

What's the Big Deal about AMQP?

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06.27.12

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What is AMQP?

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AMQP is a specification not a product

Advanced Message Queueing Protocol is
“the internet protocol for business messaging”



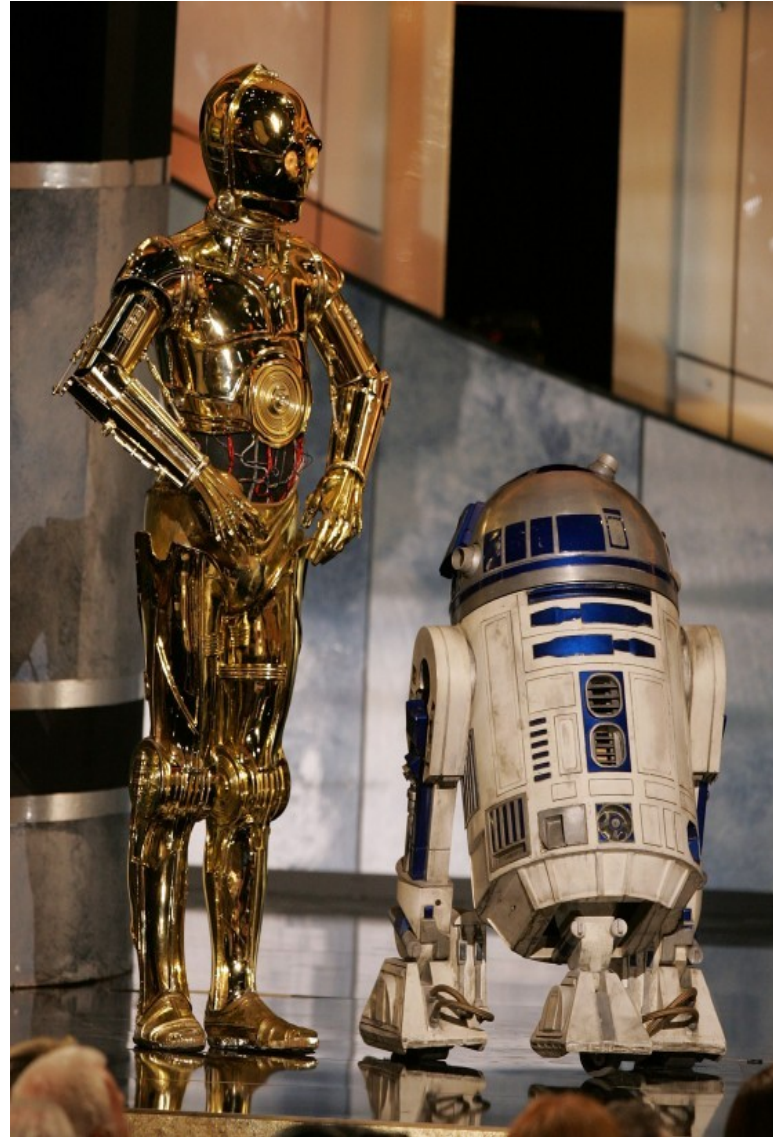
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Messaging – like email for machines



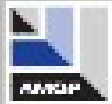
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AMQP got it's start in Financial Services at JP Morgan with John O'Hara



Personal Motivation

- Delivered several large global banking systems
- Became frustrated by the waste and expense of connecting everything together
 - Hundreds of systems across six continents
 - Thousands of demanding users
 - Terabytes of stored data
 - Gigabytes of system messaging per day
 - Hundreds of connected business partners
- No one had an interest in making this easier..
Except those suffering the pain!
- Started "A Message Queuing Protocol"



www.amqp.org

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Membership – Users and Vendors Working Together

