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NEC

Business ConneCT

Administrator Guide

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Business ConneCT 12.0
Administrator Guide

PREFACE

This manual serves as a guideline for configuring and maintaining the contact center functionality of the Business ConneCT application. The following tasks are described in this manual:

- Understanding and creating call flows;
- Setup outbound services;
- Configure Email routing;
- Creating agent groups;
- Creating wallboards;
- Set up user accounts;
- Setup message box configuration;
- Understanding skills and set up skill based routing;
- Configure prompts;
- Setup Call Types and Not Ready Reasons;
- System maintenance (loading applications, backups etc.).

In combination with the BCT Supervisor Guide, the complete functionality of the application is described. For some of the described tasks you also need information described in the BCT Installation Guide.

Disclaimer:

Our products are subject to continual development and improvement. Therefore, while the information in this document was complete when it was written, additions or modifications to the product after that date may cause changes to the technical and functional specifications. No rights can be derived from this document.

Due to maintenance releases and patches, the appearance of figures may differ from corresponding windows in the Business ConneCT Supervisor application.

Changes to this Administrator Guide compared to Business ConneCT version 11.1 are marked yellow.

1. Introduction

1.1. What's new in 12.0

New in Business ConneCT release 12.0:

- Prevent last Phone Based Agent from logging out or switch not ready (See: Main Starter Module).
- A starter can be used for webchat and social media routing (See: Using a Starter or Router for Web chat/Social media and Create a Social Media Account).
- Suspend Call Back requests when queue is too busy (See: Configuring the Option Menu).
- iMessage and SMS added as social media type (See: Create a Social Media Account and The Agent Routing Tab).
- Microsoft Graph added as email protocol type (See: Create an Email Server and Create an Email Account).
- Extended "Expected waiting time" announcements for English-US (see: The Queue Announcements Tab)

1.2. References

1. BCT Installation Guide	Can be found on BCT DVD D:\Business ConneCT Resources\ Documentation\BCT 12.0 - Installation Guide.pdf
2. BCT Supervisor Guide	Can be found on BCT DVD D:\Business ConneCT Resources\ Documentation\ BCT 12.0 - SupervisorGuide-EN.pdf
3. Standard Telephone Number Format	Can be found in BCT Installation Guide chapter 18 - Appendix I and 19 - Appendix H.

1.3. Abbreviations

BCT	Business ConneCT	Product name
CLI	Calling Line Identification	Telephony feature
CTI	Computer Telephony Interface	Interface type
IVR	Interactive Voice Response	Voice application
PID	Personal Identification	Security key

2. Guided Tour

BCT incorporates the BCT Supervisor Dashboard. This tool is your access to configure and maintain the contact center functionality within BCT. This chapter gives you an overview of the BCT Supervisor Dashboard. It will guide you through the most important parts of the BCT Supervisor Dashboard. Also will be explained how to adjust the layout to your convenience.

Note that the screens may not look the same as yours. Screen layouts can be different due to a different version of Windows or a different software release of BCT, or as a result of your own personalization.

2.1. Logon to the Business ConneCT Supervisor Dashboard

The BCT Supervisor Dashboard can be started in two ways:

1. Go to **Start** > **Programs** > **Business ConneCT** > **Business ConneCT Supervisor Dashboard**. The logon dialog is displayed:
2. Double click on the **Business ConneCT Supervisor Dashboard** icon on your desktop.

Figure 2-1 BCT Supervisor logon

A predefined user account is available for administrator tasks. The logon name is “administrator”. Initially the password is empty. Click Login.

Note: It is strongly recommended to use a password for the “administrator” logon. To set or change your password, select Change Password from the Tools menu and enter the desired password. Make a note of your password and keep it somewhere safe and secure.

Logging on in this way requires a license when a user has monitoring rights.

Logoff

To logoff from the BCT Supervisor Dashboard, click on **File** in the task bar and select **Logout** from the drop down list, which will allow you to login with another user account, or click **Exit** to also close the application.

2.2. Exploring the Interface

The data that BCT Supervisor Dashboard can display and edit is grouped into one or several views. Only one view is active (i.e. visible on screen) at any given time.

After you performed a logon, the following window appears.

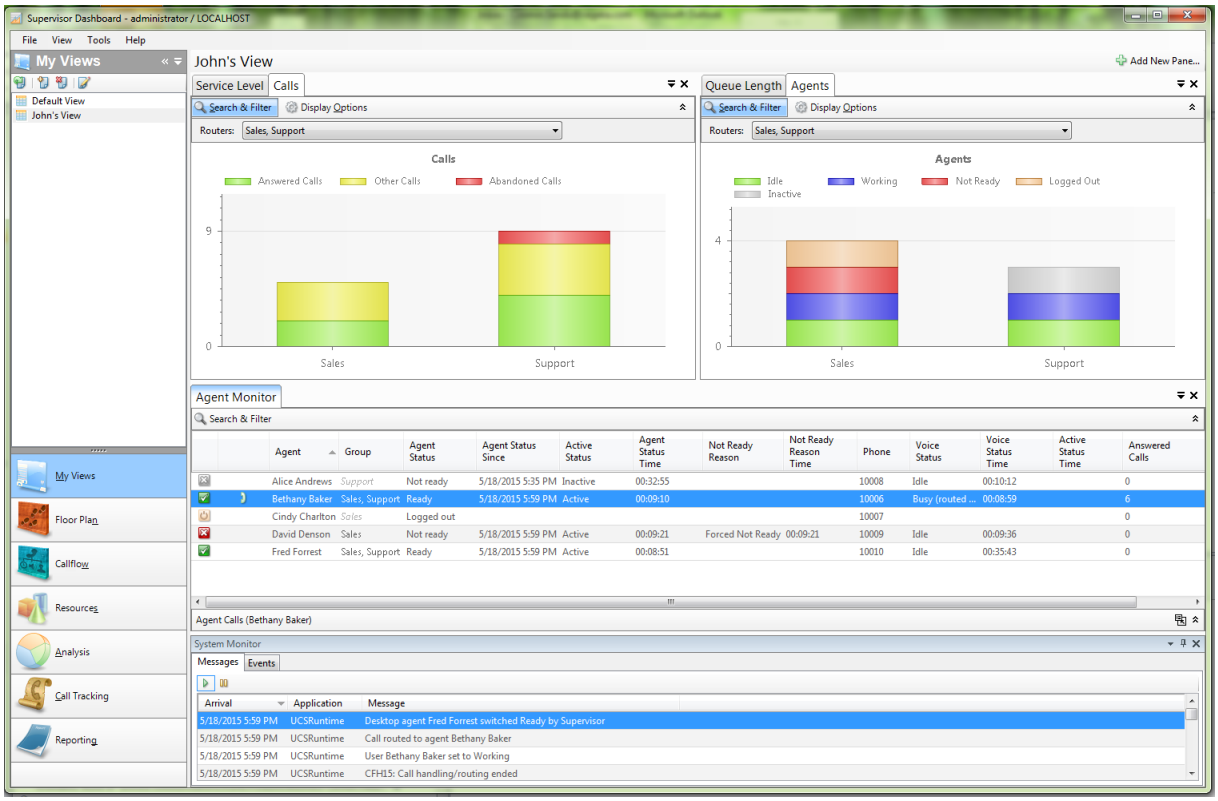


Figure 2-2 Main Layout

Note: The presentation on your screen may differ from the picture above. Supervisor Dashboard saves pane positions and selections when you sign out. The last used view will be open next time you logon.

There are 3 main areas on your screen: navigation panel, view workspace and the system monitor pane.

2.2.1. Navigation Panel

The navigation panel appears on the left side of the Supervisor Dashboard window and helps you switch between the different sections of Dashboard such as My Views, Floor Plan, Call Flow, etc. The active section is highlighted at all times.

When you click a section in the navigation panel, that section becomes active and you can work with the items within it. For example, click Floor Plan, to see the available floor plan layouts, or click My Views to switch between views by double clicking the chosen view.

2.2.1.1. My Views

This section allows you to switch between the current view and configure the list of views that can be used to display and edit the data in Supervisor Dashboard. For more information, refer to BCT Supervisor Guide (chapter 4 My Views).

2.2.1.2. Floor Plan

Monitor agents in a layout that resembles their actual position in the work environment.

2.2.1.3. Call Flow

Create and edit call flow modules and link them together to create call flows. Obtain an overview of the call flows currently defined in your organization.

The following modules can be used to build a call flow:

Starters	The Starter is the first module that is addressed in a call flow. The starter can play a welcome message and specifies the next destination in the call flow.
Attendants	With the Attendant you can create an option menu. The selection the caller makes from the menu determines which module is addressed after the attendant.
Clocks	The clock transfers the caller to different modules of the call flow, depending on the time the customer calls the BCT contact center.
Identification Groups	This module can identify callers. This can be used to inform the agents or to route the call to a specific module in the call flow.
End calls	You can create one or more end call actions with different announcements.
Messageboxes	Records messages when no human agent is available.
Routers	The router module will route the calls to agents. The router contains many important settings like queue settings, timers etc. One or more agent groups are assigned to a router to handle the calls.
Transfer	You can create one or more transfer possibilities. Examples are: transfer to an operator and transfer to an extension outside BCT.
Outbound Services	Offers the possibility to perform outbound calls to a predefined number of customers. Also used to setup outbound calls to callers who abandoned the call via an option menu.
Survey	Enables you to create customer surveys for different purposes (example: customer satisfaction, product review etc.). You can configure questions and answers categories, question templates and you can see the results in different reports.
Email Accounts	Enables you to setup Email routing. When customers send Email to the Email address of the BCT contact center, the Email can be routed on the basis of “keywords”. For example, Email including the word “insurance” could be routed to the insurance department's mailbox. This module can be configured so that an “auto reply” message is sent to the caller confirming their Email has been received.
User Applications	Not documented here, because this is customization.

The Call Flow section in the navigator can be viewed in two possible modes: Modules and Hierarchy.

- **The Modules view**

  This view presents the modules grouped by type. There is a category for each module type (Routers, Clocks, ...). Categories are grouped in three sections: Call Flow, Outbound Services and Email Accounts.

  Double clicking a category will expand it, if there are items in that category, or collapse it if it is already expanded.

  Expanding a category displays all items that the current logged in user has access to. For example, expanding the Routers category displays all routers that can be accessed by the currently logged in Supervisor. Please refer to Privileges for more information about accessible modules and resources.

  Right click on a category will display a context menu with the "New" option (), if items can be added in that category using Supervisor Dashboard.

  ***Note**: Messageboxes cannot be added using Supervisor Dashboard.* (Managing messageboxes is described in the BCT Installation Guide).

  ***Note**: Right click on Starters also allows Edit (), which will open the 'Edit Main Starter' pane.*

  While a category is expanded, right click an item in that category will present a context menu with one or more of the available actions:

  Edit (), New (), Delete (), Duplicate ().

  Also select (clicking on) one of the items in that category will enable the toolstrip buttons at the top of the navigator, so the same actions that are available in the option menu will be available on the toolstrip.

  ***Note**: Some items will not allow some actions. For example, the Messageboxes do not allow deletion.* (Managing messageboxes is described in the BCT Installation Guide)

  After a category is expanded, its items will be updated from the database every few seconds with the latest changes from the database.

- **The Hierarchy view**

  This view presents the call flow in a structured manner.

  Starting with the System Main Starter node, all items linked in the call flow are displayed here, in a tree-like interface, making it a graphical representation of the call flow.

  Unlike the Modules view of the Call flow navigator, there are no actions possible in the Hierarchy view on specific items; it is a read-only view

  After a node is expanded, the items inside that node will be updated every few seconds with the latest changes from the database.

2.2.1.4. Resources

Configure and maintain Business Connect resources like agents, groups, call types, skills, etc.

Agents	Agents populate the call flow to answer calls sent via a router or direct transfer. To be able to answer routed calls, agents must be assigned to agent groups.
Groups	A group (also called agent group) is a collection of agents. The group is assigned to one or more routers.
Skills	Skills are used to route a call to the most suitable agent. After skills are created, agents must be equipped with the correct skills and skill rating. Calls can be transferred to a router with a maximum of two skills. Only the agents that match the skill profile that is sent with the call will be used to

	answer the call.
Router Redirects	A Router Redirect defines a special router operation mode. The incoming routed call is redirected immediately to a specific call flow module when a router redirect is active for a router.
Call Types	Call types enables you to mark a call with a short description; successful, complaint, compliments, question etc. Call types are entered by agents during or after the call. Be aware that call types are stored per router. Call types can be displayed via a report.
Not Ready Reasons	Not ready reasons are used by agents when they switch from ready to not ready. Examples are: coffee break, meeting etc. When not ready reasons are used, supervisors have more information about the reason why agents switch not ready and because of that also a better indication how long the agent will be absent. It is possible to run a report about the use of not ready reasons. Not ready reasons are not available for phone based agents.
Messagebox Profiles	The messagebox profiles is used to setup a predefined number of authority settings and other message box settings. When a message box is created a message box profile needs to be assigned to the message box.
Prompts	Prompt are used to inform callers about the progress in the queue or the choices they have during the attendant part of a call flow. Prompts can be recorded via a phone or via multimedia equipment.
Wallboards	Wallboards are used to inform agents about the progress of the BCT contact center.
Survey	Survey resources are used to create customer surveys in the callflow module. It is possible to create question categories, answer categories and question templates.

The Resources section in the navigator can be viewed in two possible modes: Categories and Hierarchy.

- **The Category view**

  This view presents the resources grouped by type. There is a category for each resource type (Agents, Groups, ...).

  Double clicking a category will expand it, if there are items in that category, or collapse it if it is already expanded.

  Expanding a category displays all items that the current logged in user has access to. For example, expanding the Groups category displays all groups that can be accessed by the currently logged in Supervisor. Please refer to Privileges for more information about accessible modules and resources.

  Right click on a category will display a context menu with the "New" option (), if items can be added in that category using Supervisor Dashboard.

  ***Note**: Agents cannot be added using Supervisor Dashboard.* (Managing agents is described in the BCT Installation Guide).

  While a category is expanded, right click an item in that category will present a context menu with one or more of the available actions: Edit (), New (), Delete (). Also select (clicking on) one of the items in that category will enable the toolstrip buttons at the top of the navigator, so the same actions that are available in the option menu will be available on the tool strip.

  ***Note**: Some items will not allow some actions. For example, the Standard Messagebox Profile does not allow deletion because new Messageboxes are added by default using this profile.*

  ***Note**: Agents cannot be deleted from Supervisor Dashboard.* (Managing agents is described in the BCT Installation Guide).

After a category is expanded, its items will be updated from the database every few seconds with the latest changes from the database.

- **The Hierarchy view**
  This view presents resources in a structured manner, similar to the way call flow is displayed. The current Resources Hierarchy has three levels, Router – Group – Agents.
  The first level, Routers, will present Routers that are accessible for the current Supervisor.
  The second level, Groups, is accessible when expanding at least one Router, so groups assigned to that router and accessible by the currently logged in Supervisor will be displayed.
  The third level, Agents, is accessible when expending at least one Group, so agents assigned to that group and accessible by the currently logged in Supervisor will be displayed.
  The same actions are available for items in Hierarchy view as in the corresponding Category view items. The Routers in Hierarchy view do not allow any action, as editing routers is the concern of Callflow Navigator, and they are here only for reference purpose.
  After a node is expanded, the items inside that node will be updated every few seconds with the latest changes from the database.

2.2.1.5. Analysis

An ad-hoc reporting tool that can be used to get a quick overview of the amount of calls handled in the past.

2.2.1.6. Call Tracking

Shows a history of all calls that entered the system and how they have been handled at each stage of your call flow.

2.2.1.7. Reporting

Provides in-depth access to historical performance data over a period of time.

2.2.2. View Workspace

The workspace of each view is made up of one or more smaller windows, called *panes*. Each pane has a descriptive name, which is shown in the *pane header*.

The space occupied by a pane is called a *pane group*; a pane group may contain one or more tabbed windows (panes). In a *pane group*, only one pane is visible at any given time.

For more information, please refer to BCT Supervisor Guide (chapter 2.1.3 Main Layout).

2.2.3. System Monitor

The System Monitor is a real time monitor showing the activities in the whole contact center system. It allows you to quickly, check whether the system is handling calls correctly or if something is wrong.

In Supervisor Dashboard, the System Monitor shows up as a dedicated pane at the bottom of the main application window). This pane is not part of a specific view, therefore it is always visible regardless of the currently selected view.

2.2.4. Menu Bar

The Menu Bar gives access to a number of features.

The menu bar consists of the following menus:

File	The file menu contains the options “Logout” and “Exit”; “Exit” closes the application and “Logout” can be used to switch to another account.
View	The “View” menu can be used to activate specific sections of the Navigation Panel.
Tools	The “Tools” menu contains options: - “Capacity Calculator”: this tool can give you advice about the parameters that determine the capacity of your contact center. For details, access the BCT Supervisor Guide (chapter 7 Capacity Calculator). - “Alerts”: this option lets you configure visual and sound alerts active while you perform monitoring tasks. For details, access the BCT Supervisor Guide (Chapter 8 Alerts). - “Configuration”: lets you configure various aspects of your BCT server, such as privileges, routing points, email servers and so on. - “Change Password”: you can change your BCT password here
Help	The “Help” menu allows you to quickly access user guide and the “About” option displays the software version of the BCT software.

3. Building a Call Flow

A call flow is a collection of call flow modules. The modules are linked and from that moment on we talk about a call flow.

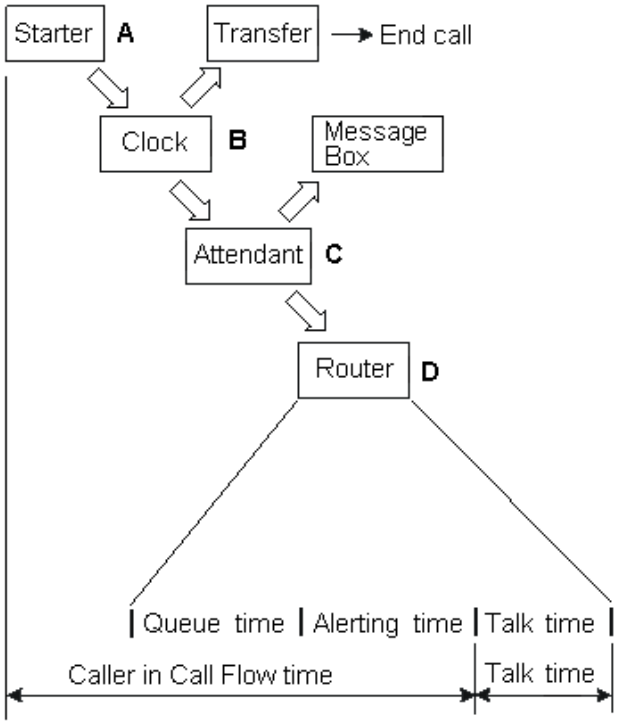


Figure 3-1 Call Flow example

The call flow guides the caller trough the linked call flow modules.

Figure 3-1 Call Flow example is used to explain the behavior of a simple call flow.

A caller dials the number of the BCT contact center. The PBX is configured in such a way that the caller will be connected to one of the IVR lines.

A call flow always starts with a starter (**A** in Figure 3-1 Call Flow example). From the starter the call is transferred to the next module.

It is possible to map all IVR lines in one starter line. It is also possible to divide the IVR lines in separate functions (e.g. reserve one line for phone based agent logon). In that case you must create more than one starter line in the starter module.

The next module in our example is the clock module (**B**).
The clock module is used to make a decision based on time. Suppose a contact center is only opened between 8:00 and 17:00. The clock module can be configured that all callers, calling the contact center before 8:00 and after 17:00 will be transferred to an end call module (or any other module). Customers who call the contact center between 8:00 and 17:00 will be transferred to the attendant module (**C**).

The attendant module offers the caller a number of choices. For example:
“Would you like to leave a message, press 1".
“Would you like to speak to one of our agents, press 2".

Often used selections are language selections, technical selections and department selections. Based on the selection, the caller is transferred to the next module.

In our example, a caller selecting 1 will be transferred to a message box to leave a message. A caller selecting 2 will be transferred to the router module (**D**).

Until now the caller is not connected to a live agent. The caller is still making his way through the call flow without a real conversation. As long as no live agent has answered the call, the caller is connected to an IVR line. It is possible that people who call the contact center will not speak to a live agent at all. In our call flow example that is the case when callers are calling the contact center before 8:00 and after 17:00. These callers will be transferred to the end call module. Also callers who select the message box option will not be routed to a live agent.
When the caller is calling between 8:00 and 17:00 and the caller presses 2 (would like to talk to one of our agents), the caller is transferred to the router module. Only in the router module the call can be routed to an agent.

It is possible that a call flow contains more than one router. Examples are one router per department or one router per offered service.

An agent group can have an “activity delay”. When you assign more than one agent group to a router and the first agent group is configured with an “activity delay” of zero, all calls will initially be answered by agents belonging to this agent group. When all these agents are busy, callers are placed in a queue.
When you specify an “activity delay” for the next agent group and the call in queue time exceeds the specified “activity delay”, calls can be answered by agents from the second agent group as well.

When an available agent is found, the call will be routed to the agent. Only from this moment on there is a real conversation between the caller and the agent.

The moment the call is answered by the agent, the IVR line is released again.

As you can see in Figure 3-1 Call Flow example, the time the caller spends in the contact center can be divided into four parts.

- **Caller in call flow time:** the time the caller spent from the moment the caller occupies an IVR line until the call is answered by an agent.
- **Queue and alerting time:** when a caller moved past the modules like starter, clock, attendant etc. and the call is transferred to a router module, there is a chance that all agents are busy. In that case the caller is queued. As soon as an agent is available again, the caller will be routed to the agent. The agent extension will start ringing (alerting time). The agent will answer the call. So the ‘Queued and alerting’ time is a part of the ‘Caller in call flow’ time.
- **Talk time:** the time the caller talks to the agent.
- **After Call Work time:** after caller and agent have finished the conversation, the ‘After Call Work’ period starts. During this period no contact center calls will be routed to the agent. After the ‘After Call Work’ time is expired, the agent is available again to answer contact center calls. The ‘After Call Work’ time is adjustable per router.

In all mentioned modules, you can use prompts. Prompts are announcements that are recorded via the BCT Supervisor. Prompts are used to inform callers (about the progress in the queue for example), ask information or ask the caller to perform a specific task (*press 2 if you would like to speak with an operator*).

Prompts can be recorded via multimedia equipment, connected to the BCT application, or via a telephone. Or use a professional voice prompt recording studio, which will record your voice prompts (in the correct format).

There are two processes involved for building a call flow:

- Defining a call flow. See section Defining a Call Flow.
- Before you can start creating a call flow, you need to agree with the customer how the call flow should look like. Defining a call flow will probably take more time and adjustments than creating the call flow in the BCT Supervisor.
- Creating the call flow. See section Creating a Call Flow.

***Note**: In order to improve media (IVR-lines) usage, it is advised to always configure a Routing Point in the PBX and in the BCT Server. Doing so will result in calls being re-routed to- and queued at a Routing Point at the moment no media for a call is required.*

3.1. Call Flow restrictions when no media resources configured

Contact Center call routing can, in its most basic form, be done without having any media resources (IVR lines) configured in the BCT Server. Call routing is then based only on so-called Routing Points, configured in the PBX. Incoming Contact Center calls will be queued at these Routing Points until the Contact Center routes the call to an available Contact Center agent.

However, when no media resources are configured, the following functionality is not available in a Call Flow:

- Playing prompts (Welcome, Auto Attendant, Option menu)
- Queue Announcements
- Receive DTMF input
- Attended Call Transfer

In more detail, the following limitations apply per Call Flow module:

- **Starter module:**
  No day period greetings or welcome greeting can be played during the starter period.
- **Attendant and Option menu:**
  Attendant and Option menu cannot be used, since the caller cannot be informed about the available options and DTMF input cannot be accepted by the system.
  (Dual Tone Multi- Frequency; the signal that you generate when you press a telephone's keys, also known as 'Touchtone'.)
- **Message box:**
  Message box cannot be used. The Message box requires prompting to inform agents or other users of the message box about choices that must be made.
- **Identification module:**
  Identification module can be used, except for PID-based identification. CLI-based and Called Number based identification will work fine. PID identification requires prompt guidance and input from the caller, so therefore this particular identification option within the Identification module cannot be used.
- **Survey module:**
  Survey module cannot be used because the caller cannot be informed about the survey and the questions or answers cannot be played. Also DTMF input cannot be accepted by the system.
  (Dual Tone Multi- Frequency; the signal that you generate when you press a telephone's keys, also known as 'Touchtone'.)
- **Transfer module:**
  The transfer module can be used, but only the Blind transfer option; since the Attended transfer option requires a media resource, this option is not available.
  Note that if in a system with no media resources configured, an Attended Transfer is configured in a call flow, the system will automatically treat this as a Blind Transfer.

- **Outbound Services**
  Outbound services cannot be used. Outbound services require media resources to initiate outgoing calls. Also prompts are played to the agent or caller.
- **Phone based agent logon via starter line:**
  Phone based Agent logon via dialing a starter line is not possible (due to unavailability of prompting and DTMF handling when no media resources are configured). Of course the two other ways of Agent logon remain available (Prefix dialing- and Function key based Agent logon).

A typical call flow for a Contact Center configuration without media resources is a Starter linked to a Clock (opening hour check) and the Clock linked to a Router.

3.2. Defining a Call Flow

Together with the customer you must analyze how the contact center is working at this moment. It is also possible that the contact center is new and that the introduction of BCT is the starting point of the business. In both situations it is important to get as much information as possible concerning all aspects that may influence the contact center behavior. To give you an idea what kind of information is important, take a look the following remarks:

- *Will the callers who would like to reach the contact center dial only one number or are there more numbers announced to reach more services*?
  More numbers means more starter lines.
- *Is the contact center inbound, outbound or mixed*?
  If the contact center is only inbound, all IVR lines can be used for that purpose.
  Combination of inbound and outbound will affect the configuration of the IVR lines. Most likely a number of IVR lines needs to be reserved for outbound.
- *Will the calls be routed to a group of agents or should the caller directly be transferred to an agent?*
  If the last option is chosen, should the call be routed to a group of agents when the requested agent is not available? If the direct transfer to agents is required, you need more advanced routing rules and the call flow may be more complex.
- *How many agents will handle the calls and how many calls can be expected?*
  The number of calls in relation to the number of agents determines a number of settings (queue length, after call work time, maximum time in queue etc.).
- *Are there periods during the day that can be considered as rush hours?*
  This implies a lot more calls during this period than the rest of the day. Rush hours affect a number of issues related to the call flow. You probably need to add more agents during that period of the day or introduce the possibility to overflow calls to a standby group of agents. This can be achieved by adding more agent groups to a router with an activity delay.
- *What are the opening hours of the contact center?*
  If the contact center is closed during a period of the day, clocks must be used to determine the opening and closing hours of the contact center. Also special events and holidays can be entered in the clock module.
- *Will the calls only be transferred to the agents or should the calls also be routed to operators or other extensions in or outside the contact center?*
  The transfer module is used to transfer calls to operators or other extensions. Typical examples are: calls that are transferred to an operator because of a queue full situation or when callers are trying to reach the contact center outside office hours.
- *Will the calls be routed to all agents of an agent group or would you like to route the calls to the*

most suitable agents?
If the last option is needed, use Skill Based Routing. Skill Based Routing will affect the router configuration, the information that is sent with the call to the next module and also the agent's settings (assign skills to agents). Using skill based routing in a contact center requires investigation in the number of skills and how the calls should be routed. Be aware that skill based routing requires tuning for a satisfying result.

- *Will all calls be handled by one router or is the contact center setup in such a way that there will be more routers based on the hierarchy of the company or the provided services?*
  Introducing more routers makes it more clear for which department or service agents are handling calls. Routers can be used as a kind of skill based routing without skills. Introducing more routers will make the call flow more complex and therefore reporting and monitoring will be more complex as well.
- *Will the contact center offer the callers a number of choices when they reach the contact center?*
  For example, what department they would like to speak. If that is the case, the attendant module will have to offer the possibility to let the customer make a selection (1 up to nine selections per attendant). You could even combine a number of attendant modules and create a question tree. The call will be routed according the selection made by the caller.
- *Would you like to identify the callers?*
  Identifying callers may be required because the contact center would like to distinguish between known and unknown customers, the area they call from or ask the caller to enter an identification number. If the caller is identified, he or she will be routed to another module in the call flow. Identifying is performed by the identification module.
- *Should the agents have some time after a call to perform some administration?*
  One of the router parameters is called 'after call work time'. During this time no new calls will be offered to the agent.
- *Will the contact center use phone based agents or computer based agents?*
- *Is the contact center only reachable via phone or is it possible that callers send Email to the contact center?*
  If the contact center would like to route Email to the agents, the Email module should be configured. The agents are notified if there is new mail via the standard mail applications like Outlook. Mail can only be read with these applications.
- *Make a list of all the prompts that are needed for the call flow.*
  Depending on the call flow, a number of prompts are needed. Examples are: welcome messages, queue announcements, attendant messages etc.

Together with the customer, create a graphical representation of the call flow. Start with defining the call flow from top to bottom.

First make a rough setup and discuss that with the customer. After that fill-in the details together with the customer.

Only after this process is completed, start building the call flow.

3.3. Creating a Call Flow

After the call flow is defined, you can start building it. As described in the previous section, defining the call flow is a top to bottom process. Creating the call flow is performed the other way around.

The chronological order of creating call flow items is important. You cannot transfer a call if no transfer module is created, nor can you route a call from a starter to a clock if the clock is not

created.

Creating a call flow is creating all modules and tools, needed for the contact center. After all modules are created, “glue” them together. This last part is called ‘linking modules’. See chapter Linking Modules.

- Start creating the simple modules like transfer and end call.
- Then create the tools needed for the call flow (“not ready reasons”, “Call types”, skills etc.).
- Create and record all prompt messages needed for the call flow.
- Create agents and agent groups. Assign the agents to one or more agent groups.
- Create all the other modules.
- Finally link the modules to create the call flow. See chapter Linking Modules.

3.4. Creating Call Flow Modules

As described in the previous section, modules need to be created before you can link them together. Some important notes about creating modules:

- Use short but understandable names for the modules.
  Do not use names like router 1, router 2. Use names like Sales, Service or Helpdesk.
- When you create prompts, use a description that covers the message.
  After you created 100 prompts and you name them “prompt 1001" up to “prompt 1100" you will not know what is recorded for these prompts. If you create a prompt for an attendant module that should give the message to the caller “Press one for sales”, an understandable name for a prompt like this is “press 1 for sales” or “1 sales”.

