

# How to make a bootable OS X 10.10 Yosemite install drive

[macworld.com/article/2367748/how-to-make-a-bootable-os-x-10-10-yosemite-install-drive.html](http://macworld.com/article/2367748/how-to-make-a-bootable-os-x-10-10-yosemite-install-drive.html)

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## OS X

Back in the day when we bought OS X on discs, as long as you kept that disc, you always had a bootable installer just in case. Modern, downloadable versions of OS X create a [recovery partition](#) on your drive, but it's always a smart idea to make your own bootable installer drive too.

I recommend making one for Yosemite, on an external hard drive or USB thumb drive, for many of the same reasons I recommend [making a bootable Mavericks installer drive](#): If you want to install Yosemite on multiple Macs, using a bootable installer drive can be more convenient than downloading or copying the entire installer to each computer. If you want to erase the drive on a Mac before installing Yosemite, or start over at any time, you can use a dedicated installer drive to boot that Mac, erase its drive, and then install the OS clean and restore whatever data you need from a backup. And if your Mac is experiencing problems, a bootable installer drive makes a handy emergency disk.

As with previous versions of OS X, it's not difficult to create a bootable installer drive from the Yosemite installer, though the processes have changed slightly since Mavericks. I show you how, below.

## Keep the installer from being deleted

Like all recent versions of OS X, Yosemite is distributed through the Mac App Store. [As with the Mavericks installer](#), if you leave the Yosemite beta installer in its default location (in the main Applications folder) when you install OS X 10.10, the installer will delete itself after the installation finishes. If you plan to use that installer on other Macs, or—in this case—to create a bootable drive, be sure to copy the installer to another drive, or at least move it out of the Applications folder, *before* you install. If you don't, you'll have to redownload the installer from the Mac App Store before you can create a bootable installer drive.

## Create the Yosemite install drive: The options

I've come up with three ways you can create a bootable OS X install drive for the Yosemite: using the installer's built-in *createinstallmedia* tool; using Disk Utility; or performing the Disk Utility procedure using Terminal.

The *createinstallmedia* method is the easiest; if you're at all comfortable using Terminal, it's the approach that I recommend you try first. (Note that the *createinstallmedia* tool doesn't work under OS X 10.6 Snow Leopard—it requires OS X 10.7 Lion or later.)

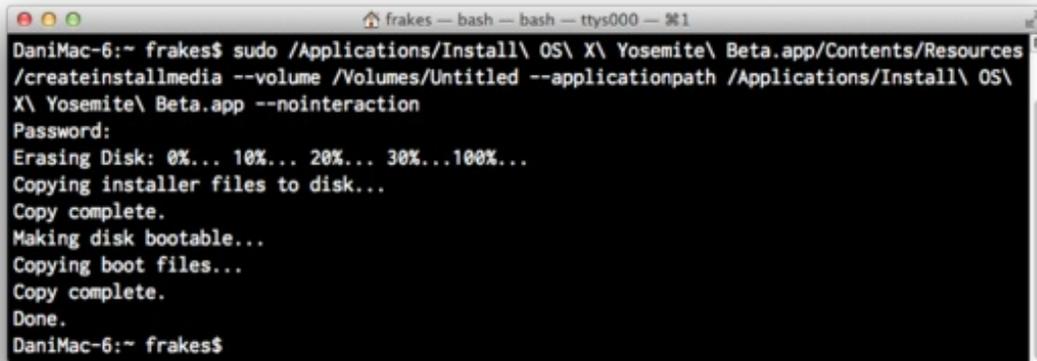
The Disk Utility method is the way to go for people who are more comfortable in the Finder (though it does require a couple Terminal commands), and it works under Snow Leopard, Lion, Mountain Lion, Mavericks, and Yosemite. The Disk Utility-via-Terminal approach is for the shell junkies out there.

