

## Introduction

MQSeries ® Integrator Version 2.0 is a new product in the MQSeries family from IBM ®. It is a framework designed to enable the provision of mission-critical Business Integration tools and processes. This helps you build your own solutions and enhances your existing solutions by adding functionality to existing programs and data without requiring changes to the existing programs and data. A more general overview on the function of this product, and a couple of potential scenarios for the use of this product can be found in the Introductory White Paper on MQSeries Integrator V2 - The next generation Message Broker.

This White Paper is designed to provide a concise look at the architecture and function of MQSeries Integrator V2 from a technical point of view, explaining what the product can do and how it works.

To this end the Sections in this White Paper are as follows:

- ❖ Business Benefits of MQSeries Integrator V2
- ❖ Technology & Architecture Overview
- ❖ Message Flow Framework and Architecture
- ❖ Message Dictionaries
- ❖ Message Warehousing
- ❖ Publish and Subscribe
- ❖ Multi-Broker Domains
- ❖ Connecting Applications to the Broker
- ❖ Internal Architecture and Administration
- ❖ Broker Tools and the Control Center
- ❖ System Management
- ❖ Security
- ❖ Migration Issues
- ❖ Summary

### ▪ What are the business benefits of MQSeries Integrator V2?

MQSeries has helped to create the multi-platform asynchronous messaging marketplace. MQSeries applications can pass messages between queues, which can be located anywhere in a customer's enterprise. Applications can also exchange messages with applications from other companies. As customers look to do more complex tasks and to put their data to more productive use, there is a need to process and transform the message data before passing the message on to the next MQSeries application. The purpose of MQSeries Integrator is to provide a simple yet sophisticated way to enable the customer to process messages en-route to their destinations. This will let the customer keep their focus on how to use this enabling technology to transform their business processes, without needing to change their existing applications. This will protect their investment. MQSeries Integrator V2 by fulfilling these functions, some of which are outlined below, is able to function as a **Message Broker**. This provides both the MQSeries messaging layer and the Message Brokering hub for processing, transformation and distribution of messages, combining these abilities with a Publish/Subscribe function. Also a brand new graphical tool is now provided as the user

interface. This allows full control of the product with the functional construction of solutions achieved by use of a wiring diagram concept.

- **Potential Business Uses for MQSeries Integrator V2**

- ❖ More efficient connectivity for application integration using hub and spoke model
- ❖ Transformation of data while routing between applications
- ❖ Separation of business logic from application logic and data logic
- ❖ Providing added business application functionality such as Publish/Subscribe
- ❖ Integration framework for adding existing and new vendor products to further add value
- ❖ Seamless integration of messages and relational databases
- ❖ Mapping between XML message formats and other data formats
- ❖ Building on existing MQSeries Integrator V1 applications without rework

By being able to provide these sophisticated functions to transform businesses, MQSeries Integrator can act as a Business Integration and Transformation Engine, becoming an application that increases business value beyond that of the individual functions.

- **Technology & Architecture overview**

Message Brokers act as a way station, or a hub, for messages passing between MQSeries applications. Once messages have reached the Message Broker, they can then be processed, depending on the configuration of the Message Broker and on the contents of the message. Within the Message Broker the individual functions are assigned to a collection of interconnected **Nodes**, where the processing and transformation activities can take place as required.

A key component of this release is the provision of a framework to allow vendors and other partners and customers to write their own processing nodes.

Other components include an extended Publish/Subscribe facility, message dictionaries and message warehousing. These will be discussed in more detail below.

As this version of MQSeries Integrator follows on from MQSeries Integrator V1, full upwards compatibility has been provided by ensuring that the **NEON Rules** and **NEON Formatter** have been included in the provided set of Nodes.

- **Deliverables**

The components of this product can be described as a Message Broker with a **message flow** framework, including publish and subscribe management and message warehouse services.

These deliverables are combined with the supplied **Control Center** tool used to wire together the message flows through the MQSeries Integrator nodes. This allows the fast creation, deployment, and control of message-based business solutions.

This release also includes increased value by adding support for data warehousing, which can be used for audit of message flows, replay and even data mining.

The transformation and reformatting of messages is made simpler through message format dictionaries that provide sample templates of message formats and structures to allow fast handling of parsed messages.