



Tableau MailScheduler

Installation manual

Date : 21-8-2023

Version : 2.3.3

1 Requirements

To successfully install the Tableau MailScheduler, you have to pass these requirements:

Windows Server

At least 8GB RAM

2 CPU or more (preferred)

50GB HDD space on the server

The installation of the Tableau MailScheduler includes the installation of a XAMPP server to host the application.

With this download, you can proceed the general installation process described in chapters 1-6 of this manual. Download the MailScheduler application and license in your portal. The installation is described in chapters 7-10 of this manual.

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3 Tableau Online and Server

The installation on Tableau Online and Server involves multiple steps. These are:

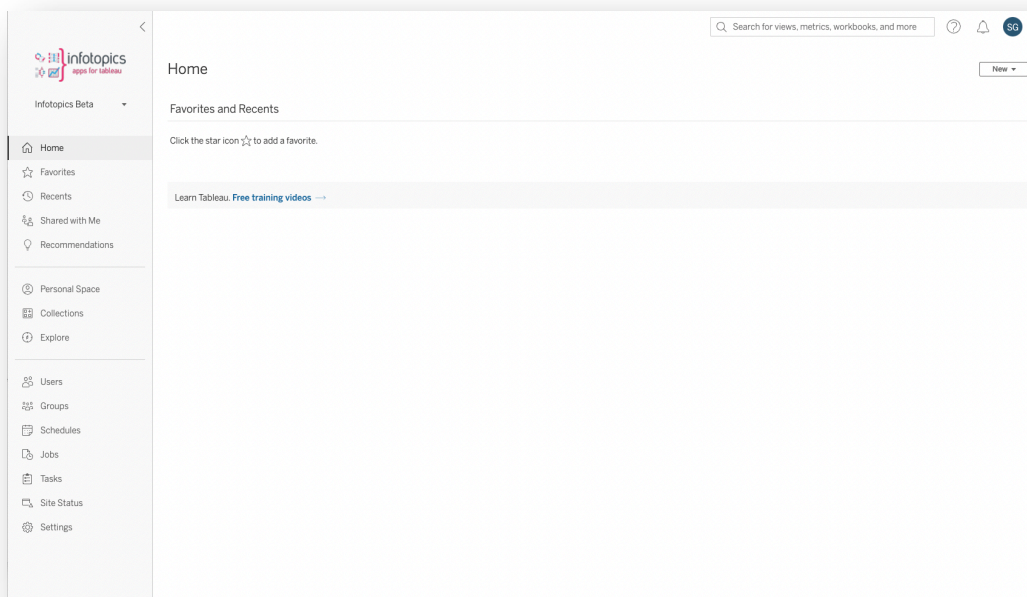
- Retrieve a Personal Access Token on Tableau Online
- Install XAMPP
- Configure Windows Task Scheduler
- Install Mail Scheduler Application on XAMPP
- Configure
 - Database
 - Environment
 - Users

3.1 Retrieve a Personal Access Token

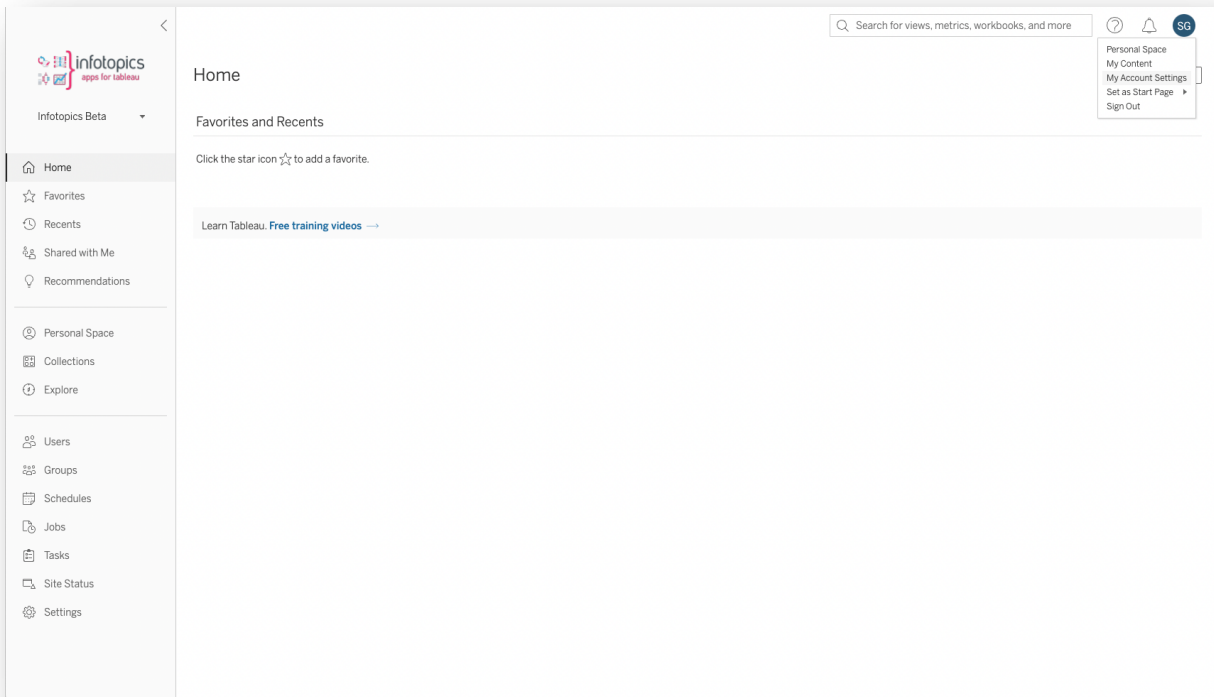
The Personal Access Token enables the Mail Scheduler to connect to Tableau with the user's permissions with the Personal Access Token. A best practice is to use the Personal Access token of a service user with at least read permissions on the entire Tableau Site.

