

Application Help

CUSTOMER

SAP Direct Store Delivery

Document Version: 1.0 – 2017-09-22

SAP Direct Store Delivery

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1 SAP Direct Store Delivery

Use

Table 1:

Product	<i>SAP Direct Store Delivery</i>
Release	2.0
Based on	<i>SAP ERP 6.06/6.07/6.08, SAP Customer Relationship Management 7.02/7.12/7.13/7.14, SAP Mobile Platform 2.3 SP06, 3.0 SP12 with MBO sidecar, Windows Mobile 6.X, Android 5.0 Lollipop</i>
Documentation Created	September, 2017

SAP Direct Store Delivery is an SAP mobile app that supports the process of selling and distribution of goods directly to the customer store bypassing the retailer warehouses.

The mobile app provides a closed-loop solution by fully integrating DSD mobile capability with enhanced *SAP Mobile Direct Store Delivery* (SAP DSD) functions included in SAP ERP and by making some CRM activities available from *SAP Customer Relationship Management* (SAP CRM).

The mobile app enables your mobile users, that is, your field sales force and delivery drivers, to respond quickly to customer needs for new and revised orders while reducing material losses.

SAP Direct Store Delivery can be used on both Windows Mobile- and Android-based mobile devices.

Implementation Considerations

SAP Direct Store Delivery is a mobile app designed to support sales, marketing, and logistics business processes, for example, customer visits, orders, CRM activities, and deliveries, to enable mobile users to both sell and distribute goods directly to the point of sale (POS).

Mobile user roles can be flexibly defined to enable mobile users provide services for presales, delivery, van sales, as well as a mixed role that can combine these roles (see [Mobile User Roles \[page 9\]](#)).

Common mobile user activities on tours include visit planning, selling, delivering, offline pricing, collecting payments, and conducting surveys and a variety of audits for pricing, promotions, and distribution. *SAP Direct Store Delivery* provides mobile users with current data, for example, on their daily itineraries, customer visits, customers, materials, activities, pricing, and expenses, to carry out their activities (see [Tour \[page 12\]](#) and [Tour Execution \[page 18\]](#)).

The mobile app user interface (UI) offers a rich user experience with screens that include standardized processes, procedures, and best practices. The UI is structured to enable mobile users to navigate intuitively and to enter data quickly and easily (see [SAP Direct Store Delivery on Mobile Devices \[page 30\]](#)).

You can use *SAP Direct Store Delivery* on the following:

- Windows Mobile-based mobile devices (see [SAP Direct Store Delivery for Windows Mobile \[page 32\]](#))
There are features that are only available on mobile devices based on Windows Mobile (see [Features only Available for SAP Direct Store Delivery for Windows Mobile \[page 31\]](#)).
- Android-based mobile devices (see [SAP Direct Store Delivery for Android \[page 63\]](#))
There are features, for example, tour monitor, maps integration, and the generation and upload of PDF files, that are only available on mobile devices based on Android.

SAP Direct Store Delivery offers substantial new enhancements as well as functional improvements to SAP DSD functions included in SAP ERP (see [Changes to Standard Functions and New Features in the Back End \[page 84\]](#)).

As mobile users' activities are performed at the POS with customers, *SAP Direct Store Delivery* provides a flexible, fast, and reliable mobile app that is key to supporting the ongoing DSD business process.

System Landscape

The following is the minimum SAP footprint and optional components for *SAP Direct Store Delivery*:

Minimum SAP Footprint

- SAP ERP modules
Logistics Execution (LE), *Sales and Distribution* (SD), *Materials Management* (MM), *Financial Accounting* (FI) including basis configuration

- **i** Note

The following information about middleware applies only to the use of *SAP Direct Store Delivery* on Windows Mobile-based mobile devices.

SAP Mobile Platform

- Server
- Client

Optional SAP Components

- *SAP Customer Relationship Management* (recommended)
- SAP ERP modules, for example, *Warehouse Management* (WM), *Production Planning and Control* (PP), *Customer Service* (CS), *Plant Maintenance* (PM)
- *Afaria* (recommended)

Integration

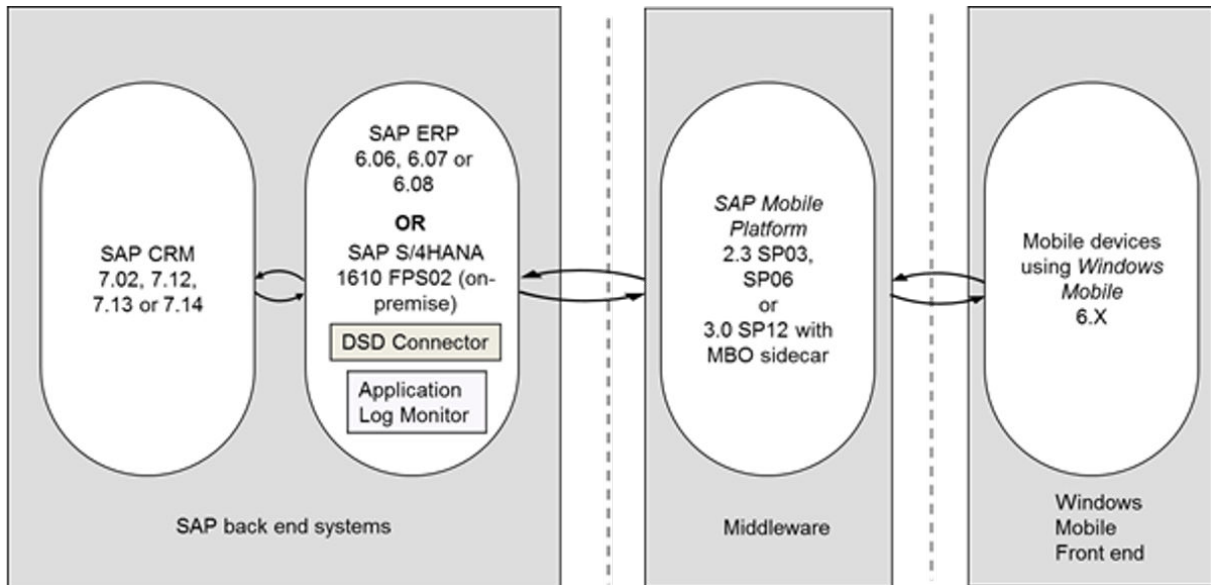


Figure 1: SAP Direct Store Delivery Architectural Overview for Windows Mobile-Based Mobile Devices

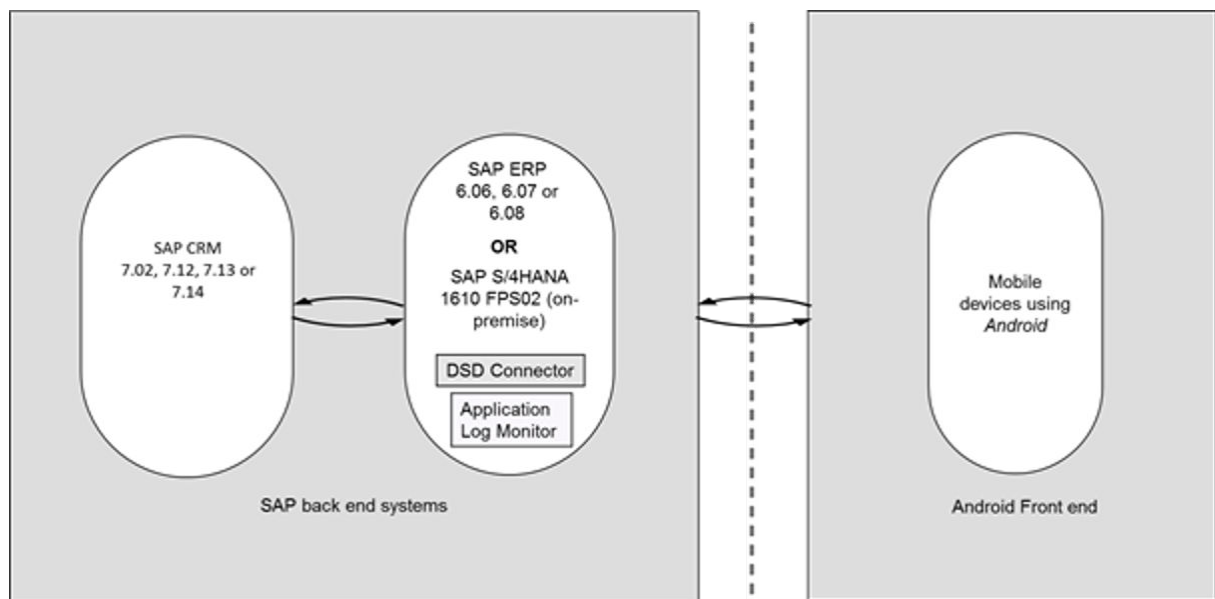


Figure 2: SAP Direct Store Delivery Architectural Overview for Android-Based Mobile Devices

In order to use the mobile application, you first have to install the back end systems and the middleware and make all the relevant Customizing settings. The [SAP Direct Store Delivery Architectural Overview](#) graphic gives the following overview of the architecture and shows the system landscape.

In the SAP back end systems, data can be exchanged between SAP ERP 6.06, 6.07 or 6.08 and SAP CRM 7.02, 7.12, 7.13 or 7.14.

The DSD Connector, located in SAP ERP, is a staging area for downloading, uploading, and status handling of data relevant to the activities of mobile users. It comprises a set of database tables in the schema of the mobile device. The DSD Connector acts as an interface from SAP systems to mobile devices as follows:

- [SAP Direct Store Delivery for Windows Mobile](#)
The DSD Connector acts as an interface from SAP systems to the middleware. Data from the DSD Connector is exchanged with the [SAP Mobile Platform 2.3](#) (SP03 or SP06; 3.0 SP12 *Sidecar*) middleware. Data from [SAP Mobile Platform](#) is exchanged with front end mobile devices.
- [SAP Direct Store Delivery for Android](#)
The DSD Connector acts as an interface from the SAP systems directly to the front end mobile devices.

At the end of tours, data uploaded to the back end SAP systems triggers the following:

- In SAP ERP, invoices and collected payments are settled in the [Settlement Cockpit](#) and [Route Accounting](#); sales documents, financial postings, and materials movements are updated/created. Upon completion of these processes, final billing can be processed.
- If SAP CRM is integrated, CRM activity data is uploaded from the DSD Connector in SAP ERP to SAP CRM (see [CRM Activity \[page 98\]](#)).
- In the [Application Log Monitor](#) in SAP ERP, tour statuses and application log messages from mobile devices are made available for monitoring (see [Application Log Monitoring \[page 136\]](#)).

Customizing

You can make Customizing settings for [SAP Direct Store Delivery](#) as follows:

- In SAP ERP under ► [Logistics Execution](#) ► [SAP Direct Store Delivery](#) ►
- In SAP CRM under ► [Customer Relationship Management](#) ► [SAP Direct Store Delivery](#) ►

Features

[SAP Direct Store Delivery](#) supports mobile users to log all tour-related activities using mobile devices. During a tour, mobile users typically do the following:

- Perform start-of-day activities, for example, vehicle safety checks (see [Tour \[page 40\]](#) (Windows Mobile) and [Tour \[page 68\]](#) (Android))
- View a list of all visits, rearrange the order of visits, and create new unplanned visits, if necessary (see [Visit List \[page 42\]](#) (Windows Mobile) and [Visit List \[page 70\]](#) (Android))
- Perform activities that are necessary for each visit, for example, take orders or deliver goods (see [Tour-Related Activities \[page 13\]](#) and [Tour Execution \[page 18\]](#))
- Update the customer's status with a reason code that indicates why a visit could not take place (see [Customers \[page 55\]](#) (Windows Mobile) and [Customers \[page 77\]](#) (Android))
- Take orders using item proposals and capturing on hand inventory (see [Example: Visit List Activities based on Preseller Scenario \[page 45\]](#) (Windows Mobile) and [Example: Visit List Activities based on Preseller Scenario \[page 72\]](#) (Android))
- Deliver goods and adjust quantities during the actual delivery process, if necessary; collect returns and empties. For more information, see the following:
 - [Materials \[page 56\]](#) (Windows Mobile)
 - [Materials \[page 79\]](#) (Android)
 - [Example: Visit List Activities based on Delivery Driver Scenario \[page 49\]](#) (Windows Mobile)

- [Example: Visit List Activities based on Delivery Driver Scenario \[page 75\]](#) (Android))
- Carry out CRM activities on a tour (see [CRM Activity \[page 98\]](#))
- Use occasionally connected scenarios (see [Delta Tour Data \[page 109\]](#))
- Use pricing determination (see [Pricing \[page 129\]](#))
- Issue invoices; collect payments and issues payment receipts (see [Example: Visit List Activities based on Delivery Driver Scenario \[page 49\]](#) (Windows Mobile) and [Example: Visit List Activities based on Delivery Driver Scenario \[page 75\]](#) (Android))
- Transfer stock, if necessary (see [Inventory \[page 54\]](#) (Windows Mobile) and [Inventory \[page 81\]](#) (Android))
- Record expenses (see [Expenses \[page 52\]](#) (Windows Mobile) and [Expenses \[page 82\]](#) (Android))
- Report on the tour (see [Reports \[page 57\]](#) (Windows Mobile) and [Reports \[page 83\]](#) (Android))

For more information about the changes to standard DSD back end functions and new features in the back end systems of *SAP Direct Store Delivery*, see [Changes to Standard Functions and New Features in the Back End \[page 84\]](#).

More Information

For more information about *SAP Direct Store Delivery* on mobile devices, see the following:

- [SAP Direct Store Delivery for Windows Mobile \[page 32\]](#)
- [SAP Direct Store Delivery for Android \[page 63\]](#)
- [Features only Available for SAP Direct Store Delivery for Windows Mobile \[page 31\]](#)

For more information about *SAP Mobile Direct Store Delivery* (SAP DSD), go to <https://help.sap.com/dsd> and from the version dropdown, select the product version for which you wish to refer the documentation.

2 Mobile User Roles

Definition

A mobile user is a person who uses a mobile device for direct store delivery. Mobile users visit customers assigned to the tour to perform activities like taking orders and delivering goods and they can also perform CRM activities such as taking a survey. If required, mobile users can connect online to the central location, for example, to add delta tour data or to upload completed visits. A mobile user can have one of the following roles:

- **Preseller**
A mobile user who visits new or existing customers to take orders but does not deliver any goods
- **Delivery driver**
A mobile user who ships presold deliveries in regular cycles to customers but does not take orders
- **Van seller**
A mobile user who sells goods to customers from a speculative load on the vehicle
- **Mixed role**
A mobile user who visits customers to perform tasks like order capture, delivery of presold goods to specific customers, and sale of goods from a speculative load. The mixed role is a combination of the other 3 roles.

Features

Preseller

A typical preseller is a full-time employee who has primary responsibility for the accounts on their predefined territory. This includes capturing orders that will later be delivered by a delivery driver and may be merchandised by a merchandiser. A preseller works with the management of an outlet to maximize the sales and distribution at that account.

Typical preseller activities include the following:

- Selling new products
- Selling displays, coolers, freezers, and so on
- Placing or maintaining point of sale (POS) promotional materials
- Maintaining or expanding shelf space
- Setting up advertising
- CRM activities such as surveys or audits

Territory and Frequency of Visiting

A preseller's territory may be organized to support specific accounts or chain outlets. The preseller's territory is generally set up with predefined daily itineraries with some need for flexibility.

Some outlets may require daily service; others may be visited once or twice a week, while still others may be visited once or twice a month. The territory is generally designed to call on outlets in a time and mileage efficient basis while keeping into account the frequency that a preseller needs to be in the outlet.

Typical Scenario

Example

Presellers do the actual selling at accounts and outlets on their tour. They enter orders on mobile devices and synchronize the data on their return to company headquarters. At the distribution center, the order is received, processed, and the product is picked and loaded onto a truck for delivery to the relevant outlet by the delivery driver. A merchandiser may arrive after the order is delivered to merchandise it. The cycle then repeats itself with the preseller returning to the outlet.

Deliver Driver

A typical delivery driver is generally a full-time employee who delivers presold product.

Territory and Frequency of Visiting

A delivery driver may not have a specific territory like other roles but may be assigned a tour each day. Delivery drivers may have the same tours each week but the outlets they deliver to can change.

Generally the tours that delivery drivers are assigned to have common stops, since they are generally set up geographically, but this can vary based on how frequently an outlet orders.

Typical Scenario

Example

At the distribution center early in the morning, delivery drivers pick up their assigned route and truck. Delivery drivers generally need to stick to the deliveries the truck has been loaded for. The delivery driver goes to the assigned truck and does any tasks required before leaving the distribution center, for example, checking the vehicle for safety, getting the odometer reading, confirming the loaded materials, and verifying any cash on hand. At each stop, delivery drivers deliver the order, present the invoice, collect cash if required, and get a signed copy of the invoice. The settlement process takes place after the tour data is synchronized on their return to the distribution center.

Van Seller

A typical van seller is a full-time employee who sells product directly off their truck. There is no need to presell an order for delivery later as the product is on the truck. A van seller has a predefined territory.

Territory and Frequency of Visiting

These are the same as for presellers.

Typical Scenario

Example

The van seller is responsible for placing orders to maintain inventory on their own truck. At stores on the tour, the van seller checks existing inventory, prepares a delivery that is verified by inventory on hand on the truck, and picks the product from the truck. Store receivers verify the product being delivered and are issued with an invoice, which they sign and pay. The van seller merchandises the products in the store before proceeding with the tour.

Mixed Role

A mixed role combines all of the above roles into one. The van seller has product on their truck so they already sell, deliver, and merchandise the product. A mixed role would add preselling to that list of responsibilities. This may be preselling an order that they will deliver into the account on the next visit or that someone else will deliver to the account. The delivery driver who can change a presold order to add extra product from the truck is another example of a mixed role.

More Information

For more information, see the SAP Help Portal at <http://help.sap.com> » *SAP Business Suite* » *SAP ERP Add-Ons* » *SAP ERP Globalization Extensions 607* » *Direct Store Delivery* » *Use of Roles in the DSD Process* ».

3 Tour

Definition

A visit list that is assigned to a mobile user in a specific date range for a defined route. A tour consists of all master and transactional data required on the mobile device.

Use

A tour consists of a number of individual visits and each visit is assigned to one customer only. You can have multiday tours that last for several days and multiple visits can be created on different days for the same customer on the tour.

The work that needs to be done by a mobile user on a tour is displayed in a list of visits and activities. The visit list contains all customers to be visited and the activity list contains the actions that need to be performed by the mobile user at each customer site.

Mobile users can also create unplanned visits and activities for a tour. Once these are created, they are processed in the same way as preplanned visits and activities.

Integration

- Multiday tours
You can define multiday tours in Customizing for *Logistics Execution* under ► *SAP Direct Store Delivery* ► *Visit Control* ► *Define Visit Plan Types* ►.
- Tour status
The tour status is a numeric ID indicating the different stages that a tour can reach, for example, status ID 308000 indicates that the tour data is available on the mobile device following synchronization.
You define the tour status IDs in Customizing for *Logistics Execution* under ► *SAP Direct Store Delivery* ► *Tour Status* ► *Define Tour Status ID* ►. Here, you can indicate whether or not a tour status ID is part of the sequence that is used to control the strict order of the steps in the tour status cycle.
- Tour status profiles
You must assign a tour status profile to each tour scenario. The profile shows the chronological order of tour processing for the relevant tour scenario in the form of sequential tour status IDs. A tour status profile is provided for each of the standard tour scenarios.
You assign a tour status profile to each tour scenario in Customizing for *Logistics Execution* under ► *SAP Direct Store Delivery* ► *Tour Status* ► *Define Tour Scenarios and Tour Status Profiles* ►.
- Maintenance blocking status
Maintenance blocking status is a numeric tour status ID, specified in Customizing for occasionally connected scenarios (OCS), that defines when delta tour data can be created. For more information about OCS, see [Delta Tour Data \[page 109\]](#).

More Information

For more information, see the following:

- *SAP Direct Store Delivery for Windows Mobile* under [Tour \[page 40\]](#) and [Visit List \[page 42\]](#)
- *SAP Direct Store Delivery for Android* under [Tour \[page 68\]](#) and [Visit List \[page 70\]](#)

For more information about visit lists in SAP ERP, see the SAP Help Portal at <http://help.sap.com> ► *SAP ERP Central Component* ► *Logistics* ► *Logistics Execution (LE)* ► *Direct Store Delivery* ► *Visit Control* ► *Visit List* ►.

3.1 Tour-Related Activities

Use

SAP Direct Store Delivery supports mobile users with a number of activities they need to carry out while on their tours.

i Note

Some *SAP Direct Store Delivery* features, for example, barcode scanning of visit times, are only available on mobile devices based on Windows Mobile. For more information, see [Features only Available for SAP Direct Store Delivery for Windows Mobile \[page 31\]](#).

Features

Start-of-Day

The downloaded tour may indicate the planned driver, co-driver, vehicle, and tour times. At start-of-day, mobile users can change the driver and vehicle data. They can record the vehicle's initial odometer reading and answers to security checks. Materials are counted (in base or sales units) and reasons can be recorded if check-out discrepancies arise. Mobile users get a confirmation of check-out materials and cash, verify the tour, and record the actual start time.

Customer Visit Activities

Each customer visit on a tour consists of one or more activities. The following is a list of possible activities performed by mobile users:

- Take orders for future deliveries, taking item proposals and captured on hand inventory into account
- Deliver presold orders, that is, orders that have been taken in advance of the current visit
- Sell and deliver without presold orders, that is, sell directly from a vehicle
- Take orders for and deliver free goods
- Perform CRM activities, such as taking a survey or capturing images using the mobile camera
- Invoice and print invoices

- Collect payments and print receipts
- Return deliveries
- Take return orders for future pickup

Activities are linked to their associated transaction documents, for example, deliveries, invoices, and orders.

Recording Odometer, Geocoordinates, and Visit Times on Tour

At each customer visit, mobile users can do the following:

- Enter the odometer reading
- Record customer geocoordinates
- Record the exact start and end time manually, automatically, or by using the barcode scanner embedded in the mobile device

This information is uploaded to the Route Accounting Database for statistical purposes only.

Changing Visit Sequence

The download provides a default order in which the visits are to be carried out. However, mobile users can change the sequence of the visits.

Note

The new visit sequence information is not uploaded to the back end.

Creating Unplanned Visits

Mobile users can create new, unplanned visits. The supported scenarios are as follows:

- Existing customer in visit list
It is possible to create additional visits for the same customer within a tour.

Example

Seeing an opportunity on the outward journey of a multiday tour, a van seller adds another visit to a customer to take place some days later on the return journey.

- Existing customer not in visit list
A visit can be created for a customer who is not in the visit list but whose customer master record is downloaded to the mobile device in an occasionally connected scenario (see [Occasionally Connected Scenario \[page 112\]](#)).
- One-time customer
A visit is created using the one-time customer number. A mobile user must enter the customer name and address and data such as phone numbers can be optionally added. At the end of tour, a customer master record is not created in the back end.

Example

A van seller takes advantage of the opportunity to sell goods from the speculative load on his vehicle by entering a one-time customer and creating a delivery.

Adjusting Inventory

During a tour, mobile users can adjust their inventory by recording breakages or by transferring unreserved stock from one vehicle to another, for example, in a van selling scenario.

Recording Driver Expenses

Mobile users can record cash expenses incurred on their tour. You can configure the application to support various expense types, for example, highway tolls, gas, and parking. Mobile users can then enter the individual amounts per expense type. Mobile user expenses are used in the end-of-day discrepancy calculation.

Reporting

Mobile users can display and print reports, for example, *Presettlement* and *Route Performance* reports. There are templates available for creating reports, for example, for expenses.

Android-based mobile devices only

- Custom reports

In the back end of *SAP Direct Store Delivery for Android*, you can enhance the XML structure of default reports with your choice of, for example, fields, tables, and values. You export these custom layouts for reports as XML files from the back end to mobile devices. On mobile devices, the mobile app checks if appropriate custom reports are available and uses them instead of default ones.

In the back end, in Customizing for *Logistics Execution* under [SAP Direct Store Delivery for Android > Handheld Connectivity > DSD Connector Settings > Mobile Device Settings > Define General Settings > Mobile Reports > Define Behavior for Mobile Reports](#), you can enable the export of XML files for custom layouts of reports to mobile devices.

By using the *Process Mobile Business Object for Download* BAdI to enhance business objects in the back end, you can populate values from the database into new fields in custom reports on mobile devices.

For customer-specific reports, for example, delivery reports but not presettlement reports, you can use various combinations of sales areas and customer number or sales areas and customer group 5 to set up which mobile users have access to which custom reports.

Example

The default report for a delivery object contains only the delivery number. You set up a custom layout that contains both the delivery number and a delivery description and you export it to mobile devices based on Android. You start by allowing all mobile users in a specific sales area to access this custom layout for deliveries to customers there. One customer requests that you use the custom report for all their deliveries. In Customizing, you make a setting to allow mobile users to use it for this specific customer regardless of sales area.

- Generate and upload PDF files

On mobile devices based on Android, mobile users can generate PDF files for invoices, delivery notes, orders, and collections. In SAP ERP in the back end, the PDF files are available after upload.

In the back end, in Customizing for *Logistics Execution* under [SAP Direct Store Delivery for Android > Handheld Connectivity > DSD Connector Settings > Mobile Device Settings > Define Tour Scenario Settings](#), in the sales-area specific settings, you can enable the e-mailing of PDF files, for example, invoices, from mobile devices.

End-of-Day

Mobile users can record the vehicle's final odometer reading. They can get confirmation of check-in materials (including returns, damaged goods, and empties), cash, and expenses. Reasons can be recorded for any check-in discrepancies. They can record the actual end time and synchronize the final data to the back end.

More Information

For more information, see *SAP Direct Store Delivery on Mobile Devices* under the following:

- [SAP Direct Store Delivery for Windows Mobile \[page 32\]](#)
- [SAP Direct Store Delivery for Android \[page 63\]](#)

3.2 Tour Monitor

In SAP ERP in the back end of *SAP Direct Store Delivery for Android*, a Web-based *Tour Monitor* app enables centrally located tour dispatchers to get feedback on mobile users' current and historical tours.

i Note

The *Tour Monitor* app is only available for *SAP Direct Store Delivery for Android*.

On a Web browser or a tablet, for example, you can use the *Tour Monitor* app to do the following:

- Select tours for monitoring by using various criteria, for example, tour, tour start date, shipment number, driver, vehicle, route, shipment type, and visit plan type
- Following your selection criteria, you can see the coordinates on a map on the upper part of the screen while the visit list or the sequence of the deliveries in the shipment is displayed on the lower part of the screen for a single tour at a time
- Use the map area to monitor mobile users' route, for example, to query their decision to change or to leave a planned route
- Read visit details, for example, sequence number, customer's name and address, visit date and time, coordinates
- Perform planned/actual comparisons for mobile users' tours by leveraging GPS data

Web-Based User Interface (UI)

The *Tour Monitor* app UI is divided into the following group boxes:

- *Monitored Tours* (no. of tours)
A list of tours is displayed on the left hand side of the screen
- *Tour ID*
 - A map is displayed on the upper right hand side of the screen
 - The route is displayed in the map and the selected visits are displayed as numbered dots
 - There is a map control on the upper left hand side of the map area.
- *Customers of Tour*
The visits for the current tour are listed in the lower right hand side of the screen along with some visit details, for example, the sequence number of the visit and the location coordinates.

Integration

Configure Tour Monitor

In Customizing for *Logistics Execution* under [SAP Direct Store Delivery for Android](#) > [Handheld Connectivity](#) > [Monitoring](#) > [Configure Tour Monitor App](#), you can configure the Web-based *Tour Monitor* app with respect to its default settings.

Set Up GPS Tracking

In the back end, you can track and store data about the location of mobile devices so that tour dispatchers can have up-to-date information on the whereabouts of mobile users.

In Customizing for *Logistics Execution* under [SAP Direct Store Delivery for Android](#) > [Handheld Connectivity](#) > [DSD Connector Settings](#) > [Mobile Device Settings](#) > [Define Tour Scenario Settings](#), you can set up tracking of GPS coordinates as follows:

- Switch GPS tracking of mobile devices on and off
- Upload GPS coordinates with every delta OCS upload
- Upload GPS coordinates every time they are captured and the mobile device has connectivity
- Upload tracked GPS coordinates once with the final upload at the end of the tour

i Note

You can customize a time interval to capture GPS coordinates.

In Customizing for *Logistics Execution* under [SAP Direct Store Delivery for Android](#) > [Handheld Connectivity](#) > [DSD Connector Settings](#) > [Mobile Device Settings](#) > [Define Mobile Device Settings](#) > [Group-Specific Settings](#), you can make the following settings:

- On the mobile device, get the mobile user's consent to being tracked
This may be a legal requirement.
- Configure the location tracking mechanism on the mobile device

4 Tour Execution

Use

Direct store delivery (DSD) is a business process that manufacturers use to both sell and distribute goods directly - bypassing any retailer or wholesaler logistics - to point of sale including additional product and market-related services such as merchandising, information gathering, or equipment service.

On tours, mobile users, for example, presellers and delivery drivers, use mobile devices to execute DSD.

Prerequisites

Customizing settings for *SAP Direct Store Delivery* as follows:

- In SAP ERP, under [▶ Logistics Execution ▶ SAP Direct Store Delivery ▶](#)
- In SAP CRM, under [▶ Customer Relationship Management ▶ SAP Direct Store Delivery ▶](#)

Example

In SAP ERP, you can enable or disable the display of individual screens on the mobile device based on the tour scenarios, for example, you can disable all ordering functionality for your delivery drivers while enabling specific ordering functionality for your presellers. You make these settings in the sub view [Business Process Settings](#) in Customizing for *SAP Direct Store Delivery* under [▶ Logistics Execution ▶ SAP Direct Store Delivery ▶ Handheld Connectivity ▶ DSD Connector Settings ▶ Mobile Device Settings ▶ Define Tour Scenario Settings ▶](#).

Note

In SAP ERP, when Customizing visit plan types, you need to make settings for the [Relevant Documents](#) based on the requested mobile user role, for example, you need to define the shipping document as the leading document for a delivery driver. You do this in Customizing for *Logistics Execution* under [▶ SAP Direct Store Delivery ▶ Visit Control ▶ Define Visit Plan Types ▶](#).

Process

The following graphic gives an overview of the activities that are performed on mobile devices in a direct store delivery process:

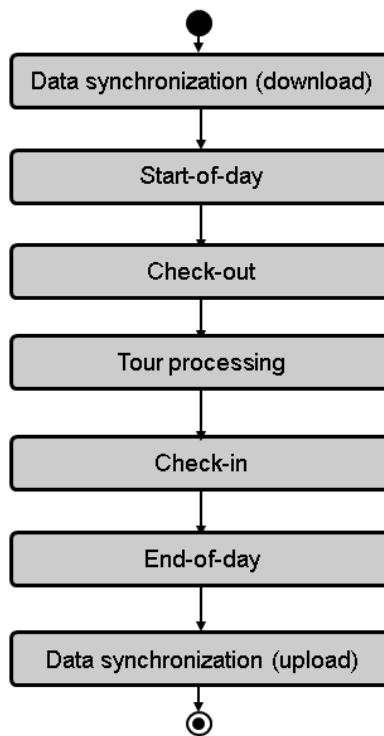


Figure 3: Mobile Direct Store Delivery Process Overview

1. Data synchronization
Transactional data and master data is downloaded from back end systems to mobile devices.
2. Start-of-day
At the beginning of the day, mobile users record and check basic tour data, for example, driver ID, vehicle ID, vehicle security checks, and odometer reading.
3. Check-out
Mobile users check what was loaded onto their vehicles. This can include both materials and cash. One or more supervisors confirm a check-out by using signature capture on the mobile device.
4. Tour processing
Mobile users view a list of all visits. For each visit, they either perform the associated activities or they update the visit status with a reason code to indicate why they could not visit a customer (for example, customer was closed or a driver ran out of time). Mobile users can also rearrange the order of their visits as well as create new unplanned visits. The main activities performed at the customer site are as follows:
 - Order taking for future deliveries
Mobile users who are presellers, or who have a mixed role, take orders from customers on the tour. Customer signatures can be captured on the mobile device, for example, for order confirmation. These orders are delivered on subsequent tours by mobile users who are delivery drivers.

