Windows 11 -
What End Users Need To Know

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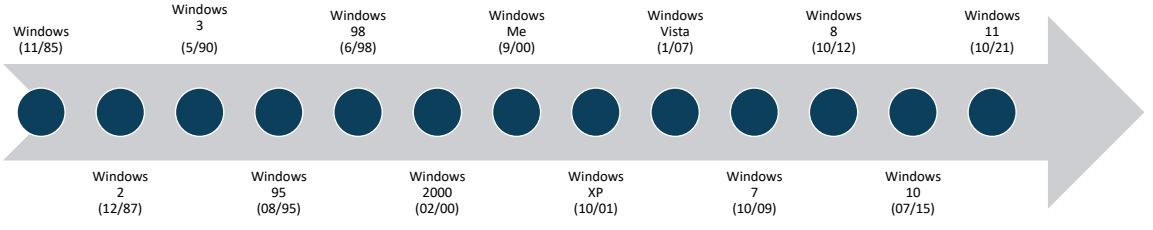
Learning Objectives

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

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

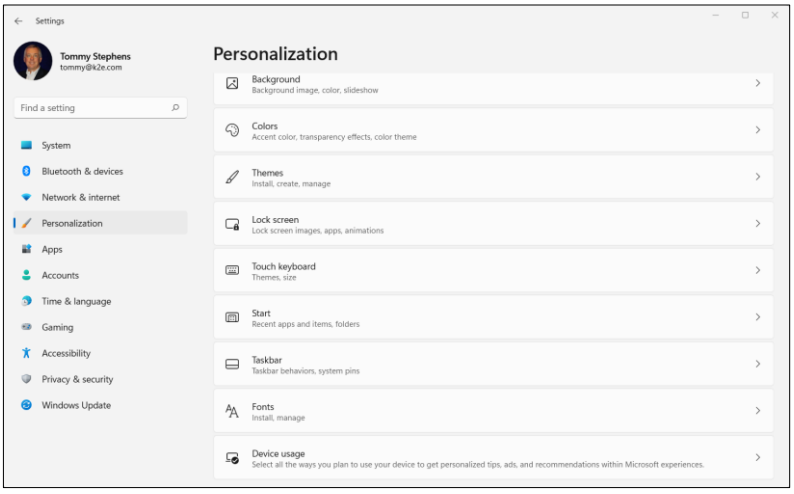
SO, HOW IS WINDOWS 11 DIFFERENT?

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**

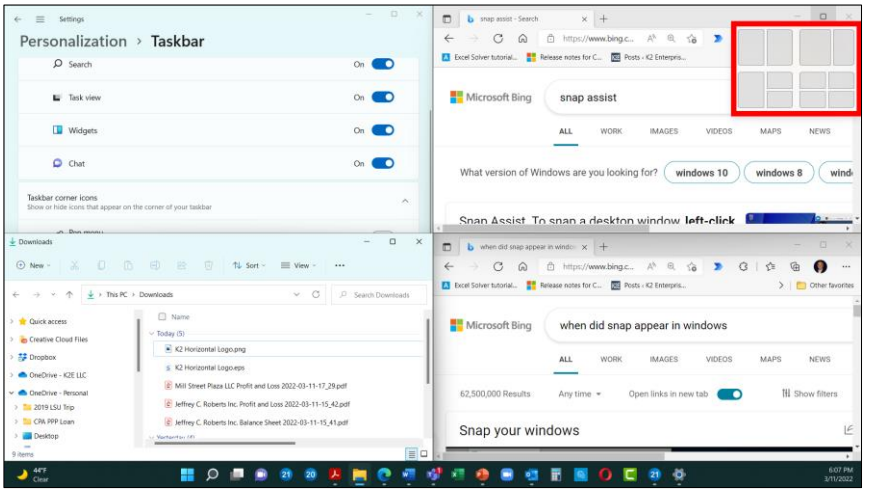
Legacy Functions In **Snap Assist**

- 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**

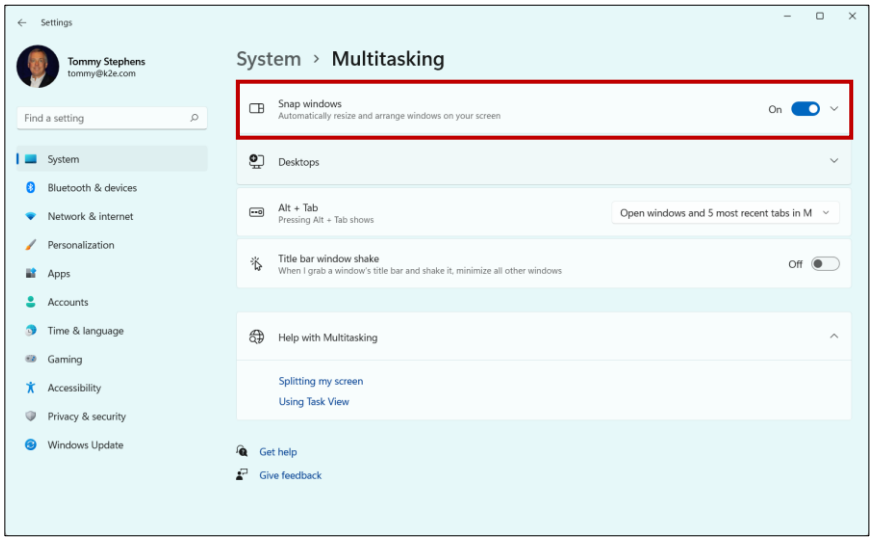
- On the following slide, note the red box highlighting the Snap **Layout** window
- **With multiple windows open, place one where you want it, hover your mouse over its Maximize button, and then choose from the arrangements available in Snap Assist**
- Using Snap Assist will arrange your Windows quickly,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

Using Snap Assist



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



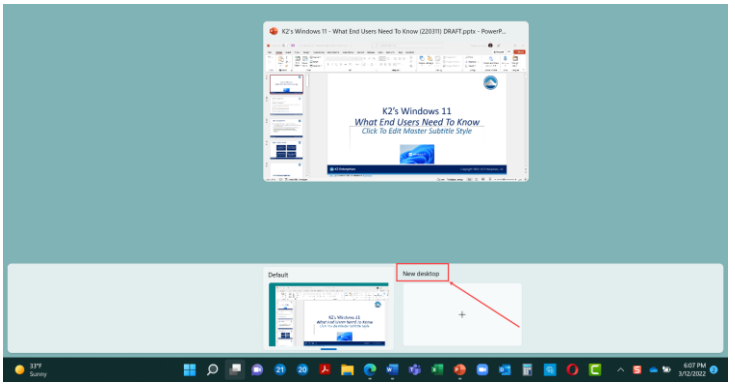
Enabling Snap Assist

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

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

AND DON'T FORGET ABOUT LEGACY SECURITY FEATURES!

Three Key Legacy Security Features

- **AppLocker**
  - A form of “whitelisting” that allows only pre-designated applications to run on a device
- **BitLocker**
  - Disk encryption tool – first made available with Vista – that can secure your hard disk and any external drives such as USB flash drives
- **Controlled Folder Access**
  - A form of ransomware protection that appeared in Windows 10

You can enhance security by enabling all three!

THANK YOU!

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