Infor Mobile Service User Guide

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Chapter 1: Introduction

Infor LN Mobile Service is an application that is available on Infor LN 10.4 and higher versions. It is not a stand-alone application but an addition to and fully integrated with the Service module of Infor LN.

This application provides field service engineers quick access to relevant resources and data. This improves service resolution efficiency and customer satisfaction. The field service engineer is linked to a service department and is responsible for performing service activities assigned to the designated department. The service engineers can use this application as a virtual office, to accomplish their day-to-day tasks, remotely.

Infor LN Mobile Service has a new and modern user experience and is available for:

1. Windows devices running on Windows 7, Windows 8/8.1 or Windows 10, except for the RT versions.
2. Android devices with Android 4.4.2 (KitKat) or higher, except for Android TV, Wear OS and any device that is not certified by Google.

This user guide describes the functions and features of Mobile Service. As Mobile Service could have different navigation patterns, dependent on the device, it is recommended to read chapter User Interface and Navigation on page 43 first. If required, the difference per device is mentioned in this guide.

Chapter 2: Getting Started

This chapter explains the actions that are required to get started with Mobile Service application.

Actions in Infor LN

This paragraph describes which actions are needed in LN to get started with Mobile Service. The following is required:

1. The LN Client Service must be enabled in the admin page of LN-UI.
2. Check the **Mobile Field Service** check box in session **Implemented Software Components** (tccom0500m000) to enable the integration.
3. The service engineers should be defined in session **Employees** (bpmdm0601m000) with the proper logon code and department. This department must exist in the Service Departments (tsmdm1100m000) session. People data and Service data need to exists.
4. Create a profile in session **Service User Profiles** (tsmdm1150m000) for each service engineer.
5. It is recommended to the administrator to create a Connection Settings File or a QR-code to make it easier for the engineers to make a first connection. This can be done in the admin page of LN UI.

Actions on Device

This paragraph describes which actions are needed on the local device to get started with Mobile Service.

1. Install Mobile Service on the local device. The setup file for Windows can be downloaded from the **Actions** menu in session **Mobile Service Parameters** (tssoc0102m000). On Android the installation needs to be performed from Google Play. The app can be found by searching for Infor LN Mobile Service.
2. Start Mobile Service and create a profile. It is optional to protect your profile with a local password.
3. Connections settings are required to be able to connect to LN. Specify those settings as provided by your system administrator. The easiest way is to load a Connection Settings File or to scan a QR-code.
   Note: When authentication is performed via ION API (for example when connecting to a multi-tenant cloud environment), a browser will pop up, asking you to provide your credentials (email and

password) to the authentication server. Provide the credentials and follow the process to get connected.

4 If you are accessing the LN Mobile Service for the first time, you must perform a full data download. This will download all master data and your assignment activities from LN and stores the data locally. For Windows the option ‘**Send/Receive**’ can be found in the top bar. For other devices this option is available in the menu and the synchronization screen will be shown automatically the first time the app is started.

   When the synchronization process is completed, the LN Mobile Service application can be used. Your assigned Service Orders, that have been released, are now displayed on your device. Any relevant change in Infor LN is downloaded to the application whenever a manual or automatic Send/Receive Data is performed.

Chapter 3: Profiles and Connections

This chapter explains the process to create a profile and configure the connection settings that are required to connect to Infor LN.

Profiles

At least one local profile in Mobile Service is needed to be able to sign in. As soon as the application is started for the first time the user needs to create a profile. A profile is needed to:

1. Keep local settings and data together.
2. Protect local data from unauthorized access by others.

To create a new profile in Windows, press the option **New Profile** on the sign in screen. To create a new profile on other devices, press the option **Manage Profiles** on the sign in screen and choose **Add**. You can protect your profile and data by a password, although this is not mandatory.

Connection settings

The most important properties of a profile are the connection settings. Connection settings are required to connect to Infor LN and should be provided by the system administrator.

- On Windows devices the connection settings are directly linked to a profile. Click on **Profile Options** in the sign in screen and on the button **Connection Settings** to change the connection settings.
- On other devices a profile contains one or more Environments and the connection settings are linked to an environment. Profiles can be maintained from the option **Manage Profiles** in the sign in screen. Environments can only be maintained after you have signed in to Mobile Service for a certain profile via option **Environments** in the menu. Select an environment and click on the option **Connection Settings** to modify those.

Connection settings can be entered and changed manually. The easiest way is to load a Connection Settings File or to scan a QR-code provided by the system administrator. Loading a Connection Settings File or scanning a QR-Code is mandatory when authentication is performed via ION API (for example when connecting to a Multi-Tenant Cloud environment).

The following connection settings are needed when authentication is not performed via ION API:

- **Username**: The username for connection with the Infor LN backend. In case of a Single Sign On (SSO) environment, this is the SSO user name. Otherwise this is the LN backend username.
- **Password**: The password to connect to the Infor LN backend.
- **LN UI Server (URL)**: The URL of the Infor LN UI Server.
- **LN Environment**: The environment Infor LN runs in.
- **Company**: The logistical data company of LN.

Specify the following fields when authentication is performed via ION API:

- Company: The logistical data company of LN.

Chapter 4: Settings

This chapter provides information about the settings required to work with the application. You can access the settings from the Menu.

Connection settings

This page is only available on Windows devices and provides an overview of the settings required to connect to Infor LN. Most of this information is defined during the creation of a profile and cannot be changed in the settings, only be viewed. For more information, see chapter Connection settings on page 10.

You can also specify the following optional setting when authentication is not performed via ION API:

Bshell Command: Add specific commands to be used when connecting to Infor LN. This can be useful when testing or tracing. Normally, this setting must be blank.

Note: An invalid command results in connection errors.

Send and Receive data settings

This page provides an overview of the settings required to synchronize the data with LN.

- **Send and receive data automatically**: If this field is set to **Yes**, the data synchronization with LN is automated.
- Automatic receive interval in seconds or minutes. The user defined number of seconds or minutes after which data is received from LN.
- **Automatic send interval in seconds** (only on Windows devices): The user defined number of seconds after which data is sent to LN.
- **Send and receive data when pausing or completing an activity**: If this field is set to **Yes**, the data is sent or received when an activity is paused or completed. This makes it possible to send and receive data at the moment the engineer finishes the work for an activity.
- **Send and receive data when ordering bench stock**: If this field is set to **Yes**, the application automatically triggers a synchronization as soon as you perform the Order Now action on the **Inventory - Bench Stock** page.

- **Number of days to keep the synchronization log**: The number of days for which you want the application to retain the synchronization log.
- **Send GPS Information**: If this field is set to **Yes**, the application will automatically log GPS data when starting, stopping and completing an activity. To use this functionality, the location service should be enabled. Click the **Test GPS** button to test the functionality.
- **Refresh application labels at startup**: If this field is set to **Yes**, the application labels are refreshed every time you log on to Mobile Service. All labels and messages are stored in LN. This option is helpful if these labels and messages change frequently. If that is not the case, it is recommended to set this field to **No**. You can also perform a manual refresh of all labels and messages.

Data display settings

The settings for the format in which the data is displayed:

- **Display format for code and description**: Select the option to determine the display format for the code and the description for an entity from Infor LN. Examples: warehouses, labor types, etc. It is possible to display only the code, only the description or the code and the description.
- **Separator for code and description**: A delimiter used to separate the code and the description display for an entity.
- **Display format for item code and description**: This is an optional setting if the display format of the item code and item description must differ from the display format of other entities.
- **Use User Language**: If this setting is set to Yes, the language as defined for the user in Infor LN is used as the application language. If you want to use other language, this setting must be set to **No**.
- **Application Language**: The language in which the application is displayed. If you change the application language, it is applicable only after you restart the application. This field is enabled only if **Use User Language** is set to **No**.

Schedule settings

This page provides an overview of the settings for the **Schedule** view.

- **Allow to accept/decline a visit in the day view** (only on Windows devices): Use this setting to determine if accepting or declining activities for a single visit is allowed in the Day view of the schedule. If this field is set to **No**, the **Accept** and **Decline** button are not displayed in the **Day** view of the schedule.
- **Minimum time in minutes between activities to split visit**: The time in minutes between multiple activities of a service order after which the service order will be split up into separate visits. If the time between the planned finish time of one activity and the planned start time of a second activity of the same service order is less than the time in this setting, both activities will be merged in a single visit assuming all other conditions for joining the two activities in one visit are also met. If the time between the two activities is higher than the time in this setting, the activities will always be split into separate visits.

