Pearson System of Courses

Deploy with Windows Imaging

Last updated: June 2018

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Deployment Process Overview

The Windows Imaging process is used when the IT Admin chooses to deploy some or all of the components of the Pearson System of Courses using a Windows image. The components are the app, configuration code, and content. The process begins by creating a "Master" image on a base machine that includes these three components, and then encapsulating that image to deploy using the chosen deployment mechanism (USB, imaging server, or other selected option). This process streamlines the provisioning of the Pearson System of Courses app, as well as the Pearson System of Courses content, and configuration code on Windows devices to students. Refer to Figure 1.
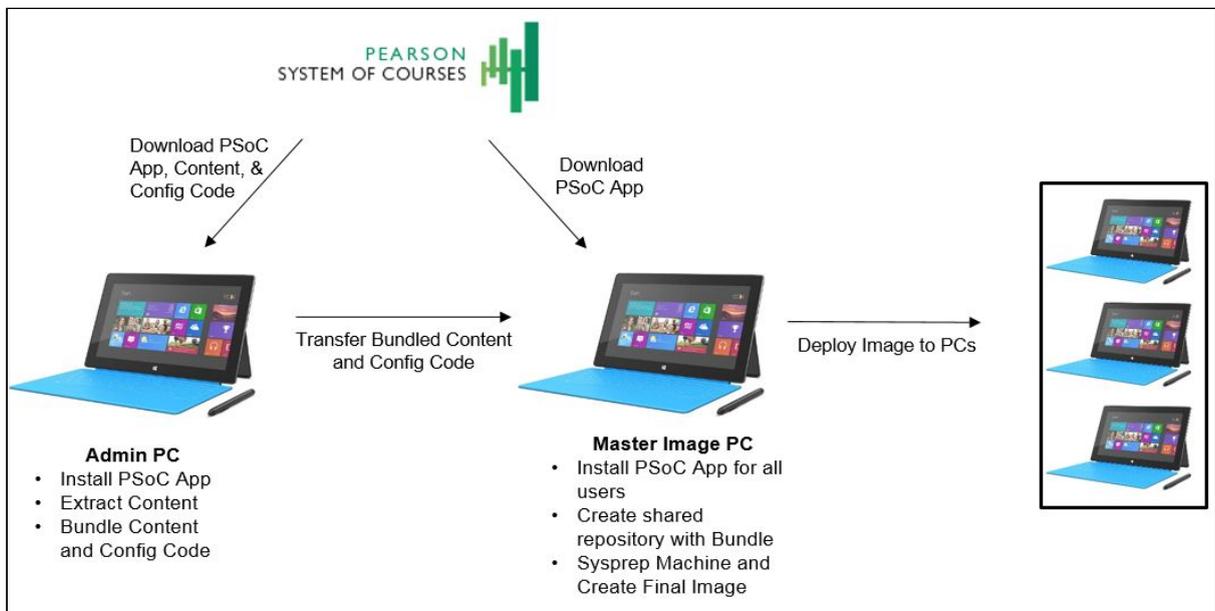

Figure 1: Windows Imaging Process

Prerequisites and Assumptions

To enable this process, the following prerequisites are required:
- Admin PC and Master Image PC devices have not had Pearson System of Courses installed in the past, meaning there is no app or content already on these two devices.
- Sideloading of the Pearson System of Courses app.
- Allow enabling of Developer Mode option for Windows 10 during the Pearson System of Courses app installation for both the Admin and Master Image devices detailed below.
    - Domain or Local Group Policy must allow the (AllowAllTrustedApps) registry key or (Allow all trusted apps to install) policy to be enabled when using the Pearson System of Courses sideload app to enable Developer Mode.
- Process to restore a device image using tools such as USB Boot Drive or PXE (pre-boot execution environment) Boot along with other Imaging software or services, such as Microsoft SCCM or Microsoft Deployment Toolkit (MDT) with Windows Deployment Services (WDS).

This process was created with the following assumptions:
- Devices used for the Pearson System of Courses app comply with the Pearson provided technical requirements located [here](#).
- Windows 10 operating system with Enterprise, Professional or Education Edition.
    - The latest information for the supported status of Pearson System of Courses and major Windows 10 version updates is available on the Pearson Support Site for Pearson System of Courses [here](#) under Announcements.
- Domain-joined workstations will be used for the teacher and student devices that are imaged from the Master Image source device.
- Workstations are imaged before being provided to students and teachers, and will include the Pearson System of Courses app, content, and configuration code using the process below.

Process

Pearson System of Courses Deployment

Schools and/or districts using Windows imaging to manage their devices can use this process to streamline deployment of the Pearson System of Courses app and content. The process (see Figure 1 above) for successfully integrating the Pearson System of Courses app, configuration code, and content involves:

- Installing the app and extracting content on an Admin PC.
- Configuring a Master Image PC with the app installed.
- Configuring a Master Image PC with the configuration code installed.
- Transferring extracted content from the Admin PC to the Master Image PC.
- Preparing the Master Image PC for deployment by using the Microsoft Sysprep tool, which enables every device to which the image gets deployed to have a unique security identifier (SID) and thus avoid duplicate devices or SIDs in the district network.

Prepare the Pearson System of Courses Content

This process will prepare the shared content on the Admin PC for transfer to the the Master Image PC. Use the Admin PC to download and extract the Pearson System of Courses content with the app. Once complete, transfer the extracted content to the shared repository (directory) on the Master image PC. This allows each individual user who logs into their imaged Windows device to start using the Pearson System of Courses app without going through the content extraction process since this is already completed for them. Note: The operating system of the Admin PC needs to match the operating system of the Master Image PC.

1. Start up an Admin PC with Windows 10 installed.
2. Open File Explorer.
3. Navigate to C:\.
4. Right click and Select **New Folder** and enter **PSoC** as the name. Refer to Figure 2. Note the PSoC folder can exist in any location, but the name must be PSoC.
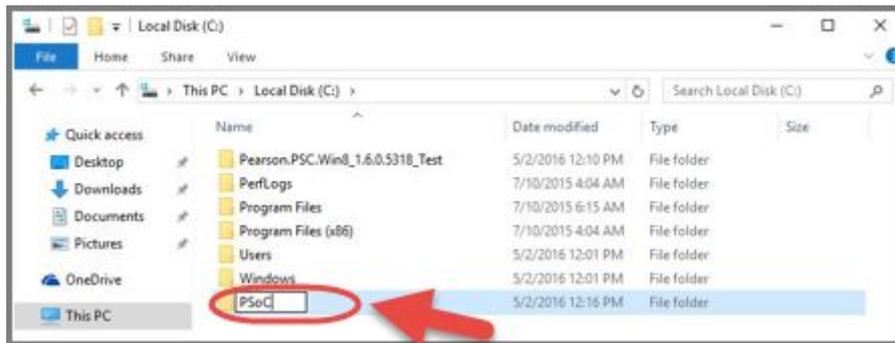
Figure 2

5. Open the PSoC folder and create a folder named SideloadContent. Refer to Figure 3.
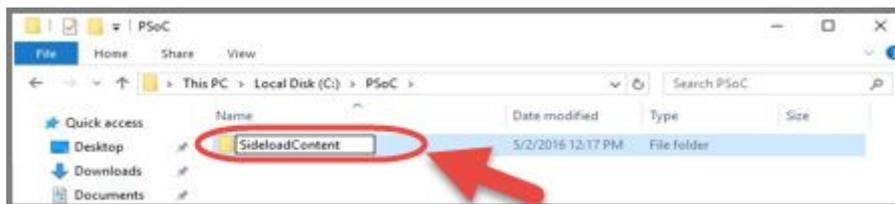
Figure 3

6. Log in to the Pearson System of Courses distribution website provided by your Pearson contact.
7. Select **CUSTOM (FOR PARTNERS)** and use the login provided by your Pearson contact. Refer to Figure 4.

Figure 4

8. Download the content sideload packages. Refer to Figure 5.
   a. Select the desired grades.
      i. **Note:** It is recommended to sideload all the grades provided to your district into a single Image to streamline the Image deployment process.

b. Save the files to C:\PSoC\SideloadContent.

Grade	ELA	Last Modified	Size (bytes)	MATH	Last Modified	Size (bytes)
9	ELA	6/3/2016		n/a	n/a	n/a
10	ELA	6/3/2016		n/a	n/a	n/a
11	ELA	6/3/2016		n/a	n/a	n/a
12	ELA	6/3/2016		n/a	n/a	n/a

Figure 5

9. Download the Pearson System of Courses Configuration Code file:
    a. Select the configuration code for your district using the link under the "Config code" section. Refer to Figure 6.

Config code	Last Modified
config code	

Figure 6

b. Save the configuration code file to C:\PSoC\SideloadContent. Refer to Figure 7.
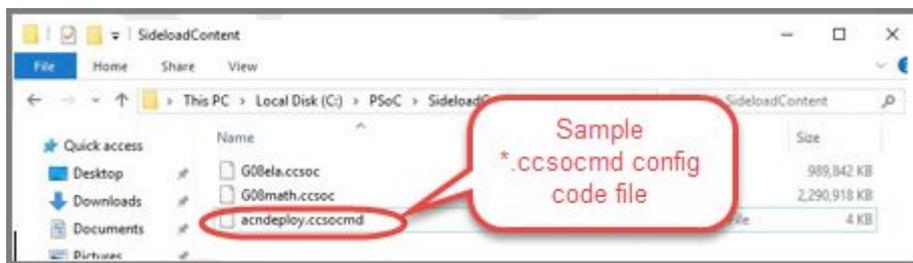
Figure 7

10. Download the Pearson System of Courses app:
    a. Download the Pearson System of Courses app package to your desktop. Refer to Figure 8.

Installation files	Last Modified
2-12 Win Release	

Figure 8

b. Right click on the Pearson System of Courses app package (zip file) and select **Extract All** to your desktop.
    i. **Note:** This will create a folder on your desktop named release_Distribution_Pearson**.

