Solution Manager: What Is It & What Can It Do for Your Business?

A Solution Overview written by Ken Asher, Sr. SAP Architect
Are you considering implementing additional functionality within Solution Manager? Do you want to understand how different features within SolMan can benefit your business? Or do you already understand the features but want to ensure you are prepared for their implementation?

The following Solution Overview is designed to provide SAP customers with an understanding of what SolMan is, what it can do for your business, steps you must take to prepare for implementation, and third party tools integration.

Subsequent issues of our BayForce newsletter will include a detailed look at ChaRM and CCMS.
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1 SOLMAN Background

The SAP Solution Manager or SOLMAN is a type of application which:

- Takes a consistent business-process and phase-oriented approach
- Provides End-to-end functionality for application management and continuous improvement
- Provides full life-cycle support and collaboration with SAP
- Contains best practices for implementation, operation and optimization of SAP solutions
- Is delivered as part of the annual maintenance fee

SOLMAN provides the necessary tools around the Implementation, Operational and Optimization aspects of your SAP Application life cycle.
SOLMAN provides insights into all of the following shown in the picture below:
1.1 Application Lifecycle Management

SAP SOLMAN provides support for all phases of the Application Lifecycle Management. The following diagram is provided by SAP to show the support of the tool in all phases of the Application Lifecycle.

Implementation of SAP solutions
- SAP methods & tools
- Global rollout
- Customizing sync.
- E-learning mgmt.
- Test management

Upgrade of SAP solutions
- SAP methods & tools
- E-learning mgmt.
- Test management

Change Request Management
- Follows ITIL standards
- Maintenance processes

Implementation

Operations

Solution Monitoring
- System monitoring
- Business process monitoring
- Central system administration
- Solution reporting
- Service Level reporting
- SAP EarlyWatch Alert

Service Desk
- Best Practices for messaging
- Integration of 3rd-party help desks

Root Cause Analysis
- Safe remote access
- Performance measurement
- Logs and Dumps
- Traces
- Technical configuration

Delivery of SAP Services
- Onsite/remote delivery
- Issue Management
- Maintenance Optimizer

Required for the delivery of SAP Standard Support Services
1.2 Functionality Overview

SAP SOLMAN Offers a broad range of functionality for Project Implementation and Operations as shown below:

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1.3 SOLMAN in the lifecycle of an Implementation Project

During the lifecycle of an Implementation project, Solution Manager supports all project phases.

1.3.1 Design Phase

- Define methodology (select and design roadmap)
- Define and setup system landscape
- Define documentation strategy and deliverables management
- Create business process model and designs

1.3.2 Build Phase
• Perform and document backend system configuration
• Develop custom RICEFW objects
• Plan test approach and manage testing
• Track development, configuration and test progress

1.3.3 Test and Deploy

- Plan and manage training approach
- Create training materials
- Define roll-out strategy
- Manage local/global business process approach
1.3.4 Manage Project

- Compare and harmonize configuration settings across system landscape
- Throughout the project: track deliverables, configuration, development, testing and training progress

2 Pre-Requisites

2.1 System Landscape

The System Landscape (transaction SMSY) is the central point in Solution Manager to configure the landscape (both SAP and non-SAP components) including detailed technical information about the components and the connections between them.

Features:
- Central configuration of satellite systems
- Automatic collection of system information
- Creation of (Trusted) RFC Connections and RFC Users
- Creation of logical components
- Logical components group all systems of a transport track. They can include virtual systems, that work as placeholders for future systems that are not yet available, but transports can already be sent there (transport buffer file exists).
- The system information is used for system monitoring, ChaRM and to receive tailored updates from SAP Support.
- The correct setup of the system landscape is a prerequisite to nearly all other functionalities of Solution Manager.
2.2 Document Management

SAP Solution Manager contains a complete Document Management System that supports the documentation of the SAP solution at any level and across all functionalities in order to support the project, the global roll-out and later on the solution support.

