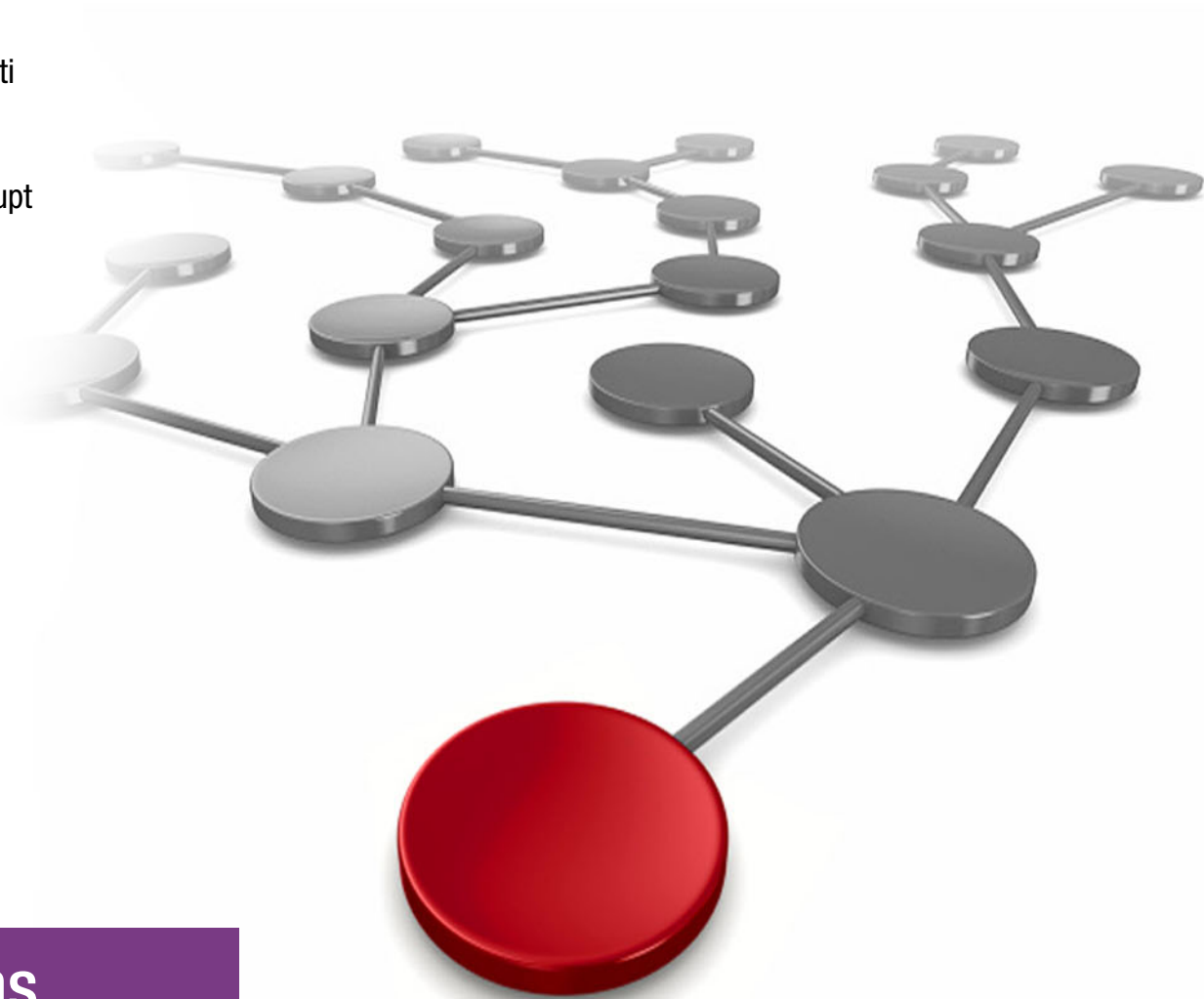# IBM Financial Transaction Manager on z Systems Platforms

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z Systems

IBM

Solution Guide

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Introduction

The IBM® Financial Transaction Manager (FTM) on IBM z Systems™ platforms is an industry software package that manages, orchestrates, and monitors commercial and consumer financial transactions. It provides the functionality to create and collect the state of transactions while also providing integration capability and common data and message models that are based on the ISO 20022 industry standard.

