## Requirements

* Windows OS
  + Windows 7 or newer
  + – or –
  + Windows 2012 Server or newer
  + 4GB+ RAM (2GB will run too slow)
* Admin privileges on the user account
  + Many instructions tell you to “Run as Admin”
  + Usually you right-click on the file and “Run as Admin” is a menu choice
* 7-zip
  + http:// <http://www.7-zip.org/>
  + Required in the scripts that automatically decompress the Canvas Data files

## Step 1 – Install SQL Server

* Require SQL Server 2012 or higher

## Step 2 – Enable xpcmdshell

* Execute the following TSQL as a SQL Server admin (copy/paste into a New Query screen and run)

EXEC sp\_configure 'show advanced options', 1

GO

RECONFIGURE

GO

EXEC sp\_configure 'xp\_cmdshell', 1

GO

RECONFIGURE

GO

## Step 3 – Install Node.js

1. Download and install Node.js
   1. Link: <https://nodejs.org/en/>
   2. Select the “LTS” (long time support) version recommended for most users
   3. Install with the standard “out of box” options

## Step 4 – Download and Unzip EMU CDV

1. Download and install EMU’s Canvas Data Viewer (CDV)
   1. Link: <https://github.com/EMU-CFE/CanvasDataViewer>
   2. Download CDV.zip
   3. Extract all files to your preferred location

## Step 5– Gather configuration information

1. Use the SampleConfigurationInputs.txt file to collect your configuration information.
2. Items needed:
   1. Your Node.js install path (example: C:\Program Files\nodejs)
   2. Your Canvas Data credentials (from the Canvas Data Portal menu in your Canvas site)
      1. Canvas Data API Secret
      2. Canvas Data API Key
   3. Your SQL Server Information
      1. Server Instance Name
      2. Server account user name (example: sa)
      3. Server account user password

## Step 6 – Install the required Node.js modules

From the CanvasDataViewer folder that you unzipped

1. Copy **mods.bat** file to the Node.js directory (C:\Program Files\nodejs)
2. Right-click **mods.bat** and Run as Administrator
3. (This will download/install the Node.js modules (extensions) that CanvasDataViewer needs)

## Step 7 – Install the CanvasDataViewer JavaScript files

1. Copy/paste to the Node.js directory (C:\Program Files\nodejs)
   1. **AutoConfig.bat**
   2. **AutoConfig.ps1**
   3. **CanvasData\_Schema\_Latest.cdconfig**
   4. **CanvasData\_Tables\_Latest.cdconfig**
   5. **CanvasDataAuth\_Schema.cdconfig**
   6. **CanvasDataAuth\_Tables.cdconfig**
2. Right-click Run **AutoConfig.bat** and Run as Administrator
3. Enter your configuration information as gathered from Step 5 (this step will modify the scripts and insert the information you provided)

## Step 8 – Create CanvasData database in SQL Server

1. Open SQL Server Management Studio
2. In the ObjectExplorer click on Connect and select your database engine that you installed
3. In the database engine, right-click on Databases and select New Database
4. In Database Name enter “CanvasData” and click OK (Leave all other settings as default. You must use this name because it is hard-coded into all the scripts.)
5. Right-click on Databases and click Refresh to make sure CanvasData has appeared
6. In the top menu click on File > Open > File. In the dialog box, find/highlight the CanvasDataViewer\_SQLScript\_... file in the CDV scripts. The script should open in a New Query window. Click Execute (F5).
7. (N.B. The “Warning! The maximum key length is 900 bytes. …” error message is expected. It doesn’t affect the installation and we’re working on eliminating it.)
8. Open the CanvasData database to confirm that tables and views have installed.

## Step 9 – Run the datafile download and database loading

1. Open SQL Server Management Studio
2. In the ObjectExplorer open the CanvasData database and go to *CanvasData/Programmability/Stored Procedures*
3. Right-click on *dbo.CanvasData\_DownloadLatestSchemaAndTable* and click “Execute Stored Procedure…”. This process accesses Canvas API endpoints to download the current Canvas Data table schema. It also downloads all the actual Canvas Data data, which is packaged in comma-delimited text files. This can take up to an hour or more.
4. Right-click on *dbo.CanvasData\_TableBuild* and click “Execute Stored Procedure…”. This process creates tables to hold the data according to the latest schema. Then it loads all the datafiles into import tables. Finally it transfers all the data to production tables and builds indexes on them to aid searching. This process can take several hours depending on the amount of data in your instance.

* Finally, set up two SQL Server Agent jobs to run the two processes at night. Set the second process to run at least two hours after the first one.:
  + *dbo.CanvasData\_DownloadLatestSchemaAndTable*
  + *dbo.CanvasData\_TableBuild*