

NTT DATA migrated MX.3 to AWS for an international airline, enhancing agility and efficiency with an end-to-end managed service.



The client context

The client is an international airline corporation that has used Murex's MX.3 platform to manage its treasury since 2015. In 2019, NTT DATA was brought in to manage the first-level technical and functional support of the solution. Throughout interviews with various stakeholders, the NTT DATA team identified a series of challenges that the client was facing and suggested migrating to a more efficient service model leveraging cloud technology.

The main challenges that were identified:



The maintenance of the infrastructure was distributed among several providers. MX.3 was hosted on-premises and supported by several IT teams.



The process of launching new developments was rigid and complex, leading to a lengthy time to market.



The infrastructure was outdated and the MX.3 operating system and database had to be upgraded to continue to benefit from Murex's support.

The NTT DATA team developed a business case on migrating MX.3 to the cloud and after presenting the positive results, the client agreed to start the project and evolve its support model to an end-to-end managed service provided by NTT DATA.



The main benefits for the client:

Optimize resources.

Use hardware capabilities only when necessary (pay-as-you-go), with full billing transparency.

Scale up and down.

Scale the MX.3 infrastructure up and down, leveraging the unlimited capacity offered by AWS.

Accelerate the provision.

Accelerate the provision of the MX.3 environment from days to minutes.

Reduce TCO and time to market.

Reduce TCO and time to market for new projects through automation and immediate hardware availability.

Simplify and automate.

The MX.3 environment management activities are evolving toward a CI model, reducing operational risk.

End-to-end switch.

Switch to an end-to-end managed service by NTT DATA, increasing efficiency and reducing dependencies by transitioning from five different support teams to just one.

Project execution

The migration to the cloud was initially planned as a lift and shift, but during the assessment phase of the project it was redefined because some on-premises features were obsolete. Others could not be migrated to the AWS architecture. The multi-phase project lasted nine months, after which the MX.3 production environment went live in AWS.

The project was split in four different phases: assessment, build, testing and go live

01 During the **first phase**, the team performed an **initial assessment** that included a detailed analysis of the security and third-party application integration. Given the high importance of security risks, the teams collaborated with the client's chief information security officer. Once the assessment was finished, the NTT DATA team worked with the client's internal technical teams to understand the architecture of the on-premises environments and how it could be adjusted to the specific requirements of the AWS architecture.



02 The **second** was the **build phase**. Following an agile methodology, in less than a month, the NTT DATA team delivered a standalone MX.3 environment based on AWS, which allowed the client to start the functional validation. In parallel, the NTT DATA team managed to integrate third-party applications such as market data, pricing, trading and payment platforms.

The main challenge of this phase was to meet connectivity and security requirements:

- **Connectivity:** The network's architecture was redefined in order to be able to access MX.3 remotely through a secure public IP.
- **Security:** Compliance rules had to be taken into consideration to meet client and market regulator policies.

During this phase, the NTT DATA team also migrated the workflow scheduler from Control-M to open-source software. This activity involved carrying out an in-depth analysis of the batch (both at a daily and end-of-day level) and preparing some tailor-made developments to be able to meet initial milestones.

03 The **third phase** consisted of **testing the solution**. One of the main challenges of this phase was to prepare and coordinate the different business areas and all the stakeholders involved. An extensive set of tests covering all functionalities together with a comprehensive test plan were established to ensure that all tests were completed in less than three weeks. Before going live on the cloud, the team prepared a dress rehearsal to align all parties involved. This step was key to ensure all parties were prepared to carry out the migration on the go-live date.

04 The **final phase** was the **go live** and stabilization. During the first week after the go live, only one non-critical incident was reported, which was solved on the same day. The migration was transparent for the business and it didn't have any impact on end users. The NTT DATA team received congratulations from both the client and the business.

For this complex project, NTT DATA had a team of six people, including two Murex experts and four cloud specialists.

- The cloud architect together with the MX.3 architect defined the target architecture model in AWS.
- The network expert defined the network flows and firewall rules.
- The Murex team reviewed the operation of all critical MX.3 processes and redefined end-of-day processes.
- The cloud team deployed the architecture and applied the security policies.

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Who was involved in the project?

The NTT DATA Murex Center of Excellence (CoE)

NTT DATA has been delivering projects and services related to Murex since 1999, becoming an official Murex partner in 2011. The current NTT DATA Murex Center of Excellence is an international team of over 200 Murex specialists that is coordinated within a global practice and provides high-quality and cost-effective services to many clients across Europe and Latin America. The well-established Center of Excellence is located in Spain and incorporates a full-suite of accelerators and prepackaged near-shore services around Murex. The NTT DATA Murex offering covers the end-to-end needs of any Murex client, including business and IT strategic advisory, green and brownfield implementations, data migration, IT integration and fully managed services. NTT DATA is continuously investing in the Murex partnership, with official training programs and strategic initiatives such as cloud, testing automation and DevOps.



The team, with over 50 professionals, is a multidisciplinary and highly specialized in cloud.

The NTT DATA Cloud Center of Excellence

The collaboration between NTT DATA and AWS began in 2010. Soon after, the Cloud Center of Excellence was created to build a highly specialized team of experts in cloud management. NTT DATA became an AWS partner in 2013, and today the team gives support to more than 40 customers around the world. The team, with over 50 professionals, is multidisciplinary and highly specialized in cloud technology, with strong partnerships with main cloud providers. The CoE provides 24/7 support 365 days a year.

