

Using SAS at GVSU – Updated August 2021

Important Note: See Professor Kapitula, kapitull@gvsu.edu, or contact IT if you have issues.

The Statistics department office cannot help with SAS installation.

Easy Cloud Based Solution:

SAS On Demand for Academics: https://www.sas.com/en_us/software/on-demand-for-academics.html

Benefits: No software to install, software is up to date. Simple to use. Easy to get started. SAS Studio is a nice programming interface.

Negatives: Do need to upload files or access data off the internet. There is a lot of data preloaded. You need to have internet access.

SAS on Stratus at GVSU : Statistics Majors and Graduate Students and those enrolled in 300-400 level STA classes can get access.

SAS is available on the STRATUS computing system at GVSU. A high performance computing system.

<https://www.gvsu.edu/hpc/guides-and-support-7.htm> has instructions and

<https://hpcsupport.atlassian.net/servicedesk/customer/portal/3/topic/406ef326-b3c7-4244-b7e4-b9270f740789> is really useful for getting started and learning more, and for trouble shooting. <https://www.gvsu.edu/hpc/about-high-performance-computing-at-gvsu-3.htm> gives more information.

SAS is Also on the GVSU Virtual Lab

Access SAS on the GVSU virtual lab, <https://www.gvsu.edu/it/computer-lab-access-268.htm> Note that you need to use the WINDOWS virtual machine. This is a remote log in to the GVSU lab computers. Click on Lab Applications on the Desktop, then STATISTICS, then SAS9.4

If you use SAS EG as your programming interface, click on that, if you prefer using the SAS windowing environment (what some call SAS 9.4, but really all the interfaces access SAS 9.4) click there, or you also can run SAS studio. See <https://blogs.sas.com/content/sastraining/2017/04/12/whats-your-sas-interface/> for more information on the interfaces.

If you have a MAC- SAS is not available for the MAC operating system locally unless you use a Virtual Machine. Your options are below.

1. Use SAS On Demand for Academics https://www.sas.com/en_us/software/on-demand-for-academics.html
2. Use a virtual machine on your Mac and then install SAS locally, using the PC instructions. You would need to contact IT or Prof. Zeitler for help with this, as Prof Kapitula does not have a Mac.
3. See above about Stratus.
4. Access SAS on the GVSU virtual lab, <https://www.gvsu.edu/it/computer-lab-access-268.htm> Note that you need to use the WINDOWS virtual machine, even though you have a MAC. See above.

If you have a PC with Windows Operating System and You Want to Install Your Own Version of SAS Locally

READ ALL OF THE BELOW before you start, this is not an easy process, SAS is complex industrial software and will take up a lot of space on your machine and take a few hours or more to install. That is if things go well. Prof. Kapitula has done it many times and for her it takes about 2 hours if there are not problems, to install a full version of SAS from campus, I usually set aside at least half a day to install it.

What you will need:

1. You will need a flash drive or external hard drive with about 25 G of space.
 2. A Windows computer preferably a newer computer with lots of Ram and Storage, if you have a very basic or old computer you should probably just use one of the options above.
- SAS will run on windows 7 professional, ultimate and enterprise and windows 8 and 8.1 And Windows 10 Home, Pro, Enterprise, and Education. It may run on other windows operating systems as well depending on what options you need.

- You should have at least 2 GB of Ram (ideally more) and 30 GBs (ideally more) of storage free on your PC.
Windows 7 Home Premium, Windows 8, Windows 8.1, and Windows 10: Supported for the Education Analytical Suite (EAS) this is what we have at GVSU
- 3. About an hour of time in a campus computer lab to download the Software Depot. The depot is large so it takes a lot of time to download. So get it started copying and then work on something else for an hour.
- 4. About an hour (or maybe more) of time to install SAS on your computer. This really takes a long time, it is a very large and complex software package, so do not expect to just install it easily like you would other programs. Follow instructions carefully.

Step 1: Copy the SAS software depot to your Flash Drive—Best done on campus

-Put flash drive into PC.

The SAS installation files are stored in a SAS software depot. Note that a SAS software depot is just a directory with all the files one needs to install SAS. The depot is stored on the R-drive.

R:\STUDENT SOFTWARE\SAS 9.4 TS1M7

Copy one the directory above onto your Flash Drive. Copy and paste the whole directory.

