



K2's Windows 11 - *What End Users Need To Know*



Learning Objectives



Upon completing this session, you should be able to:

- Identify the process for managing open windows in Windows 11 using Snap Assist
- List an example of a security improvement in Windows 11
- Identify the process of re-positioning the taskbar
- Define “widgets” in Windows 11 and identify how to add them

Major Topics Covered



Productivity
improvements in
Windows 11

How to work with
virtual desktops

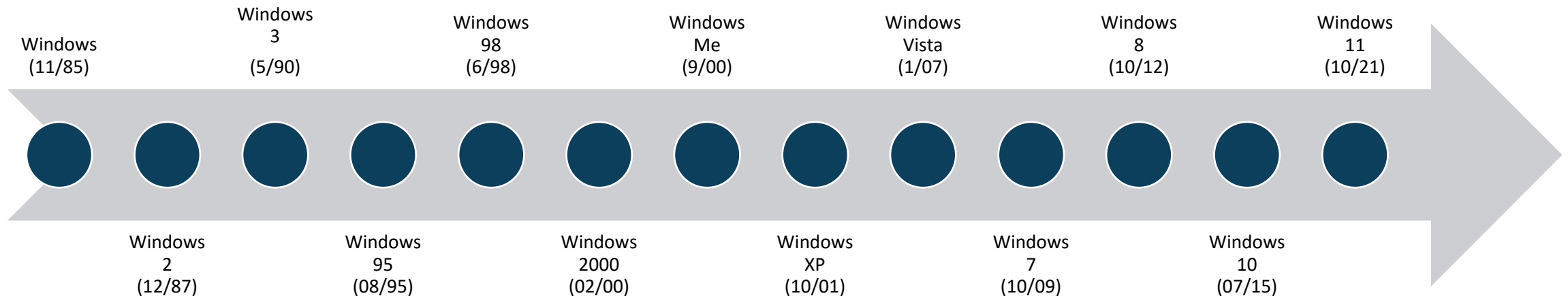
Customizing the
user environment

Improved security
tools available in
Windows 11



FIRST, THE FUNDAMENTALS

Windows Timeline



Windows 11 Fundamentals



- **Windows 11 is the most recent release** in the Windows operating system lineage
- Debuting on October 5 to the general public, **Windows 11 is a free upgrade** for existing users of Windows 10
- The operating system **builds on the strengths of Windows 10** but provides improvements in several critical areas, including **security, performance, and usability**
- Unfortunately, **not all Windows 10 users will be able to make the upgrade** to Windows 11

How To Get The Free Upgrade



- **If you currently run Windows 10, Microsoft will “push” Windows 11 to your computer**, if they haven’t done so already
- **You can also request the upgrade manually** using one of the three methods found at <https://k2e.fyi/windows11>
 - 1. Windows 11 Installation Assistant**
 - Best for most individual users
 - 2. Create Windows 11 Installation Media**
 - Best for “clean” install or bootable USB
 - 3. Download Windows 11 Disk Image**
 - Best for virtual machines and bootable USB and DVD



Must I Upgrade? You Decide



- **Absolutely not!**
- **It's your computer and you can run whatever operating system you choose**
- **However, Microsoft is not required to support an operating system – such as Windows 10 – indefinitely**
- **And if you choose to use an unsupported operating system, then you may miss out on tech support, feature improvements, bug fixes, and security updates**
- **Windows 10 will not have tech support after 10/14/2025!**

Will The Upgrade Always Be Free?



- “Yes,” and “No”
- Technically, the upgrade to Windows 11 is free if you are upgrading from a valid Windows 10 license
- However, **there could be a “hidden cost” associated with upgrading to Windows 11**
- That hidden cost could arise from the fact that **older computers may not have the horsepower to run Windows 11, resulting in cost outlays for new components and/or new computers**

Windows 11 System Requirements



- **Processor:** 1 gigahertz (GHz) or faster with two or more cores on a [compatible 64-bit processor](#) or system on a chip (SoC)
- **RAM:** 4 gigabytes (GB) or greater
- **Storage:** 64 GB or greater available storage Graphics card: Compatible with DirectX 12 or later, with a WDDM 2.0 driver
- **System firmware:** UEFI, Secure Boot capable
- **TPM:** [Trusted Platform Module](#) (TPM) version 2.0
- **Display:** High definition (720p) display, 9" or greater monitor, 8 bits per color channel
- **Internet connection:** Internet connectivity is necessary to perform updates, and to download and use some features

System Requirements Reality Check



- It is true, **some devices do not have the horsepower** to run Windows 11
- However, **most of the system requirements necessary for Windows 11 have been available for several years**
- Therefore, **many business-oriented devices sold over the past five years meet the minimum specs**
- For example, **TPM 2.0 arrived in 2014**

