Focused Run for SAP Solution Manager
Feature Pack 1
## Typographic Conventions

<table>
<thead>
<tr>
<th>Type Style</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Example</strong></td>
<td>Words or characters quoted from the screen. These include field names, screen titles, pushbuttons labels, menu names, menu paths, and menu options. Textual cross-references to other documents.</td>
</tr>
<tr>
<td><strong>Example</strong></td>
<td>Emphasized words or expressions.</td>
</tr>
<tr>
<td><strong>EXAMPLE</strong></td>
<td>Technical names of system objects. These include report names, program names, transaction codes, table names, and key concepts of a programming language when they are surrounded by body text, for example, SELECT and INCLUDE.</td>
</tr>
<tr>
<td><strong>Example</strong></td>
<td>Output on the screen. This includes file and directory names and their paths, messages, names of variables and parameters, source text, and names of installation, upgrade and database tools.</td>
</tr>
<tr>
<td><strong>Example</strong></td>
<td>Exact user entry. These are words or characters that you enter in the system exactly as they appear in the documentation.</td>
</tr>
<tr>
<td><strong>&lt;Example&gt;</strong></td>
<td>Variable user entry. Angle brackets indicate that you replace these words and characters with appropriate entries to make entries in the system.</td>
</tr>
<tr>
<td><strong>EXAMPLE</strong></td>
<td>Keys on the keyboard, for example, F2 or ENTER.</td>
</tr>
</tbody>
</table>
## Document History

<table>
<thead>
<tr>
<th>Version</th>
<th>Date</th>
<th>Change</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.0</td>
<td>2017-05-12</td>
<td>Feature Pack 1</td>
</tr>
<tr>
<td>1.1</td>
<td>2017-06-01</td>
<td>Name change: System Analysis is now System Analytics. Within this application, you can now also create dashboards.</td>
</tr>
</tbody>
</table>
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1 Introduction

Focused Run for SAP Solution Manager is a powerful solution for service providers who want to host all their customers in a central, scalable, safe, and automated environment. Focused Run uses the full power of SAP HANA as a platform without compromises including streaming, replication, scale-out, predictive analytics, and compression. With this, you can support thousands of systems in high volume monitoring use cases.
2 What's New in Focused Run for SAP Solution Manager FP 1

The following new features have been introduced with Focused Run feature pack 1 (FP 1):

- Advanced Integration Monitoring
- Guided Procedures
- Guided Procedure Content
- Maintenance Certificate
- Expert Scheduling Management

In the following table, you find information about new and changed functions that have already been delivered in the initial version of Focused Run:

<table>
<thead>
<tr>
<th>Function</th>
<th>Type of Change</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Collector Framework Admin</td>
<td>New</td>
<td>Inbound Queue Monitor</td>
</tr>
<tr>
<td>Collector Framework Admin</td>
<td>New</td>
<td>Inbound Queue Processor (wait times, application data processing, data volume) Monitor</td>
</tr>
<tr>
<td>Validation</td>
<td>Changed</td>
<td>The new attribute system_roles allows to pin a check to a specific system role. Enables to define checks, for example, for production or sandbox systems only.</td>
</tr>
<tr>
<td>Validation</td>
<td>Changed</td>
<td>ABAP SAP Notes checking has been advanced. If an SAP Note is not applied, this check allows to define the SAP Note software dependencies within the policy. This enables the validation to determine systems in which an SAP note is missing, which should have been implemented.</td>
</tr>
<tr>
<td>Custom Dashboards</td>
<td>New</td>
<td>You can create your own dashboards.</td>
</tr>
</tbody>
</table>

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Focused Run for SAP Solution Manager
What's New in Focused Run for SAP Solution Manager FP 1
<table>
<thead>
<tr>
<th>Function</th>
<th>Type of Change</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Applying Java patches without system updates</td>
<td>New</td>
<td>It is now possible to download Java patches for individual components without any system update or upgrade.</td>
</tr>
<tr>
<td>View release information notes</td>
<td>New</td>
<td>You can now view release and information notes for product version – support package stack from maintenance planner tool directly. Release and information notes are displayed for source as well target product versions – support package stack.</td>
</tr>
<tr>
<td>Check SAP Security Notes</td>
<td>New</td>
<td>While planning any changes in maintenance planner, you can check and download a list of relevant SAP Security Notes.</td>
</tr>
<tr>
<td>Integrated utilities</td>
<td>New</td>
<td>Various utilities are integrated into a single tool. It now offers a new feature to export a list of all downloads to a spreadsheet application.</td>
</tr>
</tbody>
</table>
3 Infrastructure

3.1 Landscape Management Database (LMDB)

The landscape management database (LMDB) is the central landscape information repository in Focused Run for SAP Solution Manager. A system landscape description is the basis for many Focused Run applications, like monitoring and alerting. Also to calculate updates and upgrades with the maintenance planner in SAP Support Portal, a landscape description is required.

Focused Run collects and stores detailed information about the technical system landscape. This information is built from two parts: the software descriptions from the SAP software catalog (SAP CR content) and the information that is sent automatically by technical systems.

1. During the setup of Focused Run, the CIM model and SAP Software Catalog (SAP CR content) are copied from a system landscape directory (SLD) to the LMDB by an initial, full synchronization. After this, incremental synchronization propagates software catalog updates from the SLD to the LMDB every 10 minutes.

2. Most of the system information is provided automatically by data suppliers that are installed on the technical systems.

3. Focused Run applications use the system information managed in the LMDB, for example monitoring and alerting and root cause analysis. With the system information, applications can monitor systems in the landscape.

4. From the LMDB, technical system information is sent to SAP Support Portal, to be used by the maintenance planner, for example.

5. Based on the dependencies between technical systems, the maintenance planner can calculate the stack XML files that are required for planned installations, upgrades, and updates. The files are pushed to the download basket.

6. With the files, you can implement new software on the technical systems.
Sources Providing LMDB Content

The LMDB gets its content from the following sources:

- **System landscape directory (SLD)**
  - By synchronization, the SLD provides the LMDB with the latest CIM model and SAP software catalog (SAP CR content).

- **Existing data suppliers**
  - In Focused Run, the data suppliers provide the landscape information and write landscape data directly into the LMDB.

- **Outside Discovery by SAP host agent**
  - In Focused Run, the SAP host agent provides the Outside Discovery information and writes landscape data directly into the LMDB.

- **Editor for technical systems in the LMDB**
  - Some information, like additional attributes, can only be created manually in the technical system editor of the LMDB. Apart from these exceptions, do not create system information manually. If the system is registered subsequently by a data supplier, manual information will be overwritten in the LMDB the next time the data supplier sends data.

A technical system description in the LMDB has the following prerequisites:

- Up-to-date CIM model and SAP CR content in the SLD that is connected to the LMDB.
- All technical systems register themselves in the LMDB.

Many entities in the system landscape description are identified partly by host names (not fully-qualified and case insensitive). The host name is used in the system configuration. For example, the host name “localhost” cannot be used in this part of the system configuration.

Every host in the system landscape must have at least one unique host name. Different system landscapes can be separated in the LMDB by using customer networks. Each host name within one customer network must be unique.
3.2 Monitoring and Alerting Infrastructure

Monitoring is an essential task in the management of SAP technology - performant and automated monitoring helps ensure reliable operations in your SAP system environment. SAP provides you with the infrastructure and recommendations to set up your alert monitoring, to recognize critical situations for in you system landscape as quickly as possible.