  To manage any call flow module, first open the call flow section of your BCT Supervisor Dashboard application by clicking the section in the navigation panel. The navigation panel will adapt according to your selection and you will be able to see and manage all the call flow modules in your system, grouped by module type.

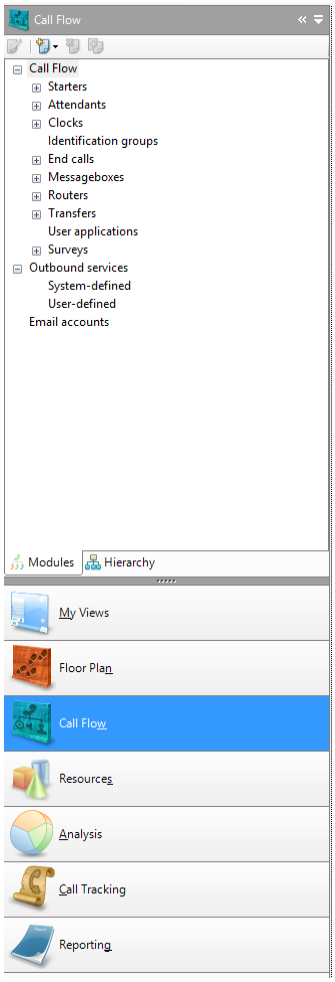


Figure 3-2 Selecting Call Flow section

Besides creating, you can delete and edit call flow modules, via the context menu or the toolstrip buttons bar in the Navigation Panel.

You can create a specific module type by:

- Right click a module of the same type in the tree and select **New** from the context menu.
- Clicking the **New Item** button in the toolstrip bar of the Navigation Panel section and selecting the appropriate module type

You can duplicate a specific module by:

- Right click a module in the tree and select **Duplicate** from the context menu.
- Select the desired module then click **Duplicate Item** button in the toolstrip menu bar of the Navigation Panel section

You can edit a specific module by:

- Right click the module in the tree and select **Edit** from the context menu.
- Double clicking the module in the tree
- Selecting the desired module then click **Edit Item** button on the toolstrip menu bar

You can delete a specific module by:

- Right click the module in the tree and select **Delete** from the context menu.
- Selecting the desired module then click **Delete Item** button on the toolstrip menu bar

Note that you cannot delete modules that are used in a call flow. If you try to delete a module that is in use, the error message will contain, for each module type that references the module, the first reference.
For example, if EndCallQueueTimeout is used as queue timeout for two routers, RouterSales and RouterSupport, and you try to delete it, the notification may look something like this:
Cannot delete module as it is referenced 1 time(s) in the following places:
Router, first reference from: RouterSales.

In the following example a transfer is created, so we will select New Transfer from the available module types:

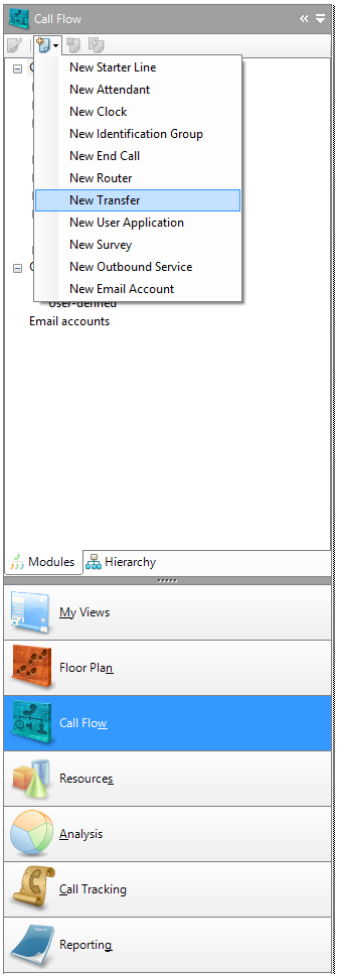


Figure 3-3 Adding a new module

After you chose to create a transfer module, a new pane opens in the view workspace, where you can edit and then save the newly created module:

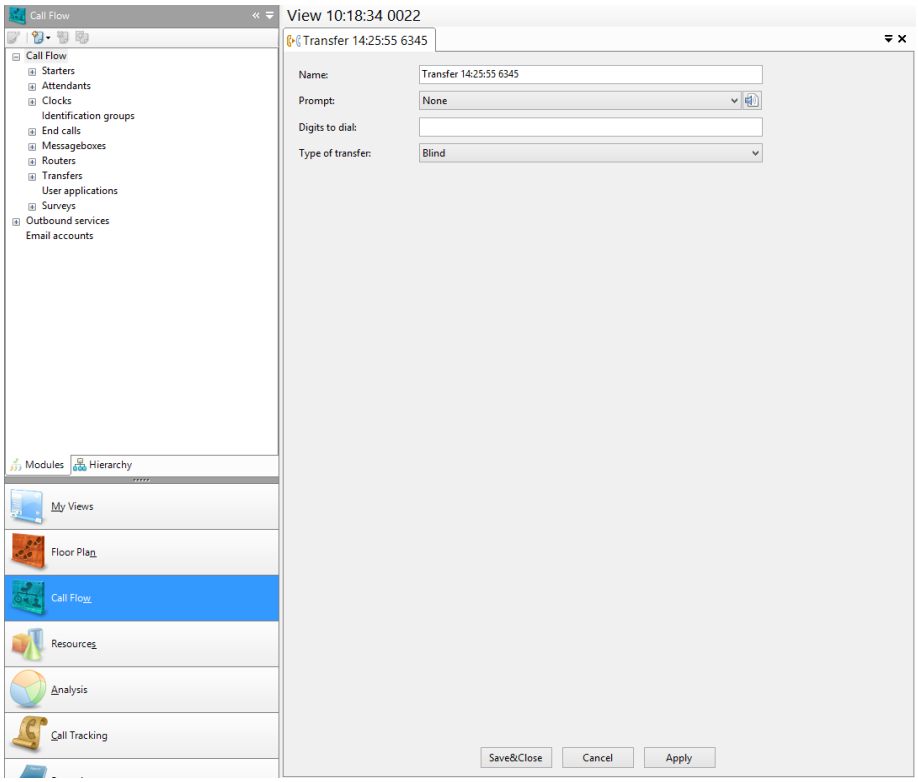


Figure 3-4 Transfer pane

As you see above, some entities are as easy to edit as filling in a few data fields. Other modules consist of one or more items related to the main module. Examples are starters (a starter will have one or more starter lines), Attendant (the attendant can also be called a menu and the menu contains one or more menu items. These kinds of modules are edited in panes that contain the related entities, usually in a grid. Some grids allow you to edit data in the grid itself, others allow you to edit data in controls below the grid, as soon as a selection is made in the grid. In the following picture an attendant is displayed.

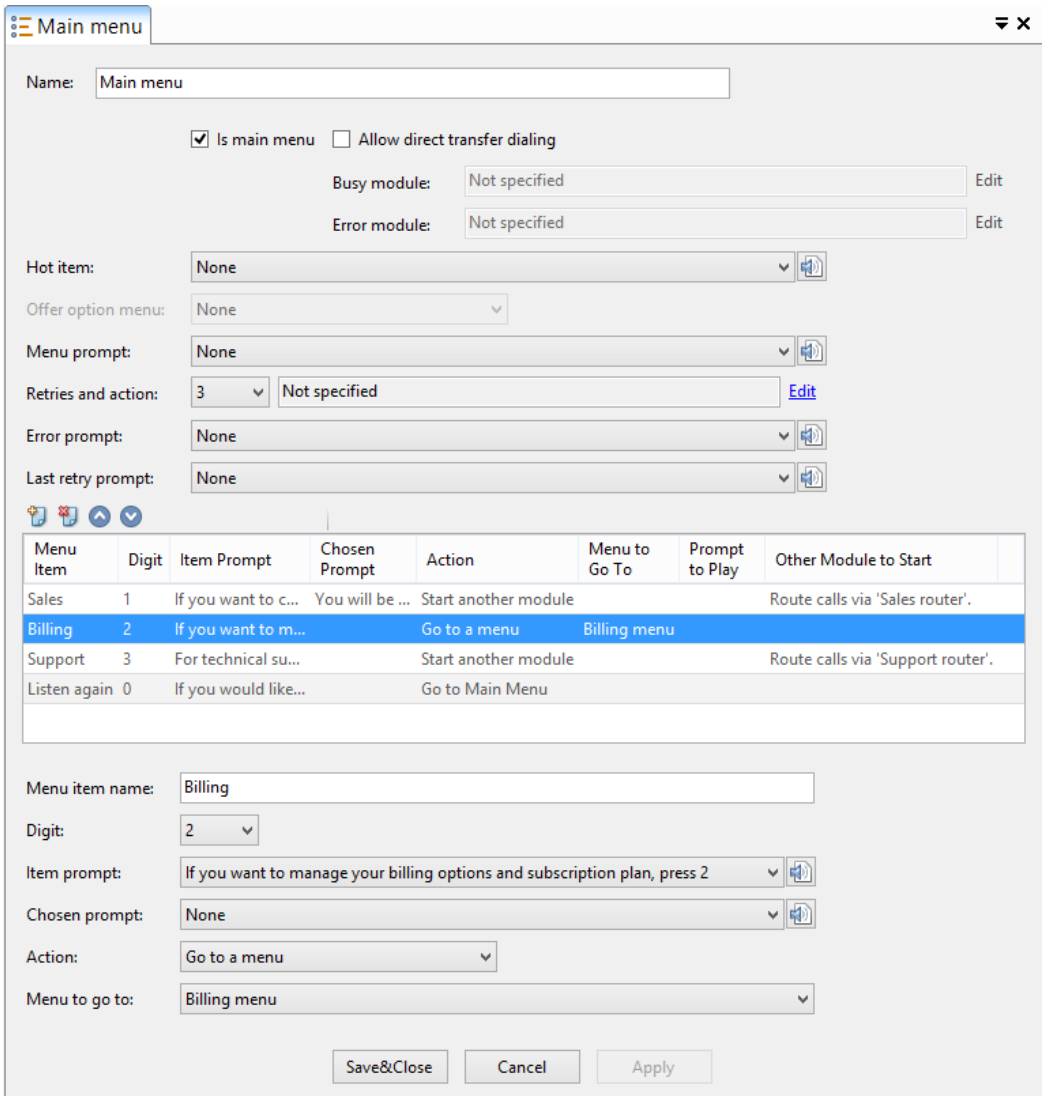


Figure 3-5 Attendant pane

3.5. Linking Modules

After all modules are created, they need to be connected to form a call flow. This is called linking. Only when modules are linked together, a real call flow is built. Before modules are linked, they just reside in the database without any function.

Note: *The information given in this chapter will not offer detailed information regarding the configuration of modules. The only purpose is to explain how to link a module to another module and what kind of information can be sent via the link. As much as possible examples are given to explain the features. Detailed information regarding the available models can be found in the chapters where the modules are explained.*

Linking modules is the same for all modules. A module that accepts a next module is being edited and by select the 'Edit' link label found on the right of the next module property you can specify the next destination. The parameters that can be used will differ per type of module. Let us use the starter as an example. The following picture displays the starter with a number of starter lines.

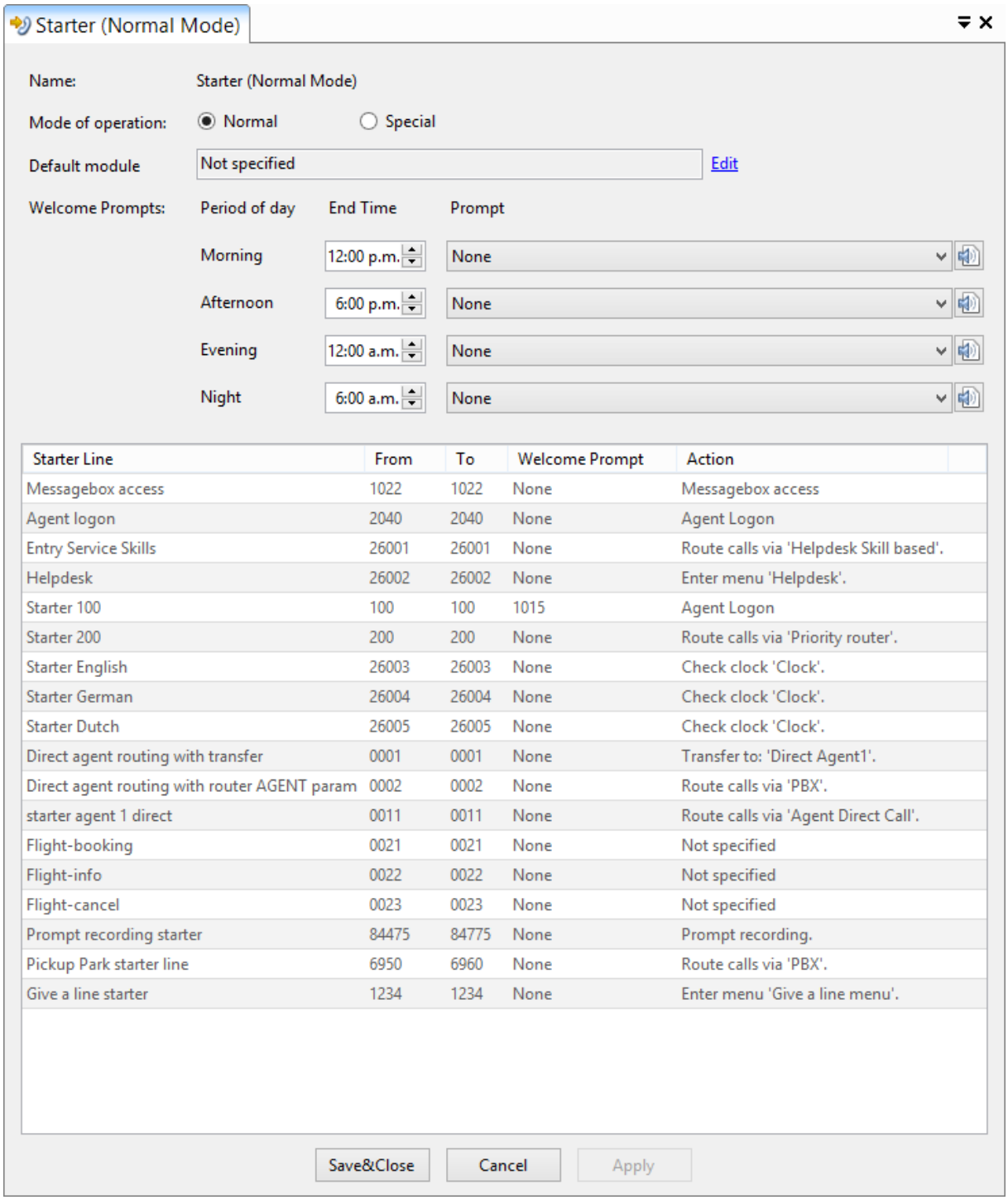


Figure 3-6 Main starter pane

This starter is displayed with 3 starter lines. Take a look at “Default module”. It is marked as “Not specified”. This indicates that the displayed item is not linked to any other module.

When you click the ‘Edit’ link label (just after the “Not specified” text), the system will offer a pane. In this pane you can select the default module for the main starter. The number of parameters differs per selected destination module.

The following picture displays a next module pane with a transfer as destination.

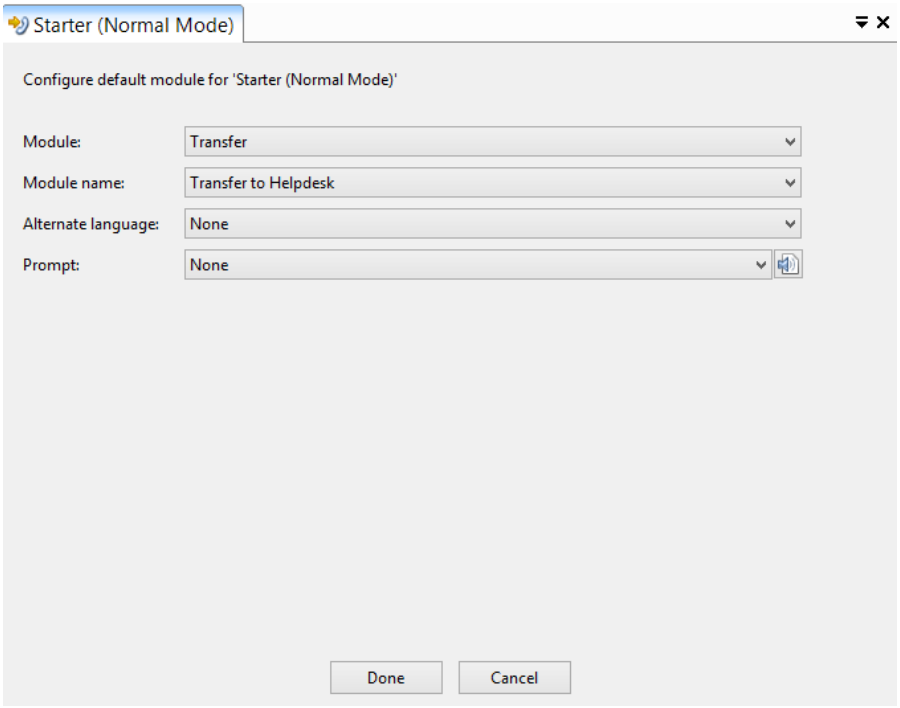


Figure 3-7 Next module transfer pane

You can see that the number of parameters is limited. In this case the transfer is selected from the Module drop down menu. When you select “Transfer” as next module you must select an already created transfer from the “Module name” pull down menu. If required, you can assign a prompt to the transfer, informing the caller that he or she will be transferred to an operator or any other type of extension. If multiple languages are defined you can also select which language should be used for the prompts.

For routers, you can specify more parameters. The following picture displays a next module pane for a router.

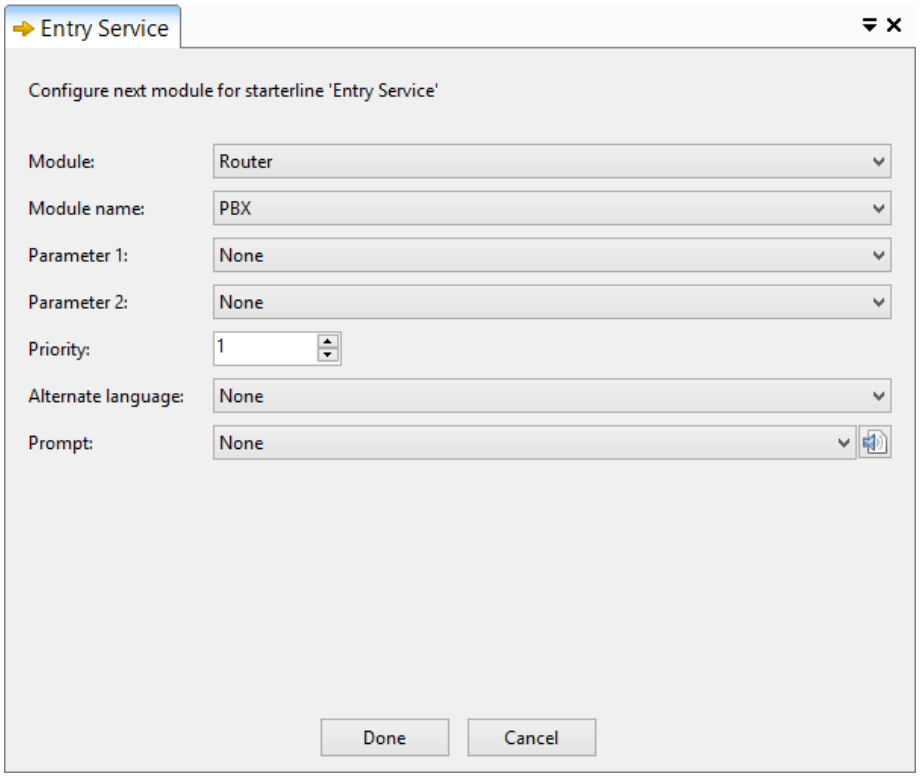


Figure 3-8 Next module router pane

As you can see, the selected module is a router and in the second field the router called “PBX” is selected as destination. If you compare this pane with the pane in Figure 3-8 Next module router pane, you see that there are 3 extra fields, “Parameter1”, “Parameter2” and “Priority”. These parameters offer the possibility to transfer the call to the selected router with extra information. The type of information will determine how the call is transferred to the selected router.

The following sections explain the features that can be configured with the “Parameter1”, “Parameter2” and “Priority” fields.

To unlink two modules, edit the module that is the source of the link and select “None” in the Module drop down field. Click Done and Save.

3.5.1. Call Flows and the Use of Other Languages for Prompts

When a link is created from one module to another, one of the parameters in the “Next Module” pane is “Alternate Language”. “Alternate Language” is used to select another prompt language. This is valid for system prompts and application prompts. Instead of the default language you can switch to another language somewhere during the call flow. Every time a module is linked from the previous module to the next module a different language can be selected.

Some examples where you change from the default language to another language:

- **After a starter:**
  When a call flow is created with a dedicated starter line per language, you will switch to the required language after the starter line. Be aware that in a situation like this, the contact center must announce a dedicated number per language.
- **After an attendant:**
  One starter line is created which is linked to the attendant module. The caller makes a choice regarding the required language during the attendant session. Related to the choice of the caller, the call is linked to the next module. Each menu item in the attendant will switch to the required

language.
- In this example you can link one or more menu items to the same router (or other module) and only change the “Alternate Language” in the “Next Module” pane for each menu item in the attendant.
- **After the identification:**
  When an identification module is used, the callers can be identified via the Calling Line Identity. For each CLI the next module can be chosen. Again all callers can be routed to the same router (or other destination). Only change the “Alternate Language” in the “Next Module” pane.

Note that from the moment another language is selected the remaining part of the call flow will use the selected language prompts. The advantage is that you can create a call flow with a number of language depending starters followed by the same attendant. The attendant prompts will be played in the language selected during “Alternate Language” selection from the starter module to the attendant module.

A lot of contact centers use welcome messages like good morning, good afternoon, good evening and good night. The prompts are usually played when callers reach a starter line. You can configure these kinds of prompts in the general part of the main starter pane. You can select a prompt for each period of the day.

For a multilingual contact center this is not the best way of playing welcome prompts. The prompts will always be played in the default language that is selected in the PBX configuration (see BCT Installation Guide). For a multilingual contact center it is better to leave these prompt fields empty and link the created starter lines to a clock. Configure in the clock time periods morning, afternoon, evening and night. Link these periods to the next module and play the welcome prompt of that moment. The result will be that the callers will hear the welcome prompt in the language that is selected as “Alternate Language” after the starter.

3.5.2. Longest Idle Routing

The basic mode for Call Center routing is on “Longest Idle” agent. A call routed to the agent who was idle for the longest time, compared to the other agents. The Agent Idle Time starts as soon as the last routed call is completed (including ACW time).

It is possible to configure the definition of the Agent Idle Time if you want to exclude Not Ready time and/or Outgoing Call time in the Agent Idle Time. Refer to BCT Installation Guide (chapter 8.2.6 Configure Agent Idle Time).

3.5.3. Skill Based Routing

Preconditions for using and implementing skill based routing:

- Skills have been created;
- Agents have been equipped with the correct skills and skill rating;
- Minimum skill score has been entered in the router settings.

Note: *This section explains how to route a call, based on skills. The complete explanation concerning skill based routing can be found in chapter* Do’s and Don’ts in Call Flows

Let us take a computer helpdesk as example to explain the configuration of “Parameter1” and “Parameter2” for skill based routing.

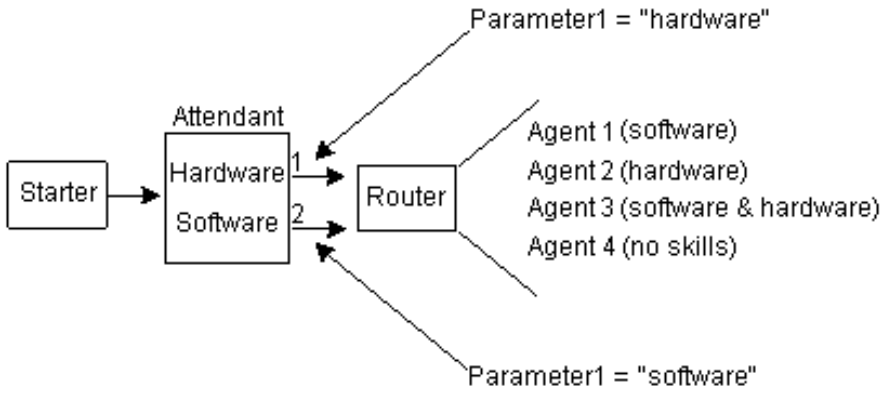


Figure 3-9 Routing example

All callers to the helpdesk dial the same number. The calls are routed to an attendant. The attendant has 2 menu items: “For hardware problems press 1” and “For software problems press 2".
The transfer in both menu items will be the router “helpdesk”.

The agents assigned to the router helpdesk are equipped with the skill software, hardware, both skills or no skills. The idea is that when a caller presses 1 (hardware problems) during the attendant session, the call will be routed to an agent with the skill hardware. If a caller presses 2 (software problems) the call will be routed to an agent with the skill software.

As you can see in Figure 3-9 Routing example, agent 3 will receive calls from both selections because both skills are assigned to this agent.

Let us assume that the attendant module and the two menu items have already been created. When callers are transferred to a router, the call will be answered by one of the agents, assigned to the router.

Link the module according the following steps:

1. Open the attendant property pane.
2. Select the first menu item (Hardware).
3. Select “Start another module” from the drop down menu in the “Action” field. Click the ‘Edit’ link button. A “Next Module” pane will appear.
4. Select “Router” from the drop down menu in the “Module” field.
5. Select “Helpdesk” (name of the router as used in the example) from the drop down menu in the “Module” field.
6. Select the skill “Hardware” from the drop down menu for “Parameter1” in the “hardware” menu item.

- Execute the same steps for the second menu item (software) only select “Software” instead of hardware.

The result will be that when callers press 1 during the attendant session, the call will be routed to the router helpdesk based on the skill hardware. Only agents with the skill hardware will be used to answer the call. If callers press 2, the call will be routed to the router helpdesk based on the skill software. Only agents with the skill software will be used to answer the call.

As you can see in the “Next Module” pane for router, there is also a field called “Parameter2”. A call can be routed with a maximum of two skills. So if you select another skill in the “Parameter2” field, the call will be routed based on two skills. This could be useful if you would like to combine language skills and technical skills or any other combination of skills. Notice that although a call is routed based on max 2 skills, an agent can have more than 2 skills.

3.5.4. Priority Routing

As you can see in Figure 3-8 Next module router pane, a “Priority” field is available.

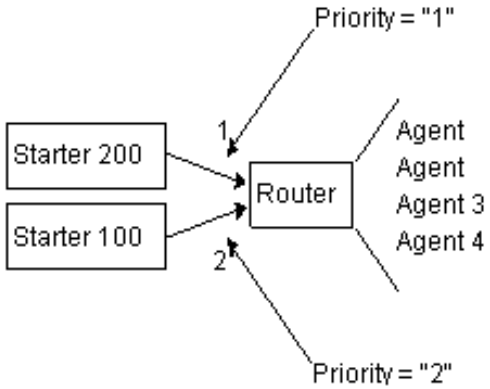


Figure 3-10 Priority Routing

Here a part of a call flow is depicted. In this example, customers are given two numbers to reach the contact center. Callers who dial number 100 (starter 100) should be handled before callers dialing number 200 (starter 200).

Be aware that this is only the case if all agents are busy and callers are queued. If agents are available and ready, then callers will be transferred to an agent regardless from which starter the call is coming from.

If priority routing is required you must enter a priority in the “Priority” field. The priority can be set on a scale from 1 up to 9. One is the lowest (default value), nine is the highest priority.

1. Open the main starter property pane (by double clicking it in the Navigation Panel for example)
2. Select starter 100 from the list of starter lines (by double clicking the line in the grid)
3. Click on ‘Edit’ link label, next to the Module text box; the following pane will appear:

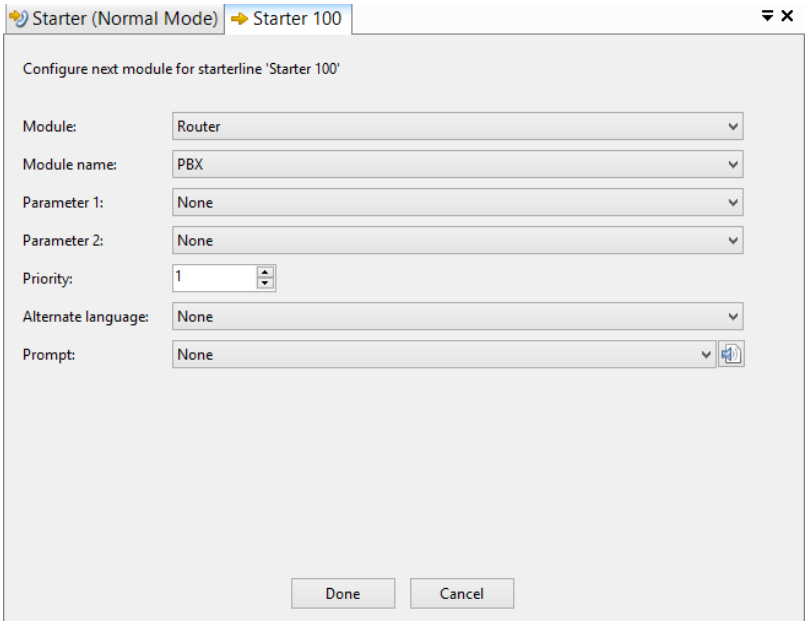


Figure 3-11 Priority routing

4. Select “Router” from the drop down menu in the “Module” field.
5. Select the required router in the “Module name” field.
6. Configure 2 as the priority.

- Execute the same actions for the Starter line “Starter 200" only leave the "Priority" field to the default value 1. From this moment on the calls transferred from the “Starter 100" will have priority over the calls that will be transferred from the “Starter 200".

In this example the priority is arranged by announcing two numbers to the customers. But there are many ways to achieve priority routing. For example: use an attendant and let the caller make the choice. Or use the identification module and configure the call flow in such a way that known customers are routed with a higher priority.

