

Master Guide
SAP Yard Logistics
Document Version: 1.0 – 2016-11-25

CUSTOMER

SAP Yard Logistics 2.0



Typographic Conventions

Type Style	Description
<i>Example</i>	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.
Example	Emphasized words or expressions.
EXAMPLE	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.
Example	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.
Example	Exact user entry. These are words or characters that you enter in the system exactly as they appear in the documentation.
<Example>	Variable user entry. Angle brackets indicate that you replace these words and characters with appropriate entries to make entries in the system.
EXAMPLE	Keys on the keyboard, for example, F2 or ENTER .

Document History



Caution

Before you start the implementation, make sure that you have the latest version of this document that is available on SAP Service Marketplace at <http://service.sap.com/instguides>.

Version	Status	Date	Change
1.0	Released to Customer	2016-11-25	Final

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1 Getting Started

1.1 About this Document

Purpose

This Master Guide is the central starting point for the technical implementation of SAP Yard Logistics 2.0. You can find cross-scenario implementation information as well as scenario-specific information in this guide.

Note

The central starting point for the technical upgrade of your SAP application/solution is the Installation Guide, which you can find on SAP Service Marketplace at <http://service.sap.com/instguides>.

Use the Master Guide to get an overview of SAP Yard Logistics 2.0, its software units, and its scenarios from a technical perspective. The Master Guide is a planning tool that helps you to design your system landscape. It refers you to the required detailed documentation, mainly:

- Installation guides for single software units
- SAP Notes
- Configuration documentation
- SAP Library documentation

The Master Guide consists of the following main sections:

- SAP Yard Logistics 2.0 - Overview
- Business Scenarios of SAP Yard Logistics 2.0
- Solution-Wide Topics
- Security Considerations
- References

Note

You can find the most current information about the technical implementation of SAP Yard Logistics 2.0 and the latest installation and configuration guides on SAP Service Marketplace at <http://service.sap.com/instguides>.

We strongly recommend that you use the documents available here. The guides are regularly updated.

Constraints

- The business scenarios that are presented here serve as examples of how you can use SAP software in your company. The business scenarios are only intended as models and do not necessarily run the way they are described here in your customer-specific system landscape. Ensure to check your requirements and systems to determine whether these scenarios can be used productively at your site. Furthermore, we recommend

that you test these scenarios thoroughly in your test systems to ensure they are complete and free of errors before going live.

- This Master Guide primarily discusses the overall technical implementation of SAP Yard Logistics 2.0, rather than its subordinate components. This means that additional software dependencies might exist without being mentioned explicitly in this document. You can find more information on component-specific software dependencies in the corresponding installation guides.
- The following scenarios are part of other Master Guides:

Integration of Warehousing and Transportation: described in the Master Guide for SAP EWM 9.3 (available on SAP Service Marketplace at <http://service.sap.com/instguides> under *SAP Business Suite Applications* → *SAP EWM* → *Using SAP EWM 9.3*).

1.2 Related Information

1.2.1 Planning Information

For more information about planning topics not covered in this guide, see the following content on SAP Service Marketplace:

Content	Location on SAP Service Marketplace
Latest versions of installation and upgrade guides	http://service.sap.com/instguides
General information about SAP Yard Logistics 2.0	http://service.sap.com/yl
SAP Business Maps - information about applications and business scenarios	http://service.sap.com/businessmaps
Sizing, calculation of hardware requirements - such as CPU, disk and memory resource - with the Quick Sizer tool	http://service.sap.com/quicksizer
Released platforms and technology-related topics such as maintenance strategies and language support	http://service.sap.com/platforms To access the Platform Availability Matrix directly, enter http://service.sap.com/pam
Network security	http://service.sap.com/securityguide
High Availability	http://scn.sap.com/docs/DOC-7848
Performance	http://service.sap.com/performance
Information about Support Package Stacks, latest software versions and patch level requirements	http://service.sap.com/sp-stacks

Content	Location on SAP Service Marketplace
Information about Unicode technology	http://scn.sap.com/community/internationalization-and-unicode

1.2.2 Further Useful Links

The following table lists further useful links on SAP Service Marketplace:

Content	Location on SAP Service Marketplace
Information about creating error messages	http://service.sap.com/message
SAP Notes search	http://service.sap.com/notes
SAP Software Distribution Center (software download and ordering of software)	http://service.sap.com/swdc
SAP Online Knowledge Products (OKPs) – role-specific Learning Maps	http://service.sap.com/rkt

1.2.3 Related Master Guides

This Master Guide is based on Master Guides for cross-industry applications. You can find more information about the relevant applications in the following documents:

Title	Location
Master Guide for SAP EWM 9.3 (available on SAP Service Marketplace)	http://service.sap.com/instguides → SAP Business Suite Applications → SAP EWM → Using SAP EWM 9.3

1.2.4 Related Operations Information

SAP Yard logistics is based on SAP Extended Warehouse Management 9.3 and SAP NetWeaver 7.40. Therefore, the general operations information that is covered in the related operations guides also applies to SAP Yard logistics.

For more information about related guides, see the following resources on SAP Service Marketplace:

Resource	Quick Link on SAP Service Marketplace
Operations Guide for SAP EWM 9.3 (available on SAP Service Marketplace)	http://service.sap.com/instguides → SAP Business Suite Applications → SAP EWM → Using SAP EWM 9.3

For a complete list of available SAP Operations Guides, see SAP Service Marketplace at <http://service.sap.com/instguides>.

The operations information specific to SAP Yard Logistics is described in the following chapters. The following areas are covered:

- Technical System Landscape
- Installation and Setup
- Monitoring Concept
- Logging and Tracing
- Technical Configuration
- Backup and Recovery
- Periodic Tasks
- High Availability Concept
- Starting and Stopping
- Scenario Administration and Maintenance Concept
- Software Change Management
- Support Desk Management
- Troubleshooting
- Alert Monitoring

1.2.4.1 Technical System Landscape

SAP NetWeaver platform 7.40 SP 14 (ABAP application server) is the current basis for the SAP Yard Logistics solution. To have the latest User Interface Technology available (especially for the UI5 part), we will use the newest User Interface Technology Component from NW7.50 that allows deployment on the SAP NetWeaver platform 7.40, which is the software component SAP_UI 7.50, SP04.

Figure 1 provides the architecture overview, illustrating the key user roles (further described in section on Security Considerations) and the solution components.

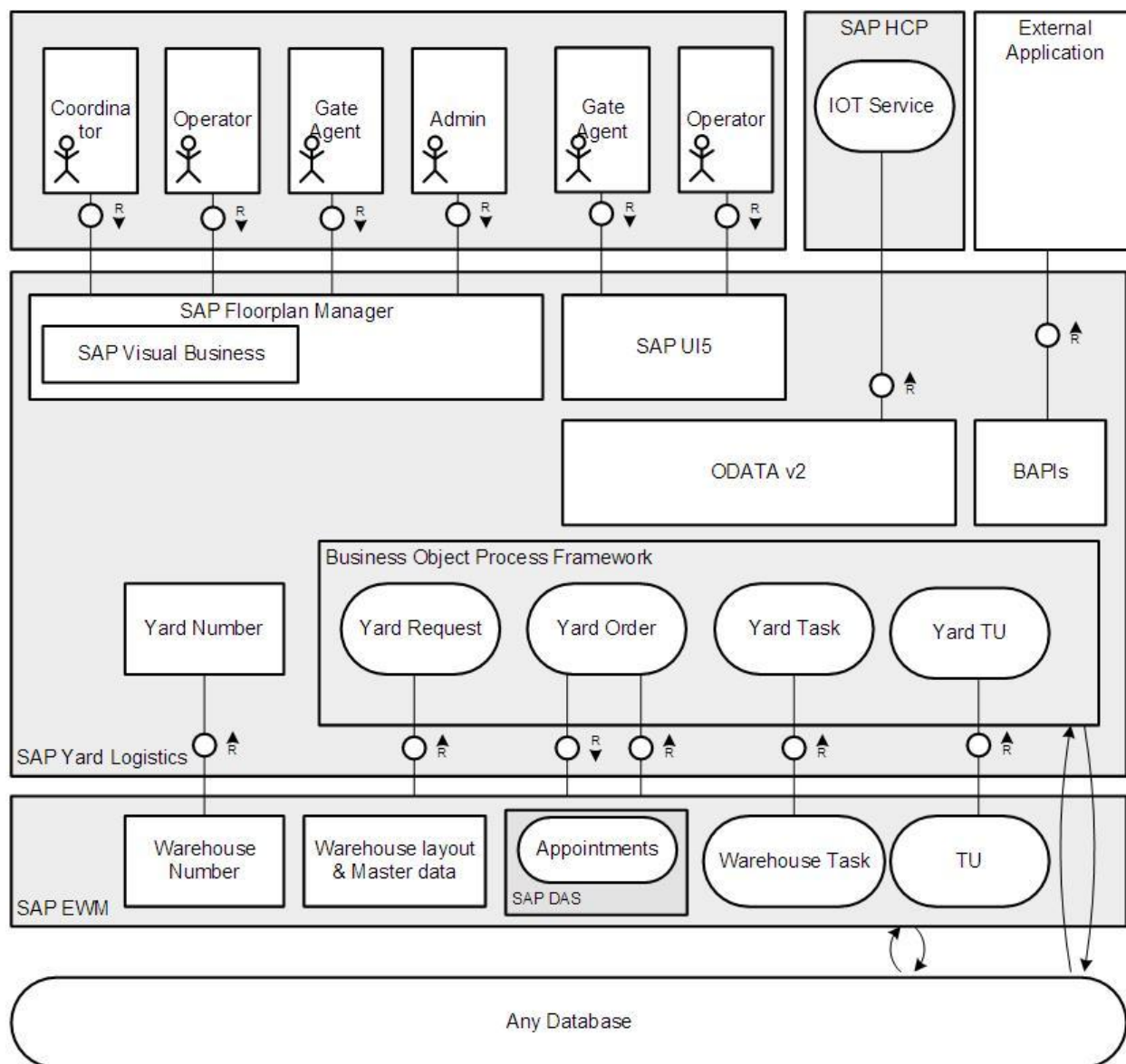


Figure 1: Architecture of SAP Yard Logistics

SAP NetWeaver platform is used at several software layers within SAP Yard Logistics. The database layer (accessed from the BOPF modelled business objects) uses the database connectivity of the ABAP application server, that is, the database can be either SAP HANA database or a classical relational database.

On top of the database layer, SAP Yard Logistics uses SAP EWM9.3 (with SP03 as minimum requirement) as technical basis (without the need to implement warehousing specific processes) as well as software components from SCM Basis (in more detail: SAP Alert Management, SAP condition technique, PPF printing). To reuse existing EWM functionalities, SAP Yard Logistics uses a simplified setup of a (technical) warehouse number and its related layout (later to be used as a yard layout) and master data (especially, master data for EWM shipping and receiving). This need not to be confused with the linked warehousing processes that runs on independent EWM business systems used for the EWM-related processes. These are "real" EWM warehousing systems that will be triggered from the yard processes at dock to EWM warehousing door or departure from door. For details, see the multiple warehouse scenario in SAP Yard Logistics described in a later chapter.

A special case is the SAP Dock Appointment Scheduling (SAP DAS for short). This application can be used independently (of EWM) but is a software component as part of SAP EWM. In the SAP Yard Logistics processes, an integration to SAP DAS is offered as well (see details in a later chapter). However, to allow the business user a seamless user interface between SAP Yard Logistics and SAP DAS, we only offer the SAP DAS application to run on the SAP Yard Logistics system.

The business documents for SAP Yard Logistics are modelled in the BOPF Business Object layer. A business object is a semantic entity that represents the smallest data unit in a business scenario within SAP Yard Logistics. You use a BOPF business object to define data structures and business logic. To define the data structure part of such a business object, you create nodes, elements, and associations between nodes. To define the business logic, you create entities such as actions, determinations, or validations. The business documents created for SAP Yard Logistics are listed in the table 1 below.

For the modeling of yard processes, SAP Extended Warehouse Management (SAP EWM release 9.3 SP03) has largely been re-used as a technical foundation (as already mentioned above). This comprises of the following:

- Master data, for example, warehouse numbers, storage layout mapping
- Business entities, for example, business partners, resources
- Interfaces to other SAP components like SAP TM and SAP EWM warehouse billing
- Business documents like EWM TUs and its functionality, as part of shipping and receiving
- Warehouse tasks for documentation of yard movements and yard activities

Table 1: BOPF Business Objects defined in SAP Yard Logistics

Business Object	Technical name	Description
Yard Request	/SAPYL/YARD_ORDER	A yard request is a planning document for the yard coordinator to control the workload for a specific yard that is represented as a yard number. It can be entered manually into the SAP Yard Logistics application or can be sent via a web service (LDAP request) from an external system. The yard request can be released for daily operations as a yard order. Technically, the BOPF business objects, <i>yard request</i> and <i>yard order</i>, use the same business object model but are distinguished by the key field DOC_CAT
Yard Order	/SAPYL/YARD_ORDER	A yard order represents the workload to be executed within a certain period based on the planning from the yard requests. The document structure of a yard order is the same as that of a yard request with the following exceptions - it uses a different key field, DOC_CAT and supports status management.
Yard Task	/SAPYL/YARD_TASK	A yard task describes the activity that should be performed on the item(s) belonging to a yard order (container, trailer) within the yard. The activity can constitute either a movement from a source storage bin to a destination storage bin, or a non-movement activity, for example, cleaning of containers.

Business Object	Technical name	Description
Yard Transportation Unit	/SAPYL/YARD_TU	A yard transportation unit is a business object for wrapping SAP EWM Transportation Units and enhancing them by SAP Yard Logistics-specific functionality like TU grouping, storing of seals and measurements.

Based on the modelled business objects, the user interface layer is also NetWeaver-based. For the expert business user, all user interfaces are defined using Floorplan Manager (FPM), based on Web-Dynpro for ABAP for the single document applications and Personal Object Worklist (POWL for short) for lists of document applications. To allow a graphical representation of the operations within a specific yard, a yard cockpit is defined (also based on ABAP FPM as ActiveX control. This needs a local installation of SAP Visual Business 2.1 on the business user's PC), SAP Visual Business shows the schematic model of the yard and its parts based on 3D geographical data.