Hours settings

This page provides an overview of the settings for the **Hours** view:

- **Number of previous weeks for which to display hours**: The number of weeks, in the past, for which the application retrieves the registered hours from LN.
- **Number of following weeks for which to display hours**: The number of weeks, in the future, for which the application must retrieve the registered hours from LN.

Serial history settings

This page provides an overview of the settings for the serial history views:

- **Automatically download serial history for active visits**: This indicates if the application automatically downloads serial history after downloading new service orders or updated service orders. The period to download serial history is defined in the next setting.
- **Period to automatically download serial history data**: When the previous setting is set to **Yes**, all history for this period is downloaded.
- **Period to manually download serial history data**: When the user clicks on the refresh button in the serial history view, the serial history is downloaded according to this period. The user can set this period at any value, but it is advised to set this to a longer period than the automatic download.
- **Period to keep serial history data**: When a visit is completed, and no other visit references the same serialized item, the serialized item history could be removed. The user could however choose to keep history for a longer time if he expects to be servicing the same serials for more than one time. The user can set this period at any value, but it is advised to set is to a longer period than the automatic download.

Visit report settings

This page provides an overview of the settings related to the visit report:

- **Show completed activities before visit report**: If this field is set to **Yes**, the completed activities are displayed as a list before generating the visit report. This makes it easy to select the activities that must be displayed on the visit report. You can choose to see a list of all completed activities for the service order or only the completed activities for the actual visit.

Documents settings

If LN is linked to a Document Management System like ODM or IDM, some document settings can be setup in Mobile Service.

- **Automatically download documents**: If this field is set to **Yes**, the process to download the required documents from LN is automated. As soon as service orders are synchronized with LN, the related documents are downloaded.
- **Download documents for**: Use this option to download documents for **All orders** or **Orders for today and the following period**. This makes it possible to have the documents of all orders available or only the documents for a specific period. This field is enabled only if the **Automatically download documents** field is set to **Yes**.
- **Days**: The number of days for which the documents must be downloaded, starting from the current date. This field is enabled only if the value of the **Download documents for** field is set to **Orders for today and the following period**.

Logging settings

This is only available on non-Windows devices. Mobile Service logs information to be used in case of issues.

- **Log Level**: It is possible to choose log level Errors (recommended), Information or Debug.
- Use the option **Share Log File** to share the log file with other persons via mail or via other channels. Use the option **Clear Log File** to empty the log.

Chapter 5: Send and Receive Data

Mobile Service sends data to and receives data from LN. It is possible to define some settings to automate the process of sending/receiving data. It is also possible to send and receive data manually by clicking on the **Synchronize** button (the icon with two rotating arrows). In that case no progress window will be shown. Another option to send/receive data manually is to click on the option **Send/Receive** in the menu. This will open a dialog which will also show the progress of the sending and receiving process.

Full data download

If you are accessing LN Mobile Service for the first time, you must perform a full data download. In which case, all the relevant master data such as items, warehouses, business partners, addresses, service types and the transactional data, such as service orders assigned to the engineer, is retrieved from Infor LN.

Do the following to activate a full download:

- Windows devices: Click on the option **Send/Receive** in the top bar, check the **Full Data Download** check box and click **Send/Receive**.
- Other devices: Click on the option **Send/Receive** in the menu and click on the button **Full Data Download**.

The window displays the progress of the send and receive actions. A full data download erases all the local data and reads it again from LN.

Note:

- A full data download could take considerable time. It is recommended to perform this action only if the connection to LN is fast and stable.
- A full data download erases all local changes that have not yet been sent to LN.
- Dependent on the Retention Period defined in session **Generic Parameters** (tcgen0100m000), a full download is done automatically if a regular synchronization was not done for a long time.

Regular data download

A normal or regular synchronization (so not a full data download) only synchronizes changes of master data and transactional data since the last synchronization. This is the preferred way of working. As soon as all the data is available in Mobile Service, you can start making changes such as changing material, adding hours, and so on. If you make changes to an item a small arrows indicator is displayed on the item, which indicates that the data in Mobile Service differs from the data in LN and still needs to be synchronized.

Sometimes, it is required to 'submit' local changes. For example, when you change the hours spent for a task. In that case you must submit this change by clicking the check mark icon behind the task (Windows) or by pressing the option **Complete** (other devices). The small arrows indicator disappears after the changed data has properly been sent to LN.

As long as not all local changes are sent to LN, the latest version of e.g. a service order cannot be displayed in Mobile Service. In fact, any local change which have not yet been synchronized blocks the download of the latest version. In this case, a red-green indicator is displayed (on Windows devices). This indicator is also visible in the 'Schedule View' to indicate that the data is not yet synchronized with LN.

Data Sending Errors

Changes are sent to LN using web services, which might result in an error. In this case, an alert is displayed indicating that the synchronization resulted in one or more errors and manual action is required. The alert is displayed for a brief period. As long as synchronization errors exist, a yellow icon with an exclamation mark is displayed (on Windows) or the synchronization icon color changes and also shows an exclamation mark (other devices). You can click the alert or the icon (Windows) and the synchronization icon or the menu option **Data Sending Errors** (other devices) to view the action resulting in the errors and the remaining actions that are blocked due to the error. Note that errors could contain some technical information as Mobile Service shows all information returned by LN.

In the screen **Data Sending Errors** you can choose to:

- Skip this action for now (On windows this is indicated by an empty button)
- Retry this action (On windows this is indicated by a checked button icon)
- Delete this action (On windows this is indicated by a trash can button icon)

Note: On Windows devices, you must click on the action button to loop through the different actions.

Click on the synchronization button in the header, to synchronize the changes to LN. Note that all remaining actions must be synchronized properly to LN, before the latest data, the service order or other entity is displayed in Mobile Service.

Chapter 6: Schedule

This chapter explains the schedule and calendar related to the engineer.

Visits

Use the **Schedule** page to view the visits an engineer must work on. The schedule is displayed if Mobile Service is started. It can also be activated from the menu.

Activities are grouped together into visits. All activities of a service order to be performed on the same location are added to one visit. For each visit, detailed information such as business partner and address information are displayed.

The status of a visit is based on the highest status of the activities of that visit. If not all activities of a visit have the same status, the visit status starts with 'Partially' such as 'Partially Accepted'. The visit status is set to **Completed** only if all the activities are completed.

Before anything can be registered for a visit, it should be accepted by the option **Accept**. The service engineer is also able to Decline a visit. In this case a reason needs to be entered. All reasons of type Assignment Rejection listed in session **Reasons** (tcmcs0105m000) are listed. In the Decline Text, additional information for the reason to decline the visit might be specified.

Dependent on authorization the engineer may add a new visit. To reschedule a visit, its start time needs to be changed via the **Edit** option. The visit can only be moved if none of the activities it contains have a status **Completed** or **Rejected**. It is also required the Service User Template assigned to the employee in LN has **Reschedule Visits** enabled.

To delete a visit, select the option **Delete**. Only the newly created visits which have not yet been synchronized to Infor LN can be deleted.

The search functionality in the List view can be used to easily search on the business partner name, the service order or a part of the address amongst other things.

Calendar Views

This paragraph only applies to Windows devices.

The status of a visit is represented by the following colors:

- Status Assigned: grey
- Status Declined: red
- Status Accepted: orange
- Status Started: light blue
- Status Stopped: dark blue
- Status Completed: light green
- Status Finalized: dark green

You can perform these actions:

- Switch to Day, Month, Week or List view.
- Use the slider to zoom in or zoom out on the visits in the Day, Month and Week views.
- Use the status filter field to display only visits with a specific status in the List view.
- Move the visit using drag and drop: click and momentarily hold to select the visit. While holding down the mouse button drag the visit to the desired time.
- View the visit card that displays
  - The name of the customer
  - The complete address of the customer
  - The repair and installation information such as service type, service order number, installation number
  - The status of the visit such as Assigned, Started or Completed (non-Windows devices only).

  Note: Not all the data is available in the Month and Week view.
- Click the visit to access the activities of the visit in the expanded view.
- Click **Accept** or **Decline** to Accept or Decline the visit.
- Add a Visit.
- Editing a Visit.

