Windows 10 Presentation
Prepared for Tetra Shillings Accounting

CMIT 380 7384
MICHAEL LAMBINICIO
01DEC2024

Windows 10 Version Summary

Windows 10 Pro is the version of Windows that will be the most optimal for small businesses. It provides more control and security features to protect each workstation. A few examples you can take advantage of are Remote desktop, using an active directory and enabling Bitlocker. These are some examples to help troubleshoot and protect the company and each end user from all the data being created everyday. The main benefits of Windows 10 Pro at the end of the day is the comfort of knowing that it is a user-friendly interface as the administrators that can help them utilize all the features capable to increase business growth and the level of security it gives knowing you are protected.

Clean installation or Upgrade installation

When moving to Windows 10 Pro, you have two methods of installation, Upgrade or Clean.

Upgrading option: This installation method is a great way to upgrade your workstation that already has an older version of Windows installed and would like to take advantage of the newer features. It will also allow you to maintain your data that was saved on the workstation if you didn't back it up previously. The disadvantage of using this method would be that all older versions of Windows settings, applications, data and registries will not be deleted and stored in a folder on your computer that could cause performance issues in the long run.

Clean option: With this option, the workstation will be completely wiped clean prior to installation of the new Windows 10 Pro. This is a highly suggested option as it will ensure that all previous data will be deleted that may have cause any performance issues and give a fresh start of the workstation.

*Note: It is always suggested to back-up your workstation to a backup directory or hard drive to prevent any loss of data essential to the company.
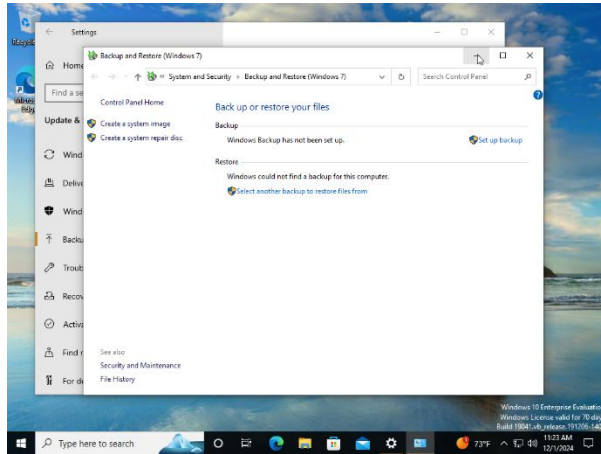
Security Features

Windows 10 Pro will give you essential security features such as Windows Security and Bitlocker.
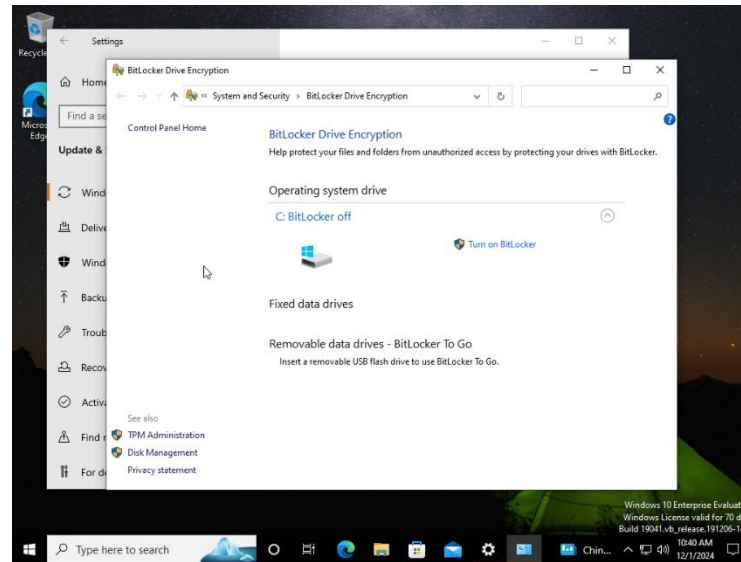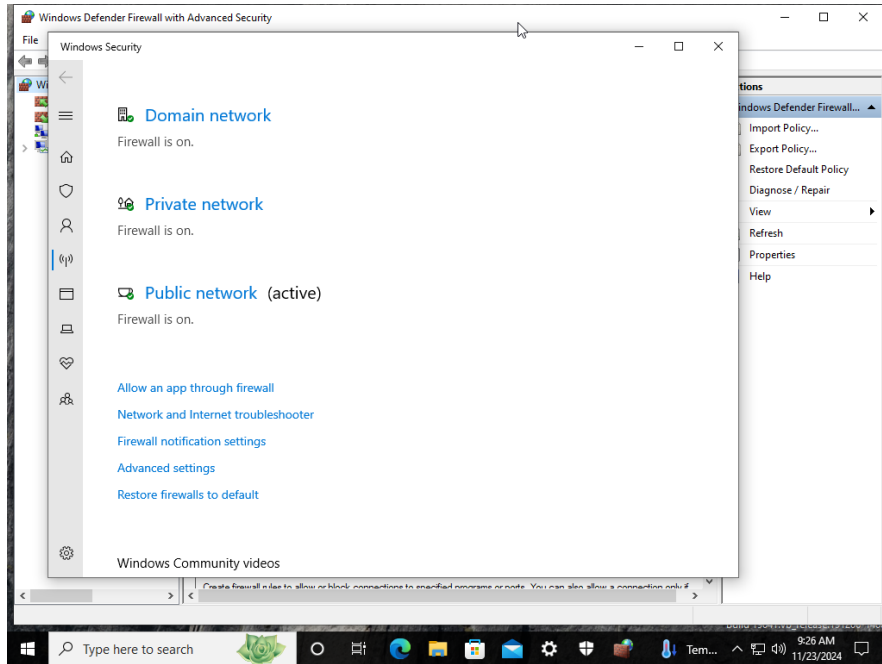
Windows 10 Backup and Recovery Overview