Functionality:
- SAP Solution Manager offers a wide range of document management functions (status schemes, versioning, history, detailed authorizations, custom attributes etc.)
- Complete MS Office Integration (but also other files)
- Digital signature for document sign-off
- Documents are available in Projects, as well as in Roadmaps, Test and Service Tickets
- SAP business process repository (BPR) allows you to add generic SAP business and setup documentation for the blueprint structure and the configuration.
- In the context of global roll-out, all documents of a project can be easily compared with a reference template.

Prerequisites:
- Creation of a project
- Set up of the business blueprint

Benefits and Value:
- Integrates the documentation and solution set up along business processes
- Allows you to run a central project documentation point
- Within a global roll-out the document can be delivered, managed and updated per roll-out
- All documents related to a change request can be identified
- Easy status tracking of documentation, test and training
2.2.1 Document Management Screens in SOLMAN

Creation

2.2.2 SOLMAN Document Management –Functional Teams

The Functional teams can leverage the Document Management functionality offered by SOLMAN and centralize all process and project related documentation.

The Functional team is encouraged to go through the wealth of SAP library web resources on the following topics:

- Document Repository
- Edit Documents
- Solution Manager and SAP KW Documents
- Assign Authorizations for Documents
- Status, Keywords and Documentation Types
- General Documentation
- Create Business Blueprint Document
- Create Configuration Guide


Navigate to: SAP Solution Manager -> Implementing and Upgrading SAP Solutions -> Projects -> Document Management
2.3 Project Administration

All implementation functions within Solution Manager are based on the project. The project administration is the single point for all central project administration tasks which need to be performed.

There are several “Project Administration” functions available:

- Setup the Project with general data
- Creation of project templates
- Defining project standards (status values, documentation types, keywords)
- Definition of the project landscape
- Creation of IMG projects
- Definition of transport details
- The Project Administration is the prerequisite for all other Solution Manager functions that’s why at least one project with a specific type needs to be created

2.3.1 Project Administration Screens in SOLMAN
3 Implementation

3.1 Road Maps

Along with the business process and system documentation, SAP offers the Roadmap functionality to track the progress of the project work. SAP delivers their best practise methods (ASAP) for a variety of products with the Solution Manager. Roadmaps contain the following information (RMMAIN):

- Phases of the project, e.g. Project Preparation, Business Blueprint, Realization, GoLive.
- Work packages within the project phases (eg. Initial Project Planning, Project Procedures).
- Document Templates (“Accelerators”) and description of activities to be carried out within the work packages.
- Milestones, which can be used for Quality Management processes (e.g. Quality Gates, QPI).

For each project a roadmap can be selected from a list of predefined SAP roadmaps (e.g. ASAP Implementation, ASAP Global Template Rollout, etc). Changes to the central Roadmap are immediately visible in all projects that use this Roadmap.

3.2 Business Blueprint

The Business Blueprint (transaction SOLAR01) is used to structure, analyze and document all to-be business processes within a hierarchical 3-level structure

Functionality:

- The business process hierarchy is set up in
  - Business Scenarios (Level 1)
  - Business Processes (Level 2)
  - Business Process Steps (Level 3)

- Pre-delivered SAP business content (documentation, transactions, configuration) are shipped with Solution Manager or can be downloaded from SAP Service Market Place
  - Administrative information (responsible, status, keywords, plan/actual dates) available on all levels
  - Use of document management at any level
  - Add/execute relevant transactions at structure level
  - Analysis across all structure levels regarding status, contents, documents
3.3 Configuration

The Functional teams can leverage the Configuration functionality offered by SOLMAN and centralize all process changes and associated documentation via SAP SOLMAN.

The configuration functionality (transaction SOLAR02) offers the possibility to centralize process-orientated system configuration and custom development to a single point of entry.

