



Windows as a Service

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Guide Description

The purpose of this guide is to discuss Windows 10 as a service. As we move into the modern desktop environment, we want to take advantage of the new features introduced by Microsoft to enhance both the end-user and admin experience. In this article we will be discussing the following topics:

- *Windows Deployment Rings*
- *Window Autopilot*

****Disclaimer****

This guide is meant to provide best practices for deployment rings and using windows autopilot. It is meant to be used as a template, but the policies defined will not be the same in all use cases. You must access to policies and configuration you will need for your customers environment and make changes as needed. TMINUS is not liable for any policies you create that do not meet the customers standards. As a best practice, test all configurations with a pilot group before moving to broad deployment across an entire organization

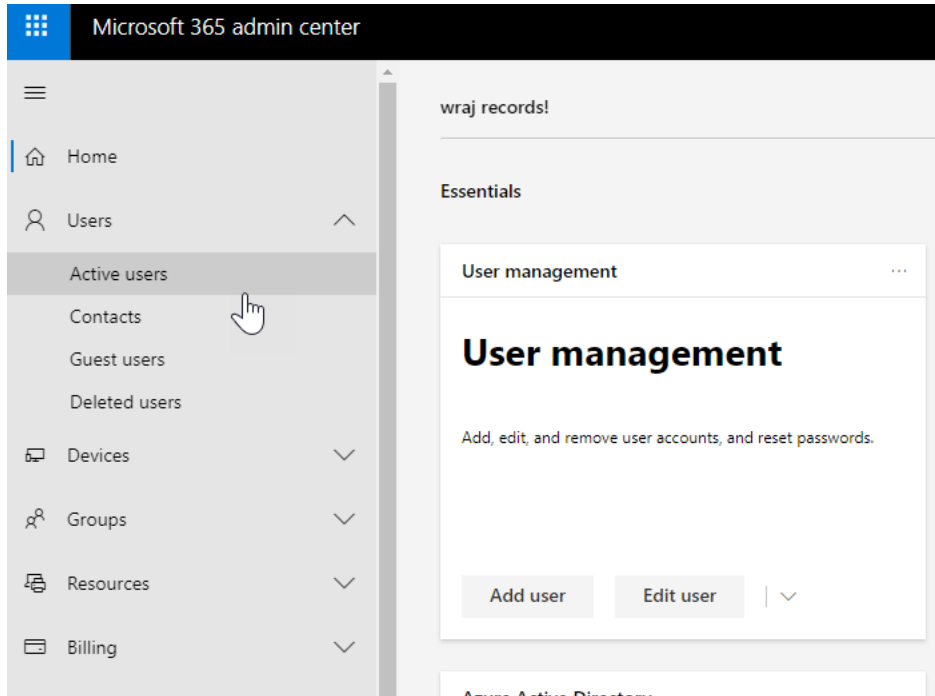
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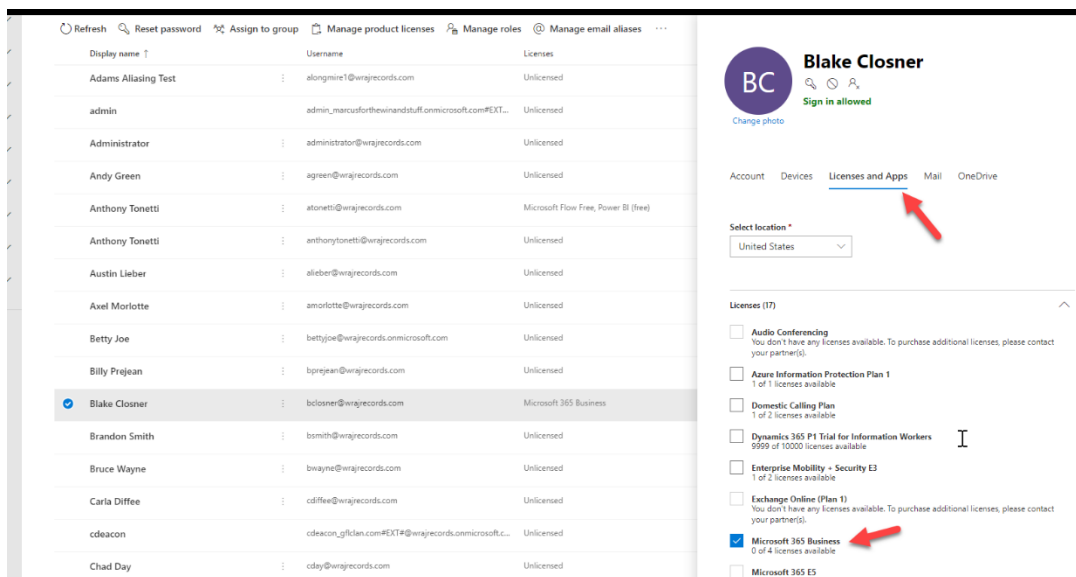
Licensing Users