One of the most important resource to have is the ability to backup each workstation to a central server and being able to recover the workstation in case of an unexpected event occurring during daily operation. Having a routine schedule for backing up workstations is vital to the consistent and protection of data for Tetra Shillings. Hundreds of man hours and data files can be salvaged just by doing routine backups. Recovery is helpful for backing up as it will extract your backup files on the workstation that may have lost data or been infiltrated, causing the need to be wiped and restored to a point where the workstation was fully functional last.
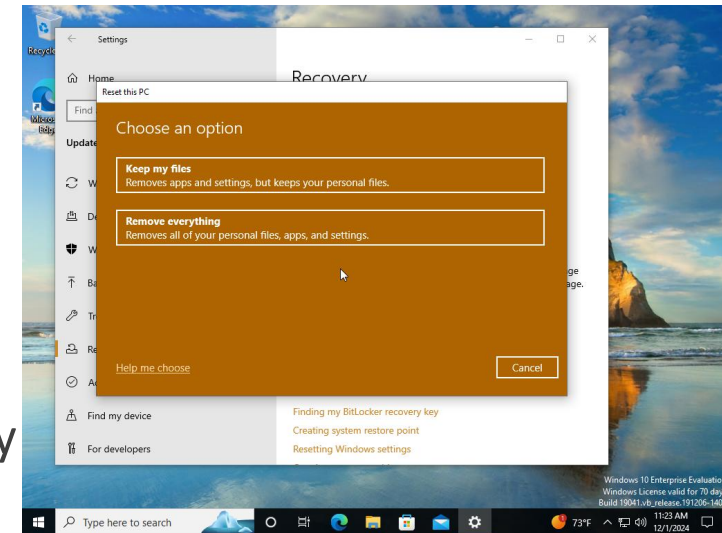
Windows 10 Backup and Recovery Tools

Windows 10 backup and recovery overview

One best tools from the Windows 10 tools and utilities are the Backup and Restore feature. This allows you to create a system image backup on the point of time you create it in case there was an unexpected failure or error on the system afterward. In being able to restore to a certain point from the last backup image, you will be able to save thousands of dollars, time and man hours in reproducing the data again. To add, it could also help correct any issues that arise.

Another great feature to have is the Recovery tool drive. This can be helpful in the recovery of a system that has malfunctioned currently and need to be recovered from a last point saved. It will also provide important Windows files needed to load up Windows 10 Pro if it isn't loading.

Incremental Backup:

Incremental backups are one of the best ways of a continuous backup of the system and only needs to backup new files that are saved and loaded prior to the last backup. This is great due to the fact of convenience and short time it takes to do it. Highly suggested for Tetra Shillings!

Full Backup:

With a full backup, it takes a complete picture of the system and saves it. In doing so, it will be more time consuming and could interrupt and slow the daily operation as it may need to use all the resources to conduct an accurate save.