For one specific role, that is, yard operations, a mobile user interface is provided. This mobile app is developed using SAP UI5. The UIs of the mobile app are called using the SAP Fiori Launchpad from the web browser of your choice. It allows for a unique mobile experience via browser, as well as through hardware independent apps, which can be consumed through the SAP Fiori client.

More Information

You can find more information about the underlying NetWeaver platform technology in the SAP NetWeaver Administrator's Guide – Technical Operations Manual in the SAP Library on [SAP Help Portal](http://help.sap.com/nw_platform) at http://help.sap.com/nw_platform.

The SAP Yard Logistics application is built on top of SAP EWM, which is based on SAP NetWeaver technology. Therefore, the monitoring tools from SAP NetWeaver, such as the Computing Center Management System (CCMS), are reused.

We recommend that you set up the Monitoring Infrastructure as described in the section on Monitoring Concept.

You find this documentation on the SAP Library for SAP NetWeaver 7.4. Go to SAP Help portal at <http://help.sap.com> and choose *Technology Platform* → *SAP NetWeaver* → *SAP NetWeaver 7.4* → *Application Help*. Go to *Function-Oriented View* → *Solution Lifecycle Management* → *Solution Monitoring*.

1.2.4.2 Installation and Setup

As SAP Yard Logistics has SAP EWM 9.3 as its technical foundation, the installation of this solution is based on SAP EWM. For more information, see installation guide for SAP EWM 9.3 on the SAP Service Marketplace at <http://service.sap.com/instguides>. Choose *SAP Business Suite Applications* → *SAP EWM* → *Using SAP EWM 9.3*.

Note

Important information about installing or upgrading to SAP EWM 9.3 is provided in SAP Note [2126732](#). This note is updated on a regular basis. Therefore, make sure you have the current version of this note before you start the installation.

More Information

Application Help for SAP Extended Warehouse Management (EWM) 9.3 at <http://help.sap.com/ewm93>.

1.2.4.2.1 SAP Visual Business

In SAP Yard Logistics, the yard cockpit graphical visualization is based on SAP Visual Business, which is a technical component for geo-visualization.

SAP Visual Business is a user interface technology that visualizes data from SAP and external data sources on a single screen. SAP Visual Business applications not only combine different types of content, but also include interactive graphics that visualize and combine enterprise data with geographical or three-dimensional real-world scenes.

The SAP Visual Business front-end component used on the SAP Yard Logistics' FPM user interface is a client component. The client-side installation is integrated into the SAP front-end installer, also known as SAPSetup, which is available on SAP Service Marketplace.

For use on NetWeaver platform release 7.4, SAP Visual Business release 2.1 is recommended.

The corresponding local user interface linked to this release is NetWeaver Business Client 5.0 PL12 (or higher) or NetWeaver Business Client 6.0 PL05.

More Information

Application Help for SAP Visual Business 2.1 at <http://help.sap.com/visualbusiness21>

Administration and Configuration topics at <http://scn.sap.com/docs/DOC-54524>

1.2.4.2.2 SAP Fiori Launchpad

The SAP Fiori Launchpad is the entry point for Fiori apps via desktops and on mobile devices. To access these apps, you must configure SAP Fiori Launchpad so that your users can access the apps that have been assigned to their respective roles.

For detailed information about the configuration tasks for the SAP Fiori Launchpad, see the following documentation:

For using Fiori Launchpad on SAP NetWeaver 7.4, go to SAP Help Portal at <http://help.sap.com/nw74> and choose *Application Help*. Go to *UI Technologies in SAP NetWeaver* → *SAP Fiori Launchpad* → *Setting Up the Launchpad*.



Caution

SAP Fiori Search is not supported in SAP Yard Logistics 2.0.

1.2.4.2.3 Printing from Overview Lists

If you want to use the print functionality from the overview lists of yard orders, yard requests and yard tasks (button *Print Version*), you must install and configure the printing services, for example, *ADS*, as described in SAP Note [1413938](#) (*WD ABAP ALV - Creating print version*).

1.2.4.2.4 Mail Server for Driver Communication (SAPconnect)

SAPconnect offers a uniform interface for external communication that supports sending using telecommunication services such as fax, text messaging (pager/SMS), and e-mails. In SAP Yard Logistics, it is used to send a short message service (SMS) for driver advice after the check-in of a Yard Order document.

More Information

You find this documentation on the SAP Library for SAP NetWeaver 7.4. Go to SAP Help portal at <http://help.sap.com> and choose *Technology Platform* → *SAP NetWeaver* → *SAP NetWeaver 7.4* → *Application Help*. Go to *Function-Oriented View* → *Application Server* → *Application Server ABAP* → *Other Services*. Select *Services for Business Users* → *SAPconnect*.

- o Transaction SCOT for setup of SAPconnect
- o Transaction SOST for monitoring of SMS sent
- o SAP Note [455140](#) for Configuration of e-mail, fax, paging/SMS via SMTP
- o SAP Note [552616](#) for FAQ on SAPoffice - Sending to external recipients

1.2.4.2.5 Adobe Document Services for Printing of Yard Documents

To be able to print the yard-related PDF forms for yard orders, yard tasks, and yard TU's, the Adobe® Document Services (ADS) has to be activated in the SAP Yard Logistics system. These ADS services provide a range of form and document creation and manipulation functions. Adobe® Document Services enhance the document handling capabilities of SAP Web Application Server (SAP Web AS). Adobe® Document Services allow SAP applications (either Java or ABAP) to take advantage of the full range of capabilities in Adobe Acrobat® Professional, Adobe® Acrobat Standard, and Adobe Reader®. These capabilities enable you to:

- Create and deploy interactive forms that look exactly like their paper counterparts
- Generate dynamic PDF documents from data contained in the SAP system
- Embed other file formats inside PDF documents as attachments

More Information

For the configuration of the ADS Services, please consult SAP Note [894009](#) - Adobe® Document Services: Configuration.

1.2.4.2.6 SAP Dock Appointment Scheduling

SAP Dock Appointment Scheduling can be deployed as an integrated solution with a local SAP Yard Logistics system. As a prerequisite, the specific roles for SAP DAS has to be added to the roles of the SAP Yard Logistics to be able to perform a simple setup of SAP DAS. Go to <https://help.sap.com/EWM93>. Select the *Application Help*. Choose *SAP Extended Warehouse Management* → *SAP Dock Appointment Scheduling*. On that page, follow the link for *Roles of Dock Appointment Scheduling*. In the context of SAP Yard Logistics, we use the SAP DAS as a

standalone application as we start the creation of appointments based on Yard Request and Yard Order items (each yard document item allows multiple appointments for different docking locations and loading points). Therefore, the setup for SAP DAS with SAP EWM using the transportation unit as a reference object is not necessary for SAP Yard Logistics setup. Once the simple setup of the standalone SAP DAS has been executed, (you can find that under *Settings* → *Simple Setup* for the DAS Administrator's menu), you can assign for a specific yard several docking locations and loading points. Based on this assignment, the arrival and departure at checkpoint events in the DAS appointment are updated.

In addition to that, SAP Yard Logistics allows assigning a yard specific "door" storage type to a docking location and loading point. Once a yard task is targeting to such a storage type or targeting from such a storage type, the arrival and departure at dock events in the DAS appointment are updated based on the appointment that is assigned to this yard task.

More Information

Go to <https://help.sap.com/EWM93>. Select the *Application Help*. Choose *SAP Extended Warehouse Management* → *SAP Dock Appointment Scheduling*.

1.2.4.2.7 SAP Information Lifecycle Management

You use the Retention Management functions of SAP NetWeaver Information Lifecycle Management (ILM) to manage the lifecycle of the data of a live application system from its creation (database) to its destruction (database or ILM store). Since transferred data remains accessible and the periods required by law can be adhered to, you can regularly store data that is no longer required for operations in the ILM store and optimize the data volume in your system.

ILM Retention Management offers the following functions:

- Putting legal holds on data that is relevant for legal cases so it cannot be deleted or destroyed. Legal holds affect the data in the database as well as the data in the ILM store.
- Grouping data objects that are to be stored or queried together in audit areas.
- ILM rules for time-based management of data objects, for the following purposes:
 - o Restriction of the retention period for reasons of data protection
 - o Adherence to legal requirements for retention periods for tax auditing and product liability purposes.
- Deleting data for which the retention period has expired and for which there is no legal hold.

To activate SAP ILM, you need to set the central switch *ILM* in Customizing for business functions.

More Information

See *Using ILM Retention Management in the Application System* at http://help.sap.com/saphelp_nw70ehp1/helpdata/en/09/ec83476f0942bcaea4481bc02ddf23/content.htm?frameset=/en/09/ec83476f0942bcaea4481bc02ddf23/frameset.htm¤t_toc=/en/35/aaef16745644c397ec0024b31fb191/plain.htm&node_id=36&show_children=true

1.2.4.2.8 Loading Scheme Adaptation

Before SP01, a loading scheme consisted of a Sequence Structure subdivided into Sequence Numbers. The sequence numbers itself were not dependent on the loading scheme but only on the sequence structure. In SP01, the sequence structure is renamed to layout, and the sequence numbers are renamed to positions (within a layout). Now, the positions are dependent on the loading scheme as well as on the layout.

This means, if you have customized a sequence structure with sequence numbers, you need to re-do it respecting the layout and its positions, which are now dependent on the loading scheme.

Technically speaking, the data base table /SAPYL/TU_LS_SEQ (for the loading scheme positions) has a new key field (the loading scheme ID) and therefore require manual maintenance. As this customizing table is delivered without any entries, the change should not have an impact.

1.2.4.2.9 Customizing Activity "Define Container Number Owner Codes"

In SP01, the Customizing activity *Define Business Identifier Codes (BIC)* is replaced by activity *Define Container Number Owner Codes*. Before SP01, you had to set up the Business Identifier Code by a 4-digit character code used as a standard setting based on ISO 6346. In SP01, the activity is renamed and replaced by the activity *Define Container Number Owner Codes*. In this activity, the 4-digits are separated into 3-digits for the owner code and a 1-digit code for the equipment category.

Technically speaking, the database table /SAPYL/TU_BIC will no longer be used and is replaced by the database table /SAPYL/CNT_BIC containing the owner code and the equipment category. As this Customizing table is delivered without any entries, the change should not have an impact but you have to maintain the entries in the replaced table manually.

1.2.4.3 Migration Topics for Release 2

1.2.4.3.1 Changes to BOPF Model of Yard Orders / Yard Requests Correction Report

In SAP Yard Logistics 1.0, two activity categories were used for the yard order business object - Yard Order and Yard Request. In SAP Yard Logistics 2.0, only one standard activity category is used - ROOT.

You use the report /SAPYL/YO_NODE_CAT_MIGRATION to set the activity category for all yard orders for a specific yard (specified as select-option) in the database table /SAPYL/YO_HDR to the ROOT activity category.

This report shall only run once using transaction SA38 during migration and it should run for all your yard numbers.

1.2.4.3.2 Customizing Activity "Define Yard Numbers"

Before Release 2, you can define yard number properties in Customizing activity *Define Yard Numbers* by choosing your central EWM business system and EWM warehouse number. Now, in Release 2, this can be defined per Yard Order Item individually, that is, multiple warehouses per Yard Order. In addition, the field *TU Mapping Type* is removed, as this mapping is now based on the field *External Document ID* (which is filled with the SAP TM's freight order, if the source system is an SAP TM system). Therefore, these fields have been removed from this screen. The *Dangerous Goods* field is still available but moved down to the additional fields for defining the *Dangerous Goods Check* and the *Dangerous Goods Source* from where the system reads the Dangerous Goods data.

1.2.4.3.3 Customizing Activity "Map TM Freight Order Types"

In Release 2, in this Customizing activity, a new flag to determine the mapping between the items for the freight order from SAP TM and the items to the Yard Request can be defined:

- When the mapping type is *1 – Duplicate external hierarchy*, no additional logic is needed. The system copies one to one the item hierarchy from TM.
- When the mapping type is *2 – Consider TU Loading Hierarchy*, the items will be loaded on the parent item, only when the TU Loading Hierarchy already maintained in SAP Yard Logistics allows this. If the loading hierarchy does not allow it, the item is placed on the same level as its corresponding parent item.

1.2.4.3.4 Customizing Activity "Map TM Relevant TU Types for Yard Request"

In this Customizing activity, an additional column for *Equipment / Vehicle Type* is added, that is, now the TU types can be determined more granular by using the equipment plus the means of transport from SAP TM.

1.2.4.3.5 Customizing Activity "Define Default Activity Types"

In this Customizing activity, the time points for the default activities are changed. The time point for *1=During Yard Request Release* is deleted. Now only the time points *0=During Yard Request Creation* or *2=During Yard Order Creation* are possible.

1.2.4.3.6 Customizing Activity "Define Whether to Activate Yard Task of Yard Order Automatically"

In the previous release, the system triggered the automatic activation of the first yard task and the follow up tasks using the SAP Post Processing Framework. As this implies some technical drawbacks, these PPF actions were removed and this new Customizing activity is implemented.

1.2.4.4 Monitoring Concept

Monitoring is an essential task in the management of SAP technology and applications. You can find more information about monitoring on the SAP Help Portal under <http://help.sap.com/nw74>. Go to *System Administration and Maintenance Information* → *Technical Operations for SAP NetWeaver*.

1.2.4.4.1 Integration Engine Monitoring and Restart

The interface connectivity between SAP Yard Logistics and SAP Transportation Management (SAP TM) is based on integration scenarios using SAP PI. Therefore, the monitoring of the interface between SAP TM and SAP Yard Logistics can be done using transaction SXMB_MONI. It is important to mention here that this monitoring transaction is available in the sending system (for example, the system hosting SAP TM), the receiving system (for example, the system that is running SAP Yard Logistics), and in the PI system connecting both these systems. Interface messages between these systems can be transferred correctly only if the messages are processed successfully in all three systems. From this transaction, you can also trigger a message re-start if the original call has ended in failure. A *Restart* button to re-process the web service call is available for use in such a scenario.