Software & Peripheral Devices



- In addition to ensuring that your computer can run Windows 11, you should also **verify compatibility with installed software and peripheral devices**, such as printers and scanners
- Before migrating to Windows 11, **verify that your existing peripheral devices and their related drivers are compatible and supported when running on Windows 11**
- **Do the same for the applications you run on your computer**, verifying both compatibility and technical support availability before making the move to Windows 11
- At this point, few incompatibilities exist

Windows 11 Lifecycle



- As with prior versions of Windows, **Microsoft will “push” Windows 11 updates to end-users**
- **Annually, in the second half of the year, Microsoft will make available a “feature update”**
 - 24 months of support for Home, Pro, Pro for Workstations, and Pro Education editions
 - 36 months of support for Enterprise and Educations editions
- See <https://k2e.fyi/w11updates> for details

Windows 11 Lifecycle



- **Monthly, and more often, if necessary, Microsoft pushes a security update for Windows 11**
- **These updates occur on “Patch Tuesday,” the 2nd Tuesday of every month**
- **Notably, these updates are cumulative**
- **Enter “winver” in Search to find the version of Windows you are currently running**



SO, HOW IS WINDOWS 11 DIFFERENT?

Advantages Of Windows 11

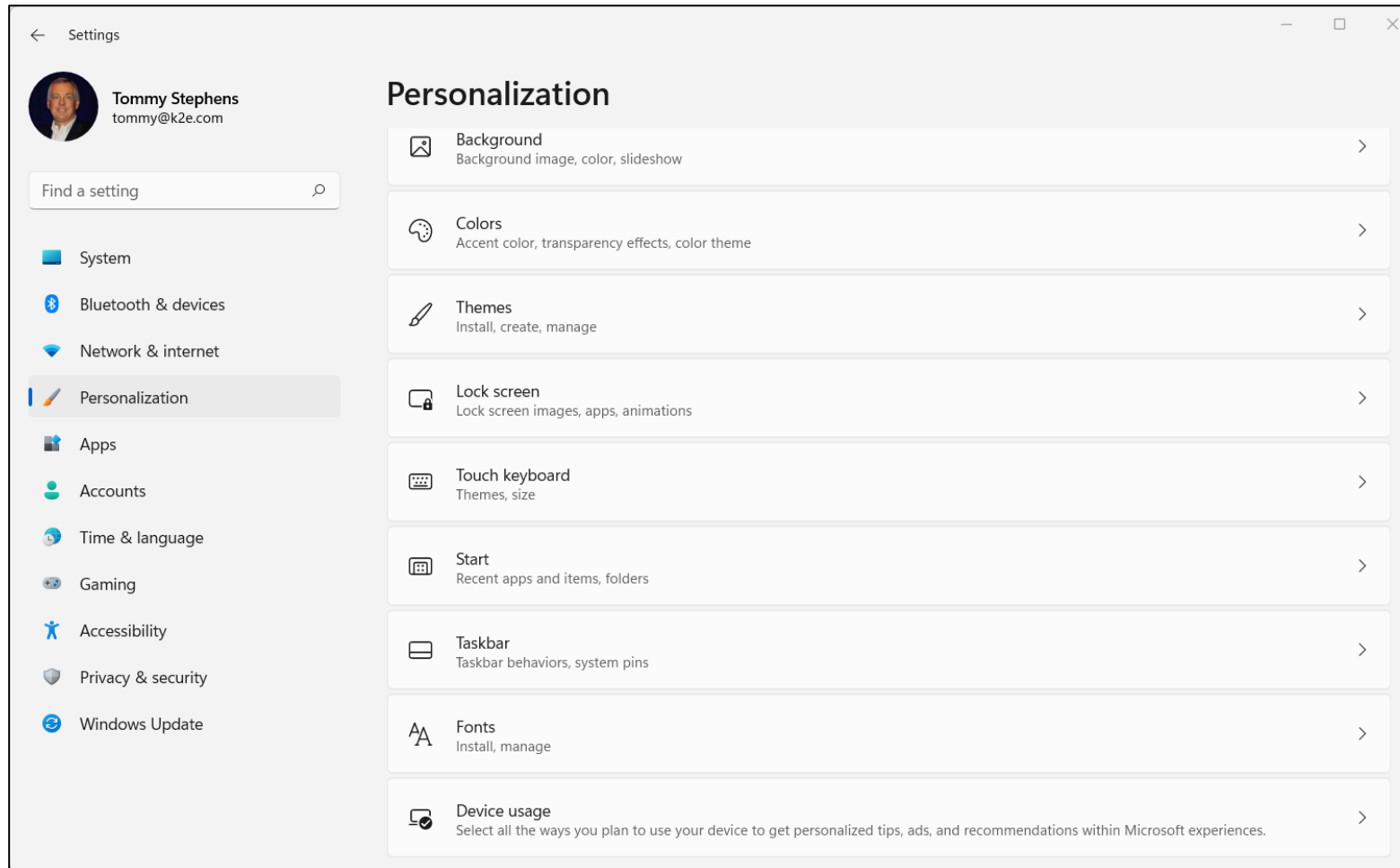


- From our vantage point, **Windows 11 builds on the strengths of prior versions of Windows**
- Plus, it adds some excellent “convenience” features, makes a notable **upgrade to the security regime using a “zero-trust” model**, and **refines some of the features that existed in Windows 10** and prior versions
- And, it **throws the occasional curveball**, such as allowing you to **run *Android* apps** or **launching Teams chats from the taskbar**



PERSONALIZATION & CONVENIENCE FEATURES

Consider Personalization Options



Customizing Windows 11 Taskbar



- The most obvious change to Windows 11 is **the taskbar is now centered in the middle of the screen**, by default
- However, you can move it easily
- To do so, go to **Start, Settings, Personalization, Taskbar, Taskbar behaviors** and choose whether you want it aligned to the **Center of the window or to the left**
 - There is no built-in option for aligning it to the right
 - Likewise, there is **no built-in option for repositioning it to the left, right, or top of the window; however, you can do that with a registry hack found at <https://k2e.fyi/taskbar>**

Widgets In Windows 11



- Windows 11 emphasizes **widgets, small applications you can use to fetch information and make it easy for you to access**
- To use widgets, first **ensure your computer is enabled for them**
 - **Right-click taskbar, choose Taskbar Settings, then Widgets**
