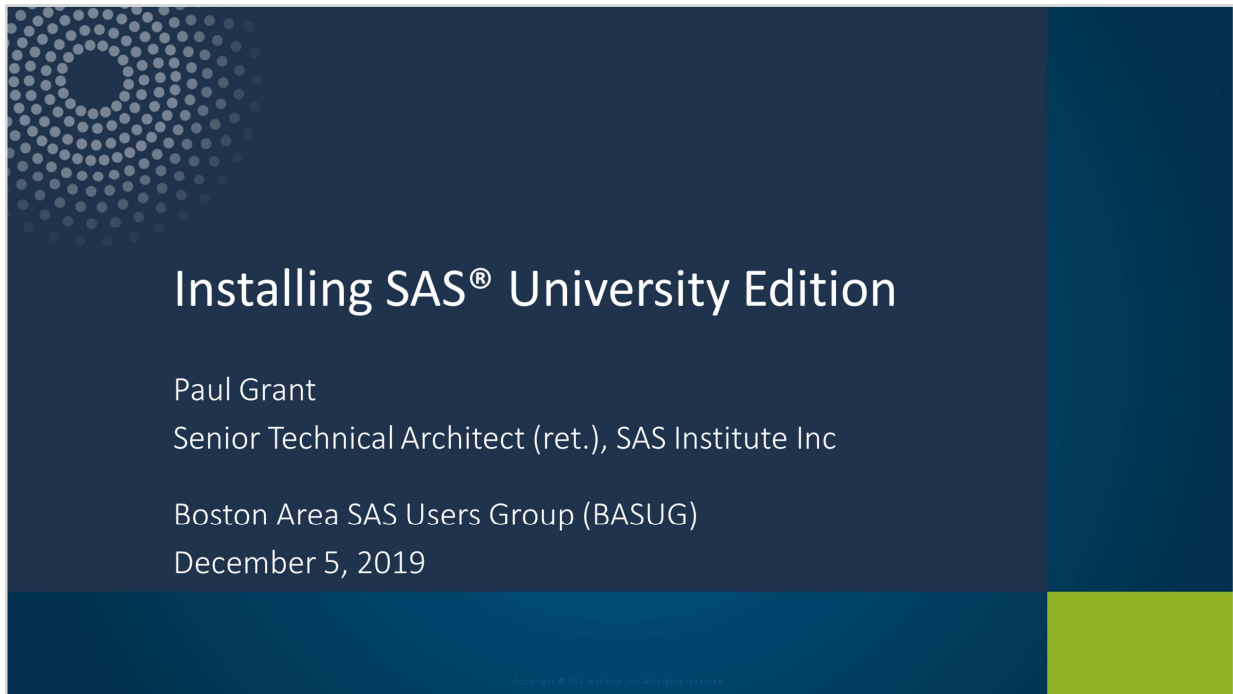




Title: Installing SAS University Edition (SAS UE)

Installing SAS® University Edition

This talk will give you an overview of how to download and install SAS® University Edition on a Windows PC including some tips that I've found useful.

Paul Grant is a retired Senior Technical Architect at SAS Institute. The organizations he supported during his 17 years with SAS include the U.S Treasury Department, the U.S. Joint Chiefs of Staff, and the FBI. He chaired SUGI 21 in Chicago in 1996 and co-chaired NESUG '94 in Philadelphia. He has been active in the Boston Area SAS Users Group since 1983. He has been developing systems with SAS since 1981.



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Abstract & bio

Agenda

- What is SAS® University Edition?
- Four step installation procedure:
 - Download virtualization software
 - Download SAS University Edition
 - Import SAS University Edition
 - Configure a shared folder(s)
- Follow the instructions & accept the defaults (VirtualBox)
- Where to go for help and to learn more

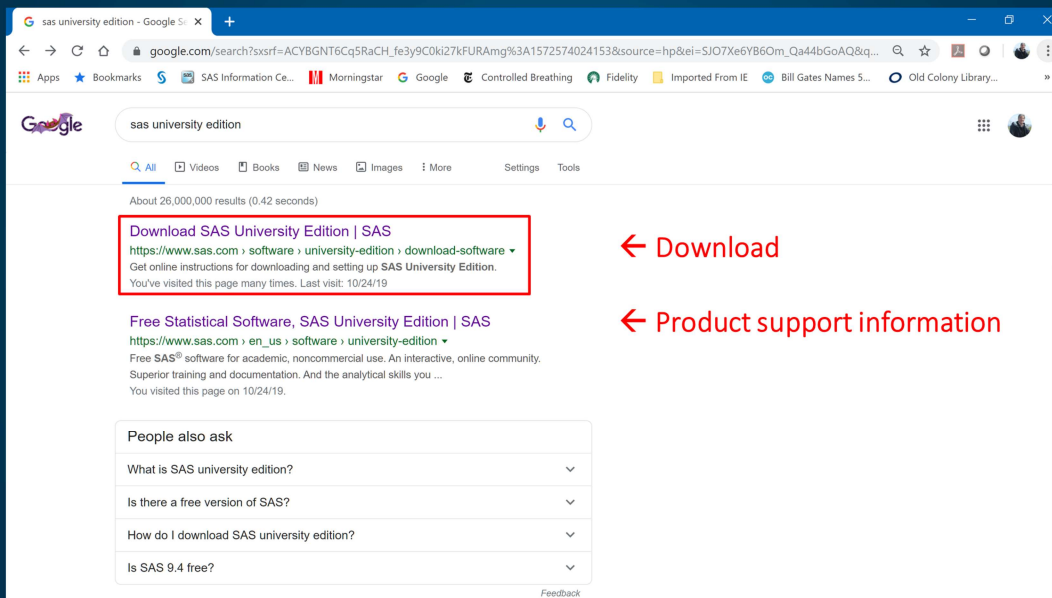
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What we'll cover today

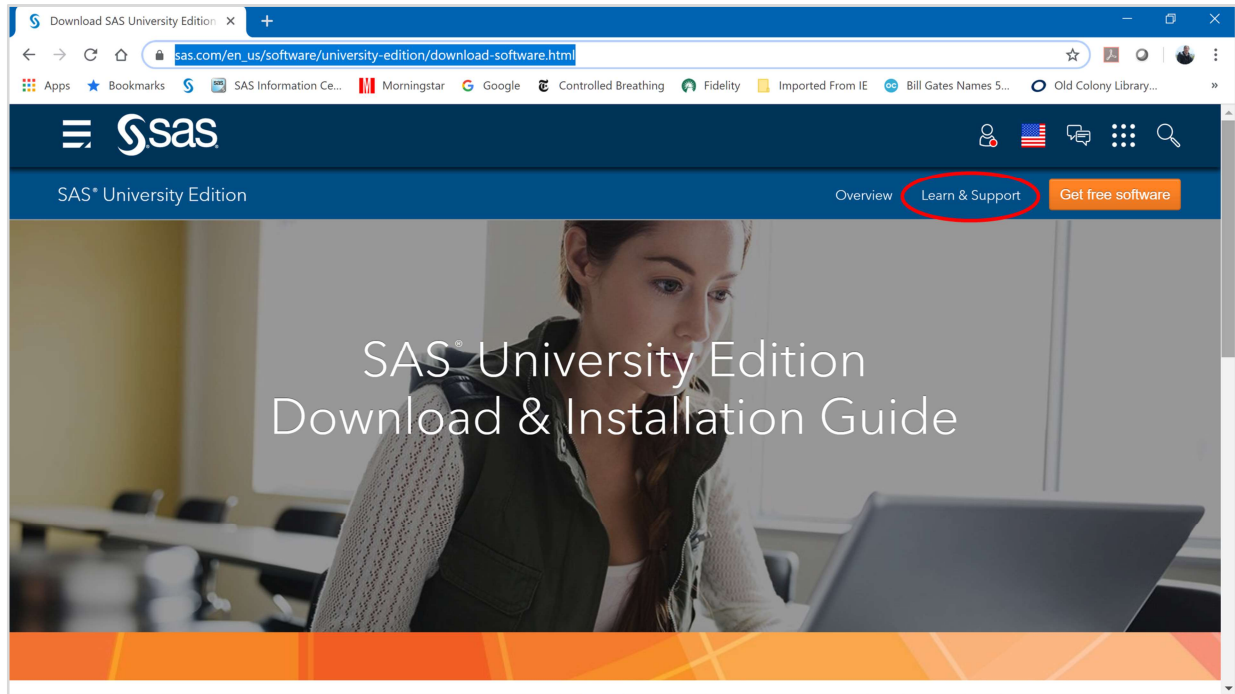
What is SAS® University Edition?

- Basic SAS learning environment geared for academics and independent learners (anybody!)
 - Includes Base SAS®, SAS/STAT®, SAS/IML®, SAS/ACCESS® Interface to PC Files and SAS® Studio
 - Runs on virtualization software (VirtualBox or VMware) on a Windows PC, Mac, or Linux workstation and AWS
 - **Free** if used for noncommercial, learning purposes
 - Annual license that needs to be renewed (ends Jul 31), and you typically also have to install the latest updates
-
- SAS UE is a “virtual appliance”
 - A **virtual appliance** is a preconfigured virtual machine that packages an operating system, a software application and parameters that define operational details.
 - The user (sasdemo) and the password are “baked into” the application and can’t be changed.

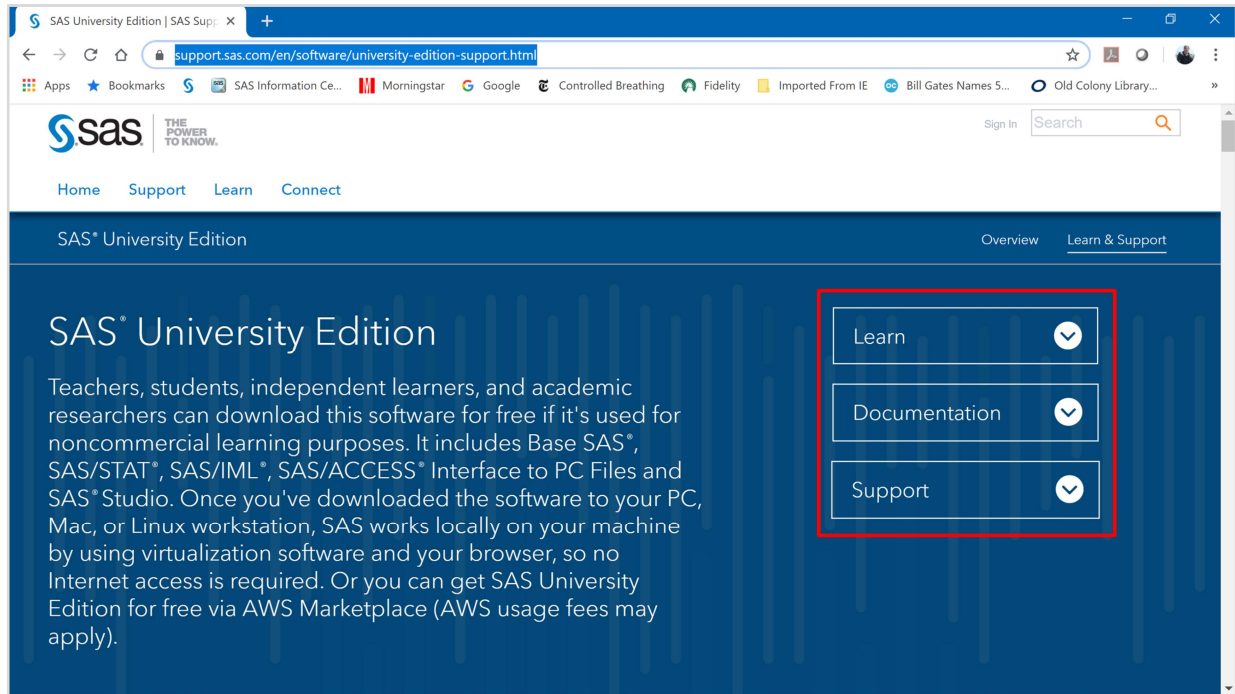
SAS® University Edition



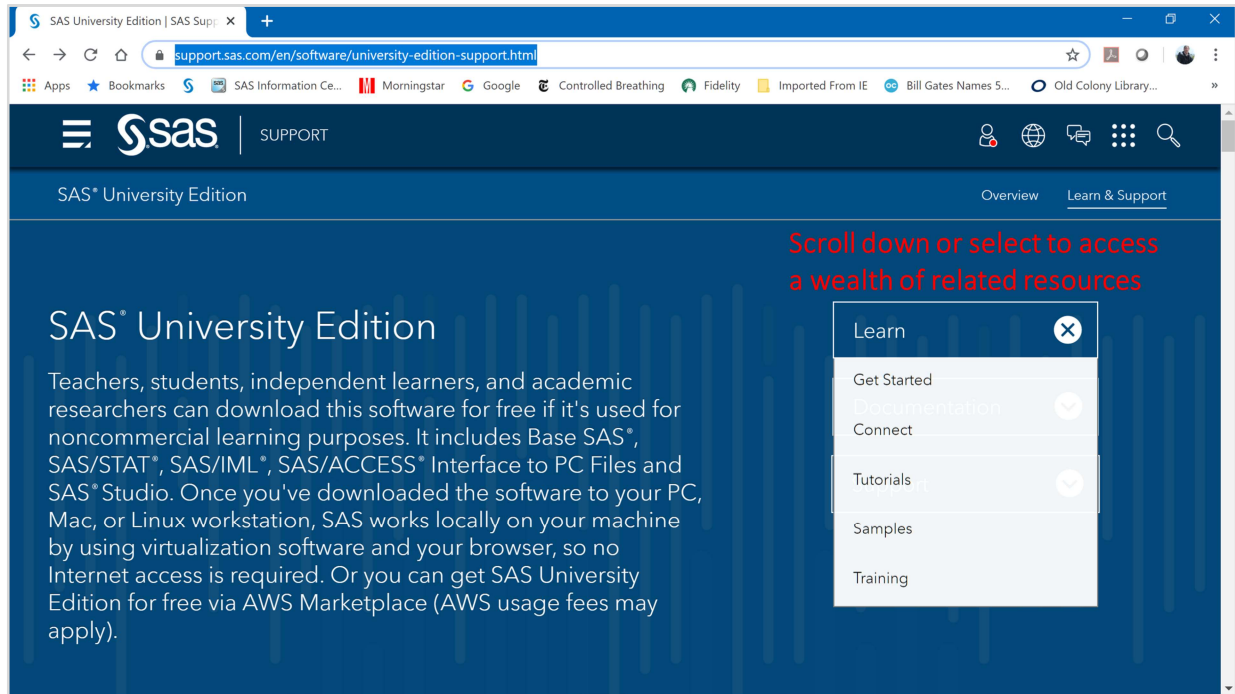
- The easiest way to find the download page is a google search
- Look for the word “Download.” The other link takes to you to the product support page for SAS UE on support.sas.com.



