

Modern Management of Windows Devices

Jodie Gaver – Windows Deployment Specialist



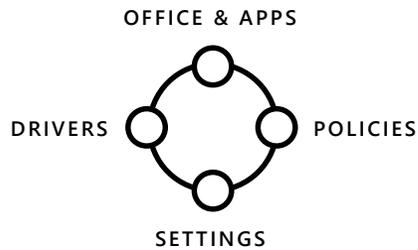
What is Modern Management?

- Provisioning not imaging
- Intune for Education & Intune

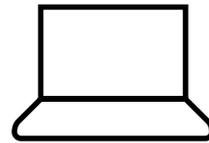


This is not modern management

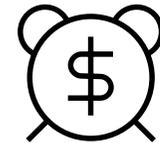
Traditional Windows deployment // The old way



Build a custom image, gathering everything else that's necessary to deploy

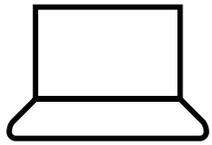


Deploy image to a new computer, overwriting what was originally on it

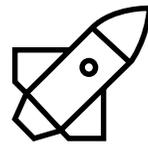


Time means money, making this an expensive proposition

Modern Windows deployment // **The new way**



Un-box and turn on
off-the-shelf Windows PC



Transform with minimal
user interaction



Device is ready
for productive use

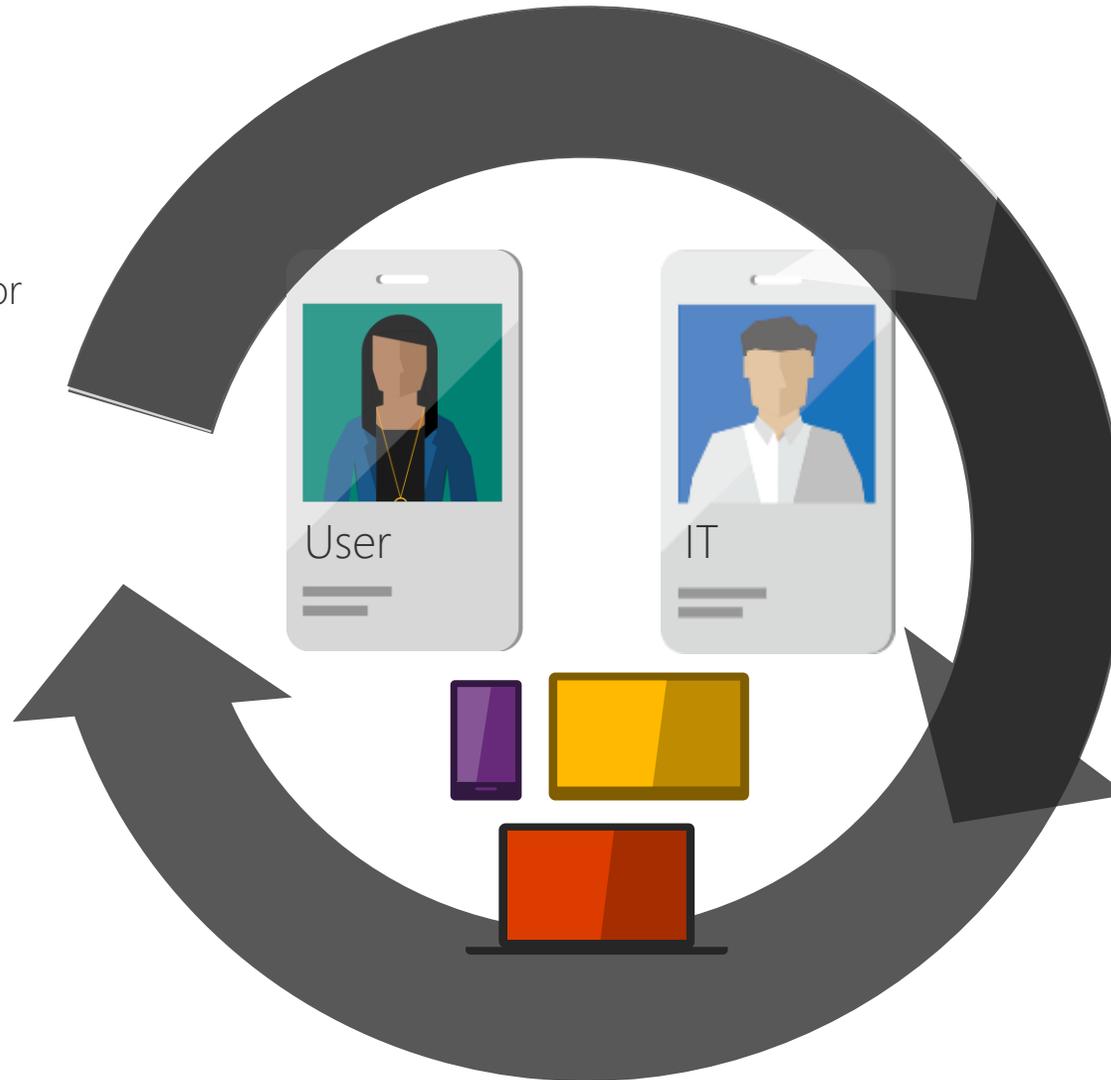
Modern Device Management Lifecycle

▶ Enroll

- Bulk enrollment - Set Up School PCs, Windows Configuration Designer or auto-enroll with GPO
- Self-service enrollment - Enter AAD credentials during Windows OOBE

▶ Retire

- Remove school data from a device
- Perform factory reset



▶ Provision

- Deploy settings
- Deploy apps

▶ Manage

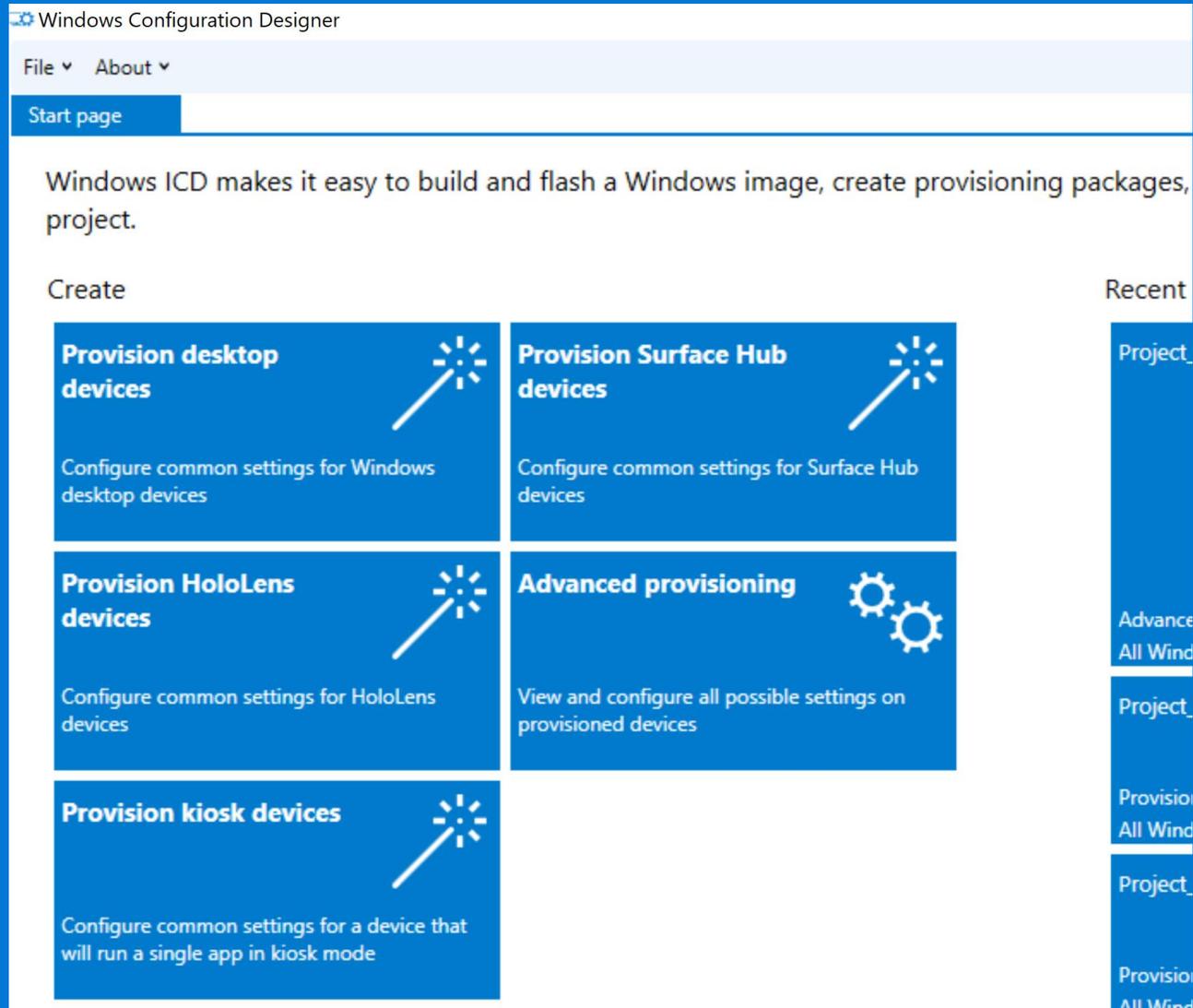
- Manage apps and settings
- Report on device and app inventory, settings errors
- Perform remote tasks