Windows 10 Backup and Recovery Tools

**How can backup and recovery benefit Tetra Shillings?**

In an event where a ransomware attack were to take place, the attacker would by-pass the users security to access their controlled folder. Windows 10 Pro has ransomware protection that blocks out suspicious files from entering the computer, potentially infecting and spreading through it. If this is the case, with the incremental backups in place, the affected workstation can be restored and recovered to an earlier backup point prior to when the ransomware attack started happening.

Windows 10 Backup and Recovery: Backup Data

There are multiple ways to conduct backups. From the settings window, click Update and Security on the left pane. When you choose backup, there are multiple ways to do so. You can use the cloud method that uses Microsoft's OneDrive. Another way is adding a drive (preferably backup server drive) to conduct the backups. Finally, if you manually create images using the old Windows 7 version, you can create a system image then save it to the backup server.
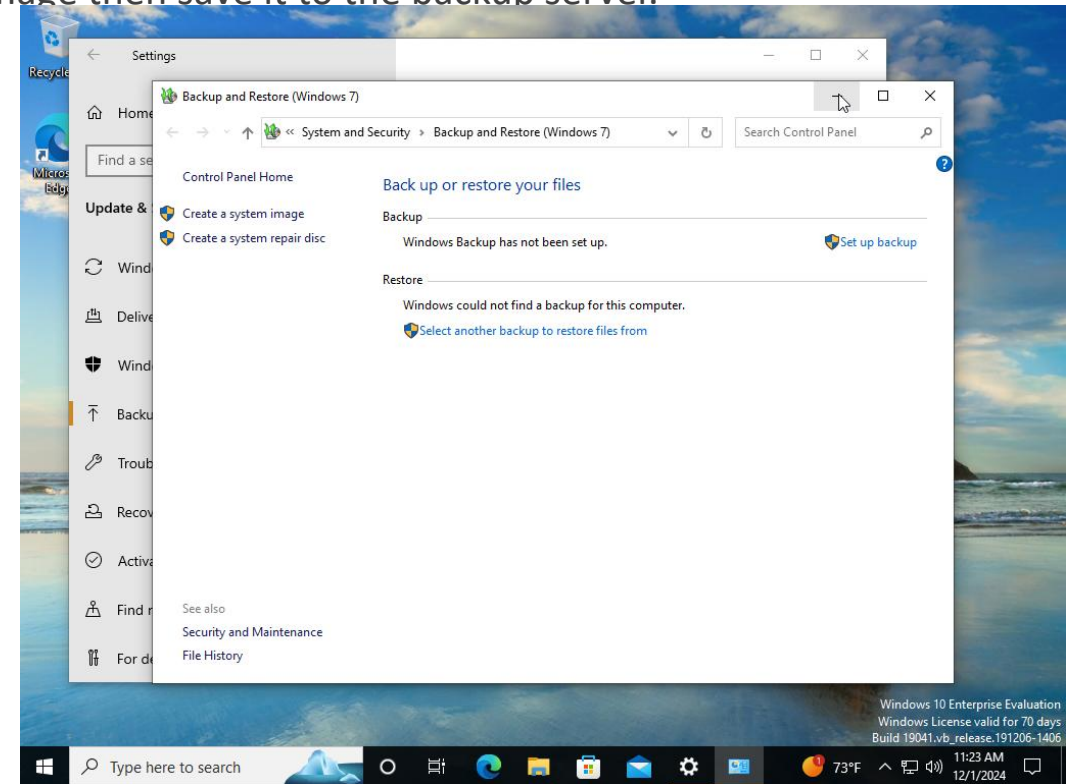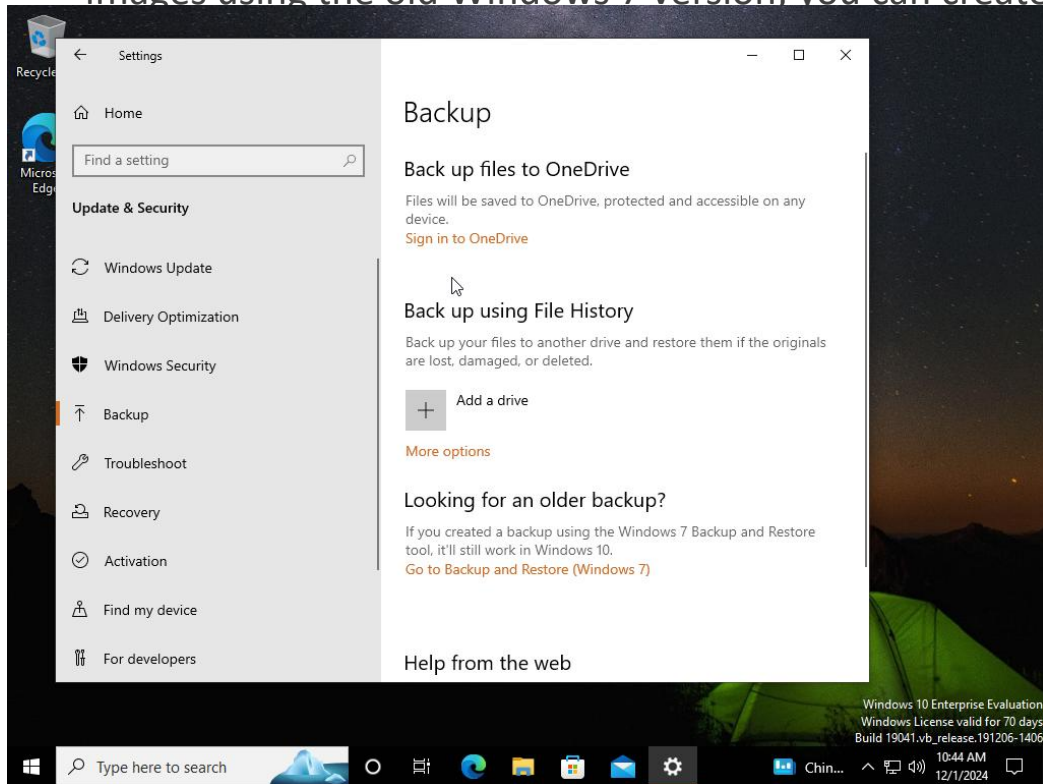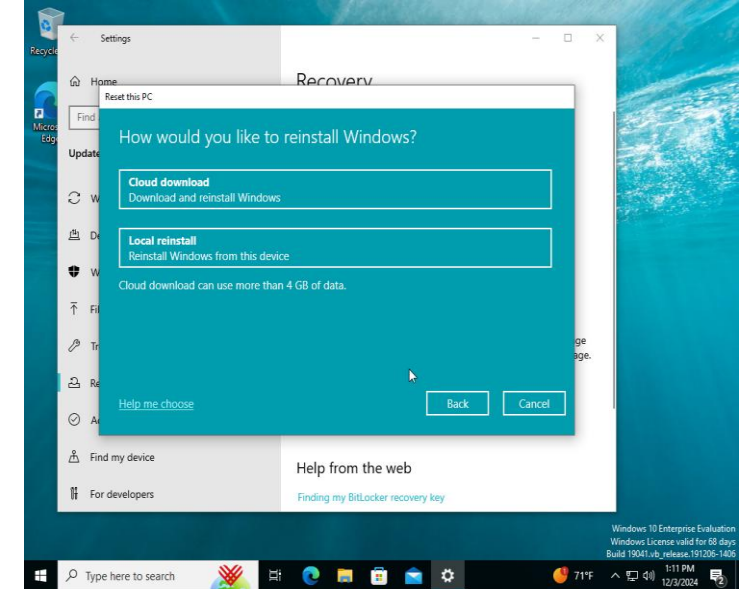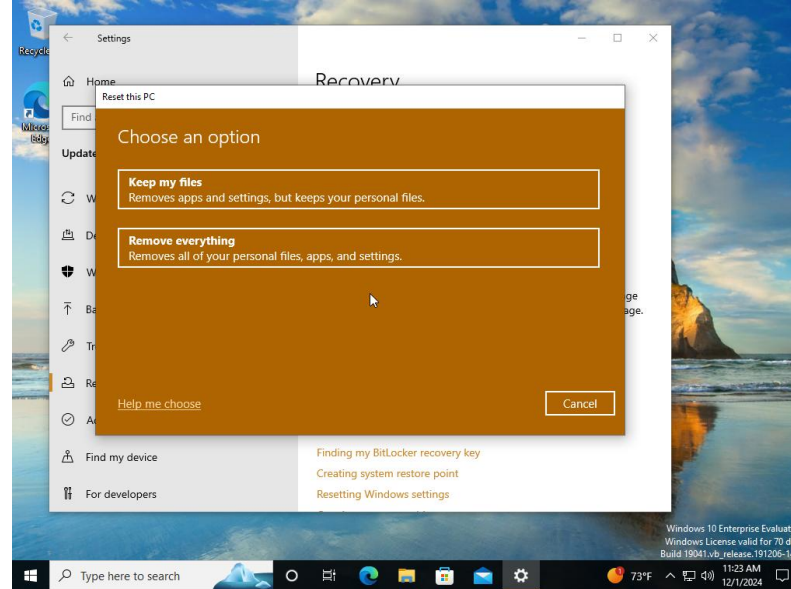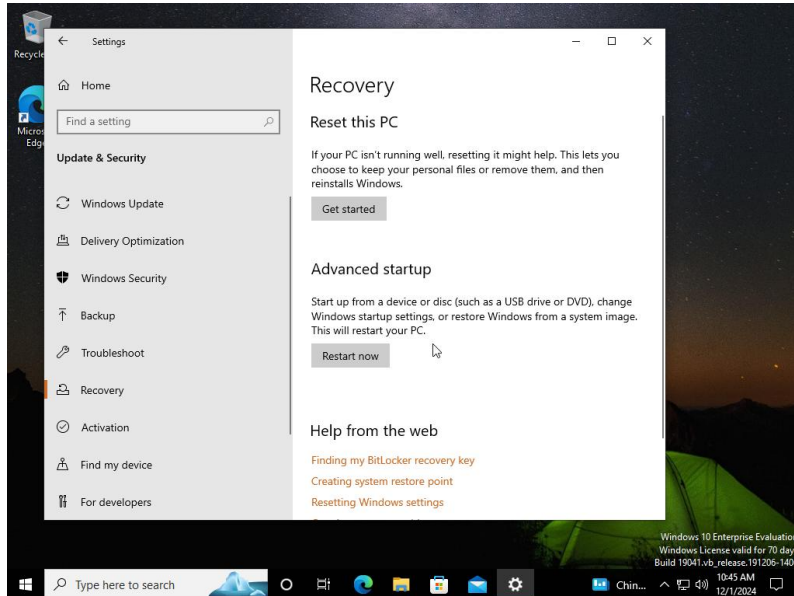
Windows 10 Backup and Recovery: Recovering a System to a Point in Time

