INSTALLATION ON WINDOWS

Inhoudsopgave

1   Intro

This document describes the installation and configuration of the Write-Back-Extreme (WBE) extension as a web-application on Windows.

You are free to choose your own installation methods and types, as long as in the end the WriteBack-Extreme web-application runs; Being accessible via an URL, like https://writeback.yourcompany.com, based on PHP 7.4+ and an updatable database of your choice.

As the WBE extension runs in a webserver as a PHP web-application, the installation of the most common webservers on Windows is explained below, as a detailed example. See here for the installation & configuration on Linux.

Point of attention: Do not use passwords containing a period "." Since this might break connections and lead to unexpected results.

1.1   Skill level

To follow along, knowledge of installing the webserver, and companion parts, of choice on Windows is required. If company standards apply for deployment of web-server, they can fit in on various parts of the installation and configuration.

In this document, the installation based on the following webservers is described:
- IIS
- Apache2 webserver, as part of the XAMPP package
- Nginx

1.2   Operating System

This manual is written for Window Server 2016/2019.

During the installation, a number of components might need to access the Internet to complete the installation, like database drivers and web-servers components. It is recommended that the installing user-account has access to the Internet from the Windows server during installation.

The installing user-account might also need 'local administrator' permissions during the installation and configuration.

1.3   Installation Checklist

The yellow marked fields are needed for completion of the installation and configuration.

General / Admin account of the WBE backend application

Point of attention: Do not use passwords containing a period "." Since this might break connections and lead to unexpected results.

Admin Account Email address:
Admin Account Name:
Admin Password:

Windows Server / Webserver:
- Minimal Server Resources: 2 vCPU, 8Gb, 100Gb diskspace, 100Mbps or 1Gbps NIC ⊠ Admin privileges to perform the installation.
- Firewall rules to permit access on port 443 (https) and ports to the database servers. Both internal and external firewall-appliances and builtin windows-firewall as well. ⊠ Minimum version of PHP is 7.4.
- A x64 (64-bit) installation is preferred.
- PHP can be installed as a component of the webserver or separately.

Windows version :
Webserver type :
PHP version :

Server Hostname :
Web Application URL :
Application port : 443 (https) or any other unused port (protocol will always be https)

SSL certificates:
- A webdomain (example: https://writeback.your-company.com)
- Use of HTTPS is mandatory in all environments. Therefor a SSL-certificate is needed. And it has to cover the web domain / application URL. It can be a wildcard certificate ("*.yourcompany.com") or URL-specific (fi. "writeback.your-company.com"). Depending on the type of webserver, the certificate-file (.crt), the private-key (.key) and certificate-chain files (often CAcert.crt) are needed to configure in NGINX / Apache Webserver. A windows certificate file (often .pfx file) is needed for IIS. The .pfx must contain the private key as well.
- Domain needs to point to the webserver through DNS (internal and/or external)
- https://writeback.your-company.com is pointing to the document-root location on the webserver (using virtual-hosts for example)
- HTTPS is functioning on above domain
- Be aware of stricter security policies of browsers nowadays, concerning CORS-policies, x-frame-headers or CSP-headers.

Database platform:

Among others the most used database for the WriteBackExtreme extension on windows are MySQL/MariaDB and MS-SQL server.

MySQL

- Minimum version of MySQL is 5.7
- MySQL is running
- MySQL root account and password (written down) to create an 'admin' account for the database to be used by WBE
- MySQL read only user (test and access via Tableau to add datasources)
- You can connect to the MySQL database through commandline or phpmyadmin

Microsoft SQL Server

- Minimum version of MS SQL Server 2016
- MSSQL is running
- MSSQL db_owner user account and password (written down)
- MSSQL read only user (on same database)
- You can connect to the SQL server database MS SQL Management Studio

Customer configuration

The database 'admin' account must be able to create objects (tables/indexes) in a schema/database in the database platform:

Point of attention: Do not use passwords containing a period "." Since this might break connections and lead to unexpected results.

Database Platform and version:
Admin Account (read/write/create) :
Password :

The read-only account will be used by tableau desktop developers to access the WriteBackExtreme information, in order to incorporate that write-back information into a workbook dashboard.

User Account (read only):
Password :

1.4   Landscape overview

Although we are focusing on the WBE Extension installation, this picture shows the whole landscape overview.
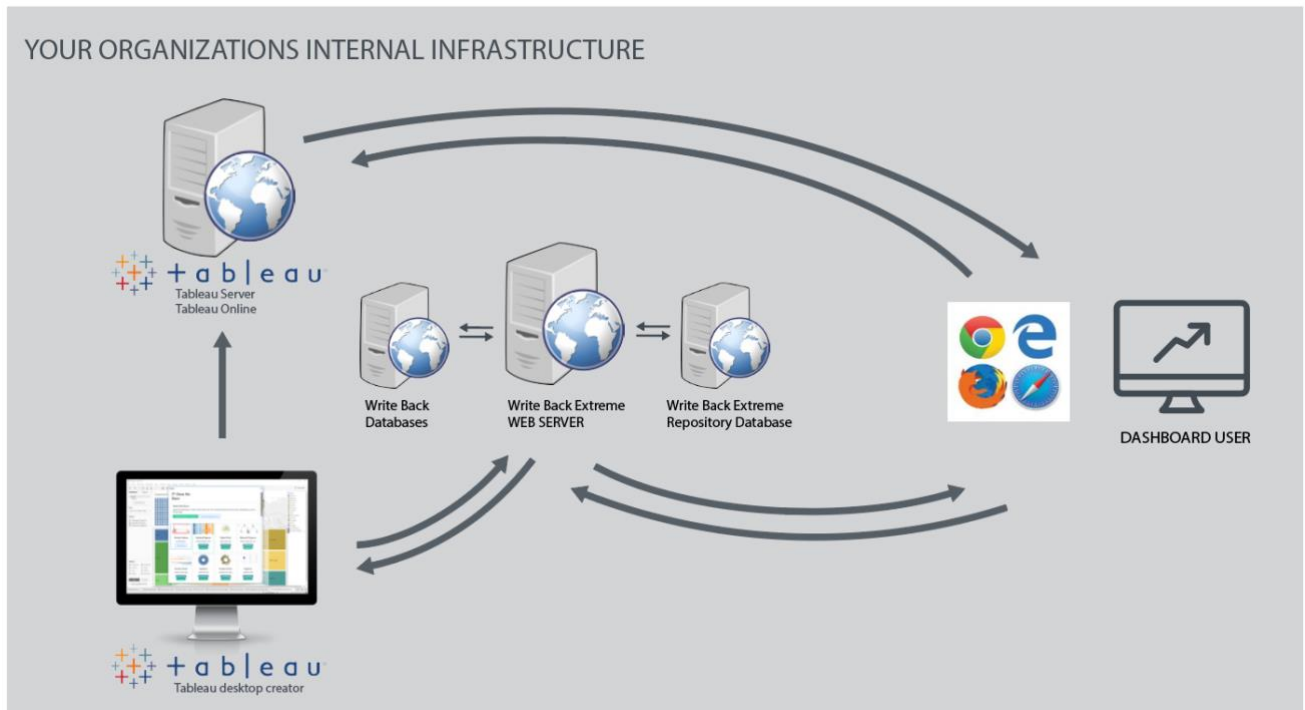
End-Users Browser : as end-users will browse dashboards served by tableau server. These dashboards might contain the WBE extension, which is displayed in an iframe of the Tableau dashboard. So, from the tableau-dashboard (-URL) the WBE-extension (-URL) is accessed in an iframe.

Tableau Server : serves the tableau-dashboards to the end-users browsers.

Tableau Desktop (user) : creates tableau dashboards which might include the WBE-extension through a .trex file and publish it to Tableau Server.

