Central Monitoring of SAP NetWeaver Process Integration 7.3 with SAP Solution Manager 7.1

Active Global Support
February 2011
Agenda

1. Motivation
2. Technical Monitoring in SAP Solution Manager
3. Central PI Monitoring
4. Use Cases & Demo
5. Outlook
6. Summary
Growing PI landscape complexity and distribution leads to growing requirements towards a central monitoring approach.

Reduce the TCO by simplification of the operations processes e.g. providing one central entry point combining monitors for PI overall status with drill-down options up to host level.

Enable tight integration with:
- System Monitoring and Root Cause Analysis
- Alerting Infrastructure
- Notification - / Incident Management

Relieve productive systems from individual monitoring activities by a central collection of monitoring data.

Reduce the time:
- For regular system health checks
- For hand-over procedures
- From incident detection to root cause
2. Technical Monitoring in SAP Solution Manager
Technical Operations in SAP Solution Manager

- Represents **all capabilities for central monitoring, alerting, analysis and administration** of SAP solutions
- Allows customers to **reduce TCO** by **predefined content** and **centralized management** tools for all aspects of operations in SAP Solution Manager
- Provides **integrated analytics** out-of-the-box or individually adaptable by customers
Technical Operations in SAP Solution Manager 7.1
Part of Application Lifecycle Management

- **Upgrade Management**
  - Integration of Upgrade Dependency Analyzer
  - Enhanced Custom Code Lifecycle Management

- **Maintenance Management**
  - Enhanced Maintenance Optimizer
  - System Recommendations

- **Business Process Operations**
  - Enhanced BPO Dashboards with Alert Inbox
  - Cross Database Comparison
  - Job Control and Schedule Management
  - Integrated Data Volume Management with Work Center

- **Technical Operations**
  - New Infrastructure for Technical Monitoring and Alerting
  - Technical Administration
  - Technical Analytics
  - Enhanced Root Cause Analysis

- **Application Incident Management**
  - IT Service Management Processes
  - Highly configurable web-client user interface
  - Additional Service document functions

- **Solution Documentation**
  - Enhanced Solution Documentation Assistant
  - Reverse Business Process Documentation and IBIS Content integration
  - Upload interface to build an initial Business Blueprint structure

- **Solution Implementation**
  - Enhanced Business Blueprint
  - Implementing Business Functions
  - Integration with the service messages

- **Template Management**
  - Comparison & Adjustment for Template
  - Roll-in changes from projects

- **Test Management**
  - Enhancement to manage test phases efficiently
  - Test Automation Framework with 3rd party tools
  - Test Scope Identification & Optimization with BPCA

- **Change Control Management**
  - Enhanced Quality Gate Management for various activities
  - Enhanced process flexibility for Change Request Management
  - Improved mechanism for the change and transport backend
  - Configuration Validation and Change Analysis
Technical Operations
What is the process behind…

Monitor

- Proactive real-time monitoring
- System, DBMS and Host Monitoring
- End-User Experience Monitoring
- Connection Monitoring
- Process Integration Monitoring
- Business Intelligence Monitoring
- Solution Manager Self Monitoring

Notify

- Reactive handling of critical events
- Unified Alert Inbox
- Alert correlation and propagation
- Central Template Maintenance
- Open data provider and alert consumer

Analyze

- Lower mean time to problem resolution
- End-to-End Change Analysis
- End-to-End Workload Analysis
- End-to-End Exception Analysis
- End-to-End Trace Analysis

Administrate

- Optimize excellence of technical operations
- Task Inbox
- Down Time and Work Mode Management
- IT Calendar
- Notification Management
- Central Tool Access

Report

Prove value to business

Technical Reporting
- EarlyWatch Alert (for Solutions)
- Interactive reporting
- Customer specific reporting

Management Reporting
- Document based SLA reporting
- Interactive SLA Reporting
- Management Dashboard
### Technical Monitoring & Alerting

**Which applications are provided…**

<table>
<thead>
<tr>
<th>Unified Alert Inbox</th>
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<tbody>
<tr>
<td>• Central access point for all alert from the different monitoring scenarios</td>
</tr>
<tr>
<td>• Integration of Incident &amp; Notification Management, Root-cause Analysis and collaboration features</td>
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</tbody>
</table>