11. Navigate to the desktop and the release_Distribution_Pearson*\Pearson.PSC* folder.
12. Right-click the Add-AppDevPackage.ps1 then select **Run with PowerShell** to install the app. Refer to Figure 9.
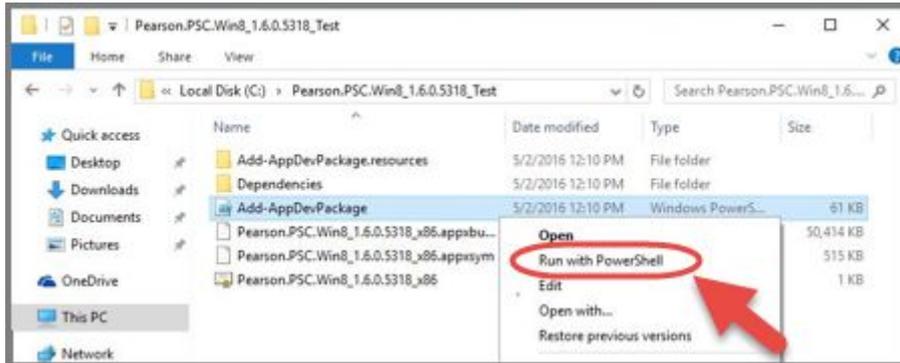
Figure 9

13. Open the Pearson System of Courses app.
14. Select **Load**. Refer to Figure 10.
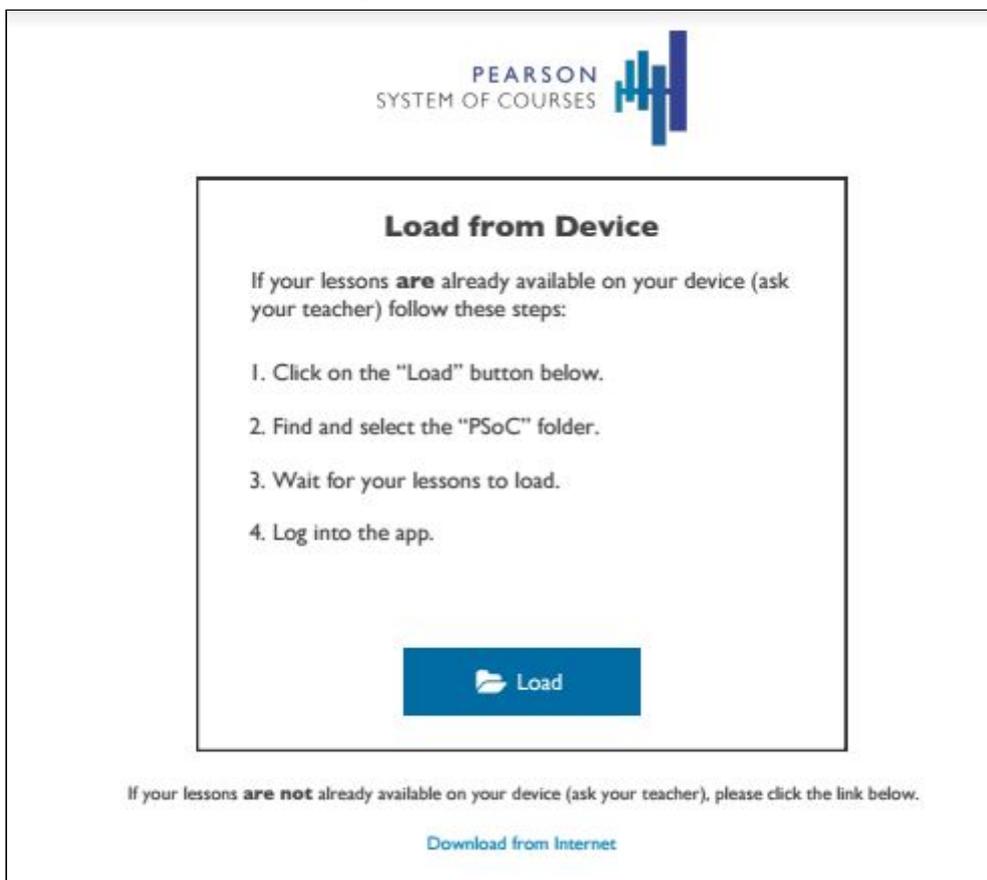
Figure 10

Select the C:\PSoC folder and the content will begin to extract. Refer to Figure 11 for example on a Windows 10 operating system
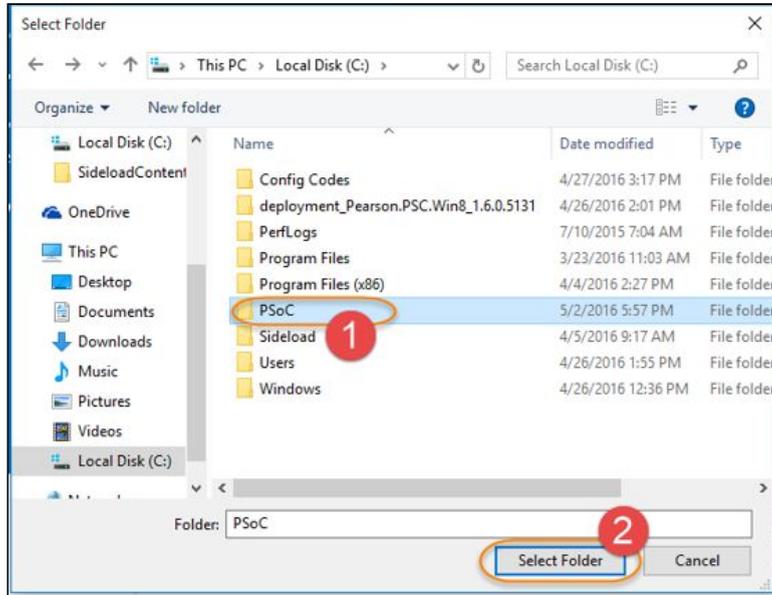
Figure 11

15. The content will now start extracting into the C:\PSoC Folder. Upon successful completion of the sideload process, a dialog will be displayed to indicate that configuration code and then content has been sideloaded successfully. Refer to Figure 12.
   a. **Note:** This process will take around 15 minutes per grade to complete for the content.
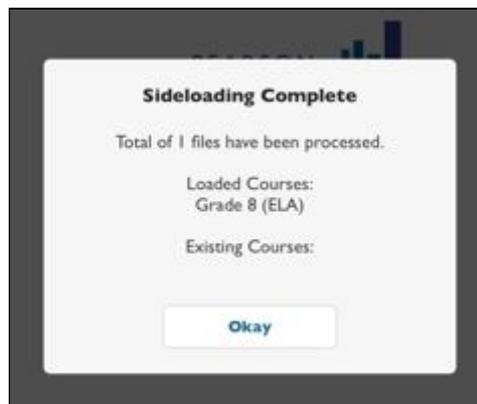
Figure 12

16. Close the Pearson System of Courses app without logging in to prevent further changes to the content.
17. Once the content has finished extracting and the app has been closed, right-click on the **C:\PSoC** folder, select **Send to** and select Compressed (zipped) folder. Refer to Figure 13.
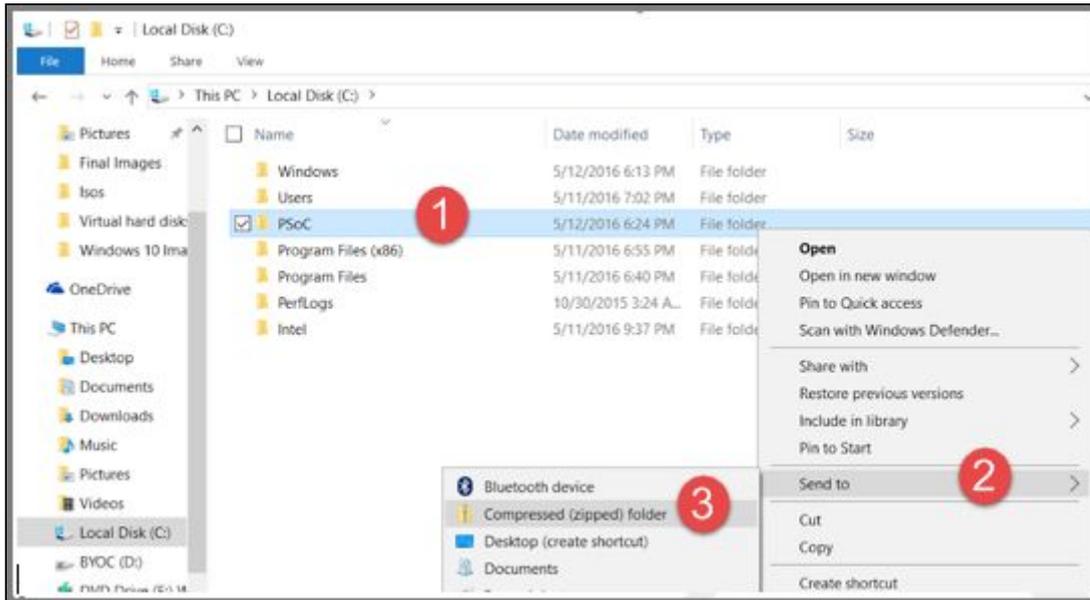
Figure 13

18. Transfer the C:\PSoC.zip file onto a USB drive for it be loaded onto the Master Image PC.

Enter Audit Mode on the Master Image PC

Audit mode enables you to customize your computers before they are deployed to the students. To put a device in audit mode:

1. Install a new clean version of Windows 10.
   Note: Please refer to the Appendix for more details on imaging Windows machines.
2. On the initial "Express Settings" splash screen, press **CTRL+ SHIFT + F3** to enter audit mode. Refer to Figure 14.
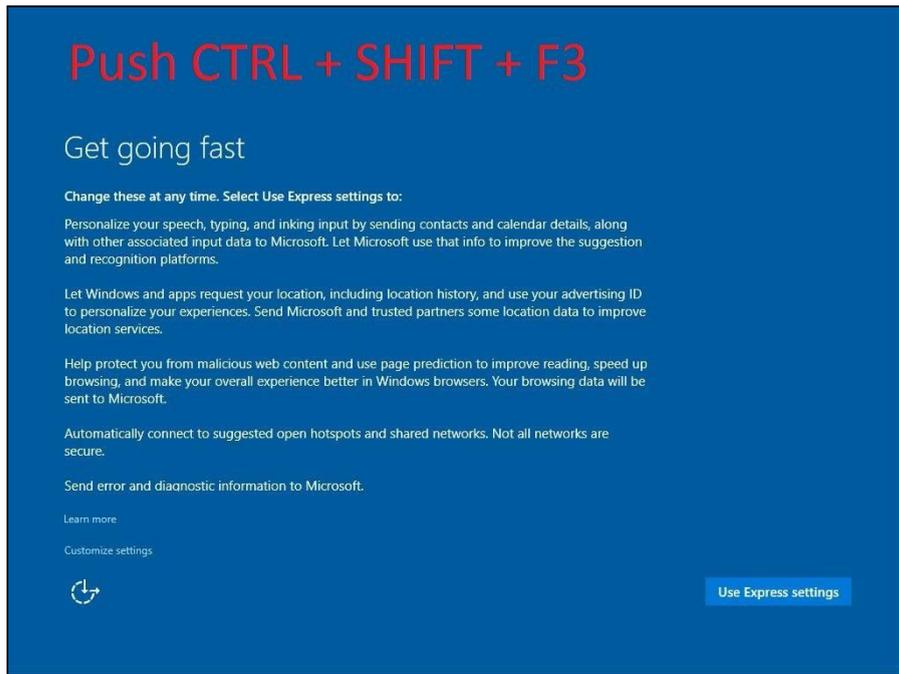
Figure 14

