# Adopt LinuxONE to meet ISO 20022 compliance deadlines between now and 2025 and for broader payments transformation

Solution Brief

Jan 2022

An overview of the combined benefits and features of Fiorano ISO 20022 Accelerator on IBM LinuxONE

- A solution that seamlessly delivers fast compliance with multi-scheme ISO 20022 deadlines with foundations to monetize ISO 20022 for competitive differentiation
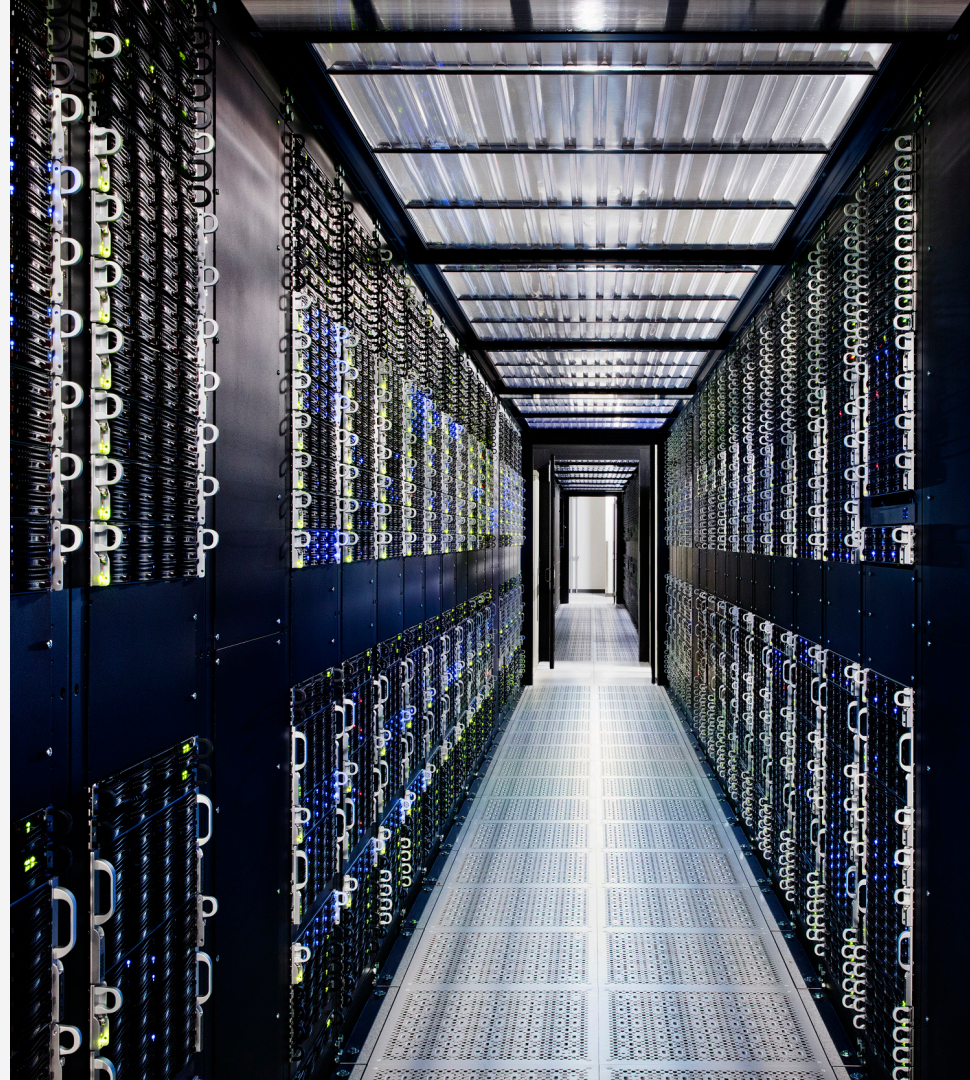
ISO 20022 is canonical and Fiorano middleware delivers a single common solution for multi-scheme ISO 20022 adoption requirements

– The majority of banks and FIs globally will need to comply with multiple ISO 20022 scheme specifications between November 2022 and November 2025.

– Fiorano ISO 20022 Accelerator running on **IBM LinuxONE** efficiently converts existing SWIFT MT messages to the new ISO 20022 standard in a timely and cost-effective way.