Financial Services

Credit Suisse

Deutsche Borse

Goldman Sachs

JP Morgan Chase

Technology Providers

HCL Technologies

IIT Software

INETCO Systems

Kaazing

Microsoft

My-Channels

Progress Software

Red Hat

SITA

Software AG

Solace Systems

StormMQ

VMWare

WSO2

Zenika



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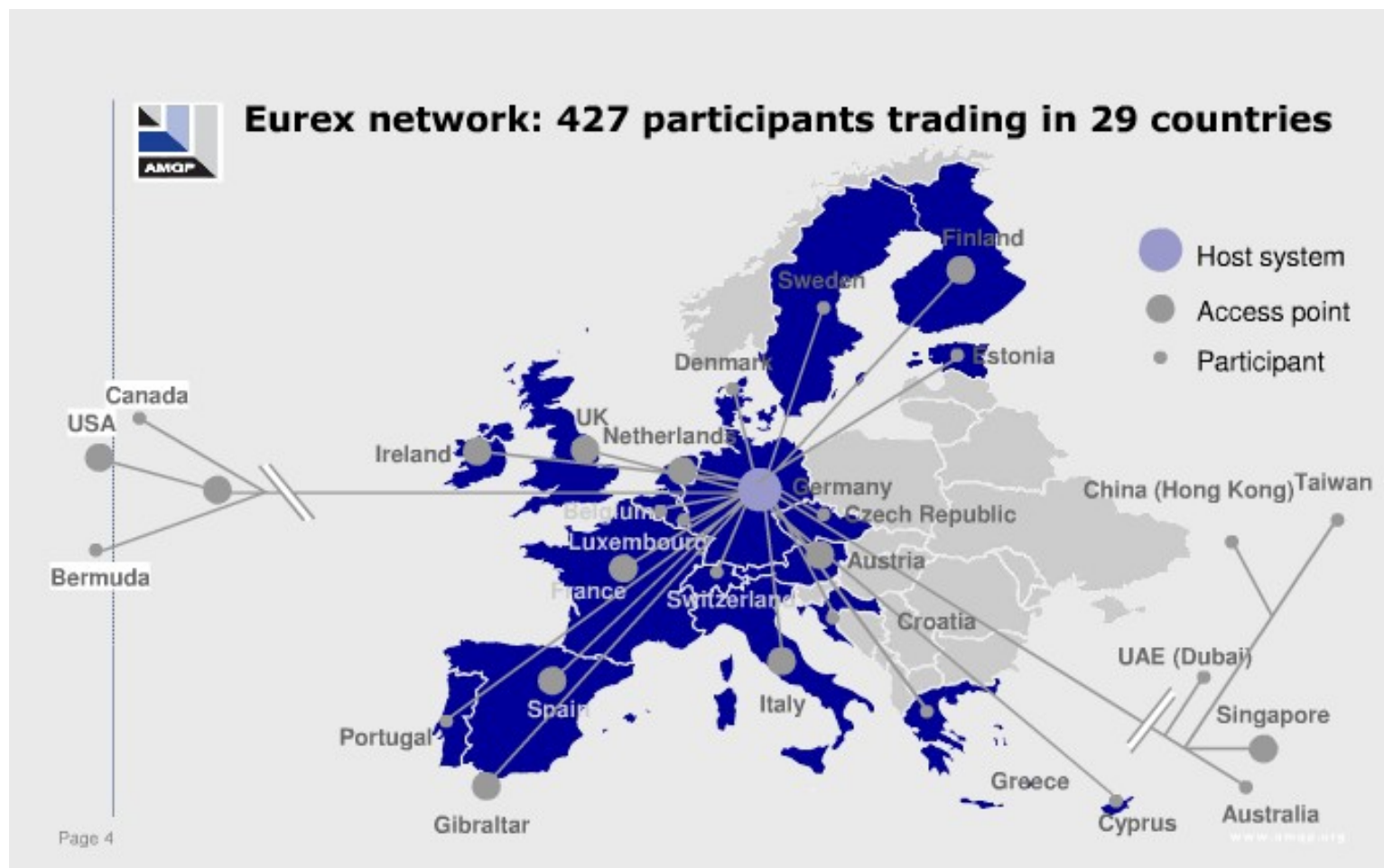
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DEUTSCHE BÖRSE
GROUP

