Advanced Root Cause Analysis and Health Checks with Focused Run for SAP Solution Manager

Dr. Jens Claussen, SAP
Patrick Richarts, SAP
December, 2019
PUBLIC
Legal disclaimer

The information in this presentation is confidential and proprietary to SAP and may not be disclosed without the permission of SAP. This presentation is not subject to your license agreement or any other service or subscription agreement with SAP. SAP has no obligation to pursue any course of business outlined in this document or any related presentation, or to develop or release any functionality mentioned therein. This document, or any related presentation, and SAP’s strategy and possible future developments, products, and platforms, directions, and functionality are all subject to change and may be changed by SAP at any time for any reason without notice. The information in this document is not a commitment, promise, or legal obligation to deliver any material, code, or functionality. This document is provided without a warranty of any kind, either express or implied, including but not limited to the implied warranties of merchantability, fitness for a particular purpose, or noninfringement. This document is for informational purposes and may not be incorporated into a contract. SAP assumes no responsibility for errors or omissions in this document, except if such damages were caused by SAP’s willful misconduct or gross negligence.

All forward-looking statements are subject to various risks and uncertainties that could cause actual results to differ materially from expectations. Readers are cautioned not to place undue reliance on these forward-looking statements, which speak only as of their dates, and they should not be relied upon in making purchasing decisions.
Agenda

Overview Run Market

Focused Run for SAP Solution Manager

Advanced Root Cause Analysis

System Analysis

Automated System Health Check

Further Information
Overview Run Market
Operations for hybrid landscapes

- **SAP Solution Manager**: On Premise based operation platform for hybrid landscapes operated and used by Customers
- **Focused Run**: On Premise based operation platform for hybrid landscapes operated by Service Providers or Customers and used by Service Providers and/or Customers
- **SAP Cloud ALM**: SAP Cloud Platform based operation platform for hybrid landscapes operated as SaaS Service by SAP and used by Customers

**System, Application and Business Process Management Data**

- **HEC, Hosting, AMS and IaaS Service Providers**
- **Customer On Premise Landscape**
- **SAP Cloud ALM** operated by SAP and used by Customers
- **SAP Cloud Platform**
- **SAP C/4HANA**
- **SAP Fieldglass**
- **SAP Customer Experience**
- **SAP Cloud Platform**
- **SAP SuccessFactors**
- **SAP Ariba**
- **SAP Concur**
- **SAP S/4HANA Cloud**
- **SAP SaaS Cloud / SAP Cloud Platform**
Different Operation Platforms for different target groups

**SAP Solution Manager**

**Target group:**
- Medium and large hybrid customers
- Customers, who are satisfied with the currently provided functional scope

**Available**

**Focused Run for SAP Solution Manager**

**Target group:**
- Service Providers
- Large and very large hybrid customers
- Customers with advanced needs, which go beyond SAP Solution Manager

**Available**

**SAP Cloud ALM for Operations**

**Target group:**
- Cloud-centric customer
- Small and medium hybrid customers
- Customers, who are requesting cloud based Operation Platform

**Beta**
Focused Run for SAP Solution Manager
Focused Run – Mission statement

• Is a **powerful solution for customers & partners** to operate their solution **centralized and highly automated with minimal TCO impact**

• **Addresses advanced customer needs** in scalability, data volumes, security, automation, openness, dashboarding & artificial intelligence

• Uses the **full power of SAP HANA as a platform**, including replication, partitioning, predictive analytics, and compression

• Is a **separate installation**, which can run **side-by-side with an existing SAP Solution Manager**

• Provides feature rich and powerful **functionality dedicated to operations of IT solutions**

• Isn’t covered by maintenance fee, but **needs to be licensed separately from SAP**
Focused Run – Use cases in scope

Advanced Analytics & Intelligence

Advanced System Management

Advanced Integration Monitoring

Advanced User Monitoring

Advanced Event & Alert Management

Advanced Configuration Monitoring

Presentation Layer

Application Layer

Integration Layer

Gateway

SAP Fiori/SAPUI5

SAPGUI/DIAG

Enterprise Portal

Fiori-as-a-Service

Mobile Services

Presentation Layer

Application Layer

Integration Layer

SAP Cloud Platform

Advanced Root Cause Analysis

Non-SAP (WebMethods, Tibco, …)

SAP Process Integration

Advanced Event & Alert Management

Advanced Configuration Monitoring

SAP GUI/DIA

SAP FIORI/SAPUI5

Enterprise Portal

S/4 HANA

ByD/C4C

Concur

Fieldglass

Advanced Event & Alert Management

Advanced Configuration Monitoring

SAPGUI/DIA

SAP FIORI/SAPUI5

Enterprise Portal

S/4 HANA

ByD/C4C

Concur

Fieldglass

Advanced Event & Alert Management

Advanced Configuration Monitoring

SAPGUI/DIA

SAP FIORI/SAPUI5

Enterprise Portal

S/4 HANA

ByD/C4C

Concur

Fieldglass

Advanced Event & Alert Management

Advanced Configuration Monitoring

SAPGUI/DIA

SAP FIORI/SAPUI5

Enterprise Portal

S/4 HANA

ByD/C4C

Concur

Fieldglass
Advanced Root Cause Analysis
Advanced Root Cause Analysis
Deep dive root cause analysis on request
Deep detailed root cause analysis capabilities tailored to your needs

- Advanced Root Cause Analysis capabilities as **System Analysis, Trace Analysis and File System Browser**
- **System Analysis:**
  - Intuitive and contextually linked dashboards enabled guided root cause analysis
  - **Standard content** is provided out-of-the-box for HANA, ABAP, J2EE, BO, Apache Tomcat, and OS
  - Additional high volume **data collection can be switched on demand** e.g. in specific hyper care phases
- **Open KPI Store** to integrate 3rd party data sources as APM tools or Infrastructure Management tools
- **Trace Analysis** allows to **dynamically switch on** deep detailed component specific traces across system and technology
- **File System Browser** gives secure read-only **access to remote file systems** for diagnosis purposes
System Analysis
System Analysis
Overview

System Analysis provides views to evaluate the historical behavior of metrics and KPI’s. The view content is pre-defined according to SAP best practice and usable out of the box. For user individual adjustments a powerful personalization capability is provided. Metric Prediction is enabled in System Analysis.