Steps to be taken:

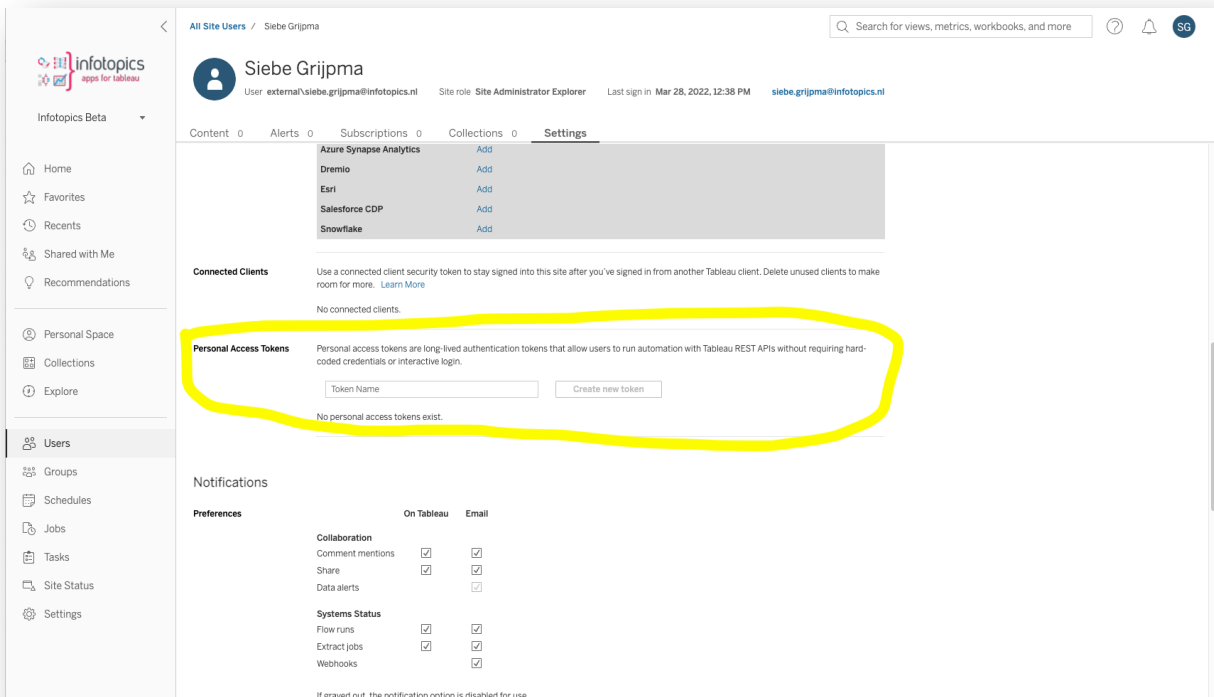
Log in to your Tableau Online environment with the user you want to use for accessing the dashboards.



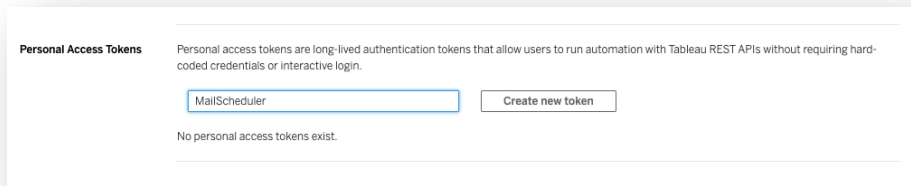
Open the dropdown in the right top corner and select “My Account Settings.”



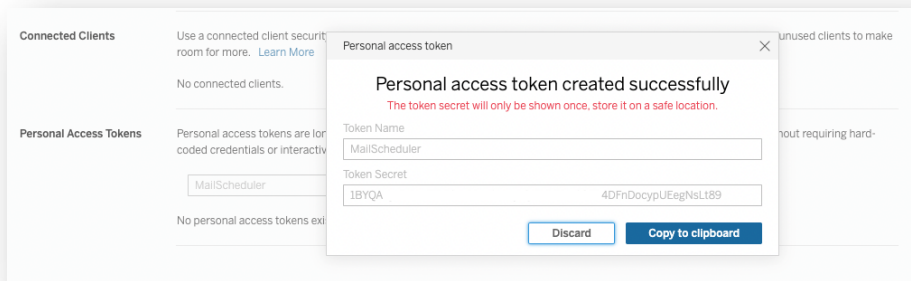
Scroll down to the section “Personal Access Tokens.”



Create a new token by entering a name (for instance, “MailScheduler”)

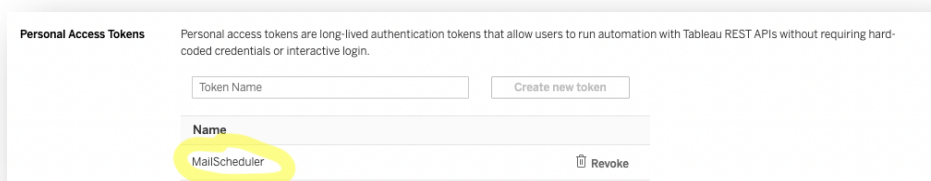


When you click the button “Create new token,” a modal window with the token will pop up. Be aware that this is the only moment you have access to the “secret” of the token, so make sure you copy it to your clipboard and save it in a plain text file.



Press the “Copy to clipboard” button to copy the Token Secret to the clipboard. The image shown has a blank space for security reasons.

To store the Personal Access Token, click the close button in the top right corner of the pop-up. Do NOT use the “Discard.” Button since this will erase the Personal Access Token. After closing the modal with the x button, your token is stored and visible.



You will use the Personal Access Token’s Name and Secret to access a Site in the MailScheduler.

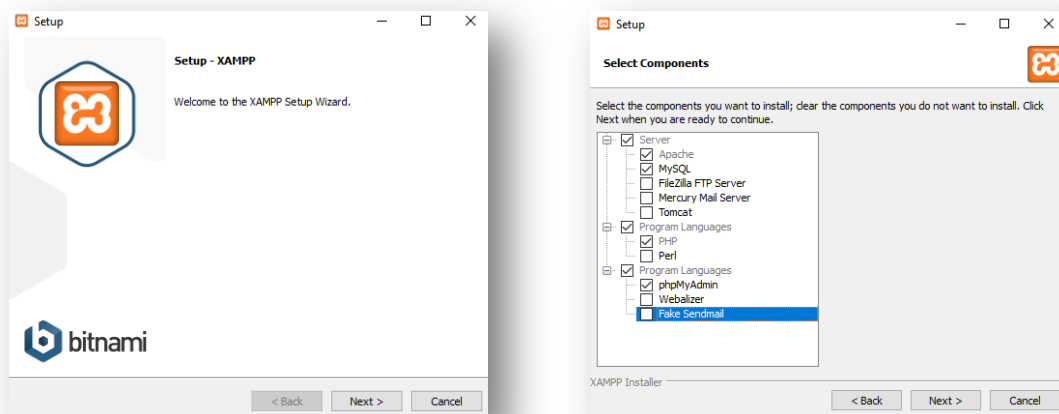
4 Install XAMPP server

The Tableau MailScheduler is a solution that uses a Laravel primary platform to run on. We provide/install the primary platform Apache/PHP/MySQL to run the Mail Scheduler in this installation step.

