



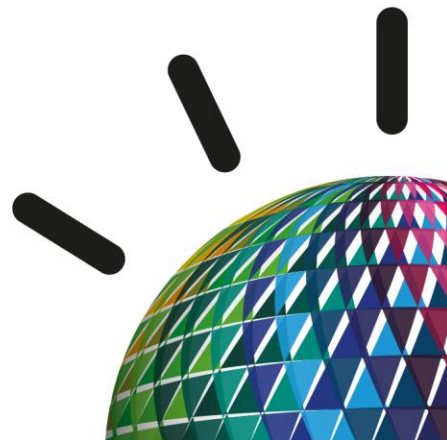
UK Impact 2012

Change the Game

What's New in WebSphere MQ & WebSphere Message Broker

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Please Note



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Performance is based on measurements and projections using standard IBM benchmarks in a controlled environment. The actual throughput or performance that any user will experience will vary depending upon many factors, including considerations such as the amount of multiprogramming in the user's job stream, the I/O configuration, the storage configuration, and the workload processed. Therefore, no assurance can be given that an individual user will achieve results similar to those stated here.



Agenda



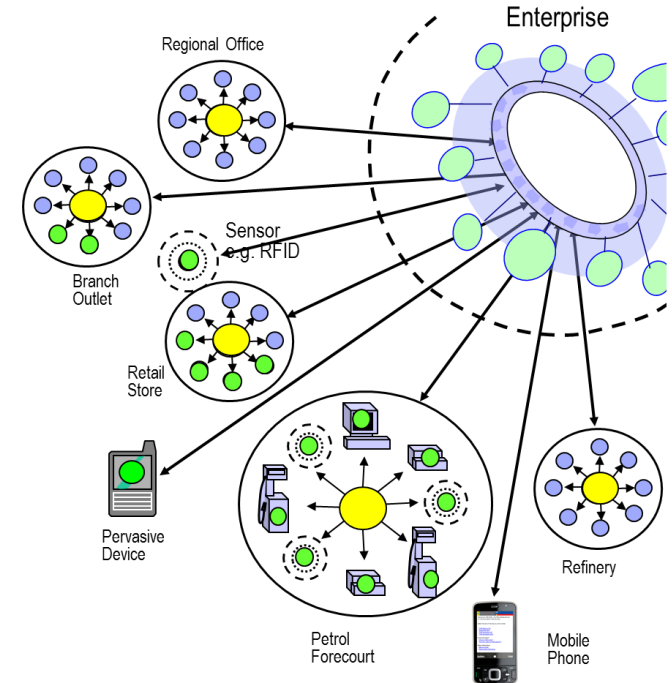
- Connectivity and Integration Announcements
- Roadmap
- WebSphere MQ family update
- WebSphere Message Broker family update
- Conclusion



WebSphere MQ Value: Connectivity to, from and within an Enterprise



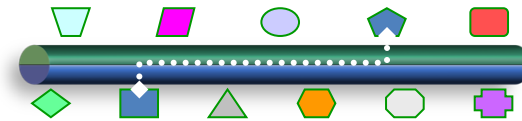
- A Universal Message Bus for access to data wherever it exists to support your business
- Provides a comprehensive range of Messaging capabilities to support your Business requirements for data integration
 - Managed File Transfer
 - Messaging integration patterns
 - Reliability and availability QoS
 - SOA foundation
- Provides appropriate data access and data privacy controls to help meet audit and regulatory requirements
- WMQ Telemetry is one step in extending the reach of WMQ to a wider world of data relevant to your business



WebSphere Message Broker



- Universal Connectivity FROM anywhere, TO anywhere
 - Simplify application connectivity for a flexible & dynamic infrastructure
- Comprehensive Protocols, Transports, Data Formats & Processing
 - Connect to applications, services, systems and devices
 - MQ, JMS 1.1, HTTP(S), SOAP, REST, File (incl. FTP, FTE, ConnectDirect), Database, TCP/IP, MQTT, CICS, IMS, SAP, SEBL, .NET, PeopleSoft, JDEdwards, SCA, CORBA, email...
 - Understand the broadest range of data formats
 - Binary (C/COBOL), XML, CSV, JSON, Industry (SWIFT, EDI, HL7...), IDOCs, User Defined
 - Built-in suite of request processors
 - Route, Filter, Transform, Enrich, Monitor, Publish, Decompose, Sequence, Correlate, Detect...
- Simple Programming with Patterns & Graphical Data Flows
 - Patterns for top-down, parameterized connectivity of common use cases
 - Graphical data flows represent application & service connectivity
- Extensive Management, Performance & Scalability
 - Extensive Administration & Systems Management facilities for developed solutions
 - Wide range of operating system & hardware platforms supported, including virtual & cloud options
 - High performance transactional processing, additional vertical & horizontal scalability
 - Deployment options include Trial, Express, Standard and Advanced
- Connectivity Packs for Industry Specific Content
 - Connectivity Pack for Healthcare includes HL7 Connectors, Patterns & Tooling



C&I: Product Announcements & Updates



Messaging

- **WebSphere MQ v7.1**
 - Security and Performance enhancements, Reduced hardware requirements
- **WebSphere MQ v7.5**
 - Fully integrated messaging solution with secure, reliable and scalable data movement

API Management

- **WebSphere Cast Iron Live Web API Services**
 - Rapid assembly of services, governed secure gateway