AMQP and MRG-M Meet the needs of real world applications



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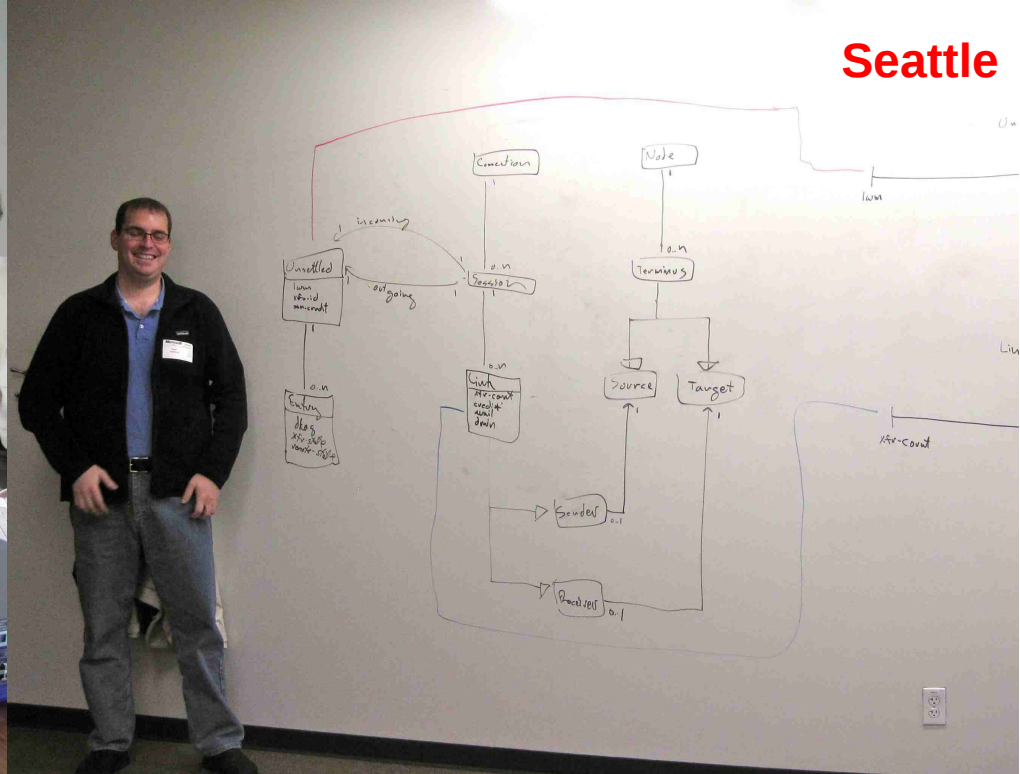
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London



