

# Routing

- [NCompass Advanced Retail: Routing and Planning](#)

# NCompass Advanced Retail: Routing and Planning

“ Version: NCompass v11.15+

Purpose: This guide explains how to configure and use Routing and Planning in NCompass Advanced Retail.

## Contents

- [Introduction](#)
- [Configuration](#)
  - [Google API Key](#)
  - [Routing Wizard](#)
  - [Engineer Settings](#)
  - [Changing Routing Settings](#)
  - [Automatic Text Messages](#)
- [Routing & Planning](#)
  - [Automatic Routing Explanation](#)
  - [Access via Two Week Planner](#)
  - [Access via Scheduled Calls](#)
  - [Routing Options](#)
  - [Suggested Routes](#)
  - [Manually Route Calls](#)
  - [Move Calls from Other Engineers](#)
  - [Add Field Calls Ready to be Booked](#)
  - [Saving a Route](#)
- [Additional Planning Tools](#)
  - [Flag Tags](#)
  - [Weight](#)

- [Fleet Tracking](#)
  - [Planned Route vs Actual Route](#)
  - [Map GPS Location and Current Call](#)
  - [GPS History](#)
- 

# Introduction

The **Routing** module helps optimise field calls into the most efficient order, reducing travel time and distance.

In the latest release, NCompass uses Google's upgraded **Routing API** to improve routing accuracy and optimisation, including support for **Northern Ireland** and the **Republic of Ireland**.

The module can automatically organise and time calls, making it easier to notify customers of their estimated appointment window. It can also route calls automatically and, when used with the points-based system, lock an engineer's day once travel time pushes them beyond their working hours. This adds protection against overbooking.

---

# Configuration

Before using the Routing module in NCompass, complete the initial setup.

## Google API Key

Follow the internal guide for setting up your Google API key:

[Setting up Google API ... | Calculus Knowledge Base](#)

“ **Note:** This may already be configured if you use **NCompass Mobile** or have previously used routing in NCompass.

## Routing Wizard

Go to:

## Tool > Licencing and Quick Configuration

On the **Routing** line, select **Click for wizard**.

### Step 1: API Key

- Enter the API key obtained in the previous step.
- Click **Save & Next >**

### Step 2: Engineer Timings and Locations

For each engineer you want to route, set:

- **Start Time** (  )
- **Start Postcode**
- Tick **Enabled**

Optional:

- Highlight engineers you want to limit by working hours.
- Enter the number of **minutes worked** for each day at the bottom of the window.
- Click **Update Selected**

“ **Note:** You can edit these settings later for each engineer individually after completing the wizard.

Click **Save & Next >**

### Step 3: Padding, Rounding, and PM Calls

Configure field call padding for the customer appointment window:

- **Start:** Add this many minutes to the start of the call
- **End:** Add this many minutes to the end of the call
- **Base Duration:** Add this many minutes to the duration of the call

Configure **rounding times**:

Google's Routing API may return exact times such as **9:57 AM**. Use the rounding setting to round these times to your preferred option.

Configure **afternoon calls** to either:

- Start immediately after the AM calls
- Start after lunch, with a delay if needed

Click **Save & Next** >

## Step 4: Automatic Routing

“ **Recommended:** Speak to the implementation team before enabling automatic routing.

Automatic routing will route **every enabled engineer**, on **every day** where a new call is booked or an existing call is amended.

“ **Important:** This may increase usage against your Google account if you exceed your monthly call allowance.

If you want to enable automatic routing:

- Set **NCompass automatically update routes** to **Yes**
- Choose a **Default Standard Route**:
  - **Fastest** (*recommended*)
  - **Furthest Call First**
  - **Furthest Call Last**
- Set **Finalize Route X Days Before** to lock field calls from amendment and route calls on the configured day/time
- Set **Lock Field Calls After Routing** if field calls should be locked once manual routing is completed

Click **Finish**

## Engineer Settings

After completing the wizard, you can update engineer-level routing details.

## Changing Routing Settings

Go to:

**Salesperson & Engineers > Edit**

Engineer tab

Update:

- **Default Start Time**
- **Default Start Postcode**

## Routing tab

Update:

- **Total duration of working hours per day**

# Automatic Text Messages

To configure customer SMS notifications with estimated field call windows:

Go to:

**Salesperson & Engineers > Edit**

In the **Engineer** tab, configure:

- **Auto SMS Times Today**

Sends messages to all customers with a mobile number for field calls booked for **today**.

Example:  on the morning of the call.

- **Auto SMS Times Tomorrow**

Sends messages to all customers with a mobile number for field calls booked for **tomorrow**.

Example:  on the evening before the call.

“ **Note:** These settings must be configured for each engineer individually.

---

## Routing & Planning

### Automatic Routing Explanation

NCompass can automatically route each enabled engineer for every day they have calls booked, if this has been configured in the routing wizard.

Whenever an engineer's diary changes, that engineer and date are added to a **re-routing queue**. Once processed, NCompass recalculates the total duration of the day.

If the new total exceeds the engineer's working hours, NCompass prevents any further calls from being booked for that engineer on that date.