Integration

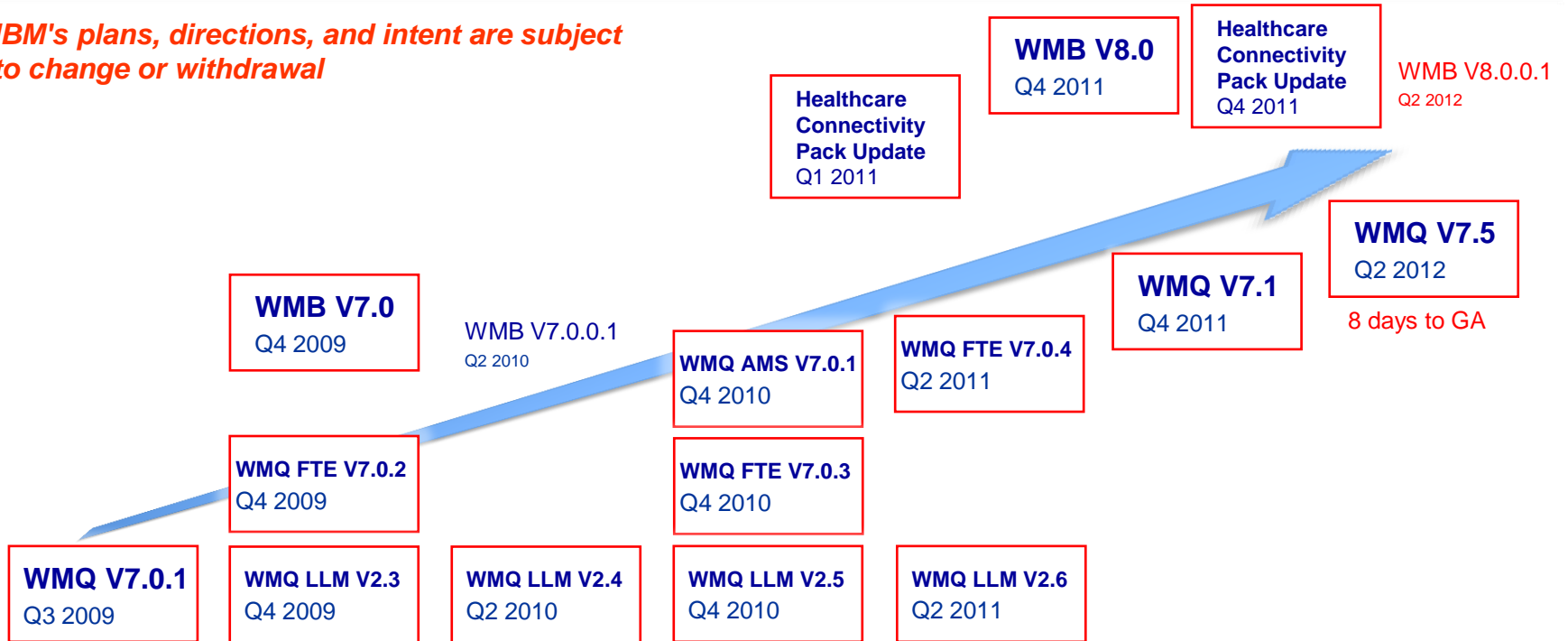
- **WebSphere Message Broker v8**
 - Enhanced .NET integration and increased audit + recording capabilities
- **WMB Connectivity Pack for Healthcare**
 - Connects + integrates new/existing HL7 based applications + medical devices
- **WebSphere DataPower v5**
 - Support for extended memory, OAuth 2.0, and enhanced governance + SLA management
- **WebSphere Appliance Management Center**
 - Streamlined user interface + task flow and Simplified installation
- **WebSphere Service Registry & Repository v8**
 - REST support and Automatic SLA policy support enforcement



Roadmap for MQ and Broker



IBM's plans, directions, and intent are subject to change or withdrawal



WMQ AMS, Advanced Message Security
WMQ LLM, Low latency Messaging
WMQT, Telemetry

WMQ FTE, File Transfer Edition



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WebSphere MQ V7.1: Feature Summary



| <i>New Feature</i> | <i>Benefits</i> | <i>Details</i> |
|--|---|--|
| Multi-Version Install capability on Distributed platforms | Makes it easier to deploy and upgrade systems and stage version to version migration | Unix and Windows support for multiple versions of MQ V7.x (AND one copy of MQ V7.0.1) down to fixpack levels. Relocatable installation support. Applications can connect to any Qmgr |
| Enhanced Security | Simplified Configuration Enhanced Authorisation and Auditing | IP address Authorisation capability Additional crypto algorithms More granular authorisation for non-local queues Application Activity Reports |
| Cloud Support | Simplifies and support Cloud deployments | Additional Hypervisor images |
| Enhanced Clustering | Improves ease-of-use | Authorisation on Cluster Q rather than XMIT Q on Dist. Platforms Bind-on-Group Support |
| Multicast capability | New messaging QoS provides low latency with high fan-out capability | MQ Pub/Sub Topic space can now map to multicast Group Addresses Provides direct interoperability with MQ LLM |
| Improved scalability and availability on z/OS | Further exploitation of z196 Customer control over CF storage use CF Connectivity Loss improvements | Code contention reduced to improve multi-processor linear scaling Use of MQ Datasets rather than DB2 significantly improves "large" message capability Structure rebuild capability for CF Connectivity Loss scenarios |
| Improved Performance on Distributed platforms | Improved multiprocessor exploitation | Various code improvements |



WebSphere MQ V7.5: Content Summary



- For Windows, Unix and Linux

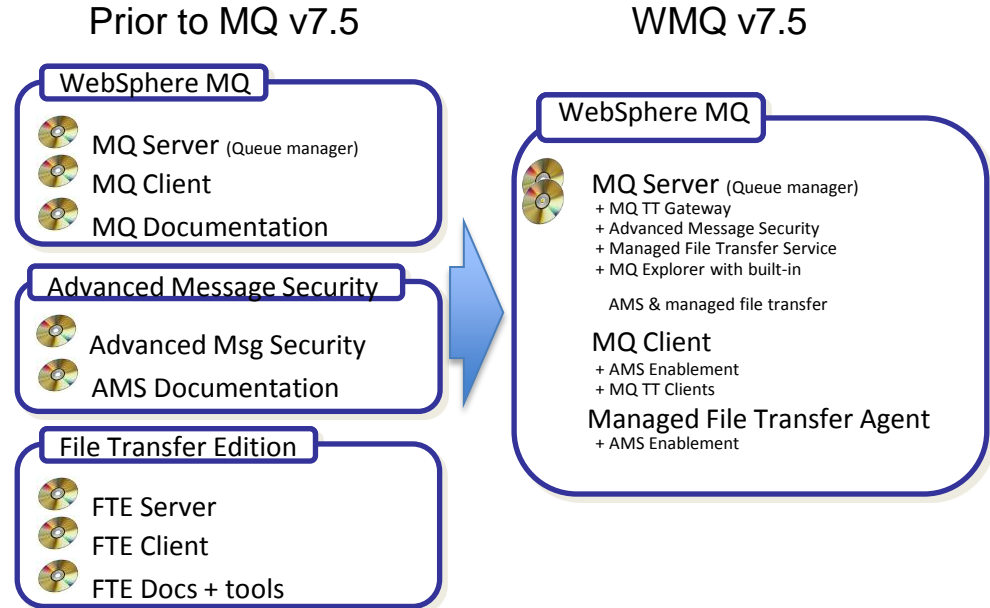
| <i>New Feature</i> | <i>Benefits</i> | <i>Details</i> |
|--|---|---|
| Integrated Installation | Makes it easier to deploy systems Simpler licensing | Combines several products into a single package Common experience |
| Enhanced Clustering | Improves ease-of-use Improves application isolation | Split Cluster Transmission Queue |
| Java Application Identification | Makes it easier to distinguish applications | Applications no longer to all have the same name |
| AMS channel interception | Provides a level of message protection even when application environment cannot run AMS | Interception in the SVRCONN still protects messages before hitting queues |
| FTE Logger Options | Can write FTE audit records to flat file | No longer a requirement for an enterprise database Easier to read data immediately |



