UNIVERSAL MESSAGING
REACHING THE PARTS THAT OTHER MESSAGING PRODUCTS CAN'T REACH

Jonathan Heywood
Senior Director Product Management, Product Marketing and Communities
Software AG
BROKER END-OF-LIFE SCHEDULE

All wM releases not supported with Broker after Oct 2020
MIGRATING
JMS-BASED MESSAGING

• Integration Server and other webMethods products
  – No Flow code changes required
  – Simply switch JMS alias to point to Universal Messaging

• Non-webMethods applications
  – No code changes required (if using standard JMS)
  – Simply switch client libraries and update connection URL

• Migrate JMS assets from Broker to Universal Messaging using provided migration utilities
MIGRATING
NATIVE PUB-SUB MESSAGING

• Integration Server
  – No Flow code changes required
  – Simply switch wM Messaging alias to point to Universal Messaging
  – Run migration utility to optimize IS Doc Types and Triggers for use with UM
  – Sync Doc Types with UM
REAL-TIME BUSINESS – BIG CHALLENGES

DELIVERY CHANNELS

VELOCITY
Nanoseconds
Microseconds
Milliseconds
Seconds
Minutes
Hours

SCALE
Petabytes
Terabytes
Gigabytes
Megabytes
Kilobytes
Bytes

REAL-TIME DATA DELIVERY
UNIVERSAL MESSAGING AND THE WEBMETHODS SUITE

- Installation: Software AG Installer
- Fixes: Software AG Update Manager
- Management: Software AG Command Central
- Deployment: Software AG Deployer
- Monitoring: Software AG Optimize for Infrastructure
- Upgrade: Software AG Migration Utilities
UNIVERSAL MESSAGING
A NEW ERA IN MESSAGING

• High availability
  – True active-active clustering
  – Fast fail-over
  – No need for special HA infrastructure

• Performance
  – Heavily optimized for modern multi-core processors
  – Streamlined storage files
  – Faster than Broker
DEMO SCENARIO
VENDOR-MANAGED INVENTORY

Silo

Monitor silo level

Trigger replenishment

Send delivery note

Execute replenishment process

Precious Metal Trinkets LLC

Goldmine Inc
DEMO SCENARIO
VENDOR-MANAGED INVENTORY

Precious Metal Trinkets LLC

Silo

Goldmine Inc

MONITOR SILO LEVEL

Send delivery note

Send delivery note

AMQP

JavaScript

Universal Messaging

Execute replenishment process

Native pub-sub

JMS

Trigger replenishment

Send delivery note

Precious Metal Trinkets LLC

Goldmine Inc
MQTT
LIGHT-WEIGHT MACHINE-TO-MACHINE MESSAGING

• Standard wire-protocol
• Vendor interoperability across-the-wire
• Focus on
  – Small software footprint
  – Low network bandwidth
• Emerging use in IoT applications
• MQTT 3.1.1 is OASIS standard
• Software AG is a member of the MQTT working group
MQTT OVERVIEW ACROSS-THE-WIRE INTEROPERABILITY

JMS Client application must have vendor-specific JMS client

MQTT Client application can use any vendor’s MQTT client

Application

JMS Client

Vendor-proprietary wire protocol

Messaging Server

Any API

Standard API

Application

MQTT Client

Standard MQTT wire protocol

Messaging Server
DEMO SCENARIO
VENDOR-MANAGED INVENTORY

Precious Metal Trinkets LLC

JavaScript

Monitor silo level

MQTT

Universal Messaging

Goldmine Inc
JAVASCRIPT CLIENT
NO APP SERVER REQUIRED!

• Web page served up by UM server
  – Simple web page hosting
• JavaScript subscribes to UM server
  – Establish connection
    • Uses web sockets if possible
    • Smart fallback based on browser and network
    • Can traverse proxies, etc.
  – Subscribe to sensor channel
  – Handler function for each received message
  – Render data using simple OSS gauge library
**DEMO SCENARIO**

**VENDOR-MANAGED INVENTORY**

- **Precious Metal Trinkets LLC**
- **Goldmine Inc**

- **Universal Messaging**
  - **Monitor silo level**
  - **MQTT**
  - **JavaScript**
  - **Trigger replenishment**
  - **JMS**
MONITORING SENSOR DATA USING JMS
TRIGGERING THE REPLENISHMENT PROCESS

- Standard JMS trigger
- Service notices silo is empty and triggers replenishment order
DEMO SCENARIO
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Precious Metal Trinkets LLC

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Universal Messaging

JavaScript

Execute replenishment process
Native pub-sub

Trigger replenishment

Goldmine Inc
WEBMETHODS BPM PROCESS
USING NATIVE PUB-SUB
DEMO SCENARIO
VENDOR-MANAGED INVENTORY

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Native pub-sub

JMS
Once order is confirmed, delivery note is prepared as XML document and sent through JMS.
DEMO SCENARIO
VENDOR-MANAGED INVENTORY

Precious Metal Trinkets LLC

Send delivery note
AMQP

JavaScript

Monitor silo level
MQTT

Universal Messaging

Goldmine Inc

Send delivery note
JMS

Execute replenishment process
Native pub-sub

Trigger replenishment
JMS
AMQP
ADVANCED MESSAGE QUEUEING PROTOCOL

• Standard wire-protocol
• Vendor interoperability across-the-wire
• Focus on
  – Various quality-of-service levels
  – Transactional semantics
  – Authentication
• More aimed at B2B applications
• AMQP 1.0 is OASIS standard
• Software AG is a member of the AMQP working group

Universal Messaging

String AMQP message

No vendor-specific software on client
DEMO SCENARIO
VENDOR-MANAGED INVENTORY

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Goldmine Inc

Universal Messaging

Send delivery note
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Trigger replenishment
JMS

Send delivery note

Execute replenishment process

Precious Metal Trinkets LLC

Goldmine Inc
DEMO SCENARIO
VENDOR-MANAGED INVENTORY

No vendor-proprietary libs needed

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JMS

Send delivery note

JMS
UNIVERSAL MESSAGING
A NEW ERA IN MESSAGING

One API
Many languages
- Java
- C++
- C#
- Python
- JavaScript
- Flex
- Silverlight
- Objective C

One Server
Many uses
- Enterprise
- Web
- Mobile
- IoT

One Bus
Many standards
- JMS
- AMQP
- MQTT
- HTTP
### WHEN SHOULD YOU SWITCH?
#### PICKING THE RIGHT TIME

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<thead>
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<th>Upgrade to release</th>
<th>JMS</th>
<th>Native pub-sub</th>
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• FAQ on Empower
  – https://empower.softwareag.com/brokerendoflife/

• Documentation
  – webMethods > Products > Universal Messaging >
    Migrating from Broker to Universal Messaging

• Try it for yourself!
  – Download Universal Messaging now through Software AG Installer
  – 90-day trial download available for all webMethods Broker customers

• TECHcommunity
  – http://techcommunity.softwareag.com
  – webMethods > Messaging
EDUCATION SERVICES
UNIVERSAL MESSAGING

Developer: UM Stand Alone
221-67E: 2 days

Developer: UM with wM
500-68E: 2 days

Developer: Knowledge Update
602D-67E: 3 days

Combined Audience:
501-68E: 4 days

Administrator: UM Stand Alone
222-67E: 2 days

Administrator: UM with wM
638-68E: 4 days

Administrator: Knowledge Update
602-67E: 3 days

Combined Audience:
501-68E: 4 days

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