**Capstone Project: MSI Update, Patch, and Deployment**

**Objective:**

To update an MSI application with new or updated files, create a patch (MSP) for version upgrade, and deploy it efficiently using PSADT and SCCM.

**Step 1: Repackaging & Capturing the Installation**

* **Goal:** Capture the installation process of the original .exe to create a clean MSI package.
* **Process:**
  1. Downloaded the original .exe file and copied it to the VM with AdminStudio installed.
  2. Ran repack.exe as administrator:
     + **Single snapshot:** Captures system state before installation.
     + **Multi-snapshot:** Captures all changes during installation.
  3. Installed the application (e.g., 7-Zip).
  4. Ran repack.exe again to compare before & after states → created an **IRP file**.
  5. Edited the IRP file on the base machine to remove unrelated files.

**Step 2: Creating the MSI**

* **Goal:** Build MSI packages from the captured installation for easier deployment.
* **Process:**
  1. Created an **ISM project file** from the edited IRP.
  2. Opened **Advanced Installer** and imported the ISM file.
  3. Built **MSI version 23.01** (original version).
  4. Updated the project version → rebuilt **MSI version 25.01** (new version).

**Step 3: Creating the MSP Patch**

* **Goal:** Allow users to upgrade from MSI v23.01 to v25.01 easily.
* **Process:**
  1. Created an **MSP patch file** in Advanced Installer.
  2. Configured **Target** as v23.01 and **Upgraded Version** as v25.01.
  3. Tested the patch:
     + Installed v23.01 → applied MSP → upgraded to v25.01 successfully.

**Step 4: Deployment Using PSADT**

* **Goal:** Automate installation and uninstallation.
* **Process:**
  1. Wrote **install/uninstall scripts** in PSADT.
  2. Added clear comments specifying file paths and processes.
  3. Ran scripts in PowerShell → confirmed installation and uninstallation worked correctly.

**Step 5: Deployment Using SCCM**

* **Goal:** Deploy the application to multiple client and server PCs.
* **Process:**
  1. Created an **Application** in SCCM.
  2. Configured **Device Collection** and **Distribution Group** for all target PCs.
  3. Simulated deployment → encountered installation errors on some clients.
  4. Resolved errors by editing **Primary User** and deploying via **Group Policy**.
  5. Successfully deployed application across all clients.

**Step 6: Outcome**

* MSI v23.01 captured and repackaged → MSI v25.01 created.
* MSP patch successfully upgraded older version to new version.
* PSADT scripts automated installation/uninstallation.
* SCCM successfully deployed patched application to all target PCs.
* **Full lifecycle demonstrated:**  
  Capture → Build → Patch → Test → Deploy