 - **Click Add Widgets** and choose the ones you want to add
 - **Reposition a widget by clicking and dragging it**

Windows 11 Snap Assist Feature



- Being able to move a window is not new in Windows 11
- Likewise, being able to **snap a window** is not new either
- However, the **Snap Assist feature in Windows makes it much easier to control how multiple open windows behave**
- Yes, you can **continue to Snap windows with your mouse**
- **And, you can still use the Windows logo key plus a Left Arrow, Right Arrow, Up Arrow, or Down Arrow to Snap a window to a specific location**

Legacy Functions In Snap Assist



- Moving and arranging windows are not new in Windows 11
- Likewise, being able to **snap a window** is not new either
- However, the **Snap Assist feature in Windows makes it much easier to control how multiple open windows behave**
- Yes, you can **continue to Snap windows with your mouse**
- **And, you can still use the Windows logo key plus a Left Arrow, Right Arrow, Up Arrow, or Down Arrow to Snap a window to a specific location**

New Functions In Snap Assist



- On the following slide, note the red box highlighting the Snap **Layout** window
- **With multiple windows open, place one where you want it, hover your mouse over its Maximize button, and then choose from the arrangements available in Snap Assist**
- Using Snap Assist will arrange your Windows quickly, saving valuable time

Using Snap Assist



The screenshot displays a Windows desktop environment with several open windows:

- Settings (Personalization > Taskbar):** Shows toggle switches for Search, Task view, Widgets, and Chat, all of which are turned on. Under 'Taskbar corner icons', there is a section for 'Show or hide icons that appear on the corner of your taskbar'.
- File Explorer (Downloads):** Shows a list of files in the Downloads folder, including 'K2 Horizontal Logo.png', 'K2 Horizontal Logo.eps', and several PDF documents.
- Microsoft Bing Search (snap assist):** The search results for 'snap assist' are shown. A red box highlights a grid of window snapping icons in the top right corner of the browser window. Below the search bar, there are tabs for 'ALL', 'WORK', 'IMAGES', 'VIDEOS', 'MAPS', and 'NEWS'. A section asks 'What version of Windows are you looking for?' with buttons for 'windows 10', 'windows 8', and 'wind'. Below that, a snippet reads 'Snap Assist To snap a desktop window left-click'.
- Microsoft Bing Search (when did snap appear in windows):** The search results for 'when did snap appear in windows' are shown. It displays '62,500,000 Results' and options for 'Any time' and 'Open links in new tab'. A snippet at the bottom says 'Snap your windows'.

The Windows taskbar at the bottom shows the system tray with a temperature of 44°F, the date 3/11/2022, and the time 6:07 PM.

