Batch Information:

- **Batch Start Date:** 2025-08-04
- **Batch Name:** WiproNGA_DWS_B5_25VID2550
- **First Name:** Tirthajit
- **Last Name:** Das
- **User ID:** 34940
- **Batch ID:** B5-25VID2550

ASSIGNMENTS

- ✓ **Interactive and Non-Interactive Applications**
- ✓ **Required and Available App assignments**
- ✓ **Groups, Dynamic queries, Users**
- ✓ **Process Flow for an Application on Windows client via IME service. (From Polling to detection, to installation , to detection and toast notifications as success/failure)**
- ✓ **Registries with respect to LOB and Win32Apps**
- ✓ **Specific Registries with Application GUID which give you the status of Installation/Uninstallation.**
- ✓ **Log File locations & Company Portal**
- ✓ **How to Sync once app assignments are done. (Intune Device Sync/ Company Portal Local side Sync)**

➢ Interactive and Non-Interactive Applications.

In the context of **Application Packaging** and **Enterprise Deployment**, understanding whether an application is *interactive* or *non-interactive* is critical. It affects how the application is **installed**, **configured**, and **deployed silently** in large-scale enterprise environments using tools like **SCCM**, **Intune**, or **GPO**.

- **What are Interactive Applications?**

Definition:
Interactive applications are those that **require user interaction** during installation or runtime. This includes clicking "Next", selecting options, entering license keys, accepting agreements, or making configuration choices.

Common Characteristics:

- Show GUI windows, dialogs, or prompts.
- Require human input.
- Can’t be installed silently without modifications.
- May block automation if not handled properly.

Examples:

- Setup.exe that asks for install location, license key, or user preferences.
- Applications that pop up configuration windows post-installation.
- Installers that require selecting features manually.

Handling in Packaging:

- Must be converted to **non-interactive** (silent) using switches like /silent, /quiet, /qn (for MSI), or by creating a response/answer file.
- May need scripting or transform files (.MST) to suppress dialogs.

- **What are Non-Interactive Applications?**

Definition:
Non-interactive applications are designed to run without requiring **any user interaction**. They can be installed silently and are ideal for automated deployments across multiple systems.

Common Characteristics:

- Fully silent or unattended installation.
- Accepts default settings or pre-configured options.
- Compatible with deployment tools (like SCCM, Intune).
- Don't show GUI prompts.

Examples:

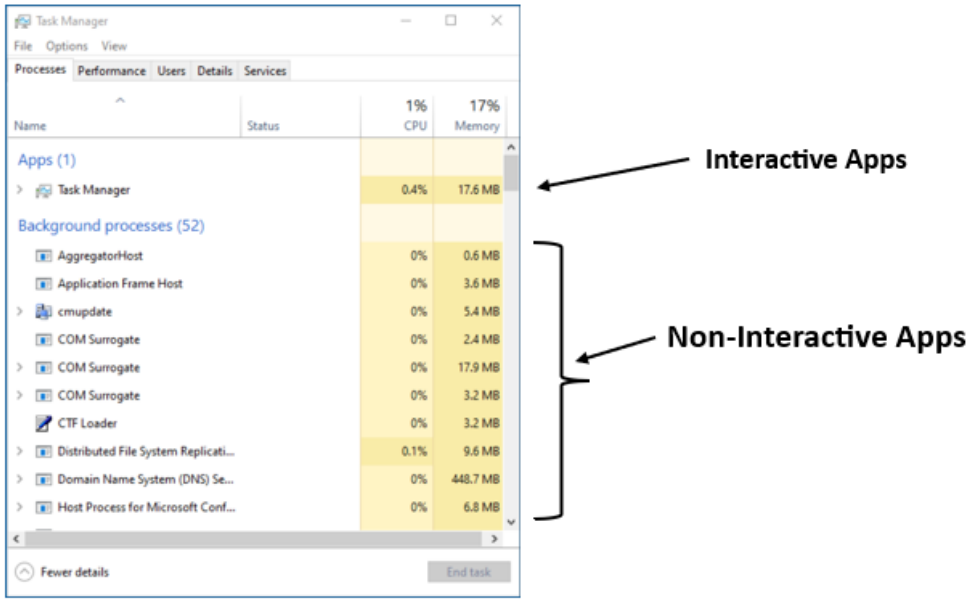
- MSI installers with /qn flag (quiet, no UI).
- EXE installers with proper silent switches like /S, /quiet, /norestart.
- Custom-packaged applications prepared using tools like **AdminStudio**, **Advanced Installer**, or **PSADT** (PowerShell App Deployment Toolkit).