This IBM Redbooks® Solution Guide provides an overview of the business value of using the IBM FTM and offers solution options that are available now on z Enterprise Systems.

Did you know?

In the global banking climate, banks are facing the following unprecedented demands:

- ► Implement faster or immediate payments
- ► Streamline IT operations across lines of business
- ► Improve revenue in an era of stringent regulations

IBM FTM that is deployed on z Systems platforms provides a highly scalable and secure platform with which you can gain visibility and control of all payment transactions that help to balance financial risk and facilitate effective financial planning and performance management.

Business value

Real Time Gross Settlement (RTGS), faster payments, payment hubs, and Single Euro Payment Authority (SEPA) are all a small fraction of the issues and trends modern banks must address to remain profitable and competitive. For most banks, 16 - 24% of their revenue is derived from payments. By 2016, over $1.4 trillion in revenue will come from payments. The IBM FTM enables banks to automate commercial and consumer payments by using the latest software and hardware technologies from IBM.

IBM FTM in commercial payments provides the following benefits:

► Provides the runtime environment for payment processing. These processes are customized to each customer situation that is based on samples that are provided by IBM.

► Facilitates dash-boarding and reporting for operations and clients.

► Enables tracking and tracing for batch payment files and single transactions throughout the integrated process.

► Integrates to (and shields) the back-office processing application from external standards changes.

► Manages message orchestration, which enables common processes, such as canceling, rekey, approval, and other common entry, repair, and investigation functions.

The IBM FTM Product Family also manages message orchestration, which enables common processes, such as canceling, rekey, approval, and other common entry, repair, and investigation functions.

Compared to IBM FTM in commercial payments, IBM FTM in consumer payments includes the following benefits:

► Provides standardized processing of payments, such as files, batches, and transactions
► Tracks incoming transactions to original batch files and back-office processing systems
► Allows for smoother introduction of new channels; for example, mobile
► Shields back-office processing from external standards changes
► Provides the runtime environment to implement features, such as least cost routing

Solution overview

IBM FTM is a customizable framework for the banking industry. It is built upon IBM's leading middleware products, such as IBM Integration Bus (IBM IB), IBM WebSphere® Message Queuing, IBM DB2®, IBM WebSphere Application Server and IBM Cognos® Reporting.

IBM FTM that is deployed on Linux on z Systems platforms takes advantage of industry-leading IBM middleware and a world-class database and hardware platform to provide a solid foundation for your payment or securities transactions. IBM FTM that is deployed on Linux on z Systems platforms also gives you a virtualized platform that is designed for flexibility and scalability.

Because it is a single system image, the z Systems architecture simplifies the cost and management of your software licenses. The system is designed to protect your data with a Common Criteria Evaluation Assurance Level 5+ (EAL5+) certification rating for security. IBM DB2 for z/OS® also is engineered to use the z Systems platforms architecture and provides a solid, efficient data hub for your information.

The Linux on z Systems platforms offers a uniquely powerful enterprise Linux solution for data center simplicity, trusted operations, and unrivaled economics. It is an enterprise-grade platform for Linux, which is fully supported by enterprise-grade capabilities, such as nondisruptive scalability, unparalleled availability, and continuous data protection. With all of these capabilities that are combined in an integrated z Systems platform, IBM FTM provides a flexible, scalable, and highly available environment to support the 24 x 7 operations that are needed by financial transaction processing institutions.