Six Steps To Enable Snap Assist



1. Open **Settings**
2. Click on **System**
3. Click the **Multitasking** page on the right side
4. Turn on **Snap windows** toggle switch to enable the feature (if applicable)
5. Click the **Snap windows** setting to expand the options



Settings

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Find a setting

- System
- Bluetooth & devices
- Network & internet
- Personalization
- Apps
- Accounts
- Time & language
- Gaming
- Accessibility
- Privacy & security
- Windows Update

System > Multitasking

Snap windows On

Automatically resize and arrange windows on your screen

Desktops

Alt + Tab Open windows and 5 most recent tabs in M

Pressing Alt + Tab shows

Title bar window shake Off

When I grab a window's title bar and shake it, minimize all other windows

Help with Multitasking

[Splitting my screen](#)
[Using Task View](#)

[Get help](#)
[Give feedback](#)

Enabling Snap Assist

Virtual Desktops In Windows 11

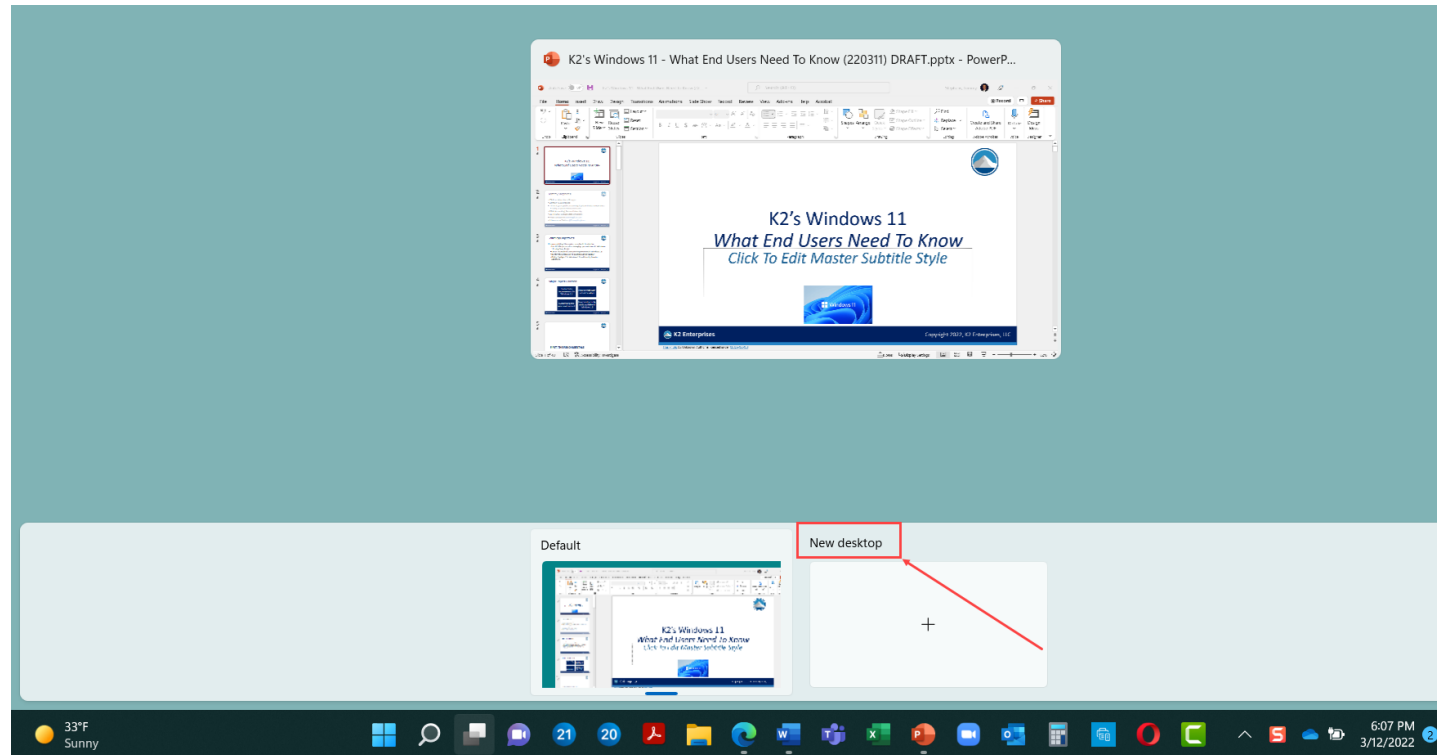


- In Windows 11, **virtual desktops allow you to configure and use multiple, task-oriented desktops**, with easy toggle options from one virtual desktop to another
 - For instance, you might create an Accounting desktop to use when performing accounting work and a Personal desktop to use when performing personal tasks
- The **primary advantages of Virtual Desktops is they make it easier to stay focused on the task at hand and simplify accessing the resources necessary to complete these tasks**

Creating Virtual Desktops



- To create a Virtual Desktop, **click the Virtual Desktop icon on the taskbar, then select New Desktop**