<table>
<thead>
<tr>
<th>System Monitoring</th>
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<tbody>
<tr>
<td>• Status overview for technical systems, instances, databases and hosts.</td>
</tr>
<tr>
<td>• Drill down to single metrics and events, Jump in to metric reporting and landscape information</td>
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<tr>
<th>End-User Experience Monitoring</th>
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<tbody>
<tr>
<td>• Measurement of availability and response times from an end-user perspective</td>
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<tr>
<td>• Deep integration in E2E Trace Analysis for Root-cause Analysis</td>
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<table>
<thead>
<tr>
<th>Process Integration Monitoring</th>
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<tbody>
<tr>
<td>• Central entry point for SAP Process Integration specific monitoring for complete PI domains</td>
</tr>
<tr>
<td>• Contains central monitors as Overview, PI components, PI channels and Message flow monitoring as well as context sensitive jump-ins in local monitors</td>
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<table>
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<tr>
<th>Business Intelligence Monitoring</th>
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<tr>
<td>• Central monitoring for SAP Business Intelligence solutions based on SAP BW and BOE XI</td>
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<tr>
<td>• Monitoring of SAP Business Warehouse process chains and Business Objects specific jobs</td>
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<table>
<thead>
<tr>
<th>Connection Monitoring</th>
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<tr>
<td>• Active Monitoring of RFC and HTTP connections between SAP Systems</td>
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Integration of all scenarios in Alerting & Metric Monitoring
3. Central PI Monitoring
Central PI Monitoring

Message Flow

- Channel error or stopped
- Message in error (e.g., due to Receiver determination issue)
- PI Component is down

Error, Exception or other monitoring-relevant event
Central PI Monitoring
Architecture & Scope
Dual Level Monitoring

Central Tools
- Status Overview
- Unified information
- Aggregated messaging information
- Isolated runtime environment
- Alerting
- Incident Management

Local Monitoring Tools
- Real-time information
- Detailed information including payload access
SAP NetWeaver PI Monitoring in SAP Solution Manager – PI Domain Overview

Monitoring of multiple PI Domains

Access to PI Monitoring applications
- Overview Monitor
- Component Monitor
- Channel Monitor
- Message Monitor

SAP Solution Manager

Detailed Selection

PI Domains (5)

View: [STANDARDVIEW] Overview Monitor Component Monitor Channel Monitor Message Monitor

<table>
<thead>
<tr>
<th>Name</th>
<th>Technical Systems</th>
<th>Alerts</th>
<th>SLD URL</th>
</tr>
</thead>
<tbody>
<tr>
<td>domain 28 ldcbxj</td>
<td>AE7-JAVA,BXJ-JAVA,BXJ-ABAP,LKG-JAVA</td>
<td>0</td>
<td><a href="http://ldcbxj:5280/sid">http://ldcbxj:5280/sid</a></td>
</tr>
<tr>
<td>domain 28 usclu8r</td>
<td>BJF-ABAP,LI5-ABAP,TUG-JAVA,WIN-JAVA,OVA-ABAP,UER-JAVA,UER-ABAP</td>
<td>0</td>
<td><a href="http://usclu8r:50026/sid">http://usclu8r:50026/sid</a></td>
</tr>
<tr>
<td>domain 40 ld8134</td>
<td>AAE-JAVA</td>
<td>0</td>
<td><a href="http://ld8134:54000/sid">http://ld8134:54000/sid</a></td>
</tr>
<tr>
<td>domain 50 ld8134</td>
<td>AEX-JAVA_AEX-ABAP</td>
<td>0</td>
<td><a href="http://ld8134:55300/sid">http://ld8134:55300/sid</a></td>
</tr>
<tr>
<td>domain 78 ldcb4x</td>
<td>B4X-JAVA,B4X-ABAP,V4X-JAVA</td>
<td>0</td>
<td><a href="http://ldcb4x:57800/sid">http://ldcb4x:57800/sid</a></td>
</tr>
</tbody>
</table>
SAP NetWeaver PI Monitoring in SAP Solution Manager – Overview Monitor

