



## Success Story

SUSE Linux Enterprise Server for SAP Applications on IBM Power Systems

# Danish Defence

Rapid reporting for military administration and operations with SAP HANA, IBM POWER and SUSE. An army marches on its stomach, but it wouldn't get very far without other essential supplies. To ensure military operations run smoothly, Danish Defence migrated to SAP HANA to accelerating reporting, leveraging IBM Power Systems and SUSE Linux Enterprise Server for SAP Application.



### Overview

The Danish Ministry of Defence (MoD) is tasked with carrying out the government's defence policy to protect Denmark and its national interests, and to ensure the security of its citizens. Headquartered in Copenhagen, the ministry employs more than 20,000 people. The Danish Defence Acquisition and Logistics Organisation, an agency under the MoD, is tasked with the procurement of military equipment to all units and agencies under the MoD. It is also responsible for running all IT operations, and supporting defence administration and operations.

### Business Need

The mission of the Danish Ministry of Defence is to protect Denmark and its national interests. The ministry serves the government and plays an active role in defence, security and emergency management policies. Today, Danish troops are deployed all over the world as part of NATO, UN and coalition operations.

To effectively defend Denmark and to play its part in international

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#### TIMO JENSEN

Major, Chief of Section, Demars Operations & Platform, IT Operations Danish Defence Acquisition and Logistics Organization

peacekeeping and stability operations, Danish Defence must ensure that its back-end operations run with military precision.

Timo Jensen, Major, Chief of Section, DeMars Operations & Platform, IT Operations, Danish Defence Acquisition and Logistics Organization, elaborates: “It's extremely important that military operations are completed on time, which requires a lot of planning and administration behind the scenes. We rely heavily on our core set of SAP systems to ensure that we can get vital supplies and equipment to troops when they need them, for example.”

The ministry's core set of SAP ERP applications, known as DeMars, cover everything from logistics and finance to HR; all data is stored in SAP Business Warehouse. To keep its back-end operations in top form, the ministry aimed to boost performance of its SAP applications. As a first step, it decided to move its SAP Business Warehouse application to the SAP HANA database.

“Previously, loading transaction data from SAP ERP into SAP Business Warehouse would often overrun into operations and wasn't complete by the time staff arrived at work,” remarks Timo Jensen. “This meant that employees had to wait around for reports, dampening productivity. We knew that moving to the SAP HANA in-memory database would grant us faster access to operational data.



### Danish Defence at a Glance:

Headquartered in Copenhagen, the Danish Ministry of Defence employs more than 20,000 people.

#### Industry and Location

Government, Denmark

#### Products and Services

IBM Power E880  
IBM Power Systems  
SUSE Linux Enterprise Server for SAP Applications

#### SAP HANA Applications

SAP® Business Warehouse powered by SAP HANA®  
SAP ERP  
SAP HANA

#### Benefits

- + Up to 10x faster system response times enable employees to work more productively
- + Faster load and runtimes for daily reports means that they are now always ready at the start of the day
- + Major performance boost enables generation of an additional report during the day, giving employees up-to-date insight into operations
- + 60 percent reduction in storage footprint
- + Lower power and cooling costs
- + High up-time safeguards operational continuity
- + Automatic failover ensures that core systems stay online even in the unlikely event of disaster
- + Lays the foundation for introducing SAP

"In addition, moving to SAP HANA would allow us to keep our vital SAP applications on the vendor's standard support path – in line with our continuous upgrade policy."

## Solution

Danish Defence has been using IBM Power Systems™ servers to run its SAP applications for almost 20 years, and that wasn't about to change.

"To deploy SAP HANA, we had two options: upgrade our existing IBM Power Systems servers to the latest generation with IBM POWER8 processors, or move to Intel-based x86 appliances," comments Timo Jensen. "We know from years of experience that IBM Power Systems is a tremendously stable and reliable platform. And after running a public tender, we found that IBM Power Systems still offered the best value for money—and the best performance per CPU."

The ministry selected two IBM Power System E880 servers running IBM AIX® and SUSE Linux Enterprise Server for SAP Applications to serve as the backbone for its new SAP HANA environment. The ministry also chose to replace its existing SAN solution with IBM DS8886, which includes High Performance Flash Enclosure Gen2 flash cards, to meet storage requirements for SAP HANA production systems.

