Nordea

About Nordea

Nordea serves over 10 million personal customers and more than half a million corporate customers in the Nordic region. Nordea is currently represented in 16 countries throughout the world, operating through a number of full-service branches, subsidiaries and representative offices.

The Situation

Regulatory reporting is a fundamental part of today’s financial world. Market participants are legally obliged to provide requested data to national and supra-national regulators for legislation such as Basel II & III. Regulators in turn use this data as a tool to monitor the health of the financial system and obtain visibility over market activity. It’s difficult to overestimate the importance of accurate, timely and complete regulatory reporting. Penalties for non-compliance include fines or adverse reputational impact.

To give an idea of the complexity inherent in regulatory reporting, different market participants and different activities have different reporting requirements in each jurisdiction. Firms also need to create a reporting framework that adapts to the constantly evolving environment; new regulations or amendments to existing regulations could occur. Larger financial houses, like Nordea, that are categorized as Global Systemically Important Banks (GSIBs) have additional responsibilities as they have the highest level of scrutiny on their regulatory reporting.

The Challenge

Nordea manages a complex and distributed data matrix across multiple business lines and jurisdictions. Managing this data through manual processes is time consuming, labor intensive and doesn’t offer any economies of scale. In addition, relying on manual processes to document where data was located tended to be an error prone effort, highly dependent on the skills of each individual data analyst.

Historically, there was no single repository they could look at that contained information about the specifics on what data was in each system and what was the provenance of that data. However, data regulations like the BCBS 239, sometimes referred to as the “Principles for effective risk data aggregation and risk reporting,” were raising the bar on data management processes.

The problem was that with the existing legacy systems, which used a combination of mainframe, relational, ETL and classic data warehousing technologies, responding to the demands of regulators in a timely fashion was both a challenge and cost prohibitive.
Solution Overview

The Nordea strategy is to move to a combination of Hadoop/Spark as the new data store and analytics environment in conjunction with implementing a smart data catalog and a native Hadoop business intelligence solution. The new environment will provide Nordea with a 10x savings per terabyte of data. Additionally, traditional data warehouses often require schema changes which make them slow and expensive to implement as new data sources become available. By moving to a Hadoop architecture, Nordea will be able to respond quickly to the addition of new data sources and new requests from regulators thanks to the flexibility provided by schema on read within the Hadoop world.

Why a Data Catalog is Critical to the Nordea Architecture

Critical to the Nordea architecture was the implementation of a data catalog. Data that was formerly in many different systems would now be co-located into a single Hadoop cluster. However, this created a new set of questions: Precisely what data is now available in the Hadoop data lake? Where did it come from? What is the quality of this data? Who should have access to it?

To solve this problem, Nordea decided to implement a data catalog which would automatically tag data as it came into the new environment and provide quality statistics, as well as track the lineage of that data. This way, when regulators now have questions or want to stress test the portfolio for 30/60/90 days, Nordea will be able to quickly find the data they need to generate the reports simply by querying the catalog. In the past, 80% of the effort in responding to requests was spent simply looking for data. Now with a data catalog at the center of the process, all the time spent hunting for data can be spent responding to regulators in a timely manner.

Why Waterline Smart Data Catalog?

Nordea chose Waterline for a variety of reasons. Waterline was engineered from day one to run on Hadoop, which is the new underlying data fabric of the Nordea architecture. Additionally, Waterline uniquely provided a combination of automated data fingerprinting to automatically tag data, along with human curation with ratings and reviews. The Waterline process provides objective profiling information combined with the opinions of users as they use data for generating various reports. This approach also saves time, saving as much as 90% of the time it used to take to perform this exercise manually.

Waterline’s Smart Data Catalog was also built with a significant number of REST APIs, making it possible for Nordea to implement the catalog as a platform that can be automatically integrated with access control systems as well as Nordea’s new business intelligence application of choice. This means that sensitive data coming into the data lake can be automatically tagged, and those tags can be passed to the underlying access control system so users who have the proper credentials can get access to that data. Users of the business intelligence suite will also have secure visibility into the data catalog without having to leave their BI tool.

With Waterline at the core of the data resource management architecture, Nordea can now quickly and affordably respond to their rapidly changing regulatory world.