– Fiorano ISO20022 Accelerator platform is listed by SWIFT as a validated vendor solution to meet SWIFT CBPR+ requirements out of the box.
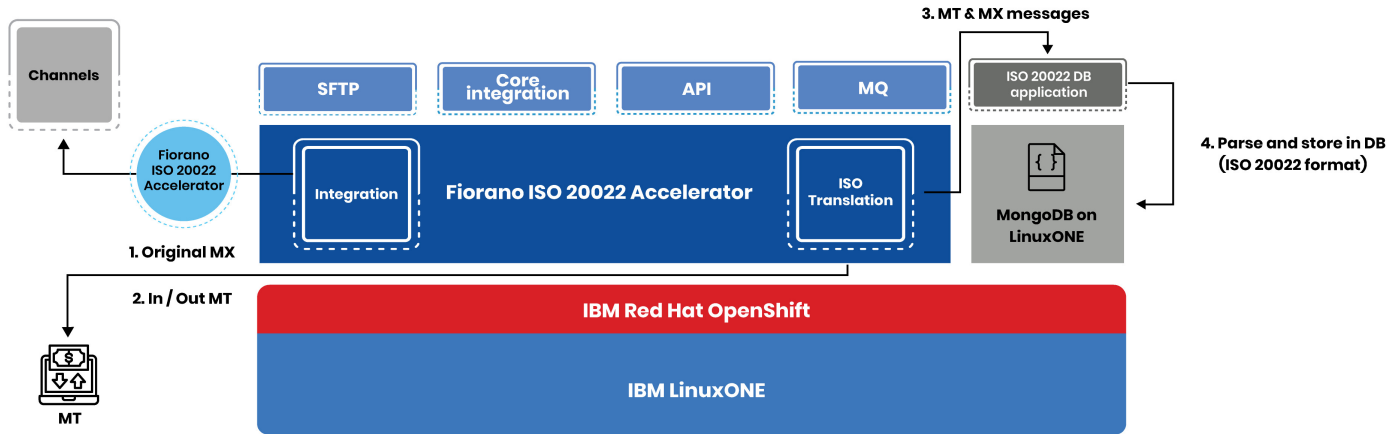
Fiorano ISO 20022 Accelerator on IBM LinuxONE allows users to comply with regulatory requirements on time without disrupting existing operations

The solution effectively converts existing SWIFT MT messages to the new ISO 20022 standard in a timely and cost-effective way
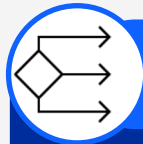
Non-disruptive adoption

Fiorano's powerful and **codeless** visual integration studio, adapters, and tools allow easy and pain-free integration of ISO 20022 translation libraries into existing bank / financial institution IT environments with minimal effort, in a non-disruptive manner

Step-up and step-down Truncation management

A commonly accepted risk-area for banks globally when adopting ISO 20022 is data truncation of Fields and Characters

Fiorano ISO 20022 Accelerator addresses data truncation management out-of-the-box, delivering guaranteed lossless translations

Leveraging ISO 20022 data

Optional DB add-ons provide powerful capabilities for financial institutions to extract value from ISO 20022 messages