Note: *The selected priority is only valid during the transfer to the selected router. If the call is not answered and the call is rerouted to another router (or even to the same router again), the priority is not available anymore. From that moment on the calls will be answered based on the longest time in queue.*

3.5.5. Language Routing

Language routing offers the possibility to use a language selection at the beginning of the call flow and use that information to route the call to agents with the correct language.

Language routing is a combination of skill based routing and language selection during the call flow.

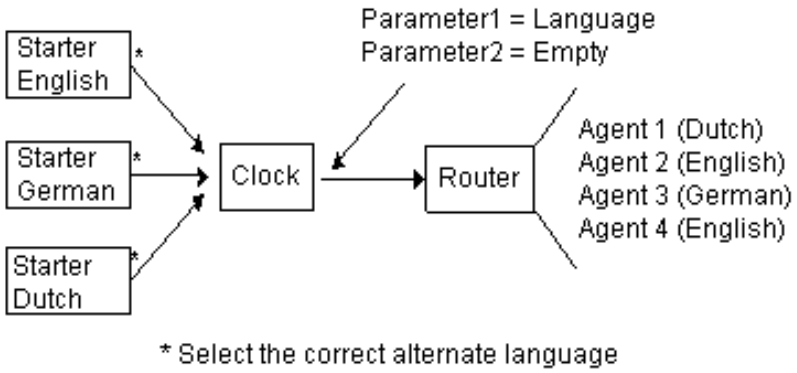


Figure 3-12 Language routing

A contact center offers callers the possibility to speak to Dutch, English or German speaking agents. For this reason 3 numbers are announced to the customers.

From the starter, the calls must be routed to a clock to check the opening hours of the contact center. After the clock, the call is routed to a router. All agents are assigned to this router.

If a caller reaches the English starter the call must be routed to Agent 2 or Agent 4.
If a caller reaches the German starter the call must be routed to Agent 3.
If a caller reaches the Dutch starter the call must be routed to Agent 1.

The following items need to be created to enable language routing:

- The Dutch and German language must be created.
  (Creating new languages is described in the BCT Installation Guide).
- Create the skills English, Dutch and German.

Note: *The name of the skill must be exactly the same as the name of the created languages in the "Languages and directories" tab of the BCT Supervisor configuration tool. This is described in the* BCT Installation Guide*.*

- Assign the skills to the agents.
- Make sure the Minimum skill score is entered correctly in the router settings.

At this moment you can link the starters to the clock and the clock to the router.

1. Open the main starter property pane and select the "Starter German" by double clicking it in the grid. Click the 'Edit' link label next to the "Module" text box to open the "Next Module" pane.
2. Select the clock as next module in the "Module" field.
3. Select a created clock in the "Module name" field.

3. Select German as the "Alternate Language".

3. Click Done and then Save&Close to save the changes.

- Execute the same steps for the Dutch starter line.
- Execute the same steps for the English starter line, there is no need to check the "Alternate Language" check box because English is the default value.

Note: *It is possible that the default language has been changed from English to another (created) language. If that is the case you should check the "Alternate Language" check box and select English from the pull down menu.*

After the starter lines are linked to the clock, (with the correct language selection), the clock must be linked to the router.

1. Open the clock for edit and click the 'Edit' link label next to the "Default Module" field.
2. In the "Next Module" pane select router in the "Module" field.
3. Select the desired router from the drop down menu in the "Module name" field.
4. Select "LANGUAGE" from the drop down menu in the "Parameter1" field.

- Select the "LANGUAGE" in the "Parameter1" field will trigger the system to check what language selection is made during the call flow. According the language selection the call will be routed to agents who meet the language skill.

From this moment on, calls will be routed according the language selection, made in the link between the starter line and the clock.

The advantage of routing calls based on the selected "Alternate Language" is that the call flow needs fewer modules. If you don't use language routing you need three clock modules and three router modules. Each starter needs a language-dependent clock and language-dependent router.

3.5.6. Direct Agent Routing

Direct Agent Routing enables the possibility to route a call via a router directly to an agent.

Many contact centers only announce one number to their customers and callers will be transferred to any available agent. If this is the case for your contact center Direct Agent Routing is not needed.

There are also contact centers where the caller is allowed to call the extension of a specific agent or contact. If you use the Direct agent extension for this purpose, the caller will not be guided via the call flow.

There are some disadvantaged in a situation like that:

- When the agent is busy the caller will get busy tone
  (the caller will not be queued during this period);
- No overflow and exception handling possible;
- The call will not be routed according the office hours (no clock);
- No reporting on progress, service level, answering time, etc.;
- No announcements.

Direct Agent Routing offers the possibility to announce an extension number for each agent that must be contacted directly without the disadvantages of a direct connection.

There are three ways to achieve Direct Agent Routing:

1. Create a transfer module for each agent that needs direct dial in.
   Disadvantage is that calls to the transfer will not be queued and when you select the blind transfer the call will be lost when the agent is not answering the call. Also reporting is limited (only information is the number of calls per transfer module).
2. Create a router for each agent that needs direct dial in.
   This solution needs a large number of routers, therefore the call flow will be unnecessary complex and difficult to manage. Also reporting will be complex and difficult to read because of the large number of routers.
3. Direct agent routing with “Parameter1” and “Parameter2” information.
   This is the best option if you want to keep the call flow simple. The calls will be routed via one router and via the parameter information the correct agent will receive the call.
   All features of routing calls guided by a router are still active.
   If the requested agent is on the phone the caller will be queued.
   Also reporting is available.

In the following figure a simplified example of direct agent routing is depicted.

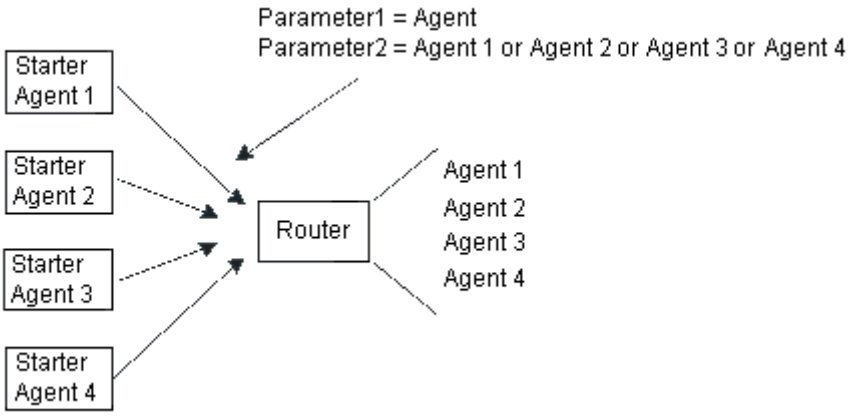


Figure 3-13 Direct agent routing example

Per agent a starter line is created. The number of the starter is announced as the extension of the agent.

Note: *When direct agent routing is used for a large number of agents you will need a large number of starter lines.*
Note that the maximum number of IVR lines is not the maximum number of starter lines. You can share an IVR line for a number of starter lines.
Create as much hardware less DNRs (or non member ACD groups) as there are agents and forward these to the IVR group (See the BCT Installation Guide for more information, same method is used for phone based agent logon).

In the example given in Figure 3-13 Direct agent routing example, 4 agents are populating the contact center. Therefore 4 starter lines are created.

- Select “starter agent 1" and click the next module ‘Edit’ link label.
- In the “Next Module” pane select “Router” as next module.
- Select the created router in the “Module name” field.
- Select “AGENT” from the drop down menu in the “Parameter1” field.
- Enter the agent name in the “Parameter2” field.

  Note: *The agent name entered in the “Parameter2” field must be exactly the same as the agent short name (the basic login name), as entered during the creation of the agent. Otherwise the system will not route the call to the requested agent.*

- Click Done and then Save to activate the changes.

Repeat these steps for all starter lines and make sure the correct agent short name is entered during the linking.

This feature will only work in combination with specific router settings.

Select the router from the Navigation Panel and select **Edit** from the context menu. Select “Agent Routing” tab.

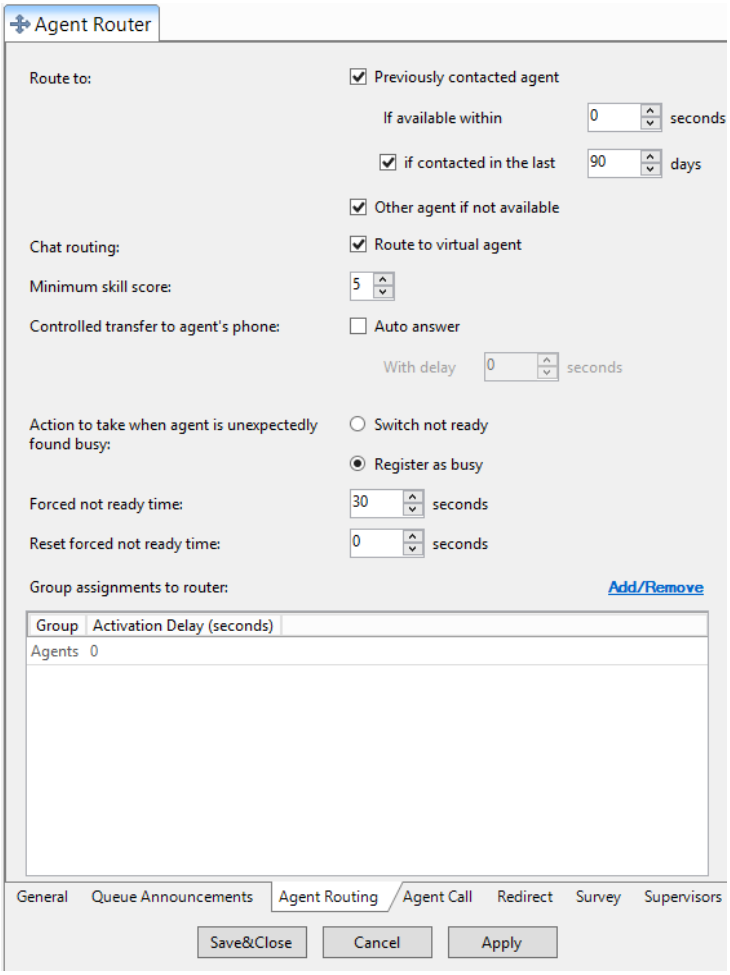


Figure 3-14 Router properties window

Check the “Other agent if not available” check box if the call should be routed to another available agent when the requested agent is not available. If this check box is not checked the system will try to transfer the call to the requested agent until the “Max. Queue Time” expires.

Direct agent routing can be combined with normal contact center routing. When a general starter is created and linked to the same router the agents will also receive calls from the general starter.

3.5.7. Service Routing

BCT can route calls based on key words. These key words must be entered as description for the starter line. This is called Service Routing. Create one or more starter lines and announce the starter line numbers to the customers of the contact center. This way of routing calls can be used to offer a service per starter line.

Example:

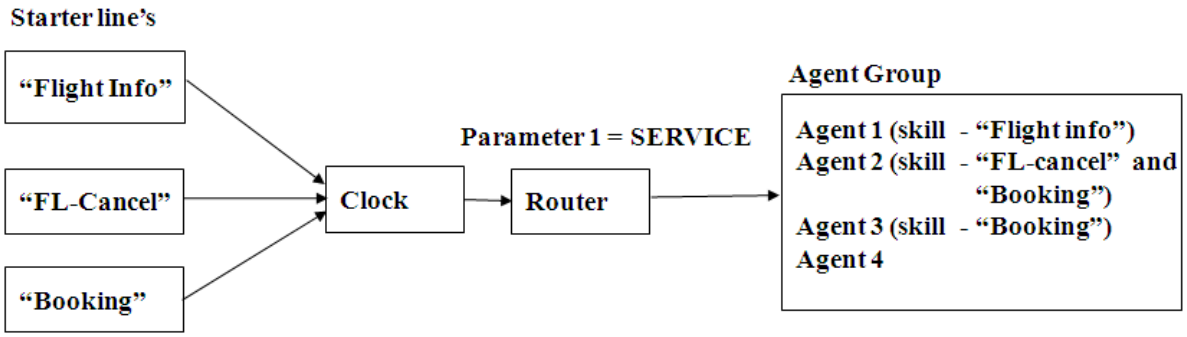


Figure 3-15 Service routing example

A travel agency offers customers the following services:
- Flight information
- Canceling flights
- Booking holidays

To the customers of the Travel agency three numbers are announced:
- Dial 100 for Flight information.
- Dial 200 for canceling flights.
- Dial 300 for booking holidays.

When callers dial for flight information the call will be answered by agent 1.
When callers dial for canceling flights, the call will be answered by agent 2.
When callers dial for booking holidays the call will be answered by agents 2 and 3.

Service routing is a combination of skill based routing and routing on key words.

The following items need to be created to enable service routing:
- Create the skills "Flight-info", "FL-cancel" and "Booking".

  Note: *The name of the skill must be exactly the same as the description of the starter line.*
- Assign the skills to the agents.
- Make sure the Minimum skill score is entered correctly in the router settings.

Link starter lines to the router.
- Select the first starter line and click the 'Edit' link label next to the "Module" text box.
- In the "Next Module" pane select router in the "Module" field.
- Select the desired router from the drop down menu in the "Module name" field.
- Select "SERVICE" from the pull down menu in the "Parameter1" field.
- Select "SERVICE" in the "Parameter1" field will trigger the system to send the starter line description with the call as a kind of skill. The call will be routed to agents who meet the skill description.

Execute the same steps for the other two starter lines.

From this moment, calls will be routed based on the used description in the starter line.

Although Service routing seems very similar to Skill based routing there is a difference in the sense that with Service routing the initial selected service (Flight Info, FL-Cancel, Booking) is remembered throughout the complete Call Flow; at the end of a Call flow, when the call needs to be routed to an Agent, still this initial selected Service will be used as (skill) criteria for selecting an Agent.

3.6. Create a survey

Via a survey you can request feedback from your customers about delivered services, products or other important aspects for your business. A survey can be created by following the next steps:

1. Create survey's resources

There are three types of survey resources: question categories, answer categories and question templates. The question categories and answer categories are used to group together related questions/answers in the survey reports. Examples for question categories are: quality, service, performance and for answer categories are: poor, medium, good or neutral. Question templates can be used for a question which is used for several surveys.

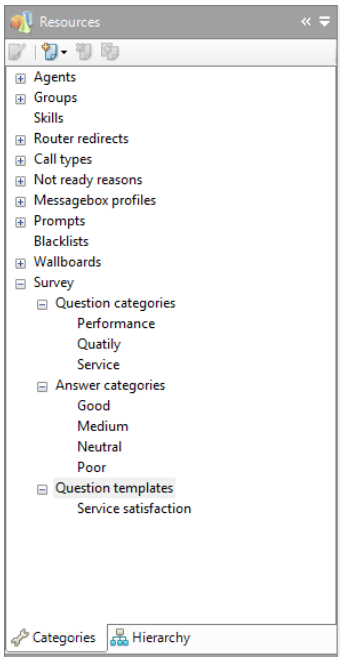


Figure 3-16 Survey resources example

In order to learn how to add, modify, delete or duplicate a survey resource please check the Survey Resources chapter.

2. Define the survey

You can define a survey by using previously created survey resources. Every survey has a number of questions and each question has one or more answers. You have to ask the proper questions in order to obtain all the information you need from your customer.

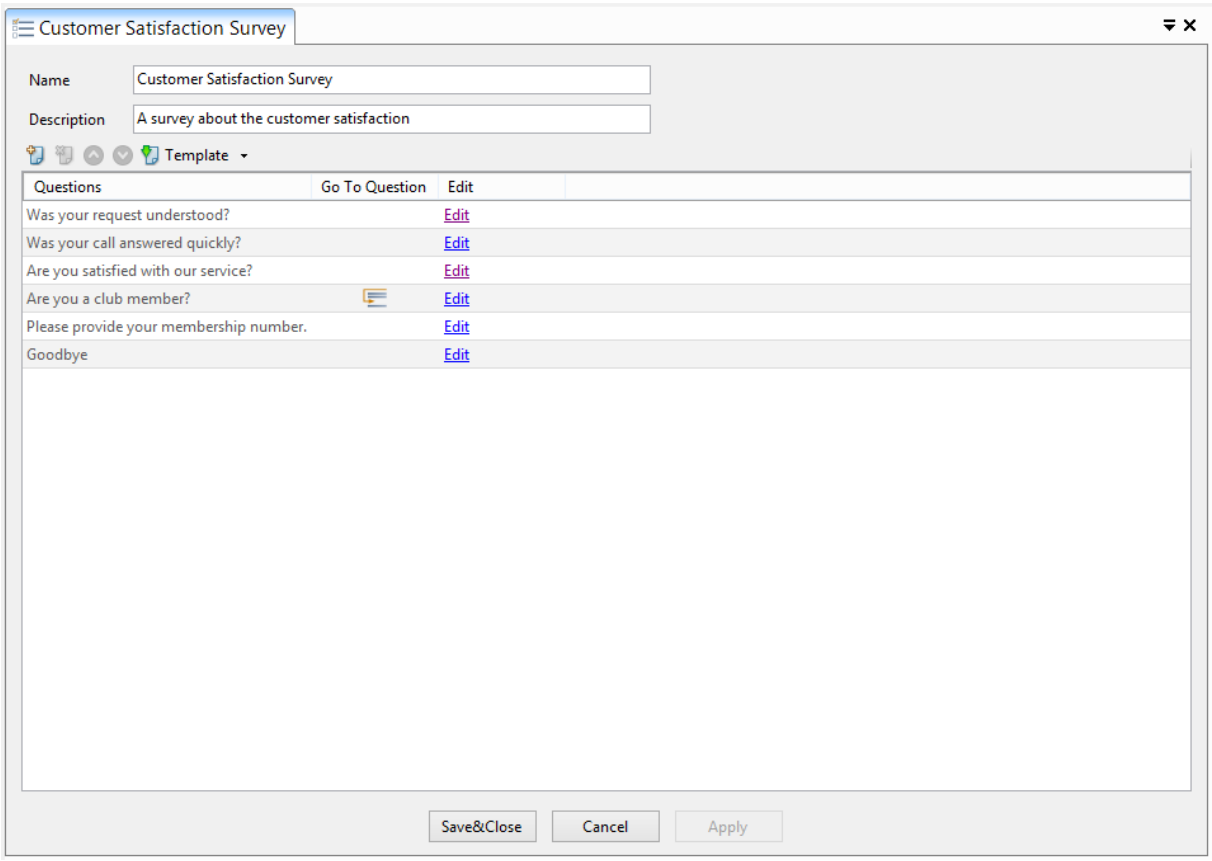


Figure 3-17 Survey example

In order to learn how to add, modify, delete or duplicate a survey module please check Survey Module chapter.

3. Create a starter for survey

A special survey starter is required to allow agents to route calls to a survey.
The routing to the survey must be initiated manually (via the telephone) or by pressing the end call button in the Desktop Client.

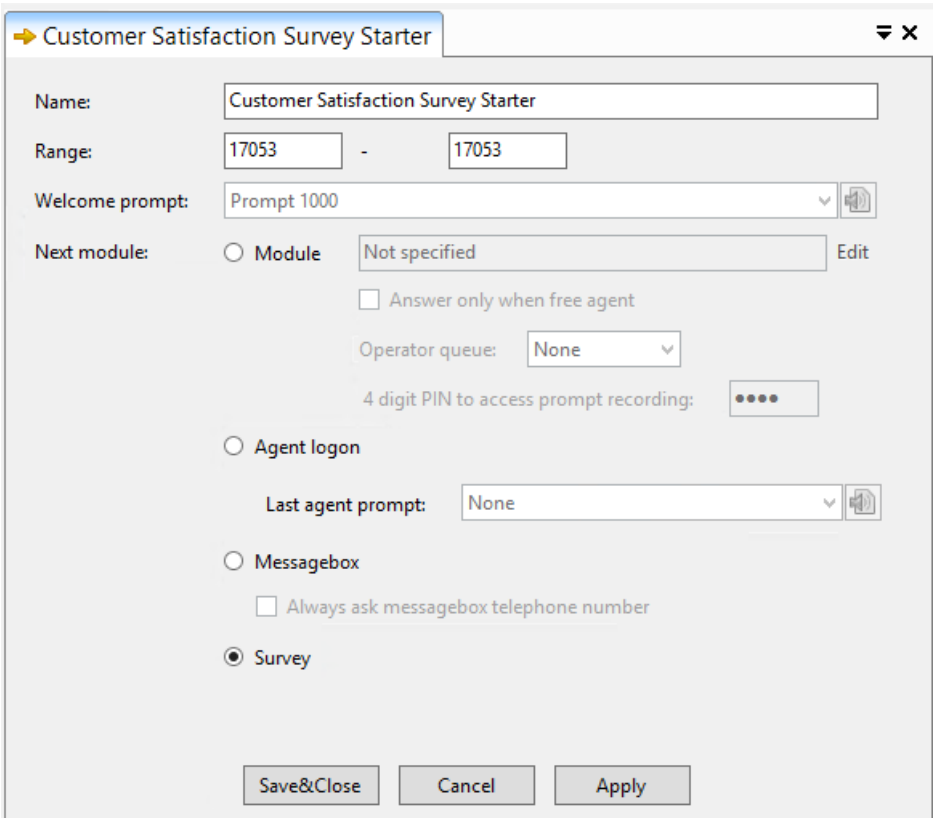


Figure 3-18 Survey starter example

A starter can be configured as a survey starter by select the 'Survey' radio button from the starter pane (see Figure 3-18 Survey starter example). For more information about starters please check Main Starter Module.

4. Survey activation

When survey resources are defined and a survey is created, you have to activate this survey. In this step you have to decide the way of working for the survey: type of activation, approval prompt, moment in time when the caller should accept or reject a survey invitation, when the survey should start. For all of this you have to follow the next steps:

Survey assignment

A survey must be assigned to a router in order to associate the survey service to a caller (example service, sales or product). This action must be done in Survey tab from Router pane in Supervisor Dashboard (see The Survey Tab of the Router Module for more information).

Survey configuration

The survey activation configuration must be done in Survey tab of Router pane.

Via the 'survey activation' property you can specify how the survey should be started:

- Approved by caller: the caller will be invited to participate in a survey, so an approval question prompt should be configured. You select this prompt by using the 'approval

prompt' property. An approval prompt can be played at 3 moments: on call completion when the agent press the Call End button (call completion value), when the caller enters the router queue (queue arrival value) or just before the caller is connected to the agent (connect to agent value). One of these 3 values can be selected via the 'approval moment' property.

- Agent transfer: the agent will transfer the call to the survey. In this case no participation prompt and no automated participation question needs to be configured, because the agent should perform this task and transfer the call manually to the survey starter line.

Note: *When you use the 'Approved by caller' feature, make sure that the agent will press the end-call button in the Desktop Client or the agent transfers the customer to the survey starter at the end of the call. If the agent doesn't then the survey will not be started even if the customer accepted the survey invitation.*

Using these settings you can create different scenarios like:

Scenario 1: Survey Approval AFTER Agent conversation:
At the end of the conversation with the agent, the agent will ask the caller, if he/she wants to participate in a survey. If the customer agrees, the agent will transfer the caller to a survey starter and the Survey will be executed.
Another option is:
At the end of the conversation with the agent, the system will ask the caller, if he/she wants to participate in a survey. If the survey is accepted, the survey will start immediately.

Scenario 2: Survey Approval BEFORE Agent conversation:
The system asks the caller if he or she wants to participate in a survey, before the call is entered in the router queue or before the call is transferred to the agent.
When the caller presses "1", he/she accepts the invitation to participate in a survey. This survey will start immediately, after the conversation with the agent.

3.7. Do's and Don'ts in Call Flows

In practice "everything is possible" in a Call Flow. But not all Call Flows automatically lead to an efficient working system or can even cause malfunctioning. Below some situations are listed which should be taken care of or prevented.

- When an agent router enters an Exception Exit, do not assign an operator Router as next module. In this case the call will never be visible in the operator queue pane.
  Use a Blind Transfer Module as next module and assign the Operator Starter Line as destination number
- When an agent router enters an Exception Exit, do not assign an Attended Transfer Module as next module. Waiting for the destination to answer, keeps the calling party hold up.
  Use a Blind Transfer Module as next module instead
- The next module for an operator Fallback or Park Starter should always be directly the operator router.
  The Fallback and Park starter line number are used to direct calls to the correct starter for operator calls. When e.g. a clock or Identification module is in between starter and router fallback or park might not work correctly.
- Operator traffic should always start at a Routing Point to activate a starter line
  When a prompt is needed after receiving the call on a Routing Point, the call will be redirected to a VMP line automatically
  Operator traffic initially received via a VMP line will not be handled correctly.
- Agent traffic might enter the Contact Center either (via an access number with forwarding) on a VMP line or a Routing Point.
  Preferable a Routing Point should be used, when a prompt is needed the call will be redirected to a VMP line automatically.
  Note that when a call is present on a VMP line and an agent becomes available (or the agent/operator picks the call from the queue), the call is first redirected to a Routing Point and afterwards moved to the agent (to provide the correct calling party on the agent's terminal display instead of the VMP line number).

4. Skill Based Routing

BCT can route calls based on skills.

You can route calls to a router based on one or two requested skills. Only agents who match the skill profile will be taken into account to answer the call. All agents can be assigned to one router and via skills a call will go to the best suitable agent.

Skills must be created and assigned to the agents who should handle the calls. Skill based routing is only applicable for calls transferred to agents via a router.

There are all kind of reasons why skill based routing would be useful. Some examples are:

- **Multi- language contact center:**
  When all agents are assigned to one router, all calls will be routed to this router, regardless of the caller's language. Based on the requested skill the call will be answered by a matching agent.
- **Technical helpdesk:**
  Via an attendant, the callers can make a selection concerning the technical problem or question they have. The call will be routed to an agent who has the requested technical skills to answer the question or solve the problem.
  Using skills will avoid that calls will be transferred to agents who do not have enough knowledge.
- **Routing calls based on department hierarchy:**
  Configure an attendant module and let the caller select a department.
  The call will be transferred to an agent who belongs to the requested department. Departments could be sales, service, development etc.
- **Routing calls based on a service:**
  Suppose the contact center is a bank. The bank is offering services like money transfer, mortgage, insurance, etc.
  Set-up the skills related to these services and assign the skills to the agents who provide the service.

It is also possible to combine technical skills with other kind of skills. An international helpdesk may have a combination of technical and language skills. You can assign more than 2 skills to an agent.

Skills are sent with the call when the call is transferred from a module to the router. "Parameter1" and "Parameter2" in the "Next Module" window are used to enter the requested skill(s).

This chapter explains:

- How Skill based routing works;
- How to calculate if agents will get calls based on skills;
- How to configure the minimum skill score for the router.

Note: *Skill based routing is not a complex story. However, implementing skill based routing in a contact center is a process that most likely will take some time. You need to know how the contact center is working and what kinds of skills are involved.*
Introducing skill based routing is, like creating a call flow, a process with interaction of the customer and the contact center administrator.

After analyzing the contact center way of working, make a list of the requested skills. Make also a list of agents and note down which skills should be assigned to the agents. Together with the customer, define the skill level per skill and per agent.
Only when this information is available you can setup skill based routing.

The chronological order to setup skill based routing is as follows:

1. Create skills (see section Skills);

2. Assign the correct skills to the agents (see Figure 5-7 Agent skills in section Agents);
3. Assign the correct skills rating to the agents (see Figure 5-6 Agent properties pane in section Agents);
4. Set the correct “Minimum Skill Score”;
5. Link the modules according to the requested skills.

4.1. Skill Based Routing With One Skill

Consider the following example to understand how Skill based routing works.

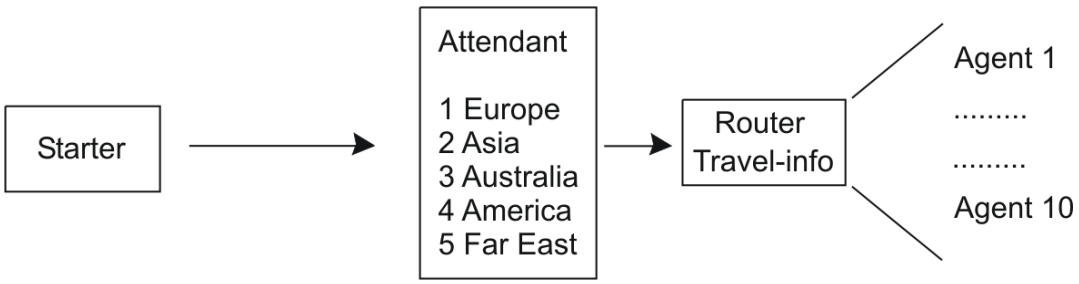


Figure 4-1 Travel Agency, single skill routing

A travel agency is starting a contact center to advise callers about holiday arrangements that can be booked.

The contact center has 10 agents.

The contact center has the following holiday regions: Europe, Asia, Australia, America and the Far East. These regions will be created as skill. The agents are responsible for at least one of the mentioned regions.

The contact center uses an attendant to ask the caller what kind of information is requested.

The skills are divided according to the following table. The rating is entered between brackets.

Agent name	Skill	Skill	Skill
Agent 1	Europe (5)	Australia (9)	Far East (6)
Agent 2	Asia (9)	America (9)	
Agent 3	Europe (8)	Far East (5)	
Agent 4	Asia (5)	Far East (7)	
Agent 5	Europe (6)	America (5)	
Agent 6	Australia (4)	Europe (9)	Far East (7)
Agent 7	Europe (7)		
Agent 8	Asia (7)	America (6)	
Agent 9	Europe (8)		
Agent 10	Australia (6)	Europe (9)	Far East (4)

Table 4-1 Assigned skills to agents

All agents are assigned to the router “Travel-info”.

The “Minimum Skill Score” on this router is set to “5”. This means that when an agent is assigned with one of the skills and the rating of the skill is below the "Minimum Skill Score”, no call will be transferred to this agent.

Note that this is only valid if you use skill based routing on a single skill. When a call is routed with two skills the calculation is more difficult. This will be explained later in this section. For now we will only route calls based on one skill.

The rating of a skill is important. Per agent you need to enter the correct rating per assigned skill. As you can see in Table 4-1 Assigned skills to agents, Agent 6 will not receive calls that were routed with the skill Australia. The rating for this skill is 4 and that is below the “Minimum skill Score” of the router, which is 5.

Agent 6 will receive calls with the skill “Europe” and “Far East”. As you also can see, the rating per skill differs per agent. Agents 2, 4 and 8 are equipped with the skill “Asia”. When a caller select “Asia” during the Attendant, the call will be routed to one of these agents.

