

SAS[®] Download Manager for z/OS

Overview

The SAS Download Manager is a client used to access the SAS software repository in order to download selected SAS orders. It is not used to actually install your SAS software order. The SAS Download Manager, once fully extracted, requires approximately 16 to 150 MB of space to run.

Note that you have two options—you can either use the SAS Download Manager with a graphic interface or you can run in a headless mode. Both options are described below.

Downloading the SAS Download Manager for z/OS

The z/OS user can use the SAS Download Manager to create a SAS Software Depot. The install of SAS software on a system requires access to a depot either on a local file system or on a network-accessible file system via an NFS mount. If the depot is created in a network accessible location, then other machines, including z/OS, can run their respective deployments directly from it. Likewise, if the depot has been created by another machine (such as Windows or UNIX) in a network location that is accessible by z/OS, then there is no need to run the SAS Download Manager directly on z/OS. If the z/OS machine does not have access to a network file system, then the SAS Download Manager can be run on z/OS.

Use the following steps to put your z/OS executable(s) in place:

1. Use a Web browser on Windows or UNIX to download the z/OS version of the SAS Download Manager from SAS.
2. If the download location is not NFS-mounted to the z/OS system, transfer the downloaded file(s) to the UNIX file system on z/OS via binary FTP or by using the SAS Software Depot Copy Utility. For information about using the copy utility, see the “Moving Between Non-Shared Network Locations” section of the *SAS Deployment Wizard and SAS Deployment Manager 9.3: User’s Guide*, located at <http://support.sas.com/deploywizug93.html>.

Using the SAS Download Manager with Graphic Interface

Note: *The SAS Download Manager writes to many of the same files as the SAS Deployment Wizard. Therefore, instances of the SAS Download Manager and the SAS Deployment Wizard cannot be run at the same time.*

You must have Java installed on the system where the SAS Download Manager is run, and you must have an X11 display server available to display the dialogs.

A typical download can require 40 minutes or more of CPU time. This time varies widely depending on the size of your order, the speed of your machine, and the speed of your connection. When the download fails due to a timeout, you can restart the download and it will resume from the point at which it stopped during the previous invocation.

If you execute the download manager from an rlogin or putty session, to increase the amount of CPU time available to the download process you must set the CPUTIMEMAX in the userid's OMVS segment to at least 1500. Remember that this user ID also needs a setting of at least 800M in the ASSIZEMAX parameter in the OMVS segment.

The SAS Download Manager uses a temporary space while it is running. You can direct temporary storage away from the default location of /tmp by setting the system variable TMPDIR before invoking the SAS Download Manager. The command might look something like this:

```
export TMPDIR=/directory/with/atleast100M
```

Before using the SAS Download Manager to download your full SAS software order, ensure that you have your Order Number and SAS Installation Key at hand, since the SAS Download Manager requires them. The Order Number and SAS Installation Key are included on your Software Order Email. When you are ready, use the following process to download your SAS software order.

1. Set the execute bit using the following command on the file you downloaded from the SAS Download Manager site:

```
chmod +x <file name>
```

Issue the following command to start the SAS Download Manager:

```
./<file name>
```

Available command line options are described in the "Command Line Options for Graphic User Interface" section that follows.

A message appears that reads "Uncompressing SAS Download Manager." When the files are fully uncompressed, the **Choose Language** page opens.

2. At the **Choose Language** page, select the language in which you would like to run the SAS Download Manager. Select **OK**.
3. If the SAS Download Manager is unable to automatically detect your proxy settings, you will be prompted for your proxy information. If you do not know your proxy settings, contact your system administrator to obtain your HTTP proxy server, port number, and login information.
4. The **Order Information** page opens. Enter the Order Number and SAS Installation Key into the appropriate fields. Select **Next** to continue.

Note: *It is very important that you locate your original software order e-mail for the correct order and SAS installation key to download the software. You **cannot** use a renewal order number. The renewal order is a license update and it cannot be used to download software. If you cannot locate your original software order e-mail, contact your SAS Installation Representative or SAS Contracts at the following URLs:*

<http://support.sas.com/adminservices/contact.html>
<http://support.sas.com/adminservices/sasrep.html>
<http://support.sas.com/techsup/license>

5. The **Specify Order Details** page opens with the **Order Number** and **SAS Products to Install** boxes populated from the SAS database. Review the products in your order. If the product list is not what you expect, ensure that you have the correct Order Number. Select **Back** to enter a different Order Number.

