Challenges Faced While Automating ERP (INFOR)

Infor LN FP7 (On-Premise Version)

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This whitepaper outlines the significant challenges faced during the automation of Infor ERP systems and offers insights into potential limitations and associated solutions.

1. General Challenges in Automation

Applications such as web applications and ERP systems often present significant challenges in automation due to the following reasons:

Identification of User Interface Objects: Applications may not expose selectors, IDs, or classes for elements on the web page.

Solutions:

Solution #1: Surface Automation

- **Limitations:**
  - Complexity in accurately obtaining element coordinates.
  - Minor changes in font type/style can disrupt automation.
  - UI customizations post-development affect automation stability.
    In attended BoT scenarios, concurrent work on another application is not feasible.

Solution #2: Desktop Automation

- **Limitation:**
  - Some customers do not permit desktop automation, leaving surface automation as the only viable, although complex and time-consuming option.

2. Performance Issues

Infor frequently utilizes pop-up windows for data entry or warnings, complicating automation script management.
The platform can experience slowdown due to large data processing, leading to timeouts or failures if wait times are improperly managed.

Solution:
Implement intelligent waiting mechanisms like "Wait for Element" with dynamic timeouts to ensure bots don't timeout due to page slowness.

3.   Asynchronous Event

Infor triggers asynchronous processes (e.g., data uploads, report generation) in the background.

Solution:

- o   BoT must implement smart wait mechanisms to ensure processes complete before proceeding.

4.   Browser – Specific Challenges

Infor operates across various browsers (Chrome, Firefox, IE), but elements may behave differently, causing automation inconsistencies. Issues may arise with dropdowns, pop-ups, or JavaScript-heavy components.

Solution:

- o   Analyse the INFOR recommendation on supported browsers and develop BoT accordingly.
- o   Cross-Browser Testing: Perform extensive testing on all supported browsers and create browser-specific automation scripts if needed. RPA tools allow configuring scripts for multiple browsers like Chrome, Firefox, and IE, ensuring consistent results.

5. Complex Authentication and Security Protocols

Organizations often use Single Sign-On (SSO) or Multi-Factor Authentication (MFA), complicating the automation of login processes that involve token-based authentication or captcha handling. Session expirations can also disrupt automation flows.

Solution:

- o   BoT must incorporate:
- o   Session management logic for seamless re-authentication.
- o   Human intervention for certain steps.

6. Data Handling & Accuracy

Infor processes large volumes of data (e.g., transaction records, invoices). Automating data extraction, processing, and validation require optimized logic to prevent performance bottlenecks. Exporting extensive reports or managing numerous records can strain both the BoT and the underlying system.

Solution:

- o BoT needs to incorporate smart Exception Handling mechanisms to ensure the synchronization of BoT with the ERP processing.

7. Frequent Software Updates & Patches

Regular updates to Infor can alter the layout, structure, or workflows, potentially breaking existing automation scripts. Continuous monitoring of system updates and subsequent testing of automation scripts is essential.

Solution:

- o After each Infor update, analyse the update release notes for possible changes impacting automation, update BoT accordingly and run regression tests to detect any broken workflows. Set up test environments with the latest updates to evaluate automation stability.

8. Pop-ups and Modal Windows

Infor often employs modal windows or pop-ups for confirmations and data entry. These can interrupt automation flows if not appropriately managed.

Solution:

- o Configure the possible pop-ups/alerts in the BoT and Use actions like "wait for element"

9. Report Generation and PFD Automation

Infor generates reports that require exporting in various formats (Excel, PDF). Automating these processes can be challenging due to inconsistencies in file formats and potential failures in report generation.

Solution:

- o Set up retries and error-handling logic specific to report generation failures. For example, if a report download fails, the BoT should automatically retry after a specified delay or trigger an alert to notify the relevant User for manual intervention.

Extracting data from PDF reports necessitates robust Optical Character Recognition (OCR) or PDF parsing capabilities, which may struggle with complex formatting.

Solution:

- o In case of PDF automation, if OCR accuracy is low, consider using advance AI based built-in OR third party Intelligent Document Processing tools.

10. Customizations in the Infor Implementation

Many organizations customize their Infor ERP deployments with tailored dashboards, forms, and workflows. Such customizations complicate automation since bots designed for standard interfaces may fail in highly customized environments.

Solution:

- o Work with IT teams to standardize as much of the Infor interface as possible.

11. General Best Practices: To overcome the challenges faced Automating INFOR

- • Develop a strategic launch plan that includes time for testing and training employees.

- • Ensure thorough testing of workflows, address compatibility concerns through updates or alternative solutions.