Provisioning not imaging

Windows Configuration Designer
Set up School PCs

Autopilot – Ideal for 1:1

Windows Configuration Designer – FREE App

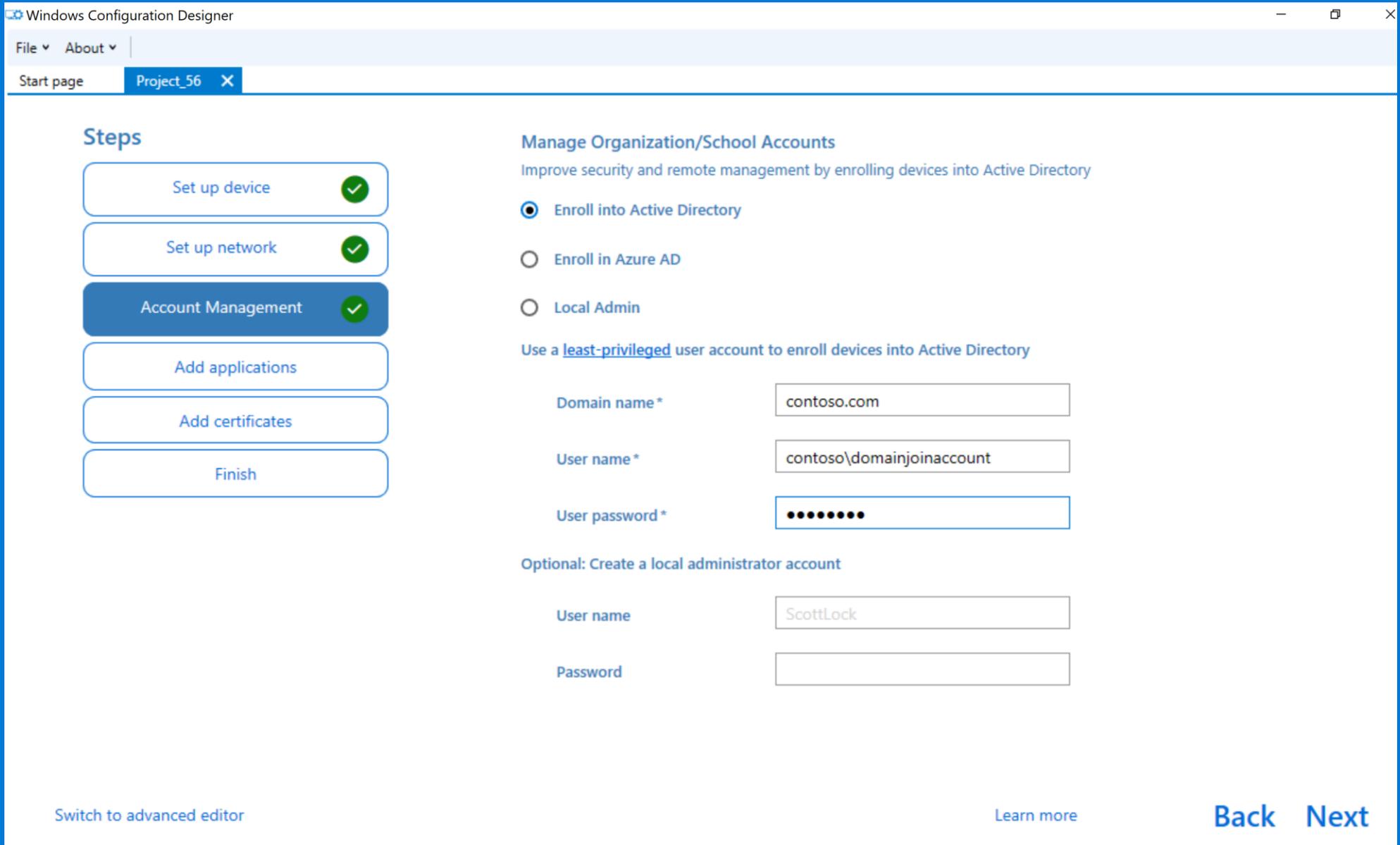


The screenshot shows the Windows Configuration Designer application window. The title bar reads "Windows Configuration Designer". Below the title bar is a menu bar with "File" and "About" options. A "Start page" tab is active. The main content area features a heading "Windows ICD makes it easy to build and flash a Windows image, create provisioning packages, project." followed by a "Create" section with five blue tiles:

- Provision desktop devices**: Configure common settings for Windows desktop devices.
- Provision Surface Hub devices**: Configure common settings for Surface Hub devices.
- Provision HoloLens devices**: Configure common settings for HoloLens devices.
- Advanced provisioning**: View and configure all possible settings on provisioned devices.
- Provision kiosk devices**: Configure common settings for a device that will run a single app in kiosk mode.

On the right side, a "Recent" list is partially visible, showing entries like "Project_", "Advance All Wind", "Project_", "Provision All Wind", "Project_", and "Provision All Wind".

Windows Configuration Designer – AD Join



The screenshot shows the Windows Configuration Designer application window. The title bar reads "Windows Configuration Designer". The menu bar includes "File" and "About". The tab bar shows "Start page" and "Project_56".

Steps

- Set up device ✓
- Set up network ✓
- Account Management ✓**
- Add applications
- Add certificates
- Finish

Manage Organization/School Accounts
Improve security and remote management by enrolling devices into Active Directory

- Enroll into Active Directory
- Enroll in Azure AD
- Local Admin

Use a least-privileged user account to enroll devices into Active Directory

Domain name*

User name*

User password*

Optional: Create a local administrator account

User name

Password

Switch to advanced editor [Learn more](#) **Back** **Next**

Windows Configuration Designer – AAD Join

Windows Configuration Designer

File About

Start page Project_56

Steps

- Set up device ✓
- Set up network ✓
- Account Management ✓**
- Add applications
- Add certificates
- Finish

Manage Organization/School Accounts

Improve security and remote management by enrolling devices into Active Directory

- Enroll into Active Directory
- Enroll in Azure AD
- Local Admin

The default number of devices that can be joined to an Azure AD tenant is limited to 20. Contact your domain administrator to change the limit and [go here](#) for more info.

