

PMC209

Introducing the Advanced Adapter Engine Extended for SAP NetWeaver PI



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 **TECHED 10**

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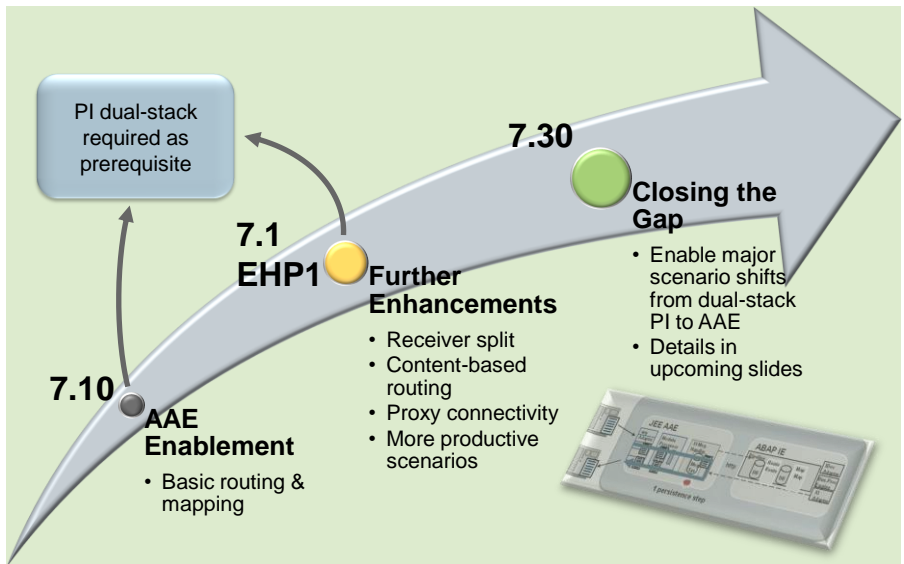
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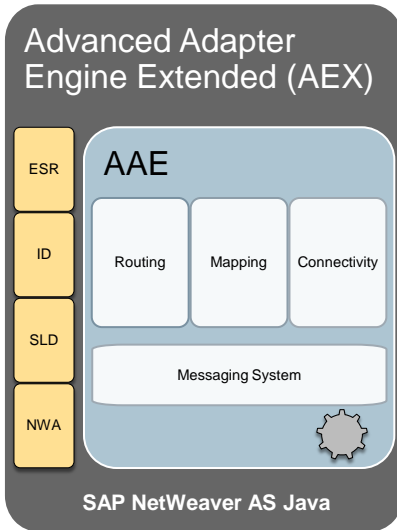
Agenda



1. Introduction to AEX
2. AEX Features in Detail
3. Use Cases
4. Outlook
5. Demo

Advanced Adapter Engine Evolution





What is the new Advanced Adapter Engine Extended (AEX)?

- **Leaner** SAP NetWeaver Process Integration installation alternative
 - Fully **independent**, single-stack solution based on SAP NetWeaver AS Java only
 - Own integration domain
 - Own tools for design, configuration, and operations
 - ES Repository, Integration Directory, SLD, NWA, Monitoring
 - Powered by Advanced Adapter Engine (AAE) introduced in 7.1 (but with more capabilities)
 - Not to be confused with a non-central AAE
 - Additional mediation and connectivity features to allow for major scenario shifts to AEX
 - Available starting from SAP NetWeaver PI 7.3 (**planned** for Ramp-up in Q4, 2010)

Benefits

Main Benefits

- Reduction in overall TCO with single-stack
 - Faster installation (1 hr)*
 - Less hardware (½ hardware requirement)*
 - Fast restart (90 secs)*

* Hardware dependent
- Drastically reduced resource consumption (scenarios can speed up to a factor 10)
 - Conversely, need only 10% of resources for comparable performance, sizing cut down by factors
 - Up to 60% less energy consumption
- Monitoring simplification with one dedicated toolset and one stack
 - All end-to-end monitoring and configuration information
- One database scheme

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AEX Features in Detail – Closing the Gap



Close gaps to enable major scenario shifts from dual-stack PI to AAE

- Further support of adapters
 - IDOC adapter in AAE
 - HTTP adapter in AAE
- Interface and mapping split on AAE
- Optional message versions (on error / before routing / after mapping / validation ...)
- User defined message search (replacing TREX)
- XML Validation redesign (ESR - schema based)
- Integrated Configuration (AAE) generation from Process Integration Scenario

Still to come:

- Integration processes
- WS-RM support (WS Adapter)
- IDoc adapter not yet complete