Creating Virtual Desktops



- Upon creating a 2nd, 3rd, or additional desktop, **select it from Virtual Desktops and configure as necessary to support your productivity objectives**
- **You can open specific apps on any of your virtual desktops, but opening them on one Desktop 1, does not open them on Desktop 2**
 - After all, that's the purpose of the Virtual Desktop...streamlining the workspace with just the tools you need for a specific task
- **Sadly, you cannot save Virtual Desktops...you must rebuild them each time you restart your computer**

Run Android Apps



- **Yes, you can now run Android Apps on your Windows 11-powered computer**
- **Open the Microsoft Store, install the Amazon Appstore app, and then sign-in using your Amazon credentials**
- Upon doing so, you search, download, install and run your favorite Android apps



HYPER-V AND VIRTUAL MACHINES

Hyper-V And Virtual Machines



- **Don't confuse virtual desktops with virtual machines**
- **As you've seen, a virtual desktop is an additional desktop on your Windows computer that you can customize to facilitate focused and streamlined work environments**
- **A virtual machine is much, much different...it is an altogether separate "software-based" computer, complete with its own operating system, virtual hard disk, and applications**
- **A very common use case associated with virtual machines is testing software**

Windows 11 And Virtual Computers



- **Windows 11** (like some of its predecessors) include Hyper-V, a tool through which you can create virtual computers
- **Once you create the virtual computer, you can use it as you would a traditional device**
- If using it in a testing environment, at the end of the project, **you can just delete the virtual computer, without affecting its host – the real, physical computer**
- **Microsoft provides a Windows license that is valid for 51 days to load into a virtual computer**

The Modern Edge Browser



- The **Edge browser is the default browser in Windows 11** and is installed with the operating system, by default
 - Practically, **Edge replaced Internet Explorer – which Microsoft retired with a retirement date of June 15, 2022**
- **Edge is based on Chromium**, the same platform used for **Chrome and Opera**
 - Accordingly, you will notice some similarities between them

Edge Advantages & Disadvantages



Advantages

- Based on Chromium
- Large number of extensions
- Adds “tracking prevention” to enhance privacy
- Customizable profiles
- Progressive web apps and an “immersive reader”

Disadvantages

- Average performance//not as fast as Chrome or Firefox
- No significant differentiation in user interface
- Not compatible with older hardware (is that *really* a concern?)

Connecting To Teams



- Microsoft's **Teams** has quickly become one of the most widely-used communication and collaboration platforms in the world
- Given that, it's only natural that Microsoft included a **Teams icon to allow users to access Chat and Meeting features quickly**
- Note, this will be useful only if you have a Teams account
 - You can obtain a free Teams account at <https://k2e.fyi/teamssignup>

Other Personal Productivity Tools



To Do

List

Calendar

Maps App

Clock

Sticky Notes



SECURITY FEATURES

Key Security Features



- Windows 11 security adopts many of the principles found in “Zero Trust Security Models (ZTSMs)”
- As implied by the name, **ZTSMs provide a more secure environment than legacy security environments**
- Four key principles of ZTSMs include
 - **Endpoint security**
 - **Segment networks**
 - **Least privilege controls**
 - **Identity verification**

New Windows 11 Security Features



Trusted platform module

Support for Azure-based Microsoft Azure Attestation

New security innovations, such as Pluton security processes

Secured-core PCs

Improved authentication options

Trusted Platform Module (TPM)



- Remember, a **TPM chip is required to run Windows 11...Why?**
- **TPM chips secure things like encryption keys and user authentication credentials**
- **Thus, they help to reduce the risk of unauthorized logins, and even if those occur, they reduce the risk of a hacker being able to decipher encrypted data**

Azure Attestation



- **Microsoft Azure Attestation (MAA) verifies the trustworthiness of platforms before you access them**
- Windows 11 supports MAA out-of-the-box
- **Thus, when you access a Cloud-based resource, MAA verified that the resource is secure before it grants access**
- **Again, ZTSM...*trust no one, trust no device, trust no cloud***

New Security Tools, Including Pluton



- Tools like hardware-enforced stack protection and the Microsoft Pluton security processor help **reduce the threat of zero-day attacks**
- **They also strengthen the ZTSM model by verifying everyone and everything attempting to access a device**

Secured Core PCs



- **A secured-core PC is a secure device that integrates hardware, software, and identity protection**
- **Further, these devices enable these protections out-of-the-box, not risking end-user configuration issues**
- **These devices might be used best in high-risk environments, such as health care, mobile workers, high profile industries, and high-profile companies**

Improved Authentication Options



- **New Windows 11 devices will seek to use alternatives to passwords to authenticate users during logins**
- **Windows Hello provides authentication options such as fingerprints and facial recognition to move away from password-based logins**



