



All You Need to Know About Security in SAP Solution Manager 7.2

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Session ID # ASUG84182

About the Speakers

Ranjit Prithviraj

- Managing Director, Fitch Ratings
- Responsible for global strategy and management of Enterprise applications for Fitch Group
- “Are we there yet”

Sanjay Mahajan

- Director, Fitch Ratings
- Over 20 years of experience in SAP administration, security, databases including HANA, and various operating systems
- “Need to get a hobby other than Fitch and SAP”

Key Outcomes/Objectives

1. Solution Manager system security is as critical as security on other production systems
2. A large number of roles are provided by SAP out of the box and can be used directly
3. Only roles that are related to the used scenarios are relevant

Agenda

- **Fitch Overview**
- Concepts of Solution Manager security
- Solution Manager roles and users
- Various interfaces and their security set up
 - CRM UI
 - Work Center
 - NetWeaver Business Client
 - Fiori
- Fitch Approach to SAP Support Backbone Update
- Important OSS notes, documentation, and references

Fitch Group

Fitch Group is a **global leader in financial information services** with operations in over 30 countries. Fitch Group is majority-owned by Hearst Corporation.

Fitch Ratings

Fitch Solutions

BMI Research

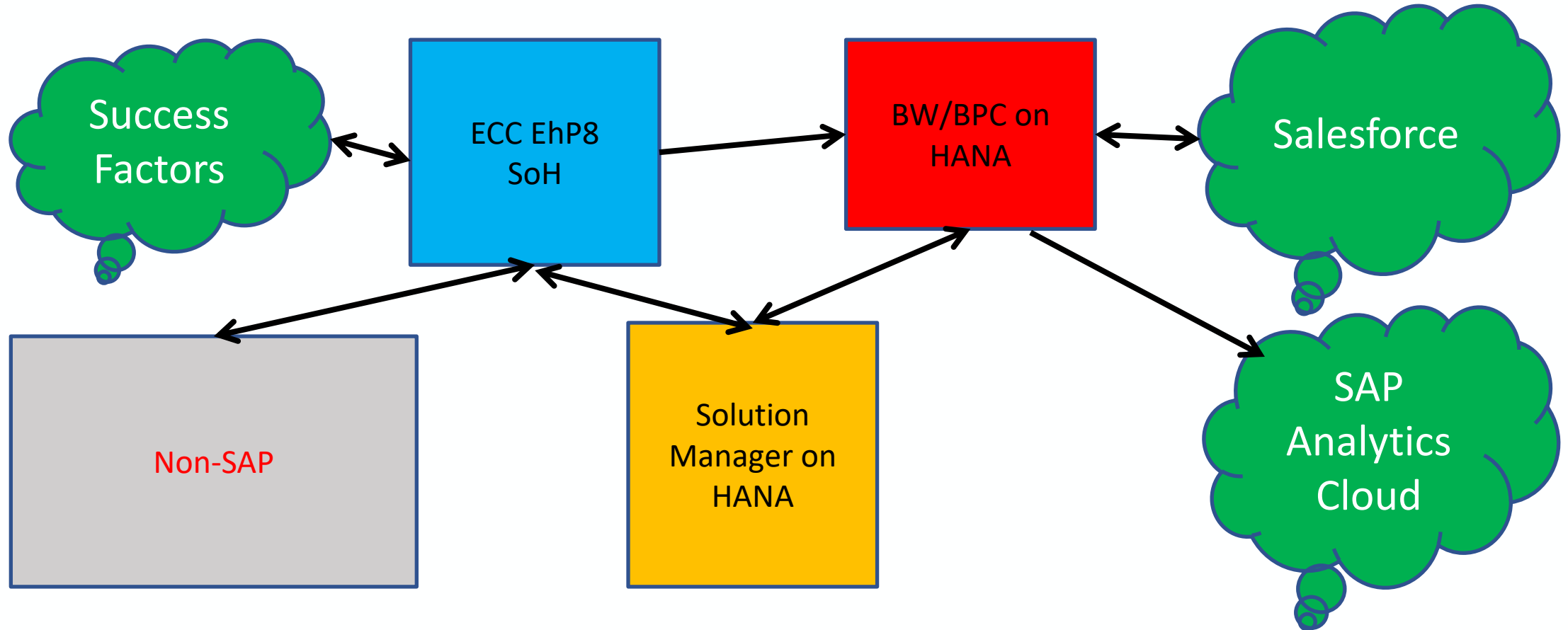
Fitch Learning

- One of the Big Three credit rating agencies
- Over \$1 Billion in revenue
- Over 4000 employees

Dual headquarters in New York and London

Our SAP landscape

We use SAP for Finance, SD, MM, T&E, Reporting, and HR. It interfaces with several non-SAP applications