System Analysis provides e.g. the following pre-defined dashboards (system dependent):

- ABAP on HANA
- ABAP Basis
- ABAP Exceptions
- ABAP Performance
- SAP HANA Overview
- Host Metrics
- HANA Thread Samples
- ABAP Work Process Samples
- AS Java
- Apache Tomcat
- Business Objects Enterprise
- BO Data Services
System Analysis
System Analysis Personalization

• Each view in System Analysis can be customized by specifying the attributes:
  • **Scope** (inherited or selected)
  • **Metrics** (all metrics belonging to the scope are listed and can be selected)
  • **Time Range** (inherited or selected)
  • **Resolution** (automatically or selected).

• In addition the visualization can be customized by:
  • **Legend** (on/off)
  • **Data Labels** (on/off)
  • **Chart Type** (line, column, bar, …)
  • **Left/Right Axis Labels** (free text)
System Analysis provides the possibility of **metric integration**. Such metrics could come from 3rd party monitoring tools like Dynatrace, etc.

3rd party metric integration via **Open KPI Store**:  
- Generic persistency and display of time series metric data  
- Rest service for receiving data  
- Flexible visualization  
- Housekeeping
Demo: System Analysis
System Analysis – Features 1/3

• Every page contains a header toolbar showing the selected time range and scope. The time range can be directly adjusted via scroll buttons or by choosing one of the pre-defined time ranges. Two-level tooltips for data point details:
  – Hover tooltip for simple display
  – Click on data point for detailed display: all kpis (value/min/max/count), context information, series information; links to other pages and as input for opening other applications like file system browser and system monitoring.

• Variants of the major chart types: Time series, 2nd value axis, stacking are possible. Also, pie and donut chart types are now supported.
System Analysis – Features 2/3

• **Interactive zoom** by dragging rectangles on data points – auto-adjusting resolution

• **Pre-defined analysis** paths on some pages: HANA Thread Samples, ABAP Work Process Samples

• **Metric forecast** for System Monitoring metrics

• Powerful **aggregation and filtering** (transient for all pages, personalizable for custom pages):
  – Selectable aggregation dimensions for drilldown
  – Filtering on every dimension
  – Selection of aggregation logic: min/max/average/sum/count
System Analysis – Features 3/3

- A dedicated dashboard for Application Server ABAP running on SAP HANA has been added.

- The page toolbar shows an indicator, if for systems in scope a system anomaly is expected.

- Collection for detailed root cause analysis capabilities, e.g. exception management data, ABAP performance data, and SAP HANA thread samples can be activated and deactivated directly from the application.

- Aggregation of selected metrics for selected systems to achieve a long-term history. Transparently used in System Analysis.
Automated System Health Check
It is possible to **schedule** (daily, weekly monthly, ad hoc) the **automatic execution of System Health Checks** based on the SAP Guided Procedure Framework. The registered recipients will get an **email** which includes the **System Health Check document** in HTML format.

Some examples for included checks:

- **Availability Reporting** based on Service Availability Management Data
- **ABAP Performance** (Dialog Response time, HTTP Response Time, Long Running Jobs, ...)
- **ABAP Exceptions** (Lock Entries, Short Dumps, ...)
- **OS Level Checks** (Top CPU Processes, File System Free space)
- **Database Growth**
- **Compliance Checks** based Configuration & Security Analysis
Automated System Health Check – How to

SAP delivers **ready-to-use templates** for ABAP System Health Check Guided Procedures.

SAP delivers **predefined Guided procedure plug-ins** that check certain aspects of an ABAP system, Host, HANA DB or Sybase ASE database and return some detailed information and an evaluation.

These plug-ins can **easily be customized** (e.g. time period to be evaluated, bar chart or table output) and re-used in customer guided procedures.
The **execution** of the guided procedure **can be scheduled** periodically in background using **Guided Procedure Planning Management**.

Defined recipients **receive an email** with the result report(s).
Demo: Automated System Health Check
Example Health Check Report
Further Information
Further Information – Advanced Root Cause Analysis

Section “Advanced Root Cause Analysis” in the Focused Run Expert Portal

- System Analysis
- Open KPI Store
- Aggregation Configuration (forthcoming)
Further Information – System Health Check

• How to plan the automatic execution of Guided Procedures (e.g. System health Check) automatically in background.

• How to edit the contents of Guided Procedures (e.g. System Health Check)

• Description of Guided Procedure Plug-ins that can be used in guided procedures (e.g. System Health Check)

• Overview over Guided Procedure Framework in Focused Run


Join our social media family

Follow us on Twitter (#solman and #CloudALM), get the latest news, learn about support offerings and events!

Search for “SAP Cloud ALM” on YouTube for product demos, expert interviews and event insights!

Subscribe to WhatsApp SAP Product Support channels and receive updates including KBAs, wiki's, guided answers, SAP Notes and “hot tips”.

Join the SAP Digital Business Services LinkedIn group for networking and updates!
Thank you.

Contact information:

**Stefan Lahr**  
Support Expert  
[stefan.lahr@sap.com](mailto:stefan.lahr@sap.com)