Whichever method you use, you need a Mac-formatted drive (a hard drive, solid-state drive, thumb drive, or USB stick) that's big enough to hold the installer and all its data—I recommend at least an 8GB flash drive. That drive must also be formatted with a GUID Partition Table. (Follow [this tutorial](#) to properly format the drive.) Your OS X user account must also have administrator privileges.

### Option 1: Use *createinstallmedia*

Starting with Mavericks, hidden inside the OS X installer is a Unix program called [createinstallmedia](#), provided by Apple specifically for creating a bootable installer drive. If you're comfortable using Terminal, *createinstallmedia* is a relatively simple tool to use.

As mentioned above, the *createinstallmedia* tool works only in Lion, Mountain Lion, Mavericks, or Yosemite—you can't create an installer drive this way while booted into Snow Leopard. If you need to create a Yosemite beta install drive while booted into Snow Leopard, you should use the Disk Utility instructions, below.

A screenshot of a Terminal window on a Mac. The window title is "frakes — bash — bash — ttys000 — 1". The prompt is "DaniMac-6:~ frakes\$". The command entered is "sudo /Applications/Install\ OS\ X\ Yosemite\ Beta.app/Contents/Resources/createinstallmedia --volume /Volumes/Untitled --applicationpath /Applications/Install\ OS\ X\ Yosemite\ Beta.app --nointeraction". The output shows the progress of the process: "Erasing Disk: 0%... 10%... 20%... 30%...100%...", "Copying installer files to disk...", "Copy complete.", "Making disk bootable...", "Copying boot files...", "Copy complete.", "Done.", and the prompt "DaniMac-6:~ frakes\$".

```
DaniMac-6:~ frakes$ sudo /Applications/Install\ OS\ X\ Yosemite\ Beta.app/Contents/Resources
/createinstallmedia --volume /Volumes/Untitled --applicationpath /Applications/Install\ OS\
X\ Yosemite\ Beta.app --nointeraction
Password:
Erasing Disk: 0%... 10%... 20%... 30%...100%...
Copying installer files to disk...
Copy complete.
Making disk bootable...
Copying boot files...
Copy complete.
Done.
DaniMac-6:~ frakes$
```

Using the createinstallmedia command in Terminal

## Here are the required steps:

1. Connect to your Mac a properly formatted 8GB (or larger) drive, and rename the drive `Untitled`. (The Terminal command used here assumes the drive is named `Untitled`.) Also, make sure the Yosemite installer, called `Install OS X Yosemite.app`, is in its default location in your main Applications folder (`/Applications`). This means that if you moved it before installing Yosemite, you need to move it back before making your installer disk.
2. Select the text of this Terminal command and copy it:

```
sudo /Applications/Install\ OS\ X\
Yosemite.app/Contents/Resources/createinstallmedia --volume
/Volumes/Untitled --applicationpath /Applications/Install\ OS\ X\
Yosemite.app --nointeraction
```

3. Launch Terminal (in `/Applications/Utilities`).
4. *Warning: This step will erase the destination drive or partition, so make sure that it doesn't contain any valuable data.* Paste the copied command into Terminal and press Return.
5. Type your admin-level account password when prompted, and then press Return.
6. The Terminal window displays the progress of the process, in a very Terminal sort of way, by displaying a textual representation of a progress bar: *Erasing Disk: 0%... 10 percent...20 percent...* and so on. The program then tells you it's copying the installer files, making the disk bootable, and copying boot files. Wait until you see the text *Copy Complete. Done.* (see the screenshot above), which could take as long as 20 or 30 minutes, depending on how fast your Mac can copy data to your destination drive.

You now have a bootable Yosemite install drive. If you like, you can rename the drive from its default name of `Install OS X Yosemite`, though I think it's kind of a catchy name.

## Option 2: Use Disk Utility

You'll find Disk Utility, a handy app that ships with OS X, in `/Applications/Utilities`. Here are the steps for using it to create your installer drive. The procedure is a bit more involved with Yosemite than it was for Mavericks (which was itself a bit more involved than under Mountain Lion and Lion).

Right-click (or Control+click) the Yosemite installer to view its contents.