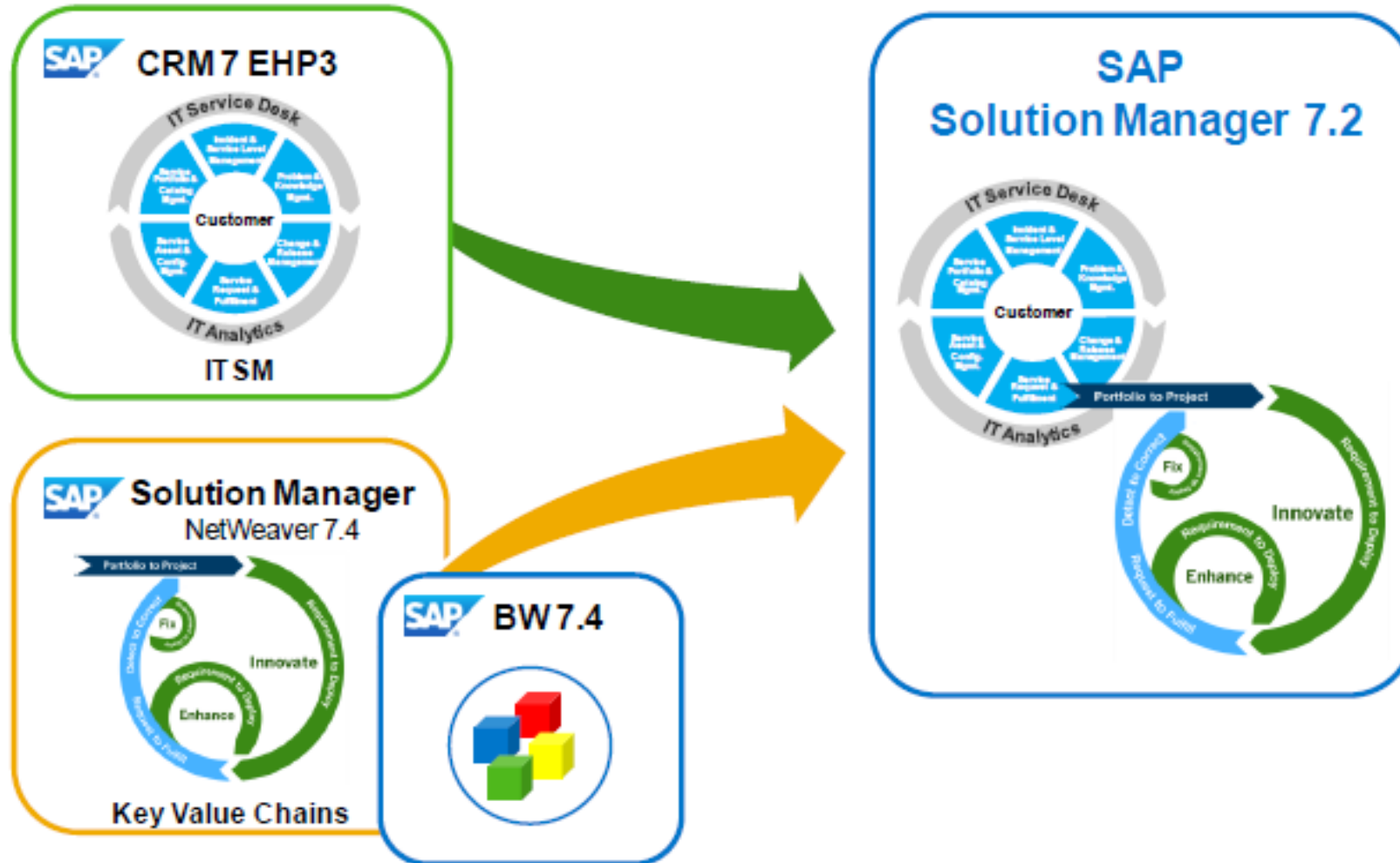


Agenda

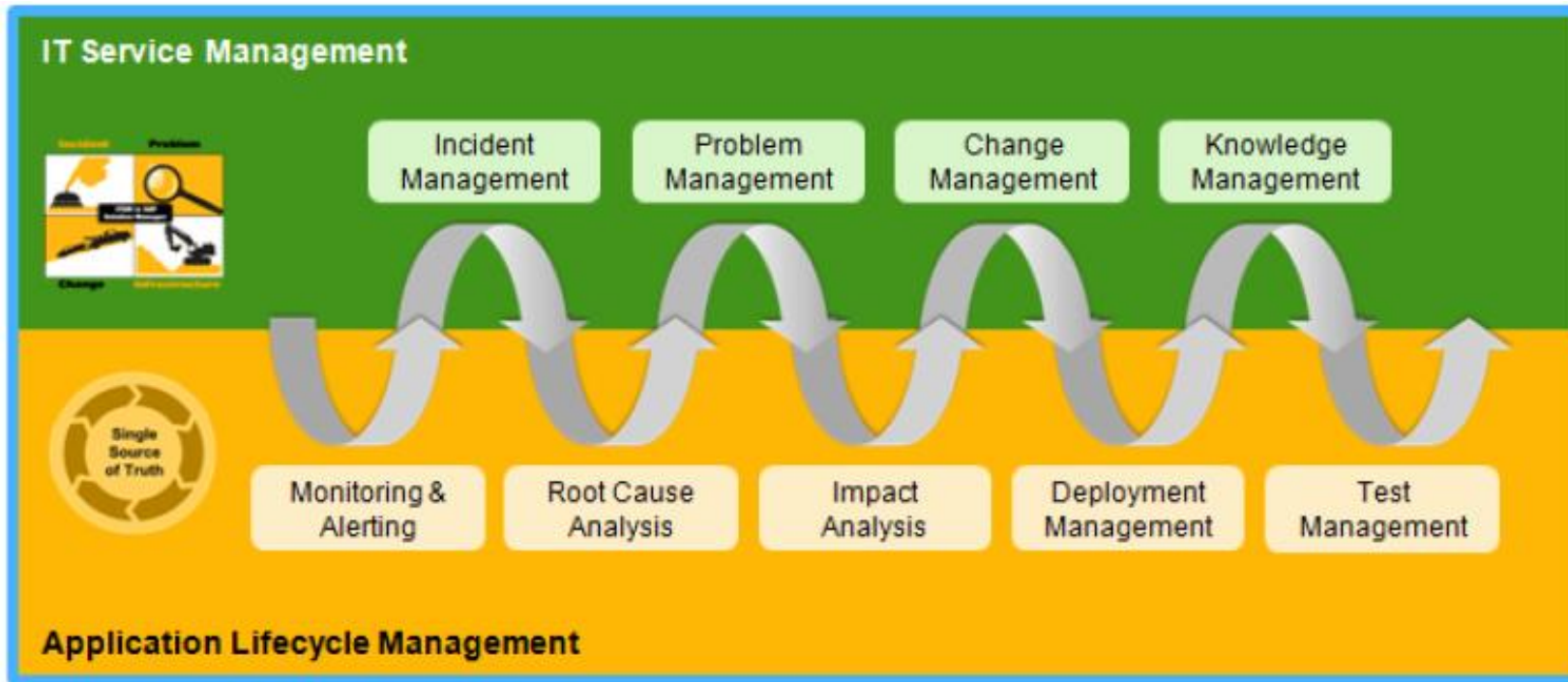
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Concepts