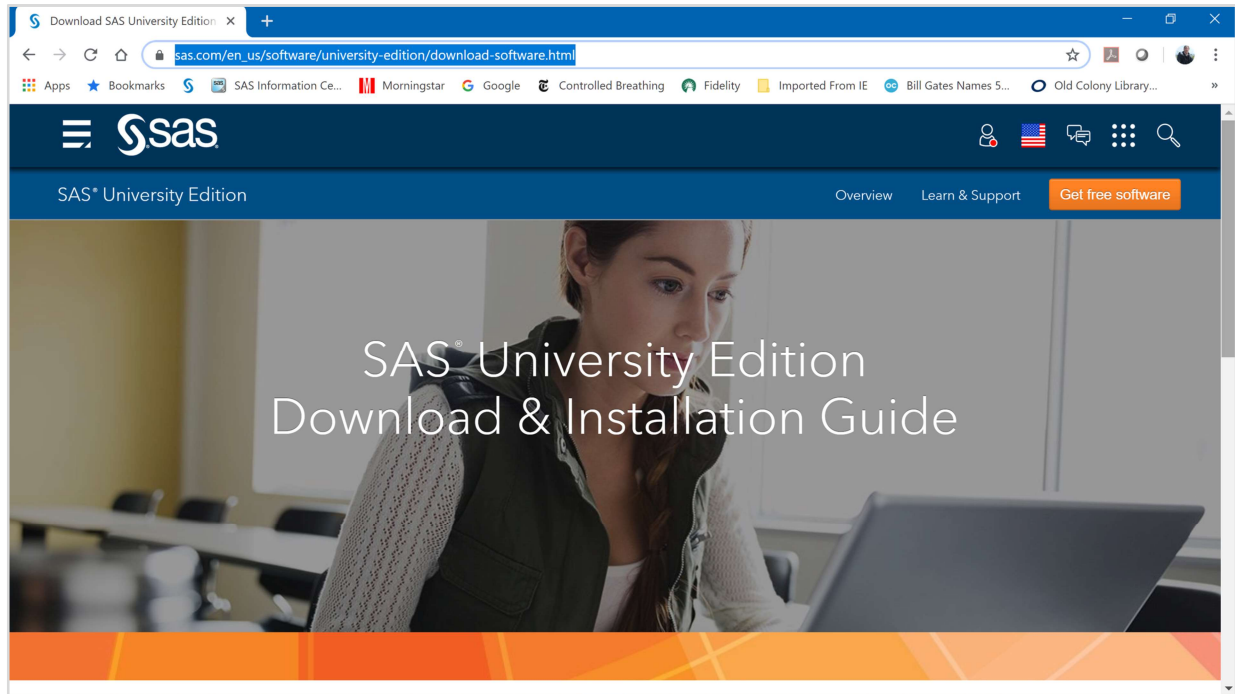
- This is the download & installation page
- Before going over the installation procedure, notice the 'Learn & Support' link on the menu bar.
- This will take you to the product support page for SAS UE on support.sas.com



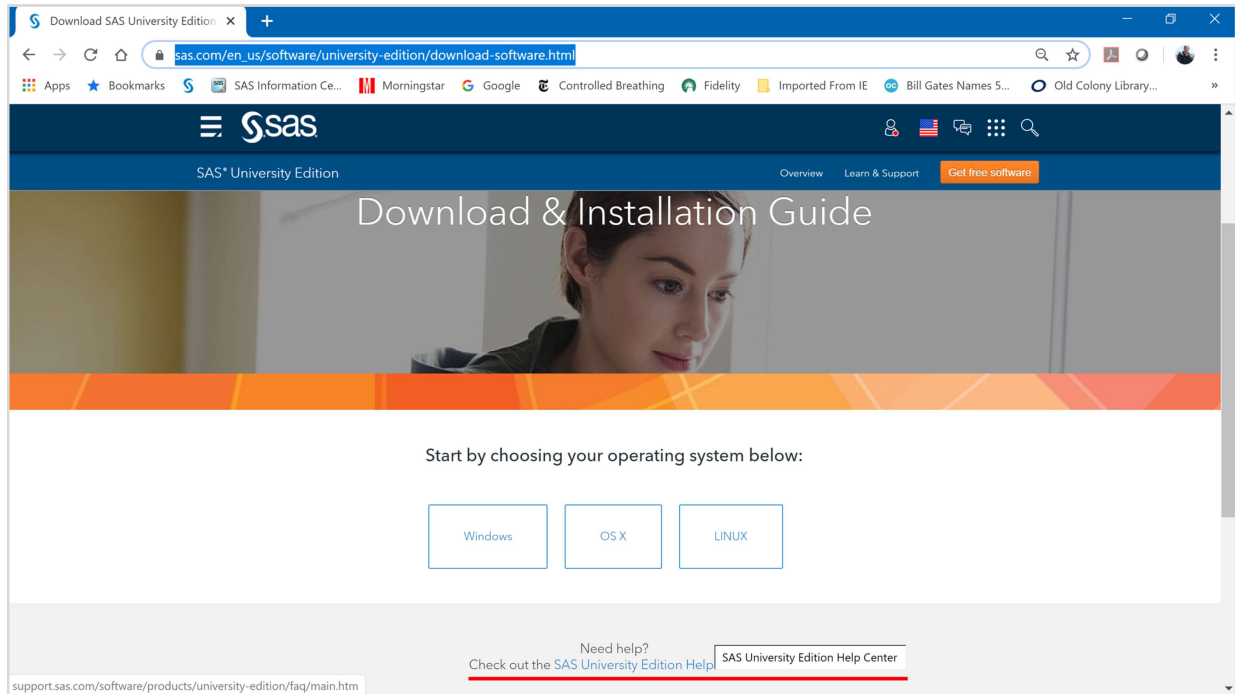
- This page tells you about SAS UE and has links to documentation, learning and support resources for SAS UE.



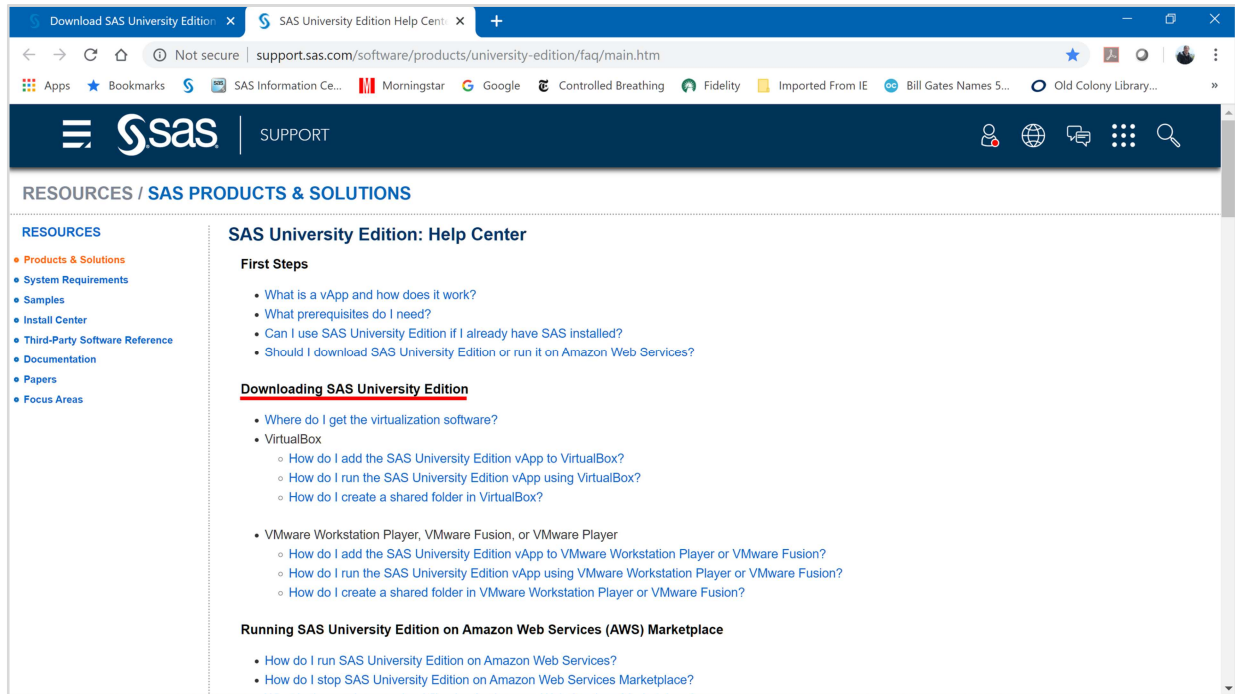
- Scroll down the page (or select an item) to access a wealth of SAS UE-related learning resources,
- Including some great videos and documentation on getting started and using SAS UE



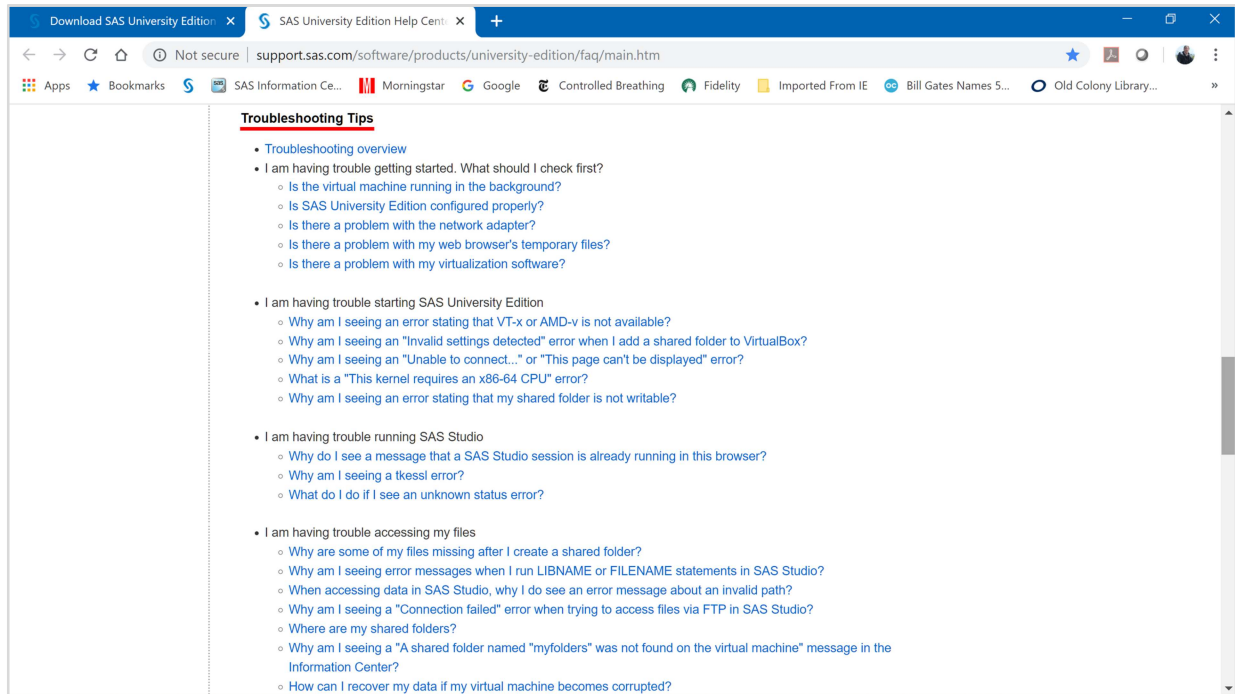
- Going back to the download & installation page,
- Scroll down to start the download and installation process



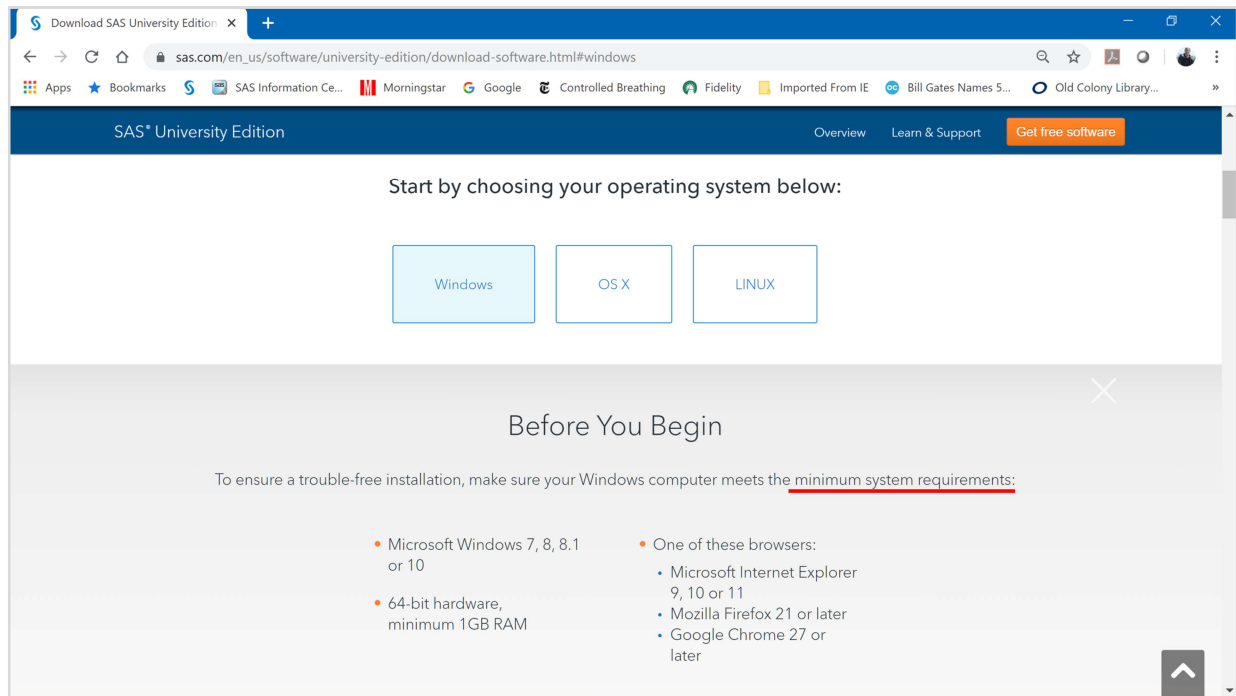
- Notice the link to the SAS UE Help Center at the bottom of the page.
- I recommend opening this page before selecting the operating system so you can have it available as you go through the download and installation process.
- It will open in another browser tab when you click on the link.