Handling in Packaging:

- Preferred format for deployment.
- Easy to script, schedule, or push through automation tools.
- Fewer chances of deployment failure due to human error.

- **Why This Matters?**

Feature	Interactive Apps	Non-Interactive Apps
User Involvement	Required	Not required
Automation Compatibility	Poor	Excellent
Deployment Speed	Slower	Faster
Risk of Human Error	Higher	Lower
Suitable for SCCM/Intune	Needs conversion	Directly deployable



➢ Required and Available App assignments.

- **What are App Assignments?**

When deploying applications (especially via tools like **Microsoft Intune**, **SCCM**, etc.), you assign apps to user groups or device groups. These assignments define **how and when** the app gets installed on the target systems.

App assignments are typically categorized into two types:

1. **Required**
2. **Available**

1. <u>Required App Assignment:</u>

- **Definition:**
  In a "Required" assignment, the app is **automatically pushed and installed** on the user's device or system **without user interaction**.

- **Key Characteristics:**
  - Installation is **mandatory**.
  - It happens **as soon as possible** (based on deployment schedule).
  - The user **cannot cancel or postpone** it.

- Often used for **critical business apps** like antivirus, VPN client, office tools, etc.
- Admins can set a **specific deadline** for the installation.
- App will **reinstall automatically** if it's uninstalled.

- **Real-World Example:** You assign Microsoft Teams as a required app to all corporate laptops. Every device will have it installed silently in the background without needing user approval.

2. <u>Available App Assignment:</u>

- **Definition:**
  In an "Available" assignment, the app is **optional** and shown in a **company portal** (like Intune Company Portal) where users can **choose to install it** themselves.

- **Key Characteristics:**
  - Installation is **user-initiated**.
  - App is **not forced** onto the device.
  - Good for **optional tools** (e.g., PDF editors, development tools, training apps).
  - Offers **self-service flexibility**.
  - Reduces unwanted installations and user complaints.

- **Real-World Example:** You assign Adobe Reader as an available app. Users who need it can open the Company Portal and click "Install".

- **When to Use What?**

Situation	Recommended Assignment Type
Business-critical or security apps	Required
Optional tools or utilities	Available
Testing apps in a controlled group	Available
Rollout with guaranteed presence	Required

➢ Groups, Dynamic queries, Users.

- **Users**
  - A **user** is anyone who logs into a system (e.g., employee).
  - Two types:
    - **Local User** – Exists only on one PC.
    - **Domain User** – Managed in Active Directory, can log in on any domain-joined PC.
  - Used in packaging for:
    - Per-user settings
    - Active Setup
    - Logon scripts
- **Groups**
  - A **group** is a collection of users to manage permissions and deployments easily.
  - Types:
    - **Security Group** – Controls access to apps/files.
    - **Distribution Group** – For sending emails (not used for access).
  - Helps in:
    - Targeting software to specific teams (e.g., HR, IT)
    - Applying GPO or logon scripts

- **Dynamic Queries**
  - Rules used to **auto-fill groups or collections** based on user/device properties.
  - Used in tools like **SCCM** or **Azure AD**.
  - Example: Automatically include all laptops with Windows 11 and HR users in a group.
  - Saves time – no need to add users/devices manually.

➢ Process Flow for an Application on Windows client via IME service. (From Polling to detection, to installation , to detection and toast notifications as success/failure).

