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MRG-M Message Flow

Bruce Wolfe

Curriculum Manager, Red Hat

06.27.12

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MRG-M Message Flow – **schedule**

- Red Hat Messaging Overview
- Topic Exchanges
- Demonstration

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MRG-M Message Flow Overview

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MRG-M Message Flow – AMQP

- Advanced Message Queuing Protocol
 - Our Vision
 - To become the standard protocol for interoperability between all messaging middleware.
- Open Internet Protocol Standard
 - Supporting unencumbered...
 - use
 - implementation
 - extension



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MRG-M Message Flow – AMQP 0-10

AMQP sits at which layer?



Compare: REST over HTTP



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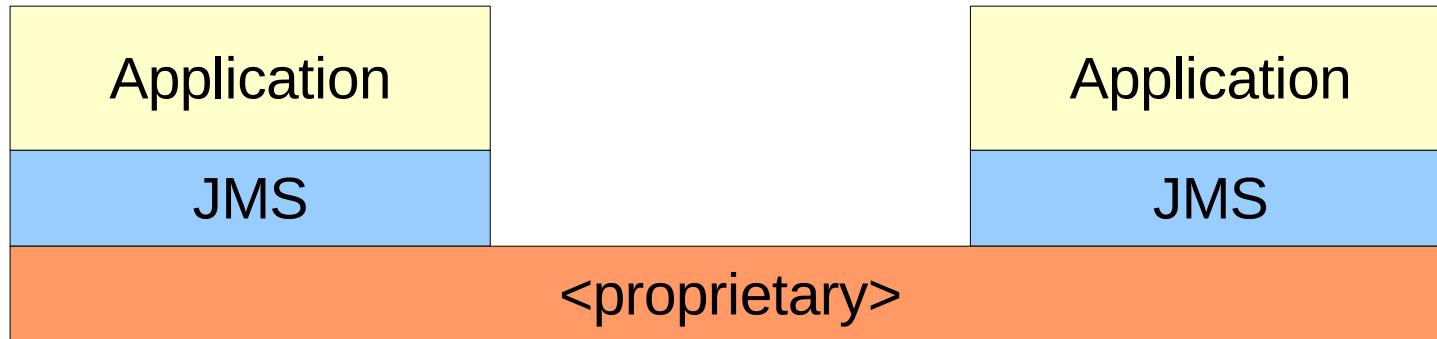
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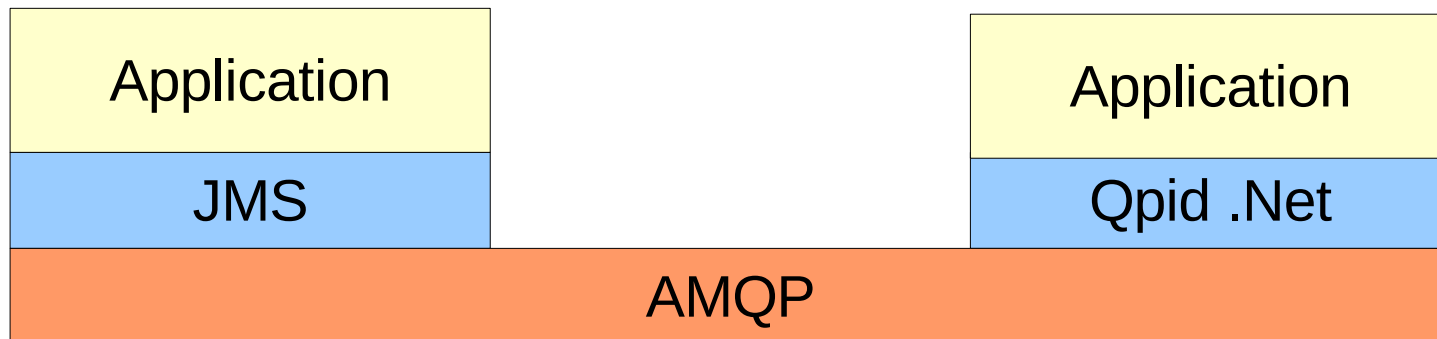


