



How to create a valid command line for the Software Distribution in Parallels Mac Management

- Parallels Device Management

Information

Common scenarios

Copying the .APP file

Most of applications for OS X are installed by just copying and pasting its *.app* bundle to the */Applications* folder.

For instance, the Chrome browser is distributed as a *.DMG* image file that contains the *.APP* bundle inside. To install Google Chrome on a Mac you have to mount the *.DMG* to the Finder, then copy the *.APP* to the *Applications* folder.

Example:

1. Let's mount the *.DMG* image first

```
sudo su
hdiutil mount googlechrome.dmg
```

the *.DMG* is mounted to Finder to the default */Volumes/* folder: */Volumes/Google Chrome*

2. Now we just copy the *.APP* to the */Applications*

```
cp -R '/Volumes/Google Chrome/Google Chrome.app' /Applications
```

The same is done using the Parallels Mac Management specific syntax:

```
:Google Chrome.dmg/Google Chrome.app:/Applications:
```

Running the .PKG/.MPKG

There is also a second way of installing the applications on a Mac: running the *.PKG/.MPKG* package using the system *Installer* application.

The *.PKG/.MPKG* packages are also usually distributed inside the *.DMG* or *.ISO* images.

For instance Adobe Flash Player is (as one of the two options) distributed as a *.PKG*

To install the application distributed as a *.PKG* package you need to:

1. Mount its *.DMG* or *.ISO* to Finder
2. Run `/usr/sbin/installer -pkg "application_name.pkg" -target /`

Example:

```
sudo su
hdiutil mount install_flash_player_16_osx_pkg.dmg
/usr/sbin/installer -pkg '/Volumes/Flash Player/Install Adobe Flash Player.pkg' -target /
```

The same is done using the Parallels Mac Management specific syntax:

```
:install_flash_player_16_osx_pkg.dmg/Install Adobe Flash Player.pkg::
```

Other (custom) scenarios

There are cases where the application for the OS X is distributed as a .DMG image file that contains the .APP bundle inside, but it cannot be installed by copying the .APP to the /Applications folder.

This is because the .APP located inside the .DMG is not an application bundle itself (as Chrome or Firefox), but an installation package that, in its turn, contains an installation script inside or a .PKG package.

In such cases the regular command line will not work: at maximum the installation .APP will be copied to the /Applications folder but the application itself will not be installed.

What to do:

1. Mount the .DMG to see what's inside:

- 1.1. If it is a .PKG package, use the regular instructions

- 1.2. If it is an .APP bundle, check its name - the applications' bundles have the regular application's name: *Google Chrome.app*, *Firefox.app*, *VLC.app*, etc. The ones that have "Install" as a part of the name are usually the installation bundles.

2. If the bundle inside the .DMG or .ISO is an installation package, explore its contents. Open the .APP with the **Show package contents** context menu item and drill down to the Contents folder. It usually contains the folders like MacOS and Resources.

Explore both folders. The MacOS folder usually contains the installation script, while the Resources folder may contain the .PKG package.

- 2.1. If the .PKG is found, use the regular command for running the .PKG with the *Installer* application. Make sure to specify the correct path to the .PKG.

- 2.2. If the .PKG is not found, search the Internet for the instructions on the "silent installation" of the application you want to install using the command line. For instance: "*adobe flash player silent install on a mac*" will provide you with the instructions from Adobe.

NOTE: Before attempting to create a correct command in Parallels Mac Management, check everything on a test Mac. If a command fails to run on a Mac, it will surely fail in Parallels Mac Management.

NOTE: When testing the command on a Mac make sure to use the OS X/UNIX native commands, not the Parallels Mac Management ones.