WebSphere MQ V7.5



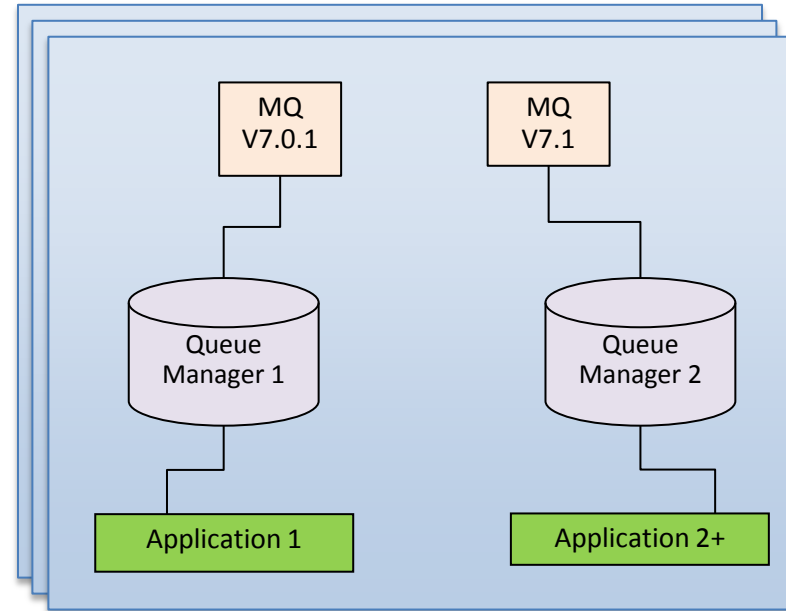
- **Integrated Messaging Offering**
 - Single install, packaging & tooling for all Messaging options
 - Reduce time to value, simplify usage
- **What's being delivered?**
 - Integration of MQ with MQ FTE, MQ AMS and MQ Telemetry
 - Single install, common integrated tooling and management, simplified licensing and entitlements
 - Updated MQ Explorer tooling for all platforms
 - More complete, easy to use messaging infrastructure, enabling you to gain full range of messaging, swiftly & easily
- **All messaging functions & capabilities available to all customers, new and existing with rich choice of qualities of service**
 - Removal of charge for MQ XA client
 - Reduced pricing metric for standard MQ Telemetry client
 - Lower cost for larger numbers of clients



Multi-Version Installation



- MQ on Unix and Windows can install multiple levels on a system
 - Relocatable to user-chosen directories
 - Can have multiple copies even at the same fixpack level
- Simplifies migration
 - Can move applications as needed, not all at once
 - No need for parallel hardware
- Easier for ISVs to imbed MQ in solutions
 - Can install in “private” locations without worrying about other copies
 - Reduces support concerns
- Permits a single copy of V7.0.1 to remain on system
 - So existing systems can be migrated
 - Must be 7.0.1.6 or later



Security: Channel Access Control



- Simplifying configuration for channel access
 - Clients and queue managers
- SET CHLAUTH definitions control who can use channels
 - Name mapping
 - Access blocking
- Easy to test rules that you define
 - DISPLAY CHLAUTH can “execute” rules
- Rules can be applied in WARNING mode
 - Not actually blocked, but errors generated
- **MIGRATION NOTE:** Standard rules block clients on new queue managers
 - “Secure by default”
 - Migrated queue managers behave as before until you enable the rules
 - Queue manager attribute CHLAUTH(ENABLED|DISABLED) provides overall control

