



RSAT Automation Testing Helps Steel Manufacturer Reduce Manual Verification and Optimize ERP Solution Quality

CASE STUDY

Customer: A manufacturer of prime quality steel products

Industry: Mining and Metals

Profile: The client produces prime quality steel products from recycled scrap steel for the mining, construction, automotive, and engineering industries.

Services: Dynamics QA

Business Need

The steel manufacturer was using Dynamics 365 F&O to run day-to-day operations of their business. Because the manufacturer was part of a larger enterprise, with the segregation of the companies, their production environment was duplicated into a new instance. This instance still contained all customizations that were mainly focused on parent company processes. As a result, such customizations needed to be removed for other entities/child companies, in order to make their processes simple. To ensure the ERP solution worked optimally after removing customizations, thorough manual testing of different modules, which was repetitive in nature needed to be done.

The manufacturer wanted to engage with a provider who could analyze various processes that were executed within D365F&O and create automated testing scenarios that could be utilized at every platform upgrade to significantly reduce manual verification efforts. This would enable users to leverage capabilities of the latest version of their Dynamics solution.

Since the manufacturer is one of the clients of a Microsoft VAR Synoptek acquired in 2019, they reached out to Synoptek to fulfil this Dynamics QA requirement.

Solution and Approach

To meet the manufacturer's requirement, Synoptek, a Microsoft Gold Partner, adopted RSAT – Microsoft's automation tool for D365F&O testing – to automate many of the D365F&O processes. The tool not only helped us in reducing the time and cost of testing, it also allowed functional users to record business tasks and then convert the recordings into a suite of automated tests - without having to write source code. Since the tool is fully integrated with Microsoft Azure DevOps, it resulted in seamless test execution, reporting, and investigation.

The Synoptek QA team performed the following activities:

- Listed down 100 pre-recorded scripts as provided by the manufacturer which had basic end-to-end flow of different AX and D365 FO processes.

Two scenarios listed below:

Purchase Order

- Create Purchase Order > Add Purchase Order line with quantity, Discount, Unit Amount > Validate Net amount > Save the Purchase Order.
- Open the Purchase Order as created above > Submit for approval to confirm > Reassign to Admin user > Approve the workflow > Confirm the Purchase Order > Validate the line-item number, quantity, net amount, etc. in Purchase Order confirmation journal.
- Open the Purchase Order as created above > Post the product receipt and validate the line-item number, unit amount, net amount, etc.
- Open the Purchase Order as created above and validate the status of purchase order as Received > Post the invoice and validate the line-item number, unit amount, net amount, etc.

Sales Order

- Create New Sales order > add line-item with quantity, Discount, Unit Amount > Validate Net amount > Save the Sales Order > Confirm the Sales Order > Validate details in Sales Order confirmation journal > Pick and post the packing slip and validate the details > Post the invoice and validate the details in invoice journal > Validate the Sales Order status.
- Understood the complete end-to-end flow of each scenario and identified fields for which validation was required.
- Saved and uploaded the recorded script on LCS, fetched and added the script to the test plan on DevOps, and loaded the script on RSAT to generate the input parameter file.
- Changed the value of each parameter in the file according to the business scenario and ran the script from RSAT.
- Uploaded the latest files to Azure DevOps from RSAT after successful execution and verified the result on DevOps.
- Executed test scenarios again using RSAT, whenever required, and re-worked on test scripts when new changes were made in the processes.
- Provided training material for using RSAT and made sure the manufacturer had complete understanding of how to perform the RSAT steps.

Azure DevOps DynamicsQA / DynamicsQA / Test Plans / D365FO-Standard Processes

Oct 22 - Oct 29 **Past** 97% run, 90% passed. [View report](#)

Test Suites

- D365FO-Standard Processes
 - General Ledger/Cash & Bank Management/Budgets
 - 1.1 - Bank Accounts (3)
 - 1.2 - Exchange Adjustment (5)
 - 1.3 - Journal Entry Management & Upload (5)
 - 1.4 - Journals and journal processing (5)
 - 1.5 - Period Close (4)
 - 1.6 - Create Budgets (5)
 - 1.7 - General Ledger - Budget Process (2)
 - Account Payable
 - 2.1 - Generate Payments including EFT File/Remittance... (..)
 - 2.2 - Matching Vendor Invoices to Purchase Orders (2)
 - 2.3 - Vendor invoice processing (1)
 - Accounts Receivable
 - Procurement and Sourcing
 - 4.1 - All Purchase order (18)**
 - 4.2 - Purchase Requisition management (5)
 - 4.3 - Request for Quote Scenarios (3)
 - Fixed Assets
 - Sales and Marketing

4.1 - All Purchase order (ID: 231)

Define **Execute** Chart

Test Points (18 items)

