which, if all is running as intended, should return something like this:

```
$ sftp localhost
The authenticity of host 'localhost (::1)' can't be established.
RSA key fingerprint is b3:42:27:4a:b6:22:86:4b:c6:21:32:47:4b:8b:18:0d.
Are you sure you want to continue connecting (yes/no)? yes
Warning: Permanently added 'localhost' (RSA) to the list of known hosts.
Password:
```

Connecting to localhost isn’t too useful though, and this is called Remote Login for a reason, because it allows for secured connections to remote Macs through either the SSH command line interface, SFTP through any modern FTP/SFTP client, or with a direct file transfer by using the scp command from the terminal of other Macs or unix machines. We’ll focus primarily on the SSH and SFTP side of things because that is generally what the most commonly needed.

Connecting to the Mac’s SSH Server Remotely

Now that you have SSH up and running, connecting to it remotely is easy. The great thing about this is you can now connect to the Mac from virtually any other operating system, all you need is an SSH client. SSH clients are bundled with Mac OS X and Linux so there are no downloads necessary there, but **iOS users can use Prompt** and Windows users can **get PuTTY** (its free).

1) From the Mac functioning as an SSH Server:

First you’ll want to grab the IP of the Mac running the server, this let’s another user/client know where to connect to:

- **Get the Macs IP address** – Go to “System Preferences” and “Network” to retrieve the IP

2) Connecting to the Mac with SSH from another computer:

Now with servers IP address, the Mac can be connected to:

- We'll assume you're using the Terminal in Mac OS X, so using the IP address that you just found, use the following command syntax:

```
ssh username@ip.address
```

- This is what it would actually look like, using paul as the username and 192.168.0.25 as the server IP:

```
ssh paul@192.168.0.25
```

- You will be asked to accept an RSA key to your known hosts list, so type "yes" and then you will be asked for the users password
- You're now remotely connected to the Mac via SSH

You'll now be logged into the Mac through SSH, this can be done remotely or over a local network, and all traffic to and from the machines is securely encrypted.

Connect to the Mac through SFTP

Because Remote Login enables both SSH and SFTP, you can also now connect to the Mac securely through the sftp protocol. This can be done through the Terminal, or through third party SFTP apps like CyberDuck, Transmit, Filezilla, or even **from Mac OS X itself** to transfer files to and from the Mac from any other location. A direct SFTP service link would look something like this: sftp://192.168.0.100

From the Terminal and command line, you would use the following command syntax to connect to the SFTP server:

```
sftp user@remote_host
```

If you want to use SCP instead, the procedure is the same except you use 'scp' as the commands instead.

A few things to remember here: your local IP address (on a LAN) is different than your **external IP address** (to the outside world). The easiest way to get a machines external IP is by going to a site like 'whatismyip.org' but keep in mind that if the Mac is behind a router with a firewall, you would have to open the ports on the router to be able to access it. That process is different depending on the router and firewall in use, so it wouldn't make much sense to cover it here.

Finally, breaking away from Mac OS X and going to the mobile world with iOS, you can actually **SSH into iPhones and iPads too** by setting up servers on iOS devices too, but it's a bit more complicated and requires a jailbreak to be able to enable the servers and gain access to the iOS command line.

*Thanks to Izdexic for the post idea **via comments***

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Posted by: Paul Horowitz in Command Line, Mac OS X, Tips & Tricks

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Start an FTP or SFTP Server in Mac OS X Lion says:
September 30, 2011 at 10:51 am

[…] Update: Our much more detailed guide on Remote Login and SSH Server's is here. […]

Reply

Parakeet says:
September 30, 2011 at 11:15 am

I have this enabled at home so I can tunnel my traffic through it from public wifi spots, works like a charm.

BTW this is a great app for making it easy:

http://projects.tynsoe.org/en/stm/

Reply

Rufus says:
September 30, 2011 at 11:34 am

Nice tip. Here's how to make a quick SSH Proxy with Firefox:

Setup client:

ssh -C2qTnN -D 8080 user@ssh_server

Now go to Firefox -> Preferences -> Advanced -> Network Settings and fill it in with SSH server info

Test it, check IP, done!

Reply

Burn an ISO Image from the Command Line says:
March 14, 2012 at 8:09 am

[…] for several reasons. For one, the command line aspect makes it easy to use through a remote SSH connection, but perhaps more useful is dd's low-level functionality which is generally faster than […]

Reply

How to Remotely Sleep a Mac from Anywhere with SSH or an iPhone says:
March 14, 2012 at 2:33 pm

[…] SSH and the Terminal and is more advanced than the email method mentioned below. You will need to enable SSH server on the target Mac beforehand for this to work, this can be done quickly through System Preferences > Network > Enable […]

Reply

Change the Shell in Mac OS X Terminal says:
March 21, 2012 at 11:30 am

[…] the default shell in Terminal app, in addition to changing a users default login shell for when logging in remotely with SSH or otherwise. Here's how to do […]

Reply

How to Set Up a Password-less SSH Login says:
May 25, 2012 at 3:17 pm

[…] up passwordless SSH logins is a great way to speed up connections to regularly accessed remote Macs and unix boxes. Because OS X doesn't include the ssh-copy-id command, you will have to use […]

Reply

Create SSH Bookmarks in Terminal for Quick Remote Server Access in Mac OS X says:
June 3, 2012 at 5:39 pm

[…] because we set a custom port. If the server you are connecting to uses the default port 22 (like the OS X SSH server does) you won't need to do […]

Reply

Reboot Mac OS X from the Command Line says:
September 6, 2012 at 9:24 am

[…] be an invaluable trick for troubleshooting purposes, remote systems administration and management through SSH, and a number of other […]

Reply

Start a Time Machine Backup on a Remote Mac with SSH says:
November 5, 2012 at 1:52 pm

[…] you're familiar with SSH, have Remote Login's SSH server enabled on the target Mac, here's all you need to […]

Reply

Java for OS X 2003-001 Update Patches Security Vulnerability says:
February 19, 2013 at 2:36 pm

[…] reports indicate the attack specifically created an open SSH connection on the targeted Macs, potentially allowing for remote […]

Reply

Synergy between different operating systems | LeaseWeb Labs says:
February 21, 2013 at 4:16 pm

[…] an SSH server on Linux you can install the "openssh-server" package. On OSX you can find the OpenSSH server under sharing and on Windows you can install the user friendly Bitvise WinSSHD or […]

Reply

Kill All Processes Belonging to a User with pkill says:
February 22, 2013 at 2:13 pm

[…] it would be best to use fast user switching to initiate a new login with another user account, or to use the ssh server and perform it on another local Mac. Using pkill on your own active username will cause all […]

Reply

Nmap for Mac OS X Explores Networks, Scans Ports, and More says:
March 29, 2013 at 11:03 pm

[…] "Sharing" panel will directly impact what you see as running, whether it's to activate the SSH and SFTP server and enabling remote login, turning on and off file sharing for Macs or Windows or both, screen […]

Reply

Mount & Unmount Drives from the Command Line in Mac OS X says:
May 13, 2013 at 3:34 pm

[…] line to remount the drive, the entire process can be completed remotely if necessary through SSH, and without ever having to physically disconnect a drive from the Mac. This is infinitely useful […]

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