We use the default XAMPP installation by apachefriends.org. Download the latest Windows version from: <https://www.apachefriends.org/download.html>.

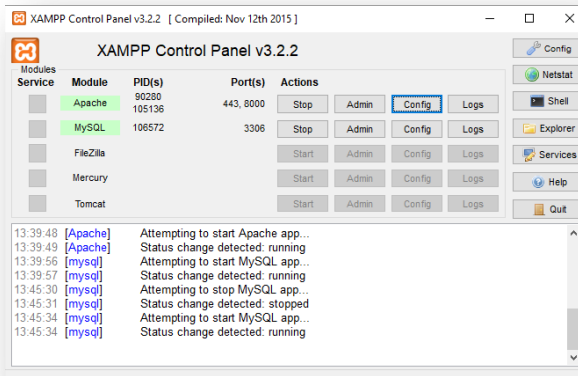
From the XAMPP install, we only use Apache and MySQL; These are the only XAMPP components you have to install and start.

4.1 Installation XAMPP



In the next window, enter the path for installation, e.g., C:\xampp
It is best to use paths without spaces and special characters.

After selecting the install path, a screen asks you to learn more about Bitnami for XAMPP. Deselect the checkbox and continue with the installation process. After successful installation, the control panel is shown. (In the screenshot below, you notice the Apache runs on port 8000).

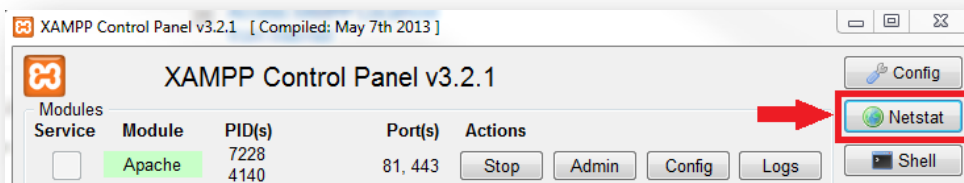


The XAMPP installation of Apache and MySQL might conflict with existing installations on the server/machine (port numbers already in use). You can change the default port numbers to free port numbers following the next steps.

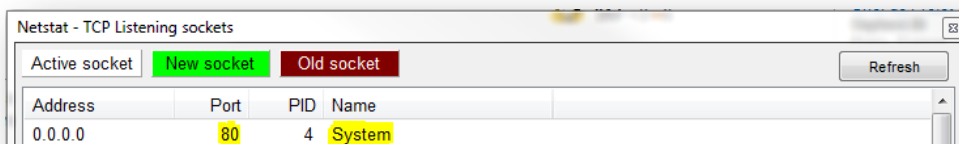
4.2 Change default port numbers Apache & MySQL

The default port used by Apache is 80.

Look at all your used ports with [Netstat](#) (integrated to [XAMPP Control Panel](#)).



Then you can see all used ports, and here we see that the System already uses the 80 port.



Choose a free port number (8012, for this example).

4.3 Edit the file "httpd.conf"

You should find this file in C:\xampp\apache\conf on Windows:

```
Listen 80
ServerName localhost:80
```

Replace them by:

```
Listen 8000
ServerName localhost:8000
```

Save the file.

Access: <http://localhost:8000> to check if it works.

If not, you must edit the http-ssl.conf file as explained in step 3 below. ↓

4.4 Edit the file "http-ssl.conf"

You should find this file in C:\xampp\apache\conf\extra on Windows.

Locate the following lines:

```
Listen 443
<VirtualHost _default_:443>
ServerName localhost:443
```

Replace them with a other port number (8013 for this example) :

```
Listen 8013
<VirtualHost _default_:8013>
ServerName localhost:8013
```

Save the file.

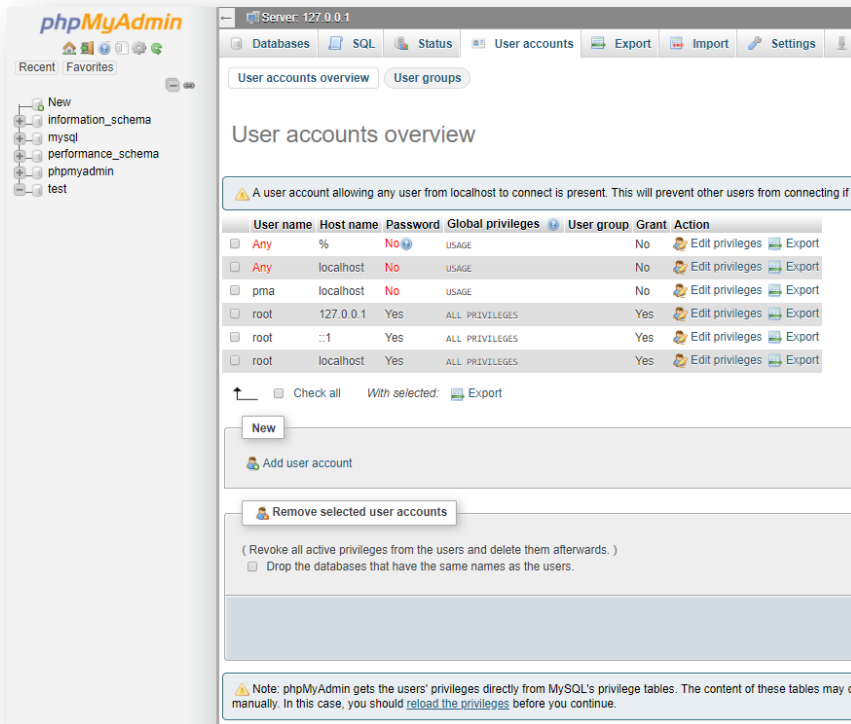
Restart the Apache Server.