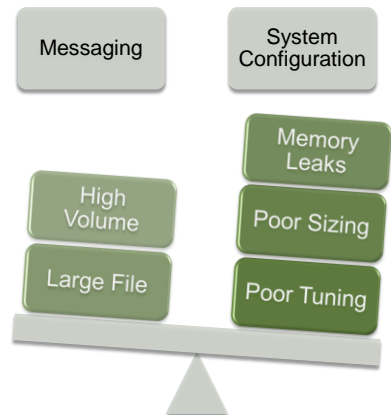


New Adapter Features

- Large (binary) file-to-file transfer
- Configurable JDBC message size limits
- Time-out configuration per communication channel
- Publish and subscribe messaging for JMS Topics

Fault Tolerance Improvements

- OutOfMemory Handling
- Blacklisting
- Safe Restart for huge message backlogs
- Reduction of cluster communication (locking), e.g. EOIO message sticking to cluster nodes
- CPA Cache, Monitoring improvements
- Configuration Wizard for system parameters (CTC template)



AEX Features in Detail – Monitoring and Configuration



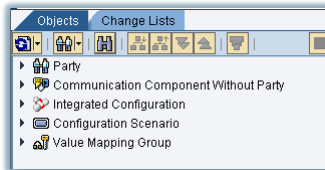
Monitoring

- Complete reuse of existing and new, central monitors (e.g. payload-based message search)
- Only minor adoptions for AAE scenarios (versions, directory cache monitor)
- Solution Manager Integration (with 7.1 shipment **planned** Q2 2011)

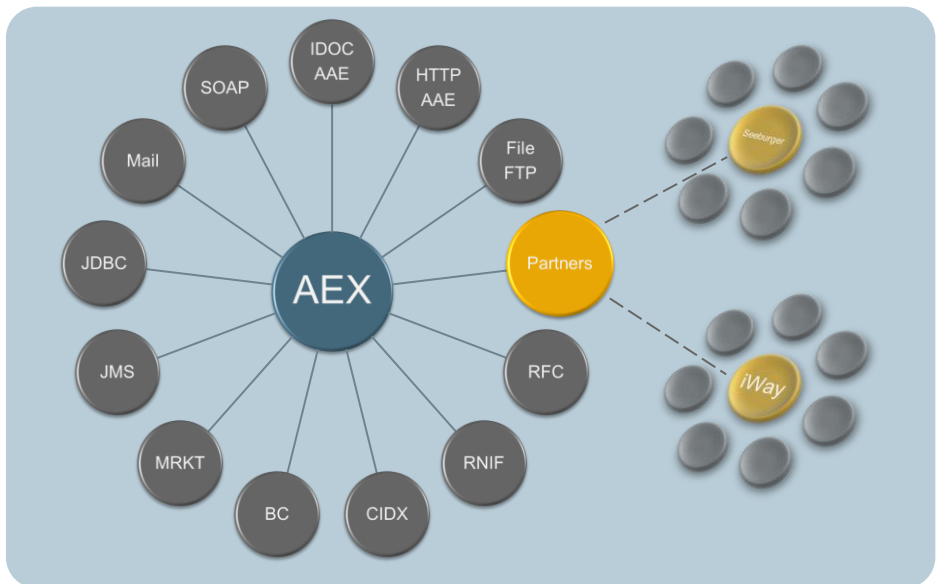


Configuration (Directory)

- Finish new configuration object ("Integrated Configuration") for AAE scenarios
 - focus: usability → additional improvements in TCO / TCD
 - Available through Directory API
- Robustness improvements (e.g. CPA cache)
- Adoption for AEX usage type



AEX Features in Detail – Connectivity



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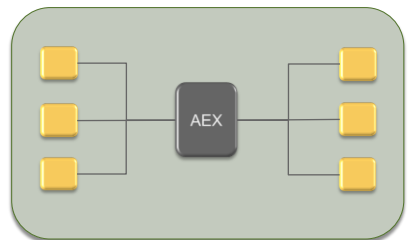
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Use Cases



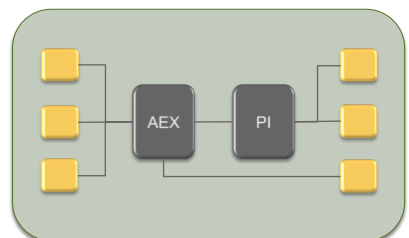
AEX stand-alone

- Using AEX as lean, low-cost integration middleware
- Using AEX as test environment



