

# 'Run-OSBuilder' Script Execution

Create a Windows 10 Enterprise Installation ISO from Microsoft Media with current servicing updates applied

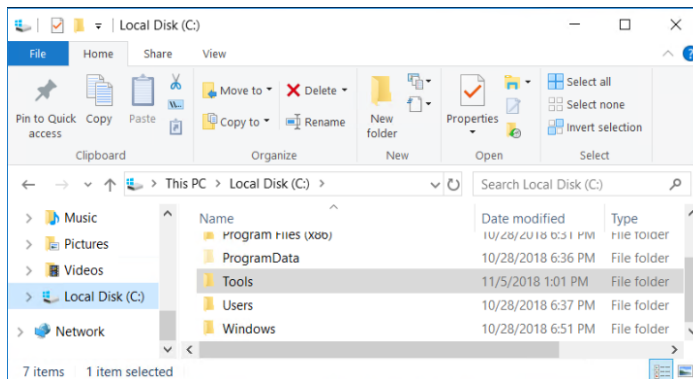
## Requirements:

- Virtual Machine running Windows 10 Enterprise (64bit preferred)
  - Can be domain joined or stand-alone
- Administrator rights on the Virtual Machine
- Script must be run in PowerShell with Admin rights
- Correct version of the Windows Assessment and Deployment Kit installed or downloaded for later installation.
  - <https://docs.microsoft.com/en-us/windows-hardware/get-started/adk-install>
- Windows 10 Business Edition ISO downloaded from Microsoft or MSDN
  - ISO contains multiple Windows 10 editions (Enterprise, Professional, Enterprise N, etc.)
- Approximately 30GB of HDD free space

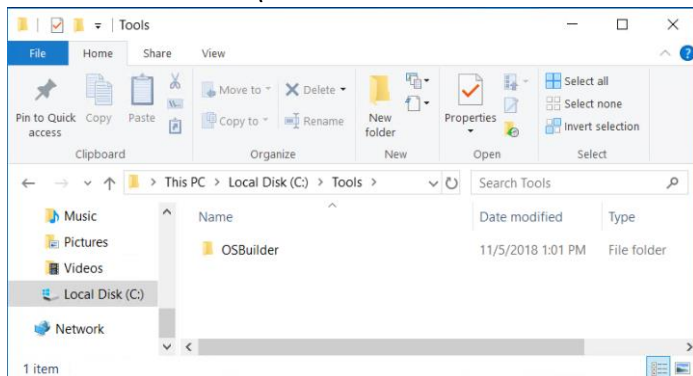
## Instructions:

Demo video for v1.0.5 is located [on YouTube here](#). Video run-time approximately 16 minutes.

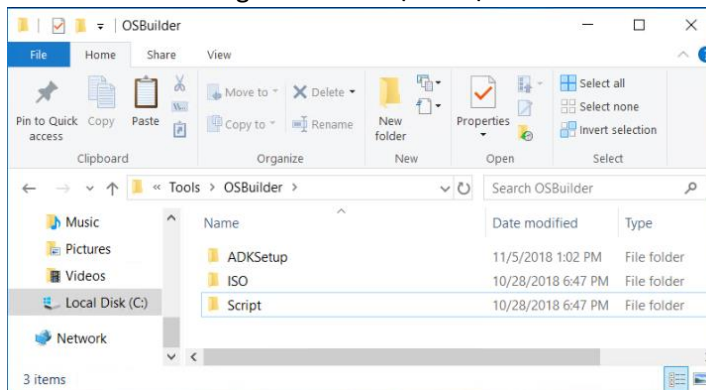
- 1) Log onto the Virtual Machine with an account that has local administrator rights.
- 2) Create a folder on the root of drive 'C:' called "Tools"



