

Job Monitoring Setup with SAP Solution Manager 7.1 SP 10

December 2013



Business Scenario

Business Scenario

The new unified Job Monitoring allows you to monitor all the business-critical background jobs such as ABAP jobs and BW process chains, centrally. In job monitoring concept, you refer the ABAP jobs and BW process chains as monitored objects. You configure these monitored objects in a technical scenario or a business process solution.

You monitor the objects based on:

- attributes such as job owner, job name, start time
- time intervals

The following metrics indicate the health of the monitored object:

- Object status – Failed, Active, Cancelled, Released
- Scheduling metrics - schedule start time, start delay, end time, duration, out of time window
- Job log messages
- Job log content

By setting threshold values for each metric

Automatic notification or support message generation conditions

Prerequisites

Version Prerequisites and Managed System Configuration

You are using SAP NetWeaver BW 7.0 or higher for BW process chains

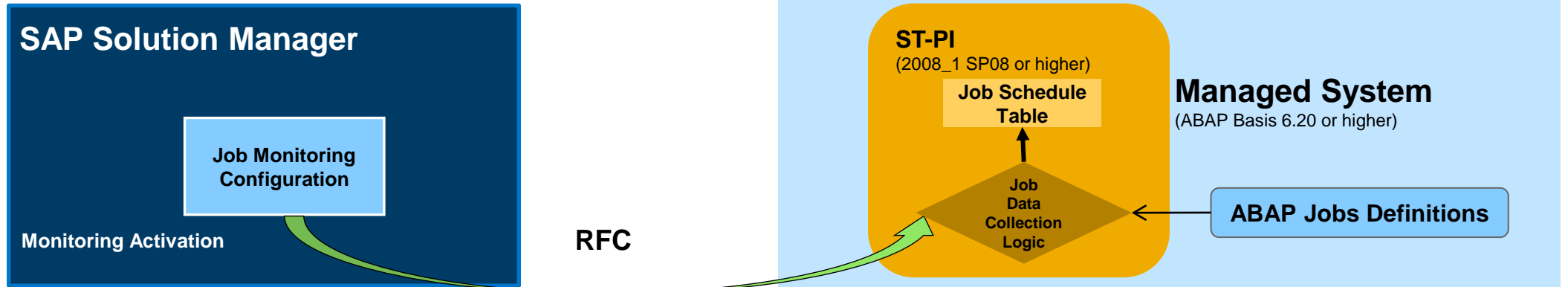
You have implemented any additional SAP Notes that are required for SAP Solution Manager 7.1 SP 10

For other job monitoring specific system prerequisites, refer the SAP Note **1909902**

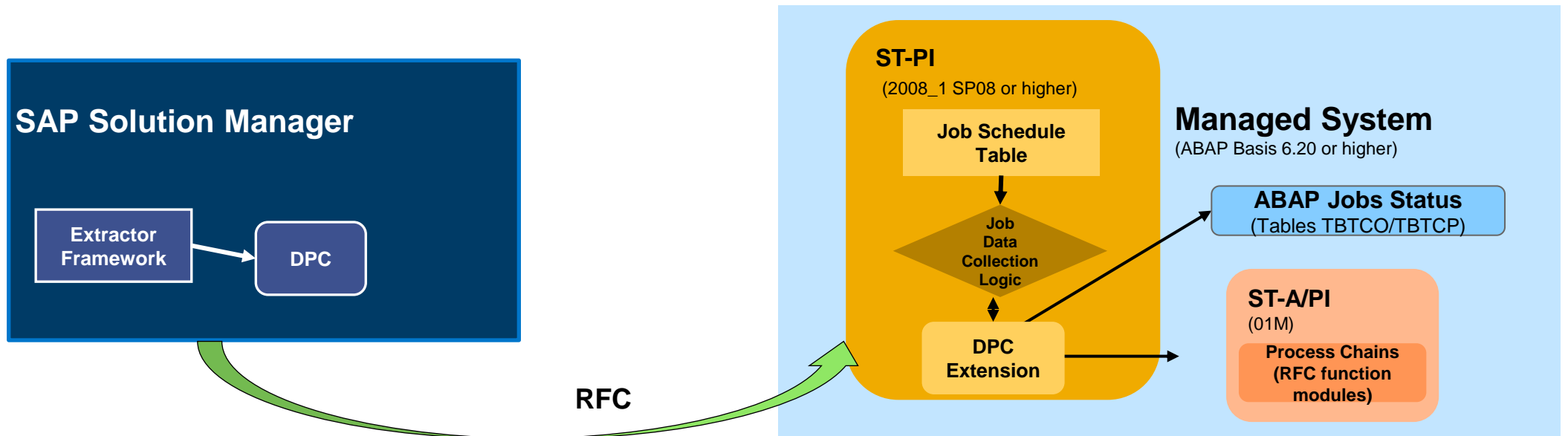
Architecture

Job Monitoring

Configuration Time

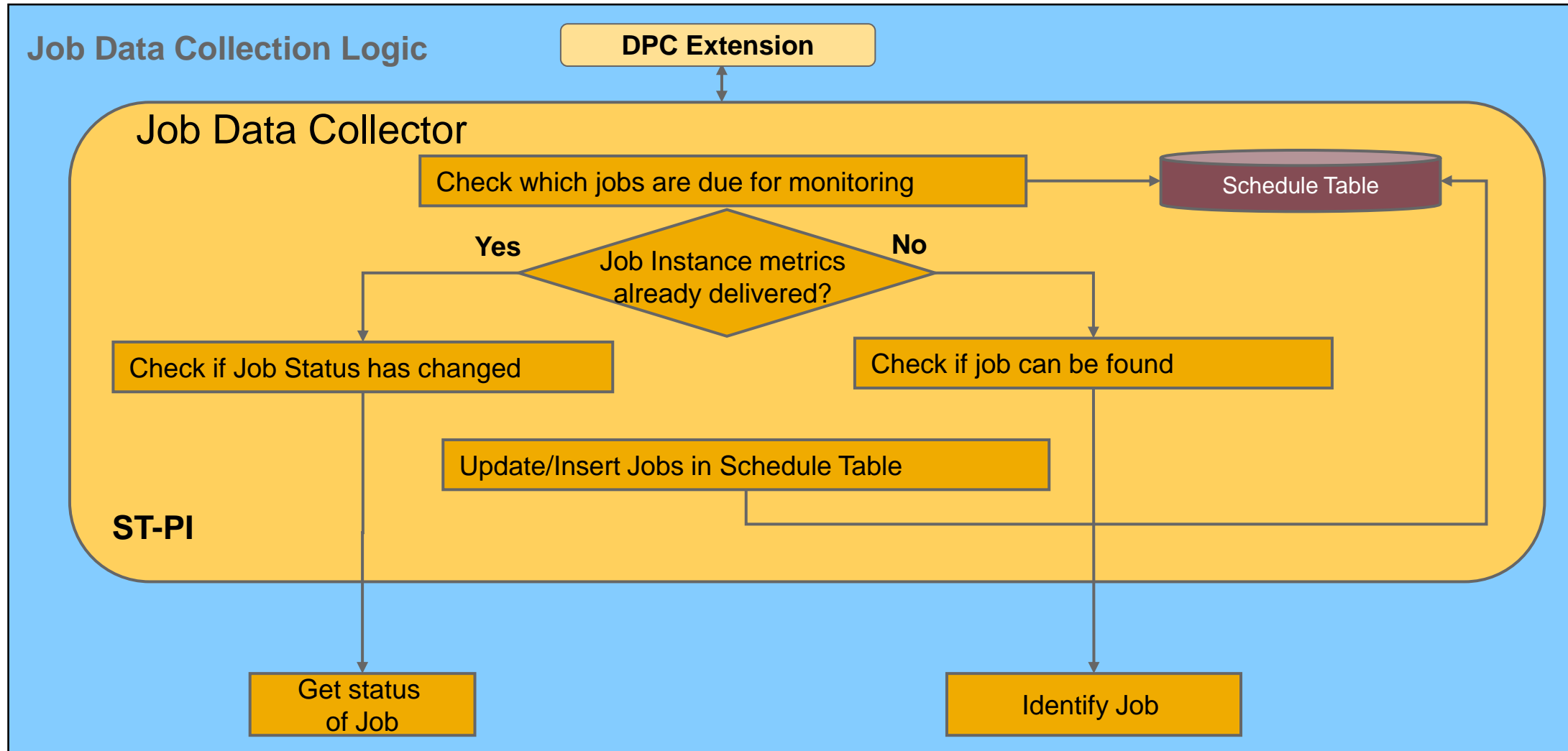


Runtime



Job Monitoring

Architecture, Job Data Collection Logic

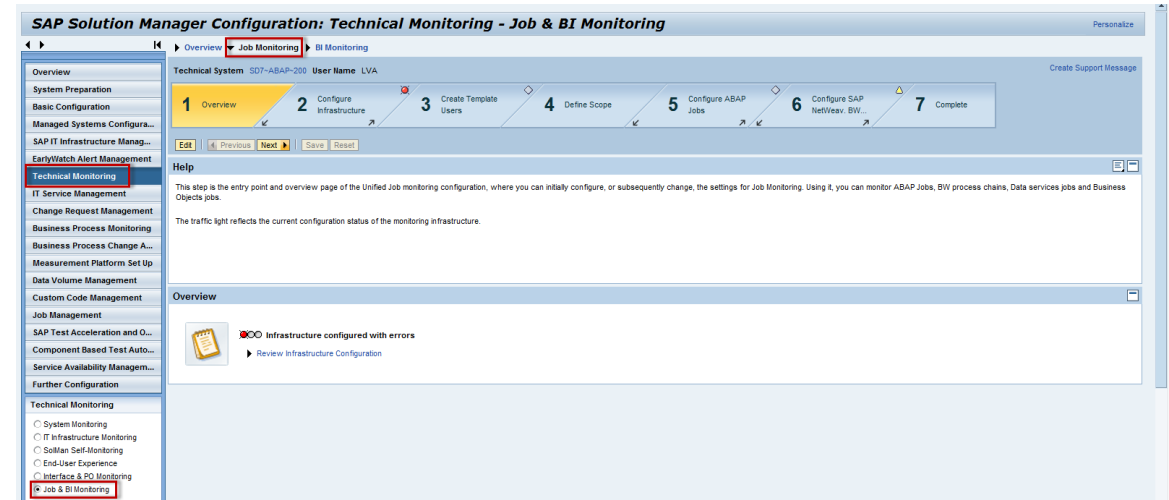


Configuration

Entry points to Job Monitoring Configuration

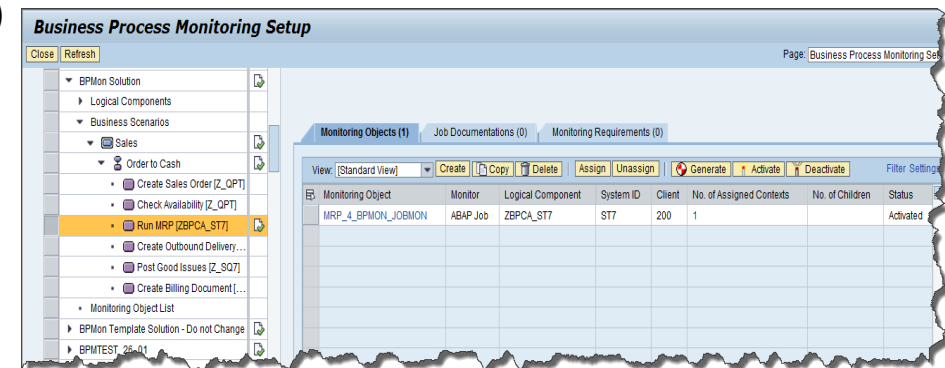
Technical Monitoring -> Job & BI Monitoring (transaction code SOLMAN_SETUP)