This allows estimated travel time to be considered when preventing overbooking.

## Access via Two Week Planner

Go to:

**Field Calls > Two Week Planner**

Then:

- Right-click the engineer and day you want to route

## Access via Scheduled Calls

You can also access routing from **Scheduled Calls**:

- Open **Scheduled Calls** from the **Quick Links** bar or the **Field Calls** menu
- Select the **Engineer** and **Date**
- Click **Engineer >**

## Routing Options

Available options include:

- **Show engineer locations**  
Opens the live map showing engineer locations and booked calls.
- **Show Current Route**  
Opens the Route Planner in **view-only** mode.
- **Suggest Fastest Route**  
Opens the Route Planner with the optimum route.
- **Edit Current Route**  
Opens the Route Planner with editing tools.

## Suggested Routes

Use the **Suggest** buttons on the right-hand side of the window to re-route calls using Google's API.

## Suggest Fastest Route

Optimises the calls in the order Google determines is best.

## Suggest Other Route

Additional routing options:

- **Fastest Route Starting with Furthest Call**  
Makes the furthest call the first stop.
- **Fastest Route Starting with Selected Call**  
Highlight a call in the grid to make it the first stop.
- **Fastest Route Ending with Furthest Call**  
Makes the furthest call the final stop.
- **Fastest Route Ending with Selected Call**  
Highlight a call in the grid to make it the final stop.

“ **Note:** NCompass will use the system defaults (such as first call / last call) if these have already been set on the field calls.

## Manually Route Calls

To manually re-order calls:

- Use the grid at the bottom of the window
- Click and drag calls into the order you want
- A blue line shows where the call will be dropped
- After reordering, click **Update Map**

NCompass will then calculate the estimated travel time and distance for your manual route.

## Move Calls from Other Engineers

You can overlay field calls booked on the same day for other engineers.

To do this:

- Tick **Show calls booked for other engineer(s)**
- Optionally choose a group of engineers to display
- Click **Update Map**

This shows **purple pins** on the map for calls booked to other engineers.

Click a pin to view:

- Postcode
- Weight of call
- Who the call is booked for
- Flag tags

Additional actions:

- Click **Field Call ...** to open the full field call details
- Click **Book to this Engineer** to move the call to the engineer currently being planned

The route will then refresh to include the newly added call.

## Add Field Calls Ready to be Booked

You can also overlay sales that are in stock and ready for delivery booking.

To do this:

- Tick **Show sales ready for delivery to be booked**
- Click **Update Map**

This shows **green pins** on the map for calls ready to be booked.

Click a pin to view:

- Postcode
- Weight of call
- Who the call is booked for
- Flag tags

“ From **v11.16 onwards**, this planning information is displayed directly on the pin details.

Additional actions:

- Click **Field Call ...** to open the full field call details
- Click **Book to this Engineer** to assign the call to the engineer currently being planned

The route will then refresh to include the newly added call.

# Saving a Route

Click **Round Times & Save Route** to save the route against the engineer/day and apply times to each call using the padding settings defined in the wizard.

“ **Note:** If configured, NCompass will lock the route at this point so no new calls can be booked.

## Additional Planning Tools

### Flag Tags

Flag tags can be configured against **Skills** so a character is displayed when a skill is assigned to an item on the field call.

This is useful for highlighting calls involving:

- Large or heavy items
- Specific installation types (for example built-in or gas)

Go to:

**Administration > Item Groups and Engineer Skills**

Then:

- Click **Edit** on a skill
- Enter a character in **Flag Tag**
- Click **Save**

Example:

If a skill such as **Large Item Delivery** has a flag tag of **L**, any call containing an item with that skill will display **L**:

- On the planning grid
- On the map pinpoints

# Weight

If van weight restriction is being used:

- Pins display the **weight** of each call
- The route planner displays:
  - **Total weight** for each booked call
  - **Total van weight**

If you want to enable this on your system, contact the **Calculus Implementation Team**.

# Fleet Tracking

These features require **NCompass Mobile**.

If you want to learn more about the delivery app, contact the team for a demonstration.

# Planned Route vs Actual Route

Use **Route Plan Enquiry** to compare planned distance and duration against actual travel distance and duration.

Go to:

**Field Calls > Route Plan Enquiry**

You can:

- Apply filters for engineers and dates
- Sort by any column, such as the largest time overrun
- Click **Show Route** to overlay expected vs actual route on a map
- Click **Details** to view more information for the selected row

# Map GPS Location and Current Call

The **Current Call** feature shows where the engineer is and how long the current call marked as **Travelling** will take from their current position.

From the **Scheduled Calls** screen:

- Click the engineer you want to review
- Click **Engineer >**

- Click **Map GPS Location and Current Call...**

A window will display:

- The engineer's current GPS location
- The distance to the customer property
- The estimated travel time

## GPS History

NCompass stores GPS history for each engineer for each day they are using **NCompass Mobile**.

This lets you:

- View routes taken throughout the day
- Track engineers in real time while travelling

Go to:

**Field Calls > Show GPS History**

Then:

- Click the engineer you want to view
- Change the date or date range if needed (defaults to today)
- Click **Show Locations**