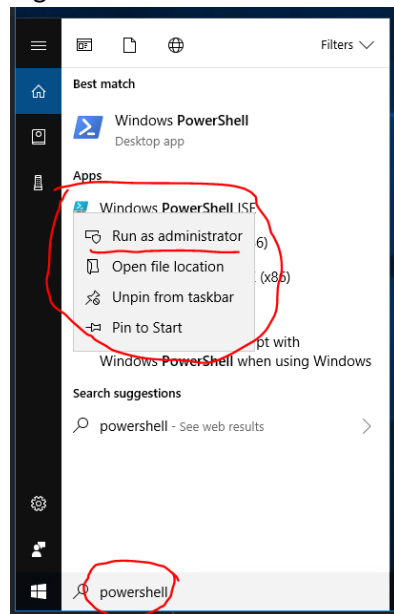
- 3) Create a folder in 'C:\Tools' called "OSBuilder"



4) Create the following folder in 'C:\Tools\OSBuilder':



- a. ISO = "C:\Tools\OSBuilder\ISO"
  - b. Script = "C:\Tools\OSBuilder\Script"
  - c. ADKSetup = "C:\Tools\OSBuilder\ADKSetup"
- 5) Copy the Windows 10 ISO file from Microsoft to "C:\Tools\OSBuilder\ISO".
- 6) Copy the 'Run-OSBuilder.ps1' script file to "C:\Tools\OSBuilder\Script".
- 7) Copy the downloaded ADK Setup files to "C:\Tools\OSBuilder\ADKSetup" if it has not already been installed.
- 8) Open powershell as administrator by clicking on the start menu or in the Cortana search box and typing "PowerShell".
- a. Right-Click on the PowerShell icon and select "Run as Administrator"



9) At the PowerShell prompt, type the following commands and press the enter key on your keyboard:

a. To set the execution policy for running scripts to "Bypass"

i. `Set-ExecutionPolicy -ExecutionPolicy Bypass -Force`

```
Administrator: Windows PowerShell
Windows PowerShell
Copyright (C) Microsoft Corporation. All rights reserved.

PS C:\Windows\system32> Set-ExecutionPolicy -ExecutionPolicy Bypass -Force
```

b. To verify that the execution policy is set to "Bypass"

i. `Get-ExecutionPolicy`

```
Administrator: Windows PowerShell
Windows PowerShell
Copyright (C) Microsoft Corporation. All rights reserved.

PS C:\Windows\system32> Set-ExecutionPolicy -ExecutionPolicy Bypass -Force
PS C:\Windows\system32> Get-ExecutionPolicy

Select Administrator: Windows PowerShell
Windows PowerShell
Copyright (C) Microsoft Corporation. All rights reserved.

PS C:\Windows\system32> Set-ExecutionPolicy -ExecutionPolicy Bypass -Force
PS C:\Windows\system32> Get-ExecutionPolicy
Bypass
PS C:\Windows\system32>
```

c. To clear the screen

i. `CLS`

```
Administrator: Windows PowerShell
Windows PowerShell
Copyright (C) Microsoft Corporation. All rights reserved.

PS C:\Windows\system32> Set-ExecutionPolicy -ExecutionPolicy Bypass -Force
PS C:\Windows\system32> Get-ExecutionPolicy
Bypass
PS C:\Windows\system32> cls

Administrator: Windows PowerShell
PS C:\Windows\system32>
```

10) At the PowerShell prompt type the following commands and press the enter key on your keyboard

a. To change working directory to where the script is located

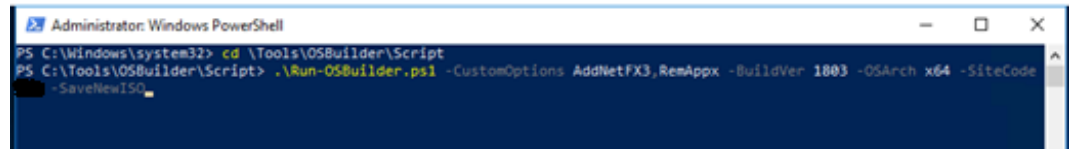
i. `cd \Tools\OSBuilder\Script`

```
Administrator: Windows PowerShell
PS C:\Windows\system32> cd \Tools\OSBuilder\Script

Administrator: Windows PowerShell
PS C:\Windows\system32> cd \Tools\OSBuilder\Script
PS C:\Tools\OSBuilder\Script>
```

11) Run the script by typing the following command and press the enter key on your keyboard.

