



Infor LN Service User Guide for Service Scheduler Workbench

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About this document

This guide provides information about the various concepts and processes for the Service Scheduler Workbench.

Objectives

This document is designed to meet the objectives described below. It is assumed that you already have a understanding of Infor LN Service

Understand the following concepts

- Assigned Activities Section -GANTT
- User Settings Section
- Activities Section
- Location Section
- Assigning an activity to an Engineer
- Multi-activity Planning
- ERP settings for Workbench

Document summary

This user's guide explains the various concepts and process available in the Service Scheduler Workbench.

How to read this document

This document is assembled from online Help topics. As a result, references to other sections in the manual are presented as shown in the following example:

For details, refer to Infor LN Service Online Help.

Please refer to the Table of Contents to locate the referred section.

Underlined terms indicate a link to a glossary definition. If you view this document online and you click on underlined text, you jump to the glossary definition at the end of this document.

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This chapter provides a brief introduction of the Service Workbench.

Service Scheduler Workbench

Introduction to service scheduler workbench

Use the workbench for planning and scheduling of service order activities. Service orders and activities can be scheduled and released by taking into account the constraints such as skills, availability, locations and so on. The workbench features several planning constraints can be used by engineers to improve efficiency and provide high visibility of field service activities.

Positioning

The Service Scheduler Workbench is positioned within the Service Planning modules. The modules that are part of the Service Planning are Territory Planning, Preventive Maintenance Planning, and Group Planning. The Service Scheduler Workbench links the plans generated by the Group Planning module.

The Group Planning module generates a pre-plan, which must be 85% correct. After the group plan is transferred for execution, the details and exceptions are planned and scheduled in the Service Scheduler Workbench.

Layout

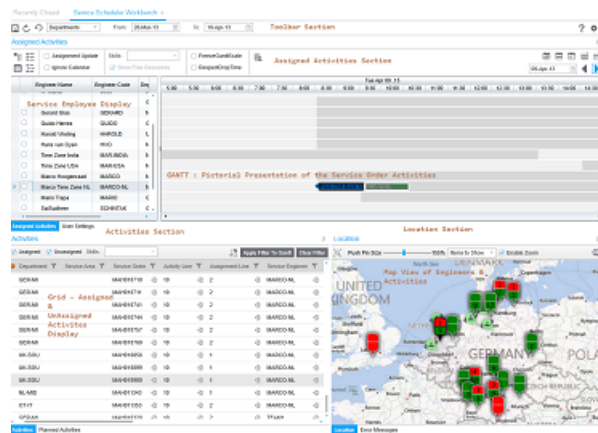
When the workbench is accessed, all the data related to the Service departments, linked to the user accessing the workbench, is populated. Service departments are linked to a user in the Service Departments by User Profile (tsmdm1155m000) session.

The workbench includes these sections:

Note

It is crucial that the capacity required for the service activities is matched with the available capacity.

Service activities and the employees and their availability time are displayed in the workbench.



Planning Modes

There are three methods of planning the schedule of the service engineers:

Step 1: Plan based on the availability of the engineer

This schedule depends on when the engineer can visit the customer. You must select an activity and drag the activity to the Gantt chart. The workbench calculates the new planned start and finish times. However, these times may deviate from the requested times of the activity.

Step 2: Plan based on the requested time of the activity

This schedule depends on when the engineer is available to perform the activity, based on the requested planned start and finish time. Select the unassigned activity, the system displays a list of skilled engineers available to perform the activity. The planner must select engineer and using the drag option link the engineer to the required activity. This process is executed to ensure the planned start and finish times remain unchanged.

Step 3: Plan based on a geographical selection

This plan is used to group the activities in a specific region, to reduce the travel time. Using the map, you must select the activities for a required region. In the grid you must select the unassigned activities for the region, and drag the activities to the Gantt chart. Optionally, the activities can be sequentially planned in 1 action.

Toolbar Section

This section is used to save, refresh, revert, and filter data.

- Save

Submits the workbench changes to ERP.

- Refresh

Updates the date from ERP based on the Service Departments and related Start and End Date.

- Revert

Reverts the changes made to the selected assignments

- Service Departments

All the service departments available on the ERP backend server are displayed. Initially, the data of the departments linked to the user profile are fetched. Next, all the engineers linked to the selected service departments are fetched. Finally, service orders/activities assigned to the retrieved service engineers are fetched, irrespective of the service departments to which these orders and activities are linked

- Start Date – End Date

A date range is selected using the start and end date. The user can specify the required time span between the start and end date using the Time Horizon option in the User Settings section, on the General tab.

Chapter 2

Assigned Activities Section -GANTT

2

This chapter provides a brief description of the concepts available in Assigned Activities Section -GANTT.

Assigned Activities Section -GANTT

This section displays a graphical view of the service activities based on the assignment planned start and finish time. The user can view all the engineers in the left of the section and all the service orders/activities assigned to the engineers on the Gantt view on the right of the section. The employee's availability and non-availability, based on their calendar data, is also displayed. The first and second row of the Gantt chart display the activity constraints of a selected activity, including the planned Start/Finish Time, Earliest Start/Latest Finish Time, Installation Group Calendar, and so on.

Assigned Activities Section: Other Features

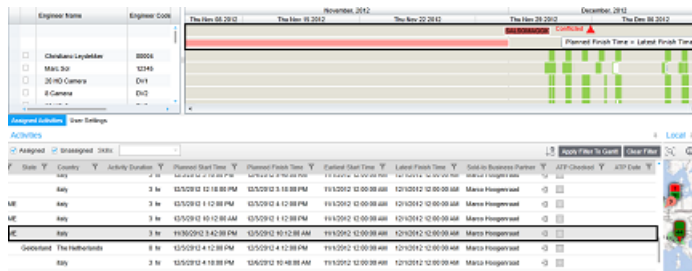
This section explains the additional features supported by the Service Scheduler.

Show Activity Constraints Feature

This feature provides you with a detailed view of whether the earliest start time, latest finish time, installation group calendar, planned start time, planned finish time, and ATP are in sync or if there is any deviation.