3. The machine will restart and automatically log in as the device administrator.
4. When the device boots to the desktop in audit mode, a System Preparation Tool (Sysprep) prompt will appear, select **Cancel** to proceed with configuration of the device. Refer to Figure 15.
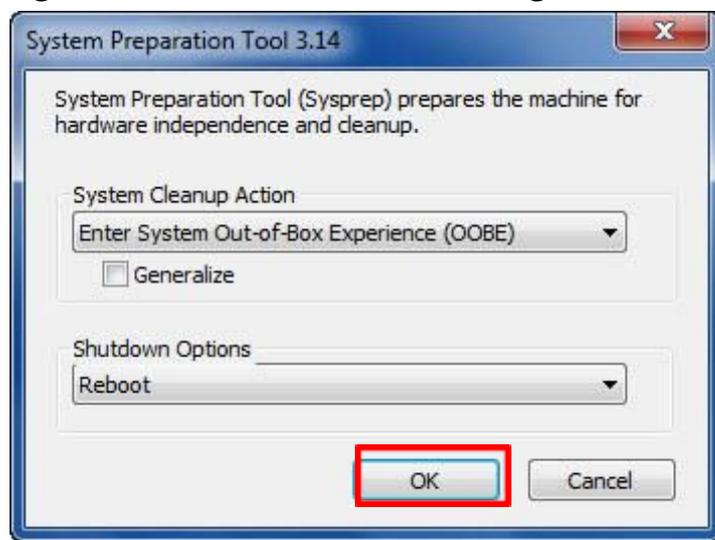
Figure 15

Uninstall Default Metro Apps

If you are using SCCM to deploy your image, you will need to remove the

Default Metro Apps before the image can be used in an SCCM Task Sequence:

1. Press **Start** .
2. Search for Windows PowerShell and right-click to Run as Administrator to open a Windows PowerShell Administrative command line window and enter the following command:

```
Get-AppxPackage -AllUser | Remove-AppxPackage
```

3. PowerShell will then uninstall all Metro Apps, including the Store App. PowerShell may display errors in the PowerShell window which can be ignored. Refer to Figure 16.
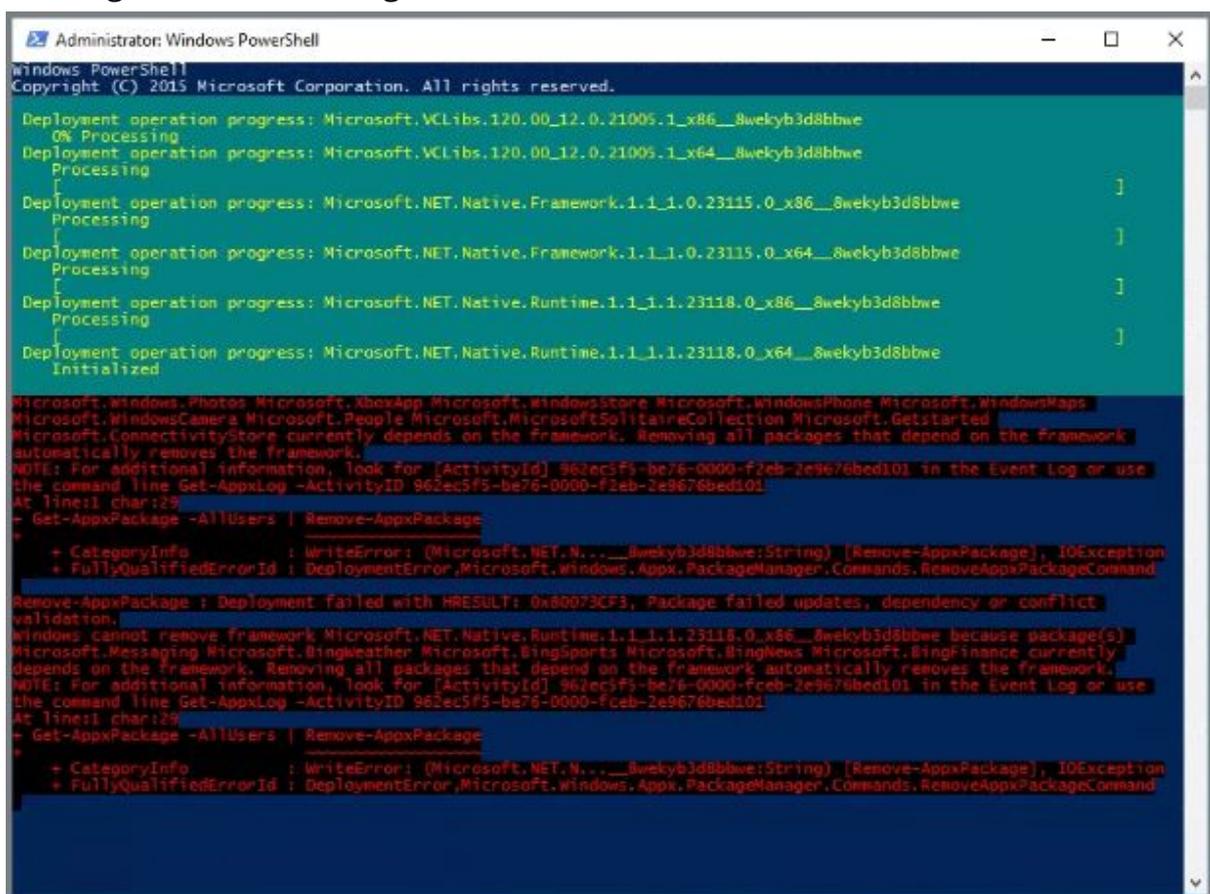

Figure 16

4. Once complete, the default Metro apps will be uninstalled. Refer to Figure 17.
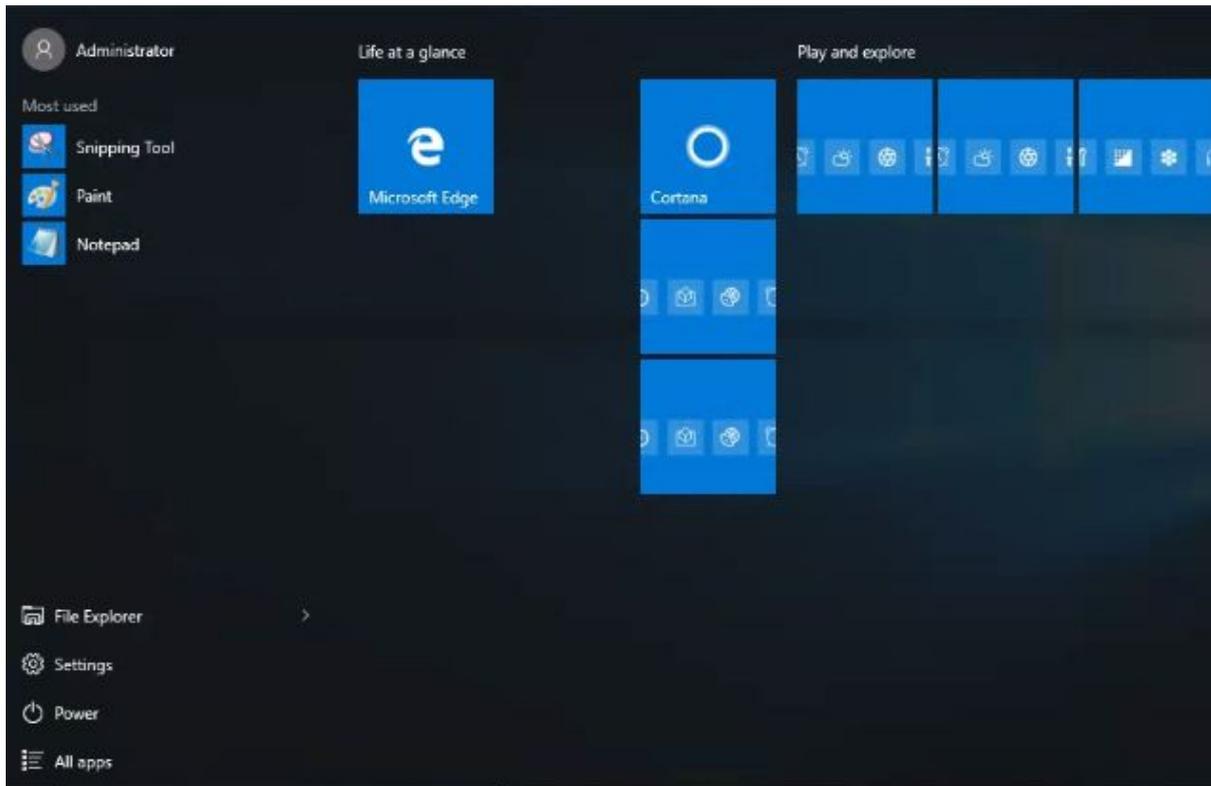
Figure 17

