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What's new in Message Broker V8

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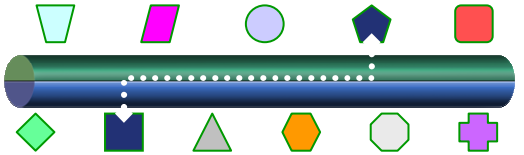
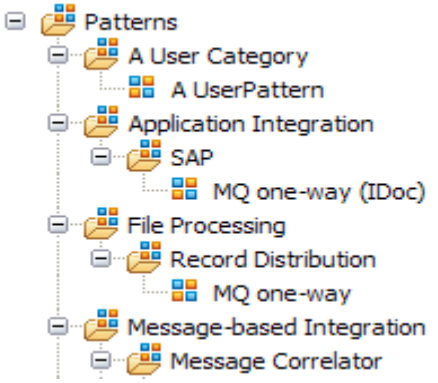
WebSphere Message Broker



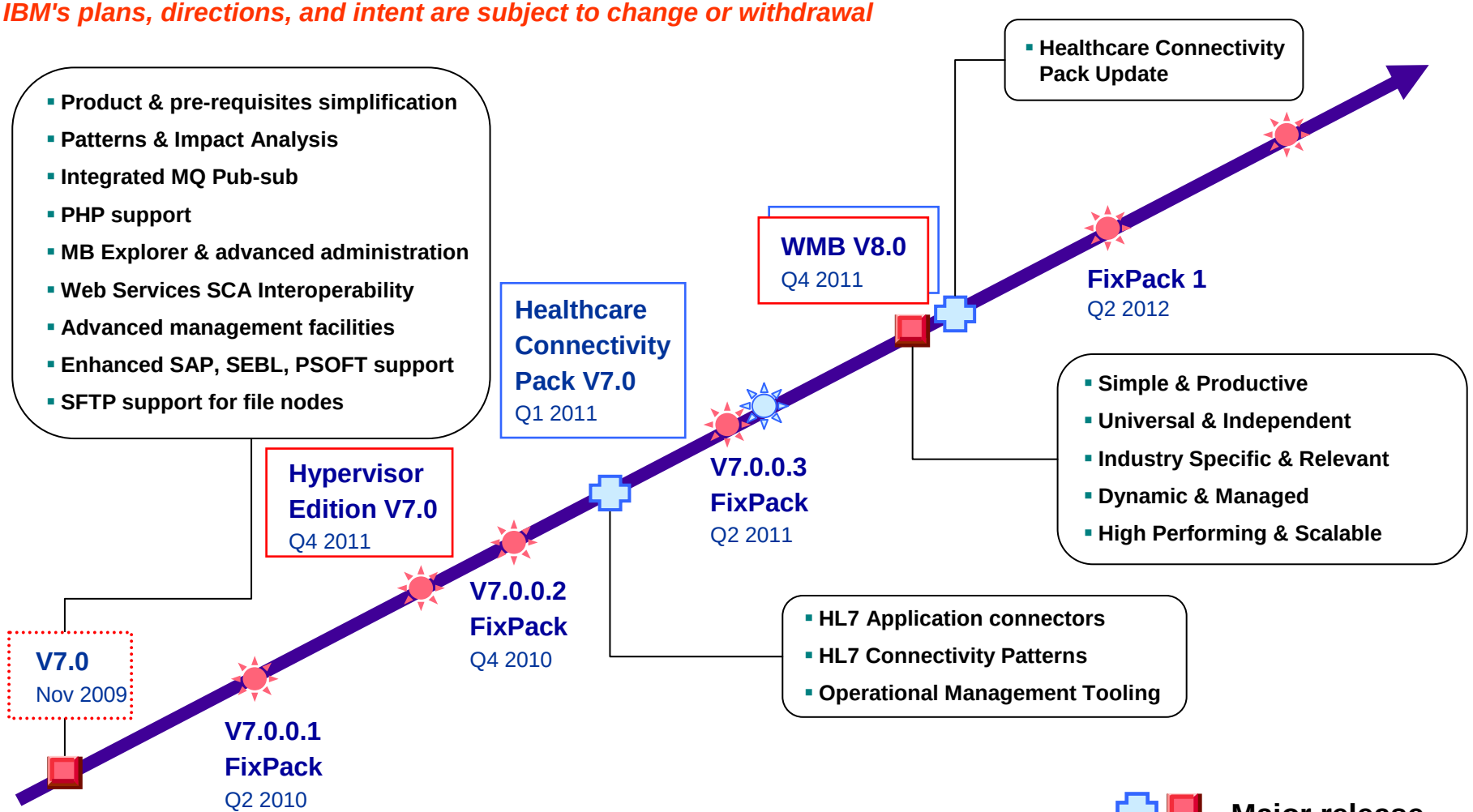
- Universal Connectivity FROM anywhere, TO anywhere
  - Simplify application connectivity for a flexible & dynamic infrastructure
- Comprehensive Protocols, Transports, Data Formats & Processing
  - Connect to applications, services, systems and devices
    - MQ, JMS 1.1, HTTP(S), SOAP, REST, File (incl. 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
    - e.g. Service façades, Message processing, Queue2File…
    - IBM & User defined patterns for development reuse & governance
  - Graphical data flows represent application & service connectivity
    - Custom logic via Graphical mapping, PHP, Java, ESQL, XSL & WTX



- 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

Message Broker Product Roadmap

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



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 x/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