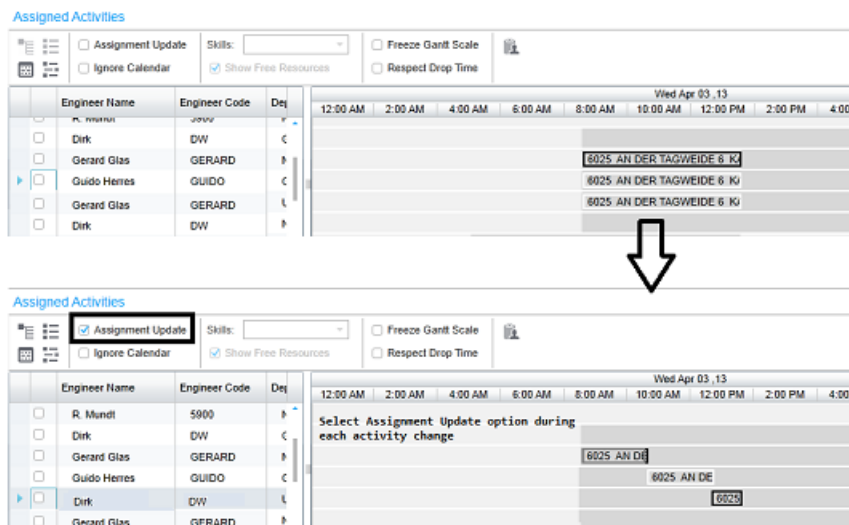
When an activity is selected, the first two rows in the Gantt chart display one task bar each. The task bar in first row represents the planned start time and planned finish time of the activity. The task bar in the second row represents the earliest start time and latest finish time of the activity. Also an indicator is displayed for the ATP date. The Installation Group Calendar information is highlighted in the second row. The Conflicted icon displays the reason for the conflict.

You can select the colors for the task bars and the ATP indicator in the User settings section, on the Colors tab.



Assignment Update

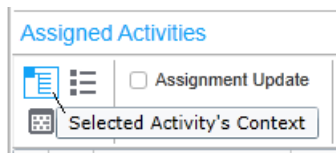
Use this option to plan for each assignment individually. For example, the first activity has a duration of 5 hours and the second activity has 3 assignment lines. You can then schedule the 3 assignments with the durations 2 hours, 2 hours and 1 hour respectively. When you saves the plan, the assignment planned start and assignment planned finish times of all the three assignments are updated to ERP. However, the activity duration, activity planned start, and activity planned finish times remain the same in ERP.



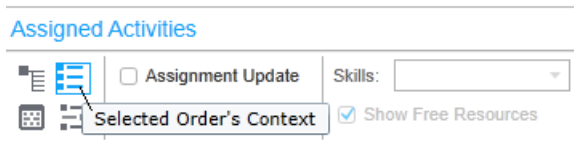
Various Filter views in Gantt

You can select various views of the data on Gantt using the filters:

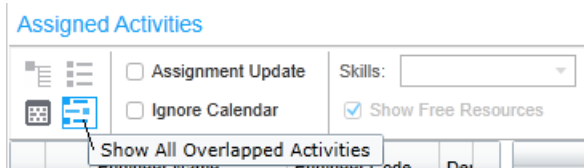
- **Selected Activity's Context:** All engineers assigned to the selected activity are displayed in the left section of the Gantt chart. The selected activity and the related assignments are displayed on the right section.. No other activities assigned to the selected engineers are displayed on the Gantt. Features such as Unassign, Cut and Copy are disabled in this view.



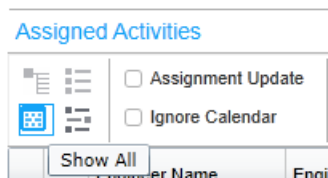
- **Selected Order's Context:** All engineers assigned to all activities under the selected order will be displayed in the left section of the Gantt chart. The selected order and the related activities and assignments are displayed in the right section. No other activities assigned to the selected engineers will be displayed on the Gantt chart. Features such as Unassign, Cut, Copy are disabled in this view.



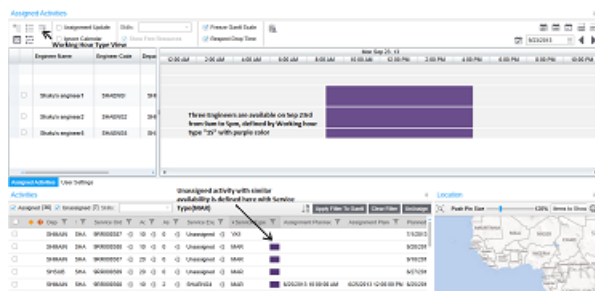
- **Show All Overlapped Activities:** All the overlapped activities available during the selected time frame (within a day, or a week or a month) are displayed on the Gantt chart. In this view, only the overlapped activities are displayed. To exit from this view, select the Show All option.



- **Show All:** When you initially log in to workbench, the default view is displayed. In this view, all the service engineers are displayed. When you refresh the data or on selecting an unassigned activity from the grid, the view changes to the default view.

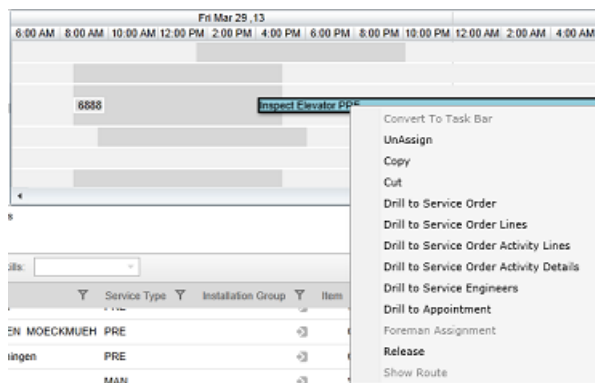


- **WHT (Working Hour Type) View:** When you select the display color for the Working Hour types in the User settings, the Working hour type view icon is enabled. When you click the Working hour icon, all the engineers available for the configured working hour types are filtered and displayed. This helps in planning the weekend duties, new product duties and so on.



