



**QuickSync Case Study document for a Leading
Medical Devices & Equipment Manufacturing Company**

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About the Client

The client is a multinational medical technologies corporation based in the US and one of the world's leading medical technology companies. Internationally, their products are sold in over 100 countries through company-owned sales subsidiaries and branches as well as third-party dealers and distributors.

They used the MF ALM tool to manage their Projects, Testing and QA activities prior to the migration requirement. Post-migration, they wanted to shift their legacy data and project work into the Azure DevOps tool.

Change Management is hard, but it is nothing you can't handle with the right solution. The company approached Kovair for a dependable and cost-effective solution, to migrate the project data from MF ALM to ADO.

Business Need

The multinational medical technologies corporation needed to shift some of the legacy application data, from its legacy data platform MF ALM to the modern Azure DevOps platform.

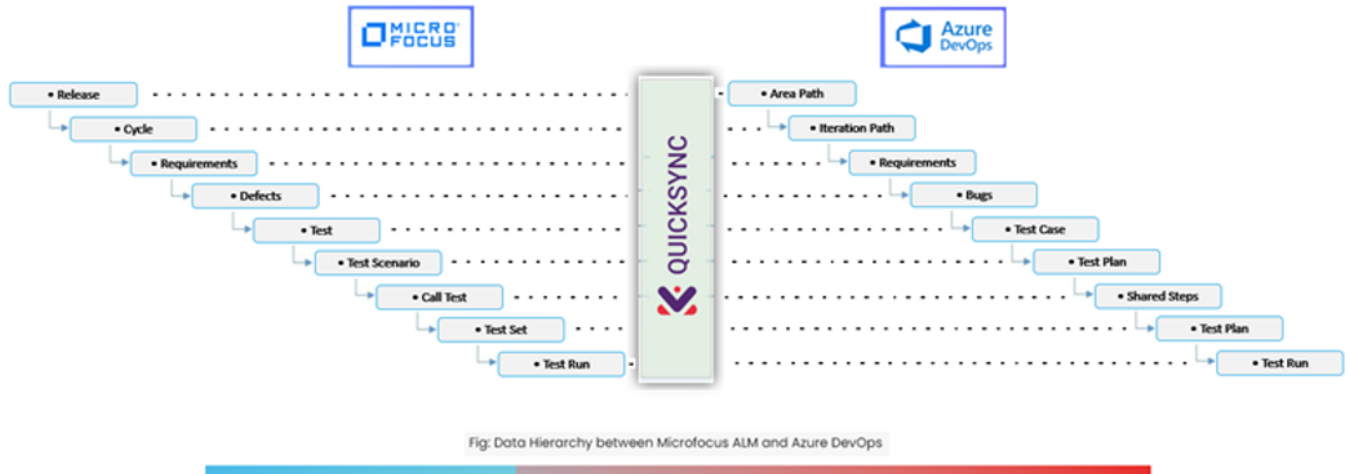
The data migration activities included a myriad of smaller tasks and incremental steps to successfully migrate data from ALM to ADO. The requirements, releases, cycle data, as well as test cases (which are available under test plan) from MF ALM to be moved to ADO.

- ✓ All linked items (Tests, Requirements, Defects etc.) to be moved for each Requirement from MF ALM to ADO.
- ✓ All History and Audit Trail for approval to be copied to ADO from MF ALM for all requirements.
- ✓ Acceptance Criteria, Description and Comments successfully copied over.
- ✓ All Attachments, along with Requirements, for each Release & Cycle to be moved to ADO.
- ✓ Same folder structure to be followed in ADO for Release & Cycle, as it is in MF ALM.

Kovair Flexible Architecture

Kovair QuickSync has been trusted, used, and appreciated by several small, medium and Fortune 500 companies globally. Kovair QuickSync has carried out many migration projects since its inception.

The client evaluated various alternative vendors; however, their requirement was to acquire a platform that possesses the necessary flexibility to seamlessly adapt to their specific business needs.



Kovair Role

To successfully transfer large amounts of data from numerous projects necessitates a profound comprehension of data migration processes, as well as the knowledge of associated methodologies and potential challenges inherent in such a complex endeavor.