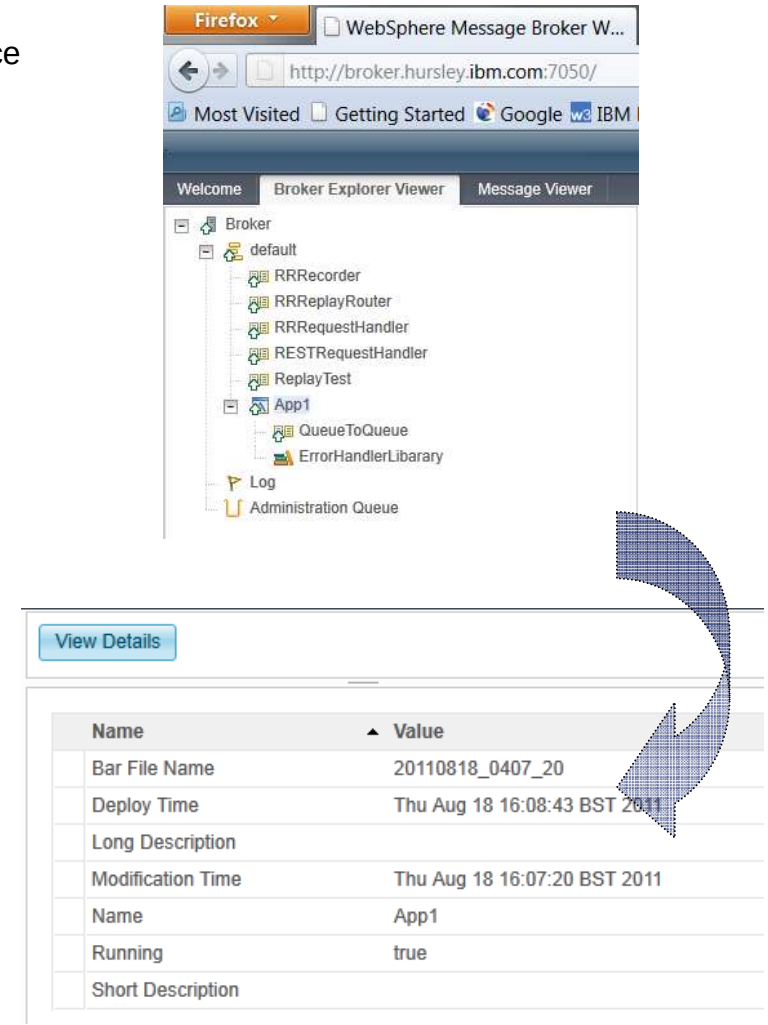
- Detailed MB8 System Requirements
  - See www.ibm.com/software/integration/wbimessagebroker/requirements/

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
    - **`mqsimigratecomponents`** command (includes **`-t`** option for rollback)
- **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
- **Publish Subscribe migration**
  - MQRT clients migrated to MQ7 clients with new MQ7 facilities for message streaming
  - MQTT and multi-cast clients use native MQ nodes with MQ7.0.1 & MQ8 respectively
- **Production ready**
  - V8 is designed to be ready for production at General Availability;
  - Extensive Alpha, Beta and IBM testing from Jan 2011

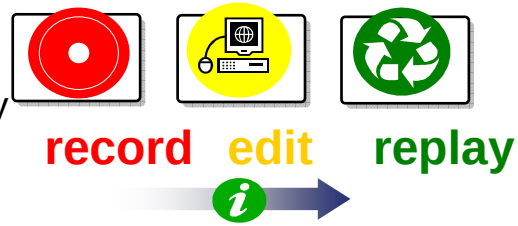
Web Administration for Universal Access

- **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
    - Just start a port for web admin, and go!
  - Can reconfigure to listen on user port or disable
    - SSL connector configured via **`mqsichangeproperties`**
  - View resources only for V8 GA
    - Design allows for future role based access to modify resources
- **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

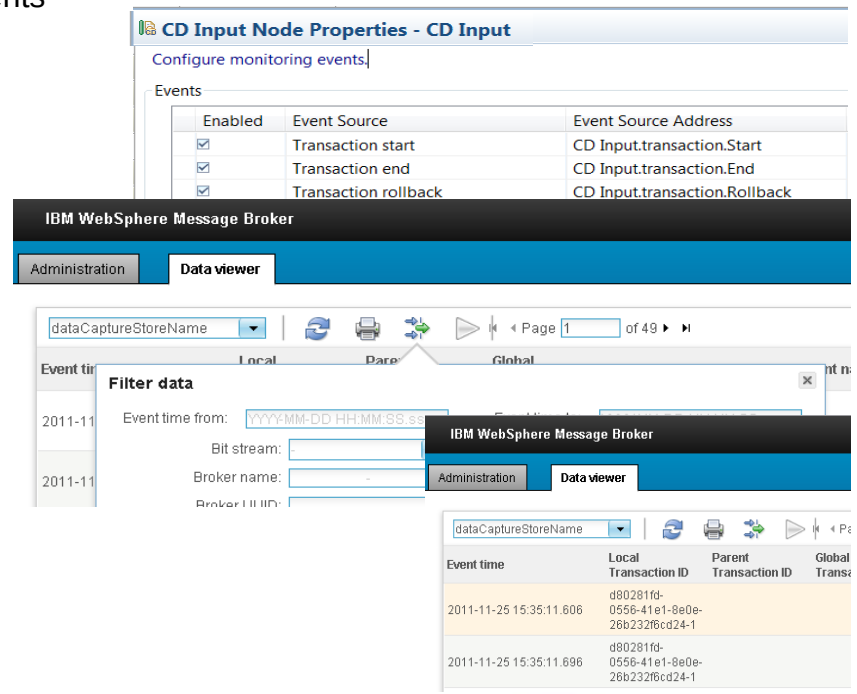


Record & Replay

- **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
    - Monitor tab or monitoring profiles identify captured events
  - Capture events on *any broker*, local or remote
    - Any broker EG can be configured as capture agent
    - Configurable service identifies topic, target database
  - Agent stores data in a database

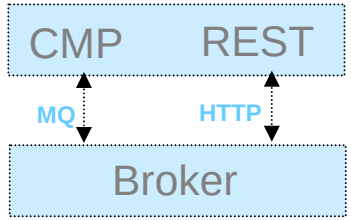


- **Web Tooling to View, Query data**
  - Friendly editors to view and query payloads
    - Key data fields, including application data
  - Independent web admin & capture for scalability
    - Configure multiple EG listeners for web

- **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

Open Management with REST

- **REST based management API**
  - MB now supports HTTP/REST management API
    - Complements & compatible with existing CMP interface
  - HTTP client can manage MB independent of CMP
    - Includes new interface for message record & replay



- **URI for all MB Resources**
  - New data format for payload describes MB resources & related entities
  - Service documents & feeds map intuitively mapped to MB artefacts
  - Provides very natural navigation of MB resources
    - e.g. Execution group document contains EG properties & per-message flow feed

```
GET /admin/eg/MYEGNAME HTTP/1.1
From: machine@ibm.com
User-Agent: MyApp/1.0
```