With SAP Solution Manager 7.1, SAP has introduced the end-to-end Monitoring and Alerting Infrastructure (MAI), which allows stable and reliable operation of complex heterogeneous system landscapes. In focused Run for SAP Solution Manager, configuration, scalability and performance of the MAI was optimized especially for monitoring large system landscapes. This changes include:

- For the storage of the metrics the new SAP HANA based Unified Data Model is used: in the reporting layer SAP Business Warehouse is replaced by SAP HANA, meaning that the data for monitoring and reporting is stored only once. This increases the data throughput and decreases the data footprint and the database load significantly.

- Only push-based communication will be used for the transport of metric data from the managed objects to the managing system.

- The possible number of managed systems handled by the MAI has been increased drastically.

Integration

The Monitoring and Alerting Infrastructure depends on:

- Landscape Management Database for your system landscape information
- Simple Diagnostic Framework for connecting your managed systems to the Focused Run system
- Notification Management for notifying the corresponding users in case of an issue
- Simple System Integration for configuring the managed systems
- Rapid Content Delivery for automatically downloading the latest content updates for metrics, events and alerts.
3.3 Simple Diagnostic Framework

The Simple Diagnostics Framework is the server component managing the Simple Diagnostics Agents (SDA) on all managed systems centrally. The framework is mainly responsible for the installation or update of the SDA, the transfer of the SDA configurations and the SDA self-monitoring. The framework also provides user interfaces for the SDA management and for the mass update of all SDAs in the landscape.

The Simple Diagnostics Agent (SDA) is a component on the host of the managed system, which collects system metrics and sends it to Focused Run for SAP Solution Manager. It is integrated into the SAP Host Agent; as a result, the SAP Host Agent, which serves as a reverse HTTP proxy, provides the connection to the SDA. There are no additional communication channels needed. In addition, the SDA runs under the user of the SAP Host Agent. No additional operating system user is required.

There is only one SDA on each physical host. It collects data for all logical hosts and for multiple Focused Run systems.

After the host has been registered in the Landscape Management Database (LMDB) by an outside discovery function of the SAP Host Agent, the SDA is automatically installed and configured for self-monitoring.
3.4 Notification Management

Notification Management Recipient lists allows to maintain recipient lists for automated alert notifications. The e-mail or SMS recipients in the recipient list will receive an alert notification e-mail or text message in case of a critical alert.

Recipient lists can either be assigned to customer networks or can be customer network unspecific.

Customer network specific recipient lists should be used if systems of several customers are hosted in FRUN and alert notifications should be send out to recipients of these customers.

Customer network unspecific recipient lists should be used if alert notifications should be send out to internal recipients.

Features

For customer-network specific recipient lists, a filtering mechanism is enabled that sends out alert notifications only to the recipients that are assigned to the same customer network as the managed object for which the alert notification is sent. This mechanism ensures that recipients from customer A do not receive alert notifications for systems of customer B.

For customer-network unspecific recipient lists, it is possible to import e-mail and phone numbers from selected FRUN users into recipient lists.

Prerequisites

To send any SMS notification, maintain the SMS server details in Notification Management Configuration.

To maintain recipient lists, you need to have the application specific roles.

Activities

7. Create recipient lists and assign them optionally to customer networks
8. Maintain recipient lists by including e-mail addresses and mobile phone numbers (in case recipient should be notified by SMS).
9. Import e-mail and mobile phone numbers from SU01 (only for Customer network unspecific recipient lists)
10. Go to system monitoring template maintenance and assign these recipient lists to notification variants
3.5 Simple System Integration

You can use Simple System Integration (SSI) as part of Focused Run for SAP Solution Manager to automatically configure technical systems for the following use cases:

- Advanced System Management (ASM)
- Configuration and Security Analytics (CSA)
- Advanced User Monitoring (AUM)*
- Advanced Event and Alert Management (AEM)
- (*) SSI supports Trace Analysis configuration

Features

Simple System Integration supports you with the following tasks:

- Search for technical systems
- Edit the relevant configuration for technical systems
- Automatically configure one or many technical systems
- View the configuration status of technical systems
- Access the configuration log messages of technical systems
- In addition:
  - The automatic configuration supports prerequisites and post configuration checks to prevent misconfigured systems
  - The automatic configuration can be invoked via a Web services interface

Process

The Simple System Integration process is as follows:

11. Set up customer network.
    Set up the customer network for which you want to configure your technical systems. For more information, see: Managed Systems Preparations Guide, chapter Customer Network Preparation.

12. Prepare technical system.
    Install SAP Host Agent, create monitoring user etc.
    For information about the technical system types supported and for preparation instructions see Managed Systems Preparations Guide.

13. Edit technical system configuration.
    In the Simple System Integration application enter the parameters relevant for the automatic configuration.

14. Run automatic configuration.
    In the Simple System Integration application click Configure Automatically.

15. Review configuration logs.
    In the Simple System Integration application review the configuration logs and fix the configuration errors. For troubleshooting support see chapter on troubleshooting in Managed Systems Preparations Guide.

Integration

Simple System Integration is closely integrated with:

- Landscape Management Database (LMDB)
- Simple Diagnostic Framework / Simple Diagnostics Agent
• Monitoring and Alerting Infrastructure
• CCDB

**Decommissioning**

Simple System Integration provides an ABAP report for performing network, technical system, and host cleanup. The respective entities can be removed from the Focused Run system, the involved configuration stores, and the LMDB. For more information, refer to the online documentation at https://wiki.scn.sap.com/wiki/display/TechOps/decommissioning.

**Authorization Schedules**

You can access Simple System Integration using one of the following authorization schedules. For information, refer to the Focused Run Security Guide:
• Display
• Execute
• Expert
• Administrator
3.6 Self-Monitoring

The end-to-end monitoring and alerting infrastructure (MAI) allows stable and reliable operation of complex heterogeneous system landscapes. To monitor the correct functioning of the landscape, a large number of metrics and alert types, as well as various views and applications, are available to you, which provide prior warning about possible problems. So Self-Monitoring keeps you informed about the trustworthiness and timeliness of the monitoring data, and - if there are any issues - how to resolve the issue.

The Self-Monitoring has different aspects:

- Monitoring of the MAI and other central functions
- This feature contains functions that display specific metrics, alerts, and logs and traces for the central infrastructure of Focused Run for SAP Solution Manager. In the overview view of Self-Monitoring, this information is grouped by the following technical components:

<table>
<thead>
<tr>
<th>Technical Component</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Agent Framework</td>
<td>The agent framework manages Simple Diagnostic Agents installed in all managed systems, centrally. In Self-Monitoring, the status of the data collection regarding agent errors, configuration issues and availability checks are displayed.</td>
</tr>
<tr>
<td>CCDB Infrastructure</td>
<td>The configuration and change database (CCDB) stores the configuration data of the managed systems, allowing you to trace configuration changes. For scheduling, sending and processing these data the Collector Framework is used; in Self-Monitoring, the status of the Collector Framework is displayed.</td>
</tr>
<tr>
<td>Introscope Enterprise Manager</td>
<td>The CA Wily Introscope Enterprise Manager (EM) acts as the central repository for all Introscope performance data and metrics collected in an application environment. In Self-Monitoring, metrics for availability, health and capacity of the EM are displayed.</td>
</tr>
<tr>
<td>SAP Early Watch Alert</td>
<td>SAP EarlyWatch Alert is a diagnostic service, which monitors solutions in SAP systems. Focused Run transfers the service data collected from the managed system to the SAP Support Portal, where data is analyzed and a report is created.</td>
</tr>
<tr>
<td>Monitoring and Alerting</td>
<td>The Self-Monitoring displays specific metrics and alerts to monitor the correct functioning of technical components belonging to the MAI. Including the Event Calculation Engine and the Unified Metric Store.</td>
</tr>
</tbody>
</table>

- Self-Monitoring of Managed Systems
  To be able to monitor managed systems, the monitoring for these systems needs to be correctly set up, the associated agents and monitoring functions need to be working correctly, and it must be possible to connect from the Focused Run system to the relevant managed system without problems. In the system view, this information is displayed, grouped by technical systems.