Additionally, IBM LinuxONE's secure environment with MongoDB supports emerging ISO 20022 use-cases that leverages rich and contextual ISO 20022 data, beyond translation-related compliance
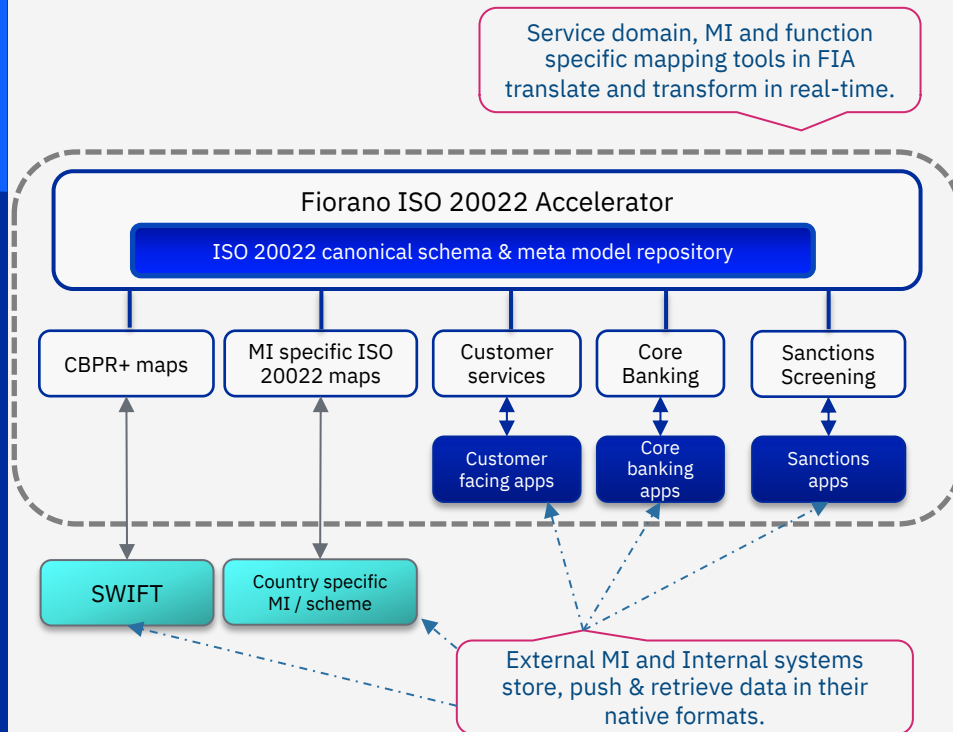
Secure

Pervasive encryption: enables you to efficiently deploy and deliver a solution designed to comply with ISO 20022 to help you gain great confidence in your compliance preparedness

Hardware Security: Designed to meet the requirements for FIPS 140-2 Level 4, the highest cryptographic security available commercially[1]

Simplified Compliance: Encrypt and decrypt data faster

– Using middleware offers banks a pragmatic approach to ISO 20022 adoption as it allows easy and fast migration, with minimal risk and costs.

Service domain, MI and function specific mapping tools in FIA translate and transform in real-time.

Fiorano ISO 20022 Accelerator

ISO 20022 canonical schema & meta model repository

CBPR+ maps	MI specific ISO 20022 maps	Customer services	Core Banking	Sanctions Screening

Customer facing apps

Core banking apps

Sanctions apps

SWIFT

Country specific MI / scheme

External MI and Internal systems store, push & retrieve data in their native formats.

Benefits

• Fiorano ISO 20022 Accelerator is a platform that provides a central and flexible reference data model for ISO 20022 translations, along with supporting integration adapters, services and pre-configured MT <> MX mappings and translations.

• Fiorano ISO 20022 Accelerator delivers accelerated delivery of translations from legacy MT/legacy proprietary formats to new ISO 20022 formats and vice-versa, in real-time.

• ** Compatible with IBM MQ® (adapters included).