The client sought an entity possessing the requisite expertise and proficiency to construct and execute a feasible and economical solution that would successfully guide the organization through the migration process. The organization found this expertise at Kovair Software.

Challenges

Data Migration from one tool to the other always brings along certain challenges as mentioned below:

- The volume of data to be migrated from MF ALM can be cumbersome on a migration tool and migrating these datasets without automation is a NVA (non-value added) process for any organization.
- Specific inter-relationships from within the data is always required to be migrated. Each of these specific relationship's linking needs to be properly mapped within the migration tool. Inter-relationships were to be migrated along with any Linked defects for each test run to be copied.
- Being cross-vendor tools, one from MF and the other from Microsoft, there exists no out-of-the-box connectivity between ALM & ADO.
- MF ALM and Microsoft Azure DevOps have contrasting differences in the data models for various artefacts.

- Records from multiple MF projects are usually required to be migrated into Azure DevOps projects. Merging items from multiple MF ALM projects to Azure DevOps project is another aspect of the migration complexity.
- Synonymous to entity mapping, there exists an equally important requirement of user mapping. In most cases there exist several Active Directory users who will not be having access to the Azure DevOps organizations. Mapping and migrating those users add to the deliverable challenges.
- All Attachments and Comments associated with all MF ALM artefacts - including Design Steps and Call Tests are consistently to be migrated into Azure DevOps. Change(s) history (audit log) data are moved as comment in ADO.
- Since data is business and the client cannot afford to lose business, the data quality is always of utmost importance. Data sanity is to be ensured to uphold the quality standards needed during the scope of any migration.
- A stringent timeline was declared by the client as after onboarding of the resources to Azure DevOps, MF ALM will not be used any more, but till that date, the QA team members were rigorously working in MF ALM for an upcoming release. So, no downtime and the delta load of newly created or updated data needed to be accommodated within a very small window.
- MF ALM has the capability to add single Test Case multiple times in a Test Set for execution, on the contrary ADO doesn't allow to add a single Test Case multiple times in a Test Suite. The problem is, if the sequence of Test Cases is not maintained after migration, then the execution sequence will be ruined, and Testers will not be able to follow the running steps.
- Test Cases in MF ALM were reused in different Test Sets during different Releases and Cycles. Each of these Test Instances hold the relation with multiple Release Cycles. This data was critical to the client as they needed to identify which Test Case has been used in how many Cycles.

All these challenges added up to the complexity of the data migration and the quality of migration of the data needed to be verified.

Kovair Solution

Kovair, in the first step of the migration, started understanding the data structure and reaching a consensus on the migration use cases. Kovair used its migration and synchronization solution – [Kovair QuickSync](#) for migrating the legacy data.

As part of the **ALM to ADO** migration, Kovair had to investigate Requirements, Test Cases, Test Runs, Defects, and cross-check Artefact relationships.

QuickSync tool was installed in multiple VMs of this organization for parallel execution and adhering to the timeline. With simple mouse clicks, the mapping of the Projects, Artefacts, and Fields between MF

ALM and ADO was completed. The customer performed shakeout testing in their staging environment and once the customer was satisfied, we moved to production migration.

Requirements Migration:

1. In MF ALM, Folders are considered as a Requirement type, hence we migrate the entire Folder hierarchy of Requirements along with the Functional Requirements into the Requirements Work item in Azure DevOps.
2. The Folder hierarchy is maintained with the help of a Parent-Child relationship.
3. Link type “Tested by” used for Requirement to Test Case relationship.
4. Relation between Requirement to Release of ALM appear as relation between Requirement to Area path in ADO.
5. Relation between Requirement to Cycle of ALM appear as relation between Requirement to Iteration in ADO.
6. In ALM there is a provision for linking multiple Release/Cycles with a Requirement, but the client team confirmed that no Requirement will be linked with more than one Release/Cycle. So, QuickSync retrieved the latest Cycle linked with each Requirement and established the relationship in ADO.

Comments Migration:

1. Multiple comments were consolidated and migrated in Azure DevOps as expected with each Record.

Traceability Migration:

1. Traceability relationships between Release to Requirements, Requirements to Tests, Tests to Defects, Defects to Release and Cycles, Runs with Defects etc. were astutely migrated.

