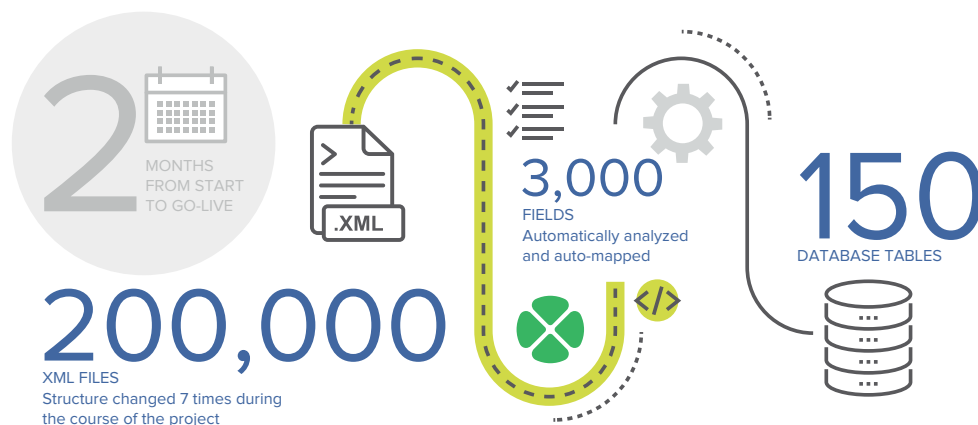


Automated Data Migration

With an automated data mapping framework built with CloverDX, a multinational software company was able to completely rethink their project plan to successfully deliver a complex data migration within a tight two-month schedule.

CloverDX developed a data analyzer and an automated mapping framework that allow a software company to migrate a highly complex, repeatedly changing structure of XML data into a pre-defined database structure. The solution was able to both automatically detect changes to the XML structure and adapt to these changes without intervention.



A Tight Schedule For Data Migration

Our client was tasked with migrating thousands of critical manufacturing formulas from a legacy manufacturing management system into a new management platform.

It was clear that they would not be able to meet the deadline with a custom solution

They were faced with a tight deadline — to deliver all the data into the new platform within two months — and it was clear that they would not be able to custom code a solution that could automatically detect and adapt to still-evolving input data formats in time.

Automated Analyzer To The Rescue

Given the complexity of incoming data and the continuous changes to its structure, we designed a solution that would automate the process.

Initially, the client had a development team considering the problem and working with scripts for individual data structures separately. However, with almost 200,000 XML files with constantly changing schemas, they realized this approach could not scale quickly enough.

After a brief analysis, our services team quickly built a Proof of Concept demonstrating an automated analyzer that recognizes XML elements and attributes and automatically creates mapping documents, all without requiring consultants' input. After realizing the efficiencies gained by leveraging the automated nature of the PoC, we quickly agreed to take the prototype into implementation. Fueled by the success of the initial architecture, we were able to achieve a successful migration within two months.

LEARNING

- It would be impossible to migrate so many different data structures without automation. We had to think creatively to avoid repeating tedious work that had previously slowed the project down.
- Even with plentiful resources in the company's development team, it still wasn't possible for them to scale their efforts fast or effectively enough to meet the deadline. With automation, our services team instead delivered the project on time, accurately, and with a smaller team.

Moving Forward

A migration is always an iterative process that continues beyond the go-live. Additional changes and data sources often follow. Having a reusable architecture based on CloverDX enables the company's team to tackle further changes in data or structures.

"I would like to take this opportunity to say thanks to the whole team for working with us to make this happen on time, especially with the time constraints regarding the go-live. Looking forward to working with this team in the future."

Solutions Architect

CHALLENGES

- Customer timeline was only 2 months
- Mapping 3000 fields into 150 database tables
- XML structures changed 7 times during the project
- Effort started in the middle of the project
- Requirements were added throughout the project

RESULTS

- Automatic detection of XML structure changes and target mapping
- Resiliency to the changing input data structure without intervention
- Successful processing of 200K XML files generically
- Generic configuration and solution for database data loading
- Extensible reconciliation framework for managing data issues and errors

DELIVERY

CloverDX Professional Services

The project was implemented by our services team during a roughly five-month period.

CloverDX Cluster, 1 node

The solution is powered by a single node CloverDX Server running the automated data analyzer, database loader, and reconciliation.

Platform



XML files
~200,000



CloverDX Cluster
single node



Product Lifecycle
Management System
manufacturing management