Functionality:

- Centralized configuration of defined logical components
- Use of pre-delivered SAP business content (documentation, transactions, configuration, BC-sets)
- Administration of any structure level (responsible, state, plan/actual efforts)
- Use of document management at any level
- Add/execute relevant configuration, custom development, BC-Sets to individual structure level
- Analyzing of all structure level regarding status and plan/actual effort
- Platform and system starting point for test and training management

Prerequisites:

- Creation of a Project
- Setup of Business Blueprint structure
- Setup of System Landscape and Logical Components
- Creation of an IMG Project

Benefits and Value for Teams:

- Document and link customizing and custom development for all satellite systems via SolMan
- Automated checks avoid typos or inconsistencies
- Lock of transaction SPRO in satellite systems ensures that no undocumented customizing can be performed
- Assignment of IMG nodes, developments, RICEFW and Configuration Documentation to processes or activities
- Support of global roll-out with configuration templates
- Easy implementation of pre-delivered configuration content
3.3.1 Configuration Screens in SOLMAN

![Configuration Screens in SOLMAN](image)

3.3.2 Configuration – Functional Teams

This part of the project configures the process requirements specified in the Business Blueprint phase, in the system.

If you use objects from the Business Process Repository in your own structures, some of them are already assigned to transactions and BC Sets. If you create structures independently, i.e. without objects from the Business Process Repository, you can assign transactions in the transaction Business Blueprint.

You can assign BC Sets, IMG objects and test cases/business test requirements, in the transaction Configuration.

**Prerequisites**

You have selected scenarios and processes or created your own processes using the Business Process Repository, in the Business Blueprint phase.

You are in the Realization phase and have called the Configuration transaction.
Features

In this project task, we can:

- **Edit transaction/program assignments**
  
  You can run the transactions which are already assigned in the Transactions tab, add new transactions, or remove not-needed transactions from the project scope.

- **Assign/edit BC Sets**
  
  You can assign BC Sets to project steps, in the Configuration tab, view the contents of the assigned BC Sets, and remove not-needed BC Sets from the project scope.

  You can activate one BC Set or all BC Sets assigned to a process.

  You can create new BC Sets in application systems, and assign them in the Solution Manager, for project or company-specific settings which you want to use (e.g. in a global rollout or to create your own solution).

- **Make/edit IMG assignment**
  
  You can assign IMG objects to the project steps. You can see and edit these settings, and the settings made by BC Sets, in the component system IMG.

- **Edit test cases**
  
  You can perform first function tests directly after the configuration. You can also run CATTs to familiarize yourself with how a transaction works. You can also create test cases.

- **You document the settings which are relevant to the configuration, along the project structure, in the Project Documentation tab. For more information, see Processing Documents.**

- **Create/change issues and problem messages in the Issues/Messages tab.**

**Help and Reference for Configuration – Functional Teams**

The functional teams can leverage the wealth of information on various Configuration options in SOLMAN by referring to this SAP library web resource:


Navigate to: SAP Solution Manager -> Implementing and Upgrading SAP Solutions -> Projects -> Document Management
3.4 Test Management

SAP recommends two options for testing SAP solutions:

- Use of Solution Manager combined with 3rd Party tools (esp. HP Quality Center for SAP)
- Use of Solution Manager Test Workbench only. The Test Workbench provides a comprehensive toolset supporting functional testing (manual as well as basic automated testing).

Some customers leverage HP Quality Center which can be integrated into SAP Solution Manager. It has a broad range of features beyond what is offered by the SOLMAN Test Workbench. However for quick testing, the SOLMAN Test Workbench can still be leveraged.

Some of the features of the SOLMAN Test WorkBench for Basic Testing:

- Easily use test cases and recorded eCATT test scripts stored in the business process structure
- Create test plans as a logical structure for test phases
- Divide test plans into test packages which are assigned to one or more testers
- Directly jump into test system and respective transaction
- Document test results within the Solution Manager
- Analyze all test results and test status within the Solution Manager
- Integrate the Test Workbench with the Service Desk using tickets to raise and manage bugs discovered
3.4.1 SOLMAN Screens for Test Management via Test WorkBench

Assign test cases to business processes

Create test plans

Create test packages and assign testers

Analyze test results
4 Operation
The Solution Manager delivers integrated solutions and tools to efficiently monitor and operate your SAP Landscape.