The system always tries to route the call to the agent with the highest skill rating.

In this example, the system will try to route the call to Agent 2, (rating 9 for skill Asia). Only if Agent 2 is not ready or already talking to a customer, the call is routed to Agent 8 (rating 7 for skill Asia). If Agent 2 and Agent 8 are not available, the call will be routed to Agent 4 (rating 5 for skill Asia). If Agent 4 is not available as well, the call will not be answered and placed in the queue, until Agent 2, agent 4 or Agent 8 is available again.

As you can see in Table 4-1 Assigned skills to agents, an agent can be equipped with more than one skill.

Some agents will receive calls from only one region (Agent 7 and Agent 9 for Europe), other agents will receive calls from several regions (e.g. Agent 10 for Australia, Europe and Far East). Calculating if an agent will receive calls based on one skill is not complex:

- The agent with the highest rating for the requested skill will receive the call. (Assuming all agents are available).
- An agent will only receive the call if the skill rating for the requested skill is above the “Minimum Skill Score” as entered in the router settings.
- If no skills are assigned to an agent, no skill based calls will be transferred to that agent.

In the used example the agents are rated depending on their knowledge regarding the skills. Therefore some agents have a higher or lower rating than other agents. There are also examples of skill based routing where agents have the same rating and the only purpose of the rating is to meet the “Minimum Skill Score” of the router.

When skill based routing is used to route calls based on departments (sales, service, and finance), most likely the rating will be the same for all agents who belong to the individual departments.

4.2. Skill Based Routing With Two Skills

In the travel agency example in the previous section, one skill is used to route the call to the best matching agent. It is also possible to route a call with two skills.

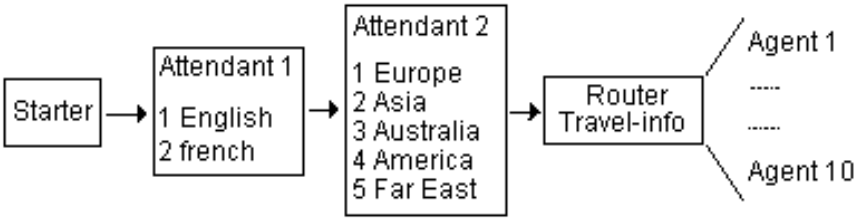


Figure 4-2 Travel Agency, two skill routing

The travel agency offers the callers the possibility to speak in English or in French. Therefore a new attendant will be created before the region selection attendant. See Figure 4-2 Travel Agency, two skill routing.

First the caller must make a selection, concerning the language. After that the region selection must be made.

Two new skills will be added, “English” and “French”. The table with the skills related to the agents will look like the following table:

Agent	Skill	Skill	Skill	Skill	Skill
1	Europe (5)	Australia (9)	Far East (6)	English (6)	French (6)
2	Asia (9)	America (9)		English (6)	French (9)
3	Europe (8)	Far East (5)		English (6)	
4	Asia (5)	Far East (7)		English (6)	
5	Europe (6)	America (5)		English (6)	French (7)
6	Australia (4)	Europe (9)	Far East (7)	English (6)	French (5)
7	Europe (7)			English (6)	
8	Asia (7)	America (6)		English (6)	
9	Europe (8)			English (6)	
10	Australia (6)	Europe (9)	Far East (4)	English (5)	French (8)

Table 4-2 Assigned skills to agents including language skills

All agents can help the callers in English. Only some agents speak French.

When skill based routing is used with two skills, there are two options how the system should use the skill and calculate if an agent is suitable to answer the call.

The following figure shows the “Skill Definition” window.

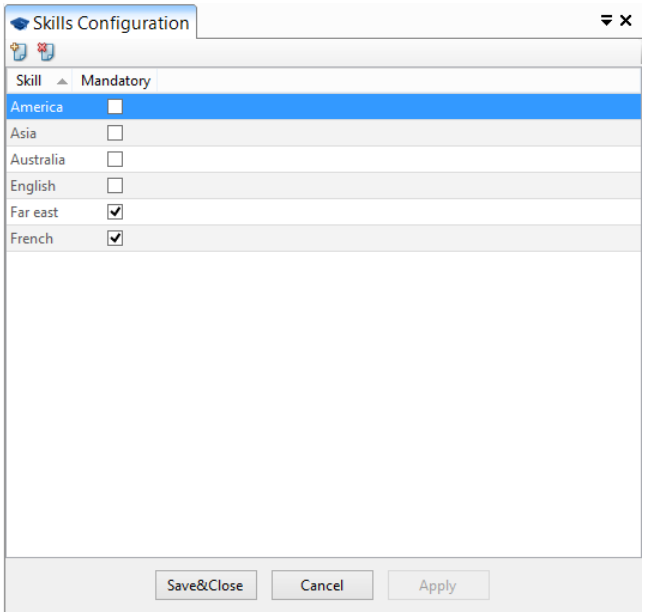


Figure 4-3 Skill definition window

As you can see, a skill can be “Mandatory” or not.

Mandatory skills:

If both skills are mandatory, the calculation is the same as for single skill routing.

When “Mandatory” is checked, the skill rating for the agent must be at least the same or higher than the “Minimum Skill Score” that is set on the router.

When a caller selects English and the region Australia, the requested skills are “English” and “Australia”. Because the skills are both mandatory, only agents with the skills “English” and “Australia” with a rating equal to 5 or higher will receive this call.

Agent 6 will not be taken into account because the skill rating for “Australia” is below the minimum skill score.

One skill mandatory:

If one of the requested skills is mandatory, the mandatory skill must be rated at least the minimum skill score. The other skill is calculated differently.

Add up both skill rating values and divide them by two. The result will be used as agent rating for the skill that is not mandatory.

If the result of this formula is less than 5, the call will not be routed to that agent. Suppose a call is routed on the skill request “French” and “Australia” and only the skill “French” is mandatory. The call will be routed only to agents who have skill “French” rated at least 5 and skill “Australia” rated at least 5.

Agent 6 will not be taken into account for this call.
(Australia rating 4 + French rating 5) : 2 = average rating of 4.5

Two non mandatory skills:

When “Mandatory” is not checked the average of both skill ratings must be at least the same or higher than the “Minimum Skill Score” that is set on the router.

A call is routed with non mandatory skills “Far East” and “English”.

Agent 10 will not receive calls for this skill request.

(Far East rating 4 + English rating 5) : 2 = average rating of 4.5.

Agent 10 will receive calls with requested skills “Far East” and “French”.
(Far East rating 4 + French rating 8) : 2 = average rating of 6.

5. Resources

The Resources section of the Navigation Panel contains some of the items needed to build a call flow or to support agents. Depending on the type of agent (screen based or phone based) and the used modules in the call flow, some of the items may not be applicable. The following sections explain all resources.

5.1. Not Ready Reasons

When agents leave their desk during a shift, they should switch “not ready”. While in the “not ready” state, no calls will be routed to the agent. When the agent returns to the desk and switches “ready”, calls can be routed to the agent again.

The not ready reasons give the supervisor more feedback concerning the not ready state of the agent. The selected not ready reason will inform the supervisor of the reason of switching not ready. If an agent switches not ready with “coffee break” the supervisor expects the agent back in 15 minutes, if an agent switches not ready with “lunch”, the agent is probably not available for a longer period. The supervisor can be aided with this by configuring a time limit for a not ready reason.

Not ready reasons are displayed on the agent monitor and floorplan and are used for reporting.

Note: *The system defined Not Ready Reasons e.g. “Set Forced Not Ready” will not appear in the list.*

To view the “Not Ready Reasons”, open the Resources section of the Navigation Panel, Categories page and expand the Not Ready Reasons node. To edit or add new “Not Ready Reason”, double click any existing Not Ready Reason or right click the “Not Ready Reasons” node and choose **New** from the context menu. The following pane will open:

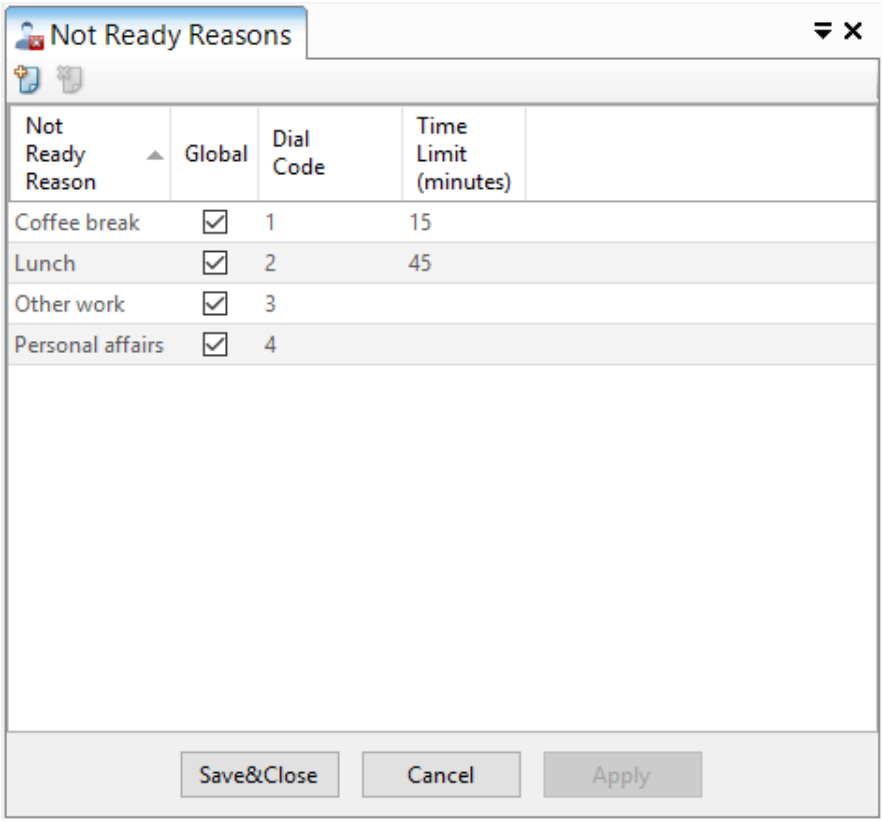


Figure 5-1 Not Ready Reasons configuration pane

When the pane is opened, you can also click the **New** button above the table ( ) to add a new “Not Ready Reason”.

Per Not Ready Reason you can set the following properties:

Not Ready Reason:	When agents set themselves “not ready”, the "Not Ready Reason" text that is created here will appear in a drop down list on the agent's screen.
Global:	Indicating that this Not Ready Reason is per router or global (applicable for all routers).
Dial Code:	The Dial Code is only applicable for Phone based agents connected to an **iS3000, SIP@Net, SV8300, SV9300, SV8500, SV9500 or UNIVERGE 3C.** Phone based agents enter a “Not Ready Reason” via a dialed prefix. The value may be 1 up to 6 digits. In case of screen based agents, the Dial Code can be ignored.
Time Limit:	A time limit (in minutes) can be used to change the behavior of the not ready timers as shown in the Agent desktop, agent monitor and on the floorplan. When entered, the not ready timers that are shown in the agent monitor and the floorplan will indicate whether a time-limit has not yet expired for this agent (the time-limit will be displayed in blue and will count down) or when expired (the time-limit will display in red and will count up). By default, the time limits are kept per agent and calculated over a day. So a limit of 30 minutes entered for a Coffee Break implies that an agent can take one coffee break of 30 minutes or 5 coffee breaks of 6 minutes before the time-limit is reached. Each day at midnight the usage per agent is cleared and agents get a restarted daily limit. This dally reset behavior can be changed using the configuration-setting “DisableDailyNotReadyTimeLimits”. When this setting is set to “True”, the time limit is (re)applied to each start of a not ready period. So each new coffee break will start over with the configured limit until it expires.

To remove a “Not Ready Reason”, click on that line so it is highlighted and click **Delete** button above the table ( ). You can also remove a “Not Ready Reason” by right click it in the Navigation Panel tree and select **Delete** from the context menu.

Note: *It is not allowed to delete a Not Ready Reason still assigned to a router. When you try to do this, a warning is displayed stating that the Not Ready Reason is still in use.*

5.2. Call Types

Call types are short notes that can be attached to a call. A Call Type can be selected by an agent during the call or during the after call work time. Call types are used for statistical reasons. Examples are: how many callers requested information, how many callers bought a product or how many callers issued a warranty request. A report can be generated to display the number of entered call type items. The report will list per agent the number of times a call type item is entered.

To view the “Call Types”, open the Resources section of the Navigation Panel, Categories page and

expand the Call Types node. To edit or add new “Call Type”, double click any existing Call Type or right click the “Call Types” node and choose **New** from the context menu. The following pane will open:

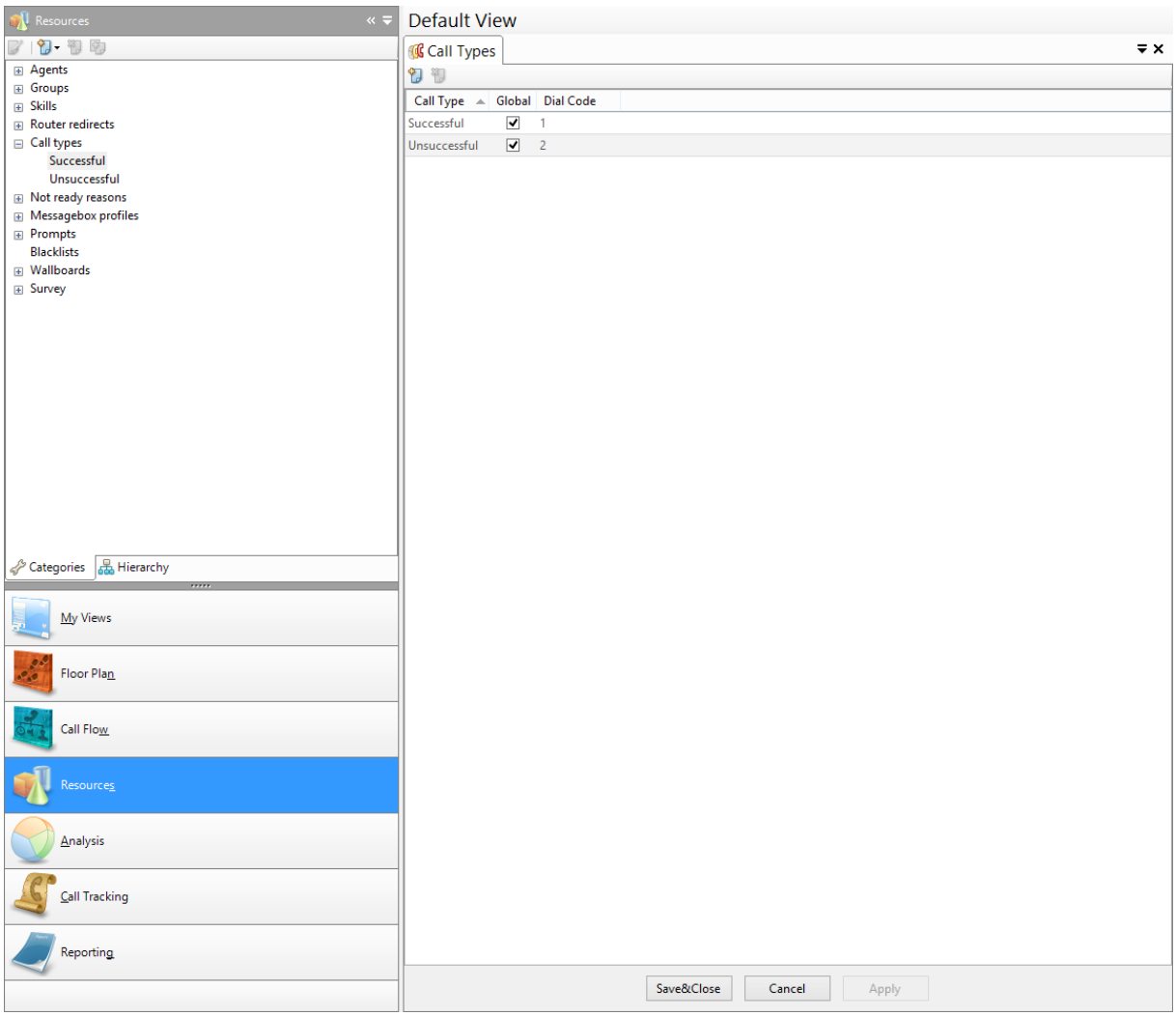


Figure 5-2 Call Types Configuration pane

When the pane is opened, you can also click the **New** button above the table ( ) to add a new “Call Type”.

Per Call Type you can set the following properties:

Call Type:	When agents set themselves the call type, the call type text that is created here will appear in a drop down list on the agent's screen.
Global:	Indicating that this Call Type is per router or global (applicable for all routers).
Dial Code:	The Dial Code is only applicable for Phone based agents connected to an **iS3000, SIP@Net, SV8300, SV9300, SV8500, SV9500 or UNIVERGE 3C.** Phone based agents enter a call type via a dialed prefix. The value may be 1 up to 6 digits. In case of screen based agents, the Dial Code can be ignored.

To remove a “Call Type”, click on that line so it is highlighted and click **Delete** button above the table ( ). You can also remove a “Call Type” by right click it in the Navigation Panel tree and select **Delete** from the context menu.

Note: *It is not allowed to delete a Call Type still assigned to a router. When you try to do this, a warning is displayed stating that the Call Type is still in use.*

5.3. Skills

If the contact center uses skill based routing, skills must be created. Each agent can have one or more skills assigned.

A skill can be mandatory, this means that an agent should have a skill rating for the mandatory skill, at least equal to the minimum skill score of the router. If an agent's actual score for a mandatory skill is insufficient, this agent will not receive calls for that skill. The complete explanation of skill based routing is described in Do's and Don'ts in Call Flows.

To view the "Skills", open the Resources section of the Navigation Panel, Categories page and expand the Skills node. To edit or add new "Skill", double click any existing Skill or right click the "Skills" node and choose **New** from the context menu. The following pane will open:

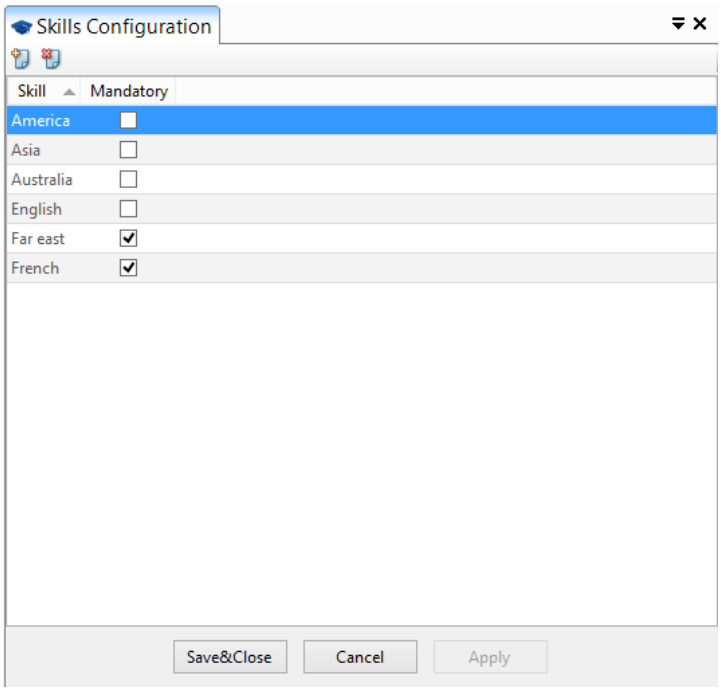


Figure 5-3 Skills configuration pane

When the pane is opened, you can also click the **New** button above the table ( ) to add a new "Skill".

To remove a "Skill", click on that line so it is highlighted and click **Delete** button above the table ( ). You can also remove a "Skill" by right click it in the Navigation Panel tree and select **Delete** from the context menu.

5.4. Message box Profile

Message boxes can be created for a group of users. Such a group may use the same profile. Another description for a profile is a template. It offers the user of a message-box a set of predefined settings and more or less restrictions. A profile has certain characteristics. You can, for example, make a profile for all the employees in the sales department. One of the characteristics could be that new

messages are announced on their mobile phone. After a profile has been configured a message box can then be further configured.

Note: *The system contains a Message box Profile: "Standard". This is the default Message box profile and it cannot be deleted.*

To view the "Messagebox Profiles", open the Resources section of the Navigation Panel, Categories page and expand the Messagebox Profiles node. To edit or add new "Messagebox Profile", double click any existing Messagebox Profile or right click the "Messagebox Profiles" node and choose **New** from the context menu. The following pane will open:

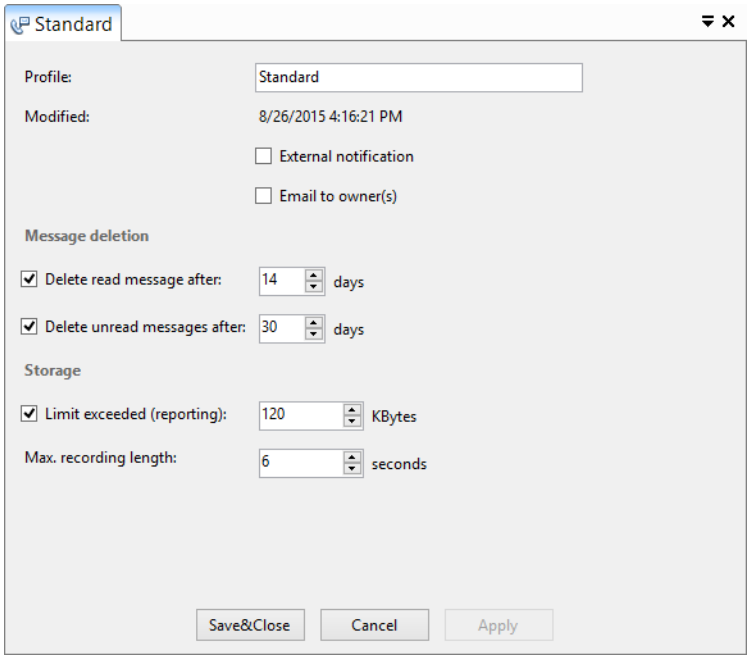


Figure 5-4 Message box profile pane

The following settings can be configured for a Messagebox Profile:

Profile:	The name of a group of message boxes which have the same basic settings. To avoid assigning the wrong message box profile, use explainable names like sales, agents, basic etc.
Modified:	Date and time stamp when this profile was created or updated.
External notification	Indicates whether a new message may be notified to an external destination. The destination can be entered in the general tab of the "Message box Properties" window. See Message box General Tab.
Email to owner(s)	Indicates whether new messages are emailed (as a WAV file) to the owners of a message box.
Delete read message after:	Enter after how many days read messages are deleted automatically. Unchecking this option means the read messages are never deleted.
Delete unread message after:	Enter after how many days unread messages are deleted automatically. Unchecking this option means the unread messages are never deleted.
Max. recording length:	Enter the maximum number of seconds allowed for a single message.

Limit exceeded (reporting):	Enter how big the message box is. 8 Kbytes is about 1 second. This is used only for reporting. The Messagebox Resource report generates the disk use and whether the message box is full (Exceeded). Unchecking this option means there is no limit configured.

5.5. Prompts

Handling prompts is described in a separate chapter. Please refer to Prompts.

5.6. Email Servers

Email routing is described in a separate chapter. Please refer to Create an Email Server.

5.7. Agents

Agents populate the contact center. A call is routed to a router and the router will transfer the calls to agents. To receive routed calls the agents must be assigned to an agent group. The agent group must be assigned to the router. More than one agent group can be created and an agent can be a member of more than one agent group.
Agents need to be created and defined with the BCT configurator, before they can be assigned to a group. This is described in the BCT Installation Guide.
In the BCT Supervisor Dashboard, select Resources from the Navigation Panel, Categories page and expand Agents node. All users with agent role assigned will be displayed in the tree.

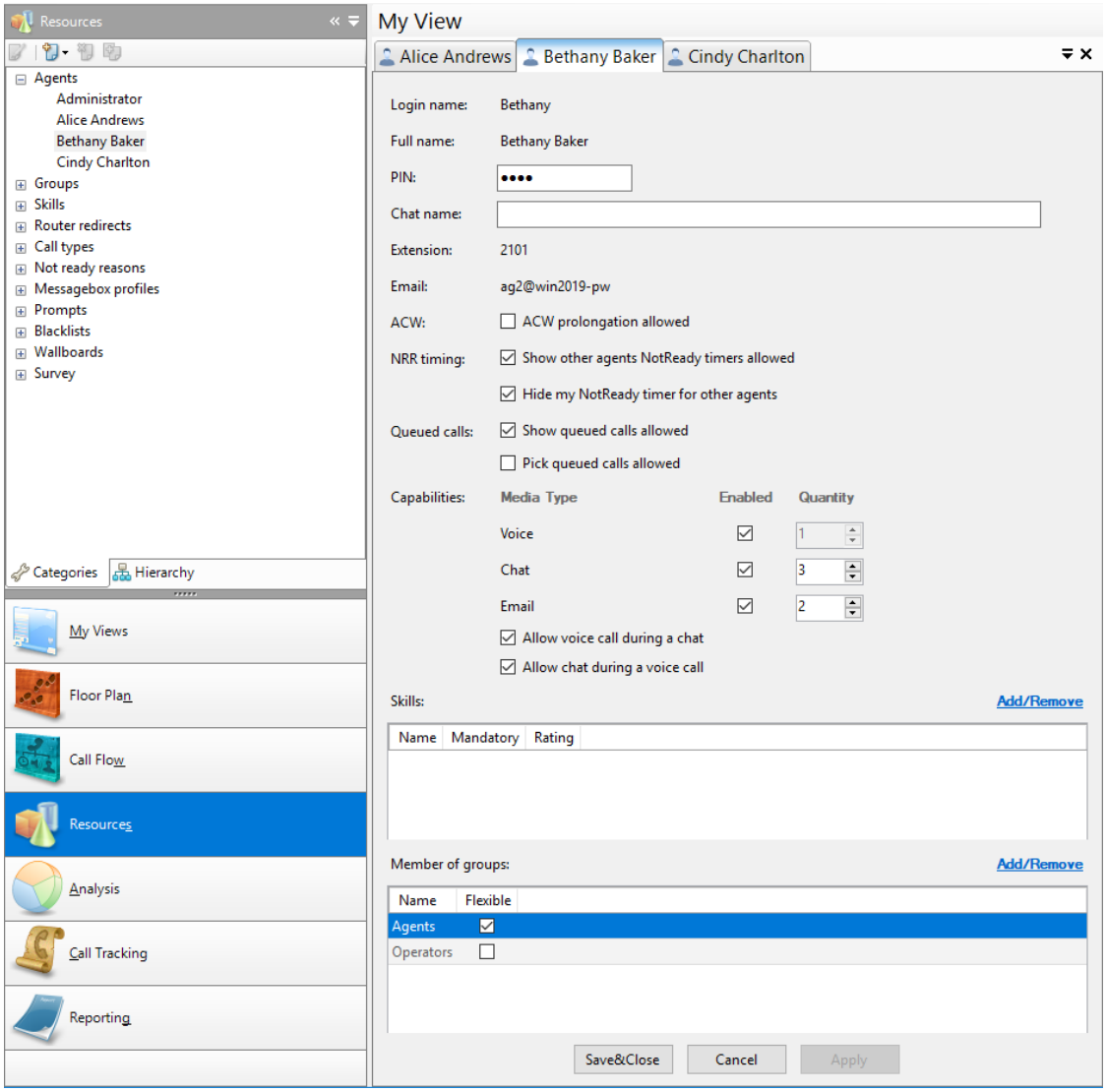


Figure 5-5 Agents navigator

To modify the properties for an agent:

- Right click the agent in the tree and select **Edit** or

- Select the agent in the tree and click the **Edit Item** button of the toolstrip bar or

- Double click the agent in the tree

The agent properties pane is displayed.

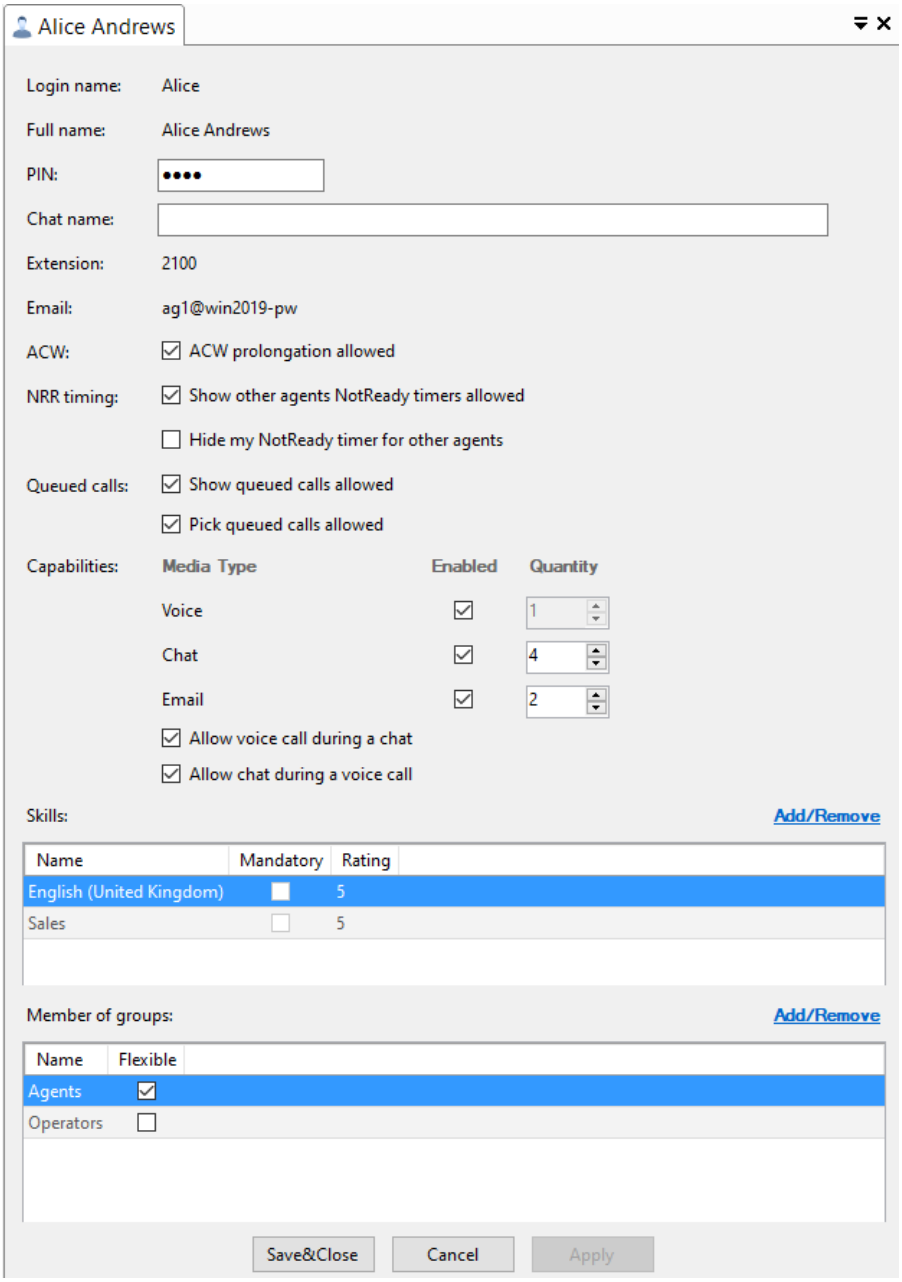


Figure 5-6 Agent properties pane

The following settings apply for each agent:

Login name: The name used by the agent to login BCT applications as entered in BCT.