Visit page

Click on a visit to open the visit page. The left sidebar (Windows) or the tab **General** (other devices) displays visit related information, such as the start time of the first activity, the finish time of the last activity of the visit, the picture of the business partner, address information, service order and visit status. Click on the information icon to get more information regarding the visit.

The following tabs or options are also available:

- **Activities**: The list of activities of the visit to be performed.
- **Documents**: Displays all documents linked to the service order. This tab is available only if the document management is implemented for Mobile Service.
- **Report**: Displays the visit report.

Chapter 7: Activities

When a client reports a fault to the service provider, the service engineer visits the client location to resolve the fault. The **Visit Activities** page provides an overview of the activities that must be performed during a visit. Visits are determined dynamically. All activities from the same order and the same location are grouped together in one visit. As soon as the order, business partner or location differs or if the engineer needs to travel, a new visit is created. The activities that have a common top item, are grouped together and can be accepted or declined individually or in a batch. You can indicate whether you have started or stopped working on an activity or completed an activity.

Activity page

Click on an activity to open the activity page. The left sidebar (Windows) or the tab **General** (other devices) contains:

- The Date, start time, finish time of the assigned activity.
- A picture, code, description, serial number, alternative serial number of the top-item of the activity.
- Click on the information icon to get more information regarding the activity.

The following tabs or options are also available:

- Tasks
- Inspections
- Materials
- Travel Time
- Other Costs
- Diagnosis - Information for diagnosing the current activity.
- Documents - To view attached documents of the activity.
- **Note:** Tasks and Inspections are displayed on one page on Windows devices. The same applies to Travel Time and Other Costs.

Actions on Activities

You can perform following actions in the view of the activities:

- Review the list of activities.
- Start the details screen of one activity by clicking on it.
- Accepting an activity by clicking on the option **Accept**. The status of the activity changes to **Accepted**.
- Declining an activity by clicking on the option **Decline**. The status of the activity changes to **Declined**. Note that a Reason needs to be entered. All reasons of type Assignment Rejection listed in session **Reasons** (tcmcs0105m000) are listed. In the Decline Text additional information for the reason to decline the activity might be specified
- Starting and stopping an activity. You can click **Start / Stop** to register the actual start and finish time of the activity.
  Note:
  - If the activity status is **Accepted** and you click **Start** (for the first time), the actual start time is registered, and the activity status is set to **Started**. The back-office planner receives an indication that you have started the activity.
  - If the activity status is **Started** and you click **Stop**, the actual stop time is registered, and the activity status is set to **Stopped**. This indicates that you have stopped the activity.
  - If the activity status is **Stopped** and you click **Start** (for the second time), the activity status is reset to **Started** and the actual stop time is cleared.
  - If you click **Complete**, the completion time is registered, and the status is set to **Completed**.
  - When you click **Start**, **Stop** or **Complete** option, the data synchronization with Infor LN is only triggered immediately if the **Send and receive data when pausing or completing an activity** field is set to Yes on the **Send/Receive** settings.
- Completing an activity by clicking the option **Complete**. The status of the activity changes to **Completed**.
- Adding notes to an activity by clicking on the small balloon icon. Specify the note (information) related to the activity and press **Add**.
- Editing a note linked to an activity by clicking on the small text balloon icon. Select the note you want to modify from the list. Add or modify the information and click **Update**.
- Adding an Activity by clicking on the **+** button. Fill the activity description, **Service Type** and optionally the remaining fields and click on **Add Activity**(Windows) or **Save** (other devices).
- Editing an Activity by clicking on the option **Edit**.

  You can move an activity by changing the planned start or finish date/time. When a visit has multiple activities, moving a single activity might cause the visit to be broken up into separate visits. This would happen if a visit to another customer is planned between the remaining and moved activities of the current visit.

  You can change the actual start and finish time of an activity as long as its status is not **Completed**.

Chapter 8: Tasks

This chapter explains the tasks which are to be performed for the current assigned activity. In this section, you can perform basic actions like completing performed tasks and updating the hours spent.

Actions on Tasks

You can perform following actions on the Tasks page of an activity:

- Adding a task by clicking on the **+** button. Select the **Add a Task** option (Windows devices only). Select a Task from the list and fill the remaining fields and click **Add Task** (Windows) or **Save** (other devices).
- Editing a task by clicking on the **Edit** option. You can change the times in the grid by clicking on the - or **+** button.
- Deleting a task by clicking on the **Delete** option. This is not allowed if the task is estimated or already has been approved or processed.
- Completing a task by clicking on the check mark icon (Windows) or on the option **Complete** (other devices).

Chapter 9: Inspections

This chapter explains the inspections which are to be performed for the current assigned activity. In this section, you can perform basic actions like entering inspections.

Open an activity from the activity list by clicking on it. Click on the tab **Tasks and Inspections** (Windows) or **Inspections** (other devices).

Actions on Inspections

You can perform following actions on the **Inspections** page of an activity:

- Adding an inspection by clicking on the **+** button. Select the **Add an Inspection** option (Windows devices only). Specify the required information. Note that the instruction text of the measurement will only appear if it is not empty. Click **Add Inspection** (Windows) or **Save** (other devices).
- Editing an inspection by clicking on the **Edit** option.
- Deleting an inspection by clicking on the **Delete** option.
- Completing an inspection by clicking on the circle (Windows) or on the option **Complete** (other devices.

Linking a document to an inspection

Execute the following steps to link a document to an inspection:

1. Select the appropriate activity.
2. Select the appropriate inspection.
3. Select the **Documents** option. The **Inspection Documents** screen is displayed.
4. Click the folder button (Windows) or the **+ Documents** button (other devices). The explorer window opens.
5. Select the document to link.
6. Click **OK** (for Windows devices only).
7. The document is now linked to the inspection and is available in the list. Go back to the **Inspections** screen by clicking the back button.

Note: To be able to link a document, a document management system must be in place for Infor LN.

Linking a photo to an inspection

Execute the following steps to link a photo to an inspection:

1. Select the appropriate activity.
2. Select the appropriate inspection.
3. Select the **Documents** option. The **Inspection Documents** screen is displayed.
4. Click the camera button (Windows) or the **+ Camera** button (other devices). The standard camera application of the system is started.
5. Take a photo.
6. A window appears displaying the photo. Change the description of the photo if the default name is not appropriate.
7. Press **OK**. The photo is now linked to the inspection and is available in the list. Go back to the **Inspections** screen by clicking the back button.

   Note: To be able to link a photo, a document management system must be in place for Infor LN.

Chapter 10: Register material

This chapter explains the Register Material functionality which is used to view and register material costs for a service order. The material cost lines associated with the current service order activity, are also displayed on the **Register Material** page. For each material cost line, the user can change the quantity and modify the details of a material cost line. The user can click **+** to add new material cost line to the current activity. It is also possible to order materials and have them added as material cost lines.

The **Register Material** screen displays the following details:

- The first group Used Materials.
- A second group with Returned Materials.
- A third group with Scrapped Materials.
- A fourth group with Ordered materials.
- A picture of the Item / Serialized Item (Windows devices only).
- The Item Description and the Serial Number.
- The (actual/estimate) quantity.
- The **+** and **-** buttons to change the quantity.

Actions on Materials

You can perform following actions on the Materials page of an activity:

- Adding a material by clicking on the **+** button. Specify the required information. Click **Add Material** (Windows) or **Save** (other devices).
- Editing a material by clicking on the **Edit** option.
- Deleting a material by clicking on the **Delete** option. Note that it is not allowed to delete estimated materials.
- Using a material by clicking on the **use** icon (Windows) or **Use** button (other devices).

Note:

- The quantity needs to be filled in the list of materials and are always cumulative quantities which will be added to or subtracted from the total quantity.
- No quantity needs to be entered in case of serialized items as the quantity is always one.
- You might not have authorization for some warehouses dependent on the settings in your Service User Template.

Material Groups

You can find the following material groups in Mobile Service:

- Used Materials. These are the materials used to perform the activity. Used materials could have been delivered already to the customer location. In this case the used quantity is already filled, and those materials are considered as being used. The source is On Location.

  It is also possible to use materials from the car of the service engineer. The car is usually defined as a warehouse in LN and linked to the car. The source is From Car.

  Used material might be bought in a local store. In this case the source is Local Purchase.
- Returned Materials are materials to be returned from the location of the customer. The source is By Car if this is done by the engineer itself using material from the car. Otherwise, the source is From Location.Scrapped Materials are materials that will be scrapped by the service engineer or the customer. The source is To Scrap.
- Ordered Materials are materials which are ordered and not delivered yet. The source is On Order.