– Easy integration into technology environments that are (a) not API-native, and (b) not designed to be interoperable & integrate with 3rd party systems. With IBM LinuxONE, these tools are deployed on a platform that is secure, cost-effective and agile.
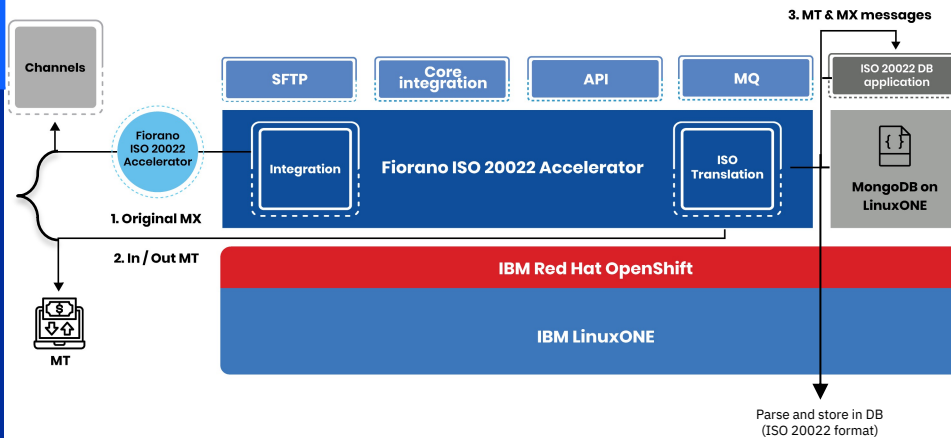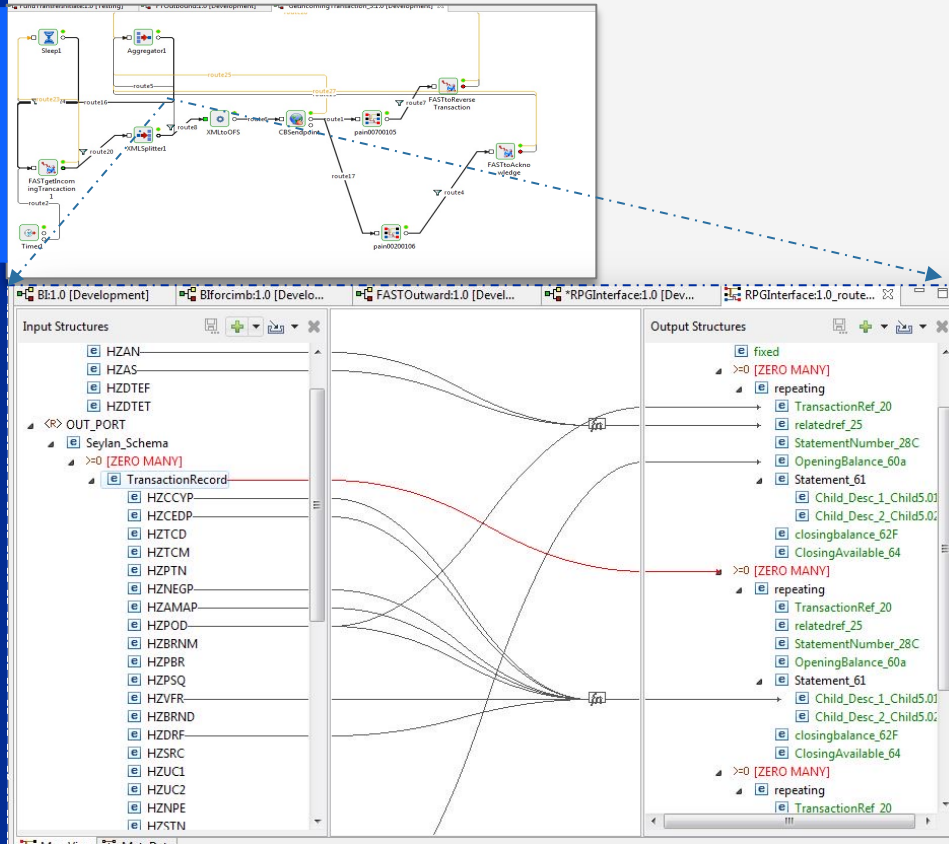
Benefits

- Fiorano ISO 20022 Accelerator minimizes risk by incorporating Fiorano's mature no-code and visual studio and tools for integration, along with its SWIFT-certified ISO 20022 translation platform and scheme-specific licensed translations.

- Engineers can drag-drop-connect to systems without writing a single line of code, delivering high productivity.

- Fiorano's integration studio offers:
  - Easy and fast integration with legacy systems and environments
  - Custom integration component development in C / C++ / C# and Java™
  - Event-driven integration architectures

Channels

3. MT & MX messages

| SFTP | Core integration | API | MQ | ISO 20022 DB application |

Fiorano ISO 20022 Accelerator

Integration

ISO Translation

Fiorano ISO 20022 Accelerator

MongoDB on LinuxONE

1. Original MX

2. In / Out MT

IBM Red Hat OpenShift

IBM LinuxONE

MT

Parse and store in DB (ISO 20022 format)

