

SAS Programming- Using SAS® for Windows in Batch Mode (Oct 2022)

Benefits of Using SAS® for Windows Batch Mode:

- Scheduling the date/time for SAS programs to be executed
- Submitting large, computationally intensive SAS programs
- Submitting SAS programs with significant amounts of output written to the log and output

Ways to Run SAS in Batch Mode

There are two (2) Ways to Submit a Batch Job and Manage Output:

- Immediate SAS Job Execution
- Schedule a Date/Time for SAS Job Execution

Important Points When Running SAS® in Batch Mode

Batch programs run SAS® in the background in the Windows environment. When running in Batch Mode, the SAS windows such as the Editor, Log and Output windows are not displayed on the screen. Results are written directly to log (.log) and output (.lst) files for later viewing. Performance may improve to execute a SAS program since write the output to the screen for display is avoided.

The program may start executing immediately or placed in a queue behind other Windows jobs. Batch mode facilitates scheduling Batch jobs as needed. Off peak hours processing may help in better performance and run time.

Two Ways to Submit a SAS Batch Job and Manage Output

1. Executing the Job Immediately In Windows Explorer. This SAS program file should have a .sas extension.

- Right-click on the SAS program you want to submit.

Note: *The program Output (.lst) and Log (.log)files will be located in the same folder as the sas program.* Consult SAS command options like -ALTLOG or -OUT to send the logs and .LST to desired location. For more details an oldie but good info is <https://v8doc.sas.com/sashtml/win/zcoutput.htm>

2. Scheduling a SAS Batch Job to Run at a Specific Time

This method uses the Windows Task Scheduler to schedule a time and date for the batch job to be executed.

For Windows 7 / Windows 10 / windows 11:

A batch file is a file which can be used to execute jobs in Windows. It can be used to run one or multiple SAS jobs. There are Three (3) requirements:

1. The path of your SAS software (sas.exe) on your computer

2. The path to the location of the SAS program you wish to execute.
3. (Optional) A line for each SAS program to execute using Windows Scheduler.

Step 1. Create a batch file (which has a .bat extension)

Go to the Windows Start Menu -> All Programs -> Accessories-> Notepad

Each SAS job on one line:

1. The path of the SAS software (with quotes around the path)
2. -SYSIN
3. The path of the SAS program which you want to execute using Windows Scheduler.
4. Save the batch file as .BAT type file.

The batch file content to run a SAS program called MysasProg1.sas using SAS 9.4 will look like this:

```
"C:\Program Files\SASHome\SASFoundation\9.4" -SYSIN "C:\myjobs\MysasProg1.sas"
```

The path of SAS software can be different for different installations.

Note: The path above is the default location for SAS 9.4 installs.

To submit multiple SAS programs in batch mode, the batch file will have one row like above for each of SAS programs (changing the path to the location of each program).

For example, the batch file content to run two SAS programs called MysasProg1.sas and SMysasrog2.sas using SAS 9.4 will look like this:

```
"C:\Program Files\SASHome\SASFoundation\9.4" -SYSIN "C:\myprogs\MysasProg1.sas"  
"C:\Program Files\SASHome\SASFoundation\9.4" -SYSIN "C:\myprogs\MysasProg2.sas"
```

Step 2: Navigate to Windows Start Menu -> (in Search) Type Task Scheduler

Task Scheduler

File Action View Help

Task Scheduler (Local)

Task Scheduler Library

Task Scheduler Summary (Last refreshed: 10/13/2022 1:52:58 PM)

Overview of Task Scheduler

You can use Task Scheduler to create and manage common tasks that your computer will carry out automatically at the times you specify. To begin, click a command in the Action menu.

Task Status

Status of tasks th... Last 24 hours

Summary: 138 total - 0 running, 136 succeeded...

Task Name	Run F
.NET Framework NGEN v4.0.3031...	
.NET Framework NGEN v4.0.3031...	
Adobe Acrobat Update Task (last...	
AdobeGCIInvoker-1.0 (last run su...	

