IBM

Systems Middleware

Guide Share France
Groupe de Travail MQ
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« Journée des performances MQ »

Carl Farkas
Pan-EMEA zWebSphere Application Integration Consultant
IBM France D/2708
Paris, France
Internet : farkas@fr.ibm.com

Agenda

- Evènements
- Annonces majeures
  - IIB v10
  - MQ Appliance
- Performances

System z Technical University

- LE conférence IBM z System en Europe pour 2015
- En plus des centaines de sessions au sujet du z13, z/OS, etc, plein de sessions autour de nos sujets favoris tels que : WAS z/OS, CICS, MQ z/OS….
- Dublin, 18-22 mai 2015
- http://www.ibm.com/services/learning/ites.wss/zz/en?pageType=page&c=Q549350A81365Q21
- Rencontre les développeurs ainsi que vos pairs. D'ailleurs, dites-moi AVANT que vous vous inscrivez svp. Je peux essayer d'arranger des rdv entre vous et les développeurs, d'autres clients, etc.
- Un excellent rapport qualité/prix.
- Discount de 20% pour les membres de Guide ! Voir http://www.gse.org/MEMBERS/IBMDiscount/tabid/712/Default.aspx

WebSphere Technical University

- THE major IBM conference in Europe for WebSphere technology in 2015
- Hundreds of sessions on our favorite WebSphere topics: WAS, MQ, IIB (Broker), etc. on z/OS as well as Distributed platforms
- Dublin, 13-16 October 2015
- http://www.learnquest.com/assets/pdfs/IBM_WebSphere_Technical_University_Flyer_2015.pdf
- Meet the developers and meet your peers throughout Europe
- A terrific investment in *your* skills

IBM Integration Bus v10 themes

- Simple & Productive
  - ▶ Making it easier and quicker to develop and manage integration solutions
    - Learn, Develop, Deploy, Manage, Migrate quickly and easily

- Universal & Independent
  - ▶ Connecting 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 & Intelligent
  - ▶ Allow the creation of dynamic solutions that provide business insight
    - Flexible configuration tools, analysis of data and intelligence
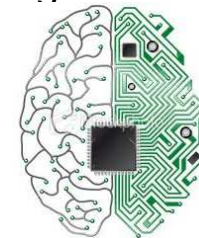
- High Performing & Scalable
  - ▶ Provide a platform and technology neutral connectivity option
    - Work on the widest possible range of hardware, software and virtualized environments

IIB v10 en bref….

- Rafraichissement des plates-formes
  - Fin de support pour 32-bit
  - Java v7.1 SR2
  - L'IIB devient de plus en plus « cloudy » : support sur SoftLayer, scripts CHEF,…
  - Emphase sur l'interface d'admin Web
  - Support MQTT

- Support de MQ amélioré ! Bien plus souple.
  - Support pour MQ Clients (MQInput, MQOutput, etc.)
  - Support pour multiples QMs à la fois (0 à N) par un Integration Node (Broker)
  - Fin d'exigence de MQ comme prérequis (sauf sur z/OS… pour le moment)

- Meilleur support pour les développeurs
  - Installation plus « lite » (environs 1Go)
  - Bibliothèque d'exemples « online »
  - Outil de test de régression, support d'une API REST pour les tests
  - Support pour Je
  - Meilleur support pour les bibliothèques partagées (Shared Libs)
  - Quelques clics pour créer une interface REST/JSON

A few IIB customers that presented their stories at InterConnect2015…Perhaps you'll be the next?