- Delivery with presold orders
Mobile users who are delivery drivers, or who have a mixed role, deliver presold materials from their truck and they print a delivery note or an invoice. If necessary, they can add items and change item quantities. The mobile app supports the return of goods (for example, spoiled goods, incorrect items) and the return of empties, which are added to deliveries.
- Delivery without presold orders
Mobile users who are van sellers, or who have a mixed role, deliver materials that have not been ordered. They sell materials directly off their vehicle by creating new deliveries. This includes both normal outbound deliveries and return inbound deliveries. The physical processing of the delivery is similar to that of presold order deliveries.
- CRM activities
If SAP CRM is integrated, mobile users can perform CRM activities such as taking surveys, writing journals and notes, and creating attachments (see [CRM Activity \[page 98\]](#)).
- Occasionally connected scenarios
Mobile users can add additional customers, deliveries, orders, or activities during tour execution by connecting to the central location. They can upload tour data, for example, for completed visits (see [Occasionally Connected Scenario \[page 112\]](#)).
- Invoice issuing
Mobile users can be enabled to issue a legal invoice. Customers who do not receive an invoice receive a delivery note instead.
- Payment collection
Mobile users can be enabled to collect payments for current deliveries as well as outstanding open items. Payment methods and terms can be changed on the device. Customers are issued payment receipts.

The following general tour-related activities are also supported:

- Recording of inventory adjustments
Mobile users can record inventory adjustments, for example, in the case of breakages or truck-to-truck transfer of unreserved stock.
 - Recording driver expenses
Mobile users can record miscellaneous expenses, such as tolls, parking fees, and gas costs.
 - Reporting
Mobile users who are using *SAP Direct Store Delivery* can display and print reports, for example, a *Presettlement Report* or a *Route Performance Report*.
5. Check-in
Any materials and empties returned to the warehouse are validated. In this case, mobile users enter returned quantities, which can then be verified and confirmed by supervisors.
 6. End-of-day
End-of-day consists of recording end-of-tour data, for example, the final odometer reading, and returned cash/payments.
 7. Data synchronization
Transactional data is uploaded from mobile devices to back end systems.

More Information

For more information, see *SAP Direct Store Delivery on Mobile Devices* under the following:

- [SAP Direct Store Delivery for Windows Mobile \[page 32\]](#)

- [SAP Direct Store Delivery for Android \[page 63\]](#)
- [Features only Available for SAP Direct Store Delivery for Windows Mobile \[page 31\]](#)

4.1 Presales

Use

Capturing orders from customers involves both the centrally located back end systems operator and a mobile user who has the role of preseller.

Presales is a sales-orientated business process where the visit list and not the shipment is the leading document. This visit list contains the list of customers who are to be visited without delivering materials to them. It is generated from a preseller visit plan type and is not connected to shipments.

Prerequisites

Back End SAP ERP System

Customer, material, vehicle, and driver master data is maintained.

The visit plan, visit plan type (preseller), route, sales area, truck, and driver are defined.

All the necessary Customizing settings have been made in Customizing for *Logistics Execution* under *SAP Direct Store Delivery*.

i Note

When Customizing visit plan types for presellers, you must specify the *Visit List Document* as the *Relevant Documents* in Customizing for *Logistics Execution* under ► *SAP Direct Store Delivery* ► *Visit Control* ► *Define Visit Plan Types* ►.

Back End SAP CRM System

If SAP CRM is integrated, CRM activities data relevant to *SAP Direct Store Delivery* is maintained (see [CRM Activity \[page 98\]](#)).

Process

SAP ERP Operator at the Central Location

1. Generate a visit list for a start and end date in the future using the preseller variant. Use *Visit List Generation* (transaction code /DSD/VC_GEN).
2. You can edit the driver and vehicle. Use *Visit Control: Visit Lists* (transaction code /DSD/VC_VL).

3. Send the visit list to the mobile device.
You can process the IDocs (transaction code `BD87`) to make the visit list for the preseller available in the DSD Connector.

Preseller Using a Mobile Device

1. Synchronize data
To synchronize the tour data from the back end to the mobile device, on the main menu of the mobile device, choose *Synchronize*. The device informs you once the tour download is complete. The visit list is now available on the mobile device.
2. Prepare tour
On the main menu of the mobile device, choose *Tour*. You make your start-of-day checks, for example, you record an odometer reading and answer vehicle security check questions, and you verify the tour.
3. Visit customers
On the main menu of the mobile device, choose *Visit List* (Windows Mobile) or *Visit list* (Android) to see the sequence of customer visits on your route for the day. You can cancel visits (and add a reason for cancellation) and you can change the sequence of the visits.
4. Capture orders
From the list of activities for a customer, choose to add an order. Select the materials and enter their quantities.
5. Capture customer's confirmation
If using offline pricing, determine pricing for the confirmed order, including, for example, any rebates, discounts, or manually entered conditions. Capture a signature from the customer to confirm the final order and pricing.
6. If SAP CRM is integrated, perform CRM activities, for example, conduct a customer survey.
7. Record end-of-day data
Record, for example, the odometer reading at the end of the tour.
8. Synchronize data
Synchronize the tour data from the mobile device to the back end.

Result

At the central location, orders are received and processed. Product is picked and loaded onto a truck for delivery to the relevant outlets by delivery drivers.

More Information

For more information, see [Example: Visit List Activities based on Preseller Scenario \[page 45\]](#) (Windows Mobile) or [Example: Visit List Activities based on Preseller Scenario \[page 72\]](#) (Android).

4.2 Delivery

Use

The delivery of goods to customers involves both the centrally located SAP ERP operator and a mobile user who has the role of delivery driver.

Delivering goods is a logistics-orientated business process where the shipment, generated from a visit plan type, is the leading document.

Prerequisites

Back End SAP ERP System

Customer, material, vehicle, and driver master data is maintained.

The visit plan, visit plan type (delivery driver), shipment type, transportation planning point, route, sales area, truck, and driver are defined.

An order number is available or created depending on the type of delivery as follows:

- Order number for delivering presold
If this is delivering with presold orders, you have the order number for an order that has been taken by a preseller in advance of the current visit.
- Order number for delivering without preselling
If this is delivering without preselling, you create an order (standard transaction code `VA01`). You enter an order type (for example, `ZPP1` for standard order), a customer, and a material and its quantity. You get a confirmation of the sales order created and its number.

All the necessary Customizing settings have been made in Customizing for *Logistics Execution* under *SAP Direct Store Delivery*.

i Note

When Customizing visit plan types for delivery drivers, you need to set the *Shipping Document* and *Ship Delivery* as the *Relevant Documents* in Customizing for *Logistics Execution* under **SAP Direct Store Delivery** > *Visit Control* > *Define Visit Plan Types*.

Back End SAP CRM System

If SAP CRM is integrated, CRM activities data relevant to *SAP Direct Store Delivery* is maintained (see [CRM Activity \[page 98\]](#)).

Process

SAP ERP Operator at the Central Location

1. Create an outbound delivery with order reference.
On the *Create Outbound Delivery with Order Reference* screen (transaction code VL01N) you enter, for example, the order number, shipping point, and a date to create the delivery.
2. Create a shipment.
On *Create Shipment: Initial Screen* (transaction code VT01N) you enter the transportation planning point and the shipment type. On the next screen, you enter data such as forwarding agent, shipment route, driver, and vehicle.
3. Add the outbound delivery to the shipment.
4. Check dates for planning, check-in, and loading start (transaction code VT02N can be used for modification of a shipment).
5. Optionally confirm loading (transaction code /DSD/SV_LC_COUNT).
6. Send the shipment to the mobile device (use transaction code BD87 to process the IDOCs).

Delivery Driver Using a Mobile Device

1. Synchronize data
To synchronize the tour data from the back end to the mobile device, on the main menu of the mobile device, choose *Synchronize*. The device informs you once the tour download is complete. The shipment, including the delivery for the order, is now available on the mobile device.
2. Prepare tour
On the main menu of the mobile device, choose *Tour*. You make your start-of-day checks, for example, you record an odometer reading, answer vehicle security check questions, and check your load and cash. You may need to get one or more checkers' signatures to confirm the check-out materials and cash and you verify the tour.
3. Visit customers
On the main menu of the mobile device, choose *Visit List* (Windows Mobile) or *Visit list* (Android) to see the sequence of customer visits on your route for the day. You can cancel visits (and add a reason for cancellation) and you can change the sequence of the visits.
4. Deliver
You can do the following with the delivery:
 - Display the ordered delivery
 - Change the delivery, for example, by adding items to it or applying deal conditions
 - Add returned goods and empties
 - Confirm the delivery by capturing the customer's signature

i Note

You can also cancel the delivery.

5. If SAP CRM is integrated, perform CRM activities, for example, capture a photo of a customer's display and add it as an attachment to a CRM activity on the mobile device.
6. Invoice
Display an invoice summary for the delivery showing, for example, the cost of the items delivered, minus a discount, and with the addition of value added tax. You can print the invoice.
7. Collect payment
You can collect payments for due open items as well as for the current delivery. You can display recent collections, credit information, payment terms, for example, pay immediately without deductions, and payment methods, for example, cash or check. You can change the payment terms and method on the device.
8. Capture customer's confirmation

Capture a signature from the customer to confirm the collection of payment. You can print a receipt.

9. Record end-of-day data

Record, for example, the odometer reading at the end of the tour. Capture checkers' signatures as required to confirm the check-in of materials and cash.

10. Synchronize data






Synchronize the tour data from the mobile device to the back end.

Result

Invoices and collected payments are settled in the *Settlement Cockpit* and *Route Accounting* in SAP ERP.

More Information

For more information, see [Example: Visit List Activities based on Delivery Driver Scenario \[page 49\]](#) (Windows Mobile) or [Example: Visit List Activities based on Delivery Driver Scenario \[page 75\]](#) (Android).

For more information about *Route Accounting*, see SAP Help Portal at <http://help.sap.com>  [SAP ERP Central Component](#)  [Logistics](#)  [Logistics Execution \(LE\)](#)  [Direct Store Delivery](#)  [Route Accounting](#) .

4.3 Van Sales

Use

Selling goods to customers from a speculative load on a van involves both the centrally located back end systems operator and a mobile user who has the role of van seller.

Van sales is a both a sales- and a logistics-orientated business process where both the visit list and the shipment are relevant documents.

For van sales, an order for the speculative load is created in the SAP ERP system for the driver.

Prerequisites

Back End SAP ERP System

Customer, material master, vehicle, and driver data is maintained.

The visit plan, visit plan type (van seller), shipment type, transportation planning point, route, sales area, truck, and driver are defined.

All the necessary Customizing settings have been made in Customizing for *Logistics Execution* under *SAP Direct Store Delivery*.

i Note

When Customizing visit plan types for van sellers, you need to set the *Visit List Document* and *Shipping Document* as the *Relevant Documents* in Customizing for *Logistics Execution* under ► *SAP Direct Store Delivery* ► *Visit Control* ► *Define Visit Plan Types* ▾.

Back End SAP CRM System

If SAP CRM is integrated, CRM activities data relevant to *SAP Direct Store Delivery* is maintained (see [CRM Activity \[page 98\]](#)).

Process

SAP ERP Operator at the Central Location

1. Generate a visit list for a start and end date in the future using the van seller variant. Use *Visit List Generation* (transaction code `/DSD/VC_GEN`).
2. Create a sales order for the driver, who is a van seller (transaction code `VA01`).
3. Create a delivery (transaction code `VL10a`) using the van seller variant.
4. Create shipment through dynamic transportation planning (transaction code `/DSD/RP_DYNDISP`) using the van seller variant.

Van Seller Using a Mobile Device

1. Synchronize data
To synchronize the tour data from the back end to the mobile device, on the main menu of the mobile device, choose *Synchronize*. The device informs you once the tour download is complete. The visit list and the shipment for the speculative load is now available on the mobile device.
2. Prepare tour
On the main menu of the mobile device, choose *Tour*. You make your start-of-day checks, for example, you record an odometer reading, answer vehicle security check questions, and check your load and cash. You get checkers' signatures to confirm the check-out materials and cash and you verify the tour.
3. Visit customers
On the main menu of the mobile device, choose *Visit List* (Windows Mobile) or *Visit list* (Android) to see the sequence of customer visits on your route for the day. You can cancel visits (and add a reason for cancellation) and you can change the sequence of the visits.
4. Sell and deliver
Take an order for goods from the speculative load. If using offline pricing, get a price on the mobile device and confirm the delivery by capturing the customer's signature.
5. If SAP CRM is integrated, perform CRM activities, for example, display an attachment to a CRM activity on the mobile device to show the customer a photo of a new product that will be sold from the van on future tours.
6. Invoice
Display an invoice summary for the delivery showing, for example, the cost of the items delivered, minus a discount, and with the addition of value added tax. You can print the invoice.



-
7. Collect payment
You can display recent collections, credit information, payment terms, for example, pay immediately without deductions, and payment methods, for example, cash or check. You can change the payment terms and method on the device.
 8. Capture customer's confirmation
Capture a signature from the customer to confirm the collection of payment. You can print a receipt.
 9. Record end-of-day data
Record, for example, the odometer reading at the end of the tour. Capture checkers' signatures to confirm the check-in of materials and cash.
 10. Synchronize data
Synchronize the tour data from the mobile device to the back end.

Result

Invoices and collected payments are settled in the *Settlement Cockpit* and *Route Accounting* in SAP ERP.

More Information

For more information, see [SAP Direct Store Delivery on Mobile Devices \[page 30\]](#).

For more information about *Route Accounting*, see SAP Help Portal at <http://help.sap.com>  [SAP ERP Central Component](#) > [Logistics](#) > [Logistics Execution \(LE\)](#) > [Direct Store Delivery](#) > [Route Accounting](#) .

4.4 Presales, Delivery, and Van Sales in a Mixed Role

Use

Combining presales, the delivery of presold goods, and sales to customers from a speculative load on a van involves both the centrally located back end systems operator and a mobile user who has a mixed role.

The mixed role is a mixture of both sales- and logistics-orientated business processes where both the visit list and the shipment are relevant documents.

For a mixed role, an order for the speculative load is created in the SAP ERP system for the driver.

Prerequisites

Back End SAP ERP System

Customer, material master, vehicle, and driver data is maintained.

The visit plan, visit plan type (mixed role), shipment type, transportation planning point, route, sales area, truck, and driver are defined.

All the necessary Customizing settings have been made in Customizing for *Logistics Execution* under *SAP Direct Store Delivery*.

i Note

When Customizing visit plan types for a mixed role, you need to set all 3 documents, the *Visit List Document*, *Shipping Document*, and *Ship Delivery*, as the *Relevant Documents* in Customizing for *Logistics Execution* under **SAP Direct Store Delivery** > *Visit Control* > *Define Visit Plan Types*.

Back End SAP CRM System

If SAP CRM is integrated, CRM activities data relevant to *SAP Direct Store Delivery* is maintained (see [CRM Activity \[page 98\]](#)).

Process

SAP ERP Operator at the Central Location

1. Generate a visit list for a start and end date in the future using the mixed role variant. Use *Visit List Generation* (transaction code /DSD/VC_GEN).
2. Create a sales order for the driver for the speculative load on the vehicle (transaction code VA01).
3. If there are presold goods to be delivered, create deliveries (transaction code VL10a) and a shipment (transaction code /DSD/RP_DYNDISP) using the mixed role variant.

Mixed Role with a Mobile Device

1. Synchronize data
To synchronize the tour data from the back end to the mobile device, on the main menu of the mobile device, choose *Synchronize*. The device informs you once the tour download is complete. The visit list for preselling, the shipment and delivery for presold goods (if applicable), and the shipment for the speculative load is now available on the mobile device.
2. Prepare tour
On the main menu of the mobile device, choose *Tour*. You make your start-of-day checks, for example, you record an odometer reading, answer vehicle security check questions, and check your load and cash. You get checkers' signatures to confirm the check-out materials and cash and you verify the tour.
3. Visit customers
On the main menu of the mobile device, choose *Visit List* (Windows Mobile) or *Visit list* (Android) to see the sequence of customer visits on your route for the day. You can cancel visits (and add a reason for cancellation) and you can change the sequence of the visits.
4. For a mixed role, the mobile users can perform any of the following tasks of the other roles at a customer's site:
 - Capture orders
See [Presales \[page 21\]](#); see also [Example: Visit List Activities based on Preseller Scenario \[page 45\]](#) (Windows Mobile) or [Example: Visit List Activities based on Preseller Scenario \[page 72\]](#) (Android)
 - Deliver presold

See [Delivery \[page 23\]](#); see also [Example: Visit List Activities based on Delivery Driver Scenario \[page 49\]](#) (Windows Mobile) or [Example: Visit List Activities based on Delivery Driver Scenario \[page 75\]](#) (Android)

- Sell and deliver
See [Van Sales \[page 25\]](#)
- 5. If SAP CRM is integrated, perform CRM activities
- 6. Invoice and collect payment
Provide an invoice for a delivery of presold goods, for a sale of goods from the van, or for both and collect payment.
- 7. Capture customer's confirmation
- 8. Record end-of-day data
Record, for example, the odometer reading at the end of the tour. Capture checkers' signatures to confirm the check-in of materials and cash.
- 9. Synchronize data
Synchronize the tour data from the mobile device to the back end.






Result

At the central location, any orders are received and processed and the product is picked and loaded onto a truck for delivery to the relevant outlet by a delivery driver.

Any invoices and collected payments are settled in the *Settlement Cockpit* and *Route Accounting* in SAP ERP.

More Information

For more information, see [SAP Direct Store Delivery on Mobile Devices \[page 30\]](#).

For more information about *Route Accounting*, see SAP Help Portal at <http://help.sap.com>  [SAP ERP Central Component](#)  [Logistics](#)  [Logistics Execution \(LE\)](#)  [Direct Store Delivery](#)  [Route Accounting](#) .

5 SAP Direct Store Delivery on Mobile Devices

Use

SAP Direct Store Delivery is a mobile app that manufacturers use to both sell and distribute goods directly - bypassing any retailer or wholesaler logistics - to point of sale including additional product and market-related services such as merchandising, information gathering, or equipment service.

Compared to the previous *SAP Mobile Direct Store Delivery* (SAP mDSD) 3.0, *SAP Direct Store Delivery* offers a new user experience based on different technology, design, and navigation patterns.

In this section, the process in which mobile users, for example, presellers and delivery drivers, use mobile devices to perform direct store delivery is explained in detail.

You can use *SAP Direct Store Delivery* on the following:

- Windows Mobile-based mobile devices (see [SAP Direct Store Delivery for Windows Mobile \[page 32\]](#))
There are features that are only available on mobile devices based on Windows Mobile (see [Features only Available for SAP Direct Store Delivery for Windows Mobile \[page 31\]](#)).
- Android-based mobile devices (see [SAP Direct Store Delivery for Android \[page 63\]](#))
There are features, for example, the generation and upload of PDF reports, that are only available on mobile devices based on Android.

Implementation Considerations

- All the necessary components have been installed.
For more information, see the installation notes for *SAP Direct Store Delivery*.
- All the necessary Customizing settings have been completed for both mobile devices and the back end systems, as well as their connections.
Customizing settings for *SAP Direct Store Delivery* can be made as follows:
 - In SAP ERP, under ► [Logistics Execution](#) ► [SAP Direct Store Delivery](#) ►
 - In SAP CRM, under ► [Customer Relationship Management](#) ► [SAP Direct Store Delivery](#) ►
- A mobile app is set up per mobile engine server
You do this in Customizing for *Logistics Execution* under ► [SAP Direct Store Delivery](#) ► [Handheld Connectivity](#) ► [DSD Connector Settings](#) ► [Logical System Connectivity](#) ► [Set up Mobile App per Mobile Engine Server](#) ►.

More Information

For more information about the mobile direct store delivery process, see [Tour Execution \[page 18\]](#).

5.1 Features only Available for SAP Direct Store Delivery for Windows Mobile

i Note

SAP Direct Store Delivery 2.0 can be used on both Windows Mobile- and Android-based mobile devices. There are features that are only available on *SAP Direct Store Delivery for Android*, for example, Tour Monitor, maps integration, and the upload of PDF files. The following table shows the functions that are only available for *SAP Direct Store Delivery for Windows Mobile* and not for *SAP Direct Store Delivery for Android*:

Table 2:

SAP Direct Store Delivery Feature Component	Feature only Available in SAP Direct Store Delivery for Windows Mobile	More Information
Middleware	<i>SAP Mobile Platform</i> is the middleware used to transfer data between the back end and the front end of <i>SAP Direct Store Delivery for Windows Mobile</i> .	SAP Direct Store Delivery [page 4] under "System Landscape" and "Integration"
Tour Scenario Customizing	About screen	
Additional Customer	Download additional customers	New Data for Mobile Users [page 92] under "Features"
SAP CRM	Survey: Pre-filled surveys supported	CRM Activity [page 98]
Manual Discounts	Manual discounts	
GIF Upload of Signatures	GIF upload of Signatures	i Note <i>SAP Direct Store Delivery for Android</i> can upload JPEGs and PDFs
Counting Groups	Counting groups	
Enhancement Concept	Branding (colors, texts, fonts)	For more information, see the Enhancement Guide for SAP Direct Store Delivery on the SAP Help Portal at https://help.sap.com/dsd .
Peripherals	Key mappings	

5.2 SAP Direct Store Delivery for Windows Mobile

Use

This section describes the mobile app on Windows Mobile-based mobile devices.

Features

In this section, the mobile app functions offered by *SAP Direct Store Delivery* are described based on the following menu options that are displayed on the main menu of Windows Mobile-based mobile devices:



Figure 4: SAP DSD Main Menu Screen with Icons

The following table maps the activities performed by mobile users to the main menu icons on mobile devices:

Table 3:

Sequence	Mobile User Activity	Corresponding Main Menu Icon
1	Downloading data from the back end systems	Synchronize [page 38]
2	Performing start-of-day activities (including check-out)	Tour [page 40]
3	Processing a tour Performing various activities on customer visits	Visit List [page 42]
4	Recording of expenses incurred during tour processing	Expenses [page 52]
5	Recording of changes to inventory during tour processing	Inventory [page 54]
6	Displaying master data for the visited customers	Customers [page 55]
7	Displaying master data for the available materials	Materials [page 56]
8	Generating various reports using the current tour data available on the mobile device	Reports [page 57]
9	Performing end-of-day activities (including check-in)	Tour [page 40]
10	Uploading data to the back end systems	Synchronize [page 38]

5.2.1 Mobile Application Screen Framework

In order to use the *SAP Direct Store Delivery* mobile app effectively, it is helpful to understand the basics of the screen framework concept on which the mobile app design for Windows Mobile is based.

Screen Sections and Elements

The Windows Mobile-based mobile device screen can be divided into the following main sections:

- Status Bar
- Header Bar
- Content Area
- Footer Bar

The following *Sections and Elements on Mobile Device Screen* graphic shows the location of these sections, together with their screen elements, on the mobile device screen:

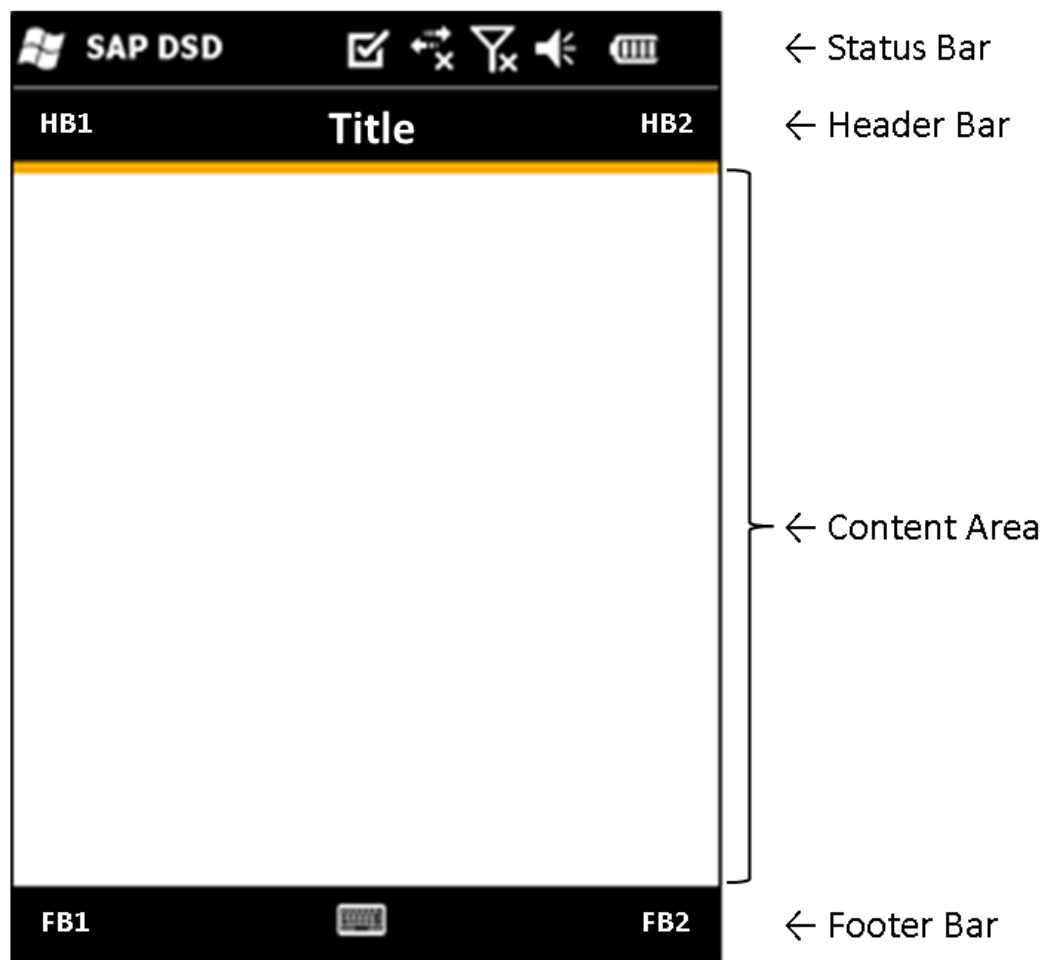


Figure 5: Sections and Elements on Mobile Device Screen

Table 4:

Screen Section	Screen Element	Explanation
Status Bar	SAP DSD	The abbreviated name of <i>SAP Direct Store Delivery</i> is displayed.
Header Bar	Title	The title of the screen is displayed.
	HB1 (Header Button 1)	This button is typically used for the <i>Back</i> or <i>Cancel</i> option.
	HB2 (Header Button 2)	This button is typically used for the <i>Next</i> or <i>OK</i> option.

Screen Section	Screen Element	Explanation
Content Area	N/A	<p>The screen area in which the main information is displayed.</p> <p>Different screen types, for example, home screen, overview screen, and inspection screen, as well as different views, for example, list view, partial list view, and form view, are available.</p>
Footer Bar	FB1 (Footer Button 1)	This button is intended for frequent actions that are primary functions directly related to the actual content displayed on the Content Area.
	FB2 (Footer Button 2)	<p>This button is intended for frequent actions or contextual menu that are the secondary functions.</p> <p>It is typically used as the <i>Menu</i> button under which are several options related to the current screen, for example, canceling an activity displayed on the Content Area.</p>

Contextual Menu

The following general rules are applied to the *Menu* options that are commonly used across the screens:

Table 5:

Display Sequence	Menu Option	Short Cut Key	Explanation
1	<i>Sort By</i>	R	The contextual menu (<i>Sort By</i> > <List of Sort Criteria> >) is displayed.
2	<i>Search</i>	S	The search field is displayed at the top of the Content Area.
3	<i>Filter</i>	F	The dropdown list boxes for filtering are displayed at the top of the Content Area.
4	
5	<i>Cancel <Object></i>	C	This is used for a cancel option, for example, <i>Cancel Visit</i> .
6	<i>Exit</i>	E	This is used when you want to exit from the <i>SAP Direct Store Delivery</i> mobile app.

Overlay Function

The overlay function, which minimizes the user navigation as well as enables quick access to the desired information and commands, is utilized for the mobile app.

The overlay function supports the following options:

- Table overlay
- Search overlay
- Filter overlay

Status Icons

The following status icons are used to indicate the status of activities on mobile devices:







Icon	Meaning	Typical Usage
	Mandatory	New mandatory activity
	Optional	New optional activity
	In Process	Activity in process
	Completed	Activity completed; Check passed
	Error	Failed activity; Check failed
	Inactive	Cancelled activity

Figure 6: Status Icons with Meaning and Usage

Interaction Modes

SAP Direct Store Delivery supports the following interaction modes:

- Keyboard
Mobile users are enabled to navigate and manipulate the screen elements using the keyboard on mobile devices. For example, to navigate among the screen elements, the arrow keys and the tab key can be used, while the *Enter* key is used to manipulate the selected screen element.
The shortcut keys, such as "S" for *Search* and "C" for *Cancel*, are also supported.
- Touch
This interaction mode provides direct and random access to any element on the screen by touching (or clicking).
Depending on personal preferences and the type and capabilities of the mobile device, mobile users can interact with their mobile devices by touching the screen elements with their finger or with a pointing device like a stylus pen.

5.2.2 Synchronize

Definition

An icon that is displayed on the main menu screen of the mobile device on which the *SAP Direct Store Delivery* mobile app is installed.

The *Synchronize* menu is used to synchronize the data between the front end mobile device and the back end systems.

Structure

The *Synchronize* menu is used before and after a tour execution.

To start a tour, the tour data needs to be downloaded from the back end systems to the mobile device. To complete the tour, the tour data needs to be uploaded from the mobile device to the back end systems.

The *Synchronize* menu may be used several times during a tour execution whenever it is required to download new data from or upload new data to the back end systems. For more information, see [Occasionally Connected Scenario \[page 112\]](#).

The *Synchronization* screen indicates the type of synchronization that is being executed. The type of synchronization to be executed is determined depending on the tour status and the related data.

The following *Status Change of Icons* graphic depicts the status change (active or inactive) of the icons on the main menu screen:



1. Before *Synchronize* (before starting a tour)
All icons except *Synchronize* are inactive.
2. After *Synchronize*
All icons other than *Expenses* and *Inventory* become active when the download of the relevant tour data from the back end systems to the mobile device is complete.
The *Expenses* and *Inventory* icons become active after the check-out is completed as part of the start-of-day activities in the *Tour* menu.

i Note

For the case of *Presales* [page 21] scenario, the *Inventory* icon is not used as presales is a sales-orientated business process in which orders are captured from the customers, however, without delivering materials.