In a Microsoft Intune-managed environment, the **Intune Management Extension (IME)** plays a crucial role in delivering **Win32 apps**, **PowerShell scripts**, and other custom configurations to Windows clients. The process flow—from polling to detection, installation, and notification—is vital for ensuring reliable app deployment and user communication.

1. Polling Phase

- The IME service regularly **polls Intune service** for new instructions or targeted applications.
- Default polling frequency is **every 60 minutes** (can vary slightly).
- IME contacts **Microsoft Intune cloud service** to:
  - Check for new app assignments.
  - Update status for previous installations.
  - Retrieve scripts, Win32 apps, or configurations.

2. Detection Phase

- After receiving app deployment instructions, IME first checks whether the application **already exists** on the device.
- This is done using a **Detection Rule** configured during packaging (e.g., file existence, registry key, MSI GUID, etc.).
- If the detection rule returns **"App is already installed,"** IME will **skip installation**.
- If **not detected**, it proceeds to the installation phase.

3. Installation Phase

- IME downloads the **app payload** (like a .intunewin package) from Intune's storage.
- App is installed silently using:
    - System context (default)
    - Custom install command (like install.cmd or .exe /silent)

4. Post-Installation Detection

- After installation, **IME re-runs the detection rule** to confirm successful installation.
- If detection rule **now returns "App is installed" → Success**.
- If not → installation is **marked as failed**.
- Results are reported back to **Intune portal** for admin visibility.

5. Toast Notifications (User Experience)

- Based on the app deployment configuration, the end user may receive:
    - **Success notification**: App installed successfully.
    - **Failure notification**: Installation failed with error code.

- These toast notifications help improve transparency and user trust in managed device environments.
- Admins can customize whether notifications appear or not.

➢ Registries with respect to LOB and Win32Apps.

- **What is the Windows Registry?**

The **Windows Registry** is a hierarchical database used by the Windows operating system to store configuration settings and options for:

- The operating system
- Installed applications
- System hardware
- User profiles

It contains keys and values that applications can read from or write to during installation, configuration, and runtime.

1. LOB Apps (Line-of-Business Applications):

Definition: LOB apps are custom-built or internal-use applications used within an organization. These are often packaged and deployed via tools like **Microsoft Intune (Endpoint Manager)**.

Registry behavior:

- Typically installed **per-user** or **per-device**, depending on the deployment configuration.
- Uses HKCU if deployed to **user context**.
- Uses HKLM if deployed to **device/system context**.
- Registry entries might store:
    - Licensing information
    - Configuration settings

- Logging preferences
- App versioning data

2. Win32Apps:

Definition: Win32Apps are classic Windows desktop applications (typically .EXE or .MSI) deployed via **Intune (Endpoint Manager)** using Win32 App deployment model.

Registry behavior:

- Mostly installed in **system context**, using **HKLM**.
- May also use HKCU if app is user-specific or modifies user preferences.
- Registry entries can include:
  - Install state
  - Version tracking
  - App configurations
  - Installer logs

Intune also uses registry checks for:

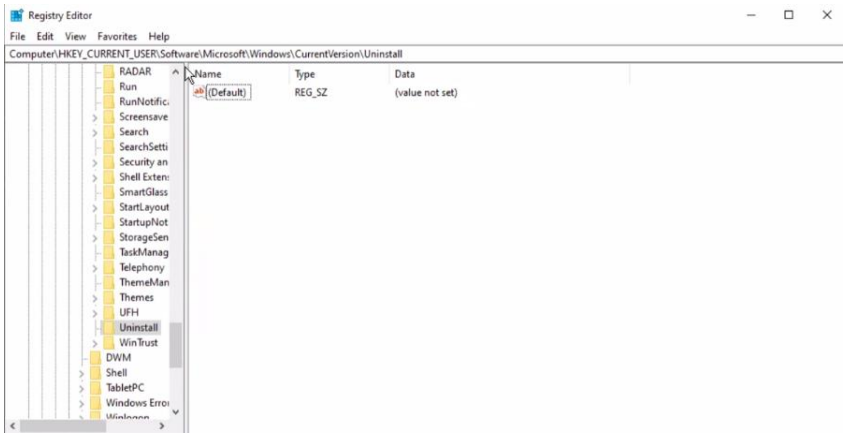
- **Detection rules** (e.g., to detect if an app is installed)
- **Requirement rules**
- **Remediation scripts**

➢ Specific Registries with Application GUID which give you the status of Installation/Uninstallation.

