



How Emerson Successfully
Migrated Data from
HP QC 9.2 to TFS 2015 Using
Kovair QuickSync

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Kovair Software is a Silicon Valley based software Product Company specializing in the domain of Integrated Application Lifecycle Management - ALM solutions. Our objective is to make the software development process better, faster and collaborative – anytime, anywhere, using any tool, platform and technology. Kovair’s focus on integrating third party best-of-breed tools enables creation of applications in a synchronized tools environment.

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Introduction

Emerson Electric Co. is an American multinational corporation headquartered in Ferguson, Missouri, United States. This Fortune 500 Company manufactures products and provides engineering services for a wide range of industrial, commercial, and consumer markets. They used HP QC 9.2 to manage their Testing and QA activities. Based on organization-wide changes in their internal software development processes and policies, Emerson decided to move from HP QC 9.2 to Microsoft TFS 2015. This meant all the accumulated data in HP QC needed to be migrated to TFS where the future QA activities would be performed. At the Organizational level, they wanted to reuse the existing investment in tests.

With this data migration objective, the company approached Kovair for a suitable and cost-effective solution.

Challenges

The migration initiative presented the following challenges -

- ❖ The primary requirement was the migration of the Defects and Test Cases organized in hierarchical folders.
- ❖ Interrelationships were to be migrated – in HP QC, Tests and Defects were not only directly linked but also there were links between Tests and Defects via Test Run, Run Step and Test Instance. All these link types had to be converted into a single direct link between Test and Bug in TFS. Conversion of links during the data migration was a challenging task.
- ❖ The volume of data to be migrated from HP QC was in thousands and migrating these without automation was a mammoth task.
- ❖ Being cross-vendor tools, one from HP QC and the other from Microsoft, there exists no out-of-the-box connectivity between these tools.
- ❖ HP QC 9.2 and TFS 2015 have contrasting differences in the data models for various artefacts.
- ❖ Records from multiple HP Projects were to be migrated into TFS Projects based on a defined logic. Tricky part being merging items from multiple HP QC projects to fewer structured TFS projects.

- ❖ All Attachments associated with all HP QC artefacts including Design Steps were to be migrated to TFS.
- ❖ Fields of HP QC Defects like Verified in Version, Detected in Version, Detected By, Created By and Creation Date was required to be clubbed together and migrated to TFS to a single Multiline Text field System Info in a given format.
- ❖ There were more than 120 users to be mapped between HP QC and TFS.
- ❖ Last but not the least, one of the biggest challenges was to develop QuickSync without any access to HP QC 9.2, as the version was too backdated and the corresponding downloadable was not available in their website. Therefore, Kovair had to develop QuickSync and perform the necessary testing at Emerson environment itself.
- ❖ 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 data.

QuickSync tool was installed in a server of this organization. Setting up the configuration involved a negligible manual effort. This effort mainly consisted of mapping the Projects, Artefacts, and Fields between HP QC and TFS. Once done, the rest of the migration was a swift automated process. The configurations were easy since QuickSync does not require any single piece of code to be written for doing the same. The configuration can be accomplished with simple mouse clicks. Once the configuration is completed, the customer performed shakeout testing with multiple sample data sets in their staging environment and once the customer was satisfied with the testing result, we moved to production migration.

The migration took care of the most complex challenge – the contrasting data structure in the following ways:

- ❖ The HP QC Defects were migrated as Bugs in TFS.
- ❖ HP QC Tests were migrated as Test Cases in TFS by maintaining the same Test Plan hierarchy.
- ❖ Apart from the artefacts, the corresponding attachments, comments, user values, and the relationship links between Defects and Test Cases were also migrated.

Kovair QuickSync also facilitated the users to view the statistics of migration. The total number of successful and failed migration can be viewed from QuickSync. In the case of failed migration, the detailed log of the objects and the reasons for failure were available from one of the built-in monitoring reports of QuickSync.

A validation report was generated post-migration for each project to verify the success of the migration. The validation report had the details like HP QC Project, TFS Project, HP QC ID, TFS ID, HP QC Artefact Title, TFS Artefact Title, and Migration Status.

Kovair QuickSync Business Values

- ❖ Preserving the existing investment on test tool by Emerson.
- ❖ Easy tool installation and quick initial setup.
- ❖ Codeless configuration for mapping the HP QC Projects, Entities and Fields to the TFS counterparts.
- ❖ Successfully migrated thousands of records including Tests and Defects to TFS.
- ❖ Easy monitoring capabilities having an objective and subjective statistical view of the state of migration with reports and logs.
- ❖ Retry mechanism for any unsuccessful migration.
- ❖ Simple licensing based on the successful transactions across all configurations and all projects by any number of users.
- ❖ 100% Migration with zero failure.

Project Execution Overview

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 in order to validate the configuration and data integrity in staging instance.

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

In the third phase of the project, the validation report was generated after verification of the migrated records.

Conclusion

Kovair QuickSync allowed Emerson to overcome all challenges of data migration and move from HP QC 9.2 to TFS 2015 within a few months in an incremental manner. The complete data got successfully moved from HP to TFS by maintaining the hierarchy and relationships of the record across artefacts.