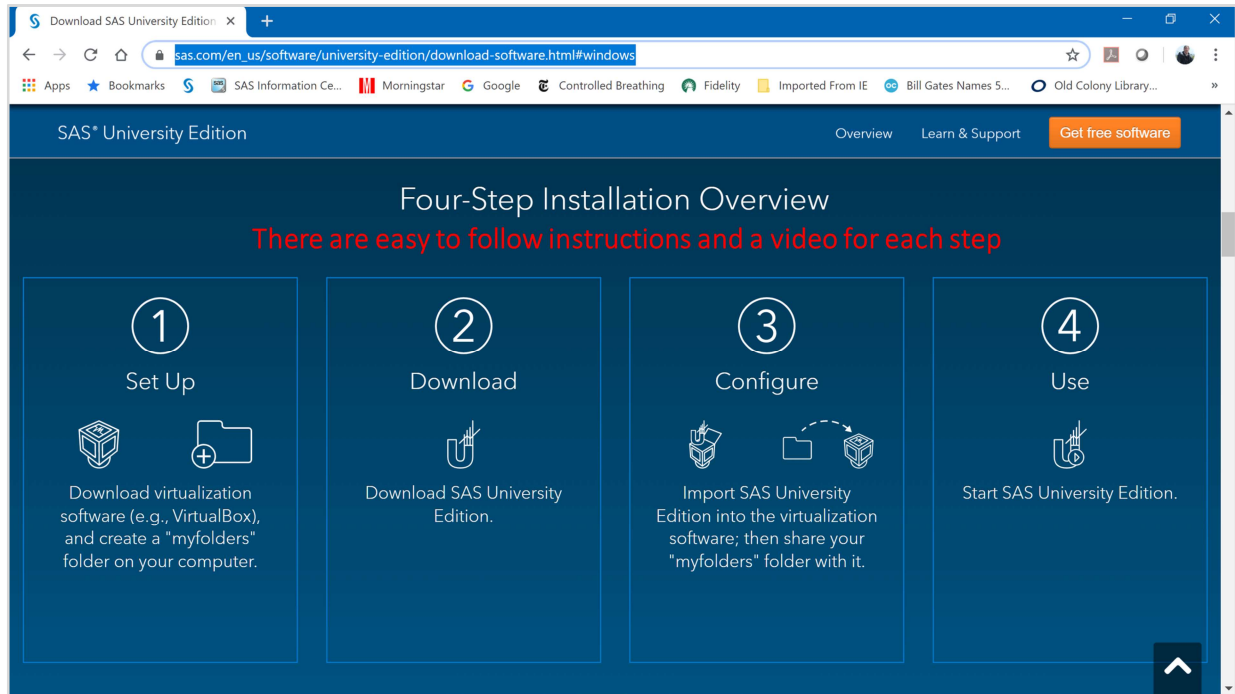
- The SAS UE Help Center has information on setting up the SAS UE.



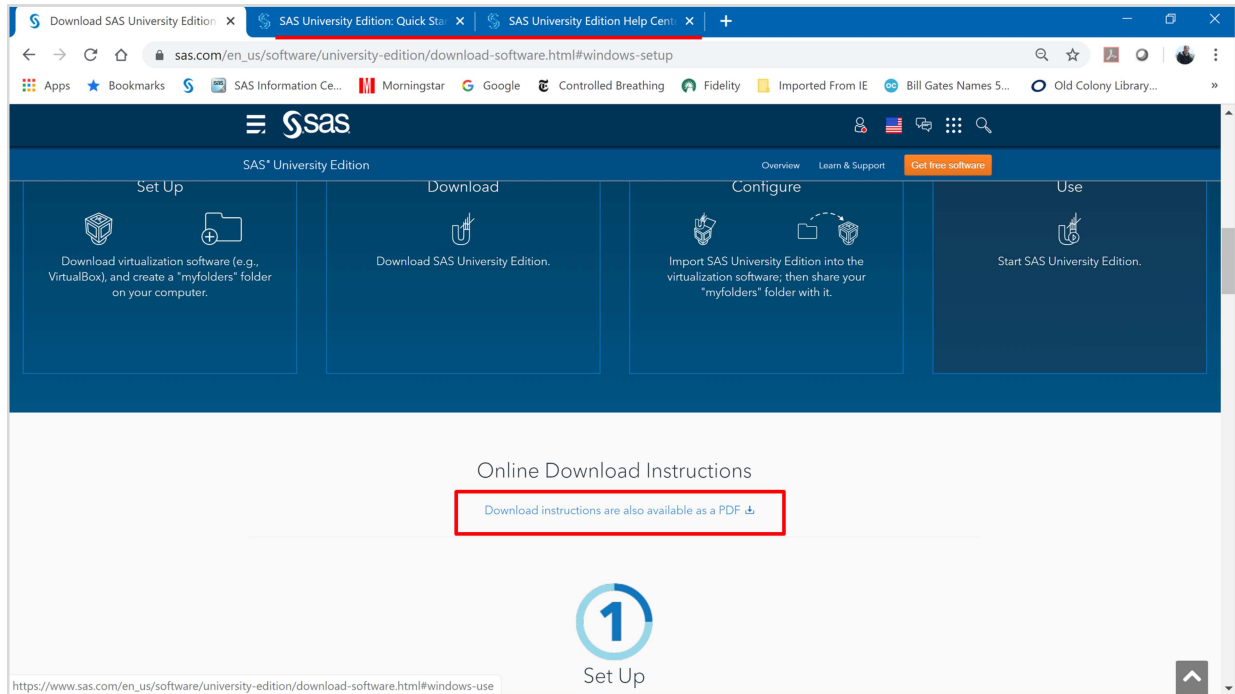
- Scroll down to find information on troubleshooting the setup process.



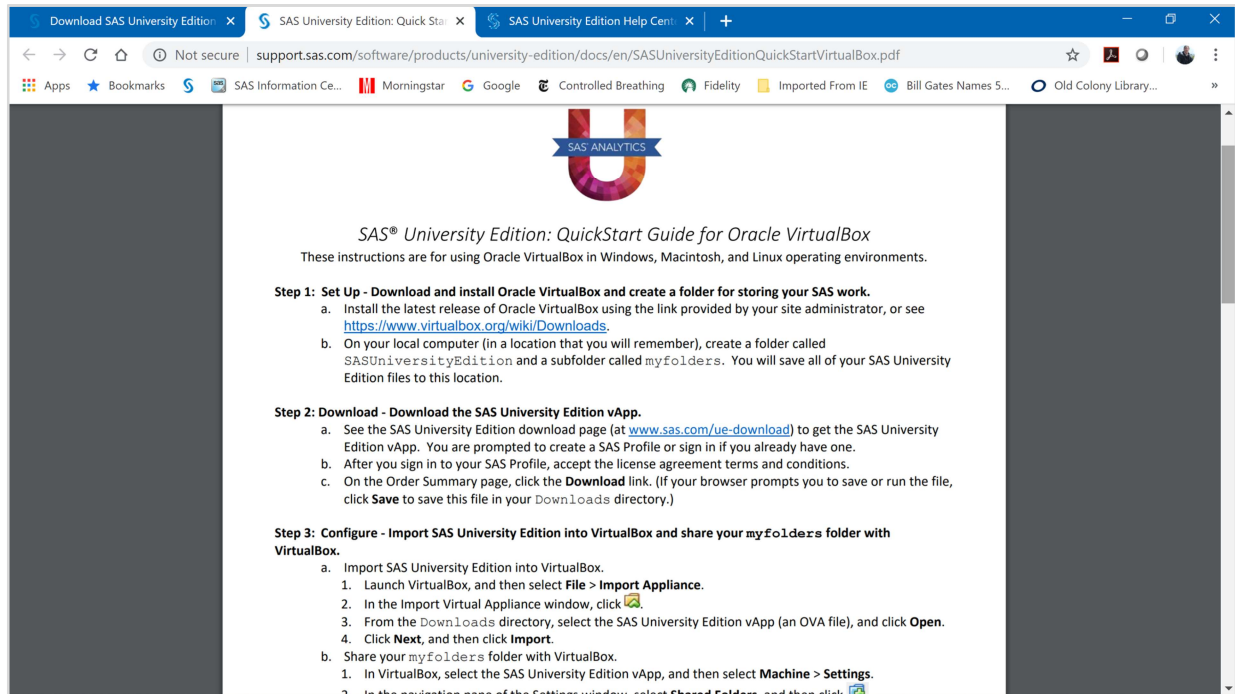
- Select your computer's operating system.
- In this case, MS Windows.
- Make sure your computer meets the system requirements.
- Chrome works well for me.



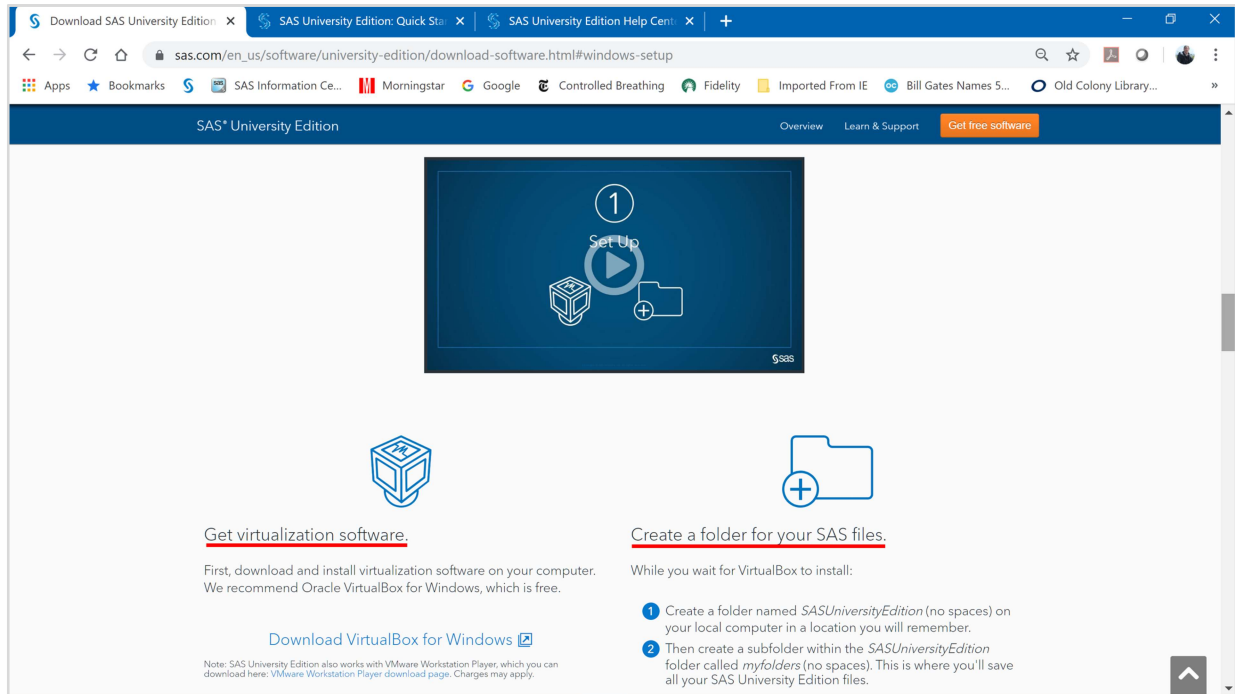
- There are four steps in the installation process.
- There are easy-to-follow instructions and a video for each step.



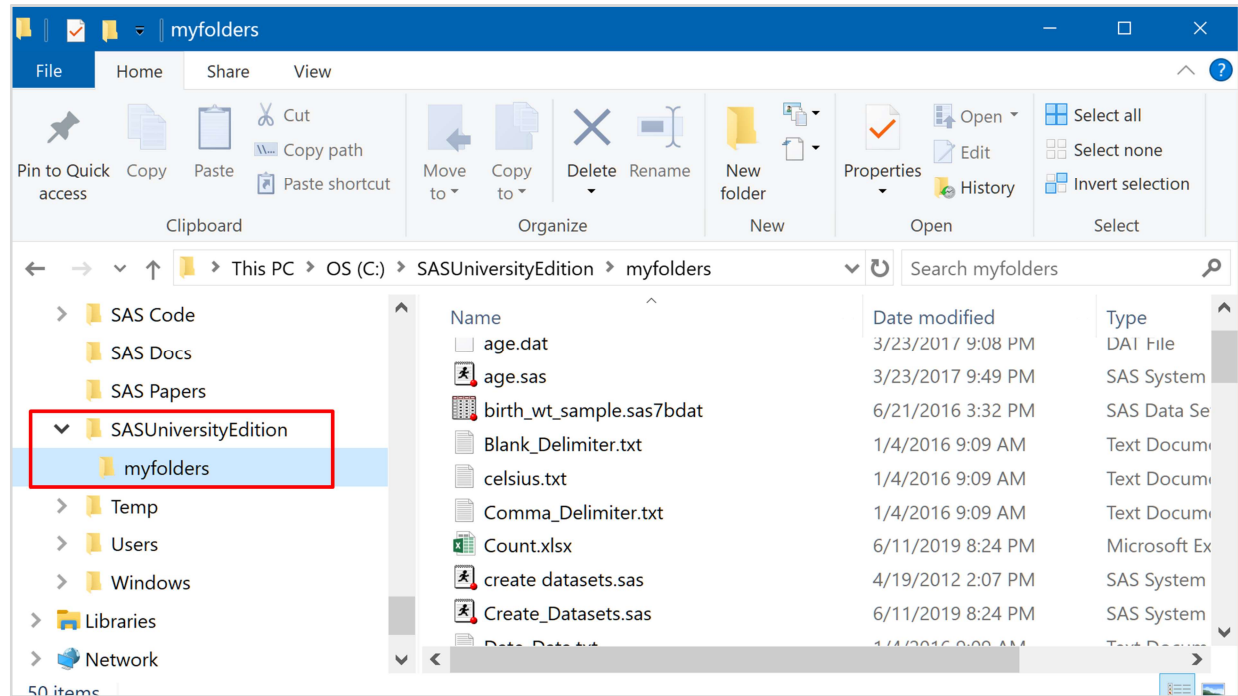
- Before clicking on the Step 1 icon, open a pdf of the Download/Setup instructions so you can have it available as you go through the download and installation process.
- It will open in another browser tab when you click on the link.



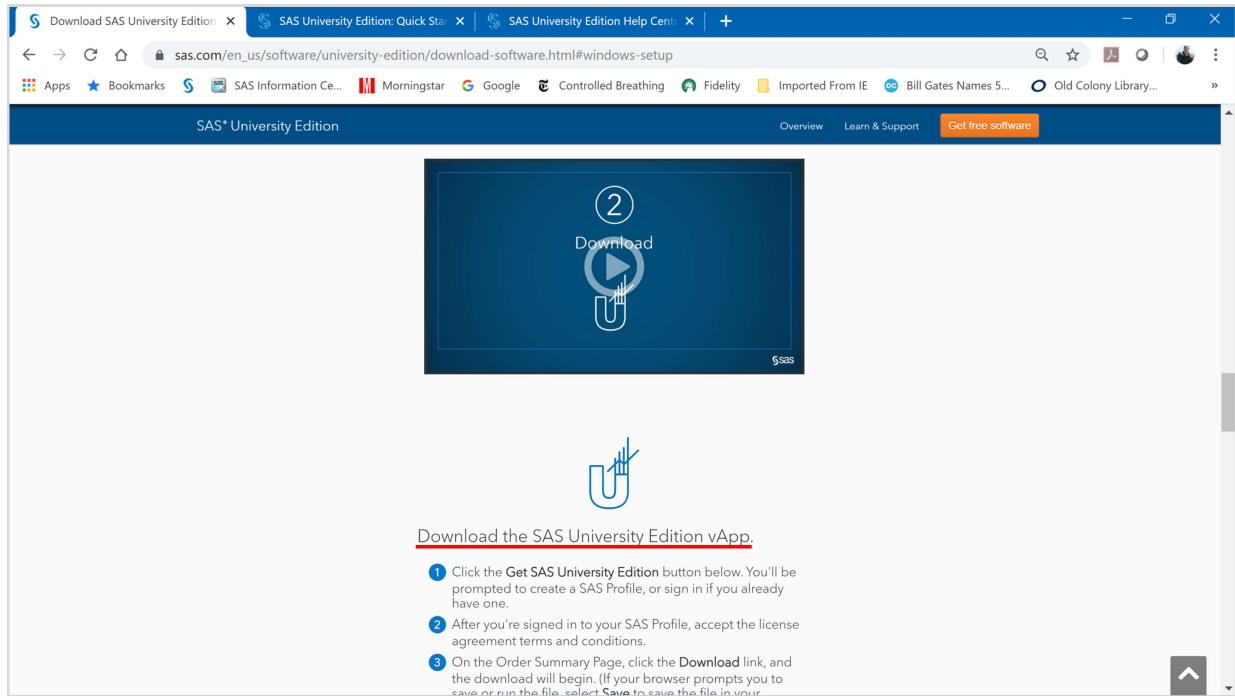
- The instructions in this document repeat the instructions you'll see on the download page.