MRG-M Message Flow – Interoperability

Current JMS



Using AMQP



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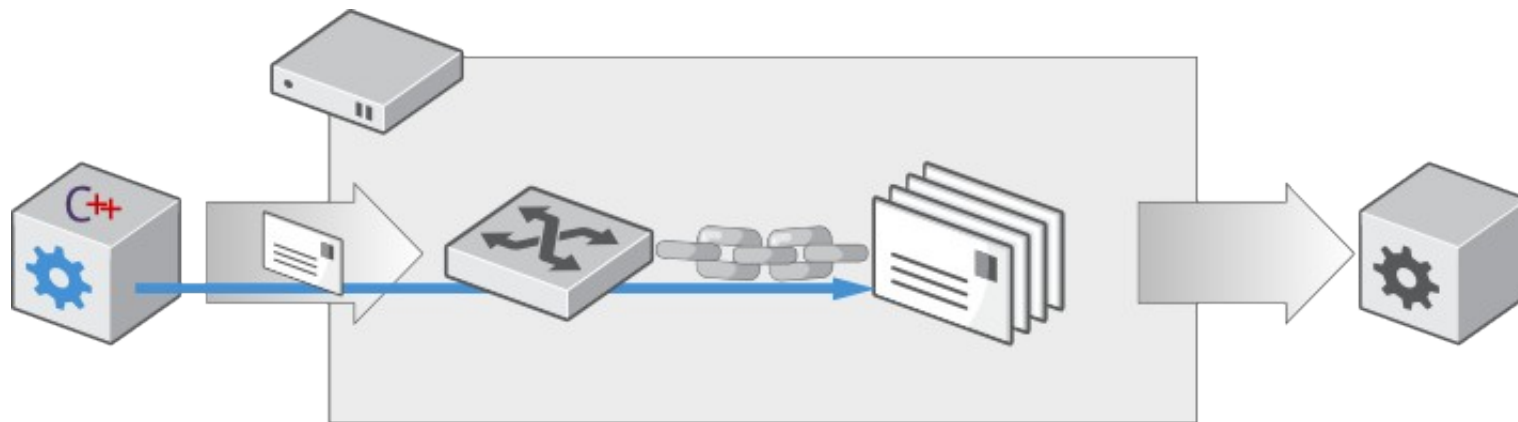
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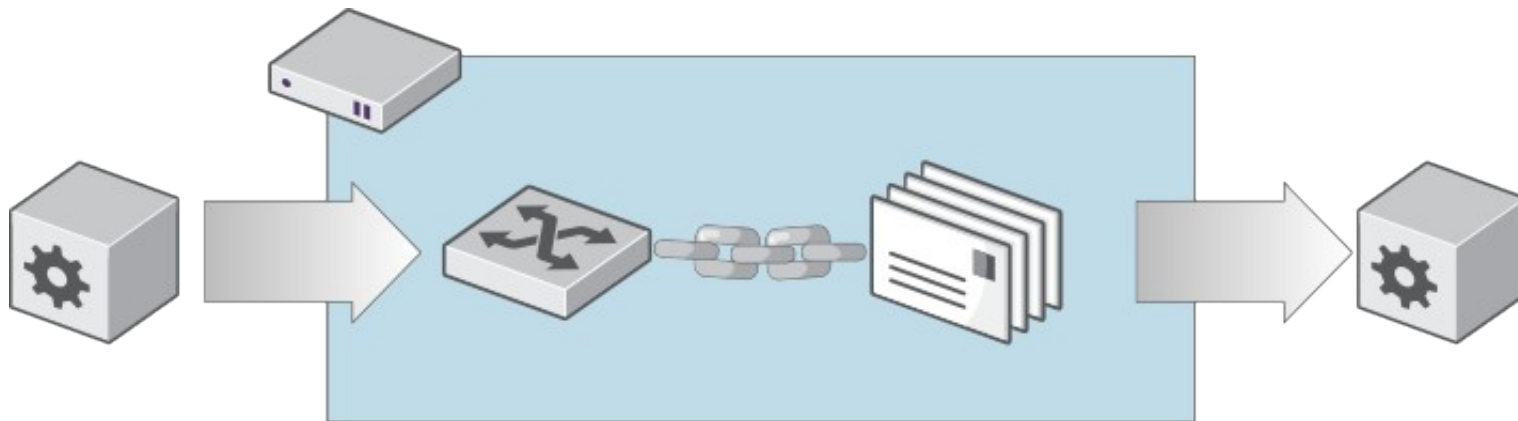
MRG-M Message Flow – Producers

- Client built using AMQP client libraries
 - Responsible for...
 - Connecting securely
 - Establish session on exchange to queue
 - Generating message(s)
 - Send



MRG-M Message Flow – Broker

- qpidd process running on the server
 - Responsible for...
 - Creating/hosting exchanges & queues
 - Secure connection establishment
 - Mapping session to exchange/queue
 - Transactions, persistence, clustering etc.