Title	Outcome	Order	Test Case Id	Configuration
[RSAT-D365FO-STD] 4.1.1 - Creation of Purchase Order from Request for Quote	Passed	1	256	Windows 10
[RSAT-D365FO-STD] (P) 4.1.2 - Creation of Purchase Order Manually	Passed	2	257	Windows 10
[RSAT-D365FO-STD] (C) 4.1.2.1 - Confirmation of the Purchase Order	Passed	3	258	Windows 10
[RSAT-D365FO-STD] (C) 4.1.2.2 - Single Product Receipt for Purchase Order	Passed	4	261	Windows 10
[RSAT-D365FO-STD] (C) 4.1.2.3 - Single Invoice for Purchase Order	Passed	5	262	Windows 10
[RSAT-D365FO-STD] 4.1.3 - Multiple Purchase Confirmation Version	Passed	6	264	Windows 10
[RSAT-D365FO-STD] (P) 4.1.4 - Multiple Product Receipt for Purchase Order	Passed	7	266	Windows 10
[RSAT-D365FO-STD] (C) 4.1.4.1 - Multiple Invoices for Purchase Order	Passed	8	268	Windows 10
[RSAT-D365FO-STD] 4.1.5 - Cancellation of Delivery Remainder	Passed	9	270	Windows 10
[RSAT-D365FO-STD] (P) 4.1.6 - Partial Product Receipt for Purchase Order	Failed	10	272	Windows 10
[RSAT-D365FO-STD] (C) 4.1.6.1 - Partial Product Receipt for Purchase Order- Posti...	Passed	11	274	Windows 10
[RSAT-D365FO-STD] 4.1.7 - Correction of Product Receipt	Passed	12	277	Windows 10
[RSAT-D365FO-STD] 4.1.8 - Cancellation of Product Receipt	Passed	13	278	Windows 10
[RSAT-D365FO-STD] 4.1.9 - Under Delivery of Purchase Order	Passed	14	281	Windows 10
[RSAT-D365FO-STD] 4.1.10 - Over Delivery of Purchase Order	Passed	15	282	Windows 10
[RSAT-D365FO-STD] 4.1.11 - Multiple Product Receipts, Same Vendor, Multiple Pu...	Passed	16	284	Windows 10
[RSAT-D365FO-STD] 4.1.12 - Cancel a Purchase Order	Failed	17	286	Windows 10
[RSAT-D365FO-STD] 4.1.13 - Delete a Purchase Order at Open Status	Passed	18	288	Windows 10

Azure DevOps DynamicsQA / DynamicsQA / Test Plans / Runs

Enter Run ID... [Go](#)

Recent test runs

Test runs Filter

State	Run Id	Title	Completed Date	Build Number	Failed	Pass Rate
Needs investigation	1080	4.1 - All Purchase order	8/12/2021 6:12:34 AM		2	0%
Completed	1078	4.1 - All Purchase order	8/12/2021 6:12:21 AM		0	100%
Needs investigation	1076	1.2 - Exchange Adjustment	8/12/2021 6:08:54 AM		2	0%
Completed	1074	1.2 - Exchange Adjustment	8/12/2021 6:08:47 AM		0	100%

Azure DevOps DynamicsQA / DynamicsQA / Test Plans / Runs

Enter Run ID... [Go](#)

Recent test runs

Test runs

1078: 4.1 - All Purchase order...

Run 1078 - 4.1 - All Purchase order

Run summary Test results Filter

Update comment Add attachment

Summary

Completed 17 minutes ago. Ran for 01 seconds

Run type
Owner
Tested build
Release
Release Stage
Build platform
Build flavor
Test settings
MTM lab environment

not available
not available
not available
not available
not available
Default
not available

Comments

No comments

Error message

No error message

Attachments ()

Outcome

16

Passed

Outcome by priority

2

Passed

Outcome by configuration

1

Passed

Outcome by failure type

None

Passed

Outcome by resolution

Business Benefits

Synoptek's Dynamics QA Services enabled the manufacturer to achieve several business benefits:

- Allowed the manufacturer to test an exhaustive list of scenarios in contrast to limited scenario testing by their in-house functional team
- Automated end-to-end D365F&O scenarios and helped in minimizing manual verification efforts by 40 to 50%
- Made it easy for the manufacturer to identify at what stage a script fails and the reason behind it
- Enabled scripts developed for one entity to be reused across multiple entities, thus saving them substantial time in testing by completing the project in 5 months
- Ensured that the MODs were properly analyzed, migrated, or removed according to customer needs, assuring data integrity
- Removed over 115 customizations with zero data issues, improving the functionality and performance of D365F&O platform while ensuring optimum results and ROI from their Dynamics investment



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Removed over **115** customizations with zero data issues

About Synoptek

Synoptek is a global systems integrator and managed IT services provider, offering comprehensive IT management and consultancy services to organizations worldwide. The company works in partnership with clients of all sizes – from mid-market to Fortune 100, and for over two decades, its focus has been to provide maximum business value to its clients, by enabling them to grow their businesses, manage risk and compliance, and increase their competitive position. Synoptek is committed to delivering improved business results and unmatched service to every client, every time.



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