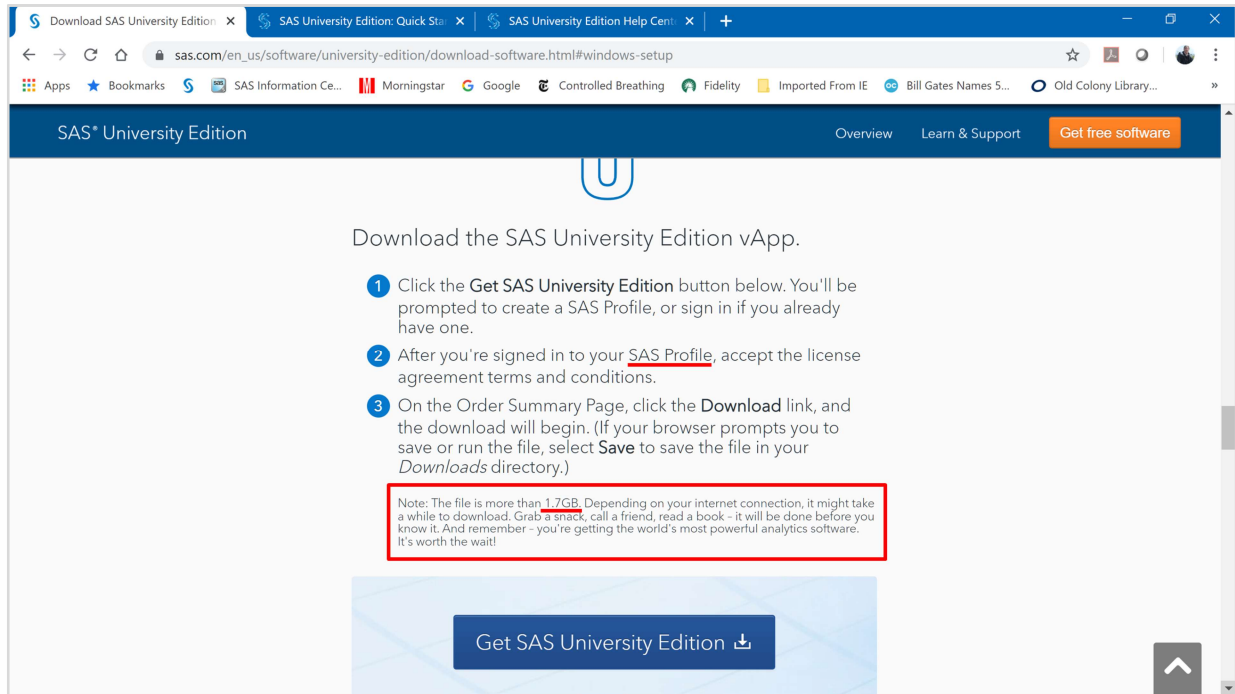
- In **Step One**, you'll do two things:
 - Download the virtualization software (I recommend using the default: VirtualBox).
 - Create folders in your computer for SAS UE files
- There's a video that will walk you through both of these tasks.



- These are the two folders you'll create.
- More on these when we come to the configuration step.



- In **Step Two**, you'll download SAS UE vApp file.



- You must have a SAS profile to download SAS UE
- SAS UE .ova file is large – 1.75GB and it DOES take a long time to download
- Go back to SAS UE Learn & Support page and watch a video or two on SAS UE while you're waiting

Download SAS University Edition | SAS University Edition: Quick Start | SAS University Edition Help Center

sas.com/en_us/software/university-edition/download-software.html#windows-setup

SAS University Edition Overview Learn & Support Get free software



3 Configure

Import SAS University Edition into VirtualBox.

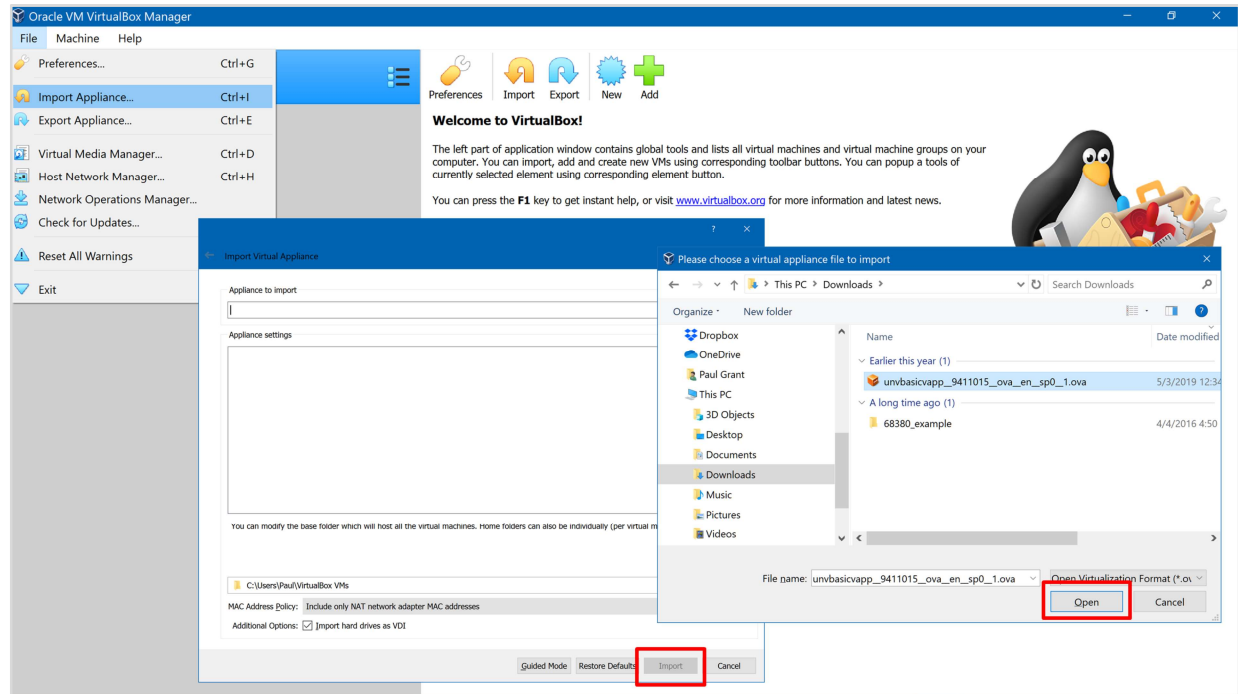
- 1 Launch VirtualBox and select **File > Import Appliance**.
- 2 In the Import Virtual Appliance window, click the folder icon to the right of the field.
- 3 In the file browser window, select the SAS University Edition .ova file, and click **Open**.
- 4 Click **Next**, and then click **Import** in the Appliance Settings window.

Share your *myfolders* folder with VirtualBox.

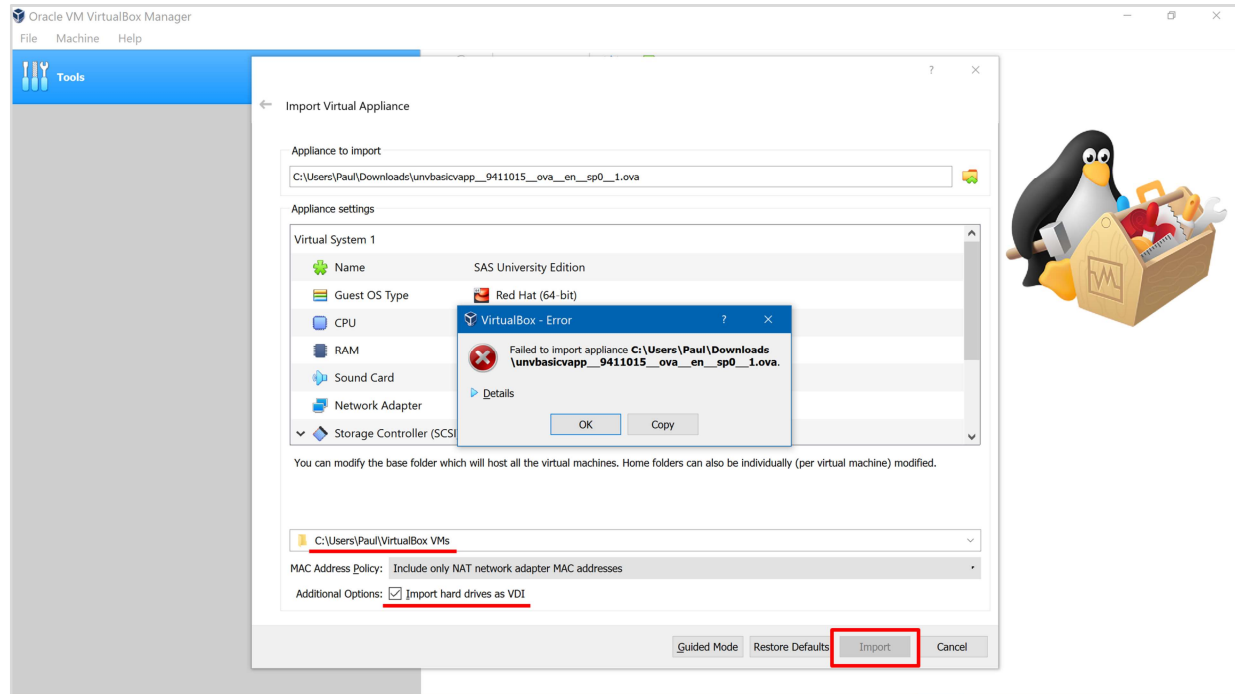
- 1 In VirtualBox, select the SAS University Edition vApp, and then select **Machine > Settings**.
- 2 In the navigation pane, select **Shared Folders**, and then click the Add Folder icon (+) in the upper right of the Settings window.
- 3 In the Add Share window, select **Other** as the folder path.
- 4 In the Select Folder window, open the *SASUniversityEdition* folder, and select the *myfolders* subfolder you created in step 1. Click **Select Folder**.
- 5 In the Add Share window, confirm that **Read-only** is not selected.

Feedback

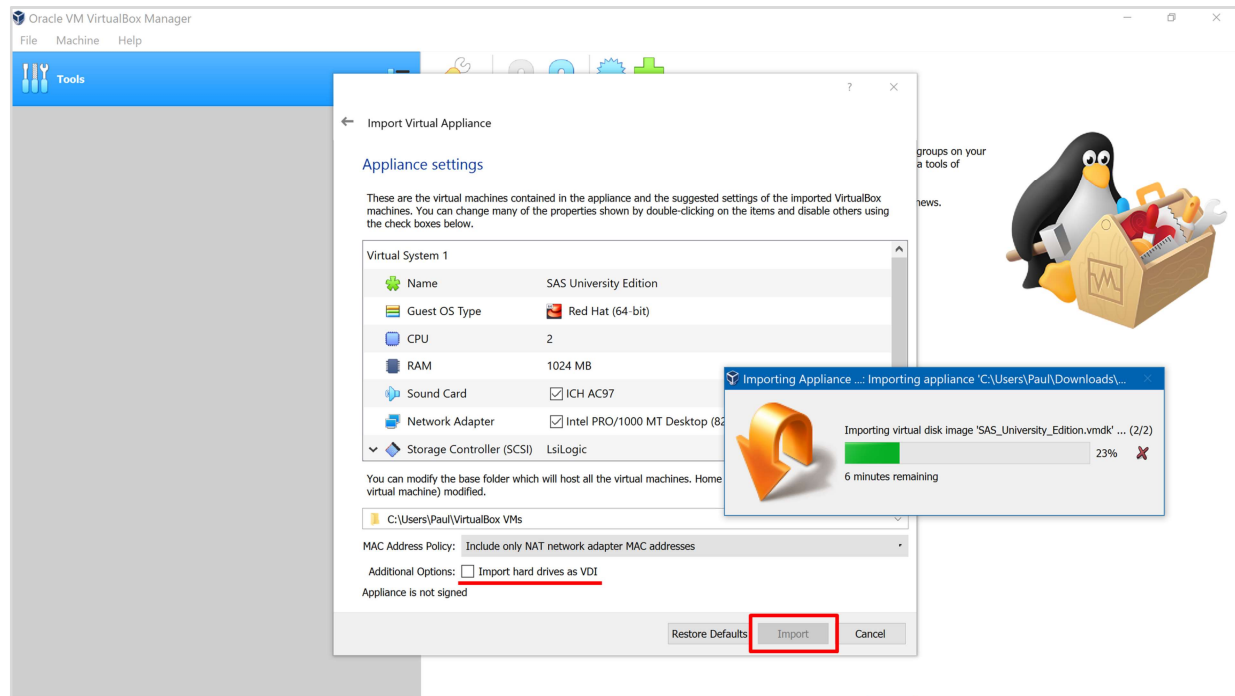
- In **Step Three**, you'll do two things:
 - Import SAS UE into the virtualization software. If you have any problems with the installation, it will probably be here.
 - Configure a shared folder for the files you'll use in the SAS UE



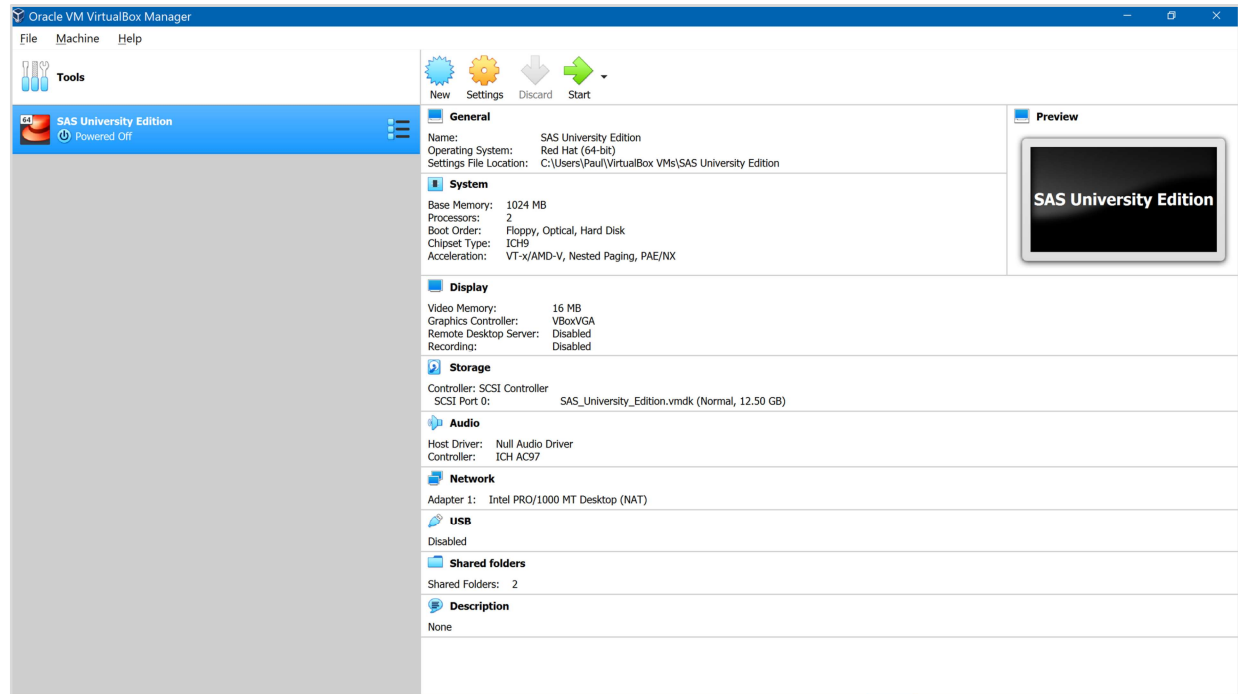
- To import SAS UE appliance:
- 1) Start VirtualBox
- 2) Click File > Import Appliance
- 3) Click Import, browse to SAS UE .ova file in your Downloads folder and click Open.