Aer Lingus

Did you know that many of the largest financial institutions in Germany, France, UK, France, Italy, Spain, USA, etc. are using the IIB (WMB) on z/OS today?

v10: 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), Ubuntu
  - Optimized 64-bit support on all platforms, developer OS and server OS
    - *No longer support for 32 bit Windows or 32 bit Linux*
  - Express, Standard and Advanced editions make IIB applicable for all solutions and budgets

- Virtual images for efficient utilization & simple provisioning
  - Extensive support for virtualized environments, e.g. VMware, AIX Hypervisor… any!
  - Support for public and private clouds: Softlayer, Pure, non-IBM, RYO etc.
  - Chef scripts for automated building of flexible IIB images (see Github)
  - Pre-built images (Hypervisor editions) available on xLinux and AIX

- Includes access to full range of industry standard databases and ERP systems
  - DB2, Oracle, Sybase, SQL Server, Informix, solidDB
  - Open Driver Manager support enables new ODBC databases to be accessed
  - JDBC Type 4 for popular databases
  - SAP, Siebel, Peoplesoft, JDEdwards at no additional cost

- Technology components and pre-requisites
  - Java 7.1 on all platforms
  - WMQ is no longer required on Distributed platforms, but is still fully supported - MQ 7.0.1 or higher

v10: Radical Evolution of Developer Experience

IIBSetup10.0.219.0.exe   1,182,562 KB

- Much smaller footprint… around 1GB

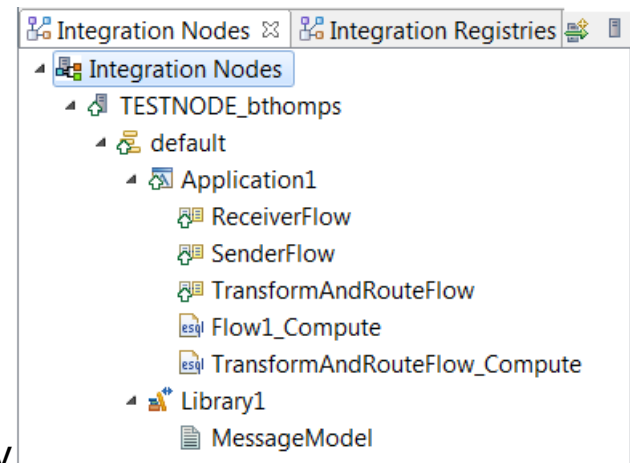- Patterns, Samples and Documentation
  - ▶ These are now separately downloaded, as required
  - ▶ Allows in-version release of samples and patterns
  - ▶ Can be staged to local server

- Built-in Unit Test Environment
  - ▶ Developer tools have built-in unit test server
    - ▪ Fixed name of TESTNODE_<userid>
  - ▶ Started and stopped with tools
  - ▶ Can still test/deploy to manually created local and remote servers

- IIB Policies are becoming key
  - ▶ Used more and more to define run-time properties externally

Application Development | **Patterns Explorer** ⊠

Patterns

- Patterns
- ◢ Pattern Repositories
  - ◢ OT4I GitHub Pattern Repository
    - ◢ Samples
      - ↓ Solar [Not installed]
  - ◢ Experimental OT4I GitHub Pattern Repository
    - ◢ Mobile
      - ◢ MessageSight
        - ↓ Event Filter [Not installed]
    - ◢ Samples
      - ↓ Solar [Not installed]
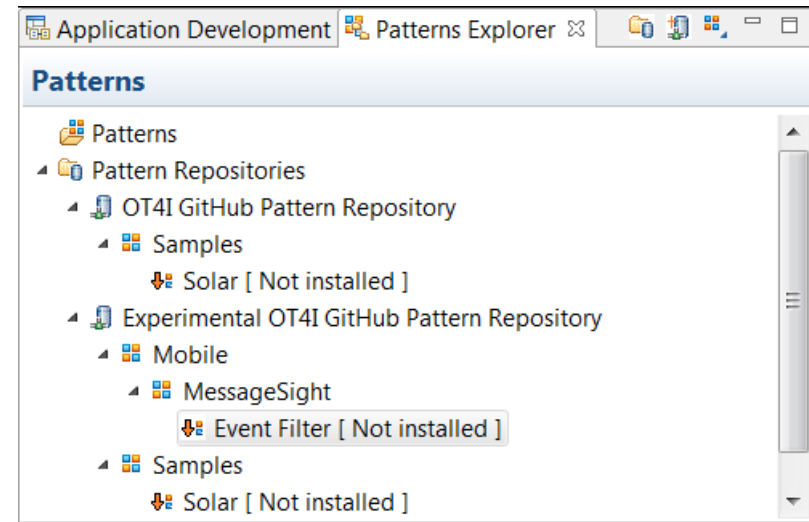
Download and Install   **Rating :** Popular   **Size :** 68 KB   **IBM Supported :** Yes

