

CYBER SECURITY LAB 19

Demonstrate NTFS file system using NTFS permission reporter

What is NTFS in Cybersecurity?

- **NTFS (New Technology File System)** is the default file system used by Windows operating systems for storing and organizing data on hard drives.
- From a **cybersecurity** perspective, NTFS is important because it provides **built-in security features** such as:
 - **File and folder permissions** (who can read, write, or modify)
 - **Encryption (EFS)** for protecting sensitive files
 - **Auditing** (tracking who accessed/modified data)
 - **Access Control Lists (ACLs)** for granular security

So, NTFS is not just about storing data, but about **controlling and protecting access** to that data.

Why is NTFS Needed?

1. **Security** – Unlike older file systems (like FAT32), NTFS allows admins to set permissions per user or group.
2. **Reliability** – It has journaling (keeps track of changes) to prevent corruption.
3. **Scalability** – Supports large files and modern storage systems.
4. **Compliance** – Helps organizations meet regulations (like GDPR, HIPAA) by enforcing access controls and auditing.
5. **Data Protection** – Encryption and file recovery options add layers of defense against breaches.

Without NTFS, organizations would struggle to **secure sensitive files** on Windows systems.

What is NTFS File Permission Reporter?

- It is a **tool/software** used by IT admins and security teams to **analyze, export, and report NTFS file and folder permissions**.
- Since NTFS permissions can get very complex in enterprise environments (multiple users, nested folders, inherited permissions), it's hard to manually check who has access to what.

What is it Used For?

1. **Audit & Compliance** – Helps prove that only authorized users have access to confidential data.
2. **Security Monitoring** – Detects excessive permissions (e.g., if “Everyone” has access to a sensitive folder).
3. **Risk Reduction** – Prevents insider threats by identifying weak or misconfigured permissions.
4. **Access Reviews** – Useful during user role changes or employee offboarding.
5. **Reporting** – Generates reports (CSV, Excel, PDF) for management and auditors.

Example: An admin can run an NTFS Permission Reporter to check *who has access to the Finance department's payroll folder* and fix misconfigurations.

STEP 1: Open any browser, search for NTFS file permission.

<https://www.permissionsreporter.com>

NTFS Permissions Reporting Software for Windows

You need a visual, interactive software tool to help you manage the system permissions. You need Permissions Reporter - the ultimate network-enabled NTFS...

Free download - NTFS Permissions - Share Permissions - Upgrade to Pro

<http://www.cjdev.com/software/ntfsreports/info>

NTFS Permissions Reporter - Cjdev

NTFS Permissions Reporter is a modern user friendly tool for reporting on directory permissions on your Windows file servers. It lets you quickly see which...

<https://sysdig.com/info/ntfs-permissions/>

Top 11 NTFS Permissions Tools for Smarter Administration

13-Jan-2021 — 1. NTFS Permissions Reporter Free Edition from Cjdev · 2. Netwrix Effective Permissions Reporting Tool · 3. Microsoft's AccessEnum · 4.

STEP 2: Click on Download now

The screenshot shows the homepage of the NTFS Permissions Reporter website. At the top, there is a navigation bar with links for Home, Screens, Features, Download, Order, and Support. Below the navigation bar, the title "NTFS PERMISSIONS REPORTER" is displayed in large, bold letters, followed by the subtitle "Fast and easy file system permissions auditing for Windows". There are two prominent buttons: "Download Now" and "Upgrade to Pro". Below these buttons, a screenshot of the software interface is shown, displaying a file tree and a permissions audit report. The report includes columns for Path, Item Type, Item Name, and Permissions. At the bottom of the page, there is a section titled "THE NTFS PERMISSIONS ANALYZER FOR WINDOWS" and a link to "Activate Windows".