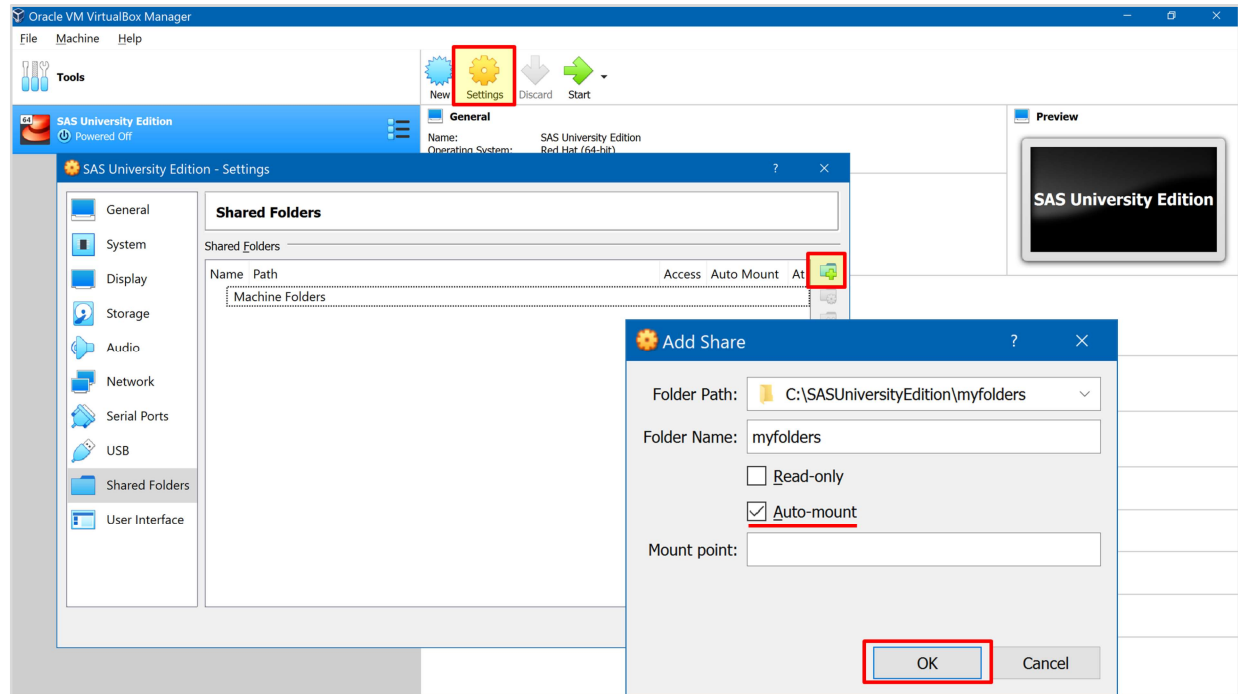
- This is where I had problems. My import failed. Twice.
- Somehow I learned that the default setting (checked) of the “Import hard drives as VDI” checkbox was the problem.
- I had to remove the files installed during the failed import and do the import again with the “Import hard drives as VDI” checkbox unchecked.
- Notice the location where the VirtualBox files for SAS UE will be written.



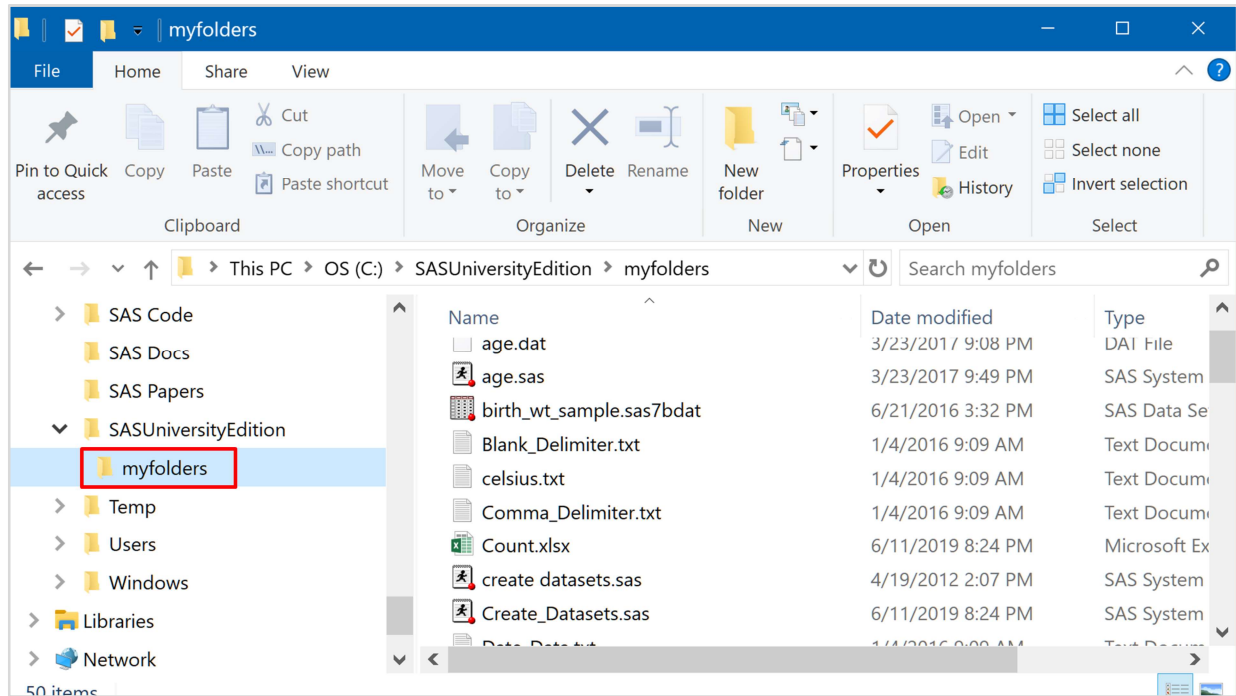
- Uncheck the “Import hard drives as VDI” check box.
- Click Import



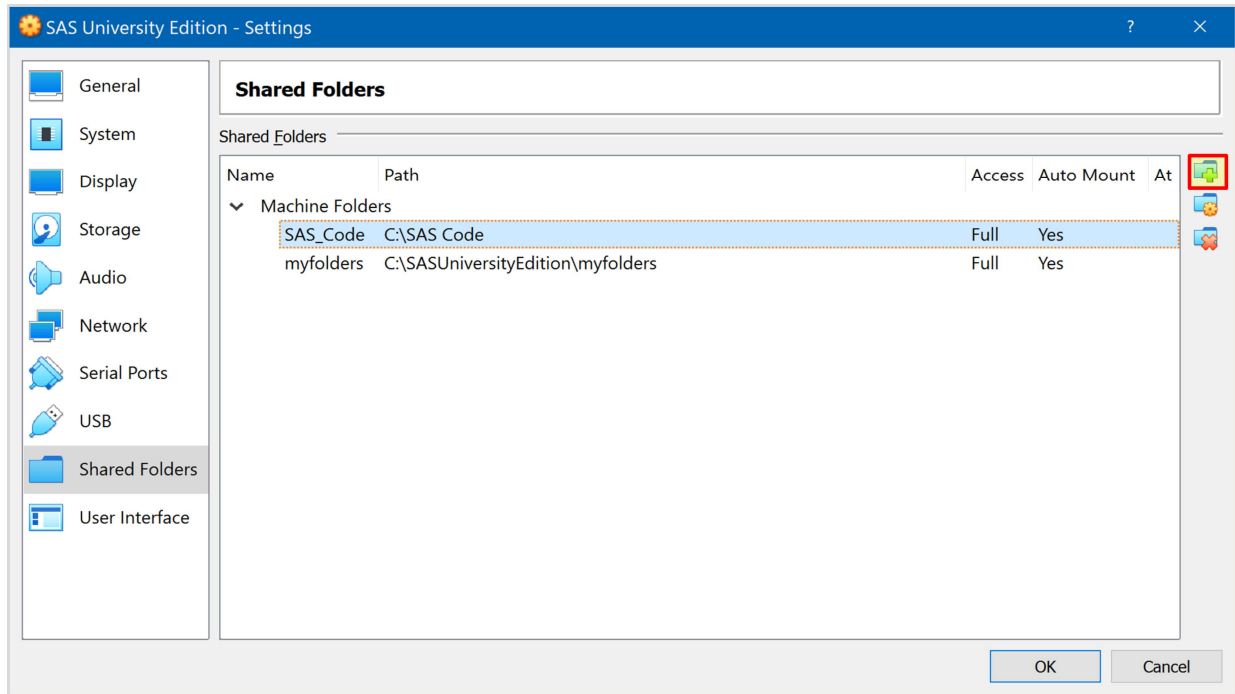
- When SAS UE has been imported, VirtualBox looks like this.



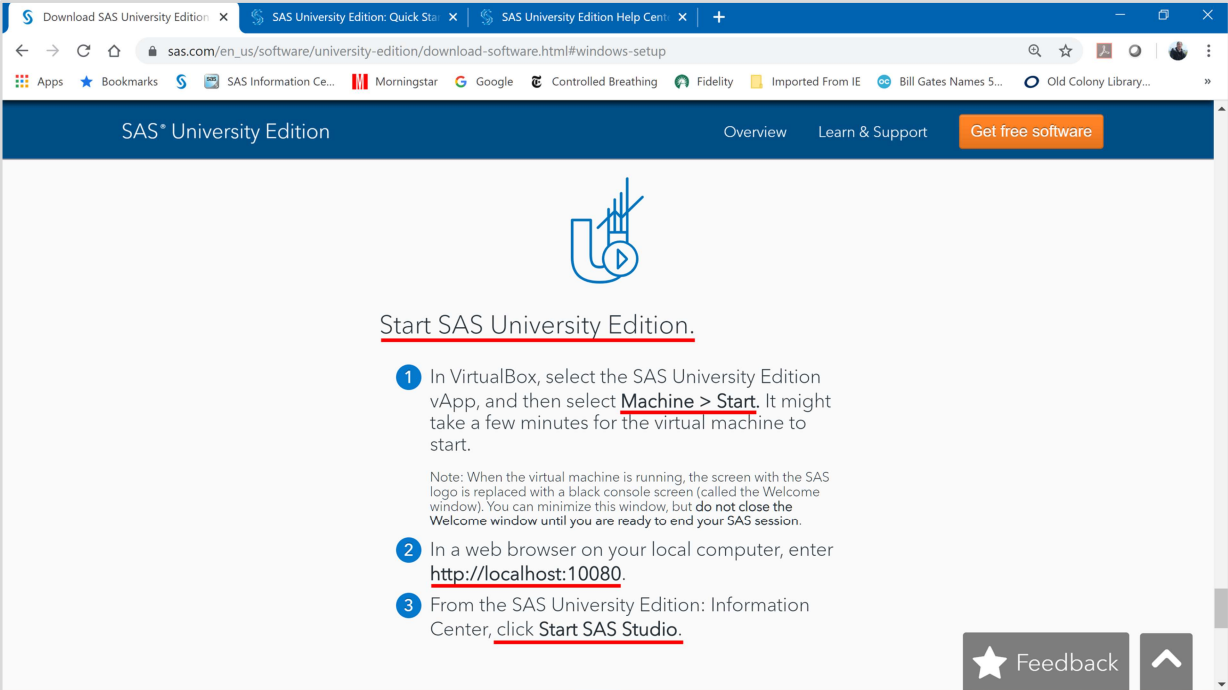
- Next, you need to configure the shared folder(s) that will allow you to share data and program files between your computer and SAS UE.
- Click Settings, Shared Folders.
- Click the Add Folder icon on the right and navigate to the folder you created in Step One.
- Be sure to check the Auto-Mount box.



- Here's the folder that will be shared between the two machines.
- Any files you put here will be available to you in SAS UE



- You can set up any number of shared folders.
- I've added a second folder that contains my library of useful SAS routines.

A screenshot of a web browser displaying the SAS University Edition download page. The browser's address bar shows the URL: sas.com/en_us/software/university-edition/download-software.html#windows-setup. The page has a blue header with the text "SAS* University Edition" and navigation links for "Overview", "Learn & Support", and a "Get free software" button. Below the header is a large blue play button icon. The main content area is titled "Start SAS University Edition." and contains a three-step numbered list. Step 1: "In VirtualBox, select the SAS University Edition vApp, and then select Machine > Start. It might take a few minutes for the virtual machine to start." Step 2: "In a web browser on your local computer, enter http://localhost:10080." Step 3: "From the SAS University Edition: Information Center, click Start SAS Studio." A note is included between steps 1 and 2: "Note: When the virtual machine is running, the screen with the SAS logo is replaced with a black console screen (called the Welcome window). You can minimize this window, but **do not close the Welcome window until you are ready to end your SAS session.**" At the bottom right of the page, there is a "Feedback" button with a star icon and an upward-pointing arrow button.

Download SAS University Edition | SAS University Edition: Quick Start | SAS University Edition Help Center

sas.com/en_us/software/university-edition/download-software.html#windows-setup

SAS* University Edition Overview Learn & Support Get free software

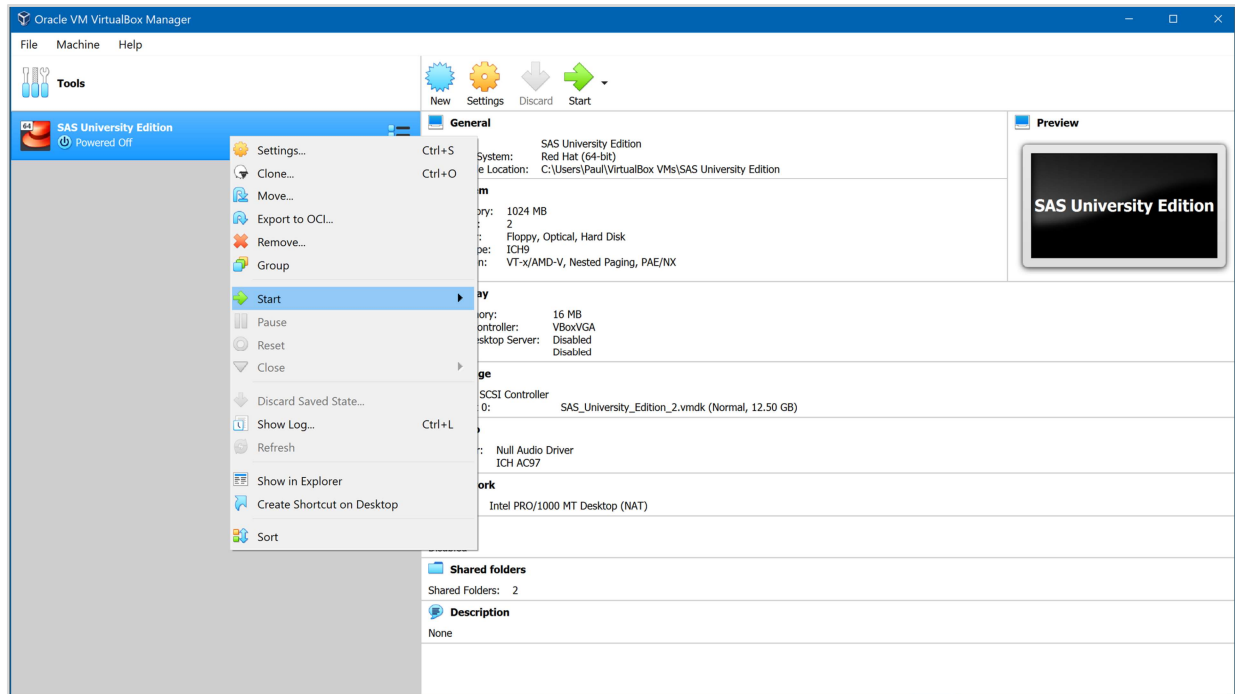


Start SAS University Edition.