Task bar Context Menu options

Right-click the activity on the GANTT chart, the context menu with these options is displayed



Convert to Task Bar

This option is enabled for all activities:

- When the assignment planned start time and finish times are the same.
- When an unassigned activity is assigned to an engineer, using the Drag and drop option, and if the duration is zero, the activity is displayed as a diamond.

Select the Convert to Task bar, option to convert the activity to a task bar. By default the duration is set to 30 minutes.

These options are available only for activities with the status Free, Planned, and Released.

UnAssign

Use this option to unassign an engineer already assigned to an activity. The assignment line is deleted from both ERP and the workbench. You can also unassign multiple activities. After the assignment(s) for an activity are unassigned, the assignment(s) are either removed or converted into unassigned activities, if the activity belongs to the selected department.

Cut, Copy, and Paste

When you add an activity to the Gantt chart using the Cut/Paste option,, the activity's planned start time is considered as the scheduled start time. If the Cut/Paste-Respect option is selected then time defined for the activity is used. The same is applicable for the activity's assignment planned start time.

For more details on the Multiple Activity Cut-Copy/Paste option, refer to the Multi Activity Planning for Assigned Activities section.

Drill back options

Drill back options such as Drill to Service Order, Drill to Service order lines, Drill to Service order activity lines, Drill to Service order activity details, Drill to Service engineers, and Drill to Appointment are available which enable you to access the ERP sessions. For the drill back sessions such as Service order details, Service order lines, Activity details, and Activity lines, if you change the data in ERP the changes are updated to the workbench.

Foreman Assignment

A foreman is a service employee, who has several service employees reporting to them. If you select an unassigned activity, using the drag and drop option, and assigns the same to a foreman, the Foreman Assignment option is enabled. To view this option right-click the selected foreman name. If this option is selected, multiple assignments, wherein one assignment is assigned to each service employee, are created.

The view mode changes to Selected Activity's Context when the Foreman Assignment option is selected. All the newly created assignments are displayed on the Gantt chart in a single view. The Foreman Assignment option can also be enabled using the Copy/Paste option.

Show Route

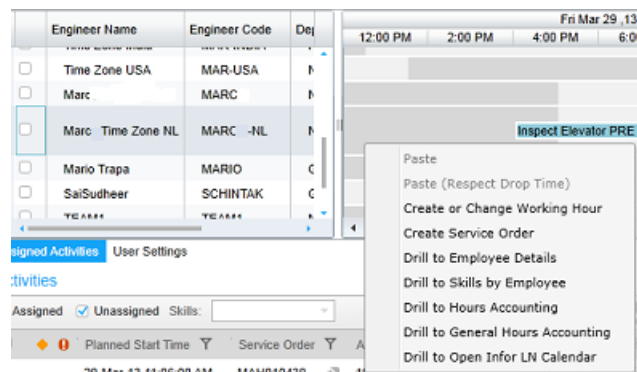
When you select multiple activities of the same Engineer, the Show Route option is enabled. This option will map the route based on the multiple activities. The GPS co-ordinates of the activity's location address are considered for the internal process . The Route is based on Assignment Plan Start Time.

Release

A Free or Planned activity can be released from the Scheduler using the Release option.

Gantt Context Menu options

Right-click an empty area on the Gantt chart, the context menu with these options is displayed:



Create or Change Working Hour

Using this option, you can change the status of the working hours of an engineer to Available or Unavailable. To access this option right-click the GANTT chart.

Create Service Order

You can insert a service order from the workbench using the Create Service Order option. An ERP session is opened from the workbench; wherein the planned date is transferred from the workbench. You must create a new activity. The current engineer is automatically assigned to an activity. To view the new order on the Gantt chart, you must select the Save changes and Exit (Ctrl+L) option in the ERP session.

Drill back sessions

Drill back sessions such as Drill to Employee details, Drill to Skills by Employee, Drill to Hours accounting, Drill to General hours accounting, and Drill to open ERP calendar enable you to access the ERP sessions from the Workbench.

Chapter 3

User Settings Section

3

This chapter provides a brief description of the User Settings Section.

User Settings Section

Workbench supports the Persistent Docking layout and Persistent filters. You use these features to define the grid column width, grid column sequence, docking panes position, and grid filters in the workbench using the Save Defaults option on the Workbench tool bar.

General Settings

The settings available on the General tab:



Planning Horizon

- The Type field can be selected as Fixed or Relative.
- Fixed type fetches the data from the date as specified in the From field.
- Relative type fetches the data based on the current date.
- The Days field can be set to the number of days to fetch the data from the ERP backend server.

Location

Map Zoom Level: You can select the default map zoom level for the Service Scheduler Workbench.

Others

■ Auto Save

When the Auto Save Option is set to ON, all the actions executed by you are saved to the ERP backend server. You cannot revert this action.

When the Auto Save mode is disabled, click the Refresh button to undo the actions.

■ Exclude Service Engineers

The selected Service engineers are excluded from the Workbench.

■ Exclude Service Order Series

The Service orders with the specified order series will be excluded from the work bench.

Department	Engineer Code	Service Engineer
SHMARV	08904	Christiane Leydenker
OT.IT	10439	CV
OT.IT	10750	PR
OT.IT	10870	PO
OT.IT	10889	DG
SHMARV	12345	Marc Sol
OT.IT	40956	RAPN
OT.IT	40959	RUBA

Gantt

The Gantt tab enables you to define the displays options for the Gantt chart.

Department	Engineer Code	Service Engineer
SHMARV	08904	Christiane Leydenker
OT.IT	10439	CV
OT.IT	10750	PR
OT.IT	10870	PO
OT.IT	10889	DG
SHMARV	12345	Marc Sol
OT.IT	40956	RAPN
OT.IT	40959	RUBA

View Options

You can define the Gantt time scale to be displayed in the Workbench.

These are the options:

- Today: The Gantt time scale is set to Today. You can also select the Visible units and the Starting Hour.

- **Current Week:** The Gantt time scale is set to Week. You can also select the Visible units and the Starting Day for Week. The Starting Day For Week setting is considered only when the Current Week is the selected View option, the first time the application is launched.
- **Current Month:** The Gantt time scale is set to Month. If the Current Month is the selected view option, the time scale will be 31 days from the current date.