1. Once you've downloaded Yosemite, find the installer on your Mac. It's called Install OS X Yosemite.app and it should have been downloaded to your main Applications folder (/Applications).
2. Right-click (or Control+click) the installer, and choose Show Package Contents from the resulting contextual menu.
3. In the folder that appears, open Contents, then open Shared Support; you'll see a disk image file called InstallESD.dmg.
4. Double-click InstallESD.dmg in the Finder to mount its volume. That volume will appear in the Finder as OS X Install ESD; open it to view its contents.
5. Several of the files you'll need to work with are hidden in the Finder, and you need to make them visible. Open the Terminal app (in /Application/Utilities), then type (or copy and paste) the following command, and then press Return:

```
defaults write com.apple.finder AppleShowAllFiles 1 && killall  
Finder
```

(This

tells the Finder to show hidden files—we'll re-hide such files later.)

6. Launch Disk Utility (in /Applications/Utilities) and then drag BaseSystem.dmg (in the OS X Install ESD volume) into Disk Utility's left-hand sidebar.
7. Select BaseSystem.dmg in Disk Utility's sidebar, and then click the Restore button in the main part of the window.
8. Drag the BaseSystem.dmg icon into the Source field on the right (if it isn't already there).
9. Connect to your Mac the properly formatted hard drive or flash drive you want to use for your bootable Yosemite installer.
10. In Disk Utility, find this destination drive in the left sidebar. You may see a couple partitions under the drive: one named EFI and another with the name you see for the drive in the Finder. Drag the latter—the one with the drive name—into the Destination field on the right. (If the destination drive has additional partitions, just drag the partition you want to use as your bootable installer volume.)
11. *Warning: This step will erase the destination drive or partition, so make sure that it doesn't contain any valuable data.* Click Restore, and then click Erase in the dialog box that appears; if prompted, enter an admin-level username and password.
12. Wait for the restore procedure to finish, which should take just a few minutes.
13. Open the destination drive—the one you're using for your bootable installer drive, which has been renamed OS X Base System. Inside that drive, open the System folder, and then open the Installation folder. You'll see an alias called Packages. Delete that alias.
14. Open the mounted OS X Install ESD volume, and you'll see a folder called Packages. Drag that folder into the Installation folder on your destination drive. (You're replacing the deleted Packages alias with this Packages folder.) The folder is about 4.6GB in size, so the copy will take a bit of time, especially if you're copying to a slow thumb drive.
15. Also in the mounted OS X Install ESD volume, you'll find files named BaseSystem.chunklist and