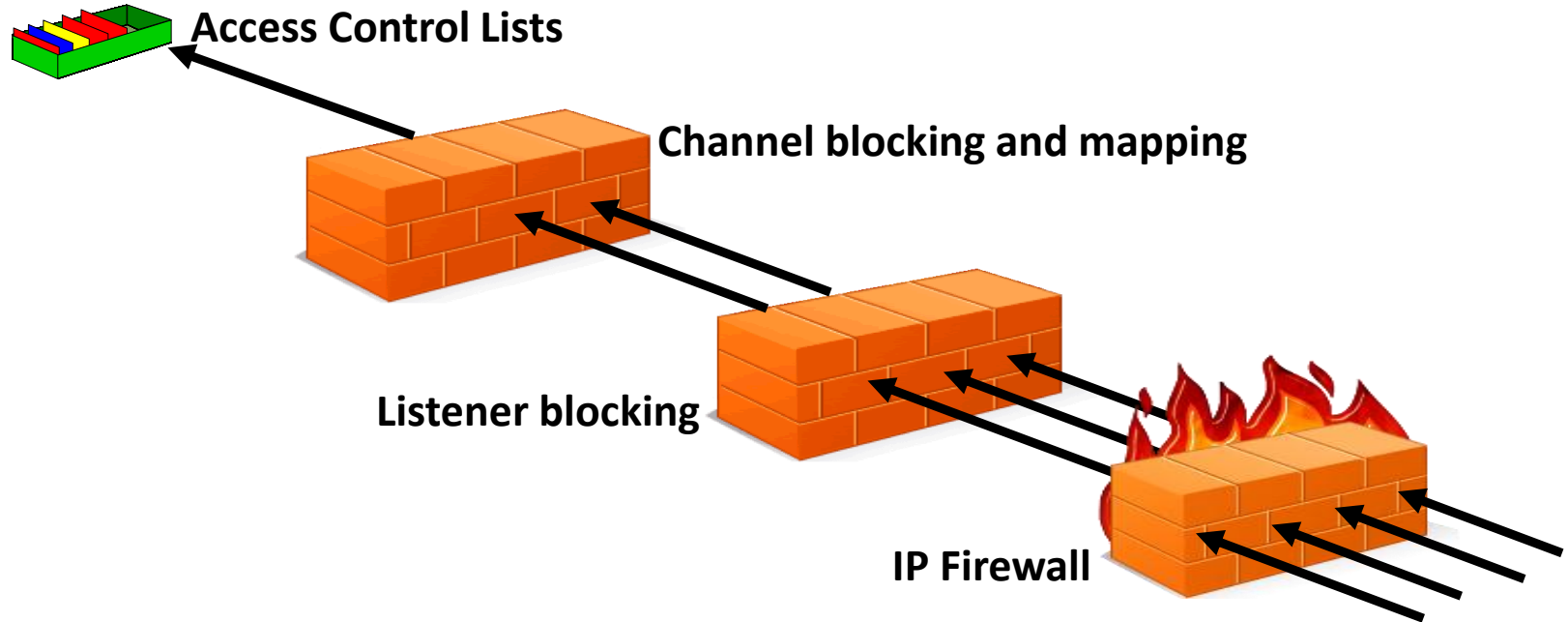


Security: Channel Access Control – example uses

- Block connections from specific IP addresses
- Block connections from specific Userids
- Set MCAUSER value used for any channel coming from a specific IP address
- Set MCAUSER value used for any channel having a specific SSL or TLS DN
- Set MCAUSER value used for any channel connecting from a specific Qmgr
- Block connections claiming to be from a particular Qmgr unless the connection is from a specific IP address
- Block connections claiming to be from a particular Client Userid unless the connection is from a specific IP address
- Block connections presenting a particular SSL or TLS certificate unless the connection is from a specific IP address



Channel Access Blocking Points



- More crypto algorithms supported for SSL
 - Stronger algorithms are now available and recommended
 - MQ V7.0.1 added some SHA-2
 - MQ V7.1 adds more, with support for the NSA “Suite B” standard which includes Elliptic Curve cryptography
- Some older algorithms (eg SHA-1) should be considered deprecated
 - No plans to withdraw older algorithms immediately
 - But expect them to be removed in a future version of MQ
- Newer algorithms supported by gskit8 on Distributed platforms
 - Waiting for z/OS and iSeries SSL implementations before MQ can support them there
- The gskit toolkit is now provided inside the MQ installation
 - Will not clash with alternative levels from other MQ installations or other products



- Distributed platforms now have authorisations for non-local queues
 - Including clustered queues
 - Making it consistent with z/OS
 - Also consistent with Topic authorisations
- So there is no longer a need to authorise access to the cluster transmit queue
- Grant authorisation to the remote queue manager instead
 - A new pseudo-object known to the OAM



Application Activity Reports



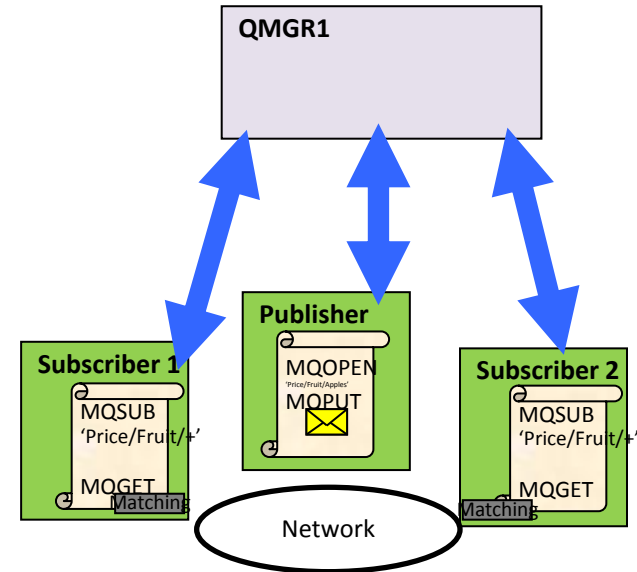
- New set of events to report on MQI operations by applications
 - One PCF event may contain multiple MQI operations
- Configurable in granularity
 - Amount of data
 - Which applications
- Enables scenarios such as
 - Application audit trail
 - Message duplication
 - Resource usage: which queues or topics are actually being used
 - Problem Determination: most recent MQI calls by applications
 - Application Coding Standards: does everyone use the MQI in the recommended way
 - And more ...
- On all Distributed platforms