Seattle



Newcastle

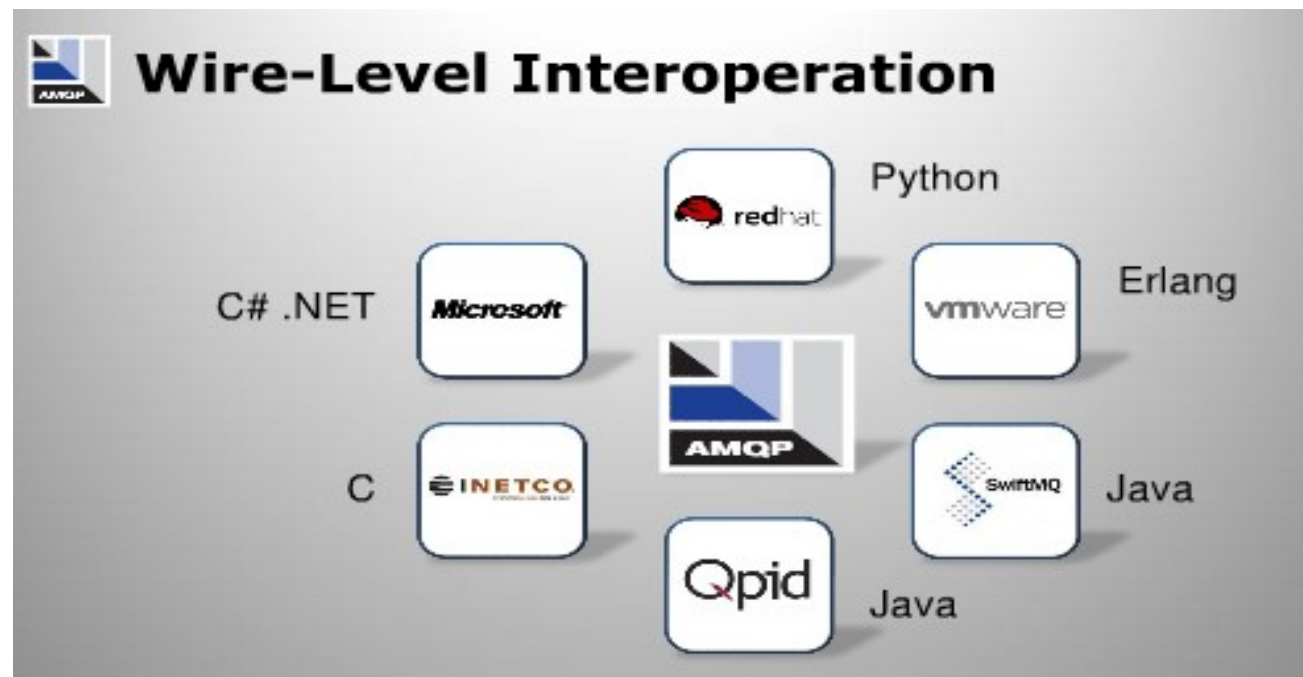


Westford

What's the big deal about AMQP 1.0?

Binary compatibility guaranteed going forward

Vendor interoperability



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What are the benefits of AMQP?

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Benefits of AMQP

Provides interoperability with open wire level protocol

Allows for an open ecosystem with an open standard

Reduces integration costs

Removes technical barriers to trade

Provides necessary features

Positions for innovation



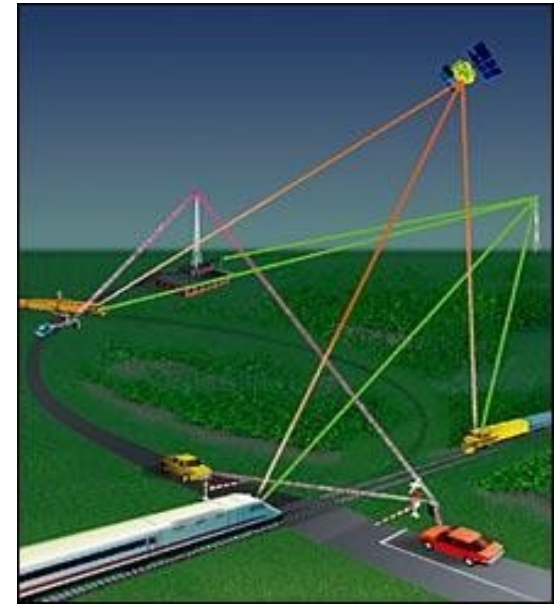
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Example – Positive Train Control



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Example 2: Aviation Air to Ground Communication Committee chose AMQP



