MI Channel for market infrastructure participants

Reach higher levels of performance and resilience

SWIFT

A dedicated messaging channel to access market infrastructures

Benefits

- › Stateless footprint
- › Advanced resiliency features
- › Easy integration with IBM WebSphere MQ/Series
- › Capable of very high throughput
- › Leverages SWIFTNet Single Window and existing SWIFT infrastructure
- › Enables TCO reduction

MI Channel is a messaging channel developed by SWIFT that enables large market infrastructures to enhance services for their communities. Relying on the store-and-forward platform, MI Channel optimises the exchange of very large amounts of data between the market infrastructure and its participants while offering a simplified mode of operation and lower integration costs.

Large market infrastructures are key players in the financial industry, and the evolution of the regulatory landscape is making their role increasingly vital. In this context, regulators require that most of them must comply with the stringent Principles for Financial Market Infrastructures (PFMIs) issued by the Committee on Payment and Settlement Systems (CPSS) and the International Organization of Securities Commissions (IOSCO).

These market infrastructures operate in the payments, securities or foreign exchange (FX) industries, either at the domestic or international level.
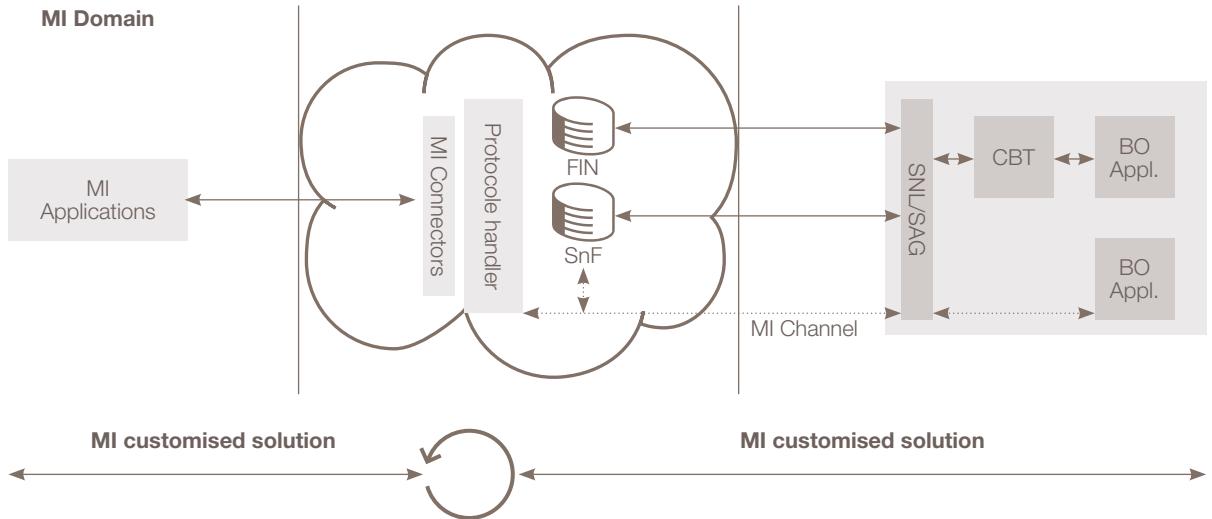
The critical nature of their business and their focus on operational excellence and cost management is leading them to adopt their own sets of requirements in terms of standards, resiliency, protocols, mode of operations and performance.

For financial institutions with a global presence, dealing with the specific requirements of each market infrastructure that they are connected to is a complex and costly exercise.

As the global provider of secure financial messaging and standards, SWIFT can help reduce this cost and complexity for banks and other MI participants. SWIFT's MI connectivity solutions enable market infrastructures to operate with SWIFT according to their own specific requirements, while allowing their participants to continue to exchange messages and files over SWIFT's existing FIN, Interact store-and-forward, and FileAct channels.

In addition, as a new step to enhance its connectivity offering for market infrastructures, SWIFT is introducing a new messaging channel for MI participants. This messaging service is called MI Channel and is designed to address market infrastructures' requirements for higher throughput and more versatile solutions.

MI Domain

MI Applications

MI Connectors

Protocole handler

FIN

SnF

MI Channel

SNL/SAG

CBT

BO Appl.

BO Appl.