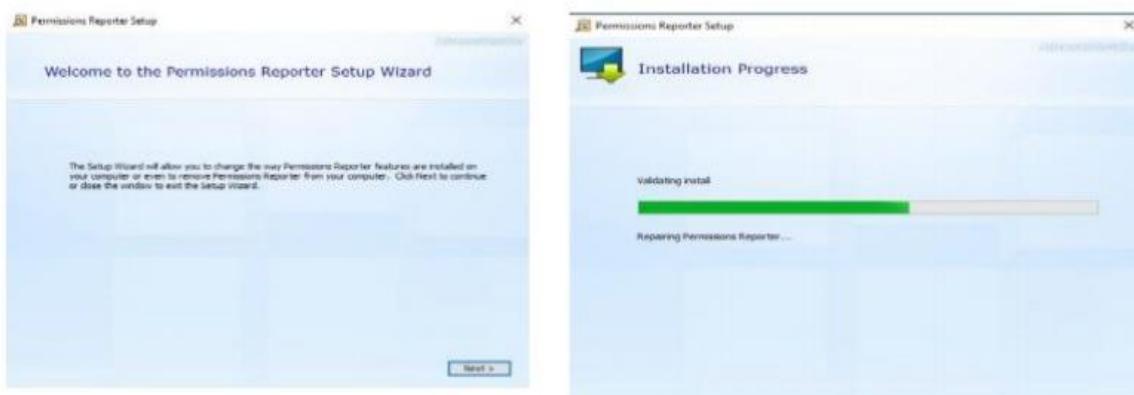
STEP 3: Click on Start Download

The screenshot shows the "FREE DOWNLOAD" section of the website. The title "FREE DOWNLOAD" is at the top, followed by the sub-instruction "Start managing file system permissions better today. Just click the button below to download, then install on any supported computer." A large yellow "Start Download" button with a cloud icon is centered. To the right of the button, there is a red circular badge with the text "FREE BASIC EDITION!". Below the download button, there is a screenshot of the software's interface showing a detailed permissions audit report. At the bottom of the page, there is a section titled "PERMISSIONS REPORTER REQUIREMENTS" with a note about supported operating systems: "Any 64-bit Edition of Windows 11, 10, 8.1, 7 (SP1) or Windows Server 2022, 2019, 2016, 2012". There are also links for "BUILT FOR 64 BIT" and "PRODUCT HELP".