Access: <http://localhost:8000> to check if it's working.

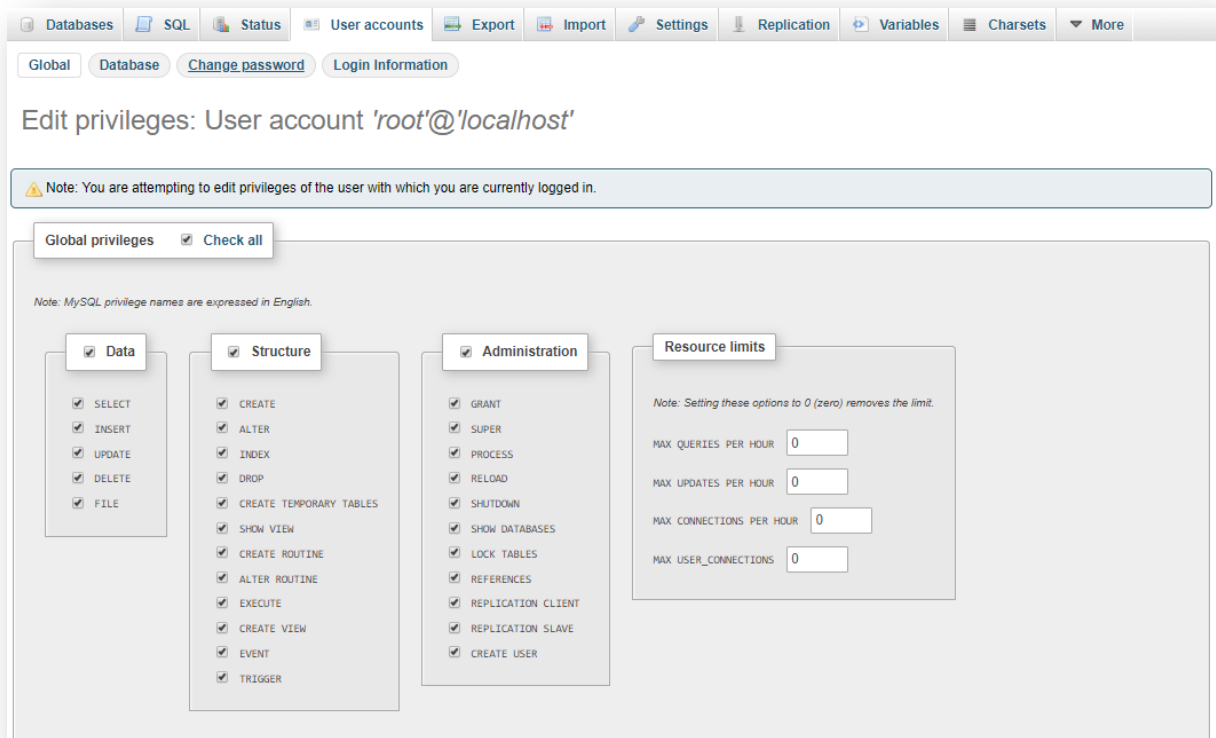
4.5 Change MySQL root password

For security purposes, we change the root password of the MySQL server. Point your browser to <http://localhost/phpmyadmin/>

You will automatically be logged in as the root user. Select the tab "User accounts" as shown below.



Click the “edit privileges” button for the root user on “localhost.”



Click the “Change password” button on top of the page and change the password into a safe difficult-to-guess password. We will not use the root user regularly. We will use it for installation and support purposes. Please write down or save the password in a safe place!

After changing and saving the password, your access to phpMyAdmin will expire. You will have to edit the phpMyAdmin config file, which you can find at:

C:\xampp\phpMyAdmin\config.inc.php

Change the section on authentication type and info as stated below:

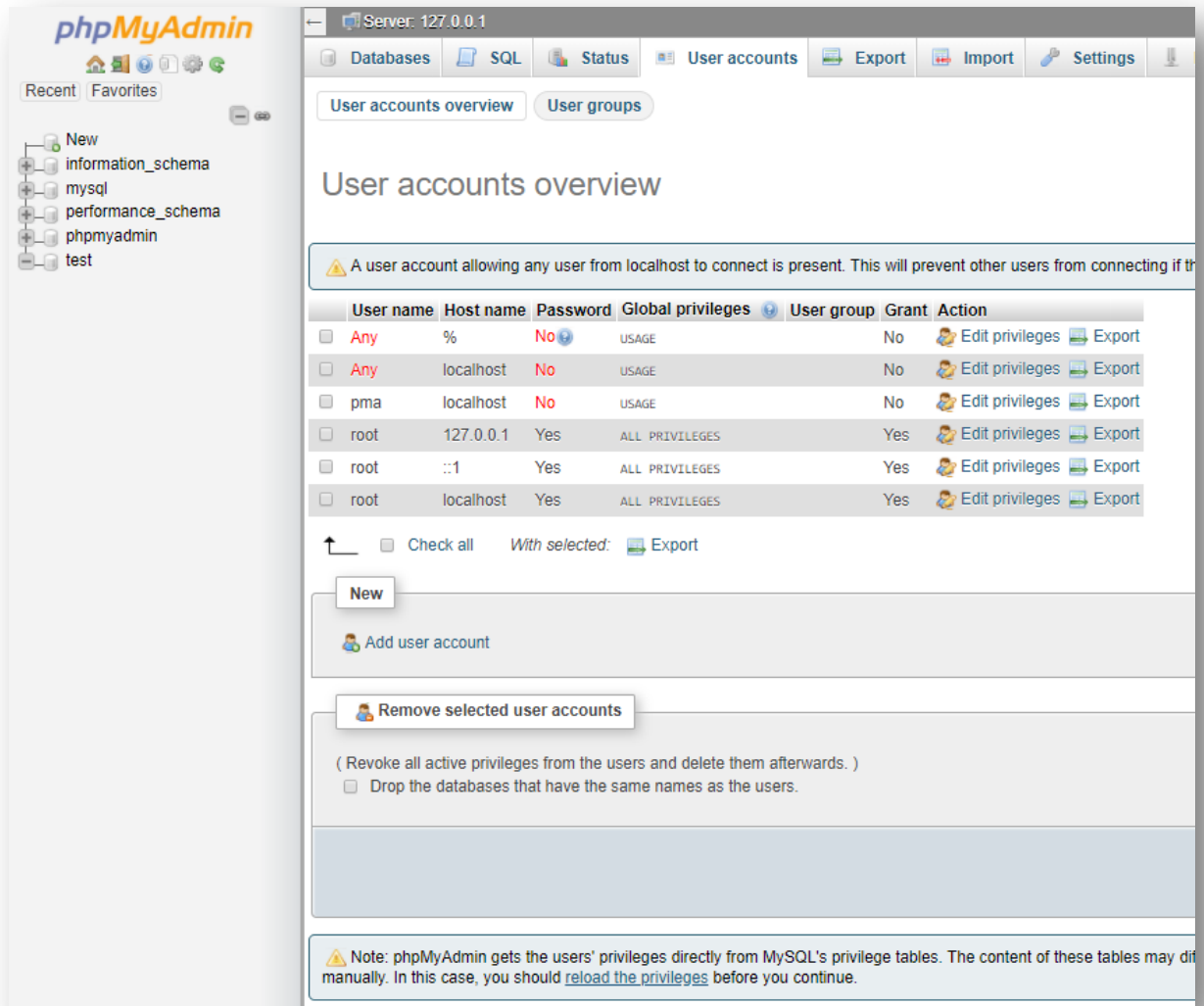
```
/* Authentication type and info */
$cfg['Servers'][$i]['auth_type'] = 'cookie';
$cfg['Servers'][$i]['user'] = 'root';
$cfg['Servers'][$i]['password'] = '';
$cfg['Servers'][$i]['extension'] = 'mysqli';
$cfg['Servers'][$i]['AllowNoPassword'] = false;
$cfg['Lang'] = '';
```