SAP Solution Manager = ALM processes + ITSM processes + BW



Concepts



- Treat Solution Manager as a production system
- Use at least one additional system as dev or test solution manager, separate from the production system
- Apply security concepts to Solution Manager system as well as managed systems

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Types of roles in Solution Manager

SAP Solution Manager provides different role types:

- authorization roles (functional/infrastructure authorization)
- work center roles (basic/navigation)
- UIU Roles (for visibility/design and usage of the CRM Web UI)

Naming convention –

Namespace - SAP

Product (optional) – SM, CRM, UI2

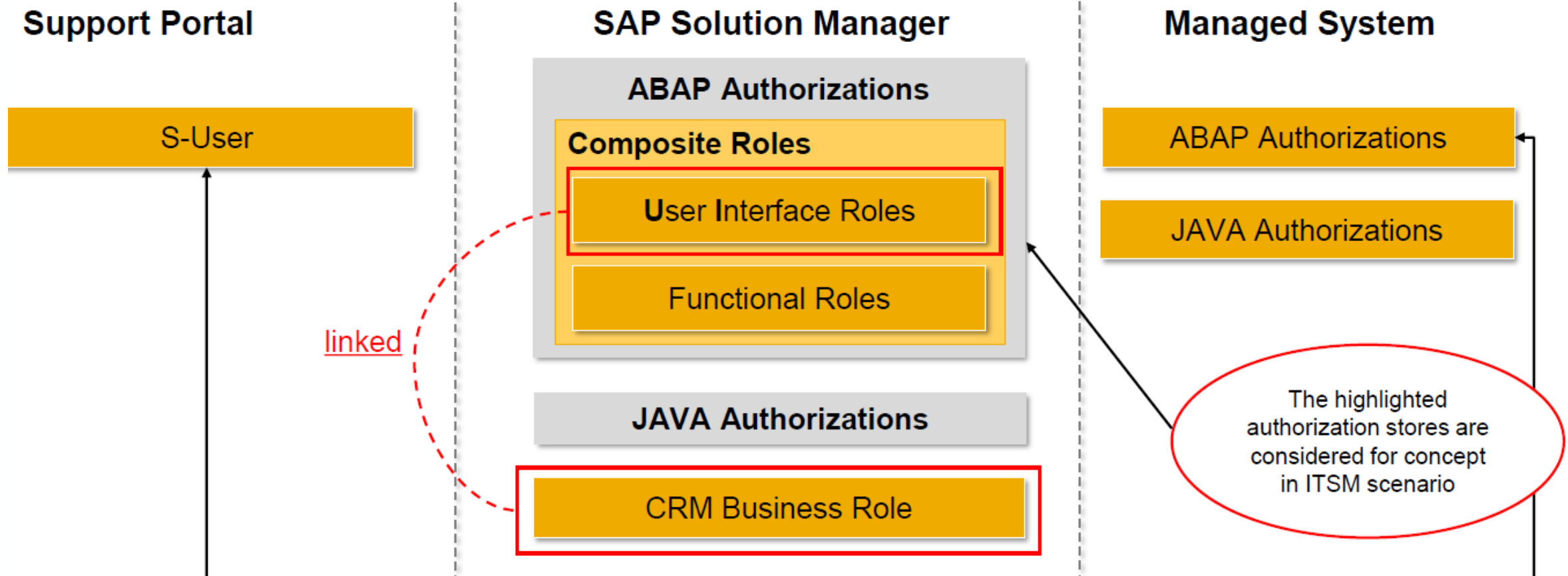
Function or Scenario – BI, UIU,

Risk level – DISP, EDIT, ADMIN

Example : SAP_SM_BI_ADMIN Administrator: BW Reporting (full authorization)

All roles are built on top of each other. This means, that the authorizations for a display user are included in the authorizations for an operations user, and in turn the authorizations for the operations user are included in the authorizations for the administration user.

Roles



Business Roles

User group	Business Role	Description
Report / End User	SOLMANREQU	Business Role for Reporter / End User
Dispatcher	SOLMANDSPTCH	Business Role for Dispatcher
Processor	SOLMANPRO	Business Role for Processor
Administrator	SOLMANPRO	Business Role for Administrator

- can be assigned to the end user via
 - SU01 using parameter CRM_UI_PROFILE
 - CRM org. model
 - PFCG role (CRM navigation role) which is mapped/linked to a CRM business role
- user can have multiple CRM business roles

Navigation Roles

Work Centers - have a specific navigation bar and specific views. These User Interface navigations are controlled by coding and a specific role. Without assigning the navigation role for Work Centers to the user, the user is not allowed to access the Work Center. All Work Center navigation roles have the following naming convention: SAP_SMWORK_<WorkCenter>. As navigation roles are simply defining navigation possibilities, the roles do not contain any relevant authorization objects, and should not be copied into a separate name space.