- Self-Monitoring features within System monitoring
  The status and values of the Self-Monitoring metrics are integrated into System Monitoring, both on system and on metric level.
Features

Generally, in Self-Monitoring the following functions are available to you:

- For each metric and alert type, you can display a description that provides information about the meaning of the metrics and, if there is an error status, about the meaning, consequences, analysis, and possible solutions of the error.
- You can display the development of performance metrics over time, in the Metric Monitor.
- Appropriate analysis and troubleshooting tools are available to you at the level of metrics, but also at the level of technical components. You can call these tools directly from the Self-Monitoring user interface. When you call these tools, additional context information is passed, so that corresponding filters are set to display only the information that is related to the affected object in the appropriate tool.

Monitoring of the MAI and other central functions by technical components

If you want to monitor the components of the MAI or other central functions of Focused Run, use the Overview of the Self-Monitoring in the tab Central Components. Here, the most important metrics are displayed, together with their status and the number of associated alerts, broken down by the technical components listed above.

Self-Monitoring of Managed Systems

If you want to display the Self-Monitoring of the managed systems, use the Managed System View. You can filter the systems displayed according to different criteria:

- Data Separation (systems belonging to a customer or a data center)
- Properties or roles of the technical system

The Managed System View checks if the following prerequisites are fulfilled by the managed systems:

- The properties of the system in the Landscape Management Database (LMDB) are automatically updated by SLD data suppliers.
- The agent and the Introscope Enterprise Manager responsible for the system are available, running without errors and the configuration settings of the agent match those stored centrally in Focused Run.
- The configuration data of the system is sent to the CCDB Infrastructure.
- The Service Data Control Center (SDCCN) collects and manages performance data from managed systems for analysis in service sessions, which is, among others, used for SAP EarlyWatch Alert. Self-Monitoring checks its proper functioning both on managed system and on central component level; without SDCCN, the proper functioning of SAP EarlyWatch Alert is not warranted.

Self-Monitoring features within System monitoring

In System Monitoring, alerts and metrics of Self-Monitoring are displayed on system level utilizing the fact that Self-Monitoring is a monitoring category like availability, performance, configuration and exceptions. That means that next to the monitoring values of your managed systems the trustworthiness and timeliness of these values are displayed.

On metric level, you can check the data collection, which leads to Self-Monitoring information and troubleshooting tools for this metric.
3.7 Guided Procedures

You can document recurring administrative tasks as well as emergency procedures or troubleshooting tasks using the Guided Procedure Authoring. These guided procedures can be run by other users or fully automatically in background to execute the tasks at any time in a guided, documented and reproducible manner.

Guided procedures provide the following benefits:

- Processes are speeded up
- Less experienced users are provided with expert knowledge to perform complex processes
- Business-critical processes can be executed with minimized risk
- Central, guided, and reproducible execution of day-to-day activities
- Central documentation of expertise
- Predefined content that can be customized

Features

A guided procedure (GP) is a set of steps and substeps in an application area. Each step has one or more activities. The activities can be either manual or automatic. Alternatively the step could include a custom Web Dynpro UI.

- Manual activities contain a documentation what needs to be done and optionally a navigation link to a screen in the managed system, or FRUN or an external link. Example: Check for short dumps in the managed system
- Automatic activities trigger the automatic execution of certain activities in FRUN in background. Example: Check file system free space on the hosts of the managed system and display result in a table.
- Custom UIs and Plugins provide embedded UIs that allow the user to enter data and trigger based on these data the execution of certain activities in FRUN or in the managed system.

The Log section shows detailed logs for every activity that was performed. Logs are updated automatically based on the execution status of each activity. You can also enter a comment here.

The following features are available:

<table>
<thead>
<tr>
<th>Tool</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Guided Procedure Browser</td>
<td>The Guided Procedure Browser shows the Guided procedures that are relevant for the selected managed systems. It allows to execute, create, and edit guided procedures.</td>
</tr>
<tr>
<td>Guided Procedure Runtime</td>
<td>The Guided Procedure Runtime opens when a guided procedure is executed manually. All steps and activities will be executed for the selected managed system. This means, manual activities with navigation links will navigate to the managed system(s) selected in the scope, automatic activities, custom UIs or plugins might trigger automatic actions in the managed system(s). At the end of the guided procedure execution a report can be generated containing the execution results and can be send to interested parties.</td>
</tr>
<tr>
<td>Guided Procedure Maintenance</td>
<td>The Guided Procedure Maintenance allows to edit existing guided procedures or create new guided procedures. The guided procedure step on the left side reflects the roadmap that is displayed when executing guided procedures. The right side shows the step details including help texts, activities or custom UIs and allows to maintain documentation, add new manual activities or integrate existing automatic activities or custom UIs.</td>
</tr>
<tr>
<td>Tool</td>
<td>Description</td>
</tr>
<tr>
<td>-------------------------</td>
<td>-----------------------------------------------------------------------------------------------------------------------------------------------</td>
</tr>
<tr>
<td>Guided Procedure Log Book</td>
<td>The Guided Procedure Log book provides an overview over executed guided procedure instances for selectable time frames. It shows the execution status and allows to drill down to logs and comments.</td>
</tr>
<tr>
<td>Guided Procedure Background Execution</td>
<td>The Guided Procedure Background Execution allows to execute guided procedures for a high number of systems in background. The relevant batch jobs can be scheduled immediately or recurring. A mail containing the result report will be sent out to predefined recipients. Please note: Only guided procedures containing automatic activities can be executed in background</td>
</tr>
</tbody>
</table>
3.8 Rapid Content Delivery

Rapid Content Delivery tool allows you to import the latest content updates for various functions of Focused Run Solution for SAP Solution Manager, such as, Monitoring and Alerting, and CCDB Collector Framework. Content updates are available in the form of Support Packages (content package) in SAP Support Portal. Each content package contains the latest content updates for various functions of Focused Run for SAP Solution Manager.

Prerequisites

You have authorization to access the Rapid Content Delivery tool.

Features

- You can download the content manually from the SAP Support Portal.
- It is a standard channel to import content packages.
- Content delivery is independent of support package delivery. Content can be individually shipped at any point of time.
3.9 Monitoring and Alerting Analysis Tools

The Monitoring and Alerting Infrastructure (MAI) contains a variety of different analysis tools for error handling. Using these tools, you can monitor and safeguard the proper functioning of the system monitoring and the other use cases of the MAI.