Material Delivery Types

In LN a material line always has a delivery type. This field is not directly available in Mobile Service, only indirectly. In the next table you will find the most important mappings between **Delivery Type** and **Source** for materials created in LN.

Delivery Type in LN	Comment	Group	Source
From Car		Used Materials	From Car
From Service Inventory		Used Materials	From Car
From Warehouse	Warehouse is a car.	Used Materials	From Car
From Warehouse	Warehouse is not a car and materials are not yet delivered.	Ordered Materials	On Order
From Warehouse	Warehouse is not a car and materials are delivered.	Used Materials	On Location
From Warehouse in Car	Transfer order not yet completed	Ordered Materials	On Order
From Warehouse in Car	Transfer order completed	Used Materials	From Car
From Warehouse by Transport	Materials not yet delivered	Ordered Materials	On Location
From Warehouse by Transport	Materials delivered	Used Materials	On Location

Delivery Type in LN	Comment	Group	Source
By Purchase Order	Warehouse is a car.	Used Materials	From Car
By Purchase Order	Warehouse is not a car and materials are not yet delivered.	Ordered Materials	On Order
By Purchase Order	Warehouse is not a car and materials are delivered.	Used Materials	On Location
Supplier Direct Delivery	Materials not yet delivered.	Ordered Materials	On Order
Supplier Direct Delivery	Materials are delivered.	Used Materials	On Location
By Field Purchase		Used Materials	Local Purchase
To Scrap		Scrapped Materials	To Scrap
To Warehouse	Warehouse is a car.	Returned Materials	By Car
To Warehouse	Warehouse is not a car.	Returned Materials	From Location
Supplier Direct Return		Returned Materials	From Location
To Scrap		Scrapped Materials	To Scrap

Note:
- If you add new materials in Mobile Service, you need to specify the **Material Group** and **Source**. Dependent on this information and the default delivery type from Item Service Data in LN the resulting delivery type of the material line in LN will be determined.
- It might be the case you do not have authorization for some delivery types dependent on the settings in your Service User Template.

Chapter 11: Travel Time and Other Costs

This chapter explains the Travel Time and Other Costs functionality which can be used to register miscellaneous cost for a service order. The cost lines with several cost types such as tool, travel and other are also displayed. Note that the Travel Time and Other Costs on non-Windows devices are viewed on separate tabs.

Actions on Travel Time

You can perform following actions on the **Travel Time** page of an activity:

- Adding travel time by clicking on the **+** button. Select the **Add Travel Time** option (Windows devices only). Specify the required information. Click **Add Travel Time** (Windows) or **Save** (other devices).
- Editing travel time by clicking on the **Edit** option.
- Deleting travel time by clicking on the **Delete** option. Note that deletion might not be allowed dependent on the status in Hours Accounting.
- Completing travel time by clicking on the check mark icon (Windows) or on the option **Confirm** (other devices).

Actions on Other Costs

You can perform following actions on the **Other Costs** page of an activity:

- Adding other costs by clicking on the **+** button. Select **Travel Distance**, **Callout Charge** or **Other Costs** and specify the required information. Click **Add Cost** (Windows) or **Save** (other devices).
- Editing other costs by clicking on the **Edit** option.
- Deleting other costs by clicking on the **Delete** option. Note that deletion might not be allowed dependent on the status in LN.
- Completing other costs by clicking on the check mark icon (Windows) or on the option **Confirm** (other devices.

Chapter 12: Diagnosis

This chapter explains the Diagnosis functionality which is used to modify the diagnosis information for a service order activity. The information such as the reported problem, expected problem and solution, actual problem and solution codes (and/or description), text fields for the problem and solution and note are displayed. The information specified on this page can be used for problem and solution analysis and statistics.

The **Diagnosis** page displays these details:

- Service Order header text.
- Reported problem. This is the problem (code) as reported by the customer.
- Expected problem. This is the expected problem as specified by the person receiving the service call.
- Expected solution
- Actual problem
- Actual solution
- Diagnosis notes

Note:

- The **Reported Problem**, **Expected Problem**, and **Expected Solution** are applicable only if the service order activity is linked to a service call. Else, these fields are not visible.
- The **Reported Problem**, **Expected Problem**, **Expected Solution**, **Actual Problem**, and **Actual Solution** are visible only if the **Diagnostics** field is selected in the **General Service Parameter** (tsmdm0100m000) session.
- If the status of the activity is **Assigned**, **Declined** or **Completed**, this page is a display page.
- You cannot modify notes specified by other service engineers.

Actions on Diagnosis

You can perform following actions on the Diagnosis page of an activity:

- Fill the **Actual Problem** and **Actual Solution** and their related texts.
- Click on the **Note** icon to add or edit notes.

Chapter 13: Documents

This chapter explains the Documents functionality. You can use the **Documents** page to download/upload and view the documents related to a service visit, such as installation manuals, technical drawings. These documents are stored in a Document Management System (DMS) and are related to service orders, service order activities, (serialized) items and reference activities available in LN. The Document Management HUB is used to integrate Mobile Service with a Document Management System. If the Document Management HUB is not configured for Mobile Service in **Document Mapping** (ttdms3550m100), the **Document** screen is not visible, and documents cannot be viewed, downloaded or uploaded in Mobile Service.

Note: Every time the application is started, DMS integration with LN, is checked.

The **Documents** screen can be started from the **Visit** page or the **Activity** page or for an inspection. When the Document page is accessed from the **Visit** page, all the documents linked to the service order activities which are part of the current visit and all the documents linked to the reference activities and configurations (items) of each activity, are displayed. The documents linked to the service order and the finalized visit report documents are also displayed.

When the Document page is accessed from the **Activity** page, all the documents linked to this activity and the documents linked to reference activities and configuration (item), are listed. A new document is attached to the current activity.

When the **Document** page is accessed from an inspection, all the documents linked to this inspection are listed. A new document is attached to the current inspection.

Actions on Documents

You can perform following actions on the **Document** page:

- Attach a document by clicking on the icon with a **+** indicator to browse to the file explorer or to start the camera. Browse and select the document or take a picture with the camera.
  Note: After synchronization, the document is available in the Document Management System.
- Download a document by clicking on the option **Download**. Note that the document might already be available on the local device.
- View a document by clicking on the document. Note that this is only possible if the document has been downloaded already.

Note: An icon in the document list shows per document the status:

- If the icon contains a down arrow, the document is available in the Document Management System but not yet on the local device.
- If the icon contains an up arrow, the document is not yet available in the Document Management System but only on the local device. This can only be the case for documents locally created by the service engineer.
- If the icon does not contain an arrow, the document is available in the Document Management System and on the local device.

Chapter 14: Visit Report

This chapter explains the visit report of the activities performed for the visit and all the cost that are associated with the visit. The engineer can generate this report after the completion of the work on the visit. The activities and the cost lines which are managed by the current engineer are displayed on the report.

Visit Report Layout

The visit report contains the cost lines with quantities and hours. The value of the costs amounts is not displayed if a coverage is applicable. In this case the coverage reason is displayed (Warranty, Contract, Quotation or Discount). Amounts of material costs are not displayed if the logistic procedures are not yet completed in LN, such as the issue from inventory. In this case the amount is displayed as Unavailable.

The visit report can be signed-off by both the engineer and the customer. The signatures are attached to the report and uploaded to LN and stored in **Service Order Visits** (tssoc2501m000) session.

The default layout of the default visit report includes amongst others:

- The service department address, service order, date and assigned engineer
- The location address and the invoice address
- An overview of the invoice amounts per group (materials, labor and others)
- The comments from the engineer and the customer
- The signatures from the engineer and the customer

For each activity, the default report contains:

- The activity description and the invoice amount for the activity
- The used materials
- The labor details
- The other Costs details
- The Diagnosis information

Note that the layout of the local visit report is dependent on the device.

- On Windows devices, the local visit report is based on a template in Visit Report Templates (tsmdm5100m000) session. The template can be adjusted in LN to change the visit report layout. A template is a file with a Rich Text Format (.rtf) extension and can be adjusted with any program that supports this extension, like MS Word, Open Office, and so on. If the template has been adjusted, you must upload the template to LN. The available templates are synchronized automatically to the local Mobile Service application. Its format after finalizing the visit is pdf. See Creating Visit Report Template on page 46.

