SAP Alert Management

Dr. Erhard Weidenauer, SAP AG

Dr. Christoph Nake, SAP AG

Johannes Jonas, SAP AG
Motivation

What Is Alert Management?

Example Demonstration

Alert Category Definition

Recipient Assignment

Triggering Alerts

Delivery Channels

System Configuration

Summary
SAP applications recognize critical situations for a company

- Insufficient system resources, system administration (mySAP Technology, CCMS)
- Delivery problems for an important order (mySAP SCM)
- Drastic decline in revenue (mySAP BI)
- Key customer cancels contract (mySAP CRM)...

Third-party applications recognize critical situations, too

- Control desk of a production plant: Overloading
- Stock value goes below limit
- ...
General Alert Management Scenario

Non-Alert Unit

Application

Decision Tool

Application Context

Alert Push

ALM

Alert Delivery

UWL

SAPconnect

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In many processes and applications, critical situations arise. The information about a situation is distributed to an appropriate recipient list in form of an alert.

An alert is characterized by the following:

**Someone must react immediately!**

**Keep in mind:**

- If no one has to react, it’s just a notification.
- If the immediate reaction is not necessary, it’s a work item.
Example: The single processing of an alert takes about 30 minutes and you receive 10 alerts within 1 hour. Hence, you need 5 hours to process these alerts.

Keep in mind:

- Not all alerts can be handled immediately. For some alerts, the processing is delayed for several hours.

- The alert loses its exceptional character, since almost the entire working day is filled with alert processing.

- Getting used to the ongoing escalation status of the alerts, you treat them as work items.

Sending too many alerts inhibits immediate processing.
Example: For an alert category, you have defined 10 recipients. Some alerts belonging to that category are triggered.

Keep in mind:
The fact that you are aware of the 9 other alert processors can lead to the situation that no one takes care of the alert.

Think twice about possible group dynamics, before defining large recipient lists.
Benefits of Alert Management

- **Active delivery of mission critical information:** Support for e-mail, SMS/pager, fax, Web interface, and so on

- **Personalized alert delivery**
  Get messages via your preferred channel

- **Define which content is relevant for you**
  Publishing and subscription mechanism for alert topics

- **Easy-to-use definition environment for customer projects**
The Alert Management system is available since SAP Web AS 6.20.

Alert Delivery Logic implemented by:

- CRM (Customer Relationship Management)
- SCEM (Supply Chain Event Management)
- APO (Advanced Planner and Optimizer)
- CCMS (Computer Centric Monitoring System)
- PLM (Product Lifecycle Management)
- BW (Business Information Warehouse)
- …
Possible System Landscapes

1. SAP System
   - Application
   - ALM
   - RFC

2. Application System
   - ALM
   - RFC

3. SAP System
   - Application
   - ALM
   - Application System
   - RFC

Requirements:
- ALM Server ≥ Web AS 6.20
- Local application systems ≥ 4.6C
- Local application systems ≤ 6.10 need a workplace plugin
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Summary
Example of a Technical Scenario

Non-Alert Unit

Update Manager -> CCMS Alert Monitor
Update inactive

ALM
Alert Push

Informs SysAdmin

SAPconnect

UWL

UWL Informs SysAdmin
Example of a Business Scenario

Non-Alert Unit

CRM

PPF

Purchase order cancelled

ALM

SAPconnect

UWL

Alert

Informs manager
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Definition of an Alert Category (1)

Alerts within an alert category are defined by various properties:

- Title, short text and long text
- Variables that can be used in title, short or long text (application data)
- Priority
- Recipients
- Escalation procedure
- Subsequent activities (in form of URL‘s)
- ...

Alert categories can be defined by applications or customers using the alert category definition environment in transaction ALRTCATDEF.
Definition of an Alert Category (2)

Overview of alert categories on this server

Transaction code ALRTCATDEF

Alert category definition
**Definition of an Alert Category (3)**

### General Properties

<table>
<thead>
<tr>
<th>Alert Definition</th>
<th>Description</th>
<th>Machine damage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Classification</td>
<td>Machine surveillance</td>
<td></td>
</tr>
<tr>
<td>Priority</td>
<td>Very High</td>
<td></td>
</tr>
<tr>
<td>Max. No. of Days</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>Expiry Time in Min.</td>
<td>1,448</td>
<td></td>
</tr>
</tbody>
</table>

### Container Definition

- **SMS short text displayed in the alert inbox:**
  - Machine no. & MACHINEID & LOCATION & damaged
- **Long text in the detail view of the inbox:**
  - Machine no. & MACHINEID & LOCATION & type & MACHINEID & is damaged
- **URL-based subsequent activities**
  - URL: http://www.mycompany.com/b2b
  - Type: Order spare parts
  - Chock supply chain
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Recipient Assignment

Administrator
Fixed recipients (users and roles)

Application
Runtime determination of recipients

Subscription
Holders of a subscription role can subscribe to a category in the alert inbox

Alert recipients
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Alerts can be triggered either by using one of the following frameworks:

- **Event in the Business Object Repository**
  - Define event linkage with transaction SWE2
  - Receiver function module: SALRT_CREATE_VIA_EVENT

- **Action of the Post Processing Framework (PPF)**

- **Auto-Reaction Method in CCMS (since 6.40)**

- **Triggering as a step in a SAP Workflow**

or by direct call of the function module SALRT_CREATE_API.
Triggering an Alert (2) - Event Linkage

Transaction code SWE2

Business Object Type, Event of Business Object Type, Alert Category (Receiver Type)