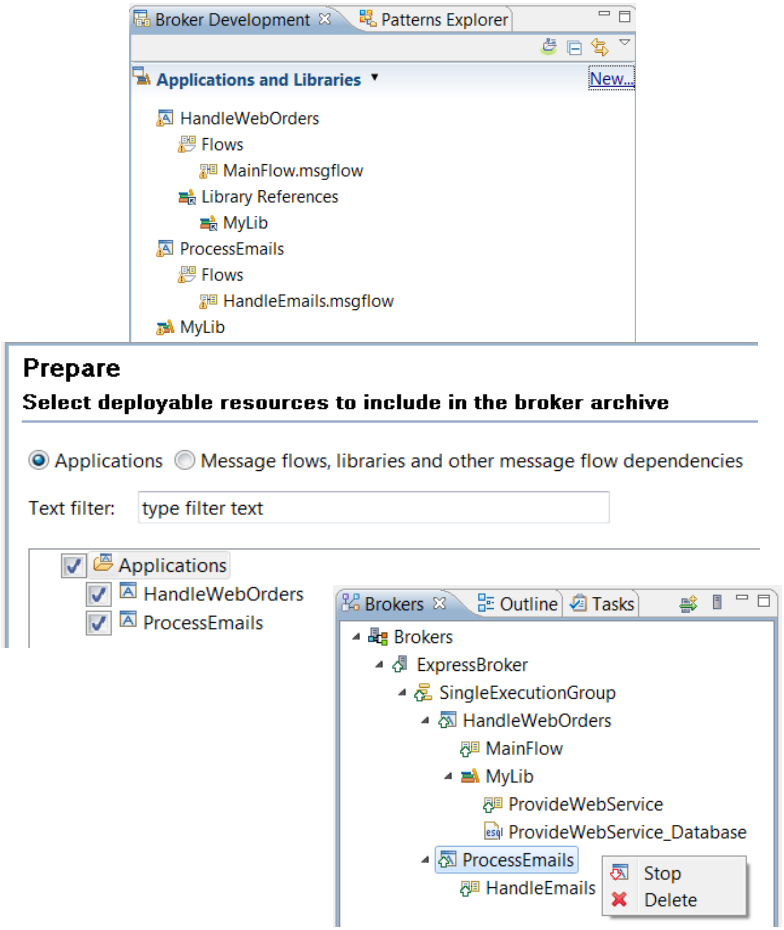
```
HTTP/1.1 200 OK
Date: Sun, 1 Oct 2011 21:46:59 GMT
Content-Type: text/html
Content-Length: 426

<?xml version="1.0" encoding='utf-8'?>
<service xmlns=http://www.w3.org/2007/app xmlns:atom="http://www.w3.org/2005/Atom">
  ...
  <executiongroup description.long="" description.short="" ... >
  </executiongroup>
</service>
```

- **Fully open interface can be exploited by 3rd party tools**
  - JSON and XML message formats over REST published & maintained for use by external users
  - Enables widgets, mash-ups & other situational applications

Easy to Develop, Deploy & Manage

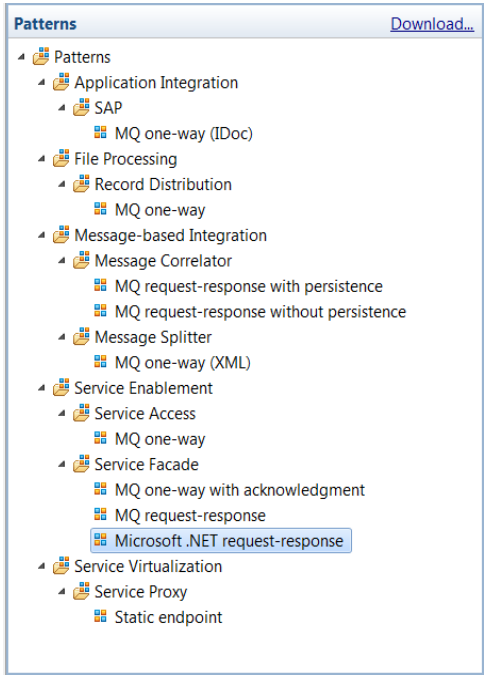
- **Streamlined AD, Deploy & Management**
  - New & migrated resources grouped into Apps & Libs
    - Encourages designing for reuse
    - Simplifies deployment & management
- **Apps & Libs contain all solution resources**
  - Apps contain solution specific resources
    - e.g. main processing flow, specific transformations
  - Libs contain common resources
    - e.g. data definitions, error routines…
    - Can reference other libraries
  - 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 e.g. **`mqsilist`**
  - Full lineage available, e.g. version, deploy date…

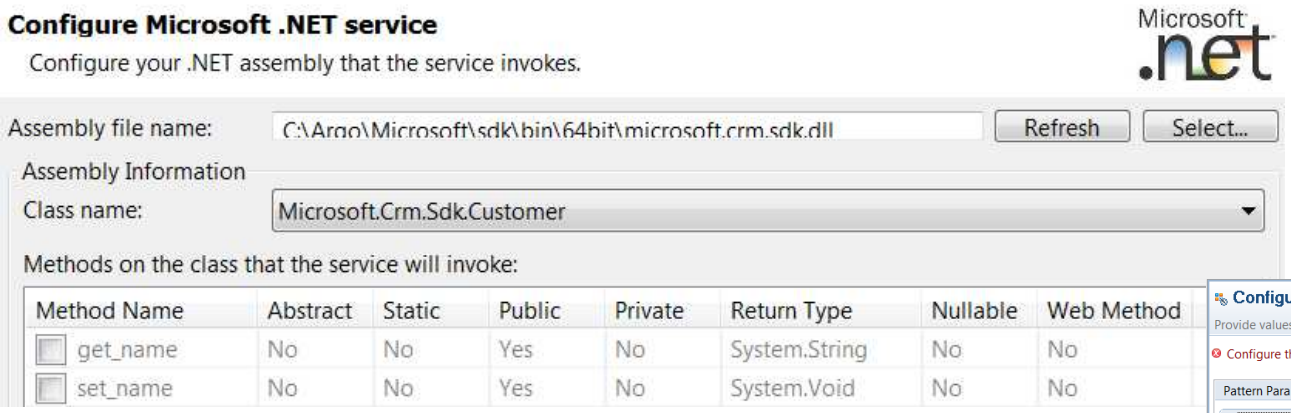


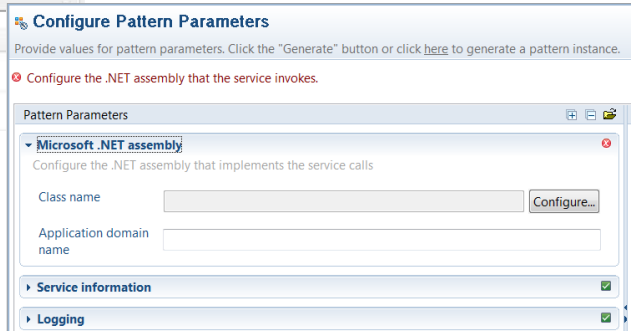
Patterns for Easy Solution Creation & Capture

- Patterns Based Development
  - Quickly create best practice solutions from pre-built templates
    - e.g. Web Service façades, Message processing, File to queue…
  - IBM pre-supplied & User Defined Patterns
    - Create & share user patterns, including community downloads

- 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





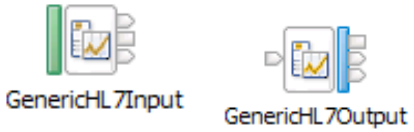


- Pattern Authoring Enhancements
  - Reconfigure pattern preserving user customizations
    - Identify invariant parts using simple annotations
  - User-defined editors for rich pattern dialogs
    - e.g. .NET discovery introspects assembly
  - Unbounded repeating group pattern parameters
    - Allows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