3. Before *Synchronize* (after finishing a tour)
The *Expenses* and *Inventory* icons become inactive after check-in is completed as part of the end-of-day activities in the *Tour* menu.

i Note

Once the end-of-day activities are completed, the tour data can no longer be edited.

4. After *Synchronize*
After an upload synchronization at the end of the day, the mobile application resets and shuts down. This process takes place implicitly after synchronization, however, it is indicated by a popup to the user.
All icons except *Synchronize* become inactive again when the upload of the relevant tour data from the mobile device to the back end systems is complete.

More Information

For more information about the mobile direct store delivery process, see [Tour Execution \[page 18\]](#).

5.2.3 Tour

Definition

An icon that is displayed on the main menu screen of the mobile device on which the *SAP Direct Store Delivery* mobile app is installed.

The *Tour* menu is used before and after a tour by mobile users to perform start-of-day and end-of-day (confirmation) activities.

Structure

On the *Tour* screen, the tour information is displayed in the top half of the Content Area.

The following information is displayed:

- *Route*
- *Tour ID*
- *Planned Start*
- *Planned End*

i Note

- Multiday tours are supported.
For more information, see [Tour \[page 12\]](#) (under the section “Integration”) and [Changes to Standard Functions and New Features in the Back End \[page 84\]](#).
- For more information about the naming of the screen sections and elements, as well as the activity status icons, see [Mobile Application Screen Framework \[page 34\]](#).

In the bottom half of the Content Area, the *Start-of-Day* or the *Confirmation* (end-of-day) activities are listed with the corresponding status icons.

Start-of-Day Activities

Before a mobile user starts a tour, the start-of-day activities, typically the following, need to be performed:

- *Verify Tour*
- *Vehicle Check*
- *Check-Out*
- *Leave Plant*

End-of-Day (Confirmation) Activities

After a mobile user finishes a tour, the end-of-day activities, typically the following, need to be performed:

- *Plant Arrival*
- *Check-In*
- *Confirmation*

The icons in the middle of the Content Area indicate the overall tour status (start-of-day, tour execution, and end-of-day) with an active icon showing the current status.

The following *Start-of-Day and End-of-Day Activities under Tour Menu* graphic depicts the layout of the *Tour* - related screens with examples of start-of-day and end-of-day activities:

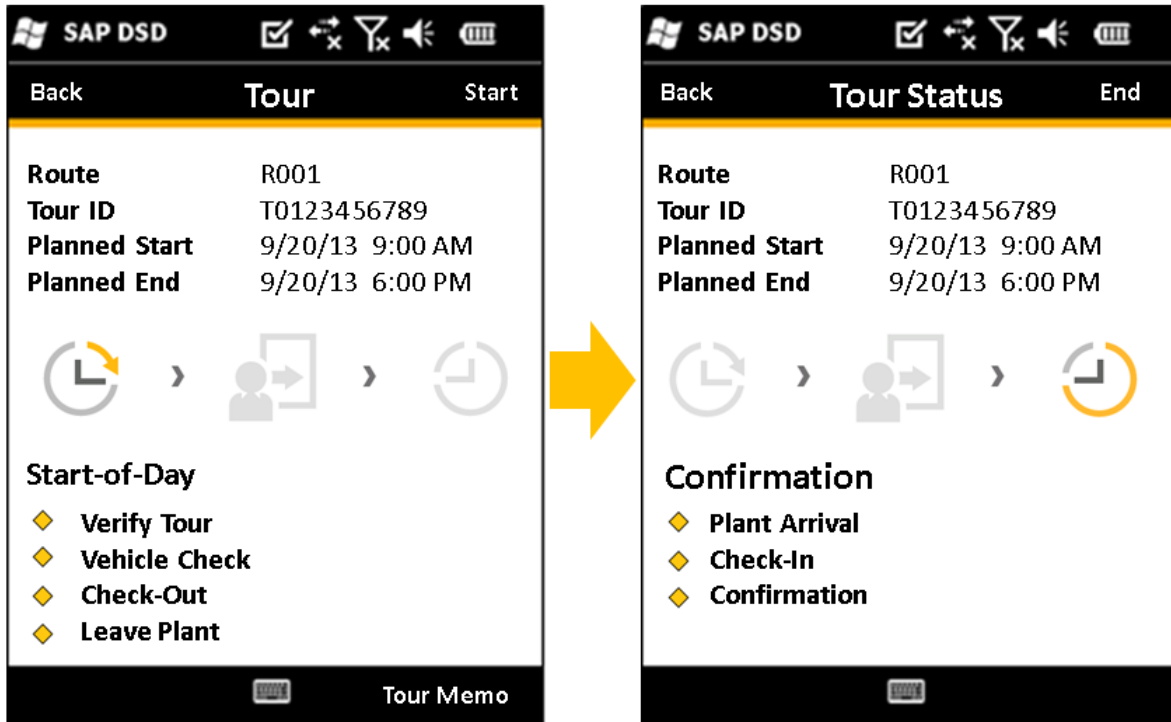


Figure 8: Start-of-Day and End-of-Day Activities under Tour Menu

More Information

For more information about the mobile direct store delivery process, see [Tour Execution \[page 18\]](#).

Occasionally connected scenarios, including delta down- and upload as well as rush orders, are supported. In addition, the consumption of online services, for example, ATP check, credit check, and pricing check, are supported.

For more information, see the following:

- [Delta Tour Data \[page 109\]](#)
- [Occasionally Connected Scenario \[page 112\]](#)

5.2.4 Visit List

Definition

An icon that is displayed on the main menu screen of the mobile device on which the *SAP Direct Store Delivery* mobile app is installed.

The *Visit List* menu provides the list of customers the mobile user needs to visit on a tour. During the tour, the mobile user needs to perform various activities for individual customers.

Structure

Visit List Screen

On the *Visit List* screen, a list of customers to be visited is displayed.

Mobile users can add more customers to the list using the *Add Visit* button on the Footer Bar of the mobile device. Furthermore, canceling visits and changing the visit sequence can be done using the *Menu* button on the Footer Bar.

From the *Visit List* screen, the user can drill-down to each *Visit* (customer) screen by choosing one from the list.

Visit Screen

On the *Visit* screen, the following information is displayed in the top half of the Content Area.

The start time needs to be recorded before the mobile user starts the listed activities for the customer, while the end time also needs to be recorded to complete the visit. Recording of the start and end time can be done manually or automatically, or skipped depending on the Customizing settings.

- *Customer*
- *Start*
- *End*

In the bottom half of the Content Area, the activities that are planned for the customer are listed with the corresponding status icons.

Mobile users can add more activities to the list using the *Add Act* button on the Footer Bar of the mobile device.

Furthermore, canceling the visit, displaying the visit pick list, creating a rush order and displaying messages (if available) can be done using the *Menu* button on the Footer Bar.

From the *Visit* screen, mobile users can drill-down to individual activity screens, such as *Delivery*, *Open Items*, *Order* and *Returns*, by choosing one from the list.

The following are the typical activities that are performed by mobile users during their tours:

SAP Direct Store Delivery Activities

- Delivery Presold
- Delivery without Presold
- Take Order
- Collection
- Return Delivery
- Return Order
- Invoice
- Free Goods Delivery
- Free Goods Order
- Capture on Hand
- Item Proposal

- Odometer Reading

SAP CRM Activities

- Audit
- Survey
- Competitor Report
- Damage Report

i Note

Depending on the tour scenario, the relevant activities and their sequence can be defined in Customizing. For example, the take order activity would be assigned to the preseller scenario, while it would not be assigned to the delivery driver scenario.

You can define mobile device settings based on tour scenarios in Customizing for *Logistics Execution* under [▶ SAP Direct Store Delivery ▶ Handheld Connectivity ▶ DSD Connector Settings ▶ Mobile Device Settings ▶ Define Tour Scenario Settings ▶](#).

Example

The following *Screen Transition from Visit List to Visit* graphic depicts the screen transition from *Visit List* to *Visit* together with an example of activities to be performed:

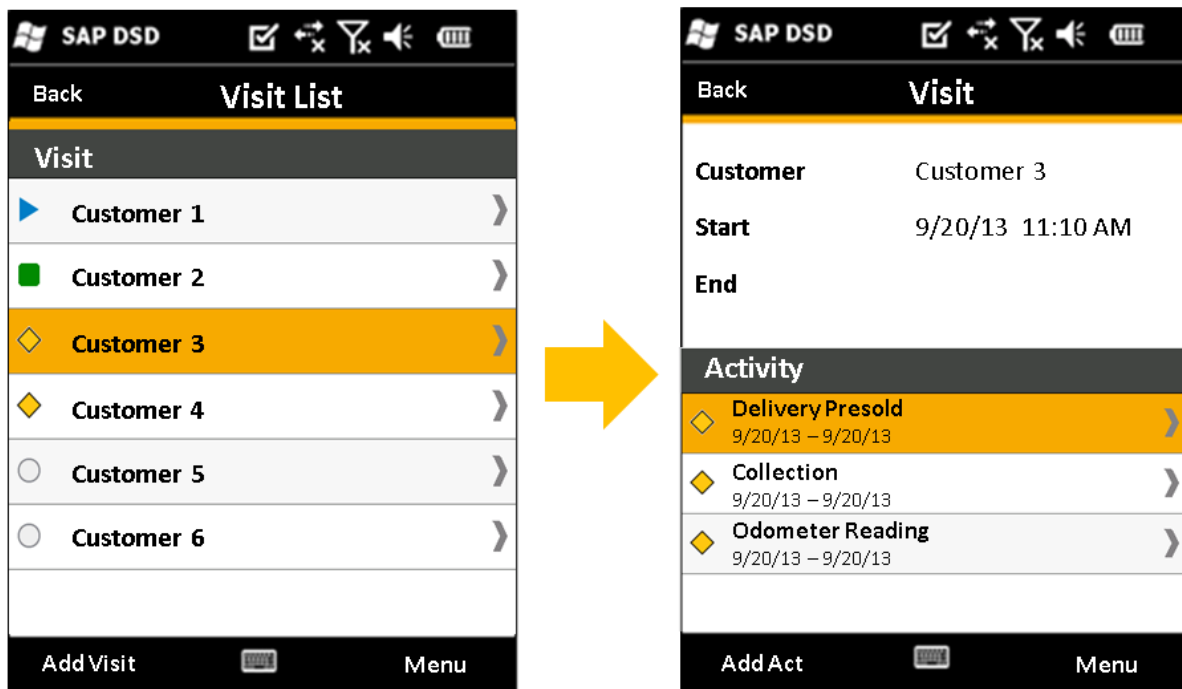


Figure 9: Screen Transition from Visit List to Visit

For more information about examples of typical visit list activities performed by presellers and delivery drivers, see:

- [Example: Visit List Activities based on Preseller Scenario \[page 45\]](#)
- [Example: Visit List Activities based on Delivery Driver Scenario \[page 49\]](#)

More Information

For more information about the mobile direct store delivery process, see [Tour Execution \[page 18\]](#).

The occasionally connected scenarios including delta down- and upload as well as rush order are supported. In addition, the consumption of online services, for example ATP check, credit check and pricing, are also supported.

For more information see:

- [Delta Tour Data \[page 109\]](#)
- [Occasionally Connected Scenario \[page 112\]](#)

5.2.4.1 Example: Visit List Activities based on Preseller Scenario

Use

Typical Scenario

Presellers do the actual selling at accounts and outlets on their tour. They enter orders on mobile devices and synchronize the data on their return to company headquarters.

At the distribution center, the order is received, processed, and the materials are picked and loaded onto a truck for delivery to the relevant outlet by the delivery driver.

A merchandiser may arrive after the order is delivered to merchandise it.

The cycle then repeats itself with the preseller returning to the outlet.

Prerequisites

- All the necessary Customizing settings have been completed for both mobile devices and the back end systems, as well as their connections.
For more information, see [Presales \[page 21\]](#) under the section “Prerequisites”.
- The preseller has completed the following activities:
 - Download of tour data from the back end systems to the mobile device using the [Synchronize](#) menu
 - Check-out as part of the start-of-day activities using the [Tour](#) menu

- The *Visit List* is active as the current tour status and the preseller is able to start a tour

Activities

The following are the activities that presellers typically perform under the *Visit List* menu using mobile devices:

Visit

1. On the *Visit List* screen, choose a customer from the list.
The *Visit* screen with the list of planned activities for the customer appears.
2. The preseller can add activities using the *Add Act* button in the Footer Bar.
3. Furthermore, using the *Menu* button, the preseller can perform the following:
 - Display messages
 - Display visit pick list
 - Execute rush order
 - Cancel visits

Take Order

1. On the *Visit* screen, choose the *Take Order* activity from the list.
The *Add Materials* screen with the list of available materials for the customer appears.
2. Enter the relevant quantities for the ordered materials.
3. Using the *Menu* button, the preseller can perform the following:
 - Display search text field
 - Display filter dropdown list boxes
 - Display sort by criteria:
 - Importance
 - Material Number
 - Product Hierarchy
 - Quantity
4. Choose the *OK* button in the Header Bar.
5. On the *Order* screen, the materials that have been maintained on the *Add Materials* screen are listed with the corresponding quantities entered.
6. The preseller can add items using the *Add Item* button in the Footer Bar.
7. Using the *Menu* button, the preseller can perform the following:
 - Display messages
 - Display sort by criteria
 - Display search text field
 - Display filter dropdown list boxes
 - Add untied empties
 - Check applicability of deal conditions
For more information, see [Deal Condition \[page 120\]](#).
 - Display order reference
 - Cancel orders
8. Choose the *Returns* button in the Header Bar.
The *Returns* screen appears.

Take Return Order

1. On the *Returns* screen, choose the *Add Item* button in the Footer Bar.
The *Add Return Items* screen with the list of available materials for the customer appears.
2. Enter the relevant quantities for the returned materials.
3. Using the *Menu* button, the preseller can perform the following:
 - Display search text field
 - Display filter dropdown list boxes
 - Display sort by criteria:
 - Importance
 - Material Number
 - Product Hierarchy
 - Quantity
4. Choose the *OK* button in the Header Bar.
5. On the *Returns* screen, the materials that have been maintained on the *Add Return Items* screen are listed with the corresponding quantities entered.
6. The preseller can add items using the *Add Item* button in the Footer Bar.
7. Using the *Menu* button, the preseller can perform the following:
 - Display messages
 - Display sort by criteria
 - Display search text field
 - Add untied empties
 - Check applicability of deal conditions
For more information, see [Deal Condition \[page 120\]](#).
 - Display order reference
 - Cancel orders
8. Choose the *Confirm* button in the Header Bar.
The *Order Confirmation* screen appears.

Order Confirmation

1. On the *Order Confirmation* screen (in the bottom half of the Content Area), capture a signature from the customer to confirm the order.
Use the *Clear* button in the Footer Bar to erase the signature.
2. Choose the *Confirm* button in the Header Bar.
3. The preseller also needs to confirm the order by providing a signature.
4. Choose the *Confirm* button in the Header Bar.
Upon confirmation by the customer and the preseller, the order is issued. If the mobile printer is available, select the *Print* checkbox to provide the printed order to the customer on the spot. Otherwise it is sent later.
5. Using the *Menu* button, the preseller can perform the following:
 - Display order summary
 - Display order details
 - Display result of deal conditions check (passed or failed)
For more information, see [Deal Condition \[page 120\]](#).
 - Display order preview
 - Cancel orders

CRM Activities

If SAP CRM is integrated, presellers can perform CRM activities, for example, take survey, perform audit, capture a photo of a customer's display and add it as an attachment to a CRM activity on the mobile device and so on.

CRM Activity: Audit

1. On the *Visit* screen, choose a CRM activity from the list.
In this example, choose *CRM: Audit*.
The *Activity Overview* screen appears with the following information:
 - *Type*
 - *Description*
 - *Reason*
 - *Activity Item*Under the *Activity Item*, the CRM activity items, for example, *Journal* and *Maintain Partners*, are listed.
2. Choose the *Start* button in the Footer Bar before starting a CRM activity item.
The options under the *Menu* button become active.
3. Using the *Menu* button, the preseller can perform the following:
 - Edit activities
 - Add attachments (photo image files)
 - Add notes
 - Cancel activities
4. Choose an activity item from the list.
In this example, choose *Journal*.
The *Journal* screen with the list of materials for a journal appears.
5. The preseller can add materials using the *Add Mat.* button in the Footer Bar.
6. Choose the *OK* button in the Header Bar.
It returns to the *Activity Overview* screen with the *Journal* activity item completed.
7. Choose the *Stop* button in the Footer Bar after finishing all the CRM activity item.
The options under the *Menu* button become inactive again.

Result

At the central location, orders are received and processed. Materials are picked and loaded onto a truck for delivery to the relevant outlets by delivery drivers.

For more information about typical visit list activities performed by delivery drivers, see [Example: Visit List Activities based on Delivery Driver Scenario \[page 49\]](#).

More Information

For more information, see:

- [Mobile User Roles \[page 9\]](#)
- [Tour Execution \[page 18\]](#)
- [Presales \[page 21\]](#)

5.2.4.2 Example: Visit List Activities based on Delivery Driver Scenario

Use

Typical Scenario

At the distribution center early in the morning, delivery drivers pick up their assigned route and truck. Delivery drivers generally need to stick to the deliveries the truck has been loaded for.

The delivery driver goes to the assigned truck and does any activities required before leaving the distribution center, for example, checking the vehicle for safety, getting the odometer reading, confirming the loaded materials, and verifying any cash on hand.

At each visit, delivery drivers deliver the ordered materials, present the invoice, collect payments if required, and get a signed copy of the invoice.

The settlement process takes place after the tour data is synchronized on their return to the distribution center.

Prerequisites

- All the necessary Customizing settings have been completed for both mobile devices and the back end systems, as well as their connections.
For more information, see [Delivery \[page 23\]](#) under the section “Prerequisites”.
- The delivery driver has completed the following activities:
 - Download of tour data from the back end systems to the mobile device using the [Synchronize](#) menu
 - Checking out as part of the start-of-day activities using the [Tour](#) menu
- The [Visit List](#) is active as the current tour status and the delivery driver is able to start a tour

Activities

The following are the activities that delivery drivers typically perform under the [Visit List](#) menu using mobile devices:

Visit

1. On the [Visit List](#) screen, choose a customer from the list.
The [Visit](#) screen with the list of planned activities for the customer appears.
2. The delivery driver can add activities using the [Add Act](#) button in the Footer Bar.
3. Furthermore, using the [Menu](#) button, the delivery driver can perform the following:
 - Display messages
 - Display visit pick list
 - Display empties balance preview
 - Cancel visits

Deliver Presold

1. On the *Visit* screen, choose the *Deliver Presold* activity from the list.
The *Delivery* screen with the list of delivery items and corresponding quantities for the customer appears.
2. Using the *Menu* button, the delivery driver can perform the following:
 - Display messages
 - Display search text field
 - Display filter dropdown list boxes
 - Add non-tied empties
 - Add return items
 - Display delivery reference
 - Check applicability of deal conditions
For more information, see [Changes to Standard Functions and New Features in the Back End \[page 84\]](#) under “Deal Conditions”.
 - Edit discounts
 - Cancel deliveries
3. Choose the *Confirm* button in the Header Bar to execute the delivery.
The *Delivery Confirmation* screen appears.

Invoice (Delivery Confirmation)

1. On the *Delivery Confirmation* screen (in the bottom half of the Content Area), capture a signature from the customer to confirm the delivery.
Use the *Clear* button in the Footer Bar to erase the signature.
2. Choose the *OK* button in the Header Bar.
Upon confirmation by the customer, the invoice is issued. If the mobile printer is available, select the *Print* checkbox to provide the printed invoice to the customer on the spot. Otherwise it is sent later.
3. Using the *Menu* button, the delivery driver can perform the following:
 - Display invoice summary
 - Display invoice details
 - Display result of deal conditions check (passed or failed)
For more information, see [Changes to Standard Functions and New Features in the Back End \[page 84\]](#) under “Deal Conditions”.
 - Display delivery preview
 - Display invoice preview
 - Cancel deliveries

Collection (Open Items)

1. On the *Visit* screen, choose the *Collection* activity from the list.
The *Open Items* screen appears with the list of all open items, and the corresponding amounts, for the customer in the sales area.
At the bottom of the list, the total due amount is displayed.
2. Using the *Menu* button, the delivery driver can perform the following:
 - Display recent collections
3. Under the *Open Item* list, mark the corresponding checkboxes for which the customer is willing to pay.
4. Choose the *Collect* button in the Header Bar to execute the payment.
If the customer has a default payment method, the *Edit Payment* popup appears.
5. Confirm and enter the necessary information, for example credit card number if the *Method* is defined as credit card. The *Amount* can be adjusted.

Choose *OK* button.

The *Payments* screen appears

6. On the *Payments* screen, the payments are listed based on the payment methods together with the corresponding amounts.
7. Using the *Menu* button, the delivery driver can perform the following:
 - Add payments by the payment methods allowed for the customer, for example cash and credit card
8. On the *Payments* screen, choose the *Pay* button in the Header Bar.
The *Collection Confirmation* screen appears.

Receipt (Collection Confirmation)

1. On the *Collection Confirmation* screen (in the bottom half of the Content Area), capture a signature from the customer to confirm the payment.
Use the *Clear* button in the Footer Bar to erase the signature.
2. Choose the *OK* button in the Header Bar.
Upon confirmation by customer, the receipt is issued. If the mobile printer is available, select the *Print* checkbox to provide the printed receipt to the customer on the spot. Otherwise it is sent later.
As a result of the collection, the information on the *Open Items* screen for the customer, for example, open items and remaining amount, is updated accordingly.

CRM Activities

If SAP CRM is integrated, delivery drivers can perform CRM activities, for example, take survey, perform audit, capture a photo of a customer's display and add it as an attachment to a CRM activity on the mobile device and so on.

CRM Activity: Audit

1. On the *Visit* screen, choose a CRM activity from the list.
In this example, choose *CRM: Audit*.
The *Activity Overview* screen appears with the following information:
 - *Type*
 - *Description*
 - *Reason*
 - *Activity Item*Under the *Activity Item*, the CRM activity items, for example, *Journal* and *Maintain Partners*, are listed.
2. Choose the *Start* button in the Footer Bar before starting a CRM activity item.
The options under the *Menu* button become active.
3. Using the *Menu* button, the delivery driver can perform the following:
 - Edit activities
 - Add attachments (photo image files)
 - Add notes
 - Cancel activities
4. Choose an activity item from the list.
In this example, choose *Journal*.
The *Journal* screen with the list of materials for a journal appears.
5. The delivery driver can add materials using the *Add Mat.* button in the Footer Bar.
6. Choose the *OK* button in the Header Bar.
It returns to the *Activity Overview* screen with the *Journal* activity item completed.
7. Choose the *Stop* button in the Footer Bar after finishing all the CRM activity item.
The options under the *Menu* button become inactive again.

Result

Materials for which the orders have been taken by the presellers are delivered to the customers.

Invoices and collected payments are settled in the back end systems.

For more information about typical visit list activities performed by presellers, see [Example: Visit List Activities based on Preseller Scenario \[page 45\]](#).

More Information

For more information, see:

- [Mobile User Roles \[page 9\]](#)
- [Tour Execution \[page 18\]](#)
- [Delivery \[page 23\]](#)

5.2.5 Expenses

Definition

An icon that is displayed on the main menu screen of the mobile device on which the *SAP Direct Store Delivery* mobile app is installed.

On the *Expenses* screen, mobile users can record the expenses incurred during a tour, such as highway toll, gas, parking fee and so on.



Structure

On the *Expenses* screen, the recording of expenses is simple and easy.

Mobile users can enter the expenses incurred during a tour as follows:

1. On the *Expenses* screen, choose *Add* button in the Footer Bar.
The *Add Expense* screen appears.
2. Select an entry from the *Expense Type* dropdown list box, for example, *Gas*.
3. Enter a value in the *Amount* field.

Note

The currency used on the mobile devices can be maintained in Customizing for *Logistics Execution* under  *SAP Direct Store Delivery* .

4. Choose the *OK* button in the Header Bar.

On the *Expenses* screen, the entered expense is accumulated based on the expense type.

5. To record additional expenses, repeat the steps 1 to 4 above.

⚠ Caution

The expenses can be entered into the mobile device only during a tour that is between the *Check-Out* and *Check-In* activities.

Before starting a tour, the *Expenses* icon is inactive until the check-out of cash is completed as part of the start-of-day activity under *Tour* menu.

After finishing a tour, the *Expenses* icon becomes inactive again as soon as the check-in of collections, including cash, is completed as part of the end-of-day activity under *Tour* menu.

Integration

You can maintain the expense types that may occur during the course of a tour. You do this in SAP ERP in Customizing for *Logistics Execution* under [SAP Direct Store Delivery](#) > [Handheld Connectivity](#) > [DSD Connector Settings](#) > [Mobile Device Settings](#) > [Define General Settings](#) > [Define Expense Types](#).

Example

The following *Screen Transition for Recording Expenses* graphic depicts the screen transition for the recording expenses process:

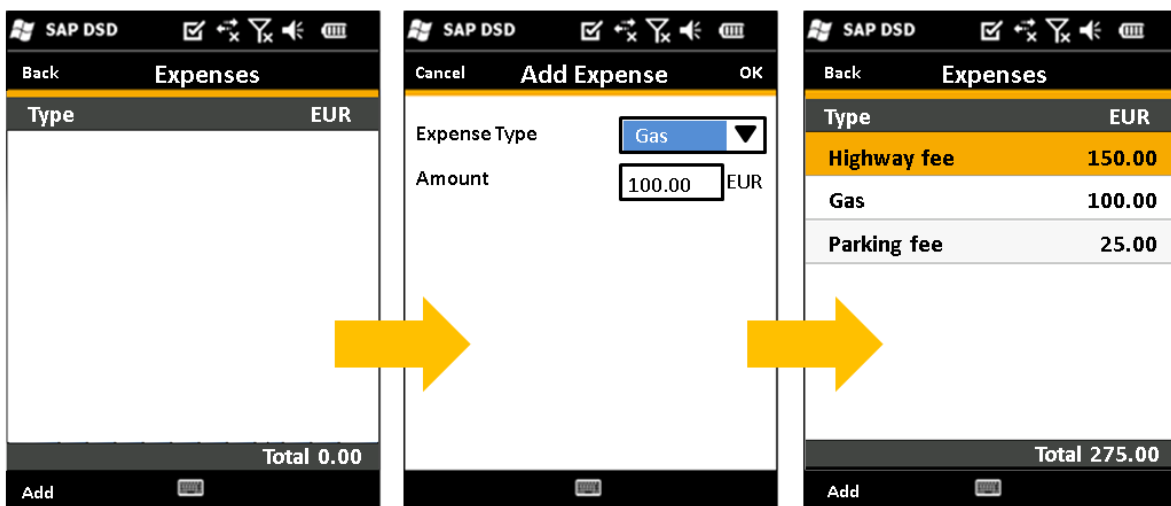


Figure 10: Screen Transition for Recording Expenses

More Information

For more information about the mobile direct store delivery process, see [Tour Execution \[page 18\]](#).

5.2.6 Inventory

Definition

An icon that is displayed on the main menu screen of the mobile device on which the *SAP Direct Store Delivery* mobile app is installed.

The capturing on hand inventory feature is supported by *SAP Direct Store Delivery*.

Using the *Inventory* menu, mobile users are enabled to understand the current status of the materials and their quantities on the vehicle during a tour. Furthermore, it enables mobile users to take necessary actions during the tour by managing the inventory, so that the deliveries can be carried out in an efficient and effective manner.

For more information about capturing on hand inventory, see [New Data for Mobile Users \[page 92\]](#).

Structure

On the *Inventory* screen, the materials, together with their types and quantities that are to be delivered to the customers during a tour, are displayed by default. This should match with the actual materials and their quantities on the vehicle as an inventory check has been completed as part of the start-of-day (*Check-Out*) activities.

However, during the tour, discrepancies (shortages) can occur for some reasons, for example, materials are damaged in transit, the information in the freight list is incorrect, the theft of materials occurs, and so on.

Note

The reasons for discrepancies can be maintained in Customizing for *Logistics Execution* under [SAP Direct Store Delivery > Handheld Connectivity > DSD Connector Settings > Reasons > Define Reasons for Differences for Check-in and Check-out](#).

Mobile users can adjust the inventory in the following ways:

- Add inventory items
- Stock transfer for delivery or return delivery
- Add empties
- Reload

In addition to the above, payments (collections) are also considered to be a kind of inventory. However, the information on payments is display only and the users cannot adjust this on the mobile devices.

Caution

The inventory can be maintained on the mobile device only during a tour that is between the *Check-Out* and *Check-In* activities.

Before starting a tour, the *Inventory* icon is inactive until the check-out of materials is completed as part of the start-of-day activities under *Tour* menu.

After finishing a tour, the *Inventory* icon becomes inactive again as soon as the check-in of materials, including returns, empties, and payments, is completed as part of the end-of-day activities under *Tour* menu.

More Information

For more information about the mobile direct store delivery process, see [Tour Execution \[page 18\]](#).

5.2.7 Customers

Definition

An icon that is displayed on the main menu screen of the mobile device on which the *SAP Direct Store Delivery* mobile app is installed.

The *Customers* menu enables mobile users to access the customer master data both offline and online.

Structure

Select Customer Screen

On the *Select Customer* screen, a list of customers to be visited in the tour is displayed.

Mobile users can add more customers to the list using the *Add Cust* button on the Footer Bar. A text-based search of customers is also possible using the *Search* option under the *Menu* button. The search field appears in the top part of the Content Area.

For more information about additional customers, see [New Data for Mobile Users \[page 92\]](#).

From the *Select Customer* screen, the user can drill-down to each *Customer* screen by choosing one from the list.

Customer Screen

On the *Customer* screen, the *Name* and *Number* of the customer are displayed in the top half of the Content Area.

In the bottom half of the Content Area, a list of the customer details is displayed.

Note that the customer details displayed vary depending on the Customizing settings, however, typically the following information is included:

- *Customer Contacts*
- *General Information*
- *Sales Area Information*

- [Credit Information](#)
- [Open Items](#)
- [Listing Exclusion/Inclusion Materials](#)

If SAP CRM is integrated with [SAP Direct Store Delivery](#), the following CRM-related details may be included, in addition to the above:

- [CRM Marketing Attributes](#)
- [CRM Activities](#)

For more information, see [CRM Activities Integration \[page 101\]](#).

From the [Customer](#) screen, the user can drill-down to each of the customer details items by choosing one from the list.

More Information

For more information about the mobile direct store delivery process, see [Tour Execution \[page 18\]](#).

5.2.8 Materials

Definition

An icon that is displayed on the main menu screen of the mobile device on which the [SAP Direct Store Delivery](#) mobile app is installed.

The [Materials](#) menu enables mobile users to access the material master data both offline and online.

Structure

Select Material Screen

On the [Select Material](#) screen, a list of available materials is displayed.

To see the details, the user can drill-down to the each [Material](#) screen by selecting one from the list.

Under the [Menu](#) button on the Footer Bar, the [Search](#) and [Filter](#) options are available. If the user chooses the [Search](#) option, the search field appears in the top part of the Content Area, while the dropdown list boxes for filtering appear when the [Filter](#) option is chosen.