- On all other devices, the local visit report has a standard layout which cannot be adjusted. Its format is html.

Viewing a Visit Report

To view the visit report for a visit:

1. Navigate to the **Visit** page.
2. Click on the option **Report**.
3. Select the activities you want to include.
4. Click **Confirm**. The visit report is displayed on the screen.

   Note: If the visit is already finalized, the report is shown as soon as you click on the **Report** page.

Finalizing a Visit Report (Windows devices)

To Finalize the visit report for a visit:

1. Navigate to the **Visit** page.
2. Click on the option **Report**.
3. Select the activities you want to include and change the report language if required.
4. Click **Confirm**. The visit report is displayed on the screen.
5. Click on the **Signature** icon.
6. Click **Sign Off** option located below the Engineer signature section or click on the Engineer Signature box. This starts the **Sign Off** section. Specify the following information:

   Engineer Signature
   Sign in the **Engineer Signature** text box. You can click **Undo** to clear the signature.

   Comment
   Specify the additional information, if any.

7. Click **OK**.
8. Click **Sign Off** option located below the **Customer signature** section or click on the **Customer Signature** box. This starts the **Sign Off** section. Specify the following information:

   Customer Signature
   Sign in the **Customer Signature** text box. You can click **Undo** to clear the signature.

Customer Representative Name
Specify the name of the customer representative.

Comment
Specify the additional information, if any.

9. Click **OK**.
10. The signatures appear in the right pane after both the engineer and the customer confirm the signatures. Click on the **Finalize** option.

    The signatures, names and comments are displayed on the visit report and a pdf of the visit report is generated. No changes can be made to this document anymore and the **Signature** option on the visit report screen is disabled.

Finalizing a Visit Report (Other devices)

To Finalize the visit report for a visit:

1. Navigate to the **Visit** page.
2. Click on the option **Report**.
3. Select the activities you want to include.
4. Click **Confirm**. The visit report is displayed on the screen.
5. Change the report language if required.
6. Click on the **+** icon and choose **Engineer Signature**. This starts the **Sign Off** section of the engineer. Specify the following information:

    Engineer Signature
    Sign in the **Engineer Signature** text box. You can click **Clear** to clear the signature.

    Comment
    Specify the additional information, if any.

7. Click **Save**.
8. Click on the **+** icon and choose **Customer Signature**. This starts the **Sign Off** section for the customer. Specify the following information:

    Customer Signature
    Sign in the **Customer Signature** text box. You can click **Undo** to clear the signature.

    Customer Representative Name
    Specify the name of the customer representative.

    Comment
    Specify the additional information, if any.

9. Click **Save**.

10 The signatures appear in the visit report. Click on the **Finalize** option. No changes can be made to this document anymore and the **Finalize** option on the visit report screen is disabled.

Visit Reports and Visit Documents

As soon as a visit is finalized and synchronized, its visit report is uploaded to LN and visible in session **Service Order Visits** (tssoc2501m000). The name in **Service Order Visits** is **Uploaded Visit Report** to distinguish this report from the **Service Order Visit Document**. A **Service Order Visit Document** is the output of session **Print Service Order Visit Documents** (tssoc2401m000).

Windows devices

1. The **Uploaded Visit Report** is a pdf document based on the visit report template and is created and uploaded when finalizing the visit.
2. If the parameter **Visit Report for Mobile Service on Windows Devices** in **Mobile Service Parameters** (tssoc0102m000) session is **Based on Visit Report Template**, then:
   a. The uploaded visit report is stored in Service Order Visits in LN.
   b. The uploaded visit report will be send to the Document Management System, if applicable.
   c. The uploaded visit report will be distributed via Document Output Management, if applicable.
3. If the parameter **Visit Report for Mobile Service on Windows Devices** in **Mobile Service Parameters** (tssoc0102m000) session is **Based on Standard Report in LN**, then:
   a. The uploaded visit report is stored in Service Order Visits in LN.
   b. Session **Print Service Order Visit Documents** is used to generate automatically a Visit Document in pdf format when finalizing the visit.
   c. The generated visit document will be send to the Document Management System, if applicable.
   d. The generated visit document will be distributed via Document Output Management, if applicable.

Other devices

1. The Uploaded Visit Report is a fixed html document and is created and uploaded when finalizing the visit.
2. The uploaded visit report is stored in Service Order Visits in LN.
3. Session **Print Service Order Visit Documents** is used to generate automatically a Visit Document in pdf format when finalizing the visit.
4. The generated visit document will be send to the Document Management System, if applicable.
5. The generated visit document will be distributed via Document Output Management, if applicable.

Note: The visit report or visit document (dependent on the device or the parameter) that is stored in the Document Management System will become visible in the **Documents** page of Mobile Service.

Chapter 15: Hours

From the menu you can start the Hours overview. This view displays all the registered hours on service orders and all the registered General Hours by week. In the Settings View, you can specify the number of weeks in the past and in the future for which you would like to view the hours.

In the header the total number of booked hours and the employment hours are displayed. All the hours already registered for that week and the totals for each day of the week, are also visible.

It is possible to add or change General Hours by clicking on the plus sign. The fields general task, labor type, day of the week and duration are mandatory fields and cannot be left empty.

It is not possible to add or change service hours. That needs to be done on the service order itself in Mobile Service.

Chapter 16: Inventory

This chapter explains the Inventory functionality. This includes:

- Bench Stock
- Inventory by item
- Inventory by Warehouse

Bench Stock

Bench Stock items are items for which the **Delivery Type** field in the **Service Control** group box is set to **From Service Inventory** in the **Items - Service** (tsmdm2100m000) session.

Note: Usually inventory management is not required for such items. See the **Inventory Management for Bench Stock** check box for service employee's **Service Car** field.

The header displays a list of authorized warehouses for the service engineer. By default, the warehouse linked to a service engineer's car, is displayed. The last selected warehouse will be displayed next time you open this screen.

To order bench stock items using Mobile service:

1. Specify the required quantity in the **Quantity** field of the items which require additional stock.
2. Click **Order Now**. By default, the synchronization process is started so orders are immediately transferred to Infor LN. To prevent the synchronization, you must clear the **Send and receive data when ordering bench stock** check box on the **Send/Receive** tab in the **Settings** view.
3. Infor LN creates a manual warehouse transfer order to transfer the ordered items from the central warehouse to the car. The **On Order** quantity field displays the quantity that is already ordered.

Inventory by Item or Warehouse

To view the inventory by item or by warehouse, select the applicable option in the **Inventory** screen. You can view the **On Hand** and the **On Order** inventory available for the selected item or warehouse.

Note:

- Inventory data is displayed based on the last synchronization date.

- Inventory data is only visible if the **On Hand** or the **On Order** quantity is unequal to zero.

Chapter 17: Calls

This chapter explains the Calls functionality. You can use calls to notify the back office of:

- Additional work
- Opportunities at customer site
- Any other communications

All calls you have created and which status is not yet **Solved** or **Accepted** will be visible in the list.

You can perform following actions:

- Adding a call by clicking the **+** button. Specify all required information and click on **Add Call** (Windows) or on Save (other devices). Note that the **Reported Time** is defaulted with the current date and time.
- Editing a call by clicking the option **Edit** for a selected call. Specify the modifications and click on **Update Call** (Windows) or on **Save** (other devices). Note that you can only update Calls with status **Registered**, **Assigned** or **In Process**. The reported time cannot be modified after the call has been synchronized with Infor LN.
- Deleting a call clicking the option **Delete** for a selected call. A call can only be deleted if its status is **Registered**.

Chapter 18: Serial History

This chapter explains the Serial History for orders and inspections. You can access the serial history overview from the menu. Alternatively, serial history can be started from the Serial History icon (like a clock with a reverse arrow) which is displayed on several pages where a serial number is visible.

The serial history overview includes

- Serial history for orders
- Serial history for inspections

When serial history is activated from the menu, the user must enter an item and serial number. After both are entered, the history is shown. Notice that only the history of serialized item is available for serialized items which are referenced in any visit in your schedule and only then when in the settings serial history is set to automatically download data.

If no history is shown it is possible to refresh the data by clicking the refresh button in the upper right part of the screen. This will need an active connection to Infor LN.

If the history icon from any other screen is used to go to serial history, the serial number from that screen is used to activate the serial history filter.