- By creating a technical Job monitoring scenario



Business Process Monitoring -> Business Process Monitoring (New)

- By assigning monitoring objects to a business context



Configuration – Entry through Technical Monitoring Configuration

Precondition Checks and Managed System Preparation

- **Step 2 Configure Infrastructure** covers the sub-steps required to prepare the managed systems to be included in the Job monitoring scenario, and generic preparation steps for enabling the monitoring infrastructure within Solution Manager.
- **Step 2.1 Check Prerequisites** includes infrastructure prerequisites check that automatically detects the missing steps in general infrastructure setup (e.g. not yet executed Basic Setup of Solution Manager).
 - Execute this automatic check and follow-up on potentially missing basic setup steps (this includes especially the version of the ST-A/PI ABAP addon within the monitored SAP BW systems as well as a patch for the BO server system if the BO system version is below 4.0 SP2)

The screenshot displays the SAP Solution Manager Configuration interface for 'Technical Monitoring - Job & BI Monitoring'. The breadcrumb navigation shows 'Overview > Job Monitoring > BI Monitoring'. The main content area features a progress bar with six steps: 1. Overview, 2. Configure Infrastructure (highlighted in yellow with a red error icon), 2.1 Check Prerequisites (with a red error icon), 2.2 Configure Manually, 2.3 Default Settings (with a green checkmark), 2.4 Workmode Settings (with a green checkmark), and 2.5 Update Content (with a diamond icon). Below the progress bar are buttons for 'Edit', 'Previous', 'Next', 'Save', and 'Reset'. A 'Create Support Message' link is visible in the top right. A 'Help' section at the bottom provides instructions on how to view logs and configure the infrastructure.

SAP Solution Manager Configuration: Technical Monitoring - Job & BI Monitoring Personalize

Overview > Job Monitoring > BI Monitoring

Technical System SD7-ABAP-200 User Name LVA Create Support Message

1 Overview 2 Configure Infrastructure 2.1 Check Prerequisites 2.2 Configure Manually 2.3 Default Settings 2.4 Workmode Settings 2.5 Update Content

Edit Previous Next Save Reset

Help Help Icon

This is the status overview of the infrastructure configuration sub-steps, and the entry-point for all infrastructure configuration actions.

- To display the logs for a configuration step, select the row in the Steps table, and see the logs displayed below.
- To set or change the configuration for the Job Monitoring Infrastructure, choose the description in the Steps table, or the corresponding step in the guided procedure above.

Content Customization Adjustments (optional)

- **Step 2.2 Configure Manually** – You can ignore all activities that are marked as(optional).
 - The remaining activity “Content Customization” allows you to adjust the alert reporting output format. Typically this is also not required to be changed. This step is identical for all monitoring scenario types and not specific to Job monitoring. Therefore it is not explained in full detail here.

The screenshot displays the SAP Solution Manager Configuration interface for Technical Monitoring. The main title is "SAP Solution Manager Configuration: Technical Monitoring - Job & BI Monitoring". The breadcrumb navigation shows "Overview > Job Monitoring > BI Monitoring". The left sidebar contains a menu with items like "Overview", "System Preparation", "Basic Configuration", "Managed Systems Configura...", "SAP IT Infrastructure Manag...", "EarlyWatch Alert Management", "Technical Monitoring", "IT Service Management", "Change Request Management", "Business Process Monitoring", "Business Process Change A...", "Measurement Platform Set Up", and "Data Volume Management". The main content area shows a progress bar with steps: 1 Overview, 2 Configure Infrastructure, 2.1 Check Prerequisites, 2.2 Configure Manually (highlighted in yellow), 2.3 Default Settings, 2.4 Workmode Settings, and 2.5 Update Content. Below the progress bar are buttons for "Edit", "Previous", "Next", "Save", and "Reset". A "Help" section is visible, providing instructions for manual activities and a note that not all activities are required.

Default Settings for Alert Reaction

- **Step 2.3 Default Settings** –allows to customize general behavior on how to react on alerts produced within any monitoring scenario.
 - You can enable automatic creation of incidents and notifications and define the channels and persons to be informed via notifications.
 - This customization is not specific to the Job monitoring configuration and therefore not explained in detail here.

The screenshot displays the SAP Solution Manager Configuration interface for 'Technical Monitoring - Job & BI Monitoring'. The breadcrumb navigation shows 'Overview > Job Monitoring > BI Monitoring'. The main content area is divided into several sections:

- Progress Bar:** A sequence of steps from 1 to 5. Step 2.3 'Default Settings' is highlighted in yellow, indicating the current configuration stage.
- Help Section:** Titled 'Auto-Incidents', it contains instructions on enabling automatic incident creation from alerts and lists required information: 'Support component', 'CRM Transaction type', and a note that 'if no close of an incident the corresponding alert should also be closed'.
- Default Settings Section:** Features tabs for 'Summary', 'Incidents', 'Notifications', and 'Third-Party Components'. The 'Summary' tab is active, showing:
 - Metadata: 'Last Changed at: 01.07.2013 - 12:39:24' and 'Last Changed by: Mayank Shrivastava'.
 - Text input fields for 'Last Change Comment' (containing 'hello') and 'New Change Comment'.
 - Configuration options:
 - Automatic Incident Creation: Inactive
 - Automatic Notification: Inactive
 - Third-Party Components: Active
 - Automatic Alert Confirmation: Inactive

Define Workmode Settings (Currently not supported until SP10)

- **Step 2.4 Workmode Settings** allows you to customize workmode settings.
 - You can define whether Job monitoring shall be enabled or disabled under certain workmode conditions
 - These settings affect only the workmode behavior for Job monitoring scenarios – not for the system monitoring of the systems involved in Job monitoring scenarios.
 - The business hours, downtimes, etc. can be defined per Job monitoring scenario in the “Technical Administration” workcenter under “Work Mode Management”.
 - By default the Job monitoring will be enabled at all times except for “Planned Downtimes”.

SAP Solution Manager Configuration: Technical Monitoring - Job & BI Monitoring

Technical System: SD7-ABAP-200 User Name: LVA

1 Overview | 2 Configure Infrastructure | 2.1 Check Prerequisites | 2.2 Configure Manually | 2.3 Default Settings | **2.4 Workmode Settings** | 2.5 Update Content

Help

In this step, you can configure the standard behavior of EEMon depending on the work mode. The settings affect all metrics and alerts of EEMon.

EEMon consumes work modes defined for the monitored objects. You can assign work modes to

- technical systems, hosts and databases individually
- technical scenarios. The work mode is inherited by all objects of the technical scenario.

To ensure that scripts are executed for a work mode, select the *Monitoring Enabled* checkbox.

Work mode Type	Monitoring Enabled
No workmode configured	<input checked="" type="checkbox"/>
Planned Downtime	<input checked="" type="checkbox"/>
Peak Business Hours	<input checked="" type="checkbox"/>
Non-Peak Business Hours	<input checked="" type="checkbox"/>
Non-Business Hours	<input checked="" type="checkbox"/>
Maintenance	<input checked="" type="checkbox"/>

Update SAP Monitoring Template Content

- **Step 2.5 Update Content** allows you to update Solution Manager with the latest monitoring template definitions.
 - Newly updated content will have effect to subsequently executed monitoring template assignments
 - Content version 13 is the minimum version required

The screenshot shows the SAP Solution Manager configuration wizard for 'Update Content'. The wizard progress bar indicates the following steps: 1 Overview, 2 Configure Infrastructure, 2.1 Check Prerequisites, 2.2 Configure Manually, 2.3 Default Settings, 2.4 Workmode Settings, and 2.5 Update Content (highlighted in yellow). The 'Update Content' step is currently active, and a blue arrow points to the right, indicating the next step.

Technical System: SD7~ABAP-200 User Name: LVA

Buttons: Read Only, Previous, Next, Save, Reset

Help

separately. It is recommended that you carry out this step only under the use case *System Monitoring*.

If you happen to import the same content version that is currently applied in your system, ensure that you apply the content again. This is required as the latest content you imported may have minor changes although the content version was same.

Pre requisite: OSS connectivity from the solution manager system.

Content Update:

Active Content is the Content Version that has been applied.

Content Update

Last Check: 28 Oct 2013, 05:35:26 CET [Refresh](#)

Active Content:

New Content Available:

[Update Content](#)

Create Users

- **Step 3 Create Template Users** allows you to create standard Template/Demo Users in the SAP Solution Manager system.

If you use BI Reporting, you need additional standard template users in the BW system/client. If your BW system is in the same client as SAP Solution Manager, the relevant roles are assigned to the standard user in the SAP Solution Manager system.