Full name: Name of the agent (first name + last name) as entered in BCT.

PIN: A PIN is used by phone based agents to perform a logon. Each agent must have a unique PIN number. If the contact center is screen based the PIN can be omitted.

Chat name: The name by which the agent will be identified in a chat session. If this field is left empty, the agent's first name will be used and if that is also empty the login name will be used.

Extension: The telephone number the agent uses to perform contact center activities.

Email:	The email address of the user, as entered in BCT.
ACW prolongation allowed:	If checked, it will allow the agent to extend the After Call Work time for a call.
Show other Agents Not Ready timers allowed	If checked, it will allow the agent to show the Not Ready timers of other agents on their Desktop Client.
Hide my NotReady timer for other agents	If checked, it will hide this agent's Not Ready timers on the Desktop Client of other agents.
Show queued calls allowed	If checked, it will allow the agent to show the queue pane in the Desktop Client.
Pick queued calls allowed	If checked, it will allow the agent to pick up calls from the queue. This setting is only available when the 'Show queued calls allowed' setting is checked.
Capabilities Voice:	Specifies if the agent is capable of voice calls. To enable this agent's voice capability, check the box. If the agent is voice- enabled, the agent cannot take more than one call at a time.
Capabilities Chat:	Defines if the agent is capable to handle web chats. To enable this agent's chat capability, check the box. If the agent is chat- enabled, fill in the number of chats the agent can handle in parallel: 1-20, default 3.
Capabilities Email:	Defines if the agent is capable to handle emails. To enable this agent's email capability, check the box. If the agent is email-enabled, fill in the number of emails the agent can handle in parallel: 1-20, default 2.
Allow voice call during a chat	Defines if the agent can receive a voice call while already handling a web chat. If checked then voice calls will be routed to the agent while already engaged in a web chat.
Allow chat during a voice call	Defines if the agent can receive a web chat while already handling a voice call. If checked then web chats will be routed to the agent while already engaged in a voice call.
Skills:	The collection of skills assigned to this agent.
Member of groups:	The collection of groups this agent is part of.

Note: Chat and email quantities are overridden when picking up calls from the agent visual queue.

Editing skills of an agent

The middle section of the agent properties pane contains skill information for the selected agent in a grid. Per skill, the name, the mandatory property of the skill and rating is displayed.

Each agent has a skill rating (0 up to 9) per assigned skill. The higher the score, the better the agent is on that skill. Where possible, the call is routed to the available agent with the most suitable skills.

If a skill is mandatory, an agent should have a skill rating that at least equals the minimum skill score of the router. If an agent's actual score for a mandatory skill is insufficient, the agent will not receive calls for that skill. In the agent's properties, to edit the skills assigned to the agent you can click the 'Add/Remove' link label**;** the grid will enter edit mode and its appearance will change, as following:

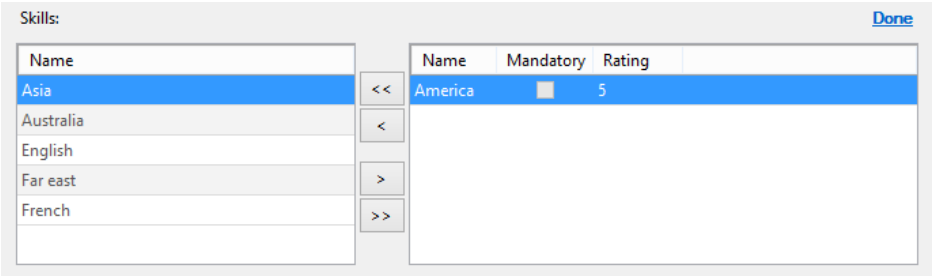


Figure 5-7 Agent skills

The left grid contains all the skills you defined in your system. The right grid contains the skills assigned to the agent being edited. If the skill you want to assign is not in the list of available skills, you have to first create the skill. To assign a skill to the agent, select the skill in the left grid and press the > button. You can assign multiple skills at once by multiple selection. Pressing the >> button assigns all skills (selected or not).

To remove agent skills, select the skill (or multiple skills) in the right grid and press the < button. Pressing the << button will remove all agent skills, selected or not.

When you have finished assigning skills to the agent press 'Done' link label.

You must also set the correct skill rating for each assigned skill. Do so by editing the value in the **"**Rating**"** column. The rating can be a number between 0 and 9. The higher the rating, the better the agent is qualified for this skill. The default ranking is 5.

Editing groups of an agent

If the selected agent is assigned to one or more agent groups, these groups are displayed in the lower part of the agent properties pane.

The agent assignment in a group may be "Flexible". Flexible means than the agent is allowed to switch itself active or inactive in the group.

This is set by the checkbox in the "Flexible" column.

When click 'Add/Remove' link label the grid will enter edit mode and it appearance will change as:

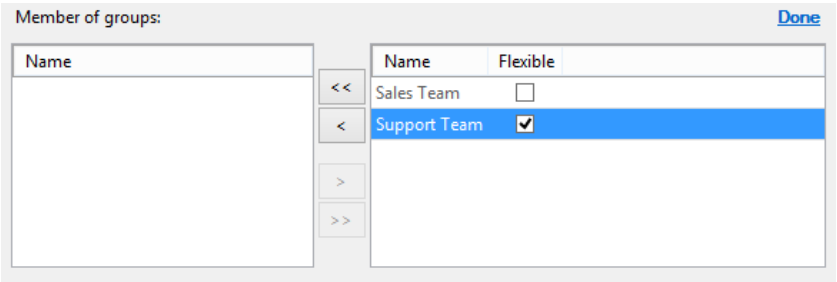


Figure 5-8 Agent groups

Here you can assign the agent to groups by using the buttons. The left grid contains all groups available in your system; the right grid contains groups that this agent is part of. The newly assigned groups will be mandatory by default.

Click 'Done' link label when you finished assigning agent to groups.

Note: It is required that an agent logs in again on the Desktop client, before changes in group assignments are visible on the client side.

5.8. Groups

Groups (also called agent groups) contain one or more agents. An agent group is assigned to a router. Therefore an agent group is the link between agents and routers.

In the BCT Supervisor Dashboard, select Resources from the Navigation Panel, Categories page and expand Groups node. All created groups will be displayed in the tree. You can create a new group by:

- Right click the Groups node or an existing Group in the Navigation Panel tree and select **New** from the context menu

- Select **New Group** after clicking **New Item** in the Navigation Panel toolstrip bar

To duplicate a group, Right click an existing Group in the Navigation Panel tree and select **Duplicate** from the context menu or click **Duplicate Item** in the Navigation Panel toolstrip.

To edit a group, select the Group in the Navigation Panel and select **Edit** from the context menu, or double click the Group. The Group pane is opened.

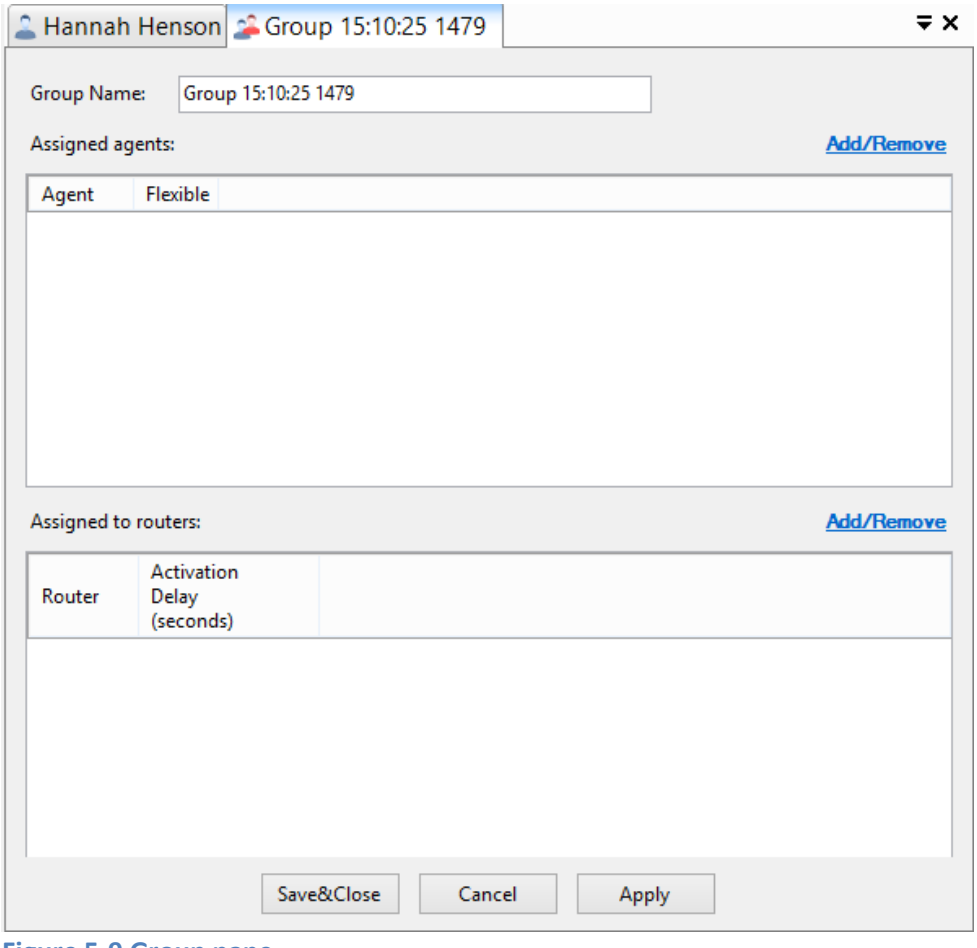


Figure 5-9 Group pane

You can change the following items:

Group Name	The name of the Group. Note, that this name is used in reporting. If you change the name of an existing group it has consequences for the reporting!

When you create a new Group, a default name is filled in for you. It is recommended to change it to a meaningful name.

Assigned agents This table shows you the agents currently assigned to this Group. To assign or remove agents from this Group, click on 'Add/Remove' link label above the table. Assign agents by selecting them in the left grid and clicking the > button. Type-while-search is available on both the left and right grids. To use this feature, click on any agent in the grid and start typing the name of the agent you want, as you type, you will be navigated to the searched name.

Assign to routers This table shows you the routers this Group is assigned to. To assign this Group to a router click on 'Add/Remove' link label above the table. Add the group to a router by selecting the router in the left grid and clicking the > button.
On Routers, activation delay can be viewed and set for each router this group is assigned to. Make sure that the used "Activation Delay" for a specific router is smaller or equal to the "Max queue time" (General tab of the router). If the "Max queue time" is less than the "Activation Delay", callers will be transferred to the "Queue timeout" exception exit instead of the second agent group. See more details in the router module configuration Router Module.
Note that it is more logical to do this via the router properties, because there you see an overview of the groups that are already assigned, and you can change the delay via the router. See The Agent Routing Tab.

To delete a Group, right click the Group in the Navigation Panel tree and select **Delete** from the context menu.

5.9. Wallboards

A wallboard is a device that displays data provided by the Business ConneCT (BCT) call center.

BCT supports three types of wallboards:

- Soft Wallboard
- Hardware wallboards:
  - DataDisplay
  - MessageMaker

Currently the Soft Wallboard is the preferred choice. Hardware wallboards are supported for existing installations and for those who require a hardware wallboard for a special reason.

5.9.1. Soft Wallboard

The Soft Wallboard is a software solution based on a custom Microsoft PowerPoint add-in that can be deployed on any PC that has Microsoft PowerPoint installed. The Soft Wallboard client installation software can be found on the BCT installation DVD. See BCT Installation Guide for more details.

Create or Edit:

In the BCT Supervisor Dashboard, select Resources from the Navigation Panel, Categories page and expand Wallboards node.
To edit or add a Soft Wallboard, right click the Wallboards node and select **Add New** or **Edit** from the context menu. To duplicate a Soft Wallboard, right click an existing Wallboard node and select

Duplicate from the context menu. A pane will open with 'Soft Wallboard' selected as default wallboard type.

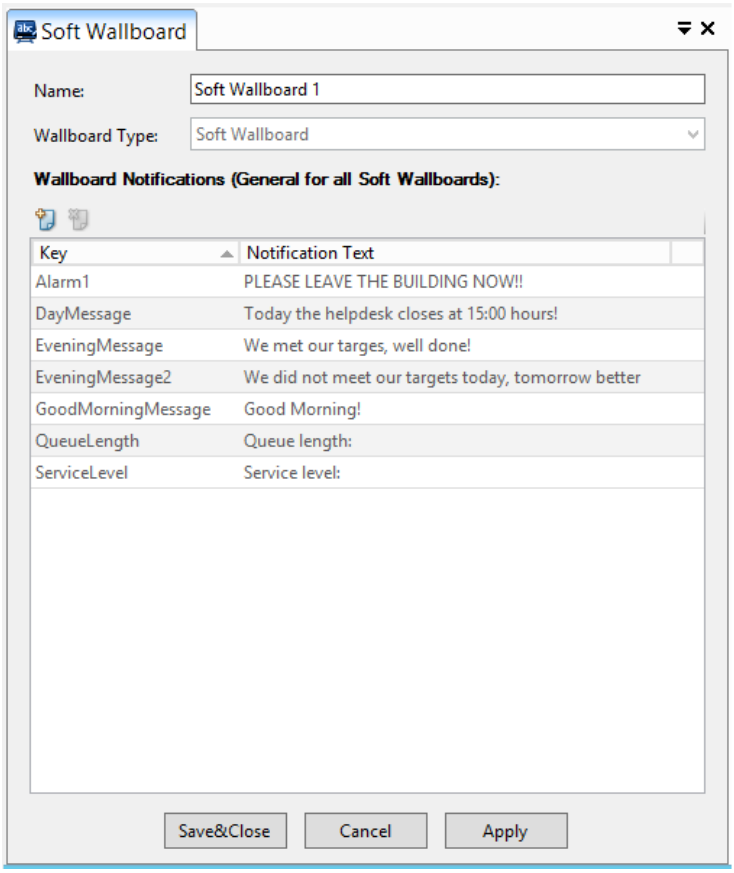


Figure 5-10 Soft Wallboard pane

In this pane you can define a unique name for your wallboard.
The pane contains a table to add, delete or edit messages that are used in the Soft Wallboards. The messages apply to all Soft Wallboards defined in your BCT system.

Note: *The wallboard type can only be changed during creation. Once the wallboard has been saved the wallboard type cannot be modified anymore.*

This is all you need to do as BCT Administrator to prepare a Soft wallboard in BCT Supervisor. In the following chapter preparation of a soft wallboard client is explained. Refer to the BCT Supervisor Guide for more information concerning preparing messages on the wallboard.

Preparing a soft wallboard client

Configuration settings for each client are stored in the advanced document properties of the Microsoft PowerPoint presentation. These settings are required in order to connect to the BCT Server platform.

To open the document properties page (PowerPoint 2013, 2016 and 2019):

1. Open the Soft Wallboard presentation file.
2. In Microsoft PowerPoint, go to *File > Info*

3. On the right side of the information pane, click Properties, then select Advanced Properties from the drop-down list that appears (see Figure 5-11 Locating Microsoft PowerPoint document properties).
4. In the properties window that appears, click the Custom tab to see the properties that need to be configured.
5. To modify a property, select the property, change its text value in the Value field and then press the Modify button

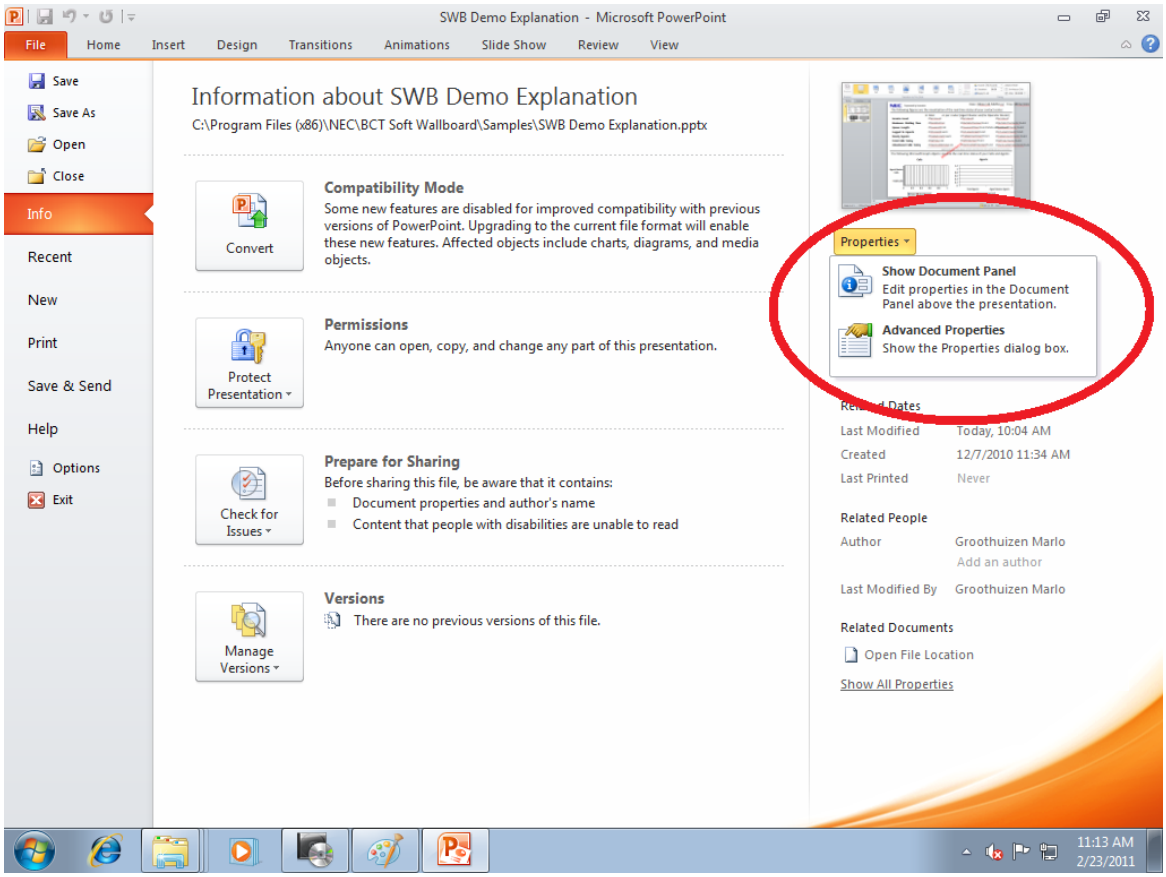


Figure 5-11 Locating Microsoft PowerPoint document properties

Tip: if you intend to use one of the sample files installed by the Soft Wallboard client installation, copy it first to another folder and remove the read only flag before modifying the configuration settings.

Available configuration settings

This section lists the available configuration items that can be used in the Custom tab of a presentation and their effect. When not configured, items marked as optional will get their specified default value.

- **Wallboard Name** – the name of the wallboard client by which the server recognizes it. It must be identical with the name of the wallboard definition, as configured on the server (see Figure 5-10 Soft Wallboard pane)
- **Wallboard Server Address** – the computer name or IP address of the PC where BCT Server is installed.

Note: *The default port number that is used to connect to the server is 32011. To specify a different port number, use <servername>:<port> (note that this also requires changes to FrontEnd.WinService.exe.config on the server).*

- **Wallboard Alarm Sound File** – (optional) the full path to a *.wav file that will be played as "buzzer alarm" (e.g. %windir%\media\notify.wav).
- **Refresh Rate** – (optional) the delay time, between consecutive updates of the presentation with server-side data. Default is 00:00:05 (5 seconds).

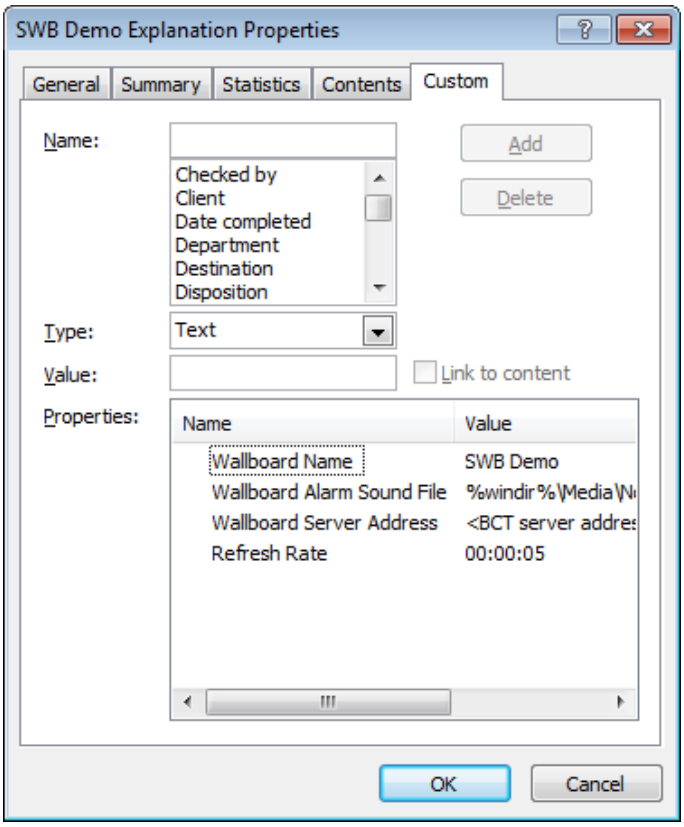


Figure 5-12 Custom Properties tab with Soft Wallboard parameters

Information about how to start/stop and monitor a Soft Wallboard can be found in the BCT Supervisor Guide.

5.9.2. Hardware Wallboard - MessageMaker

The MessageMaker wallboard can be connected via a COM port or via the IP network.
A MessageMaker wallboard can have up to four lines on the display.

Create or Edit:

In the BCT Supervisor Dashboard, select Resources from the Navigation Panel, Categories page and expand Wallboards node.
To edit or add a Soft Wallboard, right click the Wallboards node and select **Add New** or **Edit** from the context menu. A pane will open with 'Soft Wallboard' selected as default wallboard type. From the 'Wallboard Type' dropdown list, select MessageMaker.

Note: *The wallboard type can only be changed during creation. Once the wallboard has been saved the wallboard type cannot be modified anymore.*

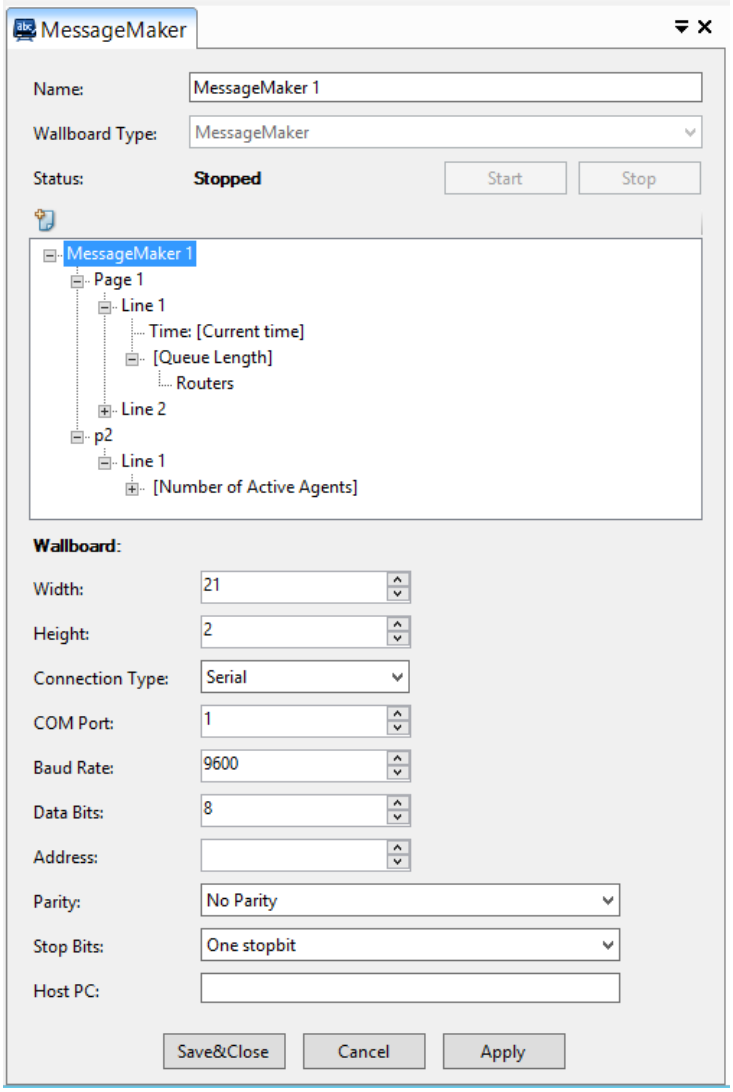


Figure 5-13 Custom Properties tab with Soft Wallboard parameters

In this pane you can define a unique name for your wallboard.
The pane contains a tree representation of the wallboard structure with pages, lines and line details.
To edit the wallboard properties, select the root node and edit the properties shown on the lower part of the pane.
Refer to the BCT Supervisor Guide for more information concerning preparing messages on the wallboard.

To edit the properties of a MessageMaker wallboard with serial connection, select the root node in the tree and adapt the following properties:

Width	MessageMaker wallboards are available in 16 or 21 characters.
Height	MessageMaker wallboards are available with 2 or 4 lines.
Connection type	Serial.
COM port	COM port number on the PC to which the wallboard is connected.
Baudrate	The default Baud rate for a MessageMaker wallboard is 9600 b/s. The

	Baud rate is displayed on the wallboard during the self-test.
Databits	Always “8”.
Address	Enter the correct address. The address is displayed on the wallboard shortly when you power up the board.
Parity	Select “No parity”.
Stopbits	Select “One stopbit”.
Host PC	Enter the computer name or IP address of the computer to which the wallboard is connected.

To edit the properties of a MessageMaker wallboard with TCP/IP connection, select the root node in the tree and adapt the following properties:

Width	MessageMaker wallboards are available in 16 or 21 characters.
Height	MessageMaker wallboards are available with 2 or 4 lines.
Connection type	TCP/IP.
IP Address	Enter the IP address of the wallboard. This IP address is also displayed during the self-test of the wallboard. (See the BCT Installation Guide for more information.)
Port Number	Enter the correct port number. Most likely this is the default value 3500. If another port number was selected during the IP configuration of the wallboard you must enter that one.

5.9.3. Hardware Wallboard - DataDisplay

The DataDisplay wallboard is connected via a COM port.
Some settings are fixed for the DataDisplay wallboard, those settings are shown but cannot be modified.

Create or Edit:

In the BCT Supervisor Dashboard, select Resources from the Navigation Panel, Categories page and expand Wallboards node.
To edit or add a Soft Wallboard, right click the Wallboards node and select **Add New** or **Edit** from the context menu. A pane will open with ‘Soft Wallboard’ selected as default wallboard type. From the ‘Wallboard Type’ dropdown list, select DataDisplay.

Note: *The wallboard type can only be changed during creation. Once the wallboard has been saved the wallboard type cannot be modified anymore.*

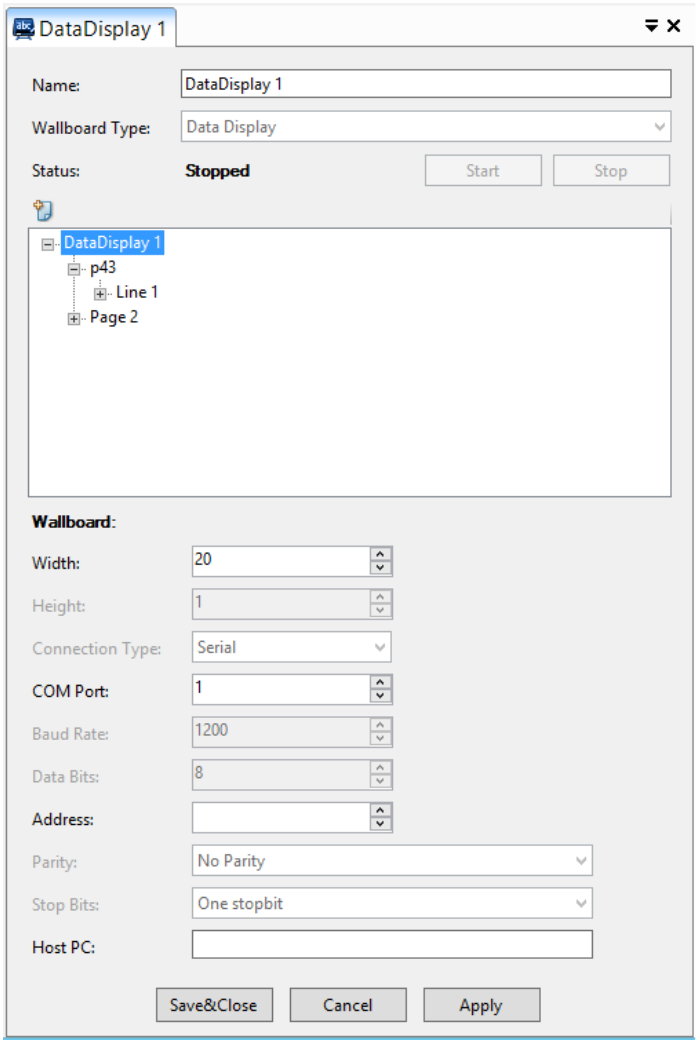


Figure 5-14 Custom Properties tab with DataDisplay Wallboard parameters

In this pane you can define a unique name for your wallboard.
The pane contains a tree representation of the wallboard structure with pages, lines and line details.
To edit the wallboard properties, select the root node and edit the properties shown on the lower part of the pane.
Refer to the BCT Supervisor Guide for more information concerning preparing messages on the wallboard.