The analysis tools are closely connected with the Self-Monitoring of the MAI. The Self-Monitoring keeps you informed about the trustworthiness and timeliness of the monitoring data; if the Self-Monitoring reports an issue, you can use the analysis tools to resolve it.

⚠️ Caution

When you start the analysis tools, only a limited number of tools, which are designed for the use of customers, are displayed. You can display more tools using the expert mode, which are intended only for Digital Business Support.

Features

The Monitoring and Alerting Infrastructure tools are grouped along the following different activities:

- analysis of the monitoring data and the data provisioning
- displaying logs and traces
- administrating technical settings of the MAI
- configuration of templates, metrics, monitoring settings and managed objects
- simulation and testing

Additionally, the tools offer a launchpad for the most commonly used UIs within monitoring and related components to provide a convenient access of the affected applications during troubleshooting.

Within each activity, the tools are sorted by technical component:

<table>
<thead>
<tr>
<th>Tool</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Alerting Directory</td>
<td>The Alerting Directory contains metrics, events and alerts which are used for one or more concrete managed objects at customer site including the corresponding information of the considered managed objects that are monitored by the MAI.</td>
</tr>
<tr>
<td>Template Repository</td>
<td>The Template Repository is the storage place and delivery infrastructure for metrics, events and alerts (MEAs) based on templates. It is the pool of all MEAs that can principally be used by the customer.</td>
</tr>
<tr>
<td>Landscape Management</td>
<td>The Landscape Management uses the Landscape Management Database (LMDB) as the central landscape information repository.</td>
</tr>
<tr>
<td>Data Provider Connector</td>
<td>The Data Provider Connector is responsible for delivering metric or event instances from managed objects to the MAI. In Focused Run for SAP Solution Manager, only push-based communication will be used for metric data transport from the managed objects to the MAI.</td>
</tr>
<tr>
<td>Tool</td>
<td>Description</td>
</tr>
<tr>
<td>----------------------</td>
<td>---------------------------------------------------------------------------------------------------------------------------------------------</td>
</tr>
<tr>
<td>Self-Monitoring</td>
<td>To monitor the functioning of the MAI, a Self-Monitoring containing a large number of metrics and alert types, as well as various views and applications, is available to you to provide prior warning about possible problems.</td>
</tr>
<tr>
<td>Unified Metric Store</td>
<td>In Focused Run, all monitoring data is stored in the Unified Metric Store in an SAP HANA-based unified data model. Storage and aggregation of the monitoring data in BW Info Cubes is discontinued, which reduces the database footprint of the metric data dramatically.</td>
</tr>
</tbody>
</table>
3.10 Expert Scheduling Management

This scheduling application manages the collection of data from different applications such as System Analytics and Advanced Integration Monitoring.

Features

You can do the following:

- View the lists of schedulers with details such as **Scheduler Name**, **Scheduling Period**, and **Last Status**
- View details of each run of a selected scheduler such as **Status**, **Update**, and **Messages** in the **Scheduler Task** table.
- View the details of each selected run details of the scheduler such as **Status**, **Phase**, and **Run Time** in the **Task Items** table.
- Manage a scheduler by performing one of the following actions:
  - Activate the scheduler that is in deactivate status
  - Deactivate the scheduler that is in activate status
  - Release the scheduler which is in banned status
  - Delete the scheduler which is not required anymore
- View the details of the selected scheduler such as **Name**, **Class**, and **Context Name**.
4 Configuration and Security Analytics

Configuration and Security Analytics (CSA) provides an overview of the changes that have been applied to the systems configured in Focused Run for SAP Solution Manager. It takes regular snapshots of the configuration settings and store them in the configuration and change database (CCDB) in different containers called configuration stores.

Configuration stores are grouped depending on the type of configuration data. For example configuration store: ABAP_COMP_SPLEVEL contains details on Software Components currently implemented and the change history of each component.

Features described below use the information from CCDB and shows configuration stores in different applications that even make possible to validate existing configuration or settings.

Features

- Display Changes of Configuration Data: shows the recorded changes for the systems selected in scope during a specific time range.
- Search: search in CCDB for configuration data. It looks for configuration items matching the string entered in the search field.
- Store Browser: Shows the total of technical systems according to the selection scope and displays the configuration items within the configuration stores collect for a technical system. It also provides the history of changes recorded for a configuration item.
- Validate Configuration Data: helps you to determine whether the systems in your landscape are configured consistently and in accordance with your requirements. It allows you to validate configuration data of your system based on policies defined in policy management. The validation results are displayed group by system or policy check id level.
- Policy Management: allows you to create policies which contain rules to determine if a configuration item is compliant or not compliant.
- CSA Administration: allows you to review the status of the Collector Framework (CF) managed systems. The different status found will be grouped and will allow you to find errors easily, for example in the setup or the configuration.

1 Note

Collection of the change data starts with the date when the configuration stores are filled for the first time. Only changes of a product instance configuration made after this date can be displayed in the change analysis. Thus is not possible to report any changes that were made before the change analysis function was set up.

Therefore, the history of changes that were made during the past two years can also only display changes after the change analysis function was set up.

The configuration stores are shown in Display Changes of Configuration Data. The Configuration and Security Analytics can only report changes if there were any.
5 Advanced User Monitoring

5.1 Real User Monitoring

The Real User Monitoring provides permanent measurement of all real user requests types (Dialog, RFC, http, https and WS) within a system landscape.

User requests are collected on client side and server side. User requests on the client side are coming for example, from the SAPUI5 or the SAP GUI.

On server side requests are provided by SAP Gateway or SAP ABAP Systems and SAP J2EE. They are collected by the Real User Monitoring and transferred to the Focused Run for Solution Manager System. After that all collected data is assembled and correlated allowing you to have different features described below.

Features

- Overview
  It provides you a status overview of your systems as well as the status of the different request types grouped by system. Overview page helps you to identify specific systems or requests types with poor performance.
  Once a system is identified with poor performance you can drill down in the Request Overview page.

- Request Overview
  This page helps you to identify single requests with poor performance for a specific user and to know how often a specific application or function was executed.
  o With the UI personalization, you can customize your request types and filter by specific user, user type, timeframe, and request name or request type.
  o From the request overview, you can drill down into the Request Flow.
  o Request Flow provides an analysis of a single request flow including all components involved in the execution. You can review the time spent by a single sub request for a component and analyze the resource consumption of each sub request.

- Request Type
  It is a default dashboard delivered with Focused Run for SAP Solution Manager and shows you the status of all the requests types existing in your selected scope.

- Card View Dashboard
  You can build a customized page for analyzing the behavior of end users by relevant requests or systems in which you are interested at. Each selection is represented in a dedicated dashboard tile.
  Dashboard tiles provides the following information:
  o Average response time
  o Total number of executions
  o Percentage of red rated executions.
  o Request Types

- End User Evaluation Dashboard
Provides you an overview of the Operating Systems and browsers used in the SAPUI5 request type. It also combines the information in a single diagram. Filter settings can be used to specify the displayed information by

- Timeframe
- Request Name
- User
- System

- Tree Map Dashboard
  It evaluates a huge number of executions of request types to find out the "hot" requests which are the ones with highest impact in the system selected.