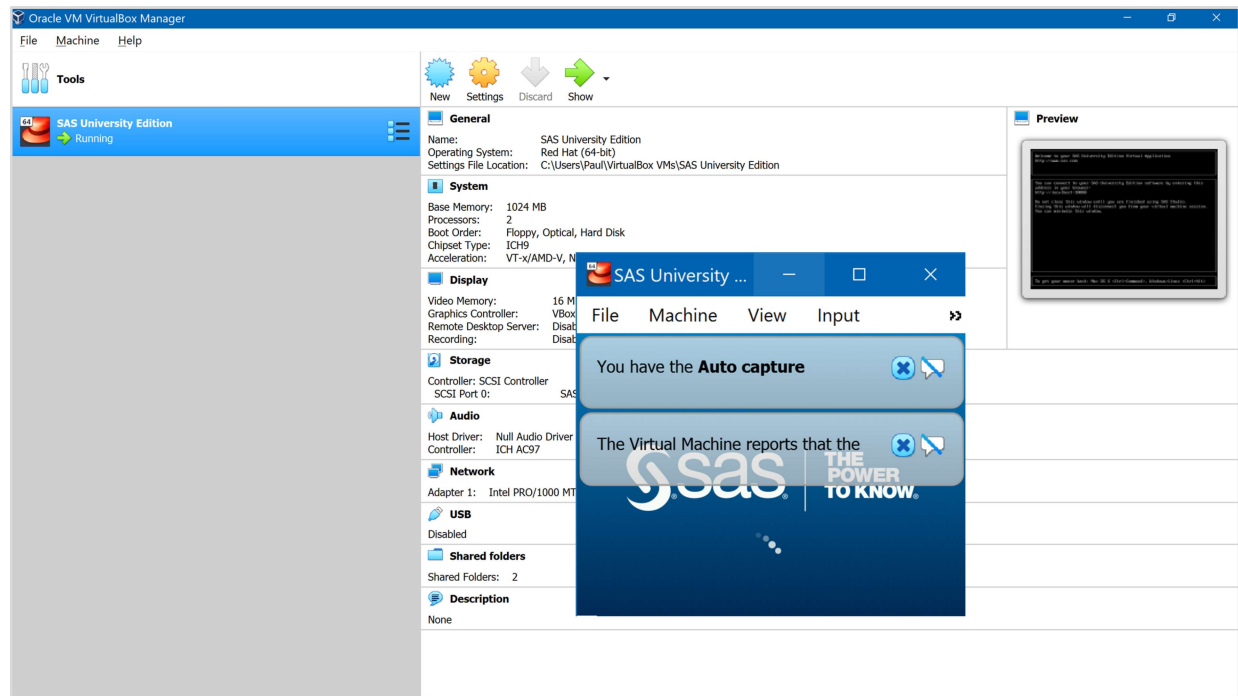
- 1 In VirtualBox, select the SAS University Edition vApp, and then select Machine > Start. It might take a few minutes for the virtual machine to start.
Note: When the virtual machine is running, the screen with the SAS logo is replaced with a black console screen (called the Welcome window). You can minimize this window, but **do not close the Welcome window until you are ready to end your SAS session.**
- 2 In a web browser on your local computer, enter http://localhost:10080.
- 3 From the SAS University Edition: Information Center, click Start SAS Studio.

★ Feedback ↑

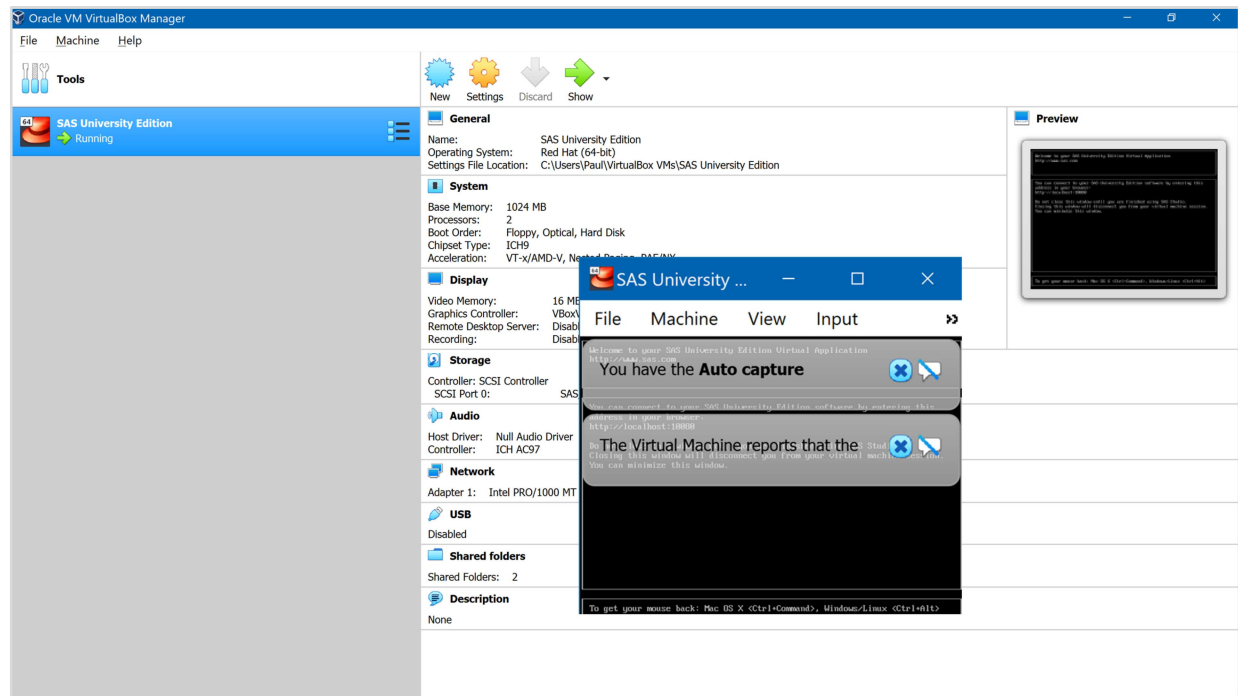
- In **Step Four**, you'll
 - Start SAS UE vApp running inside the virtualization software (VirtualBox)
 - Connect to SAS UE using your web browser.



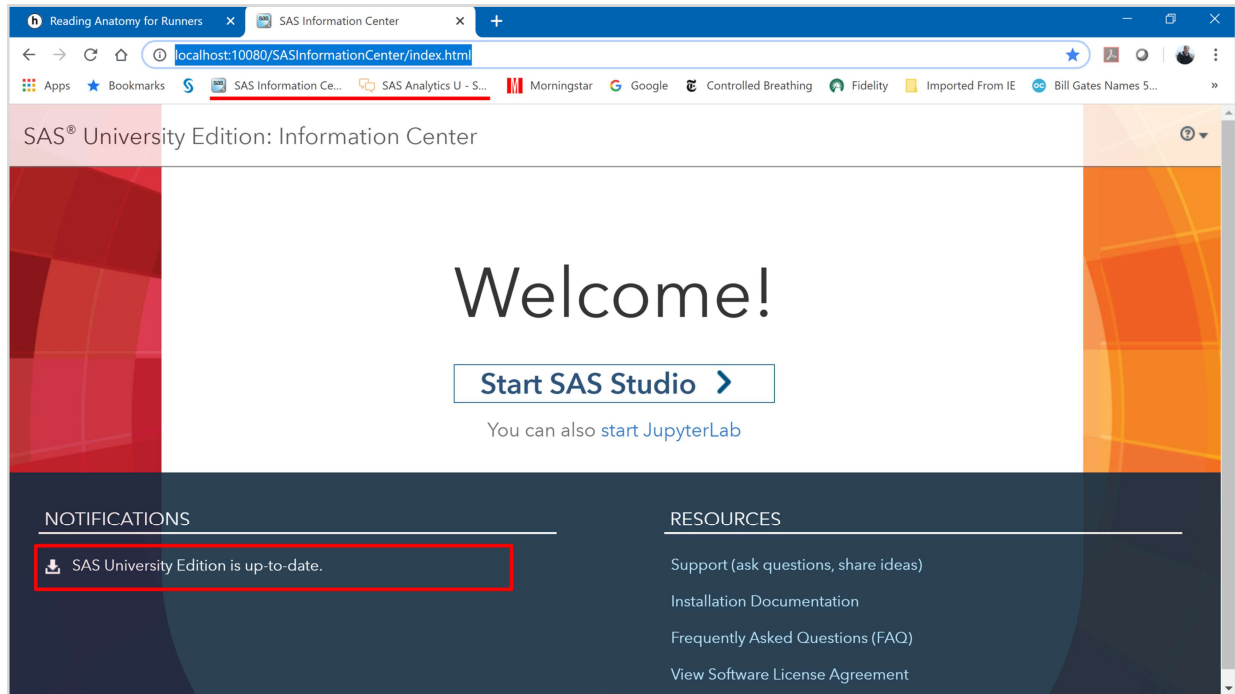
- Start SAS UE by either right-clicking or double clicking on the SAS UE icon, or clicking Start on the menu ribbon.



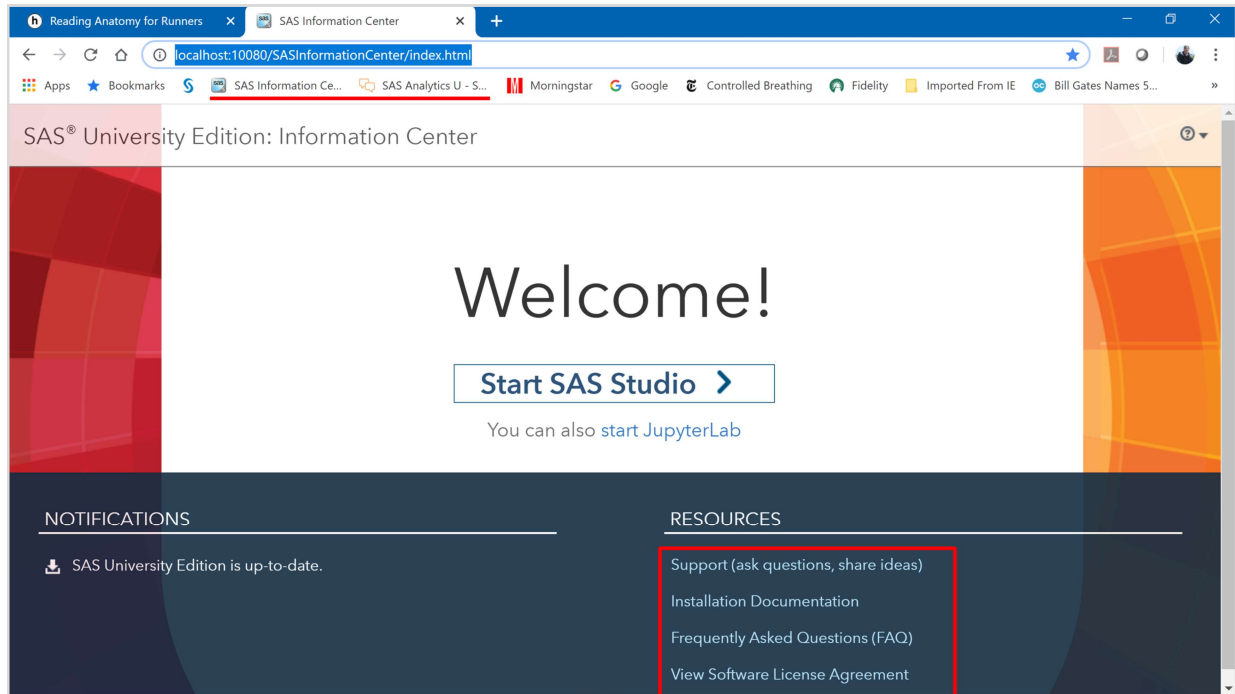
- An icon for SAS UE vApp will open and quickly turn blue, displaying the SAS logo.



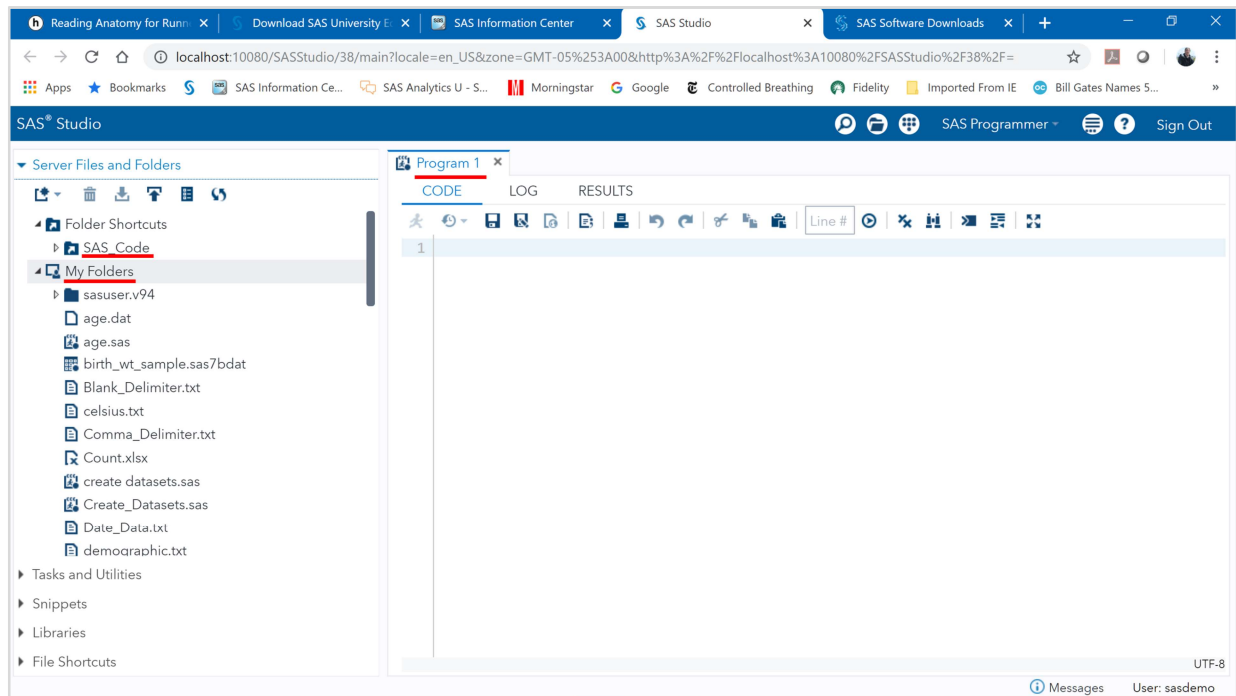
- When it stops moving and turns black, you can open your browser to start using the SAS UE.