1.2.4.4.2 Queue Monitoring

The integration engine of SAP PI as well as SAP EWM use A2A interfaces based on RFC function calls that are processed via queued RFCs. The naming of the queues have been taken over from the naming conventions of these applications. You can perform the basic monitoring using transaction SMQ1 for outbound queues, that is, qRFC calls at sender side, or transaction SMQ2 for inbound queues, that is, qRFC calls at receiver side.

1.2.4.4.3 Monitoring of the Post-Processing Framework

The Post-Processing Framework (PPF) is used in SAP Yard Logistics to perform follow-up process actions based on existing business objects, that is, yard orders, yard tasks and yard TUs. PPF monitoring can be performed in two different ways. The first way is to use directly in the FPM user interface of the single document maintenance for one of the business objects mentioned above. On these user interfaces, you can find a custom UIBB area called *Output Management* that shows all PPF actions related to the current business object document. For

example, to verify whether a particular yard order has been sent to SAP TM, you can navigate to the UIBB area [Output Management](#) and verify that an entry for the PPF action [Send LDAP Notification to SAP TM](#) exists and has a green light. If this is the case, the yard order has been processed successfully.

In the second, a more conventional method, you can use transaction SPPFP. Here, you have to enter the date and period of the PPF action that you want to see.

- The application, which is fixed /SAPYL/PPF for SAP Yard Logistics
- The action profile - /SAPYL/YO for yard orders, /SAPYL/TU for yard TUs, /SAPYL/YT for yard tasks
- The action definition - one of the entries mentioned in the table below

Then, you can see a PPF action processed as resulting list entries. If you have enabled the function, from this list also you can re-trigger a PPF action.

Table 2: PPF Actions in SAP Yard Logistics

Business Object	Action Profile	Action Definition	Description
Yard Task	/SAPYL/EXT_COMM	/SAPYL/DRIVER_COMM	Send driver's notification
Yard Order	/SAPYL/YO_PRINT	/SAPYL/YO_PRINT_DOCUMENT	Yard Order Print (automated)
Yard Order	/SAPYL/YO_PRINT	/SAPYL/YO_PRINT_DOCUMENT_MAN	Yard Order Print (manual)
Yard Request	/SAPYL/YR_PRINT	/SAPYL/YR_PRINT_DOCUMENT	Yard Request Print (automated)
Yard Request	/SAPYL/YR_PRINT	/SAPYL/YR_PRINT_DOCUMENT_MAN	Yard Request Print (manual)
Yard Task	/SAPYL/YT_PRINT	/SAPYL/YT_PRINT_DOCUMENT	Yard Task Print (automated)
Yard Task	/SAPYL/YT_PRINT	/SAPYL/YT_PRINT_DOCUMENT_MAN	Yard Task Print (manual)

1.2.4.4.4 Monitoring in the Yard Cockpit

The Yard Cockpit is a monitoring tool that enables you to oversee all activities within a yard based on the operational documents as well as the current situation using a graphical visualization.

To support these requirements, the [Yard Cockpit](#) is split into several areas. The right side of the screen contains the visual yard, which is the display of the current situation within the yard in a graphical view. On the left side of the screen, you can see the lists for yard orders, yard tasks, resources, and so on.

Technically, in these areas, UIBBs are shown in the FPM application, which allows for the efficient filtering and display of the operational business documents, for example, yard tasks, yard order, TUs, and so on.

In the Yard Cockpit, the different UIBBs mentioned below in table 3, are treated independently. This means, for example, one Yard Order in the Yard Order UIBB has no impact on the display of the Visual Yard.

The following table contains the UIBBs that are currently available in the yard cockpit.

Table 3: Available UIBBs in the Yard Cockpit

UIBB	Description
Yard Tasks	With this UIBB, you can filter and display yard tasks based on different criteria, such as creating new ones and editing existing ones.
Yard Orders	With this UIBB, you can filter and display yard orders based on different criteria.
Transportation Units	With this UIBB, you can filter and display TUs based on different criteria.
Alerts	With this UIBB, you can filter and display alerts based on different criteria.
Resources	With this UIBB, you can filter and display resources based on different criteria.

Note that you can click the person symbol on the upper right corner to determine the layout of the yard cockpit.

1.2.4.4.5 Monitoring the Driver's Communication via SMS

In SAP Yard Logistics, it is used to send an SMS for driver advice after the check-in of a Yard Order document. This makes use of SAPconnect, a functionality to set up different communication possibilities sent from the SAP system. To monitor the SMS sent, you can use transaction SOST.

More Information

You find this documentation on the SAP Library for SAP NetWeaver 7.4. Go to SAP Help portal at <http://help.sap.com> and choose *Technology Platform* → *SAP NetWeaver* → *SAP NetWeaver 7.4* → *Application Help*. Go to *Function-Oriented View* → *Application Server* → *Application Server ABAP* → *Other Services*. Then select *Services for Business Users* → *SAPconnect*.

1.2.4.5 Logging and Tracing

Trace files and log files are essential for analyzing problems.

- For general information about traces, see SAP Library for SAP NetWeaver on [SAP Help Portal](http://help.sap.com) at <http://help.sap.com/nw703> and choose *Application Help* → *Function-Oriented View*. Go to *SAP NetWeaver by Key Capability* → *Application Platform by Key Capability* → *Application Server ABAP* → *Administration of Application Server ABAP* → *Monitoring and Administration Tools for Application Server ABAP* → *Trace Functions*.
- You can also see [SAP Help Portal](http://help.sap.com) at <http://help.sap.com/nw74>, and choose *Application Help* → *Function-Oriented View* and choose *Application Help* → *Function-Oriented View*. Go to *SAP NetWeaver Library: Function-Oriented View* → *Application Server* → *Application Server ABAP* → *Administration of Application Server ABAP* → *Monitoring and Administration Tools for Application Server ABAP* → *Trace Functions*.

In the following section, the logging concept is described in detail.

1.2.4.5.1 Application Log

The application log is a re-use tool that collects messages, exceptions, and errors. This information is organized and displayed in a log. As the technical basis is SAP EWM, all SAP Yard Logistics related logs are stored using object /SCWM/WME. This enables the switching of log messages per SAP user and warehouse.

Table 4: Application Log Sub Objects for SAP Yard Logistics

Sub Objects	Description
/SAPYL/INTERFACE_EWM	EWM Interface Messages
/SAPYL/YARD_TU	Yard Transportation Unit
/SAPYL/YC	Yard Cockpit
/SAPYL/YO	Yard Order / Request
/SAPYL/YR_REL	Yard Request Release (by report)
/SAPYL/YT	Yard Task
/SAPYL/YT_DLOC_DET	Yard Task Destination Location Determination
/SAPYL/YT_QDET	Yard Task Queue Determination
/SAPYL/RESET_SEQ	Storage Bin Sequencing

More Information

For general information about application logs, see SAP Library for SAP NetWeaver on SAP Help Portal at <http://help.sap.com/nw74> and choose *Application Help* → *Function-Oriented View*. Go to *SAP NetWeaver Library: Function-Oriented View* → *Solution Life Cycle Management* → *Application Log*.

1.2.4.6 Technical Configuration

The following sections contain information that are related to the operation of the web-based applications provided in SAP Yard Logistics:

- Yard transportation unit overview (WDCA_YARD_TU)
- Yard cockpit (WD_COCKPIT_NEW)
- Color picker (WD_COLOR_PICKER)
- Yard editor (WD_YARD_EDITOR)
- Yard order (WD_YO)
- Yard order check-in and check-out (WD_YO_CICO)
- Yard order overview (WD_YO_POWL)
- Assignment of TU to yard order (WD_YO_TU)
- Yard request (WD_YR)
- Yard request overview (WD_YR_POWL)

- Yard task (WD_YT)
- Yard transportation unit (WD_YTU)
- Yard task overview (WD_YT_POWL)

These applications are based on the Web Dynpro for ABAP technology. Therefore, we strongly recommend that you read the operations information available for this UI technology first. This information is provided with the documentation for your SAP NetWeaver release. You can access this information on SAP Help Portal at <http://help.sap.com/nw>.

You must also activate the corresponding SICF nodes to the applications (mentioned in brackets).

More Information

See *Activating ICF Services*. Go to <http://help.sap.com/nw74> and choose *Application Help* → *UI Technologies in SAP NetWeaver*. Go to *Web Dynpro ABAP and Floorplan Manager* → *Web Dynpro ABAP* → *Web Dynpro ABAP Administration* → *Initial System-Wide Configuration Settings for Web Dynpro ABAP*.

1.2.4.6.1 Yard Visualization Using SAP Visual Business

To enable the yard visualization in SAP Yard Logistics, you have to install and configure the SAP Visual Business front-end component (see section on SAP Visual Business). Based on this technical setup, the yard objects to be visualized need to be completed using the yard object editor.

1.2.4.6.2 SAP Fiori Launchpad and Mobile Apps

To use SAP Fiori Launchpad, you must set it up as described in section on Installation and Setup.

Once you have done this, you must provide role-specific authorizations to your business users to access the Fiori Launchpad applications. To this end, you have to assign the following pre-defined roles to the users:

Technical Role	Description	Notes
/SAPYL/YTASK_APP	SAP Yard Logistics - Backend Role for Fiori App - Yard Task Confirmation	Only relevant for the SAPUI5 user interface
/SAPYL/SELFCKEIN_APP	SAP Yard Logistics - Backend role for Fiori App – Self Check-In	Only relevant for the SAPUI5 user interface
/SAPYLUI/BCR_YARDOPERATOR_T	SAP Yard Logistics - Business Role for Yard Operator	Only relevant for the SAPUI5 user interface
/SAPYLUI/BCR_GATEAGENT_T	Business Role for Yard Gate Agent	Only relevant for the SAPUI5 user interface
/SAPYLUI/TCR_T	SAP YL - Technical Role for Fiori Launchpad	Only relevant for the SAPUI5 user interface

After that, populate the Launchpad with the right apps. For this, you can use transaction /UI2/FLP_CONF - Fiori Launchpad Designer.

SAP Yard Logistics provides the following catalogs available in the Launchpad:

Catalog ID	Description
X-SAP-UI2-CATALOGPAGE:/SAPYLUI/BC_YARDOPERATOR_T	Apps for SAP YL Yard Operator
X-SAP-UI2-CATALOGPAGE:/SAPYLUI/BCC_GATE_AGENT_T	Apps for SAP YL Gate Agent
X-SAP-UI2-CATALOGPAGE:/SAPYLUI/TC_T	Apps for SAP YL

To be able to start the mobile apps, semantic objects YardTask and YardOrderSelfCheckIn are defined.

You must also activate the SICF nodes /default_host/sap/bc/ui5_ui5/sapylui/ytask (for this mobile application) and the SICF node /default_host/sap/opu/odata/sapyl/das_yard_operator_srv (for the ODATA service in the SAP Yard Logistics backend).

For the self check-in app, you must activate the SICF node /default_host/sap/opu/odata/sapyl/self_check_in_srv.

1.2.4.7 Backup and Recovery

You need to back up your system landscape regularly to ensure that you can restore and recover it in case of failure. The backup and restore strategy for the application consists of the following:

- Backup and restore coverage for each component
- Cross-system data dependencies and handling

The backup and restore strategy for your system landscape must not only consider SAP systems but must also be embedded in the overall business requirements and incorporate your company's entire process flow. In addition, the backup and restore strategy must cover disaster recovery processes, such as, the loss of a data center through fire. In this context, it is essential that you ensure that backup devices are not lost together with normal data storage, by using separate storage locations.

SAP Yard Logistics is, as SAP EWM 9.3, based on SAP NetWeaver technology. All related SAP NetWeaver backup procedures also work for SAP Yard Logistics. Therefore, there is no special procedure for this component. For more information on backup and recovery, see <http://help.sap.com/nw74>. Go to *System Administration and Maintenance Information* → *Operations Information*.

1.2.4.8 Periodical Tasks

In addition to the standard jobs mentioned in *Technical Operations for SAP NetWeaver*, see <http://help.sap.com/nw74>. Go to *System Administration and Maintenance Information* → *Technical Operations for SAP NetWeaver*. You must schedule SAP EWM-specific jobs in your SAP system. You must run all jobs, unless otherwise specified, at times of minimal system activity, so as not to affect performance or otherwise disrupt your daily operations. You can restart all jobs.

To release multiple yard requests based on their planned arrival or departure dates, automated via a background process, the business can use transaction /SAPYL/MASS_YR_ACTIV to release multiple Yard Requests on a planned arrival or departure date.

To analyze all the business objects in the yard, for example, yard requests, yard orders, yard task, transportation units you need to plan the report /SAPYL/TIME_BASED_ALERTS_MASS on a periodical basis. This report calls the

relevant alert class that does the validations. If the validation of the alert class determines that the business object is valid for an alert, the report raises the corresponding alert.

You can use the report /SAPYL/ARR_DEP_ALERTS to check the arrival and departure dates and times of yard orders frequently during the day. This report triggers an alert automatically based on the settings. Alerts can be displayed in the alert monitor. For inbound yard orders, the report checks only those yard orders for which the check-in is not yet posted and for outbound yard orders, the report checks only those yard orders for which the check-out is not yet posted

1.2.4.9 High Availability Concept

SAP Yard Logistics uses standard SAP NetWeaver functions for high availability. For more information about high availability, see SAP Library for SAP NetWeaver on SAP Help Portal at <http://help.sap.com/nw74> and choose *Application Help* → *Function-Oriented View*. Go to *Solution Life Cycle Management* → *SAP Business Continuity*.

1.2.4.10 Starting and Stopping

SAP Yard Logistics is installed as Add-on to SAP EWM 9.3. Therefore, you should consult the starting and stopping procedure valid for SAP EWM 9.3. See SAP Help Portal at <http://help.sap.com/ewm93> and choose *System Administration and Maintenance Information* → *Application Operations Guide*. Go to *Starting and Stopping*.

1.2.4.11 Scenario Administration and Maintenance Concept

SAP Yard Logistics uses standard SAP NetWeaver functions and is based on SAP EWM 9.3. Therefore, consult the starting and stopping procedure valid for SAP EWM 9.3. See SAP Help Portal at <http://help.sap.com/ewm93> and choose *System Administration and Maintenance Information* → *Application Operations Guide*. Go to *Starting and Stopping*.