SAP Solution Manager Configuration: Technical Monitoring - Job & BI Monitoring

Technical System: SD7~ABAP~200 User Name: LVA

1 Overview | 2 Configure Infrastructure | **3 Create Template Users** | 4 Define Scope | 5 Configure ABAP Jobs | 6 Configure SAP NetWeav. BW... | 7 Complete

Read Only | Previous | Next | Save | Reset

Help

This optional step creates standard Template/Demo Users in the SAP Solution Manager system.

If you use BI Reporting, you need additional standard template users in the BW system/client. If your BW system is in the same client as SAP Solution Manager, the relevant roles are assigned to the standard user in the SAP Solution Manager system.

You have the following options:

You can create a new user. The system creates the new user, the corresponding business partner, if necessary, and assigns the relevant copied and SAP roles.

You can use an existing user. The system assigns the relevant copied roles and SAP roles to an existing user.

Users

Create all Users Refresh

Status	Update Needed	Current ID	Standard ID	User Type	System	Documentation	Login
◇	<input type="checkbox"/>	TP_JMON_L1	TP_JMON_L1	Dialog User	SD7	Display	
◇	<input type="checkbox"/>	TP_JMON_L2	TP_JMON_L2	Dialog User	SD7	Display	
◇	<input type="checkbox"/>	TP_JMON_L2	TP_JMON_L2	Dialog User	BW	Display	

Create New Job Monitoring Scenario

- **Step 4 Define Scope** allows you to define managed systems where jobs will be monitored.

SAP Solution Manager Configuration: Technical Monitoring - Job & BI Monitoring

Personalize

Overview Job Monitoring BI Monitoring

Technical System SD7~ABAP~200 User Name LVA

Create Support Message

1 Overview 2 Configure Infrastructure 3 Create Template Users 4 Define Scope 5 Configure ABAP Jobs 6 Configure SAP NetWeav. BW... 7 Complete

Read Only Previous Next Save Reset

Help

In this step, you select the technical scenario to configure for Unified Job monitoring. A scenario is a set of technical systems. You must select a scenario to proceed to the next setup steps.

Note: To configure several job monitoring scenarios, execute the steps for each scenario.

This step allows you to create a new scenario, or maintain or delete an existing Job Monitoring scenario.

1. To create a scenario, choose the button Create. A scenario creation wizard is displayed in a new browser window.

a) In step 1 (Enter Name/Type), enter technical name and a feasible description of the scenario.

Scenario Selection

Create Maintain Delete

Name	Description	Monitoring & Alerting Setup Status
__1_VJ_Test	VJ Test	◇
__DEMO	Demo Scenario	◇

Refresh Filter

Create New Job Monitoring Scenario

- A new Job monitoring scenario is defined via a guided procedure
 - Step 1: In the first step you have to enter a unique name for the Job monitoring scenario and a description text.

The screenshot displays the SAP Solution Manager Configuration interface for 'Technical Monitoring - Job Monitoring'. At the top, a progress bar shows five steps: 1. Enter Name/Type (highlighted in yellow), 2. Select technical systems, 3. Define attributes, 4. Additional Configuration, and 5. Review. Below the progress bar, the 'Define Technical Scenario Properties' section is active. It contains three input fields: 'Enter type of the Technical Scenario: *' with the value 'Job Monitoring', 'Enter name of the Technical Scenario: *' with the value 'Job_Mon_Scenario', and 'Enter a description for technical scenario: *' with the value 'Scenario Description'. A red rectangular box highlights the 'Job_Mon_Scenario' and 'Scenario Description' fields. A 'Continue' button is located at the bottom right of the form.

Create New Job Monitoring Scenario

- Step 2: here you need to select the technical systems that shall be included within your Job monitoring scenario

SAP Solution Manager Configuration - Technical Monitoring - Job Monitoring

1 Enter Name/Type 2 Select technical systems 3 Define attributes 4 Additional Configuration 5 Review

Scenario Header

Name: Job_Mon_Scenario
Type: Job Monitoring
Description: Scenario Description

Define Technical Systems

Add Technical System(s) ▾
Application Server ABAP

Ext. System ID	Caption	TS Type
	Caption	

Back Continue

Select Technical Systems of Type 'Application Server ABAP'

Filter

Ext. System ID	Caption	TS Type
001	001 on	ABAP
0BP	0BP on	ABAP
0CV	0CV on	ABAP
12300001	123 on hostjan	ABAP
1AS	1AS on	ABAP
1CD	1CD on	ABAP
1ST	1ST on	ABAP
1YA	1YA on	ABAP
1YB	1YB on	ABAP
4C5	4C5 on	ABAP
A01	A01 on testhost01	ABAP
A0100001	A01 on wdfibmd8112	ABAP
A0G	A0G on uxdba0g	ABAP
A12	A12 on wdfibmd0401	ABAP
A1200001	A12 on wdfibmd13312	ABAP

OK Cancel

SAP Solution Manager Configuration - Technical Monitoring - Job Monitoring

1 Enter Name/Type 2 Select technical systems 3 Define attributes 4 Additional Configuration 5 Review

Scenario Header

Name: Job_Mon_Scenario
Type: Job Monitoring
Description: Job Monitoring

Define Technical Systems

Add Technical System(s) ▾

Ext. System ID	Caption	TS Type
SD7	SD7 on kddbsd7	ABAP
ST7	ST7 on kddbst7	ABAP

Back Continue



Note: Application Server ABAP also runs the BW Process Chains

Only objects from selected technical systems can be monitored in a Job monitoring scenario (example: if you want to monitor a ABAP Job defined within a SAP ABAP system, you have to include that ABAP system in the Job monitoring scenario)

Create New Job Monitoring Scenario

- Step 5: Review the scenario details with the list of technical systems that you added for monitoring.

SAP Solution Manager Configuration - Technical Monitoring - Job Monitoring

1 Enter Name/Type 2 Select technical systems 3 Define attributes 4 Additional Configuration 5 Review

Scenario Header

Name: Job_Mon_Scenario
Type: Job Monitoring
Description: Job Monitoring

Scenario Details - Technical Systems

Ext. System ID	Caption	TS Type
SD7	SD7 on lddbsd7	ABAP
ST7	ST7 on lddbst7	ABAP

Back Save

Scenario Selection

Create Maintain Delete

Name	Description
job_mon*	
Job_Mon_Scenario	Scenario Description





Note: Defining attributes and additional configuration are not required for job monitoring. Hence, the steps 3 and 4 are disabled.

You can add or remove systems later by choosing the “Maintain” button in the scenario selection

Select Job Monitoring Scenario for Monitoring Setup

- After the Job monitoring scenario is created you are back in the Job monitoring configuration roadmap in Step 4 “Define Scope”
- You should now verify that the “Managed System Configuration” has been done for all systems that are included in your Job monitoring scenario
- Via “Next” you enter the Job monitoring specific configuration for the selected scenario

Job Monitoring Scenario Details		
	Managed System Configuration	System Monitoring Configuration
▼ BQ7		
▪ BQ7-ABAP		



Managed System Configuration status should be green for all systems in the scenario before you continue the Job monitoring setup



You can jump to the managed system configuration from the Job Monitoring Scenario details view per involved system via the “Managed System Configuration” button (after selecting the system)

Configure ABAP Jobs

Step 5: This section provides a guided procedure to set up Job Monitoring for ABAP Jobs.

Sub-steps involved are:

- Select ABAP jobs from managed system
- Configure metrics and thresholds for monitored objects
- Configure incident and notification

Technical Scenario Job_Mon_Scenario-JOB_MONIT User Name LVA Create Support Message

1 Overview 2 Configure Infrastructure 3 Create Template Users 4 Define Scope **5 Configure ABAP Jobs** 5.1 Select ABAP Jobs 5.2 Alert Configuration

Read Only Previous Next Save Reset

Help

This section provides a guided procedure to set up Job Monitoring for ABAP Jobs. Configure ABAP Jobs by selecting the Jobs from the systems that you want to monitor and define thresholds for various metrics. In addition you could maintain the incidents and notifications settings as well. Do not forget to Activate the scenario before leaving the configuration.

A status, and the log entries for each step, is displayed in the table below. By choosing the link provided in column Description, you can jump directly to a single setup step.

Steps

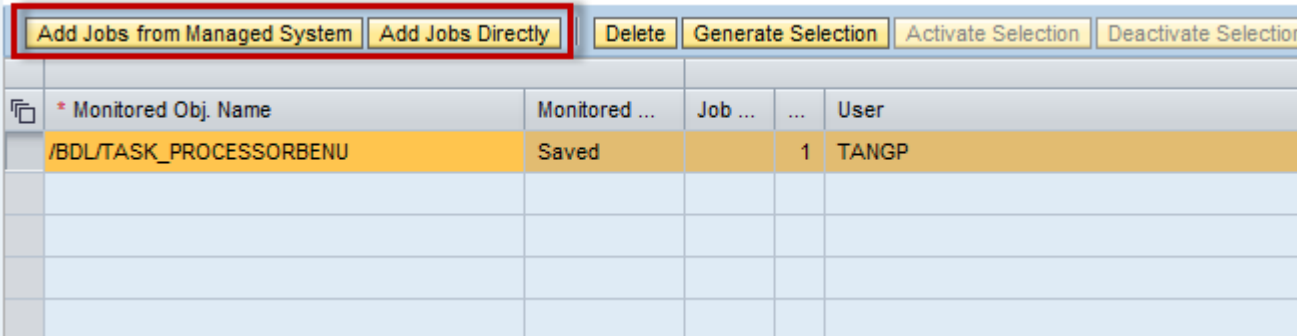
Status	Updates Needed	Description	Type	Last Changed on	Last Changed by
◇	<input type="checkbox"/>	Select ABAP Jobs	Mandatory	00.00.0000 00:00:00	
◇	<input type="checkbox"/>	Alert Configuration	Mandatory	00.00.0000 00:00:00	
◇	<input type="checkbox"/>	Incidents and Notifications	Mandatory	00.00.0000 00:00:00	

Details of Step: **Select ABAP Jobs** [Show All](#)

Configure ABAP Jobs

Step 5.1: Add an ABAP job for monitoring

You can choose **Add Jobs Directly** or **Add Jobs from Managed System**



* Monitored Obj. Name	Monitored ...	Job	User
/BDL/TASK_PROCESSORBENU	Saved		1	TANGP

Note: *Add Jobs Directly* allows to add jobs according to the filter criteria specified during 'Identification'. You also have the possibility to select jobs which are not scheduled yet on the Managed System but you know the Job names and user who will execute them with this option.