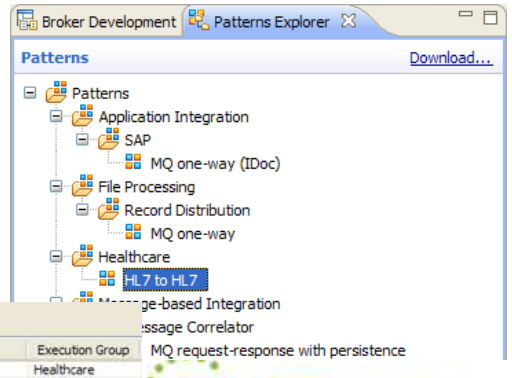
Healthcare Connectivity Pack

- New Feature for Healthcare
  - MB part of many healthcare solutions, including HL7, medical devices, home health & analytics
  - Connectivity Pack provides IBM ESB for Healthcare as a priced feature of Message Broker
  - Typical scenarios include device integration, electronic forms, clinical document sharing, analytics…
  - Built-in & customizable patterns enable rapid creation of healthcare connectivity scenarios
  - New facilities for connecting HL7 clinical applications, with end-user operational tooling

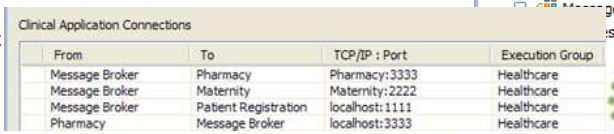
- Built-in Clinical Applications Support
  - New input & output nodes connect HL7 clinical applications
    - EPIC, Cerner (ADT, Demographics), JAC, Sunquest, IHE, MediTech…



- HL7 Connectivity Pattern
  - New Patterns Explorer Healthcare category handles common HL7 connectivity requirements
    - e.g. HL7 pattern has sequencing, duplicate detection, journaling, remainder processing built-in
    - Exploits HL7 V2.x Common Information Model (CIM)
  - Users can extend built-in patterns & create their own healthcare patterns

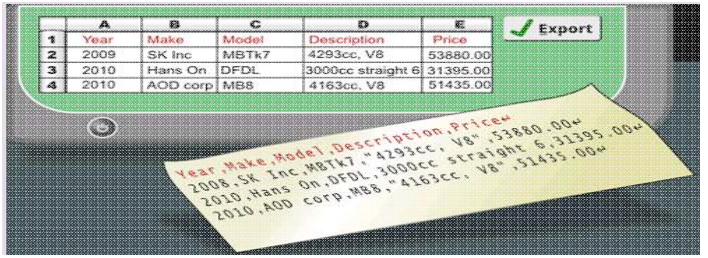


- Operational Tooling
  - Provides end-user view for status and statistics
  - Informational details on clinical applications
    - On/off-line, messages sent/received/queued etc

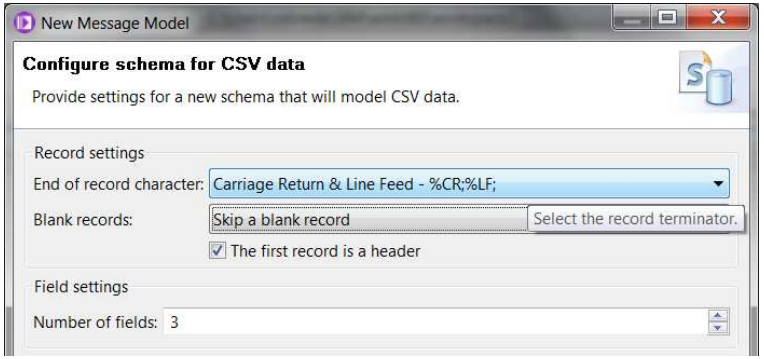


Easy Data Modelling with DFDL

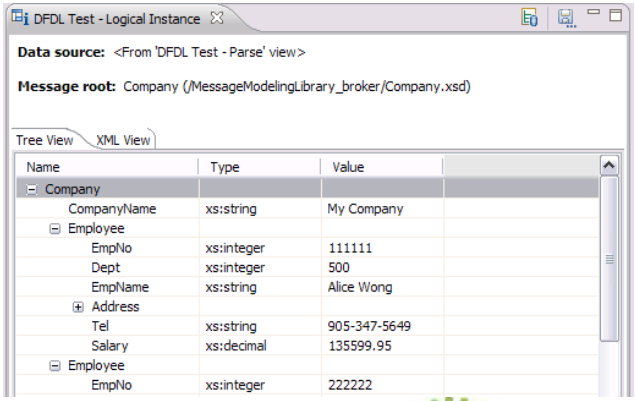
- **Simple & powerful standard for data modelling**
  - New standard for binary, text & industry data formats
    - Logical structure with physical annotations
    - e.g. endian, ASCII/EBCDIC, padding, justify…
  - Data Format Description Language (DFDL)
    - For use in IBM and non-IBM products
    - 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



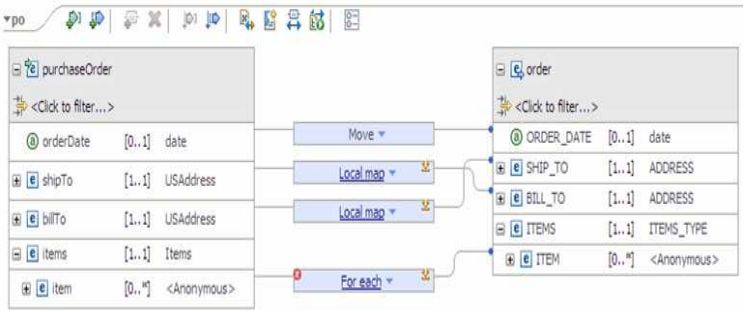
- **Test parsing and test data generation**
  - Test whether sample data fits with DFDL definition
    - Parse trace provide success & error case explanation
  - Auto-generate test data for test & debug scenarios



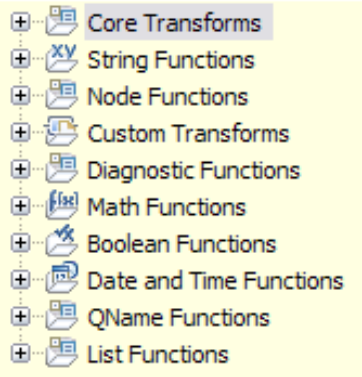
- **All broker nodes can exploit new DFDL parser**
  - Configure as existing XML, JSON, MRM, MIME… parsers
    - Interacts with message tree in usual manner
  - Excellent performance characteristics
    - (e.g.) element type, size, structural complexity etc
    - Supports streaming, partial parsing etc…