APPLOCKER AND BITLOCKER

AppLocker



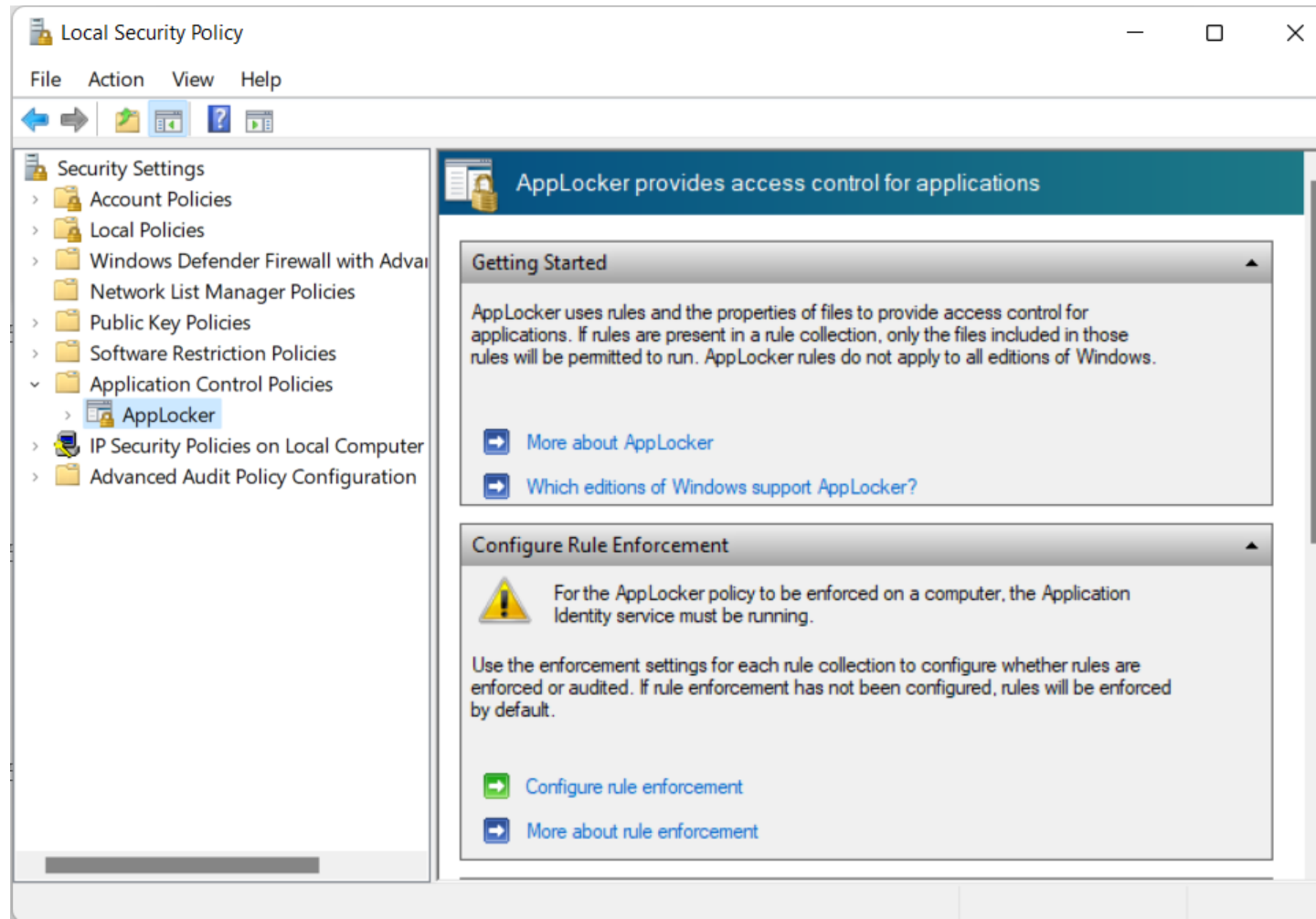
- **AppLocker is a form of “whitelisting” software** available in Windows, designed to control what apps can run from a device
- Essentially, **“whitelisting” means that if the software hasn’t been pre-authorized, it cannot run on a given device**
- Not new with Windows 11, **AppLocker appeared with the Windows 7 release**; however, its origins can be traced back to 2001 when it was known as **Software Restriction Policies**

AppLocker's Benefits



- AppLocker reduces the risk of malware running on a device
- AppLocker also reduces the risk of other unwanted software, such as games
- Additionally, AppLocker can assist with conforming to software licenses and restrict licensed software to authorized users
- Also, AppLocker helps to maintain software standardization

AppLocker



- You can access AppLocker by searching for **Local Security Policy** on your computer
- Then, expand **Application Control Policies**