WBE extension : served by a separate web-server on a different server than the Tableau Server (web) Application. The WBE extension actually has two end-points:

-   The extension itself on https://writeback.your-company.com/extension
-   The configuration backend on https://writeback.your-company.com/backend

WBE Repository database : This is a database for WBE's own administration. But if you wish, you can use this database also as a Write-Back database.

Write-Back Database : the database(s) were schema's are created to write-back the data entered through the WBE-extension in the Tableau dashboard. There can be multiple databases to writeback to and these database can be different from database-platform (MySQL/MariaDB, MS-SQL, PostgreSQL, Redshift, Snowflake, Teradata, etc). For all used WBE database-types a database-drivers must be configured in the 'php.ini' file.

1.4.1 Public Access

Public access from the Internet is possible. For both Tableau Server as the WBE extension. Where as Tableau Server has multiple user-authentication methods, such as local-user, Active-Directory, SAML and Open-ID, WBE has no user-authentication mechanism.

The extension-API of Tableau does not support any type of authorization in the extension itself. To access the WBE-extension from the Internet, you might want to deploy a reverse-proxy in your DMZ, in front of the WBE extension. It could prohibit unauthorized access by deploying a SingleSign-Authentication method, supported by your company. (Strongly advised to be the same authentication-method as Tableau Server for the purpose of SSO).

For example an [Azure Application Proxy,](#) with Pre-Authentication enabled. In AWS, you can deploy a [web-application proxy](#) for that. The reverse-proxy configuration is not part of this installation instruction, is best discussed with your cloud-platform team.

1.5 **Required**

Before starting the installation, a checklist of things you need:

a) Windows Server 2012 R2, 2016 or 2019 Standard Edition
b) WBE zip-package or download link, provided by App4Tableau / Infotopics
c) Access to at least one (1) database-platform through an account which is 'administrator' on an existing, but empty, schema/database
d) Firewalls rules applied to allow access to the WBE-extension-URL and database(s)
e) Administrator permissions during installation
f) Internet access during installation
g) Download links for your web-server of choice and other web-server components
h) LICENSE file received from Apps4Tableau / Infotopics
i) SSL certificate including the private key

2 Installing a webserver

In this chapter, you can find three (3) installation & configuration examples. ⊠ IIS with PHP 7.4 and a MS-SQLserver database
- Apache2 via XAMPP, with PHP and a MySQL/MariaDB database
- NGINX webserver, with PHP and a PostgreSQL database

We hope these examples supply you with enough details how to install and configure WBE in your environment, even in a different combination of web-server and database-platform.

2.1 Windows System Environment variable

We need to specify a Windows System Environment variable 'BOX_REQUIREMENT_CHECKER', set to 0 (zero).

Type ⊞+R and enter 'sysdm.cpl'. Select the 'Advanced' tab and then the 'Environment Variables' button.
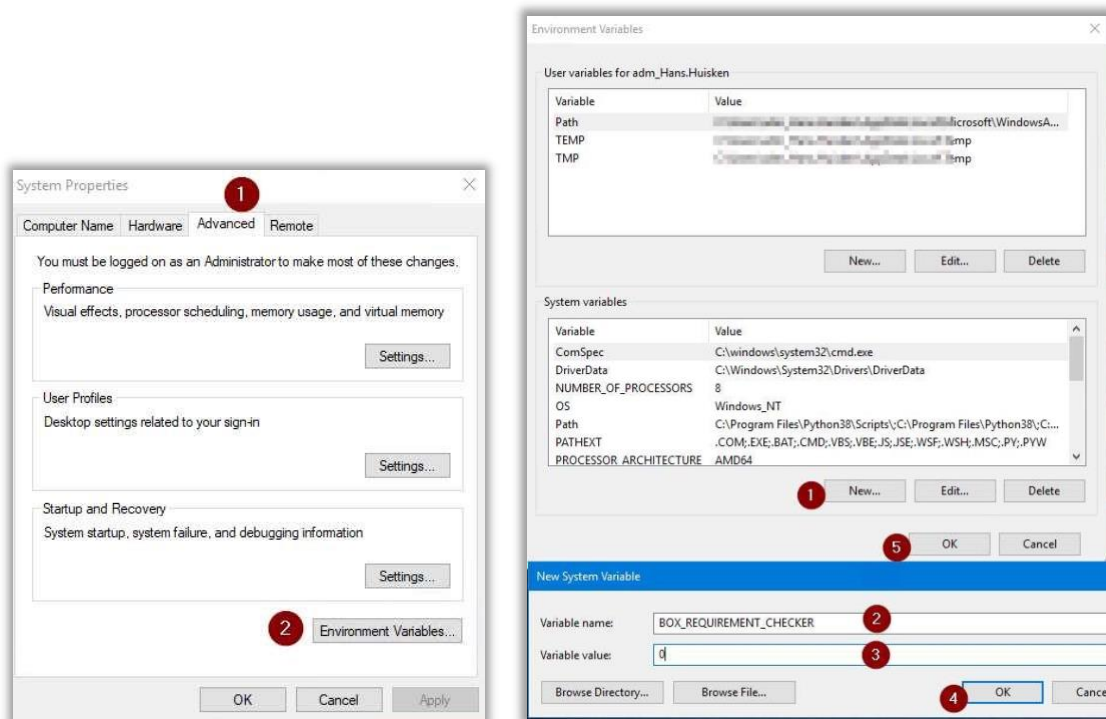
In the section 'System Variables', press 'New' and define the variable correspondingly.

To be sure the variable applied and available system-wide, please reboot your windows server. If you will be using Apache2 with XAMPP, you can reboot your server at a later moment.

2.2 Add URL to your DNS

Ask your IT DNS-administrator to add the URL in your company's DNS with the IP-address of your windows server. And to the public 'internet' DNS, if your Tableau Server and WBE extension are public facing.

Type 'nslookup writeback.your-company.com' in a dos-cmd-box and it should be found and point to your windows-server's IP-address.

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2.3 IIS with PHP 7.4 and a MS-SQLserver database

2.3.1 IIS install

In the 'Server Manager' click 'Manage' and choose 'Add Roles and Features'
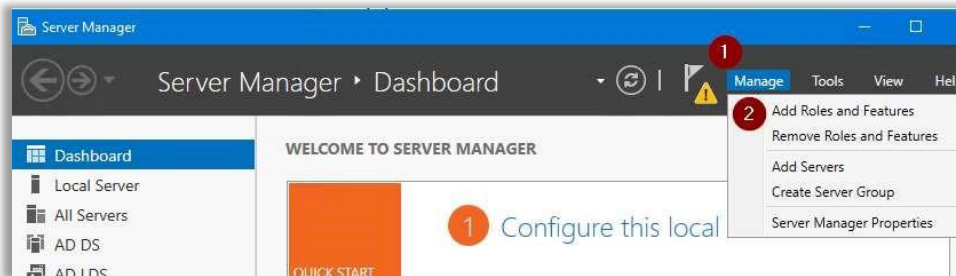
Be sure to select the windows servers where you want to install IIS, while clicking 'Next' to get to the 'Server Roles' page.
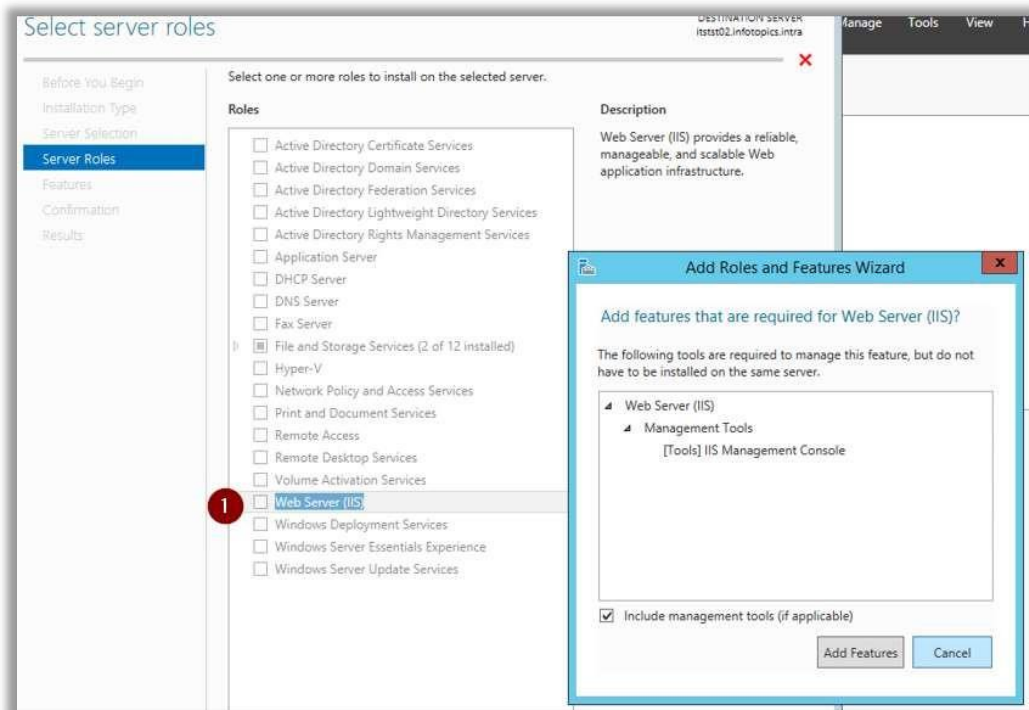
Only check the box in front of IIS. (No other Role is selected). Wait until IIS is installed.