1.2.4.12 Software Change Management

Software Change Management standardizes and automates software distribution, maintenance, and testing procedures for complex software landscapes and multiple software development platforms. These functions support your project teams, development teams, and application support teams.

The goal of Software Change Management is to establish consistent, solution-wide change management that allows for specific maintenance procedures, global rollouts (including localizations), and open integration with third-party products.

This section provides additional information about the most important software components.

- **Transport and Change Management:** Enables and secures the distribution of software changes from the development environment to the quality. For transport and change management issues, the procedures of

SAP NetWeaver apply for SAP Yard Logistics. For more information, see SAP Library for SAP NetWeaver on SAP Help Portal at <http://help.sap.com/nw74> and choose *System Administration and Maintenance Information* → *Technical Operations for SAP NetWeaver*. Go to *Administration of Application Server ABAP* → *Change and Transport System*.

- The SAP Yard Logistics component is a server component that uses the standard ABAP Transport Management System (TMS) for software logistics. The SAP Yard Logistics application component belongs to the technical software layer SAPYL (for the SAP YL applications besides the SAPUI5 application) and to SAPYLUI (for the SAP YL's UI5 application). Updates to these components are supplied through SAP Notes or the SAP Note Assistant and support packages.
- Support Packages and SAP Notes Implementation: Provides standardized software distribution and maintenance procedures. Patches for the components are available either as regular support packages or as SAP Notes. To download the SAP Notes, use SAP Solution Manager or the SAP Note Assistant.

1.2.4.13 Support Desk Management

Support Desk Management enables you to set up an efficient internal support desk for your support organization that seamlessly integrates your end users, internal support employees, partners, and SAP Active Global Support specialists with an efficient problem resolution procedure.

For support desk management, you need the methodology, management procedures, and tools infrastructure to run your internal support organization efficiently.

SAP Support needs to be able to work remotely for highest efficiency and availability. Therefore, all required support tools must be remotely accessible for SAP support. For SAP YL, the standard SAP procedures for setting up remote support apply.

For information about Remote Support Setup, see <http://support.sap.com/remotecconnection>.

For information about reporting incidents and forwarding them to SAP, see <http://support.sap.com>.

For sending incidents/problem messages/tickets to SAP, choose the appropriate component (or sub component) name from the SAP component hierarchy:

Component	Component Name	Notes
SCM-YL	SAP Yard Logistics	For all messages to SAP YL processes and applications (except the mobile app for yard operations)
SCM-YL-FIO	SAP Yard Logistics Fiori	For all messages related to the mobile app for yard operations

1.2.4.14 Troubleshooting

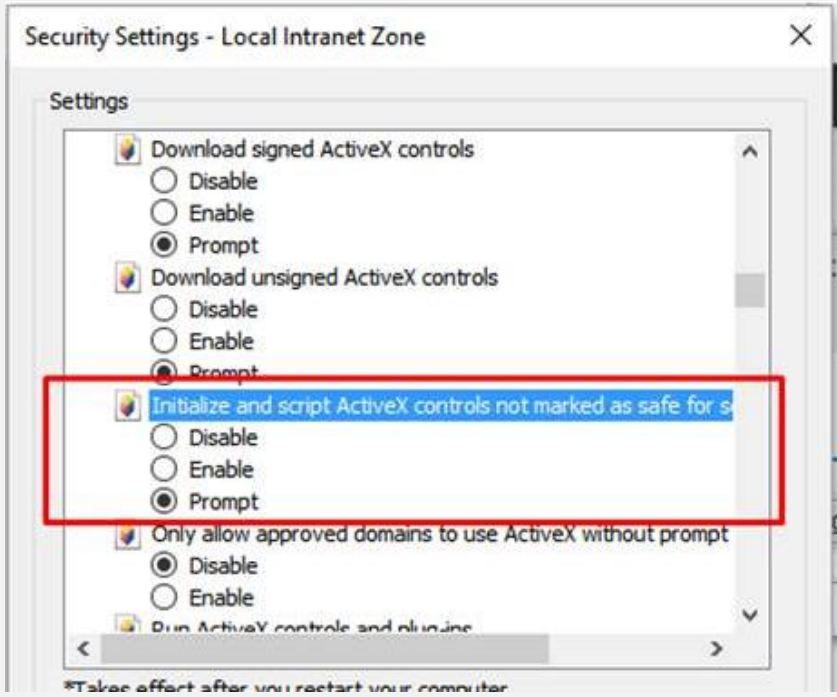
For information about troubleshooting SAP NetWeaver, see SAP Library for SAP NetWeaver on SAP Help Portal at help.sap.com/nw74 and choose *System Administration and Maintenance Information* → *Technical Operations for SAP NetWeaver*. The following tools are available for troubleshooting SAP Yard Logistics:

- Application Logs - For more information, see section on Logging and Tracing.

- SAP EWM Troubleshooting - Consult the chapter on [Troubleshooting](#) valid for SAP EWM 9.3. See SAP Help Portal at <http://help.sap.com/ewm93> and choose [System Administration and Maintenance Information](#) → [Application Operations Guide](#). Go to the chapter on [Troubleshooting](#).

1.2.4.14.1 Tips and Tricks

Table 5: Tips and tricks for troubleshooting

Issue	Resolution
The visualization of the yard cockpit looks strange and you have defined the items in a correct way.	Clear the cache of the Visual Business GUIBB. The SAP Visual Business control in the browser caches map tiles on the front-end machine. It may be necessary to clear the cache if you encounter mis-fitting map tiles. The cache content is controlled through the Visual Business Property window that you can open with Ctrl + Alt + Right click. The window offers a Cache tab, which shows you the actual cache location and its content. Furthermore, it allows you to clear the cache completely. See http://help.sap.com/visualbusiness21, open the Application Help and navigate to Visual Business Elements → Cache Control.
The visualization of the yard cockpit is not starting or shows a white space or an error message "No map can be displayed for VisBis UIBB"	This is an issue in the browser security, for example, Internet Explorer 11, and for the browser, you have to allow "insecure" ActiveX controls. See the security setting for IE11 as an example:  Also, compare SAP Note 2305753.

Issue	Resolution
There is an issue in a Web Dynpro ABAP that is only reproducible by a specific user. This issue may be represented by a blank screen, a dump or a time-out error.	See SAP Note 2198046 - How to resolve user-specific issues in Web Dynpro ABAP and use WD application WD_ANALYZE_CONFIG_USER
Changes to BO field control for yard orders, yard requests or yard tasks are not up-to-date after transport.	Open transaction SHMM, then find the shared area /B0FU/CL_BO_FIELDCONTROL_SHM and select Delete All Instances button on the table toolbar. Then refresh the Web Dynpro application and all the fields are disabled according to the updated field control database table.  Caution If several business users are using Web Dynpro applications in parallel, then they may receive a dump because the shared memory instances are deleted.
You have changed Customizing settings for the self check-in app but you still see the old version in the target system	The target system's client cache needs a refresh for your user. Therefore, start transaction SA38 and run the report /UI2/INVALIDATE_CLIENT_CACHE
You are using the NWBC locally and have empty F4 value help lists	The reason is a browser bug released in a security patch in May by Microsoft, which causes that issue. See SAP Note 2375211.
The queues are hanging and you want to automate their restart	You can schedule the following reports on a regular time base: · RSQOWKEX: Restart QOUT qRFC LUWs · RSQIWKEX: Restart QIN qRFC LUWs For more information, please consult the SAP Note 813029 - <i>Automatic processing of failed XI messages</i>

1.2.4.15 Alert Monitoring

Proactive automatic monitoring is the basis for ensuring reliable operations for your SAP system environment. SAP Yard Logistics is technically based on SAP NetWeaver Application Server, and reuses the Alert Monitor framework used in SAP SCM Basis. You can set up the basic customizing using transaction /SCMB/ALENCFG - [Alert Engine Configuration](#).

The possible alert [categorization](#) is defined via alert structures. These structures represent special topics for alerting. The following table shows the predefined alert structures:

Table 6: Alert Structures in SAP Yard Logistics

Alert Structure	Name
2800	SYL: YT Exception
2810	SYL: Time Based Alerts
2820	SYL: Arrival and Departure
2830	SYL: Storage Bin Block
2840	SYL: Transportation Unit Block
2850	SYL: Thresholds

Based on the alert [categorization](#), you can define the specific alert messages called alert types. The following table shows the pre-defined alert types:

Table 7: Alert Object Types in SAP Yard Logistics

Alert Type	Alert Description
2801	Transportation Unit Damaged
2802	Transportation Unit Blocked
2811	Transportation Unit in Yard
2813	Check-in Delayed
2814	Check-out Delayed
2821	Arrival Date / Time has Passed
2822	Departure Date / Time has Passed
2831	Storage Bin Blocked for Putaways
2832	Storage Bin Blocked for Stock Removal
2833	Storage Bin Blocked for Putaways and Stock Removal
2841	Transportation Unit General Block
2851	Threshold Exceeded

To monitor the specific alerts created by the SAP Yard Logistics solution, you can use transaction /SAPAPO/AMON1. Select one of the overall alert profiles showing all alerts for SAP Yard Logistics to see all posted alerts.

1.2.4.16 Data Growth and Data Archiving Monitors

SAP Yard Logistics uses the standard tools available in SAP NetWeaver and does not require a component-specific tool. For the business documents of yard orders (and yard requests), yard tasks and yard TUs, the

archiving adapter of the Business Objects Processing Framework is used. For more information, see the SAP NetWeaver Operations Guide on SAP Service Marketplace at service.sap.com/operationsnw74.

You can archive the following data in SAP Yard Logistics:

Table 8: Archiving Objects for SAP Yard Logistics

Business Document	Archiving Object	Report	Description
Yard Request and Yard Order	/SAPYL/YO	/SAPYL/ARCH_YARD_ORDER_PRE	Archiving of BO /SAPYL/YARD_ORDER: Preprocessing Program
		/SAPYL/ARCH_YARD_ORDER_WRI	Archiving of BO /SAPYL/YARD_ORDER: Writing Program
		/SAPYL/ARCH_YARD_ORDER_DEL	Archiving of BO /SAPYL/YARD_ORDER: Deletion Program
Yard Tasks	/SAPYL/YT	/SAPYL/ARCH_YARD_TASK_PRE	Archiving of BO /SAPYL/YARD_TASK: Preprocessing Program
		/SAPYL/ARCH_YARD_TASK_WRI	Archiving of BO /SAPYL/YARD_TASK: Writing Program
		/SAPYL/ARCH_YARD_TASK_DEL	Archiving of BO /SAPYL/YARD_TASK: Deletion Program
Yard Transportation Units	/SAPYL/TU	/SAPYL/ARCH_YARD_TU_PRE	Archiving of BO /SAPYL/YARD_TU: Preprocessing Program
		/SAPYL/ARCH_YARD_TU_WRI	Archiving of BO /SAPYL/YARD_TU: Writing Program
		/SAPYL/ARCH_YARD_TU_DEL	Archiving of BO /SAPYL/YARD_TU: Deletion Program

In addition to the archiving objects, SAP Yard Logistics also provides specific ILM-enabled entities that are linked to the archiving objects mentioned above. The following table gives an overview on these ILM objects for SAP Yard Logistics. For more details on how they can be used, see the online help item [Making SAP NetWeaver ILM Available](#) at

http://help.sap.com/saphelp_scm700_ehp01/helpdata/en/b0/3f9fd868c14b5696554766234884f8/content.htm?frameset=/en/09/ec83476f0942bcaea4481bc02ddf23/frameset.htm¤t_toc=/en/35/aaef16745644c397ec0024b31fb191/plain.htm&node_id=3&show_children=false

Table 9: ILM Objects for SAP Yard Logistics (see transaction IRM_CUST)

ILM Object	Description
SAPYL_YO	ILM Object for Yard Orders
SAPYL_YT	ILM Object for Yard Tasks
SAPYL_YTU	ILM Object for Yard TUs

1.3 Important SAP Notes

You must apply the following SAP Notes after the system installation is complete. Make sure that you have the up-to-date version of each SAP Note, which you can find on SAP Service Marketplace at <http://service.sap.com/notes>.

SAP Note Number	Title
1797996	RCCLUKA2 "Multiple objs allowed" is not set
2244648	In BOPF-Test-UI (Transaction BOBT or /BOBF/TEST_UI) an error occurs at loading
2265646	Departure from checkpoint: GI not posted for TU container
2269756	In Test UI is the trace active, while it has not been switched on
2270368	BOBT query via SADL leads to ABAP short dump
2327301	BOPF query execution dumps
2329287	ABAP-Dictionary-objects for SAP Note 224141
2329313	Maintain dates from external system using references
2330264	Quick outline with inherited members displays double entries for methods
2361466	LDAP Notification: short dump GETWA_NOT_ASSIGNED for TU w/o vehicle
2368533	Application terminates while processing PPF actions in background
2377075	Application terminates on click of Print Immediately action
2193128	No option to use six-sided textures for boxes
2378423	Arrival at checkpoint not possible for inbound TU container

You must read the following SAP Notes before you start the installation. These SAP Notes contain the most recent information on the installation, as well as corrections to the installation documentation.

SAP Note Number	Title	Description
2230295	Release Strategy for the ABAP Add-on SAPYLUI	This note contains the release strategy for the mobile user

SAP Note Number	Title	Description
		interfaces used in Yard Operations
2230296	Release Strategy for the ABAP Add-on SAPYL	This note contains the release strategy for the SAP Yard Logistics 2.0 with its business scenarios

2 SAP Yard Logistics 2.0 – Overview

The continued expansion of world trade leads to an increased transportation demand of goods starting from a global planning for an international outbound transportation (reflected by SAP TM) up to managing warehouse process execution in an optimized way (reflected by SAP EWM).

Between this global planning and this local execution, companies manage truck, container or rail yards to connect the different levels of this supply chain execution. An efficient management of such yard processes is a crucial part for an overall optimized logistical chain. An optimal handling of its resources within the yard supports the yard efficiency. Interaction between independent business partners of this supply chain can lead to manual effort, delays, and thereby increasing costs. A lack of transparency of the usage of resources in the yard prevents an optimal infrastructure usage.