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
    - e.g. Full map exchange with MDM Server V9
    - 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

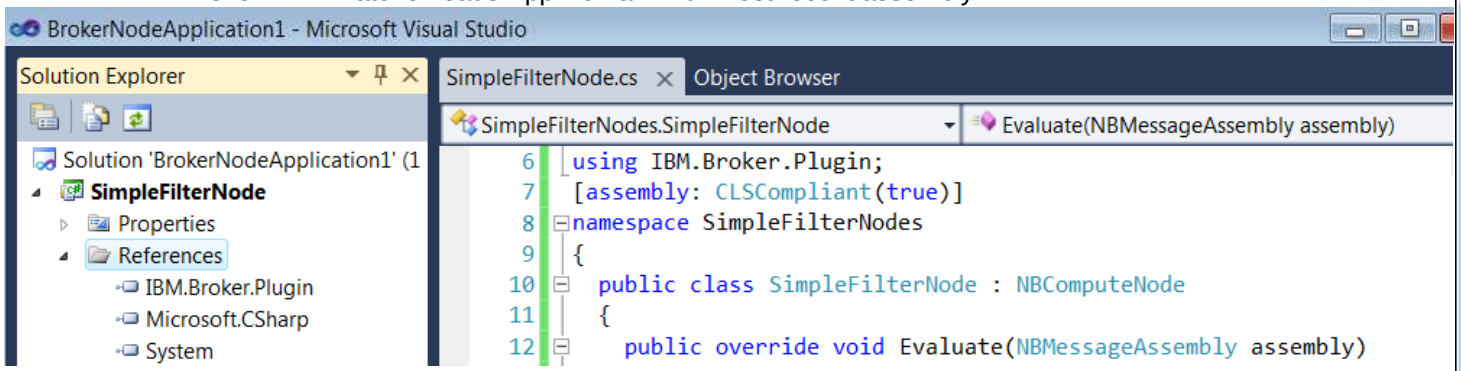
- **Migration from pre-version 8 maps**
  - Existing maps developed before version 8 continue to work as-is
    - Existing maps opened in read-only mode for visualization & comprehension, cannot be modified
    - Automatic conversion of **`.msgmap`** format to MSL not currently built-in

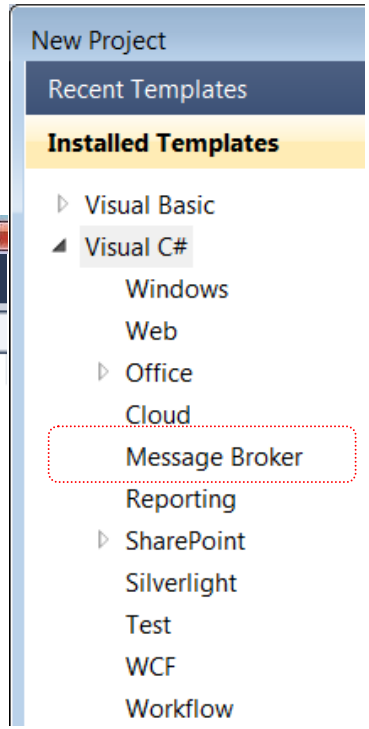
Deep Integration for .NET

- **New node for native .NET program invocation**
  - Call .NET programs directly via CLR V4; includes app domains for isolation
  - C#, VB .NET (COM), JScript & F# programming available natively in MB
    - Extensive range of .NET data types supported for easy integration

Update Dynamics

- **Integrated Visual Studio Development**
  - Create .NET nodes in Visual Studio; Native MB assemblies simplifies process
    - e.g. packages, templates, #using, debug, content assist etc
  - Visual studio compiled resources available without redeploy
    - Broker .NET watcher loads App Domain with most recent assembly



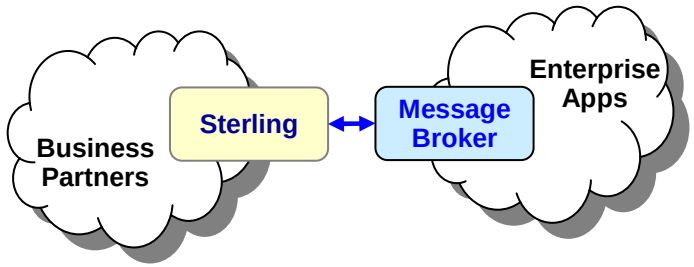


- **Call .NET programs from new and existing MB nodes**
  - Toolkit can introspect .NET assemblies to dynamically discover available methods
    - Automatically create appropriate language signatures to simplify invocation
  - (e.g.) ESQL can now directly invoke .NET programs using simple procedure call

- **.NET performance compares favourably with native ESQL & Java transformations**
  - .NET resource statistics show behaviour partitioned by app domain (calls, storage…)

Extend Sterling with MB Connectivity

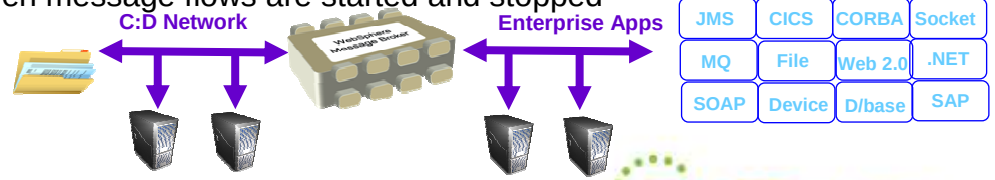
- **End-to-End Processing in B2B Scenarios**
  - C:D backbone enriched by MB - connects partners to Enterprise
    - e.g. File2Queue, Database2File, File2Dynamics, .NET etc
  - Sophisticated file processing includes timely inbound and outbound transfers & intelligent metadata
  - New C:D File input & C:D File output nodes allow MB to use files transferred by C:D
    - Complement existing MB file, FTP, SFTP and FTE file capabilities



- **C:D File Input node**
  - Message flow starts processing message as soon as C:D agent notifies of complete file transfer
  - C:D metadata provided in `LocalEnvironment` allowing intelligent processing of transfers & scripting
  - File can be processed as whole file or record-at-a-time; simple & user records – per existing file nodes

- **C:D File Output node**
  - Creates file output records and requests C:D transfer with appropriate metadata
  - `LocalEnvironment` allows users to specify transfer overrides and customizable metadata
  - New pattern: Web 2.0 enablement of C:D file transfers: collect records then request transfer

- **C:D Agents are automatically Installed, Configured and Managed**
  - Installed seamlessly as part of regular install, auto configured CD-R
  - CD-R agents are started with MB execution groups when message flows are started and stopped
  - Execution Group Properties for custom configuration