AEX in combination with SAP NetWeaver PI

- Separating landscapes for different regions or organizations of an enterprise
- Separating network zones
- Using AEX as manual fail-over system (Business Continuity)
- Note: May require sync of design and/or configuration content w/ suitable transport scenarios



AEX Stand-alone – Lean, Low-cost Integration



Using AEX as lean, low-cost integration middleware

- Fundamental-to-advanced messaging capabilities for SAP and non-SAP integration (no immediate or major BPM requirements)
- High performance and robustness
- Avoid larger system resource and operational footprint and TCO of dual-stack PI installation

AEX Stand-alone – AEX as Test Environment



Using AEX as test environment

- AEX can serve as test environment for adapter / module development by partners and customers
- Complete and consistent toolset to set up, configure and test integration scenarios in your landscape

Separating landscapes for different regions or organizations of an enterprise

- Subsidiaries in different region or organization require “local” integration solution with local design and development or independent operation
- Global or central integration requirements via dual-stack PI

Separating network zones (A2A and B2B)

- Set up a landscape based on an SAP NetWeaver PI standard installation for your security-critical scenarios
- Add an AEX installation in DMZ that is used for the external communication
- Easily configure a change of the transport protocol between AEX and PI in order to provide maximum security

Using AEX as manual fail-over system (Business Continuity)

- “Federated” AEX instance to run critical scenarios during planned or unplanned downtime
- Mission critical interfaces that require 100% uptime can continue running
- Manual switch-over procedures must be set up and carefully planned

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Glimpse of What's To Come

- AEX is first milestone for "dual-stack-less PI"
- Reduce Total Cost of Development
 - Simplified configuration
 - Eclipsed based tools
 - System centric process (SCP) support
- Reduce Total Cost of Operations
 - Enhanced integration with SAP Solution Manager
 - Alerting, reporting, task management via SAP Solution Manager
 - Functional completeness of Java stack
- Further optimizations in a one process environment (runtime, configuration, monitoring)
- Landscape Completion
 - Non-central runtimes
 - Central ES Repository
 - More federation options with now more "lightweight" PI domains
- Continuing Support for existing installation types

Planned and subject to
change without notice



DEMO

SAP NetWeaver PI – AEX 7.3

Demo Description



An Internet shop produces orders for different suppliers:

- Book orders start with "00"
- DVD orders start with "01"
- Book and DVD Orders may be mixed in one document

The book supplier ("Best books in town") expects an order with his deliverables

The DVD supplier ("Best DVDs in town") expect several messages:

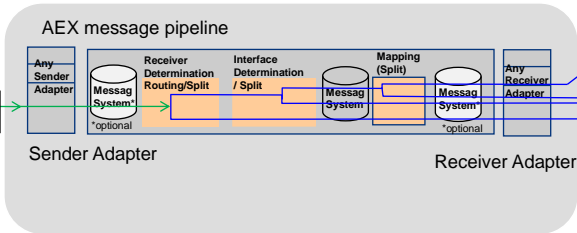
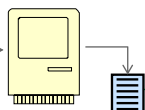
- The order itself
- A bookkeeping message with order value summary
- A message containing summarized order information usable for CRM campaigns

The linkage between internet shop orders and supplier backends is done with a PI 7.30 AEX

Demo: AEX / 7.30

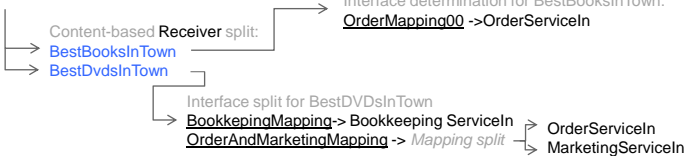


Internet Shop for books and DVDs:
„InternetBuyer“



Supplier

Sender: InternetBuyer
Interface: OrderServiceOut



Further Information



➔ SAP Public Web:

SAP Developer Network (SDN): www.sdn.sap.com

Business Process Expert (BPX) Community: www.bpx.sap.com

SAP BusinessObjects Community (BOC): boc.sap.com

Further technical information from the SAP Technology RIG

- Webinars: <http://www.sdn.sap.com/irj/scn/ipnw-khnc>
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Further Information



➔ Related SAP Education and Certification Opportunities

<http://www.sap.com/education/>

➔ Related Workshops/Lectures at SAP TechEd 2010

PMC262, Using the Advanced Adapter Extended of SAP NetWeaver PI, Hands-On Workshop

PMC210, SAP NetWeaver Process Integration: Improved Fault Tolerance and TCO Reduction, Lecture



Feedback

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