Download App and Transfer Content onto the Master Image PC

1. Plug the USB drive with the Pearson System of Courses content (PSoC.zip file) prepared from the Admin PC (see above) into the Master image PC.
2. Transfer the PSoC.zip file onto the desktop.
3. Extract the PSoC folder from within the PSoC.zip file onto the root of C:\. Refer to Figure 18.
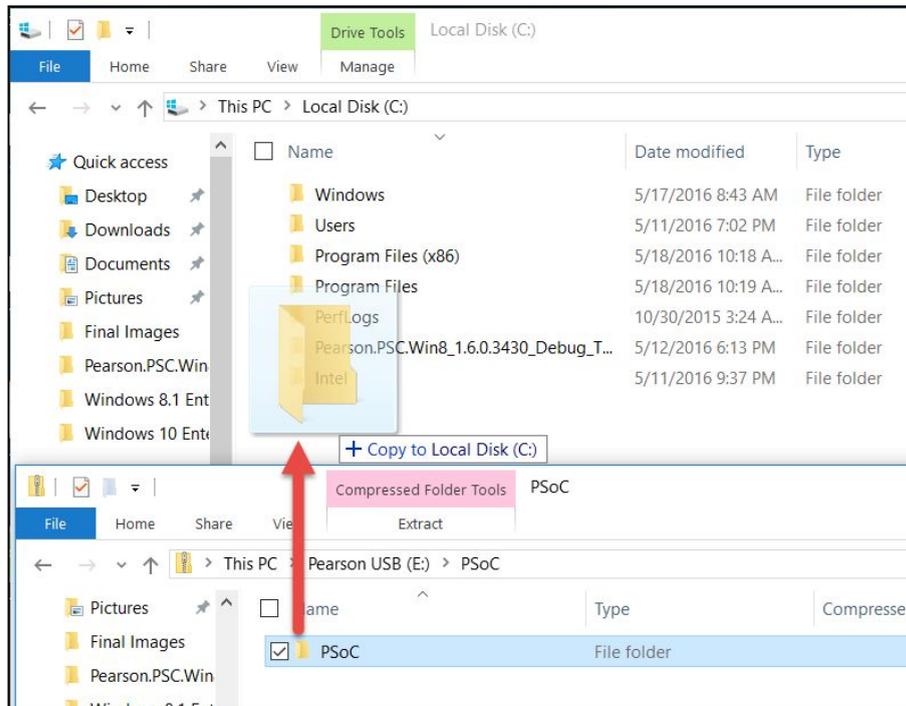
*Figure 18*

4. Log in to the Pearson System of Courses distribution website provided by your Pearson contact.
5. Select **CUSTOM (FOR PARTNERS)** and use the login provided by your Pearson contact. Refer to Figure 19.

Figure 19

6. Download the Pearson System of Courses app:
   a. Download the Pearson System of Courses app package to your Desktop. Refer to Figure 20.

Installation files	Last Modified
2-12 Win Release	

Figure 20

    b. Right click on the Pearson System of Courses app package and select Extract All to your Desktop.

        i. **Note:** This will create a folder in your Desktop named release_Distribution_Pearson*.

7. Download the Pearson System of Courses Configuration Code:

    c. Select the Config code link for your district. Refer to Figure 21.

Config code	Last Modified
config code	

Figure 21

    i. Save the file to C:\PSoC\SideloadContent.

Note: This file may already be present from your Admin PC content folder. If so, you can skip this step or overwrite the file.

8. Grant Full Control to the C:\PSoC Folder. Go to C:\, right click on PSoC, and select Properties. Refer to Figure 22.
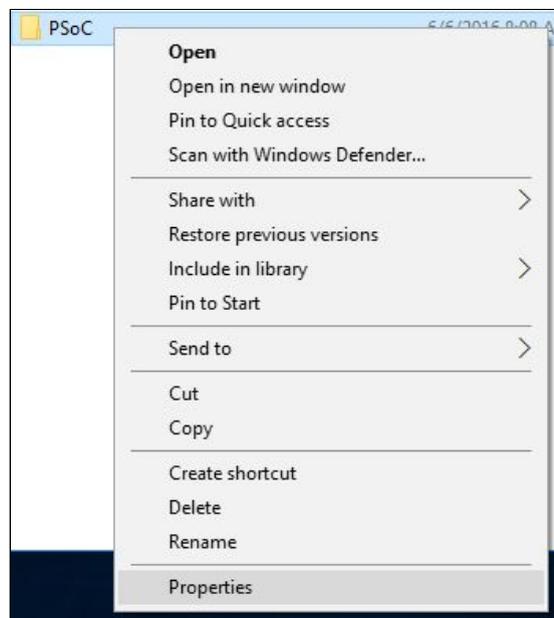
Figure 22

9. Navigate to the Security tab, Users and select **Edit**. Refer to Figure 23.
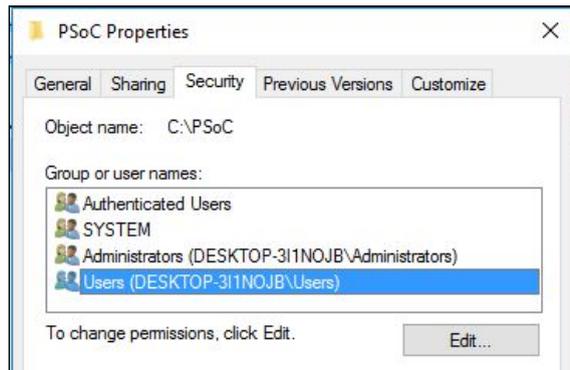
Figure 23

10. Allow Full Control for all Users (local device users). Refer to Figure 24.
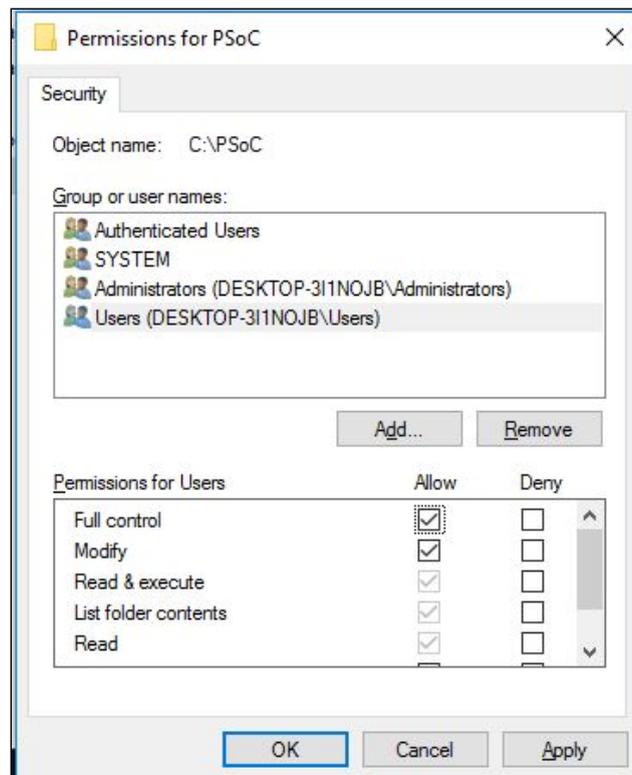
Figure 24

Install the App for All Users on the Master Image PC

The following steps involve running a PowerShell script that automates the process of meeting the needed app Prerequisites, as well as installing the app itself.

1. Navigate to the Desktop and the release_Distribution_Pearson*\Pearson.PSC* folder. Refer to Figure 25.
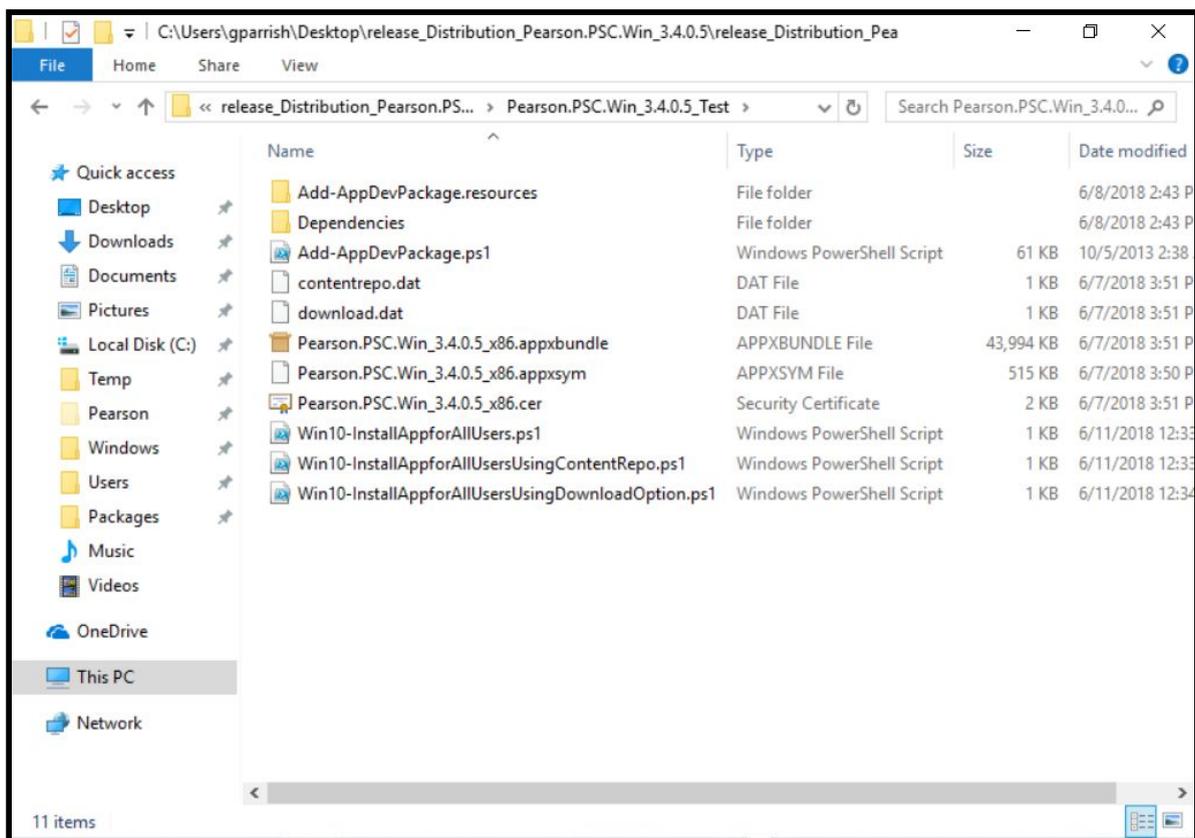
Figure 25

2. Select which script will be used for installing the Pearson System of Courses sideload app for all users. Each script file is described below.

   Note: Installing the Pearson System of Courses app will enable the Developer Mode setting on your device and image. This option is needed during the app installation only and can be disabled after the app installation is completed. This option is enabled by way of a registry key to add and enable the "AllowAllTrustedApps" key. This same option will be needed for future Pearson System of Courses app upgrades. **Any domain group policy or local policy that overrides this option at any time may interfere with the installation process and may need to be managed during this time.** The current value for this setting can be checked in the Windows Settings configuration under Updates and security → For developers → Use developer features.