BitLocker

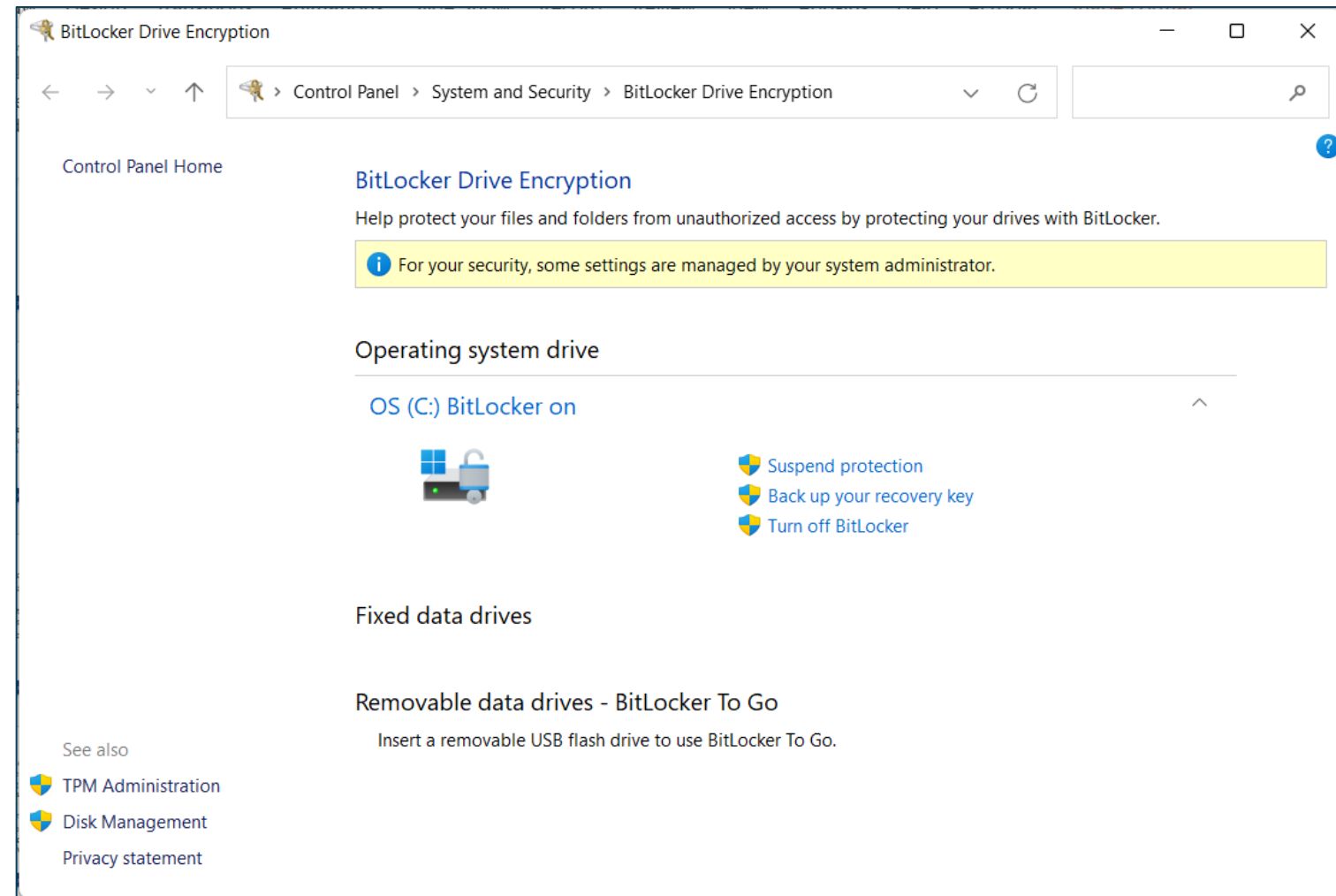


- **BitLocker is a tool you can use to encrypt your hard disk(s) and USB drives**
- **With the data encrypted, if your device becomes compromised, the data on your disk remains encrypted and protected from unauthorized access**
- Consider lost or stolen laptops or tablets and the risk associated with exposing the data on those drives

Enabling BitLocker Is Easy!