STEP 4: Click on Run



STEP 5: Click on Next

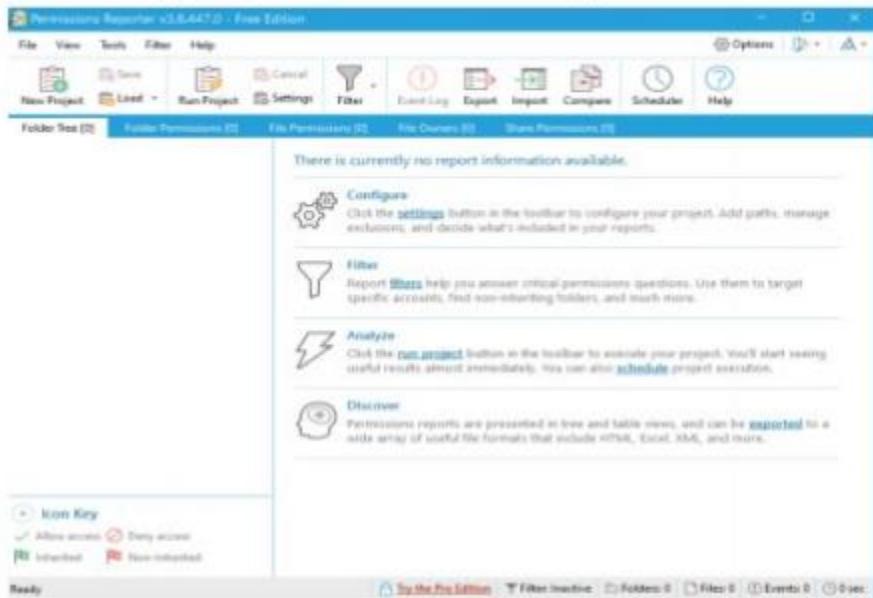


STEP 6 : Click on Close

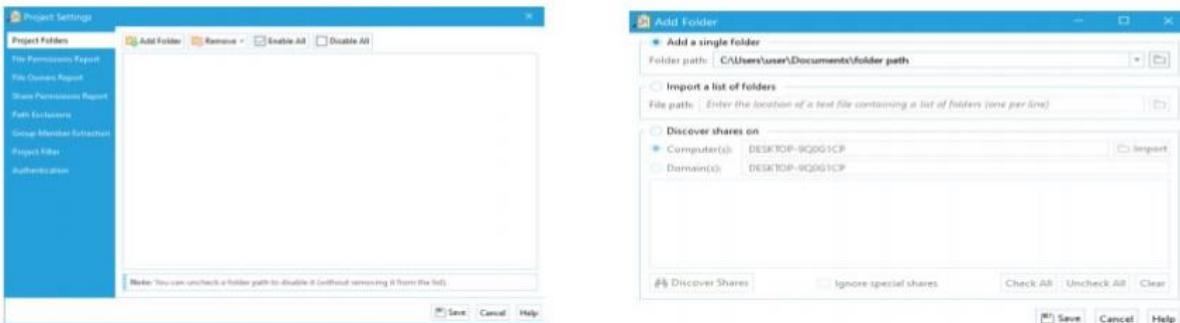


STEP 7: Open the permission Reporter

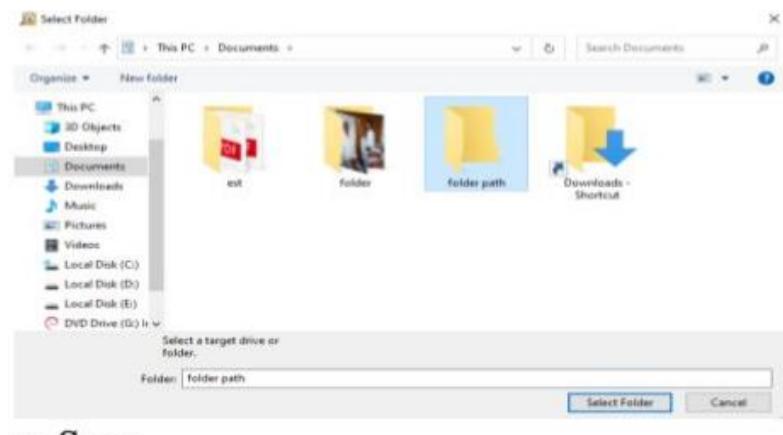
STEP 8: In configure, click on settings.



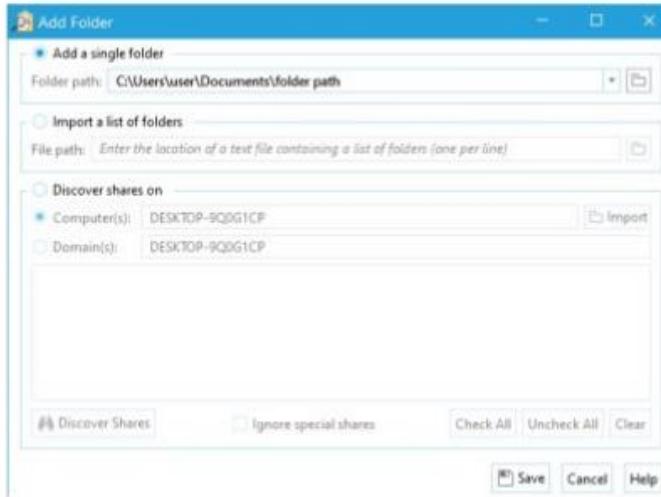
STEP 9: In Project settings, select Add folder.



STEP 10: Select the folder, and click on select folder.



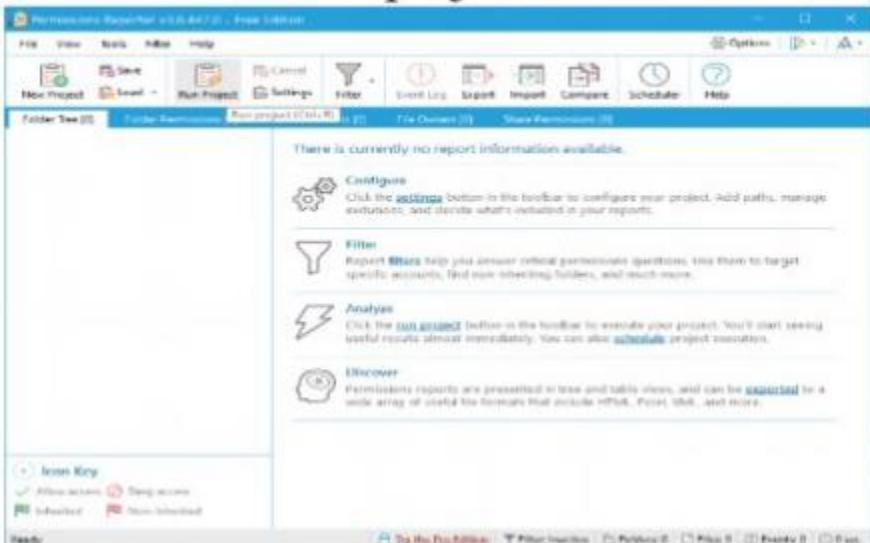
STEP 11: Click on Save



STEP 12: Click on Save.



STEP 13: Click on the run project.



STEP 14: Permissions of the displayed folder display on the screen.

File View Tools Filter Help

New Project Save Load Run Project Settings Filter Existing Export Import Compare Scheduler Help

Folder Tree [3] File Permissions [0] File Owners [0] Share Permissions [0]

C:\Users\user\Documents\Folder path [2]

General

PATH: C:\Users\user\Documents\Folder path
OWNER: DESKTOP-9Q001CP\user
MODIFIED: 11/20/2022 8:45:11 AM
SUBFOLDER COUNT: 0
INHERITED: True
SCAN STATE: Complete

Permissions

Type	Identified Account	Basic Permissions	Scope
Allow	BUILTIN\Administrators	Full control	This folder, subfolders, and files
Allow	NT AUTHORITY\SYSTEM	Full control	This folder, subfolders, and files
Allow	DESKTOP-9Q001CP\user	Full control	This folder, subfolders, and files

Subfolders Data Immediate Non-Inheriting Immediate Non-Inheriting

Name	Owner	Inherited	Subfolders	Subfolders (Inher...)	Subfolders Not Inheriti...
No items to show.					