ANSYS Installation Guide for Mac OSX

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As with many engineering softwares, ANSYS is not available for the Mac OSX platform. However, it is still possible to install ANSYS and your other engineering softwares on an Apple computer by first installing Windows on your Mac. Please follow this guide to learn how to install Windows and ANSYS on your Mac.

1. Buy and install Parallels Desktop 11 (~\$80).

Students and teachers may be able to obtain a 50% discount here. Make sure to check the system requirements. Your computer needs at least 4GB of RAM to run Parallels Desktop but unless you want to run ANSYS version 14.5 or earlier, your computer needs at least 8GB of RAM to run ANSYS smoothly on the virtual machine. We also recommend that you have at least 20GB of free hard disk space.

While your Apple computer already has a software called BootCamp to install Windows on your Mac, it requires the user to reboot each time he or she wants to switch operating systems. The user also has to play with disk partitioning which makes the setup more complicated. We highly recommend using Parallels Desktop for its ease of use and flexibility. This software allows the user to run Mac OSX and Windows side by side and it does not require hard drive partitioning. Windows simply acts as an application that you can run or close as you wish. All the Windows files are contained in one master file (a . pvm file) that you can move wherever you want, even on an external hard rive.

2. Get yourself a copy of Windows 7, 8 or 10 with 64-bit (X64) from an installation CD or ISO file.

Windows 10 Home is available on the Microsoft Store for \$120. Students and teachers may be able to obtain a FREE or severely discounted copy of Windows 10 here. It is accessible as an ISO file to download. IMPORTANT: Make sure it is the 64-bit version (X64).

Cornell University faculty can obtain Windows 7, 8 or 10 for FREE here. Again, please choose the 64 bit version.

3. Run Parallels Desktop 11 and follow the on-screen instructions to install Windows.

If you downloaded Windows as an ISO file, you will simply be asked to drag and drop the ISO file in the box to proceed with the installation process. If you have the Windows installation CD, then simply insert it in the drive when prompted. We suggest that you choose to use Windows for "Productivity". Feel free to follow this excellent installation guide if you need.

A Required Configurations

To access the configuration settings of the virtual machine, please see this guide. Note that the virtual machine must be shut down prior to making changes to these settings. Here are some settings modifications that MUST be implemented for ANSYS to work properly with Parallels Desktop.

1. Memory allocation

- a. Go in the "Hardware" tab and select "CPU & Memory".
- b. Set the memory allocated to Parallels Desktop to be at least 2112 MB. This is because ANSYS 16.0 and later needs this amount of RAM to run the solver. We also highly recommend that the amount of memory you set lies in the green "recommended" range (too much memory allocated to Parallels Desktop will slow down your mac). This will only happen if your computer has at least 8GB of RAM, hence why we recommend to have at least this amount.

•••			windows 7 - Hardware	
General	Options Hardware Sec	P 🚺	D Business	Q Search
	CPU & Memory Boot Order Graphics Mouse & Keyboard Shared Printers Network 1 Sound USB & Bluetooth Hard Disk 1	Proc	essors: 2 C lemory: 2112 MB 4 MB 4 MB Recommended Advanced Settings	16 GB 64 GB
+ -	-			Restore Defaults
	Click the lock to prev	ent further o	changes.	?
(Since t) 2. Folder Sharing a. Go to C b. Unseled	his computer only ha ptions>Sharing ct "Share Mac user fo	s 4GB of RA	AM, it runs very poorly while in the yellow ra	ange)

Recommended Configurations (i)

We also recommend the following settings for ease of use and optimal performance.

 Go in the Options tab a. Select "Optimization" i. Make sure your sett 	ings are set this way.			
Performan	ce: Faster virtual machine			
	🗹 Enable Adaptive Hypervisor			
	🗹 Tune Windows for speed			
Pow	er: Better performance			
	Show battery in Windows			
Free See	ee. 🗆 Deel time virtuel diels entireire	tion		
Free Space	ce: 🔄 Heal time virtual disk optimiza	ation		
b. Select "Sharing" i Have the settings se	at like so			
1. Have the settings se	st like 50.			
Share Mac				
Share Po				
	Custom Folders			
Shared F	Profile: Share Mac user folders with Wind	ows		
	Configure			
Shared	Cloud: Share iCloud, Dropbox, and Goog	le Drive		
Smarth	Auunt: 🗌 Man Man volumes to Windows			
onarti	iount. In map mae volumes to windows			
Share Windows				
	Access Mindows folders from Mas			
	Access windows folders from Mac			
	 Shortcuts to virtual disks on Mac deskto 	qq		
	Share OneDrive with Mac			
	Dete	n D (n lln		
ii This will effectively l	reen Windows separate from the Mac. It makes u	ising Parallels more intuitive and simple		
c. Select "Applications" i. Disable the sharing	so that it looks like this.			
Share Wir	dows applications with Mac			
Show	Windows applications folder in Dock			
Show	Dock icons in Coherence only			
Pause	Windows when no applications are open			
✓ Dock i	cons bounce to alert			
✓ Add n	ew applications to Launchpad			
Share Mac applications with Windows				
Web Pages:	Default			
Email:	Default ᅌ			
	More Applications			

Go in the "Hardware" tab and select "CPU & Memory".
 a. Try setting the number of CPUs (cores) to 2. Test whether the performances of Windows are better, and if the Mac still runs smoothly. The odds are that it will and than ANSYS will compute faster. This is the default setting in Parallels 10.

4. Obtain and install ANSYS 17.0.

ANSYS now offers a student version of their software for FREE. The functionalities are more or less the same as in the full version except that structural problems are restricted to 32,000 nodes and fluid problems are restricted to 512,000 nodes. This is more than enough for what a typical student will need.

⚠	Firewall notifications
	On your first few uses of ANSYS, Firewall notifications should pop up. Make sure to allow all ANSYS programs to run normally (i.e do not let the Firewall block ANSYS programs). You can verify the allowed program list by going into Start>Control Panel>System & Security>Allow a program through Windows Firewall.
(i)	Cornell University faculty can get the full version of ANSYS for FREE by following this installation tutorial.

Please contact Sebastien at sfl32@cornell.edu if you have any questions regarding this installation guide.