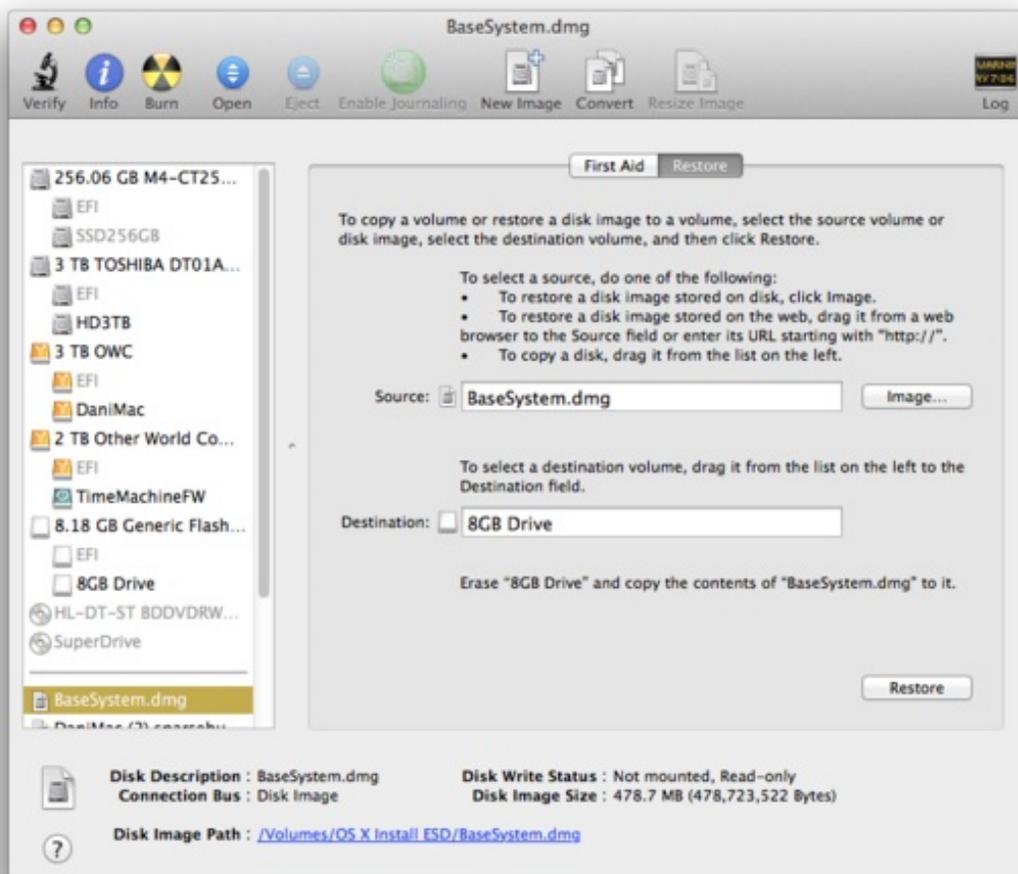
BaseSystem.dmg. Copy these files to the *root* (top) level of your install drive (OS X Base System, *not* into the System or Installation folder).

16. Eject the OS X Install ESD volume.

17. You'll likely want to re-hide invisible files in the Finder. Open the Terminal app, type (or copy and paste) the following command, and then press Return:

```
defaults write com.apple.finder AppleShowAllFiles 0 && killall Finder
```

You now have a bootable Yosemite install drive. If you like, you can rename the drive from OS X Base System to something more descriptive, such as Yosemite Installer.



You can use Disk Utility's Restore screen to create a bootable Yosemite installer drive.

### Option 3: Use Terminal

If you're a Terminal jockey, you likely know that most of Disk Utility's features can be accessed using shell commands—which means that you can perform the Disk Utility procedure using a few commands in Terminal.

1. Download the Yosemite installer from the Mac App Store and make sure it's in your main Applications folder (/Applications)—it's called Install OS X Yosemite.app.

2. Connect to your Mac a properly formatted 8GB (or larger) drive. Rename the drive to `Untitled`. (The Terminal commands I provide here assume the drive is named `Untitled`.)
3. Open Terminal and type (or copy and paste) the following commands, one by one, pressing return after each to run it. Make sure each command finishes—in other words, you see a command prompt—before running the next command. Enter your admin-level account password when prompted.

```
sudo hdiutil attach /Applications/Install\ OS\ X\ Yosemite.app/Contents/SharedSupport/InstallESD.dmg
```

```
sudo asr restore -source /Volumes/OS\ X\ Install\ ESD/BaseSystem.dmg -target /Volumes/Untitled -erase -format HFS+
```

(During this step, you'll be prompted to confirm that you want to erase the contents of `Untitled`. Type `y` and press Return.)

```
sudo rm /Volumes/OS\ X\ Base\System/System/Installation/Packages
```

```
sudo cp -a /Volumes/OS\ X\ Install\ ESD/Packages /Volumes/OS\ X\ Base\System/System/Installation/Packages
```

```
sudo cp -a /Volumes/OS\ X\ Install\ ESD/BaseSystem.chunklist /Volumes/OS\ X\ Base\System
```

```
sudo cp -a /Volumes/OS\ X\ Install\ ESD/BaseSystem.dmg /Volumes/OS\ X\ Base\System
```