- Windows Devices: Use the i (information) button to show more data from any part of the serial history. The information pane can be left expanded to browse through different parts of the serial history. Just click on any part of the serial history list. The Serial History for Orders is displayed in a hierarchical view for each order. The hierarchy is: Order- Activities - (Tasks - Materials - Inspections group) - detail about these groups. Notice that only those tasks, materials and inspections are shown which are related to the order. Inspections that are not order related can be shown in the **Serial History for Inspections** view.
- In other devices open the history record to show a report of the serial history and additional information.

The **Serial History for Inspections** view only shows individual inspections. In this view the inspections which are not related to any order, are also shown.

Chapter 19: Installations and Serials

This chapter explains the installation and serials or serialized items linked to the selected business partner..

Installations

You can start the Installations overview from the menu. It shows all installations for a selected business partner. An installation is a top serialized item in LN linked to the selected business partner.

The installations are shown by installation group, if applicable. If an installation is not part of any installation group, it is shown as a top serialized item.

You can perform the following actions:

- Showing all installations for an installation group by clicking on the **Expand** icon.
- Linking an installation to an installation group by selecting an installation group and clicking the **Add** option.
- Linking an installation to an installation group by selecting a top serialized item and clicking the **Add** option.
- Editing an installation by selecting an installation and clicking the **Edit** option.
- Removing an installation from an installation group by selecting an installation group and clicking the **Remove** option.

Note: You need authorization for adding and removing installations. See option **Update Installations** in **Service User Templates** (tsmdm1160m000) session.

Serials

Serials or Serialized Items can be used throughout Mobile Service. In general, the following applies:

1. A serialized item is a combination of an item and a serial number.
2. If you select an item in the item drop-down, only the serial numbers of the selected item are available in the serial number drop-down.
3. If you leave the item blank, the serial number drop-down contains all serial numbers of the system. This way you can find a serial if you do not know the item.

4 If you have authorization to create new serial numbers in Mobile Service (See option **Create Serials** in session **Service User Templates**) a **+** icon or **Add** button behind the serial is shown. Use this option to create a new serialized item.

Appendix A: User Interface and Navigation

This user guide is meant for Mobile Service, independent on the device on which it is running. The user interface and the navigation could however be different on several devices. There are two solutions for Mobile Service:

1. A version for Windows devices.
2. A version for other devices like Android.

Mobile Service on Windows

On Windows, Mobile Service needs to be installed on your laptop or tablet with the setup file provided by your Administrator. The following information is important from a user interface and navigation perspective.

Top Bar

- Click the **Menu** icon with the three horizontal lines to open the top bar.
- Navigate to **Schedule**, **Hours** or any other view.
- Click on the **Synchronization** button to perform a manual synchronization.

Information Panes

Information panes are displayed throughout the application. An information pane provides the additional details, of the active screen. For example, in the **Visit** screen, the information pane displays the Sold-to Contact and the Ship-to Contact details related to the visit. To view an information pane, click **(i)** in any screen, click the arrow option to collapse the information pane.

Route Navigation

Addresses are shown on several places in Mobile Service. You can navigate to Open Street Map by clicking on the small maps icon.

Selecting a row:

- Mouse: Right-click on the row.
- Touch: Tap and hold the row.

- Stylus: The equivalent for right-clicking the mouse.

Selecting a row changes the view to Selection Mode and displays the options in the bottom bar that can be applied to the row.

Selecting multiple rows:

First select one row as described above. Then:

- Mouse: Left-click the next row(s).
- Touch: Tap the next row(s).
- Stylus: The equivalent for left-clicking the mouse.

Deselect a row:

- Mouse: Left-click the selected row.
- Touch: Tap the selected row.
- Stylus: The equivalent for left-clicking the mouse.

Alternatives for (de)selecting rows:

- Mouse: Left-click the 3-dotted bar at the bottom of the screen and click **Select All** or **Clear Selection**.
- Touch: Tap 3-dotted bar at the bottom of the screen and tap **Select All** or **Clear Selection**.
- Stylus: Select the 3-dotted bar located at the bottom of the screen and click **Select All** or **Clear Selection**.

Drill down into the details of a row:

- Mouse: Left-click the row.
- Touch: Tap the row.
- Stylus: The equivalent for the left-click of the mouse.

Activating buttons and other action items:

- Mouse: Left-click.
- Touch: Tap.
- Stylus: The equivalent of the left-click of the mouse.

Notifications

Mobile Service can show notifications or alerts, for example in case of synchronization errors. The notification contains a short message to inform you. Note that notifications are not disruptive and will disappear automatically. You can click on some notifications to navigate to the appropriate page.

Mobile Service on other Devices

On other devices, Mobile Service needs to be installed on your tablet or phone from the official application store, like Google Play. The following information is important from a user interface and navigation perspective.

Menus and Actions

- Click the **Menu** icon in the homepage to open the main menu. Navigate to **Schedule**, **Hours** or any other view. Inline or in context menus can be activated by clicking on the icons with three dots.
- A single click on any list item opens the linked data.
- Use the **Back** option in Mobile Service or the **Back** button on the device to navigate to the previous page.
- Inserting new data is mostly done via the **+** button in the bottom right corner.
- Editing or deleting data is done via the inline or in context menu and the option **Edit** or **Delete**.

Information Pages

Information pages are available throughout the application. An information page provides the additional details, of the active screen. To view an information page, click **(i)** in the applicable screen.

Route Navigation

Addresses are shown on several places in Mobile Service. You can navigate to the default Map Application on the device by clicking on the small maps icon.

Notifications

Mobile Service can show notifications or toast messages, for example in case of synchronization errors. The notification contains a short message to inform you. Note that notifications are not disruptive and will disappear automatically. You can tap on these notifications to navigate to the appropriate page or display a more detailed message dialog.

Appendix B: Creating Visit Report Template

A visit report is based on a template. The template is composed of plain text, images and placeholders. The required report is displayed after the actual visit data is populated in the template. This chapter explains how to create a visit report template. Note that this is only applicable for Mobile Service on Windows devices.

The visit data consists of several data sets. The template must be composed in such a way that it will correspond with these data sets. Every data set contains zero, one or more rows. In the template, these rows are represented by a single row definition.

The template is stored as a rich text document (.rtf). You can create or modify the template using a text processor that supports rtf files.

This manual uses the layout of the default template in all the samples and figures. The complete default template is added in Default Template for Visit Report on page 59. The default template is also available in LN in the **visit report template (tsmdm5100m000)** session.

For a better view of the nested tables, see Tips on page 52.

Text and Images

When creating a template the base elements are text and images. When translation is not required, original text can be used. In the default template, translation placeholders are used. This is not required.

Layout elements can be tabs, tabs at a user defined position and tables. Both Word and rtf files support these layout elements. Character and paragraph formatting are also supported.

Replaceable text and values must be defined by placeholders.

Placeholders

Placeholders are defined by using text within markers. There are four types of placeholders, each identified by different markers.

Notation	Placeholder Types
<<placeholder name>>	Translated text
##placeholder name##	Data item from a data set
%%placeholder name%%	Image from a data set
[[data set identifier]]	Data set identifier

Example:

##DepartmentName##	<<Order>>	##ServiceOrder##
##DepartmentAddress##	<<OrderReference>>	##ReferenceA##
	<<StartTime>>	##StartTime##
	<<ServiceEngineer>>	##Engineer##

In this example <<Order>>, <<OrderReference>>, and so on, are a translatable text placeholder. Translation is depended on the language selected in (LN). ##DepartmentName##, ##ServiceOrder##, and so on are data items. These data items are retrieved from the document level data set. As the document data set is generally available, these placeholders can be used anywhere in the document. For a list of all placeholders, see Placeholders for Visit Report Template on page 53.

The example above can result in the following merged lines.

NL Service Department	Service Order	SOO001407
Het Torentje	Reference	CUST_B_00012
Binnenhof 19	Start Time	15-8-2016 10:28:01
2513 AA Den Haag Zuid Hol- land	Service Engineer	John Doe
The Netherlands		

Data sets

The visit report contains seven data sets.

- Document data
- Activity data
- Material cost data, with a reference to Activity data
- Labor cost, with a reference to Activity data
- Other cost, with a reference to Activity data
- Inspections, with a reference to Activity data
- Total Hours per Labor Type

Data sets can hold any type of information such as text or images. The markers around the placeholders (## for text and %% %% for images) determine how the data is displayed.

Although materials, labor and other cost are linked to an activity, it is possible to show the list of all the cost of all the activities..