CRM WebClient - also has a specific navigation bar and specific views, and are therefore controlled by a specific role. Without assigning the navigation role for the CRM WebClient to the user, the user is not allowed to access the CRM WebClient. All CRM WebClient navigation roles have the following naming convention: SAP_SM_CRM_UIU_<SOLMANPRO, SOLMANREQU>. As navigation roles are simply defining navigation possibilities, the roles do not contain any relevant authorization objects, and should not be copied into a separate name space.

BW Authorization Roles

Some scenarios require BW reporting authorizations. For these scenarios specific BW authorization objects are required by the user, and therefore specific roles are required. These roles are roles containing authorization objects, therefore they need to be copied into your name space.

SAP_BI_E2E_BPCA	SAP Solution Manager / E2E authorization BPCA
SAP_BI_E2E_BPO	SAP Solution Manager / E2E authorizations BPO
SAP_BI_E2E_CCM	SAP Solution Manager / E2E authorizations CCM
SAP_BI_E2E_CHARM	SAP Solution Manager / E2E authorizations CHARM
SAP_BI_E2E_CV	SAP Solution Manager / E2E authorizations CV

SAP_BW_SPR_REPORTING	Reporting for Incident Management Data
SAP_BW_SPR_SETUP	
ZSAP_BW_SPR_REPORTING	Reporting for Incident Management Data

J2EE/Java Roles

In case an application is based on Java, such as Root Cause Analysis, specific Java role are required for the user. These roles have the same names as the security group in the User Management Engine (UME) of the Java stack. As navigation roles are simply defining navigation possibilities, the roles do not contain any relevant authorization objects, and should not be copied into a separate name space

Authorization Objects

Authorization objects in roles are clustered in authorization classes. The following authorization classes are part of SAP Solution Manager roles:

AAAA - all authorization objects that are obsolete. Here, you can find all authorization objects which have become obsolete with the change of Release

BC* - Basis components in the system. All authorization objects included in this class start with convention S_.

CRM - CRM component. Authorization objects in this class start with CRM_. CRM authorization objects are required for all applications, which are based on CRM WebClient, such as ITSM scenarios.

RS - BW component (ST_BCO). Authorization objects in this class start with RS_. BW authorization objects are required for all applications, which use BW - Reporting.

SM - Solution Manager and shipped with Software Component ST are contained in this authorization class.

SMD - Solution Manager Documents. Currently these are: S_SMDATT and S_SMDDOC

SMPI - ST-PI, which relate to Solution Manager.

SMBI - ST-BCO, which relate to Solution Manager.

Critical Authorization Objects

Authorization Objects B_USERST_T and B_USERSTAT (status change)

In the roles for *Change Request Management*, the authorization object B_USERST_T (status of a previous change document can only be set by the system) is used instead of B_USERSTAT (The status of the change document is influenced by the user).

Authorization Object S_RFC (RFC access)

Roles for the managed system contain authorization object S_RFC. The authorization object contains values with added asterisk (*).

Authorization Object S_TABU_DIS (table access)

Authorization Object S_TABU_NAM

Authorization Object S_DEVELOP

Categories of Users

- Users Created During Installation
- Configuration Users
- SAP Solution Manager specific technical users
- BW specific technical users
- Specific dialog users
- Managed system users

Types of Users

Dialog User -

are users for dialog communication on Solution Manager, and mainly working on easy access menu as well as in Sol. Manager LaunchPad (web-based application).

Technical User -

are users for dialog-free communication between systems or internal processing on SAP Solution Manager are used, SMD_AGT - To connect Diagnostics Agent to SAP Solution Manager Java Stack

SOLMAN_BTC - To run all required batch jobs for the Basic Configuration of SAP Solution Manager

SM_EXTERN_WS - For external Web Service communication between Diagnostics Agent and SAP Solution Manager

SM_INTERN_WS - For internal Web Service communication between ABAP and Java Stack of SAP Solution Manager

SMD_RFC - To connect ABAP and Java Stack

SM_EFWK - To run Extractor Resource Manager Step, and in case of local BW - system used to load data in the BW - system

Special users

SAPSUPPORT

- Read User for Root Cause Analysis
- main log on user to Diagnostics
- has the possibility to use all the functions in the Root Cause Analysis group

SAPSERVICE

- user is used for Service Delivery by SAP
- has all the authorizations that apply for the SAPSUPPORT user
- further authorizations in the SAP Solution Manager system and Managed Systems, additionally

DDIC – with SAP_ALL and SAP_NEW. Should be locked.

SOLMAN_ADMIN – Configuration user. Should be normally locked.

J2EE_ADMIN – For Java Stack administration

RFCs

Authorization for Trusted RFCs between SAP Solution Manager, Managed Systems, and BW - System

Trusted authorizations are needed between SAP Solution Manager and its managed systems, as well as SAP Solution Manager and a remote BW - system.

In case of a remote BW - connection, the user in the SAP Solution Manager system is additionally assigned trusted authorization object S_RFCACL (role SAP_SM_S_RFCACL; Help Text-ID: AUTH_SAP_S_SM_RFCACL). The user in the BW - system is also assigned authorization S_RFCACL (role SAP_SM_BW_S_RFCACL; Help Text-ID: AUTH_SAP_S_SM_RFCACL).

The user in the managed system receives role SAP_SM_S_RFCACL (Help Text-ID: AUTH_SAP_S_SM_RFCACL) with authorization object S_RFCACL.

Both roles are not contained in the respective composite roles, due to their highly security-relevant character.

Business Partner

CRM - based scenarios or Technical Monitoring, require that the user is assigned a Business Partner (BP). When a new user is created using SOLMAN_SETUP , a business partner is created as well.