Working with IBM Global Technology Services® – Strategic Outsourcing and IBM Business Partner Komplex IT, the joint team implemented one IBM Power System E880 server at IBM's data centre in Ballerup, and one at the IT services headquarters. The servers are virtualized with IBM PowerVM®, and the ministry uses IBM PowerHA® SystemMirror® for AIX to provide near-continuous availability during planned and unplanned downtime. The ministry takes advantage of IBM Spectrum Virtualize™ to ensure that the production SAP HANA database is synchronized across sites to prevent data loss.

"The IBM and Komplex IT team planned the migration carefully, and it went very smoothly as a result. Using the IBM Live Partition Mobility feature, we were able to move logical partitions [LPARs] of our development, test and sandbox environments from the existing servers to the IBM Power System E880 servers without any downtime whatsoever—and users were none the wiser. To be on the safe side, we migrated the production

environment during a scheduled period of downtime. In both cases, the migration was painless and completed in a matter of minutes."

In addition to migrating SAP Business Warehouse to SAP HANA, the ministry also migrated its SAP ERP systems to the IBM Power System E880 servers—running on IBM AIX on Oracle databases—to take advantage of the enhanced performance levels.

## Benefits

With SAP Business Warehouse powered by SAP HANA running on latest-generation IBM POWER8® processor-based servers, the ministry has seen performance skyrocket.

Timo Jensen comments: "We've seen a huge improvement in reporting runtimes, with some reports created up to ten times faster than before. We know that this is a result of both the hardware upgrade and moving to SAP HANA."

"We can also load transactional data from our ERP systems into SAP Business Warehouse much faster than before. Where previously they would overrun into the working day, loads are now completed by 3am—four hours ahead of the former schedule. This means that rather than hanging around waiting for reports in the morning, staff have the information they need to make timely and accurate decisions when they arrive. System performance is so good that we can run an additional report around midday, so that employees can base their decisions on the most up-to-date data."

By replacing its existing SAN solutions with a single IBM DS8886 system at each location, Danish Defence shrunk its storage footprint by 60 percent—significantly reducing power and cooling costs. The ministry has also found the IBM infrastructure to be extremely reliable.

"One of the biggest benefits of the new IBM Power System E880 servers is the outstanding stability and reliability," says Timo Jensen. "I can sleep well at night knowing that I won't get a frantic phone call about the systems going down unexpectedly. We need the systems supporting military operations to be available 24/7—IBM Power Systems provides just that."

The ministry plans to migrate its SAP ERP applications to SAP HANA, and later implement next-generation SAP

S/4HANA® applications, for which the SAP HANA database is a prerequisite.

Timo Jensen notes: "The latest-generation IBM Power Systems servers give us the horsepower to do so much more in future. In particular, we are keen to enhance our predictive analytics capabilities to optimize our supply chain and logistical planning—and IBM Power System E880 servers can support the necessary compute-intensive big data analytics."

He concludes: "The combination of SAP HANA and IBM Power Systems provides a highly reliable, high-performance platform for one of our most critical applications. We expect IBM to keep working closely with SAP to improve how SAP HANA runs on IBM Power servers and to keep us informed of the latest and upcoming upgrades. We're looking forward to what the future and SAP S/4HANA will bring."

## SUSE Linux Enterprise Server for SAP Applications

The key requirements at Danish Defence are speed, 24x7 availability and smooth migration, this was made possible through the integrated solution of IBM Power Systems and SUSE Linux Enterprise Server for SAP Applications. SUSE Linux Enterprise Server for SAP Applications, with its optimized performance for SAP Applications, built-in high availability clustering, automated failover and recovery for SAP HANA helped drive the resiliency and RAS (reliability, availability and serviceability) the Danish military needed. Pre integrated, pre certified, with easy to use installation wizard, the deployment experience is simple and fast. Lastly, with 24x7 priority support directly from IBM, this integrated offering from SAP, IBM and SUSE is a solution that the Danish Defence Ministry can always rely on.



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