You can start the 'IIS Manager' via the 'Server Manager' --> 'Tools' button or via the 'Windows Start' button ⊞ or via the 'Administrative Tools'

After 'IIS Manager' is started, a popup may appear to install the Web Platform Installer. Please install WPI for the next steps.

2.3.2   Add additional components via Web Platform Installer (WPI)

Start 'Web Platform Installer' from within the 'IIS Manager'.
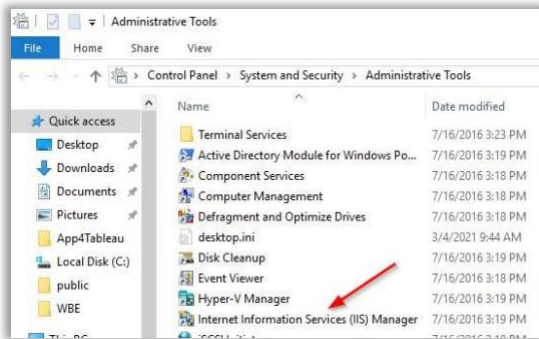If not installed yet, Install Web Platform Installer 5.1 (WPI) via this link.
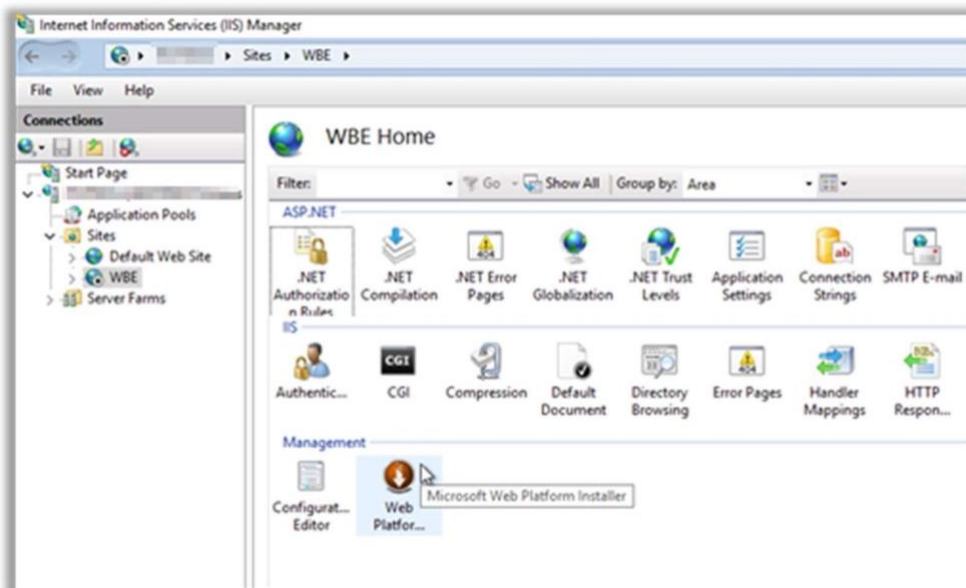
In WPI, use the search-feature to find and select the next components for install:
- PHP 7.4.1 (x64)
- Microsoft Drivers 5.8 (x64) for PHP 7.4 for SQL Server in IIS or
- Microsoft Drivers 5.9 (x64) for PHP 7.4 for SQL Server in IIS
- URL rewrite 2.1 (might be installed already)
- Application Request Routing 2.5 with KB2589179 (needed for URL Rewrite)
- IIS: CGI (alternative via 'add Roles and Features' --> Web Server (IIS) --> Web Server--> Application Development-->CGI)

The following items are ready to be installed:

× **Windows Cache Extension 2.0 (x64) for PHP 7.4**
View license terms   Direct Download Link

× **Microsoft Drivers 5.8 (x64) for PHP v7.4 for SQL Server in IIS**
View license terms   Direct Download Link

× **PHP 7.4.1 (x64)**
View license terms   Direct Download Link

× **IIS: CGI**

× **Application Request Routing 2.5 with KB2589179**
                                                            Direct Download Link

× **KB2589179 for Application Request Routing 2.5**
                                                            Direct Download Link

× **URL Rewrite 2.1**
View license terms   Direct Download Link

× **PHP Manager for IIS**
View license terms   Direct Download Link

Total file download size: **57,11 MB**

It might select additional packages to install due to dependencies.

Web Platform Installer

PREREQUISITES   INSTALL   CONFIGURE   **FINISH**

× We're sorry. The following products have failed to install.

PHP Manager for IIS   Get Help
This product did not install successfully: Downloaded file failed signature verification and may have been tampered with

Windows Cache Extension 2.0 (x64) for PHP 7.4   Get Help
This product did not install successfully: Downloaded file failed signature verification and may have been tampered with

Web Platform Installer Log   View log here

✓ The following products were successfully installed.

RunPHP Helper
External Cache 1.1
Web Farm Framework 1.1
Microsoft Visual C++ 2008 Redistributable Package
URL Rewrite 2.1
IIS: CGI
Application Request Routing 2.5
KB2589179 for Application Request Routing 2.5
Application Request Routing 2.5 with KB2589179
PHP 5.3.28
PHP 7.4.1 (x64)
Microsoft Drivers 5.8 (x64) for PHP v7.4 for SQL Server in IIS

Finish

Some packages may fail, but these 2 are not needed and can be ignored.
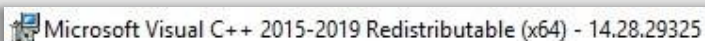
2.3.3   Check PHP version

Open a dos-cmd prompt (you will need it later, too; leave it open) and type the command:
    php --version

```
C:\Windows\system32>php --version
PHP Warning:  'vcruntime140.dll' 14.0 is not compatible with this PHP build linked with 14.16 in Unknown on line 0
```

In case of this error message like above, install the 'Microsoft Visual C++ redistributable' version 2019 or newer.

Microsoft Visual C++ 2015-2019 Redistributable (x64) - 14.28.29325

Solve this error by installing Microsoft Visual C++ Redistributable for Visual Studio 2019 (VC_redist.x64.exe).

2.3.4   PHP configuration

In the dos-cmd type the command:
`where php`

In the reported folder, you will find a file named 'php.ini'. Please make a copy of it to 'php.ini – original'.