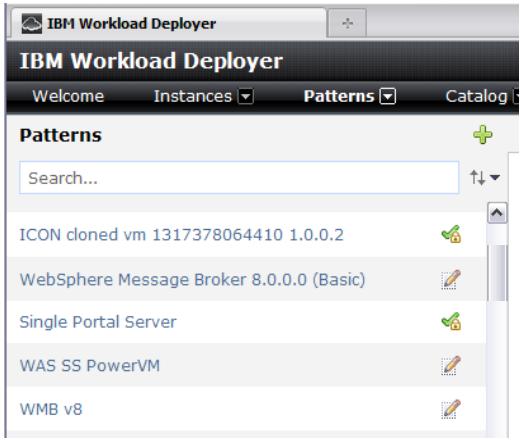
- **MB Explorer Monitoring**
  - Resource manager statistics & reporting
  - Activity Log displays C:D JOB details & other reference data

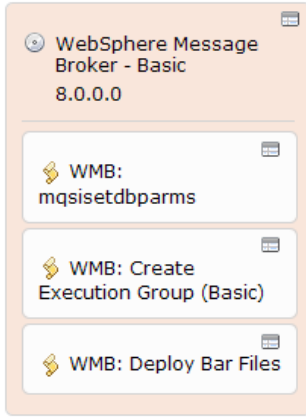
IBM Workload Deployer for Private Clouds

- **Simplify provisioning MB on x/Linux & AIX**
  1. Initial system deploy resulting in quicker time to solution value
  2. Fix pack deploy reduces recurring maintenance cost
- **Virtual image software & hardware packages**
  - Packages includes all MB & MQ components
  - RHEL 5.5 for VMware ESX x86-64 & IWD images
  - AIX 6.1 TL7 **`mksysb`** & IWD images
  - Updated when new fix pack levels released
    - Download to customer site from IBM web
    - Uploaded to IWD using scripts or Image Loader tool
  - VMware & **`mksysb`** images can be used standalone
- **Configuration patterns & scripts**
  - HVE Scenario Configuration Information
    - Base Pattern with configuration script packages
  - Base Pattern for most popular MB topology configurations
    - *Basic Broker, Advanced Broke*r, *<User Pattern>*
  - Script Packages configure base pattern
    - *Create Exec Group, Deploy BAR, Run MQSC, <User Script>*
    - Emergency Fix also possible: iFix binary + script package to drive installer
- **Full function deployed configuration**
  - Interaction with deployed MB components as per regular deployment

vmware

`mksysb`





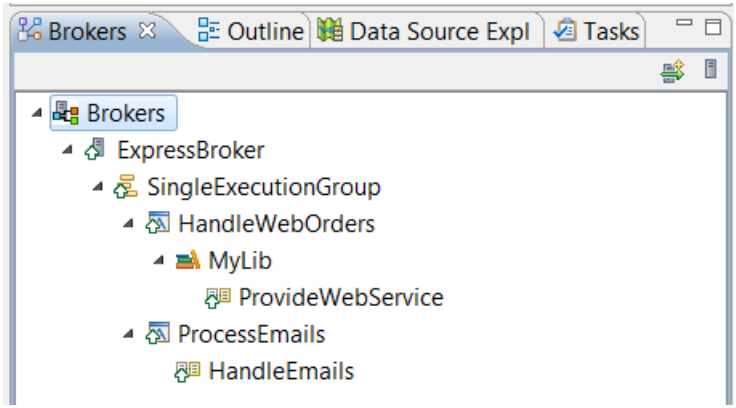
SHARE in Atlanta 2012

Express Edition for Initial Deployment and Future Growth

- **Adopt Message Broker in intuitive increments**
  - A starting point for new users with department level capacity, functionality and price needs
  - Single package allows movement between modes
    - e.g. Trial->Express->Standard->Advanced
  - Same toolkit for all modes of operation, same service package for simple maintenance

- **New Mode of Operation**
  - **Express:** Initial deployment with 1 execution group, no explicit flow limit, and limited node set
    mqsimode BROKER1 –o express
  - Node set includes many transports & protocols, graphical transformation, scripting & programming
    - e.g. SOAP, MQ, HTTP, JMS, File, Email, Graphical maps, PHP, Java, .NET

- **Development & Deployment**
  - All toolkit facilities available, including unit test environment
  - Packaging of solution via BAR file as with other modes
  - Deployment to unlicensed mode fails gracefully with reason
    - Change to unsupported mode also reports reason

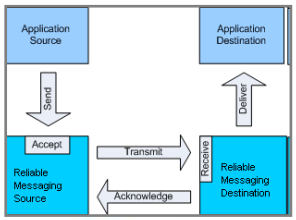


- **Operational Management**
  - Flows & applications provide basic isolation & control
  - Single execution group collocates resources in OS process
    - Multiple threads can be assigned to message flow

- **Licensed & Visible**
  - Separate ITLM file for each mode enables compliance check
  - MBX and Browser administration report & start-up messages for operational clarity

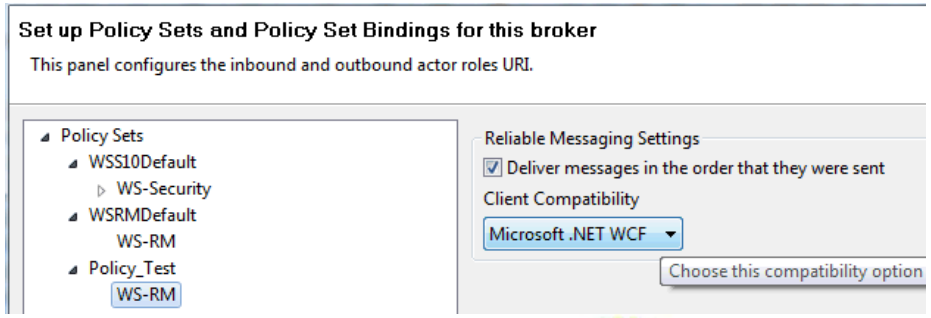
WS-Reliable Messaging

- **SOAP nodes now support WS-RM W3C protocol**
  - Typical Scenarios for reliable delivery of messages between applications
  - Multiple classes of service: {AtLeastOnce, AtMostOnce, ExactlyOnce}, InOrder
  - Complements SOAP/JMS reliability & persistence. SOAP/JMS(MQ) is formidable!