Indicator Symbols

You can define the symbols for the flags in this order Blocked, Emergency, and Appointment.

Others

- **Activity Block Description**

The selected option is displayed on the activity task bar.

- **Color Procedure**

You can define the colors for the task bar based on the Color Procedure. For example, if the Status is selected, the colors defined for the activity status such as Free, Released, and Planned are displayed.

- **Show Free Resources**

To enable the Show Free Resources option, select this check box.

- **Freeze Gantt Scale**

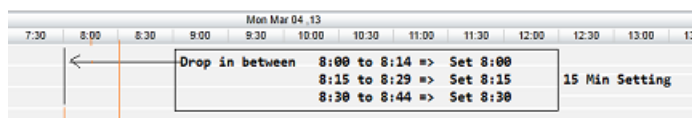
To enable the Freeze Gantt Scale option, select this check box.

- **Respect Drop Time**

To enable the Respect Drop Time option, select this check box.

- **Drop Time Grid**

With this setting Planner can define granularity of dropping by either 15 mins, 30 mins or 1 Hour. For example when 15 mins is selected below drop times can be seen:



- **Show Activity Constraints**

Use this option to view the first two rows of the Gantt chart. This helps you to determine, if the earliest start time, latest finish time, installation group calendar, planned start time, planned finish time, and ATP are in sync or if there is any deviation.

Employee Sequence

You can group employees or define the sequence such that the selected employees are displayed at the top of the Gantt chart. Select a row to enable the Up/Down arrows. Use the arrows, to shift the position of an employee.

Employee Sequence

Department	Engineer Code	Service Engineer
NL-MID	120	120 Marc
NL-MID	GERARD	Gerard Glas
GER-MI	GUIDO	Guido Herres
NL-MID	130	Tijdschema EMP
NL-MID	310000	Cor Harthoorn
NL-MID	5900	R. Mundt
GER-MI	DW	Dirk

When you set the displayed sequence, you must click the Refresh button.

The sequence of employees in Gantt:

Assigned Activities

☐ Assignment Update

☐ Ignore Calendar

Skills:

☒ Show Free Resources

☐ Freeze

☐ Respect

Colors

Use the Colors tab to define the colors for these options:

Tooltip

The Tooltip option is configurable. You can choose the required fields to be displayed with a tooltip.

User Settings

General Gantt Colors **Tooltip** Multi Activity Planning

Service Order Activity

Details:

Done For:

Activity Address:

Planned Times:

Assignment Times:

Indicators:

Planned Activities

Details:

Done For:

Activity Address:

Planned Times:

Others:

Multi-activity Planning

Multi-activity planning enables you to perform the planning methods such as Time based and Route based. For more details, refer to the Multi-activity Planning section.

Chapter 4

Activities Section

4

This chapter provides a brief description of the Activities Section.

Activities Section

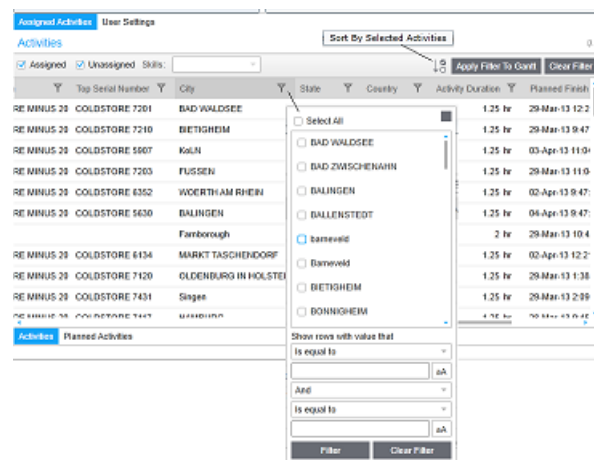
The unassigned and assigned activities are displayed in the grid view. The user can service activities with the status Free, Planned, and Released.

Planned activities are displayed on the Planned Activities tab.

You can assign the unassigned or planned activities to the required employee using Gantt chart and the drag option.

Activities Section – Other Features

The Activities section grid generates the assigned, unassigned and planned activities. Use the filters available for each column to display data as per your requirements. The image displays the filters for the City column.



Planned Activities

Planned activities are used to list the activities planned for a serialized item or installation group to improve the long term preventive maintenance process.

When a planned activity is selected the required skills are populated in the Skill combo section and the engineers with matching skills are displayed on the GANTT chart.

To transfer a planned activity to a service order link the planned activity (using the drag and drop feature), and assign the activity to an engineer.

Grid Filter

When you filter on the Service Engineer column, the display of the following sections are modified:

1. Gantt: The selected engineers are displayed in the left section of the Gantt. All the assigned activities are also displayed.
2. Grid: All the activities assigned to the selected engineers are displayed on the grid.
3. Map/Location: All activities assigned to the selected engineers are displayed on the Map

You can also use the Apply Filter To Gantt option to view how the display of various sections are modified when column filters are used.

Clear Filter

Use this option to clear all the filters applied on the grid.

Sort By Selected Activities

Use this option to group Selected Activities.

Skills

Use the Skills option to list the required skills for the selected activity in the grid. Mandatory skills are displayed in Red.

State Indicators

State Indicators help to easily identify activities on the grid based on different criteria:

1. An activity modified.
2. A new assignment line is added using the Copy/Paste or drag and drop option from the unassigned list to the Gantt chart.
3. An error occurs when updating data to ERP.

These activities are displayed with indicators as shown in the image.

<input checked="" type="checkbox"/> Assigned	<input checked="" type="checkbox"/> Unassigned	Skills: <input type="text"/>
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

GANTT Engineer Context Menu options

Get Current Location

To enable the Get Current Location option, right-click the engineer on the GANTT chart. Select the option to map the engineer based on their latest available GP.