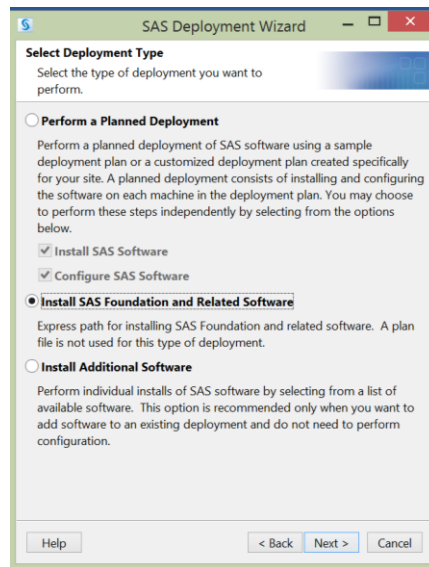
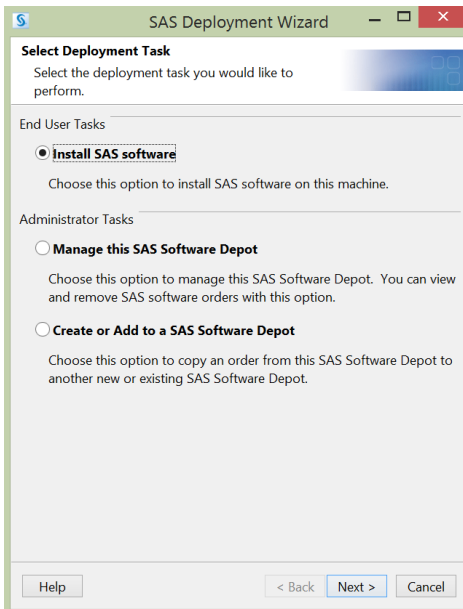
Remember this may take about an hour as it is about 21Gig you are copying.

Remember to remove your flash drive after it finishes copying.

Step 2: Put the flash drive into your computer. Note: the SAS 9.4 TS1M7 folder on your flash drive is what is referred to below as the **SAS 9.4 Software Depot** folder

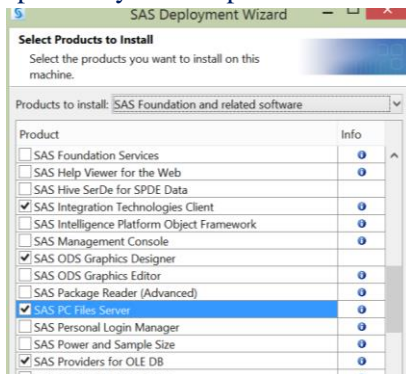
1. In the computer where you want to install. Open the **SAS 9.4 Software Depot** folder.
2. Right-click on “Setup.exe” file in the **SAS 9.4 Software Depot** folder, and click “run as administrator.” If prompted "Do you want to allow the following program to make changes to this computer?", click **Yes**. **OK** to English?
3. Select “**Manage this SAS Software Depot**” and select “**Retrieve Hot Fixes**” >> **Finish**. This will retrieve any updated hot fixes from SAS and update your SAS Software Depot. If you get an error when you run this it means things are fine, so do not worry about it and go to step 4.
4. Right-click on “Setup.exe” file in the **SAS 9.4 Software Depot** folder, and click “run as administrator.” Say yes if you are asked if you really want to make changes. **Remember: It may take an hour or more to install SAS.** Lots of waiting is normal. If on the screen below you can’t see “next” enlarge the window. Click next.

5. **Select Install SAS software, and Install SAS Foundation and Related Software for a new install**



6. Below is advice on what to select but depending on your deployment and computer you may be asked different questions, I tried to provide answers to all possible questions but if you have a problem ask Prof. Kapitula, kapitull@gvsu.edu

Select Products to Install: Here you will probably go with the default except you should add a click for **SAS PC File Server** (see below), although if you do not need Enterprise Miner or Text Miner unclick those ones, typically only graduate students or students taking multivariate statistics use those products and they take up a LOT of space on your computer.