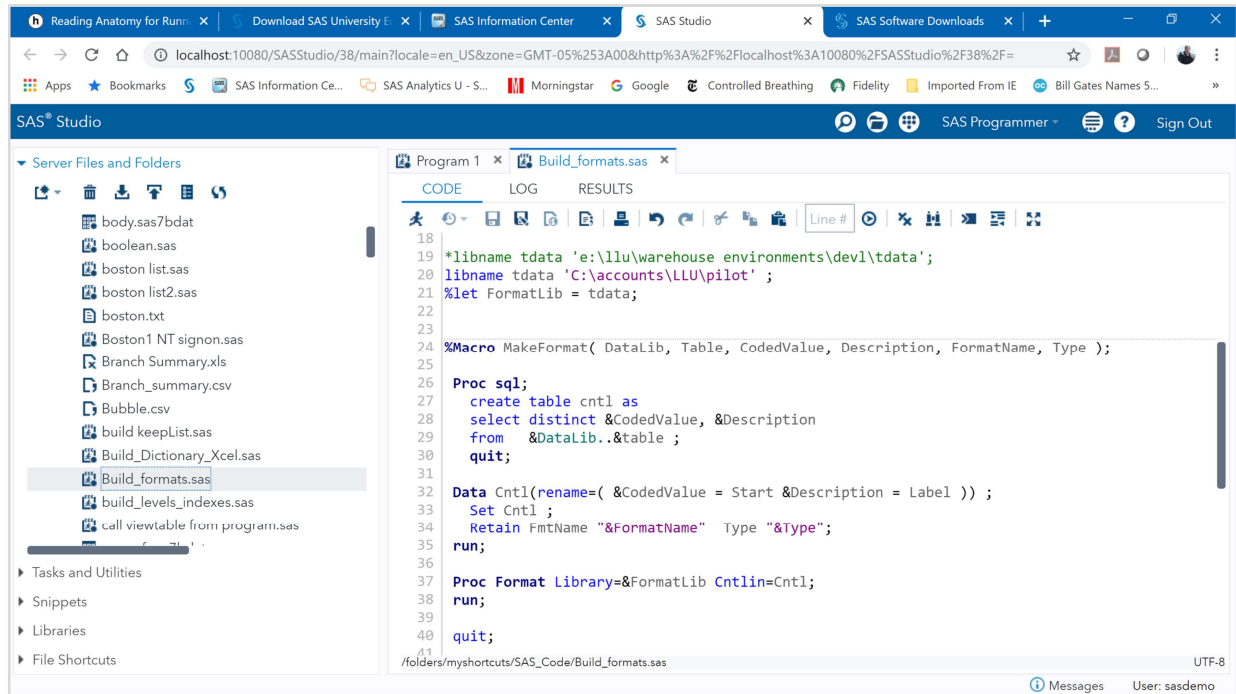
- Open your browser
- Enter `http://localhost:10080` in the address bar
- This will bring you to the SAS Information Center, which I've bookmarked to save typing
- Notice the Notifications section on the lower left – It automatically alerts you of updates and errors.



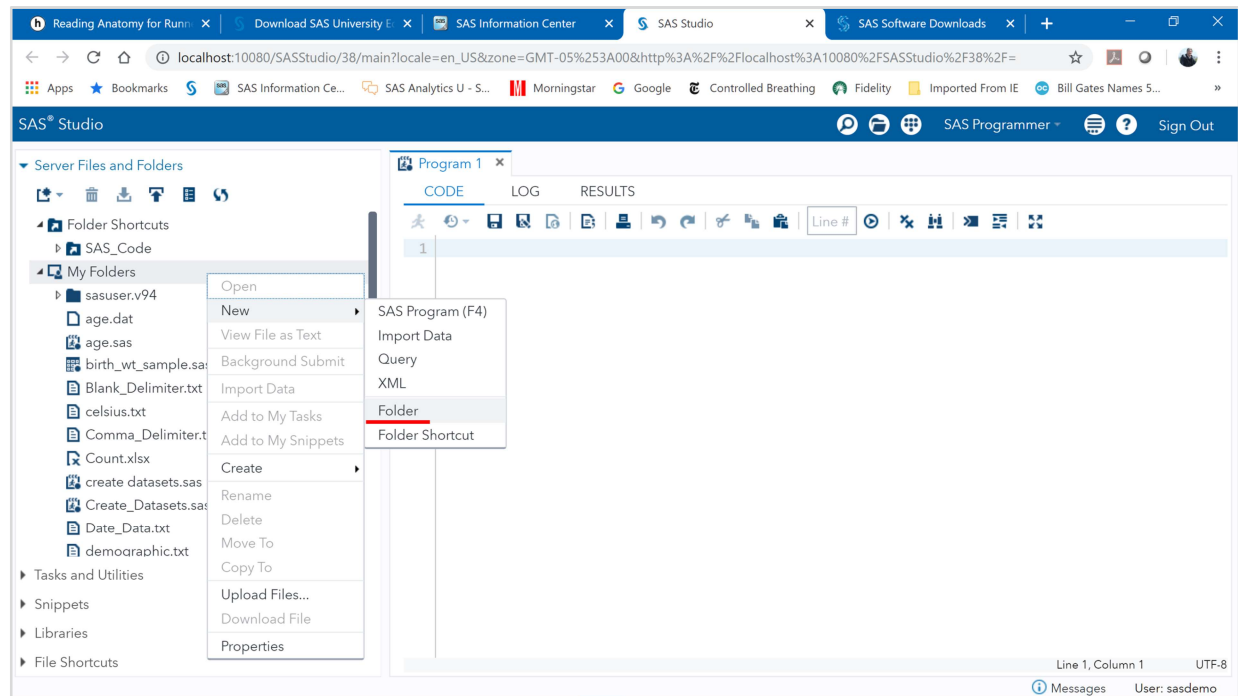
- On the bottom right there are links to the key SAS UE resources:
- The Support link takes you to the SAS Analytics U Communities page – VERY helpful!
- The Installation Documentation link takes you to SAS UE resources page on support.sas.com, which contains videos and tutorials on SAS UE.
- The Frequently Asked Questions link takes you to the SAS University Edition Help Center
- Each of these links will open in a new browser tab so you can refer to them as you use SAS UE.
- Then click Start SAS Studio (or start JupyterLab)
- This SAS Information Center window will stay open in your browser and the SAS Studio application will open in a separate browser tab.



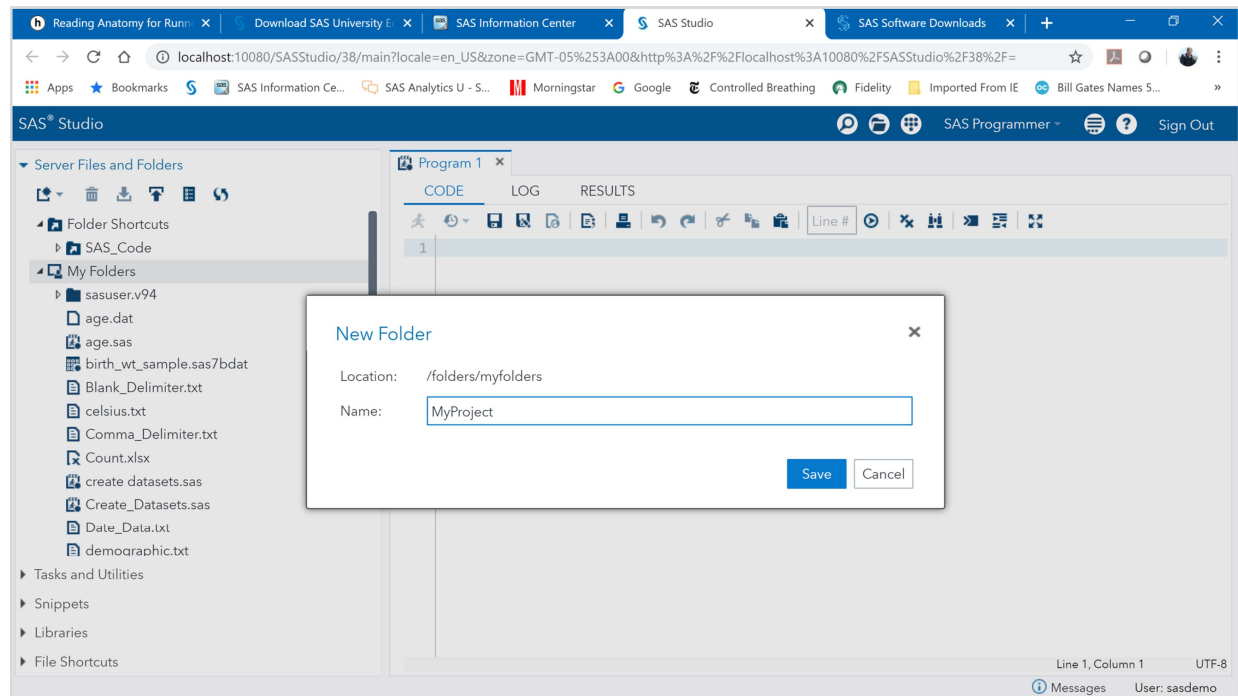
- When it opens, SAS UE looks like this.
- My two shared folders are listed in the left pane.
- I can start writing a new SAS program in the right pane.



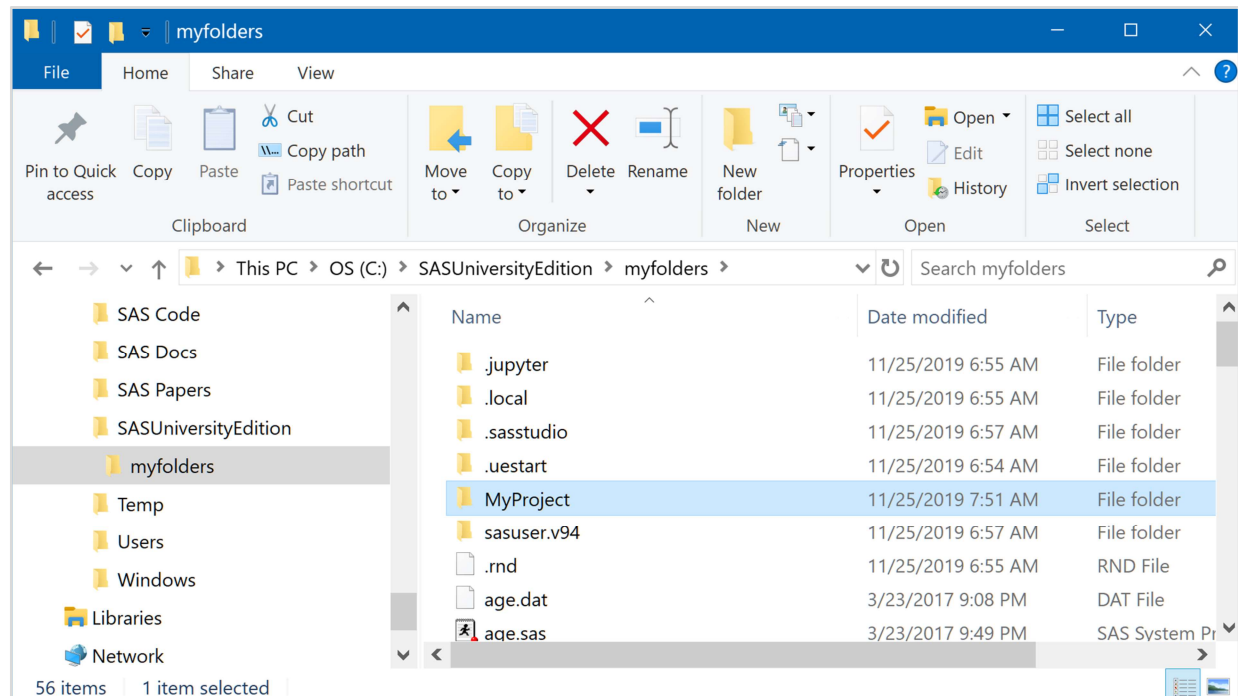
- or I can open an existing program.



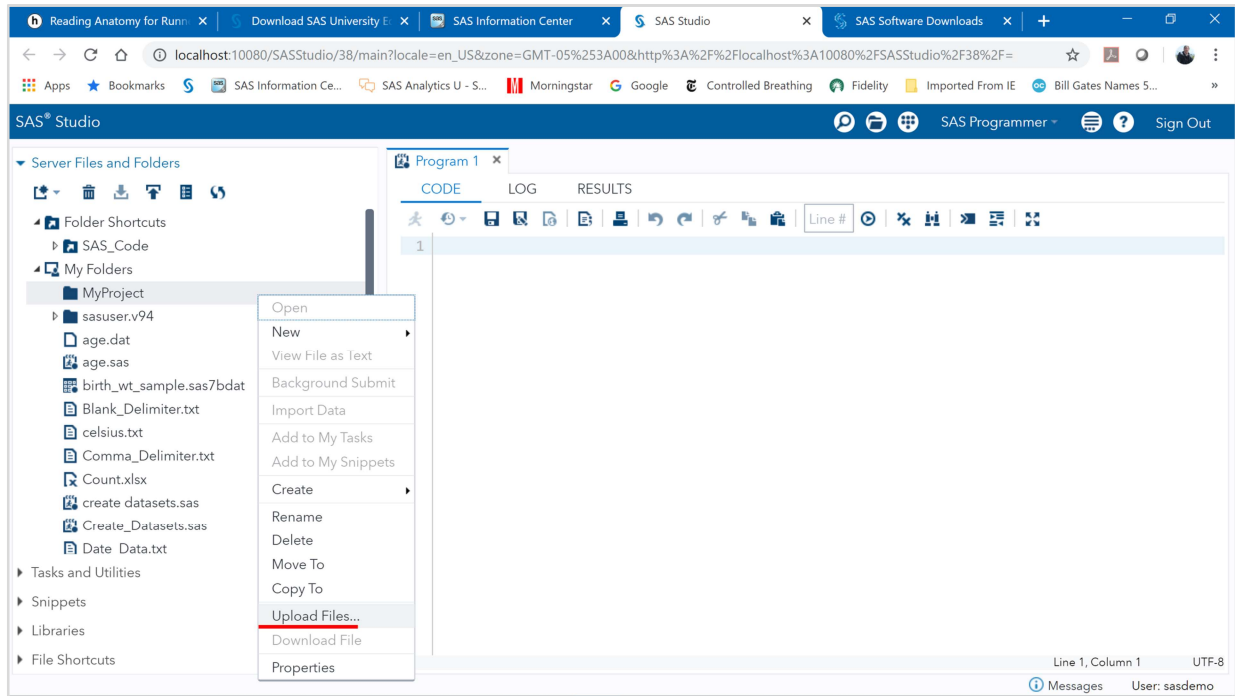
- I can add sub folders to the MyFolders folder.