	Engineer Name	Engineer Code	Dep	12:00 AM	2:00 A
<input type="checkbox"/>	R. Mundt	5900	M		
<input type="checkbox"/>	Dirk	DW	C		
<input checked="" type="checkbox"/>	Gerard Glas	GERAR			
<input type="checkbox"/>	Guido Herres	GUIDO			
<input type="checkbox"/>	Hans van Oyen	HVO	M		
<input type="checkbox"/>	Time Zone India	MAR-INDIA	M		

Get Current Location

Assigned Activities User Settings

Chapter 5

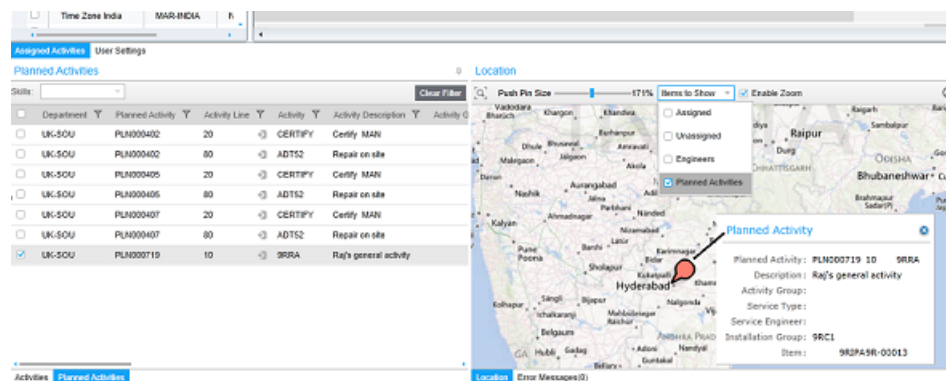
Location Section

5

This chapter provides a brief description of the Location Section.

Location Section

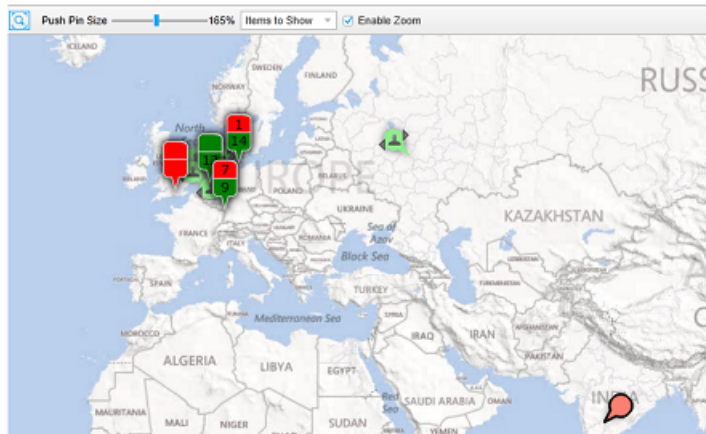
This section provides the map view of the engineers and activities (assigned/unassigned/planned), which helps in easily identifying the location of the engineer and the activity.



You can filter the data to be displayed using the Items To Show list. The image displays the applicable filter, that is, planned activities and the respective location on the map. Similarly, you can filter the assigned activities, unassigned activities and the engineer's locations that must be displayed on the map.

Location Section – Other Features

The Map/Location section displays the pushpins for the engineer, assigned activity, unassigned activity, and planned activity.

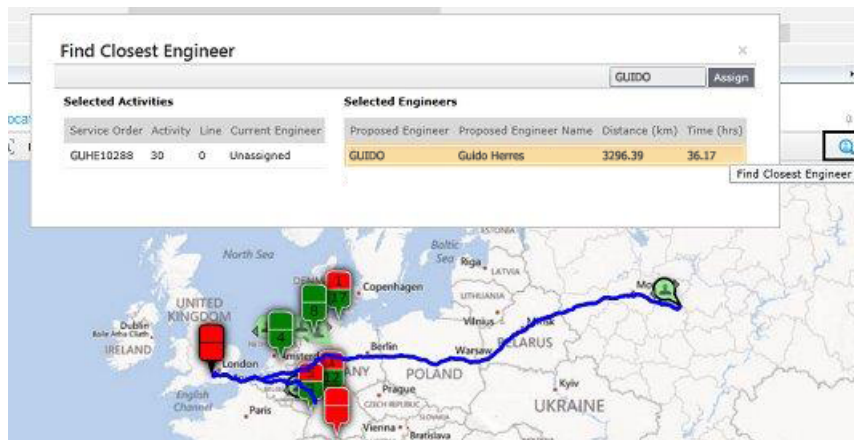


Pushpin Selections and Zoom

- To remove all selections, click on an empty area of the map.
- Press Shift+click to select multiple activities.
- When you zoom in on a particular location, only the activities available for the location are displayed.
- To select a region or group of activities, you can also press CTRL and drag the pointer to create a box over the required region or activity.
- To zoom in on a particular region or activity's location, press SHIFT and drag the pointer to create a box over the required area.
- Activities are displayed as pushpins on the map. You can define the size of the pushpins.
- For a group of activities with the same location address or the same area or when you zoom out of an area or a location, a single pushpin represents the region. The pushpin displays the number of activities. For example, for the Germany a group of 7 unassigned and 9 assigned activities are displayed. The first part of the pushpin displays the unassigned activities and the second part displays the assigned activities. You can define the colors for the pushpin in the User Settings> Map Pushpin section on the Colors tab.
- Use the Enable Zoom option zooms in on the activity address. When this option is unselected then map remains at the zoom level already selected by the planner and it doesn't zoom in further.
- Use the Zoom to Fit option to zoom in and view all the selected activities and engineers.

Find Closest Engineer

Use this option to locate the engineer closest to the selected activities. This feature calculates the distance and time for the engineer to travel to the activity location address.



You can enable the Closest Engineer button:

- When multiple engineers and a single activity are selected. Use the SHIFT + Click option or press CTRL and drag to create a box over the activities and engineers, to view the required details.
- The estimated time and distance is populated and an Assign option is displayed. To assign the engineer, select the Assign option. The activity is displayed on the Gantt chart. The route to each of the selected activities is displayed in Blue.

Chapter 6

Assigning an activity to an Engineer

6

This chapter provides a brief description of the Assigning an activity to an Engineer.