– Fiorano's SWIFT- validated ISO 20022 middleware supports real-time message de-composition (MX-MT) and re-composition (MT-MX) for CBPR+ and other schemes.
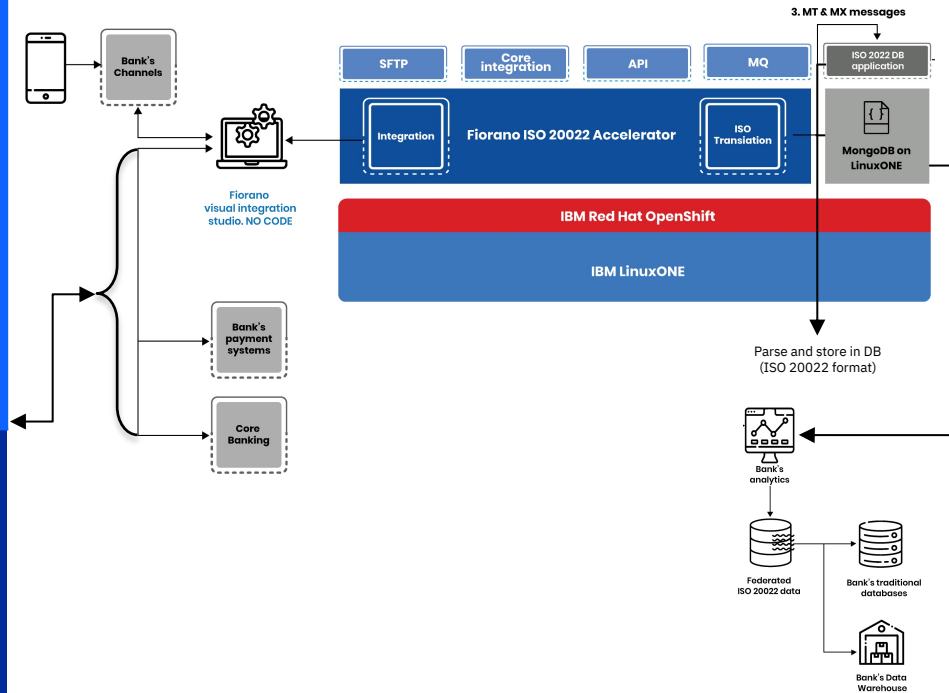

Benefits

- Translation processes in Fiorano are designed and deployed visually in Fiorano integration studio.

- Event-orchestration is managed within Fiorano.

- Non-restrictive: Fiorano mapping tools allow easy extensibility to new / changing ISO 20022 schemes as they evolve.

– By leveraging native MongoDB data-platform capabilities on IBM LinuxONE, banks and financial institutions can now take full advantage of Fiorano ISO 20022 platform's rich and contextual message structure and data-language through direct access to powerful add-ons and functions of MongoDB on IBM LinuxONE.
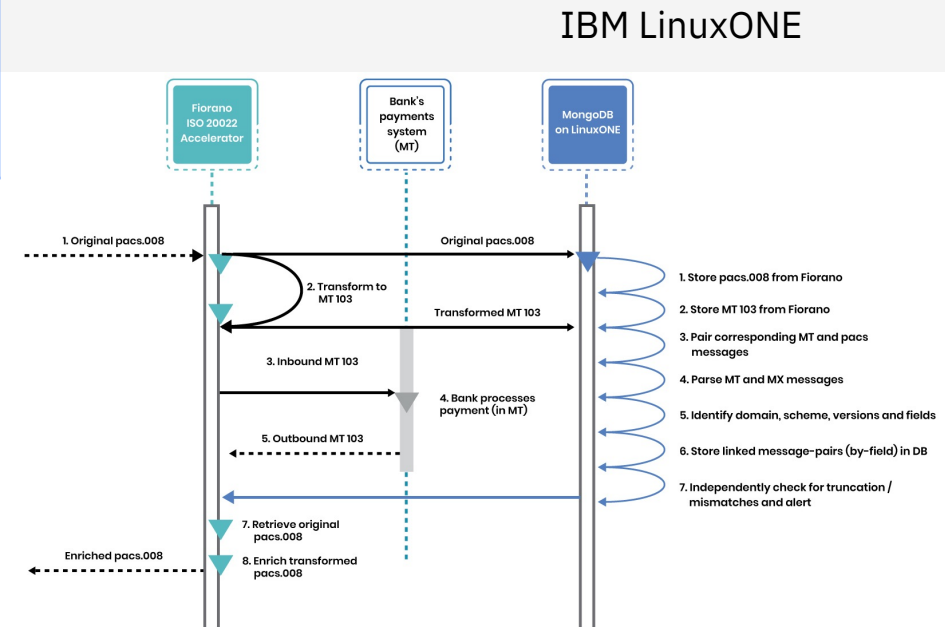

Benefits

- Add-ons in MongoDB on IBM LinuxONE support:
  - Bridged-translation models for data truncation management
  - Parsing, identification of ISO 20022 field-structures and storage of ISO 20022 messages with individual fields earmarked in respective database columns
  - Use-cases beyond translation by making field-level ISO 20022 message data directly accessible via. standard SQL queries
  - Native ISO 20022 analytics
  - Powerful and emerging use-cases for Machine Learning and Artificial Intelligence