MI customised solution

MI customised solution

⌃ MI Channel is a new solution that complements existing SWIFTNet channels. It supports high performance, a stateless footprint with advanced recovery features and a direct connection to back-office applications over MQ-Series

MI Channel complements SWIFT's existing messaging solutions and respects the principle of the SWIFT single window of the MI participants as it leverages their existing Alliance Connect connectivity pack, Hardware Security Modules (HSMs) and certificates, and integrates with their existing communication software: SWIFTNet Link and Alliance Gateway.

Introducing MI Channel

MI Channel is designed to offer multiple benefits which are complementary to other existing SWIFTNet messaging channels. It provides a set of new features which maximise performance and facilitate technical operations and integration. These features come in addition to the standard messaging functionalities offered by other SWIFT channels:

— Message authentication, confidentiality and integrity through SWIFTNet PKI
— Managed and integrated Security Services (PKI)
— Digital signatures using HSM-stored certificates
— Guaranteed delivery of messages
— Closed user group management and authentication of message sender
— Very high resiliency at protocol and infrastructure level
— Best in class quality of service and availability

Higher performance

MI Channel delivers extremely high performance through protocol optimisation and by applying intelligent batching and compression mechanisms throughout end-to-end message flows, while keeping the infrastructure requirements low through an efficient usage of hardware and network resources.

With the appropriate infrastructure sizing, a single MI Channel installation can support message volumes reaching the equivalent of several hundred individual messages per second.

Back-office integration

MI Channel is easy to integrate with existing back-office applications and operations using a standard IBM WebSphere MQ-Series client interface. MQ is the only protocol needed, and customers can deploy it on their existing Alliance Gateway and SWIFTNet Link.

This setup provides for a stateless footprint that does not store messages. Storage instead takes place on the customer's MQ-Server, which can be co-located in the back-office itself.

In addition, the solution provides functionality to populate the InterAct header with static information related to the MI service profile, making the protocol even easier to handle from the back-office.

The customer retains full responsibility and control over the management of its IBM WebSphere MQ-Series server environment, its resilience, sizing, performance, monitoring and day to day management.

Advanced resiliency

MI Channel offers an advanced resiliency model that supports high data traffic as well as lower volumes of extremely critical messages.

It leverages the central store-and-forward platform to support a stateless transactional footprint guaranteeing that there are no inflight messages in case of failure, and eases the switch from a production to a backup infrastructure and the associated recovery of potential data loss through the introduction of the replay feature.

This MI channel supports multiple modes of operation. It resumes aborted transactions if the customer setup can guarantee synchronous replication of its IBM WebSphere MQ infrastructure between a production and a backup system, and the new replay feature can also recover messages from the store-and-forward platform and deliver them again if an asynchronous replication of the IBM WebSphere MQ infrastructure has created a gap in the messages.

The customer simply needs to provide the time of failure or the sequence number of the last received message and the MI Channel will start recovering data from that point onwards. All messages marked as previously delivered will be resent over the same messaging channel. They will carry the tag 'Possible duplicate' for ease of reconciliation.

Unlocking the power of MI Channel

MI Channel is available to customers that have registered for a Market Infrastructure service supporting this channel and have installed the relevant SWIFTNet Link and Alliance Gateway patch.

Using Alliance Gateway provides several advantages, including a standard operational framework, support of flows from multiple applications, a light Graphical User Interface (GUI) with a familiar look and feel via WebPlatform, and integrated monitoring capability.

Integrated and complementary to your SWIFTNet single window, MI Channel can be used in parallel with other flows such as FIN, FileAct and Browse. SWIFTNet Link and Alliance Gateway use the MQ-Client library and can reach any queue-manager over a local network.

MI Channel messaging features

— Message confidentiality and integrity through SWIFTNet PKI
— Managed and integrated Security Services (PKI)
— Digital signatures using HSM-stored certificates
— Guaranteed delivery of messages
— Closed user group management and authentication of message sender
— Stateless transactional footprint utilising customer's IBM WebSphere MQ-Series environment for storage
— Advanced resiliency leveraging store-and-forward platform
— Easy integration with IBM WebSphere MQ/Series
— Capable of very high throughput
— Leverages SWIFTNet single window

For more information, please contact your SWIFT account manager or visit www.swift.com.