Assigning an activity to an Engineer

Single Unassigned Activity

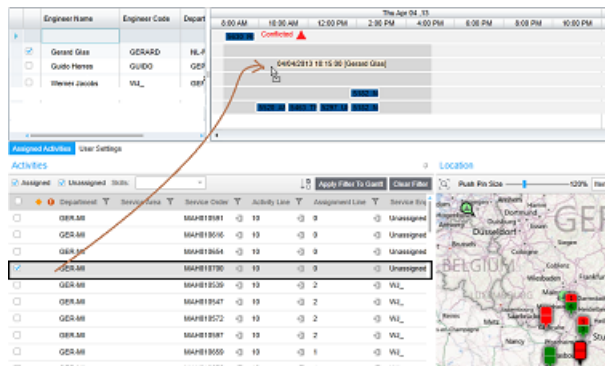
When a single unassigned activity is selected these actions are performed:

- The Gantt chart displays the selected activity's planned times. You can stop this action by selecting the ON Freeze Gantt Scale option.
- The first and second rows display the activity constraints for the selected activity. The first row displays the activity planned start/finish time for the task. The second row displays the earliest start and latest finish time for the task. The installation group calendar is also displayed in the background.
- The Skills list is populated with the mandatory and optional skills required to execute the selected activity. Mandatory skills are displayed in Red.
- The list of engineers with the skills required for the activity is populated in the Gantt.
- The Show Free Resources option enables the planner to get the list of engineers available to execute the activity during the planned time.

All planning in the workbench is done based on the calendar information. However, in some cases planning can be done without the calendar. Use the Ignore Calendar option to ignore the calendar and assign the task during the engineer's non-availability time . Assigning an activity to an engineer:

Step 1:

Plan based on the availability of the engineer:—Check when the engineer can visit the customer. Drag the selected unassigned activity from the grid to the Gantt chart and assign the activity to the required engineer. The activity's planned start and finish time are modified. For example, the time selected for the engineer, Gerard Glas, is 10:15 AM.



Step 2:

Plan based on the requested time for the activity – Check if an engineer is available for the requested date/time. Select the engineer(s) from the Gantt and link it to the selected activity's Order Number or Activity Number, using the drag option. The Order Number and the related unassigned activities for the order are assigned to the engineer.

Note

The planner can also select multiple engineers if the activity must be shared.

Smart Planning using the drag option

When the planner selects (using the drag option) an activity nearby the end of existing activity then and the time difference between the existing activity's assignment finish time and the selected time is less than or equal to five minutes, the activity is automatically be sequenced. This feature helps you to plan activities without any time delay.

Multiple Unassigned Activities

A plan based on the requested time for the activity. You must check if an engineer is available for the requested date/time.

- You can select multiple unassigned activities from the Activities section and link the activities, using the drag option, to the required engineer on Gantt.
- You can select multiple unassigned activities from the Activities section and link the activities, using the drag option, to the required engineer based on the Activity number or the Order number.

Chapter 7

Multi-activity Planning

7

This chapter provides a brief description of the Assigning an activity to an Engineer.

Multi-activity Planning

Multi-activity planning enables you to define planning methods such as Time based and Route based.

- **Time Based Sequential:**
This is a sequential plan, which enables you to schedule multiple activities sequentially. You can choose either the Forward Planning or the Backward Planning option.
- **Forward Planning:**
On Gantt chart select the required multiple activities and, using the drag option, link the first activity to the required time. Based on the first activity's planned start time, all the other activities are planned sequentially. You can also modify the planned start time of the first activity, which ensures that all other activities are planned sequentially.
Note: No activity, in forward planning, other than the first activity can be selected.
- **Backward Planning**
On Gantt chart select the required multiple activities and, using the drag option, link the first activity to the required time. Based on the last activity's planned finish time, all the other activities are planned sequentially. The planner can also change the planned finish time of the last activity using the drag option. This ensures that, from the last activity, all other activities are also planned sequentially. No activity, in backward planning, other than the first activity can be selected.
- **Route Based**
Route based helps you to schedule a group of activities based on the route. The route is created based on the locations of the activities for the group. Travel distance and time are calculated for the activities. Distances are calculated based on the GPS co-ordinates specified for the address. The travel time is combined with the duration of the various activities to be executed at the location.
You can maintain the default information required for the multi-activity planning in the Multi Activity Planning section, on the User Setting tab. You can define the Planning Method,

Distance Calculation Method, Route Start Address, Average Travel Speed, Travel Offset Time and so on.

Note: Route Based Planning Method is applicable only for ERP LN FP8 and above.

User Settings

General Colors Tooltip **Multi Activity Planning** Miscellaneous

Multi Activity Planning

Planning Method: Time Based Sequential ▼

Distance Calculation Method: Time Based Sequential
Route Based

Start Address of Route: First Activity ▼

Average Travel Speed: 60 km/hr

Travel OffSet Time: 0.2 hr

Keep Sequence Of Activities: ☐

Respect Earliest Start Time: ☐

Respect Latest Finish Time: ☐

Assigned Activities **User Settings**

The planning process is executed based on the value of the Planning Method specified in the User Settings.

The fields in the Route Based method are:

- **Distance Calculation Method**
This method is used to calculate the distance between two locations.
- **As The Crow Flies**
Distance is calculated using a simple formula
- **Bing Maps**
Uses a dedicated web service. An internet connection is required wherein Infor 10 ERP Enterprise requests the Bing maps web service to calculate the distance.
- **Google Maps**
Uses a dedicated web service. An internet connection is required wherein Infor 10 ERP Enterprise requests the Google maps web service to calculate the distance.
- **Route Start Address**
- **First Activity**
Start route at first activity. This is the default value.
- **Company**
Start route at company address.
- **Service Department**
Start route at service department address.

- **Service Engineer**
Start route at service engineer address.
- **Average Travel Speed**
Average travel speed to be used for calculation of the travel time when planning a route.
- **Travel Offset Time**
Travel offset time to be used for the calculation of the travel time when planning a route.
- **Keep Sequence Of Activity Set**
When select this check box, ERP Enterprise does not change the sequence of the activities while planning for the specified group. A route will be defined from the first activity, with the activity 2, 3, and so on, until the last activity. The order of the activities will not be changed. Only the distances and the travel times between the locations of the service orders are calculated.