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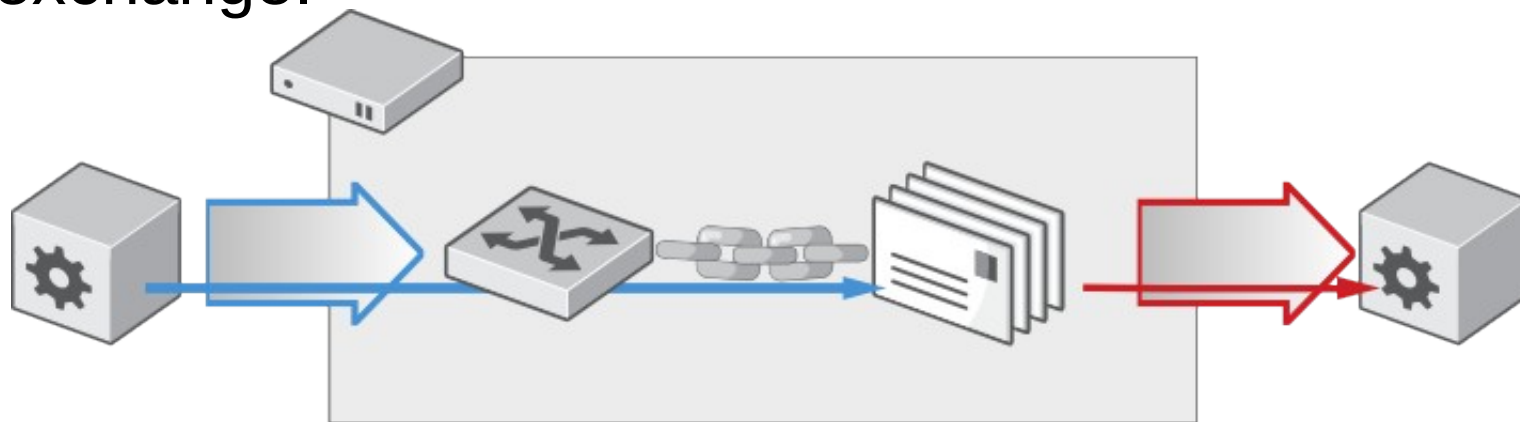
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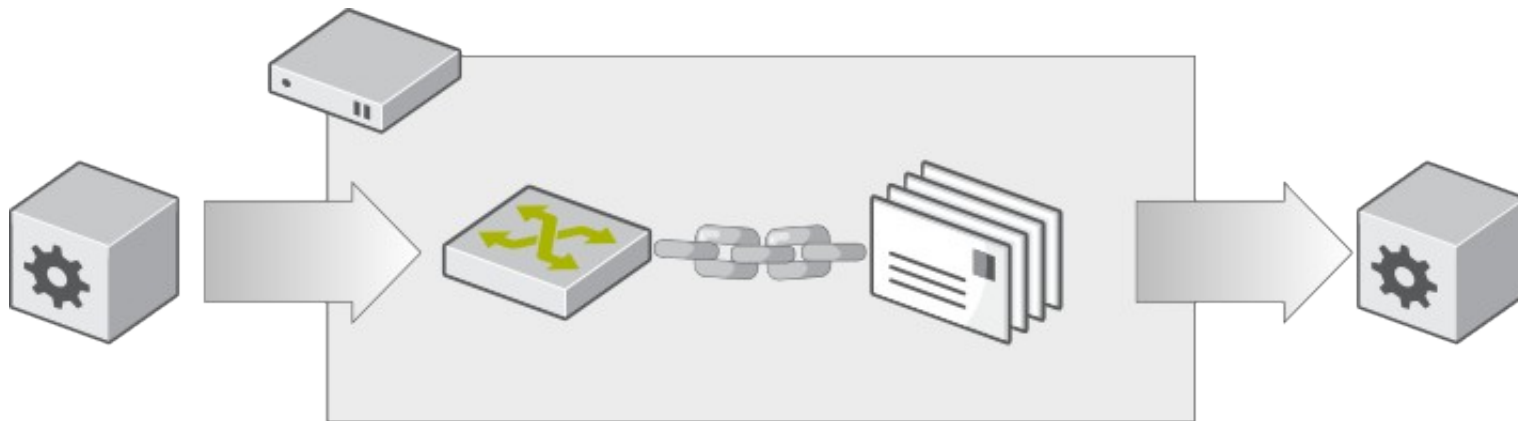
MRG-M Message Flow – Connections & Sessions

- Connection:
 - Secure gateway into Broker through which sessions are established.
- Sessions:
 - Peer-to-Peer link between client and queue, optionally transactional. Producer messages arrive via an exchange.