7. The next window should pick the kind of SAS you should install based on the type of computer you have, I have 64-bit so for me that is checked. Then click Next.
8. Select SAS Foundation Products – Usually you can go with the defaults here, unless you have some things you know you do not want., you also can just go with defaults, if you want to make maps and import PC files, make sure the below SAS/ACCESS Interface to PC files is checked. The SAS/GRAPH obsolete maps are optional but if you do not click that the polygon files stored in MAPS will not be there anymore. Here is what I have:
- Base SAS
 - GfK GeoMarketing CITIES Maps for SAS/GRAPH
 - GfK GeoMarketing WORLD Maps for SAS/GRAPH
 - SAS Enterprise Miner - **if you need enterprise miner***
 - SAS Integration Technologies
 - SAS Scalable Performance Data Client
 - SAS Text Miner – **if you need text miner***
 - SAS/ACCESS Interface to PC Files
 - SAS/ASSIST
 - SAS/CONNECT
 - SAS/ETS
 - SAS/GRAPH
 - SAS/GRAPH Obsolete Maps Data
 - SAS/IML
 - SAS/OR
 - SAS/QC
 - SAS/SHARE
 - SAS/STAT

*Note: Do not install Enterprise Miner and Text Miner unless you know you need them.

9. Leave 64-bit selected if it is available, otherwise leave 32 bit selected if that is what is selected. >> Next>>
10. **Specify SAS installation data/license file**, it should end in .txt. something like:
SAS94_9BJFW_70132566_Win_X64_Wrkstn.txt it should be found in the sid_files directory in the Software Depot directory if you installed 64 bit sas on windows you would have the one with a 64, if 32 bit the one without. If you can't find a working license file will need to contact IT or contact Prof. Kapitula for help. >>Next>>
11. **(Clear All) for language unless you want something other than English** >> next >>
12. (A typical) Deployment directory for **SAS Graphs Java Applet: C:\program files\SASHome** You may need to create this directory if it does not exist. Do not put it on a network drive, or in My documents, especially if you are faculty.>>Next>>
13. **For SAS document conversion**, just go with what is there, >>Next>>
14. **For SAS studio basic**, you can go ahead and leave it checked if you might use SAS studio, SAS studio is an interface for running SAS through a web browser., keep clicking or you can just leave it unclicked for now if you have no interest in it, you can do it later if you find you need it. >>Next>>
15. **Default Product for SAS File Types** (you may not get this with the subset, or you may only see two options) When you double click a data file, it will be opened with one of three SAS products. I like SAS Enterprise Guide so I check that.

You may also be asked the following depending on your deployment:

- If asked about Ports, use the default Ports provided.
- (A typical) **Deployment directory for SAS Graphs Java Applet: C:\program files\SASHome**
- **URL for SAS environments:** Leave the blank and click Next
When you see a message “**an unexpected error has occurred**. Would you like to continue with.....?”
 - **Yes to ALL**
 - You probably don't need these.
- After completion of installation, Start >> Down arrow >> Click SAS 9.4 (English) or if you have windows 8, SAS 9.4 can be found under Applications.
- (A typical) **Deployment directory for SAS Graphs Java Applet:**
 - **C:\program files\SASHome** You may need to create this directory if it does not exist. Do not put it on a network drive, or in My documents, especially if you are faculty.>>Next>>
- For SAS document conversion, just go with what is there, >>Next>>

16. It will check your system, if there are no problems go ahead and click next. If you do not have enough space you will need to free up space on your hard drive or you may not have a computer capable of running SAS.
17. Click Start
18. Do some meditation, stretch, or drink some coffee, as this may take awhile. I do not recommend doing anything else on your computer while SAS installs.
19. After completion of installation, Start >> Down arrow >> Click SAS 9.4 (English) or if you have windows 8 or later, SAS 9.4 can be found under Applications.
Below is especially useful for faculty

If there is an error message regarding SASUSER directory, follow the instruction below.

SASUSER issues: To initialize the SAS kernel

- (1) Create a folder “My SAS Files” in the C-drive. In other words, the file directory is C:\My SAS Files.
- (2) **Run Notepad as an administrator** (right click on notepad application, click run as administrator)
- (3) Open the file, “sasv9.cfg” below using Notepad in the following directory.
C:\Program Files\SASHome\SASFoundation\9.4\nls\en\sasv9.cfg

Note that "sasv9.cfg" may appear when the file type is changed to All Files.

- (4) Use EDIT to find the word "SASUSER" or "My SAS FILES" and correct the directory of the location of MY SAS FILES and SASUSER as follows.

```
-SET MYSASFILES "C:\My SAS Files"
```

```
-SASUSER "C:\My SAS Files"
```

Note: The Double Quotes may not copy correctly if you copy and paste the code fixes above, and you will get a different error when you run SAS if that is the case after making the fix, so if you try the fix above and still get an error when you try to run SAS, go back in and delete and retype the double quotes.

- (5) Save and Exit.

- (6) Run SAS 9.4

License files are in the directories but if you get an error that you have an outdated license or no license file found, contact IT or Prof Kapitula for a SAS license.

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