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New Capabilities of SAP NW PI 7.1 – Part 1

Enterprise Services Repository
- Enhanced Design Capabilities
- Service Enabling
- Services Registry – UDDI V3.0

Additional WS Standards
- WS Reliable Messaging
- WS Policy
- WS Security and SAML

High Volume Support
- Local processing in Adapter Engine
- Message packaging
- Improved performance for ccBPM
- Reduced sizing
New Capabilities of SAP NW PI 7.1 – Part 2

Event provisioning and consumption for BAM
- Local container
- Subscription and handling of business process events
- Milestone Monitoring

Next steps towards central configuration and administration

Functional Enhancements
- XML payload validation
- BPEL modeling enhancements

............
Enterprise Services Repository
Additional WS Standards & High Volume Support
Business Process Management
Further Enhancements
Enterprise Services Repository

Additional WS Standards & High Volume Support

Business Process Management

Further Enhancements
The ES Repository is based on the Integration Repository

The ES Repository stores objects, such as GDTs and message interfaces

Re-use existing data and leverage existing investment

New and enhanced objects in the ES Repository include
  - Process Component Models
  - Service Interfaces
The ES Repository provides a comprehensive metadata repository that can be used for SOA provisioning.

Objects in the ES Repository include:

- Integration Scenarios
- Process Component Models
- Service Interfaces (Enterprise Services)
- Global Data Types (CCTS based)
- Interface Mappings
- Executable Integration Processes (BPEL)
Process Component Models in the ES Repository

Based on SAP’s process component architecture methodology

References to
- Integration Scenario Models
- Process Components
- Business Objects
- Service Interfaces
- Global Data Types

Functionality of Process Components exposed through enterprise services

The Process Components in the SAP Business Suite are described in SDN
Enterprise Services built in the ES Repository

Enterprise Services:
- Are mapped to the Service Interface object in the ES Repository
- Are built using a consistent enterprise model based on:
  - GDTs
  - Process Components
  - Business Objects
- Ensure quality and stability
- Are based on open standards
- Are well documented
Global Data Types are:

- Defined company-wide based on open standards (ISO 15000-5, UN/CEFACT CCTS)
- Defined in the ES Repository
- Approved SAP-wide using the Governance process
- Reusable semantic building blocks for service interfaces and message types
Process Component Models

- Process component architecture models enable SOA governance
- Drill down from high-level models to service interfaces and operations
The Services Registry – Benefits

Services Registry – Key Benefits

- Based on UDDI 3.0
- Naming standards and classifications
- Service evolution and versioning
- Classification system search
- Keyword search services
- Service management and governance
- Procedures for backend publications
- Procedures for client development
- Service configuration
- Documentation
Enterprise Services Repository
Additional WS Standards & High Volume Support
Business Process Management
Further Enhancements
Web Services Reliable Messaging (WS-RM)

- Asynchronous messaging (EO, EOIO) based on open WS standard
- Native support through Integration Engine (w/o adapter)
Principle Propagation based on SAML

- Forward user context from sender to receiver
- Authorization check in receiving system based on original user

Request status of order xyz??
Integration Server
Authorized??
**Message Packaging**

- Process bulk of messages in one service call (mapping, routing, ..)
- Reduce context switches
- Enable mass operations on database
- For async scenarios
Local Processing in Adapter Engine

- Natural evolution of adapter engine
- Provides mapping, routing to by-pass Integration Server
- Adapter to adapter communication
- For sync and async scenarios
Enterprise Services Repository
Additional WS Standards & High Volume Support
Business Process Management
Further Enhancements
Major Enhancements for Process Automation

Human interaction
- Generic user decision
- Language dependent texts for end-user display, enriched with variables
- Integration paradigm (design/ configuration)

Step groups (modeling enhancements)

Configurable parameters

BPEL adoption
- BPEL4WS 1.1
- WS-BPEL 2.0 Preview and implementation
- BPEL4People planned
Event Provisioning and Consumption for BAM

Event Correlation
- Subscription and handling of business process events
- Milestone Monitoring Process Definition

Embedded Event Infrastructure
- Collecting, pre-filtering and publication of events across SAP and non-SAP systems
Example: Multi-backbone Order Handling

Monitoring Process Instance (tracks Orders > 10,000 €)

- Order
- Order Confirmation
- Raise Alert
- Get customer KPIs: A-customer Complaints statistics
- A-customer and Complaints?
  - Yes: Raise Alert
  - No
- Delivery
- Invoice

Monitoring Event Provider

- Application
- Org.Mgmt.
- User Mgmt.
- Application System 1

Integration Server

- XI Runtime
- Transaction
- ...
- ...
- Application System 2
BAM Milestone Modeling (BPEL)

- Modelled Event Correlation
- Rule and Alert Trigger
Enterprise Services Repository
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Further Enhancements
Major Enhancements for Mapping

Function libraries
- Re-usable user defined functions

Synchronous DB/RFC look-ups
- Use graphical function to model look-ups

Parameterizable mappings
- Specify mapping parameters at configuration time

Functions with multiple results
- Look-up function reads multiple fields
XML Payload Validation

- Validate incoming/outgoing messages against XML schema
- Forward/Backward error handling
One service runtime for point-to-point and ‘brokered’ communication
Centralized Configuration of Services

Centralized Configuration of Point-to-Point Connections

- Optimize message processing through de-centralized runtime
- ... but keep control through centralized configuration
Unified Administration

- Key monitoring functionalities integrated in SAP NW Administrator
- One place to monitor and administrate SAP NetWeaver
Upgrade paths will be offered for

SAP NW ’04 and

SAP NW 7.0 (2004s)

to go to SAP NW Process Integration 7.1.
SAP NW PI 7.1: Major Enhancements

Summary and Further Information
Why use SAP NetWeaver Process Integration 7.1?

5 Reasons for using SAP NetWeaver Process Integration 7.1

- Use Process Integration as an SOA backbone
- Establish ES Repository as the central SOA repository in customer landscapes
- Leverage support of additional WS standards such as UDDI, WS-BPEL and tasks, WS-RM
- Enable high-volume and mission-critical integration scenarios
- Benefit from new functionality such as principal propagation, XML validation and BAM capabilities
Further Information

Public Web

http://www.sdn.sap.com ➔ IT Practices and IT Scenarios ➔
End-to-End Process Integration, Business Event Management,
ESA Design and Deployment
http://www.sdn.sap.com ➔ Enterprise SOA, SAP NetWeaver,
Partners and ISVs, Forums

SAP Service Marketplace


Training http://service.sap.com/education

BIT400 (SAP XI)
BIT430 (SAP XI – BPM)
BIT450 (SAP XI Development)
BIT460 (SAP XI Mapping)