MRG-M Message Flow – Exchanges

- Inbound message router to queues.
- Define style of message handling.
 - Responsible for...
 - Binding to Queues using binding-key
 - Routing messages using routing-key



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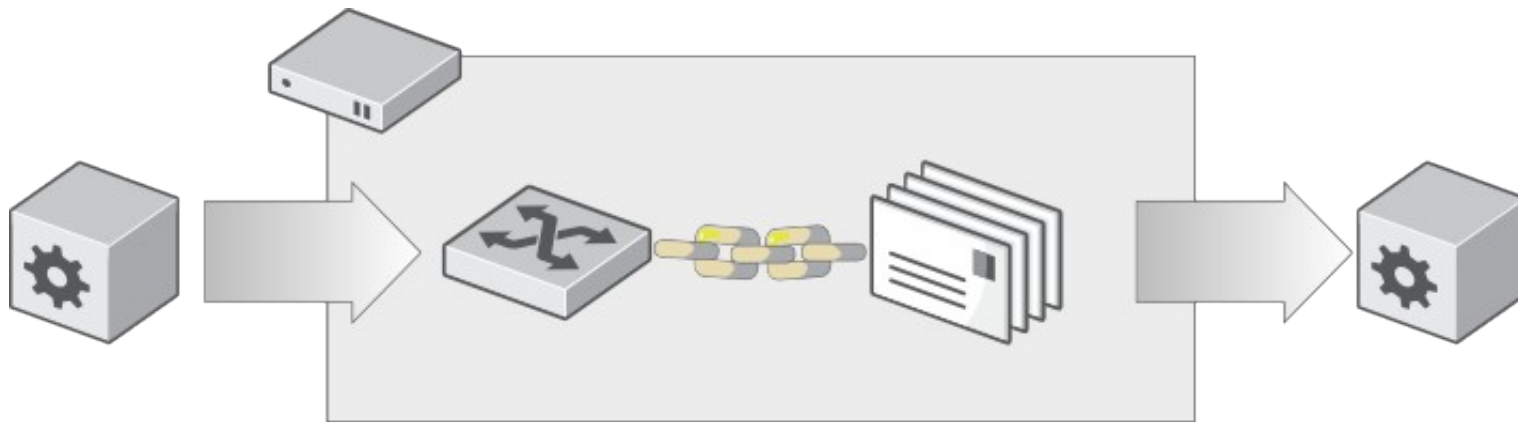
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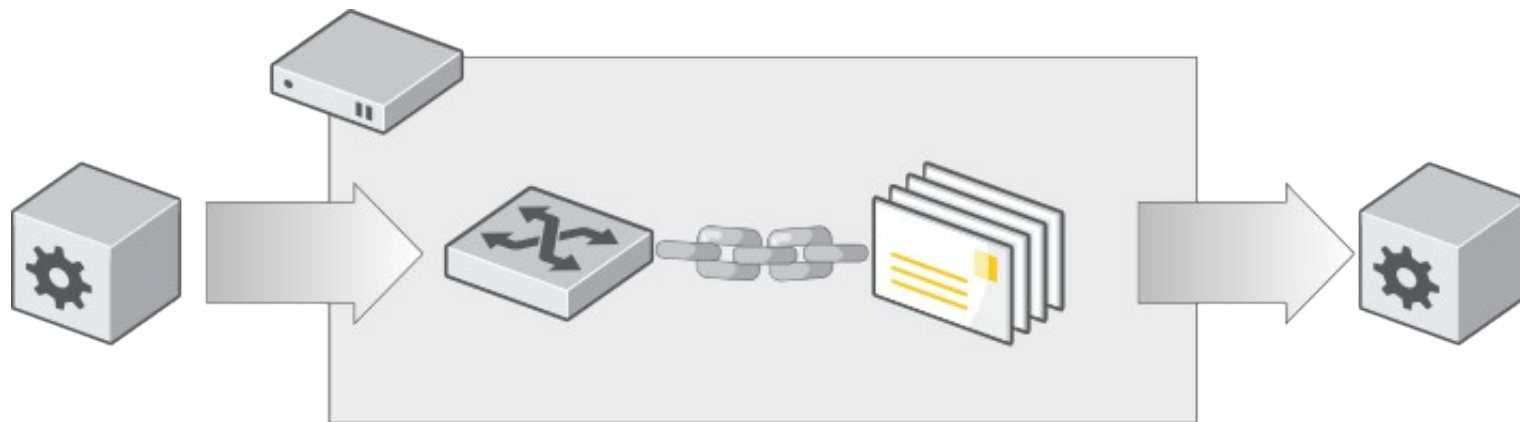
MRG-M Message Flow – Bindings