Aggregated View as entry point with most important status information on Integration Server, Decentral Adapter Engines and connected SAP Business Systems

Individual view per PI component (e.g., Integration Server)

Integration with system monitoring on level of technical systems
SAP NetWeaver PI Monitoring in SAP Solution Manager – Overview & System Monitoring

System-, Instance-, and Host-related metrics on one screen
SAP NetWeaver PI Monitoring in SAP Solution Manager – Component Monitor

Central view on availability and self-test status of all PI components

Reworked specific Self-Test details per PI component
SAP NetWeaver PI Monitoring in SAP Solution Manager – Channel Monitor

Central view on availability of all channels across different adapter engines

Follow-Up actions like:
- context sensitive navigation to further monitors
- start/stop/ping of channels

Channel Details and Short-Log per server node
SAP NetWeaver PI Monitoring in SAP Solution Manager – Message Error Monitor

- Allows for detailed filtering
- Error Messages View points out PI components with messages in error state
- Trend graph enables historical view and trend detection
- Drill-down option
SAP NetWeaver PI Monitoring in SAP Solution Manager – Message Error Monitor

Better root-cause detection using new status details

Drill-down option
SAP NetWeaver PI Monitoring in SAP Solution Manager – Message Flow Monitor

PI component-independent message scenario representation

Drill-down options and context sensitive navigation to local tools
SAP NetWeaver PI Monitoring in SAP Solution Manager – Alert Inbox

- Alert type table with activities
- Pre-defined POWL queries per category and per monitored object type
- Several personalization capabilities for content and look-and-feel
- Alert group table with activities
- Number of occurrences per alert type and number of status changes
- Status, processor and comments to track status of alert group directly in alert inbox
- Incident Ticket ID and status directly in alert inbox
SAP NetWeaver PI Monitoring in SAP Solution Manager – Integration with Incident Management

All known context information is filled in automatically.
All known context information is filled in automatically.
Central PI Monitoring in SAP Solution Manager 7.1

Availability

- Central PI Monitoring is supported as of PI Release 7.11, SP06 *
- Improvements in Component and Channel Monitoring for PI Releases as of 7.30
  - Self test information of PI Components were significantly improved
  - Short log information for PI Channels were significantly improved
  - Channel Ping is available in Channel Monitor
  - Status Details were introduced for Message Status
- Central User Defined Search is supported as of PI Release 7.31
- PI Message based Alerting is supported as of PI release 7.31

* For PI systems with lower releases, we have PI related metrics in Technical System Monitoring
4. Use Cases & Demo
How much time and manual effort would you need to answer these questions?

- What is the overall status of all PI components of the productive PI domain? Do you have issues in the underlying technical systems?
- What is the error trend for your business critical interfaces?
- Which have been the most prominent errors that occur this year? Have these errors occur in the last 7 days? At what point in time during the day do these errors typically occur?
- What is the message backlog today? Is there a relation between the message backlog and the overall message volume?
- Business department calls you and wants to know if and since when messages have been stuck for their business critical interfaces? On which PI components have those messages failed?
- How many communication channels do have an issue and which are the relevant local monitors?
- On which PI components do you have most error messages and which interfaces are affected?
- How many messages have been received this month via communication channel "xyz"?
Demo
5. Outlook for PI 7.31
Central User Defined Search in SAP Solution Manager 7.1
Search Criteria & Filter Section

Launch the Message Search for a PI Domain

Select the PI Runtime Components

Maintain Search Attribute and Value, (Value Help or free entries)

Execute Search
Central User Defined Search in SAP Solution Manager 7.1
Search Results

Runtime Components on which the suitable Messages were found

Single Messages as result of central User Defined Search
6. Summary
Central PI Monitoring in SAP Solution Manager 7.1
Summary

- “Good morning” page for overall status of one or multiple SAP NetWeaver PI systems assigned to one PI domain
- Alerting integration for component & channel availability
- Integration with notification and incident management
- Reduced time for
  - regular system health checks
  - hand-over procedures
  - root cause analysis
- Central collection of monitoring data to relieve monitoring related load from productive systems
Thank You!

Contact information:

F name MI. L name
Title
Address
Phone number