The following scenarios require Business Partners:

Incident Management

Change Management

QGM

BPCA

Application Monitoring

LMDB

Job Scheduling Management

Requirement Management

Process Management

Service Requests

Data Volume Management

The system does not create a Business Partner when an existing user is updated.

Business Partner

CRM Business Partner

- can be linked with the CRM org. model
- a person or an organization within company IT processes
- based on SAP Solution Manager
- Important to perform tasks in CRM
- Business Partner Types:
 - BP Organization:** companies/organizations (internal or external)
 - BP Person:** company staff, such as key users and processors, and individuals who are not part of the company

Business Partner administration

BP Organization

usually linked to organizational units in CRM org. model

can be created:

- manually (transaction **BP**)
- manually from CRM org. model (transaction **PPOMA_CRM**)

BP Person

usually linked to user accounts on SAP Solution Manager and/or managed systems

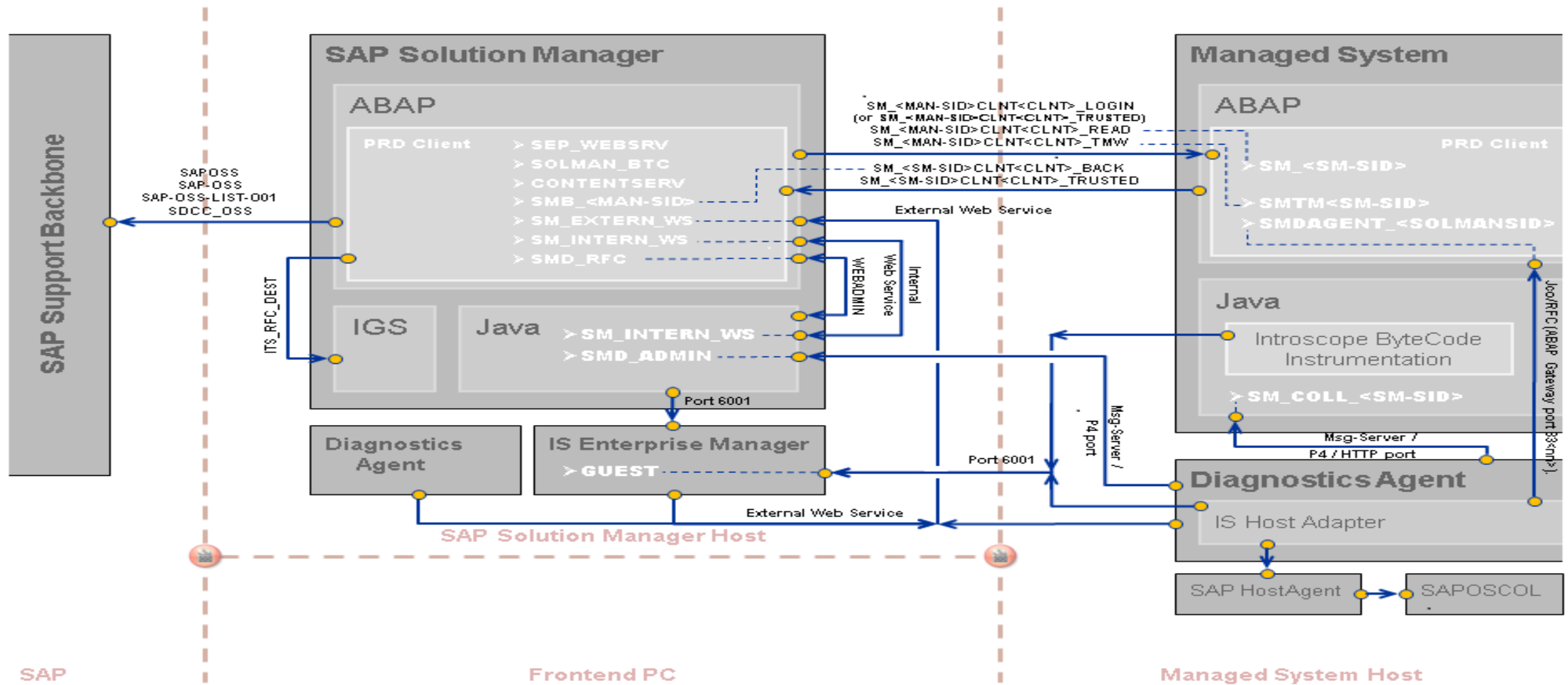
can be created:

- manually (transaction **BP**)
- automatically (transaction **BP_GEN**)
- automatically or background job (transaction **BP_USER_GEN**)
- automatic synchronization of CRM business partners and user accounts in background job