[SAP Direct Store Delivery](#) supports the following features:

- Item proposal
- Listing and exclusion of materials

For more information, see [New Data for Mobile Users \[page 92\]](#) and [Listing and Exclusion of Materials \[page 134\]](#).

Material Screen

On the *Material* screen, the *Name* and *Number* of the material are displayed in the top half of the Content Area.

In the bottom half of the Content Area, a list of the material details is displayed.

Note that the material details displayed vary depending on the Customizing settings, however, typically the following information is included:

- *General Information*
- *Sales Area Information*
- *Tied Empties*
- *Units of Measure*

From the *Material* screen, the user can drill-down to each of the material details items by choosing one from the list.

More Information

For more information about the mobile direct store delivery process, see [Tour Execution \[page 18\]](#).

5.2.9 Reports

Definition

An icon that is displayed on the main menu screen of the mobile device on which the *SAP Direct Store Delivery* mobile app is installed.

The *Reports* menu enables mobile users to generate various reports based on the current data available on the mobile device.

The following table lists the examples of available reports:

Table 6:

Report Title	Usage
Expenses	<p>This report provides an expense summary with the following information:</p> <ul style="list-style-type: none"> • Header Data <ul style="list-style-type: none"> ◦ <i>Date</i> ◦ <i>Tour</i> ◦ <i>Route</i> ◦ <i>Driver</i> • Expense Summary <ul style="list-style-type: none"> ◦ <i>Expense ID</i> (for example, highway toll, gas, and parking fee) ◦ <i>Expense</i> (amount) ◦ <i>Total Expenses</i> (amount)
Presettlement	<p>This report provides an overview of the payments that the driver collected from the customers visited during the tour:</p> <p>The presettlement report provides the following information:</p> <ul style="list-style-type: none"> • Header Data <ul style="list-style-type: none"> ◦ <i>Driver</i> ◦ <i>Vehicle</i> ◦ <i>Route</i> • Presettlement Overview <ul style="list-style-type: none"> ◦ <i>Total Amount collected on Route per Payment Method</i> ◦ <i>Collection Documents generated on Route</i> ◦ <i>Canceled Collections</i> ◦ <i>Detail of Checks</i> ◦ <i>Detail of Credit Card</i> ◦ <i>Detail of Bank Transfer</i> ◦ <i>Detail of Custom Payments</i>
Inventory	<p>This report can be executed based on the different settings, for example, based on all inventory types, free materials, reserved materials, blocked materials, empties or counting groups, and provides the following information on the current inventory:</p> <ul style="list-style-type: none"> • Header Data <p>Grouped by inventory type or counting group, depending on the setting</p> • Inventory Summary <ul style="list-style-type: none"> ◦ <i>Material</i> (material number) ◦ <i>Material Name</i> ◦ <i>UoM</i> (unit of measure) ◦ <i>Quantity</i>

Report Title	Usage
Check-Out/Check-In/Reload Differences	<p>This report provides the following information on differences at check-out, check-in and reload:</p> <ul style="list-style-type: none"> • Header Data Grouped by inventory type or counting group, depending on the setting • Check-Out/Check-In/Reload Differences Summary <ul style="list-style-type: none"> ◦ <i>Material</i> (material number) ◦ <i>Material Name</i> ◦ <i>UoM</i> (unit of measure) ◦ <i>Expected Quantity</i> ◦ <i>Actual Quantity</i> ◦ <i>Difference Quantity</i> ◦ <i>Reason for Difference</i> • Signatures <ul style="list-style-type: none"> ◦ Checker signature ◦ Driver signature
Total Inventory Differences	<p>This report can be executed based on the different settings, for example, based on all inventory types, free materials, reserved materials, blocked materials, empties or counting groups, and provides the following information on the inventory differences:</p> <ul style="list-style-type: none"> • Header Data Grouped by inventory type or counting group, depending on the setting • Total Inventory Differences Summary <ul style="list-style-type: none"> ◦ <i>Material</i> (material number) ◦ <i>Material Name</i> ◦ <i>UoM</i> (unit of measure) ◦ <i>Check-Out Quantity</i> ◦ <i>Reload Quantity</i> ◦ <i>Adjusted Quantity</i> ◦ <i>Delivered Quantity</i> ◦ <i>Returned Quantity</i> ◦ <i>Check-In Quantity</i> ◦ <i>Difference Quantity</i> • Signatures <ul style="list-style-type: none"> ◦ Checker signature ◦ Driver signature

Report Title	Usage
Visit Overview	<p>This report provides an overview of the visits that the driver executed during the tour:</p> <ul style="list-style-type: none"> • Header Data <ul style="list-style-type: none"> ◦ <i>Date</i> ◦ <i>Tour</i> ◦ <i>Route</i> ◦ <i>Driver</i> • Visit Overview <ul style="list-style-type: none"> ◦ <i>Visit</i> (numbers 1, 2, 3, and so on that indicate the visit ID) ◦ <i>Accounts</i> (customer number) ◦ <i>Name/Activity</i> (customer name/activity executed, such as delivery presold, collection, odometer reading, and so on) ◦ <i>Start/End</i> (start and end times, for example 10:15 AM - 11:20 AM)
Visit Details	<p>Like the <i>Visit Overview</i> report, this report also provides information on the visits that the driver executed during the tour, however, giving more detail for each visit with the following information:</p> <ul style="list-style-type: none"> • Header Data <ul style="list-style-type: none"> ◦ <i>Date</i> ◦ <i>Tour</i> ◦ <i>Route</i> ◦ <i>Driver</i> • Visit Details <ul style="list-style-type: none"> ◦ <i>Visit</i> (numbers 1, 2, 3, and so on that indicate the visit ID) ◦ <i>Accounts</i> (customer number) ◦ <i>Name/Activity</i> (customer name/activity executed, such as delivery presold, collection, odometer reading, and so on) ◦ <i>Start/End</i> (start and end times, for example 10:15 AM - 11:20 AM) ◦ <i>Activities</i> (an additional list of ordered or delivered items for orders and deliveries) ◦ <i>Delivery or Order</i> type <ul style="list-style-type: none"> ◦ <i>Material</i> (material number) ◦ <i>Material Name</i> ◦ <i>UoM</i> (unit of measure) ◦ <i>Quantity</i> ◦ <i>Visits</i> (total number of visits made during the tour) ◦ <i>Activities</i> (total number of activities executed during the tour)

Report Title	Usage
Visit Discrepancies	<p>This report provides an overview of the visit completion time deviations for which the planned and actual times are compared:</p> <ul style="list-style-type: none"> • Header Data <ul style="list-style-type: none"> ◦ <i>Date</i> ◦ <i>Tour</i> ◦ <i>Route</i> ◦ <i>Driver</i> • Visit Discrepancies <ul style="list-style-type: none"> ◦ <i>Visit</i> (numbers 1, 2, 3, and so on that indicate the visit sequence) ◦ <i>Accounts</i> (customer number) ◦ <i>Name</i> (customer name) ◦ <i>Plan</i> (planned start and end times for the customer visit) ◦ <i>Actual</i> (actual start and end times for the customer visit) ◦ <i>Deviation</i> (difference between the planned and actual times)
Empties Balance	<p>This report can be printed out with the <i>Visit Overview</i> option (if activated) in the <i>Menu</i> and provides the following information on the empties balance of a particular customer:</p> <ul style="list-style-type: none"> • Header Data <ul style="list-style-type: none"> ◦ <i>Empty Material Number</i> ◦ <i>Empty Material Name</i> ◦ <i>Initial Empty Balance</i> ◦ <i>Delivered Quantity</i> ◦ <i>Returned Quantity</i> ◦ <i>Actual Quantity</i> (delivered - returned) ◦ <i>Final Empty Balance</i> ◦ <i>Net Price per Unit</i> ◦ <i>Total Price</i> • Empties Balance Summary <ul style="list-style-type: none"> ◦ <i>Total Net Sum</i>

Report Title	Usage
Route Performance	<p>This report provides information on driver's performance on the route with various indicators from the different business perspectives:</p> <ul style="list-style-type: none"> • Header Data <ul style="list-style-type: none"> ◦ <i>Driver</i> ◦ <i>Route</i> • Summary Information <ul style="list-style-type: none"> ◦ <i># Planned Visits</i> ◦ <i># Executed Visits</i> ◦ <i># Effective Visits</i> • <i>Percentage</i> <ul style="list-style-type: none"> ◦ <i>% Effectiveness of Visits</i> ◦ <i>% Effectiveness of Sales</i> • <i>No Sales/No Visit Reasons</i> <ul style="list-style-type: none"> ◦ <i>% Visits with No Sales Reason</i> ◦ <i>% Visits with No Visit Reason</i> • <i>Total of Customers with No Sales/No Visits Reasons</i> • <i>No Sales Reason Code</i> • <i>No Visit Reason Code</i> • <i>Sales and Returns summarized per product (SKU) in Sales and Base Unit of Measure</i> • <i>Empties Returns summarized per product (SKU) in Sales and Base Unit of Measure</i>

Structure

You can access most of the reports as follows:

1. On the main menu screen of the mobile device, choose the *Reports* icon.
The *Reports* screen appears with a list of available reports.
2. Choose one from the list.
The next screen displayed is the preview of the report.
On the report, the information is displayed based on the current data available on the mobile device.
3. If a mobile printer is connected with the mobile device, print out of reports can be triggered from the mobile device.
Choose the *Print* button in the Footer Bar.
4. To generate another report, go back to the *Reports* screen by choosing the *Back* button in the Header Bar.

More Information

For more information about the mobile direct store delivery process, see [Tour Execution \[page 18\]](#).

5.3 SAP Direct Store Delivery for Android

Use


This section describes the mobile app on Android-based mobile devices.

Features

In this section, the mobile app functions offered by *SAP Direct Store Delivery* are described based on the menu options that are displayed on the navigation drawer of mobile devices based on Android.

i Note

Once you have used your user name and password to log in, you can have the navigation drawer appears

from the left hand side of the mobile device by either clicking on the  button or by swiping it in from the left.

i Note

There is a *Settings* menu option that allows you to set up, for example, security, connection parameters for synchronization, location services (GPS), security, logging, and peripherals (for example, size of pictures, hardware scanning).

The following table maps the activities performed by mobile users to the main menu options on mobile devices:

Table 7:

Sequence	Mobile User Activity	Corresponding Main Menu Option
1	Downloading data from the back end systems	Synchronize [page 67]
2	Performing start-of-day activities (including check-out)	Tour [page 68]
3	Processing a tour Performing various activities on customer visits	Visit List [page 70]
5	Displaying master data for the visited customers	Customers [page 77]
6	Displaying master data for the available materials	Materials [page 79]
4	Recording of changes to inventory during tour processing	Inventory [page 81]

Sequence	Mobile User Activity	Corresponding Main Menu Option
7	Recording of expenses (for example, highway tolls) incurred during tour processing and showing the financial balance of collected cash from customer visits	Expenses [page 82]
8	Generating reports using the current tour data available on the mobile device	Reports [page 83]
9	Performing end-of-day activities (including check-in)	Tour [page 68]
10	Uploading data to the back end systems	Synchronize [page 67]

5.3.1 Mobile Application Screen Framework

In order to use the *SAP Direct Store Delivery* mobile app effectively, it is helpful to understand some of the basics of the screen framework concept on which the mobile app design for Android is based.

Screen Sections and Elements

The Android-based mobile device screen can be divided into the following main sections:

- Status Bar
- Application Bar
- Content Area
- Bottom Toolbar
- Navigation Bar

The following *Examples of Sections and Screen Elements on Android Screen* graphic shows the location of these sections, together with some of their screen elements, on the mobile device screen:

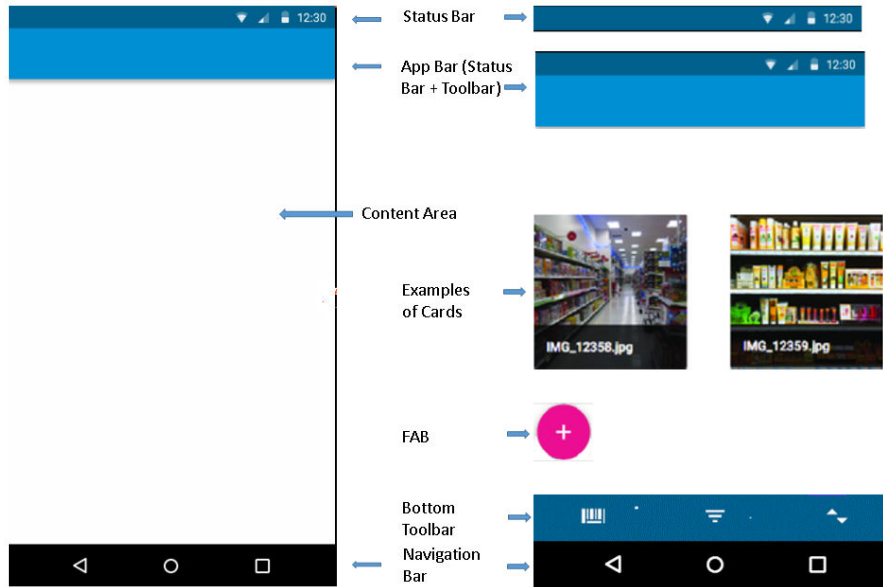


Figure 11: Examples of Sections and Screen Elements on Android Screen

Table 8:



Section	Screen Element	Explanation
Status Bar		Gives an overview of, for example, the status of the battery or the Wi-Fi connection.
Application Bar		This is comprised of the status bar plus a toolbar that is displayed underneath. The toolbar contains buttons, for example, for a full text search of customers in the customer master. Buttons are displayed either on the top or the bottom toolbar.
Content Area		The screen area on which the main information is displayed. Screen elements displayed here include floating action buttons (FABs) and cards.
	Floating action button (FAB)	FABs are used for a promoted action.




Section	Screen Element	Explanation
	Cards	Cards provide context and an entry point to more robust information and views. Their content and quantity can vary greatly. Examples of cards are picture cards (as shown in the Examples of Sections and Screen Elements on Android Screen graphic above) and dashboard cards.
Bottom Toolbar		This toolbar is located at the bottom of the screen. Buttons are displayed either on the top or the bottom toolbar.
Navigation Bar		In the Examples of Sections and Screen Elements on Android Screen graphic shown above, the 3 icons on the navigation bar are (from left to right) Back , Home , and Overview . <div style="background-color: #fff9c4; padding: 10px; margin-top: 10px;"> <p>i Note</p> <p>The navigation bar buttons differ depending on the device manufacturer; some use the navigation bar buttons as “hardware” buttons while others use them as “software” buttons.</p> </div>

Status Icons

The following status icons are used to indicate the status of activities on mobile devices:

Table 9:

Icon	Meaning
	Not Processed
	Optional

Icon	Meaning
	Partially Processed
	Processed
	Canceled

5.3.2 Synchronize

Definition

A menu option on the navigation drawer on Android-based mobile devices.

The *Synchronize* menu option is used to synchronize the data between the front end mobile device and the back end systems.

Structure

Use the *Synchronize* menu option before and after a tour execution. To start a tour, the tour data needs to be downloaded from the back end systems to the mobile device. To complete the tour, the tour data needs to be uploaded from the mobile device to the back end systems.

The *Synchronize* menu option may be used several times during a tour execution whenever it is required to download new data from or upload new data to the back end systems. For more information, see [Occasionally Connected Scenario \[page 112\]](#).

More Information

For more information about the mobile direct store delivery process, see [Tour Execution \[page 18\]](#).

5.3.3 Tour

Definition

A menu option on the navigation drawer on Android-based mobile devices.

The *Tour* menu option is used before, during, and at the end of a tour by mobile users to get a current overview of the tour's progress.

From the *Tour progress* screen, mobile users can proceed to screens to perform start-of-day activities (including check-out) and end-of-day activities (including check-in) .

Structure

On the *Tour* screen, the tour information is displayed on cards, for example, the following:

- **Tour progress**
The *Tour progress* card displays a two-slice pie chart that displays the amount and number of processed versus pending visits. This is automatically updated as the tour progresses. The list of the four customers to be visited next may be displayed too.
If you select the card by clicking it, on the *Tour progress* screen, you get a detailed overview of the following:
 - Visits
For example, how many are processed and still to be processed
 - Activities
For example, how many are canceled
 - The elapsed time of the tour
 - The average time per visit overall during the daySelect the *GO TO VISITS* button to proceed to the visit list. If you proceed to the *Visit list* screen without confirming check-out, the menu options are inactive (greyed out).
- **Open items**
On the *Open items* card, a bar chart displays the amounts of open and due items. The information on this card gets updated as the tour progresses and you collect open items.
- **Tour overview**
On the *Tour overview* card, for example, the route and tour ID are displayed. If you select the card, you see a *Tour overview* screen with further read-only information about, for example, the planned start date, the driver name and ID, the codriver, the vehicle, and the trailer.
- **Tour memo**
On the *Tour memo* card, messages from the shipment header or the visit list header are displayed. If there is only one message available, it is shown directly on the card. If more than one message is available, access the card to read them.
- **Sales volume**
On the *Sales volume* card, an overview showing target versus current sales volume is displayed. The target sales volume is manually entered and is compared to the captured order values. This card is not active for the delivery driver scenario.

i Note

- Multiday tours are supported.
For more information, see [Tour \[page 12\]](#) (under the section "Integration") and [Changes to Standard Functions and New Features in the Back End \[page 84\]](#).
- For more information about the naming of the screen sections and elements, as well as the activity status icons, see [Mobile Application Screen Framework \[page 64\]](#).

Start-of-Day and Check-Out

On the [Tour progress](#) screen, select the FAB to proceed to check-out. A number of screens are displayed in a specific order that is dependent on the configuration in the back end. The following is an example of a sequence of check-out screens:

- Vehicle check
Answer the questions and confirm by choosing the FAB.
- Check-out materials
You can choose the + (plus sign) icon to add a material to the list from either the material selection list (use full text search to find materials to add) or from the product hierarchy filter (access it by using the icon on the bottom toolbar or by sliding it in from the left hand side).
You can increase or decrease quantities. You may need to confirm any differences (by authorized password) and add a reason code if this is configured as mandatory.
- Odometer reading
Record the mileage displayed on the odometer.
- Check-out cash
Record the cash being taken on tour, for example, to cover the mobile user's expenses.
- Signature capture
If the signature size is OK, the FAB appears to enable you to continue to the next step in the process.
You can erase the signature from the input area by choosing the *X* icon.

Once the check-out is confirmed, the [Visit list](#) screen is displayed to the mobile user.

End-of-Day and Check-In

Once you have completed your tour, on the [Tour](#) screen, choosing the FAB navigates to the [Material check-in](#) screen.

On the [Material check-in](#) screen, you see a list of materials and their expected quantities.

You can choose the + (plus sign) icon to add a material to the list from either the material selection list or from the product hierarchy filter .

You can increase or decrease quantities. You may need to confirm any differences (by authorized password) and add a reason code if this is configured as mandatory.

You can also check-in the vehicle, cash, odometer reading, and so on.

More Information

For more information about the mobile direct store delivery process, see [Tour Execution \[page 18\]](#).

Occasionally connected scenarios, including delta download and upload are supported. For more information, see the following:

- [Delta Tour Data \[page 109\]](#)
- [Occasionally Connected Scenario \[page 112\]](#)

5.3.4 Visit List

Definition

A menu option on the navigation drawer on Android-based mobile devices.

The *Visit list* menu option provides the list of customers the mobile user needs to visit on a tour. During the tour, the mobile user needs to perform various activities for individual customers.

Note

You can access the visit list either from the navigation drawer or from last check-out activity (see [Tour \[page 12\]](#)). If you go to the visit list before confirming the check-out at the start of the tour, the menu options are inactive (greyed out) on the *Visit list* screen.

Structure

Visit List Screen

On the *Visit list* screen, a list of the customers to be visited is displayed.




You can use the free text search to search in the list.

You can select a customer in the list, for example, for canceling a visit to them, by selecting the status icon on the left of the individual customers.

You can select the icon on the right of the individual customers to open a text field where detailed master data about customers is displayed. In this text field, up to 8 fields of customer data (for example, the name of the street a retail outlet is located on) can be displayed. Here, you can also choose the *START VISIT* button as required. The label of this button changes depending on the visit status.

If you select the center of the screen, the *ACTIVITIES* (for example, item proposal and capture on hand inventory) and *ATTACHMENTS* tabs per individual customer are shown. Select the + (plus sign) icon to add new activities, for example, delivery, order, and CRM activity, or new attachments.

A status icon shows the overall status for each visit. When you have completed a customer visit, the status of

the visit is changed from  to  and it is moved to the lower part of the visit list along with the  visits.

For more information about status icons, see [Mobile Application Screen Framework \[page 64\]](#).

View Map of Visits

In the toolbar of the *Visit list* screen, choose the *Map* icon to open a map that shows the current visits. Mobile users can zoom in and see the exact location of the named visits on the visit list. They can also see their own location in the vicinity.

Add Visit

You can add visits to the visit list by selecting *Add visit* from the extended menu options. On the next screen, all possible customers are displayed for your selection. If a customer is maintained for more than one sales area, a pop-up appears and you can select the sale area you are interested in. The new visit is added to the visit list at the last position before canceled and successfully processed visits.

Create a One Time Customer

You can add a one time customer to the visit list by selecting *One time customer* from the extended menu options. You must enter, for example, the customer name, street, city, and postal code and you can also enter the district, region, and phone numbers.

Select the + (plus sign) icon to add new activities, for example, delivery, order, and CRM activity. Use the FAB to confirm, for example, a new order for a new one time customer. The *Add new activity* screen can be configured per mobile user role in the back end (for example, to show potential additional activities relating to orders but not to deliveries for presellers).

The new one time customer appears in the visit list after the last  visit.

If you create an order for your new one time customer (in the preseller or mixed role), you can access the following additional menu options:

- Return items
- Deal conditions (see [Deal Condition \[page 120\]](#))
- Add untied empties
- Order references

Cancel Visits

Select one or more customer visits by clicking the status icon, choosing the delete icon, and selecting a reason code.

If you want to cancel all remaining visits, choose *Cancel remaining visits* from the extended option menu and elect a reason code from the list.

SAP Direct Store Delivery Activities

The following are the typical activities that are performed by mobile users during visits:

- Delivery presold
- Delivery without presold
- Take order
- Collection
- Return delivery
- Return order
- Invoice

- Free goods delivery
- Free goods order
- Capture on hand inventory
- Item proposal

SAP CRM Activities

- Survey
- Activity journal

i Note

Depending on the tour scenario, the relevant activities can be defined in Customizing. For example, the take order activity would be assigned to the preseller scenario, whereas it would not be assigned to the delivery driver scenario.

You can define mobile device settings based on tour scenarios in Customizing for *Logistics Execution* under [SAP Direct Store Delivery](#) > [Handheld Connectivity](#) > [DSD Connector Settings](#) > [Mobile Device Settings](#) > [Define Tour Scenario Settings](#).

More Information

For more information about examples of typical visit list activities performed by presellers and delivery drivers, see the following:

- [Example: Visit List Activities based on Preseller Scenario \[page 72\]](#)
- [Example: Visit List Activities based on Delivery Driver Scenario \[page 75\]](#)

For more information about the mobile direct store delivery process, see [Tour Execution \[page 18\]](#).

The occasionally connected scenarios including delta down- and upload are supported. For more information see the following:

- [Delta Tour Data \[page 109\]](#)
- [Occasionally Connected Scenario \[page 112\]](#)

5.3.4.1 Example: Visit List Activities based on Preseller Scenario

Concept

Typical Scenario

Presellers do the actual selling at accounts and outlets on their tour. They enter orders on mobile devices and synchronize the data on their return to company headquarters.

At the distribution center, the order is received, processed, and the materials are picked and loaded onto a truck for future delivery to the relevant outlet by the delivery driver.

A merchandiser may arrive after the order is delivered to merchandise it.

The cycle then repeats itself with the preseller returning to the outlet.

Prerequisites

- All the necessary Customizing settings have been completed for both mobile devices and the back end systems, as well as their connections.
For more information, see [Presales \[page 21\]](#) under the section “Prerequisites”.
- The preseller has completed the following activities:
 - Download of tour data from the back end systems to the mobile device using the *Synchronize* menu
 - Check-out as part of the start-of-day activities using the *Tour* menu
- The *Visit list* is active as the current tour status and the preseller is able to start a tour

Activities

The following are the activities that presellers typically perform under the *Visit list* menu using mobile devices:

Visit

On the *Visit list* screen, a list of the customers on the tour is displayed. The preseller can do the following:

- Select individual customers and choose to have the activities and attachments for that customer displayed
The preseller can choose a customer from the list of customers on the tour and select the center of the screen.
The list of planned activities for the individual customer appears. Examples of preseller activities are taking orders and taking return orders. The preseller can add activities to the customer visit by using the + (plus sign) icon. There are tabs for both *ACTIVITIES* and *ATTACHMENTS* per customer.
- Add one time customers to the visit list
- Cancel visits

For more information, see [Visit List \[page 70\]](#).

Take Order

1. On the *Visit* screen, choose a customer and click in the center of the screen to access the *ACTIVITIES* tab.
2. Choose the + (plus sign) icon to access the *Add new activity* screen.
3. Under *Order*, select *Take order*.
The *Add materials* screen with the list of available materials for the customer appears.
4. Select materials to be ordered (you can use search and filter) and enter the relevant quantities.
5. On the *New order* screen, you see the list of materials and their quantities for the order. You can sort items in the order by description, material number, or quantity. You have the following extended menu options:
 - *Return items*
 - *Deal conditions*
For more information, see [Deal Condition \[page 120\]](#).
 - *Add non-tied empties*
 - *Order references* (for example, payment terms)

6. To add materials to the order, choose the + (plus sign).
7. To edit materials in the order, click on the line item. On the *Edit material* screen, change, for example, the actual quantity, UoM, and reason.
8. Choose the FAB to navigate to order confirmation.

Order Confirmation

1. On the *Order confirmation* screen, capture a signature from the customer and the preseller to confirm the order.
You can use the *X* icon to erase a signature.
2. Choose the FAB to confirm the order and navigate to the customer details.
3. Upon confirmation by the customer and the preseller, the order is issued. If a mobile printer is available and printing is configured, you can provide the printed order to the customer on the spot. Otherwise, it is sent later.
4. On the *Customer* screen, you get a message that the order is confirmed and the status of the *Take order* activity on the *ACTIVITIES* tab is now changed to processed.

CRM Activities

If SAP CRM is integrated, presellers can perform CRM activities, for example, take a survey, perform an audit, capture a photo of a customer's display and add it as an attachment to a CRM activity on the mobile device, and so on.

Item Proposal

You can choose the *Item proposal* activity to add proposed materials and their quantities to an order you want to create.

You can edit the materials and quantities proposed.

Result

At the central location, orders are received and processed. Materials are picked and loaded onto a truck for delivery the following day to the relevant outlets by delivery drivers.

For more information about typical visit list activities performed by delivery drivers, see [Example: Visit List Activities based on Delivery Driver Scenario \[page 75\]](#).

More Information

For more information, see the following:

- [Mobile User Roles \[page 9\]](#)
- [Tour Execution \[page 18\]](#)
- [Presales \[page 21\]](#)

5.3.4.2 Example: Visit List Activities based on Delivery Driver Scenario

Concept

Typical Scenario

At the distribution center early in the morning, delivery drivers pick up their assigned route and truck. Delivery drivers generally need to stick to the deliveries the truck has been loaded for.

The delivery driver goes to the assigned truck and does any activities required before leaving the distribution center, for example, checking the vehicle for safety, getting the odometer reading, confirming the loaded materials, and verifying any cash on hand.

At each visit, delivery drivers deliver the ordered materials, present the invoice, collect payments if required, and get a signed copy of the invoice.

The settlement process takes place in the back end after the tour data is synchronized on their return to the distribution center.

Prerequisites

- All the necessary Customizing settings have been completed for both mobile devices and the back end systems, as well as their connections.
For more information, see [Delivery \[page 23\]](#) under the section "Prerequisites".
- The delivery driver has completed the following activities:
 - Download of tour data from the back end systems to the mobile device using the *Synchronize* menu option
 - Checking out as part of the start-of-day activities using the *Tour* menu option
- The *Visit list* is active as the current tour status and the delivery driver is able to start a tour

Activities

The following are the activities that delivery drivers typically perform under the *Visit list* menu using mobile devices:

Visit

On the *Visit list* screen, a list of the customers on the tour is displayed. The delivery driver can, for example, do the following:

- Select individual customers and choose to have the activities and attachments for that customer displayed
The delivery driver can choose a customer from the list of customers on the tour and select the center of the screen.
The list of planned activities for the individual customer appears. Examples of delivery driver activities are delivering presold goods and collecting payments. The delivery driver can add activities to the customer visit by using the + (plus sign) icon. There are tabs for both *ACTIVITIES* and *ATTACHMENTS* per customer.

- Cancel visits

For more information, see [Visit List \[page 70\]](#).

Deliver Presold

1. On the *Visit* screen, choose a customer and click in the center of the screen to access the *ACTIVITIES* tab.
2. Choose the *Deliver presold* activity from the activities list.
The *Delivered materials* screen with the list of delivery items and corresponding quantities for the customer appears.
3. Choose the FAB to execute the delivery and to navigate to the *Delivery confirmation* screen.
4. You can edit a presold delivery, for example, as follows:
 - Change the quantity of an existing item
 - Add non-tied empties
 - Add return items
 - Display delivery reference
 - Check applicability of deal conditions
For more information, see [Deal Condition \[page 120\]](#).
 - Cancel a delivery

Invoice (Delivery Confirmation)

1. On the *Delivery confirmation* screen, if configured, capture a signature from the customer and from the delivery driver to confirm the delivery.
You can use the *X* icon to erase a signature.
2. Choose the FAB to confirm and to navigate to the customer details.
You can select the *Delivery preview* option from the extended menu.
3. Upon confirmation by the customer, the invoice is issued. If a mobile printer is available and printing is configured, you can provide the printed invoice to the customer on the spot. Otherwise it is sent later.
4. On the *Customer* screen, you get a message that the delivery is confirmed and the status of the *Deliver presold* activity on the *ACTIVITIES* tab is now changed to processed.

Collection (Open Items)

1. Choose the *Collection* activity from the list of activities for a customer.
At the top of the resulting screen, the total amount assigned for collection is displayed.
The amounts for total debts and for a list of overdue items are displayed in the content area.
2. Select the relevant open item or items and choose the FAB.
3. On the *New payment* screen, choose a payment method or use the pre-populated payment method. Enter the necessary information, for example, the credit card number if the payment method is defined as credit card.

i Note

If you choose cash as the payment method, on the following screen, you can choose to use a calculator to work out the exact change or shortfall quickly.

4. Confirm the amount, save, and choose the FAB.
5. At the top of the resulting screen, the total amount assigned for collection and the payment amount is displayed. The payment method and relevant details are displayed in the content area. Choose the FAB.

-
6. On the *Collection receipt* screen, capture customer and delivery driver signatures to confirm the payment and choose the FAB to complete the process.
 7. Upon confirmation by the customer, the receipt is issued. If the mobile printer is available and printing is configured, you can provide the printed receipt to the customer on the spot. Otherwise, it is sent later.
 8. On the *Customer* screen, you get a message that the collection is confirmed. On the *ACTIVITIES* tab for the customer, the status of the *Collection* activity is now changed to processed.