Solution architecture

The IBM FTM architecture provides ultimate flexibility in any bank's processing environment. The solution is built on a set of core capabilities and yet is modular in that new payment types can be added incrementally.

A high-level view of the IBM FTM architecture is shown in Figure 1.
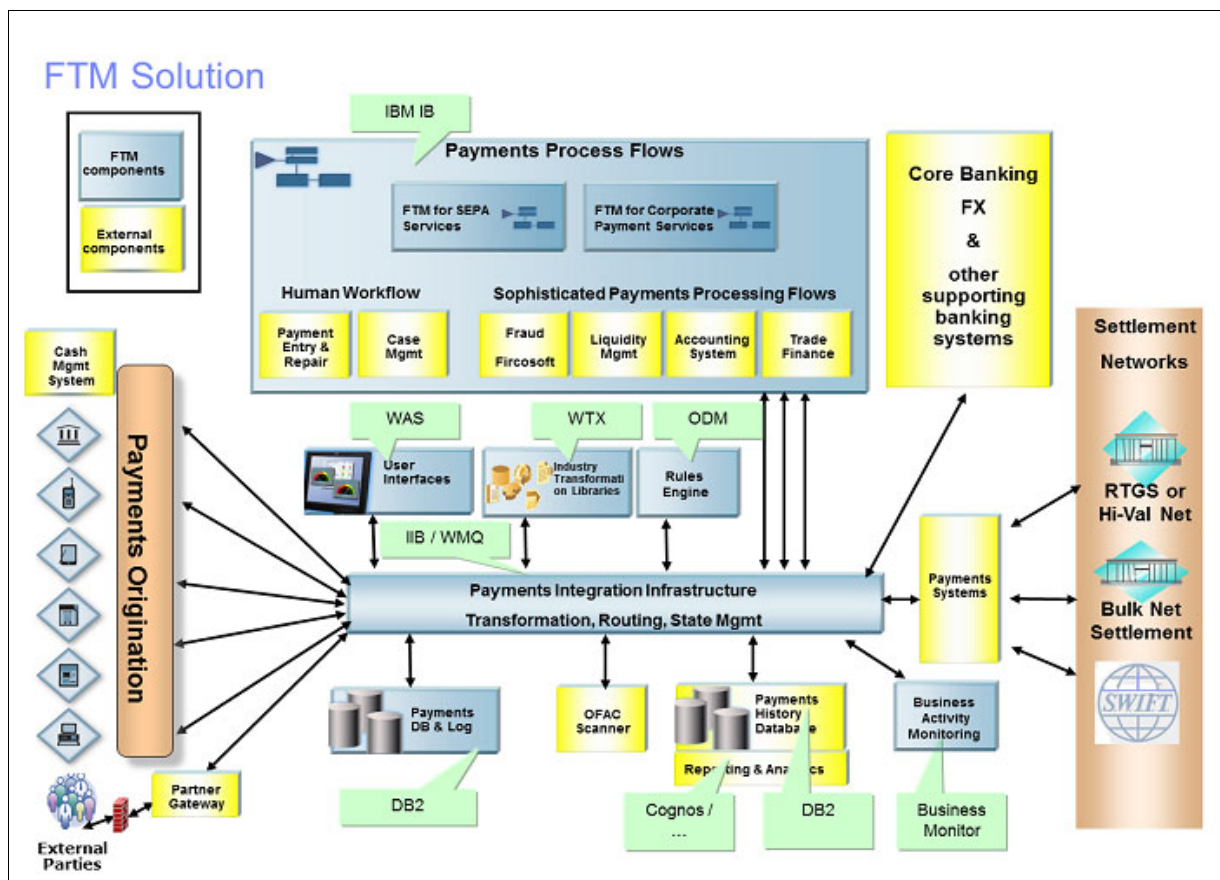

Figure 1   IBM FTM high-level architectural overview

Options on z Systems platforms

There are at least two major options for implementing IBM FTM on Linux for z Systems platforms. In this section, both options are described.