   There are three distinct options that can be used to install the Pearson System of Courses app for all users. Please review the three options below and select one of these options that will be used to install the app with the selected startup behavior. The LOAD option indicates the

content is provided locally in the file system while the DOWNLOAD option indicates that the content will be downloaded Over-The-Air (OTA).

   a. Script: "Win10-InstallAppForAllUsers.ps1"
      This selection is the standard option that will present each user on the device the option to select the **LOAD or DOWNLOAD** option when starting the app.

   b. Script: "Win10-InstallAppforAllUsersUsingContentRepo.ps1."
      This selection will only present the **LOAD** option to each user on the device when starting the app. This is the **recommended** option when following the full deployment method in this guide.

   c. Script: "Win10-InstallAppforAllUsersUsingDownloadOption.ps1."
      This selection will only present the **DOWNLOAD** option to each user on the device when starting the app.

      Note: The typically used option for a Windows imaging deployment that includes the app, content, and Configuration Code in the image is option "b". This option will force the use of the content repository by providing LOAD as the only option when the user completes the app startup process for the first time.

3. Press **Start** .
4. From the Windows Start menu, Search for Windows PowerShell and right-click to **Run as Administrator** to open a Windows PowerShell Administrative command line window. Refer to Figure 26.

Figure 26

5. Enter the following PowerShell command to allow the current user to install the sideload app package for all users. Select **Y** or **A** to allow the change to be completed:

`Set-ExecutionPolicy RemoteSigned -Scope Currentuser`

Refer to Figure 27.
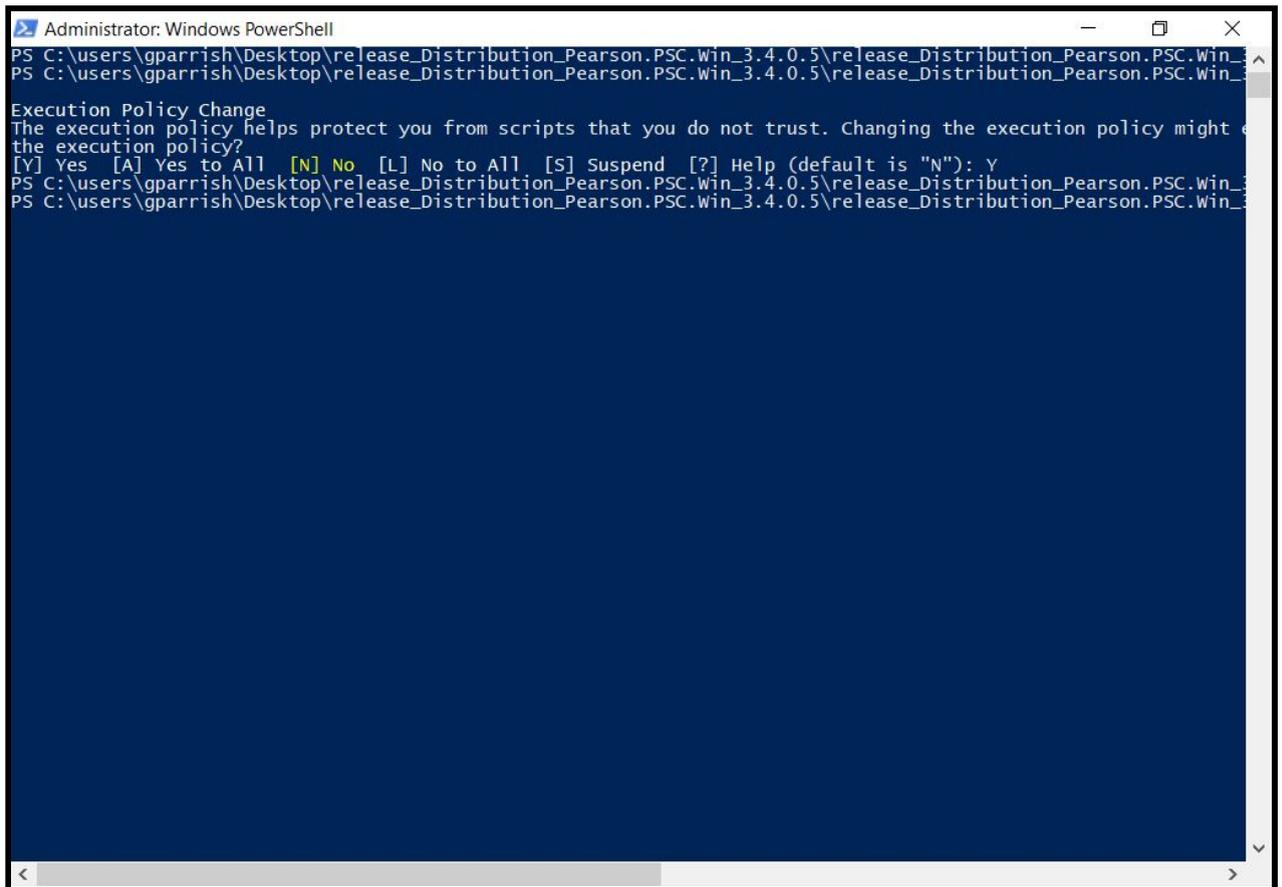
Figure 27

6. From the same Powershell window, run one of the scripts previously selected in step 2 above to install the the PSC sideload app package for all users. This script may take a few minutes to complete. Ensure that the script completes without an errors. Refer to Figure 28 as an example of the content repository (Load) script installation.

Figure 28

Deploy the Master Image

Once the Master Image PC is prepared, the image is made available through the process of Sysprep. To Sysprep the Master Image PC:

1. Navigate to C:\Windows\System32\Sysprep. Refer to Figure 29.
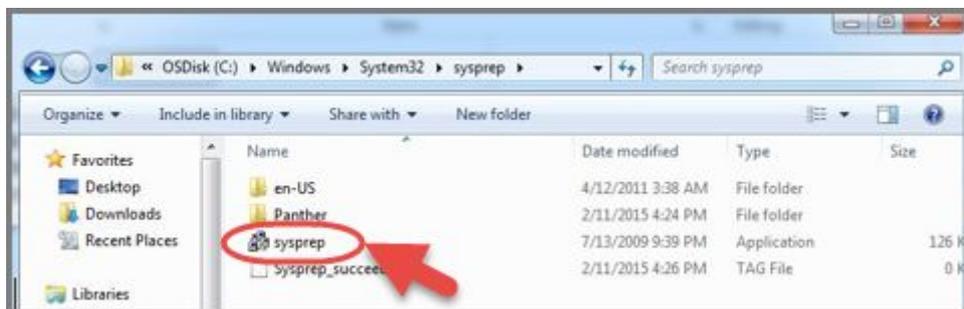
Figure 29

2. Run the **Sysprep.exe**.
3. Select **Enter System Out-of-Box Experience (OOBE)** under System Cleanup Action.
4. Select **Shutdown** under Shutdown Options. Refer to Figure 30.
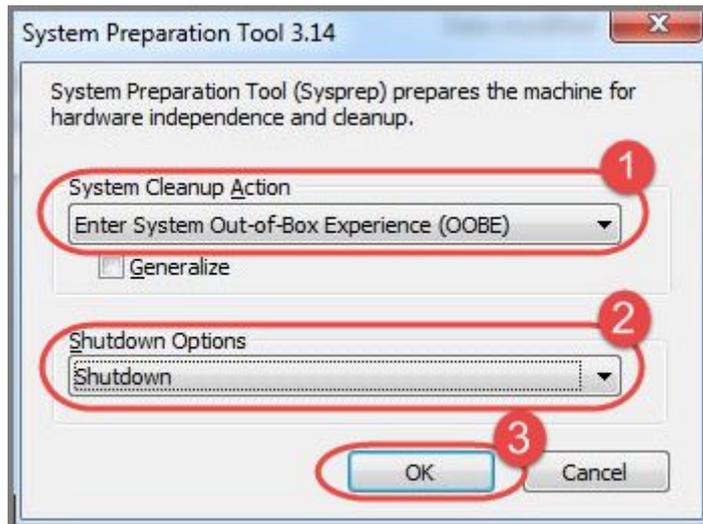
Figure 30

5. Select **OK**.
   Note: If errors arise, please review the Appendix to find troubleshooting help.

Once the Master Image PC is prepared, capture the image and deploy it with the deployment mechanism of your choosing.

Verify the Installation

Once the Image is installed onto a device, you can verify the successful implementation of the Pearson System of Courses app, content, and configuration code. This is highly recommended to be completed on a sample of devices by the team preparing, deploying, and supporting the device image process and/or Pearson System of Courses.

Note: The instructions below can be used to initially validate the created image from the process followed in this document. Additionally, these instructions can be provided to your teachers or students as a self-help guide on how to complete the Pearson System of Courses app startup process.

### *Verify the Pearson System of Courses App and Content*

1. Log in to the machine as a district user, student or teacher.
2. Allow a short delay for the initial device preparation to be completed after the Windows log in. For a new Windows user log in there may be a number of one-time settings and configurations that are processed, including the installation of the Pearson System of Courses app for the

specific user.

