Lab - Permissions (Instructor Version)

**Instructor Note**: Red font color or gray highlights indicate text that appears in the instructor copy only.

# Objectives

In this lab, you will explore the difference between running as administrator and standard user. You will also review the inherited permission of files and folders and encrypt files and folders.

Part 1: User Account Control (UAC)

Part 2: Permission Inheritance

Part 3: Encrypting File System (EFS)

# Recommended Equipment

* A Windows device

# Instructions

## User Account Control (UAC)

User Account Control (UAC) is a Windows security feature that helps prevent malware from causing damage to your PC by exploiting the privileges of the Administrators group. UAC also allows standard users to perform tasks that require elevated privileges within their session.

### Create a regular user account.

* + - 1. Log in to Windows using an account with administrative privileges. To verify that the account has administrative privileges, click **Start** > **Settings** > **Accounts** > **Your info**. Under your username, you should see **Administrator** to indicate that this account is part of the Administrators group.
      2. Click **Family & other users** to add another user account.
      3. Click **Add someone else to this PC** (or **Add account** in Windows 11) if there is not a standard user account on this PC. Provide the information necessary to create a new user account.

### Run as administrator vs. standard user

* + - 1. Still logged as the user with administrative rights, run **Windows Powershell** as an administrator. Click **Start** >expand the **Windows Powershell** folder > right-click **Window Powershell** > **select Run as Administrator**.

#### Question:

Did you need to provide your password to allow this app to make changes? Explain your answer.

Type your answers here.

No password is needed because the logged-in user has administrative privileges.

* + - 1. Click **No** to exit the UAC prompt.
      2. Now log in as a standard user and run Windows Powershell as an administrator.

#### Question:

Did you need to provide your password to allow this app to make changes? Explain your answer.

Type your answers here.

An administrator’s password is needed because the logged-in user does not have administrative privileges.

* + - 1. Click **No** to exit the UAC prompt.

## Permission Inheritance

### Review folder permissions

* + - 1. Log in to an administrative account. Navigate to C:\ with File Explorer and create a folder with a name of your choice.
      2. Right-click the newly created folder and select **Properties**.
      3. Navigate to the Security tab.

#### Questions:

Which group or usernames have full control of the folder?

Type your answers here.

SYSTEM and Administrators.

* + - 1. Click **Advanced** to review permissions in detail.
      2. Click **Effective Access**. Click **Select a user**.
      3. Enter the username of current account in the **Enter the object name to select (example)**. Click **Check Names** to verify the object name is correct. Click **OK** to continue.
      4. Click **View effective access** to view the current permission. Note this user has full control of this folder. Click **OK** when done.
      5. Click **Select a user** and enter the username of newly created user in this activity. Click **Check Names** to verify and click **OK**. Click **View effective access** to view the current permissions. Note this user does not have the same permissions. Click **OK**.
      6. Click **OK** to exit the Properties window.

### Inherited permission

* + - 1. Within your newly created folder, create a new text file. Right-click the blank space and select **New** > **Text Document**. Name the file.
      2. Right-click the newly created file and select **Properties**. In the Security tab, click **Advanced > Effective Access > Select a user**. Review the permissions of both users.

#### Question:

How do the file permissions compare to the folder permissions? Where did the file get the permission?

Type your answers here.

The file inherited its permission from the folder permission.

* + - 1. Click the Permission tab.

#### Question:

What else can you do in this tab?

Type your answers here.

You can change the owner, add, remove, or view the permission entry, and disable inheritance.

* + - 1. Click **OK** to exit Advanced Security Settings.
      2. Login as the other user.

#### Question:

Does the permission align with the effective permission? What did you try to do?

Type your answers here.

The permission is the same as the effective permission.

## Encrypting File System (EFS)

You can encrypt individual files and folders.

**Note**: EFS is not available in Home edition.

* + - 1. Create a new folder in C:\ and add a file to the new folder.
      2. Right-click the new file. Navigate to the General tab in the Properties window. Click **Advanced**.
      3. In the Advanced Attributes window, select **Encrypted contents to secure data** and click **OK**.
      4. Click **OK** to close the Properties window. Select **Encrypt the file and its parent folder (recommended)** and click **OK** when prompted by the Encrypted Warning. The folder and its contents are now encrypted.
      5. Log in to another user’s account.
      6. Attempt to make edits to the newly encrypted file with the other user.

#### Question:

What happened when you attempted to make edits to the file?

Type your answers here.

You do not have permission to open the file. You need to get permission from the owner or administrator.

## Cleanup

Remove any files, folders or user accounts that were created during this activity.

* + - 1. Log in with the accounts and navigate to C:\ and remove any files or folders during this activity.
      2. Delete the new local user account. Click **Start** > **Settings** > **Accounts** > **Family & other users**. Select and remove the local user account that was created for this activity.

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