Solution deployment on Linux for z Systems platforms with DB2 z/OS

An architectural overview of the infrastructure when this option is used is shown in Figure 2. It includes the major IBM FTM components that are placed on Linux for z Systems platforms, and uses the strengths of DB2 that is running in an IBM Parallel Sysplex® and Data Sharing on z/OS, which provides increased reliability, scalability, and security.
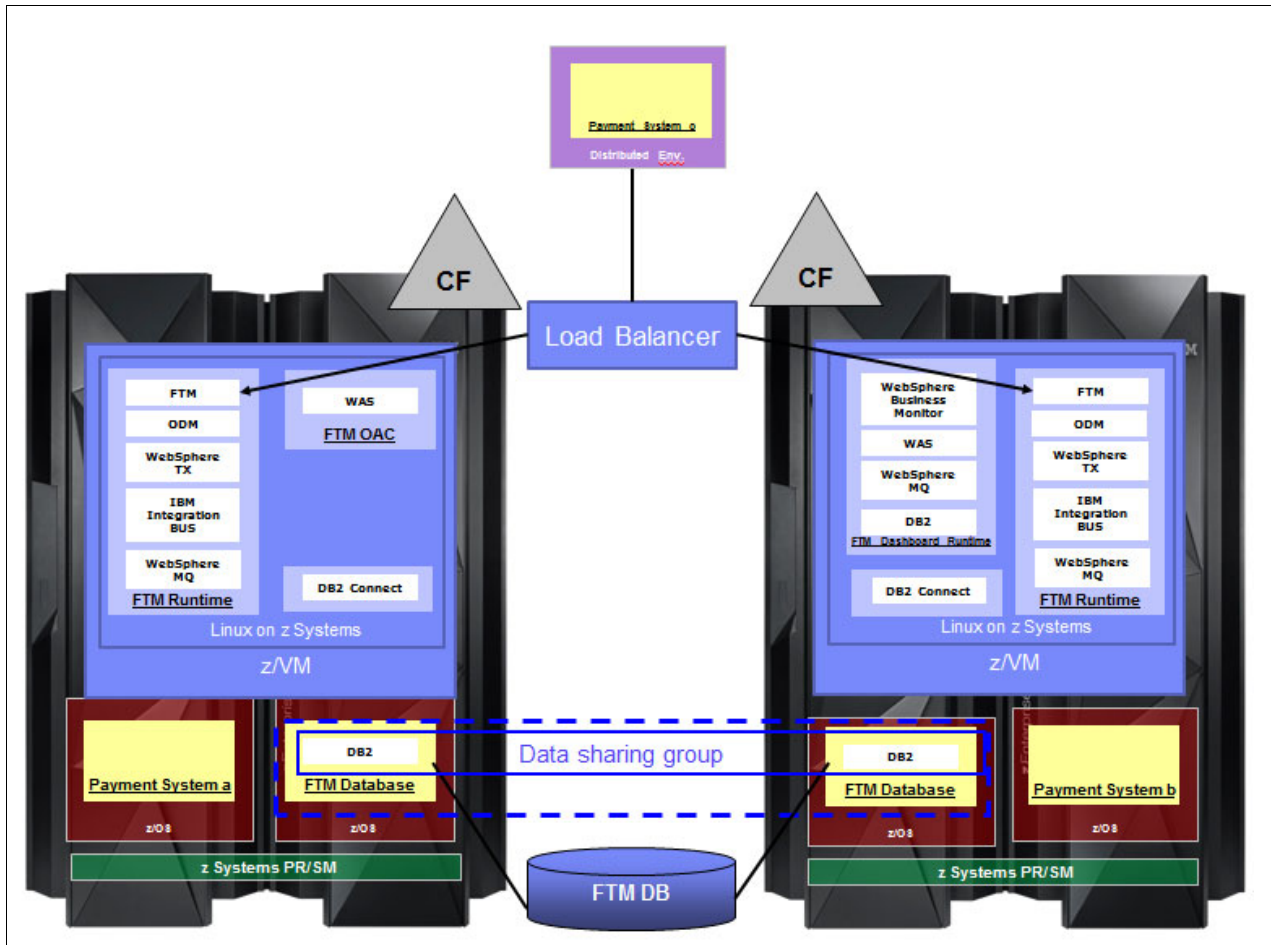