Document data set

This data set holds information about the visit and is available over the whole document. This set also contains images. The signature placeholders are the only supported image placeholders.

Activity data set

The activity data set identifier is [[Activities]]

This data set holds data for the activities which are selected by the user when generating the report.

Material cost data set

The material cost identifier is [[MaterialCost]]

This data set holds data of all material cost. These are the costs entered in the Material screen. The display of material cost of one or more activities is based on how the material cost is defined in the template.

Labor cost data set

The labor cost identifier is [[LaborCost]]

This data set holds data of all labor cost. These are the costs entered in the Task and Inspection screen. The display of labor cost of one or more activities is based on how the labor cost is defined in the template.

Other cost data set

The other cost identifier is [[OtherCost]]

This data set holds data of all other cost. These are the costs entered in the Travel Time and Other Cost screen. Data for both Travel Time and Other are displayed here. The display of other cost of one or more activities is based on how the other cost is defined in the template.

Inspections

The Inspections identifier is [[Inspections]]. This data set holds the data of all inspections of an activity. These are the inspections specified in the **Tasks and Inspections** page.

Total Hours per Labor Type data set

The Total Hours per Labor Type identifier is [[TotalHoursPerLaborType]]. This data set holds the information about the total hours spent per labor type. It must be used on document level.

Layout

Basically placeholders can be placed anywhere in the rtf document. So a construction like *Service order number ##ServiceOrder## has a start date of ##StartDate##* is completely valid.

To be able to align elements, tabs or tables can be used. Tables can be inserted.. Columns and or rows can be merged. For instance, a table of two rows with in the first row having one cell and the second row having three cells, is valid.

<<SomeTranslatedText>>		
##FieldA##	##FieldB##	##FieldC##

The layout is show above will retrieve Field A, B and C from the document data set.

To be able to display data from any other data set, a layout convention must be followed. All data set dependent placeholders must be inside a table. The data set identifier is key to the layout convention. The identifier must be placed in the first row in the first cell as the first text in this table.

Data set layout convention:

[[DataSetIdentifier]]		
<<HeaderTextA>>	<<HeaderTextB>>	<<HeaderTextC>>
##FieldA##	##FieldB##	##FieldC##

The data set convention defines three or more rows.

- The first row must hold the data set identifier (with [[ ]] markers). See also, the data set definition provided earlier in the document.. When the data set identifier is not found, the table is handled as a layout table. See above.

  The data set identifier row is deleted after the merge is executed,
- The last row is replicated as many times as the data set hold rows. Data placeholder of each replicated row is replaced with the corresponding data set row values. If the layout row contains data placeholders which do not correspond with the data set properties, replacement takes place using the parent data set. If no match is found in the parent data set, the placeholder is matched and possibly replaced with the document data set values.
- All other rows are header rows (zero, one or more). The header rows usually contain translatable text placeholders (<< >>). If the header rows contain data placeholders, data is replaced from the parent data set. If not applicable, placeholders are replaced with data from the document data set.

The minimum requirement for a data set table is two rows. Header rows are optional.

Example:

[[MaterialCost]]			
<<Materials>>			
<<Quantity>>	**<<ItemCode>>**	**<<ItemDescription>>**	**<<Amount>>**
##Quantity##	##Item##	##Description##	##AmountOrCoverage##

or

[[MaterialCost]]			
##Quantity##	##Item##	##Description##	##AmountOrCoverage##

In the first example material cost is presented with two header rows. In the second example, header rows are not present.

Nested Layout

In order to be able to represent parent/child relations, an extra convention is defined. In the case of activities and materials, if materials per activity must be presented, the material table must be nested in the activity table. Data sets have a structure to recognize if used as a child set. Instead of presenting all the material of a visit, only the material for the current activity are presented in the nested material tables.

Note: Be careful when inserting the nested tables in the last row. If more than one table is required (for instance material, labor and other cost), the tables can be inserted in the same cell with a paragraph ending (just a RETURN) in between. See also the layout of Materials - LaborCost - OtherCost in Default Template for Visit Report on page 59.

In Word, this is easy to accomplish. Set the cursor in a table cell and select 'Add table' from the INSERT tab.

Nested data set layout convention:

Example:

[[DataSetIdentifier]]		
<<HeaderTextA>>	<<HeaderTextB>>	<<HeaderTextC>>
##FieldA##	##FieldB##	##FieldC##

[[DataSetIdentifier]]		
<<HeaderTextX>>	<<HeaderTextY>>	<<HeaderTextZ>>
##FieldX##	##FieldY##	##FieldZ##

[[Activities]]			
<<Activity>> (##ActivityPk##)			
[[MaterialCost]]			
<<Materials>>			
<<Quantity>>	**<<ItemCode>>**	**<<ItemDescription>>**	**<<Amount>>**
##Quantity##	##Item##	##Description##	##AmountOrCover-age##

In the example above a material cost ([[MaterialCost]]) data set is nested in an activity data set ([[Activities]]). The ##ActivityPk## is retrieved from the Activities data set. ##Quantity##, ##Item##, ##Description## and ##AmountOrCoverage## are retrieved from the MaterialCost data set.

Result:

Table 1: Activity (V01002310:10)

Materials

Quantity	Item Code	Item Description	Amount
8 pcs	AVDK17	PUR Item from car	Warranty
3 box	AVDK1501	Plugs S8 Item from serv. inv.	9,00 EUR

Totals

For each data set which represents costs, totals are calculated. In the default template, these totals are presented in the summary paragraph.

The placeholders Totalxxx and GrandTotal displays values of all the cost of the selected activities. The detail lines of these costs do not necessarily have to be presented in the report. The TotalDetailxxx and GrandDetailTotal placeholders contain values only from the detail cost lines.

In this way, the customer can decide to display only the totals without details, or display the detail and then displays the totals of these details.

Tools to edit the template

The template must be stored as an rtf file. Microsoft Word can handle this type of file although there are a other text processing applications which also can edit this file type. After creating the template, the file must be stored as .rtf document.

Note: Although the layout on the screen might look the same, there are differences between text processors (and also the application) in printed output. So, if you use preprinted paper, test the template with real data, saved as pdf.

Fixed price

The LN backend supports the fixed price per activity functionality. The report supports fixed price in a basic manner. The fixed price is not a field (as to present in the report), but is represented as total.

Prices are calculated in the LN backend. These prices are synchronized to the app. By definition, if an activity has a fixed price, all individual costs are set to zero. In this way the totals and the grand total would always be zero. The report replaces the totals with the fixed price amount.

In case cost is not calculated as zero, these costs are added to the fixed price amount.

Location of the default template

Templates are managed in LN in the **Visit Report Templates (tsmdm5100m000)** session. In this session, it is possible to import and export templates. This session can also generate the default template, as added in Default Template for Visit Report on page 59.

Tips

Editing placeholders

When adding or changing placeholders, type out the entire placeholder in one action, don't change any individual characters, as Word sometimes adds some invisible markers in the rtf document. If so, the report merger cannot be able to interpret the template in the right way., and the placeholder is not replaced in the visit report. For placeholders which are spelled correctly but don't show the merged value, edit the template document and retype the placeholder from start to finish including the front and end markers.

Tables with invisible borders

When the amount of data to be displayed is little, it is recommended to not display some or all of the borders of a table. All editors allow individual borders to be invisible.

MS Word settings

When using Word as editor, it is advisable to use the Web Layout view. From the Menu bar, select the **VIEW** tab, the click the Web Layout view. The tables borders beyond the right margin of the paper are visible and can be edited.

The cell gridlines must also be displayed. By default, this feature is not enabled. Use the border layout option in the **HOME** tab and click **View gridlines**. The borders with no visible line, are represented as a dotted line.

Appendix C: Placeholders for Visit Report Template

This chapter explains the place holders for a visit report template. Note that this is only applicable for Mobile Service on Windows devices.

Document

- DepartmentName
- DepartmentAddress

  10 row formatted address according to the backend address formatting rules.
- ServiceOrder
- CustomerOrder
- StartTime

  Actual start time of the first activity
- StartTimeDateOnly

  Actual start date of the first activity, without the time part.
- ServiceEngineer
- ServiceAddress

  10 row formatted address according to the backend address formatting rules.
- SoldToBusinessPartnerName
- BillingAddress

  10 row formatted address according to the backend address formatting rules.
- InvoiceToBusinessPartnerName
- Item

  Item code.
- ItemDescription

  Item description
- SerialNumber
- SerialNumberDescription
- ServiceType
- ServiceTypeDescription
- Project
- ProjectDescription
- OrderFixedPriceAmount: Amount including currency. If PricingMethod is not Fixed Price this field is hidden.