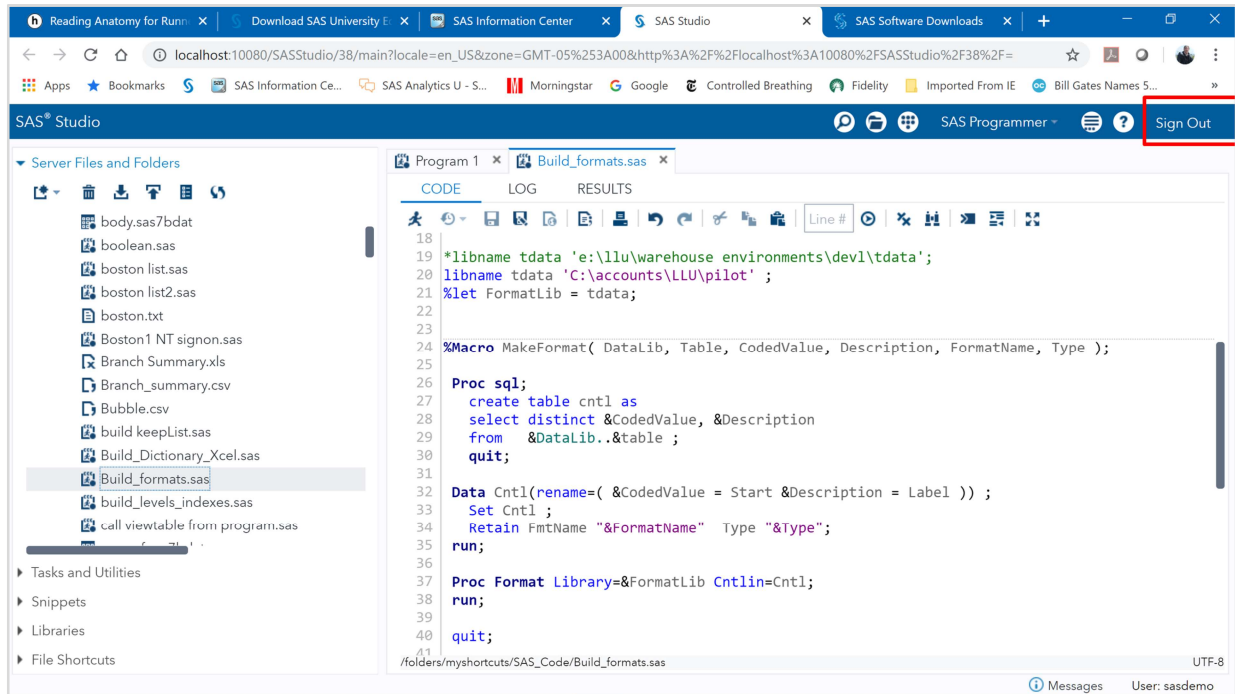
- This allows me to separate programs for different projects.



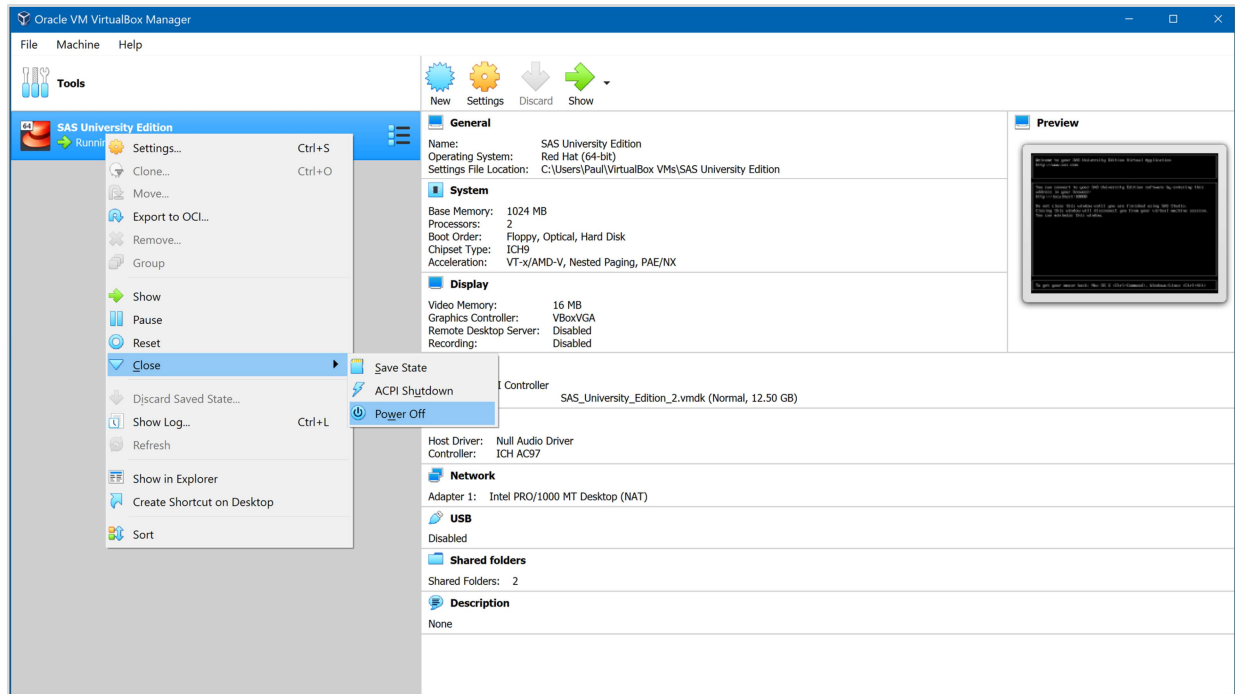
- The MyProject subfolder is created in SAS UE and in my computer's file system.
- I can add files to it either through my computer's file system



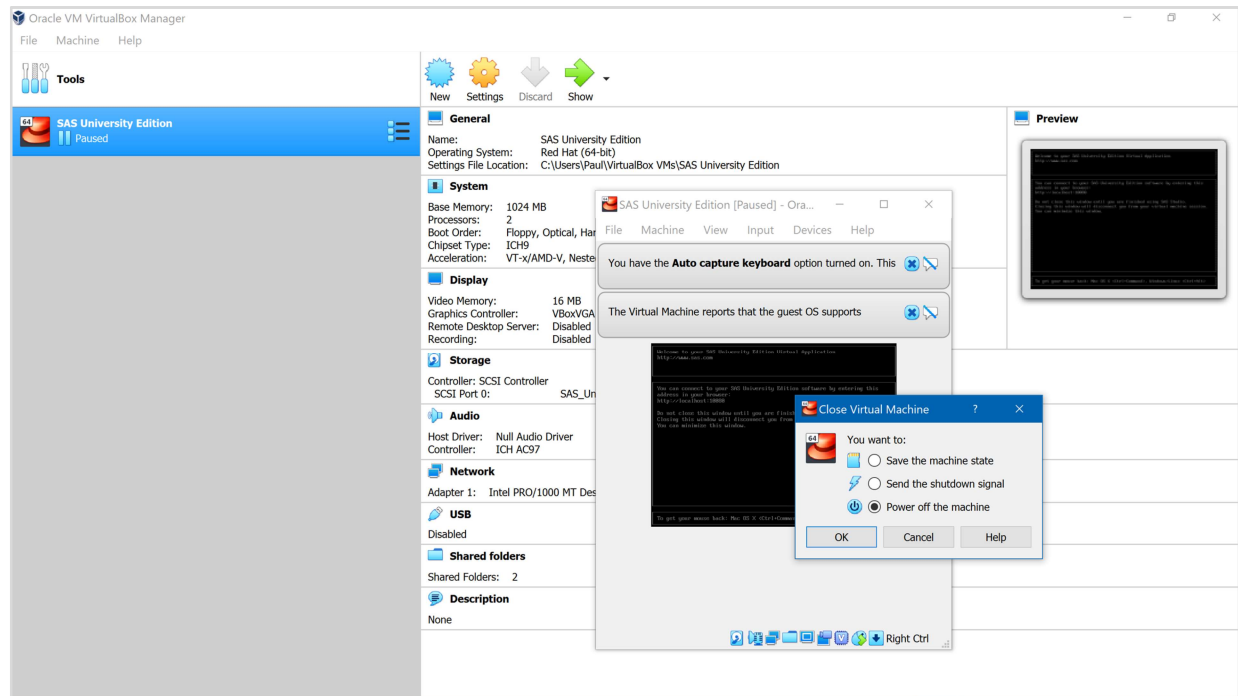
- Or through SAS UE.



- When done working, Sign Out and close the two browser windows.



- Then close SAS UE vApp in VirtualBox by right-clicking on SAS Uev App and either selecting either power off or save state.

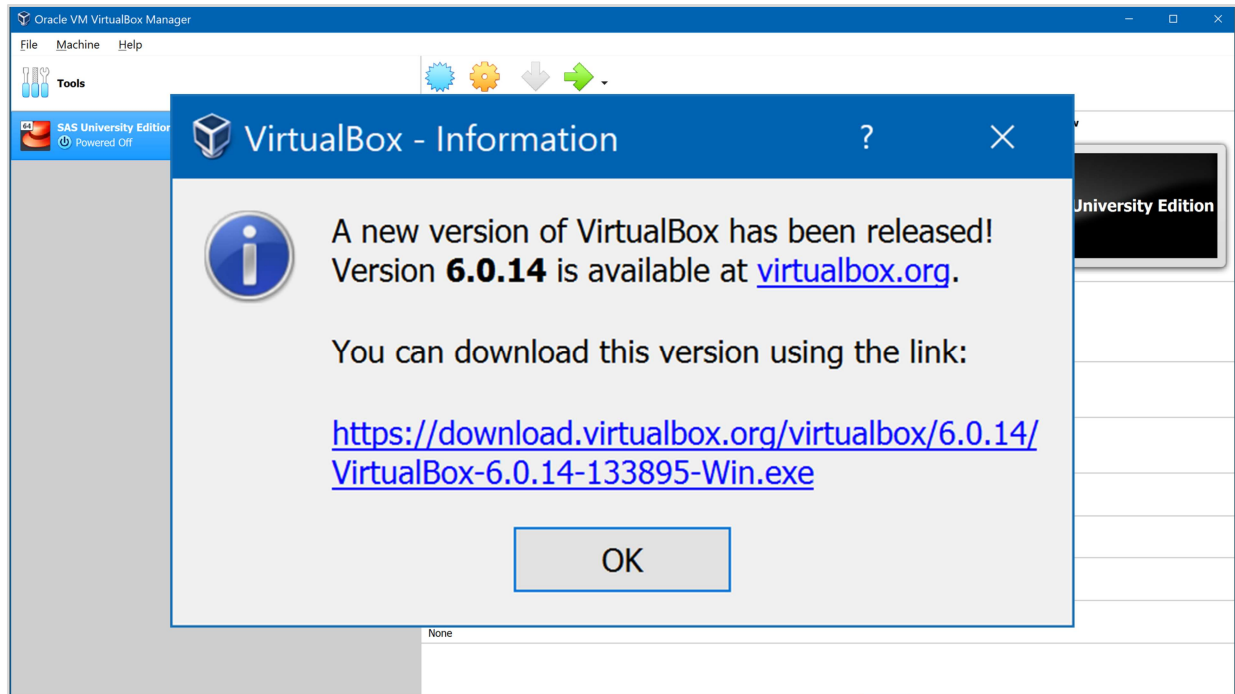


- Or you use the VM's icon window to shut it down.

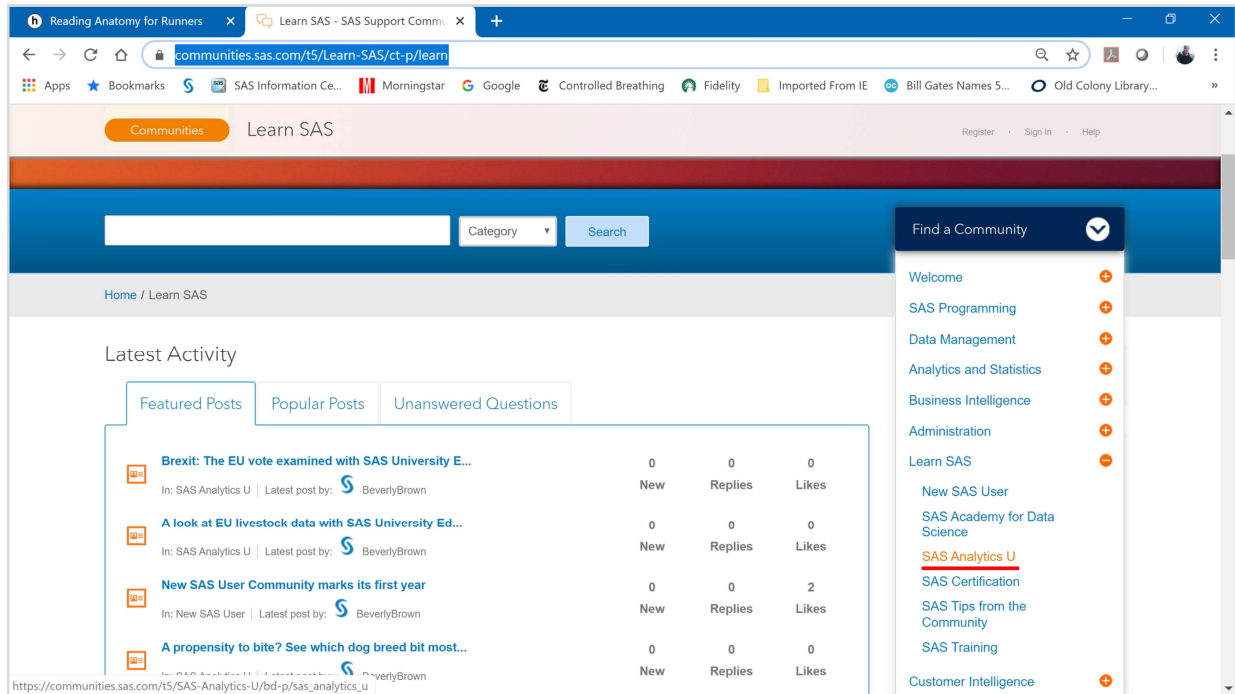
Need Help?

- Using the SAS® University Edition
 - Learn & Support page on support.sas.com
 - SAS Analytics U page on communities.sas.com
 - SAS University Edition Help Center
- Installation and upgrade
 - SAS Analytics U page on communities.sas.com
 - SAS University Edition Help Center
- Technical Support: 1-800-727-0025

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- If you get a message that an update for your virtualization software is available when you start VirtualBox, you can either stay with the current version or upgrade.
- The upgrade will be done “in place” and should not effect SAS UE.



- A great source of information on installing SAS UE is the SAS Analytics U community on communities.sas.com.
- I bookmark this page too.

Key SAS Analytics U community articles on installation and upgrading

- SAS University Edition December 2018 Update
- Updating SAS University Edition: Your guide to success
- If your SAS University Edition Update fails...
- How to uninstall SAS University Edition and re-install (without losing your data)!

Copy and paste these titles into the search box

- Here are the articles I found most helpful in handling installation and upgrade issues.

Installing SAS® University Edition

Thanks to Beverly Brown and Randy Mullis, SAS
University Edition support staff at SAS

Thank you!