MQ Clients – Multicast

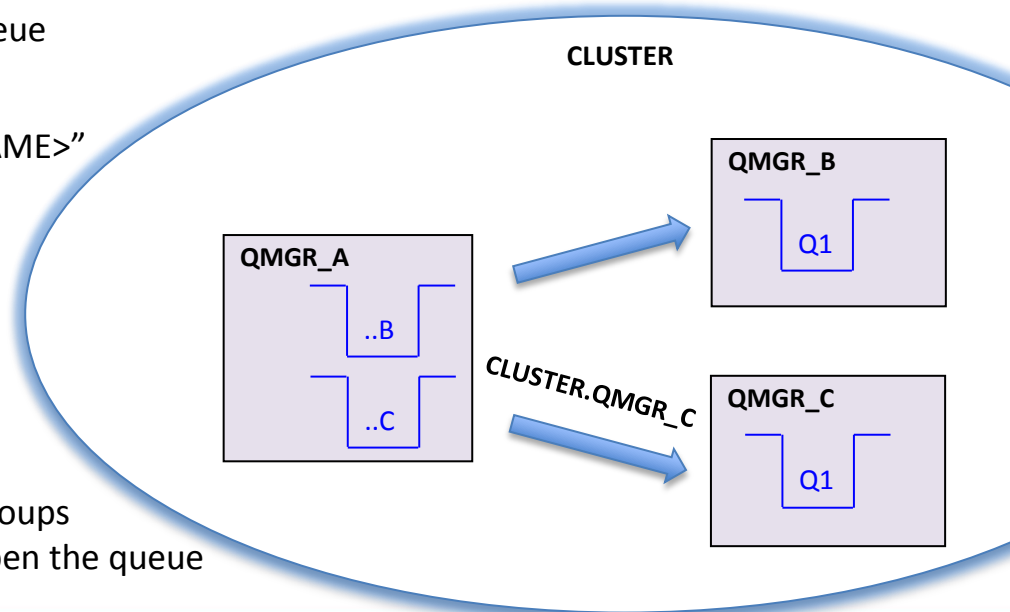


- Publish/Subscribe is enhanced to support multicast communication
 - Uses technology from the MQ Low Latency Messaging product
 - So it is interoperable with LLM
- Provides new Quality of Service
 - Low latency with high fan-out
 - Provides higher speeds for non-persistent messages
 - Provides higher availability as queue manager can be removed without affecting flow
 - Provides “fairness” as all recipients of a message get it at the same time
 - Higher scalability as additional subscribers cause no additional traffic
- Mapping MQ topic space to multicast group addresses
 - Can have mix of multicast and queue-based subscribers
 - Topic objects have associated COMMINFO objects to define addresses and other attributes
- Supports direct communication from publisher to subscriber, bypassing queue manager
- Queue manager maintains status and statistics for monitoring



Clustering – Split Transmit Queue & Bind on Group

- With V7.5 a queue manager can automatically define a PERMANENT-DYNAMIC queue for each CLUSSDR channel.
 - Dynamic queues based upon new model queue “SYSTEM.CLUSTER.TRANSMIT.MODEL”
 - Well known queue names: “SYSTEM.CLUSTER.TRANSMIT.<CHANNEL-NAME>”
- Controlled via attribute affecting all cluster-sdr channels on the queue manager
- “Bind on group”
 - All messages within a logical group are routed to the same queue manager
 - Workload balancing is done for each group
 - Simpler for applications that use message groups
 - Previously would have had to close and reopen the queue



Extending the reach of MQ – MQ Telemetry Transport MQTT)



- IBM developed a protocol for constrained systems like industrial controllers
 - Later renamed MQ Telemetry Transport (MQTT) due to broader telemetry adoption
 - Built for low bandwidth, high latency, unreliable, high cost networks
 - Tailored for resource-constrained client application environments
- Traditional messaging qualities of service provided where environment allows
- Feature available from MQ 7.0.1.4; server platform coverage extended in V7.1
 - Highly scalable
 - A single queue manager can handle up to 100K concurrently connected devices
 - Fully integrated / interoperable with WMQ
 - Publishers and subscribers can exchange messages with MQI and JMS applications
- From MQ 7.5 Telemetry Clients can be connected to WMQ servers without a per connection cost but a small additional server cost
 - There is no change in the licensing for the WebSphere MQ Telemetry Clients Advanced
- In addition any 3rd party, open source or roll your own MQTT client can be used



MQ 7.5: Enhancements to newly-integrated components

- Managed File Transfer
 - Logger can now write to a file
- AMS
 - V7.0.1.2 enhancements
 - Supports SHA-2 Digest algorithms
 - Command and Configuration Events for Policy changes
 - Audit trail of who has changed configuration
 - SVRCONN interception
- Base MQ
 - Java client application identification



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Message Broker Themes



- Simple & Productive
 - Making it easier and quicker to develop and manage MB solutions
 - Learn, Develop, Deploy, Manage, Migrate quickly and easily
- Universal & Independent
 - Connecting MB to a range of different systems
 - Universal connectivity includes standards, de facto standards, industry and custom systems
- Industry Specific & Relevant
 - Provide industry relevant connectivity packs to solve domain specific problems
 - Industry specific nodes, solution-oriented patterns & user-oriented tooling
- Dynamic & Managed
 - Allow the creation of dynamic and governed solutions
 - Design solutions for easy, flexible change with appropriate control
- High Performing & Scalable
 - Provide a platform and technology neutral connectivity option
 - Work on the widest possible range of hardware, software and virtualized environments



Content At a Glance



- Simple & Productive
 - Apps & Libs for streamlined development, packaging, deployment & management facilities
 - New .NET pattern, customization enhancements & user defined pattern editors
 - Express Edition starting point for departmental capability, capacity & price needs
 - Programmable message flow API for totally flexible solution creation and customization
- Universal & Independent
 - New B2B nodes for Sterling Connect Direct
 - Simple & high performing data modelling with DFDL
 - Code-free graphical transformations with GDM
 - Enhanced JMS connectivity, including JMS Receive node
 - SOAP nodes now support W3C WS-RM
 - Database & file enhancements
- Industry Specific & Relevant
 - Healthcare Connectivity Pack: Clinical application connectivity, healthcare patterns & end-user tooling
- Managed & Dynamic
 - Web 2.0 browser console with REST management API for ubiquitous access
 - Record & Replay to capture, view & replay in-flight messages
 - Message flow activity trace for rapid flow analysis by end-users
 - Deployable sub flows, ESQL, Maps & schemas for dynamic transforms
 - IBM Workload Deployer for x/Linux & AIX private clouds
- High Performing & Scalable
 - Extended platform support with deep .NET integration



A Broad Range of Supported Platforms and Environments



- Broad range of operating system and hardware platforms supported
 - AIX, Windows, z/OS, HP-UX, Linux on xSeries, pSeries, zSeries, Solaris (x86-64 & SPARC)
 - IBM Workload Deployer for z/Linux & AIX
 - Windows introduces support for .NET CLR V4
 - Added Ubuntu support for developer workstations
- 64 bit Support on ALL platforms
 - Execution group size is 64 bit & all commands are 64 bit on all platforms
 - Maintain 32bit option for developers on Windows & x/Linux platforms
- Full range of industry standard databases
 - DB2, Oracle, Sybase, SQL Server, Informix, solidDB
 - Open Driver Manager support enables new databases to be accessed
 - Contact IBM for details on MySQL, Teradata, PostgreSQL, Cache & Progress
- MQ 7.0.1 prerequisite
 - Minimum prerequisite as MB7 simplifies migration, MQ 7.1 support part of standard lifecycle
- Java 6 on all platforms
 - 64 bit IBM J9 engine for superior Java performance
- New Installer
 - Install Anywhere for distributed platforms, z/OS fully supports and exploits SMP/E
 - Includes new combined silent install, non-root install & flexible security groups