- OrderFixedPriceTaxAmount: Amount including currency. If PricingMethod is not Fixed Price this field is hidden.
- OrderFixedPriceAmountAndLabel: Amount including currency preceded by a text and colon. If PricingMethod is not Fixed Price this field is hidden.
- OrderFixedPriceTaxAmountAndLabel: Amount including currency preceded by a text and colon. If PricingMethod is not Fixed Price this field is hidden.
- Priority

  The priority of the visit
- SoldToContact
- SoldToContactName
- SoldToContactTelephone
- SoldToContactEmail
- PlannedStartTime
- PlannedFinishTime

Special placeholders

Totals which displays total values of all costs independent of if the details line are displayed or not.

- TotalMaterialCost
- TotalMaterialCostTax (not in default template)
- TotalLaborCost
- TotalLaborCostTax (not in default template)
- TotalOtherCost
- TotalOtherCostTax (not in default template)
- TotalInvoice
- TotalTax
- GrandTotal

Note:

TotalInvoice, TotalTax and GrandTotal is calculated by adding the TotalInvoice, TotalTax and GrandTotal is calculated by adding the individual totals and including the fixed price value (if any). In general, if a fixed price value is set, all detail amounts are zero.

Totals of costs which are presented in the detail lines.

- TotalDetailMaterialCost
- TotalDetailMaterialCostTax (not in default template)
- TotalDetailLaborCost
- TotalDetailLaborCostTax (not in default template)
- TotalDetailOtherCost
- TotalDetailOtherCostTax (not in default template)
- TotalDetailInvoice
- TotalDetailTax
- GrandDetailTotal

Note: TotalDetailInvoice, TotalDetailTax and GrandDetailTotal is calculated by adding the individual totals and including the fixed price value (if any). In general, if a fixed price value is set, all detail amounts are zero.

Document placeholders available after finalization of the visit

The following placeholders are available after the visit is finalized.

Text placeholders

- EngineerComments
- CustomerComments
- CustomerName

Image placeholders (represented by %%placeholder%%)

- EngineerSignature
- CustomerSignature

Activities

- ActivityLine
- ActivityText
- ReportedProblem
- ExpectedProblem
- ExpectedSolution
- ActualProblem
- ActualSolution
- ActualProblemComment
- ActualSolutionComment
- Description
- Item - Item code.
- ItemDescription - Item description
- SerialNumber
- SerialNumberDescription
- ServiceType
- ServiceTypeDescription
- FixedPriceAmount - Amount including currency. If PricingMethod is not set to Fixed Activity Price this field is hidden.
- FixedPriceTaxAmount - Amount including currency. If PricingMethod is not set to Fixed Activity Price this field is hidden.
- FixedPriceAmountAndLabel - Amount including currency preceded by a text and colon. If PricingMethod is not set to Fixed Activity Price this field is hidden.
- FixedPriceTaxAmountAndLabel - Amount including currency preceded by a text and colon. If PricingMethod is not set to Fixed Activity Price this field is hidden.
- Priority

  The priority of the activity
- ShipToContact
- ShipToContactName
- ShipToContactTelephone
- ShipToContactEmail
- Contract

- ContractDescription
- Warranty
- WarrantyDescription
- CoverageType
- CoverageTypeDescription
- ActualStartTime
- ActualFinishTime
- PlannedStartTime
- PlannedFinishTime

Material

- Quantity - The quantity of the material, including unit.
- Item - Item code
- Description - Item Description
- SerialNumber
- SerialNumberDescription
- AmountOrCoverage

  The invoice amount, as calculated by the backend including the currency. If the material has been changed after the last synchronization or has not been synchronized at all, the amount is not visible.

  If the amount is zero and a value is specified in the ‘CoveredBy’ field, the coverage type is displayed instead of the zero amount.
- Lotcode

Labor cost

- StartTime - The start time of the labor task.
- EndTime - The end time of the labor task. (This field is calculated based on the start time and duration of the labor task.)
- Duration - The duration of the labor task.
- LaborType - Translated labor type.
- Task - Task description
- OvertimeType - The overtime code.
- AmountOrCoverage

  The invoice amount, as calculated by the backend including the currency. If the labor cost has been changed after the last synchronization or has not been synchronized at all, the amount is not visible.

  If the amount is zero and a value is specified in the ‘CoveredBy’ field, the coverage type is displayed instead of the zero amount.

Other cost

- Quantity - The quantity of the material, including unit.
- TravelStartTime
- CostType - CostType can be Other or Travel.
- Description - Other cost description. CostType Travel does not have a description.
- AmountOrCoverage

The invoice amount as calculated by the backend including the currency. If the other cost has been changed after the last synchronization or has not been synchronized at all, the amount is not visible.

If the amount is zero and a value is specified in the ‘CoveredBy’ field, the coverage type is displayed instead of the zero amount.

Inspections (not included in default template)

- Item - Item code
- ItemDescription
- SerialNumber
- SerialNumberDescription
- MeasurementType - Measurement type code
- MeasurementTypeDescription
- Position - Position code
- PositionDescription
- MeasuredValue
- MeasurementTime - Date and time of the measurement
- InspectionText - Additional text entered by the service engineer
- Inspections
- Inspection
- Item
- SerialNumber
- Position or MeasurementPosition
- MeasuredOn
- MeasuredValue
- MeasuredValueOrDescription
- MeasurementType
- MeasurementUnit
- InspectionText
- FixedPrice
- OrderFixedPrice

Total hours per labor type (not included in the default template)

- LaborTypeCode - The code of the labor type
- LaborType - The description of the labor type
- Duration - The duration of the labor type expressed in hours

Text labels (used by <<placeholder>>)

- Order
- OrderReference
- StartTime
- FinishTime
- ServiceEngineer
- LaborTypes
- LaborType

- Duration
- … see <<placeholder>> in appendix 2

Appendix D: Default Template for Visit Report

This chapter explains the default template for visit reports that is used if no appropriate template can be found. Note that this is only applicable for Mobile Service on Windows devices.

##DepartmentName##	**<<Order>>**	**##ServiceOrder##**
##DepartmentAddress##	<<OrderReference>>	##ReferenceA##
	<<StartTime>>	##StartTime##
	<<ServiceEngineer>>	##Engineer##

<<ServiceAddress>>	**<<BillingAddress>>**
##SoldToBusinessPartnerName##	##InvoiceToBusinessPartnerName##
##ServiceAddress##	##BillingAddress##

<<Summary>>			
<<Materials>>	**<<Labor>>**	**<<OtherCosts>>**	**<<Total>>**
##TotalMaterialCost##	##TotalLaborCost##	##TotalOtherCost##	##TotalInvoice##
		<<Tax>>	##TotalTax##
		<<Total>>	##GrandTotal##

<<EngineerComments>>
##EngineerComments##
<<CustomerComments>>
##CustomerComments##

%%EngineerSignature%%	%%CustomerSignature%%
##ServiceEngineer##	**##CustomerName##**
<<ServiceEngineer>>	<<CustomerName>>

[[Activities]]
<<Activity>> (##ActivityPk##)
[[MaterialCost]]

<<Materials>>			
<<Quantity>>	**<<ItemCode>>**	**<<ItemDescription>>**	**<<Amount>>**
##Quantity##	##Item##	##Description##	##AmountOrCover-age##

[[OtherCost]]			
<<OtherCosts>>			
<<Quantity>>	**<<CostType>>**	**<<Description>>**	**<<Amount>>**
##Quantity##	##CostType##	##Description##	##AmountOrCover-age##

[[LaborCost]]			
<<Labor>>			
<<Hours>>	**<<LaborType>>**	**<<Task>>**	**<<Amount>>**
##Duration##	##LaborType##	##Task##	##AmountOrCover-age##

<<Diagnosis>>
<<ReportedProblem>>
##ReportedProblem##

<<ExpectedProblem>>	**<<ExpectedSolution>>**
##ExpectedProblem##	##ExpectedSolution##

<<ActualProblem>>	**<<ActualSolution>>**
##ActualProblem##	##ActualSolution##
##ActualProblemComment##	##ActualSolutionComment##