1. Ensure All appropriate Users are Licensed

a. Login to 365 Admin Center > Go to Active User



b. Select a User > Click **Licenses and Apps** > Ensure an M365 License is Assigned (or license defined on page 1)



Windows Deployment Rings

With Windows as a service, the methodology of updates has completely changed, moving away from major upgrades every few years to iterative updates twice per year. Each iteration contains a smaller subset of changes so that they won't seem like substantial differences, like they do today. Windows updates will function much like our traditional office software and will consist of the following:

Feature Updates

- Occurs 2x a year
- Around March and September
- Changes will be in bite-sized chunks rather than all at once
- Cadence has been aligned with Office 365 ProPlus updates.

Quality Updates

- Administrators will see one cumulative monthly update that supersedes the previous month's update
- Contains both security and non-security fixes
- Makes patching simpler and ensures that customers' devices are more closely aligned with the testing done at Microsoft

Servicing Channels

- Windows 10 offers 3 servicing channels
 - Windows Insider
 - Need to register
 - consume and deploy preproduction code to test machines, gaining early visibility into the next build
 - Have the opportunity to discover possible issues before the update is ever publicly available and can report it to Microsoft.
 - Microsoft recommends that all organizations have at least a few PCs enrolled in the Windows Insider Program
 - Semi-Annual Channel
 - feature updates are available as soon as Microsoft releases them
 - servicing model is ideal for pilot deployments and testing of Windows 10 feature updates and for users such as developers who need to work with the latest features immediately.
 - Long-Term Servicing Channel
 - not intended for deployment on most or all the PCs in an organization; it should be used only for special-purpose device like point of sale systems

Deployment Rings

Deployment rings in Windows 10 are similar to the deployment groups most organizations constructed for previous major revision upgrades. They are simply a method by which to separate machines into a deployment timeline. You should leverage deployment rings to become more **proactive** rather than **reactive** with new updates that are released. Here is an example of some deployment rings you could create:

Deployment ring	Servicing channel	Deferral for feature updates	Deferral for quality updates	Example
Preview	Windows Insider Program	None	None	A few machines to evaluate early builds prior to their arrival to the semi-annual channel
Targeted	Semi-annual channel (Targeted)	None	None	Select devices across various teams used to evaluate the major release prior to broad deployment
Broad	Semi-annual channel	120 days	7-14 days	Broadly deployed to most of the organization and monitored for feedback Pause updates if there are critical issues
Critical	Semi-annual channel	180 days	30 days	Devices that are critical and will only receive updates once they've been vetted for a period of time by the majority of the organization

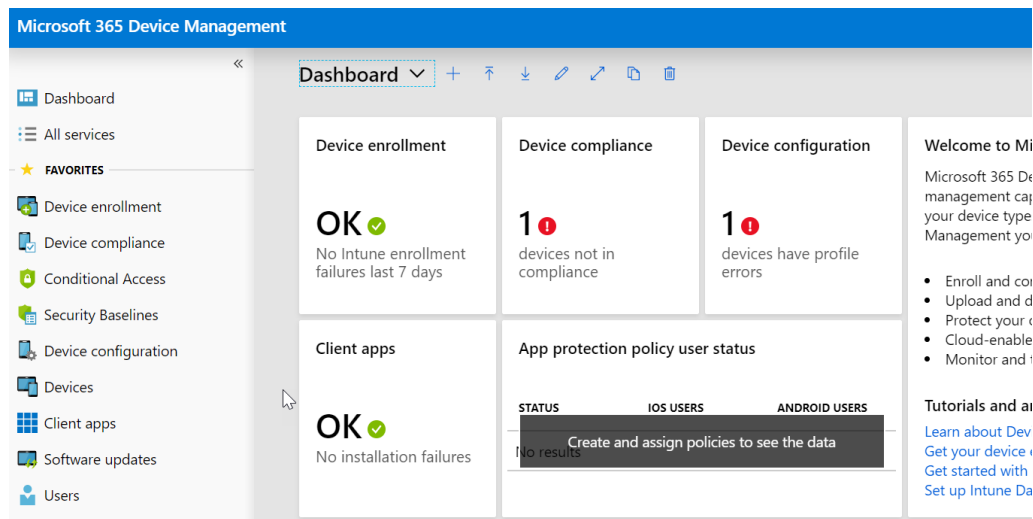
Here are a list of good points to consider with the deployment rings:

1. Choose your champions within an organization for the Windows insider or semi-annual (targeted) channel. These should be more tech savvy users who can provide great feedback.
2. Develop an FAQ for the new updates or create some training documentation based of the feedback of our champions
3. Reduce your help desk calls by communicating to end users the updates the will receive when you get to your "broad deployment" ring.