InstallAnywhere™



Detailed MB8 System Requirements
See www.ibm.com/software/integration/wbimessagebroker/requirements/



Easy Migration and Co-existence



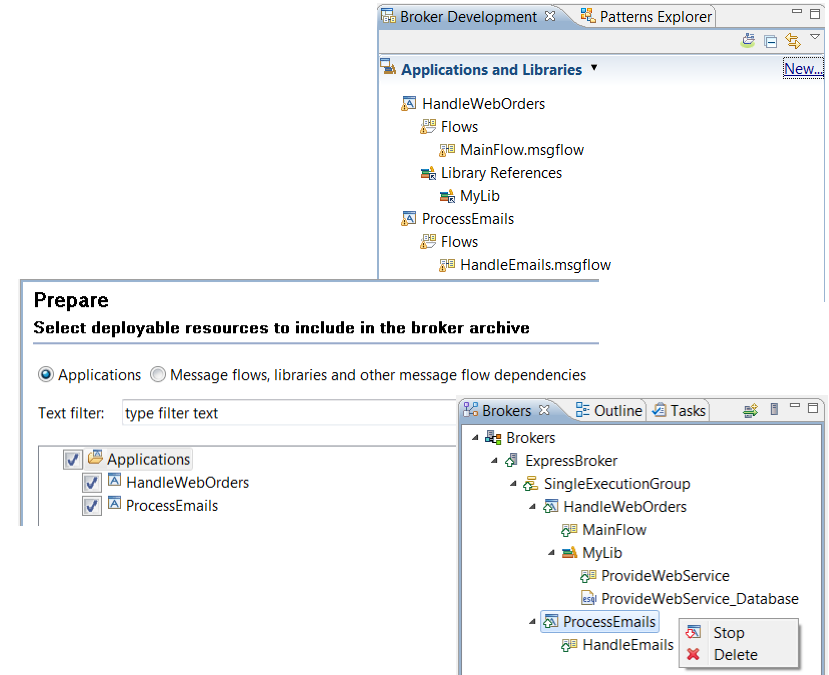
- Migration from V6.1 and V7
 - Message flows, message sets, ESQL, Java, Maps and XSLT run without change
 - Includes automatic migration of existing MB6.1 32 bit execution groups to 64 bit
- Migration commands for in-place migration
 - Includes migration of all configuration data including broker databases, queues and registry
 - Forwards and backwards migration of existing components, in situ
- Co-existence for incremental migration
 - MB8 co-exists with MB6.1 & MB7 to enable incremental migration
 - MB7.0 will support MQ7.1 as part of standard service lifecycle
 - MQ7.1 supports queue manager co-existence
 - MB8 Explorer can administer MB7 and MB8 brokers
 - New web admin can only administer MB8 and higher brokers
- Production ready
 - V8 is designed to be ready for production at General Availability;
 - Extensive Alpha, Beta and IBM testing from Jan 2011



Easy to Develop, Deploy & Manage



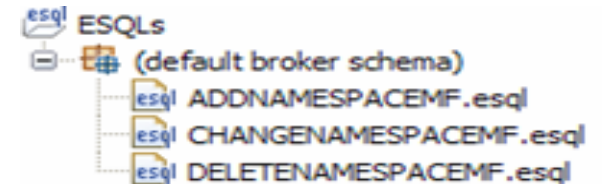
- Streamlined AD, Deploy & Management
 - New & migrated resources grouped into Apps & Libs
- Apps & Libs contain all solution resources
 - Apps contain solution specific resources
 - Libs contain common resources
 - Easily convert between projects and apps/libs
- Easy deployment
 - Drag & drop apps to run them immediately
 - Simple to package with 1-click for each app
 - Override deployment properties for promotion
- Consistent Operations
 - AD artefacts are visible in runtime with same structure
 - MBTK, MBX, Web admin all reflect same structure
 - Can manage using apps e.g. start, stop, delete
 - Commands updated to refer to Apps & Libs
 - Full lineage available, e.g. version, deploy date...



Dynamic Deployment of AD Artefacts



- Allow sub-flows to be deployed independently of main flow
 - Additional to existing build-time sub-flow; no performance impact
 - New “Route to sub-flow” allows dynamic addition of new/changed logic
 - Intuitive Drag and drop deploy & simple BAR file packaging
- Independently deployable ESQL
 - Particularly useful for dynamic transformation scenarios
 - Allows new/changed transformation without whole-flow redeploy
 - Intuitive Drag and drop deploy & simple BAR file packaging
- Deploy Flow Stopped provides fine grained initialization control
 - Important in “order-of-initialization” type scenarios
 - Allows operator to declare initial state for deployed flow resources
 - Persists over expected or unexpected restarts
- Deployable Maps & Schemas
 - Graphical maps & XSDs (XML and DFDL) can now be deployed independent of flow
 - Simplifies change management for incremental solutions
 - Just deploy changed artefacts rather than whole flow!



| | |
|---|------------|
| Start Mode | Maintained |
| Start additional instances when flow starts | Maintained |
| | Manual |
| | Automatic |



Web Administration for Universal Access



- Web Administration Console
 - Objective is to provide comprehensive web management interface
 - Focus on non-administrators to understand brokers & resources
 - Designed as a complement to MB Explorer
 - MB Administrators can continue to use MB Explorer
- Easy to configure
 - No extra moving parts - uses internal HTTP server to serve data
 - Can reconfigure to listen on user port or disable
 - View resources only for V8 GA
- Using Web Admin
 - Intuitive tree view shows hierarchy of MB resources
 - View resource details with click or button
 - Includes full suite of resources
 - Apps, Libs, Flows, Configurable services etc
- Web Admin & MB Explorer
 - MBX & web admin designed for concurrent use
 - Web admin requires MB8 broker
 - Explorer can manage both MB8 & MB7 brokers