Then edit 'php.ini' file (with notepad++) and make the next changes:
```
post_max_size = 20M                                    (about line 694)
upload_max_filesize = 20M                              (about line 844)
```

Error to console instead of logfile.
```
display_errors = On                                    (about line 482)
; error_log C:\Windows\Temp\PHP74x64_errors.log        (about line 1921; comment out by ';' in front)
```

At the bottom, add 'fileinfo' and 'sqlsrv' dll's to be loaded in the 'ExtensionList'.
```
[ExtensionList] ….
extension=php_fileinfo.dll
extension=php_pdo_sqlsrv_74_nts_x64.dll
extension=php_sqlsrv_74_nts_x64.dll
extension=php_pdo_pgsql.dll
extension=php_pgsql.dll
```

The both 'sqlsrv' dll's are there, to load the ms-sqlserver drivers in php. These are installed on the correct location by the WPI-installer (sub-folder 'ext' from the folder where 'php.ini' file is found).

For example, when you find the 'php.ini' file in 'C:\Program Files\PHP\v7.4\' the dll's for databasedrivers (and other dll's) are installed/copied to 'C:\Program Files\PHP\v7.4\ext'.

The 'pgsql' dll's are for PostgresSQL (but might need to be downloaded and installed/copied to the extension folder of PHP; see also later in the NGINX section).

### 2.3.5   PHP : TS or NTS database drivers ?
Some database drivers come in two (2) different type: TS and NTS. TS means Thread-Secure and NTS means Non-Thread-Secure. It depends on the version of PHP, which type you need to use.

In this case a 'NTS' version of database drivers needs to be specified in the 'php.ini' file.

2.3.6   IIS : Create site for WBE

In 'IIS Manager' create a site for WBE web-application.
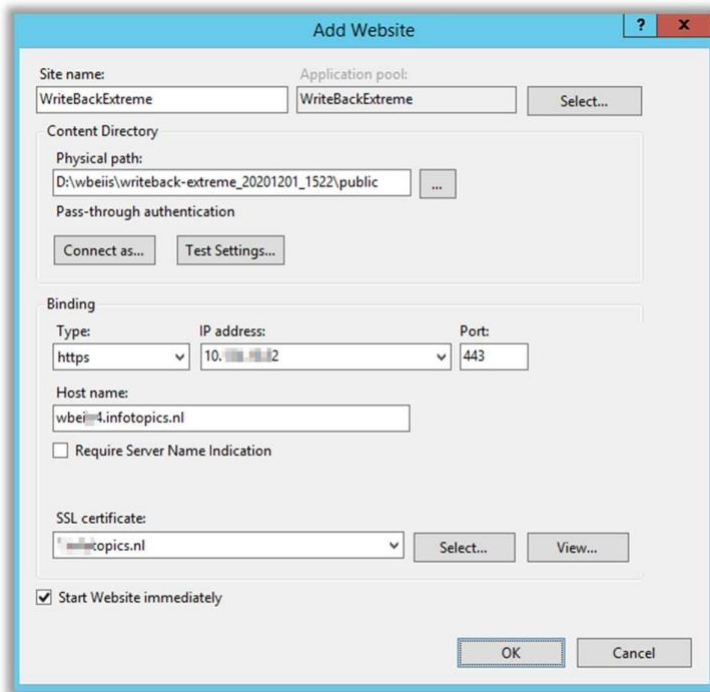
First specify a site-name.

Then the physical path, where we located the source-files of WBE. Please note that '\public' is at the end of the path.

Then specify the binding info. The hostname is your webdomain URL. And specify the corresponding SSL-certificate.

The SSL-certificate should be installed upfront into the windows certificate store. (double click the .pfx file and choose 'install' in the 'computer account' or 'local machine'; not 'current user'!).

2.3.7   Unzip the WBE extension zip file to the desired web-root location

Copy the downloaded or received WBE zip-file to a TEMP-folder. And unzip it there. You can download the latest version of WriteBackExtreme from your Enterprise Portal: https://my.appsfortableau.com

Copy the unzipped files and folders from the unzip to the specified folder in the sitebinding. But one (1) folder above '…\public'.

Using the example, then place the unzip-files in 'C:\xampp\htdocs\writebackextreme'.
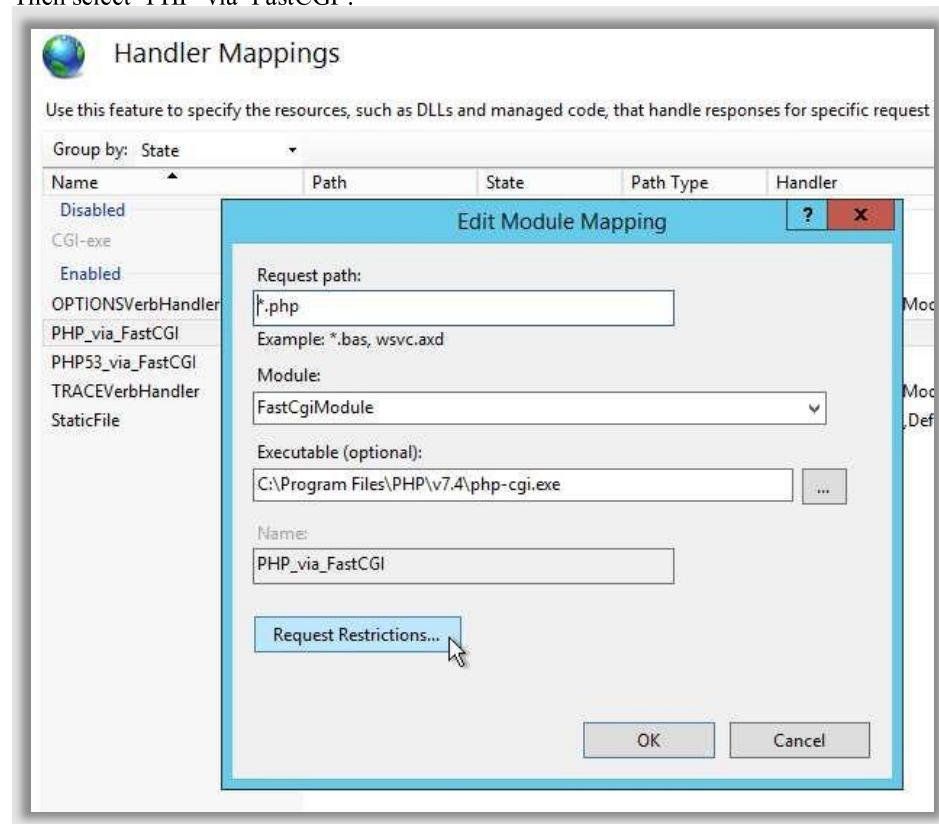
2.3.8   Enable the DELETE and PUT method in IIS
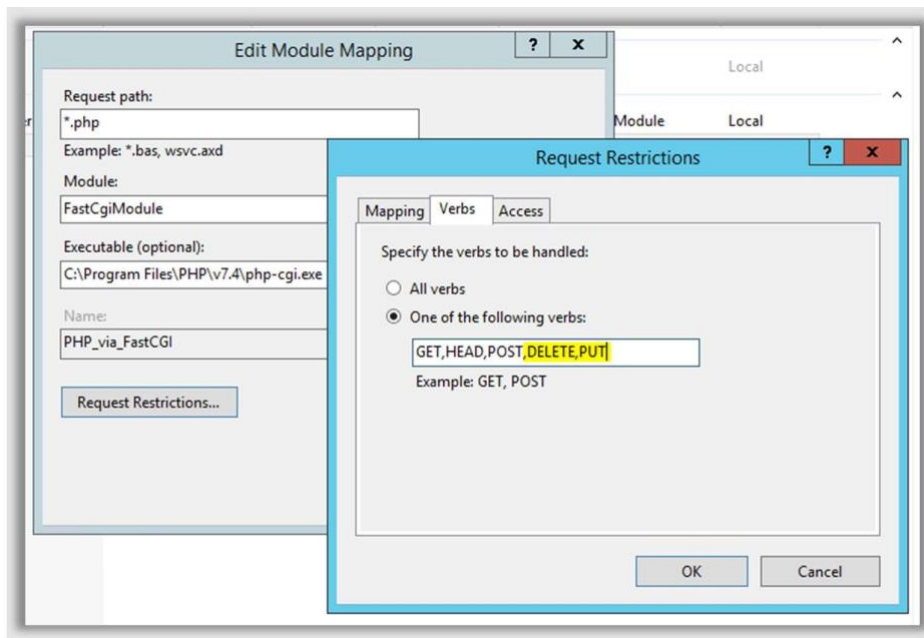
(in future releases this step will be obsolete)