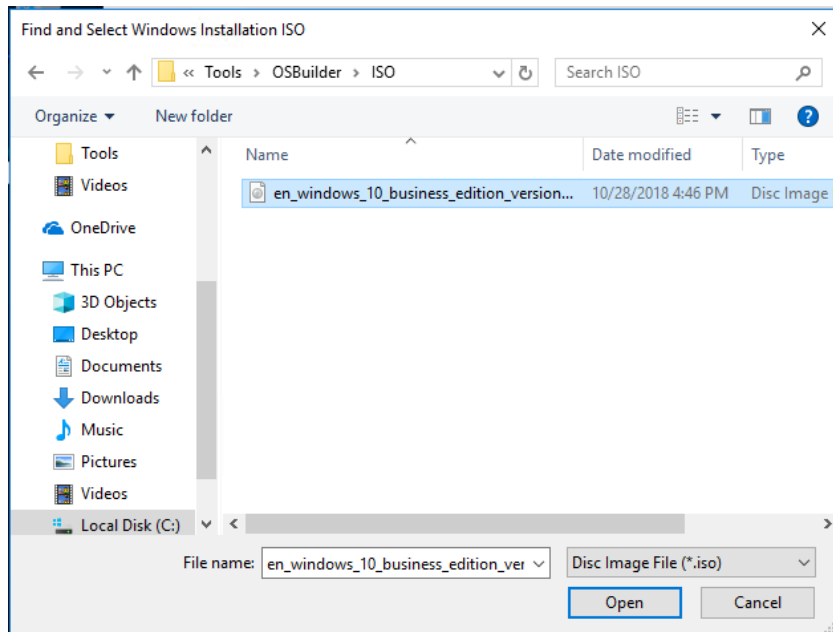
- a. `.\Run-OSBuilder.ps1 -CustomOptions AddNetFX3,RemAppx -BuildVer 1803 -OSArch x64 -SiteCode <SITECODE> -SaveNewISO`



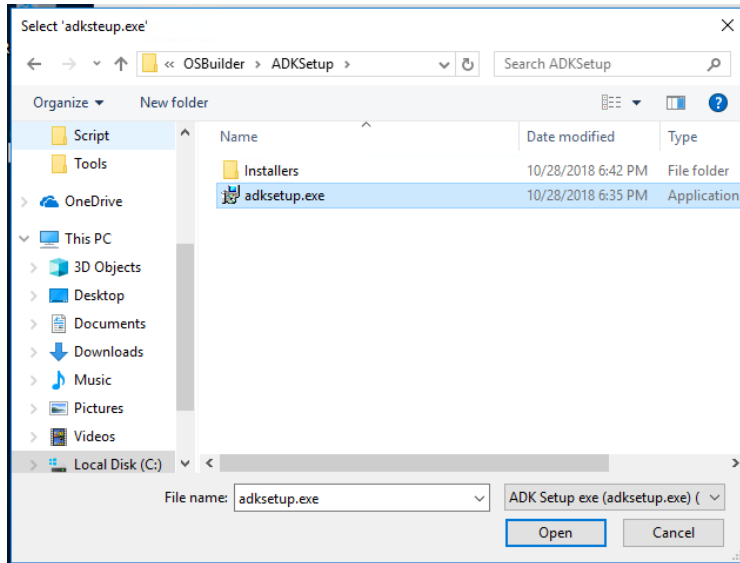
**NOTE:**

Additional options for the 'CustomOptions' script argument are available. See the "Script Information" section at the end of this document for details.

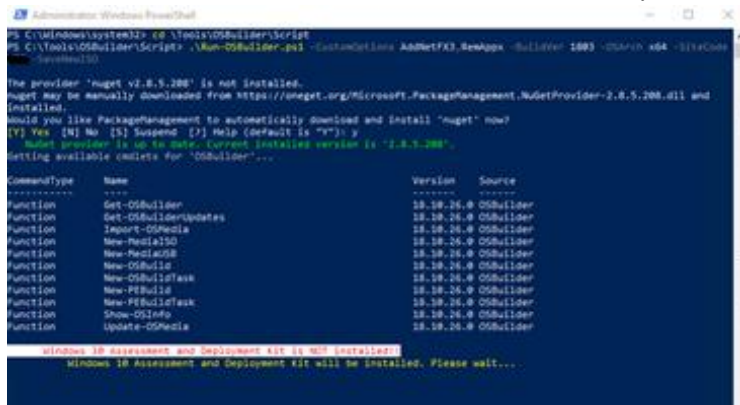
12) When prompted, browse to the location of the Windows 10 ISO from Microsoft, then click "OPEN"