The AllowNoPassword field forces the use of passwords on phpMyAdmin.

5 Database & database user

Use a browser window to navigate to <http://localhost/phpmyadmin/> again.

Login as root and select the tab “user accounts” in phpMyAdmin.



The screenshot shows the phpMyAdmin interface for 'Server: 127.0.0.1'. The 'User accounts' tab is selected. A warning message states: 'A user account allowing any user from localhost to connect is present. This will prevent other users from connecting if th...'. Below this is a table of user accounts:

User name	Host name	Password	Global privileges	User group	Grant	Action
<input type="checkbox"/> Any	%	No	USAGE	No		Edit privileges Export
<input type="checkbox"/> Any	localhost	No	USAGE	No		Edit privileges Export
<input type="checkbox"/> pma	localhost	No	USAGE	No		Edit privileges Export
<input type="checkbox"/> root	127.0.0.1	Yes	ALL PRIVILEGES	Yes		Edit privileges Export
<input type="checkbox"/> root	:::1	Yes	ALL PRIVILEGES	Yes		Edit privileges Export
<input type="checkbox"/> root	localhost	Yes	ALL PRIVILEGES	Yes		Edit privileges Export

Below the table, there are options to 'Check all' and 'With selected: Export'. There are also buttons for 'New' (Add user account) and 'Remove selected user accounts' (with a note to revoke privileges and delete users).

Note: phpMyAdmin gets the users' privileges directly from MySQL's privilege tables. The content of these tables may differ manually. In this case, you should [reload the privileges](#) before you continue.

Click “Add user account”

Add user account

Login Information

User name: Use text field: scheduler

Host name: Use text field: localhost

Password: Use text field: Strength: Weak

Re-type:

Authentication Plugin: Native MySQL authentication

Generate password: **Generate**

Database for user account

- Create database with same name and grant all privileges.
- Grant all privileges on wildcard name (username_%).

Please remember the password we entered; We have to set it in the Mail Scheduler environment file (.env) later.

6 Install the Scheduler application

The Tableau MailScheduler is a Laravel app using PHP scripts and a MySQL database.

6.1 Install script folders & files

This step covers the installation of the PHP scripts in the proper folders.

1. Use your windows explorer to navigate to the htdocs folder in your XAMPP installation and remove all files and folders.
2. create a " scheduler " folder in the XAMPP htdocs folder. For example,
C:\xampp\htdocs\scheduler\
C:\xampp\htdocs\scheduler\
3. Copy the files you downloaded from our portal to this new folder
4. Also copy your license.lic file
5. Rename the license.lic file to LICENSE by opening it in notepad++ and use the `save as`
6. Open Powershell by holding the shift key on your keyboard and right click in the folder and select PowerShell window from the context menu.
7. Type `./install.bat` in the powershell (This command will create the .env file)

6.2 .env

The root of the c:\xampp\htdocs\scheduler folder now contains a file called “.env.”. This file must be edited.

Edit your .env file like the example below using your personal values for the colored fields:

```
APP_NAME=MailScheduler
APP_KEY=
APP_URL=http://localhost:8000
APP_TIMEZONE=Europe/Amsterdam

QUEUE_CONNECTION=database
RETRY_AFTER=180
JOB_TIMEOUT=120
BACKOFF=[10,25,50]

TABLEAU_API_VERSION='3.15'

DB_CONNECTION=mysql
DB_HOST=localhost
DB_PORT=3306
DB_DATABASE=scheduler
DB_USERNAME=scheduler
DB_PASSWORD=my_password

MAIL_DRIVER=smtp
MAIL_HOST=smt.office365.com
MAIL_PORT=587
MAIL_ENCRYPTION=tls
MAIL_USERNAME=mailer@domein.nl
#MAIL_PASSWORD=my_password
MAIL_FROM_ADDRESS=mailer@domein.nl
MAIL_FROM_NAME=Mailer
```

The TABLEAU_API_VERSION should match the version of your tableau server instance. You can find the versions here: https://help.tableau.com/current/api/rest_api/en-us/REST/rest_api_concepts_versions.htm

When done editing the file, we save it with the name: “.env,” including the dot at the beginning of the filename.

Now run the install.bat script again to install the app.

If no error shows up in the PowerShell, the installation has succeeded.