3. Open the Pearson System of Courses app. Refer to Figure 31.
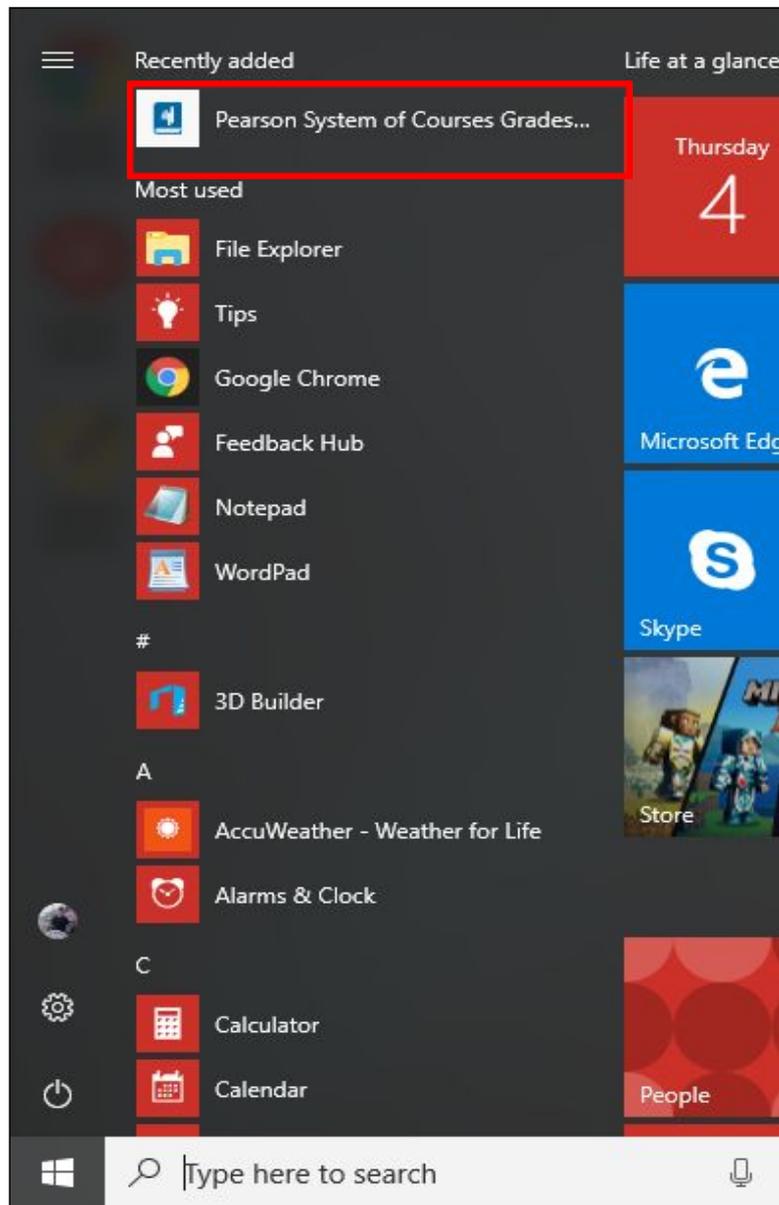
Figure 31

4. Select **Load** to use the pre-deployed Pearson System of Courses content located in the shared repository directory. Refer to Figure 32.
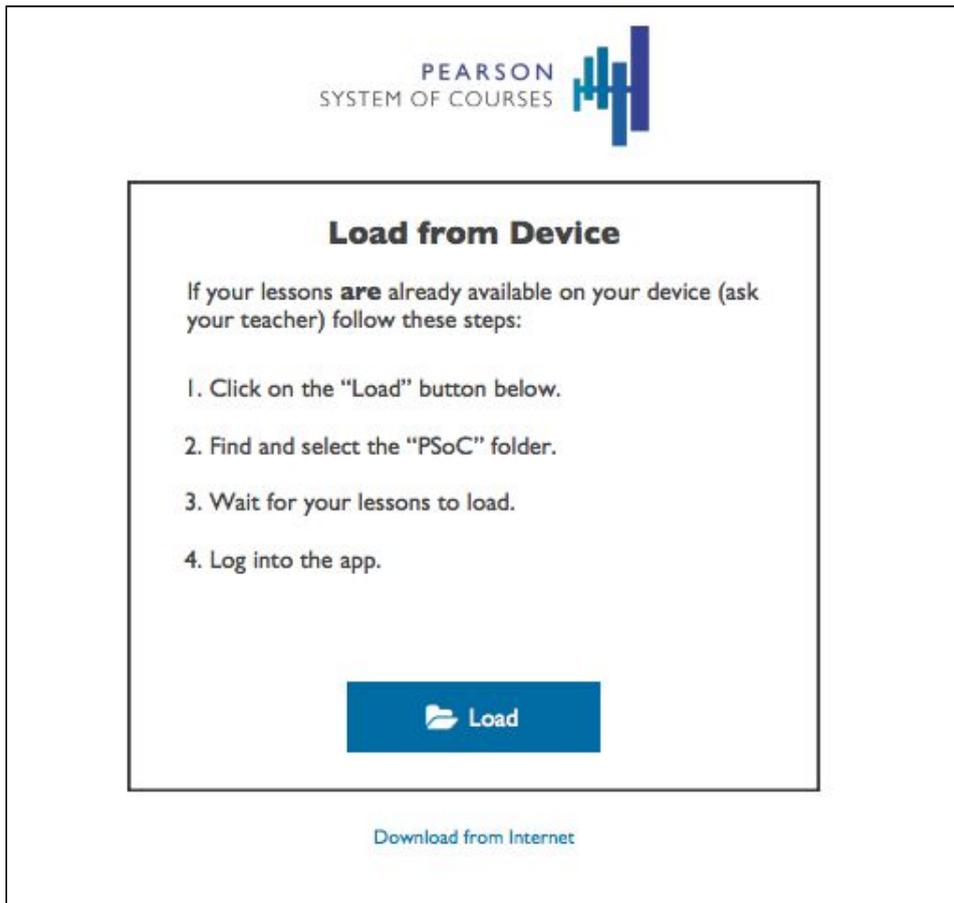
Figure 32

5. Select the **C:\PSoC** folder. Refer to Figure 33.
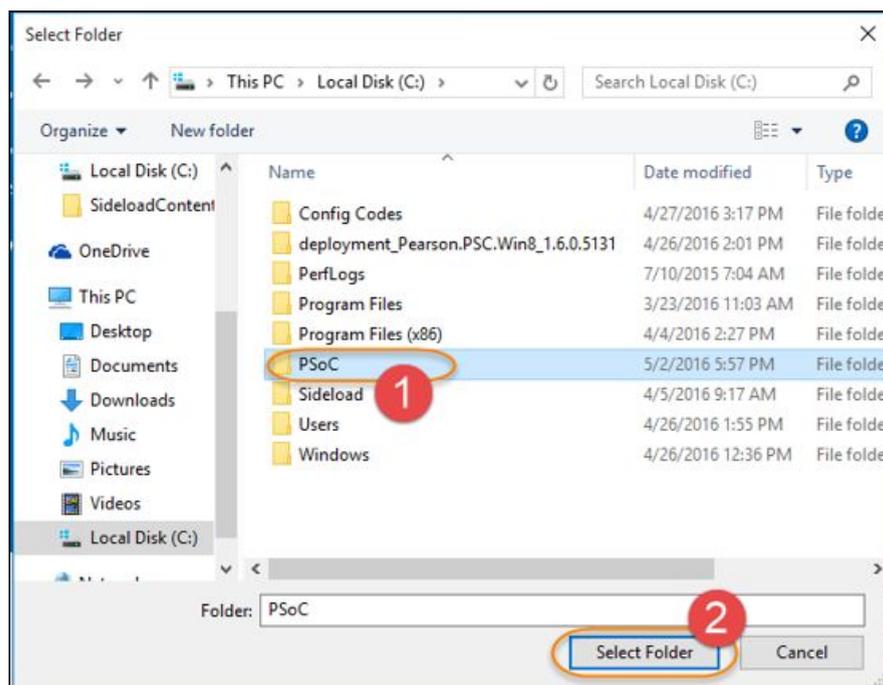
Figure 33

6. After selecting the PSoC folder, the application will begin sideloading the configuration code and content. Select **Okay** once the newly added configuration code is sideloaded. Refer to Figure 34.
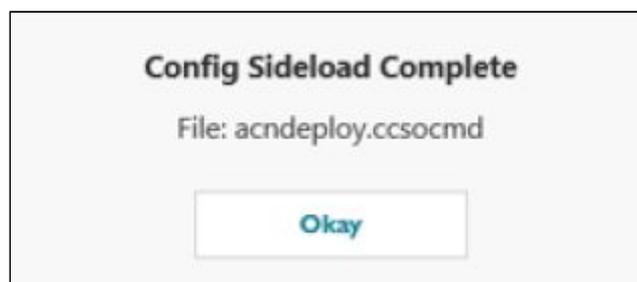
Figure 34

7. Log in to the Pearson System of Courses app using either student or teacher Pearson System of Courses credentials and confirm that Pearson System of Courses content is present and ready to use.
8. After login, select the Start Unit or Continue Lesson from the Dashboard for any available sections for ELA and/or Math. The Lessons should open without the need to download any content since it has already been loaded from the above process. A more detailed validation process is available in the Pearson System of Courses Deployment Validation Guide. Refer to Figure 35.
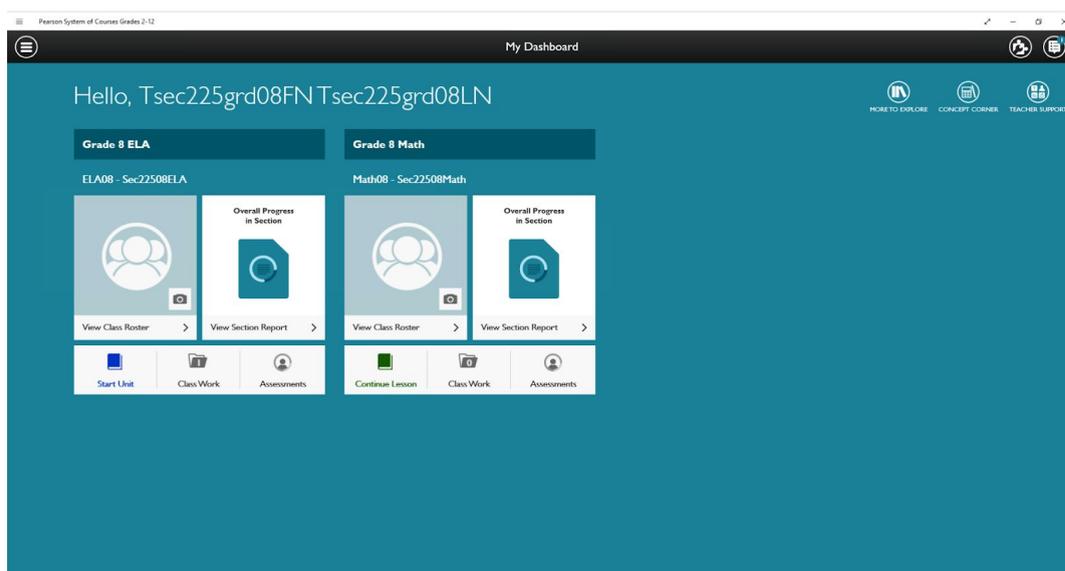
Figure 35

Update the Pearson System of Courses App

There are two ways to update the Pearson System of Courses app that was deployed via an image:
- by manually installing the updated app package on each device
- by using Microsoft SCCM (System Center Configuration Manager) or similar Mobile Device Management (MDM) tool to deploy the updated app package (appx) to managed PCs. SCCM is a Client Management Tool by Microsoft used to manage a large group of computers **(recommended)**.

Note: The app update methods above utilize a sideload app installation method. You can not update a sideload app by utilizing the app install process from the Windows store.

Begin the update process:

1. Log in to the [Pearson System of Courses distribution website](#) provided by your Pearson contact.
2. Select CUSTOM (FOR PARTNERS) and use the login provided by your Pearson contact. Refer to Figure 36.