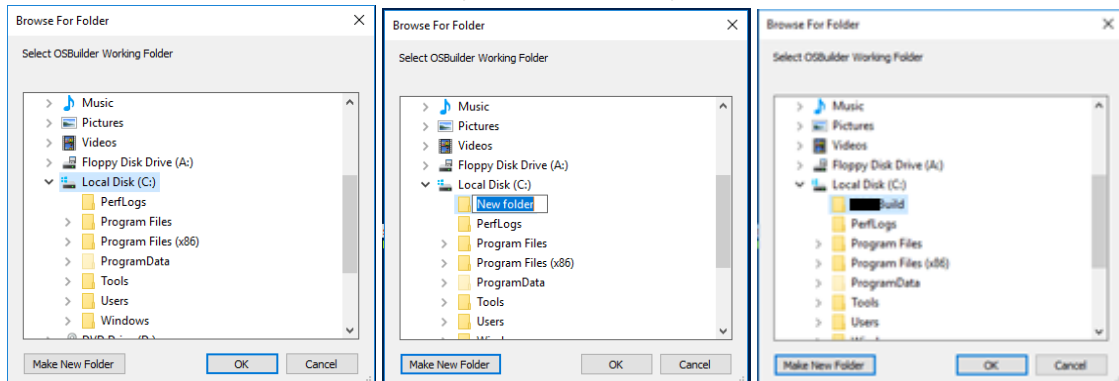
- 13) When/ if prompted for the ADKSetup.exe file, browse to 'C:\Tools\OSBuilder\ADKSetup'. Select the file "adksetup.exe" and then click "OPEN"



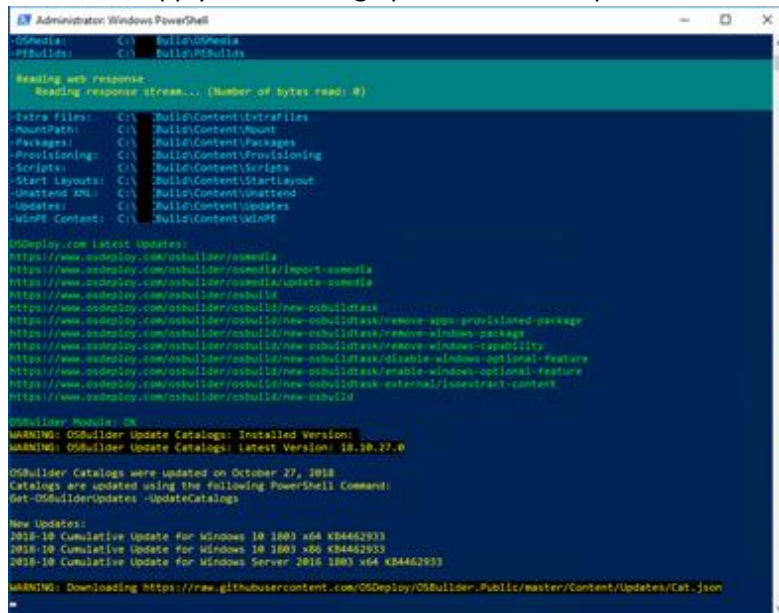
This will install the Windows 10 ADK if it is not already installed.



- 14) When prompted with the 'Browse for folder' dialog, browse to the 'C:' drive on your VM and create a new folder called "W10Build", select the folder, then click "OK".



