



Installing ArcGIS on a Mac

ArcGIS will not run natively on the Macintosh Operating System but can be made to run on an Intel-based Mac with Windows installed as a separate operating system. There are two primary methods for running Windows and ArcGIS on a Mac:

1. Machine virtualization using either *Parallels* or *VMware Fusion*. Virtual machines are third party software that allow a copy of Windows to run in concert with the Mac OS. Both systems will be active at the same time.
2. *Boot Camp*, Apples pre-installed multi boot utility. *Boot Camp* allows the user to boot the Mac into either Windows or the Mac OS, but not both at the same time.

Although both options work well for running Windows and ArcGIS on a Mac there are some important differences in how they operate that may effect a users choice based on their particular needs.

Listed below are basic notes on the two installation options and links to detailed information on features and system requirements. Information provided here may have changed over time so please double check all system requirements from the software providers websites.

Note: Library staff cannot offer software support or troubleshooting help for these installations.

Installation Comparisons

The preferred installation method will depend on the type and amount of analytical work required and how the user wishes to interact with the Mac OS. For light analysis, data visualization and exploration, a virtual machine (VM) like *Parallels* or *VMware Fusion* may be the best option. A VM installation allows the user to move back and forth between both operating systems, but will have less processing power and memory available to run ArcGIS since resources are split between both systems. For users who need the full processing power of ArcGIS and don't mind having to boot into one operating system or the other *Boot Camp* allows Arc to utilize all of the computers processing power and memory enabling more intensive analytical work and larger datasets at the expense of a free workflow between the Mac and Windows portions of the machine.

Below is a basic comparison between *Boot Camp*, *Parallels*, and *VMware Fusion*. For a more detailed feature comparison between *Parallels* and *VMware Fusion* see the [wikipedia comparison page](#).

Parallels Desktop 7

Cost: \$79.99

Pros: Starts within OSX and user can switch freely between operating systems.

Files can be easily shared between Mac and Windows applications.

Utilizes all available free HD space.

Does not require a permanent HD partition.

Allows copy & paste between Win and Mac OS.

Allows copy and move files between Win and Mac OS.

Cons: Memory and CPU resources are split between operating systems, which will result in slower processing speeds than Boot Camp.

May not be ideal for very large datasets or intensive analytical processes.

Must purchase (see website for current prices), free trial available.

VMware Fusion 4

Cost: \$49.99

Pros: Starts within OSX and user can switch freely between operating systems.

Files can be easily shared between Mac and Windows applications.

Utilizes all available free HD space.

Does not require a permanent HD partition.

Allows copy & paste between Win and Mac OS

Allows copy and move files between Win and Mac OS

Cons: Memory and CPU resources are split between operating systems, which will result in slower processing speeds than Boot Camp.

May not be ideal for very large datasets or intensive analytical processes.

Must purchase (see website for current prices), free trial available.

Boot Camp 4.0

Cost: free, pre installed utility on all Macs since 2007 (Mac OS X v10.5 and above).

Pros: Windows and ArcGIS will run at "full speed".

OS has access to all hardware and memory.

You have access to each partition and its files in either mode. You can copy and move files, but will not be able to directly copy and paste content since only apps from one OS at a time can be open.

Cons: Requires a dedicated, semi –permanent HD partition.

You must decide in advance how much HD memory to give Windows and Arc.

Requires that user log off one OS before booting to the other.

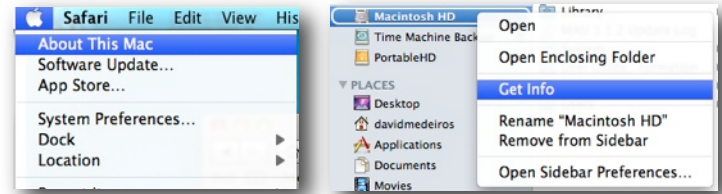
Files may not be as easily shared between systems.

Note: Newest release of Boot Camp is limited to Windows 7 (Home premium, Professional or Ultimate). Previous versions will run entire Windows OS family. (Check Applications > Utilities > Boot Camp Assistant to see what version of Boot Camp you have installed).

System Requirements

ArcGIS 10 min requirements: <http://resources.arcgis.com/content/arcgisdesktop/10.0/arcgis-desktop-system-requirements>

To determine your Mac system info click the Apple icon in upper left of your screen and select "About This Mac". To determine HD free space right click on the main HD icon and select "Get Info".



Regardless of the Windows installation method you choose, your ultimate goal is to run ArcGIS on your Mac so first be sure your system meets the minimum requirements for its installation.

ArcGIS Desktop 10 min requirements: <http://resources.arcgis.com/content/arcgisdesktop/10.0/arcgis-desktop-system-requirements>

- **CPU Speed** 2.2 GHz minimum or higher; Hyper-threading (HHT) or Multi-core recommended
- **Processor** Intel Pentium 4, Intel Core Duo, or Xeon Processors; SSE2 (or greater)
- **Memory/RAM** 2 GB or higher
- **Display Properties** 24 bit color depth
- **Screen Resolution** 1024 x 768 recommended or higher at Normal size (96dpi)
- **Swap Space** Determined by the operating system, 500 MB minimum.
- **Disk Space** 2.4 GB

In addition, up to 50 MB of disk space may be needed in the Windows System directory (typically C:\Windows\System32). You can view the disk space requirement for each of the 10.0 components in the Setup program.

Windows 7 min requirements in Boot Camp 4.0: <http://support.apple.com/kb/HT1899>

- OSX v10.7 Lion or Mac OS X v10.6 Snow Leopard & Boot Camp 3.1 Update

Windows 7 min requirements general: <http://windows.microsoft.com/systemrequirements/>

- 1 gigahertz (GHz) or faster 32-bit (x86) or [64-bit \(x64\)](#) processor
- 1 gigabyte (GB) RAM (32-bit) or 2 GB RAM (64-bit)
- 16 GB available hard disk space (32-bit) or 20 GB (64-bit)
- DirectX 9 graphics device with WDDM 1.0 or higher driver

VMware Fusion min requirements: <http://communities.vmware.com/docs/DOC-17096>

- Any 64 bit capable Mac
- 2gb of RAM
- 750mb of HD space for VMware Fusion & 5GB for ea. virtual machine
- Mac OSX 10.6.7 or later; OS Lion recommended

Parallels min requirements: <http://www.parallels.com/products/desktop/system-requirements/>

- A Mac computer with an Intel Core 2 Duo, Core i3, Core i5, Core i7, or Xeon processor.

- Minimum 2 GB of memory (4 GB of memory is recommended to run Windows 7 in a virtual machine or if your host OS is Lion)
- About 500 MB of disk space on the boot volume (Macintosh HD) for Parallels Desktop installation.
- About 15 GB of disk space for each virtual machine.
- Mac OS X Mountain Lion 10.8
- Mac OS X Lion 10.7
- Mac OS X Snow Leopard 10.6.8 or later
- Mac OS X Leopard v10.5.8 or later

Note: Mac OS X Tiger v10.4.x is not supported in this version of Parallels Desktop.

Final caveat: it is the end users sole responsibility to verify the information in this document and ensure that they meet the necessary requirements for their particular installation. No warranty is made by Branner Library or Stanford University regarding the provided information.



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