Murex

For more than 30 years, Murex has provided enterprise-wide, cross-asset financial technology solutions to capital markets players. Its cross-function platform, MX.3, supports trading, treasury, risk and post-trade operations, enabling clients to better meet regulatory requirements, manage enterprise-wide risk, and control IT costs. With more than 57,000 daily users in more than 60 countries, Murex has clients across the financial services industry, from banking and asset management to energy and commodities. Murex is an independent company with over 2,500 employees across 19 locations. Murex is committed to providing cutting-edge technology, superior customer service and unique product innovation. MX.3 is specifically designed and engineered to meet the multifaceted challenges of a transforming financial industry. To find out more, visit www.murex.com.



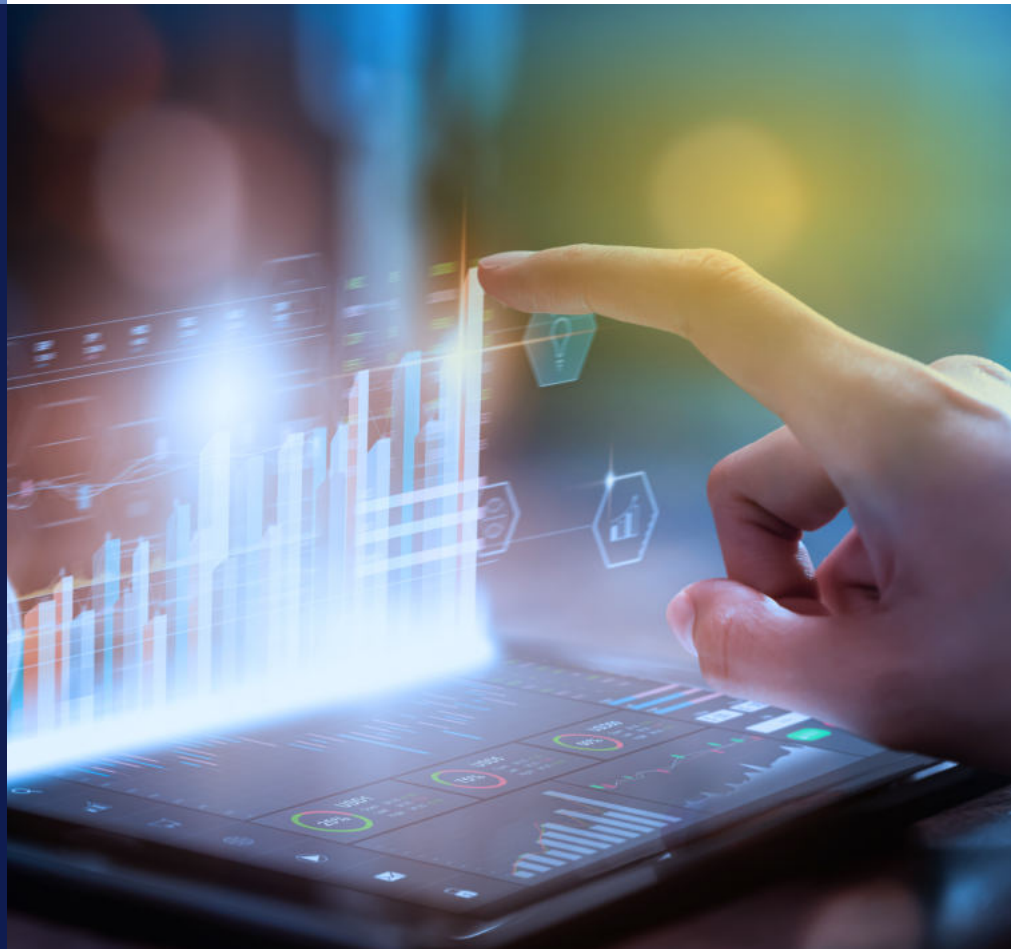
Outcomes and benefits of the solution

The project was delivered on time, on quality, and on budget. The platform is currently up and running, and the main benefits are:

- The end-of-day batch procedure decreased by approximately 50 percent due to several reasons, such as the migration to open-source scheduling software or the redesign of the EOD.
- Costs were reduced in several ways (e.g., terminating licenses for software such as Control-M or moving Oracle databases to RDS).
- The dimensioning of the servers has been reduced after the review performed during the assessment phase proved that they were oversized.
- The Recovery Time Objective (RTO) improved dramatically given that the current servers work in high availability and in different availability zones, allowing them to recover from a crash in a few minutes.
- The time dedicated to create a backup has been drastically reduced after all obsolete data were deleted during the migration.
- The operating costs have been reduced as a result of NTT DATA operating as a single service provider (infrastructure, infrastructure management and MX.3 first-level application support).

The RTO improved dramatically given that the current servers work in high availability and in different zones.

The end-of-day batch procedure duration decreased by approximately **50%**.



The differential value that NTT DATA brought to the project

The extensive knowledge of both Murex solutions and AWS, along with the global coordination of the project by the multidisciplinary teams, allowed NTT DATA to deliver the best solution for the client while respecting the deadlines the teams committed to.



Close partnerships with both Murex and AWS also played a key role in the success of this migration due to the full alignment and long-standing relationships between the centers of excellence and the partners' teams.

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About NTT DATA

NTT DATA – a part of NTT Group – is a trusted global innovator of IT and business services headquartered in Tokyo. We help clients transform through consulting, industry solutions, business process services, IT modernization and managed services. NTT DATA enables clients, as well as society, to move confidently into the digital future. We are committed to our clients' long-term success and combine global reach with local client attention to serve them in over 50 countries.

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