As a result of the collection, the information for the customer, for example, the open items and remaining amount on the *Open items* card on the *Tour* screen, is updated accordingly.

CRM Activities

If SAP CRM is integrated, delivery drivers can perform CRM activities, for example, take survey, perform audit, capture a photo of a customer's display and add it as an attachment to a CRM activity on the mobile device, and so on.

Result

Materials for which the orders have been taken by the presellers are delivered to the customers.

Invoices and collected payments are settled in the back end systems.

More Information

For more information about typical visit list activities performed by presellers, see [Example: Visit List Activities based on Preseller Scenario \[page 72\]](#).

For more information about direct store delivery and the delivery driver role, see the following:

- [Mobile User Roles \[page 9\]](#)
- [Tour Execution \[page 18\]](#)
- [Delivery \[page 23\]](#)

5.3.5 Customers

Definition

A menu option on the navigation drawer on Android-based mobile devices.

The *Customers* menu enables mobile users to access customer master data both offline and online.

Structure

Customer Master Data

On the *Customers* screen, the customers are listed alphabetically by name.

To see customer master data details on a screen, select a customer from the list by clicking on the line. On the resulting screen, the customer name and number are displayed in the application bar of the screen and general material information is displayed by default on the *GENERAL INFO* tab.

You can access each tab of customer data by swiping left/right or by clicking on the tab name. Depending on Customizing settings, the following are examples of tabs for customer master data:

- *GENERAL INFO*
For example, phone number, address, and location
- *SALES AREA INFORMATION*
For example, sales organization, distribution channel, and division, customer group, payment method, and payment terms
- *CREDIT INFORMATION*
Credit information about customer payment history, for example, control area, risk category, and available credit
The total available credit is calculated from the credit limit, special debts, open items, confirmed orders, and payments. It is displayed both as a value and also as a progress bar showing the customer's available credit as a percentage of the credit limit.

i Note

Credit information is only available for customers who are not cash payers.


- *OPEN ITEMS*
For example, *Total debts* that are broken down into *Overdue* and *Regular* amounts. The due date and the document number are displayed along with their individual due amounts.
- *MESSAGES*
Indicates the number of messages for the customer
Customer messages are displayed on a *Customer message* card. Customer sales area messages are displayed on a *Sales area message* card.
- *LISTED ITEMS*
Listed items are displayed on cards for all different order or delivery types (for example, standard order, return order, and free of charge order). The number of items listed is displayed on each card. Choose the card to open a screen containing a list of materials for the selected customer. The listed items are sorted based on material number. You can scroll the list and you can search for materials in it.
- *EXCLUDED ITEMS*
Excluded items are presented in the same way as listed items.

If SAP CRM is integrated with *SAP Direct Store Delivery*, the following CRM-related details may be included, in addition to the above:

- *CRM ACTIVITIES*
- *CRM MARKETING ATTRIBUTES*

For more information, see [CRM Activities Integration \[page 101\]](#).

Search and Filter

To search for a specific customer, on the toolbar, choose the  (*full text search*) icon and use the keyboard to search the list of customers.

The full text search searches across however many lines there are per customer, for example, across 2 lines displaying the customer name and the customer number. You can choose the *X* icon on the toolbar to reset.

Multiple Sales Areas

The customer may be maintained for one or more sales areas. In the latter case, a pop-up appears and you can select the sale area you are interested in.

Adding Customers to Visit Lists

You can add customers from the customer master to a visit list.

You can create a one time customer and add it to a visit list by selecting *One time customer* from the extended *Visit list* menu options (see [Visit List \[page 70\]](#)). No customer master data record is saved for a one time customer to the back end.

More Information

For more information about the mobile direct store delivery process, see [Tour Execution \[page 18\]](#).

5.3.6 Materials

Definition

A menu option on the navigation drawer on Android-based mobile devices.

The *Materials* menu enables mobile users to access material master data both offline and online.

Structure

Material Master Data

On the *Materials* screen, materials are listed alphabetically by material description.

To see material master data details on a screen, select a material by clicking on the relevant line. The material description and material number are displayed in the application bar of the screen and general material information is displayed by default on the *GENERAL INFO* tab.

You can access each tab of material data by swiping left/right or by clicking on the tab name. Note that the material master data displayed varies depending on the Customizing settings, however, typically the following information is included:

- *GENERAL INFO*
For example, EAN/UPC, base UoM, material type, division, group, counting group, and product hierarchy

- [SALES AREA INFORMATION](#)


For example, sales organization, distribution channel, division, sales unit of measure, minimum order, pricing group, and importance

- [UNITS OF MEASURE](#)

- [TIED EMPTIES](#)

Search and Filter



To search for a specific material, on the toolbar, choose the  icon and use the keyboard to filter the list of materials. The full text search searches across however many lines there are per material, for example, across 2 lines displaying material description and material number. You can choose the [X](#) icon on the toolbar to delete the search.

You can filter the materials list using the product hierarchy filter (access it by using the pyramid icon on the bottom toolbar or by sliding it in from the left hand side). You can use the search function on a filtered list.

Multiple Sales Areas

If master data for a material exists for more than one sales area, you can select the relevant sales area from a list on the [Select sales area](#) pop up. On this screen, the material name and number are displayed along with descriptions of sales organizations, distribution channels, and divisions from Customizing. If you choose a sales area from the list, the [GENERAL INFO](#) tab of the details screen for the material is displayed.

Add Material and Edit Quantities

You can choose the + (plus sign) icon to add a material to the list from either the material selection list (use full text search to find materials to add) or from the product hierarchy filter.

You can increase or decrease quantities of a material; you may need to add a reason code if this is configured as mandatory.

Item Proposal

An [Item proposal](#) activity proposes materials and their quantities to allow you to create an order (preseller role) or a delivery (delivery driver role).

You can edit the materials and quantities proposed.

If delivery drivers want to increase the quantity of an item proposed for a delivery, an error message informs them if the new quantity exceeds the stock on the truck.

Note

If mobile users with a mixed role want to add an [Item proposal](#) activity, a pop-up appears with the query whether a delivery or an order is to be created using the item proposal functionality.

More Information

SAP Direct Store Delivery supports the following features:

- Item proposal
For more information, see [New Data for Mobile Users \[page 92\]](#).

- Listing and exclusion of materials
For more information, see [Listing and Exclusion of Materials \[page 134\]](#).

For more information about the mobile direct store delivery process, see [Tour Execution \[page 18\]](#).

5.3.7 Inventory

Definition

A menu option on the navigation drawer on Android-based mobile devices.

Use the *Inventory* menu option to understand the current status of the materials and empties and their quantities on the vehicle during a tour. Furthermore, you can use it to take necessary actions during the tour by managing the inventory, so that the deliveries can be carried out in an efficient and effective manner.

Structure

Inventory Screen

On the *Inventory* screen, there are *MATERIALS* and *EMPTIES* tabs on which stocks of materials and empties are listed along with their quantities.

On the *Inventory* screen, the materials, together with their types and quantities that are to be delivered to the customers during a tour, are displayed by default. This should match with the actual materials and their quantities on the vehicle as an inventory check has been completed as part of the check-out process.

However, during the tour, discrepancies (shortages) can occur for some reasons, for example, materials are damaged in transit, the information in the freight list is incorrect, the theft of materials occurs, and so on.

i Note

The reasons for discrepancies can be maintained in Customizing for *Logistics Execution* under **▶ SAP Direct Store Delivery > Handheld Connectivity > DSD Connector Settings > Reasons > Define Reasons for Differences for Check-in and Check-out >**.

Adjust Inventory

On an extended menu, you can choose an option to adjust the inventory (authorization is required, for example, a supervisor password). You can adjust the quantities of individual materials and set reason codes. The adjusted quantity of a material is shown directly in the list for each material.

Capture on Hand Inventory

The capturing on hand inventory feature is supported by *SAP Direct Store Delivery*. On the *Capture on hand* screen, you can capture materials and their quantities that are on hand, for example, the actual stock on customers' shelves in store. You also have menu options to *Discard quantities* or to *Cancel capture*. For more information about capturing on hand inventory, see [New Data for Mobile Users \[page 92\]](#).

More Information

For more information about the mobile direct store delivery process, see [Tour Execution \[page 18\]](#).

5.3.8 Expenses

Definition

A menu option on the navigation drawer on Android-based mobile devices.

On the [Expenses](#) screen, mobile users can record the expenses, for example, highway tolls, gas, and parking fees, that they incur on a tour.

Structure

Enter the expenses you incur on a tour as follows:

1. On the [Expenses](#) screen, choose the + (plus sign) icon to add new expenses.
2. Select an expense type, for example, gas.
3. Enter an amount.

i Note

The currency used on the mobile devices can be maintained in Customizing for [Logistics Execution](#) under [SAP Direct Store Delivery](#).

4. Save to update the expenses database and return to the expenses list. Each expenses record appears as a single item even if there are several expenses with the same expense type.
5. To record additional expenses, repeat steps 1. to 4. above.
6. To edit an expense, click on it. On the [Payments](#) screen that opens, change, for example, the amount. Saving your entry updates the database.
7. To delete an expense, swipe to the right.

Integration

You can maintain the expense types that may occur during the course of a tour. You do this in SAP ERP in Customizing for [Logistics Execution](#) under [SAP Direct Store Delivery](#) > [Handheld Connectivity](#) > [DSD Connector Settings](#) > [Mobile Device Settings](#) > [Define General Settings Define Expense Types](#) >.

The [Expenses](#) menu option is only available as follows:

- If tour scenario Customizing is enabled in the back end

- If the tour is started, that is, if the start-of-day activities are completed

More Information

For more information about the mobile direct store delivery process, see [Tour Execution \[page 18\]](#).

5.3.9 Reports

A menu option on the navigation drawer on Android-based mobile devices.

The [Reports](#) menu option enables mobile users to generate various reports based on the current data available on the mobile device.

The following are examples of the default reports available:

- Presettlement report
This report provides an overview of the payments that have been collected by the delivery driver from the customers visited on the tour.
- Route Performance report
This report provides information on the mobile user's performance on the route using various indicators from different business perspectives, for example, the number of visits executed.

Custom Reports

To fulfill, for example, your customers' requirements or legal requirements, your company can create its own layouts for reports, for example, for invoicing, delivery, and collection. At the central location, the layouts of default reports are enhanced and the resulting custom reports may include, for example, new fields, tables, and values. Both default and custom reports are made available on mobile devices. On the mobile device, you may have access to the default reports or the custom reports depending on how this has been set up at the central location (see [Tour-Related Activities \[page 13\]](#) under Reporting).

Example

The default report for a delivery object contains only the delivery number. On your mobile device, you use a custom layout containing both the delivery number and a delivery description for your customers in a specific sales area.

6 Changes to Standard Functions and New Features in the Back End

Use

This section of the SAP Library for *SAP Direct Store Delivery* provides an overview of the following changes to standard direct store delivery back end functions and also new features that have been introduced in the back end systems of *SAP Direct Store Delivery*:

i Note

Some of the features listed below are only available on mobile devices based on Windows Mobile. For more information, see [Features only Available for SAP Direct Store Delivery for Windows Mobile \[page 31\]](#).

- Connectivity to the mobile device
The middleware for *SAP Direct Store Delivery for Windows Mobile* is *SAP Mobile Platform* 2.3 (SP03/6). *SAP Direct Store Delivery* supports *Flexible Device Pickup*. The mobile devices are not bound to a specific user but can be arbitrarily picked for usage. As soon as user-specific data is synchronized from the back end to the mobile device, the mobile device is bound until synchronization at the end of the tour.
- Security
SAP Direct Store Delivery supports encryption of payment data, role passwords, and the entire database and the encryption key is available in the back end only. This means, for example, that customer credit card numbers on the mobile device can be treated confidentially.
- Run *SAP Mobile Direct Store Delivery* (SAP DSD), *SAP Direct Store Delivery for Windows Mobile*, and *SAP Direct Store Delivery for Android* in parallel
You can define Customizing settings to run, for example, *SAP Mobile Platform* for *SAP Direct Store Delivery for Windows Mobile* and the middleware server for SAP DSD in parallel. You do this in Customizing for *Logistics Execution* under ► *SAP Direct Store Delivery* ► *Handheld Connectivity* ► *DSD Connector Settings* ► *Logical System Connectivity* ► *Set up SAP Mobile Platform or Middleware Server SAP MDSD* ►.
- Set up mobile app per mobile engine server
In Customizing, you can define a mobile app per mobile engine server. You do this in Customizing for *Logistics Execution* under ► *SAP Direct Store Delivery* ► *Handheld Connectivity* ► *DSD Connector Settings* ► *Logical System Connectivity* ► *Set up Mobile App per Mobile Engine Server* ►.
- Multiple sales areas
You can specify whether single or multiple sales area processes are used in *SAP Direct Store Delivery*. You do this in Customizing for *Logistics Execution* under ► *SAP Direct Store Delivery* ► *Basic Functions* ► *Manage Multiple Sales Areas Processes* ►.
- Multiday tours
You can have a direct store delivery tour that lasts several days. You can specify the maximum tour length in days and specify if the same customer can be visited several times on different days. You can make settings for multiday tours in Customizing for *Logistics Execution* under ► *SAP Direct Store Delivery* ► *Visit Control* ► *Define Visit Plan Types* ►.
- Multiple partner function

In Customizing, you can enable the download of partner role data for pricing and the printing of cash receipts, delivery notes, and invoices. This means that the master record for all 4 standard partner functions is downloaded for each customer on the visit list. You can also specify which partner functions are used by the pricing engine on the mobile device, that is, the ship-to party, sold-to party, or both. You make these settings in Customizing for *Logistics Execution* under ► *SAP Direct Store Delivery* ► *Handheld Connectivity* ► *DSD Connector Settings* ► *Mobile Device Settings* ► *Define Business Process and Signer Role Settings per Tour Scenario* ►:

- **Payment terms and methods**

In *SAP Direct Store Delivery*, you can maintain all relevant payment information directly on the *Additional Billing/Payment Data* tab at sales area level in customer master record maintenance. You can enable the mobile user to change the payment terms during order creation/change in presales scenarios and during delivery creation/change in delivery driver scenarios. You do this in Customizing for *Logistics Execution* under ► *SAP Direct Store Delivery* ► *Handheld Connectivity* ► *DSD Connector Settings* ► *Mobile Device Settings* ► *Define Business Process and Signer Role Settings per Tour Scenario* ►.

Cash, credit cards, checks, and bank transfer are the payment methods supported in the *SAP Direct Store Delivery* process. You can define payment methods in Customizing for *Logistics Execution* under ► *SAP Direct Store Delivery* ► *Handheld Connectivity* ► *DSD Connector Settings* ► *Mobile Device Settings* ► *Define General Settings* ► *Define Payment Methods* ►.
- **Deal Conditions**

Deal conditions are monetary discounts or free goods granted by delivery drivers to customers on-site to have an immediate, positive impact on sales. In *SAP Direct Store Delivery*, the deal conditions granted by a preseller are applied automatically in the delivery driver scenario if the order/delivery is not changed. For more information about deal conditions in *SAP Direct Store Delivery*, see [Changes and New Features in Support Packages \[page 87\]](#).

For more information about deal conditions in the direct store delivery process, see SAP Library at <http://help.sap.com> ► *SAP ERP Central Component* ► *Logistics* ► *Logistics Execution (LE)* ► *Direct Store Delivery* ► *Direct Store Delivery (Back End)* ► *DSD-Specific Master Data* ► *Additional DSD Data: Deal Condition* ►.
- **Document number generation**

SAP Direct Store Delivery has a flexible algorithm and structure for document numbering which means you can define a document number (similar to how you use number ranges in the back end for document types) using a prefix, series, and the last used number. You can use several criteria, for example, the mobile device user (default) or route, to create a unique number for a document. You can make settings for document number generation in Customizing for *Logistics Execution* under ► *SAP Direct Store Delivery* ► *Handheld Connectivity* ► *Document Numbering* ►.
- **Reason management**

You can assign reasons to orders, deliveries (header and item level; free goods or return), and visits. You can make settings for reason management in Customizing for *Logistics Execution* under ► *SAP Direct Store Delivery* ► *Handheld Connectivity* ► *DSD Connector Settings* ► *Reasons* ►.
- **Stock to stock transfer**

Stock to stock transfer can take place, for example, when one van seller transfers unreserved stock from the inventory on his van to that of another van seller.

You can make a setting to allow stock to stock transfer in Customizing for *Logistics Execution* under ► *SAP Direct Store Delivery* ► *Handheld Connectivity* ► *DSD Connector Settings* ► *Mobile Device Settings* ► *Define Business Process and Signer Role Settings per Tour Scenario* ►.

- Check vehicle security

The start-of-day vehicle security questions shown on mobile devices can be configured in the back end SAP ERP system by catalogs, which can comprise both locality-related (for example, country, route, transportation planning point) as well as vehicle-related (for example, vehicle type) questions. The questions can be maintained for the same catalog in different languages. During synchronization, the correct catalog is determined and it triggers the appropriate questions to be made available on the mobile device for the start-of-day vehicle checks.

You can make settings for vehicle checks in Customizing for *Logistics Execution* under ► *SAP Direct Store Delivery* ► *Handheld Connectivity* ► *Vehicle Check* ►.

- Barcode scanning

There are the following opportunities for mobile users to scan barcodes:

- When interactively dealing with materials
 - Item search (for example, select item, add item)
 - Order
 - Delivery
 - Check-out and check-in
 - CRM activity journals
- When dealing with visits
- Tour Monitor app, see [Tour Monitor \[page 16\]](#)
- New data for download and upload, see [New Data for Mobile Users \[page 92\]](#)
- CRM integration, see [CRM Activity \[page 98\]](#)
- Occasionally connected scenarios, see [Delta Tour Data \[page 109\]](#)
- Offline pricing, see [Pricing Engine \[page 131\]](#)
- Listing and exclusion, see [Listing and Exclusion of Materials \[page 134\]](#)
- *Application Log Monitor*, see [Application Log Monitoring \[page 136\]](#)
- Data archiving, see [Data Archiving \[page 143\]](#)
- Other functions

Additional functions are as follows:

- Empties balance management on the mobile device
- Google-like search
- Additional Customizing switches, for example, for the delivery driver scenario
- Template-based printing of reports
- Collection of overpayments and capturing of signature per collection process
- PDF files are linked to the corresponding business object, for example, invoices
- Sales area-specific document types are used in the Final Settlement Run

More Information

For more information about SAP mDSD, see the SAP Help Portal under ► *Enterprise Management* ► *SAP ERP* ► *6.0* ► *SAP ERP Central Component* ► *Logistics* ► *Logistics Execution* ► *Direct Store Delivery* ►.

6.1 Changes and New Features in Support Packages

This section of the SAP Library for *SAP Direct Store Delivery* provides an overview of the following changes to standard direct store delivery back end functions and also new features that have been introduced since the release of *SAP Direct Store Delivery 1.0*.

i Note

Some of the features listed below are only available on mobile devices based on Windows Mobile (WM) or Android.

Table 10:

Function	Type of Change	Required Support Package (SP)	Description	More Information
Trade assets and notifications	New	SP01 WM/SP01 Android	Information about trade assets can be downloaded to mobile devices. On the mobile device, mobile users can maintain notifications for trade assets. At the end of a tour, the notifications are uploaded to the back end.	Maintenance of Trade Assets and Notifications [page 93]
Generic data transport	New	SP01 WM i Note Available on <i>SAP Direct Store Delivery for Android</i> release 1.0 (SP0)	In the back end system, you can extract data generically for transportation to and from mobile devices. The replicated data can be enriched by metadata for visualization purposes on the mobile device.	Generic Data Transport [page 96]

Function	Type of Change	Required Support Package (SP)	Description	More Information
360-degree activity view	New	SP01 back end of <i>SAP Direct Store Delivery</i> i Note Back end development independent of mobile client	This report gives you an overview of CRM activities and activity items (survey and activity journals) that would be downloaded to a mobile device for a specific DSD visit plan for a defined execution period.	360-Degree Activity View [page 107]
Deal condition	Enhanced	SP01 WM/SP01 Android	In <i>SAP Direct Store Delivery</i> , deal condition functionality has been enhanced by the following: <ul style="list-style-type: none"> • New maintenance transactions • Expanded precondition fields • Scale based results • Exclusion list • Listing and deletion of deal conditions • Deal condition per period • Integration into SD document flow 	<ul style="list-style-type: none"> • Deal Condition [page 120] • Deal Condition per Period [page 123] • Deal Condition Integration into SD Document Flow [page 125]
Polling	Enhanced	SP01 WM i Note Available on <i>SAP Direct Store Delivery for Android</i> release 1.0 (SP0)	<i>SAP Direct Store Delivery</i> supports polling as well as <i>Flexible Device Pickup</i> . You can choose which of these you use in the local configuration file of the mobile device.	

Function	Type of Change	Required Support Package (SP)	Description	More Information
Tour scenario Customizing	Enhanced	SP01 WM <div style="background-color: #fff9c4; padding: 5px;"> <p>i Note</p> <p>Available on SAP Direct Store Delivery for Android release 1.0 (SP0)</p> </div>	<p>In Customizing for the tour scenario, you can make country-specific and sales area-specific settings.</p> <div style="background-color: #fff9c4; padding: 5px;"> <p>Example</p> <p>You have a sales area for food and a second one for soft drinks. For the second sales area only, you have to take empties into account. You can customize per sales area to take the empties into account where relevant.</p> </div>	<p>See Customizing for Logistics Execution under SAP Direct Store Delivery > Handheld Connectivity > DSD Connector Settings > Mobile Device Settings > Define Tour Scenario Settings.</p>
Mobile report	New	SP01 WM/SP01 Android	You can specify the reports that can be printed on the mobile device and define their behavior.	<p>See Customizing for Logistics Execution under SAP Direct Store Delivery > Handheld Connectivity > DSD Connector Settings > Mobile Device Settings > Define General Settings > Mobile Reports:</p> <ul style="list-style-type: none"> Define Mobile Reports Define Behavior of Mobile Reports <div style="background-color: #fff9c4; padding: 5px;"> <p>i Note</p> <p>The export and import of report templates is only supported for Android SP01 onwards.</p> </div>

Function	Type of Change	Required Support Package (SP)	Description	More Information
Data archiving	Enhanced	SP01 WM i Note Available on <i>SAP Direct Store Delivery for Android</i> release 1.0 (SP0)	Deal conditions can be archived and deleted.	Data Archiving [page 143]
Customizing mobile apps per mobile engine server	Enhanced	SP02 back end of <i>SAP Direct Store Delivery/</i> SP01 WM i Note Available on <i>SAP Direct Store Delivery for Android</i> release 1.0 (SP0)	Customizing for setting up a mobile app per mobile engine server now includes the <i>SAP Direct Store Delivery for Android</i> mobile app as an option. In Customizing for <i>SAP Direct Store Delivery</i> , you can define settings to run, for example, <i>SAP Direct Store Delivery for Android</i> and the SAP DSD mobile apps in parallel.	See Customizing for <i>Logistics Execution</i> under ► <i>SAP Direct Store Delivery</i> ► <i>Handheld Connectivity</i> ► <i>DSD Connector Settings</i> ► <i>Logical System Connectivity</i> ► <i>Set up Mobile App per Mobile Engine Server</i> ►.
Sales area-specific document types for mobile process as well as for Final Settlement Run	New	SP03 back end of <i>SAP Direct Store Delivery/</i> SP01 WM/SP01 Android	You can maintain sales area-specific document types for deliveries and orders and download them to mobile devices, where the correct sales area is applied when a new document is created. In the Final Settlement Run, the document type that takes the sales area into account is determined.	See Customizing for <i>Logistics Execution</i> under ► <i>SAP Direct Store Delivery</i> ► <i>Route Accounting</i> ► <i>Route Settlement</i> ► <i>Final Settlement/Document Control</i> ► <i>Assign Control Documents for Each Customer Sales Transaction Type</i> ►.

Function	Type of Change	Required Support Package (SP)	Description	More Information
Tour Monitor	New	SP01 Android i Note Only available on SAP Direct Store Delivery for Android	A Web-based app enables centrally located tour dispatchers to get feedback on mobile users' current and historical tours.	Tour Monitor [page 16]
PDF documents	New	SP01 Android i Note Only available on SAP Direct Store Delivery for Android	PDF documents of invoices, delivery notes, orders, and collections taken on the mobile app are available in SAP ERP after upload.	
Custom reports	New	SP01 Android i Note Only available on SAP Direct Store Delivery for Android	You can enhance the layouts of default reports and export these custom reports for use on mobile devices.	Tour-Related Activities [page 13] under Reporting
Map integration	New	SP01 Android i Note Only available on SAP Direct Store Delivery for Android	Mobile users can see the location of, for example, customer visits, on a map on the mobile device.	Visit List [page 70] under View Map of Visits
Link PDFs to business objects	New	SP01 Android i Note Only available on SAP Direct Store Delivery for Android	PDF files, which have been generated on mobile devices and uploaded to the back end, can be linked to the relevant business objects using SAP ArchiveLink .	

More Information

For more information on features only available on mobile devices based on Windows Mobile, see [Features only Available for SAP Direct Store Delivery for Windows Mobile \[page 31\]](#)

6.2 New Data for Mobile Users

Use

As well as downloading and uploading the standard data that is supported by SAP mDSD, *SAP Direct Store Delivery* supports mobile users with the following data:

i Note

For information about features that are only available on mobile devices based on Windows Mobile, see [Features only Available for SAP Direct Store Delivery for Windows Mobile \[page 31\]](#).

Features

- Geocoordinates for customers
- Customer hierarchy for multiple sales areas
You can download the customer hierarchy for each customer on the tour. On mobile devices, the customer hierarchy is integrated during pricing determination when a sales order is created and priced.
- Product hierarchy
You can download the complete product hierarchy definition (level, nodes, and texts) and you can expand the product hierarchy of each material to several individual levels. On mobile devices, this allows you to build different filters for, for example, the order item screen and the delivery item screen, in order to be able to filter lists based on each individual level of the product hierarchy. It is also used in offline pricing determination.
- Additional customers
On mobile devices, you can have customers with limited master data that you can use to download the full set of the master data for occasionally connect scenarios (OCS).
You can make settings for downloading additional customer master data in Customizing for [Logistics Execution](#) under ► [SAP Direct Store Delivery](#) ► [Handheld Connectivity](#) ► [Additional Data Download](#) ▾. There are the following two ways of deciding for which additional customers master data is to be downloaded:
 - Visit driven
Additional customers are selected by checking the visit plans and visit lists for the following day. This is used for preseller scenarios.
 - Master data driven
Additional customers are selected based on master data fields, for example, sales area, sales office, and transportation. You can select additional fields that should be considered for the selection of such customers depending on the route.
- Item proposal
You can download the item proposal assigned to each visit ID in the customer master record for the corresponding sales area. On mobile devices, this item proposal is suggested when new orders or deliveries are created. The item proposal can be filtered based on the results for listing and exclusion of materials.

You can allow the download of the item proposal in Customizing for *Logistics Execution* under ► *SAP Direct Store Delivery* ► *Handheld Connectivity* ► *DSD Connector Settings* ► *Mobile Device Settings* ► *Define Business Process and Signer Role Settings per Tour Scenario* ►.

- Capture on hand inventory

You can use mobile devices to record the quantities of on hand inventory (product available on customers' shelves). These quantities can be used for several business purposes for example, the calculation of the final suggested order or of sell outs per visit.

You can allow the capture of POS inventory for each customer per sales area in Customizing for *Logistics Execution* under ► *SAP Direct Store Delivery* ► *Handheld Connectivity* ► *DSD Connector Settings* ► *Mobile Device Settings* ► *Define Business Process and Signer Role Settings per Tour Scenario* ►.

By default, the back end system sends the materials for the sales area of the visit ID to the mobile device. The quantity field for each capture on hand inventory item is defaulted to zero. You can capture the on hand inventory quantities in 2 different units of measure:

- Sales unit of measure (for example, complete cases normally stored at customer depots)
- Base unit of measure (for example, bottles normally stocked on customer shelves)

- Canceled collections and invoices

Canceled collections and canceled invoices are always uploaded, with a relevant cancellation reason, from mobile devices to SAP ERP where they are stored in the *Route Accounting Database* but are never settled.

- Trade assets and notifications

For more information, see [Maintenance of Trade Assets and Notifications \[page 93\]](#).

6.2.1 Maintenance of Trade Assets and Notifications

Use

A manufacturer may place pieces of equipment in retail stores for promotions or product storage. For example, a drinks provider may provide refrigerators to retailers to chill and display drinks.

In *SAP Direct Store Delivery*, trade assets are equipment for which information can be downloaded to mobile devices.

During a tour, on the mobile device, the mobile user can create notifications to request maintenance and repairs for trade assets. At the end of a tour, the notifications are uploaded to the back end where they are managed in the area of *Plant Maintenance*.

Prerequisites

Customizing

The following settings are required:

- In Customizing for *Logistics Execution* under *SAP Direct Store Delivery*:
 - ► *Handheld Connectivity* ► *DSD Connector Settings* ► *Mobile Device Settings* ► *Define Tour Scenario Settings* ► and go to ► *Sales Area specific settings* ► *Trade Assets* ►

Activate trade assets functionality per tour scenario, shipment type or visit plan type, and sales area.

- [▶ Master Data ▶ Define Equipment Categories for Trade Assets Download ▶](#)
Define equipment categories that are relevant for trade assets.
- In Customizing for *Plant Maintenance and Customer Service* under *Master Data in Plant Maintenance and Customer Service*:
 - [▶ Basic Settings ▶ Partners ▶ Define Partner Determination Procedure and Partner Function ▶](#)
Define partner determination procedure and which business partner functions, for example, sold-to party, are mandatory for an equipment category.
 - [▶ Technical Objects ▶ Equipment ▶ Assign Partner Determination Procedure to Equipment Category ▶](#)
Assign a partner determination procedure to each equipment category.
- In Customizing for *Logistics Execution* under *SAP Direct Store Delivery*:
 - ▶ [▶ Master Data ▶ Define Trade Asset Notification Types ▶](#)
Define the notification type for the maintenance plant of a trade asset.

Features

Trade Assets

Information about trade assets per customer are made available to the mobile device via the integration of equipment, which is defined as trade assets, in the customer master data.

You create equipment and use the equipment category to define it as trade assets. Only equipment defined in Customizing as trade assets via the equipment category can be downloaded to the mobile device.

To link trade assets to a customer, you must link the equipment you create to one or more business partner functions of the customer.

When creating equipment, you need to define a maintenance plant for the trade asset. This means that the mobile user can upload notifications (see below) from the mobile device to the back end to manage repairs or maintenance for a trade asset at the relevant maintenance plant.

Notifications

In *SAP Direct Store Delivery*, a notification is a data record with which a mobile user informs the Plant Maintenance, Quality Management, or Customer Service department about an occurrence, for example, a requirement for a repair to a trade asset.

On the mobile device, there are lists of trade assets per customer and the number of notifications for a customer's trade asset is displayed. The mobile user can create one or more notification, for example, that a trade asset is in need of repair or maintenance. The mobile user can also view, edit, or delete notifications. Only notifications are uploaded at the end of the tour and any information about trade assets is not uploaded.

In the *Settlement Cockpit* (transaction code `/DSD/SL_COCKPIT`), when all tour activities are processed in the *Final Settlement Run*, trade asset notifications are created and subsequently managed as maintenance (PM) notifications in the area of *Plant Maintenance* (see *Display PM Notification*, transaction code `IW23`).