When you select this check box and use the manual Multi-activity Planning option, the Activity Sequence grid with the list of activities, selected by the user, in the work bench is enabled. Use the Up and Down arrows to change the sequence of activities as required. After the sequence is set, click the Generate Group Plan button.

The screenshot shows the 'Multi Activity Planning' section of the Service Scheduler Workbench. It includes fields for 'Service Engineer', 'Planned Start Time', and 'Planned Finish Time'. There are checkboxes for 'Plan Based On Time', 'Plan Based On Route', and 'Keep Sequence Of Activities'. The 'Keep Sequence Of Activities' checkbox is highlighted with a red box. Below these fields is an 'Activity Sequence' table with the following data:

Service Order	Activity	Line	City	Planned Start Time	Planned Finish Time	Travel Distance (mi)	Generate Travel Distance
WAVE20428	25	1	BRIDGE	28-Mar-12 9:32:28 AM	28-Mar-12 9:47:28 AM		
WAVE20289	25	1	BIRMINGHAM	28-Mar-12 9:47:28 AM	28-Mar-12 10:02:28 AM		
WAVE20437	25	1	NEWCASTLE	28-Mar-12 10:02:28 AM	28-Mar-12 10:17:28 AM		

At the bottom right, there is a 'Generate Group Plan' button.

When this check box is cleared, the shortest route between the locations is calculated and the order of the activities is updated.

- **Respect Earliest Start Time**
Select this check box to define if the earliest start time of a service order activity must be considered.
 - Yes: The service order activity is planned with Planned Start Time set to the Earliest Start Time.
 - No: Planned Start Time can be planned before the Earliest Start Time. The default value is No.
- **Respect Latest Finish Time**
Select this check box to define if the latest finish time of a service order activity must be considered.
 - Yes: The Planned Finish Time cannot be scheduled after the Latest Finish Time. The service order activity is not planned and a warning message is displayed.
 - No: The Planned Finish Time can be scheduled after the Latest Finish Time. The default value is No.

The Preview option is provided when you use the manual option to perform Multi-activity Planning. You can check the complete route plan. You can also make changes to the Route Start Address, or Average

travel speed, or check the flags (such as Respect Earliest Start Time and so on), before clicking the Generate Group Plan button.

When you click the Preview button, the entire route is planned and the complete information such as the start city of the route, planned travel start and finish times, planned start and finish times, travel duration, travel distance, and end city of the route are displayed in the Activity Sequence grid. Information about the route start and end city are displayed in a dummy row at the start and end of the Activity Sequence grid. When the Company, or Service Department, or Service engineer for the Route start address is defined, the route begins at the respective location address and is completed only on reaching the Company, or Service department, or Service engineer location address. The travel finish time to reach the respective locations is displayed with the route end city in a dummy row at the end of the grid.

Start times based on travel distance and time. Planning is based on the start address of the service engineer:

Multi Activity Planning

Service Engineer: MARCO AL
Planned Start Time: 27-Mar-13 2:00 PM
Planned Finish Time: 28-Mar-13 1:00 PM

☒ Plan Based On Time
☐ Plan Based On Route

Distance Calculation Method: As The Crow Flies
Average Travel Speed: 60 km/hr
☐ Keep Sequence of Activities
☐ Respect Earliest Start Time
☐ Respect Latest Finish Time

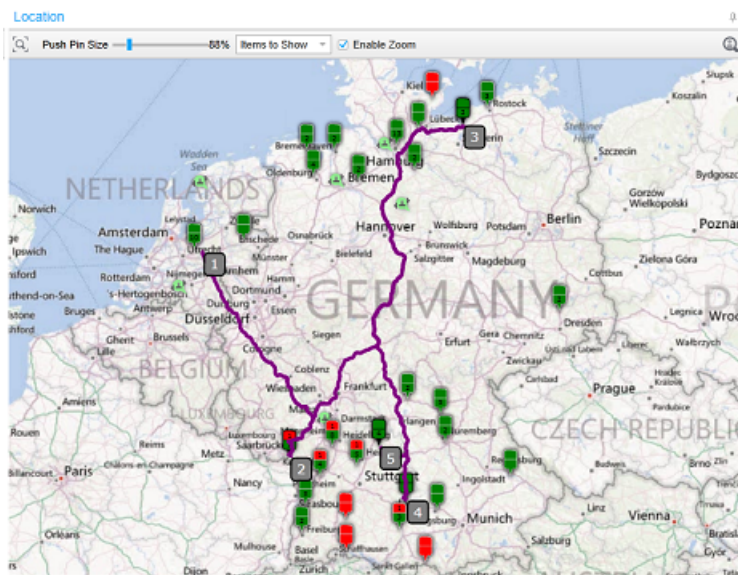
Start Address of Route: Service Engineer
Travel Offset Time: 8.2 hr

Activity Sequence

Service Order	Activity	Line	City	Planned Travel Start Time	Planned Travel Finish Time	Planned Start Time	Planned Finish Time	Travel Duration
			Barmen					
MA000074	18	2	Wessum	27-Mar-13 7:52:16 AM	27-Mar-13 2:00:00 PM	27-Mar-13 2:00:00 PM	27-Mar-13 3:18:00 PM	6:55:42
MA000078	18	2	Wessum			27-Mar-13 2:18:00 PM	27-Mar-13 4:00:00 PM	8
MA000088	18	3	HORTZHOVEN	27-Mar-13 4:31:00 PM	28-Mar-13 2:00:00 PM	28-Mar-13 8:00:00 AM	28-Mar-13 9:40:00 AM	10:04:00
MA000089	18	3	Bullerstrasse	28-Mar-13 9:40:00 AM	28-Mar-13 7:38:42 PM	28-Mar-13 8:00:00 AM	28-Mar-13 9:40:00 AM	10:20:00
MA000072	18	1	ICHYRTAL	28-Mar-13 9:40:00 AM	29-Mar-13 11:00:00 AM	29-Mar-13 11:00:00 AM	29-Mar-13 12:00:00 PM	1:00:00
			Barmen	29-Mar-13 12:00:00 PM	29-Mar-13 6:00:00 PM			2:00:00

Preview Route Chart
Generate Plan

Indicative route on the map based on the locations and sequence.