Setting up Deployment Rings

If your devices are joined via Intune or AzureAD then you will be able to configure the software updates for these devices. The devices use the activation key from the M365 licenses to apply the policies for updates. Below we will configure our deployment rings:

- a. Login to <https://devicemanagement.microsoft.com> and sign-in with the customers admin creds:

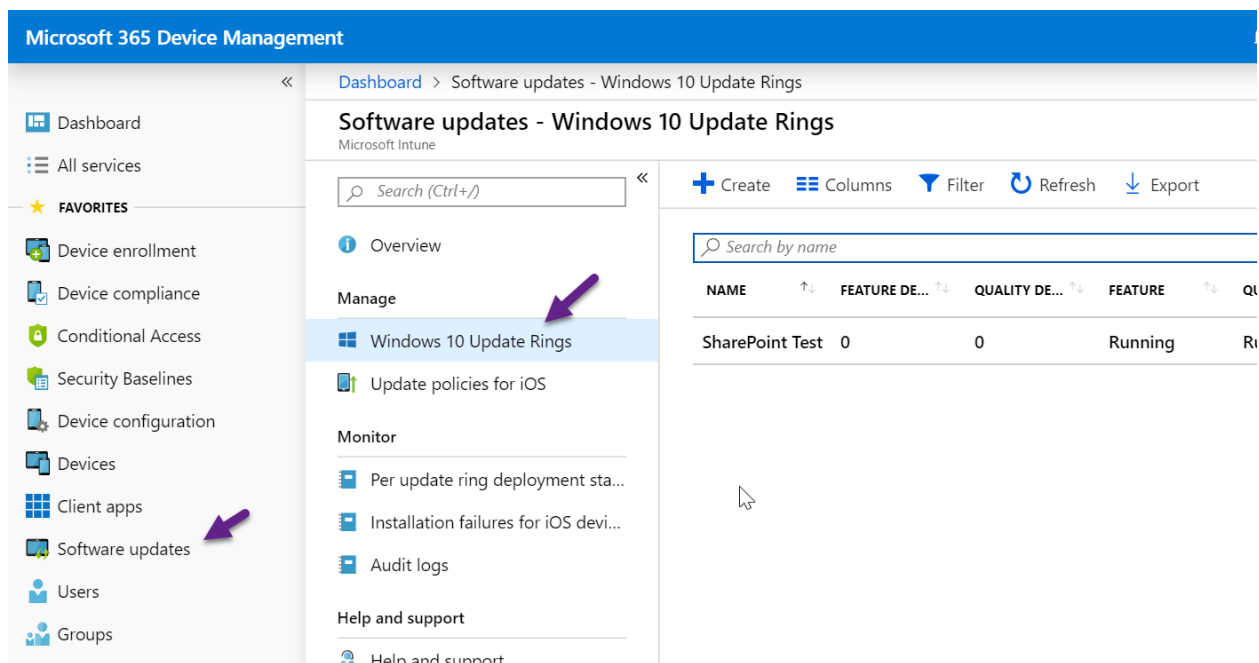


The screenshot shows the Microsoft 365 Device Management dashboard. The left sidebar contains navigation options: Dashboard, All services, and FAVORITES (Device enrollment, Device compliance, Conditional Access, Security Baselines, Device configuration, Devices, Client apps, Software updates, Users). The main content area displays several status tiles:

- Device enrollment:** OK (green checkmark), No Intune enrollment failures last 7 days.
- Device compliance:** 1 (red exclamation mark), devices not in compliance.
- Device configuration:** 1 (red exclamation mark), devices have profile errors.
- Client apps:** OK (green checkmark), No installation failures.
- App protection policy user status:** No results. A tooltip says "Create and assign policies to see the data".

 A "Welcome to Microsoft 365 Device Management" message is visible on the right, along with a list of actions: Enroll and configure, Upload and download, Protect your content, Cloud-enable, and Monitor and report. There are also links for "Tutorials and articles" such as "Learn about Device Management", "Get your device ready for Intune", "Get started with Intune", and "Set up Intune Device Management".