Infrastructure and Communication channels

Technical Infrastructure after SOLMAN_SETUP

SAP Solution Manager and Managed System



RFCs to SAP Support Portal

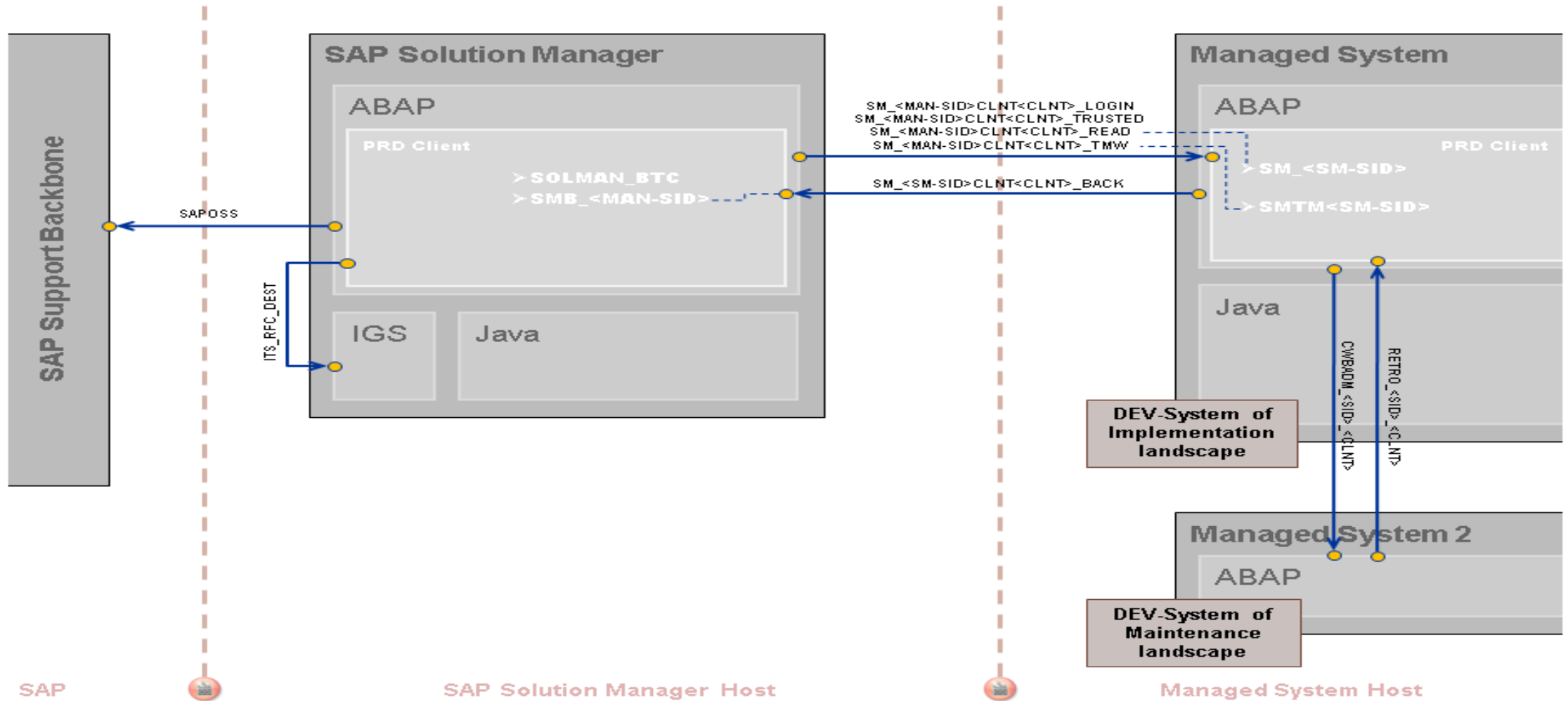
Check RFC Destinations for SAP Support Portal

	Status	RFC Destination Name	Logon Group	Refresh
	●	SAP-OSS	1_PUBLIC	
	●	SAP-OSS-LIST-001	1_PUBLIC	
	●	SAPNET_RTCC	EWA	
	●	SAPOSS	EWA	
	●	SDCC_OSS	EWA	

ChaRM Infrastructure

Technical Infrastructure

Change Request Management



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User Interface – CRM UI

User group	Technical Role	Name
Reporter / End User	Navigation Bar Profile	SOLMANREQU
	Role Configuration Key	SOLMANREQU
	PFCG-ROLE-ID	SAP_SM_CRM_UIU_SOLMANREQU
Dispatcher	Navigation Bar Profile	SOLMANPRO
	Role Configuration Key	SOLMANDSPT
	PFCG-ROLE-ID	SAP_SM_CRM_UIU_SOLMANDSPTCH
Processor	Navigation Bar Profile	SOLMANPRO
	Role Configuration Key	SOLMANPRO
	PFCG-ROLE-ID	SAP_SM_CRM_UIU_SOLMANPRO
Administrator	Navigation Bar Profile	SOLMANPRO
	Role Configuration Key	SOLMANPRO
	PFCG-ROLE-ID	SAP_SM_CRM_UIU_SOLMANPRO

User Interface – Work Center

The work center represents a work space for a user, which allows access to all tools necessary for the work of the user. Access in the navigation panel is restricted by using the authorization object SM_WC_VIEW.

The screenshot displays the SAP Solution Manager Work Center interface. The browser address bar shows the URL: `hostname:8000/sap/bc/webdynpro/sap/ags_workcenter?sap-client=100#`. The navigation bar includes tabs for Business Process Operations, Change Management, SAP Solution Manager: Configuration, Root Cause Analysis, and Incident Management (which is currently selected). A dropdown menu is open over the Incident Management tab, listing various SAP modules and services, with Incident Management checked. The main content area shows the 'Overview' for the Incident Management work center. It indicates the assigned Business Partner is Sanjay Mahajan / New York NY 10004 (274). The overview is divided into three columns: 'Incident Reported by me', 'For processing by me', and 'Processing by my team'. Each column lists various incident statuses and their counts.

Incident	For processing by me	Processing by my team
Reported by me	For processing by me	Processing by my team
New (1)	New (0)	New (121)
Assigned to (12)	Assigned to (12)	Assigned to (22)
Withdrawn (26)	Withdrawn (9)	Withdrawn (40)
In Process (10)	In Process (7)	In Process (34)
Forwarded (0)	Forwarded (0)	Forwarded (2)
Customer Action (1)	Customer Action (1)	Customer Action (13)
Proposed Solution (0)	Proposed Solution (0)	Proposed Solution (0)

User Interface – NetWeaver Business Client

The user interface frontend of SAP NetWeaver Business Client (NWBC) integrates classic SAP GUI-based transactions and new Web Dynpro applications.