- 24 Hours Status Profile
  Allows to evaluate the request execution rating over a complete day and you will be able to identify critical hours of a request execution as well as conjunctions of bad performance during the day.

- Topology View
  It can be used to evaluate the amount of request executions per hour and the average response timer per request type in the context of system landscape components. In this way, it is possible to get full transparency about system components which are involved in request executions.
5.2 Trace Analysis

The most common use case of the trace analysis tools is to identify user requests across SAP ABAP and SAP J2EE that have an excessive execution time.

For example, an employee complained about the high system response time while using the Bank Information feature of an Employee Self-Service scenario. Trace Analysis provides you the possibility to analyze the problem and identify the component which is responsible for poor performance.

Features

- SAP Client Plug-In: It is a client side component that allows you to record the activity of a single user or a single process in detail.
- Trace Analysis: It includes analysis features across SAP ABAP and SAP J2EE, so that a component causing a problem can be isolated and identified.
- To analyze a trace you check the distribution of the response time over the client, network and server. Furthermore, you can drill down the response time of each server component involved in the execution.

Note

The system which needs to be traced have to be enabled explicitly in the Focus Run for Solution Manager system.
6 Advanced System Management

6.1 System Monitoring

System Monitoring monitors the status of the systems, hosts, and databases in the Focused Run 1.0 landscape.

Features
- There are three sections on the Overview page, as follows:
  - **Overview**: In this section, you can view the status of the systems based on the scope selected.
  - You can use the Scope Selection option in the monitoring application to select the required technical systems.
  - The various statuses are as follows:
    - Critical
    - Warning
    - Okay
    - Unknown
    - Planned Downtime
- **System List**: You can view the details of the systems in a table, as follows:

<table>
<thead>
<tr>
<th>Column Name</th>
<th>Purpose</th>
</tr>
</thead>
<tbody>
<tr>
<td>Extended SID</td>
<td>You can view the details of the system</td>
</tr>
<tr>
<td>System Type</td>
<td>Displays the type of the system.</td>
</tr>
<tr>
<td>Role</td>
<td>Displays the role of the system. For example, production system or Test System</td>
</tr>
<tr>
<td>Overall Status</td>
<td>Overall status of the managed object is displayed in this column. Status can be Critical, Warning, Okay, or Unknown.</td>
</tr>
<tr>
<td>Availability</td>
<td>Availability category rating and icon are displayed this column. Rating is Critical, Warning, Okay, or Unknown.</td>
</tr>
<tr>
<td>Performance</td>
<td>Performance category rating and icon are displayed. Rating is Critical, Warning, Okay, or Unknown.</td>
</tr>
<tr>
<td>Configuration (for systems and database)</td>
<td>Configuration category rating and icon are displayed. Rating is Critical, Warning, Okay, or Unknown.</td>
</tr>
<tr>
<td>Exception</td>
<td>Exception category rating and icon are displayed. Rating is Critical, Warning, Okay, or Unknown.</td>
</tr>
<tr>
<td>Self-Monitoring (for systems)</td>
<td>Self-Monitoring category rating and icon are displayed. Rating is Critical, Warning, Okay, or Unknown.</td>
</tr>
<tr>
<td>Work Mode</td>
<td>The current work mode of the system is displayed.</td>
</tr>
<tr>
<td>Column Name</td>
<td>Purpose</td>
</tr>
<tr>
<td>------------------</td>
<td>-------------------------------------------------------------------------</td>
</tr>
<tr>
<td>Customer Network</td>
<td>Displays the network to which the managed system belongs to.</td>
</tr>
<tr>
<td>Customer Name</td>
<td>Displays the name of the customer</td>
</tr>
</tbody>
</table>

- **Alert Ticker**: You can find a short preview of Alerts which have 'Current rating' as Red (Critical) or Yellow (Warning). Click on any alert to view its details.

- **On the System page you can do the following:**
  - View the template names assigned to the managed systems, hosts, or databases.
  - View the IT Calendar of the managed systems, hosts, or databases.
  - View details of the managed objects, by going to the System Landscape.
  - View the hierarchal structure of the systems, hosts or databases.
  - Filter the metrics in the tree view or the tabular view, based on the rating and view the metrics report.

- **Personalization**: You can personalize the view of System Monitoring by adding custom pages. You can drag and drop the required view on the screen and a new page gets added. You can rename, hide, copy, or delete the newly added page.

- **Auto-refresh**: You can set auto-refresh, and the details will be refreshed at the specified interval. You can also pause and restart the refresh.

- **Notifications**: You can send an e-mail or text message to system users, business partners, and external recipients.
6.2 System Analytics

System Analytics allows you to keep an eye on the performance of your system landscape with different views available for your components. You can easily identify bottlenecks or look for peaks which are correlated to the typical working hours of your systems using different views with different time frame selections.

For example, unless your system is not used globally, you would expect a pronounced daily pattern exhibiting peaks during the day and relatively low load at night.

Features

- **ABAP Basis**
  Shows you the key performance indicators of the ABAP System in graphical form. You can review the total and average response time by task type, review the number of logged-on users or review the ICM load in your system. Additionally, you can look for dumps generated in your system or entries in the ABAP System Log.

- **J2EE Engine**
  Allows you to review the behavior of your Java Virtual Machine with the view available for Effective Old Space Usage and Effective Perm Space Usage. You can also review the number of http requests and users logged-on in your system. Optionally you can check number of application errors and response time for Java SQL statements.

- **Host**
  Displays the workload peaks for CPU Utilization and Page Out. You can identify whether CPU has been over utilized and look for a solution.

- **Custom Dashboards**
  You can create new views displaying metrics from System Monitoring, Self-Monitoring and Advanced Monitoring scenarios. You also can select different chart types and scopes.
6.3 IT Calendar

You use IT Calendar to manage the work modes for technical component such as technical systems. You can also analyze the events for technical components for any period.

Features

- **Scope Selector:** You can use this to narrow down the list of technical components. You can search based on Customer Name, Data Center and so on. You can define your own search criteria as per your requirement.
- **Context Switching:** You can switch among technical scenarios, systems, and Instances
- **Create work mode:** You can a work mode.
- **Download to excel:** You can download the planned calendar events to excel.
- **Date Picker:** You can choose a period or a date to view the events planned on the defined period or date.
- **Personalization:** You can personalize the view by adding custom pages. You can drag and drop the view on the custom pages. You can also rename, hide, copy, or delete the added pages.
6.4 Work Mode Management

You use this application to plan and notify work modes for technical systems, databases, Instances during activities such as:

- Patch upgrades
- Database, hardware, or operating system maintenance
- Configuration or customizing changes
- Migration
- Different type of work modes available are as follows:

<table>
<thead>
<tr>
<th>Type</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Planned Downtime</td>
<td>Work mode during which the system is technically down and you do not have access. System administrators can use this work mode to perform planned administration tasks that can only be performed during downtime.</td>
</tr>
<tr>
<td>Maintenance</td>
<td>Work mode during which the system is technically up and you have no access. System administrators can use this work mode to perform planned administration tasks that can only be performed during maintenance.</td>
</tr>
<tr>
<td>Peak Business Hours</td>
<td>Work mode during which the system is technically up and you have access. Most users are logged on to the system and load peaks are expected.</td>
</tr>
<tr>
<td>Non-Peak Business Hours</td>
<td>Work mode during which the system is technically up and you have access. Less users are logged on to the system, and load peaks are not expected.</td>
</tr>
<tr>
<td>Non-Business Hours</td>
<td>Work mode during which the system is technically up and you have access. Most users are not logged on to the system and load peaks are not expected.</td>
</tr>
</tbody>
</table>

Prerequisites

You are authorized to access the Technical Administration work center.

