

Success Story | Near Zero Downtime Migration

Complex migration with minimal downtime

**Nativion helps NRG Energy achieve complex migration
with an only 13-hour downtime**

Following several acquisitions, NRG Energy wanted to ensure that its National Retail Platform would be able to provide a robust, stable foundation that could handle the additional customers who had come on board. To consolidate the various customer activities into one single environment the Nativion transformation team took action with the Nativion DCS.



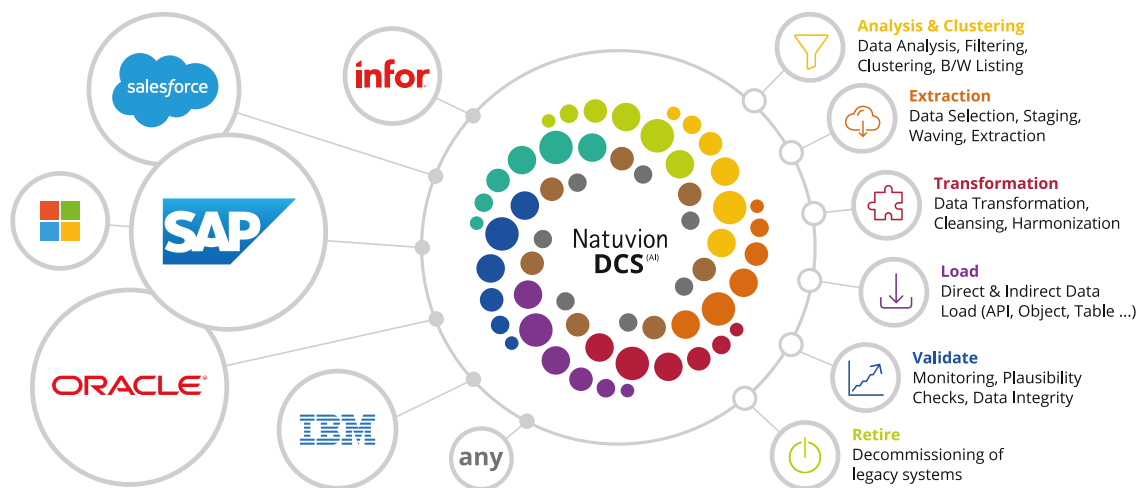
After NRG Energy had acquired several other Energy providers in Texas as well as in the Northeast Home and Business segment, it was its goal to adequately support its growth and to achieve efficiency, effectiveness, and synergies. That is why NRG decided to transition its existing National Retail Platform (NRP) from Oracle database to Suite on HANA (SoH) database in their SAP ECC system to consolidate its customer operations into a single instance. NRG also needed to streamline its SAP ISU database, which had grown to almost 28TB following the various acquisitions and was impacting system performance across the business. The biggest challenge: achieve all of these goals while keeping downtime as low as possible.

Time was of the essence, as NRG's most recent acquisition included a transition services agreement (TSA). This stipulated that the various handover activities – including IT carve-outs, administrative separations, and other transfers – were completed within a restricted timeframe. Also from a business perspective, the company understandably wanted to keep downtime to the absolute minimum – less than a day – and avoid any impact on business continuity for 7.5 million customers.

Intelligent transformation tools as project accelerator

In order to resolve the issue with time constraints for the migration process, NRG Energy’s long-time consulting and solution provider, Utegration, referred NRG to Nativion. Utegration is a Nativion partner and knew about the Nativion Data Conversion Suite (DCS). Nativion DCS was specifically designed to handle extremely large data volumes and can automate many typical transformation tasks. That makes it ideal for migration and transformation projects with tight time constraints as it was the case with NRG. Once NRG Energy became aware of the performance of Nativion DCS, it approved an 18-hour downtime window for Nativion to complete the analysis and migration.