The screenshot shows the SAP NetWeaver Business Client (NWBC) user interface. The browser address bar displays the URL: `hostname:8000/sap/bc/ui2/nwbc/?sap-nwbc-node=0000000198&sap-nwbc-context=03HM33303...`. The SAP NetWeaver Business Client header is visible, with the 'Incident Management' menu item highlighted. Below the header, the 'SAP Solution Manager: Incident Management' page is shown. The page includes a navigation sidebar on the left with options like 'Overview', 'Messages', 'Queries', and 'Reports'. The main content area displays the 'Overview' section, which shows the user's assigned Business Partner: 'Sanjay Mahajan / New York NY 10004 (274)'. The 'Overview' section is updated as of '03/31/2019 19:52:55 EST'. The data is presented in a table format:

Incident	For processing by me	Processing by my team
Reported by me	New (0)	New (121)
New (1)	New (0)	New (121)
Assigned to (12)	Assigned to (12)	Assigned to (22)
Withdrawn (26)	Withdrawn (9)	Withdrawn (40)
In Process (10)	In Process (7)	In Process (34)
Forwarded (0)	Forwarded (0)	Forwarded (2)

User Interface – Fiori

Authentication is managed by the SAP Fiori Framework. Access is only allowed to a known user. This user must have a password. The access is certificate based.

Authorization

Authorization for the user is shipped by Software Component ST-UI for SAP Solution Manager applications. In addition, for each individual application back-end authorization and RFC - communication authorization are required.

To call the SAP Solution Manager Launchpad: `SAP_SM_FIORI_LP_EMBEDDED`

To get access to necessary groups: `SAP_SMWORK_*`

Tile Accessibility

Tiles are grouped in SAP Fiori Groups. A SAP Fiori Group is assigned to a Catalogue. In the User Interface you find only those files which are assigned to a group of a catalogue as being visible. If you do not find a specific tile, you need to check in the catalogue for it and assign it. In case you see a Tile, but cannot access its application, you are missing authorizations for it as end-user.

User Interface – Fiori

http://hostname.com:8000/sap/bc/ui5_ui5/ui2/ushell/shells/abap/FioriLaunchpad.html#Shell-home

The screenshot displays the SAP Fiori Launchpad interface within a web browser. The browser's address bar shows the URL: `hostname:8000/sap/bc/ui5_ui5/ui2/ushell/shells/abap/FioriLaunchpad.html#Shell-home`. The browser's bookmark bar includes items such as 'Apps', 'Managed bookmarks', 'AWS Console', 'SM3', 'SMX', 'FitchIAM', 'Projector', 'Log In', 'Deloitte', 'Speakers', 'Genesis', 'Naviance', and 'EGI - Fiori'. The SAP logo is visible in the top left corner of the application, and the user's name, 'Sanjay Mahajan', is shown in the top right corner.

The main content area features a navigation bar with the following categories: 'Analysis', 'IT Service Management', 'SAP Engagement and Service D...', 'Technical Administration', and 'System and Appl'. Below this, a grid of application tiles is displayed:

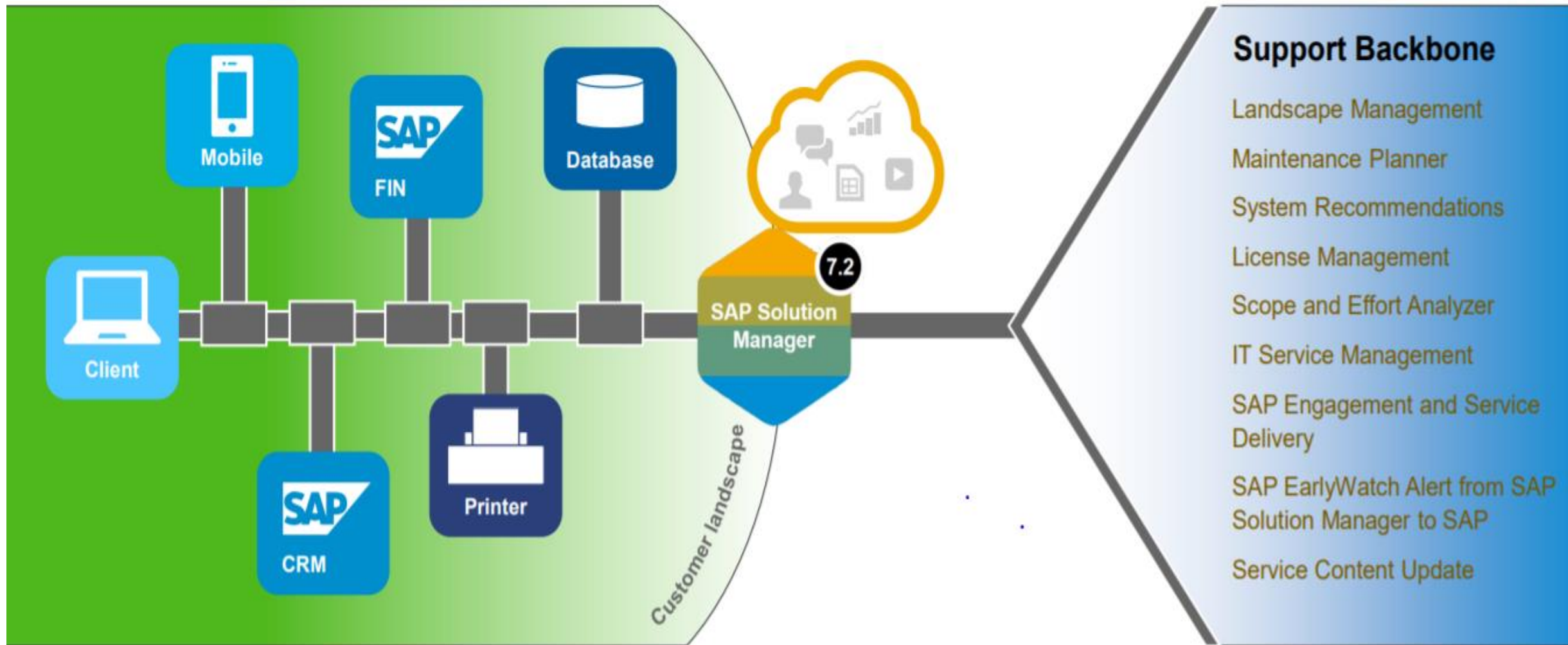
- Requester IT Service Managem...** (Icon: Person)
- Dispatcher IT Service Managem...** (Icon: Group of people)
- Professional IT Service Managem...** (Icon: Person with document)
- Call Center Agent IT Service Managem...** (Icon: Phone)
- Create Incident** (Icon: Document with star)
- My Incidents** (Icon: Question mark) with a large number **24** and the text **Open Incidents**.
- Resolve and Dispatch Incidents IT Service Managem...** (Icon: Document with person)
- IT Service Management Analytics** (Icon: Bar chart)
- ITSM and Change Management Dashboard** (Icon: Bar chart)