Bulk Token Expiry*

Bulk AAD Token* **Bulk Token Fetched Successfully**

Optional: Create a local administrator

User name

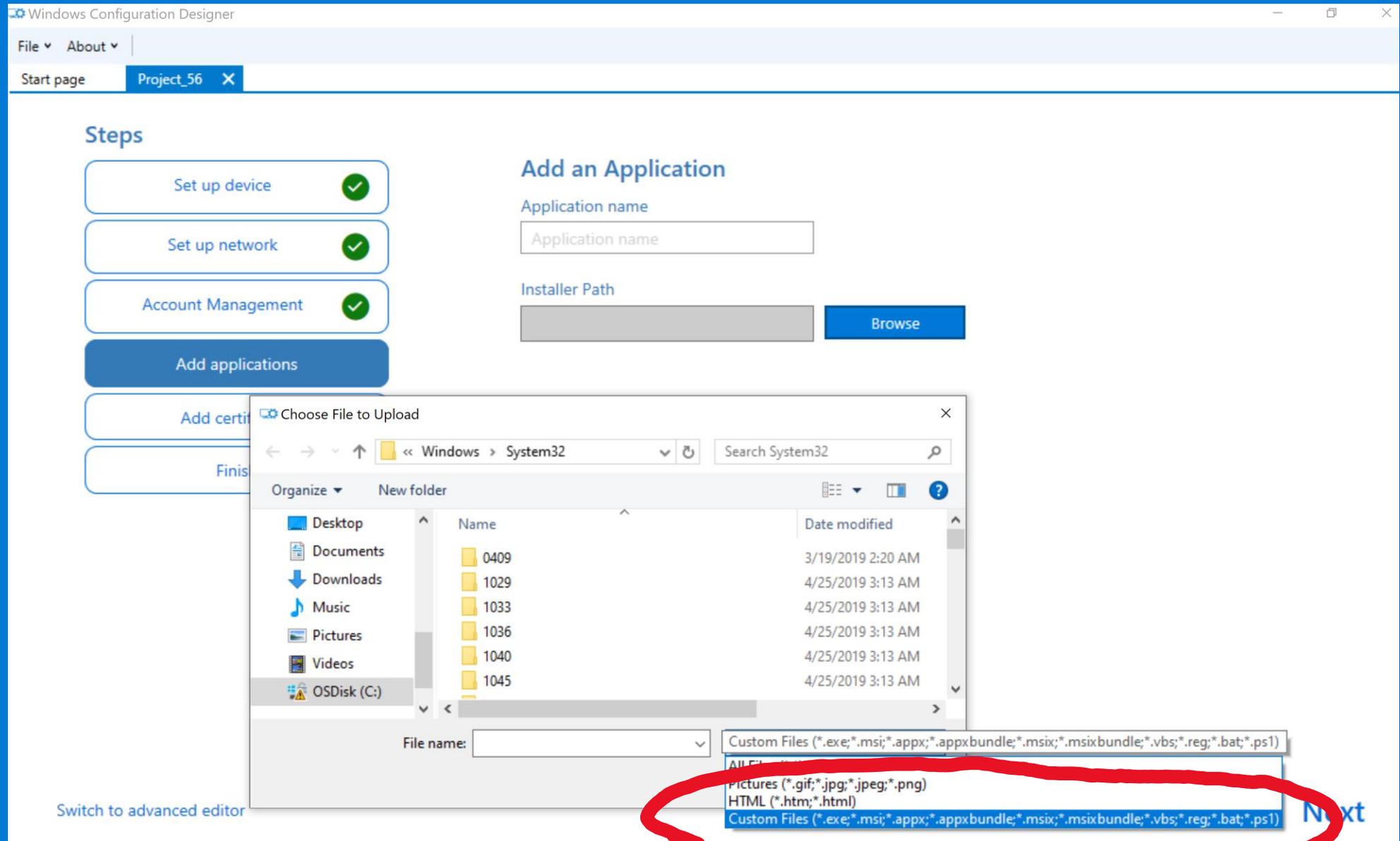
Password

Switch to advanced editor

Learn more

Back Next

Windows Configuration Designer – Add Apps



Windows Configuration Designer

File ▾ About ▾

Start page Project_56 X

Steps

- Set up device ✓
- Set up network ✓
- Account Management ✓
- Add applications**
- Add certificates
- Finish

Add an Application

Application name

Installer Path

Switch to advanced editor

Choose File to Upload

« Windows » System32 Search System32

Organize ▾ New folder

Name	Date modified
0409	3/19/2019 2:20 AM
1029	4/25/2019 3:13 AM
1033	4/25/2019 3:13 AM
1036	4/25/2019 3:13 AM
1040	4/25/2019 3:13 AM
1045	4/25/2019 3:13 AM

File name:

Custom Files (*.exe;*.msi;*.appx;*.appxbundle;*.msix;*.msixbundle;*.vbs;*.reg;*.bat;*.ps1)

All files (*.*)

Pictures (*.gif;*.jpg;*.jpeg;*.png)

HTML (*.htm;*.html)

Custom Files (*.exe;*.msi;*.appx;*.appxbundle;*.msix;*.msixbundle;*.vbs;*.reg;*.bat;*.ps1)

Next

Windows Configuration Designer – Add Apps

Windows Configuration Designer

File ▾ About ▾

Start page Project_56 X

- Set up device ✓
- Set up network ✓
- Account Management ✓
- Add applications**
- Add certificates
- Finish

Add an Application

Application name
Student App

Installer Path
C:\Users\jogaver\Downloads\Stude... Browse

Command line arguments
msiexec /i "student.msi" /qn /norestar

Continue installations after failure
If this application fails to install, subsequent app installations will continue.

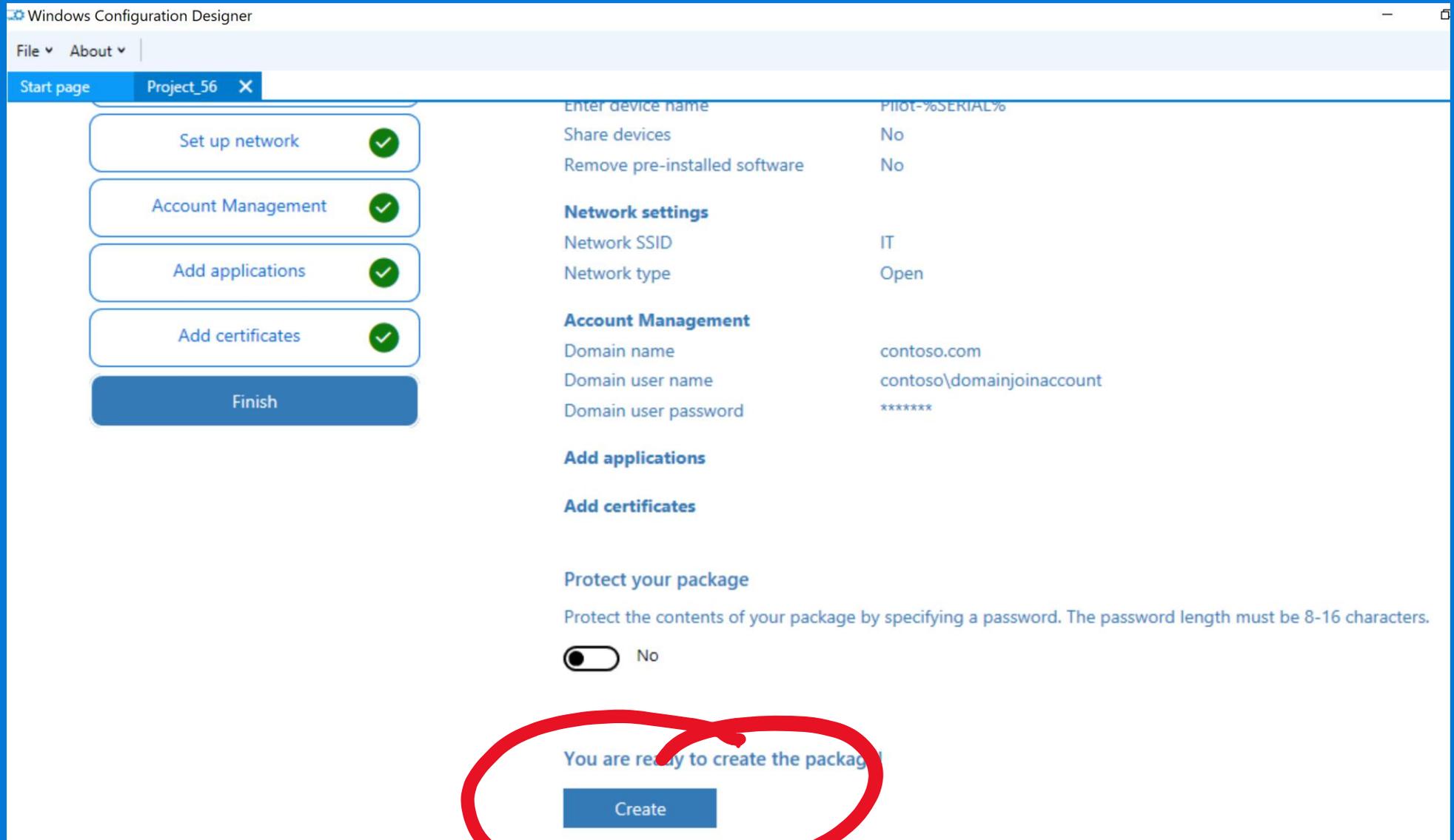
No

Restart required
 No

Required win32 app dependencies
+

Cancel Add

Windows Configuration Designer – Create!