Nativion DCS: one tool for many use cases



Near Zero Downtime project approach

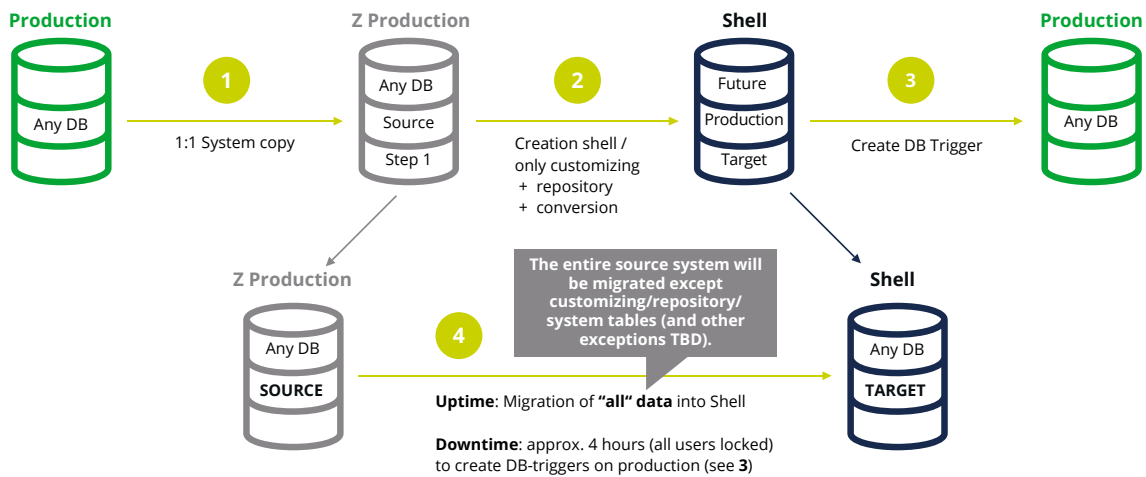
The project involved moving all of NRG Energy’s master and transactional data from Oracle database to Suite on HANA database in their SAP ECC system and included Unicode conversion on the fly.

Nativion structured the NRG Energy project with Nativion DCS project by using the SAP Database Migration Option (DMO) in uptime followed by the Nativion DCS Near Zero Downtime (NZDT) approach in downtime. To achieve NZDT, Nativion DCS applies procedures such as data synchronization (triggers), the identification of warm or cold data, and waving mechanisms. The combination of these features with Nativion DCS’ high level of automation enabled NRG Energy to eliminate the need for time-consuming manual work.

The following is an general overview of the single phases Natuvion undertook to complete the migration quickly and efficiently.

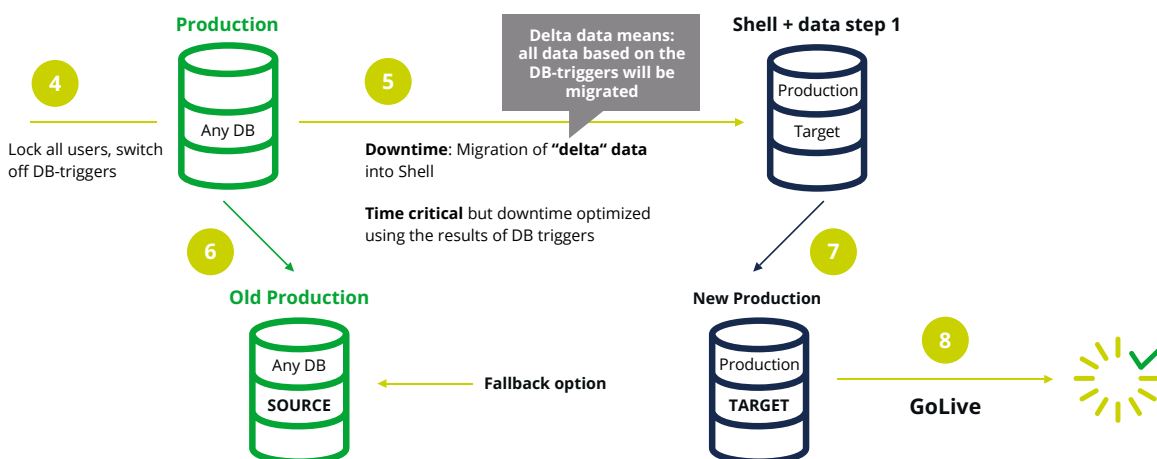
NZDT: Data Migration - Any DB to Any DB STEP 1

High level (using DB-trigger)



STEP 2

Cutover: Prod system is down - this step is carried out 1 or 2 weeks after step 1



Step by step to a smooth migration

First, Nativion made a 100% copy of the Oracle source database, containing all of the master and transactional data, and migrated this copy into an empty HANA shell (the target). In addition, the Nativion team utilized a tool available within Nativion DCS that counts all of the table entries. This check confirmed that the tables contained the same amount of data on both the source and target systems.