After the SAP Solution has been established, SOLUTION MANAGER supports the operations team with the following functionalities:

4.1 Operation – Prerequisite – Solution Landscape

The Solution Landscape makes it possible to manage and to monitor systems and business processes in operational processing.

A solution contains systems, which you assign according to certain criteria, for example:

- It contains all systems used in the production processing in your system landscape (i.e. on which one or more of your most important business processes run). You can proactively monitor the business processes, business process steps, and interfaces of these systems (e.g. all production systems).
- It has a restricted view of the systems in your system landscape (e.g. for a business area).
- The solution scope and settings can be specified in the Solution Directory.

Prerequisites:
- Physical and technical connection to satellite systems
- Assigned the Solution Monitoring role to the users
- Defined systems and logical components in the System landscape maintenance (transaction SMSY)
- The correct setup of the solution landscape is prerequisite to almost all Solution Manager operation functionalities like Monitoring, Service Desk, Change Request Management etc.
4.2 Solution Manager Diagnostics

The current version of **Solution Manager Diagnostics** focuses on root cause analysis for SAP Web Application Server JAVA Stack and SAP Enterprise Portal with the following key features:

- Central Configuration Display
- Central Log File Viewer
- Software Change Tracking
- Portal Monitoring and Single Activity Trace
- HTTP Analysis
- JAVA Thread Dump Analysis
- JAVA Performance Analysis with WilyTech Introscope
- Load tests with Mercury Loadrunner

**Prerequisites:**
- The Solution Manager Diagnostics is based on SAP Web AS 6.40.
- SMD is required if you run at least one SAP Web Application Server JAVA Stack in your SAP Solution
- SAP PI (dual stack) and EP will sit on SAP Web Application Server JAVA Stack.
Benefits and Value:

- Solution Manager Diagnostics provides efficient and safe root cause analysis for SAP NetWeaver.
- The SMD is a pure analysis tool, it has read access only. SAP wants to avoid being accused of damaging the Java system. For Java, without SMD, you need to connect to the file system of the server in order to be able to read all the system logs.
- One central web-enable console
- Integrates in Service Desk scenario
- Ensures standardized operations and effective optimization

4.2.1 SOLMAN Screens for Solution Manager Diagnostics

Information flow:

![Information flow diagram]

Work Center - Root Cause Analysis

![Work Center screenshot]

Solution Manager Diagnostics - Root Cause Analysis

![Solution Manager Diagnostics screenshot]
### 4.3 Service Desk

The Solution Manager offers all functionalities to set up a Service Desk scenario for the customers system landscape.

- One-click support message creation from satellite systems and automatic Data Collection (e.g. Time, System, Client, User, Transaction) from sending system
- Various possibilities to customize the scenario (e.g. Support Desk Org., Status scheme, Parties involved)
- Basic Ticket Reporting (no built-in SLA-time reporting!)
- Solution Database functionality to store problems, root-causes and re-usable solutions
- In case of an existing Support Organization connection of 3rd Party Ticketing Tool possible (WebService)
- Service Desk is based on a reduced SAP CRM system already integrated in SAP Solution Manager
- Extension “Service Desk XT” (extra license costs!) enhances the Service Desk to support non-SAP components

**Prerequisites:**
- Setup of system landscape and logical components
- Configure RFC to Solution Manager in all satellite systems
- SAP PI (dual stack) and EP will sit on SAP Web Application Server JAVA Stack

**Benefits and Value for SAM:**
- Very comfortable ticket creation for SAP end/key users
- Service Desk as SPOC of Support Services for all connected SAP (and optional: non-SAP) Systems
- Automatic support team assignment for SAP components
- Seamless ticket escalation to SAP Global Support
- Compliant to ITIL Service Support process model
- Incident tickets highly integrated with other SolMan functionalities, e.g. creation from / assign. to Roadmap, Blueprint, Configuration, Monitoring, Test, ChaRM
4.3.1 SOLMAN Screens for Service Desk

- Create a Support Message
  
  - Creation of support message directly in the satellite system → Automatic transfer of necessary data to Solution Manager (e.g. system, client, user, module, transaction).
  - Documents like e.g. screenshots of the error message can be attached to the support message.