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YOUR ENTERPRISE



AMQP Aware Services
C/C++, Java JMS, MS
WCF, Cloud Applications



AMQP Aware Clients
Devices & workstations

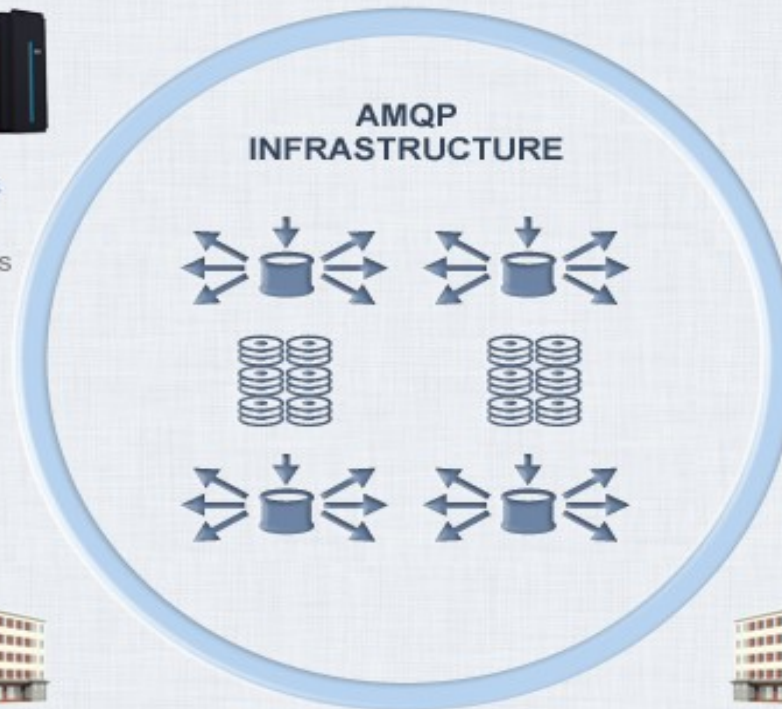


orders@supplier.com



treasury@fundmanager.com

BUSINESS PARTNERS & SERVICES



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What's the Big Deal about Red Hat Enterprise MRG-Messaging?

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MRG Messaging Feature Highlights

Core Messaging

Advanced Features

High Performance

High Availability

Management tools

Security

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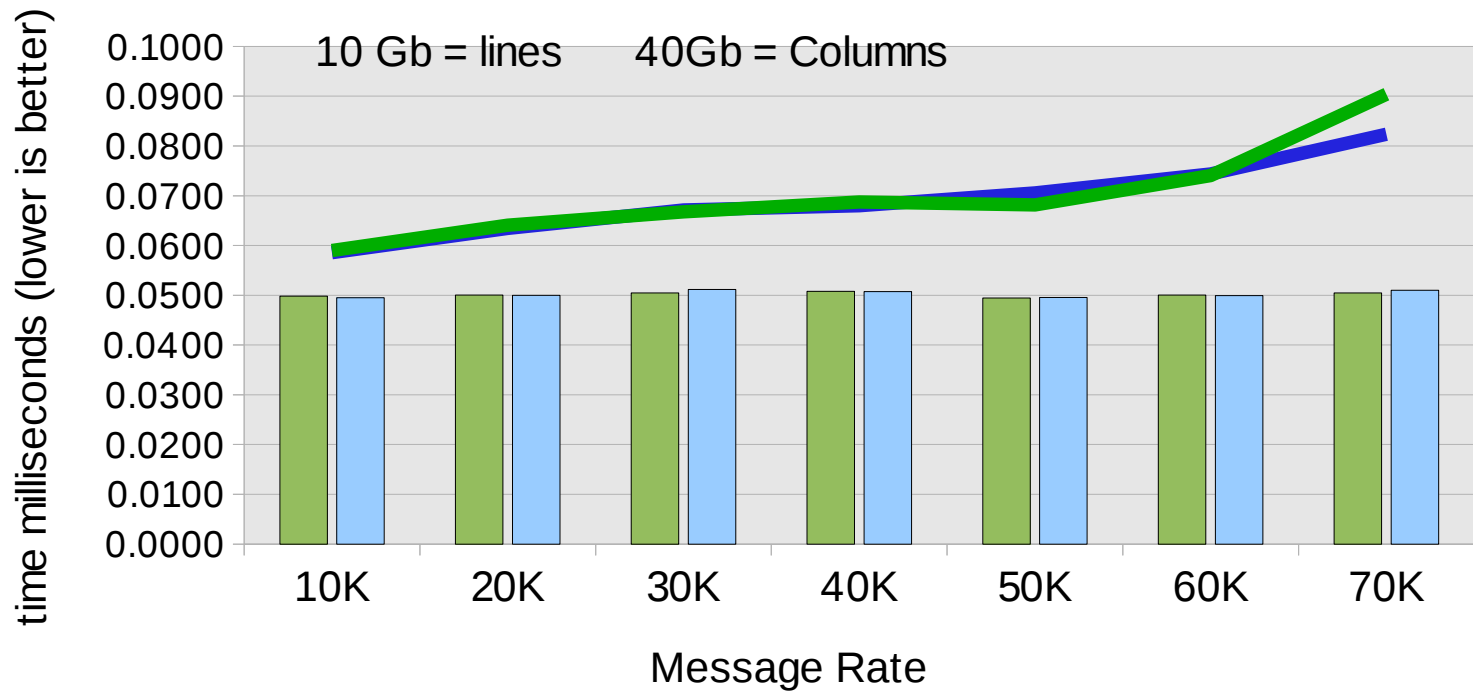
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40 Gbit Gen3 vs 10 Gbit PCI Gen2 latency