- 15) The script will then create the needed working folders for the ISO build, import the media and download/ apply the servicing updates to it. This process can take up to 2 hours to complete.



```
Administrator Windows PowerShell
-OSMedia: C:\Build\OSMedia
-PSBuild: C:\Build\PSBuild

Reading web response
Reading response stream... (Number of bytes read: 0)

-Extra Files: C:\Build\Content\ExtraFiles
-MountPath: C:\Build\Content\Mount
-Packages: C:\Build\Content\Packages
-Provisioning: C:\Build\Content\Provisioning
-Scripts: C:\Build\Content\Scripts
-Start Layouts: C:\Build\Content\StartLayout
-Unattend XML: C:\Build\Content\Unattend
-Updates: C:\Build\Content\Updates
-WinPE Content: C:\Build\Content\WinPE

OSDeploy.com latest updates:
https://www.osdeploy.com/osbuilder/osmedia
https://www.osdeploy.com/osbuilder/osmedia/import-osmedia
https://www.osdeploy.com/osbuilder/osmedia/update-osmedia
https://www.osdeploy.com/osbuilder/osbuild
https://www.osdeploy.com/osbuilder/osbuild/new-osbuildtask
https://www.osdeploy.com/osbuilder/osbuild/new-osbuildtask/remove-apps-provisioned-package
https://www.osdeploy.com/osbuilder/osbuild/new-osbuildtask/remove-windows-package
https://www.osdeploy.com/osbuilder/osbuild/new-osbuildtask/remove-windows-capability
https://www.osdeploy.com/osbuilder/osbuild/new-osbuildtask/disable-windows-optional-feature
https://www.osdeploy.com/osbuilder/osbuild/new-osbuildtask/enable-windows-optional-feature
https://www.osdeploy.com/osbuilder/osbuild/new-osbuildtask-external/isoextract-content
https://www.osdeploy.com/osbuilder/osbuild/new-osbuild

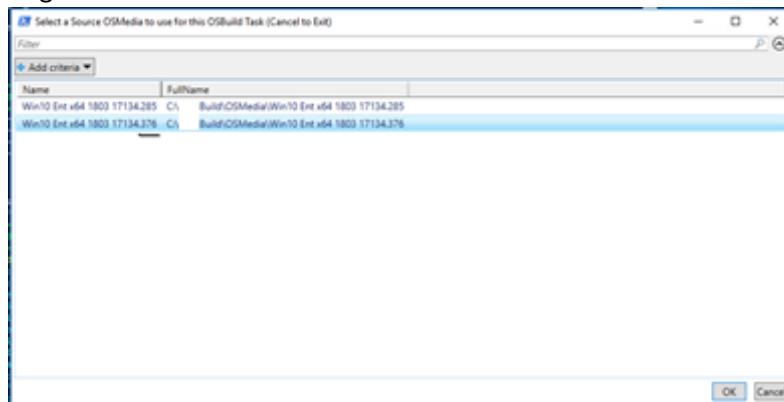
OSBuilder Module: OK
WARNING: OSBuilder Update Catalogs: Installed Version:
WARNING: OSBuilder Update Catalogs: latest Version: 18.10.27.0

OSBuilder Catalogs were updated on October 27, 2018
Catalogs are updated using the following PowerShell Command:
Get-OSBuilderUpdates -UpdateCatalogs

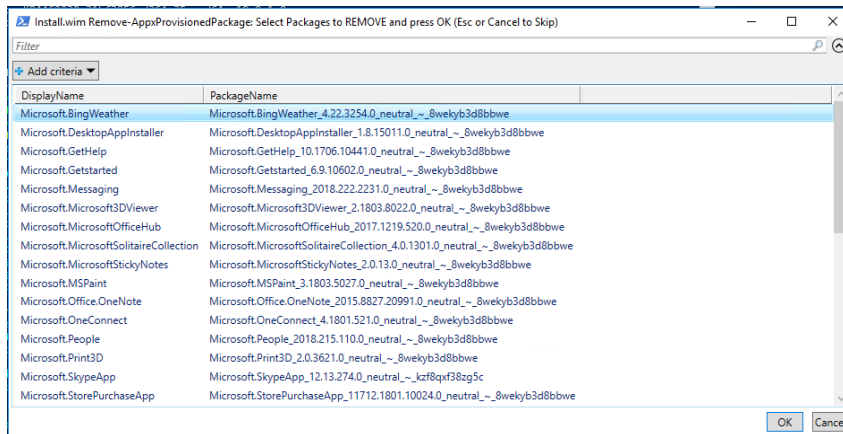
New Updates:
2018-10 Cumulative Update for Windows 10 1803 x64 KB4462933
2018-10 Cumulative Update for Windows 10 1803 x86 KB4462933
2018-10 Cumulative Update for Windows Server 2016 1803 x64 KB4462933

WARNING: Downloading https://raw.githubusercontent.com/OSDeploy/OSBuilder.Public/master/Content/Updates/Cat.json
```