- **Existing SOAP Nodes now support WS-RM**
  - The existing SOAP nodes participate in WS-RM exchanges
  - Policy Set editor defines QoS: e.g. InOrder, ExactlyOnce
  - SOAP nodes handle ALL protocol details, programmers simply send or receive WS-RM messages
    - SOAP input type nodes (input, async response) propagates reliably received message
    - SOAP request nodes (reply, request, async request) receive message to be delivered reliably
  - Only for SOAP/HTTP: SOAP/JMS, SOAP/MQ are already reliable, persistent and transactional

- **Broad Platform support for WS-RM 1.0 & 1.1**
  - .NET compatibility option for .NET 1.0 WCF clients
  - Extensive testing to other application servers



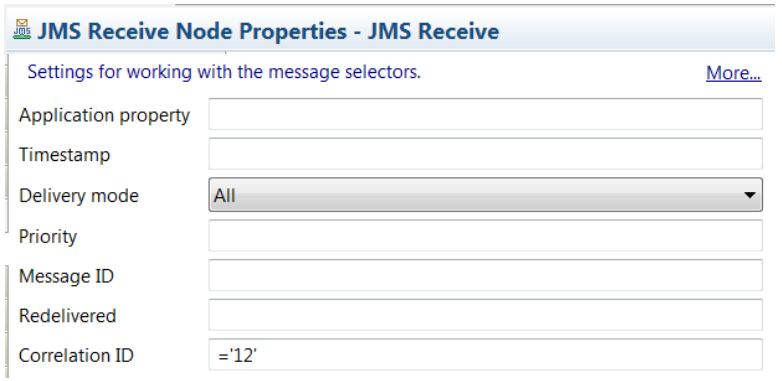
- **Composable as expected**
  - WS-Security
  - WS-Addressing

JMS Receive Node and other JMS Enhancements

- **New JMSReceive Node supports all JMS 1.1 Providers**
  - Process JMS messages in the middle of a message flow, c.f. MQGET node
  - Typical scenarios include request response, routing & augmentation
  - Works with any JMS 1.1 provider, MQ is default provider

- **JMS Receive node**
  - Works on JMS queues: receive paradigm is not applicable to topics!
  - Can be configured for destructive read or browse

- **Comprehensive & Flexible options**
  - Retrieve particular JMS with message properties
  - Per message customization
    - Many **`LocalEnvironment`** overrides!
  - Flexible data locations
    - Incoming & received message can be kept

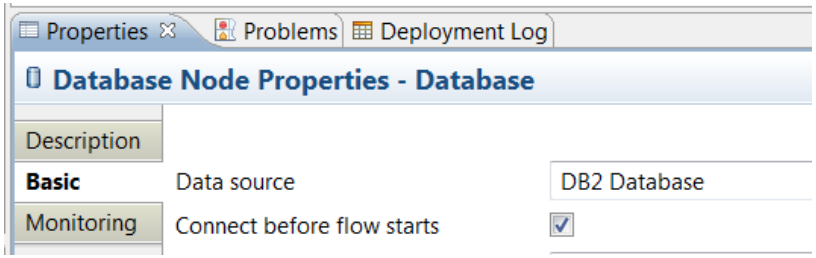


- **Activity Logging**
  - All JMS nodes updated to provide activity logging
  - Allows operators to understand JMS operations without understanding detailed flow design
    - e.g. failed to open or start JMS session, message sent to destination

- **Other JMS Enhancements**
  - Allows generic session object to be overridden as queue or topic
  - **`JMSDestinationList.DestinationList.Queue = topic|queue;`**

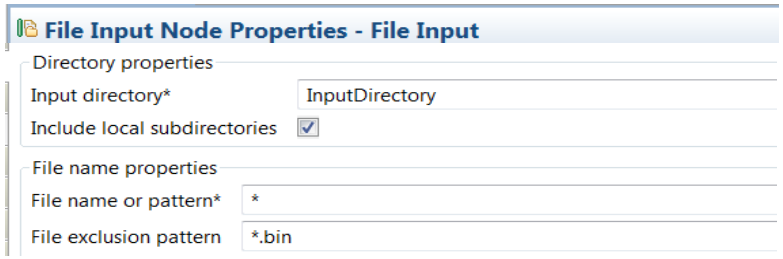
Extended File & Database Support

- **“Fast first message” processing with pre-emptive database connections**
  - New configuration option acquires & maintains database connections before messages processed
    - Default will connect first thread to database at flow start before message processing
  - Extra flow option to start all flow threads at EG start
    - All threads process “fast first message”
  - Immediate reconnect option database after failure
    - Retry once for successful reconnect
    - Exception still thrown to rollback transaction



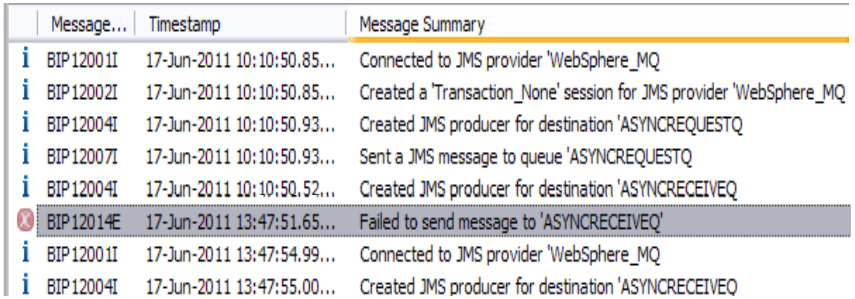
- **New Database Support**
  - Open Driver Manager allows MB to connect to even more ODBC data sources
    - e.g. MySQL, PostgreSQL, Teradata, Cache, Progress…
  - Product architecture supports third party database drivers
    - Oracle, DB2, SQL Server, Sybase, Informix, solidDB unaffected
    - More options available for other database drivers
  - Formal support requires interlock with IBM – contact IBM for more details

- **More File Processing Enhancements**
  - Append mode for File Output node
    - Add new records to end of existing file & FTP
  - File input nodes wildcard directory matching
    - Design & configurable service for operators
  - Dynamic (S)FTP file name
    - **`LocalEnvironment`** override



Making it Easier to Understand Broker Behaviour

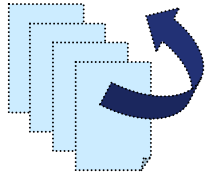
- **New Activity Logging Allows users to understand what a message flow is doing**
  - Complements current extensive product trace by providing end-user oriented trace
  - Can be used by developers, but target is operators and administrators
  - Doesn't require detailed product knowledge to understand behaviour
  - Provides qualitative measure of behaviour