Figure 36

3. Download the Pearson System of Courses app:
   a. Download the Pearson System of Courses app package to your Desktop. Refer to Figure 37.

Installation files	Last Modified
2-12 Win Release	

Figure 37

    b. Right click on the Pearson System of Courses app package and select **Extract All** to your Desktop

        i. Note: This will create a folder in your Desktop named release_Distribution_Pearson*.

Update Pearson System of Courses App Manually

Warning: Be sure to determine how the app was originally deployed for your district and devices. This process assumes the app was installed using the sideload package and not from the Windows App store. If the app was installed from the Windows store, it should be updated using the Windows Store release for this same update.

To update the Pearson System of Courses app manually, download the new app installation sideload package from the Pearson distribution site, available from your Pearson contact. To perform the update process, select one of the two approaches below.

Approach 1: As the currently logged in user, use the Add-AppDevPackage.ps1 script to update the app . This will update the app for the **current user only**. This process can be repeated for any additional users on the device. This process does not require an Administrator account or elevated access to complete the update. There are no other steps other than running the script.

Approach 2: As an Administrator, log in to each computer using a Windows Administrator account to perform the necessary steps detailed below. This will update the app for all users on the device.

    1. Locate the path where the updated Pearson System of Courses app has been downloaded:

        a. Open File Explorer.

        b. Navigate to Desktop\release_Distribution_Pearson*\Pearson.PSC*.

        c. Locate the file with the *appxbundle extension.

      i.   Right click on the file, select **Properties**.

     ii.   Navigate to the **Security** tab.

    iii.   Right click on the Object Name and copy the full path

2. Press **Start** .

3. From the Windows Start menu, search for Windows PowerShell and right-click to **Run as Administrator** to open a Windows PowerShell Administrative command line window. Refer to Figure 38.
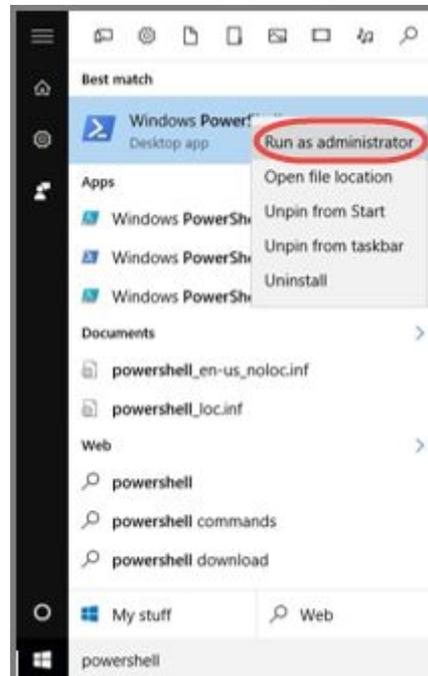
Figure 38

4. Enter the following PowerShell command to install the Pearson System of Courses app:

dism /Online /Add-ProvisionedAppxPackage /PackagePath:"<Paste the <u>Full Path</u> of the appxbundle here>" /skiplicense

Refer to Figure 39.
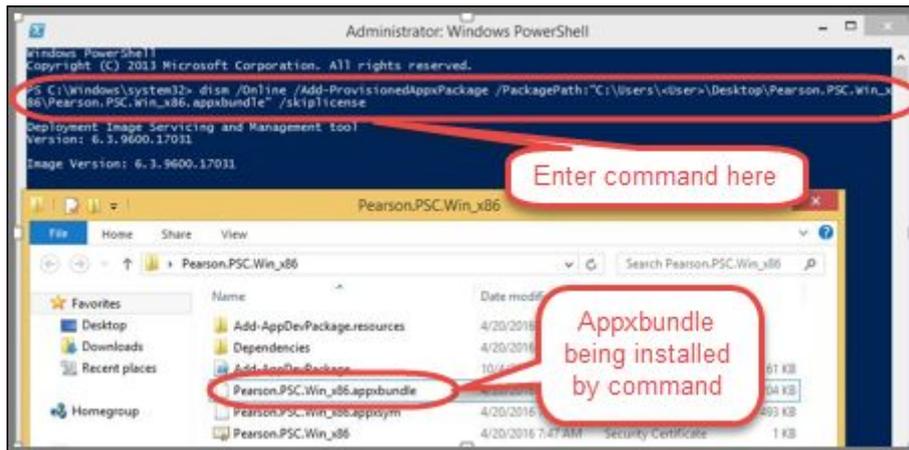
Figure 39

Update Pearson System of Courses App via SCCM

To update the Pearson System of Courses app using your MDM, download the new app installation sideload package manually. To perform the update process, follow the instructions below.

Warning: Be sure to determine how the app was originally deployed for your district and devices. This process assumes the app was installed using the sideload package and not from the Windows App store. If the app is installed from the Windows store, it should be updated using the latest Windows Store release which should also be available for this same update.

Note: This process assumes SCCM was used to initially deploy the Pearson System of Courses app to all users, which may or may not be correct. If the app was originally deployed using an image, a new SCCM application may need to be created to deploy the update.

1. In the SCCM console, select Software Library
2. Right-click on the Pearson System of Courses app and click on **Properties**. Refer to Figure 40.
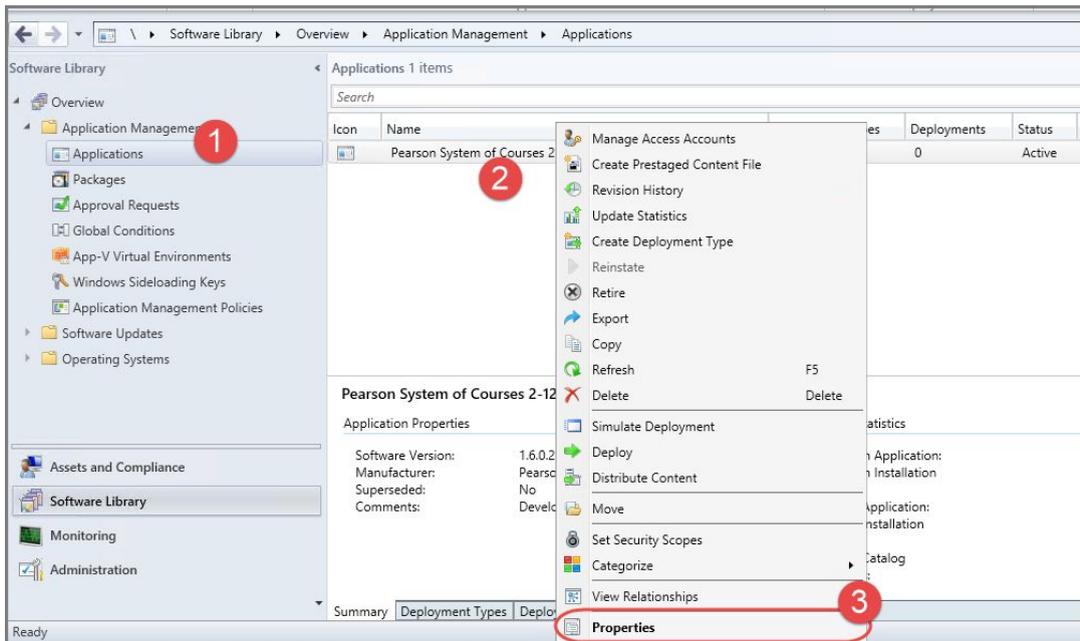
Figure 40

3. Select the **Deployment Types** tab.
4. Click **Add** to add the appx app (Pearson.PSC.*.appxbundle) and dependency bundles (Dependencies folder) and then click **OK**. Refer to Figure 41.
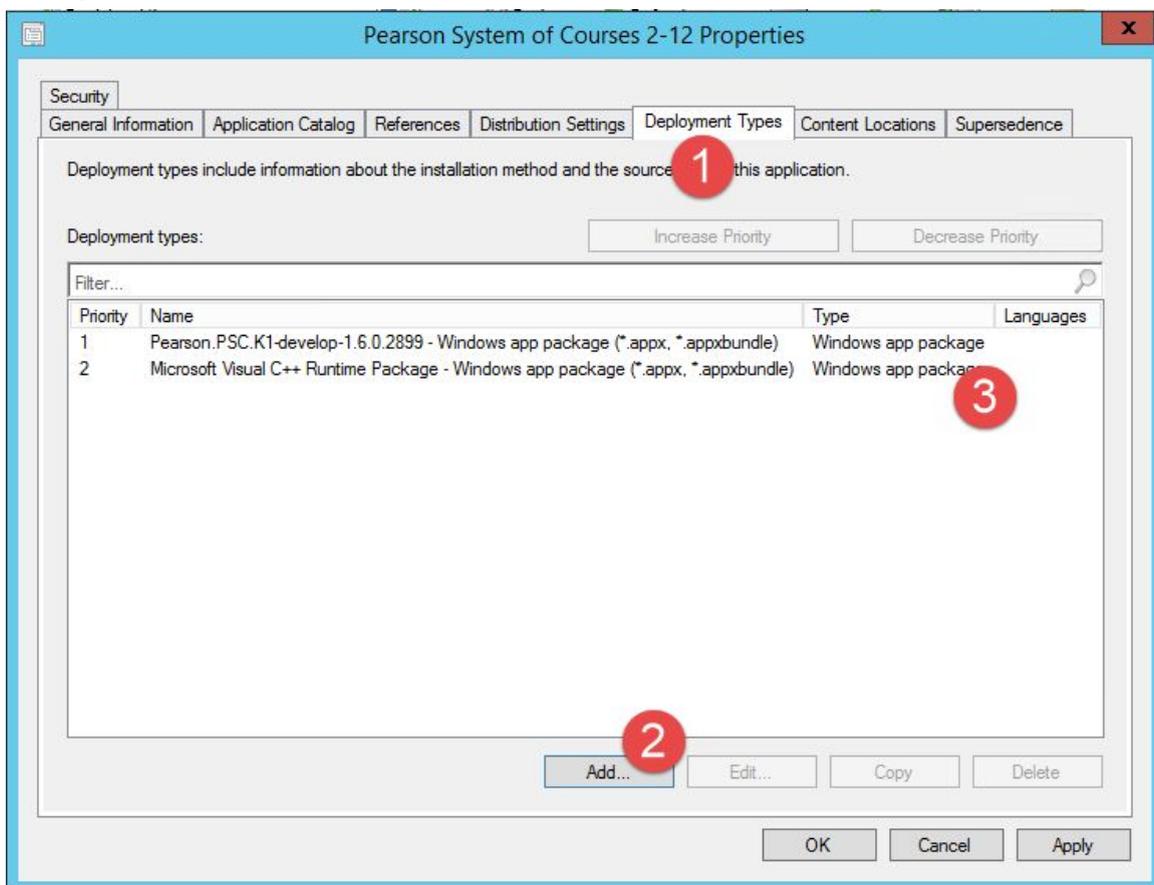
Figure 41

5. Remove the old appx app and dependency bundles so that you only have the 2 appx files you want to use to perform the update.
6. Click **OK** to close out the Pearson System of Courses app Properties window.
7. The Pearson System of Courses app will be automatically pushed to all machines in the Device Collection.