– Mongo DB on IBM LinuxONE enables ISO 20022 payments meta-data accessible for multiple use-cases, through an optional ISO 20022 native data application.
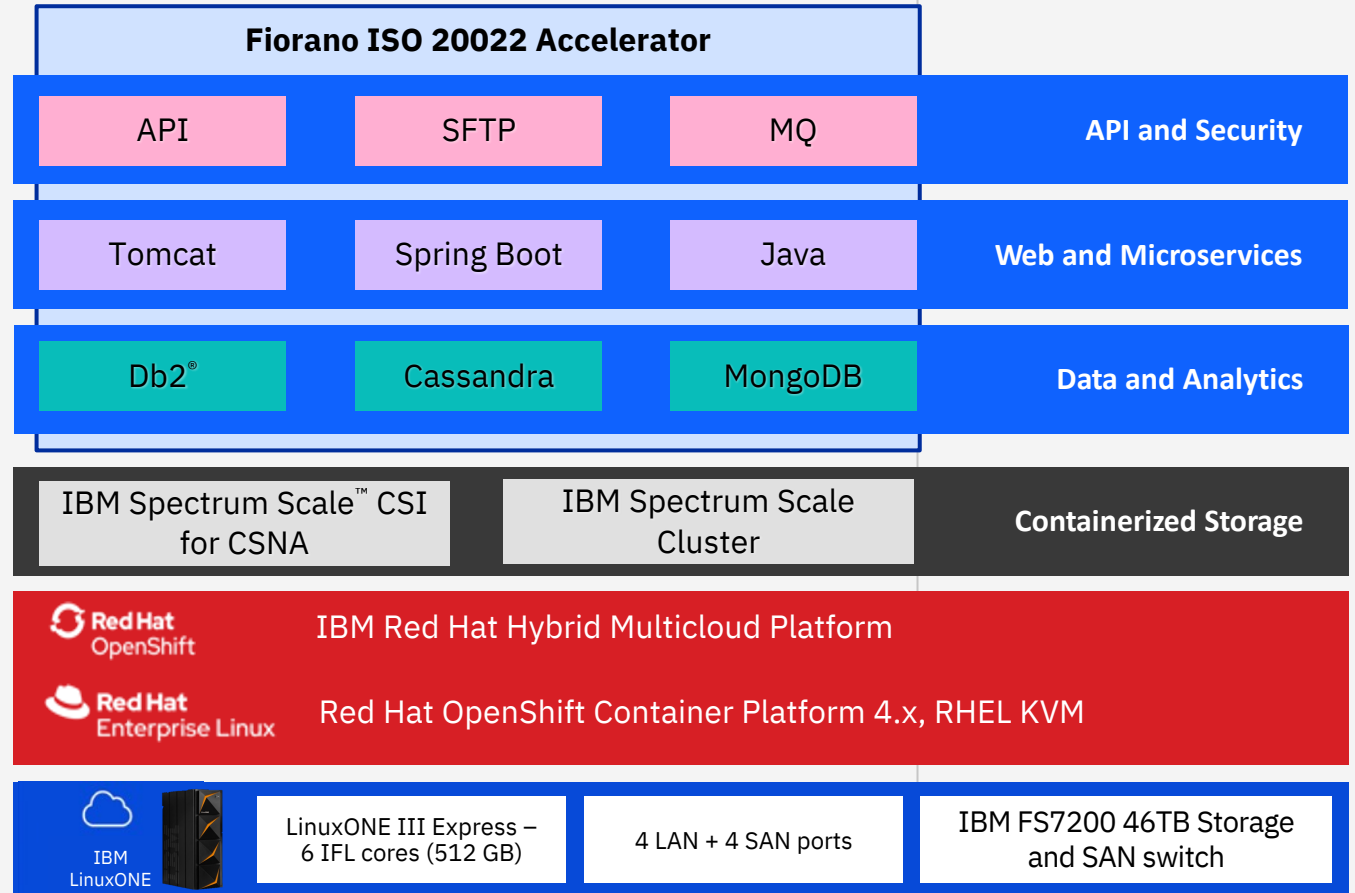
IBM LinuxONE

Fiorano ISO 20022 Accelerator

Bank's payments system (MT)