Message...	Timestamp	Message Summary
BIP12001I	17-Jun-2011 10:10:50.85...	Connected to JMS provider 'WebSphere_MQ
BIP12002I	17-Jun-2011 10:10:50.85...	Created a 'Transaction_None' session for JMS provider 'WebSphere_MQ
BIP12004I	17-Jun-2011 10:10:50.93...	Created JMS producer for destination 'ASYNCREQUESTQ
BIP12007I	17-Jun-2011 10:10:50.93...	Sent a JMS message to queue 'ASYNCREQUESTQ
BIP12004I	17-Jun-2011 10:10:50.52...	Created JMS producer for destination 'ASYNCRECEIVEQ
BIP12014E	17-Jun-2011 13:47:51.65...	Failed to send message to 'ASYNCRECEIVEQ'
BIP12001I	17-Jun-2011 13:47:54.99...	Connected to JMS provider 'WebSphere_MQ
BIP12004I	17-Jun-2011 13:47:55.00...	Created JMS producer for destination 'ASYNCRECEIVEQ

- **End-user oriented with external resource lifecycle**
  - Focus on easily understood actions & resources
  - "GET message queue X", "Update DB table Z"…
  - Complements quantitative resource statistics

- **Flow & resource logging**
  - User can observe all events for a given flow
    - e.g. "GET MQ message", "Send IDOC to SAP", "Commit transaction"…
  - Users can focus on individual resource manager if required
    - e.g. SAP connectivity lost, SAP IDOC processed
  - Use event filters to create custom activity log
    - e.g. capture all activity on JMS queue REQ1 and C:D node CDN1
  - Progressive implementation as with resource statistics, starting with JMS, C:D and SAP resources



- **Comprehensive Reporting Options**
  - Reporting via MB Explorer, log files and programmable management (CMP API)
  - Extensive filtering & search options, also includes save data to CSV file for later analysis

- **Log Rotation facilities**
  - Rotate resource log file when reaches using size or time interval

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
    - Sub-flow is fully visible as development artefact c.f. message flow

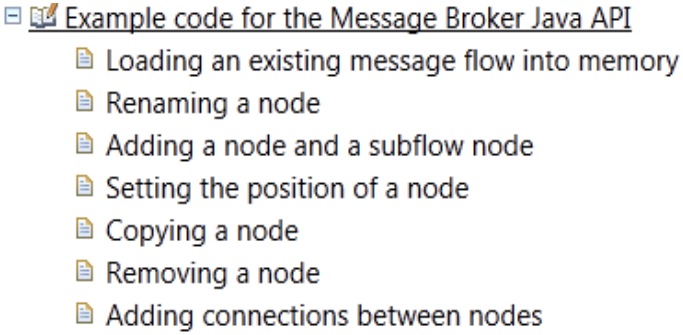
- Independently deployable ESQL
  - Particularly useful for dynamic transformation scenarios
  - Allows new/changed transformation without whole-flow redeploy
  - Intuitive Drag and drop deploy & simple BAR file packaging

- 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
      - *Manual: always needs to be started by user*
      - *Automatic: always started by broker*
      - *Maintained: remember*
  - 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!

Programmable Message Flows

- Create message flows (and more!) programmatically
  - Full flow creation lifecycle now available via simple Java API
    - Create flow, add/remove node, change properties
    - Extends CMP operational API covering deployment & config
  - Single API for MBTK, MBX, commands, end users & 3rd Party
- Message Broker API
  - Single API allows creation & management of all MB resources
  - Works on familiar MB resources, e.g. rename a message flow




```
File msgFlow = new File("main.msgflow");
MessageFlow mf1 = FlowRendererMSGFLOW.read(msgFlow);
mf1.setName(mf1.getName()+"Generated");
```

- Source deployment
  - MB8 engineered to provide source artefact creation, packaging & deployment
    - Flows, XSDs (XML & DFDL), ESQL, Maps, JARs, XSL stylesheet, WSDL, IDL…
  - Source author & deploy has many advantages
    - Easy round tripping for import/export scenarios
    - Enables more environments
      - *AD: Eclipse, Web, Visual Studio etc…*
      - *Operations: load artefacts from other sources, e.g. registry, file systems…*
    - Optimizes performance – JIT compilation means technology can improve deployed solutions
- Comprehensive range of samples
  - InfoCenter contains many samples showing how to use Message Broker API

Other Features Our Users Requested

- **New Installation and Command Security Options**
  - **mqbrkrs** security group for command administration now configurable
    - Allows broker administrators to confirm to local security naming conventions
  - Install without root (UNIX) or Administrator privilege (Windows)
    - Allows broader installation community
  - Combined Toolkit and runtime silent install on Linux and Windows
    - Simplifies provisioning of developer machines

- **Dynamic Configurable Services**
  - Many configurable services no longer require an execution group restart to take effect
  - Significant benefits for multi-tenancy and continuous operations

Message Broker Summary

- **Message Broker Version 8**
  - Major engineering release containing architectural, functional & operational advances
  - Content heavily influenced by user requirements, participation and feedback
  - Continuous rollout beyond general availability

- **Diverse Connectivity Requirements**
  - Simple & Productive to make connectivity easy and powerful
  - Universal & Independent to connect everything you need in the way you want to manage it
  - Industry Specific & Relevant to help solve business problems
  - Managed & Dynamic to create flexible solutions which can be changed with control
  - High Performing & Scalable to maximize hardware and grow with you

- **Message Broker is a key IBM connectivity technology**
  - Unparalleled range of connectivity options and capabilities
  - Supports users' range of experience & needs
  - Industry leading performance in a broad range of scenarios

This was session 10703 - The rest of the week ……

	Monday	Tuesday	Wednesday	Thursday	Friday
08:00			Free MQ! - MQ Clients and what you can do with them.	MQ Performance and Tuning on distributed	
09:30		The MQ API for dummies - the basics	The Dark Side of Monitoring MQ - SMF 115 and 116 record reading and interpretation	The even darker arts of SMF	CICS Programs Using WMQ V7 Verbs
11:00		Putting the web into WebSphere MQ: A look at Web 2.0 technologies The Doctor is in. Hands-on Lab and Lots of Help with the MQ Family	Message Broker administration	The Do's and Don'ts of z/OS Queue Manager Performance	
12:15		WebSphere MQ: Highly scalable publish subscribe environments		MQ & DB2 – MQ Verbs in DB2 & Q-Replication	
01:30	WebSphere MQ 101: Introduction to the world's leading messaging provider	What's new in WebSphere Message Broker V8.0	The Do's and Don'ts of Message Broker Performance	Diagnosing problems for MQ	
03:00	WebSphere Message Broker 101: The Swiss army knife for application integration	What's new in WebSphere MQ V7.1	WebSphere MQ Security - with V7.1 updates	Diagnosing problems for Message Broker	
04:30	Introduction to the WebSphere MQ Product Family - including what's new in the family products	Under the hood of Message Broker on z/OS - WLM, SMF and more	MQ Java zero to hero	Shared Q including Shared Message Data Sets	
06:00			For your eyes only - WebSphere MQ Advanced Message Security	MQ Q-Box - Open Microphone to ask the experts questions	

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