
TWAIN Cloud Express Installation

March 27th 2019
Revision 0.1



History

Date	Version	Comment
March 27 th , 2019	0.01	First draft

Notes

Notes
<ul style="list-style-type: none">• (none)

Overview

TWAIN Cloud Express is an easy to install tool that creates a simulated cloud environment on a user's local computer using the TWAIN Direct Bridge. This allows client application writers to interact with a cloud environment without actually needing to set up their own cloud, or gaining access to another user's cloud.

An application that works correctly with TWAIN Cloud Express will work with any other TWAIN Cloud using the same authentication and authorization methods.

There are three components: npm, the twain-cloud-express project, and the twain-direct project. All three must be installed on the local computer.

Installing npm

The Node.js package manager (npm) is a package manager for the JavaScript programming language. Specifically, it is the default package manager for the runtime environment Node.js, which is used to run twain-cloud-express.

It can be obtained from <https://nodejs.org/en/download/>

Run the installer and follow its instructions. Perform a full installation. Be aware that this may require rebooting the local computer.

When this is complete it will be possible to run 'npm' from the a command shell.

Installing twain-cloud-express

twain-cloud-express is a Node.js project that simulates a TWAIN Cloud environment on the local computer. It can be cloned or downloaded as a zip file from the following location:

<https://github.com/twain/twain-cloud-express>

When the files are present on the local machine bring up a command shell (cmd.exe is suitable for this) and change directory to the new twain-cloud-express folder.

In that folder enter the following: `npm i`

This installs npm for twain-cloud-express, a lot of text messages will fly by while it does its work. This process must be repeated whenever twain-cloud-express is updated. On my system when it's completed successfully I see a message like the following:

```
added 435 packages from 384 contributors and audited 2117 packages in 157.222s
found 7 vulnerabilities (2 low, 5 moderate)
run `npm audit fix` to fix them, or `npm audit` for details
```

No further action is required. Make a note of the full path to the folder for twain-cloud-express, this information will be needed later in this document.

Installing twain-direct

twain-cloud-express is a C# project that includes a sample TWAIN Direct application, and the TWAIN Direct Bridge, which allows legacy TWAIN scanners to be accessed through TWAIN Local or TWAIN Cloud. It can be cloned or downloaded as a zip file from the following location:

<https://github.com/twain/twain-direct>

Once the files are present on the local machine they can be built using Visual Studio, or the user can just run the latest installers under the releases folder. The rest of this section discusses doing the installation. The first step is to remove previous versions:

- Press Windows Key + R
- Enter: appwiz.cpl
- If TWAIN Direct Application (32-bit) is installed, uninstall it
- If TWAIN Direct Scanner (32-bit) is installed, uninstall it
- Close the Programs and Features dialog

To install twain-direct do the following:

- Bring up windows explorer
- Go to: twain-direct\Releases
- Double-click on: TWAIN Direct Application (x86).msi
- Follow the instructions
- Double-click on: TWAIN Direct Scanner(x86).msi
- Follow the instructions

The last step is to configure twain-direct to default to twain-cloud-express. To accomplish for the application do the following:

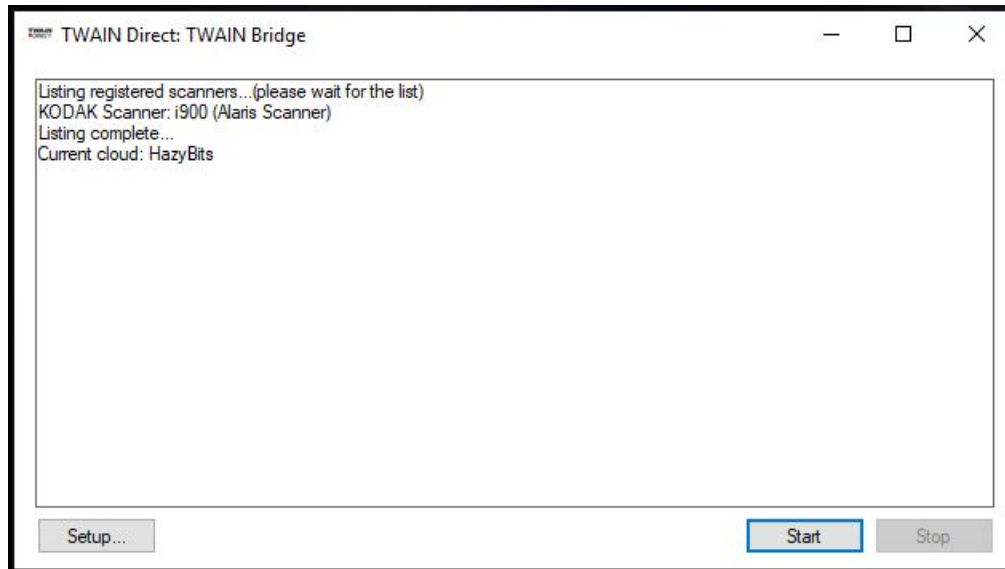
- Bring up windows explorer
- Go to: C:\Program Files (x86)\TWAIN Direct Application\data
- TwainDirect.App.appdata.installed.txt to TwainDirect.App.appdata.txt
- Edit TwainDirect.App.appdata.txt
- Find the entry for "cloudApiRoot", if it's "XcloudApiRoot", remove the X
- Copy the lines between "****BEGIN STARTING FROM THE NEXT LINE****", and "****DO NOT COPY THIS LINE****"
- Paste that data to the line immediately following: "cloudApiRoot": [
- Save the file and exit

To configure the bridge do the following:

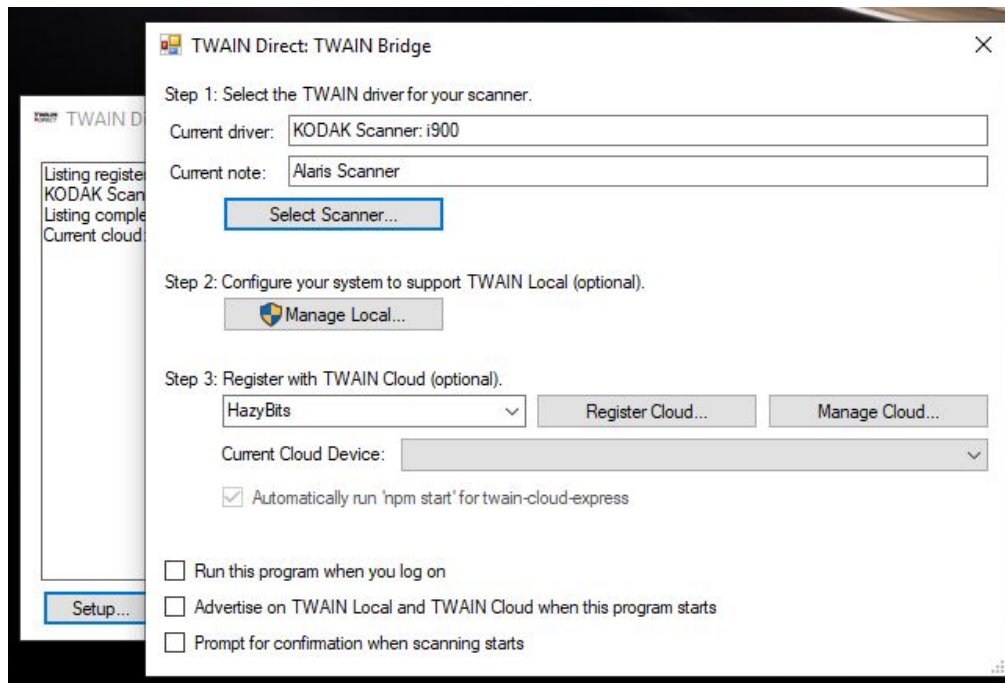
- Bring up windows explorer
- Go to: C:\Program Files (x86)\TWAIN Direct Scanner\data
- TwainDirect.App.appdata.installed.txt to TwainDirect.App.appdata.txt
- Edit TwainDirect.App.appdata.txt
- Find the entry for "cloudApiRoot", if it's "XcloudApiRoot", remove the X
- Copy the lines between "****BEGIN STARTING FROM THE NEXT LINE****", and "****DO NOT COPY THIS LINE****"
- Paste that data to the line immediately following: "cloudApiRoot": [
- Edit the property called twainCloudExpressFolder, providing the full path to the twain-cloud-express folder; be sure to use forward slashes
- Save the file and exit

Running with twain-cloud-express

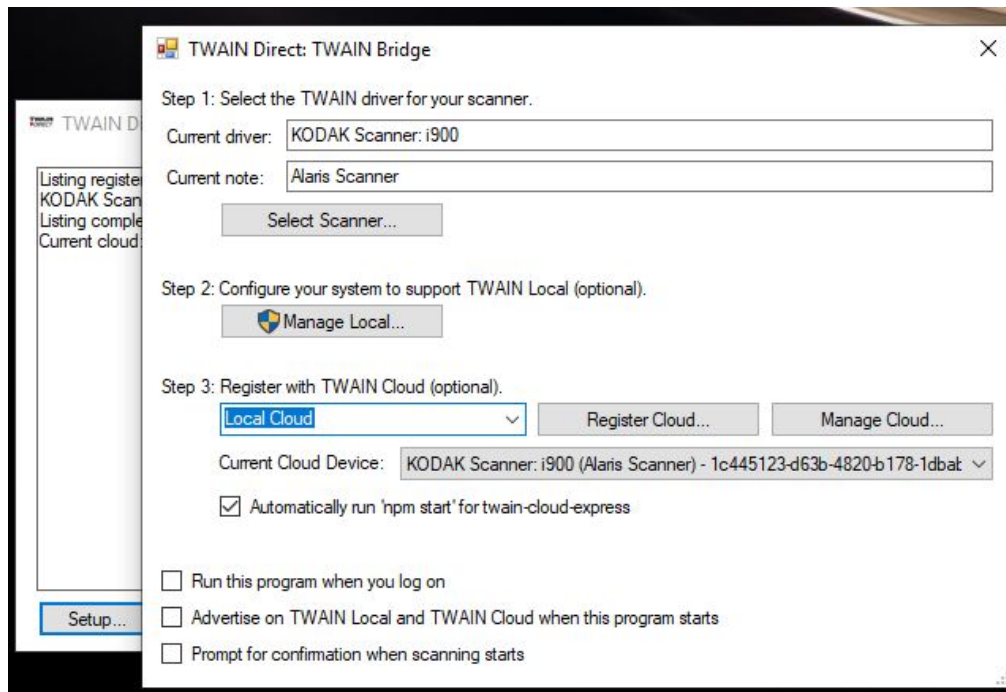
This section discusses running TWAIN Cloud express with the TWAIN Direct sample code. The first step is to bring up the TWAIN Bridge:



Click on the Setup button:



Select the Local Cloud under Step 3, make sure that Automatically run 'npm start' for twain-cloud-express is checked:



Click on Register Cloud..., if the system is correctly configured the system will start twain-cloud-express. It waits 10 seconds for things to stabilize. And then the registration window will appear.

From this point on the system will operate the same as if talking to a TWAIN Cloud scanner. If doing development work in the debugger be aware that Node.exe processes are being launching, along with a command window. It may be necessary to manually terminate these if the session is interrupted without allowing it to cleaning shut down.