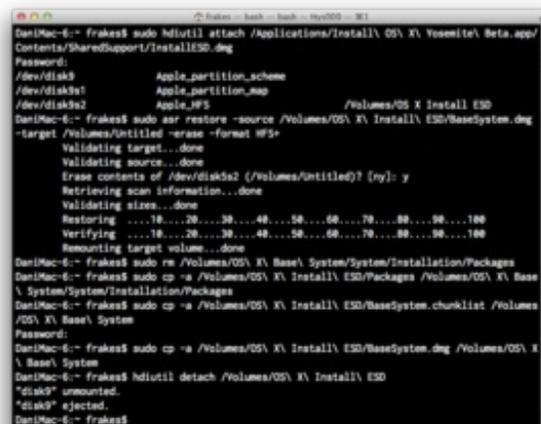
```
hdiutil detach /Volumes/OS\ X\ Install\ ESD
```

You now have a bootable Yosemite install drive. If you like, you can rename the drive from its default name of `OS X Base System` to something more descriptive, such as `Yosemite Installer`.

You can perform the Disk Utility procedure entirely in Terminal.

## Booting from the installer drive

Whichever of the above processes you've used, you can now boot any Yosemite-compatible Mac from the resulting drive: Just connect the drive to your Mac and either (if your Mac is already booted into OS X) choose the install drive in the Startup Disk pane of System Preferences or (if your Mac is currently shut down) hold down the Option key at startup and choose the install drive when OS X's Startup Manager appears.



```
Dar1Mac-6:~ frakes$ sudo hdiutil attach /Applications/Install\ OS\ X\ Yosemite\ Beta.app/Contents/SharedSupport/InstallESD.dmg
Password:
/dev/disk0      Apple_partition_scheme
/dev/disk0s1   Apple_partition_map
/dev/disk0s2   Apple_HFS      /Volumes/OS X Install ESD
Dar1Mac-6:~ frakes$ sudo asr restore -source /Volumes/OS\ X\ Install\ ESD/BaseSystem.dmg -target /Volumes/Untitled -erase -format HFS+
-target /Volumes/Untitled -erase -format HFS+
Validating target...done
Validating source...done
Erase contents of /dev/disk0s2 (/Volumes/Untitled)? (ny): y
Retrieving scan information...done
Validating sizes...done
Restoring  ....18....28....38....48....58....68....78....88....98....100
Verifying  ....18....28....38....48....58....68....78....88....98....100
Remounting target volume...done
Dar1Mac-6:~ frakes$ sudo rm /Volumes/OS\ X\ Base\System/System/Installation/Packages
Dar1Mac-6:~ frakes$ sudo cp -a /Volumes/OS\ X\ Install\ ESD/Packages /Volumes/OS\ X\ Base\System/System/Installation/Packages
Dar1Mac-6:~ frakes$ sudo cp -a /Volumes/OS\ X\ Install\ ESD/BaseSystem.chunklist /Volumes/OS\ X\ Base\System
Password:
Dar1Mac-6:~ frakes$ sudo cp -a /Volumes/OS\ X\ Install\ ESD/BaseSystem.dmg /Volumes/OS\ X\ Base\System
Dar1Mac-6:~ frakes$ hdiutil detach /Volumes/OS\ X\ Install\ ESD
"disk0" unmounted.
"disk0" ejected.
Dar1Mac-6:~ frakes$
```

When your Mac is booted from your installer drive, you can, of course, install the OS, but you can also use any of the OS X installer's special [recovery and restore features](#). Depending on how you made your installer drive, when you boot from that drive, you may even see the same OS X Utilities screen you get when you boot into OS X Recovery (recovery mode). However, unlike with recovery mode, your bootable installer includes the *entire* installer.

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### **Dan Frakes Senior Editor, Macworld**

Dan writes about OS X, iOS, utilities, cool apps, and troubleshooting. He also covers hardware; mobile, audio, and AV gear; input devices; and accessories. He's been writing about tech since 1994, and he's also published software, worked in IT, and worked as a policy analyst. You can find him on the web at [danfrakes.com](#).

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