The screenshot shows a web browser window at `http://broker.hursley.ibm.com:7050/`. The interface has tabs for 'Welcome', 'Broker Explorer Viewer', and 'Message Viewer'. The 'Broker Explorer Viewer' tab is active, displaying a tree view of the broker's resources. The tree structure is as follows:

- Broker
 - default
 - RRRecorder
 - RRReplayRouter
 - RRRequestHandler
 - RESTRestHandler
 - ReplayTest
 - App1
 - QueueToQueue
 - ErrorHandlerLibrary
 - Log
 - Administration Queue

A blue arrow points from the 'App1' folder in the tree to the 'View Details' panel below. The 'View Details' panel shows the following information:

| Name | Value |
|-------------------|------------------------------|
| Bar File Name | 20110818_0407_20 |
| Deploy Time | Thu Aug 18 16:08:43 BST 2011 |
| Long Description | |
| Modification Time | Thu Aug 18 16:07:20 BST 2011 |
| Name | App1 |
| Running | true |
| Short Description | |



Record & Replay



record edit replay

- Enable Record and Replay of In-flight Data
 - Comprehensive audit of messages, web, ERP, file & other data
 - Flexible topology: single or multiple brokers for recording, capture & replay
- Data Recording, Capture & Store
 - Graphically configure binary, text, XML payload capture, including whole, partial & multi-field data
 - Source data is currently limited to MB flows, including MB6.1, MB7 & MB8
 - Capture events on *any broker*, local or remote
 - Agent stores data in a database
- Web Tooling to View, Query data
 - Friendly editors to view and query payloads
 - Key data fields, including application data
 - Independent web admin & capture for scalability
 - Configure multiple EG listeners for web
- Replay for redelivery or flow reprocessing
 - Replay selected data to flows or applications
 - MB admin configures logical destinations
 - Maps to physical protocol, e.g. MQ: {Qmgr, Q}
 - User selects destinations from auto-populated drop-down list

CD Input Node Properties - CD Input

Configure monitoring events:

Events

| Enabled | Event Source | Event So |
|-------------------------------------|----------------------|----------|
| <input checked="" type="checkbox"/> | Transaction start | CD Input |
| <input checked="" type="checkbox"/> | Transaction end | CD Input |
| <input checked="" type="checkbox"/> | Transaction rollback | CD Input |

IBM WebSphere Message Broker

Administration Data viewer

dataCaptureStoreName

Event time: 2011-11-25 15:35:11.606

Filter data

Event time from: YYYY-MM-DD

Bit stream:

Broker name:

Broker UID:

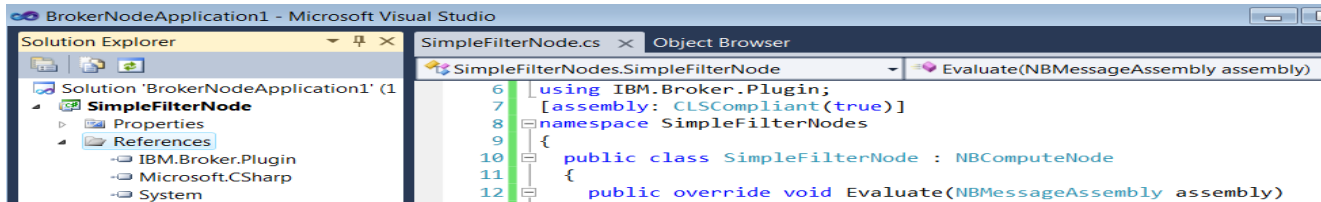
| Event time | Local Transaction ID | Parent Transaction ID | Global Trans |
|-------------------------|--|-----------------------|--------------|
| 2011-11-25 15:35:11.606 | d80281fd-0556-41e1-8e0e-26b232f6cd24-1 | | |
| 2011-11-25 15:35:11.696 | d80281fd-0556-41e1-8e0e-26b232f6cd24-1 | | |



Deep Integration for .NET



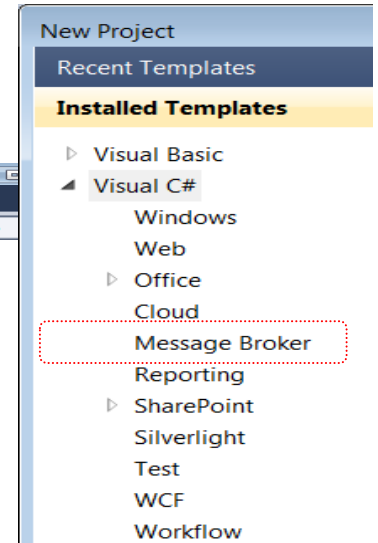
- New node for native .NET program invocation
 - Call .NET programs directly via CLR (Common Language Runtime) V4; includes app domains for isolation
 - C#, VB .NET (COM), JScript & F# programming available natively in MB
- Integrated Visual Studio Development
 - Create .NET nodes in Visual Studio; Native MB assemblies simplifies process
 - Visual studio compiled resources available without redeploy
 - Broker .NET watcher loads App Domain with most recent assembly



- Call .NET programs from new and existing MB nodes
 - Toolkit can introspect .NET assemblies to dynamically discover available methods
 - (e.g.) ESQL can now directly invoke .NET programs using simple procedure call
- .NET performance compares favourably with native ESQL & Java transformations



Update Dynamics



Patterns for Easy Solution Creation & Capture



- New .NET pattern for service façade scenarios
 - Use .NET pattern to quickly create web service from assembly
 - Create message flows & WSDL for external consumer
 - Extend pattern for (e.g.) Dynamics to SAP integration

Configure Microsoft .NET service

Configure your .NET assembly that the service invokes.

Assembly file name: Refresh Select...