Figure 2   Architecture based on Linux for z Systems platforms and DB2 for z/OS for the IBM FTM core components

The DB2 database is accessed by IBM FTM by deploying IBM DB2 Connect™ on Linux for z Systems as a gateway. This option might be preferable for someone who more comfortable with DB2 on z/OS because of skills or experience with processes, such as automatic failover.

IBM FTM on Linux for z Systems

This second option places all of the IBM FTM components on Linux for z Systems, including DB2 for Linux, UNIX, and Windows operating systems. This option might be simpler and requires only one set of Linux skills. As shown in Figure 3, IBM FTM can be integrated with payments systems on z/OS, Linux for z Systems, and distributed platforms.
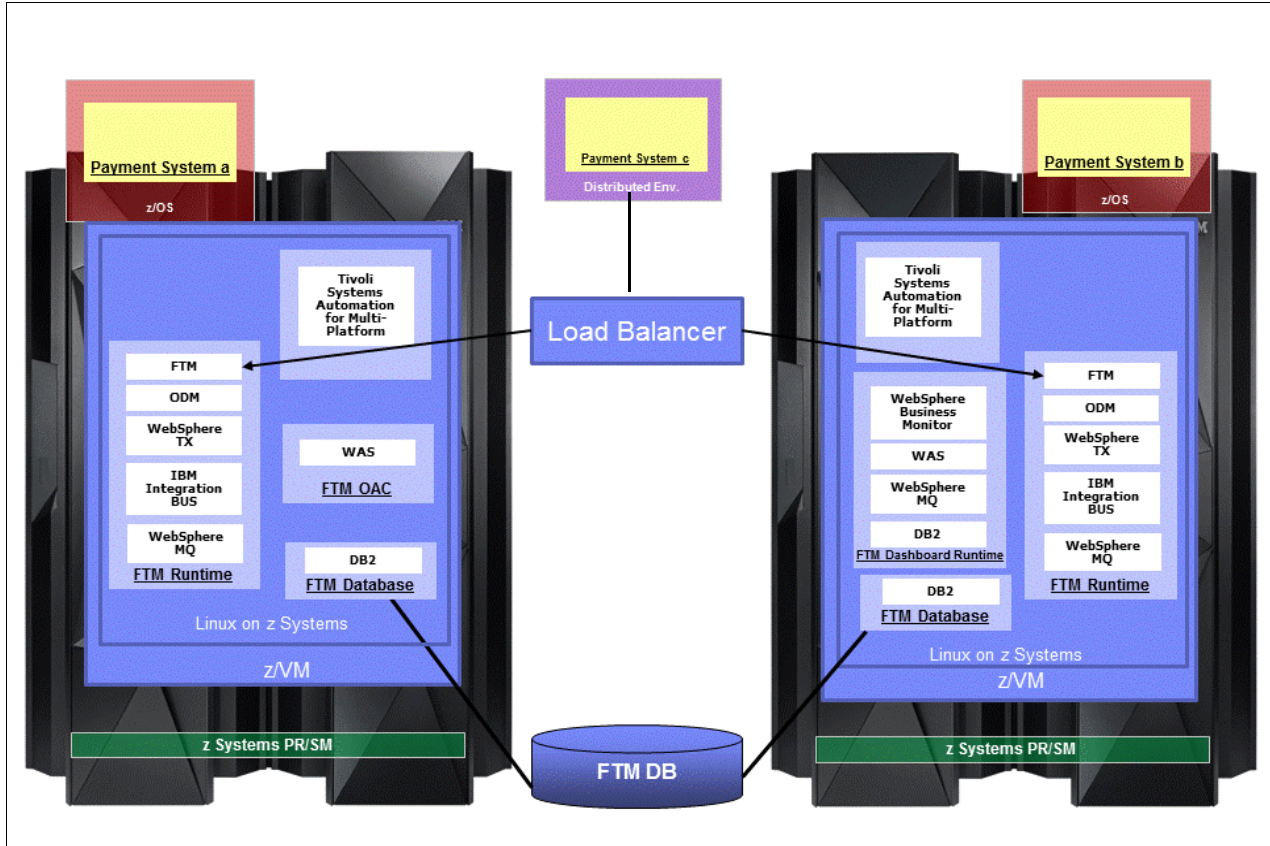