A small edit icon (pencil) is located in the bottom right corner of the application area.

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SAP Support backbone and Solution Manager



SAP Support backbone update

- SAP's Support Backbone is the central infrastructure located at SAP to provide technical support to our customers
- On the customer side, SAP Solution Manager and Focused Run for SAP Solution Manager connect to the SAP Support Backbone to exchange data for various purposes: Support incidents, system data for Maintenance Planner, SAP EarlyWatch Alert data, and many more.
- You need to switch the communication of SAP Solution Manager and Focused Run to the new infrastructure before January 2020 to ensure continuous connectivity.

Fitch's plan for Support backbone connectivity

- Upgrade Solution Manager from 7.2 SP5 to SP8
- Apply following OSS notes into all systems (ECC, BW, Solution Manager)
SNOTE functionality (to be able to import Digitally Signed SAP Notes...
import SAP Notes 2408073, 2546220 and 2508268 before 1/1/2020
- Upgrade ST-PI and ST-A/PI plug-in on all systems

ST-PI - 740 SPS07 -> upgrade to SPS10

ST-A/PI - 01S_731 SPS3 (SPS2 Solman) -> Upgrade to 01T* SPS1

- Request a technical communication user and use it going forward

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Important OSS notes

2511173 - SAP Solution Manager in High Security Infrastructure

2113602 - SOLMAN_SETUP in Solution Manager 7.2 - Responsibility of individual steps and helpful notes or KBAs

1627901 - Troubleshooting for Trusted RFC "remote logon" in Solution Manager

2293011 - Upgrade Information: Default Users within SAP Solution Manager

1487626 - Location for BW for the SAP Solution Manager

1723881 - Application of client-specific Customizing settings to role maintenance

2257213 - Authorizations for RFC users for SAP Solution Manager 7.2 SP02 and higher

Documentation

[https://help.sap.com/viewer/p/SAP Solution Manager](https://help.sap.com/viewer/p/SAP_Solution_Manager)

SAP Solution Manager - SAP Help

https://help.sap.com/viewer/product/SAP_Solution_Manager/7.2.08/en-US

Apps Managed bookmarks AWS Console SM3 SMX FitchIAM Projector Log In Deloitte Speakers Genesis Naviance EGI - Fiori

Application Help

[Download Documentation](#)

[Application Help \(English\)](#)
Material number: 50148644, Last Update: December 2018

[Application Help \(German\)](#)
Material number: 50148644, Last Update: December 2018

Security

[Authorization Concept Security Guide](#)

[Secure Configuration Security Guide](#)

[Application-Specific Security Guide](#)

[Security Optimization Guide](#)

[Security Guide for SAP Fiori Apps](#)

Configuration

[Configuration Guide](#)

Operations

[Application Operations Guide](#)

Update of SAP Systems Using Software Update Manager (SUM)

[Content Activation Guide](#) (PDF)

[Wiki: Content Activation](#)

[SAP NetWeaver TREX - Installation and Update Guides](#)

[CA Introscope - Setup Guides](#)

Additional Information

[Usage Rights for SAP Solution Manager](#)

[Product Availability Matrix](#)

[SAP Training and Certification](#)

[SAP Solution Manager - Knowledge Transfer](#)

[SAP Solution Manager Community and Wiki Pages](#)

Related Products

[SAP Fiori for SAP Solution Manager](#)

[Focused Run for SAP Solution Manager](#)

[Focused Build for SAP Solution Manager](#)

[Focused Insights for SAP Solution Manager](#)

References

- [https://help.sap.com/viewer/p/SAP Solution Manager](https://help.sap.com/viewer/p/SAP_Solution_Manager)
- Authorization Concept Security Guide
- Secure Configuration Security Guide
- Application-Specific Security Guide
- Security Optimization Guide
- Security Guide for SAP Fiori Apps
- SAP Expert-Guided Implementation
- <http://help.sap.com>
- <https://support.sap.com/en/alm/solution-manager/sap-support-backbone-update.html>

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Presentation Materials

Access the slides from 2019 ASUG Annual Conference here:

<http://info.asug.com/2019-ac-slides>

Q&A

For questions after this session, contact us at ranjit.prithviraj@fitchratings.com
and sanjay.mahajan@fitchratings.com.

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