How to Convert S3 AMIs to EBS AMIs

This cheat sheet will turn a Linux S3-backed AMI into an EBS-backed one. Sorry, it won't work with Windows.

1. Attach an EBS volume to your running boot from S3 instance as /dev/sdh (block device name is arbitrary) using the web console or EC2 APIs. Of course, you'll need to create the volume in the same availability zone that your instance is running in.

2. Format the EBS volume as an ext3 file system. You'll be asked if you really want to format the entire device (you do).
   ```
   mkfs.ext3 /dev/sdh
   ```

3. Turn off automatic file system checking:
   ```
   tune2fs -c 0 /dev/sdh
   ```

4. Create an ebs mount point under the root directory:
   ```
   mkdir /ebs
   ```

5. Mount the EBS volume as /ebs:
   ```
   mount /dev/sdh /ebs
   ```

6. Shut down currently running databases and other apps:

7. Synchronize your O/S with the EBS filesystem using rsync:
   ```
   rsync -avx --exclude /ebs / /ebs
   ```

8. Unmount your /ebs filesystem:
   ```
   umount /ebs
   ```

9. Take a snapshot of your EBS volume using the AWS console:

10. Record the AKI and ARI names of the running S3-backed instance. You'll need them in a moment.

11. Use the AWS Console to verify that the snapshot is finished.

12. Register the snapshot as a new AMI. Note that you need to use double quotes (AWS documentation and also a number of blogs use single quotes)
    ```
    ec2-register -n "<AMI Manifest Name>" -d "<Description>" -a i386
    --root-device-name "/dev/sda1" -b "/dev/sdb=ephemeral0" -b
    "/dev/sdc=ephemeral1" --kernel <AKI ID> --ramdisk <ARI ID> -s
    <Snapshot ID>
    ```