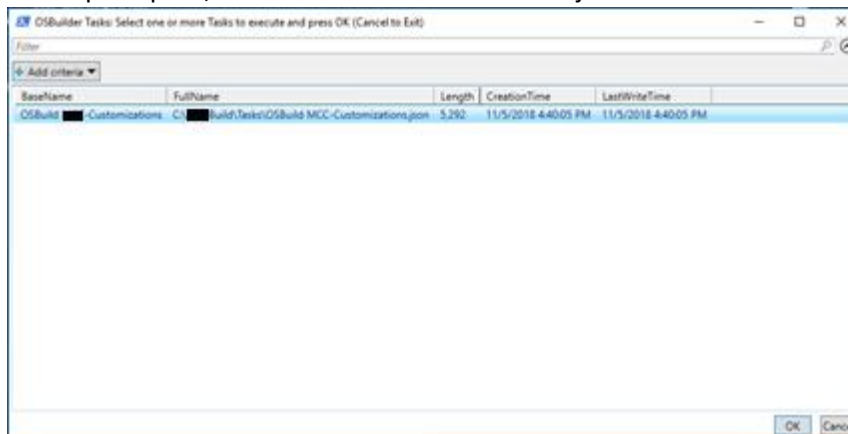
- 16) When prompted to select the Source OSMedia to use for the Build Task, select the item with the larger version number at the end of the name. Then click "OK".



- 17) When prompted for the AppX packages to be removed from the image, click the first one in YOUR list to be removed, then hold the CTRL key on your keyboard and select all of those that you want removed. Then click “OK”.



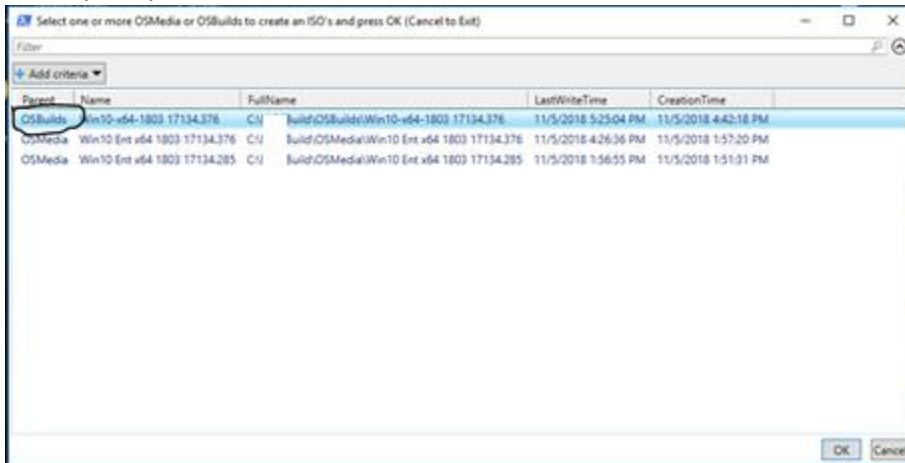
- 18) When prompted, select the Build Task that was just created and then click “OK”