The second phase included all of the activities from the first step plus a test of the NZDT approach.

In the following dress rehearsal Nativion ran the uptime migration from the Oracle source to the HANA target. This involved system downtime of just two hours but ran for about two weeks while maintaining uptime. Once the uptime migration was finished and validated, the triggers were disabled and changes that had occurred during the previous two weeks were migrated into the Suite on HANA system.

That's when it was time for the go-live. The Nativion team's idea was to turn off the archiving process during cutover – and this initiative reduced the delta migration downtime from 18 hours to 13 hours. The reason: During the dress rehearsal, the Nativion DCS triggers detected 3.8 billion changes. After deactivating archiving during cutover, the triggers captured 1.7 billion changes, which was 46% fewer records to migrate. Once the migration was complete, the Nativion team also provided NRG Energy with three weeks of follow-up customer care.

Hard Facts	
Company NRG Energy Inc.	Products & Services Energy and home services
Headquarters Louisiana, Houston Texas	Website www.nrg.com
Industry Utilities	Nativion Services Near Zero Downtime (Trigger) Suite on HANA Migration

Successful migration with only 13-hour downtime

Nativion’s approach was to do a 100% data migration with near-zero downtime using its trigger methodology. This ensured that 100% of the data could be migrated with only a 13-hour downtime.

“The major benefits for us were the exceptionally fast migration time and especially the reduction in database size,” comments Kalim Tippitt, IT Senior Director at NRG Energy. “We started with an unwieldy 28TB database and ended up with a streamlined 4.2TB database in SAP HANA.”

Knowledge transfer was another important part of the project as NRG Energy staff were actively involved in every phase of the project. They participated in the weekly tracking meeting to coordinate next steps, identified any blockages, raised any issues and potential risks, as well as taking all the necessary actions to keep the project on track. This helped ensure that the unit test, system test, performance test, IT test and business test all ran smoothly on a well-coordinated testing plan.

Crucially, Nativion finished the delta migration even faster than the 18 hours estimated for cutover, completing it 5 hours earlier than expected.

Kalim Tippitt confirms his and the company’s satisfaction with Nativion’s work and use of its innovative tools. “The proposed 18-hour downtime was already very ambitious and we were really impressed that Nativion achieved the migration even faster than planned. The migration and smaller database will definitely help our business performance while supporting our growth and M&A plans going forward.”

Do you also need to migrate data with minimal downtime? Contact us!

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About NRG



NRG Energy is a leading energy and home services company powered by people and its passion for a smarter, cleaner, and more connected future. A Fortune 500 company operating in the United States and Canada, NRG delivers innovative solutions that help people, organizations, and businesses achieve their goals while also advocating for competitive energy markets and customer choice. NRG serves 7.5 million customers. More information is available at www.nrg.com.

About Utegration



Utegration is a full-service consulting and solution provider specializing in SAP® technology and SAP-certified products for the energy and utilities sectors. Their industry experts have earned the trust of electric, gas and water utilities across North America with their outcome-driven road maps and a track record of flawless implementations. Utegration builds and optimizes new

technology for finance, regulatory reporting, customer experience and asset operations to maximize their clients' return on investment, while minimizing risk and complexity. Utegration is currently a leading partner with Nativion America Inc. on a variety of utility-based businesses.

About Nativion



Nativion is a digital moving company that moves business-critical data and processes from one technology platform to another. Nativion experts are called in when medium-sized and large enterprises want to modernize, optimize, separate, merge, or restructure their IT systems. With its exclusive expertise in technical transformation, Nativion enables its customers to run their data and processes on

the most modern and innovative technologies available. To support data transformations, Nativion leverages its proprietary software solution, Nativion DCS. Nativion is a founding member of the SAP S/4HANA Selective Data Transition Engagement Community and has been part of NTT DATA Business Solutions AG, a leading global SAP consultancy, since 2022.



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