Configure ABAP Jobs

- **Add Jobs Directly and Identification**

- Offers the possibility to **retrieve job information from the corresponding Managed System** according to the filter criteria defined. Result will show all jobs matching in the corresponding system.
 - Job name, refers to the name of the Background Job
 - Variant, name of special variant
 - User, user who executed the job. If no user is maintained explicitly all users (*) are taking into account.
 - Start Procedure, determines how the job is planned to run. There are four different possibilities: by time, by event, by preceding job and use job start condition.
 - Event ID, Event parameter, used if the job is expected to start by event.
 - Preceding Job, mandatory if the job is expected to start by a preceding job. Event ID and parameter must remain blank.
 - Parallel Jobs?, when processing is done in parallel .
 - External Program, name of the executed external program.
 - External Parameter, can be used when custom specific rules are used.
 - Job rule, when custom specific rules are used.

After clicking 'Identification Data', seven Background Jobs with name Z_DEMO_*, executed for any user matched the filter criteria.

7 hits on for specified identification data

Identification

Check Identification Data

Job Name: Z_DEMO* Job Step No.: 1 ABAP Program:

Variant: External Program: External Parameters:

User: * Parallel Jobs?:

Start Procedure: * by time Event ID: Event Parameter:

Preceding Job:

Job Rule: 000

Mon Object Name: * Job_Monitoring_Demo

Special Rules are applicable to identify groups of Background Jobs if the job names follow complicated naming conventions and cannot be mapped by simple procedures mentioned before because they are not flexible enough. For example when names of the jobs are build dinamically with data from table. In this case is not possible to define the name of their jobs prior their execution.

Configure ABAP Jobs

Add Jobs from Managed System

1. Choose a system and a client.
2. Choose *Get Jobs from ABAP System* to fetch the list of jobs that matches to the filter criteria.

You could add a *Simple Job Filter Criteria* and search for the jobs that you want to monitor.

Example for Filter Search:

Job Name - FI* and search results a list of 10 jobs. As per the search result, you can choose the exact jobs for monitoring by choosing *Add Selected Jobs*. Also, it is possible to retain the selection criteria with a pattern selection, for example, FI* and treat it as a Monitoring Object.

3. Choose *Add filter criteria as Monitored Object* or *Add Selected Jobs* according to your case.

Technical System: C6200001
Client: 001

Simple Jobs Filter Criteria

Job Name:
ABAP Program:
External Program:
Event ID:
Preceding Job:
User:

Job Step No:
Variant:
External Parameters:
Event Parameter:
Job Rule:

Job Start Condition

From: * 21.11.2013 To: * 21.11.2013
From: * 00:00:00 To: * 23:59:00

Get Jobs from ABAP System

Most of the time you may be interested in Monitoring Jobs scheduled periodically and not on jobs which are running only once.

In those cases you have to filter by Status = S (Scheduled)

Job Name	Job Step No	Scheduled	Scheduled	Sta	Per.	ABAP Program	Variant	User	Event ID	Event Parameter	Preceding Job	Start Date	Start Time	End Date	End Time
BDLTASK_PROCESSOR	1	06.11.2013	01:49:49	Fini...	Hourly	BDLTASK_SCHEDULER	80000000000168	TANGP				06.11.2013	01:50:15	06.11.2013	01:50:15
BDLTASK_PROCESSOR	1	06.11.2013	02:49:49	Fini...	Hourly	BDLTASK_SCHEDULER	80000000000168	TANGP				06.11.2013	02:49:55	06.11.2013	02:49:55
BDLTASK_PROCESSOR	1	06.11.2013	03:49:49	Fini...	Hourly	BDLTASK_SCHEDULER	80000000000168	TANGP				06.11.2013	03:49:50	06.11.2013	03:49:51
BDLTASK_PROCESSOR	1	06.11.2013	04:49:49	Fini...	Hourly	BDLTASK_SCHEDULER	80000000000168	TANGP				06.11.2013	05:07:24	06.11.2013	05:07:24
BDLTASK_PROCESSOR	1	06.11.2013	05:49:49	Fini...	Hourly	BDLTASK_SCHEDULER	80000000000168	TANGP				06.11.2013	05:49:51	06.11.2013	05:49:52
BDLTASK_PROCESSOR	1	06.11.2013	06:49:49	Fini...	Hourly	BDLTASK_SCHEDULER	80000000000168	TANGP				06.11.2013	06:50:11	06.11.2013	06:50:11
BDLTASK_PROCESSOR	1	06.11.2013	07:49:49	Fini...	Hourly	BDLTASK_SCHEDULER	80000000000168	TANGP				06.11.2013	07:49:56	06.11.2013	07:50:07
BDLTASK_PROCESSOR	1	06.11.2013	08:49:49	Fini...	Hourly	BDLTASK_SCHEDULER	80000000000168	TANGP				06.11.2013	08:50:02	06.11.2013	08:53:37
BDLTASK_PROCESSOR	1	06.11.2013	09:49:49	Fini...	Hourly	BDLTASK_SCHEDULER	80000000000168	TANGP				06.11.2013	09:50:02	06.11.2013	09:53:44
BDLTASK_PROCESSOR	1	06.11.2013	10:49:49	Fini...	Hourly	BDLTASK_SCHEDULER	80000000000168	TANGP				06.11.2013	10:49:54	06.11.2013	10:52:48

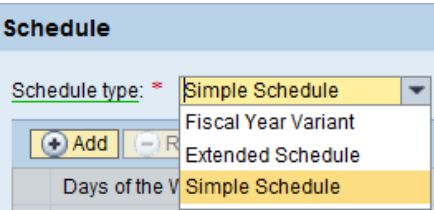
Add filter criteria as monitored object **Add selected jobs as monitored object** **Cancel**

Configure ABAP Jobs

ABAP Jobs Schedule

Simple Schedule, indicates the relevant day of the week for monitoring.

Weekdays Monday to Friday are set automatically.



Schedule

Schedule type: *

Days of the Week							First Start	Periodicity
Monday	Tuesday	Wednesday	Thursday	Friday	Saturday	Sunday	Planned Start Time	Period [Minutes]
<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	00:00:00	60

Critical Job

Data Collection Frequency: Data Retention Period (in days):

Configure ABAP Jobs

ABAP Jobs Schedule

- Schedule
 - Critical Job, **mark the Job as critical**, if the alerts collection from monitored systems to SAP Solution Manager **should take place more frequently**. Per default the alert collection for critical jobs is 5 minutes and for non-critical jobs the alert collection is 60 minutes.
 - **Data Collection Frequency**, specify how often the background job for data collection will be scheduled on the Managed System.
 - **Data Retention Period (in days)**, is the time (in days) for which data is kept in the metric directory.
 - You will see only metrics for those job instances that have been run within the retention period.

For high frequent jobs reduce retention period from 7 to 1.
For low frequent jobs increase retention period to several months.
When a job is running once per month and retention time is set to 7 days as per default, then monitoring for the last 3 months will not be possible due to low Data Retention Period.

Critical Job

Data Collection Frequency: Data Retention Period (in days):

Configure ABAP Jobs

Configured objects summary

Once you add monitored objects, you can view the summary of monitored objects per system.

Example:

In the snap shot **ST7 System** and **client 001** is selected for monitoring and it has **(0) Managed Object** configured in this scenario.

C6200001	000(0)	001(1)
ST7	000(0)	<u>001(0)</u> <u>200(0)</u> 400(0)

Explanation for the MO configuration representation:

C6200001, ST7 - System SID

000 - Client

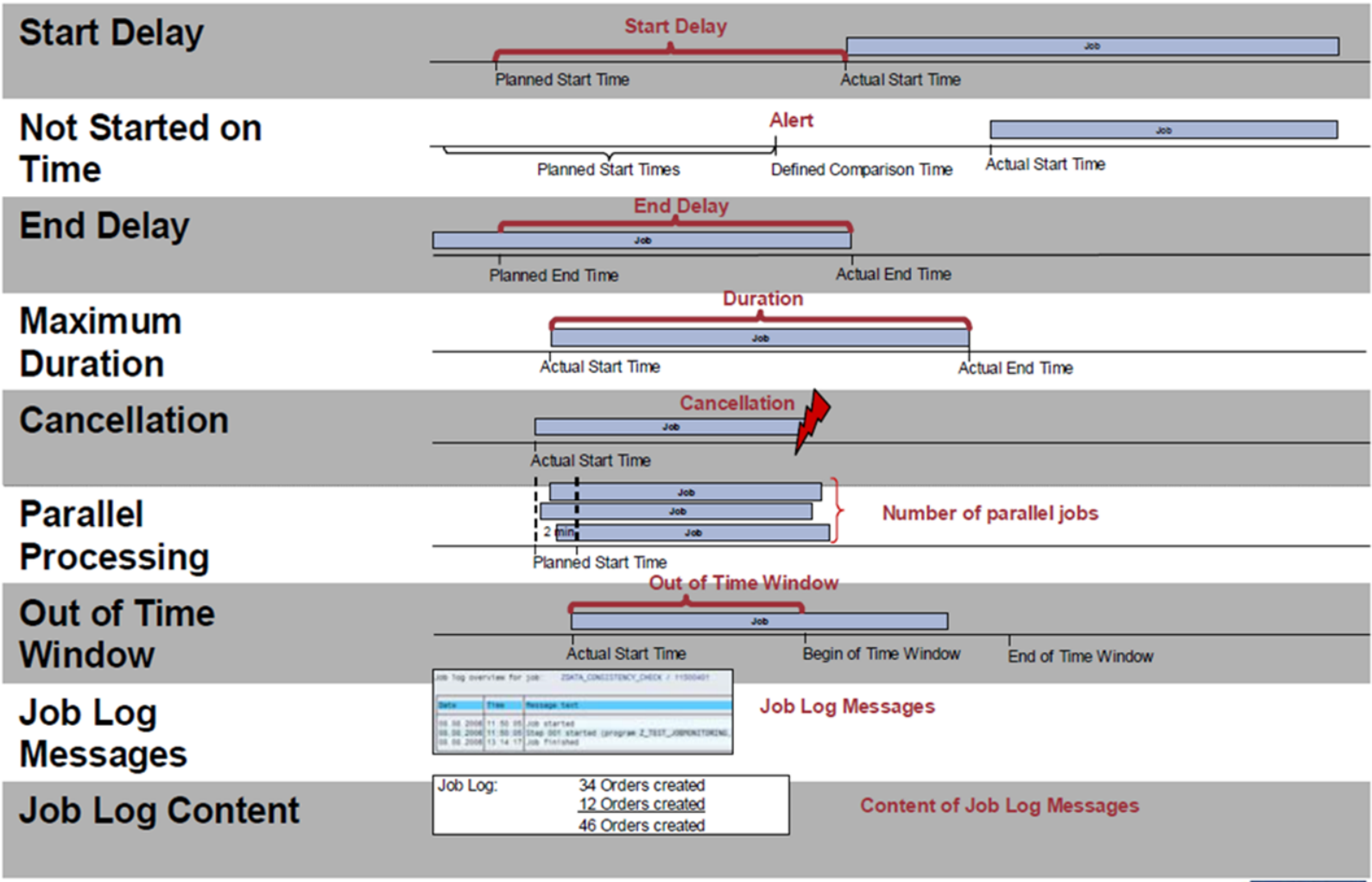
(number) - Monitored objects for that client