Assembly Information

Class name:

Methods on the class that the service will invoke:

| Method Name | Abstract | Static | Public | Private | Return Type | Nullable | Web Method |
|-----------------------------------|----------|--------|--------|---------|---------------|----------|------------|
| <input type="checkbox"/> get_name | No | No | Yes | No | System.String | No | No |
| <input type="checkbox"/> set_name | No | No | Yes | No | System.Void | No | No |

- Pattern Authoring Enhancements
 - Reconfigure pattern preserving user customizations
 - Identify invariant parts using simple annotations
 - User-defined editors for rich pattern dialogs
 - e.g. .NET discovery introspects assembly
 - Unbounded repeating group pattern parameters
 - Allows more open-ended solutions

The screenshot shows the IBM WebSphere Message Broker Pattern Specification tool. The main window displays the 'View Pattern Specification' for a 'Service Facade to Microsoft .NET: request-response pattern'. A diagram illustrates the pattern: a 'Requesting Application' sends a request to a 'Microsoft .NET Pattern Instance', which then interacts with a 'Message Broker' (containing 'SAP Input', 'SAP Output', and 'SAP Input') and a 'User-defined Application Assembly' via 'WSDL'. Below the diagram, the 'Configure Pattern Parameters' dialog is open, showing the 'Microsoft .NET assembly' configuration. The 'Pattern Parameters' section is expanded to show the 'Microsoft .NET assembly' configuration, which includes fields for 'Class name' and 'Application domain name', and a 'Configure...' button. The 'Service information' and 'Logging' sections are also visible and checked.



Easy Data Modelling with DFDL



- Simple & powerful standard for data modelling
 - New standard for binary, text & industry data formats
 - Logical structure with physical annotations
 - e.g. endian, ASCII/EBCDIC, padding, justify...
 - Data Format Description Language (DFDL)
 - For use in IBM and non-IBM products
 - forge.gridforum.org/projects/dfdl-wg
- Built-in facilities to model data easily
 - Quick wizards for (e.g.) CSV, record oriented data
 - Auto-model importers (e.g.) COBOL copybooks
 - DFDL editor for power users
 - Create logical model & physical refinements
- Test parsing and test data generation
 - Test whether sample data fits with DFDL definition
 - Parse trace provide success & error case explanation
 - Auto-generate test data for test & debug scenarios
- All broker nodes can exploit new DFDL parser
 - Configure as existing XML, JSON, MRM, MIME... parsers
 - Interacts with message tree in usual manner
 - Excellent performance characteristics
 - (e.g.) element type, size, structural complexity etc
 - Supports streaming, partial parsing etc...

The screenshot displays the 'New Message Model' wizard for configuring a schema for CSV data. It includes a table of sample data and a corresponding DFDL logical instance.

| | A | B | C | D | E |
|---|------|----------|-------|-------------------|----------|
| 1 | Year | Make | Model | Description | Price |
| 2 | 2009 | SK Inc | MBTK7 | 4293cc, V8 | 53880.00 |
| 3 | 2010 | Hans On | DFDL | 3000cc straight 6 | 31395.00 |
| 4 | 2010 | AOD corp | MB8 | 4163cc, V8 | 51435.00 |

Export

DFDL Test - Logical Instance

Data source: <From 'DFDL Test - Parse' view>

Message root: Company (/MessageModelingLibrary_broker/Company.xsd)

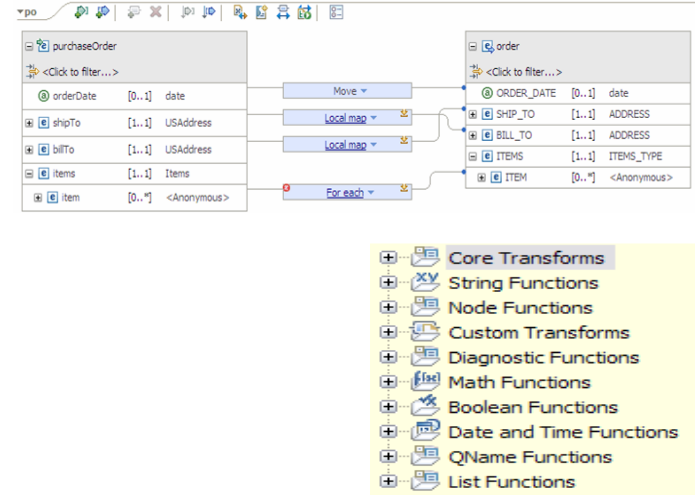
| Name | Type | Value |
|-------------|------------|--------------|
| Company | | |
| CompanyName | xs:string | My Company |
| Employee | | |
| EmpNo | xs:integer | 111111 |
| Dept | xs:integer | 500 |
| EmpName | xs:string | Alice Wong |
| Address | | |
| Tel | xs:string | 905-347-5649 |
| Salary | xs:decimal | 135599.95 |
| Employee | | |
| EmpNo | xs:integer | 222222 |



Graphical Transformations



- IBM Graphical Data Mapper (GDM)
 - Visually map and transform source to target data
 - Code-free, high performing & scalable
 - GDM designed for whole IBM product set
 - Mapping Specification Language (MSL)
- Simple & powerful graphical mapping experience
 - Apply transformations to single and multiple elements
 - Conditionals (**if then else**), Loops (**for each**), Functions (**target = f(source)**) & more!
 - Database mapping sources and targets for routing and enrichment scenarios
 - Broad database support (Oracle, DB2, SQL Server, Sybase, Informix...)
 - Complements and supports existing transformation languages
 - Call user defined transformation in Java, SQL, XPath...
- Simple deployment, high performing & scalable
 - Maps can be deployed with solution BAR file or stand-alone
 - JIT compile means technology advances improves existing, deployed solutions
 - Source deploy + runtime compilation = enhanced performance
- Migration from pre-version 8 maps
 - Existing maps developed before version 8 continue to work as-is
 - Existing maps opened in read-only mode for visualization & comprehension, cannot be modified
 - Automatic conversion of **.msgmap** format to MSL not currently built-in



Other features in MBv8



- Open Management with REST
 - REST based management API
 - URI for all MB Resources
 - Fully open interface can be exploited by 3rd party tools
- Express Edition
- Healthcare pack
- Programmable Message Flows
- Sterling Connect:Direct support
- More File Processing Enhancements
- WS-Reliable Messaging
- WMBv8 images for IBM Workload Deployer



Conclusion



- Connectivity and Integration Announcements
- Roadmap
- WebSphere MQ family update
- WebSphere Message Broker family update