Integration Nodes ⊠ | **Integration Registries**

- ◢ Integration Nodes
  - ◢ TESTNODE_bthomps
    - ◢ default
      - ◢ Application1
        - ⬚ ReceiverFlow
        - ⬚ SenderFlow
        - ⬚ TransformAndRouteFlow
        - esql Flow1_Compute
        - esql TransformAndRouteFlow_Compute
      - ◢ Library1
        - MessageModel
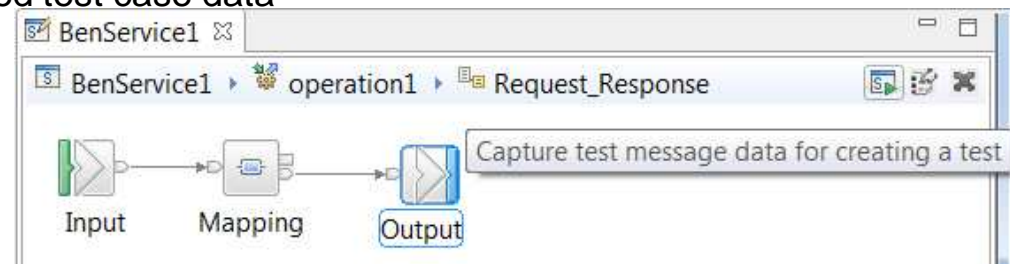
v10: Flexible MQ Topologies

- Provide more flexible topology options for MQ access
  - ▸ Many benefits include simplicity, scalability, availability & migration
  - ▸ Relationship evolves to the same as other resource managers – i.e. optional
  - ▸ Multiple Buses connected to a single Queue Manager
  - ▸ Corresponding updates for commands, CMP & Admin tools
- Automated installation simplified
  - ▸ MQ resources will not be installed at the same time
  - ▸ Reduces dependency management
  - ▸ Simplifies cloud-based installs
  - ▸ If MQ is installed, then IIB will detect this and configure appropriately
- IB now supports Local and Remote queue managers
  - ▸ Allows IB to be remote from its queue manager
  - ▸ Works with single MQ IB support to further simplify MQ topology
  - ▸ Many other internal features within IB can exploit this flexibility
- Many MQ Node related Enhancements
  - ▸ Input node supports multiple input queues, both local & remote queue managers
    - ▪ Includes easy-change policy based control of sources
    - ▪ Also applies to MQGet and MQOutput/MQReply nodes
  - ▸ Many other MQ node enhancements in pipeline: PubSub, Request/Reply…
- When a queue manager is not available…
  - ▸ Some features require MQ e.g. aggregation nodes, XA coordination, SAP Nodes collector nodes, etc.

IB1 IB2 IB3

QM

IB3

IB1 IB2

QM

Local or Remote

MQ Input

request
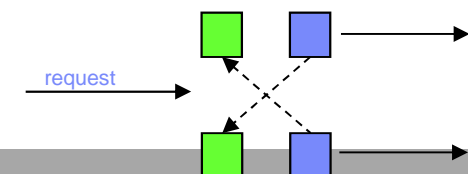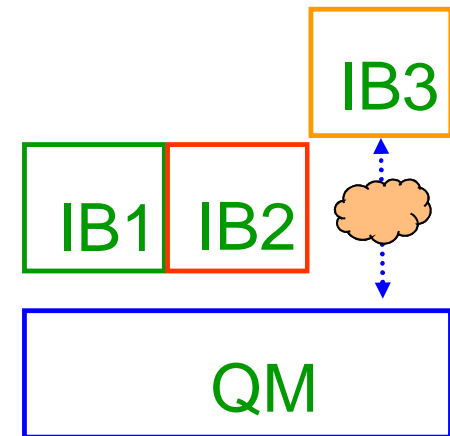
v10: Unit Test and Regression Test