The screenshot shows the Windows Configuration Designer application window. The title bar reads "Windows Configuration Designer". The menu bar includes "File" and "About". The main window has two tabs: "Start page" and "Project_56". On the left side, there is a vertical list of configuration steps, each with a green checkmark indicating completion: "Set up network", "Account Management", "Add applications", and "Add certificates". Below these steps is a large blue "Finish" button. The main content area displays configuration details for the selected project. It includes sections for "Network settings" (Enter device name: PILOT-%SERIAL%, Share devices: No, Remove pre-installed software: No), "Account Management" (Network SSID: IT, Network type: Open, Domain name: contoso.com, Domain user name: contoso\domainjoinaccount, Domain user password: *****), "Add applications", and "Add certificates". A "Protect your package" section is also visible, with a toggle switch set to "No" and a note: "Protect the contents of your package by specifying a password. The password length must be 8-16 characters." At the bottom of the window, a red circle highlights the text "You are ready to create the package" and a blue "Create" button.

Windows Configuration Designer

File ▾ About ▾

Start page Project_56 X

Set up network ✓

Account Management ✓

Add applications ✓

Add certificates ✓

Finish

Enter device name PILOT-%SERIAL%

Share devices No

Remove pre-installed software No

Network settings

Network SSID IT

Network type Open

Account Management

Domain name contoso.com

Domain user name contoso\domainjoinaccount

Domain user password *****

Add applications

Add certificates

Protect your package

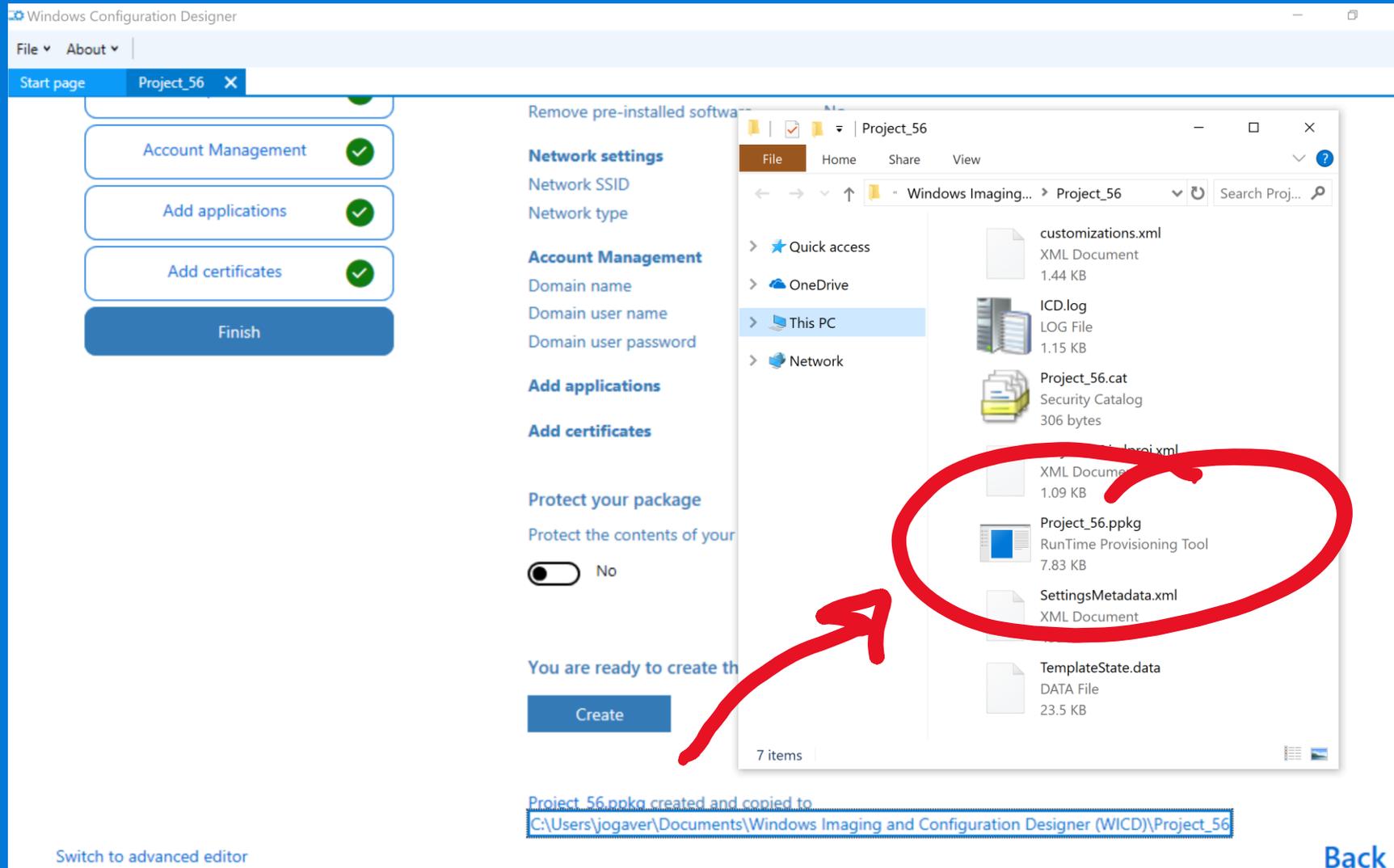
Protect the contents of your package by specifying a password. The password length must be 8-16 characters.

No

You are ready to create the package

Create

Windows Configuration Designer – .ppkg



Windows Configuration Designer

File About

Start page Project_56

Account Management ✓

Add applications ✓

Add certificates ✓

Finish

Remove pre-installed software

Network settings

Network SSID

Network type

Account Management

Domain name

Domain user name

Domain user password

Add applications

Add certificates

Protect your package

Protect the contents of your package

No

You are ready to create the package

Create

Project_56.ppkg created and copied to
C:\Users\jogaver\Documents\Windows Imaging and Configuration Designer (WICD)\Project_56

Switch to advanced editor

Back

Project_56

File Home Share View

Windows Imaging... > Project_56

Search Proj...

Quick access

OneDrive

This PC

Network

customizations.xml
XML Document
1.44 KB

ICD.log
LOG File
1.15 KB

Project_56.cat
Security Catalog
306 bytes

Project_56.ppkg
RunTime Provisioning Tool
7.83 KB

SettingsMetadata.xml
XML Document

TemplateState.data
DATA File
23.5 KB

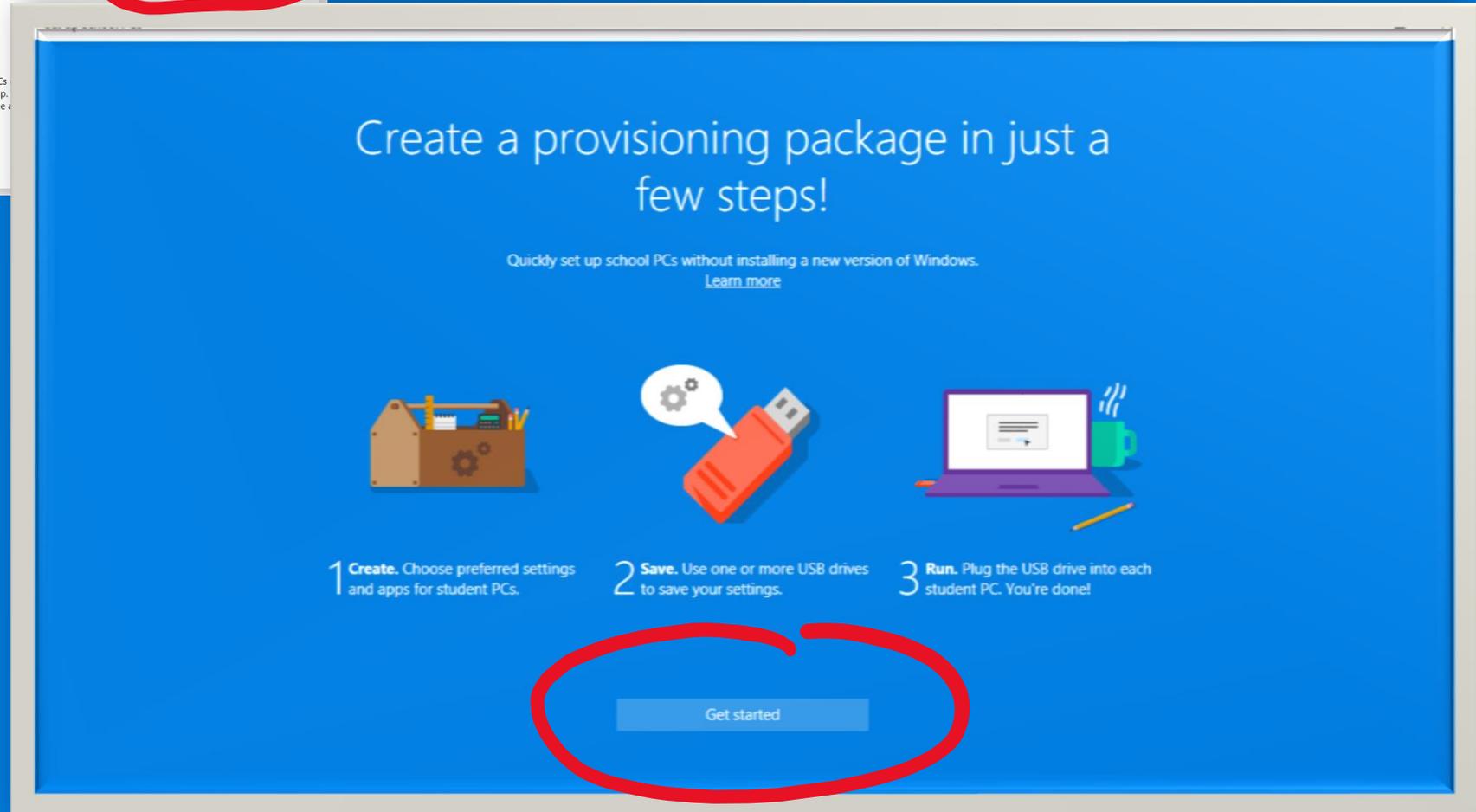
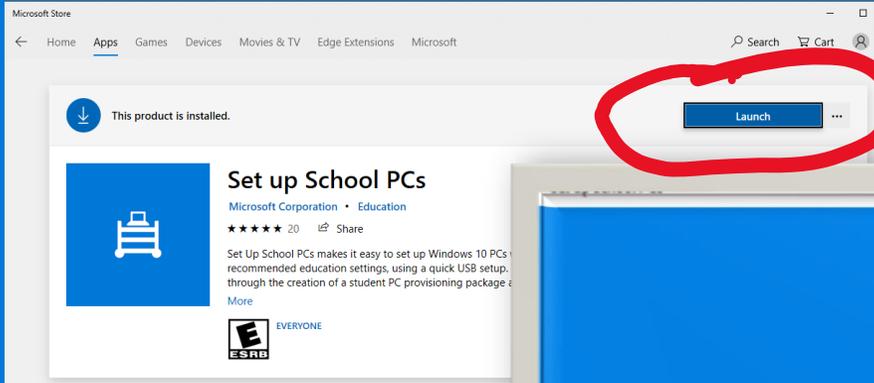
7 items