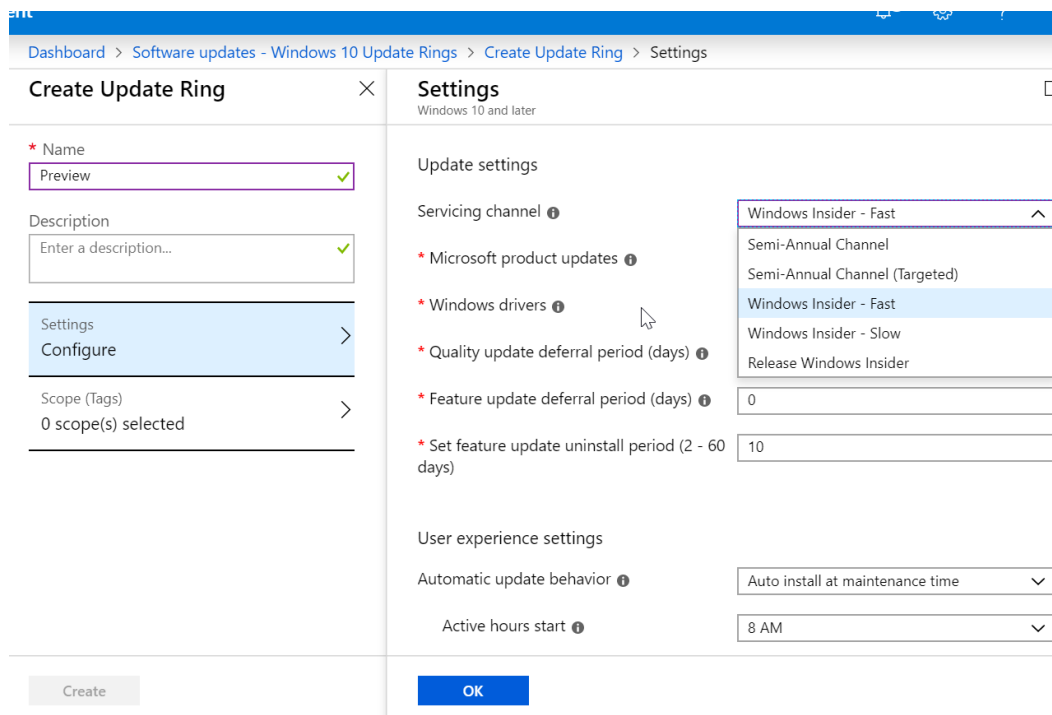
- b. Click on software updates, then Windows 10 Update Rings:



The screenshot shows the "Software updates - Windows 10 Update Rings" page in Microsoft Intune. The left sidebar is the same as in the previous screenshot, with a purple arrow pointing to "Software updates". The main content area has a breadcrumb trail: Dashboard > Software updates - Windows 10 Update Rings. The page title is "Software updates - Windows 10 Update Rings" by Microsoft Intune. There are action buttons: Create, Columns, Filter, Refresh, and Export. A search bar is present with the text "Search (Ctrl+F)". Below the search bar is a navigation menu with "Overview" selected and "Windows 10 Update Rings" highlighted with a purple arrow. Other options include "Update policies for iOS", "Monitor" (with sub-items: Per update ring deployment status, Installation failures for iOS devices, Audit logs), and "Help and support" (with sub-item: Help and support). A table is displayed with the following data:

NAME	FEATURE DE...	QUALITY DE...	FEATURE	QI
SharePoint Test	0	0	Running	Ri

- c. Click on the “+Create” button and add name your first deployment ring. In the settings section you will be able to define which servicing channel you want to choose:



Windows Insider sub-rings:

- Fast
 - The benefit of being in the Fast Ring is that you will be among the first to use and provide feedback on new and improved features. If you have devices in the Fast Ring, you should be prepared for more issues that might block key activities or might require significant workaround
- Slow
 - The benefit of being in the Slow Ring is that you'll still receive new updates and features on the Development Branch, but the builds will be more stable. Builds are sent to the Slow Ring after feedback has been received from Insiders on the Fast ring and analyzed by Microsoft's Engineering teams.
- Release Preview Ring
 - If you want to be on the current public release of Windows 10 but still get early access to updates, applications, and drivers without taking the risk of moving to the Development Branch, the Release Preview Ring is your best option.

- d. For this first ring I suggest Windows Insider-Slow. You can configure the rest of the settings appropriately depending on the user and the environment:

servicing channel ⓘ	Windows Insider - Slow
* Microsoft product updates ⓘ	<input checked="" type="radio"/> Allow <input type="radio"/> Block
* Windows drivers ⓘ	<input checked="" type="radio"/> Allow <input type="radio"/> Block
* Quality update deferral period (days) ⓘ	<input type="text" value="0"/>
* Feature update deferral period (days) ⓘ	<input type="text" value="0"/>
* Set feature update uninstall period (2 - 60 days)	<input type="text" value="10"/>
User experience settings	
Automatic update behavior ⓘ	Auto install at maintenance time
Active hours start ⓘ	8 AM
Active hours end ⓘ	5 PM
Restart checks ⓘ	<input checked="" type="radio"/> Allow <input type="radio"/> Skip
<input type="button" value="OK"/>	

Require user's approval to restart outside of work hours ⓘ	<input type="radio"/> Required <input checked="" type="radio"/> Not configured
Remind user prior to required auto-restart with dismissible reminder (hours) ⓘ	<input type="text" value="4"/>
Remind user prior to required auto-restart with permanent reminder (minutes) ⓘ	<input type="text" value="15"/>
Change notification update level ⓘ	Use the default Windows Update notifica... ▾
Allow user to restart (engaged restart) ⓘ	<input type="radio"/> Required <input checked="" type="radio"/> Not configured
Transition users to engaged restart after an auto-restart (days) ⓘ	<input type="text" value="Not configured"/>
Snooze engaged restart reminder (days) ⓘ	<input type="text" value="Not configured"/>
Set deadline for pending restarts (days) ⓘ	<input type="text" value="Not configured"/>

This setting has been replaced, going forward configure the "Download mode" setting from Device Configuration as a "Windows 10 and later" profile, with profile type Delivery Optimization. [Learn more](#) about this setting's migration.