Uninstall the Pearson System of Courses App

To uninstall the Pearson System of Courses app, you must:

- First de-provision the App for all users by removing the **neutral** Pearson System of Courses package.
- Then uninstall the Pearson System of Courses app for each user on the device.

To de-provision and uninstall the Pearson System of Courses app:

1. Press **Start** ⊞ .
2. From the Windows Start menu, search for Windows PowerShell and right-click to **Run as Administrator** to open a Windows PowerShell Administrative command line window. Refer to Figure 42.

Figure 42

3. Identify the PackageName for the Pearson System of Courses app.
   a. In Powershell run the following command:
      dism /online /Get-ProvisionedAppxPackages
   b. Locate the Pearson package with the word **neutral** in it. Refer to Figure 43.

```
DisplayName : Pearson.PSC
Version : 2016.602.1604.4632
Architecture : neutral
ResourceId : ~
PackageName : Pearson.PSC_2016.602.1604.4632_neutral_~_nhytxjf0952q2
```

Figure 43

c. Highlight the Pearson.PSC*.neutral.* PackageName and Right-click. **Note:** This automatically copies the highlighted text. Refer to Figure 44.

```
DisplayName : Pearson.PSC
Version : 2016.604.739.1260
Architecture : neutral
ResourceId : ~
PackageName : Pearson.PSC_2016.604.739.1260_neutral_~_nhytxjf0952q2
```

Figure 44

d. Once the PackageName is copied, run the following command and paste the PackageName. Refer to Figure 45.

Dism /online /remove-provisionedappxpackage /packagename:"<Paste PackageName Here>"

```
PS C:\> dism /online /remove-provisionedappxpackage /packagename:"Pearson.PSC_2016.602.1604.4632_neutral_~_nhytxjf0952q2
"

Deployment Image Servicing and Management tool
Version: 10.0.10586.0

Image Version: 10.0.10586.0

The operation completed successfully.
PS C:\>
```

Figure 45

4. Once the app is de-provisioned, uninstall the Pearson System of Courses app <u>for each individual user</u> by selecting **Start** [Windows logo] then searching for the app.

5. Right-click the app then select **Uninstall**. Refer to Figure 46.
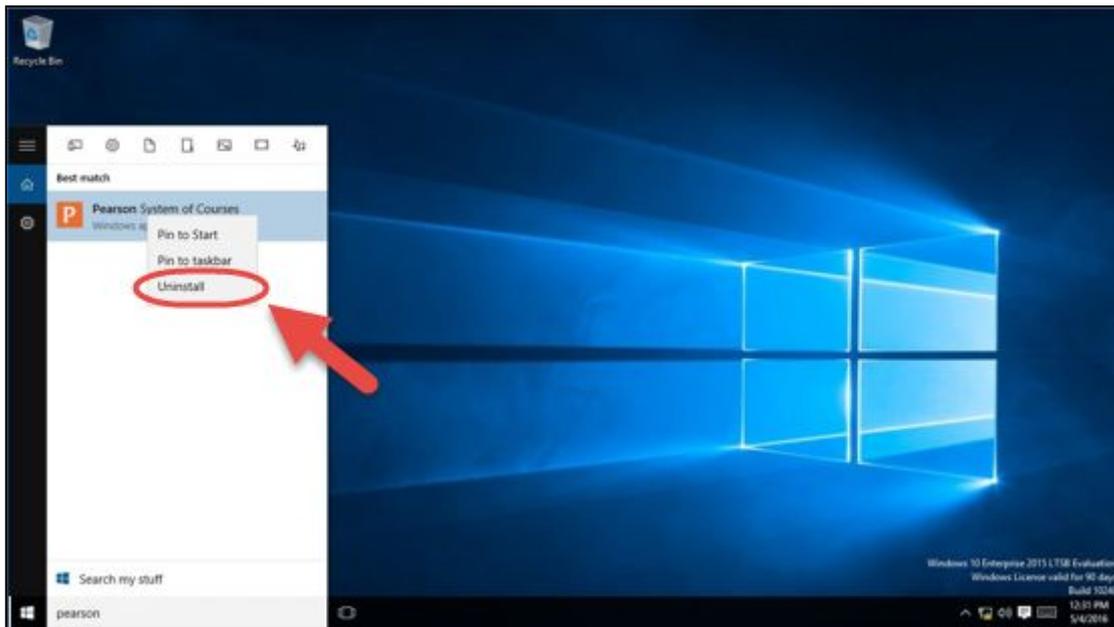
Figure 46

The Pearson System of Courses app should now be uninstalled.

Remove Pearson System of Courses Content

The shared repository located in the C:\PSoC folder is not automatically removed after uninstalling the Pearson System of Courses app. The Pearson System of Courses content must be manually removed by deleting the C:\PSoC folder by following the steps below.

1. Prior to deleting the C:\PSoC folder, ensure that there are no other users currently logged in on the particular device that utilize the shared Pearson System of Courses content repository. This can be done by logging out all other users or restarting the Windows operating system on the device.

2. Browse to the **C:\PSoC** folder and right-click on it and select **Delete** to remove the content folder. Alternately, use Shift-Delete to remove the content folder and bypassing the Recycle Bin as it may be large in size. Refer to Figure 47.
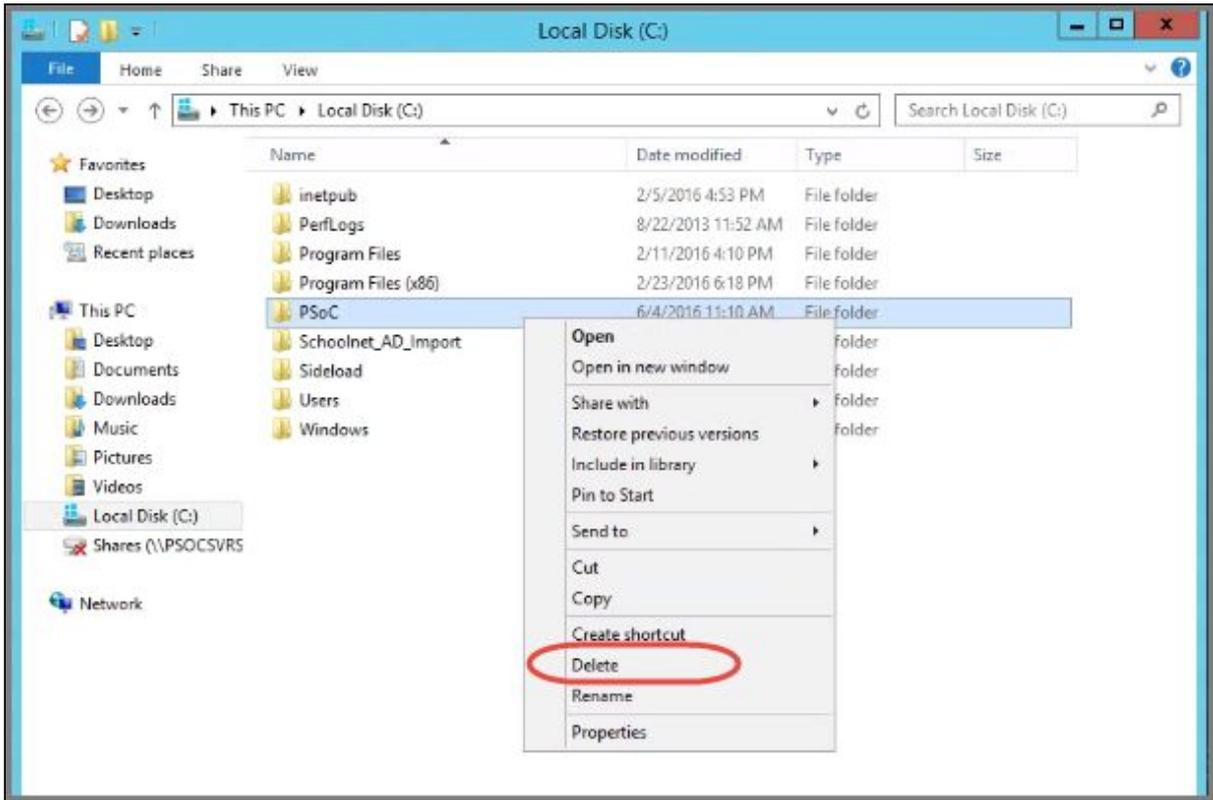
Figure 47

3. Next, to completely remove the folder from the local disk (as well as any other recently deleted files), go to the **Recycle Bin** located on the desktop or in the Windows Explorer file manager and right-click to empty it. Refer to Figure 48.
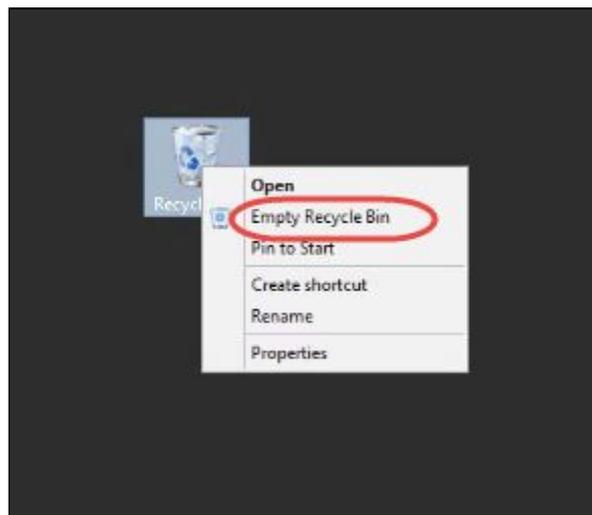
Figure 48

The Pearson System of Courses content should now be completely removed from the hard drive.

Appendix

For more information on issues and troubleshoot, please visit:
- [Building an Image via Audit Mode](#)
- [Sysprep Error Troubleshooting](#)