MongoDB on LinuxONE

1. Original pacs.008

Original pacs.008

2. Transform to MT 103

Transformed MT 103

3. Inbound MT 103

4. Bank processes payment (in MT)

5. Outbound MT 103

7. Retrieve original pacs.008

Enriched pacs.008

8. Enrich transformed pacs.008

1. Store pacs.008 from Fiorano

2. Store MT 103 from Fiorano

3. Pair corresponding MT and pacs messages

4. Parse MT and MX messages

5. Identify domain, scheme, versions and fields

6. Store linked message-pairs (by-field) in DB

7. Independently check for truncation / mismatches and alert

Benefits

• IBM LinuxONE offers an optionally pre-integrated ISO 20022 data application on MongoDB:
  – MT and MX messages stored as pairs in ISO 20022 format JSON
  – SQL and API interfaces

- IBM LinuxONE's reliable computing performance and enhanced security features, combined with Fiorano ISO 20022 Accelerator's capabilities, enables on-time compliance with regulatory requirements without disrupting existing operations and keeping up to speed with business requirements.

- The combined solution delivers predictable costs, and agility to ISO 20022 adoption projects.

- IBM LinuxONE provides end-to-end pervasive encryption, enabled by much faster hardware encryption both on-chip and in the separate CryptoExpress card, and secured by protected keys. Customers and executives can now be confident about the privacy and security of their data in transit, at rest, or in use.

- The IBM LinuxONE is designed to meet the requirements for FIPS 140-2 Level 4, the highest cryptographic security available commercially[1]. In contrast, high security attainment in the industry is typically Level 2. Organizations can protect sensitive data and maintain privacy by policy as data moves from its source throughout your enterprise—and across hybrid multi-clouds. LinuxONE with IBM Hyper Protect Data Controller provides end-to-end, data-centric encryption and privacy to keep your data protected no matter where it travels in your enterprise.

- The IBM Z[®] and LinuxONE servers are certified at EAL 5+, the highest level of common criteria security certification for commercial servers[2]. So, an application that is running on one partition (LPAR) cannot access another application on a different partition, which provides essentially the same security as an air-gapped system.

- Secure Execution another feature that is designed to help enterprises who want to be able to support confidentiality and data integrity for selected workloads and simplify efforts to meet regulatory challenges. It not only securely separates second-level guest operating systems running under KVM for IBM LinuxONE from each other but securely separates access to second-level guests from the hypervisor.

– Fiorano ISO 20022 Accelerator bundled with Red Hat® OpenShift® and IBM LinuxONE is a self-contained gateway that is built on cloud platform on-prem. It is easy and timely to implement and operate. It is designed to be secure, cost-effective, and agile.

Fiorano ISO 20022 Accelerator

API	SFTP	MQ	**API and Security**

Tomcat	Spring Boot	Java	**Web and Microservices**

Db2®	Cassandra	MongoDB	**Data and Analytics**

IBM Spectrum Scale™ CSI for CSNA	IBM Spectrum Scale Cluster	**Containerized Storage**

Red Hat OpenShift — IBM Red Hat Hybrid Multicloud Platform

Red Hat Enterprise Linux — Red Hat OpenShift Container Platform 4.x, RHEL KVM

IBM LinuxONE	LinuxONE III Express – 6 IFL cores (512 GB)	4 LAN + 4 SAN ports	IBM FS7200 46TB Storage and SAN switch

Enable users to comply with ISO 20022 deadlines without disrupting their existing operations.

- Book a consultation to explore the advantages of Fiorano ISO 20022 Accelerator on IBM LinuxONE

- Demo the solution and evaluate your need

- Quickstart with Fiorano ISO 20022 Accelerator on IBM LinuxONE Express Bundle

SWIFT case-study

ISO 20022 in focus with Fiorano. May 2021

LPNHelp@us.ibm.com

To learn more about how IBM Z and IBM LinuxONE platforms combined with Fiorano ISO 20022 Accelerator can benefit your banking institution, please contact LPNHelp@us.ibm.com.

You may also contact your IBM sales representative or IBM Business Partner.

Learn more

About IBM LinuxONE - visit:
ibm.com/linuxone

About IBM Z - visit:
ibm.com/it-infrastructure/z

1.   Source: https://www.ibm.com/security/cryptocards/highlights

2.   Source: https://www.commoncriteriaportal.org/files/epfiles/1160c.pdf