

ING Bank Turkey: DevOps Leads Dramatic Development Turnaround

A Testament to Before-and-After
DevOps Implementation



ING Bank Turkey's extensive development department had no database source control and relied on an internal, object-based release automation program. Whenever a release was made, they often found themselves scrambling for solutions as production went awry and downtime costs added up. This situation was compounded by a lack of the right release automation tools to understand where things had gone wrong.



The Company

ING Turkey ("ING") develops in-house core banking software and uses nearly 150 database schemas for accounting, cash management, CRM, and forex development. All of ING's development teams use databases through PL/SQL and database-side business logic.

Nearly four years ago, ING began a transformation process to increase the efficiency of their development teams, and has been working with a standard practice for the past three years. To this end, ING created a pipeline, middleware, and user ware, but had yet to adopt a standardized approach to the database.

The Challenge

The lack of database source control had serious ramifications. Programmers could override previous changes; it was unclear which tasks were going to production; and there was no certainty of deploying a tested application to production. At times, 15 developers were working on the same schema, or on the same objects, and so there were lost and forgotten changes, and changes not included in releases. Moreover, there was no correlation between physical changes and business requirements, and it was not possible to associate business tasks with database changes. As a result, ING experienced:

- Production downtime.
- Code that passed UAT but which failed on production.
- Developers generating scripts on the day of production release, scripts missing changes and objects, and difficult regression testing.
- No clear vision of what was in production, and no real definition of a version.
- Releases to production that were unintentionally different from previous releases.

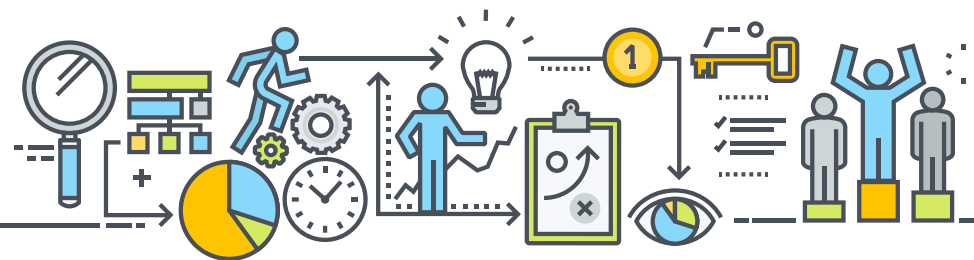


The Solution

ING's needs were quite evident. They required a solution to enforce source control, ensure that new developers followed proven change processes, and provide one shared environment with clear visibility of tasks and activities. Any acceptable solution would need to implement a unified automated release process that included permissions plus support for different teams and their cherry picking activities. Finally, ING wanted a product that could integrate with other tools such as Jenkins, Microsoft TFS, and their own internal mechanisms.

It took time for ING to find the right fit. They discovered that most products were too focused on schema comparison, did not help solve source control challenges, and required significant process changes for developers. In general, most solutions were not easy to implement and not integrated with the database itself, while some changes could be implemented in the database but not in TFS.

However, after evaluating DBmaestro, ING thought it had a winner. DBmaestro's solution was implemented in November 2017 and was soon producing results. The first production release was in January 2018 and enabled a blueprint for other projects. By May, ING had onboarded 40 projects, onboarding a total of 70 projects by July.



The Results

From a technology standpoint, DBmaestro's source control provided a clear and straightforward path for all developers while supporting both simple and complex databases. DBmaestro delivered an automated build process for different teams and tools, and generated scripts based on tasks to support cherry picking and versions as needed by various teams. Additionally, with DBmaestro, ING finally had clear version definitions with identifiable work items and no longer had to suffer from lost code, manual steps before a release, wrong dependencies, or incorrect scripts. Finally, the DBmaestro solution provided additional functionality including roles, policies, and measurements.

As a result, ING's software teams became much more efficient and faster in meeting business goals. The overall process of development accelerated while downtime was reduced. ING also benefitted from improved regulatory compliance, particularly with SOX.

ING now has close to 100 developers working with source control and only two DevOps people are required to run all of ING's operations. DBmaestro is also the force behind ING's larger projects—when there are a lot of changes, half a day of manual work is now reduced to a few minutes of automation. Lastly, DBAs are now used more efficiently and only need to provide approvals, whereas they once needed to check scripts, databases, permissions, and other factors.



“We saw what was out there, and DBmaestro was the clear winner! This is the best database DevOps tool we’ve ever seen, from source control to release management. DBmaestro helped us to include database changes in a continuous delivery pipeline. We’ve reduced our database deployment risks and now efficiently manage our dev/test/prod databases.”

Önder Altinkurt
Technology Product
Manager
ING Bank Turkey

With DBmaestro, ING has clarity and visibility into release processes and influenced objects.

As an additional safety net, DBmaestro also runs daily validations for production to highlight out of process changes and potential pitfalls.

ING’s Bottom Line:

Quality of releases has improved while reducing the number of late changes and rework!