10Gb vs 40 Gb qpid RDMA latency test results



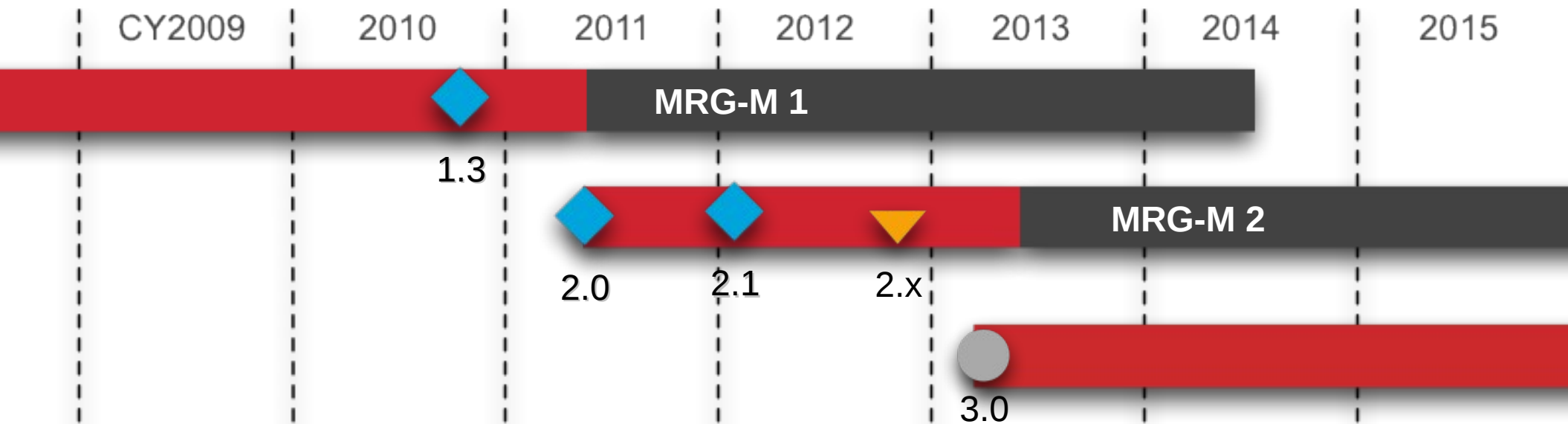
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Red Hat Enterprise Messaging



MRG-M 2.1 (Q1 CY12)

- JCA Adapter
- Message Groups
- JMS performance improvements
- Ipv6
- MS Visual Studio 2010

MRG-M “Milan” (Q3 CY12)

- Logging Enhancements
- Security improvements for ACL's
- Solaris Client
- Performance Improvements

MRG-M “Strasbourg” (H1 CY13)