Features:

- Single and Recurring Work Modes can be scheduled
- Planned Downtimes can be notified to target users based on a pre-determined pattern
- Prevent creation of unnecessary alerts, notifications, or incidents during planned downtimes.
- Single point of entry to review up-to-date planning information for managed systems.
6.5 Service Availability Management

Service availability management reports SLA-relevant downtimes of entities (technical systems on which business-critical business transactions are performed) based on data that is adjusted by system administrators and then confirmed by IT service managers or other supervisors. This downtime data is called service outages. Service availability management matches the service outages with the agreed service times, the promised availability during service times as agreed in Service Level Agreement (SLA) contracts.

Service availability management creates service outages automatically based on unplanned downtimes reported by the SAP Solution Manager monitoring and alerting infrastructure (MAI). To adjust the measured data automatically, service availability management takes into account planned downtimes that are defined in work modes and service availability definitions. Using service availability management, you can adjust the automatically created service outages or you can create service outages manually to compensate for missing measurements.

Prerequisites

- You have set up your entities (systems) in the SAP Solution Manager Configuration in the Managed Systems Configuration.
- You have authorization for service availability management. All the required roles are assigned to your user.
- For service outages to be created automatically based on availability alerts or work modes, you need to define service availability definitions for your entities in the service availability management.

Features

- Service availability definitions
  You can create, display, and maintain service availability definitions.
  In a service availability definition, you specify the following for the entities:
    - Agreed services times
    - SLA threshold and reporting period
      The SLA threshold is the promised service availability of the entity in percentage for the reporting period.
    - Contractual maintenance patterns or dates
      Contractual maintenance patterns are regular maintenance times for your entities. The time defined in a contractual maintenance pattern or date is a planned downtime and not SLA relevant.
- Automatic service outage creation
  Service availability management automatically creates service outages for entities based on availability alerts or planned work modes if you have configured service availability definitions for the particular entities.
- Service outage maintenance
  You can modify automatically created service outages and adjust, for example, start and stop times or faulty measurements, or you can hide service outages if they are caused by false alarms.
- Manual service outage creation
  As a system administrator, you can create service outages manually if measurements are missing.
- Manual service outage confirmation
  As an IT service manager, you approve service outages that the system administrators have created or changed. You do this regularly, for example weekly or at the end of a reporting period. You can also revoke confirmed service outages and reprocess them.
- Service availability monitoring
You can display the availability of entities graphically on the Overview tab page. You can switch between a monthly or yearly display depending on your reporting period, and you can drill down to view the system availability for individual months or days.

- Analysis
  You can display a chart for analyzing the system uptime. The uptime is the time an entity is up since it has recovered from the last outage.
6.6 Guided Procedure Content

The guided procedure "Automated System Health Check for ABAP Systems" checks various aspects of managed ABAP systems and generates a result report covering all findings. It also contains activities for SAP HANA or Sybase databases.

This guided procedure can be executed either manually from Guided Procedure Runtime or automatically for a high number of managed ABAP systems in parallel using Guided Procedure Background Execution.

You can use this guided procedure also as a template for your own guided procedures and remove, add or customize the activities.

Features

The following automatic activities are included in the "Automated System Health Check for ABAP Systems":

<table>
<thead>
<tr>
<th>Activity</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>ABAP System Availability</td>
<td>This activity checks the ABAP system availability from the System Monitoring metric data.</td>
</tr>
<tr>
<td>ABAP Instance Availability</td>
<td>This activity checks ABAP instance availability from the System Monitoring metric data.</td>
</tr>
<tr>
<td>ABAP Performance</td>
<td>This activity provides an overview over the response time history for last n days separated by the task type Dialog, HTTP and HTTPS.</td>
</tr>
<tr>
<td>ABAP Long Running Jobs</td>
<td>This activity checks if runtime of active jobs from the managed ABAP system are not exceeding a given runtime. Aggregated information about long running active jobs exceeding a given runtime are shown in a table or a bar chart. It provides a navigation link into the &quot;Simple Job Selection&quot; transaction in the managed ABAP system.</td>
</tr>
<tr>
<td>ABAP Work Process Status and Performance</td>
<td>This activity provides an overview over current problems with work processes. It checks if there are long running work processes or work processes with irregular status (in priv mode, waiting for semaphore or stopped). It retrieves a snapshot of the current work process occupation from the managed ABAP system via sapcontrol and lists the problematic work processes in a result table.</td>
</tr>
<tr>
<td>ABAP Buffers Statistics</td>
<td>This activity checks buffers on each instance of the managed ABAP system. Aggregated information about buffers are shown in a table. It provides a navigation link into the &quot;Tune Summary&quot; transaction in the managed ABAP system.</td>
</tr>
<tr>
<td>ABAP Memory Statistics</td>
<td>The activity is used for check memory statistics in managed system. Check if memory area in managed ABAP system instances is used above the threshold defined be user. It provides a navigation link into the &quot;memory statics search&quot; transaction in the managed ABAP system.</td>
</tr>
<tr>
<td>ABAP Short Dumps</td>
<td>This activity provides an overview over the top N short dumps that occurred in the managed system in specified timeframe.</td>
</tr>
<tr>
<td>Activity</td>
<td>Description</td>
</tr>
<tr>
<td>----------------------------------</td>
<td>-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------</td>
</tr>
<tr>
<td>ABAP System Log Errors</td>
<td>This activity provides an overview over error messages logged in the ABAP System log in the requested time frame. It returns a table listing the error messages which occurred most often sorted by occurrence.</td>
</tr>
<tr>
<td>ABAP Aborted Jobs</td>
<td>This activity checks aborted jobs in the managed ABAP system, this check retrieves all aborted jobs for the given timeframe and group them per job name. Aggregated information aborted jobs are shown in a table or a bar chart.</td>
</tr>
<tr>
<td>ABAP Update Errors and Status</td>
<td>This activity checks if update requests initial state or update requests in error state from the last N days can be found in the managed ABAP system. Aggregated information about initial or failed Update requests are shown in a table or a bar chart. It checks additionally if the update service is active.</td>
</tr>
<tr>
<td>ABAP Lock entries</td>
<td>This activity checks if there are problems with old locks in the managed ABAP system. It reads a snapshot of the lock entries that are currently active in the managed ABAP system and reports old lock entries.</td>
</tr>
<tr>
<td>ABAP Spool Request</td>
<td>This activity checks if there are problems with spool requests in the managed system. It checks if there is a high number of failed spool requests, waiting spool requests or spool request without corresponding output request.</td>
</tr>
<tr>
<td>ABAP SOST Transmission Request</td>
<td>This activity searches all of the SOST transmission requests from the last N days in managed systems. And then check if the number of transmission requests with different status is above the threshold user entered.</td>
</tr>
<tr>
<td>ABAP Standard Jobs</td>
<td>This activity is used to verify that all standard reorg jobs listed in SAP Note 16083 from the managed ABAP system have been executed successfully. Aggregated information about standard reorg jobs are shown in a table.</td>
</tr>
<tr>
<td>Host CPU utilization</td>
<td>This activity provides an overview over the CPU utilization for the last n days on all system and database hosts.</td>
</tr>
<tr>
<td>Host File system free space</td>
<td>This activity is used for checking file system free space on all hosts of managed system or DB. This activity gets all of the file system free space on hosts and check if any file system free space rate is letter than requested. It provides a navigation link to “File system free space” transaction in the managed system hosts or DB hosts.</td>
</tr>
<tr>
<td>Host Top CPU processes</td>
<td>This activity is used for checking all CPU processes runs on all hosts. This activity can get the occupation of each process runs on managed system, and check if processes in managed system hosts or DB hosts with usage above threshold exist, then show the top CPU processes in a graph sorted by CPU occupation descending.</td>
</tr>
<tr>
<td>HANA HA/DR</td>
<td>This activity checks if SAP HANA system replication works.</td>
</tr>
<tr>
<td>HANA Backup</td>
<td>This activity checks if a successful database backup was found for the last n days.</td>
</tr>
<tr>
<td>HANA DATA and Log size</td>
<td>This activity checks if the space usage of the SAP HANA database exceeds the defined threshold for Hana System DB. Aggregated information about disk usage space percent are shown in a table chart.</td>
</tr>
</tbody>
</table>