Figure 3   Architecture that is based on Linux for z Systems platforms for the IBM FTM core components

This deployment option uses the operating system Linux on IBM z Systems platforms capabilities and provides the following benefits:

► Communication between processes that are running on Linux on z Systems platforms occurs over a high-performing and secure communication, such as an IBM z/VM® guest LAN or VSwitch.

► Specialty engines, such as the Integrated Facility for Linux (IFL), lower the cost of the overall solution.

► Scalability and flexibility by using virtualized Linux servers. The number of Linux servers can be easily increased and decreased based on workload, test, and development needs.

In addition, the workload can be balanced across two or more instances of IBM FTM for even higher availability by using technologies that can help with availability, such as z/VM Single Systems Image for clustering technology and IBM Tivoli® Systems Automation for Multi-Platform.

Usage scenarios

IBM FTM can be used in various ways within an organization. One common usage scenario is to have IBM FTM provide a centralized payment hub for message transformation, tracking, and routing. As shown in Figure 4, IBM FTM is a payment hub for wire transfer processing. The wire transfer system executes the movement of money, and the status is tracked through IBM FTM.
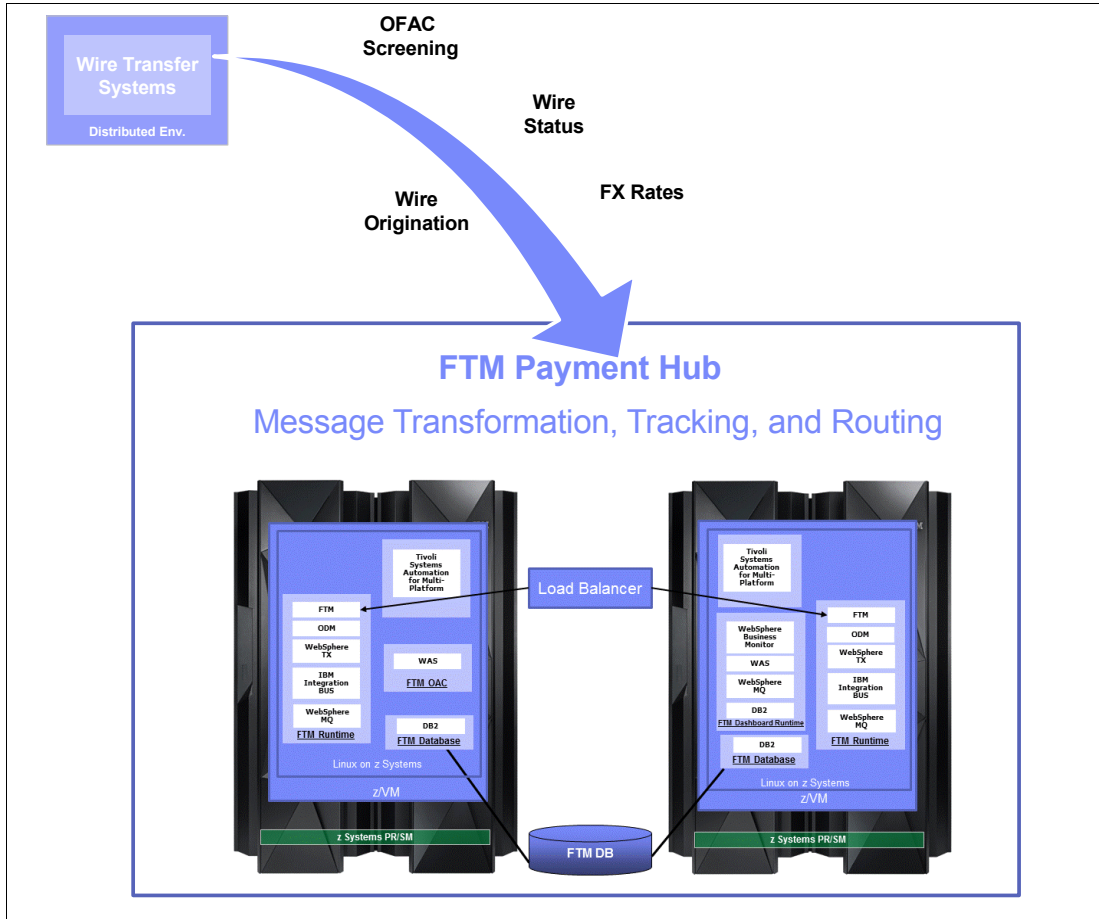