C6200001 200(0) - The system/client combination highlighted is currently selected for configuration

ST7 100(2) - The system/client combinations underlined are all other clients where Change Manager (TMW) is configured

Configure Alerts

Metric Definitions



Configure Alerts

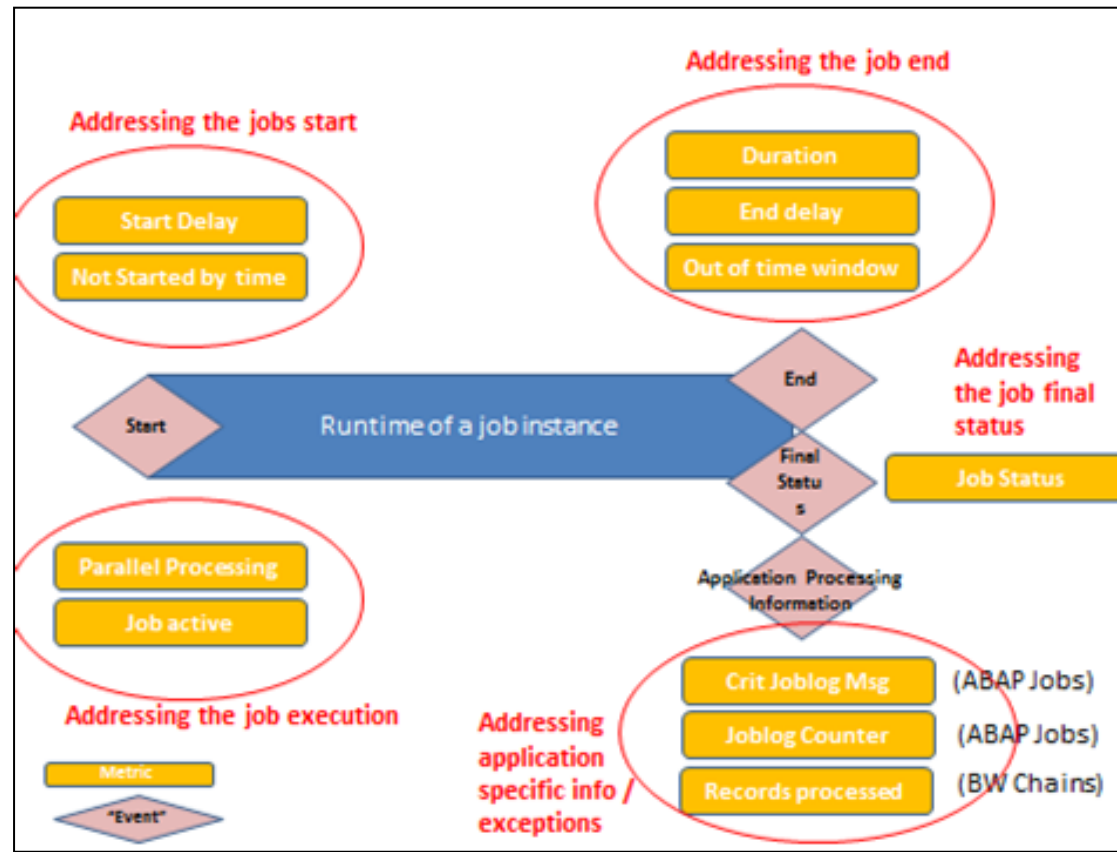
Metric Definitions

The availability of the alerts depends on the start procedure defined for the job.

- **Start Delay:** You can monitor if the start of a job has been delayed. This alert is always available. For jobs that are started by event, by preceding job or by job Start condition this alerts means the technical start delay. The technical start delay is the delay as visible in transaction SM37. For jobs started by time the start delay is considered relative to the specified start time.
- **Not started on time:** You can monitor if no job has started until a defined time of the day.
- **End Delay:** You can monitor if job has not finished by a certain time. This alert is available for non-periodic jobs.
- **Maximum Definition:** You can monitor if the job has exceeded a certain run time. This alert is always available.
- **Status (Cancellation):** You can raise a yellow or red alert if the job has cancelled. This alert is always available.
- **Parallel Processing:** You can monitor if a specified number of identical jobs are running in parallel (started within 2 minutes of each other). This alert is available if in the scheduling information the job has been specified as processed in parallel.
- **Out of Time Window:** You can monitor if a job has run outside a certain time window (started too early or finished too late). This alert is available for non-periodic jobs.
- **Job Log Messages:** You can monitor if certain messages appear in the job log. This alert is always available.
- **Job Log Content:** You can add values if the job log messages and monitor the total sum of these values.

Configure Alerts

Visual representation of logical grouping of the metrics for different job events



Configure Alerts

Set Thresholds

- **Step 5.2** After ABAP jobs have been assigned for monitoring you can configure details per monitored job
 - Define general settings (switch on/off data collection and/or alerting)
 - Define thresholds per metric

DP7 000(0) 001(0) 200(0) 205(0)
SD7 000(0) 001(0) 200(2) 205(0) 400(0)

Generate All Activate All Deactivate All

Generate Selection Activate Selection Deactivate Selection 5

* Monitored Obj. Name	Monitored ...	Job	Alerting Active	Status	Duration	Start Delay	End Delay	Not Started on Time	Out of Time Window	Job Active	Parallel Processing	Job Log Messages	Job Log Content	Last Chang...	Last Changed Time
SM:SELFDIAGNOSIS	Active	SM:S...	1	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	SAMPATHR	06.11.2013 14:52:11 I...
/BDL/TASK_PROCESSOR	Saved	/BDL/...	1	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	LVA	06.11.2013 15:49:27 I...

Monitors if a specified number of identical jobs are running in parallel

Switch on/off alerting

Monitors job status(cancellations). Specify the rating of the alert to be raised if status(cancellation) occurs

Alerts the duration. The data evaluation checks if the duration is, or was, longer (or shorter) than the upper (lower) thresholds

Alerts the start and end delay of a job

Alerts the delayed start with respect to check times

Alerts if a job does not run in a specified time window

Monitors if certain messages appear in the job log



NOTE: Alert for status Cancellation is activated by default for all ABAP Jobs.

Configure Incidents and Notifications

Step 5.3: In this step you configure Incidents and Notifications.

- **Incident**, allows you to maintain:
 - When it has to be created, for red or yellow alerts.
 - CRM Transaction Type
 - Support Component
 - Reported By
 - Category ID
 - Finally you have the possibility of confirming Alerts automatically at the same time as the incident.

Incident Settings

Template Settings

Automatic Incident Creation:

Create Incident for:

CRM Transaction Type:

Support Component:

Reported By: SOLMAN_BTC

Category ID:

Incident Confirmation Confirms Alert:

Note: If you choose Global Settings (Active), then the corresponding functionality for which the option is selected will take the global settings.

Configure Notifications

Notifications, when a yellow or red alert are triggered a notification can be send to the Maintain Recipient Lists or Maintain Global Recipients.

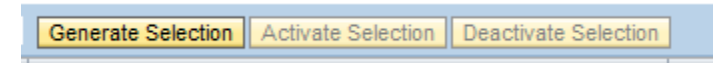
Recipients and Recipient Lists			
<input type="button" value="Add"/>	<input type="button" value="Delete"/>	<input type="button" value="Maintain Recipient Lists"/>	<input type="button" value="Maintain Global Recipients"/>
ID/Display Name	Name		
KRISHNANSAN	KRISHNANSAN		

On the *Recipients and Recipient Lists* table you can add (Add Entry button), delete (delete entry button) recipients/recipients lists and also maintain Recipient lists and global recipients. Clicking on “Maintain Recipient Lists” and “Maintain Global Recipients” launches Notification Administration application and you can maintain Recipient Lists and Global Recipients.

Configure Alerts

Activate

Once you configure alerts, you need to save, generate and activate the configured monitored object. **Monitored data will be collected from the time it was activated.** Depending on the frequencies and set up of the job monitoring, it could take some time until the first results will be displayed in the Job Monitoring UI.



Generate All

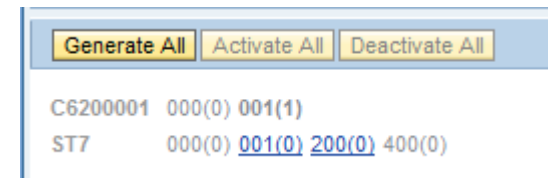
All configured monitoring object (ABAP Jobs) in the technical scenario will be generated on this action. This process will generate the alert configuration details with reference to the latest saved version of the monitoring object. It is obligatory to carry out a generation before activating the scenario.

Activate All

All configured monitoring object (ABAP Jobs) in the technical scenario will be activated. Activation happens with the generated version. This process will enable you to monitor the configured job in the job monitoring work center.

Deactivate All

The context information in the directory (run time) will be cleared off and the data collection will be switched off for all the configured monitoring object. When you deactivate a monitored object the activated version is deleted in the Solution Manager Monitoring.



Delete can only be possible when no active versions exists.

Configure SAP NetWeaver BW Process Chains

Step 6: In this step you configure SAP NetWeaver BW Process Chains by selecting the process chains from the systems that you want to monitor.