The SAP Yard Logistics solution addresses these issues by providing transparency of the yard processes, thereby simplifying the truck, container, and rail yard management. The main objectives of this solution are:

- Increase visibility of all yard processes
- Improve efficiency for user roles such as dispatchers, truck, train, and vessel drivers, the internal and external workforce, and security
- Provide planning, execution, and settlement functionality in one central system
- Integrate with existing business processes of the whole supply chain
- Prototype the integration of smart devices of yard assets via HCP IoT service

The solution is built using intuitive user interfaces and includes simple-to-adapt yard processes for different means of transports. The integration with the SAP Transportation Management (SAP TM) and SAP Extended Warehouse Management applications for the logistics fulfillment platform allows an efficient supply chain execution. Moreover, integration with charge calculation and settlement in SAP TM has been built for charging and billing the executed yard operations.

To reflect the mobile first approach and to allow faster speed of yard operations, the solution also includes mobile user interfaces for these yard operations.

The solution is based on SAP EWM 9.3 as the technical basis, allowing flexible deployment scenarios. It can run standalone, in connection with SAP TM only or fully integrated into the supply chain platform.

2.1 Software Units of SAP Yard Logistics

This section provides an overview of the most important software components in SAP Yard Logistics.

SAP YL on SAP SCM Server or SAP YL Standalone

As SAP Yard Logistics has SAP EWM as the technical foundation, the same software units and deployment options are used as in SAP EWM 9.3. You can find these software units and deployment options in the Master Guide for SAP EWM 9.3 at <http://help.sap.com/ewm93>.

The recommended deployment options from SAP EWM are described in SAP Note [1606493 - SAP EWM Deployment Options Best Practices](#). The recommended deployment option is the usage of SAP YL in a separate NetWeaver system instance where only SAP YL is actively used and no other application. However, we also

support the deployment on the SCM Server (with [SAP NW740](#) stack). For more details, see the recommended options note for SAP EWM9.3.

SAP Visual Business

In SAP Yard Logistics, the yard cockpit graphical visualization is based on SAP Visual Business. SAP Visual Business is a technical component for geo-visualization.

SAP Visual Business is a user interface technology that visualizes data from SAP and external data sources on a single screen. SAP Visual Business applications not only combine different types of content, but also include interactive graphics that visualize and combine enterprise data with geographical or three-dimensional real-world scenes.

The SAP Visual Business front-end component used on the FPM user interface of SAP Yard Logistics is a client component. The client-side installation is integrated into the SAP front-end installer, also known as SAPSetup, which is available on SAP Service Marketplace. For use on NetWeaver platform release 7.4, SAP Visual Business release 2.1 is recommended. For more details, see the application help for SAP Visual Business 2.1 at <http://help.sap.com/visualbusiness21>.

SAP Fiori and SAP Launchpad

SAP Fiori is the new user experience (UX) for SAP software that applies modern design principles. SAP solutions, such as the SAP Business Suite powered by SAP HANA, are using the SAP Fiori UX to provide a personalized, responsive, and simple user experience.

Organized by user roles, the SAP Fiori Launchpad is the central entry hub to all SAP Fiori apps, where users access apps via tiles. Within the Launchpad, there are services for navigation, personalization, single sign-on, and search. The Launchpad and the tiles are flexible and can be adapted to your needs.

All UIs are built using state-of-the-art technology such as HTML5 and SAP UI5 mobile. SAP Fiori apps allow you to access the most recent version of your back end data via OData services. Using previously defined roles and authorizations, you can specify the apps and data that a user is allowed to access.

For more details, see the Application Help for *What is SAP Fiori?* at http://help.sap.com/fiori_bs2013.

Additional Application Components

The following software components, which are not part of SAP YL, can be used in conjunction with your specific SAP YL scenarios or processes:

- SAP ERP
- SAP EWM
- SAP Dock Appointment Scheduling
- SAP TM
- SAP HCP, IoT service

SAP ERP

SAP ERP consists of different product instances and software components, each representing a particular functional piece of the software.

For more information, see the Master Guide for SAP ERP on SAP Service Marketplace at <http://service.sap.com/instguides> under *SAP Business Suite Applications* → *SAP ERP* → *SAP ERP 6.0* → *Planning*.

For information about the enhancement packages for SAP ERP that are relevant for the business process that you want to implement, see SAP Service Marketplace at <http://service.sap.com/instguides> under *SAP Business Suite Applications* → *SAP ERP* → *SAP ERP 6.0* → *SAP enhancement packages for SAP ERP 6.0*.

For SAP YL, the materials like packaging materials can be transferred to SAP YL using the same technology and data like SAP EWM. This is not mandatory, that is, you can also create packaging material manually in SAP YL directly.

SAP Extended Warehouse Management (EWM)

SAP Extended Warehouse Management (SAP EWM) is an advanced warehouse management solution that helps you gain more control over your warehousing processes and provides you with the tools needed to improve your warehouse efficiency, transform your operations, and increase your competitiveness.

SAP EWM is used in SAP YL to create a yard structure based on a warehouse layout definition. First, a warehouse number with the yard's physical layout and geographical properties must be defined. Second, this warehouse number can be re-used as yard number adding yard processes on top. Within SAP YL, the EWM warehouse is used as a yard managed warehouse number, that is, for yard entities (like trucks, containers, and so on), we define EWM transportation units (EWM vehicles are not used) and technically wrap those defining so-called Yard Transportation Units (a technical means to integrate the EWM TUs into BOPF modelled business documents of SAP YL).

The second usage of SAP EWM comes into play in the integration scenarios between SAP YL and SAP EWM. Here, SAP EWM is used as a warehousing system, allowing the inbound and outbound business scenario "Integration of Outbound Warehousing and Transportation". See the Master Guide for EWM - chapter 4.3 at <http://help.sap.com/ewm93>. This business scenario can run in combination (SAP ERP-) SAP TM-SAP YL-SAP EWM or in combination SAP YL-SAP EWM.

SAP Dock Appointment Scheduling (DAS)

The application SAP Dock Appointment Scheduling can be used to plan vehicle arrivals in your yard efficiently, and to collaborate with the parties involved in an appointment. This planning process can be used to plan the arrivals in the yard or execute a carrier planning.

Planning of vehicle arrivals at the yard, and the warehouses, and loading and unloading of the vehicles, is important for managing the efficient running of the yard, and for balancing the workload across the working day.

You can use SAP Dock Appointment Scheduling to schedule loading appointments for arrivals and departures of vehicles (in the yard document items) and to get an overview of the workload of a loading point for each day.

For a carrier, planning is important to reduce the amount of time when the vehicles are not available for use, for example, if they are waiting to be unloaded. Carriers with access to the system can plan loading appointments for their own vehicles directly in the system, and update details of their loading appointments.

SAP Dock Appointment Scheduling can be deployed as follows:

- As a standalone solution, allowing you to manage the loading appointments at your warehouse without any reference to SAP Extended Warehouse Management (SAP EWM)
- Integrated with a local SAP EWM system (not used for SAP Yard Logistics)



Caution

SAP Yard Logistics 2.0 only supports a local deployment of SAP Dock Appointment Scheduling on the same system.

SAP Transportation Management (TM)

Transportation costs have become an important factor in our economy. This is caused by increasing fuel costs and the highly increased demand to move goods within a more and more globalized business environment.

Furthermore, the transportation market is highly competitive, which tends to lead to low margins in this sector. To operate private fleets efficiently, regardless of whether you are a manufacturer, retailer, or a logistics service provider, you need to be able to plan your transportation needs in an efficient way. SAP TM allows you to:

- Determine the most efficient transportation plan, while fulfilling the given constraints (such as service level agreements, costs, and resource availability)
- Identify cost-saving opportunities (such as consolidation possibilities and the choice of the best means of transport)
- Maximize the utilization of existing resources (such as using your own fleet)
- React to execution events and solve possible conflicts with the initial plan

You can use transportation management in SAP YL processes involving transportation planning or freight order settlement functions in SAP TM based on EWM warehouse billing.

For more information, see the Master Guide for SAP TM at <http://help.sap.com/tm93>.

SAP HANA Cloud Platform, IoT Services

Internet of Things services enable customers and partners to develop, customize and operate IoT business applications in the cloud.

For more information, see the Online Help for SAP HCP at <https://help.hana.ondemand.com>, and select the link *SAP HANA Cloud Platform Internet of Things Services*.

2.2 Software Component Matrix

This section provides an overview of which business scenario of SAP Yard Logistics 2.0 uses which software unit.

Business Scenario	Software Units Key: X = mandatory (X) = optional - = Not part of the business scenario					Other S
	SAP YL	SAP EWM	SAP TM	SAP ERP	SAP DAS	
Inbound Activity Management for Truck Yards	X	(X)	(X)	(X)	(X)	(X)
Outbound Activity Management for Truck Yards	X	(X)	(X)	(X)	(X)	(X)
Internal Activity Management for Truck Yards	X	(X)				(X)

2.3 System Landscape

The following diagram provides an overview of possible system landscapes for SAP YL 2.0, which is similar to SAP EWM 9.3. See Master Guide for SAP EWM at <http://help.sap.com/ewm93>.

If you are not using only SAP YL actively as a single software component, it is important you that execute the regression tests in the system. Therefore, we recommend that you use the single active software component SAP YL in a standalone deployment approach.

The diagram below shows three possible SAP YL installations based on a minimal landscape.

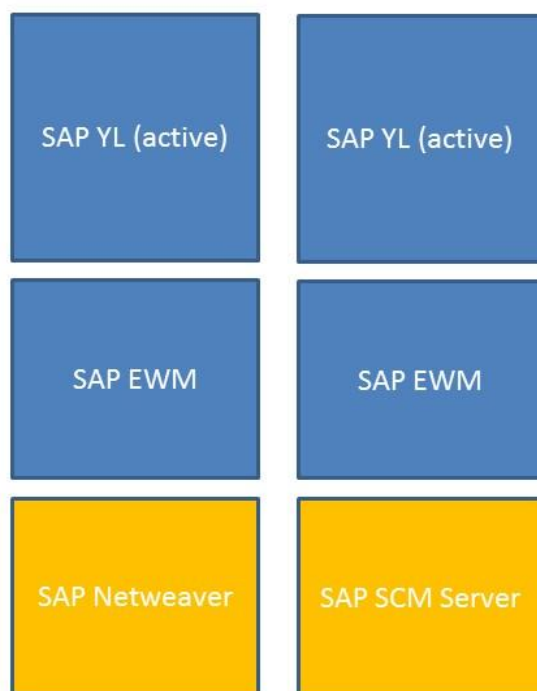


Figure 2: Deployment options of SAP YL



Caution

We strongly recommend that you use a minimal system landscape for test and demo purposes only. For performance, scalability, high availability, and security reasons, do not use a minimal system landscape as your production landscape.

 Caution

Due to performance reasons, we recommend that you install SAP TM and SAP Yard Logistics on two different business systems.

 Caution

As the Shipping and Receiving application in SAP EWM defines the Transportation Units warehouse-independent, the business system of SAP Yard Logistics and SAP EWM must be different as well.

 Caution

SAP Yard Logistics 2.0 only supports a local deployment of SAP Dock Appointment Scheduling on the same system.

The next figure shows a recommended landscape to run the mobile yard operations based on SAP Fiori in connection with an SAP ABAP backend server running the SAP YL yard processes. We assume that the software component SAPYLUI runs on the ABAP front-end server and the software component SAPYL runs on the ABAP backend server.

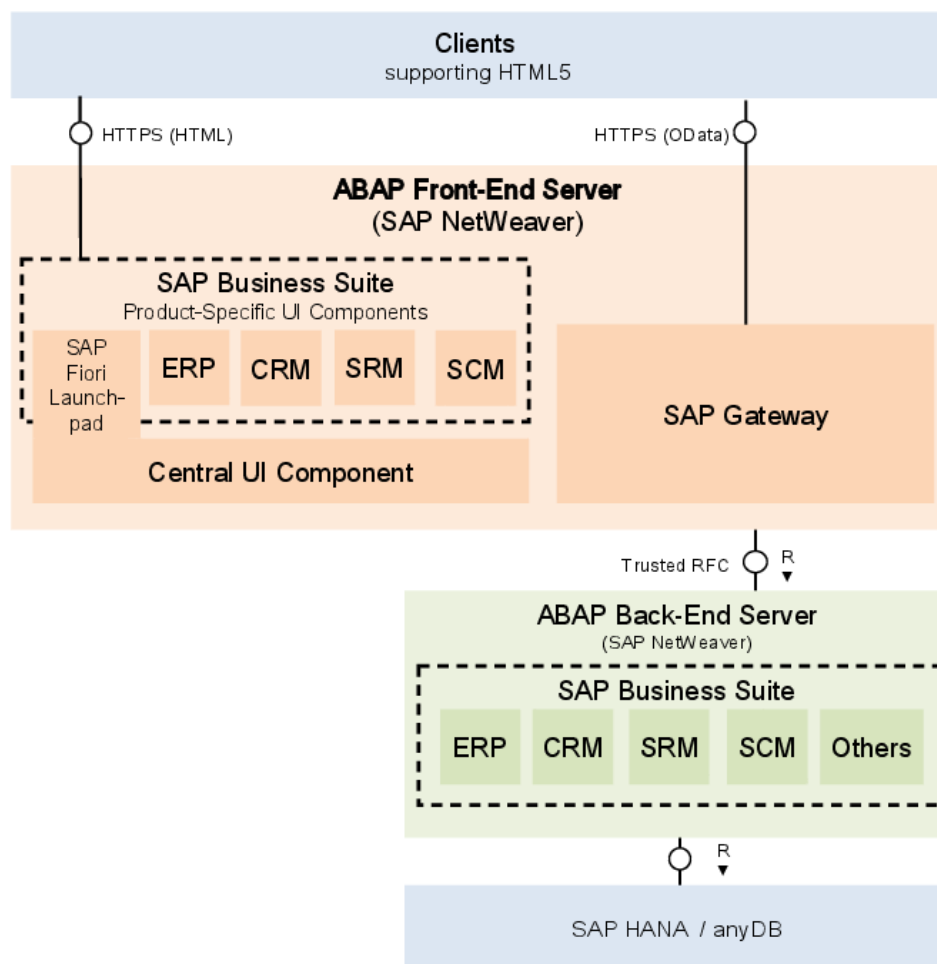


Figure 3: System Landscape for Fiori Apps

See the Application Help for SAP Fiori at http://help.sap.com/fiori_bs2013 and choose *System Landscape Required for SAP Fiori* → *System Landscape*. Go to *Setup of SAP Fiori System Landscape with ABAP Environment*.