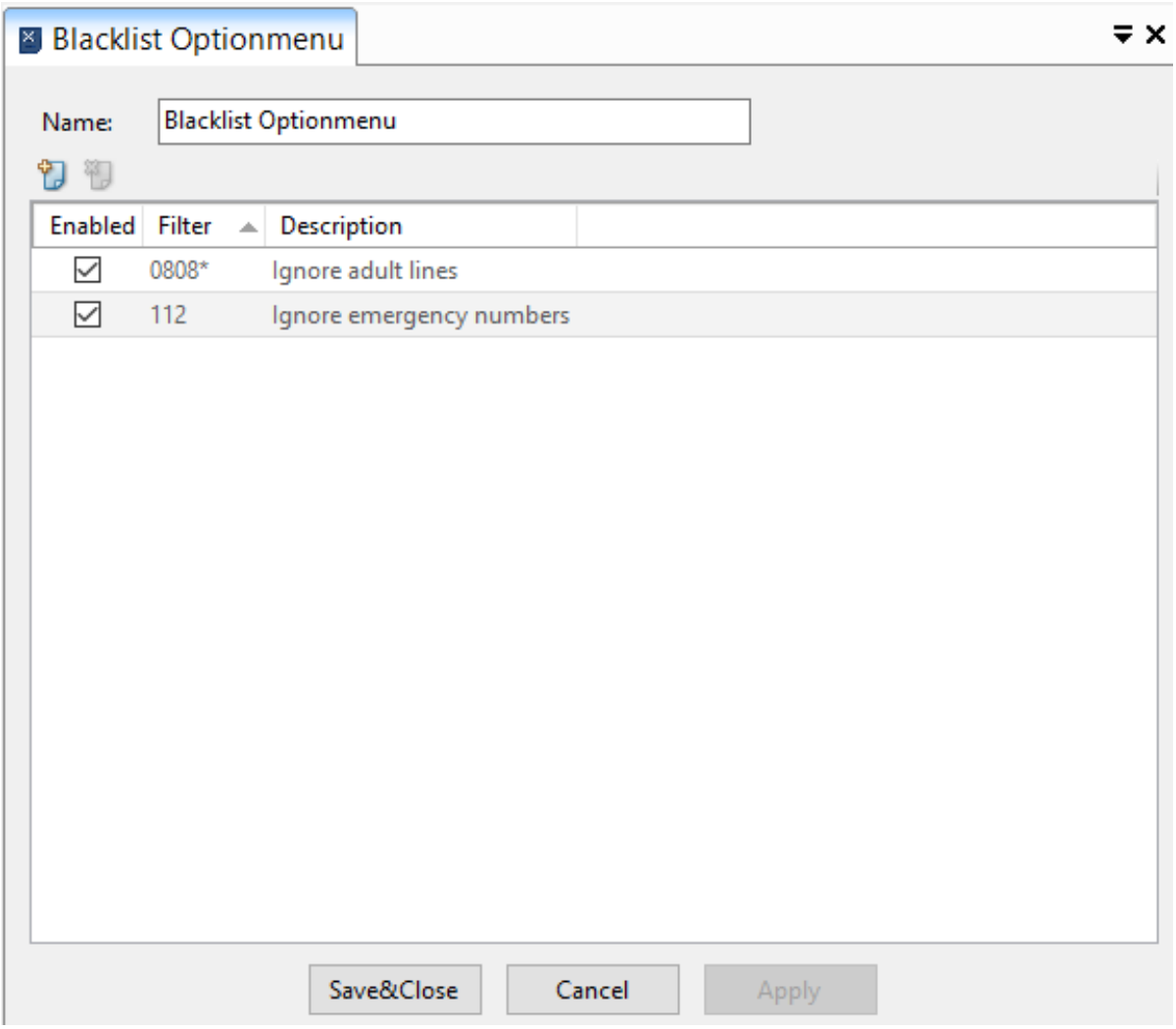
To edit the properties of a DataDisplay wallboard with serial connection, select the root node in the tree and adapt the following properties:

Width	DataDisplay wallboards are available in 20 characters.
COM port	COM port number on the PC to which the wallboard is connected.
Address	Check the rotary switch on the back of the DataDisplay wallboard. Also consult the BCT Installation Guide for more info.
Host PC	Enter the computer name or IP address of the computer to which the wallboard is connected.

5.10. Blacklist

When a caller enters an Option menu of Attendant module it can enter a number to be called back. To avoid that unwanted numbers are called back a Blacklist can be defined that can be populated with illegal, expensive or wrong numbers. These number are then ignored when the call back is started. The blacklist can be defined in the BCT Supervisor Dashboard.

In the BCT Supervisor Dashboard, select Resources from the Navigation Panel, Categories page and find the “Blacklist” resource. To add a new “Blacklist”, either right click the “BlackList” node and choose **New** from the context menu or press the Add button from the toolstrip New ( ) and select “New Blacklist”. To duplicate an existing “BlackList”, right click an existing “BlackList” node and choose **Duplicate** from the context menu or press toolstrip button **Duplicate Item** ( ). The following pane will open:



The following settings can be configured for a Blacklist:

Name: The name of Blacklist. This name is revealed when selecting a Blacklist in an option menu.

Enabled:	This checkbox defines if the Blacklist is used during the callback.
Filter:	A digit string indicating the unwanted number. The digit string must be in Standard Telephone Number Format. A wildcard star "*" can be used in the digit string. This makes it possible to identify a range of unwanted numbers. This is useful if you would like to ignore expensive numbers that start with a defined prefix, for instance 0808*.
Description:	Text field to describe the filter.

To remove a "Blacklist", click on that line so it is highlighted and click **Delete** button above the table (). You can also remove a "Black list" by right click it in the Navigation Panel tree and select **Delete** from the context menu.

Note: *It is not allowed to delete a Black list still assigned to an option menu. When you try to do this, a warning is displayed stating that the Black list is still in use.*

5.11. Router Redirects

A Router Redirect defines a special mode of router operation. The incoming routed call is redirected immediately to a specific call flow module when a router redirect is active for a specific router. A router redirect can be assigned to a router when a different work mode is required at a specific moment. For example: during a meeting all calls for a router will be redirected to another router using a router redirect.

To view the "Router Redirects", open the Resources section of the Navigation Panel, Categories page and expand Router Redirects node. To edit or add a new "Router Redirect", double click any existing "Router Redirect" or right click the "Router Redirects" node and choose **New** from the context menu. To duplicate a "Router Redirect", right click an existing "Router Redirect" node and choose **Duplicate** from the context menu. The following pane will open:

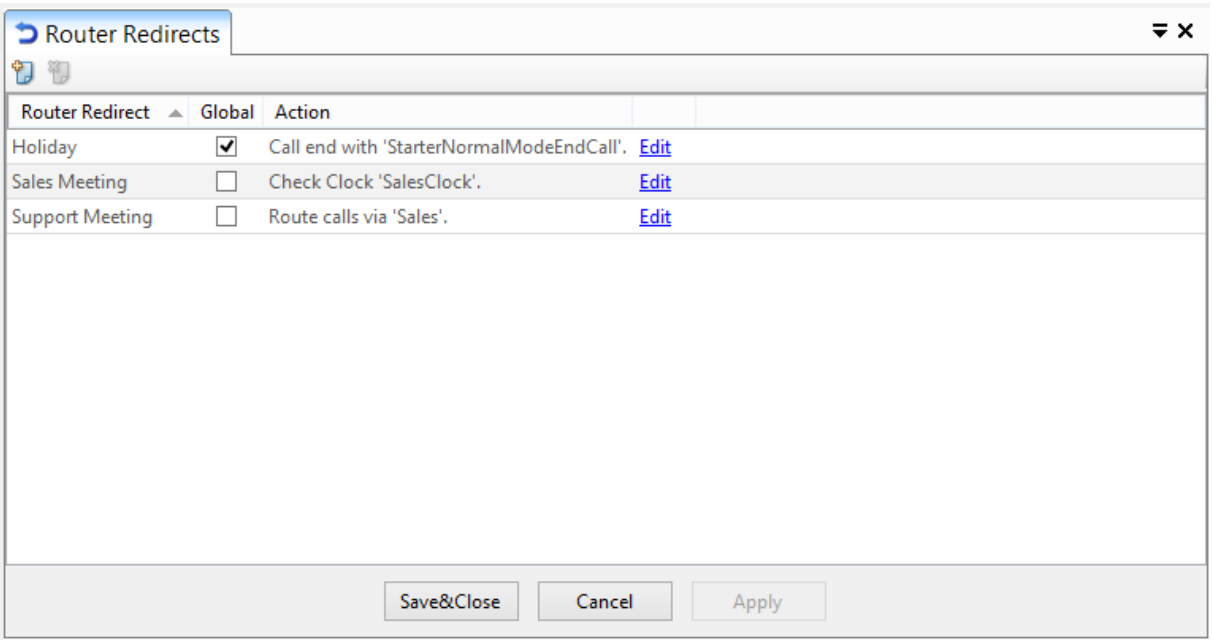


Figure 5-15 Router Redirects Configuration pane

When the pane is opened, you can also click the **New** button above the table ( ) to add a new "Router Redirect".
Per Router Redirect you can set the following properties:

Router Redirect:	A unique name for this Router Redirect.
Global:	Indicating that this Router Redirect is per router or global (applicable for all routers).
Action:	Represents a call flow module where the router will be directed to when this redirection is active. This next module can be any module defined in the system.

To remove a "Router Redirect", click on that line so it is highlighted and click **Delete** button above the table ( ). You can also remove a "Router Redirect" by right click it in the Navigation Panel tree and select **Delete** from the context menu.

Note: *It is not allowed to delete a Router Redirect still assigned to a router. When you try to do this, a warning is displayed stating that the Router Redirect is still in use.*

5.12. Survey Resources

Survey resources are used to create customer surveys in the call flow module. There are three types of survey resources:

- Question categories
- Answer categories
- Question templates

5.12.1 Question categories

A Question category is used to group related survey questions together. Using these categories you can have a better understanding of survey results presented in reports.

To view the “Question categories”, open the Resources section of the Navigation Panel, Categories page, expand Survey node and the Question categories node. To edit or add new “Question category”, double click any existing “Question category” or right click the “Question Categories” node and choose **New** from the context menu. To duplicate a “Question Category”, right click an existing “Question Category” node and choose **Duplicate** from the context menu. The following pane will open:

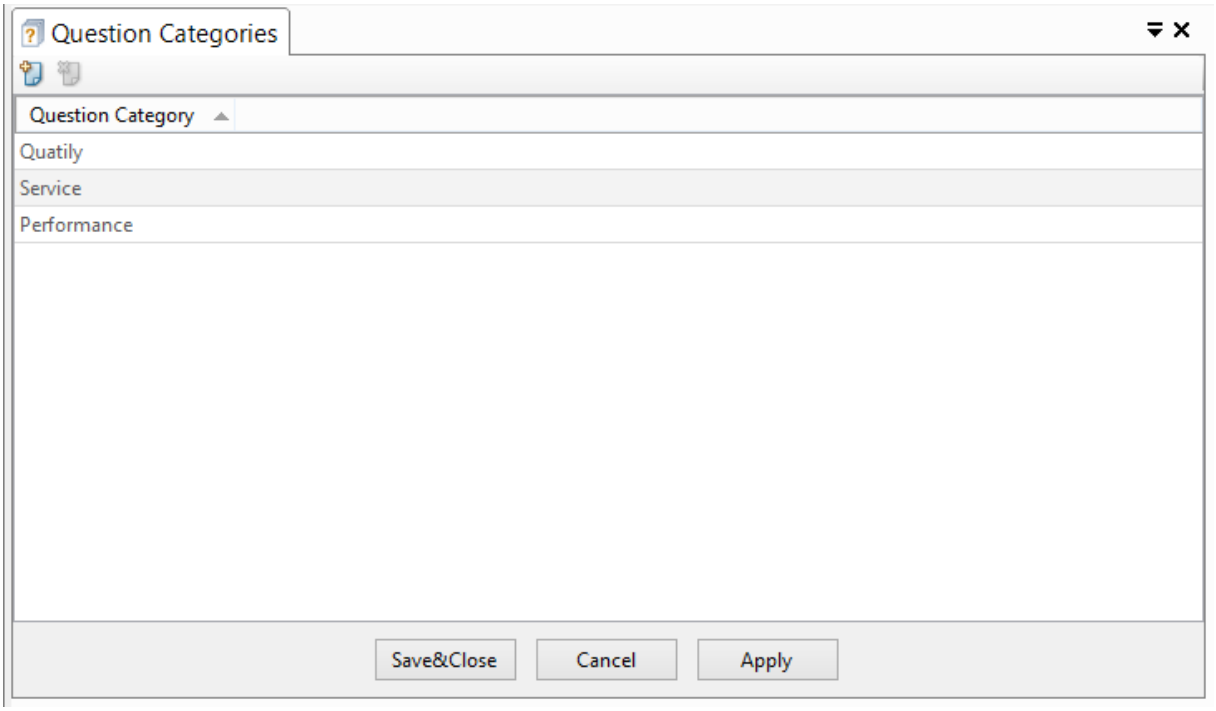


Figure 5-16 Question Categories Configuration pane

When the pane is opened, you can click the **New** button above the table ( ) to add a new “Question category”.
Per Question category you can set just one property:

Question Category: A unique name for this Question category.

To remove a “Question category”, click on that line so it is highlighted and click **Delete** button above the table ( ). You can also remove a “Question category” by right click it in the Navigation Panel tree and select **Delete** from the context menu.

Note: *It is not allowed to delete a Question category when used by a survey. When you try to do this, a warning is displayed stating that the Question category is still in use.*

5.12.2 Answer categories

An Answer category is used to group related survey answers together. Using these categories you can have a better understanding of survey results presented in reports.

To view the “Answer categories”, open the Resources section of the Navigation Panel, Categories page, expand Survey node and the Answer categories node. To edit or add new “Answer category”, double click any existing “Answer category” or right click the “Answer Categories” node and choose **New** from the context menu. To duplicate an “Answer Category”, right click an existing “Answer Category” node and choose **Duplicate** from the context menu. The following pane will open:

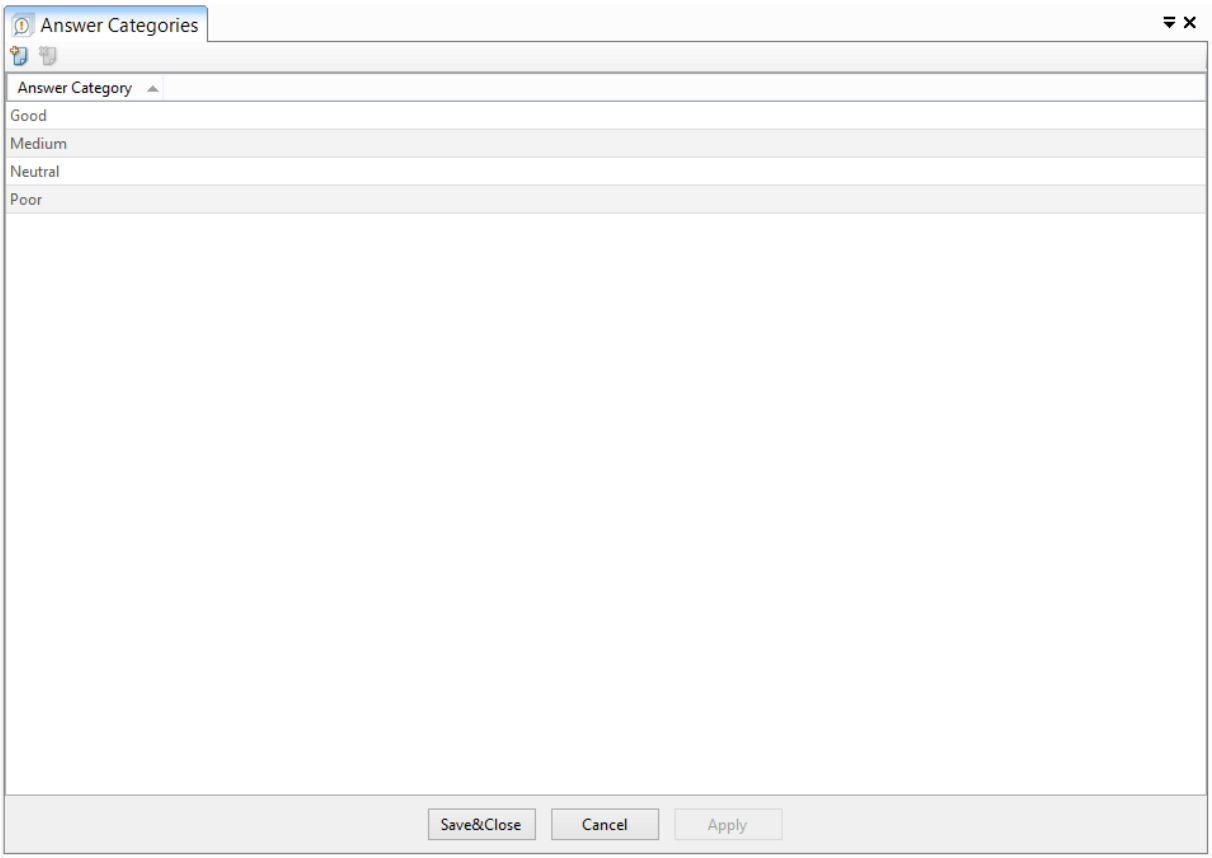


Figure 5-17 Answer Categories Configuration pane

When the pane is opened, you can click the **New** button above the table ( ) to add a new “Answer category”.
Per Answer category you can set just one property:

Answer Category: A unique name for this Answer category.

To remove an “Answer category”, click on that line so it is highlighted and click **Delete** button above the table ( ). You can also remove an “Answer category” by right click it in the Navigation Panel tree and select **Delete** from the context menu.

Note: *It is not allowed to delete an* Answer *category used by a survey. When you try to do this, a warning is displayed stating that the* Answer *category is still in use.*

5.12.3 Question templates

A Question template is a template for a question which is used several times in a survey.

To view the “Question templates”, open the Resources section of the Navigation Panel, Categories page, expand Survey node and the Question templates node. To edit or add new “Question template”, double click any existing “Question template” or right click the “Question templates” node and choose **New** from the context menu. To duplicate a “Question template”, right click an existing “Question template” node and choose **Duplicate** from the context menu. The following pane will open:

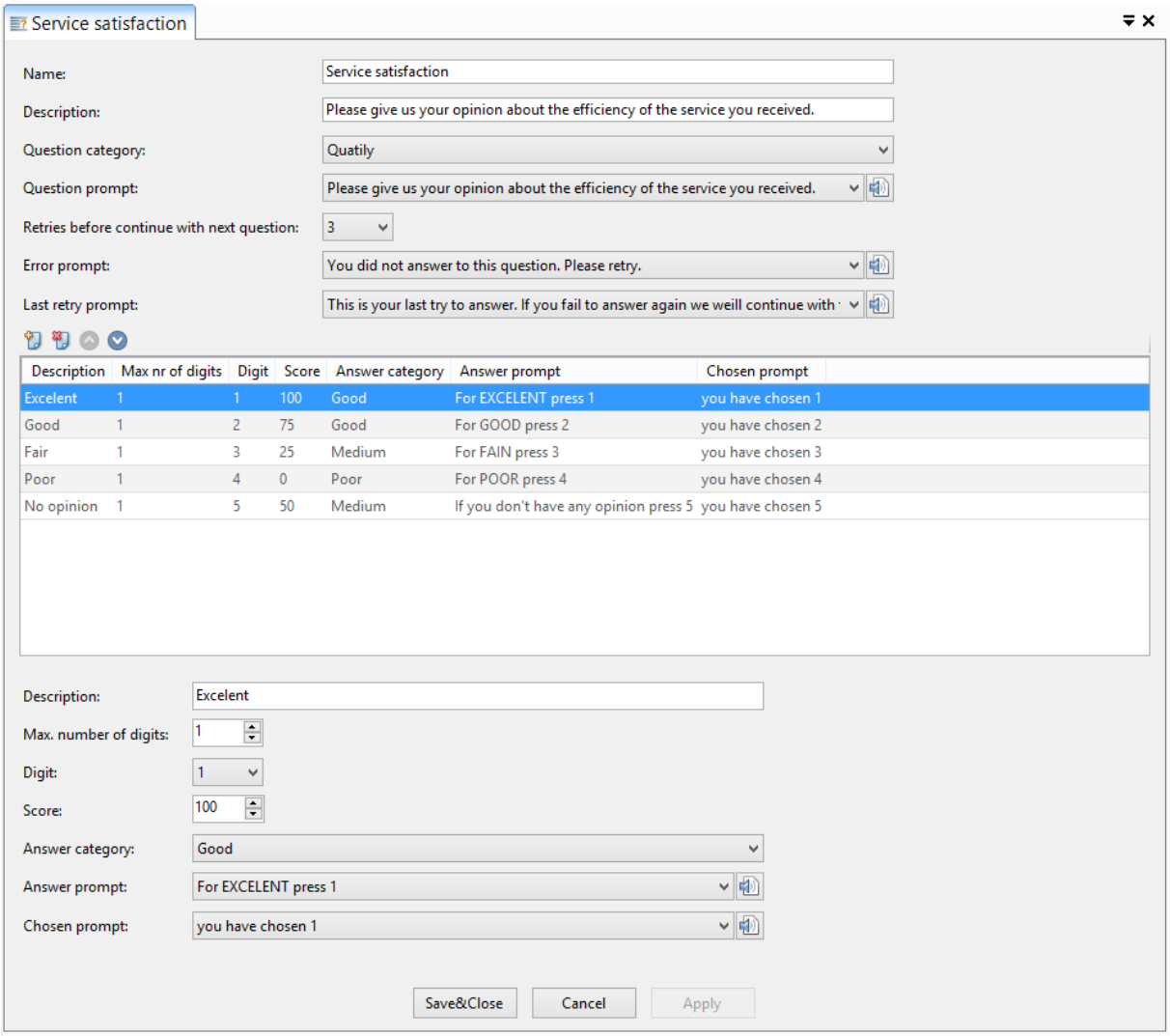


Figure 5-18 Question Templates Configuration pane

Per Question Template you can set the following properties:

Name:	A unique name for this Question Template.
Description:	A short description of this Question Template.
Question category:	A category for this question

Question prompt:	This prompt ask the question. E.g. “Are you satisfied with our services?" To edit prompts, click on the prompts button ().
Retries before continue with next question:	The number of retries the user is given the opportunity to answer the question. The default is 3. When no answer is given, this is noted as not answered and the next question is executed. If you choose ‘0’ for this property, the ‘Last retry prompt’ will be disabled.
Error prompt:	The prompt that is played when no answer is given. To edit prompts, click on the prompts button ().
Last retry prompt:	The prompt that is played on the last retry. To edit prompts, click on the prompts button ().

You can remove a “Question Template” by right click it in the Navigation Panel tree and select **Delete** from the context menu or by pressing **“Delete”** button from the keyboard.

“Question Templates” pane contains a grid with possible answers. To create a new answer, click in the **New** button () above the table. A new line will be added to the table and you will be able to edit the properties of that answer below the table. The following properties can be edited:

Description:	Short description of this answer.
Max number of digits:	Represents the number of digits that the callers could enter. The default is 1. When this number is higher than 1 the Digit field will be disabled. In case multiple digits can be entered as answer (for example phone number) the end of the entered digits is detected by entering a hash or pause of 5 seconds.
Digit:	Select the digit that callers must press to select the option provided by this answer.
Score:	This is a value range from 0 to 100. Score is used for reporting.
Answer category:	An Answer category for this answer
Answer prompt:	This prompt informs the caller about the available choices. E.g. “If you are satisfied with our service please press 2". To edit prompts, click on the prompts button ().
Chosen prompt:	The chosen prompt informs the caller which selection he/she has made. E.g. “You have selected the 2 option”. To edit prompts, click on the prompts button ().

Answers are played in the order they are displayed on the screen. You can re-arrange this order by using the up and down arrow buttons above the table ( ). Select an answer and then use the up and down arrow to move an item up or down the list.

To remove an answer, click on that line so it is highlighted and click **Delete** button above the table ( ). You can also remove an answer by right click it in the grid and select **Delete** from the context menu.

6. Prompts

A prompt is a pre-defined message that BCT can play in a voice call and/or show in a web chat. Prompts are an essential part of the BCT contact center part and build the dialog. Typically a prompt is a message such as “You are first in the queue”, “Press zero for operator” or “Good morning”.
A prompt is uniquely identified by a prompt number and has an audio message, a text message or both.

Currently only a limited number of prompts are used in web chats (prompt numbers 500 - 510 and 620 - 634).

The file with the recorded audio message resides in the prompt folder on the hard disk. The file name is identical to the prompt number. The text message resides in the database.

Note: *Prompt recording requires an IVR line.*

There are two types of prompts:

- **System prompts**
- System prompts are pre-defined prompts that are used by the system to generate error warnings and confirmation.
- System prompts are fixed. The audio and/or text part can be changed but the prompt cannot be renamed. Do not change system prompts unless you are sure where the prompt is used in the system. In almost all cases you can use application prompts for customizing the contact center announcements.
- **Application prompts**
- All prompts that must be played before the start of a module or in the attendant module are application prompts.
- Application prompts can freely be defined and removed. Create all prompts needed for your call flow as application prompt.

Note: *System defined prompts are numbered from 0 to 999.*
For application prompts, use numbers from 1000 and up.
After installation of the BCT contact center part, a prompt with number 1000 is automatically created to trigger you to start with number 1001.

Prompts are available in several languages. For each language you are using, a separate prompt (sub) folder is used. In each folder the same prompt file names exist but recorded in another language.

Note: *The prompt files (wave files) can stay on the disk even if there is no prompt with the corresponding number defined in the system. Even if an application prompt is deleted, the corresponding wave file will not be deleted. If another application prompt is created and the corresponding wave file exists on the disk, then this new prompt will be considered recorded.*

Note that you cannot delete prompts that are in use. If you try to delete a prompt that is in use, the error message will contain, for each module type that references the prompt, the first reference. For example, if Prompt1000 is used as Chat welcome prompt for two routers, RouterSales and RouterSupport, and you try to delete it, the save message may look something like this:
Cannot delete Prompt100. It is still used by the following modules:
Router, first reference from: RouterSales.

6.1. Defining Prompts

In the BCT Supervisor Dashboard, select Resources from the Navigation Panel, Categories page and expand Prompts node.
To edit or add application prompts, right click the Application Prompts node and select **Add New** or **Edit** from the context menu. To edit system prompts, right click the System Prompts node and select **Edit** from the context menu. Depending on your choice, a pane will open, allowing you access to application prompts or system prompts.

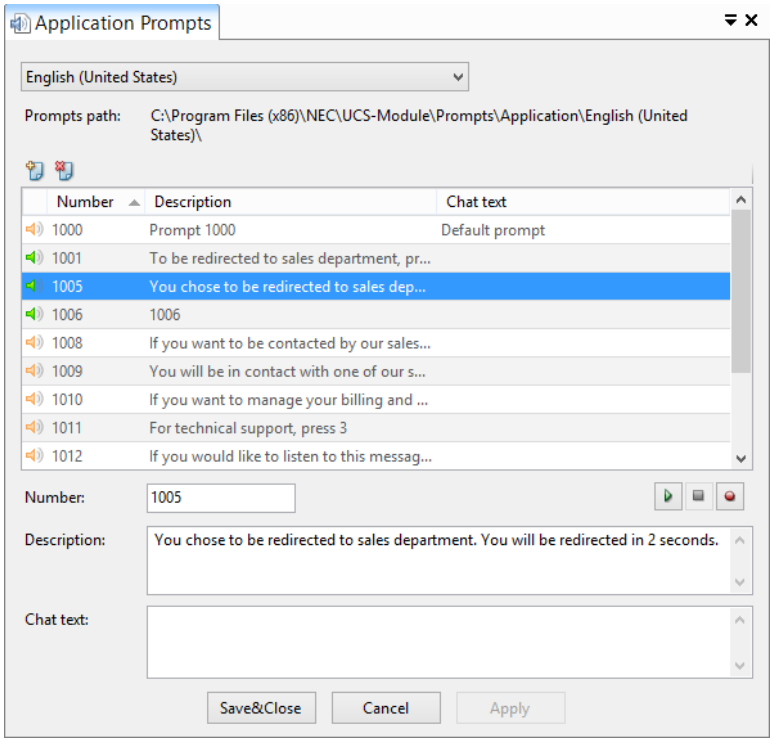


Figure 6-1 Application prompts pane

The pane shows, for the selected language, the defined application prompts. The prompts can be sorted by number or alphabetically by description.
The yellow speaker indicates the prompt has been defined but not yet recorded (there is no corresponding voice file)

To add a new prompt, click **New Prompt** ( ). A new prompt number will be generated.
To renumber an existing application prompt, fill in the **"Number"** field.
For the **"Description"** of an application prompt it is advised, for administrative purposes, to start the description of an application prompt with the number of that prompt.
Click Apply to save the changes.

6.2. Recording Prompts

There are two options to record prompts:

- Use the sound card of the BCT Supervisor computer.
- Prompts can be recorded via a microphone connected to the sound card of the BCT server computer only.
- Record prompts via phone.

- A dedicated prompt module, available as next destination in the call flow enables prompt recording via phone. The prompt recording is protected by a 4 digit PIN in this case.

When recording prompts:

- Avoid background noise;
- Clearly speak the text of the prompt with the right intonation.

Of course you can also make use of a professional voice prompt recording studio, which will record your voice prompts. It must be a WAV file with the format: CCIT uLaw, mono, 8-bit, 8 kHZ or 16-bit PCM mono (any clock rate).

6.2.1. Prompt Recording via the Sound card

1. Select a newly created prompt.
2. Click on the record button (), to start recording the prompt.
3. After you finished talking, press the stop button (), to stop recording. Stop recording one or two seconds after you finished talking, otherwise you may lose the last part of the last word.