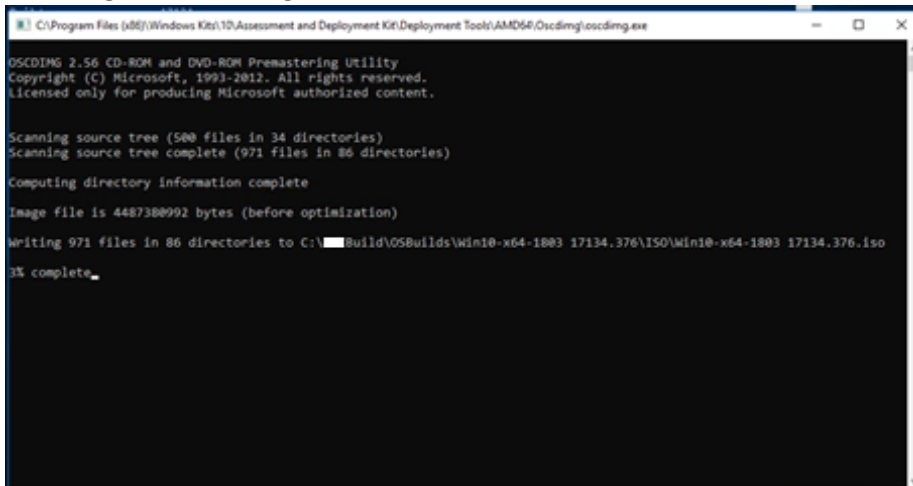
You should see something similar to the following on screen.

```
New-OSBuild
-----
Starting Task: OSBuild - Customizations
-----
Task Source OSMedia
- Media Name: Win10 Ent x64 1803 17134.376
- Media Path: C:\_Build\OSMedia\Win10 Ent x64 1803 17134.376
-----
Latest Source OSMedia
- Media Name: Win10 Ent x64 1803 17134.376
- Media Path: C:\_Build\OSMedia\Win10 Ent x64 1803 17134.376
-----
OSMedia Information
- Source Path: C:\_Build\OSMedia\Win10 Ent x64 1803 17134.376
- Image File: C:\_Build\OSMedia\Win10 Ent x64 1803 17134.376\OS\sources\install.wim
- Image Index: 1
- Name: Windows 10 Enterprise
- Description: Windows 10 Enterprise
- Architecture: x64
- Edition: Enterprise
- Type: Client
- Languages: en-US
- Build: 17134
- Version: 10.0.17134.1
- SPBuild: 1
- SPLevel: 376
- Bootable: No
- WinBoot: False
- Created Time: 09/11/2018 12:50:29
- Modified Time: 11/05/2018 15:43:09
WARNING: Downloading https://raw.githubusercontent.com/OSDeploy/OSBuilder.Public/master/Content/Updates/Cat.json
WARNING: Language Packs, Language Interface Packs and Features on Demand are not automatically displayed
WARNING: To view these updates, use the Catalog parameter
```

19) When prompted, select the OS Build in the list and then click “OK”.

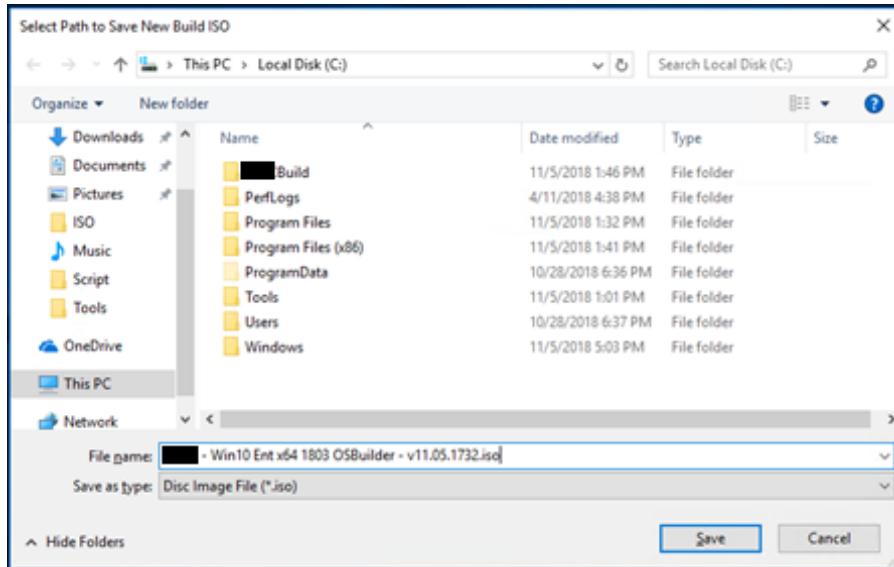


OSCDImg.exe will then generate the ISO from the OS Build.