6.3 Create MailScheduler admin user

In Windows explorer, start a PowerShell window (Shift right-click and select PowerShell window) in the folder c:\xampp\htdocs\scheduler

Use the following command to create the admin user:

```
C:\xampp\php\php.exe mail-scheduler-2.phar make:user
```

Note: the path to your php.exe can be different, depending of your installation path of xampp

You will be prompted to enter the username, email address, and password for the administrative user of the Mail Scheduler. After setup you will be able to login with this account in mail scheduler.

6.4 Add virtual host

We now need to address the virtual host. Point your windows explorer to

C:\xampp\apache\conf\extra\httpd-vhosts.conf

And change it to your convenience

```
<VirtualHost *:8000>
  ServerAdmin webmaster@infotopics.nl
  DocumentRoot "C:/xampp/htdocs/scheduler/public"
  ServerName localhost
  ServerAlias localhost
  ErrorLog "logs/scheduler-error.log"
  CustomLog "logs/scheduler-access.log" common
</VirtualHost>
```

In the file C:\xampp\apache\conf\extra\httpd-ssl.conf, search for the section where example.com is configured as a virtual host in the SSL configuration. Enter your server and certificate properties for SSL configuration. For SSL configuration, there are many ways to accomplish your desired situation. The online XAMPP community has lots of articles. Please use google if you are not satisfied with the description below.

```
<VirtualHost _default_:443>

# General setup for the virtual host
DocumentRoot "C:/xampp/htdocs"
ServerName localhost:443
ServerAdmin your-email-address@example.com
ErrorLog "C:/xampp/apache/logs/error.log"
TransferLog "C:/xampp/apache/logs/access.log"

# SSL Engine Switch:
# Enable/Disable SSL for this virtual host.
SSLEngine on

SSLCertificateFile "conf/ssl.crt/example.crt"
```



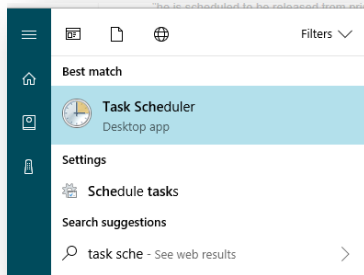
```
SSLCertificateKeyFile "conf/ssl.key/ example.key"
```

```
SSLCertificateChainFile "conf/ssl.crt/example_Intermediates_en_Root.crt"
```

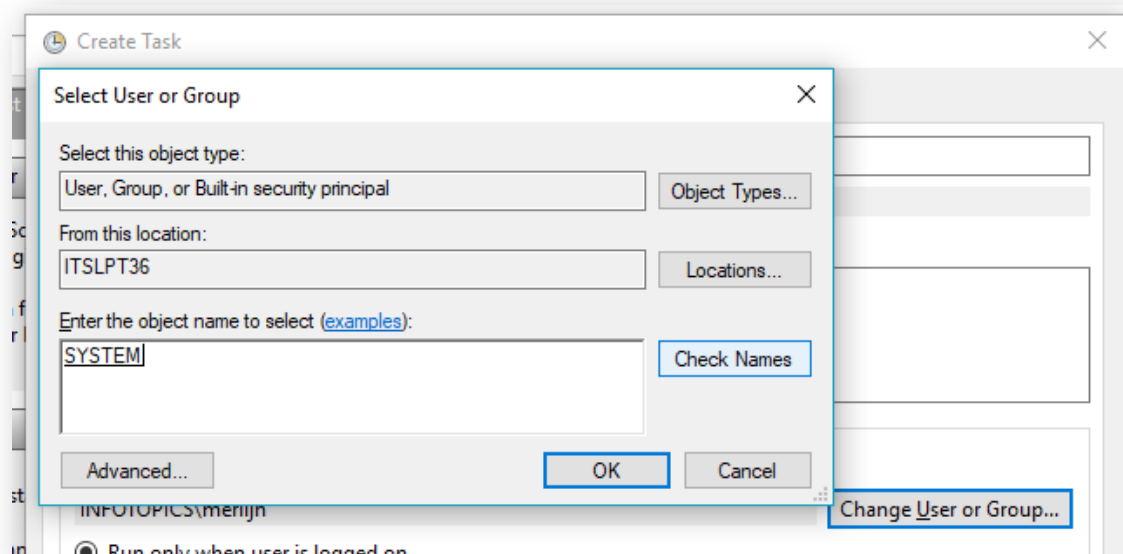
7 Scheduling

For the schedule to run automatically, we need to setup 2 tasks in the windows task scheduler.

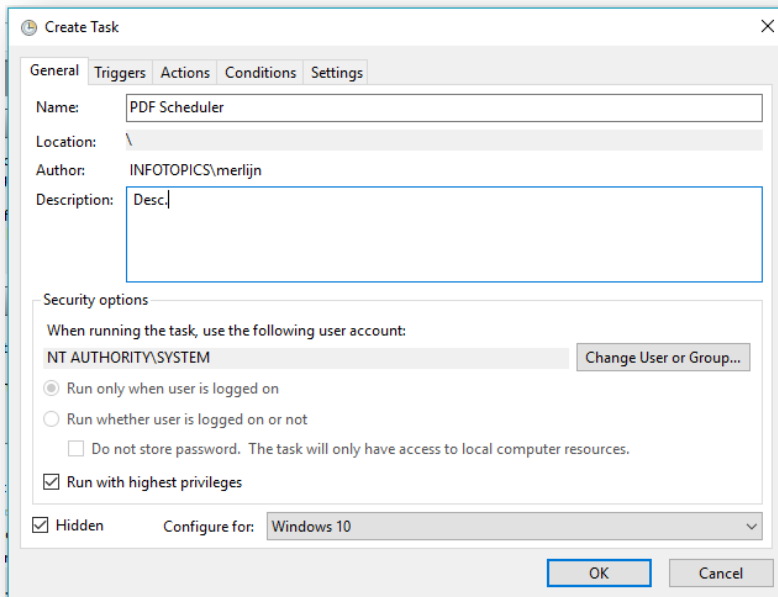
Open Windows Task Scheduler and create a new task



1. Click Create Task in the menu at the right
2. Enter Task name and description (For example, Mail Scheduler)
3. Select SYSTEM user to run the task:

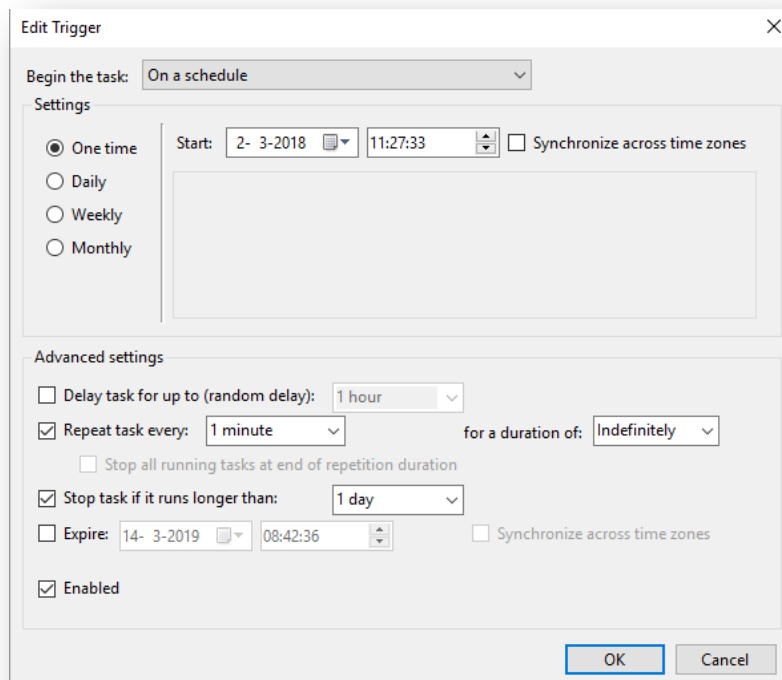


4. Run with the highest privileges and check hidden:



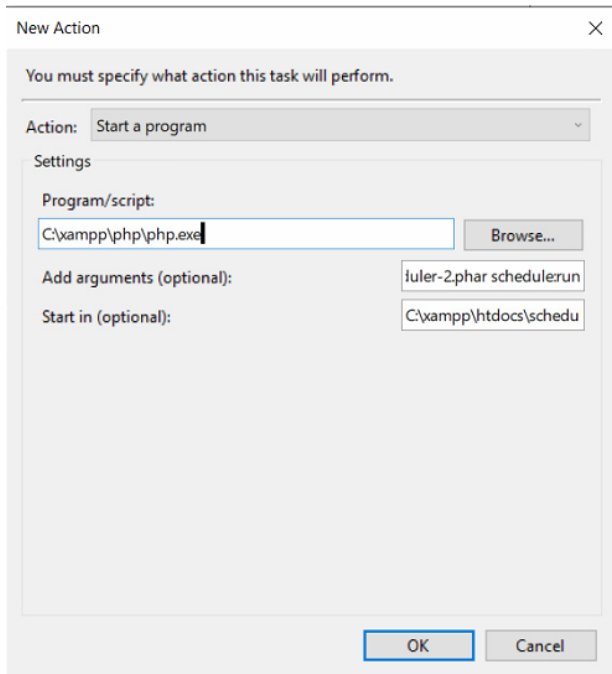
5. Select tab “Triggers.”

6. Create a new trigger:

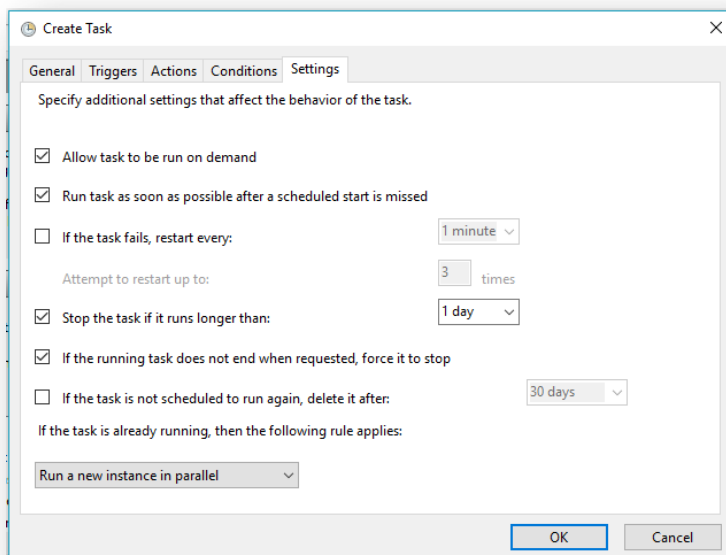


7. Select tab “Action” and create a new action

Program script: C:\xampp\php\php.exe (use the path to the php.exe in XAMPP):
Add arguments: mail-scheduler-2.phar schedule:run
Start in: C:\xampp\htdocs\scheduler



8. Click tab “settings” and check the checkboxes as shown in the following screenshot:



The server tasks schedule is now set and can be saved/ started.

Enable the Queue Worker

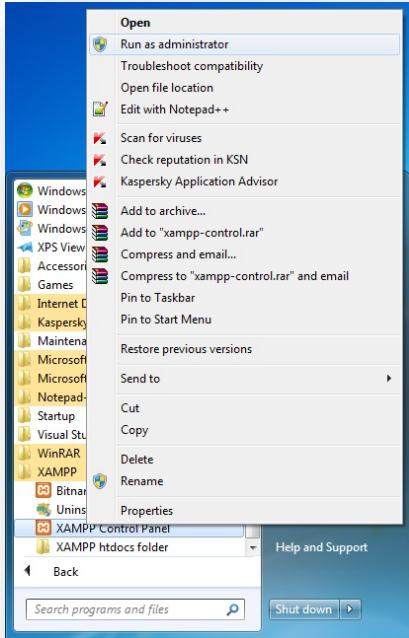
Create another task.