- **Checking Installation/Uninstallation Status & Finding Application GUIDs via Registry:**

To verify the installation or uninstallation status of an application and to locate its GUID (Product Code), the Windows Registry can be used. The relevant registry paths are:

  - **Per-machine-installations:** HKLM\SOFTWARE\Microsoft\Windows\CurrentVersion\Uninstall
  - **Per-user-installations:** HKCU\SOFTWARE\Microsoft\Windows\CurrentVersion\Uninstall



Each of these keys contains subkeys for installed applications. The subkey may use the application's name or a unique identifier such as a GUID.

- **Locating the GUID (Product Code)**
  - Inside the uninstall registry path, subkeys represent individual applications.
  - The GUID is a 32-character hexadecimal string (e.g., {80890A63-01AA-40D3-A2E9-B3E214735151}).
  - It uniquely identifies the application and is essential for uninstall operations.
- **Using the GUID to Uninstall**
  - The msiexec command utilizes the GUID to perform uninstallations:

*msiexec.exe /x {Product-GUID} /QN /L*V "C:\Client-uninstall\desktop-uninstall.log"*

- /x – Uninstall the application.
- /QN – Silent mode (no UI).
- /L*V – Logs the process to the specified path.

➢ Log File locations & company portal.

Event logs are vital records that capture system and application activities. They help in **monitoring**, **debugging**, and **analyzing** issues by providing detailed insights into what happens on a system.

Key Aspects of Event Logs

- **Timestamps:** Show the exact time an event occurred — essential for tracing event sequences.
- **Event Types:** Classify events as *Error*, *Warning*, *Information*, or *Audit* (Success/Failure) for better understanding.
- **Severity Levels:** Indicate the impact of an event, such as Critical, Error, Warning, or Informational.
- **Descriptions:** Give in-depth details including error codes, affected components, and user actions.
- **EventIDs:** Unique identifiers assigned to events, making them easier to search and analyze.
- **Categories:** Logs are grouped into types like:
  - **System Logs**
  - **Application Logs**
  - **Security Logs**
  - **Audit Logs**

➢ How to Sync once app assignments are done. (Intune Device Sync/ Company Portal Local side Sync).

1. Sync Using the Company Portal App

This is the most common method used by end users across Windows and Android devices.

Steps:

- Launch the Company Portal app on your device.
- Navigate to Settings.
- Tap or click on Sync.
- Wait for the synchronization process to complete.

2. Sync from the Intune Admin Center

This method is typically used by IT administrators to remotely trigger a sync for a device.

Steps:

- Sign in to the **Microsoft Intune Admin Center**.
- Navigate to **Devices > All devices**.
- Select the specific device you want to sync.
- Under the **Overview** tab, click on **Sync**.
- Confirm by selecting **Yes** when prompted.

3. Sync from Windows Settings (Work or School Account)

Available on Windows 10/11 devices linked to a work or school account.

Steps:

- Open the **Settings** app on the Windows device.
- Go to **Accounts > Access work or school**.
- Select the connected **work account**, then click on **Info**.

- Click **Sync** to manually trigger the device check-in with Intune.

4. Sync from Taskbar or Start Menu (Windows Only)

Quick access method via the Company Portal icon on Windows.

Steps:

- Locate the **Company Portal** icon in the system tray (taskbar) or **Start Menu**.
- **Right-click** the icon.
- Select **Sync this device**.