Activities

Creation of Equipment as Trade Assets

On the *Create Equipment* screen (transaction code **IE01**), create an equipment for an equipment category you defined for trade assets in Customizing. You must provide a description, a validity period, and the equipment status in the header.

i Note

A piece of equipment can have one or more statuses. You can navigate to the *Display Status* screen where the various statuses can be displayed (for example, *Being repaired*).

You should provide the maintenance plant of the equipment (on the *Location* tab) as this information is needed for your Customizing setting for notifications.

The following are additional equipment details (not mandatory), which can be displayed for a trade asset on the mobile device:

- Inventory number (*General* Tab)
- Manufacturer (*General* tab)
- Model number (*General* tab)
- Object type (*General* tab)
- Serial number (*SerData* tab)

To link the equipment to a customer, on the *Create Equipment: Partners* screen, you need to link to the business partner function or functions that you defined as mandatory for that customer in Customizing. If you define, for example, that the sold-to party is the mandatory business partner function for a trade asset equipment category, you must always maintain the data for that business party function. You also must define business partners according to the partner determination procedure you defined in Customizing for the equipment category.

Accessing Trade Assets and Notifications on the Mobile Device

On the front end, mobile users can access the *Trade Assets* screen, for example, by selecting either the *Customer* or the *Visit List* icon on the *Main Menu* screen of mobile devices based on Windows Mobile. From the *Trade Assets* screen, they can navigate to the *Notification* screen where they can enter details for a notification for the trade asset. They can also view, edit, or delete a notification during the tour.

Notifications in the Settlement Cockpit

After the upload at the end of the tour, the notifications for trade assets are available in the back end when the final settlement is executed in the *Settlement Cockpit* (transaction code `/DSD/SL_COCKPIT`). In the *Application Log*, you can see successfully created notifications for each *Settlement process* in the *Area: notifications posting*. If you select a notification, you can see its details, for example, the following, in the *Display PM Notifications: Maintenance Request* screen (transaction code `IW23`):

- Equipment
ID and description
- Type of notification
This is based on the maintenance plant for the equipment and your Customizing setting
- Notification short text and long text
This has been created on the mobile device by the mobile user

- Reported by
Driver number/identifier

More Information

For more information about the following, see the SAP Help Portal at <http://help.sap.com> under [▶ Enterprise Management ▶ SAP ERP ▶ 6.0 ▶ SAP ERP Central Component ▶](#):

- [▶ Logistics Execution \(LE\) ▶ Direct Store Delivery \(Back End\) ▶ Settlement Cockpit ▶](#)
- [▶ Plant Maintenance \(PM\) ▶ Equipment ▶](#)
- [▶ Plant Maintenance \(PM\) ▶ Notifications ▶](#)

6.3 Generic Data Transport

Use

In *SAP Direct Store Delivery*, in the back end, you can maintain rules and information for generically downloading data to and uploading data from mobile devices. The data for transport comprises metadata for rendering and actual dynamic values. You do not need to interact with the middleware or the mobile devices. In Customizing, you can maintain structures as the basis for custom screens for certain entry points in the mobile app.

Integration

You maintain settings for generic data transport in the following activities in Customizing for [▶ Logistics Execution ▶ SAP Direct Store Delivery ▶ Handheld Connectivity ▶ Generic Data Transport ▶](#) under:

- [Define Custom Screen](#)
Define where new custom screens appear on mobile devices.
- [Define Fields for Custom Screen](#)
Enter each component of the structure. Here, you can define whether or not a component can be edited and also what type of field a component represents.

Features

The following user interface (UI) components are supported:

- Editable text field



- Editable text area
- Drop down list
- Table (non-editable)
- Checkbox
- Break
Use to insert blank line to make a paragraph.
- Fields in a row
Use if you have more than one text field in a row.

You can transfer additional values per UI control field, for example, default values for drop down lists. The metadata is transferred via ABAP structure information. You can maintain structures for the following entry points within the mobile app:

- [Main Menu](#)
- [Reports](#)
- [Customer](#) (Master Data)
- [Material](#) (Master Data)
- [Tour Start](#)
- [Tour Status](#)
- [Tour End](#)
- [CO Materials](#)
- [CI Materials](#)
- [Inventory](#)
- [Visit List](#)
- [Visit](#)
- [Open Items](#)
- [Delivery](#)
- [Order](#)
- [Deal Conditions](#)
- [Delivery Confirmation](#)
- [Order Confirmation](#)
- [Expenses](#)
- [Collection Confirmation](#)
- [Visit Gen Stat Data](#) (only for [Generic Statistical Data](#))

If you want to download more data for the custom screens, for example, content for the fields on the custom screens, you have to implement the `/EMSE/DOWNLOAD_BADI` BAdI with the `MSE_GEN_DATA_TRANS_ITM` filter. If you make an entry in the `VALUE` field of a component, the content is shown on the custom screen.

For more information, see Customizing for [Logistics Execution](#) under the following:

- [SAP Direct Store Delivery](#) > [Business Add-Ins \(BAdIs\)](#) > [BAdI: Process Mobile Business Object for Download](#) 
- [SAP Direct Store Delivery](#) > [Handheld Connectivity](#) > [Generic Data Transport](#)  under:
 - [Define Custom Screen](#)
 - [Define Fields for Custom Screen](#)

Generic Statistical Data

In *SAP Direct Store Delivery*, generic data transport also supports the “Generic Statistical Data” functionality of SAP MDSD 3.0, including an interface to the *SAP Business Information Warehouse*.

For more information, see Customizing for *Logistics Execution* under ► *SAP Direct Store Delivery* ► *Handheld Connectivity* ► *Generic Data Transport* ► *Generic Statistical Data* ►.

In order to use this functionality, you have to provide the generic data transport Customizing for generic statistical data in Customizing for *Logistics Execution* under ► *SAP Direct Store Delivery* ► *Handheld Connectivity* ► *Generic Data Transport* ► under the following:

- *Define Custom Screen*
- *Define Fields for Custom Screen*

More Information

For more information about SAP mDSD, see the SAP Help Portal at <http://help.sap.com> ► *SAP ERP Central Component* ► *Logistics* ► *Logistics Execution (LE)* ► *Direct Store Delivery* ►.

6.4 CRM Activity

Definition

A mandatory or optional action to be performed by mobile users at customer sites. In *SAP Direct Store Delivery*, activities are closely linked to business objects, for example, orders and deliveries, and to CRM objects that contain, for example, surveys and activity journals.

Structure

i Note

For information about the features only available on mobile devices based on Windows Mobile, see [Features only Available for SAP Direct Store Delivery for Windows Mobile \[page 31\]](#) under SAP CRM.

In SAP CRM, a CRM activity always has a customizable transaction type, for example, a damage report. A CRM activity has both header and item details as follows:


- Header
The header has information such as the execution date, the account (customer), and the employee responsible for the CRM activity. This information is used to map CRM activities from SAP CRM to the tour in SAP ERP.
- Item

A CRM activity can be comprised of several activity items, for example, an activity journal, plus 2 notes, and an attachment.

The following lists the CRM activity items that are supported in *SAP Direct Store Delivery* and reflects how they are organized on the user interface of mobile devices:

- Surveys

A survey is a structured set of questions created using the survey tool in SAP CRM. There, you can create a form that mobile users can use to ask questions of store owners. Answers are entered into the form on mobile devices and it is saved along with a CRM activity. Surveys require mobile users to take action and they can have the status *Open optional*, *Open mandatory*, or *Completed*. They are fully customizable and are valid for a defined time period.


 Example

A survey is used as a customer feedback form to find out whether customers are satisfied with your level of service or with a particular product.

- Activity journals


Activity journals are used to record information about products. An activity journal has a structure and is easier to evaluate than a survey. The product-related fields are predefined in the back end and the data can be easily extracted out of the journal.

In SAP CRM, in *Sales Operations*, you can create an activity journal template based on a template type, for example, an *Audit Shelf Check*. You decide which fields (columns) and products belong to the journal, for example, to allow you record the number of facings of specific products on shelves. You define to which CRM activities, in which time frame, and at what frequency of auditing you want to add the journal.

 Note

- Mobile users can add products to activity journals by using barcode scanners embedded in mobile devices to scan product barcodes.
- On the mobile device, journals are not created directly. They are always added to CRM activities based on the defined determination criteria.

Activity journals require mobile users to take action and they can have the status *Open optional*, *Open mandatory*, or *Completed*. They are fully customizable and are valid for a defined time period.

 Example


An activity journal is used to record out-of-stock products.

- Notes

This multiple line text input field can be used, for example, for preparation or for reports. Note types can be customized and you can define which type of note can be added to each CRM activity. Notes can be mandatory or optional. You do not make a note valid for a time period.

- Attachments

Attachments can be added in form of pictures taken by the mobile device's camera. If authorized in Customizing in the back end, you can delete attachments on the mobile device.

 Example

- A preseller uses a photo to show a customer a new product

- A delivery driver takes a photo to show planogram non-compliance. The delivery driver can add a note to the relevant CRM activity to describe the picture, for example, of how the layout is not compliant with the planogram.
- Partners
A partner is a person or organization with whom you do business. In SAP CRM, you use partners to determine the business partners involved in a transaction. In *SAP Direct Store Delivery*, partners assigned to a CRM activity are accessible on mobile devices, where you can edit them. To ensure consistency in partner maintenance, Customizing for CRM partner determination is used. For more information about downloading business partners (contact persons and employees), see [CRM Activities Download \[page 104\]](#) under “Business Partner Mapping”.

Example

Partners of the following partner functions are displayed for a CRM activity on a mobile device:




- Attendee
- Owner
The owner role is used to maintain data about the employee responsible, that is, the tour driver, for the CRM activity
- Contact person

Partner data maintenance for CRM activities can be mandatory or optional on mobile devices depending on Customizing in SAP CRM.

Integration

Direct store delivery-relevant CRM activities that you create in SAP CRM are downloaded first to the DSD Connector in SAP ERP and then (via *SAP Mobile Platform* for *SAP Direct Store Delivery for Windows Mobile*) to a mobile device. When the tour data is synchronized from the mobile device to the back end systems, the CRM activities are uploaded to SAP CRM via the DSD Connector. CRM activities that have been created on a mobile device are recreated in SAP CRM.

Customizing

In SAP CRM, in Customizing for *Customer Relationship Management* under  [SAP Direct Store Delivery](#)  [General Parameters](#)  , you can make the following settings:

- [Define Transaction Types](#)
You can define the CRM transaction types that are relevant for *SAP Direct Store Delivery*. If you select the *Mandatory* checkbox, CRM activities created on the mobile device are mandatory.

Note

Existing CRM activities with the priority *1* are considered as mandatory. You can overwrite this with a customer Business Add-In (BAI).

- [Define Attachment Types](#)
You can define the direct store delivery-relevant attachment types and their maximum size (in bytes) for the download of attachments to the DSD Connector and the creation of attachments on a mobile device.

- [Define CRM Activity Authorization](#)

You can give authorization rights for reading, editing, and creating CRM activities and for deleting attachments on a mobile device.

More Information

For more information about SAP CRM, see SAP Help Portal at <http://help.sap.com> under ► [Customer Relationship Mgmt](#) ► [SAP Customer Relationship Management](#) ▾. Under [Survey Suite](#), you can see more information about creating and editing surveys.

6.4.1 CRM Activities Integration

Use

Integrating SAP CRM with [SAP Direct Store Delivery](#) allows you to do the following:

- Download SAP CRM-relevant data to mobile devices via SAP ERP (and [SAP Mobile Platform](#) for [SAP Direct Store Delivery for Windows Mobile](#))
- Upload CRM activities from completed tours to SAP CRM
- Download and upload CRM activities only for customers that are on a tour
- Automatically generate a CRM activity for a group of customers on a tour
- Add further data, for example, attribute sets, to CRM activities for tours
- Map SAP ERP tour drivers to SAP CRM business partners (BPs)
- Customize [SAP Direct Store Delivery](#)-relevant CRM activities

Benefits for Various Business Roles

Integrating SAP CRM with [SAP Direct Store Delivery](#) offers the following benefits for different roles:

- Direct store delivery tour dispatcher
You can integrate CRM activities with an [SAP Direct Store Delivery](#) tour.
- CRM activity scheduler
CRM activities for an initial tour are determined automatically. When a delta tour is created for an occasionally connected scenario, you can use the [OCS Cockpit](#) to assign CRM activities based on the existing [SAP Direct Store Delivery](#) visit list for the tour (see [Occasionally Connected Scenario](#)) [page 112].
- Mobile users (all roles):
 - You can see your CRM activities for the current day on your mobile device.
 - You can upload updated CRM activities from your mobile device to SAP CRM.

Prerequisites

SAP CRM

In Customizing for *Customer Relationship Manager* under [SAP Direct Store Delivery > General Parameters](#), you can make the following settings:

- [Define Transaction Types](#)
- [Define CRM Activity Authorization](#)
If there is no authorization for reading a transaction type, then CRM activities of this transaction type are not downloaded to mobile devices.
- [Define CRM Activity Mass Generation Depending on Tour Scenario](#)
- [Define Attachment Types](#)
- [Define Activity Status of Past Activities](#)
- [Define Marketing Attribute Sets](#)
- [Define Currencies](#)
If direct store delivery-relevant currencies are not maintained, all available currencies are downloaded from SAP CRM to the DSD Connector.

SAP ERP

In Customizing for *Logistics Execution* under *SAP Direct Store Delivery*, you can make the following settings:

- Under [Basic Functions > Activate CRM Scenario](#), you control whether or not the CRM scenario is active for *SAP Direct Store Delivery*.
- Under [Handheld Connectivity > Additional Data Download > Maintain Download Setting for CRM Activities](#), you set defaults for CRM handling for shipments and visit plan types. Here, you allow the collection of CRM activities per visit list and you can restrict the time allocated for CRM activities per visit.
- Under [Handheld Connectivity > DSD Connector Settings > Mobile Device Settings > Define Tour Scenario Settings](#), in the sub view *Activity Sequence*, you make settings for the sequence of CRM activities by transaction type on the mobile device.

Process

1. You download CRM activities from SAP CRM via the DSD Connector in SAP ERP (and the *SAP Mobile Platform* middleware for *SAP Direct Store Delivery for Windows Mobile*) to mobile devices.

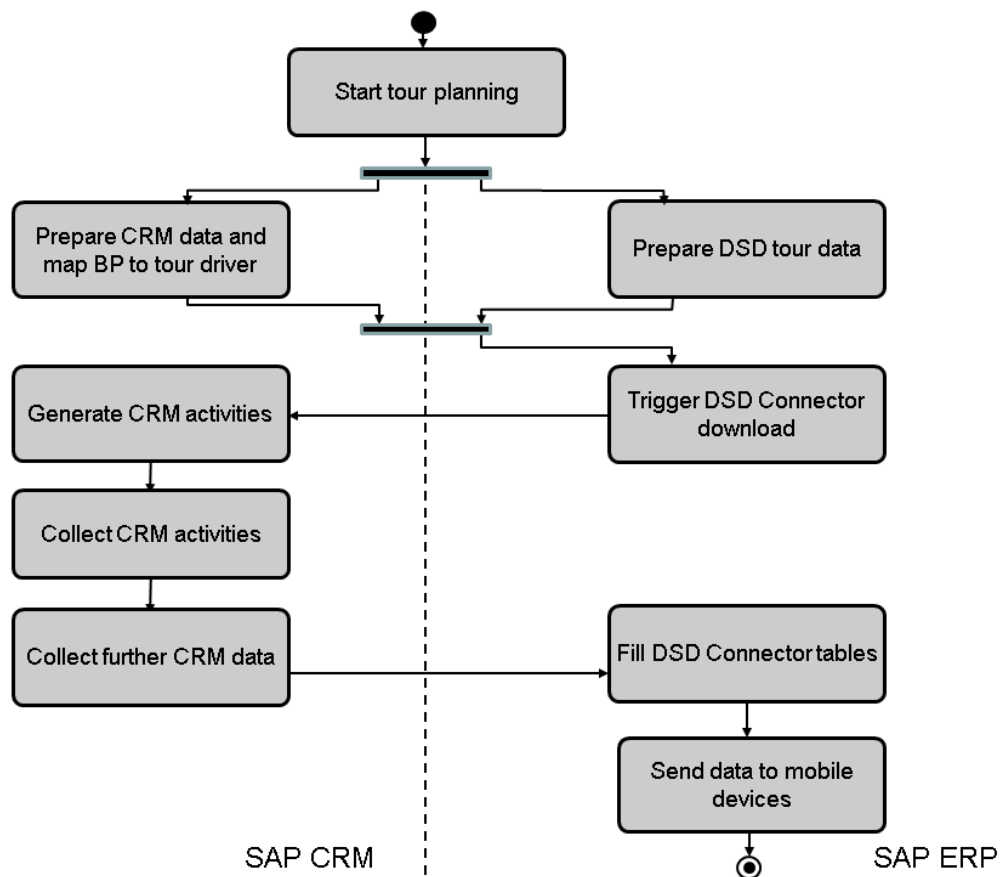


Figure 12: Downloading CRM Activities to Mobile Devices

As can be seen in the [Downloading CRM Activities to Mobile Devices](#) graphic above, the downloading of CRM activities can comprise of the following:

- SAP CRM
 - You map the CRM business partner to the SAP ERP tour driver.
 - You manually create CRM activities data.
 - The system automatically generates CRM activities for groups of customers.
 - The system adds further data, for example, marketing attributes.
- SAP ERP
 - You create tour data, for example, visit lists, shipments, and master data.
 - CRM activities data from SAP CRM is mapped to tour data in SAP ERP and is downloaded with tour data to the DSD Connector.
 - The DSD Connector stores CRM activities data for tours
 - CRM activities data is downloaded as follows:
 - [SAP Direct Store Delivery for Windows Mobile](#)
With tour data to [SAP Mobile Platform](#) from where it is downloaded to mobile devices
 - [SAP Direct Store Delivery for Android](#)
Directly to mobile devices

For more information, see [CRM Activities Download \[page 104\]](#).

2. Mobile users work with CRM activities on mobile devices.

On mobile devices, mobile users can do the following:

- Display, create, and edit CRM activities

- Requires authorization in SAP CRM Customizing
- Delete attachments
 - Requires authorization in SAP CRM Customizing
- Cancel CRM activities
- Reschedule CRM activity items so that they are no longer valid for the current tour

For more information, see “CRM Activities” in the following:

- Windows Mobile-based mobile devices
 - [Example: Visit List Activities based on Preseller Scenario \[page 45\]](#)
 - [Example: Visit List Activities based on Delivery Driver Scenario \[page 49\]](#)
 - Android-based mobile devices
 - [Example: Visit List Activities based on Preseller Scenario \[page 72\]](#)
 - [Example: Visit List Activities based on Delivery Driver Scenario \[page 75\]](#)
3. You upload CRM activities from mobile devices to SAP CRM.
After tour completion, mobile users upload data from mobile devices to SAP ERP (via [SAP Mobile Platform for SAP Direct Store Delivery for Windows Mobile](#)). Any changed or newly created CRM activities are uploaded and handed over to SAP CRM.

Result

CRM activities that have been edited or created on mobile devices are updated or recreated in SAP CRM. Any CRM activities that have been canceled on mobile devices have a *Rejected* status in SAP CRM.

CRM-relevant tour messages are displayed in the *Connector Data* assignment block of the *Application Log Monitor* (see [Application Log Monitoring \[page 136\]](#)).

6.4.1.1 CRM Activities Download

Use

In SAP CRM, you can manually create CRM activities for specific dates for customers. You can also automatically generate DSD-relevant CRM activities for a group of customers on a specific tour. You can add further CRM objects, for example, marketing attributes, to a tour.

As part of mapping CRM activities and SAP ERP tour data, you map CRM business partners (BPs) to tour drivers in SAP ERP.

In SAP ERP, all CRM activities and their additional data that map to a specific tour are collected from SAP CRM and this data is downloaded to the DSD Connector.

Prerequisites

Tour data, for example, visit lists, shipments, and master data, is maintained in SAP ERP.

The relevant Customizing settings are made in SAP CRM and SAP ERP.

Features

Generation of CRM Activities

In SAP CRM, in Customizing for *Customer Relationship Manager* under **SAP Direct Store Delivery** **General Parameters** **Define CRM Activity Mass Generation Depending on Tour Scenario**, you can make settings for the generation of CRM activities.

If the tour matches the following criteria, a CRM activity of the defined transaction type, for example, a CRM activity that contains a survey, is generated for the selected customers:

- Tour scenario/Shipment type
- Sales area
- Time period
- Target group, which is a list of customers

Note

If you do not define a target group, a CRM activity is generated for all customers in the sales area

Additional information, such as the following, can be provided for generated CRM activities:

- Description
- Duration
- Reason
- Priority

Example

You generate a CRM activity that contains a survey for a group of customers, all having the same franchise, who will be visited on a specific tour.

Additional CRM Data

The following CRM data can be added to a tour:

- Marketing attribute sets
An attribute set is a finite group of criteria used to create marketing profiles. You can create attributes sets in SAP CRM for the following:
 - Customers
 - Contact persons

Example

Attribute set *Customer Profiling* contains the attributes *Products of Interest*, *Sales Volume*, and *Size* with the corresponding values *Soft drinks*, *750,000 units/annum*, and *Medium* for a particular customer.

On the *Create Person* screen (transaction code *BP*), on the *Marketing Attributes* tab, you can assign an attribute set to a customer, a contact person, or both and enter values for the containing attributes. After

the tour data is synchronized to a mobile device, these attribute sets and attributes are displayed for the customer, contact person, or both.

In Customizing for *Customer Relationship Manager* under ► *SAP Direct Store Delivery* ► *General Parameters* ► *Define Marketing Attribute Sets*], you assign CRM marketing attribute sets to business partner categories for downloading from SAP CRM to the DSD Connector.

- Contact persons
If SAP CRM is integrated into *SAP Direct Store Delivery*, data for contact persons on mobile devices is downloaded from SAP CRM and not from SAP ERP.
- Employees
This is the business partner role to which you assign CRM activities for tours. All employees defined in SAP CRM are downloaded to mobile devices. This is done so that a business partner function referring to an employee, for example, *Owner*, can be displayed and maintained.

Business Partner Mapping

You have to map the tour driver in SAP ERP to the employee responsible for a CRM activity in SAP CRM.

Tour drivers, that is, presellers, delivery drivers, and van sellers, are defined as follows in the two systems:

- SAP ERP
Tour drivers are defined as customers in customer master data. Each tour driver has a unique driver ID.
- SAP CRM
Tour drivers are defined as employees in business partner master data.

Customers in SAP ERP are replicated to SAP CRM and become business partners of the category *Organization*. These customers are exclusively defined as organizations and not as persons. However, tour drivers must be defined as persons and not organizations. For this reason, tour drivers defined as customers in SAP CRM, as they are in SAP ERP, cannot be used as the employee responsible for CRM activities.

Therefore, in SAP CRM, you must define a business partner as a person who has the role of employee and map it to the tour driver. You do this on the *Create Person* screen (transaction code *BP*). On the *Identification* tab, you enter the tour driver ID as an external ID. This employee, who corresponds to the tour driver, is selected as the employee responsible for the CRM activities for the tour.

Alternatively, you can use the HR personnel number to map a tour driver to a CRM business partner. In SAP ERP, a personnel number can be assigned in the account management settings of the customer. In SAP CRM, you can assign the same number to a business partner for the *Employee* role. On the *Create Person* screen (transaction code *BP*), on the *Identification* tab, you enter this number as the personnel number in the *Employee Data* group box.

i Note

If both mapping using the external ID and mapping using the personnel number is maintained, mapping using the personnel number takes precedence.

Collection of CRM Activities

For SAP ERP to collect CRM activities from SAP CRM for tours, the transaction type must be defined as relevant for *SAP Direct Store Delivery* in Customizing for *Customer Relationship Manager* under ► *SAP Direct Store Delivery* ► *General Parameters* ► *Define Transaction Types*].

The collection of CRM activities is done by matching the following CRM activities data to tour data in SAP ERP:

- The CRM activity date matches the tour date

i Note

You can also allow the collection of past and future CRM activities. You do this in Customizing for *Customer Relationship Manager* under ► *SAP Direct Store Delivery* ► *General Parameters* ► *Define Activity Status of Past Activities* ►.

- The CRM activity account matches a customer on the tour
- The employee responsible for the CRM activity matches the tour driver

6.4.2 360-Degree Activity View

Use

On the Web-based *360° Report CRM/DSD* screen, Sales and Distribution managers can get an overview of the CRM activities of their sales force for planning and follow-up purposes.

Searching according to specific selection criteria, the *360° Report CRM/DSD* report displays the CRM activities and activity items (surveys and activity journals) that would be downloaded to a mobile device for a specific DSD visit plan for a defined execution period. For this purpose, for a mobile user (for example, a preseller), the report does the following:

- Collects existing CRM activities
- Simulates DSD driven activities
- Simulates CRM activities from CRM visit plans

Prerequisites

The authorization object `/EMSE/CRM` must be assigned to the relevant profile.

Activities

In SAP ERP in the back end of *SAP Direct Store Delivery*, use the `/EMSE/CRM_REPORT` transaction code to access the *360° Report CRM/DSD* report. In a Web-based UI, the *Report* main screen with the following 2 sub screens, *Search* and *Display*, are displayed:

Search

On the *Search* subscreen of the *360° Report CRM/DSD* report, in the *Search Criteria*, you can make a selection based on the following:

- *Visit Plan*
You can search for visit plans using visit plan types (mandatory), visit plan IDs, drivers (mobile users), and validity periods.

- [Customer](#)

You can search using customers' numbers and names and by using sales areas.

i Note

You can create and save your searches.

Result List

In the result list, only the visit plans for which the [Collect CRM Activities](#) checkbox has been selected in visit planning are displayed. If you point the cursor at a visit plan ID, details related to the customers for this visit plan are displayed in a [VP Details](#) quickview.

At the top of the result list group box, the execution period that is displayed is defaulted to the current day's date plus 7 days. You can set a start and end date and the result list changes accordingly.

i Note

If you set a new execution period, confirm the start/end date by choosing .

To execute the report, select a single visit plan, multiple visit plans, or all visit plans and choose [Start Report](#).

Display

Visit Plan Selection List

In the top group box with the [Execution Period: \(the selected search dates\)](#) title, a list of the selected visit plans is displayed. You are able to switch between the individual visit plans and the [List of CRM Activities](#) in the lower part of the screen changes accordingly.

Select [Display Error Log](#), to see information related to errors.

Calendar Control

On the top right of the screen, a calendar is displayed with the selected execution period highlighted.

You are able to select a date or a date range in the calendar and the [List of CRM Activities](#) changes accordingly.

CRM Activity List

You can see detailed information about CRM activities for a tour, for example, the amount of time needed for CRM activities in a day. The following are the main columns in the report:

- [Execution Date/Customer/Activity](#)

In the tree, you can see the individual days in a tour with the amount of time needed for CRM activities in a day, the individual customers, and the individual CRM activities for a tour. If you select the icon per CRM activity and if activity items such as surveys are maintained, they are displayed.

- [TAs](#) (Trade Assets)

For customers who have trade assets, the number of trade assets per customer is displayed. If you select the number, details about the trade assets are displayed in a popup.


- [Origin](#) and [Status](#)

There are 3 different types of origin with their corresponding statuses as follows:


- Existing CRM activities
 - [Origin](#): is comprised of "ActID: + the CRM Activity ID".
 - [Status](#): The status from SAP CRM in the back end is displayed, for example, **Open**.

For CRM activity item such as surveys, there are separate statuses, for example, **Filled**, that originate in SAP CRM.

- Simulated DSD-driven CRM activities.
 - *Origin*: is comprised of “DSD and the transaction description”
The transaction descriptions and the validity periods are defined in Customizing for *Customer Relationship Management* under ► *SAP Direct Store Delivery* ► *General Parameters* ► *Define CRM Activity Mass Generation Depending on Tour Scenario* ⌵.
 - *Status*: **Open**
These CRM activities are automatically generated by the system according to your Customizing settings.
- Simulated CRM activities from CRM visit plans
 - *Origin*: is comprised of “VP plus the visit plan ID”
These CRM activities and their validity periods are from CRM visit plans (maintain in the **CRMM_TOUR** transaction code or the SAP CRM Web-based UI).
 - *Status*: **Planned**


 **Caution**

You must still schedule CRM activities from the CRM visit plan.

 **Note**

Activity items (surveys and activity journals) have validity periods that originate in their respective Customizing settings.

- **Duration**
You can see whether or not there are limits placed on how much time is allowed for CRM activities per customer and which CRM activities will not be completed (highlighted in red) if the defined maximum time allowed for CRM activities is exceeded.

 **Note**

The maximum time allowed for CRM activities is defined in visit planning in the *Max. Time Allocated for CRM activities in Minutes* field and is shown in the report at customer level.

- **Mandatory**
This indicator is displayed at both activity and activity item level.

6.5 Delta Tour Data

Definition

A subset of transactional and master data, related to a unique tour, that has been changed after the tour status has passed the maintenance blocking status, for example, after the tour has been downloaded to the mobile device. In an occasionally connected scenario, delta data can be downloaded to or uploaded from a mobile device.

Use

In *SAP Direct Store Delivery*, during the physical tour execution, you can create and download tour data (documents) from the back end to the mobile device and you can also upload tour data of already completely processed visits. This is called the occasionally connected scenario and the changed data is called delta tour data. The download and upload of delta data can occur multiple times during the execution of a tour.

In *SAP Direct Store Delivery*, delta data created in the *OCS Cockpit* (transaction code `/EMSE/OC_ONTOUR`) can be sent to the mobile device without generating a new tour; new tasks are just added to an existing tour on the mobile device. For deliveries and customer visits, the shipment type and visit list type are customized separately. This enables subsequent processes, for example, for capacity checks or to calculate freight costs, to be triggered or suppressed. Such follow-up documents are created with the same attributes, for example, tour ID, driver, vehicle, and route, as the original tour document.

In the *OCS Cockpit*, you can create and change delta data. You can always see the original tour, the sequence of delta data added to it, and the status of follow-up documents.

Delta tour data, comprising the entire master and pricing data, can be requested by the mobile device for a list of customers and their sales areas. This enables the mobile user to collect payments from these customers or to use full offline pricing and data about listing and exclusion of materials to take orders and make deliveries to them.

Integration

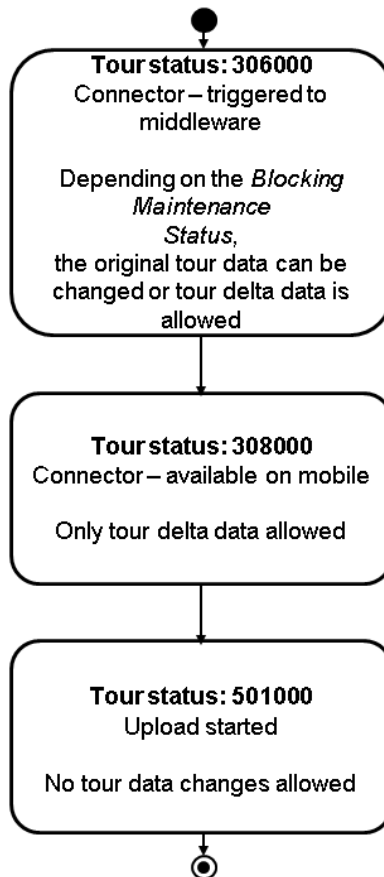


Figure 13: Delta Tour Data

As can be seen in the *Delta Tour Data* graphic above, maintenance of the original tour data is allowed in the back end until the maintenance blocking tour status is achieved or the tour is available on the mobile device (status 308000 in this graphic). At this point, you must create delta tour data.