If the product list is correct, you can enter a name for the order in the **Order Description** box. The **Order Description** box will help you to differentiate between multiple orders.

When you are satisfied with the contents of this page, select **Next**.

6. The **Specify Order Options** page opens. This page allows you to choose between downloading the entire order or subsetting the order by a number of parameters, including operating system, SAS Foundation products, and language. If you choose not to subset the download, select **Include complete order contents**. If you choose to refine the list of software you are going to download, select **Subset order contents**, then select at least one parameter you want to use to subset. Click **Next** to continue.

Note: If you are downloading software older than SAS 9.3, the subsetting option will not be available and you should skip to step 8.

7. If you chose to subset your download in the previous step, then at least one of the following pages will open. If you chose more than one parameter, clicking **Next** will take you to the next parameter you chose.

- **Subset by Platform** – The page displays the operating systems that any part of your software order can be installed. Select at least one operating system that you want to download software for. Click **Next** to continue.
- **Subset SAS Foundation Products** – The page displays the SAS Foundation products in your software order. Select at least one SAS Foundation product to be downloaded. Note that Base SAS cannot be deselected. Click **Next** to continue.

*Note: If you started the SAS Download Manager with the `-subsetclients` command line, this option reads as **Subset by Product**.*

- **Subset Product Languages** – The page displays all the languages that any part of your software order can use. Select at least one language that you want your software to use. Note that English and Unicode Support cannot be deselected. Click **Next** to continue.

8. The **Specify SAS Software Depot Directory** page opens. Enter the location you would like your SAS software order downloaded to in the text box. Your software order will be delivered as a SAS Software Depot. You can use the **Browse** button to search through your system for a place to put your software order. Once you have entered the location for your software order, click **Next**.

Note: If you have already created a 9.3 SAS Software Depot, SAS strongly recommends using the same location for all subsequent SAS 9.3 downloads. However, you cannot add SAS 9.3 products to a depot that contains SAS 9.2 products.

9. The **Final Review** page opens with a pane that summarizes the decisions you have made. Review that pane, and if anything is incorrect, use **Back** to change your responses. When the pane correctly reflects what you want to download, click **Download** to start the process.

As the SAS Download Manager retrieves your software order, the progress bar will show how much remains to be downloaded. Note that the SAS Download Manager retrieves a compressed file and extracts it as part of the download process.

10. When the SAS Download Manager has downloaded and extracted your SAS software order, the **Download Complete** page opens. Click **Finish** to close the application.
11. The instructions that you need to install your software are documented in the Software Order E-mail that you received.

If you download using the graphical user interface and you invoke the SAS Download Manager from OMVS, TSO settings will control the region and timeout values. If the command times out, the USS shell will report an Exit code of 157, and the `esdclient.log` file, located at `/u/userid/.SASAppData/SASDeploymentWizard/esdclient_YYYY-mm-dd-hh.mm.ss.log` will show something similar to the following:

```
CEE5230S The signal SIGXCPU was received.
```

Command Line Options for Graphic User Interface

Subsetting

One of the ways you can subset an order being downloaded is “by Foundation product”; that is, by SAS products usually installed on a server, such as SAS/GRAPH and SAS/STAT. The `-subsetclients` command line changes that dialog so that you can subset by client products that are not configurable. If you use the `-subsetclients` command line, the “by Foundation product” choice becomes “by product.” Also, note that if you use this command line, **only** non-configurable client software will be listed in this dialog.

Usage

```
--subsetclients
```

Note that the command line consists of two dashes followed by `-subsetclients` with a space between them.

Example

```
./<file name> --subsetclients
```

Using a Text-Based Interface

If you do not wish to rely on an X11 server, you can use the SAS Download Manager in console mode, allowing for the use of a headless system. If you use console mode, each dialog used in the installation of your SAS software is represented in text.

Note: *If you are instructed to enter a sequence that includes angle brackets, such as “Enter <q> to quit”, you must include those symbols.*

The `-console` command line option can be used with other options at the same time, such as recording or playing back a response file.

The `-console` command line option also supports two options to specify the size of the output of the SAS Download Manager. Use `-pagesize #` to specify the number of lines to display before pausing the output and `-pagewidth #` to specify the number of characters to display on a line before wrapping to another line. Note that `-pagesize` and `-pagewidth` will not work with any other command line option.