The setup of the task is the same as the first one except for:

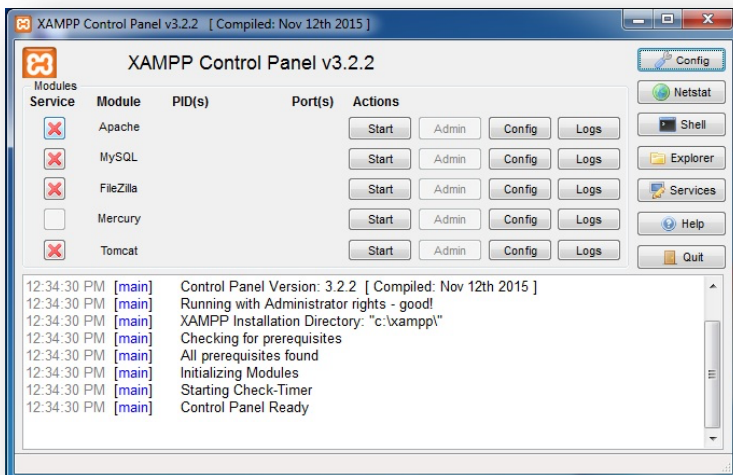
1. On the `Action` tab: The argument of the action should be `mail-scheduler-2.phar queue:work`
2. On the `Settings` tab: Select `do not start another one in this case.` in the dropdown at the bottom to prevent multiple instances running at the same time.

7.1 Tip: Run on startup Windows

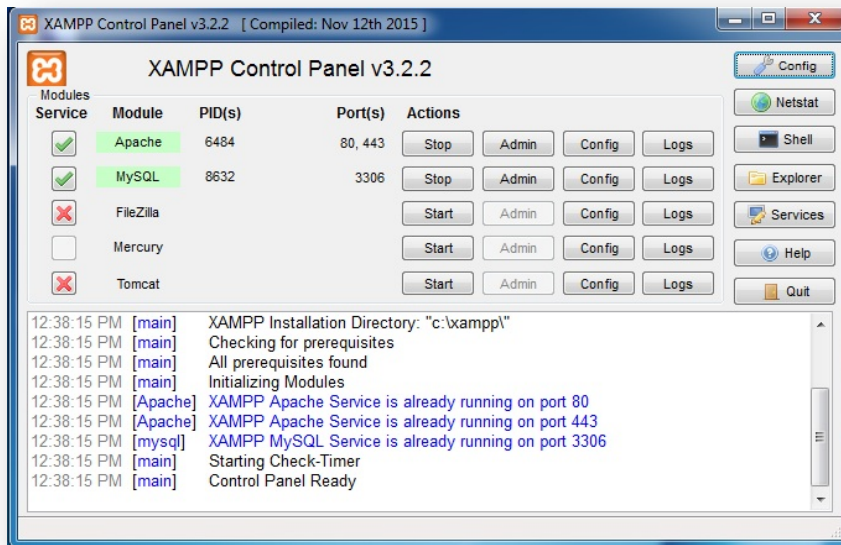
Try to run Your XAMPP Control Panel as Run as administrator, then install Apache and MySQL.



When Xampp will open, then ensure that Apache and MySQL service stopped.



Now check/tick on Apache and MySQL service module (at the left).



Now Apache and MySQL will be added in window services. You can set these services as start on window startup.

7.2 Install OpenSSL certificate

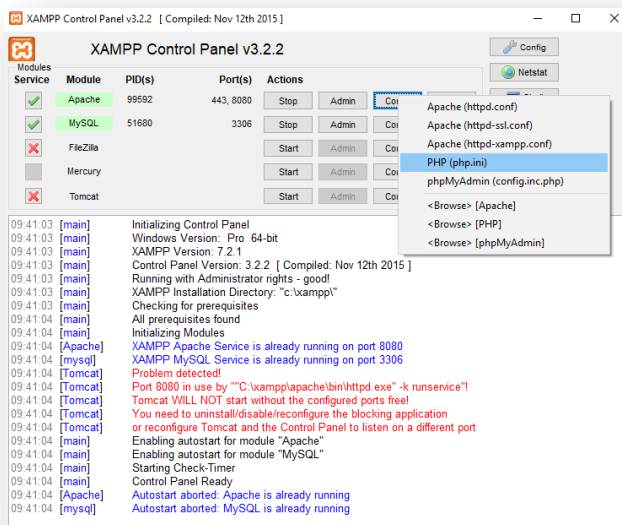
In the PHP.INI file, you can edit the path to an OpenSSL certificate file. Use your XAMPP configuration (see image) to edit this file or open the php.ini file in the xampp\php folder with your favorite editor.

In the php.ini file, search for “openssl.cafile” and change the path and filename to the crt file you would like to use. For example:

```
openssl.cafile="D:\xampp\apache\bin\Infotopics.crt"
```

Make sure the line is not commented out with a semicolon (;)

Stop and start your Apache server to make sure these settings are applied.



8 Update procedure

Depending on what version you come from, the upgrading procedure is slightly different.

8.1 V1 to V2

First, make a backup of your database.

For Tableau Mail Scheduler V2, php8.0 is required. Make sure to select php8.0 in Xampp.

Copy the new files to the installation directory.

Open the .env file and check if credentials are up-to-date with section 2.8.1.

Run in the Powershell:

```
C:\xampp\php\php.exe mail-scheduler-2.phar migrate
```

Now the database structure is up-to-date. Next, we should add the PAT tokens.

Login to the MailScheduler and add the PAT tokens to the sites you use.

(https://help.tableau.com/current/server/en-us/security_personal_access_tokens.htm)

The command below will convert the old data to the new structure. All views will be indexed, and their IDs will be stored in the database, optimizing the process.

```
C:\xampp\php\php.exe mail-scheduler-2.phar migrate-from-v1-to-v2
```

Verify that the data is converted successfully.

8.2 V1.* to V1.* (older versions)

Updates to the Tableau MailScheduler generally consist of 2 steps.

- Extract ZIP file in the C:\xampp\htdocs\scheduler folder
- In Windows explorer, start a PowerShell window (Shift right-click and select PowerShell window) in the folder c:\xampp\htdocs\scheduler. Run this command:

```
C:\xampp\php\php.exe mail-scheduler-2.phar migrate
```

- Also run the update command:

```
C:\xampp\php\php.exe mail-scheduler-2.phar app:update
```

Installing on linux

Setup cronjobs

*When installing on linux, make sure to run it from the root directory.

```
cd /your/directory; /location-of-your-phar/php mail-scheduler-2.phar schedule:run >>  
/your/directory/logs/cronjob.log
```

```
cd /your/directory; /location-of-your-phar/php mail-scheduler-2.phar queue:work >>  
/your/directory/logs/cronjob.log
```