- Link between an Exchange and Queue that is defined by the binding-key.
- Messages with a matching routing-key will travel across this binding to the Queue.



MRG-M Message Flow – Queues

- Message waiting room before delivery.
- Queues are defined with semantics that determine the ordering and priority of messages held on them.



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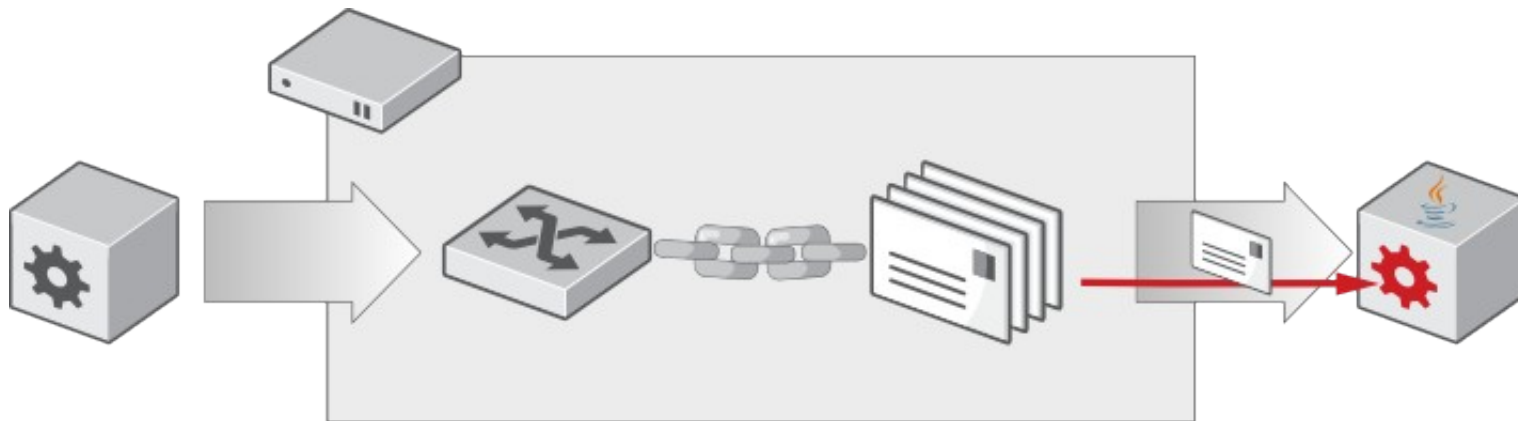
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MRG-M Message Flow – Consumers

- Client built using AMQP client libraries
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Topic Exchanges