- 20) When prompted for the location to save the new Windows 10 Enterprise 64bit Installation ISO file, browse to the desired folder and then click "SAVE". (The path can be either locally on the virtual machine or on the SCCM server).



If you chose to save the new ISO to the SCCM server, you should see something similar to the following.

```
New Installation ISO has ben copied to: '\\.\Source\OSInstall\ISO' - Win10 Ent x64 1803 OSBuilder - v11.05.1732.iso
PS C:\tools\OSBuilder\Script>
```

- 21) Your updated Windows 10 installation ISO is ready to use.

## Script Information

### Current Stable Script File

- Run-OSBuilder\_v1.0.6.ps1 - Created by [Phil Pritchett](#) (special thanks to [@skatterbrainzz](#) for his assistance)

### Previous Version Script Files

- Run-OSBuilder\_v1.0.3.ps1 - Created by Phil Pritchett
- Run-OSBuilder\_v1.0.4.ps1 - Created by Phil Pritchett
- Run-OSBuilder\_v1.0.5.ps1 - Created by Phil Pritchett

### Description

Wrapper script used to run [OSBuilder module](#) v10.10.26.0 (from [David Segura](#)) commands to build Windows 10 installation media that is patched and has only the apps and features desired.

### Compatibility

'Run-OSBuilder' only works with Windows 10 Enterprise at this time.

### Script Download

Run-OSBuilder script can be downloaded from - [https://github.com/packerphil/OSBuilder/blob/Script-1/Script%20Files/Run-OSBuilder\\_v1.0.6.ps1](https://github.com/packerphil/OSBuilder/blob/Script-1/Script%20Files/Run-OSBuilder_v1.0.6.ps1)

## Script Parameters

### BuildVer

(REQUIRED) - Microsoft Windows 10 Build Number

Valid values are:

- 1511
- 1607
- 1703
- 1709
- 1803
- 1809

### SiteCode

(OPTIONAL) - Specifies the Configuration Manager Site Code

### OSArch

(REQUIRED) - Specifies the processor architecture of the OS Media you are building.

Valid values are:

- x64
- x86

### ImageBuildName

(OPTIONAL) - Specifies the Build Name of the OS Media you are building.

Default is 'Win10-x64-1803'

### SaveNewISO

(OPTIONAL) – Switch parameter that when specified, tells the script to save the new ISO to a specific folder at the end of the run using a dialog. If not specified, the script will store the ISO within the working folders created in step #14.

### CustomOptions

(OPTIONAL) - If specified, a new build task will be created with the options chosen.

Values are comma separated (EXAMPLE - 'AddNetFX3,RemAppx')

Minimum options = 1

Maximum options = 6

Valid values are:

- AddNetFX3 = EnableNetFX3
- AddWinOpt = EnableWindowsOptionalFeature
- RemAppx = RemoveAppxProvisionedPackage
- RemWinOpt = DisableWindowsOptionalFeature
- RemWinPkg = RemoveWindowsPackage
- RemWinCap = RemoveWindowsCapability

## Script Usage Examples

### Example #1

Runs OSBuilder for Windows 10 Enterprise, Build 1803, 64bit, adds customization job for enabling .NET35 and removal of Appx Packages, specified SCCM Site Code 'LAB'

```
.\Run-OSBuilder.ps1 -CustomOptions AddNetFX3,RemAppx -BuildVer 1803 -OSArch x64 -SiteCode LAB
```

### Example #2

Runs OSBuilder for Windows 10 Enterprise, Build 1709, 64bit, names the build 'LAB-WIn10Ent-x64-1709'

```
.\Run-OSBuilder.ps1 -BuildVer 1709 -OSArch x64 -ImageBuildName "LAB-WIn10Ent-x64-1709"
```

### Example #3

Runs OSBuilder for Windows 10 Enterprise, Build 1803, 64bit, specifies to enable .NET35, and save the ISO using the dialog.

```
.\Run-OSBuilder.ps1 -BuildVer 1803 -OSArch x64 -CustomOptions AddNetFX3 -SaveNewISO
```