2.4 Overall Implementation Sequence

Purpose

The following table describes the overall installation sequence for SAP Yard Logistics 2.0. This table contains all available software units. However, to implement a specific scenario, you only need a subset of available software units. Some are only required for special processes. For information about the software that is required to implement a specific scenario, see the section on

Business Scenarios of SAP Yard Logistics .

For the latest component version and patch level requirements, see section on Technical System Landscape.

Process

The implementation sequence is determined on the installation sequence of SAP EWM 9.3, which is the technical foundation for the Add-on of SAP Yard Logistics 2.0. Therefore, the following tables are based on the EWM installation sequences described in the Master Guide of EWM 9.3 at <http://help.sap.com/ewm93>.

Implementation Sequence (SAP YL based on SAP EWM standalone)

Step	Action [Required Documentation]	Remarks/Subsequent Steps
1	Installation of SAP NetWeaver 7.4	For more information, see http://service.sap.com/installnw74
2	Installation of SAP EWM 9.3	See SAP Note 2126732
3	Installation of SAP EWM UI 9.3	See SAP Note 2126732
4	Installation of User Interface Technology 7.50 (SAP_UI software component), Version SP04	
5a	Installation of SAP YL 2.0	
5b	Installation of SAP YL 2.0 (Fiori UI)	Necessary only if you use the mobile UI for yard operations in the SAP Fiori Launchpad
6	Installation of Visual Business 2.1 (local SAP GUI installation)	Necessary only if you use the visual yard cockpit

Implementation Sequence (SAP YL based on SCM Server for EWM as an Add-On to SAP SCM)

Step	Action [Required Documentation]	Remarks/Subsequent Steps
1	Installation of SAP SCM Server 7.0 including SAP enhancement package 3	For more information, go to service.sap.com/instguides and choose <i>SAP Business Suite Applications</i> → <i>SAP SCM</i> → <i>SAP SCM Server</i> → <i>Using SAP enhancement package 3 for SAP SCM 7.0</i> .
2	Installation of User Interface Technology 7.50 (SAP_UI software component), Version SP04	
3	Installation of SAP EWM 9.3	See SAP Note 2126732
4	Installation of SAP EWM UI 9.3	See SAP Note 2126732
5a	Installation of SAP YL 2.0	
5b	Installation of SAP YL 2.0 (Fiori UI)	Necessary only if you use the mobile UI for yard operations in the SAP Fiori Launchpad
6	Installation of Visual Business 2.1 (local SAP GUI installation)	Necessary only if you use the visual yard cockpit

Implementation Sequence (Dedicated SAP NetWeaver Gateway Server for SAP YL mobile UI)

Step	Action [Required Documentation]	Remarks/Subsequent Steps
1	Installation of SAP NetWeaver 7.4	For more information, see http://service.sap.com/installnw74
2	Installation of User Interface Technology 7.50 (SAP_UI software component), Version SP04	
3	Installation of SAP YL 2.0 (Fiori UI)	Mobile UI for yard operations in the SAP Fiori Launchpad

3 Business Scenarios of SAP Yard Logistics 2.0

As introduced above, the SAP® Yard Logistics solution addresses these issues by providing transparency of the yards processes, simplifying the truck, container, and rail yard management. The main objectives of this solution are to:

- Increase visibility of all yard processes
- Improve efficiency for user roles, such as:
 - o Dispatchers
 - o Truck, train, and vessel drivers
 - o Internal and external workforce
 - o Security
- Provide planning, execution, and settlement functionality in one central system
- Integrate with existing business processes of the whole supply chain

Companies with yards need professional logistic processes to be able to withstand the competitive pressure in the worldwide markets. The yards need to be supported by a highly integrated and easy-to-use system in a complete supply chain. The SAP Yard Logistics solution provides check-in to check-out support for transportation units and is focused on the functionalities of Planning, Execution, Yard Operations, Yard Monitoring and Billing.

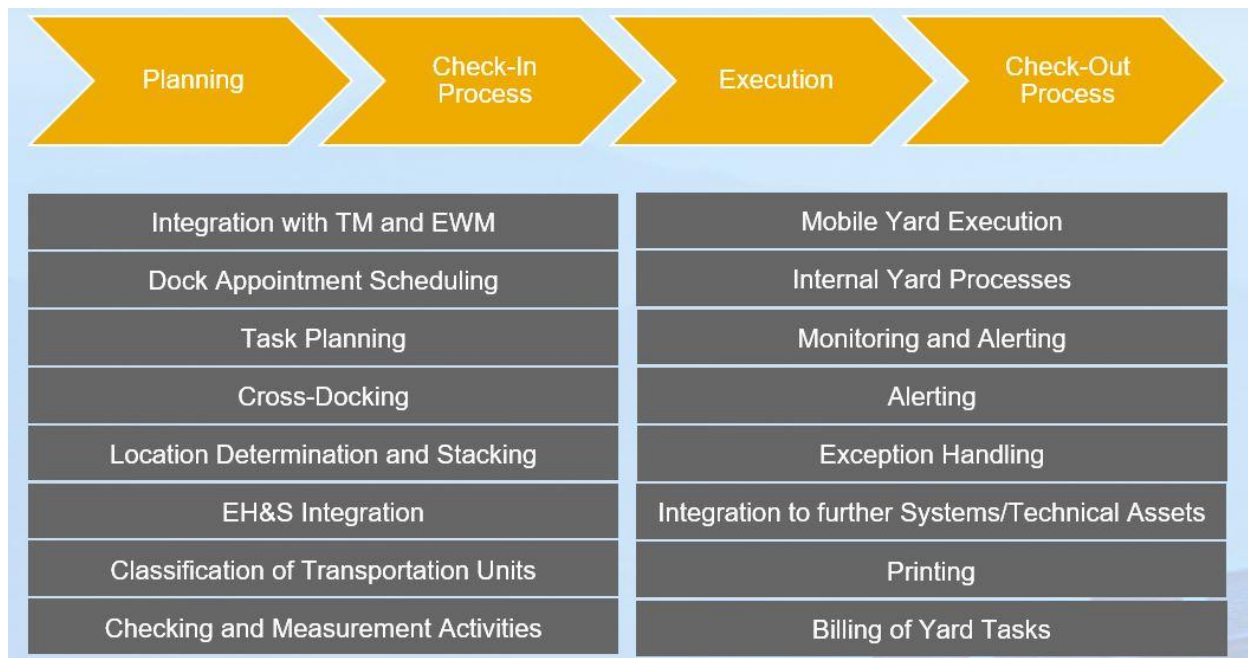


Figure 4: SAP YL Business Processes

In the figure above, you see the major business process scenarios for SAP YL.

For Planning, the business process is based on two business documents: Yard Request and Yard Order. Yard Requests are used as interfacing document to other systems and represent the time-based planning load for a yard. Yard Orders are also planning documents but accepted by the Yard Coordinator and ready for execution. The collection of Yard Orders represents the actual workload of a yard for a specific period.

In Support Package 01, the Yard Request/Order processing is split into an inbound process using inbound Yard Request/Yard Order and outbound process using outbound Yard Request/Yard Order.

For Check-In process, an existing inbound Yard Order is needed. Use this process to check-in an inbound yard order at the gate. When you check-in an inbound yard order, you actually check-in the transportation units associated with the yard order. You have a simplified user interface of the yard order to execute this process.

For Execution, you need an already checked-in inbound Yard Order for the already arrived yard resources. This process allows you to execute the operations based on Yard Tasks for a yard.

To smoothly handle a complete end-to-end flow, a newly introduced [Copy](#) functionality has been implemented to allow the copy from yard items arrived using an inbound yard order to an outbound yard order when they are leaving the yard soon after their arrival.

For check-out process, an existing outbound Yard Order is required. All relevant Yard TUs must be pushed to an outbound checkpoint to announce that they are physically ready to leave the yard. When you check-out an outbound yard order, you actually check-out the transportation units associated with the yard order. You have a simplified user interface of the yard order to execute this process.

Besides these inbound and outbound processes, SAP Yard Logistics supports Integration Scenarios (based on a sample integration functionality) in combination either with SAP TM or with SAP TM and SAP EWM.

The following topics are also changed within the Support Package 01:

- Transportation unit sequence:

With Support Package 01, you can know which transportation unit (TU) is located where in the yard. You can see the TUs preceding and succeeding the current TU. You can also insert a TU by specifying a predecessor or successor TU.

- Stackable storage bins:

With Support Package 01, the TUs on stackable bins are managed the same as on non-stackable bins using predecessor / successor TU references. A stackable bin can be managed sorted or unsorted. A yard task for a stackable bin is a movement activity. Therefore, no TU hierarchy is created.

- Yard Request/Yard Order split:

As already mentioned above, the yard request/yard order is split into inbound and outbound yard requests/yard orders.

- Copy to inbound yard request/yard order (and vice versa):

With Support Package 01, you can copy an inbound yard request/yard order into a corresponding outbound yard request/yard order and vice-versa.

- Switch to inbound yard request/yard order (and vice versa):

In the case of a linked inbound and outbound yard request/yard order, you can now directly switch between these two.

- Changes at check-in and check-out of a yard order:

With Support Package 01, you can check-in an inbound yard order and check-out an active outbound yard order from the yard order maintenance screen.

Moreover, you can now only check-in an inbound yard order and only check-out an outbound yard order.

- Reverse check-in/check-out of yard order:

With Support Package 01, you can cancel all the actions executed during the check-in of an inbound yard order and check-out of an outbound yard order.

- **Transportation Unit Assignment:**
With Support Package 01, a TU can be assigned to an inbound and an outbound yard order item for planning purposes simultaneously.
- **Pick-up flag for yard request/ order items is obsolete:**
With Support Package 01, you do not require the pick-up flag for TU items anymore. This concept has been changed to the *TU Control* concept (see next item).
- **TU Control Flag in a yard request/yard order:**
With Support Package 01, only one yard order has control over a TU at any point in time (visualized by the *TU Control Flag*), although a TU can be assigned to an inbound and an outbound yard order items simultaneously.
- **External TU number for grouping items:**
With Support Package 01, you can enter the TU Group External ID in the field *TU number* for an item to help you identify the ID for the group.
- **Upload and create transportation units:**
Now, you can upload TU data from *.csv file to create TUs based on the data in the *.csv file on your local system.
- ***Transportation Unit Empty* indicator for an item:**
Now, you can determine whether the TU is empty or not. The TU is empty if this indicator is set.
- **Record Measurements for movement activities:**
Now, you can create a yard task with movement activity type that requires the task to collect some measurements.

In the release 2 of SAP Yard Logistics, we added the following functionality:

- In the yard documents, the business user can plan appointments integrated with SAP Dock Appointment Scheduling.
- SAP Yard Logistics enables the printing of PDF-based yard documents based on the Adobe Document Services.
- The integration to EH&S management has been enriched, namely:
 - o EH&S Master Data integration to Yard Request and Yard Order
 - o Location Determination for Hazardous Substances
 - o Storage checks for Hazardous Substances
 - o Fire Department List reporting
 - o Historical content reporting for Transportation Units
- SAP Yard Logistics allows a nearly real-time recording of measurement data to yard TUs transferred from smart devices linked to SAP HCP IoT services.
- An additional UI5/Fiori app is developed for the self check-in of a yard order
- Based on yard documents, an external driver communication via SMS, pager is now available to communicate target location information to drivers.
- The existing UI5/Fiori app has been enhanced by providing a questionnaire to the business users.
- The yard order and the yard TU document supports the classification, for example, allow the determination of containers (represented by yard TUs) based on sophisticated properties of containers (specified via class properties).
- The handling of yard documents is now enabled via external applications using RFC-enabled business function modules.

- The integration to SAP EWM is enhanced to allow multiple warehousing SAP EWMs connected to yard storage types represented as warehouse visits.
- The activity planning is enhanced to have a more granular level differentiating between movements, loading/unloading, and cleaning activities.
- The application for Yard TUs now allow you to change specific field attributes.

3.1 Inbound Activity Management for Truck Yards

Overview

The scenario for inbound activity management for truck yards focuses on the end-to-end processing of truck resources arriving in the yard and then processing different internal steps and activities depending on what has been loaded onto the truck or on a connected trailer. Based on that, the processes are as follows:

- Managing Inbound Truck for Unloading
- Managing Inbound Truck with Trailer for Disposal of Trailer
- Managing Inbound Truck with Trailer for Cleaning and loading
- Managing Inbound Truck with Container
- Simple Appointment Planning for Unloading

As the inbound business scenario is not only restricted to means of transport, *Truck*, you can also execute the processes for the means of transport *Railcar*. The solution supports the process of an inbound *Train* with groups of railcars, deposit of this group in the yard, and the departure of the locomotive.

Technical System Landscape

Component	Mandatory	Optional
SAP YL 2.0	X	-
SAP YL 2.0 Fiori UI	-	X

Further Information

The following documents provide more information about Inbound Activity Management for Truck Yards.

Content	Location
Scenario Description	See the documentation in SAP Service Marketplace
Configuration Documentation	See the documentation in SAP Service Marketplace

3.1.1 Managing Inbound Truck for Unloading

The most simple inbound business process is when an inbound truck arrives at the yard for unloading and departure. The process steps are:

- Plan incoming truck - The yard coordinator does a planning of that incoming truck, which is supposed to be unloaded in the yard and departs afterwards.
- Finalize planning and create inbound yard order - The yard coordinator finalizes the planning and creates an inbound yard order as execution document.
- Check-in the inbound yard order - The truck arrives at the yard and the gate agent books check-in based on this yard order.
- Unload truck - The truck drives to the unloading location and the yard operator unloads it.
- Complete the inbound yard order
- Create corresponding outbound yard order to move the truck out of the yard
- Activate the outbound yard order
- Start Processing of outbound yard order
- Start and confirm the yard task to move the truck to the checkout storage bin (while the containers have not been moved)
- Check-out yard order - The truck leaves the yard and the gate agent posts check-out.