Copy the .ppkg to the root of a USB and provision from OOB



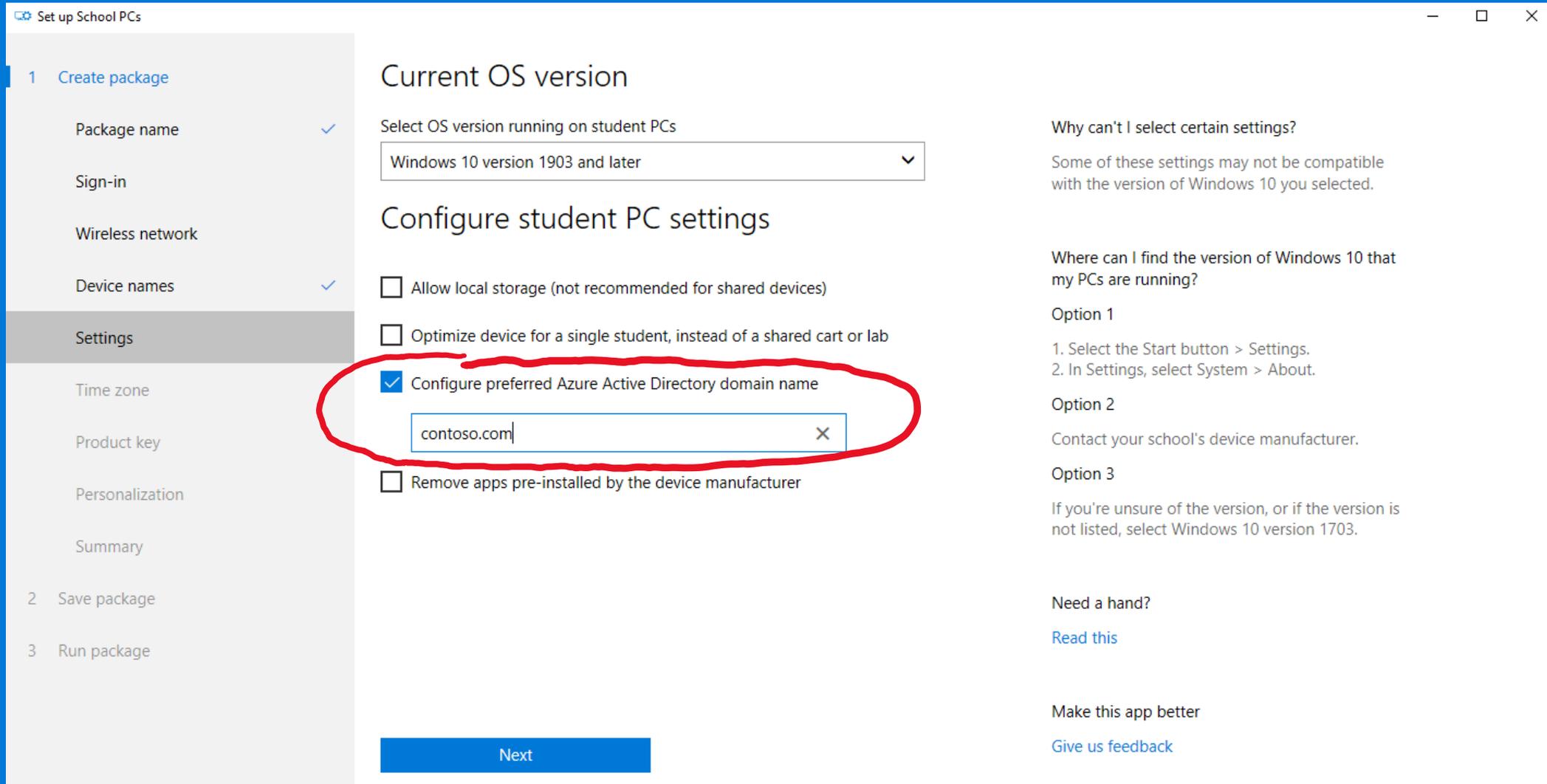
Set Up School PC's

FREE Microsoft Store App



Set Up School PC's

FREE Microsoft Store App



Set up School PCs

1 Create package

Package name ✓

Sign-in

Wireless network

Device names ✓

Settings

Time zone

Product key

Personalization

Summary

2 Save package

3 Run package

Current OS version

Select OS version running on student PCs

Windows 10 version 1903 and later

Configure student PC settings

Allow local storage (not recommended for shared devices)

Optimize device for a single student, instead of a shared cart or lab

Configure preferred Azure Active Directory domain name

contoso.com

Remove apps pre-installed by the device manufacturer

Next

Why can't I select certain settings?

Some of these settings may not be compatible with the version of Windows 10 you selected.

Where can I find the version of Windows 10 that my PCs are running?

Option 1

1. Select the Start button > Settings.
2. In Settings, select System > About.

Option 2

Contact your school's device manufacturer.

Option 3

If you're unsure of the version, or if the version is not listed, select Windows 10 version 1703.

Need a hand?

[Read this](#)

Make this app better

[Give us feedback](#)

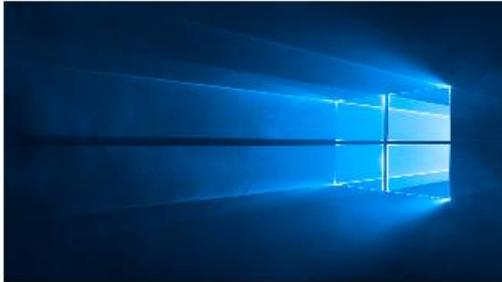
Set Up School PC's

Set up School PCs

- 1 Create package
 - Package name ✓
 - Sign-in
 - Wireless network
 - Device names ✓
 - Settings ✓
 - Time zone ✓
 - Product key ✓
 - Personalization**
 - Summary
- 2 Save package
- 3 Run package

Personalize student PCs

Desktop background



Browse

Lock screen background



Browse

Next Continue without personalization

Need a hand?
[Read this](#)

Related products
[Azure Active Directory](#)
[Intune for Education](#)
[Office 365 Education](#)

Make this app better
[Give us feedback](#)

Set Up School PC's

Set up School PCs

1 Create package

- Package name ✓
- Sign-in
- Wireless network
- Device names ✓
- Settings ✓
- Time zone ✓
- Product key ✓
- Personalization ✓
- Summary ✓

2 Save package

Insert USB

3 Run package

Insert a USB drive now

Make sure it has at least 92 MB of available storage to save your provisioning package.