Basic configuring the WBE website for the usage of DELETE and PUT method is fairly easy. Select the WBE site in IIS and double-click 'Handler Mappings'.
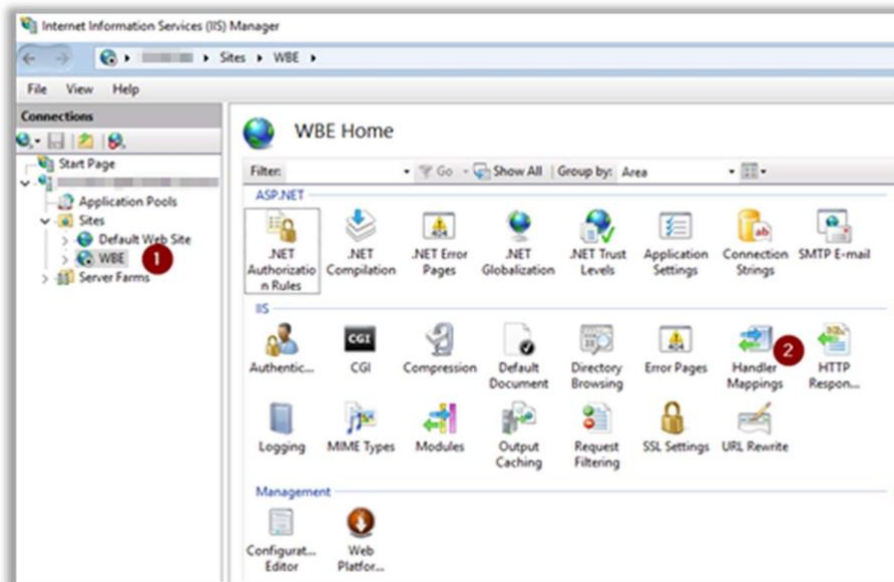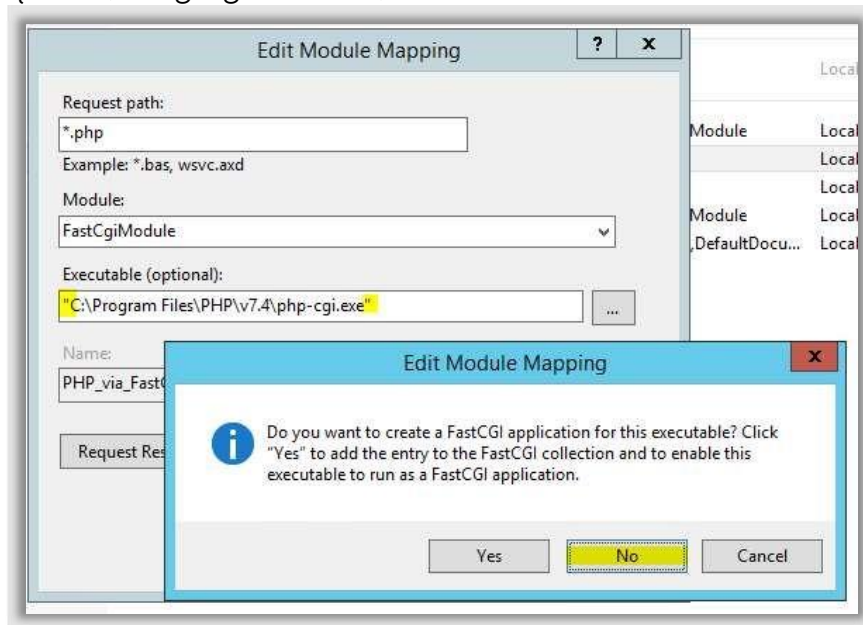
Then select 'PHP via FastCGI'.

Click 'Request Restrictions' and the 'Verbs' tab. Add ',DELETE,PUT' as highlighted.

Click 'Request Restrictions' and the 'Verbs' tab. Add ',DELETE,PUT' as highlighted.

When trying to save the changes, please enclose the exe-pathname for php with double-quotes (as highlighted below).
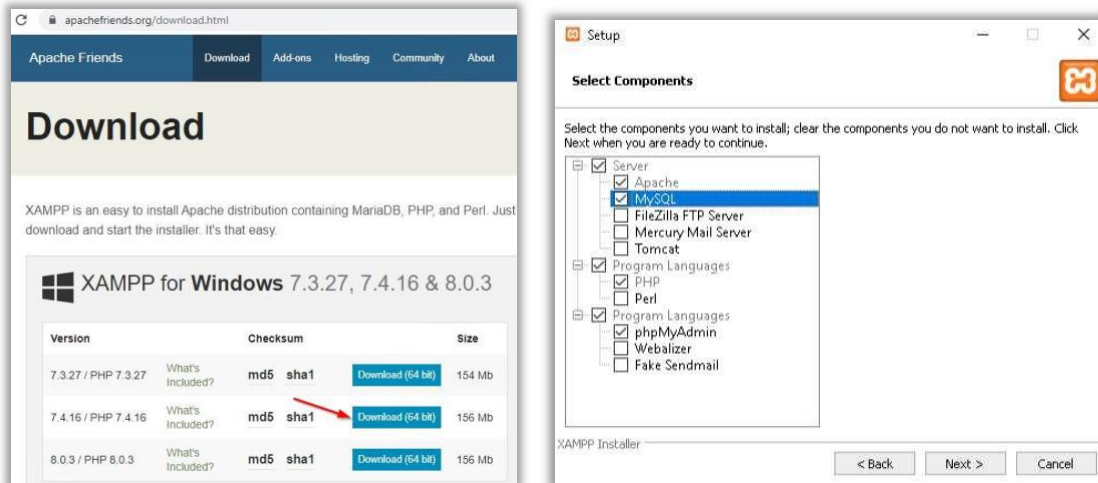

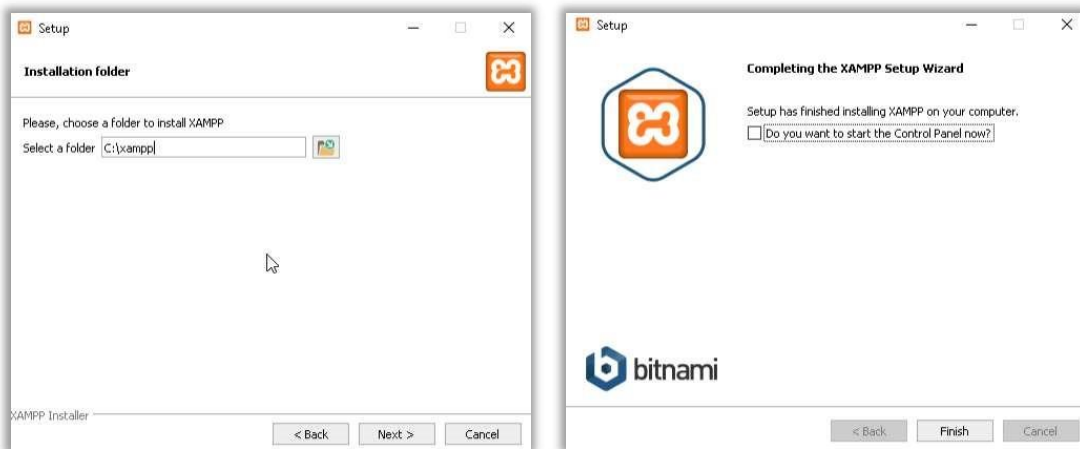Now you are ready to configure the WBE Extension.