The newly recorded prompt can be played by pressing the “Play” button ().

The procedure described above can also be used to change already recorded prompts. Simply select the prompt that needs to be changed and press the “Record” button.

Prompts can be recorded in several languages. If there is more than one language configured for your system, select the desired language from the pull down menu.

6.2.2. Prompt Recording via Phone

A dedicated prompt module, available as next destination in the call flow, enables prompt recording via phone. This gives you the possibility to record existing prompts from any phone. Simply dial the prompt access extension and follow the instructions.

The prompt access is secured via 4 digit pin verification. The value for the pin can be set or changed from the dedicated prompt module pane. Be aware that prompts can only be played back, changed and recorded via the phone option. You cannot create new prompts via phone.

Before you can start recording prompts, an entry to the prompt recording module needs to be created. In a lot of cases, prompt recording via phone will be accessed via a dedicated starter.

Create one or more starter for prompt recording access

Create a new starter line and enter an understandable name.

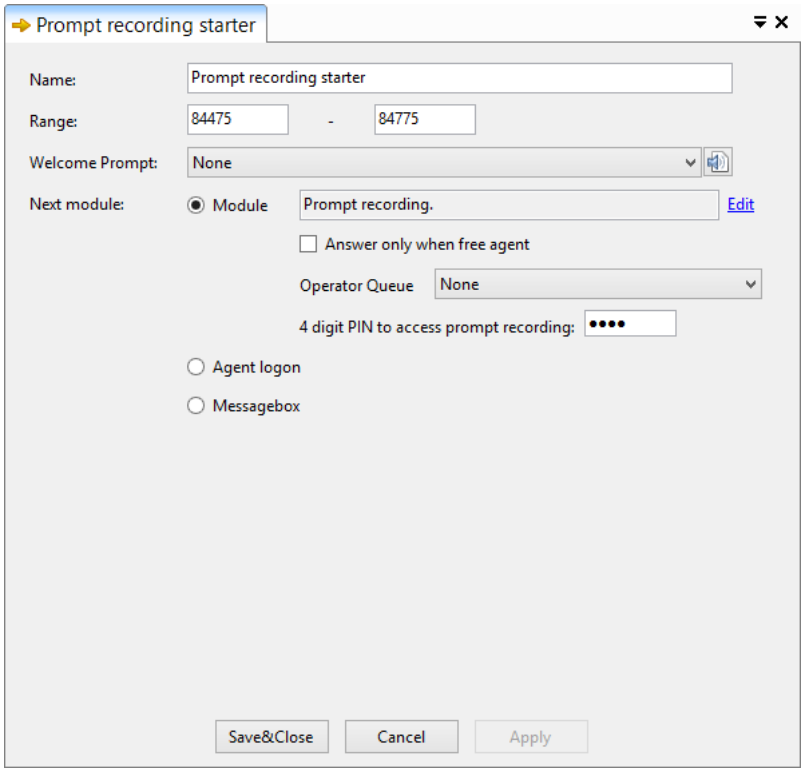


Figure 6-2 Starter line for prompt recording

Select the 'Edit' link label next to the module field.

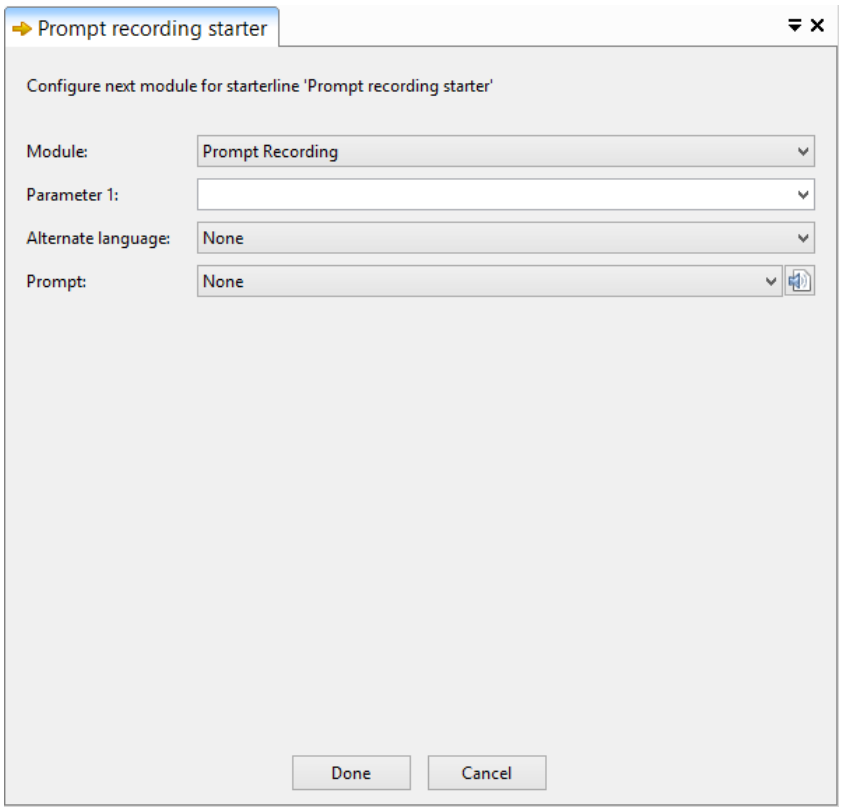


Figure 6-3 Module selection for prompt recording

Select Prompt Recording from the “Module” drop down list.

After the Prompt Recording function is selected the starter line extension can be dialed to record already created prompts.

If required some other options are available for prompt recording via phone.

- **Parameter1**
  Direct selection of a prompt that needs to be changed frequently.
  The (already) created prompt number that you specify as “Parameter1” will be selected the moment you dial the prompt access number. This offers you the possibility to directly record, change or listen to a prompt that needs to be changed frequently.
- **Alternate Language**
  If the BCT contact center is using multiple language prompts, you can create a prompt recording access module per required language.
  By selecting the required language from the language selection list, the prompts for the selected language will be recorded. Also the phone guidance during the prompt recording session will be in the selected language.
- **Prompt**
  Announcement prompt for prompt recording.
  The prompt selected, will be played as a welcome prompt the moment you enter the prompt recording access to inform the caller that he/she has entered prompt recording. If more language prompt recording modules are created you can create a dedicated language prompt per module.

Click Done and then Save the changes. From this moment on the prompt recording access is ready to use.

Using the prompt recording access

Dial the prompt recording access extension.

You will be prompted to enter a 4 digit PIN. Enter the pin and end with the hash key. The default PIN is 4711.

The system will ask you to select system prompts (press 1) or application prompts (press 3).

After you selected system or application prompts, the system will prompt you when there are new prompts that are not recorded yet.

Press 1 to start recording the new prompts. The prompt number is announced to inform which prompts will be recorded. Before you start recording a list of new prompts you may want to verify the existing list of prompts, see section Defining Prompts.

Start recording the new prompt after the beep, type any key to stop recording. After the prompt is recorded you can press 1 to record the prompt again, press 2 to play back the prompt or press 3 to select another prompt for recording.

The system will select all new prompts during the session. After all new prompts are recorded you can select system or application prompts again.

If you would like to change an already recorded prompt, type in the prompt number and listen to the prompt (press 2) or record the prompt again (press 1). If more prompt languages are available, you can use the ‘star’ key to change to another language. Not only the prompts for the next language can be recorded, also the phone guidance language will change to that language. If you press 2 the new prompts will be skipped.

7. End Call Module

The End call module enables you to disconnect a caller without having a real conversation with an agent. Disconnecting a caller with an end call module can be with or without a message to the caller. The End call module can be used when a certain department is closed. You can announce that the department is closed and then disconnect the call.

To view or edit End Calls, open the Call Flow section of the Navigation Panel, then expand the End Calls node. You will see all the end call modules defined in your system.

Create an end call by right click the End Call node of the Navigation Panel and select **New** from the context menu or by select **New Item** and **New End Call** of the Navigation Panel buttons bar ( ).
To duplicate an "end call", right click an existing End Call node and select **Duplicate** from the context menu or select **Duplicate Item** of the Navigation Panel buttons bar ( ).

To edit an end call module, right click the desired end call and select **Edit** from the context menu. A new pane will open:

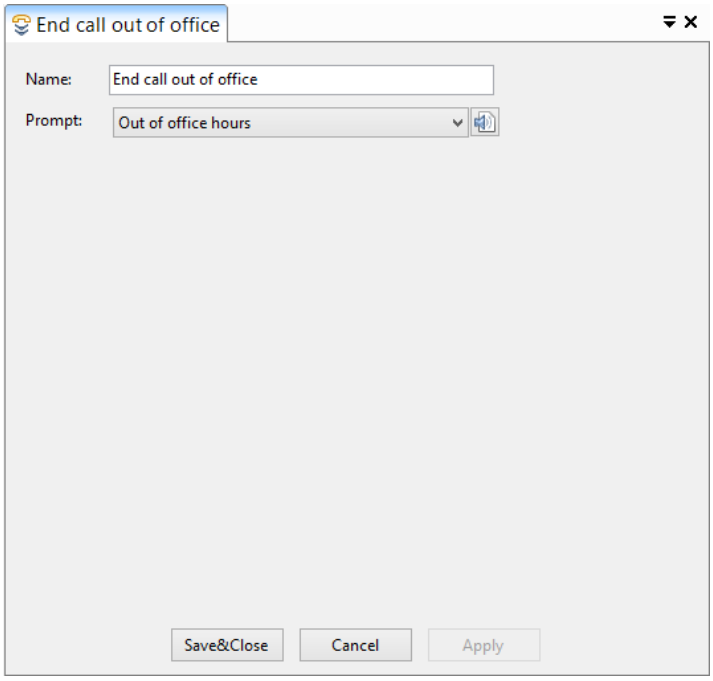


Figure 7-1 End call pane

The configuration for each entry consists of two fields:

Name:	Enter an understandable name for the end call.
Prompt:	Select a prompt from the drop down menu if a prompt must be played before the caller is disconnected.

Click Apply to save the changes.

8. Transfer Module

The Transfer module offers the possibility to send a caller directly to a pre-defined extension. This can be an internal extension, operator or any external destination. The transfer can be either 'Attended' or 'Blind'. In case of a blind transfer the system will dial the number and transfer the caller to the defined extension. The system will not monitor if the two parties are really connected.

Note: - *You should only use the blind transfer mode if you are sure the transfer will be successful, e.g. a transfer to an operator or another queue, or if there is no alternative. In other cases use an Attended transfer.*

- *The Attendant transfer requires an IVR line.*

In case of an attended transfer the result of the transfer is guarded and in case of a failure (busy or no answer) an error action is executed.

Example of an attended transfer:

A caller is transferred to an extension. The number is dialed. The phone is allowed to ring for a defined period of time. If the call is not answered within this period, the transfer is cancelled. Following cancellation, an error action will be executed. You can configure, for example, another transfer or a mailbox as the error action.

Select Call Flow section of the Navigation Panel. You can see already created Transfers by expanding the Transfers node.

To view or edit a transfer module, double click it or right click the desired transfer and choose **Edit** from the context menu.

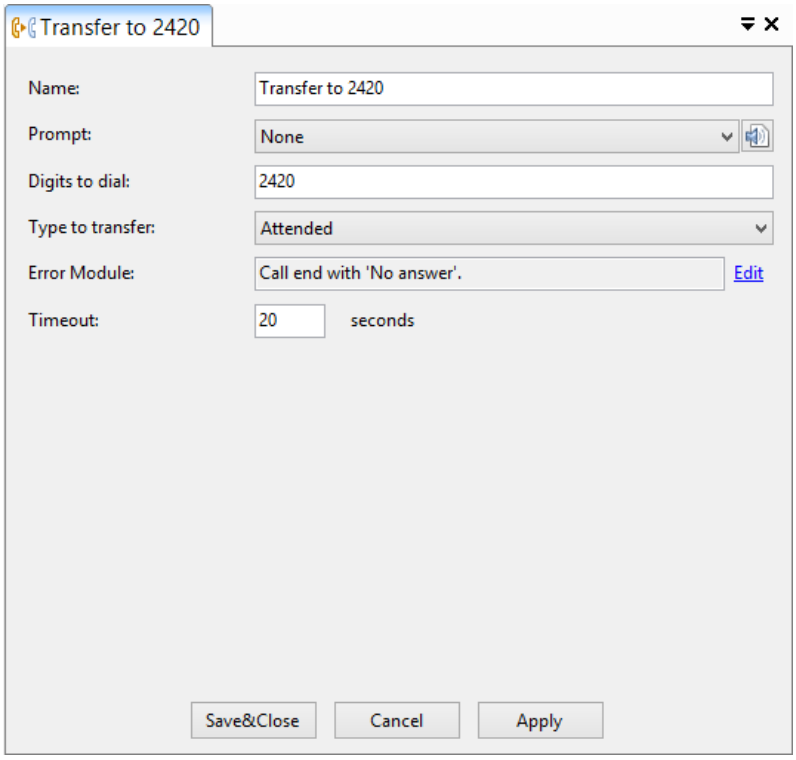


Figure 8-1 Transfer properties pane

Enter or change the following parameters:

Name:	Name of the transfer, recommended is to choose a name with the extension and type of transfer. E.g. “Transfer to xxxx”.
Prompt:	Select a prompt to be played before the transfer is done. Use a prompt like: “You will be transferred to the operator”.
Digits to dial:	The number to be dialed. If the number is an external destination, it should be in Standard Telephone Number Format.
Type of transfer:	You can choose between a controlled (attended) or a blind transfer.

In case of an attendant transfer, the following parameters need to be configured.

Error Module:	Specify an error action. Click on ‘Edit’ link label to select the error module.
Timeout:	Specify the time to wait for an answer, before the transfer will be cancelled and the error action executed.

Click Apply to save the changes.

Note: If an external voicemail system is used as destination, "Digits to dial" should refer to a (dummy) extension with fixed forwarding to the voicemail system.

9. Main Starter Module

The Starter is always the beginning of the call flow. There is only one starter module. Within the starter module one or more starter lines need to be created. The starter lines are related to the Routing points or IVR lines configured on the BCT server. The configuration of the Routing points and IVR lines is described in the BCT Installation Guide.

If the contact center announces only one number to the customers of the contact center, most likely all lines are placed in a group and only one starter line needs to be created. If more numbers are announced, more starter lines need to be created.

For every starter line another destination module can be chosen. If the contact center is using phone based agents, a dedicated starter line for agent logon must be created. If the message box module is used also a dedicated starter line must be created to play back the entered messages.

To view the Starter pane, select Call Flow section of the Navigation Panel. Right click the Starters node and select **Edit**. The starter pane will appear.

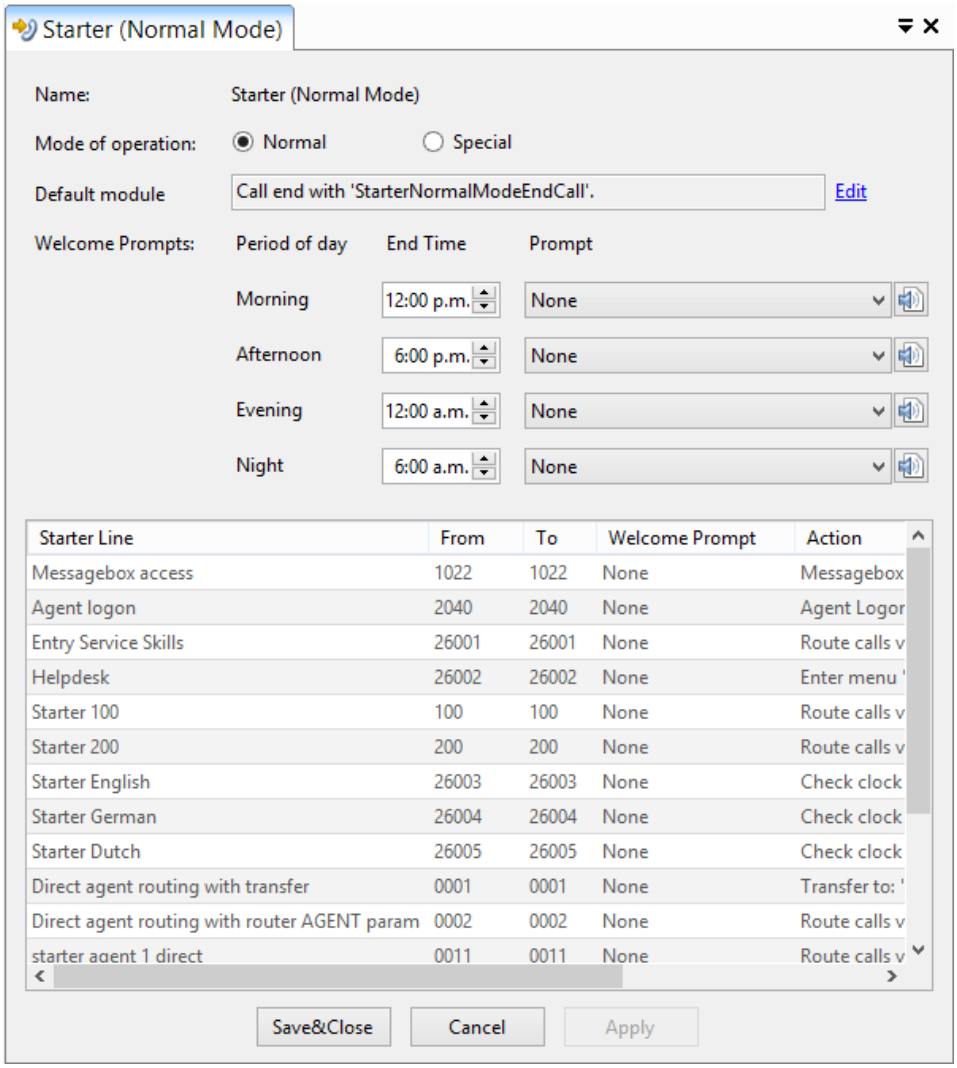


Figure 9-1 Main starter pane

The following parameters are available:

Mode of operation:	The Mode of operating is “Normal” or “Special”. “Special” will activate the defined special action for all incoming calls. In the “Special” mode, the starter line configuration will no longer be used. All calls will be routed to the destination that is chosen for “Special”. The “Special” mode is used for testing or as an emergency exit. Typically, this action will be a hang-up or a transfer to the operator. Configuring the “Special” mode destination, can be done by select the "Special" mode. Switch back to the "Normal" mode after you selected the “Special” destination. A correct working contact center will always run in the “Normal” mode. ***Note:*** *Use this special mode only in case of system maintenance, emergency situation or other special occasion.*
Default module:	In many contact centers the media resources (IVR lines) are placed in a group and should not be dialed directly. In a situation like that, customers of the contact center dial a group number and not the direct IVR line number. If a caller reaches a direct IVR line, the call will be routed to the destination of the “Default module”. Click the ‘Edit’ link label button to configure this module.
Morning/Afternoon/Evening/ Night prompts:	For each part of the day a prompt can be played. The duration of Morning, Afternoon, Evening and Night can be changed. The required prompt must be selected from the pull down menu per period of the day. Be aware that these welcome messages are valid for all starter lines. If the contact center is multilingual, this may be a problem. The prompts will only be played in the language that is selected as default language in the “PBX Configuration”. For a multilingual contact center it is better to leave these prompt fields empty and link the created starter lines to a clock. In the clock, configure time periods morning, afternoon, evening and night. Link these periods to a next module and play the welcome prompt that moment. The result will be that callers will hear the welcome prompt in the language that is selected as “Alternate Language” after the starter.

The grid below shows you the defined starter lines, in read only mode. You can edit a starter line by double clicking it in this table or by right click it in the tree of the Navigation Panel and select **Edit** from the context menu.

To delete a starter line, right click the starter line name in the Navigation Panel and choose **Delete** from the displayed context menu, or press **Delete** button from the Navigation Panel buttons bar ().

Note: *If you delete a starter line you will not be able to generate a Starter Analysis report for it anymore. BCT has no history support for starter lines yet.*

To create a new starter line, right click any of the existing starter lines in the Navigation Panel and choose **New** from the context menu, or select **New Item** button of the Navigation Panel buttons bar ( ).
To duplicate a starter line, right click an existing starter line and select **Duplicate** from the context menu or select **Duplicate Item** of the Navigation Panel buttons bar ( ).

The starter line pane will open:

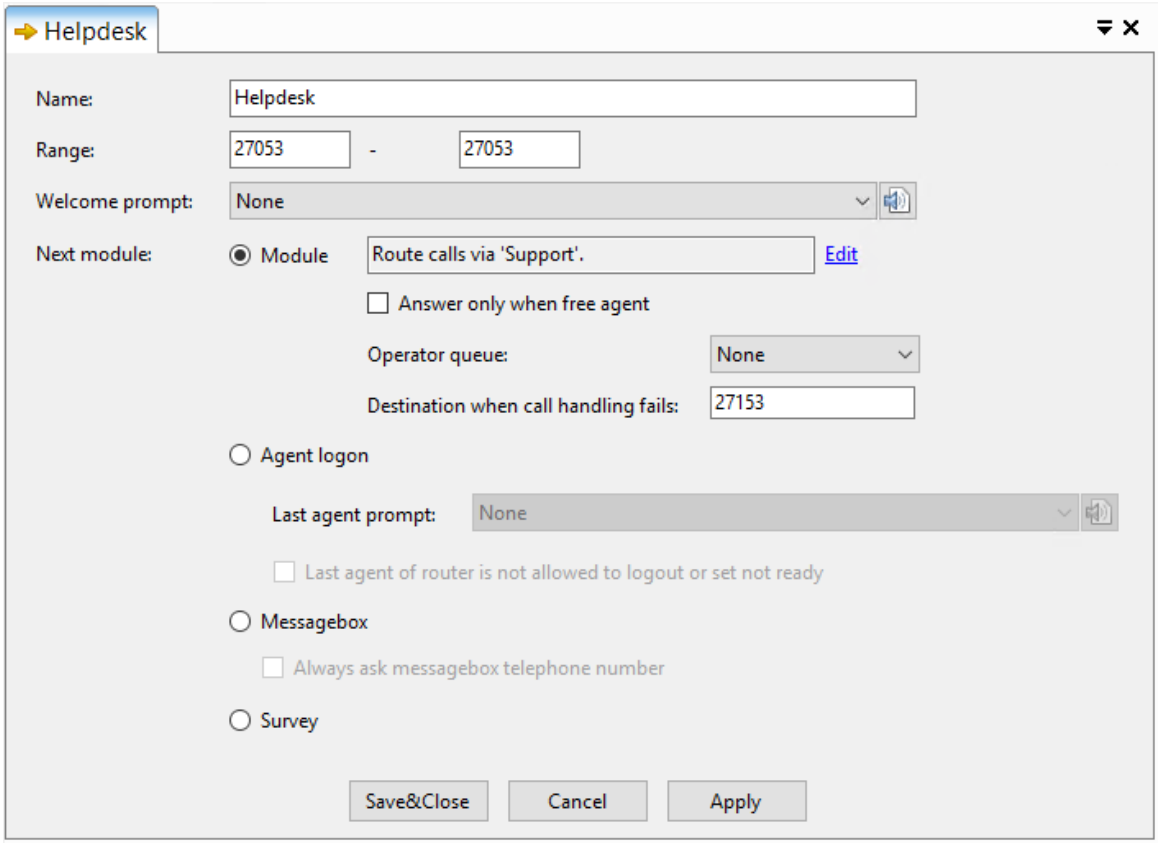


Figure 9-2 Starter line pane

You can edit the following properties:

Name:	The name of the starter line. Enter an understandable name. Depending on the function of the starter line, this may be a department name, service, agent name, etc.
Range:	You must specify an extension or extension range. When a contact center announces two numbers to the callers, e.g. number 100 sales and number 200 service, two starter lines need to be created. The first starter line will be configured with: “From” 100 “To” 100. The second starter line will be: “From” 200 “To” 200. If customers are allowed to dial more than one number and calls made to these numbers should be transferred to the same destination, a starter line with a number range should be configured. Enter the first number in the first field and the last number in the second field. ***Note**: As “#” and “*” are accepted in extension numbers and leading “0”s are significant, ranges are not numerical ranges but string ranges.* *This means 198 to 200 is OK and 998 to 1000 is rejected as “9…” is greater than “1…”.*
Welcome Prompt:	Select a prompt from the pull down menu if a prompt needs to be played. This prompt is played directly after the greeting (if configured). You can specify different welcome prompts for each starter line. Use this to welcome users or to inform the caller that he or she will be transferred to the next module. Just like the welcome greeting, this prompt will only be played in the language selected as default language.
Next Module:	Select the “Module” radio button to indicate that this starter line should be linked to another module. Click the ‘Edit’ link label to select the next destination for the selected starter line. See Linking Modules for more information regarding linking modules.
Answer only when free agent:	When this option is checked, a call may only be answered (or connected to the calling party with media active) when an agent is available to answer the call. This is checked in the router. When after entering the router module there are no free agents within 3 seconds, then call will be disconnected, otherwise the call will be routed to a free agent as normal. This functionality is required for the German market, where it is illegal to answer (/connect) such a call when no service can be provided. Note that when another module than the Router is selected (Identification, Transfer, User Application, Attendant, MessageBox, or Prompt Recording) then the call is aborted because there is no guarantee that an agent is available. When a prompt is configured for a starter, when "Answer only when free agent" is set, the prompt will not be played, because an agent may no longer be available after the prompt is played.

Operator Queue:	Select the required queue type when used as Operator queue (External, Internal, Park, Pickup Park or Fallback) from the drop down list. Select None if the starter line is not used for the Operator Queue. If you have an Operator Queue, you can use Priorities. When you specify a router as next module, you can also indicate the priority of the calls handled by that router. See Linking Modules for more information on Priority routing. The Operator Queue will be sorted first on Priority, and within a Priority on longest waiting.
4 digit PIN to access prompt recording:	The PIN to access prompt recording by phone. This feature is only available if the next module type is prompt recording (i.e. this is a starter line dedicated to prompt recording), and the value will be applied not only to this starter line, but to all starter lines that are dedicated to prompt recording. The default value is 4711.
Destination when call handling fails	The phone number to which the caller will be transferred to in case the call cannot be routed or handled by the PBX.
Agent logon:	A BCT contact center can be configured with screen based agents or with phone based agents. Screen based agents use the computer to perform logon, switch ready/not ready and logoff actions. Phone based agents use their phone for these actions. If the contact center is phone based, a dedicated starter line must be configured. Create a new starter line. Enter an understandable name. There is no need to select a prompt. Agents will be guided by system prompts. Mark the “Agent logon” radio button. There is no need to select a destination for the agent logon starter line. Phone based agents can also use prefixes to perform logon/logoff actions. In that case there is no need to use a dedicated agent logon starter line.
Last agent prompt:	Select a prompt from the pull down menu if a prompt needs to be played. This prompt is played directly after the last phone based agent for a router has entered the pin code for switching not ready or logoff. Use this prompt to warn the agent that he is the last agent in the router. Just like the welcome greeting, this prompt will only be played in the language selected as default language.

Last agent of router is not allowed to logout or set not ready:	Select this to deny an phone based agent to logout or set not ready via his phone in case he is the last agent in any router he is working for. Note that the router option '**Last agent logging out**' must be checked as well to make this function active (See The Agent Call Tab). A last agent of a router can still become Not Ready by not answering a routed call. His status will be set to Not Ready by the system after the router setting '**Forced not ready time**' expires. To prevent the last agent from being not ready too long: • the router option '**Reset forced not ready time**' should be set to a low value (1 or 2 seconds) and • the router option '**Queue call**' should be set to 'Always' or 'When at least one agent is logged on and active' The first setting makes the agent available again within short notice, but also gives the system time to route the queued call to a possible other agent when the agent is not the only logged on agent. The second setting prevents the call from 'leaving' the router through the queue exception 'No agent'.
Messagebox:	If the configured call flow uses the message box module, you need to create a starter line as message box access. Just like the agent logon, the message box requires a dedicated starter line to read out the recorded messages. Create a new starter line. Enter an understandable name. There is no need to select a prompt. Users who access this starter line will be guided by system prompts. Mark the "Messagebox" radio button. There is no need to select a destination for the message box access starter line.
Always ask messagebox telephone number:	When checked the voicemail system will start by asking for the telephone number in order to identify the messagebox and its user.
Survey	When this option is checked the starter line will start a survey module. A survey starter can dialed by an agent from consultation where the original call is a routed call. The consultation can be initiated manually (via the telephone) or via the system as a result of pressing the end call button in the Desktop Client by the agent. In all other cases (simple call, no original routed call etc.) the call will be cleared after playing prompt 798 "This function is not active".

Click Apply to save the settings.

Note: *It is not advised to define overlapping extension number ranges in starter lines as there is no way to tell which line will be used!*

Pickup Park queue

In case you want to create a Pickup park queue, the Operator Queue type is Pickup park and the next module is router Operator Support.

