API, DEVOPS & MICROSERVICES
RAPID. OPEN. SECURE.

INNOVATION TOUR 2018
April 26 | Singapore
THE NEW ARCHITECTURAL PARADIGM

Micro-services  Containers  APIs

Continuous Delivery

Cloud  DevOps  Events
MICROSERVICES

- API Gateway
- Cloud Integration
- iPaaS
- Hybrid Integration
- Internal Applications
- CONSUL
- Legacy
- ERP
- EW
- API Gateway
ARCHITECTURAL PATTERNS

Macro Service

Composition & Integration Logic

Connectivity

Micro Service

Event Bus

Mini Service

Event Bus

Integration Bus

API
WEBMETHODS ESB
DECOMPOSING THE MONOLITH…

Monolith

- State Mgmt.
- Mapping
- Services
- Routing
- B2B
- BPM
- LB
- Flow
- Session
- Messaging
- Scheduler
- Connectivity
- Transaction Mgmt.
- PKG Management
- Security
- Runtime Kernel (OSGi + Java)

4 GB heap, 4 Cores, 2GB Disk

Small Container

- Messaging
- Scheduler
- Connectivity
- Transaction Mgmt.
- PKG Management
- Security
- Runtime Kernel (OSGi + Java)
- API Gateway

256 MB Heap, 1 core, 300 MB Disk

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WEBMETHODS MICROSERVICES CONTAINER

• New flavor
  – Reduced memory footprint
  – Reduced footprint on disk
  – Faster startup time

• Provide capabilities including:-
  – Protocol support
  – CloudStreams connectors
  – Adapters (JDBC adapter)
  – Mapping and Transformation
  – Public Services
  – Etc.

Available on:-
  • DockerHub
  • Installer
MICROSERVICES ECOSYSTEM

Monitoring
- Insight
- O4I

Discovery
- Consul
- Eureka
- NGINX

Orchestration
- Cloud Foundry
- Kubernetes
- Command Central

Container
- Docker

Auditing
- UM
- DES
- LogStash
- Database

Architecture Enhancements
Circuit Breaker
Additional Components

- webMethods DevOps Edition (wM TestSuite)
- Command Central for continuous integration and continuous delivery
- Native support for Event Driven Architecture
INNOVATION TOUR 2018
DEVOPS
THE NEED FOR SPEED & SCALE

- Cloud
- Mobile
- Social
- BigData
- Blockchain
- IoT
- Bimodal
- DevOps
- Deep Learning
- Containers

![carts.com](image1)

- 300 Deployments / Year

![flickr](image2)

- 10+ Deployments / Day

![Etsy](image3)

- 50-60 Deployments / Day

![amazon.com](image4)

- Every 11.6 seconds

![Large Logistics Company](image5)

- ~50 Deployments / Day
WEB SCALE ARCHITECTURE
DEVOPS AND CONTINUOUS DELIVERY

Develop

Test

Package

Deploy

• Increased agility
• Facilitates distributed development
• Enable continuous delivery
• Support massive scalability

• Daily testing of builds
• Quick capture of errors and quick fixes
• Continuous integration

• Improved platform configuration consistency
• Faster image loading
• Container runtime, clustering and abstraction layer
• Increased workload density

• Rapid and Automated Provisioning of resources
• Elastic Scalability
• Optimized resource utilization

Cloud

Microservices

Automated Testing

docker
INTRODUCING WEBMETHODS DEVOPS EDITION
For Continuous Integration & Delivery

Local Development
Develop on the local desktops or laptops without being connected to Development server

Test Suite
Run automated unit tests for continuous development and continuous integration

Removes the need to buy additional development licenses
DEVOPS TOOLSET

Development
- Develop, Unit Tests

Build & Test
- Build, Test (Integration, Functional)

Staging
- Test (Acceptance, Performance, Load & Stress)

Production
- Execution, Monitoring, Operating

Designer Workstation
- Maven
- JFrog
- Chef
- Puppet
- Amazon Web Services
- Insight
- AppDynamics

wM Test Suite
- JUnit
- Test Suite

Asset Build Environment (ABE)
- Deployer
- Command Central

Optimize For Infrastructure
- Nagios
- CrossVista
- Docker
- BMC
Automated integration test framework for unit testing

- Create test cases re-playable at any time to detect bugs and regression
- Simulate service calls to external and backend systems
- No reliance on external backend systems
- No reliance on specific data in backend
- Capture functional experts’ feedback in test cases
- Compliant with junit test framework
DEVOPS (UNIT TEST FRAMEWORK)
INNOVATION RELEASE HIGHLIGHTS

Running code coverage analysis with defined scope

Supports standard Junit reporting to the Custom Junit runner.

Multiple Test Suite Executions in a single server session.

Includes three Designer Coverage reports - Suite Coverage, Execution Model and Service Coverage.

Code coverage allows easy identification of untested steps and leads to better definition of unit test cases and higher DevOps success.
INNOVATION TOUR 2018
API
API GATEWAY
INNOVATION RELEASE HIGHLIGHTS

1. More API Documentation options
2. New and enhanced API policies, OData API support
3. Staging support
4. Lifecycle management UI redesign

Easier and streamlined API Management – from API design and documentation, through policy enforcement to developer collaboration
API PORTAL
INNOVATION RELEASE HIGHLIGHTS

1. More API Documentation options
2. Scheduled API users reports
3. Portal customization enhancements
4. Developer friendly API try-out

Easier and streamlined API Management – from API design and documentation, through policy enforcement to developer collaboration