Select your drive:

-  **Type-C (D:)**
25.23 GB free of 29.86 GB

Need a hand?
[Read this](#)

Make this app better
[Give us feedback](#)

Save

Set Up School PC's

Set up School PCs

1 Create package

2 Save package

3 Run package

Get PCs ready

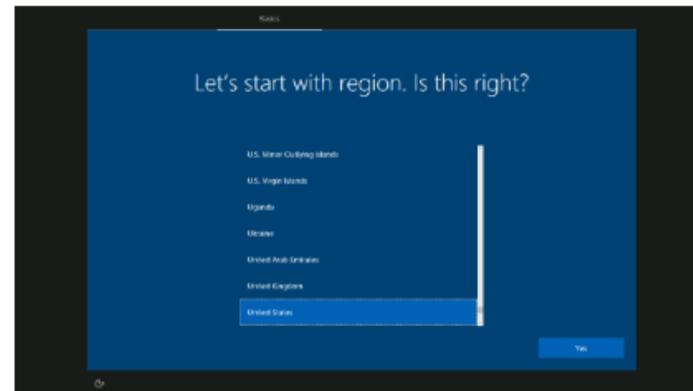
Install package

Get the student PCs ready

Let's do this.

Here's how to finish setting up your student PCs. Don't go out of order:

1. Line up all the student PCs. Don't insert the USB drive yet.
2. Turn them on and make sure they're charged up.
3. Let them load and do their thing. **DO NOT** go beyond the blue screen that looks like this:



Next

Set Up School PC's

Set up School PCs

- 1 Create package
- 2 Save package
- 3 Run package

Get PCs ready ✓

Install package

Install the package

You're almost done.

From the blue startup screen, you'll plug the USB drive into each student PC:

1. Grab a student PC and insert the USB drive.
2. The system will automatically detect the file and run it - you'll see a notification.
3. Wait until it prompts you to remove the USB.
4. Repeat steps 1-3 for all student PCs.
5. You're done!

Create new package

I'm done



Windows Autopilot



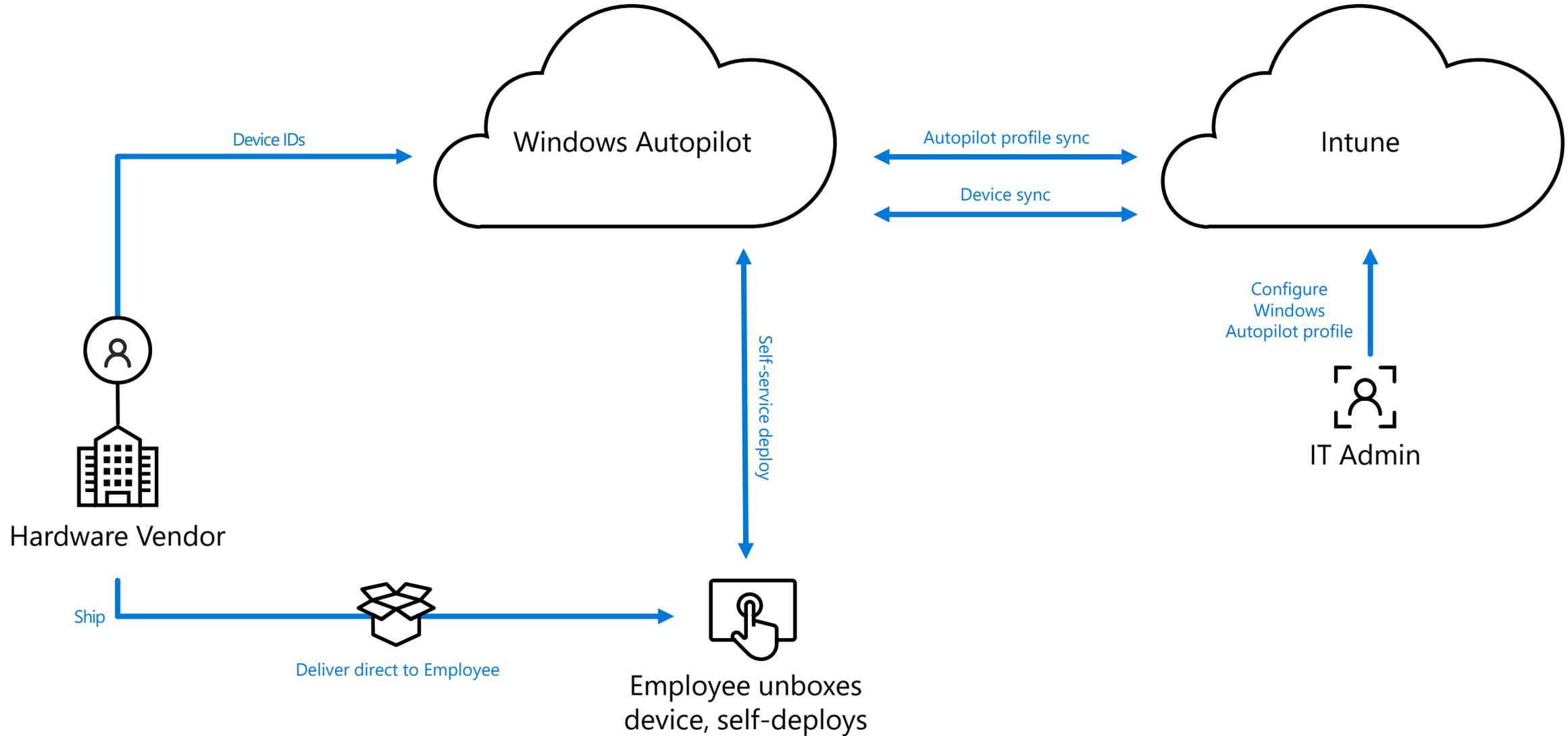
Wikipedia definition

An autopilot is a system used to control the trajectory of an aircraft without constant 'hands-on' control by a human

Autopilots do not replace human operators, but instead they assist them in controlling the....

This allows them to focus on broader aspects of operations such as....

Windows Autopilot overview



Windows Autopilot Uses (but not limited to)