Sub-steps involved are:

- Add process chains from the systems that you want to monitor
- Define thresholds for various metrics
- Maintain incidents and notifications



Configure SAP NetWeaver BW Process Chains

Step 6.1: Add BW Process Chains

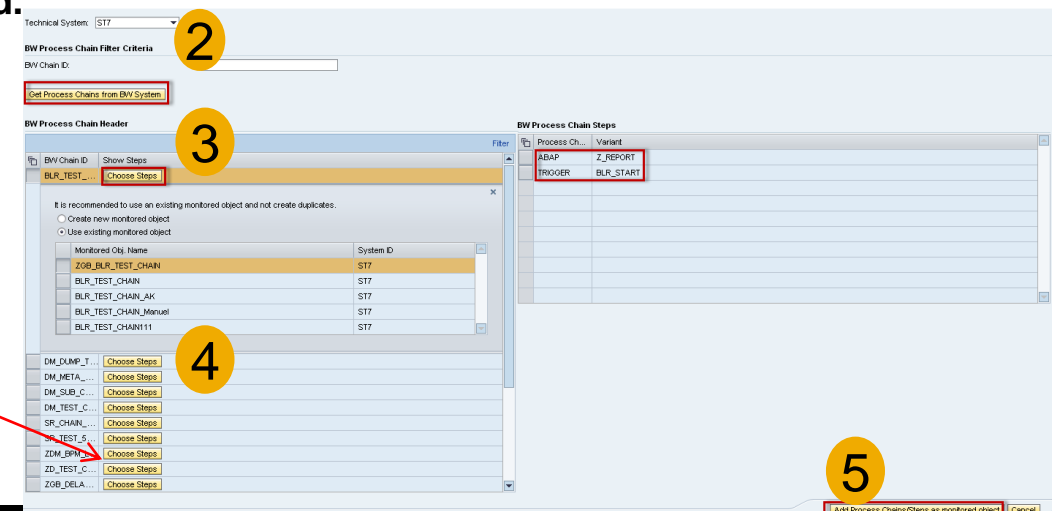
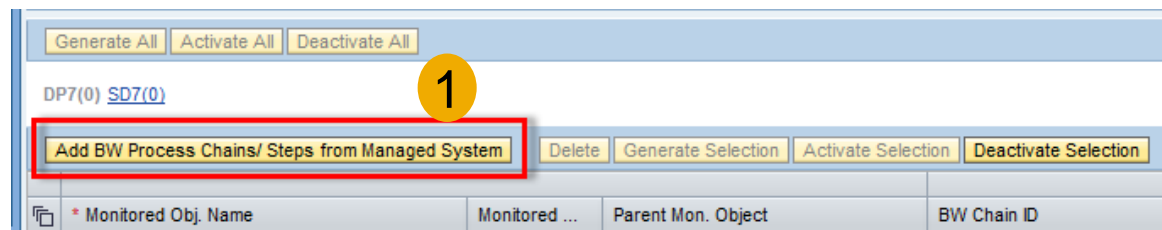
1. Choose *Add BW Process Chains/Steps from Managed System*
2. Choose a Technical System.
3. Choose *Get Process Chains from BW System* to fetch the list of process chains.

You could add a *BW process Chain Filter Criteria* and search for the PC that you want to monitor by defining a pattern (*) for a selection of Process Chains. This enables the user to flexibly choose a range of process chains that could have their actual name decided only at the runtime.

4. Choose the required steps of the selected chain when you have selected multiple process chains. You can **select** the BW Process Chain Header or a process chain header + steps of the same chain.
5. Choose *Add BW Process Chains*.



If you want to assign an existing monitored object of a chain to a process step as parent, then a new monitored object is created for the step. However, the monitored object for the process step inherits the schedule of the existing monitored object of the chain, which can be changed if the parent monitored object is deactivated.



Use Ctrl select for multiple selection

Configure Alerts

Step 6.2 After Process Chains have been assigned for monitoring you can configure details per monitored PC

- Define general settings (switch on/off data collection and/or alerting)
- Define thresholds per metric

Alerts on the number of records processed

Alerts on number of packages processed

Generate All Activate All Deactivate All														
DP7(0) SD7(1)														
Generate Selection Activate Selection Deactivate Selection														
* Monitored Obj. Name	Monitored ...	Parent Mon. Object	BW Chain ID	Process Ty...	Variant	Alerting Active	Status	Duration	Start Delay	End Delay	Not Started on Time	Out of Time Window	Records Processed	Data Packages Processed
0TCT_C0_INIT_P02	Saved		0TCT_C0_INIT_P01			<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Switch on/off alerting

Monitors job status(cancellations). Specify the rating of the alert to be raised if status(cancellation) occurs

Alerts the duration. The data evaluation checks if the duration is, or was, longer (or shorter) than the upper (lower) thresholds

Alerts the start and end of a job

Alerts the delayed start with respect to check times

Alerts if a job does not run in a specified time window

Configure Incidents and Notifications

Step 6.3: In this step you configure Incidents and Notifications.

- **Incident**, allows you to maintain:
 - When it has to be created, for red or yellow alerts.
 - CRM Transaction Type
 - Support Component
 - Reported By
 - Category ID
 - Finally you have the possibility of confirming Alerts automatically at the same time as the incident.

Incident Settings

Template Settings

Automatic Incident Creation:	Active	▼
Create Incident for:	Red and Yellow Alerts	▼
CRM Transaction Type:	Incident (IT Service Management)	▼
Support Component:		📄
Reported By:	SOLMAN_BTC	📄 SOLMAN_BTC
Category ID:		📄
Incident Confirmation Confirms Alert:	<input type="checkbox"/>	

Note: If you choose Global Settings (Active), then the corresponding functionality for which the option is selected will take the global settings.

Configure Notifications

Notifications, when a yellow or red alert are triggered a notification can be send to the Maintain Recipient Lists or Maintain Global Recipients.

Notification Settings

Template Settings

Automatic Notification: Global Settings (Active) ▼

Send Notification for: Red and Yellow Alerts

Sender: SOLMAN_BTC SOLMAN_BTC

Recipients and Recipient Lists

Add Delete Maintain Recipient Lists Maintain Global Recipients

ID/Display Name	Name
KRISHNANSAN	KRISHNANSAN

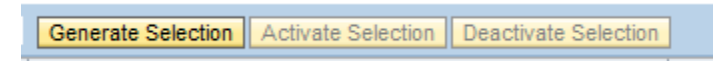
On the *Recipients and Recipient Lists* table you can add (Add Entry button), delete (delete entry button) recipients/recipients lists and also maintain Recipient lists and global recipients. Clicking on “Maintain Recipient Lists” and “Maintain Global Recipients” launches Notification Administration application and you can maintain Recipient Lists and Global Recipients.

Work Modes can be activated for Incidents or Notifications. When a Planned Downtime was scheduled an Automatic Notification or Automatic Incident Creation can be deactivated.

Configure Alerts

Activate

Once you configure alerts, you need to save, generate and activate the configured monitored object. **Monitored data will be collected from the time it was activated.** Depending on the frequencies and set up of the job monitoring, it takes some time until the first results will be displayed in the Job Monitoring UI.



Generate All

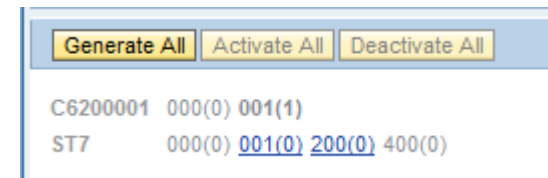
All configured monitoring object (BW PC) in the technical scenario will be generated on this action. This process will generate the alert configuration details with reference to the latest saved version of the monitoring object. It is obligatory to carry out a generation before activating the scenario.

Activate All

All configured monitoring object (BW PC) in the technical scenario will be activated. Activation happens with the generated version. This process will enable you to monitor the configured job in the job monitoring work center.

Deactivate All

The context information in the directory will be cleared off and the data collection will be switched off for all the configured monitoring object. When you deactivate a managed object the activated version is deleted in the Solution Manager runtime in the Managed System.



Delete can only be possible when no active versions exists.

Check Summary

- **Step 7 Complete** gives an overview on the success status of each step and sub-step of the Job Monitoring Configuration
 - All steps and sub-steps should have a green status
 - Press “Finish” to complete the Job configuration

Technical System: SQT-ABAP-200 User Name: LVA

1 Overview 2 Configure Infrastructure 3 Create Template Users 4 Define Scope 5 Configure ABAP Jobs 6 Configure SAP NetWeav. BW... 7 Complete

Previous Next Save Reset Finish Export To HTML

Help

The Job Monitoring is set up for the scenarios in scope. In this step, the status of all previous Job Monitoring steps are displayed.

Steps

Configuration Step	Status	Last Changed on	Last Changed by	Description
• Overview	◇			Overview
▼ Configure Infrastructure	△			Configure Infrastructure
• Check Prerequisites	△	17.10.2013 08:25:42	ZHAOLEO	Check Prerequisites
• Configure Manually	◇	29.08.2013 14:16:05	C5179363	Configure Manually
• Default Settings	■	21.10.2013 15:23:12	SAMPATHR	Default Settings
• Workmode Settings	■	22.05.2013 19:17:26	JOBMAICFG_02	Workmode specific Monitoring Settings
• Update Content	◇	04.11.2013 07:39:40	YUEZ	Updates Repository Content
• Create Template Users	△	20.06.2013 23:12:26	C5171162	Create Template Users
• Define Scope	◇	06.11.2013 13:53:26	SAMPATHR	Define Scope
▼ Configure ABAP Jobs	■			Configure ABAP jobs for monitoring and alerting
• Select ABAP Jobs	■	06.11.2013 15:49:31	LVA	Select ABAP Jobs from Managed System
• Alert Configuration	■	06.11.2013 15:53:03	LVA	Configure thresholds of the selected ABAP Jobs
• Incidents and Notifications	■	06.11.2013 14:52:12	SAMPATHR	Configure incidents and notification settings of the selected ABAP Jobs
▼ Configure SAP NetWeav. BW Process Chains	△			Configure SAP NetWeaver BW Process Chains
• Select Process Chains	■	06.11.2013 16:38:51	LVA	Select BW Process Chains from Managed System
• Alert Configuration	■	06.11.2013 16:40:58	LVA	Configure thresholds of the selected BW Process Chains
• Incidents and Notifications	◇			Configure incidents and notification settings of the selected BW Process Chains

Configuration - Entry through Business Process Monitoring

Configuration

entry from Business Process Monitoring

Setup from Business Process Monitoring

- Select **Business Process Operations (New)** Workcenter you may require role SAP_SMWORK_BPO.
- Go to **Setup Business Process Monitoring**
- Select the checkbox “**Monitoring using MAI**” to monitor via job monitoring in Technical Monitoring Workcenter. This change is irreversible. This flag can only be set without migration, if the solution does not have a monitored object assigned.