- e. Click on Assignments after you create to assign to the appropriate group.

Dashboard > Software updates - Windows 10 Update Rings > Preview

Preview
Windows 10 Update Ring

Search (Ctrl+/)

Delete Pause Resume Extend Uninstall

Click Assignments to assign this ring to at least one group.

Created: 05/26/19, 2:53:10 PM Feature: Running
Last Modified: 05/26/19, 2:53:10 PM Quality: Running
Groups assigned: 0

Profile assignment status — Windows 10 and later devices

Succeeded 0
Error 0

- f. After you assign to a group, you can pause the updates at any time or choose to uninstall the updates if you ever wanted:

Dashboard > Software updates - Windows 10 Update Rings > Preview

Preview
Windows 10 Update Ring

Search (Ctrl+/)

Delete Pause Resume Extend Uninstall

Created: 05/26/19, 2:53:10 PM Feature: Running
Last Modified: 05/26/19, 2:53:10 PM Quality: Running
Groups assigned: 1

Profile assignment status — Windows 10 and later devices

Succeeded 1

g. From here, you can create your remaining deployment rings

Dashboard > Software updates - Windows 10 Update Rings

Software updates - Windows 10 Update Rings

Microsoft Intune

Search (Ctrl+/) << + Create Columns Filter Refresh

Search by name

NAME	FEATURE DE...	QUALITY DE...
Preview	0	0

Overview

Manage

- Windows 10 Update Rings
- Update policies for iOS

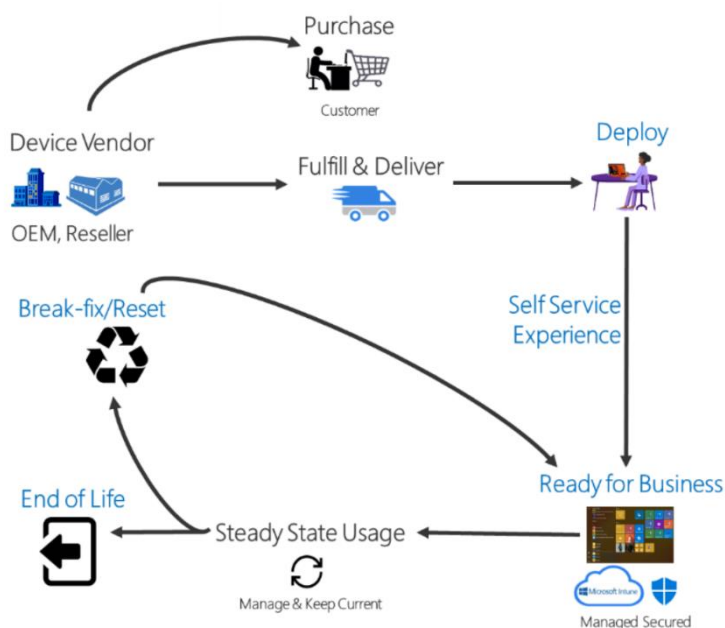
Monitor

- Per update ring deployment sta...
- Installation failures for iOS devi...

Windows AutoPilot

Windows Autopilot is a collection of technologies used to set up and pre-configure new devices, getting them ready for productive use. You can also use Windows Autopilot to reset, repurpose and recover devices.

This solution enables an IT department to achieve the above with little to no infrastructure to manage, with a process that's easy and simple.



With Windows 10 Autopilot, you can go straight from box to production with no IT intervention. Microsoft partners with major hardware vendors like Dell, Lenovo, and HP so that you can completely customize the Out of the box experience (OOBE) without having to physically touch the devices.