- 1:1



- Staff mobile devices



Managing the devices

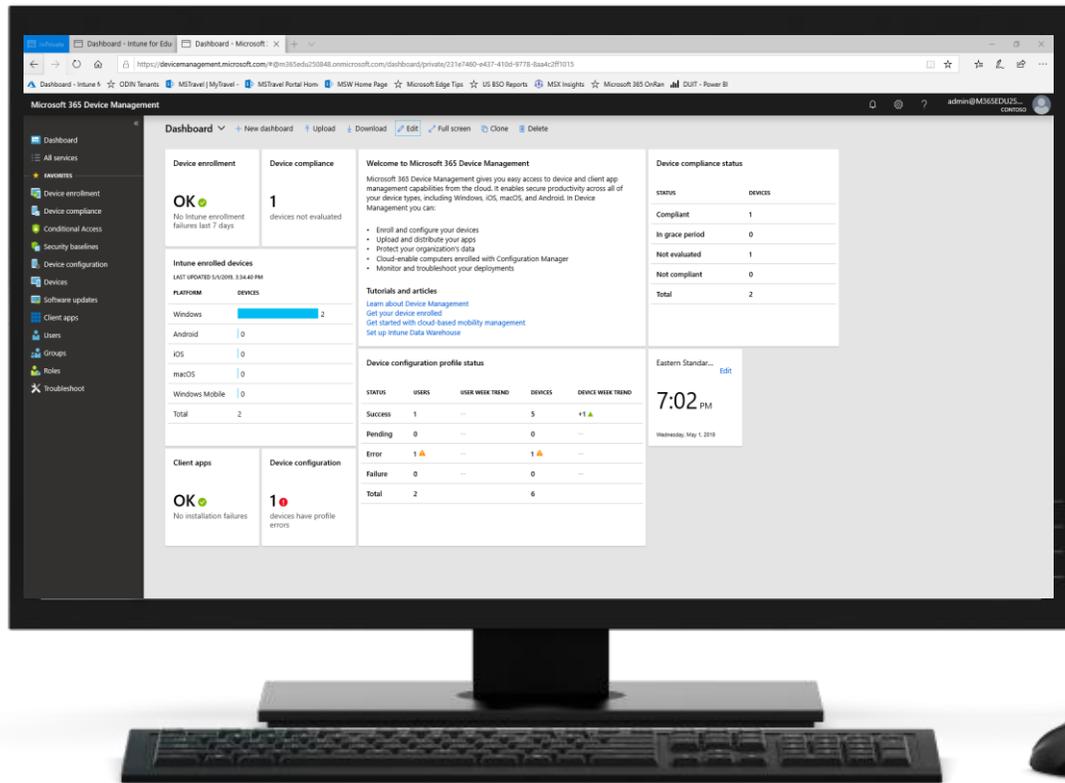
- Intune
- Intune for Education

The power of Intune, designed for education

Intune

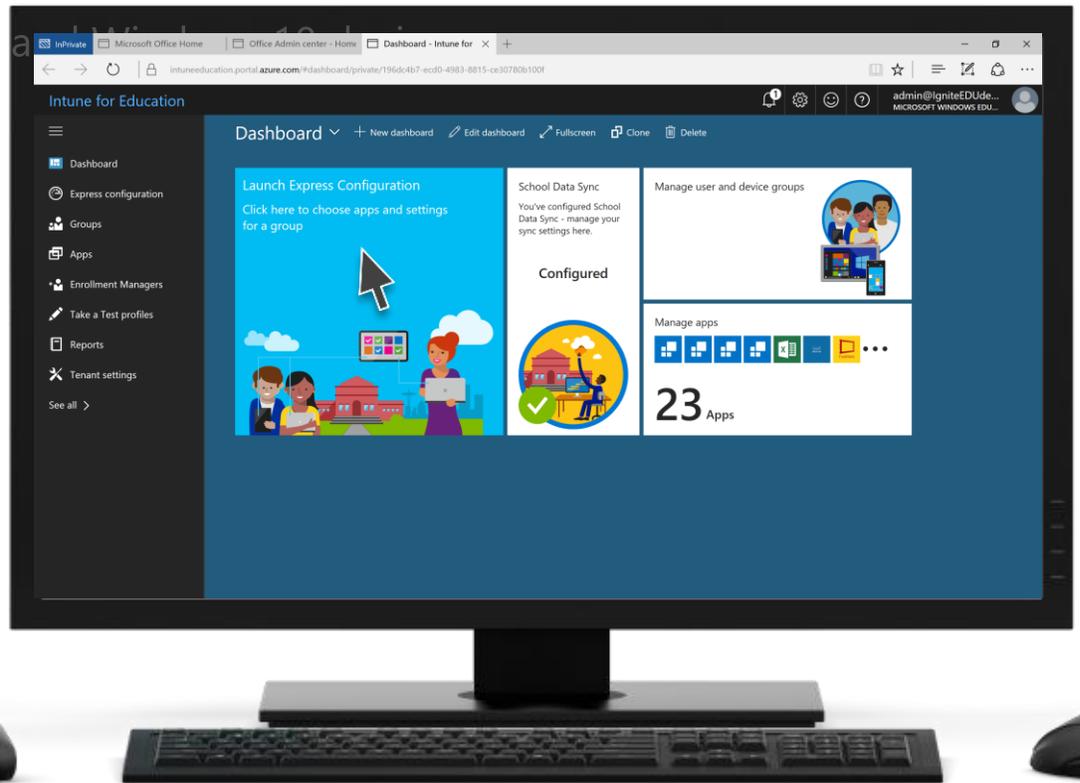
Designed for enterprise IT needs, mixed device environments,

Comes with Intune for Education!



Intune for Education

Same data, simpler experience for use with common education workflows, Windows 10 devices



Education Ready Settings

Easy to use for common school scenarios and settings

Simple web console for Windows 10 and iOS device management

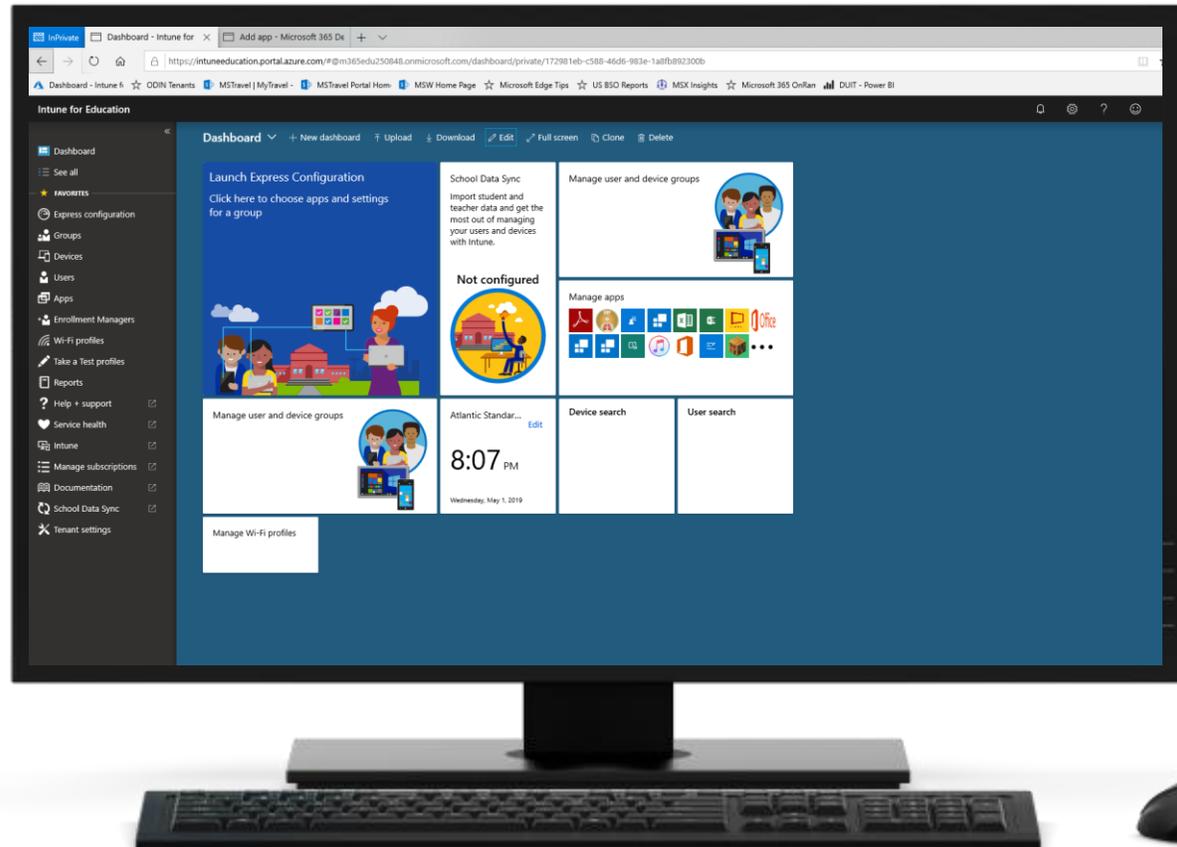
- Easy interface even for part-time IT staff to do routine tasks
- Express setup

Over 150 granular settings such as:

- Allow Camera (Yes/No)
- Allow removable storage (Yes/No)
- Windows Update preferences