3.1.2 Managing Inbound Truck with Trailer for Disposal of Trailer

A more advanced inbound process is when an inbound truck with trailer arrives at the yard, a deposit of trailer in yard is executed, and the truck departs. During execution of this process, the creation of an inbound yard request locally in SAP Yard Logistics is executed. The yard request represents the planned workload for the yard. The process steps are:

- Create inbound yard request with truck and trailer
- Create yard tasks to move truck and trailer from the inbound check point to a parking area - Create this with reference to the yard request
- Release inbound yard request
- Check-in inbound yard order
- Execute Movement activity for the truck and trailer
- Complete the inbound yard order
- Create corresponding outbound yard order to move only the truck out of the yard
- Activate outbound yard order
- Start Processing of outbound yard order
- Start and confirm yard task to move the truck to the checkout storage bin
- Check-out outbound yard order to let the truck leave the yard

3.1.3 Managing Inbound Truck with Trailer for Cleaning and Loading

Based on the processes of the last section, another typical, more advanced inbound process, can be defined as well - Arrival of an inbound truck with trailer for cleaning, loading, and departure. The truck with a trailer enters the yard. The truck drives to the cleaning area. The cleaning activity for the trailer takes place. After that, the truck drives to a loading station and loads something. Then, the truck leaves the yard. The process steps are:

- Create inbound yard request with truck and trailer
- Create yard tasks - Do this with reference to the inbound yard request
- Release inbound yard request
- Check-in inbound yard order
- Execute Movement activity and cleaning activities
- Complete the inbound yard order
- Create corresponding outbound yard order to move only the truck out of the yard
- Activate outbound yard order
- Start Processing of outbound yard order
- Execute Movement activity for the truck
- Check-out outbound yard order

3.1.4 Managing Inbound Truck with Container

Another variation of this process is when an inbound truck with loaded container (loading scheme) for deposit arrives at the yard. Then, the container measurements, like temperature, are recorded, and finally the truck departs. The process steps are:

- Plan incoming truck - The truck carries two containers (loading scheme definition). The truck leaves the container for deposit and departs from the yard. For both containers, the temperature should be recorded.
- Finalize planning and create execution document
- Check-in inbound yard order - Truck with container arrives at the yard and books check-in
- Leave containers - Truck drives to the location where containers should be left and unloads them there
- Record temperature data for both containers
- Complete inbound yard order
- Create corresponding outbound yard order to move the truck out of the yard
- Activate outbound yard order
- Start Processing of outbound yard order
- Start and confirm yard task to move the truck to the checkout storage bin (while the containers have not been moved)
- Check-out outbound yard order to let the truck leave the yard

Technical System Landscape

Component	Mandatory	Optional
SAP YL 2.0	X	-
SAP YL 2.0 Fiori UI	-	X

Further Information

The following documents provide more information about these processes.

Content	Location
Scenario Description	See the documentation in SAP Service Marketplace
Configuration Documentation	See the documentation in SAP Service Marketplace

3.1.5 Planning Appointments for Unloading

With the linkage between SAP Yard Logistics and SAP Dock Appointment Scheduling (SAP DAS for short), the planning of loading/unloading point capacity in a yard and the step-by-step integration with Dock Appointment Scheduling documents, during the yard execution process, is driven by SAP Yard Logistics.

This process focuses on the Yard Logistics - Document Appointment Scheduling integration in a simple Inbound Yard Request scenario (one single Inbound Yard Request, with a single Yard Request item that is relevant for SAP DAS, a single yard task and one loading appointment generated for this item).

The following process steps need to be executed:

1. Automatic creation of loading appointment when simple inbound scenario is activated
2. Automatic loading appointment assignment to a yard task in a simple scenario with only a single loading appointment/item. You create a movement yard task. The loading appointment is automatically assigned to this yard task.
3. Release the Yard Request: The loading appointment information is then copied automatically from Yard Request to Yard Order
4. Assign a free time slot to this loading appointment in SAP DAS that changes its status from "provisional" to "planned".
5. Yard Order Check-In: The loading appointment gets status "Arrived at Checkpoint".
6. Yard Task confirmation: For the movement to a door/ unloading activity: The appointment status changes to "Arrived at Dock".
7. Set "Departure from Dock".
8. Set Yard Order to "Complete": The loading appointment status is set to "Departed from Checkpoint".

Finally, the yard order and the loading appointment are both completed successfully.

Technical System Landscape

Component	Mandatory	Optional
SAP YL 2.0	X	-

Component	Mandatory	Optional
SAP DAS (on SAP YL 2.0 as part of SAP EWM 9.3)	X	

3.2 Outbound Activity Management for Truck Yards

Overview

The scenario for outbound activity management for truck yards focuses on the end-to-end processing of truck resources arriving in the yard and then picking up or loading different resources, like trailer or containers, to be transported out of the yard. The process variations come into play when a container is already requested for transportation or a container that needs to be picked up is only identified by its properties or content. Based on that, Based on that, the processes are as follows:

- Managing Outbound Truck for Trailer Pick-up
- Managing Outbound Truck for Trailer Pick-up with Seal Numbers
- Managing Outbound Truck for Loading of Predefined Containers
- Managing Outbound Truck for Loading of Freely Selected Containers
- Managing Outbound Planning via Assignment UI

In addition, the outbound business scenario is not only restricted to means of transport *Truck*, the processes can also be performed for the means of transport *Railcar*, like the scenario of an outbound *Train* to pick up a group of railcars and depart.

Technical System Landscape

Component	Mandatory	Optional
SAP YL 2.0	X	-
SAP YL 2.0 Fiori UI	-	X

Further Information

The following documents provide more information about Outbound Activity Management for Truck Yards.

Content	Location
Scenario Description	See the documentation in SAP Service Marketplace
Configuration Documentation	See the documentation in SAP Service Marketplace

3.2.1 Managing Outbound Truck for Trailer Pick-up

The simplest outbound process is the following: An (outbound) truck enters the yard and picks up a trailer. Then, the truck with trailer leaves the yard. The process steps are:

- Create outbound yard request, that is, planning outbound activities first: truck and concrete trailer which drive to loading facility and departing together afterwards
- Release outbound yard request
- Create corresponding inbound yard order (maintaining the incoming truck only)
- Check-in inbound yard order
- Execute Movement activity, that is, the truck drives to location where trailer is located
- Complete inbound yard order
- Activate outbound yard order
- Start Processing of outbound yard order
- Truck and trailer drive to locations where loading is executed
- Execute yard tasks, that is, the truck and the trailer are moved to outbound checkpoint
- Check-out outbound yard order

3.2.2 Managing Outbound Truck for Trailer Pick-up with Seal Numbers

A slight variation of this outbound process is augmented by having seals: An (outbound) truck enters the yard for loading of an (existing) trailer and departs the yard. The process also includes seal number handling. This process assumes that a trailer is already located in the yard. The next step is the planning of an incoming truck, which is supposed to pick up this concrete trailer, drive to the loading facility, load the trailer attached with a seal number, and both depart together afterwards. The process steps are:

- Finalize outbound planning and create outbound execution document with truck and trailer
- Create corresponding inbound yard order (maintaining the incoming truck only)
- Check-in inbound yard order - Truck arrives at the yard
- Complete inbound yard order
- Activate outbound yard order
- Start Processing of outbound yard order
- Pick-up trailer - Drive truck to the location where the trailer is located
- Load trailer - Truck and trailer drive to locations where loading is executed. Two seal numbers are attached to the trailer.
- Check-out outbound yard order - Truck and trailer leave the yard

3.2.3 Managing Outbound Truck for Loading of Predefined Containers

A more advanced supported business process is an (outbound) truck has to pick up multiple containers (loading scheme) with the special case that the container numbers are predefined and are used for departure. This assumes that the containers are already located in the yard. The process steps are:

- Plan outgoing truck with defined loading scheme - The truck is supposed to load two concrete containers already located in the yard. First, outbound is planned. Later-on inbound of truck is planned.
- Finalize planning and create outbound execution document
- Create corresponding inbound yard order (maintaining the incoming truck only)
- Check-in inbound yard order - Truck arrives at yard, books check-in
- Execute planned yard tasks - Truck drives to the location where containers are located
- Complete inbound yard order
- Activate outbound yard order
- Start Processing of outbound yard order
- Load containers - Truck drives to the location where containers are located and loads them there by starting and confirming the first two (loading) yard tasks
- Start the third planned yard task to move all items to the outbound checkpoint storage bin
- Check-out outbound yard order - Truck with containers leaves the yard

3.2.4 Managing Outbound Truck for Loading of Freely Selected Containers

The process described in the section above is also possible with the variation that the container numbers are not yet predefined but the yard coordinator can assign them. Then the first process step looks different. The process steps are:

- Plan outgoing truck with defined loading scheme - The truck is supposed to load two containers already located in the yard, which are not yet concretely identified (only size is known), and departs together afterwards.
- Finalize planning and create outbound execution document
- Create inbound yard order (maintaining the incoming truck only)
- Check-in inbound yard order - Truck arrives at yard, books check-in
Concrete containers to be loaded are known in the meanwhile
- Maintain TU numbers in outbound yard order via the Yard Order user interface
- Execute planned yard tasks - Truck drives to the location where containers are located and loads them there by starting and confirming the first two (loading) yard tasks
- Complete inbound yard order
- Activate outbound yard order
- Start Processing of outbound yard order
- Start the third planned yard task to move all items to the outbound checkpoint storage bin

- Check-out outbound yard order - Truck with containers leaves the yard

3.2.5 Managing Outbound Planning via Pick-Up Planning UI

The assignment UI allows reserving TUs located in the yard to outbound yard orders.

The truck enters the yard, loads a trailer standing in the yard and leaves the yard. The focus for this process step is to reserve TUs for the outbound yard orders.

Another usage focuses on adding a new item to a yard order and reserve a TU for it. Both steps are executed on the assignment UI, which means that the item to be loaded is not maintained upfront in the yard order item hierarchy.

3.2.6 Validating Thresholds (Including Measurements Recording)

In a Yard Order item, the business user can store threshold values on the specific tab [Thresholds](#). These thresholds can stand for specific measures like temperature and they are represented for specific TU record types. Each threshold is also defined with an upper and a lower limit. If a threshold is out of this limit's interval, then a specific threshold-based alert can be triggered, which is visible in the Alert Monitor. The recording of the thresholds is linked to a yard task that allows recording the threshold values. In addition to that, the IoT process of receiving thresholds directly for Yard TUs is also possible.

3.3 Internal Activity Management for Truck Yards

The scenario for internal activity management for truck yards is key to manage the limited resources within the yard in an optimized way. In this scenario, the business user is focusing on the execution of the yard movements via yard tasks and monitoring the operations of the yard from an E2E view in the yard cockpit (in a graphical representation supporting the overall operation status of the yard).

The internal scenario is rounded up by a special process where containers are re-arranged within a yard by stacking or unstacking containers on each other.

Based on these internal activities, the process steps are:

- Executing Yard Tasks
- Managing Yard Operations Using Mobile UI
- Monitoring Yard Activities via Yard Cockpit
- Managing Stacking and Unstacking of Containers

Technical System Landscape

Component	Mandatory	Optional
SAP YL 2.0	X	-

Component	Mandatory	Optional
SAP YL 2.0 Fiori UI	-	X

For the process, *Managing Yard Operations Using Mobile UI*, the system landscape requires the software component SAP YL 2.0 Fiori UI.

Further Information

The following documents provide more information about Outbound Activity Management for Truck Yards.

Content	Location
Scenario Description	See the documentation in SAP Service Marketplace
Configuration Documentation	See the documentation in SAP Service Marketplace

3.3.1 Executing Yard Tasks

Overview

Yard tasks are definitions of activities that must be done for items. They are activities that model all kinds of services on the yard like unloading, moving a transportation unit (TU) to a storage place, cleaning a TU, repairing a TU. Yard tasks are the key entities for planning and execution within a yard.

Such a yard task is mapped to a warehouse task in the underlying EWM warehouse assigned to the yard number.

If a yard task cannot be executed, then the business user can enter an exception in that yard task. By exception, we mean some unexpected situation that may happen in the yard when executing yard tasks. For example, the business user receives a task to move a container from one bin to another. When approaching the container, the business user sees that the container is broken. Then, he could raise an exception instead of confirming the yard task. For an exception, the business user can assign an alert type. This can be used to trigger an alert that can be checked by a user using the alert monitor. In addition to an alert, the exception can also be used to trigger follow-on activities:

- Block Source Location - The system blocks the source storage bin and you cannot execute any further activity on that storage bin.
- Block Destination Location - The system blocks the destination storage bin and you cannot execute any further activity on that storage bin.
- Block Transportation Unit - You cannot execute any further action on the transportation unit.

Technical System Landscape

Component	Mandatory	Optional
SAP YL 2.0	X	-
SAP YL 2.0 Fiori UI	-	X

Component	Mandatory	Optional
SAP Visual Business 2.1	(X)	

Further Information

The following documents provide more information about execution with yard tasks.

Content	Location
Scenario Description	See the documentation in SAP Service Marketplace
Configuration Documentation	See the documentation in SAP Service Marketplace

3.3.2 Managing Yard Operations Using Mobile UI

Overview

The mobile UI is based on the newest user interface technology from SAP based on SAP Fiori. This user interface can be executed on any device – mobile or a desktop – using the Fiori Client application (a mobile app that can be downloaded in the respective app stores). The system assigns the yard tasks for mobile execution to a queue.

The business user is assigned to one or multiple queues to fetch yard tasks for execution. This guarantees that the user can work on only one yard task at a time. The application supports two modes: *Queue* mode or *Manual Selection* mode. In *Queue* mode, the system loads the yard tasks from the queue that a business user is assigned to and the user gets the next task in the queue automatically. In *Manual Selection* mode, the application displays all the tasks with status as *Active* or *In Process* for the yard and handling resource that a business user has selected at entry. The business user can choose a yard task or search for yard tasks that he/she wants to execute.