Usage

```
--console [-pagesize #] [-pagewidth #]
```

Example

```
./<file name> --console -pagesize 20 -pagewidth 50
```

Using the Headless SAS Download Manager

The file you downloaded from the SAS Download Manager Web site can be used to run the application in batch in order to download your order without using a GUI interface. In this headless mode, the SAS Download Manager uses a script that asks questions similar to the SAS Download Manager with graphic interface and creates two files from your answers. The first file is a response file for the SAS Download Manager, and the second file is a template for a JCL job which can launch the SAS Download Manager in batch mode.

A typical download can require 40 minutes or more of CPU time. This time varies widely depending on the size of your order, the speed of your machine, and the speed of your connection. When the download fails due to a timeout, you can restart the download and it will resume from the point at which it stopped during the previous invocation.

If you download using headless mode, the download is done in a batch job. The job as created for you has a REGION of 1024M and a TIME value of 1440 (24 hours). Please do not change the region size, and use caution when reducing the time value.

Before using the SAS Download Manager to download your full SAS software order, ensure that you have your Order Number and SAS Installation Key at hand, since the SAS Download Manager requires them. The Order Number and SAS Installation Key are included on your Software Order Email. Once you are ready, use the following process to download your SAS software order.

1. Set the execute bit using the following command on the file you downloaded from the SAS Download Manager site:

```
chmod +x <file name>
```

Issue the following command to start the SAS Download Manager, including the command line option:

```
./<file name> -- -batch
```

Note that the command line consists of two dashes followed by `-batch` with a space between them. Other command line options are described in the “Command Line Options for Headless SAS Download Manager” section that follows.

A message opens that reads “Uncompressing SAS Deployment Wizard.”

2. The script asks a series of questions. Default answers are provided in square brackets, and hitting **Enter** selects them.
 - a. The script asks for your Order Number and SAS Installation Key. They can be found in your SAS Order Email.
 - b. The script asks for the location for the depot. You can either give the location of an existing depot or the location of a new one. If you are creating a new depot in an existing

directory, you must use an empty directory. The script will also ask if you want to create the directory you name if it does not already exist.

- c. The script asks for the location of the file you downloaded. Enter the full path, including the opening slash (for example, `/usr/local/sas/<file name>`).
 - d. The script asks for a version of Java that must be 1.5.0 SR5 or greater, and be 31-bit only. Enter the full path, including the opening slash (for example, `/usr/lpp/java/J5.0/bin/java`).
 - e. The script asks whether your site requires the user of an internet proxy to access the internet. Nearly all business sites use proxies, but they come in many forms with different kinds of configurations. If you answer "yes," the script will also ask for the hostname, port, and authentication information for the proxy. If you do not know your proxy settings, contact your system administrator. When running in headless mode the SAS Download Manager does not have the ability to test your answers as you enter them, so you won't know if the proxy information you provide will work until you can run the batch job.
3. Once all the questions after been answered, two files are created in the home directory of your user ID:
 - `orderfile.ascii`: the response file needed by the SAS Download Manager to provide all the information you just entered so the SAS Download Manager can run in batch. Note the file is in ASCII format, so if you want to view it, it will have to be converted to another file format.
 - `dmlmjob.jcl`: the JCL job submitted to the system to run SAS Download Manager. You will need to modify the job card of this file to adapt it to the specifics of your z/OS system. You will also have to copy this file from OMVS to MVS.
 4. **(Optional)** The SAS Download Manager uses a temporary space while it is running. You can specifically define the temporary space you want to use by adding a `TMPDIR=<directory location>` entry and the location for that space after `HOME=` in the `dmlmjob.jcl` described in step 3. However, you should use `TMPDIR=` with caution since the temporary space being used is deleted when the SAS Download Manager is closed.

Usage

```
TMPDIR=/<directory location>
```

Example

```
HOME=/u/userid  
TMPDIR=/mybigdir
```

5. **(Optional)** Copy the JCL to a PDS using the command:

```
cp /u/userid/dmlmjob.jcl '//userid.jobs.jcl(DLMJOB)'
```
6. Submit the job. You'll then need to monitor the results. If the job runs quickly, then likely something went wrong. Check the logs, located at `$HOME/.SASAppData/SASDeploymentWizard`, and rerun the SAS Download Manager with any necessary changes.
7. A SAS Software Depot will be downloaded to the location you specified under UNIX system Services or a network accessible drive. The instructions that you need to install your software from this depot are documented in the Software Order E-mail that you received.

Deleting the SAS Download Manager

When you are using the SAS Download Manager, it is not actually installed, but is running from a temp directory. When the SAS Download Manager is closed, that temp directory is cleaned up and no files remain on your machine except the original downloaded executable. To completely remove the SAS Download Manager, delete that executable.

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