- Process Message

  - Service Desk in SAPGUI or via WebFrontend
  - Transaction CRM_DNO_MONITOR
  - Analyze the Error Message
  - Assign Responsibilities
  - Search for and apply OSS Notes
  - Forward Messages to SAP Active Global Support
  - Send out emails to Requester based on status
4.4 Change Request Management

The SolMan Change Request Management (ChaRM) provides all functionalities to govern and operate a system change scenario from the raise of a request for change (RfC) over the approval process to the implementation, test and transport management.

- Covers all types of application changes:
  - Urgent live system corrections
  - Periodic SAP system maintenance
  - New software release implementation
  - Roll-out based system adaptations
- Supports workflow based role scenario with different roles: Requester, Change Manager, Developer, Tester
- Integrates seamlessly with the Service Desk (B03)
- ChaRM is SAP’s answer to the ITIL Service Support Change Mgmt. scenario: ChaRM is ITIL compliant
- ChaRM provides an overview over all RfCs and change implementations within the entire system landscape

Prerequisites:
- Solution Manager Project set up (Template, Implementation or Maintenance)
- Configured System Landscape (X01)
- Configured Transport Routes in all satellite systems

Benefits and Value:
- Complete integration with Service Desk to enable efficient and effective production support
- No system changes can be transported to productive systems without appropriate approval (recommended setup)
- Complete history log available for all system adoptions
- Import of changes via maintenance and project cycles
- Controlled system change implementation, testing and transportation procedure supported by an end-to-end change management workflow
4.4.1 SOLMAN Screens for ChaRM

Change Request Approval

Integration to Transport Routes

Transaction Monitor - Service Processes

System Change Activities Monitoring

Project-specific Task Lists

Search for Change Processes

System Change History Log
5  SOLMAN Integration with 3rd party tools

The following diagram shows the possible SOLMAN Integration with 3rd party tools.

Microsoft Visio 2003, ARIS for NetWeaver, BPM-X Integration

Automated Stress-, Performance- & Load Test: HP Quality Center, Compuware QA Suite

SPP: SAP Productivity Pack & Oracle OnDemand

Wily Introscope Advanced monitoring with graphical analysis (e.g. Tidal Horizon)

HP Quality Center: Ready-to-use interface for error messages (from EP1)

Every Ticket Tool with generic Web-Service Interface (e.g. BMC Remedy)

...and more ...

A Implementation

Prerequisites
X01 – System Landscape
X02 – Document Management
X03 – Project Administration

Implementations
A01 – Roadmaps
A02 – Business Blueprint
A03 – Configuration
A04 – Test Management
A05 – Training Management
A06 – Global Roll-Out
A07 – Customizing Synchronization
A08 – Project Analysis

B Operations

Prerequisites
X04 – Solution Landscape

Operations
B01 – System Monitoring
B02 – Solution Manager Diagnostics
B03 – Business Process Monitoring
B04 – Service Desk
B05 – Change Request Management
B06 – Maintenance Optimizer
B07 – SAP Support Integration

...and more ...
6 SOLMAN Summary – What functionality and which phase?

The following diagram shows which aspects of implementation and operation functionality can be leveraged in which phase of the project as a summarized view.
About the Author

Ken Asher holds a Masters degree in Engineering, Mathematics, and Computer Science. He has over 17 years of SAP experience and has worked as an SAP America liaison to various clients to resolve critical architecture and solution issues throughout his career including during his time with Andersen Consulting/Accenture. Ken was also a member of SAP’s ATAC team for advanced technical application consulting. He has a deep understanding of SAP architecture and has worked with all of the latest SAP technologies. In many of his previous projects he has been responsible for reviewing and recommending strategy as well as project planning for SAP clients including GMAC, Raytheon, and MIT. Ken is currently deployed by BayForce to assist Amtrak with multiple ongoing projects including one of their largest initiatives for Strategic Asset Management.

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