- Improved Facilities for Unit Test and Regression Test

  ▶ Simple to understand, fix and re-factor behaviour during development

Test suite	Total	Pass	Fail	Percent
My flows	20	15	5	75
Your flows	50	48	2	96

- Valuable, foundational first use cases

  ▶ Observe data passing through a flow

  ▶ Capture these data in "test case"

  ▶ Build regression suite from test cases

  ▶ Save data to test case

  ▶ .ibtest contents to define input (source) request and expected output (target) response. Collected into unit test library for subsequent execution

- Regression Testing

  ▶ Compare the actual data with previously captured test case data

  ▶ Regression runs set; aggregate reporting

- Exploits REST/JSON API

  ▶ Initial experience will be developer tools

  ▶ APIs are foundational for bulk operations

  ▶ Tools Integration with Jenkins, Maven, Ant, Hudson…

v10: Shared Libraries

- Major features introduced in V8 and V9
  - ▶ Enhanced to fulfil most popular user requests
  - ▶ Libraries can now be shared across multiple applications for a broad range of assets
  - ▶ Sub-flows are now independent artefacts, significant storage reduction, consistency

- Shared Libraries
  - ▶ Libraries can now be referenced by one or more applications
    - Libraries deployed independently of applications – "shared"!
    - Applications will not get "own copy"
    - Libraries can still reference other libraries
  - ▶ Shared Library is the default library type
  - ▶ Assets in multiple libraries within application are shared
    - Notably schemas, also Maps, ESQL, Java, PHP etc

- Shared Library Restrictions
  - ▶ Most notable restriction is that schema imports cannot occur across shared libraries
    - Same for PHP, XML, XSL and other cross library source imports
  - ▶ Subflows but not message flows are allowed in shared libraries, other minor subflow restrictions
  - ▶ Minor restrictions for ESQL (e.g. empty schema)
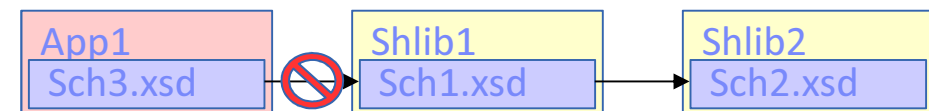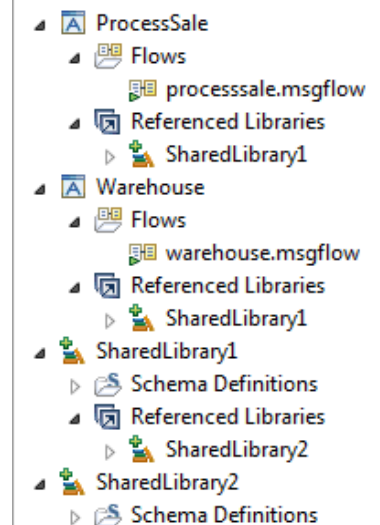
v10: Java Script API

- Web APIs are popular technology for simplified access to integration
  - ▸ Particular applicability in mobile, browsers, and node.js program scenarios
  - ▸ New feature allows Integration Bus service to be invoked via Web API
  - ▸ Builds on existing IB mobile features and service definitions
- Start from new or existing service
  - ▸ Design the IB service, creating API is single click
    - ▪ REST/JSON binding generated automatically
    - ▪ JavaScript client, documentation likewise
- Access JavaScript and documentation from URL
  - ▸ Point browser at IB node to retrieve assets!
  - ▸ Can program via HTTP GET if required

Coût de SMF MQ - depuis MP16

Accounting & Statistics

Accounting and statistics data can be written to SMF (record types 115 and 116).

Accounting Trace:

• CLASS(1) accounting is typically 2-3% more than with no accounting

• CLASS(3) typically increases MQ costs by 5-10% than running with no accounting.

Statistics Trace:

• CLASS(1) statistics are typically of insignificant cost.

• CLASS(3) enhanced statistics are also typically of insignificant cost.