To recover a system at a certain point, you click on recovery on the left pane from the Settings window, then choosing Update and Security.

You will choose between get started or restart now. Get started will reinstall windows completely from the cloud or media device. Restart now will recover the system from a system image last saved.

Windows 10 Backup and Recovery: Protecting Backup Copies

- **Risks to data and backups**
  - Media and hardware failure – Hardware failure can happen due to just worn-out components. Hard drives can become worn out due to external factors like overheating, water or fire damage. When this happens, backups will become useless as Windows will give an error declaring hard drive failure.
  - Natural disasters – Can happen at any time and unexpectedly and if one happens (i.e earthquakes, burning building, etc.) all that data can be lost, especially if one of your backups is on site. It's important to have one off-site to ensure recovery.
  - User error – End users makes mistakes sometimes and may accidentally delete files that they did not intend to. But this can be controlled by administrators through policies preventing this mistake.

- **Strategies to protect backups**
  - Multiple copies – Replication is key to prevent failure to the company. There will multiple storage devices for backups on and off site. To save storage capacity, limited copies of certain timelines will be the only ones saved.
  - Multiple locations – There will be at least one off-site location that will replicate and/or save backups from the physical location. This will help safeguard all data and recover the physical location if an attack caused a fatal failure.

Summary

The promise of Windows 10 Pro providing its full features of security and ability to backup and recover a workstation is the reason many companies switch over. The end goal is to have a protected operation within Tetra Shillings and comfort knowing that if there was a ransomware attack, natural disaster, or failure within the infrastructure, that it will be recoverable, and all personnel are able to continue the day to day with minimal impact. Windows 10 Pro has all the preventative measures in place to make the workplace protected against outside attacks.

References

[1] L. Whitney, "How to back up and restore your PC with a windows system file," PCMAG, https://www.pcmag.com/how-to/how-to-back-up-and-restore-an-image-file-of-windows-10 (accessed Dec. 1, 2024).

[2] L. Whitney, "How to back up and restore your files, apps, and settings in windows," PCMAG, https://www.pcmag.com/how-to/how-to-back-up-restore-your-documents-in-windows-10 (accessed Dec. 1, 2024).

[3] B. Giacinto, "Top 3 data loss causes-and 9 ways to prevent them," NovaBACKUP Corporation, https://www.novabackup.com/blog/top-6-data-loss-causes-and-top-10-preventions (accessed Dec. 2, 2024).