2.4 Apache2 via XAMPP

### 2.4.1 Download and install XAMPP (Apache2, MySql, PHP)

Download the XAMPP installer onto your server and run 'as administrator'.
Select 'Apache', 'MySQL', 'PHP' and 'phpMyAdmin' to install.

Select your installation-folder, and installation language (English), but un-check the 'start the Control Panel' at the end of the install. The control-panel should be started by running 'C:\xampp\xampp-control.exe' as an administrator.

2.4.2 XAMPP configuration
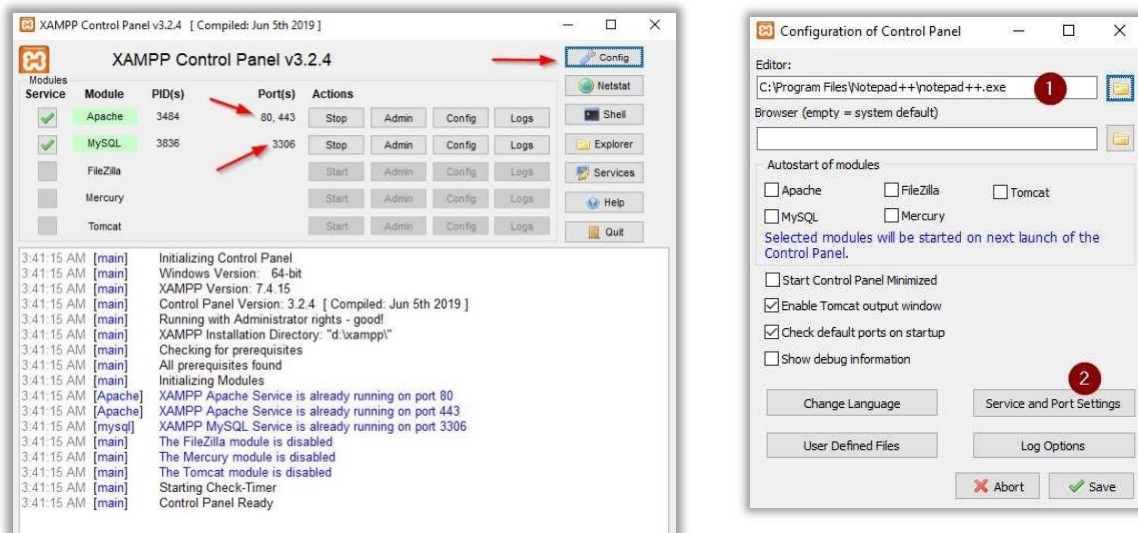
First click the 'Config' button, to adjust a couple settings like your favorite editor (notepad++) and ports for Apache and MySQL. Preferable for Apache are port 80 (http) and 443 (https). Standard port for MySQL is 3306. You can check with the 'Netstat' button if these ports are free to use.

If you change the default http port (from 80 to 81), please edit 'C:\xampp\apache\conf\httpd.conf' file and change the lines (about 60 and 228):

```
Listen 81
ServerName localhost:81
```

If you want/need to change the default https port (from 443 to 8443, for example), edit the file 'C:\xampp\apache\conf\extra\http-ssl.conf'. (You might want to save a copy before editing the file). And change lines (about line-numbers 36, 121 and125)

```
Listen 8443
<VirtualHost _default_:8443>
Servername localhost:8443
```

You might also want to adjust the SSL-certificate files as shown later in the 'http-vhosts.conf' file as well. And change the Servername correspondingly.

To add the WBE web-application URL to the XAMPP/Apache2 configuration edit the file 'C:\xampp\apache\conf\extra\httpd-vhosts.conf'. Again, you might want to save a copy before editing. And add the following lines:

```
##<VirtualHost writeback.your-company.com:443>
<VirtualHost *:443>
        ##ServerName writeback.your-company.com:443
        ServerName writeback.your-company.com
    DocumentRoot "c:/xampp/htdocs/writebackextreme/public"
    <Directory  "c:/xampp/htdocs/writebackextreme/">
            Options Indexes FollowSymLinks MultiViews
            AllowOverride All
            Require all granted
    </Directory>

    ServerAdmin admin@example.com
    ErrorLog "c:/xampp/apache/logs/error_wbe.log"
```

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```
TransferLog "c:/xampp/apache/logs/access_wbe.log"

        SSLEngine on
    SSLOptions +ExportCertData +StrictRequire +OptRenegotiate +StdEnvVars

    SSLCertificateFile "c:/xampp/apache/conf/ssl.crt/writeback_yourcompany_com.crt"
    SSLCertificateKeyFile "c:/xampp/apache/conf/ssl.key/writeback_yourcompany_com.key"
        SSLCertificateChainFile "c:/xampp/apache/conf/ssl.crt/CACert.crt"
</VirtualHost>
```

Change the URL 'writeback.your-company.com' to the desired URL. And the location of files and folders depending on the install-folder 'C:\xampp' (or D:\xampp).

Adjust the SSL-certificates file accordingly. If the SSL-certificate is installed in your Windows Certificate Store (hopefully with the private key), you can use a free utility like 'DigiCertUtil' to export the SSL-certificate to the files needed for Apache and place them in the corresponding folders.

2.4.3 Unzip the WBE extension zip file to the desired web-root location

Copy the downloaded or received WBE zip-file to a TEMP-folder. And unzip it there. You can download the latest version of WriteBackExtreme from your Enterprise Portal: https://my.appsfortableau.com

Copy the unzipped files and folders from the unzip to the specified folder in the sitebinding. But one (1) folder above '…\public'.
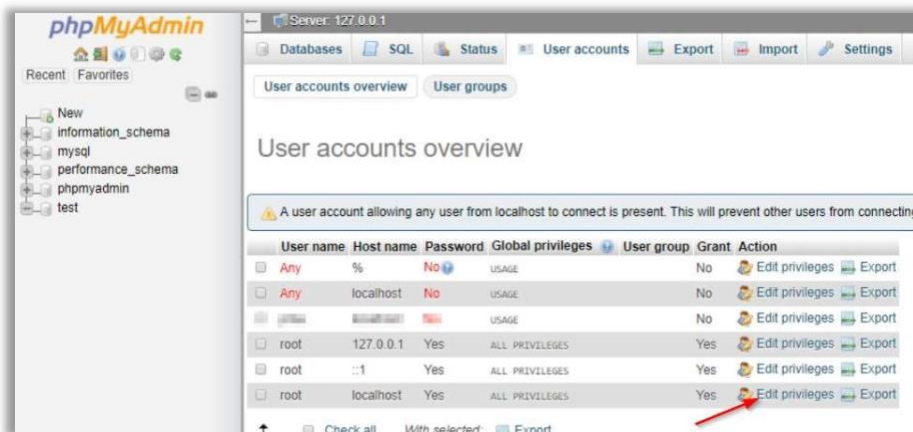
Using the example, then place the unzip-files in 'C:\xampp\htdocs\writebackextreme'.

2.4.4 Configure MySQL
First start MySQL and Apache.

And access https://localhost/phpmyadmin from a browser on the server. You will be automatically logged in as 'root' to MySQL (root is the administrator user of MySQL). And first we want to set a password for this 'root' account in MySQL.

Select the 'User Accounts' tab and click the 'edit privileges' button for 'root' on the 'localhost'.
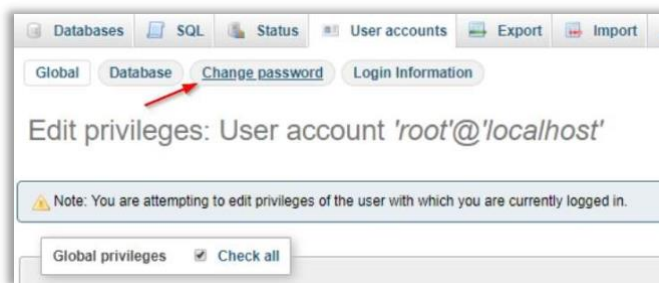
Point of attention: Do not use passwords containing a period "." Since this might break connections and lead to unexpected results.

Then click the 'Change Password' button and specify a new password. Store this password in your password-safe. It will not be used much often.
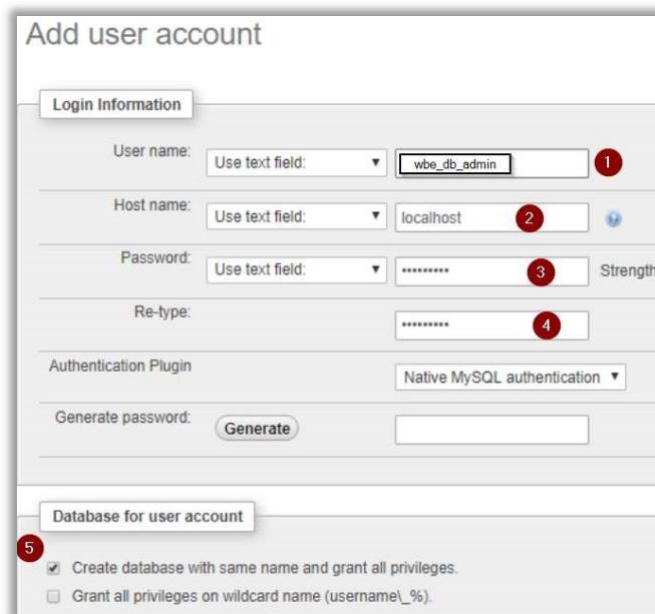
Next change is to edit the file 'C:\xampp\phpMyAdmin\config.inc.php'