Focused Run for SAP Solution Manager
Advanced System Management
Public
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<table>
<thead>
<tr>
<th>Activity</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Adaptive Server Enterprise DB Space</td>
<td>This activity checks if the SYSBASE database space exceed the defined threshold for SYSBASE System DB. Aggregated information about database space usage percent are shown in a table chart.</td>
</tr>
<tr>
<td>Adaptive Server Enterprise Critical Errors</td>
<td>This activity provides an overview over critical error messages logged in the SAP Adaptive Server error log file in the requested time frame. It returns a table listing all critical error messages sorted by occurrence.</td>
</tr>
<tr>
<td>Adaptive Server Enterprise job Scheduler</td>
<td>This activity checks if the ASE Job Scheduler is running.</td>
</tr>
</tbody>
</table>
6.7 SAP EarlyWatch Alert

SAP EarlyWatch Alert is a diagnostic service, which monitors solutions in SAP systems. Focused Run transfers the service data collected from the managed system to the SAP Support Portal, where data is analyzed and a report is created. You can access this report via your service inbox on SAP Service Marketplace.

Prerequisites

- Your managed system is connected to Focused Run.
- If your system is an ABAP-based system, create an http(s) connection so that data can be transferred from the managed system to Focused Run.
- On the managed system, activate the SDCCN transaction. Schedule a periodic task to get session data.

Features

The following managed system data is collected weekly, and passed to SAP Solution Manager:

- General component status
- System configuration
- Hardware
- Performance development
- Average response times
- Current system load
- Critical error messages and process interruptions
- Database administration

Activities

You can access the SAP EarlyWatch Alert report via your service inbox on SAP Service Marketplace. To do this, open EWA Reports on the launchpad. You can also access the SAP EarlyWatch Alert report in the SAP ONE Support portal by opening Service Messages.
6.8 Maintenance Planner

SAP Solution Manager’s cloud-based Maintenance Planner is the successor of Maintenance Optimizer. Maintenance Planner is the central tool to plan updates, upgrades, and new installations in your system landscape.

Maintenance Planner enables:

- Easy and efficient planning of all changes in your SAP system landscape
- Offers integrated processes for SAP Fiori apps and SAP S/4HANA
- All critical aspects of landscape maintenance in one tool.

Maintenance Planner is already available for SAP Solution Manager 7.1 onwards and mandatory for SAP Solution Manager 7.2 as well as for planning SAP S/4HANA and SAP NetWeaver 7.5+ based systems.

Prerequisites

- You have authorization to access Maintenance Planner with your S-user.
- You have your landscape details available in the SAP Support Portal.

Features

Maintenance Planner supports you with the following:

- Plan complex landscape maintenance process of updating, upgrading, or installing new systems in a dialog-driven process.
- Plan a new SAP S/4HANA system or convert an existing SAP ERP system to SAP S/4HANA.
- Plan deployment of SAP Fiori apps through integrated maintenance process from SAP Fiori apps reference library.
- Analyze the impact on dependent systems
- Consolidate planning for complete system tracks
- Correct erroneous system information as part of maintenance activity, that is, identify and evaluate changes to the landscape.
- Streamline planning of new installations of desired target stack level.

Activities

You can access the Maintenance Planner using the following link:
6.9 License Management

In the License Management application, you view the validity of existing licenses and maintenance certificates in the managed systems and can monitor the status of new licenses and maintenance certificates. You can also access information about how your maintenance certificates are distributed.

Distributing Maintenance Certificates

New licenses and maintenance certificates for managed systems are generated in the SAP Support Portal. The background job SAP_FRN_LIC_DISTRIBUTION downloads them to the Focused Run for SAP Solution Manager system. The licenses and maintenance certificates are available locally on the Focused Run system and can be downloaded manually.

You can select whether to automatically distribute maintenance certificates from the Focused Run system to the managed systems.

Features

Overview of License Data and License Data Distribution

The System Overview view displays information about licenses and maintenance certificates on your managed systems. In addition to basic information relevant to your systems, such as extended system ID and the status of automatic maintenance certificate distribution, it displays:

- Maintenance contract validity
- The current product version and highest possible release
- The status of licenses or maintenance certificates on the managed systems
- For all managed systems, existing licenses and maintenance certificates are read from the LMDB

<table>
<thead>
<tr>
<th>Status</th>
<th>License</th>
<th>Maintenance Certificate</th>
</tr>
</thead>
<tbody>
<tr>
<td>Red</td>
<td>The Valid to date has been exceeded.</td>
<td>The Valid to date has been exceeded.</td>
</tr>
<tr>
<td>Yellow</td>
<td>The Valid to date will be reached in less than 30 days.</td>
<td>The Valid to date will be reached in less than 30 days.</td>
</tr>
<tr>
<td>Green</td>
<td>The license is valid.</td>
<td>The maintenance certificate is valid.</td>
</tr>
<tr>
<td>Gray</td>
<td>No data. Rating is not possible.</td>
<td>No data. Rating is not possible.</td>
</tr>
</tbody>
</table>

- The status of licenses or maintenance certificates received from SAP Support Portal.
- The following status values are possible:

<table>
<thead>
<tr>
<th>Status</th>
<th>License</th>
<th>Maintenance certificate</th>
</tr>
</thead>
<tbody>
<tr>
<td>Red</td>
<td>No license available.</td>
<td>The Valid to date has been exceeded.</td>
</tr>
<tr>
<td>Yellow</td>
<td>—</td>
<td>The Valid to date will be reached in less than 30 days.</td>
</tr>
<tr>
<td>Green</td>
<td>The license is valid.</td>
<td>The maintenance certificate is valid.</td>
</tr>
<tr>
<td>Gray</td>
<td>Not data. Rating is not possible.</td>
<td>No data. Rating is not possible.</td>
</tr>
</tbody>
</table>
By choosing a specific system, you get the following detailed information, which License Management uses as the basis for the displayed status values:

- License data from the managed system.
- This is determined by the Focused Run for SAP Solution Manager system.
- License data received from SAP Support Portal.
- This data can be distributed to the managed system
- Log messages for the managed systems
- These can be error messages or success messages for the license data found and transferred.