- AMQP 1.0
- Wide area routing
- HA improvements

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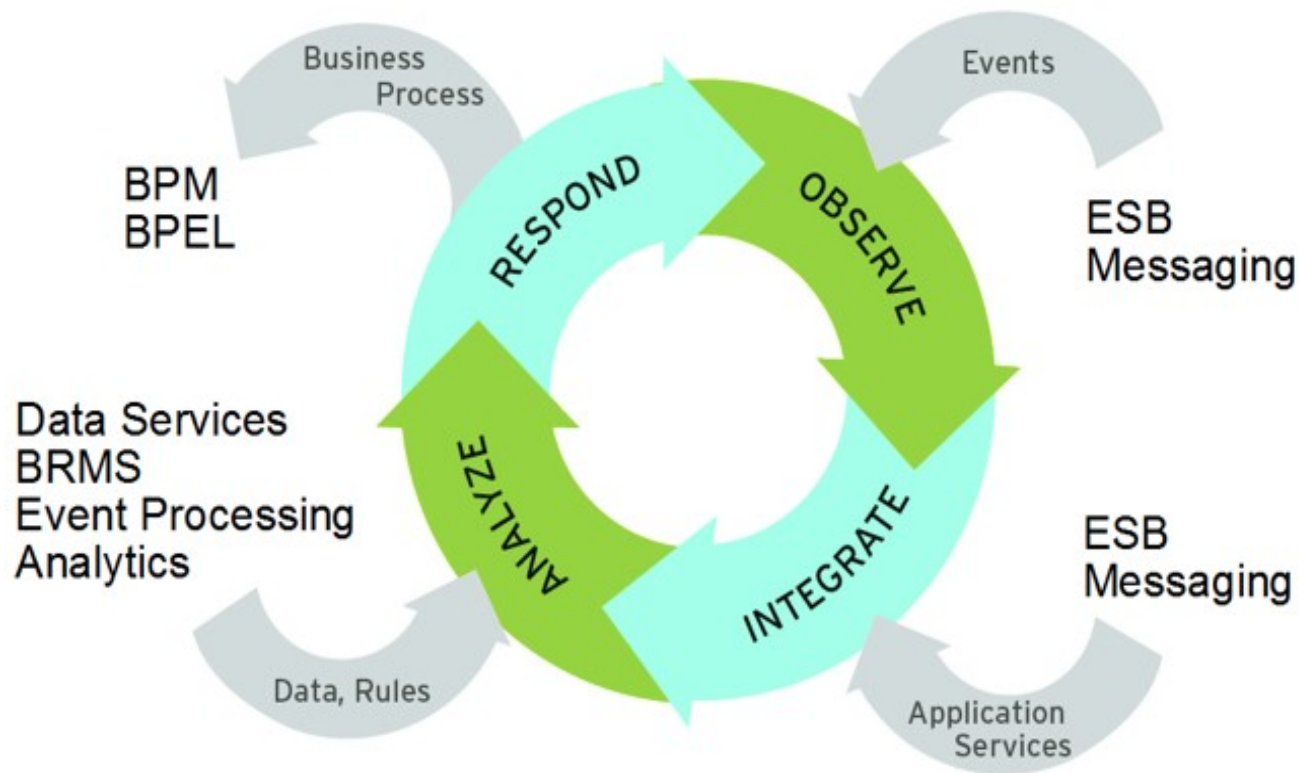
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MRG-M 2.1: JCA Resource Adapter AMQP meets JEE

Intelligent, Integrated Enterprise enabled by IT



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MRG-M 2.1: Message Groups



"Message belonging to a group will be processed mutually exclusively of other messages in the group"



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MRG-M 2.1: Other Features

Ipv6

MS Visual Studio 2010

Improved Java Performance



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MRG Messaging Beyond 2.1 - “Milan” Release

Hotfix rollup

Logging Enhancements

Security - Access Control List Improvements

Performance

Solaris Client



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Beyond 2.1: “Strasbourg” Release – H1 2013

AMQP 1.0



Routing improvements for mobile and embedded use cases

High Availability Improvements

Performance Improvements



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References

- MRG Messaging Website – “Resources” tab has links to videos and white papers
<http://www.redhat.com/products/jbossenterprisemiddleware/messaging/>
- “AMQP for Dummies” <http://engage.jboss.com/forms/red-hat-amqp-for-dummies>
- InfoQ videos
 - John O'Hara Keynote: <http://www.infoq.com/presentations/Keynote-AMQP-1>
 - Hanno Klein from Deutsche Borse:
<http://www.infoq.com/presentations/AMQP-in-Financial-Service>
- AMQP Website
<http://www.amqp.org/>
- Qpid
<http://qpid.apache.org/>



Other interesting sessions

Wed 3:40pm: Room 206 - Improving Mobile Ad-hoc Network (MANET) Communications with Red Hat Enterprise MRG Messaging

Thurs 1:20pm: Room 310 – MRG Update and Roadmap

Thurs 2:30pm: Room 309 – Real World Perspectives Panel includes Clark Palmer, Chief Engineer for Meteorcom

Thurs 4:50pm: Room 209 – Taste of Training - Red Hat Enterprise MRG Messaging Flow (Replay)

Thurs 6:00pm: “Innovation Hour” - includes Tim Potter from Meteorcom

Fri 9:45am: Room 206 - Real-time Intelligent Messaging for the Enterprise with Red Hat Enterprise MRG Messaging

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