**Project Title:** One Touch Deployment for New Laptop with Domain Join and BitLocker Integration.

**Objective:**  
Automate laptop deployment via SCCM using PXE boot for first-time, factory-reset devices with the following key goals:

* Zero manual interaction
* Dynamic hostname assignment based on MAC address
* Domain join during deployment
* BitLocker encryption (post-restart)
* USB blocking (post-restart)
* SCCM client auto-registration

**1. Pre-Requisites Setup**

**1.1 SCCM Configuration**

* Enable PXE on Distribution Point
* Configure DHCP for PXE
* Distribute boot image to PXE DP

**1.2 CSV Import with MAC Address**

* Prepare CSV with MAC addresses and Hostname (e.g., SNPL-XXXXXX)
* Use a script to pre-create devices in SCCM based on MAC
* Add to dedicated "Zero Touch Collection"

**1.3 Task Sequence Preparation**

* Use MDT-integrated TS or custom TS
* Include variables for hostname
* Add domain join credentials

**2. Task Sequence Breakdown**

**2.1 Steps:**

1. **Format & Partition Disk**
2. **Apply Operating System**
3. **Apply Windows Settings**
   * Set Timezone (say "Nepal Standard Time")
4. **Apply Device Name**
   * Use variable or script based on MAC
5. **Restart to OS** (Mandatory!)
6. **Apply Network Settings**
   * Join Domain
7. **Restart Computer**
8. **Install SCCM Agent (post-restart)**
9. **Enable BitLocker (post-restart)**
10. **Apply USB Block via GPO (post-restart)**

**3. Known Issues & Fixes**

| **Issue** | **Root Cause** | **Fix** |
| --- | --- | --- |
| Domain join fails | Configuration issue | Replace with http in configuration. |
| Domain join fails | OU typo or non-existent | Leave OU blank or correct it |
| Device not recognized in collection | Not pre-staged | Import via MAC-based script |
| SCCM client not registering | No MP found in config | Ensure MP set, check DNS |

**5. Security Add-ons**

* **BitLocker Policy:** Enabled post-restart
* **USB Blocking:** Applied post-restart via GPO
* **Windows Defender / Baseline:** Apply via SCCM baseline or GPO

**6. Final Notes**

* Avoid OU entry unless confident
* Log file to monitor domain join: C:\Windows\debug\netsetup.log
* Use F8 in WinPE for troubleshooting (e.g., nslookup, ping, ipconfig)
* Use smsts.log to debug Task Sequence failures

**Result:**

* Fully automated PXE-based deployment
* No technician input required
* Device ready with hostname, domain membership, USB policy, BitLocker (post-reboot), and SCCM client
* Future-proof scalable process