Business Process Operations (New)

The screenshot displays the SAP Solution Manager interface for the 'Business Process Operations (New)' workcenter. The left sidebar contains a navigation menu with the following items: Overview, Alert Inbox, Business Process Monitoring, Data Consistency Management, Analytics, Dashboards, Reports, and Related Links. Under 'Related Links', the 'Setup Business Process Monitoring' link is highlighted with a red box. The main content area shows a table with columns for Rating, Process, and KF - Red, and a 'Solution Settings' section at the bottom. In the 'Solution Settings' section, the 'Monitoring using MAI' checkbox is checked and highlighted with a red box.

Rating	Process	KF - Red

Solution Settings

Save

RFC Server Group for BPMon: * parallel_generators

Solution Rating Hierarchy: *

Monitoring using MAI:

Configuration

entry from Business Process Monitoring

- **Select your Solution** where your Business Process is documented
- **Select your Business Scenario** where the Business Process is located
- **Select the Business Process** which contains the Job to be monitored
- **Select the step** with the Job

Solution

The screenshot shows the SAP Solution Manager interface. The 'Solutions' table is visible with the following data:

Status	Solution	Created by	Created on	Changed on	Object ID	Inactive	Sending
	BPMon Demo	HDB_USER	02.05.2013		547710000	<input type="checkbox"/>	<input type="checkbox"/>
	BPMon Simple Demo Solution	SCHUHMANNNA	10.05.2013		551610000	<input type="checkbox"/>	<input type="checkbox"/>

Select step with Job to be Monitored



The screenshot shows the 'Business Process Monitoring Setup' interface. The tree view on the left is expanded to show the 'Run MRP [Z_SOLMAN71]' step under the 'Order to Cash' scenario. The right pane shows the 'Monitoring Objects (0)' table.

Monitoring Object	Monitor	Logica
-------------------	---------	--------

Configuration

entry from Business Process Monitoring

- Create a New Monitoring Object under Tab 'Monitoring Objects'
- On the Create New Monitoring Object section -> Cross Application, **select Background Processing**
- Choose the Monitor from **drop-down Monitor list**.
- Select **OK**.

Create New Monitoring Object

The screenshot shows the 'Create New Monitoring Object' dialog box in SAP. The background window displays 'Monitoring Objects (0)' with a 'Create' button highlighted in red. The dialog box contains the following sections:

- Filter Criteria:** In order to restrict the number of possible monitors choose one or multiple areas.
- Application Areas:** A grid of checkboxes for various areas: Customer Defined, Customer Interaction Center, Financials, Industry-Specific, Marketing, Retail, Sales, Service Parts Management, Services, and Other area.
- Cross Application:** Checkboxes for Background Processing (checked), Data Consistency, Interfaces, and Cross Application.
- Choose Monitor and Enter a Name:** A dropdown menu for 'Monitor' set to 'ABAP Job' and a text input field for 'Name'.

Buttons for 'OK' and 'Cancel' are at the bottom right of the dialog.

Configuration

entry from Business Process Monitoring

- **Get Jobs** from ABAP System
- **Select Job** for Monitoring
- **Add selected Jobs**

Add Jobs for Monitoring



Job Monitoring Configuration

Close Save and Done Save Cancel Assign to

1 2
Select Objects Configure Alerting Notification

ST7 200(30)

Add Jobs from Managed System Add Jobs Directly Delete

ABAP Jobs

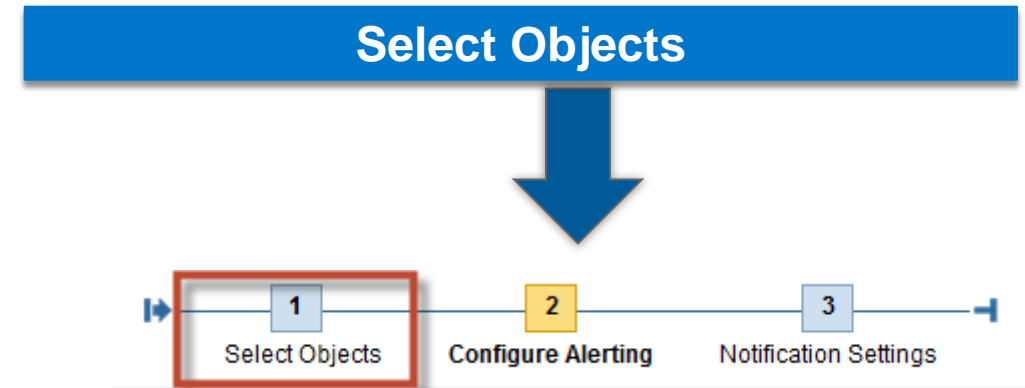
Job Name	Job Step No	Scheduled St...	Scheduled St...	Status	Period	ABAP Program	Variant	User	Event ID	Event Pr
MRP_4_BPMON_JOBMON	0000000001	22.07.2013	18:21:28	S	Hourly	Z_TEST_WAIT		ORGANISTA		
MRP_4_BPMON_JOBMON	0000000001	22.07.2013	18:21:30	S	Hourly	Z_TEST_WAIT		ORGANISTA		

Add filter criteria as Job Add selected jobs Cancel

Configuration

entry from Business Process Monitoring

- During Select Objects you follow the same procedure as before for ABAP Jobs.
- You **Check Identification Data button** and you can add more than one job by step according to your filter criteria.



Close Save and Done Save Cancel Assign to "Run MRP"

2 hits on for specified identification data

Solution	Scenario
MRP_4_BPMON_JOBMON	Not Saved MRP...

The table does not contain any data

Identification

Check Identification Data

Job Name: MRP_4_BPMON_JOBMON

Variant:

User: * ORGANISTA

Start Procedure: * by time

Configuration

entry from Business Process Monitoring

- During schedule you can also **mark jobs which are critical or not.**

Schedule Monitored Objects



Schedule

Schedule type: * Simple Schedule

[Add](#) [Remove](#)

Days of the Week							First Start	Periodicity
Monday	Tuesday	Wednesday	Thursday	Friday	Saturday	Sunday	*Planned Start Time	Period [Minutes]
<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	05:00:00	5

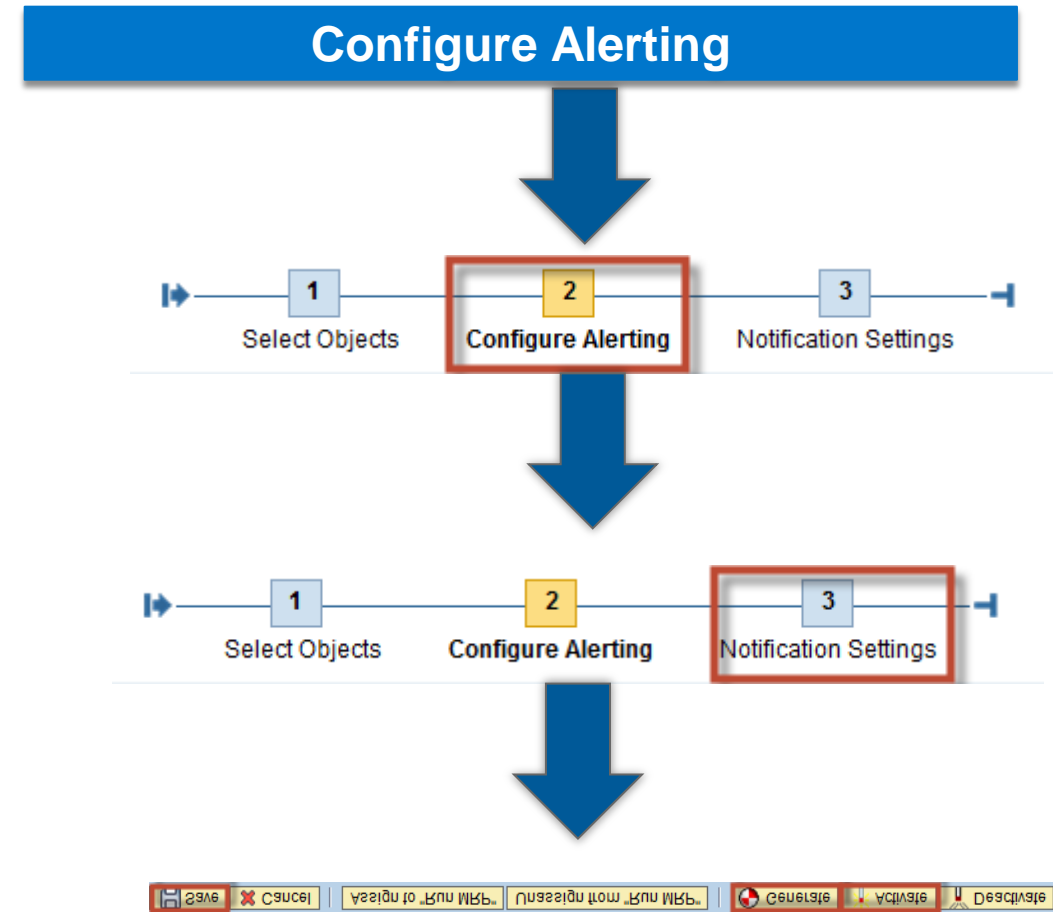
Critical Job

Data Collection Frequency: 1 Hour Data Retention Period (in days): 1

Configuration

entry from Business Process Monitoring

- Alert Configuration follows same procedure as an ABAP Job, after **selecting objects** you have to click on 'Configure Alerting'.
- **Notification and settings** are the same as ABAP Job and BW Process Chains
- **Save, Generate and Activate** your Monitoring Configuration.