**Automatic vs. Manual Distribution of Maintenance Certificates**

If the managed systems are connected to the Focused Run for SAP Solution Manager system and all prerequisites are fulfilled, you can activate automatic license and maintenance certificate distribution.

If managed systems are not connected to the Focused Run for SAP Solution Manager system, you can download licenses and maintenance certificates from the Focused Run system, and install them on the managed systems manually.

**Automatically Distributing Maintenance Certificates**

When automatic license management is active, maintenance certificates are distributed automatically. Maintenance certificate distribution is supported for ABAP and Java systems.

To activate or deactivate automatic distribution for managed systems, proceed as follows:

1. In the System Overview, select at least one managed system.
2. Under Automatic Distribution, choose either Activate Automatic Distribution or Deactivate Automatic Distribution.
3. The Automatic Distribution Status column shows the new status.

**Downloading Licenses and Maintenance Certificates**

If licenses and maintenance certificates for a managed system have been transferred from SAP Support Portal and saved on the Focused Run system, you can download the license data and save it locally as a text file.

You can upload these text files to the license application of the managed systems. For ABAP systems use SAP License Management (transaction SLICENSE). For Java systems use SAP NetWeaver Administrator.

To download license data for managed systems from the Focused Run system, proceed as follows:

1. In the System Overview view, select at least one managed system.
2. Choose Download Licenses.
3. To save the licenses and maintenance certificates, select the target directory.
4. The license of a single system is saved as a text file. The licenses for several systems are grouped as text files, and saved as a ZIP file.
7 Advanced Integration Monitoring

Advanced Integration Monitoring provides monitoring of data exchange in-between different systems within a system landscape or between systems within a landscape and external components (e.g. public cloud services). Data is collected on managed system side (e.g. for IDocs and PI Messages) and transferred to the Focused Run system or is directly pulled from APIs exposed by the public cloud services into the Focused Run system.

Scope
The application supports the following:
- Monitoring of IDocs
- Monitoring of PI messages
- Monitoring of integration and Cloud-related exceptions

Features
Overview
There are two sections on the Overview page:
- **Status Overview**: In this section, you can view the total number of systems or cloud services in the selected scope and for the selected time range. You can also view the status of the different modules (PI messages, IDocs and exceptions) for the selected scope.
  - The various statuses are as follows:
    - Red: Number of Messages / Exceptions in error state
    - Yellow: Number of Messages / Number of Exceptions with Warnings
    - Blue: Number of Messages in backlog state
    - Green: Number of Successful Messages
- **Component Overview**: You have one overview for messages and one overview for exceptions.
  - **Messages by System and Interface Type** gives an indication on the status of PI messages and IDocs for the components in scope via a stacked bar chart for the selected time range. The color code used in the chart is the same as in the Status Overview.
  - **Exceptions Distribution** visualizes the number of exceptions per exception category in a pie chart.

PI Monitoring
On the PI Monitoring page, there are cards that give you an overview on the status of the PI messages per business system. The cards are distributed into different areas grouping e.g. adapter engines or PI ABAP components.
- Each card displays information for the selected time frame on how many messages were processed and how many of them are currently in an error or in backlog state.
- **Optional via View Settings**: A trend line in the card is visualizing the error and backlog distribution for the last hour.
- Click on a number in the card to drilldown into a more detailed view:
  - Here the message distribution per Sender/Receiver attributes is displayed.
  - You can change the aggregation type and the display mode via the view settings.
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Advanced Integration Monitoring

You see a list of all single PI messages relevant for the drilldown and their status information.

In addition, you can search for a dedicated PI message via the PI Message ID. The search result displays a list of business systems on which the PI message was found.

IDoc Monitoring

On the IDoc Monitoring page you see different cards giving you an overview on the status of the IDocs per business system.

- Each Card contains an information for the selected time frame on how many inbound and outbound messages were processed and how many of them are currently in an Error or Backlog state.
- Optional via View Settings: A trend line in the card is visualizing the Error and Backlog distribution for the last hour.
- Click on a number in the card to drilldown into a more detailed view:
  - Here you see the IDoc distribution per Message Type and partner information.
  - You can change the aggregation type and the display mode via the view settings.
  - Click on the status summary or the total number to further drill down to the single IDocs:
    - You see a list of all single IDocs relevant for the drilldown and their status information. Click on the Message ID to open a Pop-Up with further details.

In addition, you can search for a dedicated IDoc via the IDoc document number. The search result displays the business systems on which the IDoc was found.

Integration and Cloud Error Monitoring

On the Integration and Cloud Error Monitoring page, you get an overview of the exception distribution for the selected scope over different categories. Categories can include exceptions that happen on the on-premise side (e.g. WebService exceptions or ABAP Application Log errors) or on the cloud side (e.g. errors on SAP HCI or IBP). In addition, you can see a bar chart showing the number of exceptions per category and an overview on the exception amount during the current week.

Click on a specific category to drilldown for a specific exception category:

- You see different charts showing the evolution of the amount of exceptions per day/week/month.
- You see a list of single exceptions with relevant error messages for the selected time frame. Click on a single exception to drilldown to further error details such as the error context, calling stack, and payload of the processing unit.

The monitoring of following exception categories is supported:

- ABAP-related categories
  - ABAP Application Log
  - ABAP Runtime Error
  - ABAP Aborted Jobs
  - ABAP Syslog
  - ABAP Update Errors
  - ABAP Web Service Errors

- Categories related to hybrid scenarios (onPremise)
  - SAP Ariba Network Integration Add-On Errors
  - CONCUR TE Foundation Add-On Errors
  - SAP HCM Employee Errors
  - SAP HCM Compensation Errors
- SAP HCM OnBoarding Errors
- SAP HCM Recruiting Errors
- SAP HCM Variable Pay Errors

**Categories related to cloud services**
- Dell Boomi Process Errors
- SAP ByDesign Document Errors
- SAP Hybris C4C Errors
- SAP HANA Cloud Integration Errors
- SAP HANA Cloud Integration for Data Services Errors
- SAP Cloud Platform Application Errors
- SAP IBP Errors
- Errors related to SAP Success Factors Middleware Integration
- Errors related to SAP Success Factors Scheduled Jobs
- Errors related to SAP Success Factors Integration
8 Advanced Event and Alert Management

8.1 Alert Management

This application is the central access point to handle alerts for Systems, DBMS and Hosts. It allows efficient alert handling based on consolidation of single alerts to alert aggregates.

Features

- On the Overview page, you can view multiple graphical reports on the open alerts that also act as visual filters. The reports are displayed based on the scope selected.
- On the Alerts screen, you can do the following:
  - Perform actions like confirm, postpone, and assign processor to a single as well as multiple alerts.
  - View the alert details. Single alert details display information like rating, metric, documentation, and action log.
  - **Rating**: Displays the changes in ratings of all alert groups.
  - **Metric**: Displays the metric details, metric documentation and allows navigation troubleshooting guides.
  - **Documentation**: Displays SAP and custom description of the alerts.
  - **Action**: Displays the logs on an alert like processor change and postponement.