Test Artifacts Migration:

1. The folder names and Test Cases names in ADO were kept the same as in ALM, as required by the client.
2. All Attachments of ALM Test Cases, Requirements, Defects were migrated to ADO. Kovair QuickSync has the capability to migrate the Attachments associated with Design Steps.
3. All the Attachments linked with the Test Instances were accurately reflected in the corresponding Test Cases.

4. Multiple Test Instances were linked with multiple Cycles, such that the latest Cycle information appeared in the Test Case. But the entire Cycle information for each Test Instance was copied to ADO in a multi-valued lookup.
5. For the criteria-based Test Run migration QuickSync's Advanced filtering mechanism was used. Only the desired Test Runs were migrated eliminating the Trial Run records.

Addressing the Delta Load migration:

1. During the migration, the QA team continued their test execution in MF ALM. So, as a result they continued to add Defects, updating existing ones establishing links with Test Cases and Runs. Kovair QuickSync identified these changed and newly added records with the help of criteria-based migration and addressed the delta load within a very small window for transition between the tools.

Kovair QuickSync Business Values

Some of the notable USPs of using [Kovair QuickSync](#) standalone product, in comparison to similar tools that are available in the market are as follows:

- **Easy** tool installation and quick initial setup.
- **Consistent migration** of exposed artifact records, attachments, comments, and relationships between artifacts. The implementation of connection, entity and field mapping creates a hierarchy of data flow logic.
- **No need to halt work** since your employees can continue to use the tools being considered during data migration or syncing. Even if there is a change in the source tool data set, sync it to the target tool in a one way or bi-directional flow.
- **Cost benefits** due to reduction in infrastructure costs which helps to reduce the bottom-line expenses in the long run.
- **Reusable template-based migration** enables you to create a configuration once and reuse it for other projects. Download template, import, or export at a click of a button for any repetitive work.
- Bank on a **real-time monitoring** facility to check status. QuickSync provides on-screen monitoring of migration status providing a real-time update on the health of migration. Easy monitoring capabilities having an objective and subjective statistical view of the state of migration with reports and logs.

- **In-built recovery mechanism** and re-migration capability to prevent any loss of data that's being transported. You can easily watch out on 'Success' or 'Error' statuses and opt to re-execute the ones that failed.
- Generate **on-screen reports** for quick analysis of data volume that is getting migrated. There are various metrics and reports to monitor according to the need.
- Save your tiring effort and time with our automated **data checker** that generates post-migration data comparison reports for data validation.
- **Parallel migration** and **multi-hosting** capabilities empower you to transport a large volume of data at comparatively quicker rates.
- Use **single window monitoring** for observing the migration progress being executed from various VMs without remotely logging into them.
- **Codeless configuration** for mapping the MF ALM Projects, Entities and Fields to the ADO counterparts.
- **Simple licensing** is based on the successful transactions across all configurations and all projects by any number of users.
- **Transformation:** Supports transformation and overriding of data during migration.

Project Execution Overview

The Kovair team proficiently carries out essential tool configurations, encompassing tasks such as establishing connections, mapping projects, mapping users, mapping entities, creating business flow, and installing the Windows service. Subsequently, the migration process is executed seamlessly and autonomously, eliminating the requirement for constant supervision.

In the first phase of the migration project, Kovair team completed the necessary tool configurations such as creating connections, mapping projects, mapping users, mapping entities, and creating business flows. Multiple shakeout tests were done with some data sets to validate the configuration and data integrity in staging instance.

In the second phase of the project, the configuration was imported to the production instance and the migration occurred automatically without the need for continuous review.

In the third phase of the project, the delta load had been addressed and the validation report was generated after verification of the migrated records.

Statistics and Achievements

- Over 200000+ data migrated from MF ALM tool.
- Migration transaction rates at around 100+ records per minute.

- Migration was executed from parallel 10 Windows boxes simultaneously.
- Entire migration had been executed in less than 2 months with zero downtime from end users.
- Less than 0.01% reported issues.

Conclusion

Kovair QuickSync allowed the client to overcome all challenges of data migration and move within a few months in an incremental manner. The complete data was successfully moved from MF ALM to ADO by maintaining the hierarchy and relationships of the record(s) across artefacts.