```
/* 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'] = '';
```

And change the 'auth_type' and 'AllowNoPassWord' accordingly.

Please verify if you can still login into phpMyAdmin as 'root' with the new password.
And while logged in, select the tab 'User Accounts' again. And click 'Add User Account' to create the wbe-database-admin account and database for the writeback repository.

Point of attention: Do not use passwords containing a period "." Since this might break connections and lead to unexpected results.

The wbe database admin account.

On the localhost, means the this admin account can only login from within this server itself.

Set a strong password. Also store this in your password-fault.

Add finally create a database with the same name as the account-name and grant all privileges to it. If you want a different name for the database, you can create them seperatedly.

In the same way, you can create an 'wbe_reader' account and assign only 'select' privileges to this account on the writeback-database, if used for writing-back (not for the wbe-repository).
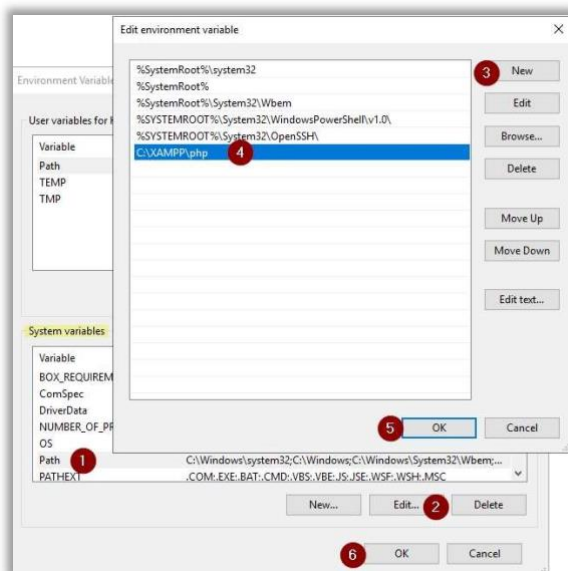
2.4.5 PHP Configuration

In a dos-cmd-box, type the command:
`where php`

if PHP is not found, you might want to add it to the PATH environment variable, by:
`set PATH=C:\xampp\php;%PATH%`
Or add 'C:\xampp\php' to the system environment path variable PATH. See above how to set a System Environment variable.

a reboot of the server maybe required after changing the PATH system variable.

In the folder 'C:\xampp\php', you will find a file named 'php.ini'. Please make a copy of it before editing.

Then edit 'php.ini' file (with notepad++) and make the next changes:

       post_max_size = 20M   upload_max_filesize = 20M

Error to console instead of logfile.

       display_errors = On
       ; error_log C:\Windows\Temp\PHP74x64_errors.log   (comment out by ';' in front)

At the bottom, add 'fileinfo' and 'sqlsrv' dll's to be loaded (about line 935):

       extension=fileinfo   (might already been activated) extension=intl
       extension=pdo_mysql   (might already been activated)
       extension=pdo_sqlsrv_74_ts_x64
       extension=sqlsrv_74_ts_x64
       extension=pdo_pgsql   (might already been activated)
       extension=pgsql   (might already been activated)

The both 'sqlsrv' dll's are there, to load the ms-sqlserver drivers in php. These are installed on the correct location by the WPI-installer (sub-folder 'ext' from the folder where 'php.ini' file is found. Eg 'C:\xampp\php\ext').

The 'pgsql' dll's are for PostgreSQL (but might need to be downloaded and installed/copied to the extension folder of PHP; see also later in the NGINX section).

2.4.6   PHP : TS or NTS database drivers ?

Some database drivers come in two (2) different type: TS and NTS. TS means Thread-Secure and NTS means Non-Thread-Secure. It depends on the version of PHP, which type you need to use.

```
D:\xampp\htdocs>php --version
PHP 7.4.15 (cli) (built: Feb  2 2021 20:47:45) ( ZTS Visual C++ 2017 x64 )
Copyright (c) The PHP Group
Zend Engine v3.4.0, Copyright (c) Zend Technologies

D:\xampp\htdocs>
```

In this case 'ZTS' version, means you have to specify the TS-version of database drivers in the 'php.ini' file.

2.5 Start Apache & MySQL at server boot

In order to start Apache and MySQL at server startup, stop both and press the 'red-cross' button in front of them. This will activate a windows service to automatically start them after boot.

Now you are ready to configure the WBE Extension.

2.6 NGINX

Not available yet. Stay tuned.

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3 Installation WBE Extension

3.1 Preparation

The downloaded zip file contains the following files:
- *wbe-core.phar* – WriteBackExtreme compiled source file.
- *install.bat* - Runs some steps to setup the WriteBackExtreme.
- *update.bat* - For updating in the future.
- *wbe-core.bat* - Uses the "cached" PHP variable path to execute the command: `/path/to/php.exe wbe-core.phar` command.

3.2 Copy your license into the LICENSE file

First type the next two commands in a dos-cmd-box: where '*C:\wbeiis\wbe2*' is WBE-root-folder where you copied the WBE unzipped folders and files.

Copy your license (file) to the WBE project-folder, to '*C:\wbeiis\wbe2\LICENSE*' (without an extension like '*.txt*')

You can download your license from https://my.appsfortableau.com

3.3 Are ALL files ready?

Run the command `DIR` to show all files to make sure we have it all. Make sure all files listed before are in the WBE project-folder with the `LICENSE` file.

3.4 Install WriteBackExtreme

Now you can run `install.bat` and it will ask to enter the full path to the `php.exe` or drag/drop the the `php.exe` within this dos-cmd-box window to automatically set the path. Press *enter* when full path is visible to continue. Follow the steps from the installation. Now you should have configured the correct database-driver and database credentials. Read more about environment variables in *3.5 Environment Variables* and then proceed with this step.

Check if everything shows up fine in the *app:status* command:

```
php.exe wbe-core.phar app:status
# or
wbe-core.bat app:status
```

3.5 Environment variables

Environment variables allows the application to not-hardcode specific environment/secret variables (e.g database credentials).

Define your WBE repository database connection details:

```
.env
 1  APP_NAME="AppsforTableau | WriteBack extension"
 2
 3  DB_CONNECTION=sqlsrv-default
 4  DB_DRIVER=sqlsrv
 5  DB_HOST=your-sql-server-hostname-or-IP-address
 6  DB_PORT=1433
 7  DB_DATABASE=your-wbe-database-name
 8  DB_USERNAME=writeback-database-account
 9  DB_PASSWORD=database-account-password
10
```

Specify your DB_HOST
DB_DRIVER must be 'sqlsrv'
DB_PORT is default *1433* for sql-server
Specify your DB_DATABASE

Specify your web-admin database account and corresponding password

---> *This must be a SQL-srv account; not a Windows-authenticated (AD) account! Save the edited file*

Point of attention: Do not use passwords containing a period "." Since this might break connections and lead to unexpected results.

3.6 Start the WBE site in IIS
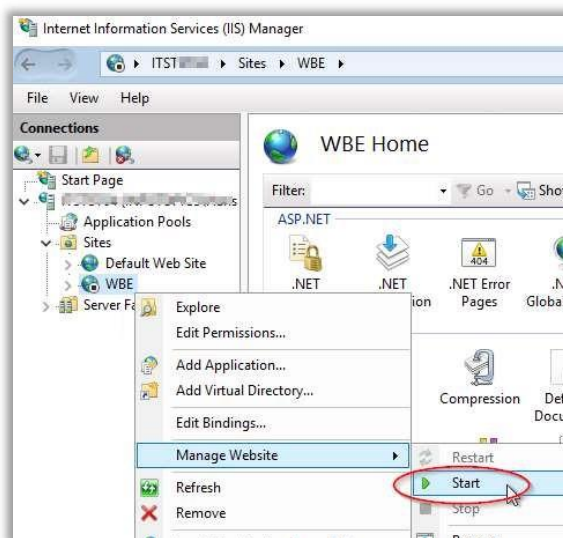
Right-click the WBE-site to select 'Manage Website' and start the site.

PS. when using Apache, the web-server is already started.

3.7 Test the WBE extension

The URL https://writeback.your-company.com should show the WBE logo.
The URL https://writeback.your-company.com/info should show the phpinfo page. Please mark the folder mentions by 'sys_temp_dir', 'session.save_path' and 'upload_tmp_dir' for later use.

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3.8 Folder-permissions

The WBE extension needs write permission to a number of folders.

Which folders need to be writeable for the WBE application?
- \<WBE-root-folder>\storage
- \<WBE-root-folder>\migration
- \<php:sys_temp_dir>   (if specified)
- \<php-info:session.save_path>
- \<php-info:upload_tmp_dir>
- Windows TEMP folder (dos-cmd-box: echo %TEMP%)

Uplift security settings for group 'Users' of these folder to 'Modify' permissions. Right-click the folder in the windows file-explorer and select the 'properties'.
Then select the 'security' tab and select 'Edit'.
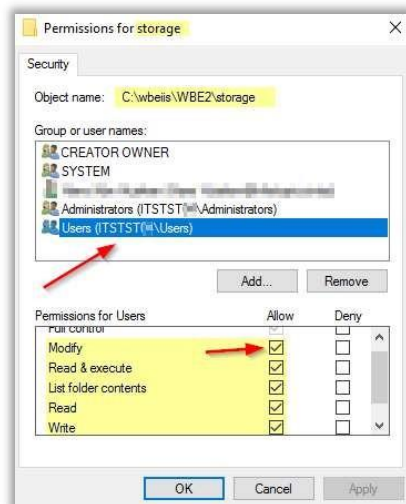
Uplift the security settings on the folder 'storage' and 'migrations' for the group 'Users' to 'Modify' Permissions. If these folders do not yet exist, you can create them with lowercase names.

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3.9 Final Result

The result is to have two (2) URL available. One for the extension itself when it's accessed via the Tableau-dashboard to run the WriteBackExtreme extension as your configured it.
The URL https://writeback.your-company.com/extension, when access directly from a browser only shows a loading screen.
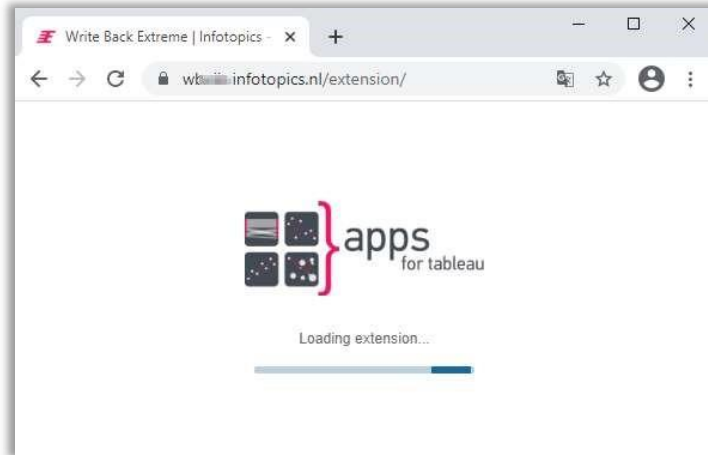
The configuration backend can be accessed via https://writeback.your-company.com/backend
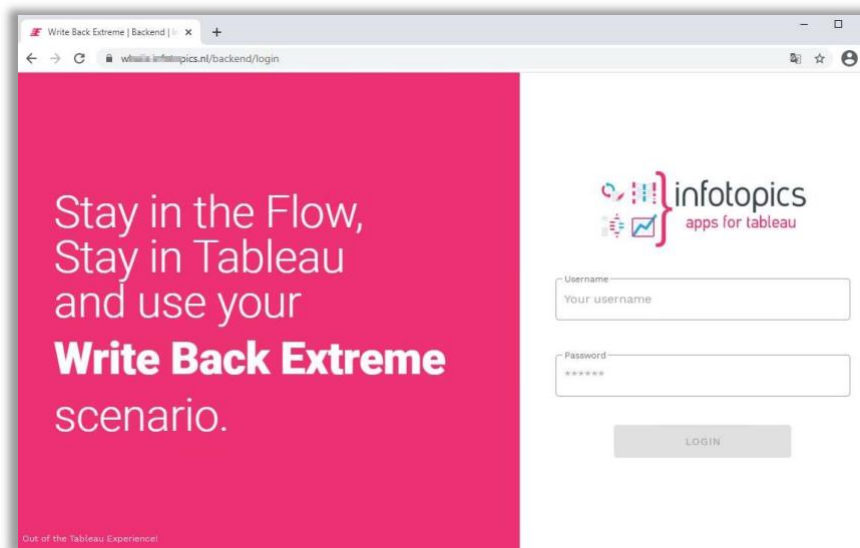
Specify the admin user-account and password to enter the backend configuration part of your Write-Back-Extreme extension.

For more info see the User Manual how to setup your Write-Back-Extreme scenario, to use inside Tableau Desktop and Tableau Server.

4   Troubleshooting

4.1   Database connection issues

Try using other tools to be sure the database is accessible from the server running WBE, to check any connectivity issues.

Point of attention: Do not use passwords containing a period "." Since this might break connections and lead to unexpected results.

4.2   Snowflake connection throws error undefined

If you have issues with the snowflake connection throwing errors in the management console. Please check if the SQLPrepare statements are disabled in the driver configuration. Disable it by using this link: [Disable SQLPrepare statements.](#)

4.3   Error during backend configuration

When accessing the backend configuration of WBE and errors pop-up. Try to reproduce the error while in browser-debug mode (F12) and check for message on the 'network' and 'console' tab, to find any common issues.

4.4   PHP related

Open een dos-cmd-box (⊞+R and 'cmd') to find if and where 'php.exe' can be found:
    C:\> `where php`

To find the version of php:
    C:\> `php --version`

4.5   Logfiles location

The WBE extension logfiles are located at:
    C:\wbeiis\wbe2\storage\logs
Apache2/XAMPP has logfiles created at:
    <xampp-install-path>\apache\logs
Look for 'access' and 'error' logfiles in particular.

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