Benefits

- Auto-enroll into Intune for MDM policy management
- Automatically join devices to Azure Active Directory (Azure AD) or Active Directory (via Hybrid Azure AD Join)
- Customize the OOBE with Company branding
- Customize the user experience for specific groups with an organization

Requirements

Windows 10 version 1703 or higher is required to use Windows Autopilot. The following editions are supported:

- Pro
- Pro Education
- Pro for Workstations
- Enterprise
- Education

Deployment

Add Devices

You will be primarily be working out of the device management portal. Devices can be added a couple of different ways:

- Device upload via HardwareID sent from hardware vendor (Dell, HP, etc)
 - You can request this service when speaking to your sales rep at the particular vendor
- Collecting the hardware ID from existing devices using PowerShell

- a. If you are using Powershell, you can run the following command to get the necessary information from the existing device. Run powershell as administrator and then past the following:

```
md c:\\HWID
```

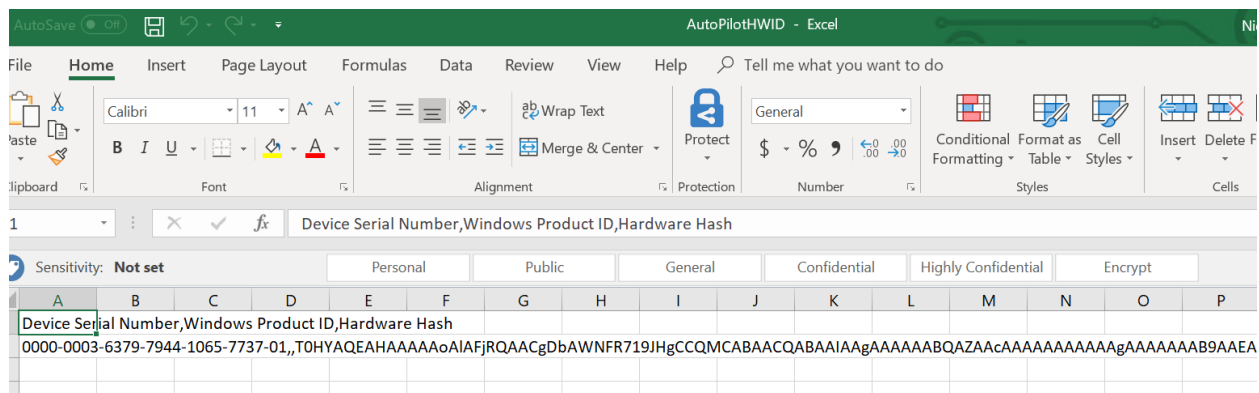
```
Set-Location c:\\HWID
```

```
Set-ExecutionPolicy -Scope Process -ExecutionPolicy Unrestricted
```

```
Install-Script -Name Get-WindowsAutoPilotInfo
```

```
Get-WindowsAutoPilotInfo.ps1 -OutputFile AutoPilotHWID.csv
```

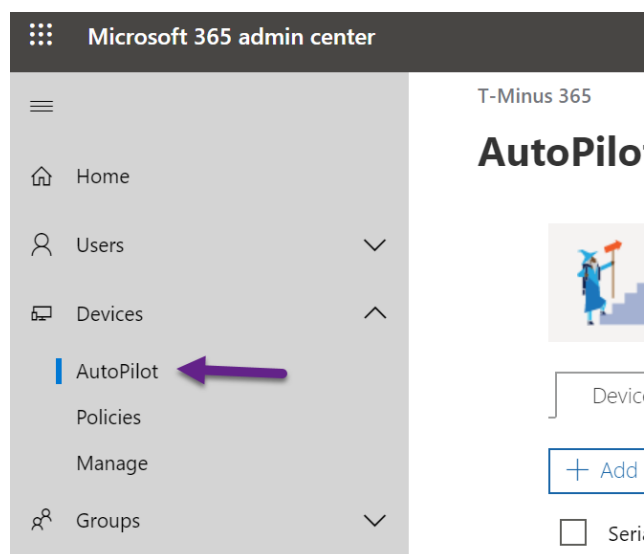
- b. You will get a CSV output of the following:



The screenshot shows an Excel spreadsheet with the following data in the first row:

Device Serial Number,Windows Product ID,Hardware Hash
0000-0003-6379-7944-1065-7737-01,,T0HYAQEAHAAAAoAIAFJRQAACgDbAWNFR719JHgCCQMCABAACQBAAIAAgAAAAABQAZAacAAAAAAGAAAAAAB9AAEA

- c. From here, you can login to <https://office.com> with global admin creds and click on Devices>AutoPilot




- d. Click Add Devices and upload your CSV

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AutoPilot

Not sure what to do here? This step-by-step guide will walk you



Devices Profiles

+ Add devices Search

Serial number Device group Profile assigned

Add devices

Upload .csv file with list of devices

To add devices, upload a .csv file that lists each device

[Download a CSV file with headers and sample device information](#)