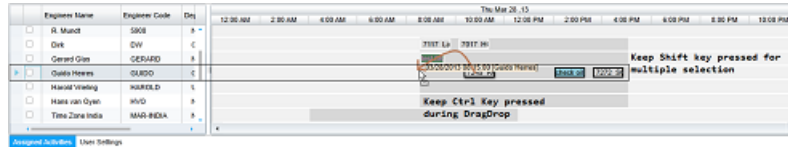
Multi-activity Planning for Assigned Activities

You can use this planning option for the same engineer or another engineer when the activity is a Reassignment.

Case 1 - Same Engineer Assignment

For the same engineer, you must select the multiple activities, using the Shift key, on the GANTT chart. Press the Ctrl key and link the first activity to the required date and time, using the drag and drop option.

As displayed, the user has selected three activities and linked the activities to the required time for the same engineer.

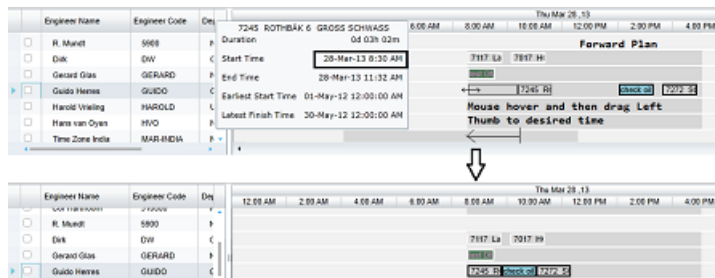


If you set the User setting Planning Method to Time Based Sequential, the activities are arranged in a sequence (as displayed). However, though the selected time was 8:15 AM, the calendar time is considered and the starting time is adjusted to 8:30 AM.

Note

You can also link the selected activity to the desired time when using the Forward Planning option (as displayed). Similarly, the can also drag link the last selected activity to the desired time when using the Backward Planning option.

You can also make use the right-click and the Cut and Paste options (Respect Drop Time) to select the required time.



Appendix A

ERP settings for Service Scheduler Workbench

A

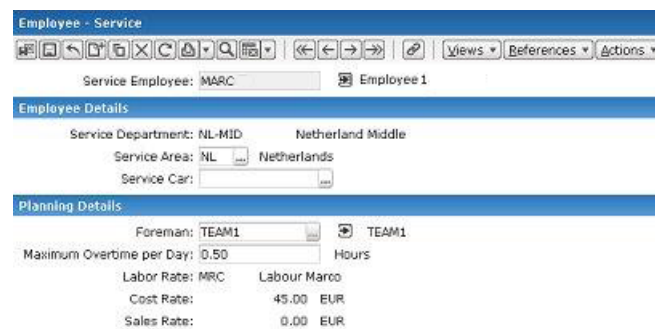
This chapter provides a brief description of the Assigning an activity to an Engineer.

ERP settings for Service Scheduler Workbench

These settings must be configured to start the Service Scheduler workbench using the ERP backend server:

Configure Service Employee

Configure Service Employee using session “Employees Service- tsmdm1140m000 / tsmdm1640m000”



Employee - Service

Service Employee: MARC Employee 1

Employee Details

Service Department: NL-MID Nederland Middle

Service Area: NL Netherlands

Service Car:

Planning Details

Foreman: TEAM1 TEAM1

Maximum Overtime per Day: 0.50 Hours

Labor Rate: MRC Labour Marco

Cost Rate: 45.00 EUR

Sales Rate: 0.00 EUR

Link Planner login to Service Employee

Configure Service employee (planner) linked to the login code using the Employees (bpmdm0601m000) session.

Employees

Employee: MARC Employee 1

General

Search Key: ENGINEER

Language: EN English

Login Code: marceng Engineer

Cost Component: 200 Aggregated Operations

Calendar Code: MARC000 Day time only

Employment

Department: NL-MID Netherlands Middle

Manager: Marc

Labor Rate: MRC Labour Marc

Time Unit for Rates: h Hours

Configure User Profile

Configure the user profile using the Service User Profiles (tsmdm1150m000) session. In the service user profile, link the departments to the employee.

Service User Profiles

Login Code: Service Employee Service Department

marceng1 MARC-NL Engineer1 NL-MID Netherlands Middle

marceng MARC Engineer NL-MID Netherlands Middle

Service User Profiles

Login Code: Service Employee Service Departments by User Profile Service Department

marceng1 MARC-NL Engineer1 NL-MID Netherlands Middle

marceng MARC Engineer NL-MID Netherlands Middle

You can also add additional departments:

Service Departments by User Profile

User Profile: mhooenr

Service Department

GER-MI Germany mid

NL-MID Netherlands Middle

Note

The system uses the department, defined for the service user data and the departments of the linked User Profile, to retrieve the service date from ERP to the workbench.

Bing License key for Map

You can also use the COM Parameters (tscom5000m000) session to specify the Bing License Key.

COM Parameters

Introduction Date: Actual set

Number Groups and Series **Miscellaneous**

Financial Data

☒ Destination Sales Tax Applicable

☒ Include Tax in BP Balances

Transportation Time

Usage Distance Tables: By City

Time Unit for Seconds: s Seconds

Distance Unit for Meters: m meter

Availability Type for Carrying Goods: STO Stolk Loading & Unloading

Webservices

☒ Bing Maps Key Implemented

Bing Maps Key: AoyAuiMtg4T6ObdJU72NgXE3snXn5OBTF6X_YFMJuwdh8MFIN4

☒ Google Maps API Implemented

Google Maps API License Key:

Options

☐ Archive General Data only via session Archive General Data

The Bing license key is required to draw routes on the map. Also, the travel time durations are calculated using Bing or Google.

When no key is inserted; the open street maps are displayed. The http connection must be configured (not https):

- Open IIS Manager
- In the Connections pane, expand the Sites node, and select the workbench site for which you must add the http binding .