Technical System Landscape

Component	Mandatory	Optional
SAP YL 2.0	X	-
SAP YL 2.0 Fiori UI	-	X
SAP Visual Business 2.1	(X)	

Further Information

The following documents provide more information about execution with yard tasks.

Content	Location
Scenario Description	See the documentation in SAP Service Marketplace
Configuration Documentation	See the documentation in SAP Service Marketplace

3.3.3 Monitoring Yard Activities via Yard Cockpit

Overview

The Yard Cockpit contains several overview lists displaying yard tasks, yard orders, alerts etc. such as the Visual Yard, which contains the graphical representation of the yard. Under the [Orders](#) section, you can search for the yard orders and yard tasks:

- Yard Order – For a yard order, you can create tasks.
- Yard Task - You can display and edit a yard task from the search result or create a yard task.

Under the [Alerts](#) section, you can search for the alerts.

Under the [Resources](#) section, you can search for the handling resources. The system displays the handling resources assigned to this yard as per your search criteria.

Under the [Transportation Unit](#) section, you can search for the TUs.

From yard cockpit, you can also drag and drop a TU from one storage bin to another. When you drag and drop, the system prompts you to create a yard task to move the TU from one storage bin to another.

Additional Note

In SAP Yard Logistics release 2, we only support six-sided textures (whereas in the former release we had only four-sided textures). This is based on a recent change of SAP Visual Business.

Technical System Landscape

Component	Mandatory	Optional
SAP YL 2.0	X	-
SAP YL 2.0 Fiori UI	-	X
SAP Visual Business 2.1	(X)	

Further Information

The following documents provide more information about monitoring via yard cockpit.

Content	Location
Scenario Description	See the documentation in SAP Service Marketplace
Configuration Documentation	See the documentation in SAP Service Marketplace
SAP Note 2239939	Collada-Objects for Yard Cockpit Visualization

3.3.4 Managing Stacking and Unstacking of Containers

Overview

The business process focuses on stacking containers on a storage bin. For the current release, 2.0, this is realized very simply. We only allow one bin for one stack. We can put and remove a container from each position of the stack.

A stackable bin stores TU strict as a stack. Only one TU (without a hierarchy) can be placed at a stack level with one YT. TU's on stackable bins will be managed as on non-stackable bins using predecessor and successor TU references removing the current loading hierarchy for stackable bins (with SP01). On a stackable bin, predecessor means subjacent TU and successor means overlying TU. A stackable bin is sorted automatically by a given sequence. A put-away into a stackable bin is movement and not a loading activity. Therefore, no TU hierarchy will be created or updated.

3.3.5 Determining Dangerous Goods Location

Overview

In this process, specific yard areas represented as storage types are permitted for specific hazard ratings.

In addition, in customizing, the business user can define the hazard ratings of a product that should be checked during maximal quantity check at location determination of a yard task for such a dangerous goods relevant storage type (see the figure below).

Maintain Storage Type Maximum Quantity					
Yard No.	Stor...	Stor...	StClassGrp	Maximum Quantity	Unit
TRCK	DRWP		1001	25	PC
TRCK	PARC		1001	50	PC
TRCK	PARK	EAST	1001	1.000	PC

Figure 5: Maximum Quantity in a Storage Type

3.3.6 Classification of Yard TUs

In SAP Yard Logistics, we use the class system to extend yard TU attributes by additional fields and values. This is used in the TU determination and validation logic. For this, we introduced two new class types: one for classifying yard TUs and one for yard order/yard request items. The yard order item classification can be used to define the properties for a container (represented by the classification data of a yard TU) that are relevant during the assignment of such a container to a yard order item. To trigger that determination, we offer a new button [TU Determination](#) that searches for a list of available yard TUs fulfilling these classification properties of the yard order's item, based on each yard TU's classification data.

3.4 Internet of Things for Yard Logistics

Overview

Internet of Things is a crucial part of today's processes in running a successful supply chain. Especially, the assets that are needed to operate a yard as well as facilities in the yard are nowadays already enabled with smart devices. Major examples are containers that send its temperature to control it being in a certain allowed temperature range, or the yard gate entry facility that allows an automated barrier opens at the gate for an already recognized truck to enter the yard. The truck has already been recognized by an OCR based scanning of its license plate and by that the corresponding yard order for check-in has been determined as well.

As topic of IoT is still evolving, SAP Yard Logistics implemented as a "starter" the following process for the current release 2:

- Pulling temperature from a smart container into the container's yard TU

3.4.1 Pulling Temperature from Smart Container

This process focuses on receiving incoming device messages (sent by a smart device on a container, for example, sending the container's temperature) from Internet of Things (IoT) service provided by SAP HANA Cloud Platform (HCP). Then after the data is persisted on the HCP, SAP Yard Logistics can then pull that data from the cloud and record it into the container's representation of a yard TU in the [Measurements](#) tab.

On the HCP, no specific coding for this process is required. Only the setup of the smart device of the container needs to be done. For this, in SAP Yard Logistics, you can define such smart devices and its message interface structures and link them to a Yard TU. After the definition of such a smart device in SAP Yard Logistics, its registration can be triggered from SAP Yard Logistics too, since the HCP IoT Services also allows remote device configuration via ODATA services.

In more detail, the following steps need to be processed:

1. Definition of new IoT message type and its registration in HCP
2. Definition of new IoT device type and its registration in HCP
3. Definition and registration of new device
4. Configuration of mapping between message data and Yard TU measurements
5. Assignment of IoT device to Yard Logistics transportation unit

-
6. Sending the device message to HCP using the simulation report
 7. Pulling the device data from HCP with updates of measurement details of a corresponding Yard TU

Technical System Landscape

Component	Mandatory	Optional
SAP YL 2.0	X	-
SAP YL 2.0 Fiori UI	-	X
SAP HCP, IoT Services	X	

4 Solution-Wide Topics

4.1 Service Oriented Architecture (SOA)

The SOA (service-oriented architecture) delivered by SAP differs from the pure architectural concept of SOA in the delivery of ready-to use enterprise services. Enterprise services are SAP defined web services, which provide end-to-end business processes or individual business process steps that can be used to compose business scenarios while ensuring business integrity and ease of reuse. SAP designs and implements enterprise service interfaces to ensure semantic harmonization and business relevance. This section deals with the service-enablement of SAP Business Suite 7.

4.1.1 Service Enablement

The service enablement of SAP Business Suite consists of one or more of the following SAP components:

- SAP Business Suite 7

Enterprise services are an integral part of the software components of the SAP Business Suite applications. Enterprise services are the technical interfaces to the functionality available in the business application.

- SAP NetWeaver PI 7.0 or higher

SAP NetWeaver Process Integration (SAP NetWeaver PI) is an open integration and application platform that provides tools enabling you to set up a service-oriented architecture for business applications. You can use the platform for providing, discovering, and consuming services, integrating applications using the integration server, and managing business processes. Process integration is required in a runtime environment to consume enterprise services in a mediated scenario.

We recommend that you use the highest version of SAP NetWeaver Process Integration (PI). For more information, see SAP Note [1515223](#) and SAP Note [1388258](#).

- Enterprise Services Repository

The Enterprise Services Repository (ES Repository) is the central repository that contains the definition of all enterprise services and models. The ES Repository is shipped with SAP NetWeaver PI and with SAP NetWeaver Composition Environment (CE) starting with SAP NetWeaver PI 7.1 and with SAP NetWeaver CE 7.1. The Enterprise Services Repository is a design time environment that enables you to create and enhance enterprise service definitions and to view enterprise service models.

- Services Registry

The Services Registry is shipped with SAP NetWeaver PI and SAP NetWeaver CE starting with SAP NetWeaver PI 7.1 and SAP NetWeaver CE 7.1. The Service Registry is required for the publication of enterprise service end-points (Web services) that have been configured and activated in the SAP Business Suite.

- SAP NetWeaver CE 7.1 or higher

The SAP NetWeaver Composition Environment (SAP NetWeaver CE) provides a robust environment for the design and implementation of composite applications. The design time environment of SAP NetWeaver CE can be used for the model-driven design and development of composite applications based on enterprise

services. SAP NetWeaver CE offers the tools and the environment necessary for running composite applications fast and efficiently in a runtime environment.

- SAP Solution Manager 7.0 EHP 1

The Solution Composer, shipped with SAP Solution Manager 7.0 EHP 1 SP 23, is required to host the enterprise service online documentation.

4.1.2 Installation of the Service-Oriented Architecture (SOA)

The installation of service interfaces, and therefore the service enablement of SAP Business Suite, consists of one or more of the following phases:

- Identification of software components and required business functions

You use the technical data section of the enterprise service documentation to identify the following data for each enterprise service:

- o The software component version with which the service was shipped
- o The business function(s) required to be activated

- Identification of technical usages (relevant only for SAP ERP)

SAP Note [1818596](#) provides a mapping of business functions and software component versions to technical usages. You use this documentation to identify the required technical usages for your list of software component versions and business functions.

- Installation of the software component ECC-SE (relevant only for SAP ERP)

The software component ECC-SE contains service implementations for ECC (the ERP Central Component). This component must be explicitly installed if you intend to use enterprise services for ECC functionality. In this case, you must also select the technical usage ESA ECC - SE during the enhancement package installation.

- Selection and installation together with the other parts of the enhancement package

In the installation process of the enhancement package, you must select all the technical usages you have identified for service enablement together with the technical usages you identified for enhanced features in SAP Business Suite. The selected technical usages installs the corresponding software components that contain the enterprise services interfaces and implementations.

- Import of ESR Content, also known as XI Content (optional)

To install the content required for the enterprise service definitions, you must select the technical usage PI Content in the installation process of enhancement package. This downloads the content files for SAP NetWeaver PI 7.0 or higher. Unpack the ZIP file and copy the tpz files corresponding to your SAP NetWeaver PI version into the import directory of your Integration Repository (for SAP NetWeaver PI 7.0x) or Enterprise Services Repository (for SAP NetWeaver ES Repository 7.1 or higher). Use the import function to import the content files into the corresponding repository (Integration Repository or Enterprise Services Repository). Choose [Tools](#) → [Import Design Objects](#).

- Services Registry (optional)

The services registry is shipped starting with SAP NetWeaver PI 7.1 and CE 7.1. You must configure the services registry and then publish the enterprise services from the Business Suite application to the registry using the transaction SOAMANAGER in the backend. For further information regarding the SAP NetWeaver PI, CE and ES Repository, refer to the corresponding SAP NetWeaver Installation and Master Guides.

Further Information

For more information about the service-oriented architecture (SOA), see the following information sources:

- SCN Community in the SAP Network at <http://scn.sap.com/community/soa> (registration required)
- SAP Note [1359215](#) - Technical prerequisites for using enterprise services (relevant only for ERP)
- SAP Note [838402](#) - Problems with non-Unicode system landscapes.

4.2 Business Add-Ins

The following BADIs of SAP EWM have been re-used for the SAP YL and SAP TM integration concerning the two interfaces for LDAP request coming from SAP TM to SAP YL and LDAP notification send from SAP YL to SAP TM:

BADI Definition	BADI Implementation	Description
/SCWM/EX_SR_BIF_TOLDAP_RQIN	/SAPYL/YR_INBOUND_MAPPING	Mapping LDAP and creation of Yard Request
/SCWM/EX_SR_BIF_TOLDAP_NOOUT	/SAPYL/EH_LDAP_NF_OUTBOUND	Outbound Mapping of LDAP Notification for Yard Order

- If you want to use the integration, you need to implement these two BADIs based on delivered sample implementation. At the time of installation, these BADIs are not processed by default so as not to interfere with the existing processes.
- Using the BADIs without implementation, implement your own logic for each of the functions, if required, and activate the implementation.

In general, there are more BADIs defined for SAP YL. You can find them all consolidated in the IMG under activity [Business Add-Ins \(BADIs\) for Yard Logistics](#). Moreover, there is an enhancement guide available for SAP YL on the help portal, see <http://help.sap.com/yl>. Go to [Enhancement Guide](#).

For information about implementing BADIs as part of the enhancement framework, see SAP Library for SAP NetWeaver Platform on SAP Help Portal at http://help.sap.com/nw_platform. Choose a release and then [Application Help](#). In SAP Library, choose [SAP NetWeaver Library: Function-Oriented View](#) → [Application Server](#) → [Application Server ABAP](#) → [Application Development on AS ABAP](#) → [ABAP Customer Development](#) → [Enhancement Framework](#).

5 Security Considerations

For security information, see the Security Guide for SAP Yard Logistics 2.0 on SAP Service Marketplace.

5.1 Fundamental Security Guides

For a complete list of the available SAP security guides, see SAP Security Guides on SAP Service Marketplace at <http://service.sap.com/securityguide>. The current version of the SAP NetWeaver security guide, which deals with general security issues, is also available via this quick link.

Additional Information

For more information about specific security topics, see the following locations on SAP Service Marketplace as shown in the table below:

Content	Location
Security	http://service.sap.com/security
Security Guides	http://service.sap.com/securityguide
Release Platforms	http://service.sap.com/platforms
Network Security	http://service.sap.com/securityguide
Infrastructure Security	http://service.sap.com/securityguide
SAP Solution Manager	http://service.sap.com/solutionmanager

6 References

List of SAP Notes

The following table lists all SAP Notes mentioned in this Master Guide.

SAP Note Number	Title	Description
2230295	Release strategy for the ABAP add-on SAPYLUI	This note contains the Release Strategy for the mobile user interfaces used in Yard Operations
2230296	Release strategy for the ABAP add-on SAPYL	This note contains the Release Strategy for the Yard Logistics 2.0 with its business scenarios
1984252	Supported functional scope of the direct TM EWM Integration	Only for release 1
2231389	Implementation notes for SAP YL and SAP TM integration	Only for release 1
2380509	Implementation notes for SAP YL 2.0 and SAP TM integration	Only for release 2

7 Release Availability Information

For more information about currently available releases for SAP Yard Logistics 2.0, and for each release, the SAP standard software required to install and use the solution, see <http://www.service.sap.com/fbs/availability>

If you have more questions, do not hesitate to contact us per mail: yard_logistics@sap.com



www.sap.com/contactsap

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