- **Search for BitLocker**
- **Turn on BitLocker**
- **Create a password to unencrypt**





CONTROLLED FOLDER ACCESS

Controlled Folder Access



- We all know that **ransomware is a HUGE threat today**, right?
- If you or your organization falls victim to a ransomware attack, absent a good backup, you will be faced with a difficult decision

Pay the Ransom or Lose Your Data

- Of course, there have been many high-profile ransomware attacks recently, including Colonial Pipeline in 2021

Controlled Folder Access



- **Education can go a long way toward reducing the risk**
- **So, too, potentially can anti-malware tools**
- **But, we must understand that humans remain the weak link and we will make mistakes**
- **Therefore, let's plan for the possibility that sooner or later, a team member is going to click on a link or attachment to an email and that will trigger a ransomware attack**
- **This is where Controlled Folder Access kicks in**

Controlled Folder Access

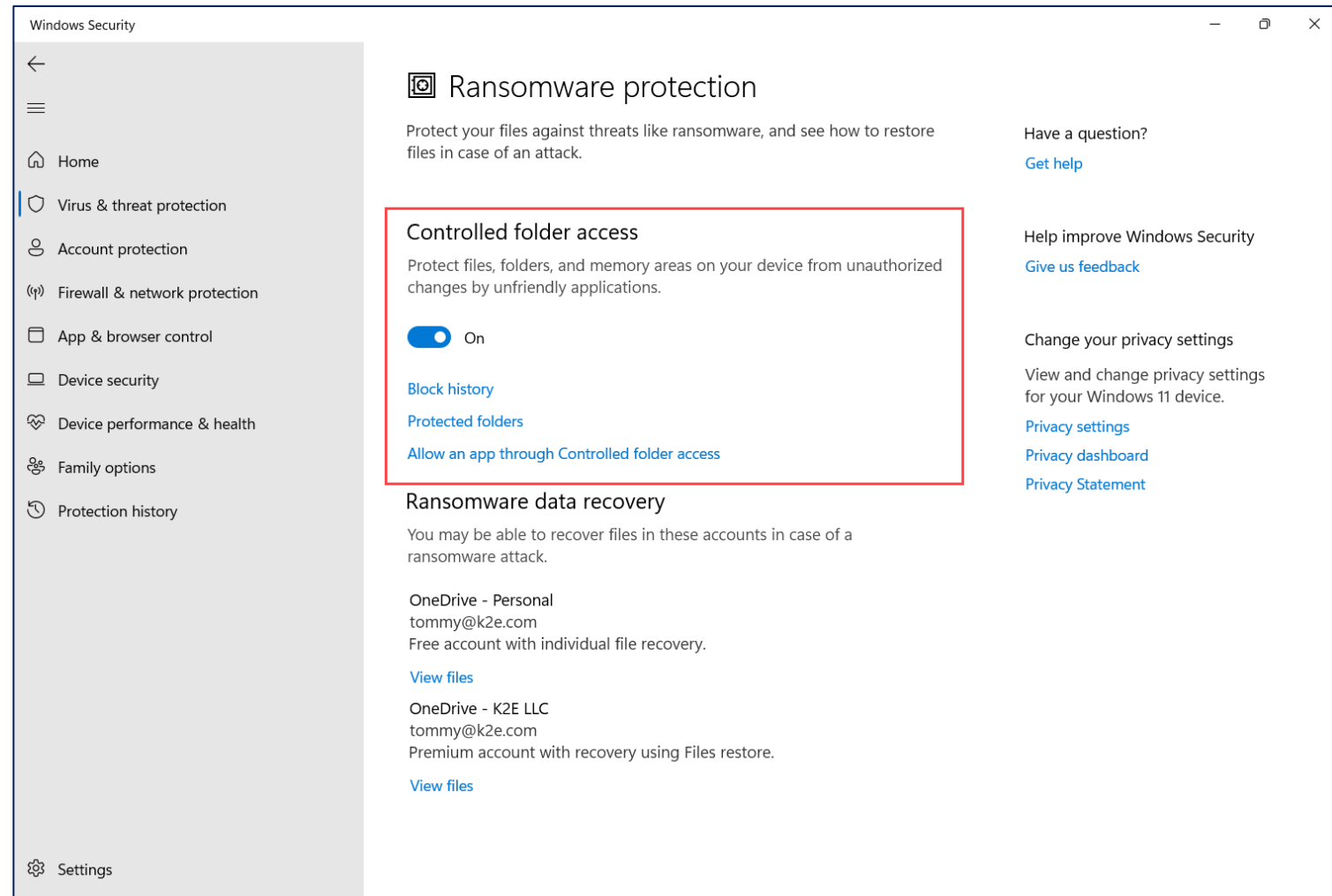


- Became available with **Fall 2017 Creator's Update (version 1709)**, so this is not new with Windows 11
- Enabled by users with Administrative privileges through the **Windows Defender Security Center**
 - Admins can enable through PowerShell and Group Policy, in addition to mobile device management configurations
- Once enabled, **CFA prevents files in specific folders from being tampered with by unknown and potentially risky applications**
- Essentially, **CFA is a form of "whitelisting"**

Controlled Folder Access Feature



- In Search Box, type **Controlled Folder Access**
- Toggle “on” **Controlled folder access**
- Fine-tune by adjusting folders and apps





THANK YOU!