autosync

autosync is a utility for archiving “snapshots” of a remote directory onto your local machine. Though it can be invoked directly, autosync’s intended use is as a daily cron routine. It’s similar in spirit to Time Machine, but with one key difference: every backup autosync makes is a *full copy* of the remote folder, not an incremental one. This uses more disk space, but can also make recovery simpler.

Before setting up autosync, you need to set up a public/private key pair between the remote server and your local machine. To do this on Bluehost:

1. Enable SSH access if you have not done so already
2. Go to the cPanel and click on “SSH/Shell Access”
3. Click “Manage SSH Keys”
4. Click “Generate a new Key” and fill out the form. Name the key something meaningful. **Leave the password blank**. If you don’t, autosync will pause every time to ask for a password. You won’t be there to answer.
5. Under “Public Keys”, you should see an an entry with the name of your new key. Click “Manage Authorization” and authorize it.
6. Under “Private Keys” there should be an entry with that same name. Click “View/Download” and download it.
7. Move the private key to the .ssh folder. Assuming the key ends up in your Downloads folder, the command to do this will be `mv ~/Downloads/name_of_key ~/.ssh`
8. `cd` into `~/.ssh` and type `chmod 700 name_of_key` to strip the key of all unnecessary permissions. The next step will yell at you if you forget to do this.
9. Type `ssh-add name_of_key`. This registers your key with ssh so it knows where to look for it.
10. Test your key out by typing `ssh yourname@website.com`. Without entering a password, this should present you with a command prompt at the remote server. If this works, type Control-D to exit back to your local terminal. If not, double check all of the previous steps. There’s a lot to forget.

Now that the key pair is set up, you can move on to configuring autosync. The first step, of course, is installing it. Type `sudo cp /path/to/autosync/ /usr/bin` to copy autosync to its installed location. Enter your administrator password when prompted. Now type, `sudo chmod o+x /usr/bin/autosync` to give autosync execute permissions. With these two steps, autosync is now installed.

Now, make a folder on the drive you’ll be backing up to and name it whatever you like. Go to that folder and create a plaintext file called `.autosync`. `.autosync` is the configuration file for that folder. Open `.autosync` in your favorite text editor and fill in the blanks:

```
server_name: name of the remote server
username: your username that server
```

```
remote_path: path to the remote folder
num_snapshots: number of snapshots to maintain
send_errors_to: email address to send errors to
send_errors_from: "from" field in error emails
smtp_server: SMTP server for error emails
smtp_user: your username on the SMTP server
smtp_password: your password on that server
```

Once this is complete, test autosync by typing `autosync /absolute/path/to/backup/folder` (eg. `/Volumes/WebBackup/redlinefilms.net.backup/`). You should see a bunch of file names fly by - these are the ones getting backed up. Once the backup finishes, check out your folder to confirm that everything is there. If everything looks good, you're ready to set up the daily cron routine. Open `/etc/crontab` (make a new plaintext file if it doesn't exist) and add the line:

```
@daily your_username SSH_AUTH_SOCK="$(find /tmp/launch-*/Listeners -user your_username -type s|head -n 1)" autosync /absolute/path/to/backup/folder/
```

This will run autosync once a day at midnight. If you want it to back up more/less frequently, check out the cron documentation at http://en.wikipedia.org/wiki/Cron.