After processing the tour on the mobile device, the transactional data is uploaded from the mobile device to the DSD connector in the back end system. At this point (status 501000 in this graphic), you cannot make changes to the tour data.

- **Tour status**
The tour status is a numeric ID indicating the different stages that a tour can reach, for example, 308000 indicates that the tour data is available on the mobile device following synchronization.
- **Maintenance blocking status**
Maintenance blocking status is a numeric tour status ID defined in Customizing for occasionally connected scenarios. Once the maintenance blocking status is reached, the original tour data cannot be changed. When a tour status ID reaches the maintenance blocking status, a delta data package must be created to add data for the tour.
- **Delta sequence number**
The delta sequence number is a consecutive identifier for delta data for one specific tour. It is assigned by the system during the creation and saving of delta data.

Example

Two customer visits are added to an already downloaded tour. In the *OCS Cockpit*, the original tour has the delta sequence number 00. The customer visits of the delta download are identified with the delta sequence number 01. If the delta with delta sequence number 01 is also downloaded, the next visit added to the tour would be in a new delta with the delta sequence number 02.

- Follow-up document
A follow-up document is an object containing the following delta data for visit lists, shipments, or both:
 - A follow-up shipment is a document with a particular shipment type and transportation planning point that contains the additional delta data, for example, delivery and customer data, for a tour.
 - A follow-up visit list is a document with a particular visit plan type that contains the additional delta data, for example customer and order data, for a tour.
- Follow-up document status
The follow-up document status describes the following different stages that a follow-up document can reach:
 - 10 New follow-up sequence created
 - 20 Output type for the download to the connector is created
 - 30 Connector inbound processed
 - 40 Processed data to middleware
 - 50 Successful download
 - 60 Unprocessed delta
 - 90 Error during import to connector or pricing

6.5.1 Occasionally Connected Scenario

Use

An occasionally connected scenario (OCS) is a business scenario where the mobile device and the back end system require an online connection for transferring data. Examples of occasionally connected scenarios are the download of additional customers, deliveries, orders, and activities or the upload of completed visits.

In *SAP Direct Store Delivery* mobile scenarios, selected data can be exchanged between mobile devices and the *SAP Direct Store Delivery* back end systems using occasional online synchronization. Occasionally connected scenarios can be used throughout the physical tour to exchange information between mobile users (for example, delivery drivers) travelling to customer locations and central locations (for example, headquarters and distribution centers).

In *SAP Direct Store Delivery*, occasionally connected scenarios enable the download and upload of the most time-sensitive information, for example, the following, between the mobile users' devices and the central location throughout the tour:

- Newly captured sales orders
- The delivery of rush orders
- Recently executed visits together with the associated activities
- The availability and price of products

A location- and time-independent device synchronization increases the flexibility, responsiveness, and consequently the efficiency of mobile users during their sales and delivery tour. For example, this saves driving

and fleet costs as the mobile users and vehicles have to return to a central location only if commercially necessary. In addition, providing the option to presellers to immediately synchronize new sales order data can reduce the order to delivery time, which improves customer satisfaction.

Example

- Presellers
In an occasionally connected scenario for presellers, the preseller may want to add a new customer to the tour. Presellers can be provided with information about when customers have been visited and what activities have been done at customer sites.
- Delivery drivers
In an occasionally connected scenario for delivery drivers, the delivery driver may want to supply an additional delivery to a customer on a dedicated tour or the delivery driver may want to provide an additional delivery to an additional customer on the tour (for example, a rush order).

Integration

In the *OCS Cockpit* (transaction code `/EMSE/OC_ONTOUR`), a customer can be assigned to multiple sales areas, for example, customer X is assigned to sales area Y and, in another node in the tree, Customer X is assigned to sales area Z.

Orders can only be added to tours that are preseller tour scenarios.

Activities can only be added to tours if the driver for an activity is same as the driver of the tour.

Features

In *SAP Direct Store Delivery*, at the start-of-day, the tour data from the back end is transferred via the DSD Connector (and via the middleware for *SAP Direct Store Delivery for Windows Mobile*) to the mobile device. As long as the tour data has not reached the customizable maintenance blocking status, you can change the original tour data and send the changed data to the mobile device.

However, there are some business scenarios that require changes to the back end data during tour execution, for example, to add additional customers or deliveries. If, for example, the delivery driver already has the tour data on the mobile device and more material is required by a customer, then you can change the tour data in the back end for future update to the mobile device when the delivery driver can connect for data synchronization. New data created from the back end is sent to the mobile device alerting the delivery driver that new actions may be required. In another scenario, data is transferred from drivers' mobile devices to SAP ERP back end ad-hoc and on the drivers' initiation.

In these occasionally connected scenarios, the tour data is now designated as delta tour data. The back end and the mobile device must track data already exchanged so that there is no duplication of data during final settlement at the end of the day or work period. In order to create and manage this delta tour data, the *OCS Cockpit* is provided in the back end in SAP ERP (see [OCS Cockpit Tour Selection and Maintenance Screens \[page 115\]](#)).

In other occasionally connected scenarios, the following functionality is available:

- Available-to-Promise (ATP), credit, due open item, and pricing checks
During occasional online synchronization, data is exchanged using interfaces, for example, for an availability (ATP) check in *Sales and Distribution* and for price determination in the back end system. This real-time data exchange enables mobile users to access the latest data and react quickly to inquiries about stock, credit, or prices at customer locations. In Customizing, you can specify which price conditions are transported to the mobile device if the ATP and price check is run.
- Reload
A reload of the truck can be necessary during tour execution. The driver returns to the distribution center where he unloads empties and damaged products before loading new products required, for example, to satisfy a new delivery for OCS. You can navigate from the *OCS Cockpit* directly to the reload functionality. In Customizing, you can indicate that a reload proposal can be generated from follow-on documents in reload maintenance (transaction /DSD/SV_RELOAD) in the back end. A corresponding *Create Proposals* button appears as a result in reload maintenance.
- Listing and exclusion
Listing and exclusion data is downloaded to the mobile device as delta tour data for customers who are newly added to a tour in the *OCS Cockpit*. You cannot update listing and exclusion data for the customers who were downloaded with the initial tour to the mobile device. For more information about the fields allowed for listing and exclusion in *SAP Direct Store Delivery*, see [Listing and Exclusion of Materials \[page 134\]](#).
- Paper-based scenario
A copy program (transaction code /DSD/SL_RADB) fills the *Route Accounting Database* (RAD) if a paper-based scenario is executed for delta uploads or final uploads and if the original tour includes delta packages with their corresponding follow-up documents. The copy program inserts all tour-relevant data taking follow-up documents, the delta upload mode, or complete upload mode (final upload) into account.
- Further OCS-relevant data
 - CRM
CRM Customizing data is updated completely (inserts, updates, and deletes)
 - Pricing
Pricing data is always updated completely both for new customers as well as for existing customers who are not part of the delta tour data.
 - Master data
Master data is updated completely. A real delta determination is done for all customers and materials that are part of the tour and the delta document.

Activities

To access the *OCS Cockpit*, do one of the following:

- In the SAP Easy Access menu, choose ► *Logistics* ► *Logistics Execution* ► *Direct Store Delivery* ► *Visit Control* ► *Occasionally Connected Scenario Cockpit* ►
- Use transaction code /EMSE/OC_ONTOUR

Customizing

In Customizing, you can make the following settings for occasionally connected scenarios for *SAP Direct Store Delivery*:

SAP ERP

In Customizing for *Logistics Execution* under *SAP Direct Store Delivery*:

- Under ► *Handheld Connectivity* ► *Occasionally Connected Scenarios* ►:
 - *Follow-up Documents for Shipments*
 - *Follow-up Documents for Visit Lists*
 - *Activate Reload Proposals*
 - *Allow Deliveries with Different Route*
 - *Maintain Condition Types for Online Pricing*
- Under ► *Handheld Connectivity* ► *DSD Connector Settings* ► *Mobile Device Settings* ► *Define Tour Scenario Settings* ►, you can make settings for enabling ATP, credit, open items, and pricing checks.
- Under *Tour Status* :
 - *Delivery Process: Assign Shipment to Tour Scenario*
 - *Sales Process: Assign Visit List to Tour Scenario*Here, you can make settings for the maintenance blocking tour status.
- Under ► *Visit Control* ► *Define Visit Plan Types* ►, you can make settings for multiday tours.
- Under ► *Basic Functions* ► *Manage Multiple Sales Areas Processes* ►, you manage whether single or multiple sales area processes are used in *SAP Direct Store Delivery*.

SAP CRM

In Customizing for *Customer Relationship Management* under ► *SAP Direct Store Delivery* ► *General Parameters* ► *Define CRM Activity Mass Generation Depending on Tour Scenario* ►, you can make settings for the mass generation of CRM activities depending on occasionally connected scenarios (see [CRM Activities Integration \[page 101\]](#)).

More Information

For more information about ATP checks and pricing determination in occasionally connected scenarios, see the SAP Help Portal at <http://help.sap.com> ► *SAP ERP Central Component* ► *Logistics* ► *Logistics Execution (LE)* ► *Direct Store Delivery* ► *Tour Preparation* ► *Additional Functions for Using Mobile Devices* ► *OCS: ATP Check and Pricing Determination* ►.

6.5.1.1 OCS Cockpit Tour Selection and Maintenance Screens

Use

On the *OCS Cockpit* (transaction code /EMSE/OC_ONTOUR) tour selection screen, you can use selection criteria to select individual or multiple tours.

On the *OCS Cockpit* tour maintenance screen, for each tour or tours you select, you can add new customers, deliveries, orders, and activities to a tour. You can change the sequence of newly added customers or deliveries and you can delete them. You can assign customers to multiple sales areas.

Features

OCS Cockpit Tour Selection Screen

On the selection screen *OCS Cockpit: Select Tour*, to select one or more tours, enter or select individual values or ranges of values in one of the following fields:

- *Tour ID*
- *Shipment Number*
- *Visit List ID*

You can also make a preselection for deliveries, customers, orders, or activities that you want to have available on the maintenance screen for adding to the delta data for a tour.

OCS Cockpit Tour Maintenance Screen

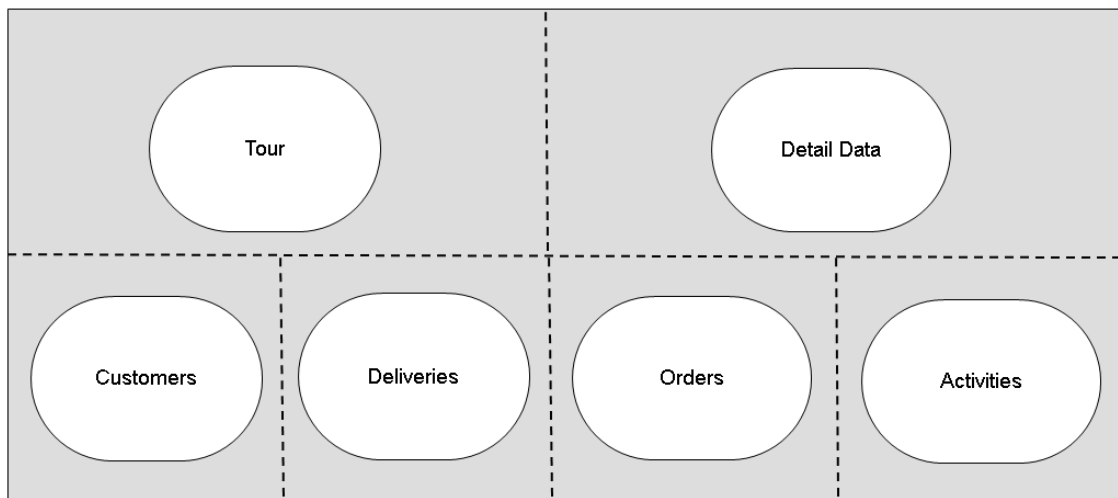


Figure 14: OCS Cockpit Tour Maintenance Screen Views





As can be seen in the *OCS Cockpit Tour Maintenance Screen Views* graphic above, the *OCS Cockpit: Maintain Tour* screen is divided into the following 6 views:

- *Tour*
At this node level, you get information such as the tour status ID and the mobile user role, for example, preseller.








The *Tour* tree can comprise, for example, of the following:

- 
- 




At this node level you see the delta sequence number, for example 00 represents the original tour and 01 represents the first delta sequence. You can also see the follow-up document status, for example, 50 for a successful download to the mobile device.

-  Sales organization/Distribution channel/Division
- 
- 
- 
- *Detail Data*
Information is shown, for example, about the tour, customer, or delivery selected in the *Tour* tree.
- *Customers*
- *Deliveries*
- *Orders*
- *Activities*

Icons and Buttons on the Main Toolbar

- 
- 
-  Delete the entire last delta sequence
-  Delete data on the DSD Connector and not the entire delta sequence
-  Navigate to display visit list data
-  Navigate to display shipment data
- *Reload*
Select when a delivery driver or van seller has not got enough stock on the truck to fulfill newly added delivery
- *Output*
Choose to execute IDoc generation for the delta sequence. The newly created delta data IDocs are inserted into the DSD Connector for further download processing with respect to the tour ID.
- *Hide/Show Customers, Hide/Show Deliveries, Hide/Show Orders, and Hide/Show Activities*
Use to hide or show these 4 views
-  Navigates to the application log to display tour-specific messages

Icons in Toolbars of the Tour, Customers, Deliveries, and Orders Views

- Tour view

- Customers/Deliveries/Orders/Activity view
 - 
 - 

Activities

You can access the *OCS Cockpit* from the *SAP Easy Access* menu by choosing **Logistics** > *Logistics Execution* > *Direct Store Delivery* > *Visit Control* > *Occasionally Connected Scenario Cockpit* (transaction code /EMSE/OC_ONTOUR).

On the *OCS Cockpit* tour maintenance screen, when you want to make changes, for example, you want to add a customer to a tour, you can use the pushbuttons on the toolbars as described above or you can use drag and drop; the color grey indicates that changes cannot be made.

6.5.1.1.1 Adding Delta Data to a Tour

Use

In this example of adding delta data to a tour, there is a mobile user with a mixed role for whom you want to change the visit list and shipment by adding the following:

- An additional customer to an original tour for visiting and taking orders
- An additional delivery for another customer on the tour

Prerequisites


The tour is already created, the tour status has reached the maintenance blocking status, for example, 308000 for data synchronized to the mobile device, and the current original data is identified with delta sequence 00.

Customizing settings are made for a mixed role scenario.

The delivery you want to add has the same route as the tour.

In the *OCS Cockpit*, if the *Customer* and *Delivery* views are hidden, on the main toolbar, choose *Hide/Show Customers* and *Hide/Show Deliveries* to show these 2 views.

Procedure


1. On the *SAP Easy Access* menu, choose **Logistics** > *Logistics Execution* > *Direct Store Delivery* > *Visit Control* > *Occasionally Connected Scenario Cockpit* (transaction code /EMSE/OC_ONTOUR) to access the *OCS Cockpit: Select Tour* screen.
2. On the *OCS Cockpit: Select Tour* screen, use the selection criteria to select the relevant tour.
3. On the *OCS Cockpit: Maintain Tour* screen, in the toolbar of the *Customers* view, choose  to select the customer you want to add to the original tour.
The selected customer is displayed in the *Customers* view.

4. In the *Customers* view, select the customer you want to add to the original tour.

5. In the toolbar of the *Customers* view, choose .

6. Select the *DSD Tour ID* in the popup.


The customer you want to add is displayed in the *Tour* view as a new node. This is indicated by a  beside the node.


7. In the toolbar of the *Deliveries* view, choose  to select the delivery you want to add to the original tour. The delivery is displayed in the *Deliveries* view.

8. Select this delivery in the *Deliveries* view.

9. In the toolbar of the *Deliveries* view, choose .

10. In the *Tour* view, select the *Customer* for whom you want to add the delivery.

A new node for the customer, which shows the newly added delivery, is displayed in the *Tour* view. This is indicated by a  beside the node.

11.  your changes.

Note

You can also use drag and drop to add the customer or delivery from the respective views to the *Tour* view.

Result

In the *Tour* view, the following information is displayed:

- The new additional customer and new additional delivery have the value *01* in the *Delta Seq.* column. Delta sequence *01* is not grey or disabled indicating that it can be edited.
- The *Doc. status* column shows value *10 New follow-up sequence created* for the delta sequence *01*.

You can use transaction code `VT03N` to check that the driver and vehicle of the follow-up shipment is the same as the original tour (original shipment).

You can use transaction code `/DSD/VC_VL_VIEW` to check that the driver and vehicle of the follow-up visit list is the same as the original tour (original visit list).

When you use transaction code `VT70` for follow-up shipment or `/DSD/VC_MESSAGES` for follow-up visit list, the error logs display the message *Document &1 is a follow-up document; no IDocs are created*.

Note

To create IDocs, in the main toolbar, choose the *Output* pushbutton. As a result, the *Doc. status* column shows value *20 Output type for the download to the connector is created* for the delta sequence *01*.


6.6 Deal Condition

Use


In *SAP Direct Store Delivery*, the standard deal condition functionality is enhanced by the following:

- New maintenance transactions
See the **Activities** section below.
- New and expanded maintenance functions
When you maintain deal conditions (transaction code `/EMSE/DC_MAIN`), the following group boxes are displayed:
 - *Assignments*
Assignments specify which customers are entitled to a deal condition (*Inclusive Assignment*) and which are not (*Exclusive Assignment*). An expanded number of assignment fields are supported, for example, *Attribute* (1-10) and *Customer Group* (1-5).
 - *Deal Condition Scales*
For more information, see the relevant section in **Features** below.
 - *Preconditions*
An expanded number of precondition fields are supported. For more information, see the relevant section in **Features** below.
 - *Exclusion List*
For more information, see the relevant section in **Features** below.
- You can perform a mass upload of deal conditions
There is a *Mass Upload of Deal Conditions* program (the `/EMSE/MASS_INPUT_DEALCOND` program) for the mass upload of deal conditions into a given SAP ERP system, which may or may not already contain deal conditions. The data necessary for migration is provided by a JSON file.
- You can list and delete deal conditions.
- You can grant deal conditions to smaller businesses by accumulating the drop volume over a certain time period (see [Deal Condition per Period \[page 123\]](#)).
- The deal condition process is integrated into the order-to-cash process in SAP ERP (see [Deal Condition Integration into SD Document Flow \[page 125\]](#)).

Integration

You can make the following settings for deal conditions in Customizing for *Logistics Execution* under **SAP Direct Store Delivery** > **Deal Condition** 

- *Define Deal Condition Types*
- *Define Field Selection*
Per deal condition type, you can make settings for the expanded list of precondition fields.
- *Define Customer Hierarchy Type for Each Sales Area*

You can make settings for deal conditions per period in Customizing for *Logistics Execution* under **SAP Direct Store Delivery** > **Deal Condition** > **Deal Condition per Period**  (see [Deal Condition per Period \[page 123\]](#)).

You can make settings for deal conditions in the SD document flow in Customizing for *Logistics Execution* under ► *SAP Direct Store Delivery* ► *Deal Condition* ► *Deal Condition in Back End Sales and Distribution Process* ► (see *Deal Condition Integration into SD Document Flow* [page 125]).

Features

Note

For information about the features only available on mobile devices based on Windows Mobile, see [Features only Available for SAP Direct Store Delivery for Windows Mobile](#) [page 31] under Deal Condition.

Maintenance of Deal Conditions

Deal Condition Scales

On the *Deal Condition Maintenance* screen, in the *Deal Condition Scales* group box, you can maintain scales on which the results of deal conditions can be based. Defining scales allows you to fine tune rebating and the granting of free goods by quantity ranges.

Scales you maintain are downloaded to mobile devices. Scales are taken into account during deal condition determination. If you maintain scales, the overall sales quantity of all fulfilled preconditions must lie within one of the scale ranges to grant the deal condition. If you do not maintain scales, the standard determination logic is applied.

In the *Results* group box, for the defined scales, the monetary rebates are displayed in *Percentage and Amount Results* while the free goods are displayed in *Free Goods Result*.

Example

Table 11:

Scale	Quantity From	Quantity To
1	0	9
2	10	19
3	20	29

A customer buys 25 units of a relevant material and gets a scale 3 level rebate, which is a higher level of rebate than for scales 1 and 2.

Precondition Fields

You use a selection of *Precondition* fields to specify which materials have to be bought by customers to qualify for specific deal conditions.

In the *Preconditions* group box on the *Deal Condition Maintenance* screen, the preconditions fields you have selected per deal condition type in Customizing are displayed.

You can select the precondition fields for the deal condition type in Customizing for *Logistics Execution* under ► *SAP Direct Store Delivery* ► *Deal Condition* ► *Define Field Selection* ►.

Using the standard deal condition functionality, you can select the following precondition fields per deal condition type:

- *Material Number*
- *Material Group*
- *Material Pricing Group*

In *SAP Direct Store Delivery*, per deal condition type, you can select the following additional product related fields for precondition definition:

- *Product Hierarchy* (levels 1-9)
- *Material Group* (levels 1-5)
- *Product Attribute* (levels 1-10)

Values you enter in precondition fields are downloaded to mobile devices where they are used during the validation of preconditions.

Exclusion List

On the *Deal Condition Maintenance* screen, in the *Preconditions* group box, you can maintain exclusion lists for materials that you want to have excluded from the precondition calculation. The exclusion lists you maintain are downloaded to mobile devices where they are taken into account during deal condition determination.

Example

You include a material group in a deal condition determination. However, you use the exclusion list to exclude some materials from this material group from the deal condition determination.

Listing and Deletion of Deal Conditions

On the *List of Deal Conditions* screen (transaction `/EMSE/DC_LIST`), a list of selected deal conditions maintained in the deal condition master can be displayed for all the deal conditions defined according to the following selection criteria:

- Header data
- Assignment
- Precondition

Note

A deal condition matches the assignment selection if there is at least one line that uses all the assignment selection criteria. The same is true for the precondition selection.

On the *Delete Deal Condition* screen (transaction `/EMSE/DC_DELETE`), you can delete a selection of deal conditions that match the following selection criteria:

- Deal condition number
- Deal condition type
- Valid to date

You can choose whether or not to delete **all** deal conditions that match the selection criteria or you can restrict the selection by selecting one of the following:

- Standard deal conditions only
- Deal conditions per period only

For more information, see [Deal Condition per Period](#). [page 123]

When you choose *Delete Deal Condition*, you are asked for a confirmation of the deletion in a popup. When you confirm the deletion, all the selected deal conditions are deleted along with their dependent data (scales, assignment data, and so on) from the database. The deletion log result is displayed on this screen too.

You can choose *Display Deal Conditions to Delete* to display the selected deal conditions before deletion.

Activities

In the *SAP Easy Access* menu, you can access deal condition maintenance under **▶ SAP Menu ▶ Logistics ▶ Logistics Execution ▶ SAP Direct Store Delivery ▶ Deal Condition** under the following:

- *Maintain Deal Conditions* (transaction code /EMSE/DC_MAIN)
- *List of Deal Conditions* (transaction code /EMSE/DC_LIST)
- *Display List of Resulting Rebates* (transaction code /DSD/DC_RESULT)
- *List of Deal Conditions not Granted due to Out of Stock Goods* (transaction code /DSD/DC_DIFF)
- *Delete Deal Conditions and Related Confirmation Data* (transaction code /EMSE/DC_DELETE)

More Information

For more information about deal conditions, see the SAP Help Portal at <http://help.sap.com> **▶ SAP ERP Central Component ▶ Logistics ▶ Logistics Execution (LE) ▶ Direct Store Delivery ▶ DSD-Specific Master Data ▶ Additional DSD Data: Deal Condition**.

6.6.1 Deal Condition per Period

Use

In order for you to also be able to grant deal conditions for free goods to customer with smaller businesses, *SAP Direct Store Delivery* accumulates drop sizes to customers over a certain time period and uses accumulated invoice data to determine deal conditions.

These special deal condition types, named deal conditions per period, are defined in the back end of SAP ERP and are not downloaded to mobile devices. Over a certain defined period of time, all the sales activities for a customer are accumulated and if the customer receives the deal condition, a free goods document is created automatically.

i Note

There is no monetary reimbursement for deal conditions per period.

Integration

You can make the following settings for deal conditions per period in Customizing for *Logistics Execution* under [▶ SAP Direct Store Delivery ▶ Deal Condition ▶](#):

- [▶ Deal Condition per Period ▶ Define Free Goods and Base Document Types ▶](#)
When you evaluate a deal condition per period, customer invoices for a specified period are cumulated to simulate a “big order”. If this “big order” result fulfills the deal condition preconditions, a free goods order is created with the free goods document type you have defined in this Customizing activity. The document type of this “big order” is the base document type you have defined in this Customizing activity.
- [▶ Deal Condition per Period ▶ Define Visit Plan Types ▶](#)
If the evaluation of a deal condition per period creates a free goods order, the next visit day to deliver this free goods order is also calculated. This calculation considers all visit plans that are assigned to this customer and that have a visit plan type defined in this Customizing activity.
- [▶ Deal Condition in Back End Sales and Distribution Process ▶ Define Order Types ▶](#)
When you evaluate a deal condition per period, only invoice positions with orders matching the order types you have defined here for the sales area of the order are considered.
- [▶ Deal Condition in Back End Sales and Distribution Process ▶ Define Deal Condition Item Categories ▶](#)
When you evaluate a deal condition per period, only invoice positions whose item category matches one of the item categories you have defined here for the order type and the sales area of the order are considered.

Features

On the *Deal Conditions per Period* screen (transaction code `/EMSE/SAPLDC_PER_PERIOD`), you can evaluate deal conditions per period. On this screen, you can also have the log results of already evaluated deal conditions displayed.

Evaluation

Only the following deal conditions are considered for evaluation:

- With the deal condition type “Deal conditions per period”
- With the deal condition status “Ready to be applied”
- Having a validity period with a date in the past

Additionally, you must have the authorization to evaluate the deal condition.

From your selection of deal conditions for evaluation, all customers matching the deal condition are selected. For each of these customers, all invoices within the deal condition period are selected. From these invoices, only invoice positions are considered that match the following Customizing settings:

- Those whose sales order has a sales document type that you have defined in the *Define Order Types* Customizing activity (see *Integration* above).
- Those whose item category you have defined in the *Define Deal Condition Item Categories* Customizing activity (see *Integration* above).

These invoice quantities are summarized and a “big order” is simulated with the customized base document type. The simulation result is used to check if this order (of the summarized invoices) fulfills the preconditions and, if so, then a free goods order is created with the customized free goods document type.

The next delivery date for the free goods is calculated from all the visit plans of the customized visit plan types the customer is assigned to plus the lead time for the customized free goods document type for this customer.

After the evaluation of a customer, the invoice data is stored and these invoices are not evaluated a second time for the deal condition. At the end of the evaluation of a deal condition, the deal condition status is set to "Already applied" and the deal condition is not considered in future evaluation processes.

Test Mode

You can run the evaluation in test mode. In test mode, only the result of the evaluation is displayed. No free goods document is created and the displayed log result is not written into the database. This means that you cannot select this result afterwards if you choose [Display Log](#). In test mode, deal conditions with the deal condition status "New" can also be evaluated.

Selection to Display Log Results

To select the log results, enter a sales organization, a customer, or a deal condition number.

Deal Conditions per Period Log Results

In the [Deal Conditions per Period Log Results](#) table, the evaluation for every customer and deal condition for your selection is displayed. You can jump to the following:

- [Deal Condition Maintenance \(Display\)](#) screen
Choose [Deal Condition](#) or double click on the deal condition number.
- [Deal Conditions per Period Log Details Results](#) table
Choose [Customer Bills](#) or double click on the customer number. From here, you can choose [Invoice to Display: Overview of Billing Items](#).
- [Display Free Goods](#)
Choose [Free Goods Order](#) or double click on the free goods order number.
- [Display Logs](#)
Choose [Application Log](#) or double click on the free goods order status.

Activities

In the SAP Easy Access menu, you can access deal condition per period evaluation under ► [SAP Menu](#) ► [Logistics](#) ► [Logistics Execution](#) ► [SAP Direct Store Delivery](#) ► [Deal Condition](#) ► [Evaluate Deal Conditions per Period](#). ►

6.6.2 Deal Condition Integration into SD Document Flow

Use

In SAP ERP, order-to-cash is a scenario that enables you to sell goods from stock using a wide range of standard features to handle sales quotes, sales orders, deliveries, customer invoices, and payments. The following [Sales and Distribution](#) (SD) documents are involved:

- Sales documents (for example, sales orders)

- Shipping documents (for example, deliveries)
- Billing documents (for example, invoices)

In *SAP Direct Store Delivery*, the deal condition functionality is available on mobile devices and also in the order-to-cash process in SAP ERP in the back end.

In the back end of *SAP Direct Store Delivery*, you can assign deal conditions to SD documents for the order-to-cash process, for example, when you create sales orders, deliveries, and invoices.

Integration

In *SAP Direct Store Delivery*, deal condition determination in the back end is the same as that used on mobile devices as follows:

- Deal conditions that are valid for customer, sales area, date, and that are active are determined
- Precondition compliance is checked taking the *Mandatory Active* checkbox and exclusion list into account
- Results are calculated based either on scales or target quantity including proportional factor
- Free goods (free of charge tied empties validation) and/or discounts (header/item, percentage/amount) are applied

For more information about maintaining deal conditions, see [Deal Condition \[page 120\]](#).

You can make the following settings for deal conditions in the SD document flow in Customizing for *Logistics Execution* under **► SAP Direct Store Delivery ► Deal Condition ► Deal Condition in Back End Sales and Distribution Process ►**:

- [Define Deal Condition Settings](#)
- [Define Transaction Codes and User Commands valid for Deal Conditions](#)
- [Define Order Types](#)
- [Define Deal Condition Item Categories](#)
- [Assign Item Categories](#)
- [Define Item Usage for Free Good Results](#)
- [Define Condition Types for Simulation](#)

Features

Deal Conditions in the SD Document Flow

Sales Orders

In the back end of *SAP Direct Store Delivery*, you can assign deal conditions to sales documents, for example, when you create sales orders (transaction code VA01), inquiries (transaction code VA11), and quotations (transaction code VA21).

When you maintain a sales document, for example, when you create a sales order during a sales negotiation with a customer, you can activate which of the deal conditions for the customer/sales area combination are available for deal condition determination. You can also simulate deal condition determination to show the free goods or monetary rebates that could be granted depending on sales volume.

The deal conditions from the saved sales order are copied into the pertaining SD shipping document (delivery). Before the delivery can begin, the stock in the storage location is checked against the sales order (see the [Out of Stock Goods and Recalculation of Deal Conditions](#) section below).

Deliveries

SD shipping documents that are deliveries are based on the sales orders you create. Granted deal conditions are considered during the delivery process and a delivery can include free goods.

Invoices

SD billing documents that are invoices are adjusted according to the deal conditions granted and the pricing data is updated to reflect discounts.