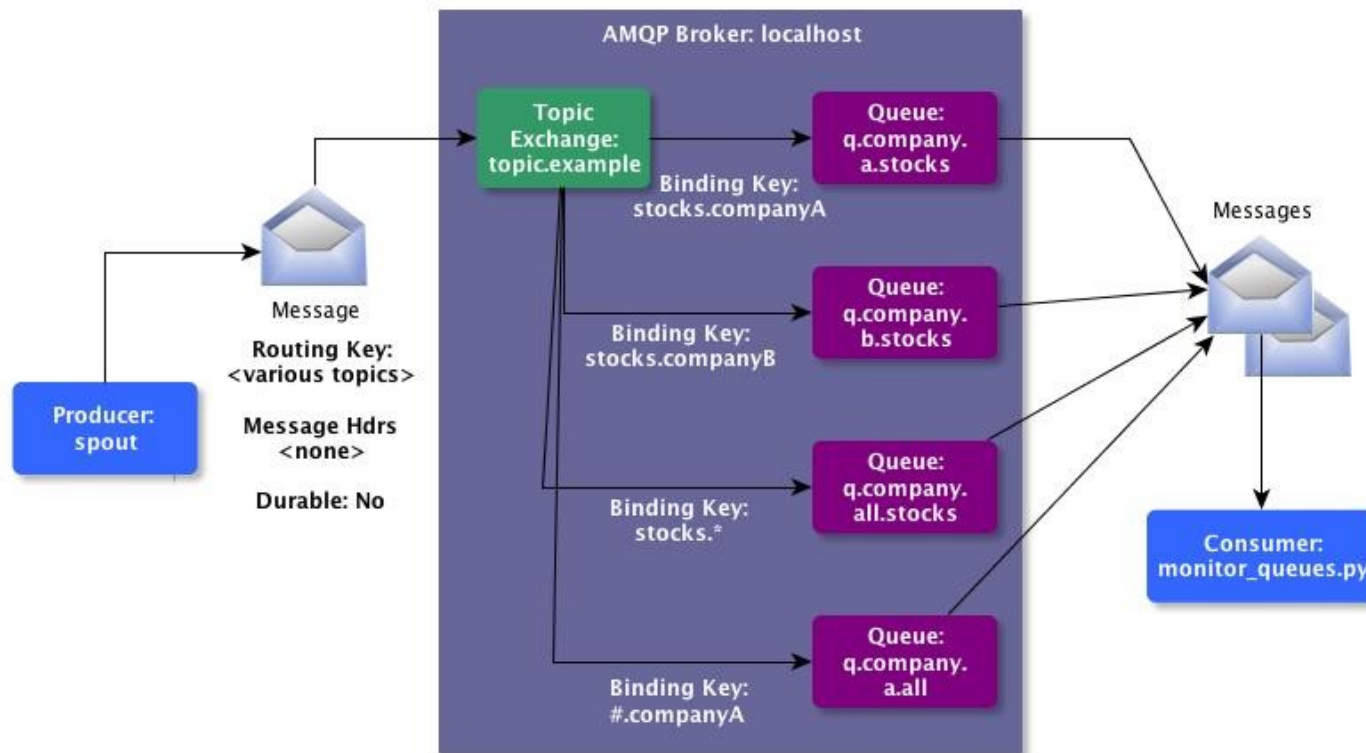
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MRG-M Message Flow – Topic Exchange Example



MRG-M Message Flow – Resources

- MRG-M Messaging
 - <http://www.redhat.com/products>
- MRG-M Documentation
 - <http://docs.redhat.com/docs>
- Apache Qpid:
 - <http://qpid.apache.org/>
- AMQP – Protocol & More:
 - <http://amqp.org/>
- Red Hat Training
 - <http://www.redhat.com/training>

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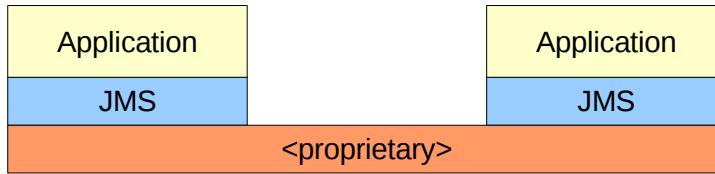
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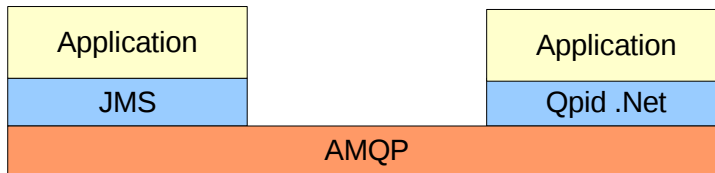


