

Desktop Device System Installation and Borrowed Device System Maintenance

Case Providing Department: Management Information Technology and

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1. Background

1) Pain Points in System Installation Process: The SIP warehouse is responsible for the core daily task of terminal computer system installation. This process has strict preconditions — the SN number of the computer to be installed must be precisely matched and registered with the MAC address in the SCCM platform, and the matched MAC address must be imported into the corresponding SCCM device collection before installation can begin. The original manual verification and registration process is prone to mismatches and omissions, which not only reduces installation efficiency but also creates potential risks for subsequent device management and information security traceability.

2) Pain Points in Borrowed Device Maintenance: Computers available for borrowing require periodic system reset. However, there is

currently no mechanism to track system installation times, relying solely on manual inspections, which is inefficient.

2. Solutions

1) Standardized Management of System Installation and Asset Ledger

- **Data Integration and Bulk Import:** First, match the existing desktop asset ledger containing computer SN numbers with the MAC address ledger stored in the SCCM platform. Then, batch import the consolidated fixed asset data (including SN numbers and matched MAC addresses) into the no-code management platform to establish a unified device information ledger.
- **Verification and Completion During Installation:** During system installation, staff select the corresponding device SN number via the mobile no-code platform, which automatically retrieves and displays the matched MAC address. Before installation, the displayed MAC address must be manually verified against the actual device MAC address. If the platform lacks the MAC address, it is manually supplemented on-site and recorded in the platform.

- Automated Data Flow and Record-Keeping: The completed MAC address information is automatically synchronized to the device ledger on the no-code platform, forming a closed information loop. After staff submit system installation operation records, the platform automatically captures and records the operation time (i.e., system installation time) and consolidates the verified/completed MAC address information to ensure traceability. The platform also provides statistics on system installation counts to support subsequent device maintenance.

2) Borrowed Device System Reset Reminder Mechanism

Include the SN numbers of borrowable computers in the no-code platform reminder system. Based on the system installation time, the platform automatically triggers reminders for system reinstallation within three months.

3. Outcomes and Benefits

- 1) Significant Efficiency Improvement: Simplifies warehouse staff's tasks of counting system installations and completing MAC addresses, reduces manual verification and record-keeping

workload, lowers information mismatch rates, and improves overall system installation process efficiency.

- 2) Standardized and Unified Data: Establishes a standardized and traceable SN number – MAC address ledger for desktop devices, resolving issues of dispersed, missing, or inconsistent information, and providing precise data support for asset management.
- 3) Strengthened Security Foundation: The gradually improved SN number – MAC address mapping serves as fundamental data for terminal device network security audits and abnormal device investigation, helping to fortify information security.
- 4) Automated Maintenance Reminders: The no-code platform can automatically notify relevant warehouse staff via email about devices requiring system reinstallation, replacing manual checks and improving the timeliness and accuracy of borrowed device maintenance.

4. Replicability and Promotion Value

This solution is implemented on a no-code platform, featuring low operational threshold and strong adaptability. Beyond the SIP warehouse system installation scenario, it can be replicated for engineer terminal

device installations. Engineers can access device basic information via the no-code platform on mobile devices, verify and complete SN numbers and MAC addresses on-site, and simultaneously record system installation information, achieving unified ledger management for all installation scenarios and further expanding the scope of data management.

5. Next Steps

Optimize Exception Warning Mechanism: Add information anomaly warning functionality to the no-code platform. When detecting the same SN number matched to multiple MAC addresses, or frequent MAC address changes, automatic alerts are triggered to allow managers to promptly investigate device movement risks.

Expand Data Application Dimensions: Based on accumulated data such as device installation time and MAC addresses, introduce modules for system installation frequency statistics and device lifecycle analysis, providing data-driven decision support for device updates and maintenance resource allocation.

Upgrade Automated Matching: Integrate daily changes in asset ledgers to complete dynamic data such as personnel information and

synchronize incremental data in real time, reducing manual maintenance costs.

Improve Reminder Delivery Methods: For scenarios where a single computer undergoes multiple system reinstalls generating multiple installation timestamps, adjust reminder calculation rules so that the most recent system installation time is used as the reference, triggering reminders when three months have elapsed.