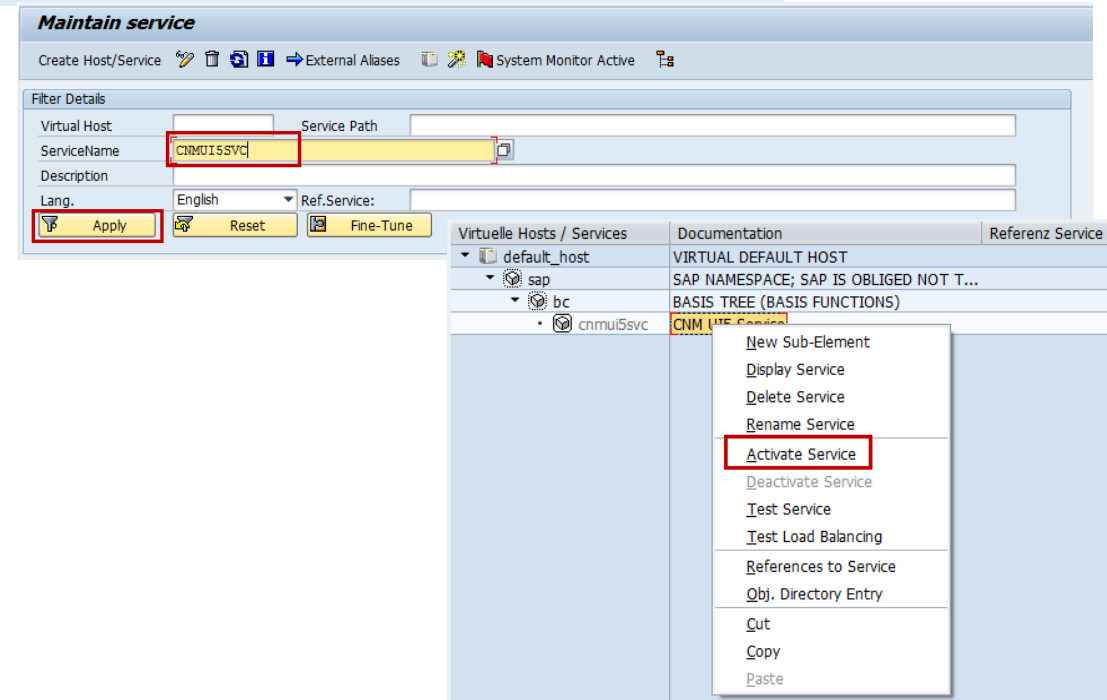
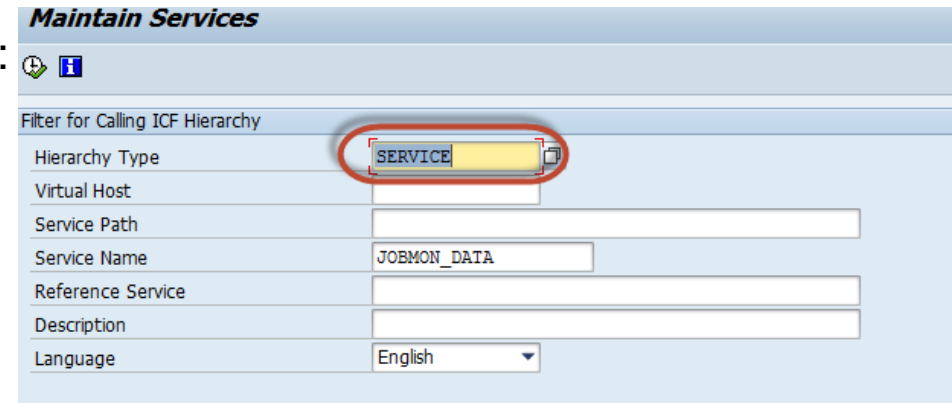


Monitoring

Prerequisites

- Activate SICF services by performing the steps below:

1. launch transaction SICF
2. Specific *Service* for hierarchy type
3. Activate the following service name.
 - " JOBMON_DATA
 - " CNMUI5SVC
 - " UI5_UI5
 - " AGS_OCC_UI5
 - " BSP jobmon_runtime



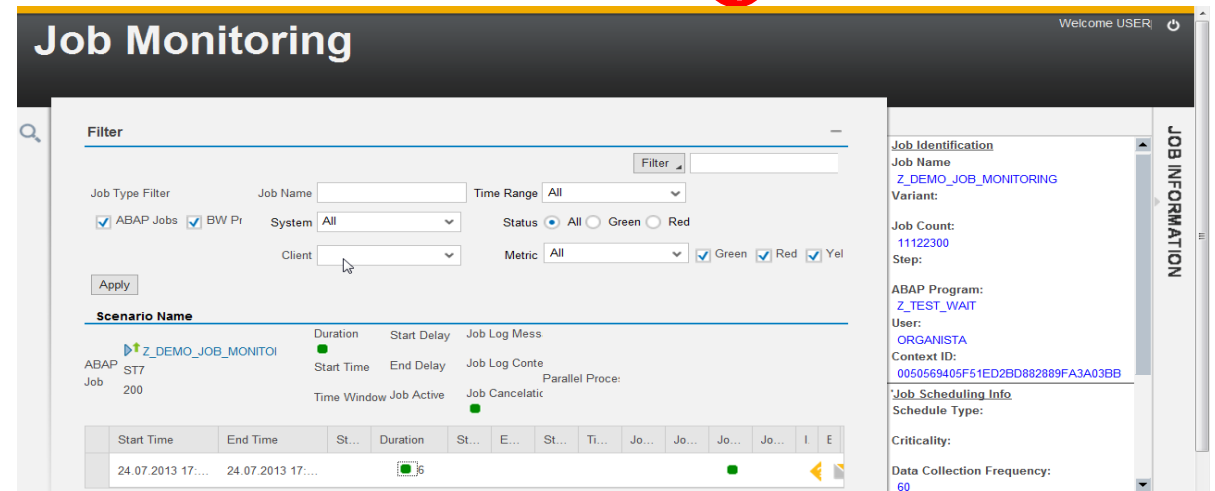
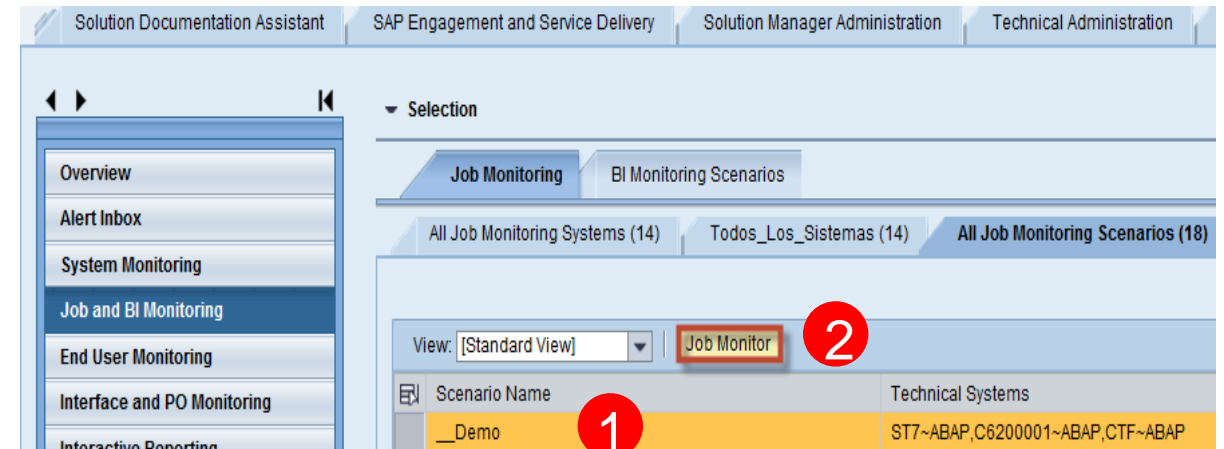
Prerequisites contd...

- Uncheck browser cache.
- To make the Refresh of the Job Monitoring UI work correctly with IE 9 and IE 10 the following setting needs to be changed:
 1. Go to *Tools ->Internet Options*
 2. In *General* tab press *Settings* in the *Browser History* section.
 3. In *Check for newer versions of stored pages* select the option *Every time I visit the webpage*.

Monitoring

from Technical Monitoring

- ABAP Jobs and SAP NetWeaver Process Chains are monitored from Technical Monitoring workcenter by Job Mon Systems, Job Mon Scenarios



Monitoring

Job Monitoring UI

- Monitoring UI is divided in three sections:
 - Filter area
 - Monitored Object List and
 - Monitored Object Instance Details.

The screenshot shows the SAP Job Monitoring interface. At the top, there is a 'Job Monitoring' header. Below it is a 'Filter' section with various controls: 'Job Type Filter' (ABAP Jobs checked, BW Process Chains unchecked), 'Job Name' (input field), 'System' (dropdown menu), 'Client' (dropdown menu), 'Status' (radio buttons for All, Green, Red), and 'Metric' (dropdown menu). An 'Apply' button is located below the filter controls.

Below the filter section is a table of monitored objects. The first row shows 'Proc Chain Element' for 'Z_RSPC_MON_SOL' with a 'Show' button. The second row shows 'ABAP Job' for 'Z_DEMO_JOB_MONITORING' with a 'Show' button and a 'Parallel Processing' indicator (1).

At the bottom of the screenshot is a table of job instances. The table has columns for Start Time, End Time, Status, Duration, Start Delay, End Delay, Start Time, Time Window, Job Log Messages, Job Log Content, Job Cancellation, Job Active, Incidents, and E-Mail.

Callouts provide additional information:

- Filter:** Allows you filter by ABAP Jobs, BW Process Chains, Job Name, System, Client, Time Range, Status or Metrics.
- Triangle allows you to see MO Instance list:** Points to the triangle icon next to the job name in the monitored object list.
- When you click on the blue link for Job Monitoring name, it will show you the MO Instance list:** Points to the blue link for the job name in the monitored object list.

On the right side of the screenshot, there is a 'Job Instance Details' panel showing various metrics and information for a selected job instance, including Job Identification, Job Scheduling Information, and Job Instance Details and BPMon Step associated.

References

SAP Notes related to Job Monitoring:

1581417 – Advanced Correction BPM Data Collectors for BW Process Chains

1706837 – Corrections: BI Data Col. For BW Process Chains – ST-A/PI 01P

1870459 – ST-A/PI 01Q: Corrections Data Provider for BW Process Chains

1866169 – Corrections unified job monitoring ST-PI 2008_1_xxx SP9

1927294 – SP10: JOBMON: Translation related issues