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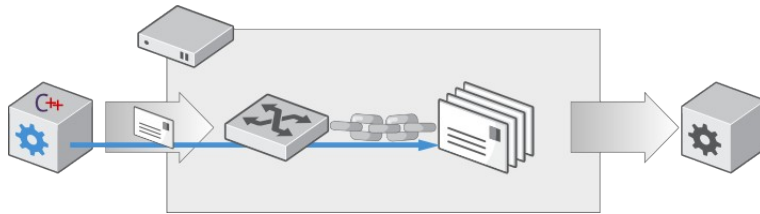
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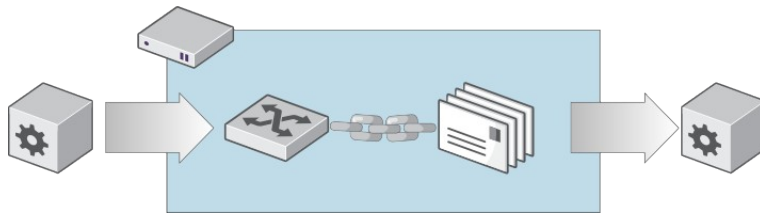
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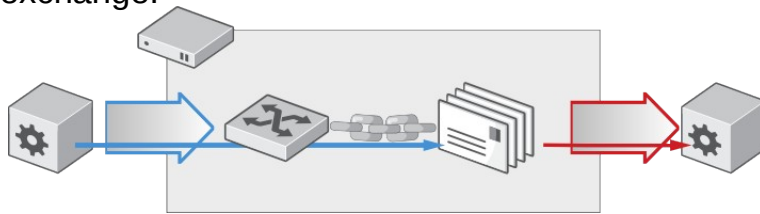
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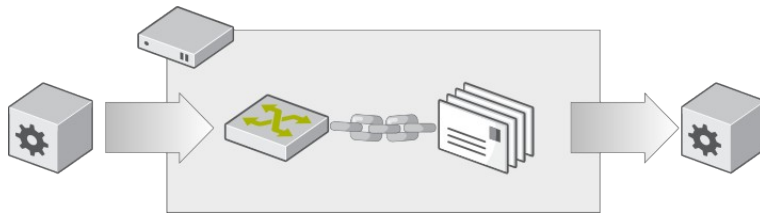
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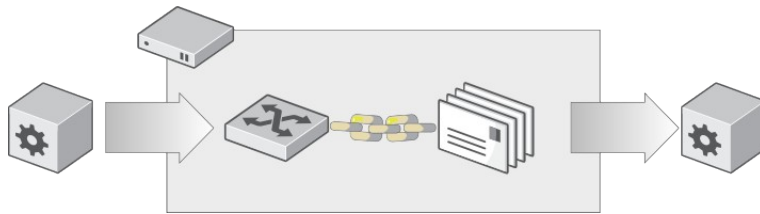
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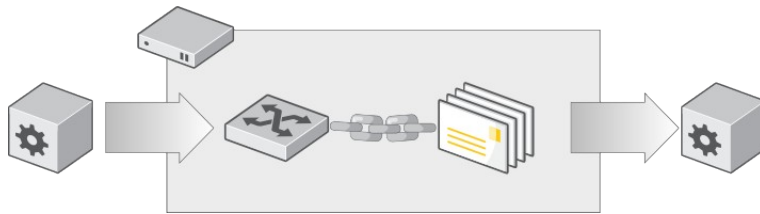
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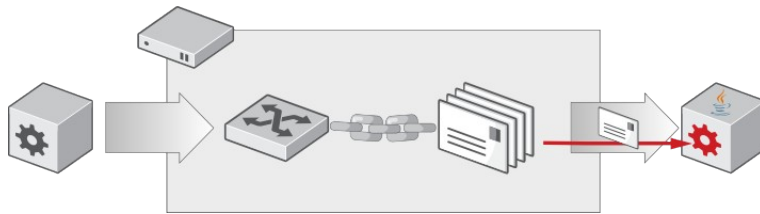
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Topic Exchanges

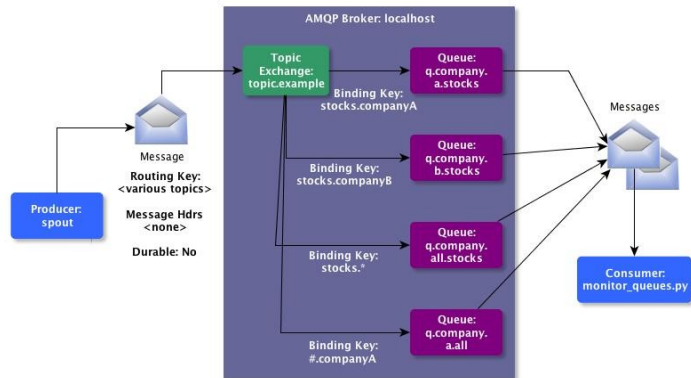
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MRG-M Message Flow – Topic Exchange Example



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