Figure 4   Payment hub for wire transfer

A second scenario provides an even broader application of IBM FTM, which positions it as the enterprise payments hub. A bank can use the message transformation, tracking, and routing for many payment types and many origination systems. Figure 5 shows the payments hub that is used for purchase order exchanges, Automated Clearing House (ACH), Single Euro Payments Area (SEPA), wire transfer processing, and information reporting.
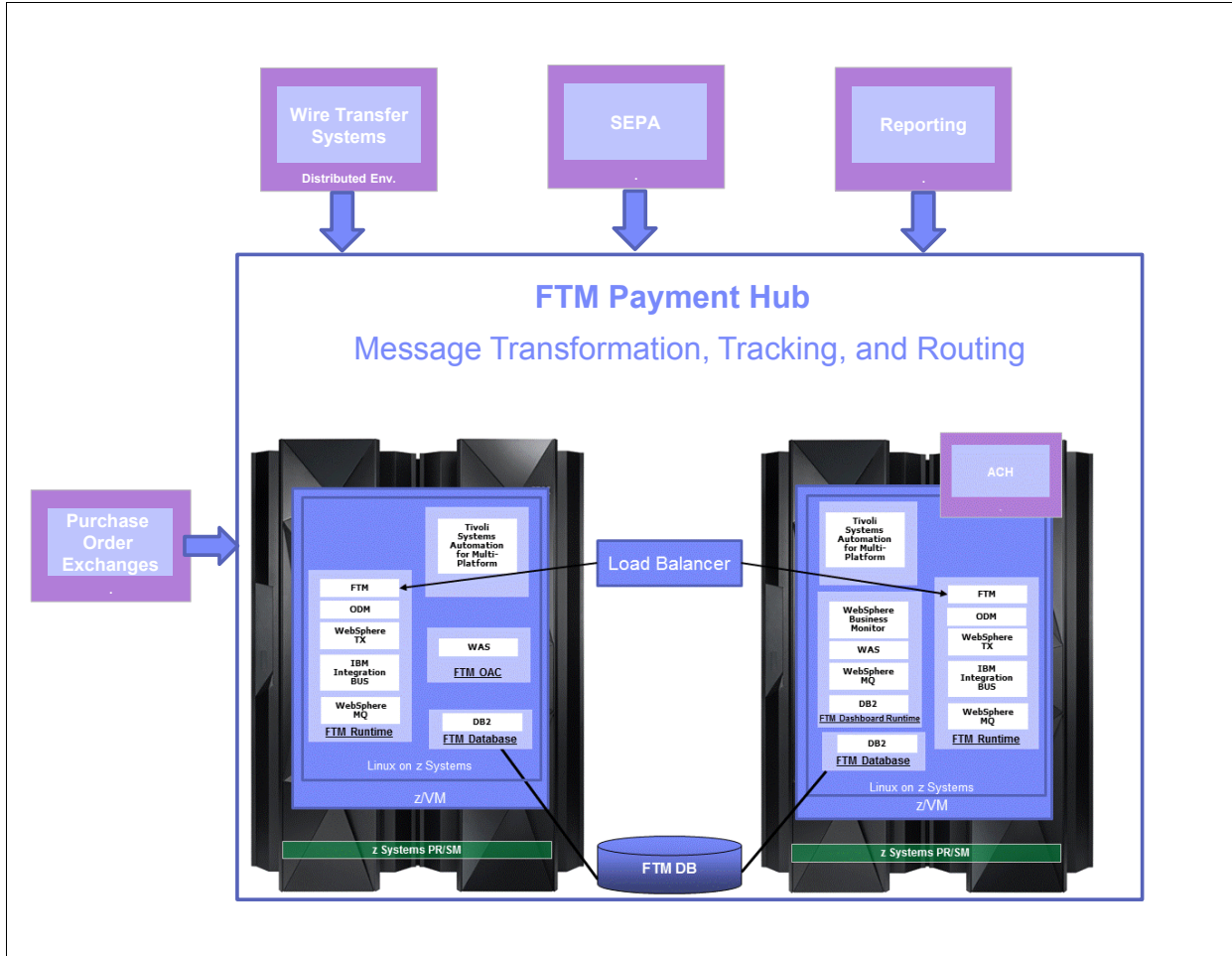