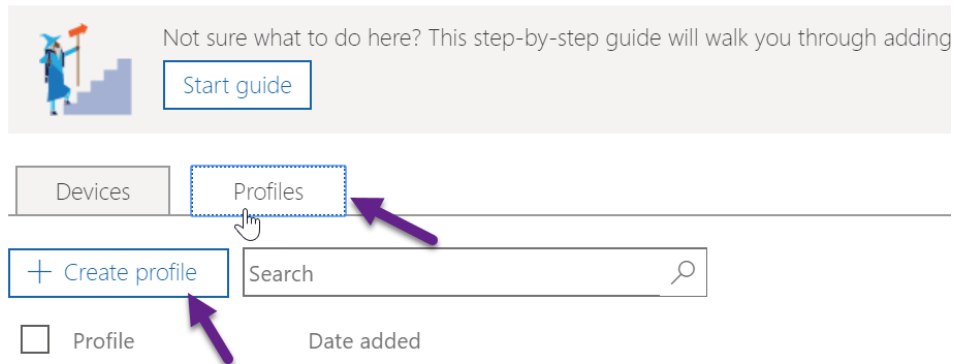
Browse to upload

Create a Device Profile

- a. Now Click on Profiles>Create Profile:

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AutoPilot



- b. Here we will give our profile a name and customize the settings:

Create profile

A profile is a collection of settings that can be applied to a single device or a device group.

Name your new profile

Skip privacy settings off

Don't allow the user to become the local admin off

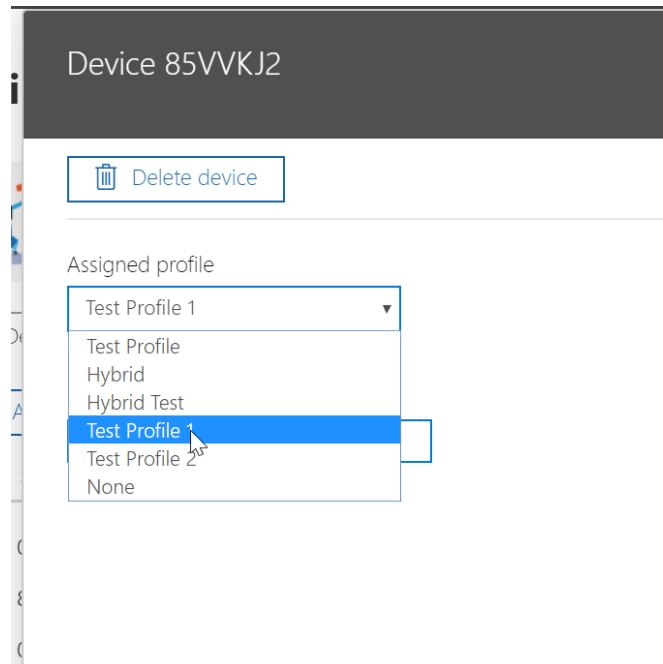
AutoPilot defaults include device registration with your tenant, company-branded sign-in, and skipping the consumer-based Windows installation steps.

Want to learn more about what these settings do?
[Here's an article with more detailed explanation.](#)

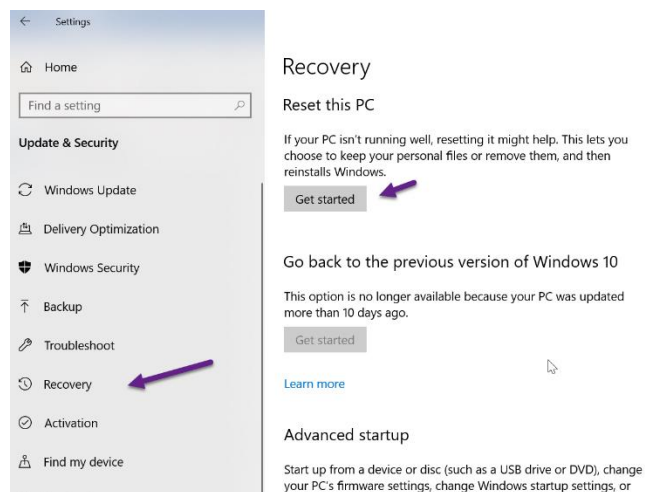
Save Cancel

c. Once we save we will go back to our devices and assign a profile to our device:

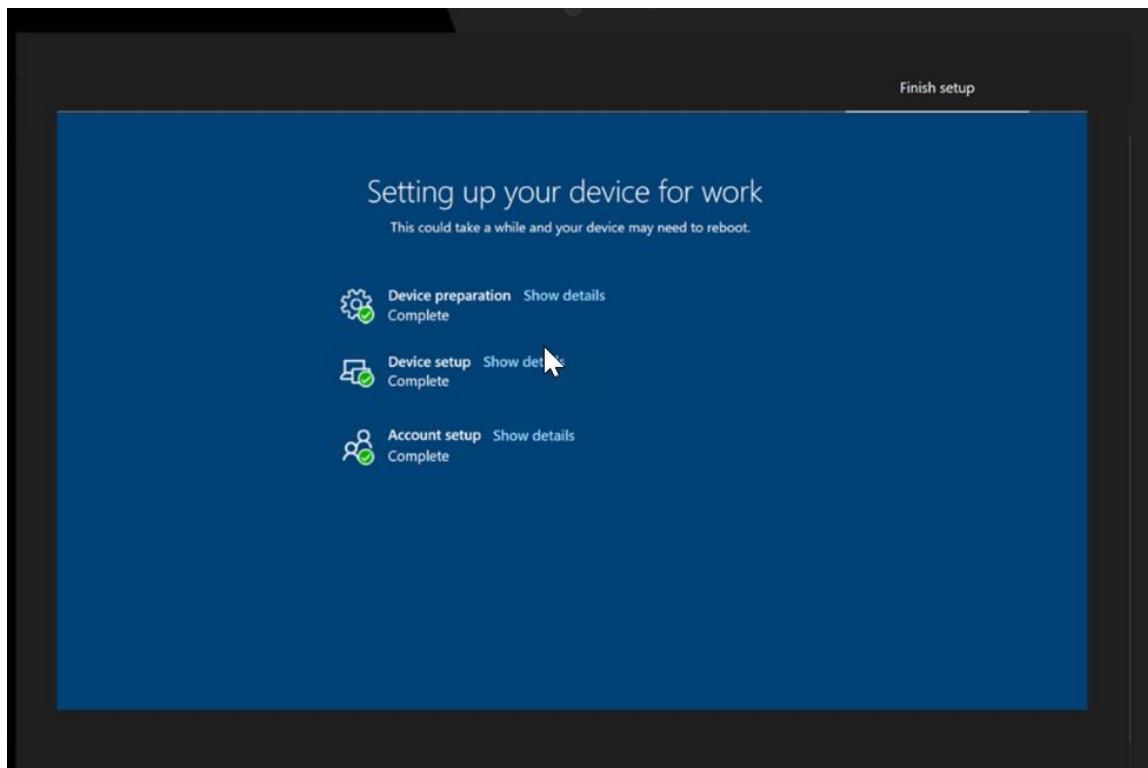
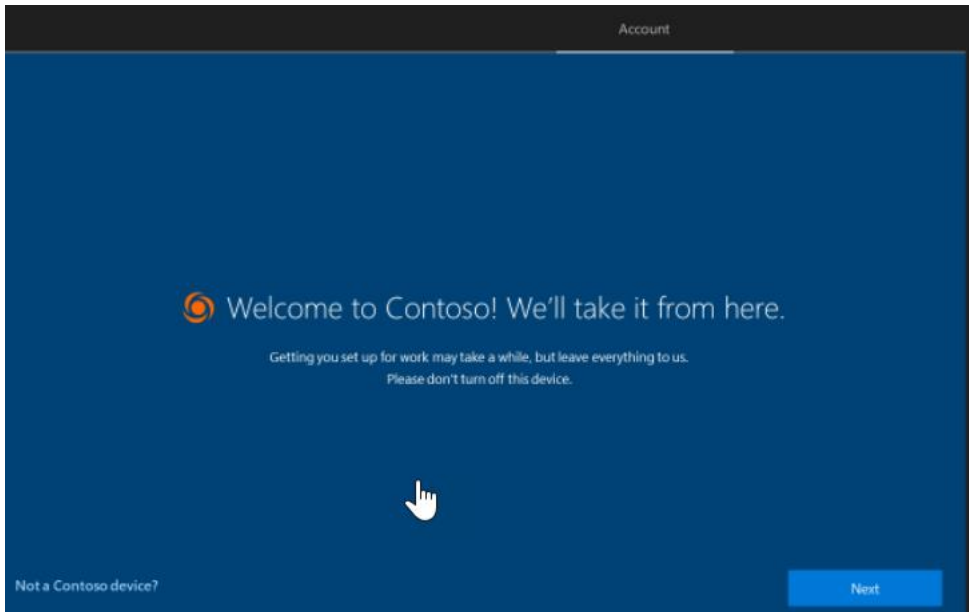
<input type="checkbox"/>	Serial number	Device group	Profile assigned	Device model	Windows pr
<input type="checkbox"/>	0000-0003-6379-7944-1065...		Test Profile 1	Virtual Machine	90e93a45-c
<input type="checkbox"/>	85VVKJ2	None	Test Profile 1	Latitude 3460	
<input type="checkbox"/>	0000-0007-6906-1122-6415...		Hybrid	Virtual Machine	f39f2fe6-bt



d. Now we are ready to reset the PC so AutoPilot can take effect. Go to settings>Updates and Security>Recovery>Get Started



- e. When the PC boots back up again you will be prompted to enter Azure AD credentials and finish your device setup:



Conclusion

I hope this article provided you some targeted guidance on Windows as a service. Any feedback to improve your experience would be greatly appreciated. I would also like to hear if there is more content that you would like to see in this guide. Any feedback can be sent to my email below:

Msp4msps@tminus365.com