Pre-Defined Function Module

Additional Checks before triggering the alert (e.g. check for important customers)
Triggering an Alert (3) - Post Processing Framework

Transaction code SPPFCADM

Context

Action and Processing Type
Auto-Reaction Method in CCMS (since 6.40)

RZ20

SALO_SEND_ALERT_TO_ALM

SALRT_CREATE_API
CALL FUNCTION 'SALRT_CREATE_API'

EXPORTING

  ip_category = name of alert category

*  IP_EXPIRATION_TIME = time of expiration
*  IP_EXPIRATION_DATE = date of expiration
*  IP_WAIT_ON_COMMIT = wait for commit work or send alert immediately
*  IP_APPLICATION_GUID = GUID of raising application (since 6.40)

* TABLES

*  IT_RECIPIENTS = dynamic alert recipients (SAP User)
*  IT_EXT_RECIPIENTS = dynamic alert recipients (address strings)
*  IT_EXT_ADDR = dynamic alert recipients (address references)
*  IT_ACTIVITIES = dynamic subsequent activities (URLs)
*  IT_CONTAINER = name/value pairs (used variables in texts)
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Alert Inbox in the EP Universal Worklist
## Alert Inbox As BSP (1) – Alert List

### Confirm alert

### Forward alert

### Short text
Machine no.p555 (AE28) damaged

### Long text
Machine no.p555 (AE28) of type Laser printer is damaged because of:
Toner empty at 18:56:35

### Show recipients of this alert

### Subsequent activities (URLs)

### Table: Alert List

<table>
<thead>
<tr>
<th>Category</th>
<th>Description</th>
<th>Number of Recipients</th>
<th>Created on</th>
<th>Time created</th>
</tr>
</thead>
<tbody>
<tr>
<td>Machine damage</td>
<td>Machine no.p555 (AE28) damaged</td>
<td>1</td>
<td>27.07.2004</td>
<td>15:46</td>
</tr>
<tr>
<td>Machine damage</td>
<td>Machine no.&lt; MACHINEID not found&gt; ( &lt; LOCATION no</td>
<td>1</td>
<td>27.07.2004</td>
<td>15:49</td>
</tr>
<tr>
<td>Machine damage</td>
<td>Machine no.p555 (AE28) damaged</td>
<td>2</td>
<td>27.07.2004</td>
<td>17:52</td>
</tr>
<tr>
<td>Machine damage</td>
<td>Machine no.12233-987 (CU30) damaged</td>
<td>2</td>
<td>27.07.2004</td>
<td>17:54</td>
</tr>
<tr>
<td>Machine damage</td>
<td>Machine no.33-44 (CU30) damaged</td>
<td>2</td>
<td>27.07.2004</td>
<td>17:55</td>
</tr>
</tbody>
</table>

### Follow-On Activities

- Order spare parts
- Check supply chain
Alerts are always delivered into the Alert Inbox

Additionally, they can be sent time-dependently or time-independently via mail, SMS/pager, or fax
Alert Inbox As BSP (3) - Subscription

- Administrator must allow Subscribe/Unsubscribe
- Role can be assigned to Category. Each User within the role can subscribe or unsubscribe to this category

Subscribe/unsubscribe as BSP
Features at a Glance ...

- Alert confirmation by e-mail, SMS, and in the alert inbox
  - “I have received and read the message!”
  - “Do not escalate this message any further!”
  - “Do not show this alert in my inbox again”

- Escalation
  To superior or system administrator in case of a missing confirmation

- Subsequent activities

- URL-based navigation into an application, such as error handling or initiating necessary actions

- Substitute determination

...
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Summary
Inbound processing for alert confirmation via e-mail (and SMS)

Definition of the XML document structure

Offering users to send XML files to an external system

Alerts are handled internally (handling of e-mail, SMS, alert inbox) or alerts are routed to a partner product (via SMTP or HTTP)
RFC-Destination to the Central ALM Server

Application System

RFC Destination: ALRT_DEST

ALM

Transaction SALRT1:

Setting: RFC Destination for Central Alert Server
RFC Dest. of Alert Server: ALM_ALERTS

Transaction SALRT1:

Setting: RFC Destination for Central Alert Server
RFC Dest. of Alert Server: NONE
Ways to Confirm Alerts

Alerts can be confirmed:

- Via API
- In the Alert Inbox (transaction ALRTINBOX, UWL in EP, or an application into which the Alert Inbox is integrated)
- By simply replying to received e-mail/SMS => Inbound Processing:

- E-mail address of Alert User in configuration
- Handler for incoming e-mail provided by Alert Management

Transaction code SO50
As of SAP Web AS 6.20, it is possible to send short messages/pager messages via a public Web service:

- Communication with a service provider via Internet protocol HTTP
- No additional hardware needed for an SMS/pager gateway
- Customer pays only for the amount of usage
- The picture shows the example of a new HTTP node in SAPconnect (administration of external communication)
Speed Up Your Business with Alert Management!

- Active delivery of critical information
- Support for different media including e-mail, Fax, WAP, SMS, Web
- Personalized alert delivery and content
- Alert inbox for an enterprise portal
- Tracking whether the information has been received and escalation procedure
- Connection and integration with third-party communication systems
- ...
Further Information

➡ Public Web:

www.sap.com ➪ Solutions ➪ Technology

➡ Service Marketplace:

http://service.sap.com
Use aliases: /alert, /communication

➡ Intranet / Twiky (internal only)

Implementation Guide
I-Tutor Sessions