Last refreshed at 10/13/2022 1:52:58 PM Refresh

Actions

Task Scheduler (Local)

- Connect to Another Computer...
- Create Basic Task... 1
- Create Task...
- Import Task...
- Display All Running Tasks
- Disable All Tasks History
- AT Service Account Configuration
- View
- Refresh
- Help

Create Basic Task Wizard

Create a Basic Task 1

Create a Basic Task Use this wizard to quickly schedule a common task. For more advanced options or settings such as multiple task actions or triggers, use the Create Task command in the Actions pane.

Trigger

Daily

Action

Start a Program

Finish


Name: MySAS Batch 2

Description: A batch file that contains multiple SAS jobs run at different time for batch processing 3

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< Back 4 Next > Cancel

Create Basic Task Wizard

 Task Trigger

Create a Basic Task

Trigger

Monthly

Action

Start a Program

Finish

When do you want the task to start? 1

Daily

Weekly

Monthly


One time

When the computer starts

When I log on


When a specific event is logged

Select schedule



< Back Next > Cancel 2

Create Basic Task Wizard

 Monthly

Create a Basic Task 1

Trigger

Monthly

Action

Start a Program

Finish


Start: Synchronize across time zones

Months:

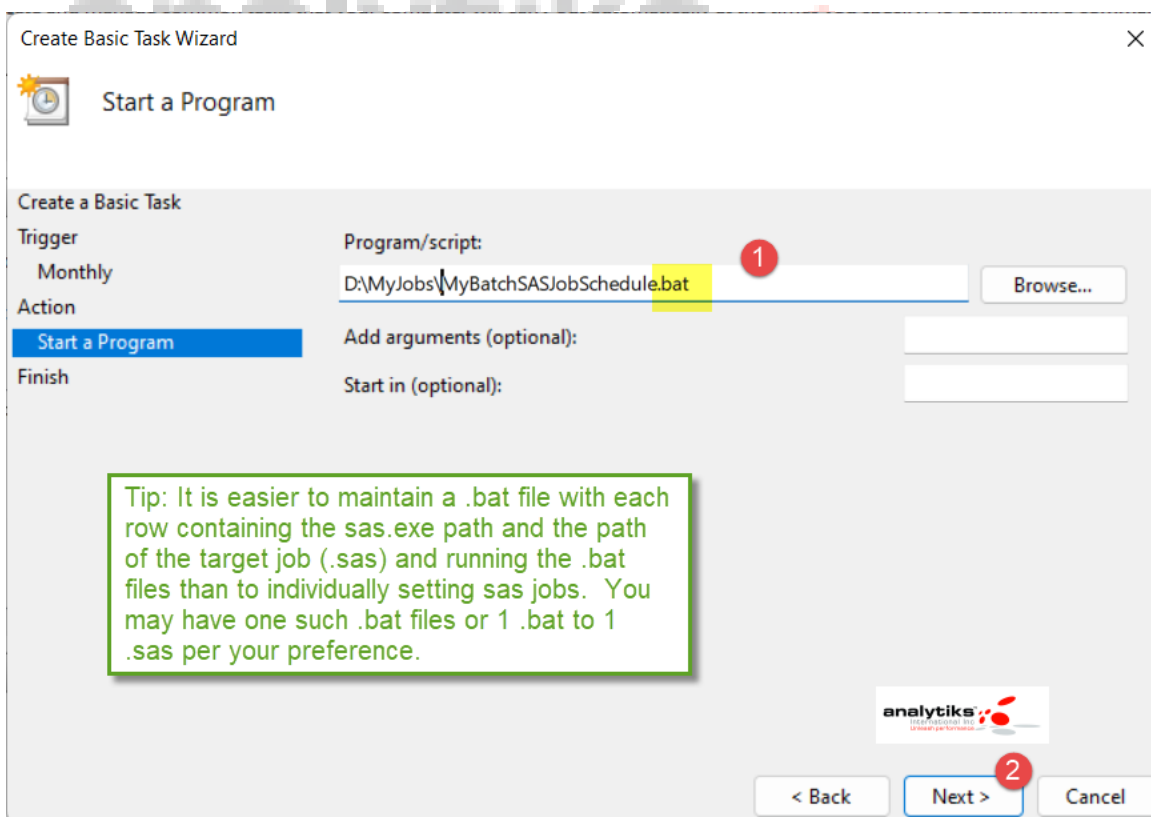
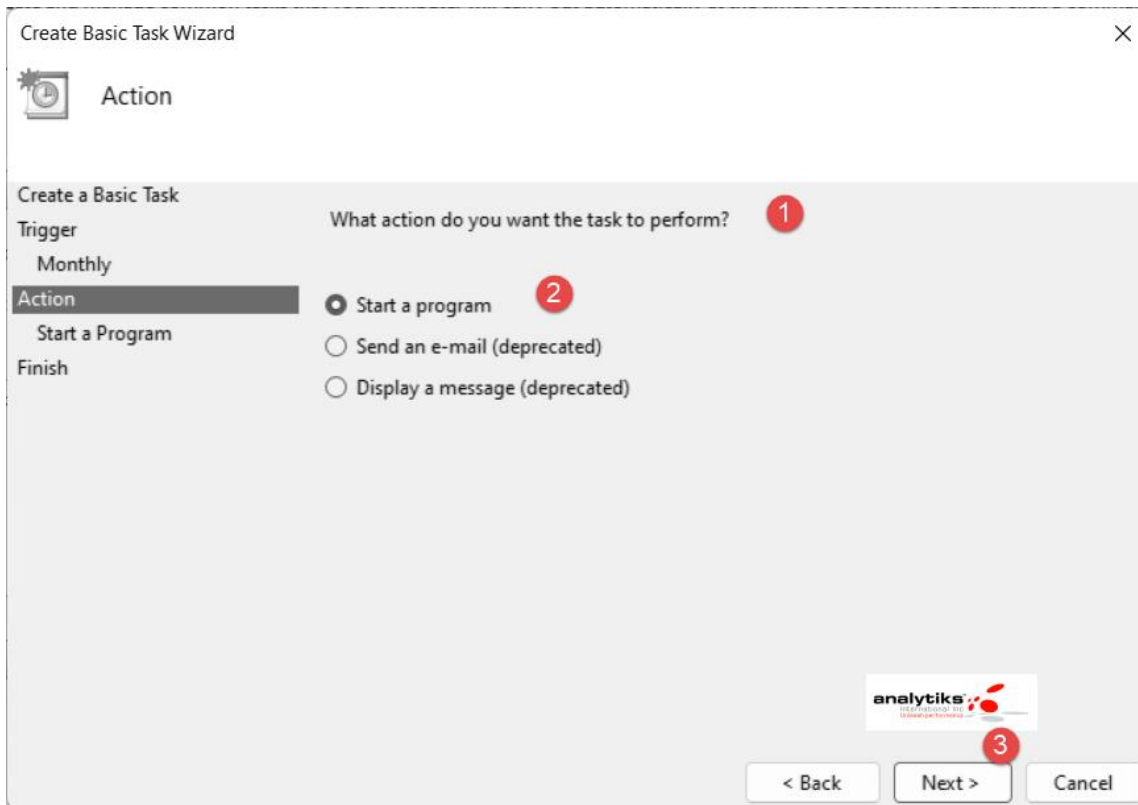
Days:

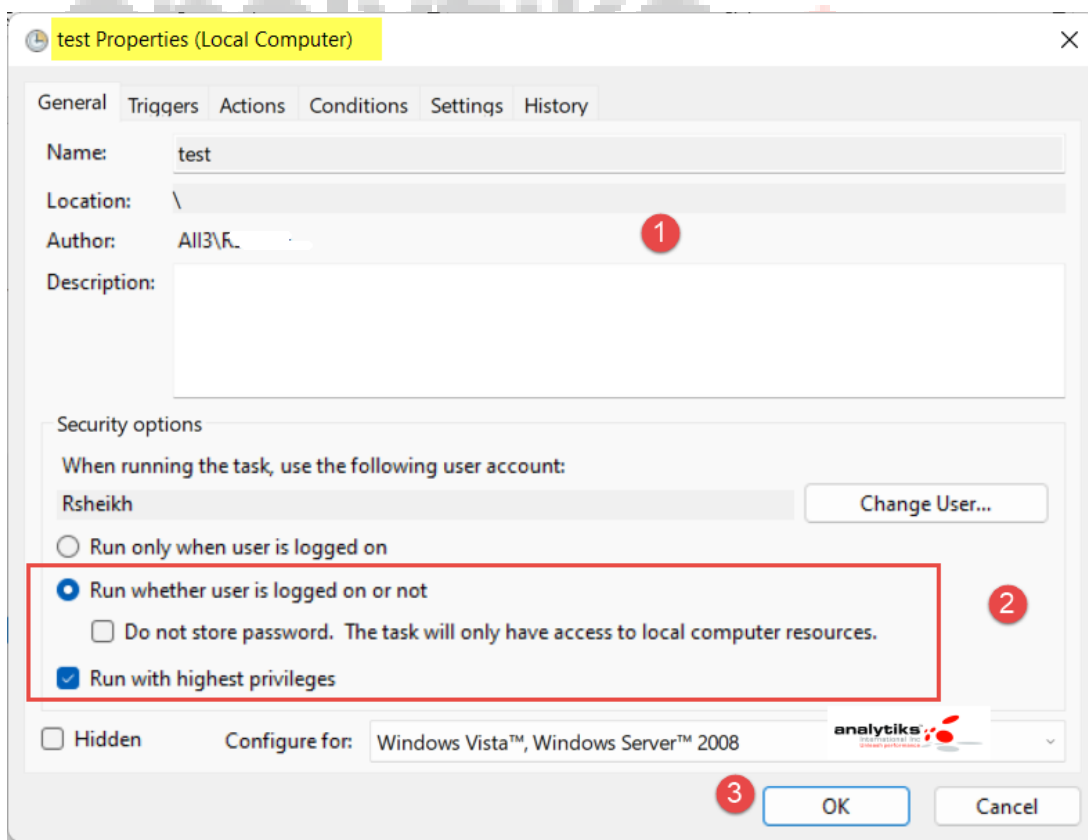
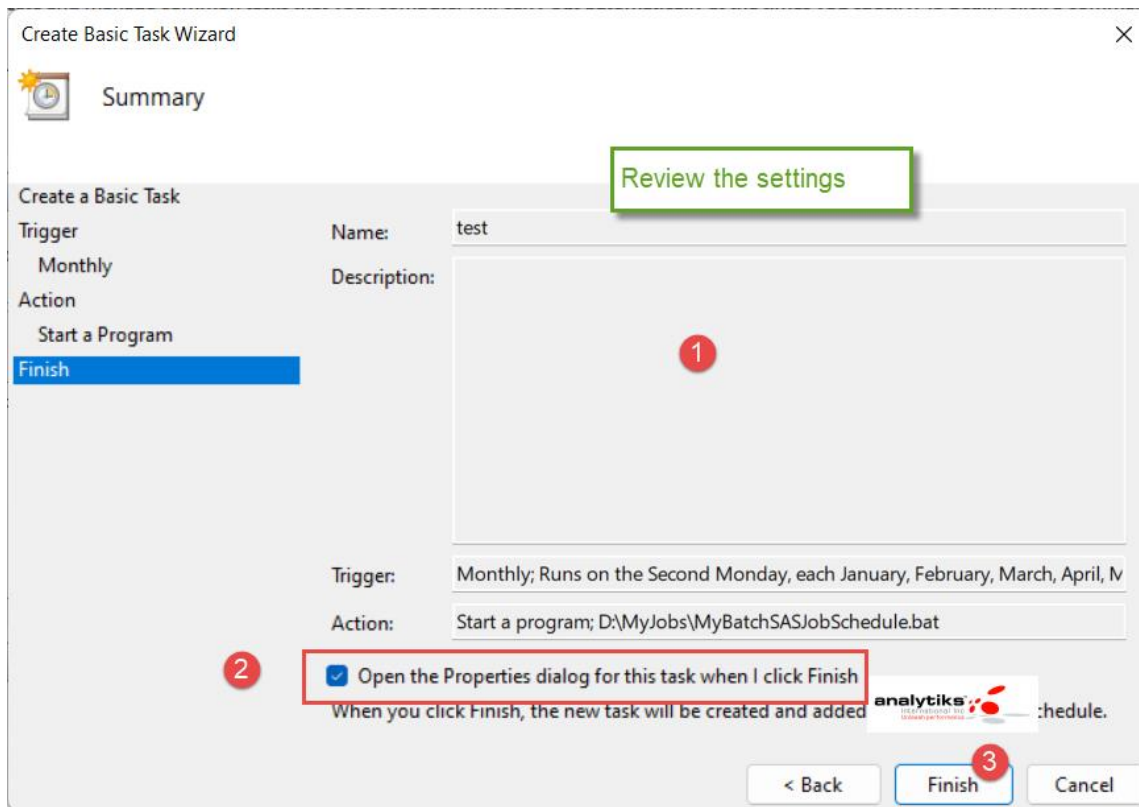
On:

Select target schedule

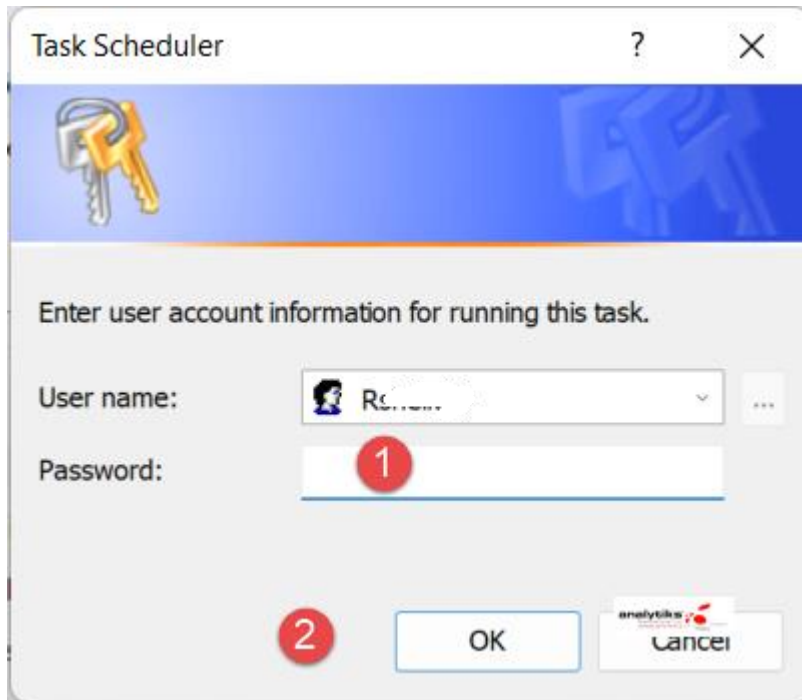


< Back Next > Cancel 2





You may get prompted for your password before scheduling



This schedules your job.

Note: If you are scheduling a job that will run on a SAS server and **NOT** your local personal machine, you may need to work with your IT administrator to allow access to local Server task Scheduler the remaining steps will remain as shown.

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