Out of Stock Goods and Recalculation of Deal Conditions

If goods on a sales order are out of stock, the delivery is automatically adjusted and decreased.

A recalculation of the relevant deal condition can be triggered depending on your settings in Customizing for [Logistics Execution](#) under [SAP Direct Store Delivery > Deal Condition > Deal Condition in Back End Sales and Distribution Process > Define Deal Condition Settings](#), for example, as follows:

- Delivery
 - You allow the recalculation of deal conditions if goods are out of stock during delivery processing
If the delivery quantities need to be changed due to out of stock goods that are part of a precondition of a granted deal condition, the deal condition determination is carried out again. If the result differs from the original one, the deal condition results are rolled back from the delivery and you need to adjust the quantity of goods in the sales order (transaction code VA02) to reflect the available stock. The deal condition is recalculated based on the adjusted quantity resulting in a new delivery.

i Note

The recalculation of deal conditions is not performed for out of stock granted free goods.

- You do not allow the recalculation of deal conditions if goods are out of stock during delivery processing
If recalculation is not selected, the determined deal conditions from the sales order are always copied into the pertaining SD shipping document (delivery) and SD billing document (invoice).
- You allow the delivery of decreased quantities of granted deal condition free goods
If the delivery quantities need to be changed due to out of stock goods that are part of granted free goods, the deal condition is not recalculated and a partial quantity of free goods is delivered.
- Invoice
If out of stock goods result in free goods and monetary discounts for granted deal conditions being rolled back, pricing is also adjusted for invoices if the deal condition cannot be granted or a different scale was achieved by the adjusted volume.

List of Deal Conditions not Granted due to Out of Stock Goods

If goods are out of stock, a deal condition granted in the sales order may no longer apply or may apply on another scale following an availability check during delivery creation. In this case, the rebate is deleted or adjusted in the delivery (for free goods) or in the invoice (for monetary amounts). In the [SAP Easy Access](#) menu, choose [SAP Menu > Logistics > Logistics Execution > SAP Direct Store Delivery > Deal Condition > List of Deal Conditions not Granted due to Out of Stock Goods](#) (transaction code /EMSE/DC_DIFF) to identify

the deal conditions that have been deleted or adjusted in the delivery or invoice document as a consequence of goods being out of stock.

Activities

Sales Order Creation and Deal Condition Determination

In SAP ERP, in the back end of *SAP Direct Store Delivery*, you can create a sales order (transaction code VA01).

While you are creating a sales order on the *Create Order: Overview screen*, you are not able to display the result of deal condition determination but you are able to simulate it. Once you save the sales order, you can display a sales order (transaction code VA03) and view the granted discounts on item level.

On the *Create Order: Overview screen*, you can assign deal conditions to the sales order. To specify which deal conditions are to be made available for determination, choose ► *Go to* ► *Deal Conditions* ► *Activate* ►. The *Deal Conditions: Overview and Activation* screen is displayed. From the list of deal conditions available for the customer/sales area combination, select the deal conditions you want to activate for determination.

i Note

If you have selected the *Mandatory Active* checkbox on the *Deal Condition Maintenance* screen, the deal condition is granted automatically and you cannot deactivate it here.

To simulate deal condition determination, choose ► *Go to* ► *Deal Conditions* ► *Simulate* ►. The *Deal Conditions: Simulation* screen is displayed. On this screen, the free goods (highlighted in green) or discounts (highlighted in yellow) granted are displayed.

i Note

To activate deal conditions and simulate deal condition determination, you have to define which order types are enabled for deal conditions in Customizing for *Logistics Execution* under ► *SAP Direct Store Delivery* ► *Deal Condition* ► *Deal Condition in Back End Sales and Distribution Process* ► *Define Order Types* ►.

When you choose to save a sales order, the following happens:

- The sales order is updated with free goods granted
- The pricing data is updated to reflect discounts
- The deal condition feedback tables are updated.
These tables are usually maintained during the upload of a tour. To be consistent with deal conditions on the mobile device, these must be updated as well.

Sales Order Display Following Deal Condition Determination

On the *Display Order: Overview screen* (transaction code VA03), you can see any free goods (including tied empties) listed on the sales order.

On this screen, you can select a sales order item and choose the *Item conditions* pushbutton to open the *Display Order: Item Data* screen. On this screen, on the *Conditions* tab, you can see the item percentage discount.

More Information

For more information about *Sales and Distribution* document flow, see the SAP Help Portal at <http://help.sap.com> ► [SAP Business Suite](#) ► [SAP ERP](#) ► [Sales and Distribution \(SD\)](#) ►.

6.7 Pricing

Use

SAP Direct Store Delivery supports pricing as follows:

- Offline pricing
- Occasionally Connected Scenario (OCS)
- Online pricing

Prerequisites

In SAP ERP, you make settings for pricing data, for example, pricing procedures, in Customizing for *Sales and Distribution* under ► [Basic Functions](#) ► [Pricing](#) ►.

To make manual discounts available on mobile devices, in SAP ERP, you need to assign the condition types for each sales area in Customizing for *Logistics Execution* under ► [SAP Direct Store Delivery](#) ► [Handheld Connectivity](#) ► [DSD Connector Settings](#) ► [Mobile Device Settings](#) ► [Define General Settings](#) ► [Assign Condition Types for Manual Discounts](#) ►.

You can maintain condition types for OCS in Customizing for *Logistics Execution* under ► [SAP Direct Store Delivery](#) ► [Handheld Connectivity](#) ► [Occasionally Connected Scenarios](#) ► [Maintain Condition Types for Online Pricing](#) ►.

Features

Offline Pricing

The pricing engine is a mobile app for performing price calculations in offline mode. The pricing engine is connected to *SAP Direct Store Delivery* on mobile devices where it uses the condition technique to determine the prices and taxes of products in sales documents.

The pricing for orders and deliveries calculated for a customer by the pricing engine on mobile devices matches the pricing for the same data calculated in SAP ERP.

As offline price calculations are performed on sales order confirmation and delivery confirmation at the POS with customers, *SAP Direct Store Delivery* provides a flexible, fast, and reliable price calculation that is key to

supporting the ongoing direct store delivery business process. *SAP Direct Store Delivery* supports pricing at the POS for individual mobile user roles as follows:

- **Preseller**
The preseller takes an order from a customer for future delivery. The pricing is carried out in the sales order on the mobile device when all items are confirmed for the order. The pricing engine can calculate the exact order price including, for example, any rebates, discounts, or manually entered conditions. The order and its price are confirmed by the customer.
- **Delivery driver**
On confirmation of delivery, the pricing engine calculates the delivery price for the invoice for the customer. The delivery driver may need to change the delivery for a cash customer if the delivery changes, for example, because the customer wants to change quantities. The delivery price is calculated by the pricing engine to reflect the actual, confirmed delivery.
- **Van seller**
The van seller sells and delivers goods from the speculative load on the truck. The pricing engine can calculate the exact confirmed delivery price for the van seller, who can then invoice and collect payment.

For more information about the pricing engine, see [Pricing Engine \[page 131\]](#).

Occasionally Connected Scenario (OCS)

In OCS, delta master data for additional materials, customers, or both is downloaded to mobile devices. However, the pricing data on mobile devices is always updated completely both for newly added customers as well as for existing customers who are not part of the delta tour data. The pricing engine uses delta material master data, delta customer master data, and the newly updated pricing data to calculate pricing.

Example

While executing a tour, a preseller has the opportunity to visit an additional customer whose master data was not downloaded to the mobile device in the original tour data. The preseller connects to the back end to download the relevant customer master data along with pricing data for all tour customers to the mobile device. On confirmation of an order, the pricing engine calculates the order price for the customer added to the tour.

For more information about OCS, see [Occasionally Connected Scenario \[page 112\]](#).

Online Pricing

Online pricing requires an online connection between mobile devices and the back end where pricing is calculated. The pricing calculations are based on data about customers, materials, and order types uploaded from mobile devices to the back end, which then downloads the calculated pricing to mobile devices. No pricing data, except data about manual conditions and their limits, is downloaded to the pricing engine on mobile devices.

You can turn off offline pricing in the back end, for example, if your delivery drivers only deliver goods and do not issue invoices or collect payments.

A decision to use online, and not offline, pricing may be based on data volume and related performance or on the complexity of formulas for pricing developed in back end systems.

More Information

For more information about the following, see the SAP Help Portal at <http://help.sap.com> ►► *SAP ERP Central Component* ►:

- Pricing
Under ►► *Sales and Distribution* ► *Pricing and Conditions (SD-BF-PR)* ►
- Pricing determination in occasionally connected scenarios
Under ►► *Logistics* ► *Logistics Execution (LE)* ► *Direct Store Delivery* ► *Tour Preparation* ► *Additional Functions for Using Mobile Devices* ► *OCS: ATP Check and Pricing Determination* ►

6.7.1 Pricing Engine

Use

The pricing procedure in the back end contains all condition records for individual customers, ranging from simple conditions for single outlets to complex conditions for multinational companies. The material master contains pricing-relevant data, for example, the physical units of measure (UoM) and UoM conversions. During synchronization of tour data from the back end to mobile devices, only pricing data relevant to customers on tours is sent to mobile devices. The pricing engine uses the tour-relevant customer, material, and condition records along with Customizing and conversion data to calculate prices on mobile devices.

Example

For a shipment, only the customer, materials, and condition records that are specific to the shipment are downloaded and the delivery price is calculated for the customer invoice.

When a mobile device is used in offline mode, the download process reads all valid condition records for all the condition types from each pricing procedure relevant to the customers in the visit list. Once the data is downloaded, the mobile user can run pricing, for example, a preseller can run pricing for confirmed sales orders and a delivery driver can run pricing for confirmed deliveries. In the case of deliveries, an invoice is generated using pricing information calculated by the pricing engine. Once an invoice is confirmed and printed, it becomes a legal document between the manufacturing company and their customer and the document becomes an important tax document.

Integration

The pricing engine can be loaded as a plug-in by *SAP Direct Store Delivery*.

Application Log

If a delivery or order price calculation fails, the mobile user can display details about the pricing error on the mobile device. Messages are provided in the output document at both header and item level. Error messages are written to the client application log which can be sent from a mobile device to the back end for further analysis in the *Application Log Monitor*.

For more information about the *Application Log Monitor*, see [Application Log Monitoring \[page 136\]](#).

3rd Party Library

As in SAP ERP, you can use user exits and develop 3rd party pricing libraries for use in *SAP Direct Store Delivery*. The pricing engine interprets an interface, provided for you, and loads your libraries to the mobile device.

Prerequisites

Blocking Changes to Condition Types

As the upload process does not send pricing information for invoices from mobile devices to the back end, the back end runs pricing for invoices during the *Final Settlement Run* for sales orders and invoices.

To avoid generating price differences between the final price on the invoice printed from the mobile device and the final price on the invoice generated in the back end, an error or a warning arises if you try to create a new condition record or change an existing condition record for a condition type that is currently being used in mobile scenarios. You can define a safety period in which error or warning messages occur. The time frame for the error or warning can be set to cover multiday tours.

You make these settings in Customizing for *Logistics Execution* under [SAP Direct Store Delivery > Handheld Connectivity > General Settings > Block Condition Types Changes for Mobile Pricing](#).

Features

Back end pricing functions supported by the *SAP Direct Store Delivery* pricing engine are as follows:

- Pricing procedure determination
The pricing engine automatically determines pricing procedures, which define the conditions permitted for a document and the sequence in which these conditions are taken into account during pricing.
- Price determination using condition technique
The pricing engine accepts sales orders, deliveries, or invoices as input and uses the condition technique to deliver prices and taxes as output.
- Multiple sales areas
You can define pricing procedures per sales area, and not just for a tour, as multiple sales areas are taken into account in pricing engine calculations.
- Condition exclusion
In pricing, more than one condition record may apply to a particular item at any one time. You can use the condition exclusion process to compare possible conditions in order to determine, for example, the best price for a customer. The pricing engine supports the following:
 - Usage of condition exclusion indicator
 - Condition exclusion group Customizing using rules (A, B, C, D, E, F, and L)
 - Last price logic
 - Usage of condition type attributes
- Manual conditions

A mobile user can grant additional discounts that are entered manually during sales order processing. Such manual conditions can be entered at header level or item level. They can have specific condition limits defined in the back end.

- Group conditions
A group condition can be used to determine a scale value based on more than one item in a document.

Example

The combined weight of different items in a group qualifies the grouped items for a higher discount than their individual weights.

- Hierarchy
The use of customer and product hierarchies allows you to reduce maintenance for pricing.
- Condition type reference
This is for ease of maintenance where only one condition needs to be maintained and other conditions refer to it.
- Condition value determination for calculation type
 - A = Percentage
 - B = Amount
 - C = Quantity
 - D = Gross weight
 - E = Net weight
 - F = Volume
 - H = Percentage included
- Scale determination for scale types
 - A = Base scale
 - B = To scale
 - D = Graduated to interval
- Scale determination using scale basis indicator
 - B = Value
 - C = Quantity
 - D = Gross weight
 - E = Net weight
 - F = Volume
 - G = Formula based
- Initial value for condition records
- Rounding rules
Rounding difference calculation is available.
- Pricing for returns and empties
 - Pricing for returns involves 2 steps as follows:
 - Regular full goods return orders (usually with a different pricing procedure)
 - Empties return in an outbound sales order
 - Pricing for empties uses a reference condition type (ZDEP) for pricing. There is also a requirement (43) in place that prevents, for example, discounts being applied to empty materials.
- Extensibility
Selected standard requirements and formulas (routines) are implemented in the pricing engine.

Formulas for condition type calculation and condition base values (group key formula, condition value formula, condition base value formula, and scale base value formula) are available in the pricing engine.

Example

A specific formula converts a basis to a whole number, for example, a basis of 300.153 is converted to 300. This formula could be used with a condition type that is used to compute pallet discounts.

6.8 Listing and Exclusion of Materials

Use

In *SAP Direct Store Delivery*, materials are either assigned (listed) or not assigned (excluded) to the customer assortment and this controls whether or not mobile users can sell and deliver materials to specific customers. The listing or exclusion of a material is controlled using the condition technique which is similar to the technique for pricing and output determination. The listing or exclusion of a material can be applied however the condition technique is set up, for example, per material, material group, customer, or customer group.

Integration

The extraction of listing and exclusion data from the back end is embedded in the status handler of the DSD Connector. Depending on Customizing for material listing and exclusion in the back end, the listing and exclusion extractor selects condition records and provides this data via the DSD Connector to mobile devices.

The validity period of time of the listing and exclusion records to be selected is taken from the pricing settings.

Prerequisites

Before the listing/exclusion extractor in the DSD Connector can be triggered, the order and delivery types for the order and delivery scenarios have to be determined from Customizing for the DSD Connector.

Note

In Customizing for *SAP Direct Store Delivery*, the *Enhance Material Listing/Exclusion List for Download* Business Add-In (BAI) enables the enhancement of the document types used for material listing/exclusion extraction. You can add further delivery/order types, which are used to determine a listing/exclusion material list for each tour customer.

Features

In *SAP Direct Store Delivery*, the following SAP standard fields from the catalogue maintained in the back end system can be used to filter listed or excluded materials for download to and use on mobile devices.

Table 12:

Field	Description
ALAND	Country
BUKRS	Company code
CITYC	City code
COUNC	County code
EAN11	EAN/UPC
KDGRP	Customer group
KNRZE	Payer
KONDM	Material pricing group
KUNAG	Sold-to party
KUNNR	Customer
KUNWE	Ship-to party
MATKL	Material group
MATNR	Material
MTART	Material type
PLTYP	Price list type
PMATN	Pricing ref. material
PRODH	Product hierarchy
WERKS	Plant
REGIO	Region
SPART	Division
VKORG	Sales organization
VTWEG	Distribution channel

i Note

Sales area fields (SPART/VKORG/VTWEG) are always considered from the tour sales area(s).

More Information

For more information about material listing and exclusion, see the SAP Help Portal at <http://help.sap.com> under the following:

- [SAP Business Suite](#) > [SAP ERP Add-Ons](#) > [SAP ERP Globalization Extensions 607](#) > [Direct Store Delivery](#) > [Tour Preparation](#) > [Additional Functions for Using Mobile Devices](#) > [Material Listing and Exclusion](#).
- [SAP Business Suite](#) > [SAP ERP](#) > [SAP EHP 6 for SAP ERP 6.0](#) > [Sales \(SD-SLS\)](#) > [Basic Functions and Master Data in SD Processing \(SD-BF\)](#) > [Basic Functions in SD](#) > [Material Listing and Exclusion](#).

6.9 Application Log Monitoring

Use

With the *SAP Direct Store Delivery Application Log Monitor*, system administrators, who are responsible for back end systems, can monitor the direct store delivery tour status and additional information about tours on one screen in a Web browser.

Back end system administrators can use the *Application Log Monitor* to do the following:

- See all relevant tours statuses for a selected time range
- See all relevant application logs and their application log messages on the same screen for a selected tour
- See all relevant connector data on the same screen for a selected tour
- Call tour-relevant functions (for example, resend, remove, or upload both initial and delta data)
- See the JSON data of special application log messages on the same screen for a selected tour and application log message
- See all relevant application logs for a selected time range
- Navigate from the application log-based view to the tour-based view, where all dependent data are selected automatically
- Perform actions for a tour, for example, for an occasionally connected scenario (OCS)

SAP Alert Management can alert users, for example, by e-mail, that there are errors for their recipients in the *Application Log Monitor*. Alert functionality is processed directly in application log handling if a process (download, upload, or online) is running.

Prerequisites


SAP delivers all relevant entries for the following activities in Customizing for *Logistics Execution* under **SAP Direct Store Delivery > Handheld Connectivity > Monitoring**:

- *Define Connector Tables to Be Monitored*
- *Define Objects for Message Log Monitoring*
- *Define Subobjects for Message Log Monitoring*
- *Assign Message Log Objects and Subobjects to Messages*

To manage alerts, ensure *SAP Alert Management* is Customized and users are defined as recipients for alerts.

Process

The following is an example process for monitoring errors:

1. Log on to the *Application Log Monitor* in one of the following ways:
 - From the *SAP Easy Access* menu, choose **Logistics > Logistics Execution > Direct Store Delivery > Application Log Monitor**.
 - Use transaction code `/EMSE/APPROG_MONITOR`.
2. On the *SAP Direct Store Delivery Application Log Monitor* screen, all tours with errors are displayed for the default time range, which is the current day.
If you want to define a time range, choose *User Configuration*.
If you want to search for a specific tour, on the *Tour Information* tab, in the *Tour Overview* assignment block, choose  and select a tour, for example, by entering a tour ID. Check if there are errors for the tour of your choice.

Note

Errors are indicated by a  for the tour status.

3. Select a tour with errors and locate these errors in the first table in the *Application Log Overview* assignment block.
4. In the second table in the *Application Log Overview* assignment block, read the relevant error message texts.
You can select different message types by selecting different tour statuses as indicated by the traffic lights.
5. In the *Connector Data* assignment block, display the relevant DSD connector table data for the current tour.

Note



CRM tables are displayed as DSD connector tables. A user in the *SAP Direct Store Delivery Application Log Monitor* is allowed to have CRM data from SAP ERP displayed, even though the user may not have the authorization to do this in SAP CRM.

6. If applicable, in the *JSON Data* assignment block, display JSON data for a relevant application log message.

i Note

Only specific application log messages have JSON data.

More Information

For more information about alert management, see the SAP Help Portal at <http://help.sap.com>  **SAP NetWeaver** > **Platform** > **7.3 Including Enhancement Package 1** > **Alert Monitor** .

6.9.1 Application Log Monitor

Use

On the Web-based *SAP Direct Store Delivery Application Log Monitor* screen, back end system administrators can monitor the status and other information about direct store delivery tours. On this single Web-based screen, they can also monitor the application log entries in the system, which they would otherwise need to monitor in *Analyse Application Log* (transaction code SLG1).

Prerequisites

The following authorization objects define which tours you can have displayed:

- DSD/VC_VP
Filters the tours for display using the visit plan type
- /EMSE/STYP
Filters the tours for display using shipment type

You need the role /EMSE/APPL_LOG_MON_ACTION to execute actions, for example, *Tour Actions* on the toolbar of the *Tour Information* assignment block.

The role /EMSE/APPL_LOG_MON_SHOW defines how many DSD Connector data tables you can have displayed. This role allows tables to be hidden for different users.

In order for you to be able to start the *SAP Direct Store Delivery Application Log Monitor*, the authorization object /EMSE/ALM must be selected for the role /EMSE/APPL_LOG_MON_START.

Features

On the *SAP Direct Store Delivery Application Log Monitor* screen, in the main toolbar, you can choose *User Configuration* to maintain the following attributes:

- No. of days for search
You can specify the number of days to search for tours in the past. If you maintain and save a new value, after the next login, this value is relevant for the start selections (tours and application log messages). If you do not configure this, the default value is 0, the current day.
- Default tab after start
The *SAP Direct Store Delivery Application Log Monitor* screen is divided into the following 2 tabs and you can specify which is the default tab for you when you start the *Application Log Monitor*:
 - *Tour Information* tab
Business process-orientated view
This is set as the default tab.
 - *Application Log Messages* tab
System administration-orientated view

Tour Information Tab

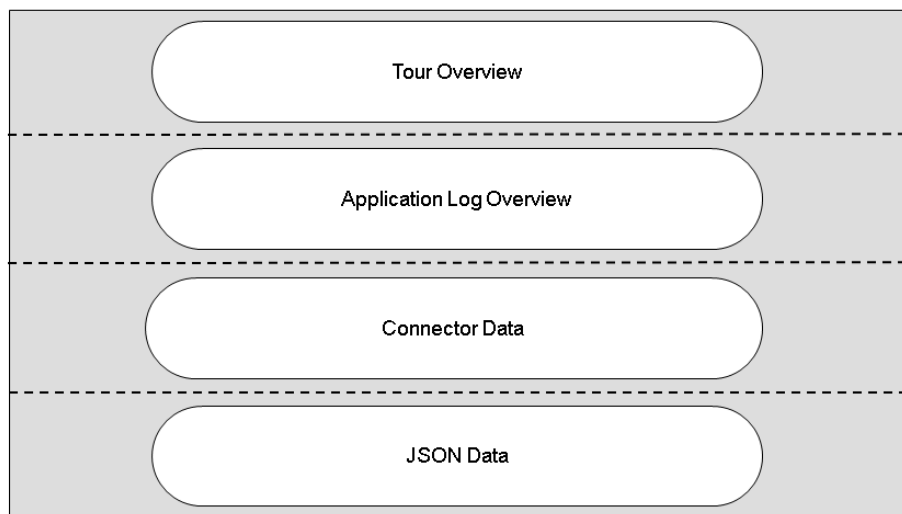








Figure 15: Application Log Monitor: Tour Information Tab

As can be seen in the *Application Log Monitor: Tour Information Tab* graphic above, the *Tour Information* tab is divided into the following 4 assignment blocks:

The Tour Overview Assignment Block

- Toolbar
The toolbar of this screen area has the following icons and actions:
 -  You can use the selection options to manipulate the amount of result data. This function opens a popup screen with selection options that are available for the tour status.
 -  Resets the selection criteria by clearing all the selected options

-  Refreshes the content of the table
- *Status*
 - 
 - 
 - 
- *Actions*
You can start the following function calls:
 - *Tour Actions*
 - *Remove Tour*
 - *Resend Tour*
 - *Force Tour Upload*
 - *Force Tour Upload to CRM*

i Note

If there is a problem during the upload of tour data to SAP CRM, use this action to trigger a new upload to SAP CRM.

- *OCS Actions*
 - *Remove Last Delta*
 - *Resend Last Delta*
 - *Force Delta Upload*
 - *Reload Actions*
 - *Reload Status*
 - *Delete Reload Queue*
 - *Queue Actions*
You can start the *Restart Unit* function call only if there is a tour with a queue status error, this is, an error during the upload process within the background remote function call (bgRFC) process.
- **Table**
By default, a start date (today) and an end date (today) is set. The current tours are displayed with the most recent tour first in the table. For a single tour status node, there are the following four sets of information:
 - Tour status information
The root node of every tours status is the original tour and its statuses. The following are the possible tour statuses:
 - *Tour status*
 - *Data status*
 - *Transactional data status*
 - *Pricing data status*
 - *CRM status*
 - *Delta data information*
 - *History status*
 - *Reload status*
 - History information

Every tour node contains a *Delta initial* sub node containing the tour history status information. Every history data entry is displayed as a leaf. Use this information to determine what happened to a tour.

- Tour delta data information

If there is delta information for a tour, there are one or more leaves to show the status of the delta information.

- Queue entry

Displays the status of the bgRFC queue for the current tour.

If there is an error during the upload process within the bgRFC process, this is displayed in the *Queue* column. In this case, a tour has an additional sub node *Queue Entries* under the tour node. If you select this row, the *Queue Actions* pushbutton is set to active and you can restart or delete the queue entry for this tour.

The error message of this bgRFC queue error is displayed in the *Node Type* column as tooltip text.

i Note


The following traffic light colors are an evaluation of the tour status, the queue status, and the different delta data statuses:


- 
- 
- 

The Application Log Overview Assignment Block

These two tables display data for the selected tour of the *Tour Overview* table. The data is also filtered based on the selection criteria for the date.

In the first table, you can use *Show* to filter the application logs by object and subobject, for example, *Process Download*, *Front End*, or *Business*.

In the second table, you can get a message text. Select  to open a popup that displays a long text or technical information about the selected message.

Select  to show the content of a JSON file in the *JSON Data* assignment block. This button is only active for special application log messages, for example, when a DSD Connector process has ended successfully in an online process.

The Connector Data Assignment Block

- **Toolbar**
The *Connector Data* toolbar has the same icons as the *Tour Overview* for *Selection Criteria*, *Reset Selection Criteria*, and *Refresh Table*.
- **Table**
Use the *Table Name* field to select one DSD connector data table and the description of the selected table is displayed.

i Note

A list of all possible tables is maintained in a Customizing table, which can be enhanced with customer-specific tables.

Use the *Max. no. of hits* field to reduce the maximum number of hits. A default of a maximum 200 entries is displayed if the number of hits exceeds 200.

The JSON Data Assignment Block

A JSON file is only written when the DSD Connector process has ended, successfully or not. This is only possible during a download, upload, or online process. A JSON file includes the complete content of the data transfer, in both directions, between the back end and the front end (or between the back end and the middleware in the case of *SAP Direct Store Delivery for Windows Mobile*).

For an online process, the JSON file includes a request and the response part.

A JSON file is also written if a mobile user sends log files to the back end. This is a single upload process.

The JSON files are stored in a database table.

Application Log Messages Tab

The *Application Log Messages* tab contains only the *Application Log Overview* assignment block.

- **Toolbar**

The *Application Log Overview* toolbar has the same icons as the *Tour Overview* for *Selection Criteria*, *Reset Selection Criteria*, and *Refresh Table*. On the toolbar, you can additionally select to display one of the following types of application logs (dependent on object or subobject):

 - *All Items*
 - *Process Download*
 - *Process Upload*
 - *Process Online*
 - *Back End*
 - *Front End*
 - *Business*
 - *System*
 - *Others*
- **Table**

This table displays application log entries for the time range selected. By default, a start date and an end date are set. The up-to-date application logs are displayed with the most recent first in the table. The *Tour* column is a link. Select a tour link to navigate from an application log on the *Application Log Overview* tab to the tour on the *Tour Overview* assignment block of the *Tour Information* tab. All the relevant data is read.

Note

The *Tour Information* tab is in single mode and the tour status (represented by the traffic light icon) cannot be changed.

6.10 Data Archiving

Use

Data archiving – a service provided by SAP NetWeaver – removes mass data that the system no longer needs online but which must still be accessible at a later date, if required, from the database.

In *SAP Direct Store Delivery*, the following data is archived:

- Additional customer master data
- Data related to occasionally connected scenarios (OCS)
- JSON data shared between the back end (via the middleware for *SAP Direct Store Delivery for Windows Mobile*) and mobile devices
- Signatures captured on mobile devices

i Note

Some *SAP Direct Store Delivery* features, for example, additional customer master data, are only available on mobile devices based on Windows Mobile. For more information, see [Features only Available for SAP Direct Store Delivery for Windows Mobile \[page 31\]](#).

Prerequisites

Data in the database can only be archived using archiving objects, which describe the data structure and context.

The *Archive Development Kit* (ADK) is the technical framework for the SAP data archiving solution. It forms an interface between applications, the database, and the archive where your data is stored. It also provides all the tools you need for data archiving. Data archiving uses the ADK to provide the archiving objects, which include all the necessary archiving programs and define the structure of the archive files to be written.

Features

SAP Direct Store Delivery uses the following archiving objects and report:

- **FI_ACCRECV**
Additional customer master data from *SAP Direct Store Delivery* is archived using the standard archiving object **FI_ACCRECV**, which offers a write (**FI_ACCRECV_WRI**) and a delete (**FI_ACCRECV_DEL**) program for archiving. There is no option to read or reload data from the archive.
The **FI_ACCRECV_WRI** write program can be executed in the following three ways:
 - Archive customer *Sales and Distribution* (SD) data
 - Archive customer *Financial Accounting* (FI) data
 - Archive customer general data

i Note

When archiving *SAP Direct Store Delivery* additional customer master data using the archiving object `FI_ACCRECV`, execute archiving for SD data and FI data first. The general option then removes the customer master record.

- `/DSD/SL`
SAP Direct Store Delivery data related to OCS, for example, the delta data of the shipment and visit list documents, is archived using the standard archiving object `/DSD/SL`, which offers a write and a delete program for archiving.
For more information about OCS data, see [Delta Tour Data \[page 109\]](#).
- `RV_LIKP`, `SD_VBAK`, `SD_VBRK`, and `FI_DOCUMNT`
Signatures from mobile devices are archived using these standard archiving objects as follows:
 - `RV_LIKP` for delivery signatures
 - `SD_VBAK` for order signatures
 - `SD_VBRK` for invoice signatures
 - `FI_DOCUMNT` for collection signatures

i Note

Collection signatures uploaded from mobile device are stored in the content repository and are retrieved via *Generic Object Services* (GOS) in *Accounting* documents (transaction code `FB03`).

- `SD_VBAK`
In *SAP Direct Store Delivery*, data related to deal condition recalculations is archived using the write and delete program of the `SD_VBAK` archiving object. In this way, records of the `/EMSE/RECALC` table are archived together with the corresponding sales document.
For more information about the recalculation of deal conditions, see [Deal Condition Integration into SD Document Flow \[page 125\]](#).
- `/EMSE/TOUR`
The `/EMSE/TOUR_DC_DELETE` report deletes JSON data from `/EMSE/TOUR_DC` table records that have no corresponding entries in the application log. The report determines the oldest application log entry and all `/EMSE/TOUR_DC` table records that are older than this application log entry are deleted. The report can be scheduled as a job.
For more information, see the report documentation.
For more information about the *Application Log Monitor*, see [Application Log Monitoring \[page 136\]](#).

Activities

All archiving programs maintained in archiving objects are started using *Archive Administration* (transaction code `SARA`).

More Information

For more information about data archiving, see the SAP Help Portal at <http://help.sap.com> under the following:

- [Introduction to Data Archiving \(CA-ARC\)](#)
- [Sap NetWeaver](#) > [Platform](#) > [7.0 including Enhancement Pack 3](#) > [Archive Development Kit](#)

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