Manage groups based on school roster data (SIS) with School Data Sync

- Teachers
- Students
- Sections (classes)
- Schools



Easier Shared Device Management

Custom experience for each user to

Create the Conditions for Learning

Enable fast sign-in on shared devices

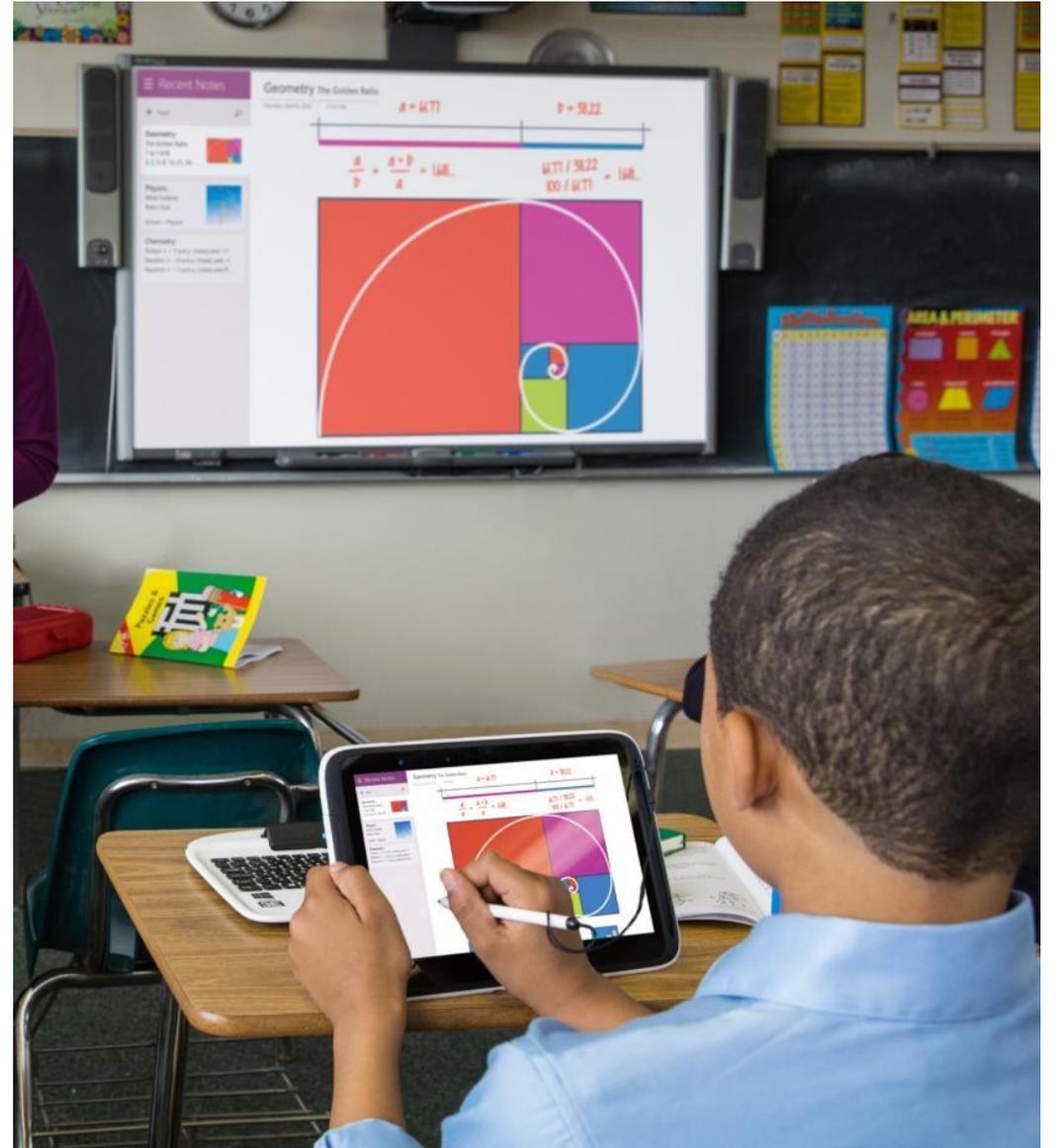
Apps deployed to devices are available to all users

Settings applied to devices are enforced at login

Each user can have a custom experience on a shared device including

- Wallpaper
- Start menu
- Installed apps
- Applied policies

Take a Test – Create a dedicated account for high stakes testing that locks PCs to the test URL



Keeping up with Windows 10

Windows Updates with Intune

Easy to configure

Nothing to maintain

Doesn't matter where the device is

Windows Education Devices Portfolio Spring 19



Typical Specs/Features*

Best



Lenovo ThinkPad 11e (AMD)
11.6" 4/500GB



HP x360 310 G4
11.6" 4/500GB



Dell Latitude 3390
13.3" Core i3 4/128GB
Est \$400



Acer Spin Pro 5
13" 4/64GB
Core i5 \$599



Asus UX303
13.3" Core i5 4/128GB

- ~ **\$399 (Est)**
- 2 in1 Convertible
- Touch
- **13.3" Screen**
- **Intel Core i3/i5**
- 4/128GB, 500GB

Better

March '19



Lenovo 14W (AMD)
14.0" 4/64GB
Starting at \$299



Lenovo 300e
11.6" 4/64GB
Starting at \$299

Feb '19



HP ProBook X360 G3 EE
11.6" 4/64GB
Starting at \$319



Dell Latitude 3190
11.6" 4/64GB
Starting at \$299

March '19



Acer TMB Spin B1(R)
11.6" 4/64GB
Starting at \$299



Asus VivoBook Flip 14 TP401
14" 4/64GB
Starting at \$329

- **Approx. \$299 (Est)**
- **Convertible 360 hinge**
- Touch & **active pen**
- 11.6" Screen
- Intel **Pentium**
- **4/64GB, & 128GB**

Good

Feb '19



Lenovo 100e
11.6" 4/64GB
Starting at \$189



HP Stream 11 PRO G5
11.6" 4/64GB
Starting at \$219



Dell Latitude 3190
11.6" 4/64GB
Starting at \$229

March '19



Acer TravelMate B1(M)
11.6" 4/64GB
Starting at \$215



Asus VivoBook W202/E201
11.6" 4/64GB
Starting at \$279

- **Approx. \$200 (Est)**
- Clamshell
- Non-touch/**touch option**
- 11.6" Screen
- Intel Celeron
- Mainly **4/64**

Microsoft 365 Component Map

Services & Features

A1 A3 A5

			A1	A3	A5
Office	Collaboration & Learning	Exchange Online (email and calendar), Teams and Skype (chat and IM), Yammer (social)	✓	✓	✓
		OneDrive for Business and SharePoint Online (files and sharing)	✓	✓	✓
		Groups (shared spaces) and Planner (work management)	✓	✓	✓
		Office Online web-based editing (Word, Excel, PowerPoint, and OneNote)	✓	✓	✓
		Office ProPlus Client (Word, Excel, PowerPoint, Outlook, OneNote)		✓	✓
	Classroom Tools	Microsoft Teams Classroom , PLCs , and StaffHub	✓	✓	✓
		OneNote Class Notebook , Sway	✓	✓	✓
	More Inclusive Classrooms	Learning Tools , Accessibility Checker , Office Lens	✓	✓	✓
	Compliance	Legal Hold , eDiscovery	✓	✓	✓
		Advanced eDiscovery , Customer Lockbox , Advanced Data Governance			✓
	Management & Security	Exchange Online Protection , DLP , Azure Rights Management , Message Encryption , School Data Sync	✓	✓	✓
		Office 365 Cloud App Security		✓	✓
	Advanced Security	Office 365 Advanced Threat Protection , Threat Intelligence			✓
	Analytics	Power BI Pro , MyAnalytics , Delve			✓
Voice, Video, and Meetings	Microsoft Teams , Skype for Business	✓	✓	✓	
	Bookings , Skype Meeting Broadcast , Office 365 Video		✓	✓	
	PSTN Dial-in Conferencing , Cloud PBX			✓	
Windows	Operating System	Windows 10 Upgrade License (Education Edition , Enterprise , Enterprise LTSB, & Pro)		✓	✓
	Management and Security	Windows Defender Antivirus		✓	✓
		Device Guard , Credential Guard , Exploit Guard		✓	✓
Advanced Security	Windows Defender Advanced Threat Protection			✓	
Enterprise Mobility + Security	Management and Security	Azure Active Directory P1 (SSO , MFA , SSPR , Conditional Access , Dynamic Groups)		✓	✓
		Azure Information Protection P1 (document classification, tracking, and revocation)		✓	✓
		Advanced Threat Analytics		✓	✓
		Intune (MDM and Mobile Application Management (MAM) without the need for device enrollment)		✓	✓
	Advanced Security	Azure Active Directory P2 (Identity Protection and Privileged Identity Management)			✓
		Azure Information Protection P2 (automated classification and hold your own key)			✓
		Microsoft Cloud App Security			✓
Additional M365 Benefits	Student Benefits	Intune for Education , Azure Active Directory P1, Azure Information Protection P1, Advanced Threat Analytics		✓	✓
		Office 365 Cloud App Security , Minecraft for Education			✓
		Azure Active Directory P2, Azure Information Protection P2			✓
	Game Based Learning	Minecraft for Education		✓	✓
	Server & CAL	Productivity Server Licenses and Client Access Licenses (CALs) for Exchange, SharePoint, Skype for Business, etc.		✓	✓
Windows Server Client Access Licenses (CALs)			✓	✓	

Additional Resources

Windows Bootable Media: tinyurl.com/bootablewinmedia

Intune for Education Setup/trial: aka.ms/pilotchecklist

Training videos on my Youtube Channel (Just search for me!)

Find me on LinkedIn!

Twitter @Jodiegaver

Jodie.Gaver@Microsoft.com