Figure 5   Enterprise payments hub

Integration

At the heart of IBM FTM is the Transaction Processing Engine that is built upon the IBM IB and WebSphere MQ.

The IBM IB and WebSphere MQ were chosen specifically for their strengths in easy integration with other IBM products and customer's infrastructure and applications. Integration can be accomplished in the following ways:

► Receiving business transactions through HTTP or an WebSphere MQ message through sending of a file via FTP or IBM Sterling Connect:Direct®.

► Producing outbound messages, files, and so on through WebSphere MQ, file sending via FTP, or IBM Sterling Connect:Direct.

Supported platforms

IBM FTM suite supports the Linux on IBM z Systems platform, in addition to IBM z/OS, IBM AIX®, Microsoft Windows (for development environments), and Red Hat Enterprise Linux platforms.

Ordering information

Ordering information can be found in the following IBM Announcement letter, 215-303, dated July 21, 2015:

http://www.ibm.com/common/ssi/rep_ca/3/897/ENUS215-303/ENUS215-303.PDF

Related information

For more information, see the following resources:

► IBM Redbooks:

– *Financial Transaction Manager Technical Overview*, SG24-8187:

  http://www.redbooks.ibm.com/abstracts/sg248187.html

– *IBM Financial Transaction Manager for Automated Clearing House Services*, SG24-8320:

  http://www.redbooks.ibm.com/abstracts/sg248320.html

– *IBM Financial Transaction Manager for Corporate Payment Services*, TIPS1001:

  http://www.redbooks.ibm.com/abstracts/tips1001.html

► IBM Financial Transaction Manager product page:

  http://www.ibm.com/software/products/en/financial-transaction-manager

► IBM Offering Information page (to search on announcement letters, sales manuals, or both):

  http://www.ibm.com/common/ssi/index.wss?request_locale=en

On this page, enter <solution name; remove angle brackets>, select the information type, and then, click **Search**. On the next page, narrow your search results by geography and language.

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