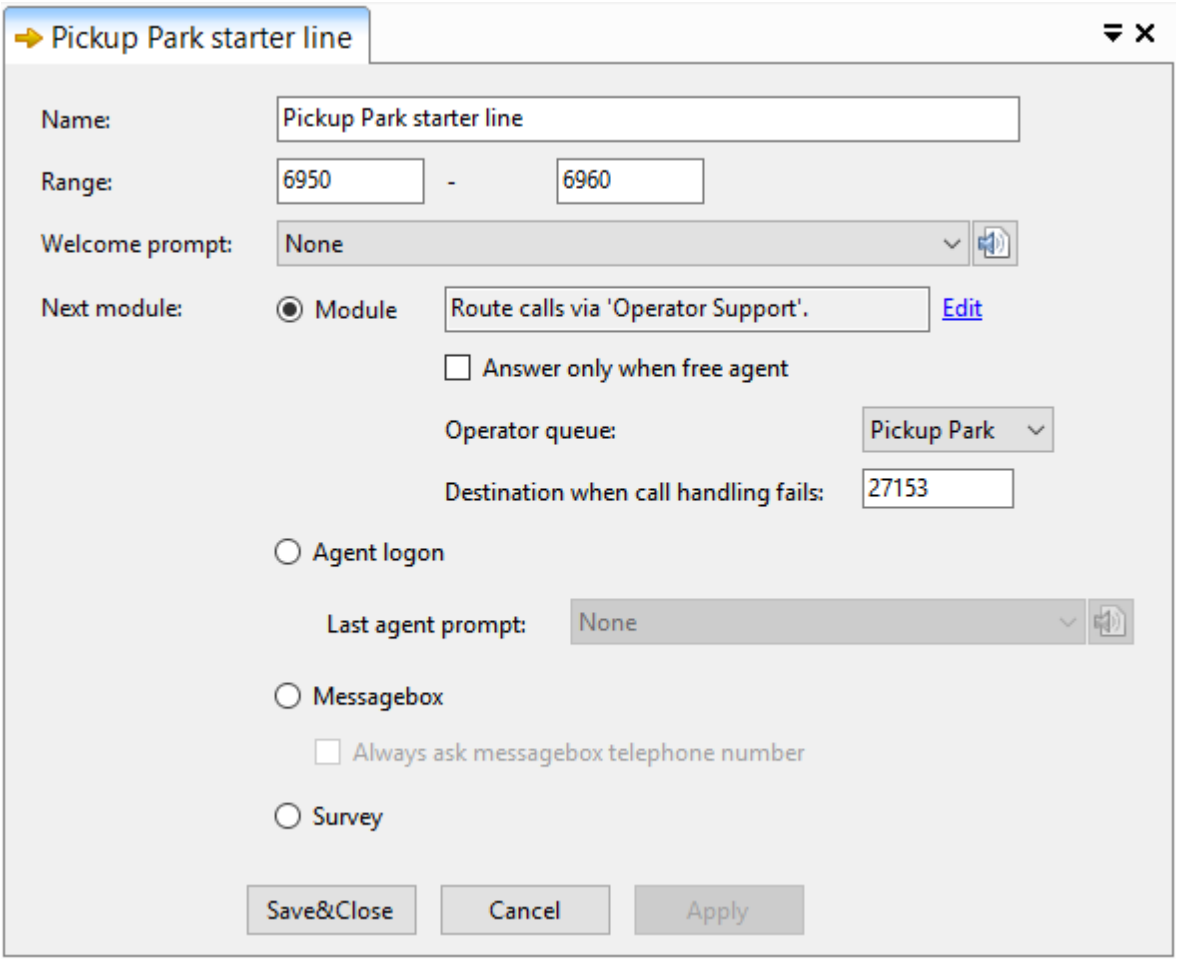


Figure 9-3 Starter Line for Pickup Park

Special in this type of starter line is the From – To range. The From- and the To-number are not the same number. In this range the first number (6950 in the example) will be used by the system to park the call, and the other numbers (6951 to 6960 in the example) are used as Pickup Extensions. The Pickup extensions represent the numbers users can dial to pickup calls parked for them.

Warning: Be aware that you must specify an announcement in the “Welcome Prompt” field to indicate to the employee who wants to pickup a parked call, that he/she should release the call to be called back by the system. The system will then connect the parked call to the employee.

10. Clock Module

You can start a certain module depending on the actual time and the day of the week. Also holidays and special events can be configured.

10.1. How the Clock Works

The clock consists of two different timetables:

- Basic clock time, depending on weekdays and time of day.
  - This timetable is used to make a difference between opening and closing hours of a contact center.
  - For example: between 8:00 and 17:00, the calls are routed to a router and handled by agents. Outside these hours the calls are ended via an end call action with a message that the contact center is closed.
- Clock exception, based on calendar dates and time of day.
  - This timetable is used to direct the callers to another module during a short or long period of a day, week, or month.
  - For example: a contact center is closed for summer holiday during the month July. In that case you can create an exception for this period and route the calls to another module.
  - You can use exceptions defined in another clock module, by configuring the 'Include exceptions from clock' property. Typically you use this exception clock to define your recurring Holiday exceptions.

The clock module decides what to do next in the following way:

1. It takes the current system date and time and determines the day of the week.
2. It tries to find a matching exception from the ones defined in 'Include exceptions from clock'. If it finds one, it will go to the defined module for that exception.
3. It tries to find a matching exception. If it finds one, it will go to the defined module for that exception.
4. It tries to find a basic clock line. If it finds one, it will send the calls to the defined module.
5. If the previous steps fail, it will take the clock's default module.

To open the Clock pane select Call Flow section of Navigation Panel, expand Clocks node and double click a clock. To create a new clock, right click the Clocks node and select **New** from the context menu, or right click an existing clock and select **Duplicate**. The following pane will open:

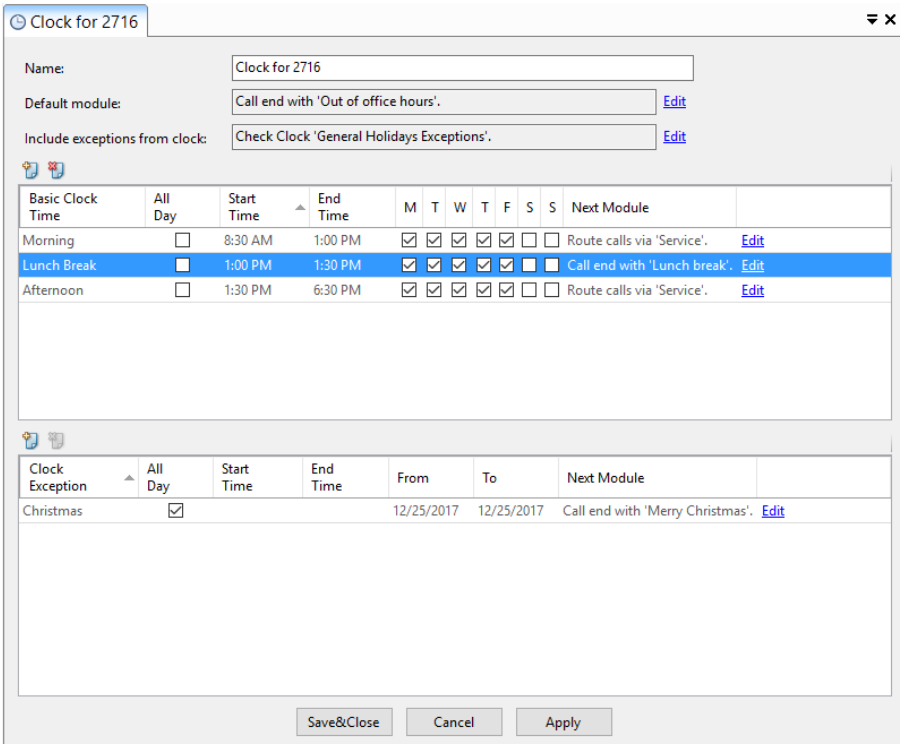


Figure 10-1 Clock pane

The interface consists of three properties for the clock and two tables, one for the basic clock times and one for the exceptions.

For the clock, you can set the following properties:

Name:	The name of the clock. Use meaningful names.
Default module:	If no matching “Include exceptions from clock”, “Basic clock time” or “Clock exception” can be found, the system will route the call according the settings of the Default module. To configure the default module of a clock, click the ‘Edit’ link label next to the default module text box.
Include exceptions from clock:	Choose a clock module if you want to use its list of exceptions. These will be checked before the clock’s own exceptions. Only exceptions are used from the included clock module, other properties, such as basic clock times, are ignored. Typically you use this exception clock to define your recurring Holiday exceptions. To configure the included exceptions clock module, click the ‘Edit’ link label next to the included exceptions clock text box.

10.2. Basic clock time

The Basic clock time is meant to handle the normal operating hours of your organization or department. For example, your department is open for telephone support from Monday until Friday, daily from 08:30 to 18:30. If a caller dials your department, the clock will check that your department is open. If the department is open, the clock will start the module that you specified for these opening hours.

If you need to create a new basic clock line, right click the basic clock time table and select **New** from the context menu, or click the **New basic clock time** button ( ) above the table.

The following fields must be filled in:

Basic clock time:	A name for the clock time. Use meaningful names.
All day:	If “All day” is checked, the time period is the whole day and the fields for “Start time” and “End time” are disabled.
Start time:	The start of the time period.
End time:	The end of the time period.
M,T,W,T,F,S,S:	The check boxes represent the days of the week (Monday, Tuesday etc.). If you put a check mark in the box for that day, it means the time period you specified is valid for that day.
Next module:	Select the ‘Edit’ link label button to select a destination for this clock line.

Note: *Create more than one clock line if your opening times differ from day to day.*

To delete a basic clock time, click the line so that it is highlighted and click the **Delete** button above the table ( ).

10.3. Clock exception

The exceptions are used to define different actions for holidays and other special occasions. An exception may consist of a period of just one hour, days, weeks or even months. If a public holiday falls on a Monday, for example, your organization may close for one day. You may want to make an exception for that day, so that calls are transferred to a message recorder or even an external extension.

Note: *Use the exceptions timetable to plan holidays, special occasions, maintenance, etc.*

> *You also have the possibility of creating a general clock module in which you define a list of general exceptions, e.g public holidays. By including it in other clock modules, changes in public holidays needs than only to be done on this clock. The exception will only follow the defined next module of the general clock module.*

There are two options: either you create a new exceptions line or you adapt an existing exceptions line. To create a new exceptions line, open the clock instance, right click the exceptions table and click **New** in the context menu. Or click the **New** button ( ) above the exceptions table.

The following fields must be filled in:

Clock exception:	The name of the clock exception. Use meaningful names.
All day:	If “All day” is selected, the time period is the whole day. Also the fields for “Start time” and “End time” are hidden.
Start time:	The start time of the exception period.
End time:	The end time of the exception period.

From:	The start date of the exception period.
To:	The end date of the exception period.
Next module:	Select the 'Edit' link label button to select a destination for this Exception.

Example 1
Suppose you define a clock exception from 5-12-2011 to 10-12-2011 with Start time 16:00 and Stop time 17:30 . This means that during the days 5-12-2011 up to 10-12-2011, there is an exception period from 16:00 until 17:30 in EACH day.

Example 2
In case you want the exception from example 1 to run from 5-12-2011 16:00 up to 10-12-2011 17:30 as one continuous period, you need to define 3 exceptions:

1. Starting 5-12-2011 from 16:00 up to 23:59
2. Starting 6-12-2011 up to and including 9-12-2011 marked "All day"
3. Starting 10-12-2011 from 00:00 up to 17:30

Click Apply to save the clock.

11. Attendant Module

Note: *The Attendant module requires an IVR line.*

The Attendant module is used to offer the caller the possibility to make a choice regarding the required department, service, language etc.

The attendant is also called a menu. Every menu has a number of menu items that can be chosen by pressing a key (producing a DTMF tone).

There are two types of Attendants:

- **Option Menu**
- The option menu is a special kind of attendant. You can offer an option menu at the start of a 'normal' menu, when a caller is entering a router module (both in combination with a hot item) or you can offer an option menu while callers are queued on a router.
- The option menu allows the caller to select an action from a list of automated actions; e.g. call back on CLI.
  Note that in case the CLI is not available, this menu item will not be offered to the caller.
- When an option menu is created, you can configure a menu with one or more automated options. The menu items in an option menu are predefined and therefore you cannot link them to a following module.
- **Menu**
- The 'normal', or regular menu supports more functions than the option menu. A number of menu items is presented to the caller. Each menu item must be linked to another module. An example:
- A call center is a technical helpdesk and via an attendant, the caller can make a selection regarding the requested information. For example a menu is created with the following menu items: for hardware problems press 1, for software problems press 2, for network problems press 3.
- Each menu item will have a dedicated destination. In the example there may be 3 routers created to route the calls to the required router. In a lot of call centers an attendant module is used in combination with skill based routing. In that case one router is used for all three menu items. Each menu item will use dedicated skill(s).

The Attendant menu Type is assigned at creation time and the type of menu cannot be changed later.

Both attendant types are used to offer callers the possibility to make a selection. There are guidelines regarding the best way of offering these choices. This is called Telephony User Interface (TUI). The following list can be used as a guide line to create and configure an attendant. Be aware that this list does not pretend to be complete, hopefully it helps to setup a user friendly attendant. The number of choices and the use of prompts highly depend on the nature of a contact center.

- Record all prompts with the same voice.
- Different voice types in one attendant will not sound professional.
- Do not speak too fast.
- Offer in every menu the possibility to repeat the choices.
- Offer in every menu an escape to a live agent.
- Always end the prompt with the digit that should be pressed.
- "For sales, press 1" and not "Press 1 for sales". Callers will remember the digits that should be pressed better when the digit is the last part of the prompt.
- Do not offer more than 5 choices in a menu.
- It is possible to link attendant menus to form an attendant with more than one level. Do not use

more than 3 levels. People will simply hang-up when there are too many levels defined.

To open the Attendant pane select Call Flow section of Navigation Panel, expand Attendants node and double click an attendant.

To create a new attendant, right click the Attendants node and select **New** from the context menu. To duplicate an attendant, right click an existing attendant and select **Duplicate** from the context menu.

The following pane will open:

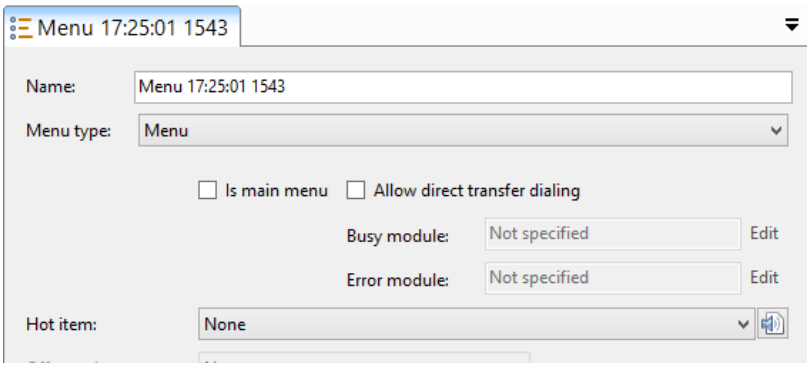


Figure 11-1 Attendant pane, new attendant

At this moment you can select between the two menu types: menu or option menu. As soon as you save the menu, you cannot change the menu type anymore.

The parameters that can be configured for the option menu and the regular menu will be explained in the following two sections.

11.1. Configuring the Option Menu

Create a new menu and select Option Menu as menu type.

Your interface will contain only the name of the menu, callback options (including blacklist related ones) and a grid with menu items. Edit the menu name to a convenient and meaningful value.

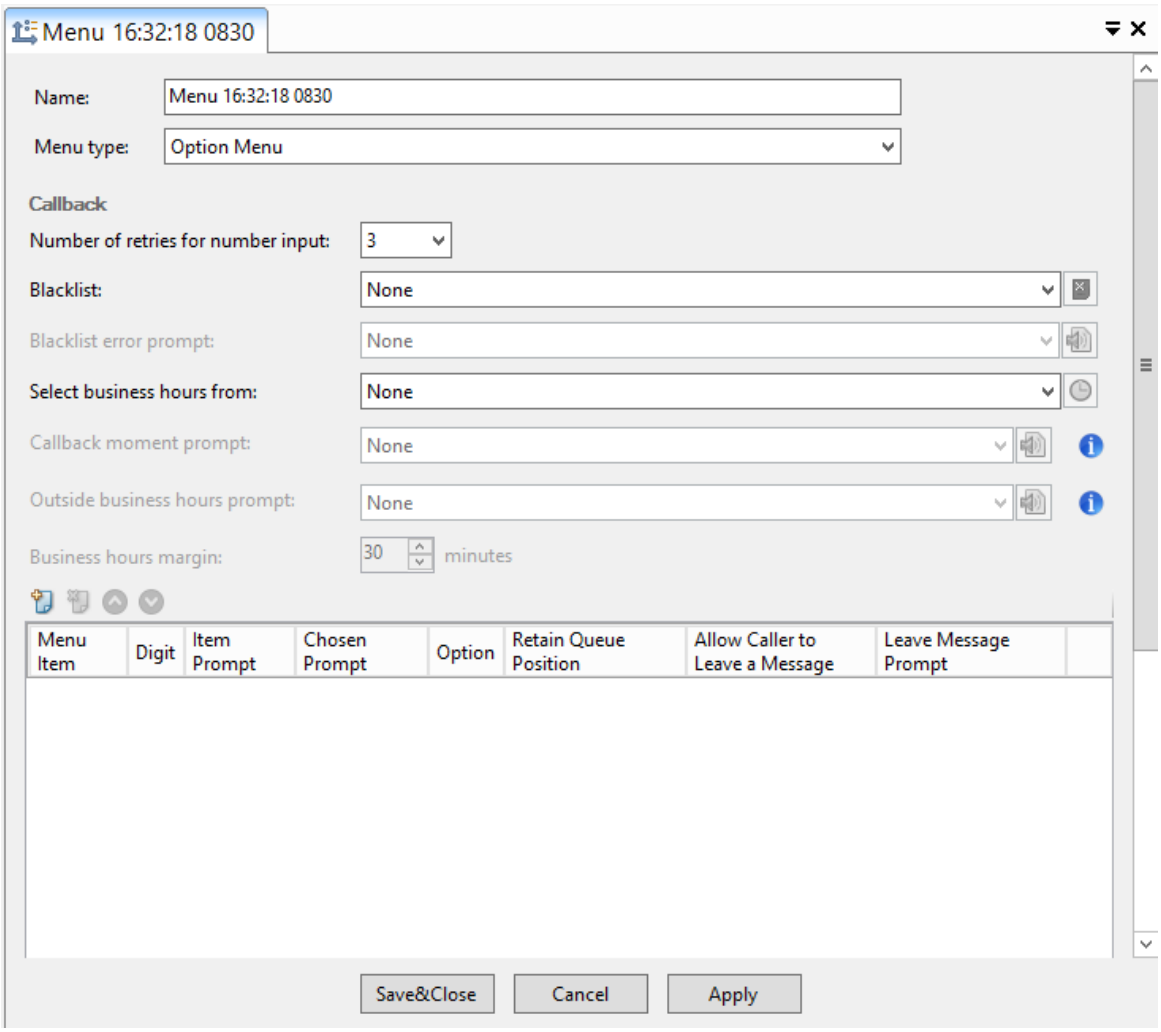


Figure 11-2 Attendant pane, new attendant

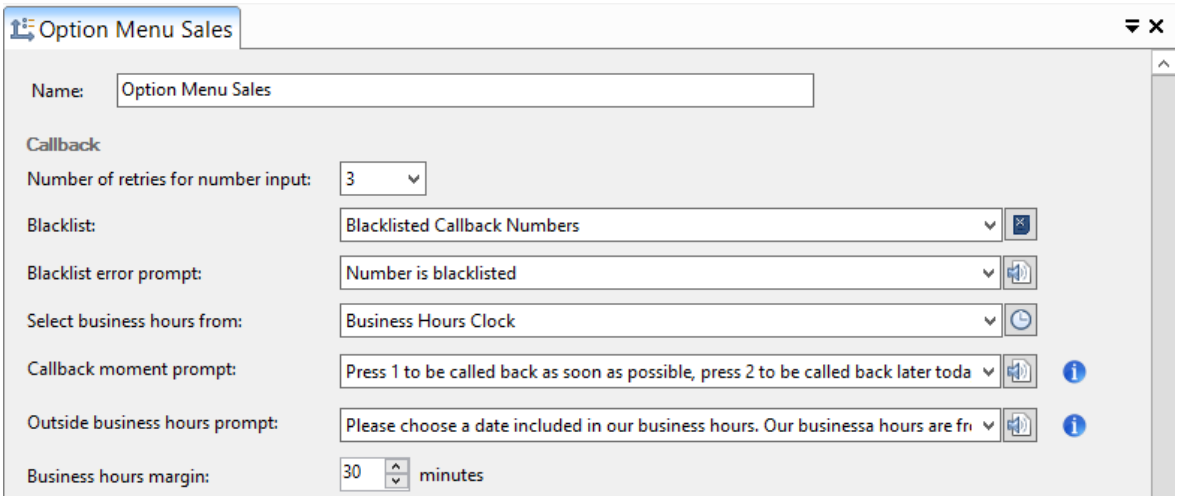


Figure 11-3 Callback options

The following callback options can be edited:

Number of retries for number input: When entering a callback number, a system prompt is played followed by all the digits entered by the user. In case the number is not correct or blacklisted, a new number can be provided by the user with a maximum number of retries specified here.

Blacklist: Choose a blacklist that you want to use for the option menu. To edit the content of the blacklist, press the edit button 

Blacklist error prompt: The chosen error prompt informs the caller that a blacklisted number was entered. The number of retries the caller is allowed to enter a number is defined by "Number of retries for number input".

Select business hours from: Choose a clock module that you want to use as business hours intervals for validating the date and time of the callback requests. To edit the clock module, press the edit button 

Note: *Pay attention when you use this clock together with Scheduling clock from the callback outbound service (see Outbound Service General Tab). In this case it is recommended to use the same clock in both places to avoid scenarios like: Customer dials in, chooses to be called back later, selects 16:00 as available time (allowed by Business Hours clock), but the callback outbound service does not execute the callback because 16:00 is out of range for its Scheduling clock.*

Callback menu prompt: The chosen prompt to announce the callback moment selection.

Outside business hours prompt: The chosen prompt to inform the caller about the business hours intervals, played when the caller requested to be called back outside the configured business hours.

Business hours margin: Define the amount of *minutes* at the end of the business hours interval when the system will not schedule anymore callbacks.

The Blacklist option can be used to block unwanted numbers to be called back. Creating and editing Blacklists is explained in Blacklist. The blacklist is only used for certain menu items. In the menu item action configuration below you can see where and how the blacklist will be applied.

The business hours callback options will provide the settings to guide the caller to select a suitable callback moment matching the business hours of the agents. More details about these settings are described in the Menu item Callback - Scheduling the callback chapter.

To create a new menu item, click in the **New** button ( ) above the table. A new line will be added to the table and you will be able to edit the properties of that menu item below the table.

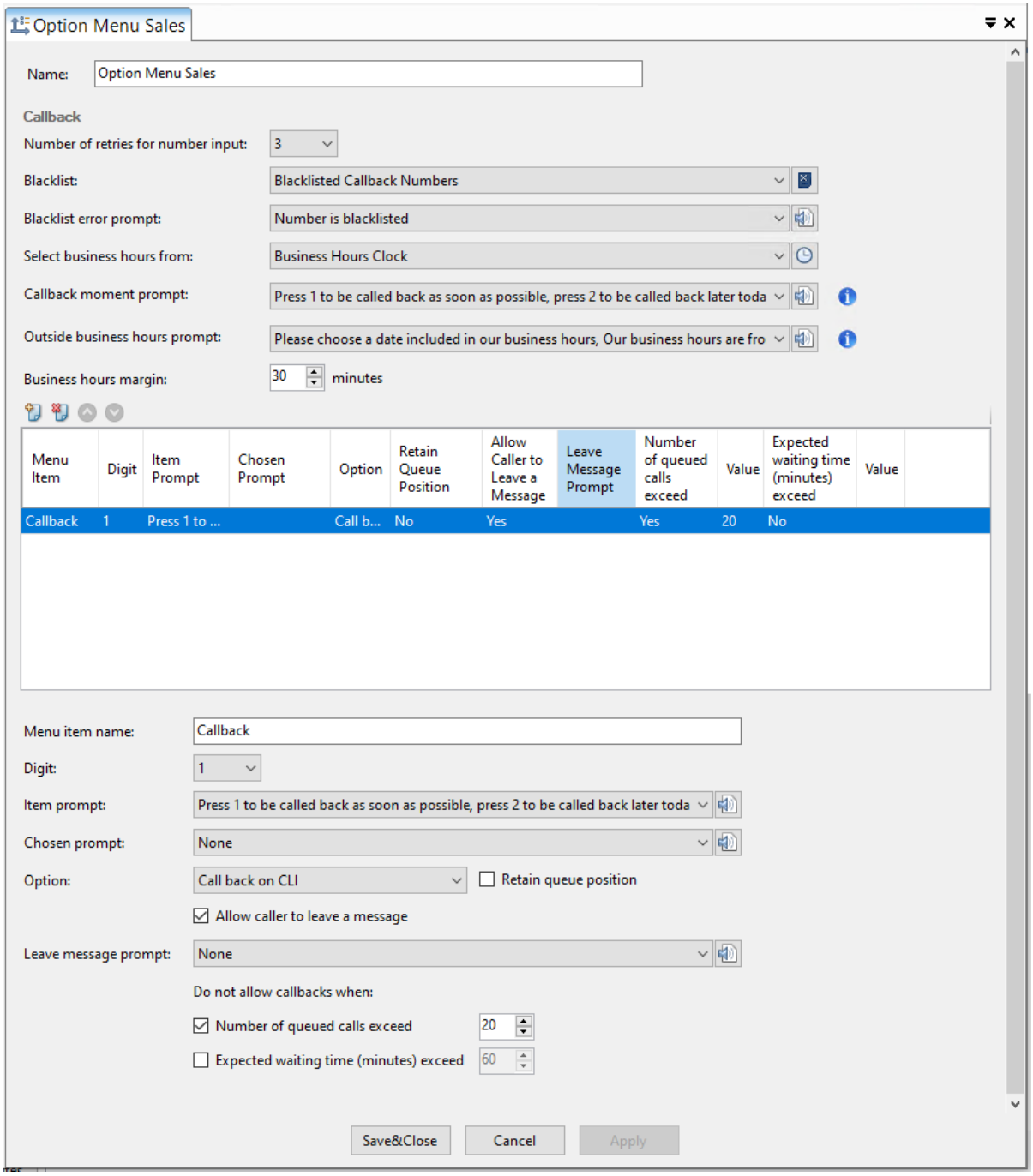


Figure 11-4 Option menu

The following properties can be edited:

Menu item name:	Enter an understandable name.
Digit:	Select the digit that callers must press to select the option provided by this menu item.
Item prompt:	The item prompt informs the caller about the available choices. E.g. “If you would like to be called back press 2". To edit prompts, click on the prompts button ().
Chosen prompt:	The chosen prompt informs the caller which selection he/she has made. E.g. “You have selected the call back option”. To edit prompts, click on the prompts button ().
Option:	The action that must be performed when the caller selects this menu item.
Retain Queue Position:	If the menu item is a Callback, then the user can hold his queue position (virtually) even if he is not in the queue anymore. The system will arrange a callback to the user at the moment that the user would have reached to top of the queue (and be answered).
Allow Caller to Leave a Message	Only when the menu item type is Callback, the user has the option to record a message before hanging up. This message will be played to the agent to whom the call is routed, before contacting back the customer.
Leave Message Prompt	The prompt played when the customer requests a callback, only if the message recording is allowed. It informs the customer that he can leave a message which will be played to the agent who will perform the callback. E.g. "If you would like to record a callback message press 3". To edit prompts, click on the prompts button ().
Number of queued calls exceeded	When selected, the call back request will be suspended, so no call back request is started, when there are more calls waiting in the queue than the defined number.
Expected waiting time (minutes) exceeded	When selected, the call back request will be suspended, so no call back request is started, when the expected waiting time for the queue is higher than the defined number.

There are a number of pre-defined and fixed actions possible in an option menu:

- **Call Back on CLI:**
  If a caller selects this option, the caller will be disconnected and the system will schedule an outbound call to the caller. The number that will be dialed is derived from the CLI information of the caller.
  Note *that in case the CLI is not available or blacklisted, this menu item will not be offered to the caller.*
- **Call Back on PID:**
  If a caller selects this option, the caller will be disconnected and the system will schedule an outbound call to the caller. The number that will be dialed is derived from the information stored in the identification module. Therefore this function is only applicable when the identification module is used as well.
  Note *that in case the derived number is blacklisted, this menu item will not be offered to the caller.*
- **Call back on “user defined”:**
  If a caller selects this option, the caller is prompted to enter his number. This number is used to set up an outbound call to perform a call back.
  Note *that in case the number entered is blacklisted the user will be prompted again for a number until the number of retries has reached and the system will put the user back to the queue.*

- **Return:**
  This option is mostly used for option menus that are used while callers are queued. If the caller selects this option the caller will be placed in the queue again.
- **Stop waiting:**
  If a caller selects this option, the caller will be routed to the exception that is specified as Abort exception in the Exception settings in the router configuration.

Menu items are played in the order they are displayed on the screen. You can re-arrange this order by using the up and down arrow buttons above the table (). Select a menu item and then use the up and down arrow to move an item up or down the list.

The menu items in an option menu are pre-defined and therefore you cannot link them to a next module.

11.1.1. Menu item Callback – Retain Queue Position

Except for the standard menu item “Callback”, there is also another variant: “Callback” with “Retain Queue Position”, which has enhanced functionality. If you select “Callback” and activate “Retain Queue Position”, the user can ask to be called back while still retaining (virtually) his queue position. This means that the user will be called back at the moment he would have reached the top of the queue. So he is actually called back at the same moment that he would have been answered if he had stayed waiting in the queue.

This feature is configured by checking the “Retain queue position” checkbox. Otherwise it is configured in the same way as normal “Callback”.

Notes:

It is advised to include in the chosen prompt the notification that the user will retain his queue position.

When the actual callback is executed and not answered by the customer, the call is removed from the queue and transformed to a regular outbound callback job.
The “Retain Queue Position” call back will always use preview dialing, so override the dialing mode of the outbound service.

11.1.2. Menu item Callback – Record Message

For all callback option menu items (Call back on CLI, Call back on PID, Call back on userdefined) the customer can record a message when requesting a callback. When the call is routed to an agent, on answer the agent will be prompted with a standard prompt or configurable prompt for the outbound service related to the Call back, followed by the message left by the calling party.
The message is deleted after the call is successfully established.
If the callback fails (e.g. due to no answer by agent, customer etc.) the call back will be handled as a normal call back call and the message will be retained as long as the call back call is retained.

The feature is enabled by checking the "Allow Caller to Leave a Message" checkbox. The prompt played to the customer is the one selected from the list "Leave Message Prompt".
When the recording is not enabled, the call back flow will continue without recording.

11.1.3. Menu item Callback - Scheduling the callback

After the caller selected to be called back, he/she gets the possibility to indicate a proper moment to be called back: *As soon as possible, later today, tomorrow or the next business day*.

The clock module selected by the Callback option "Select *business hours from*" will specify the business hours intervals when a callback can be scheduled.

When the *"Select business hours from"* is not configured the caller will be presented with a menu that offers callback moments today and tomorrow:

- *Press 1 to be contacted as soon as possible*
- *Press 2 to be contacted later today*
- *Press 3 to be contacted tomorrow*
- *Press any other key to return to the previous menu*

Not having a business hours interval defined means that a callback scheduled for later today or tomorrow will be performed any time starting with the requested time later today respectively tomorrow, when an agent is available.

When the *"Select business hours"* clock module is configured, its *Basic Clock Times* will specify the valid callback time intervals while the *Clock Exceptions* will specify the invalid callback time intervals.

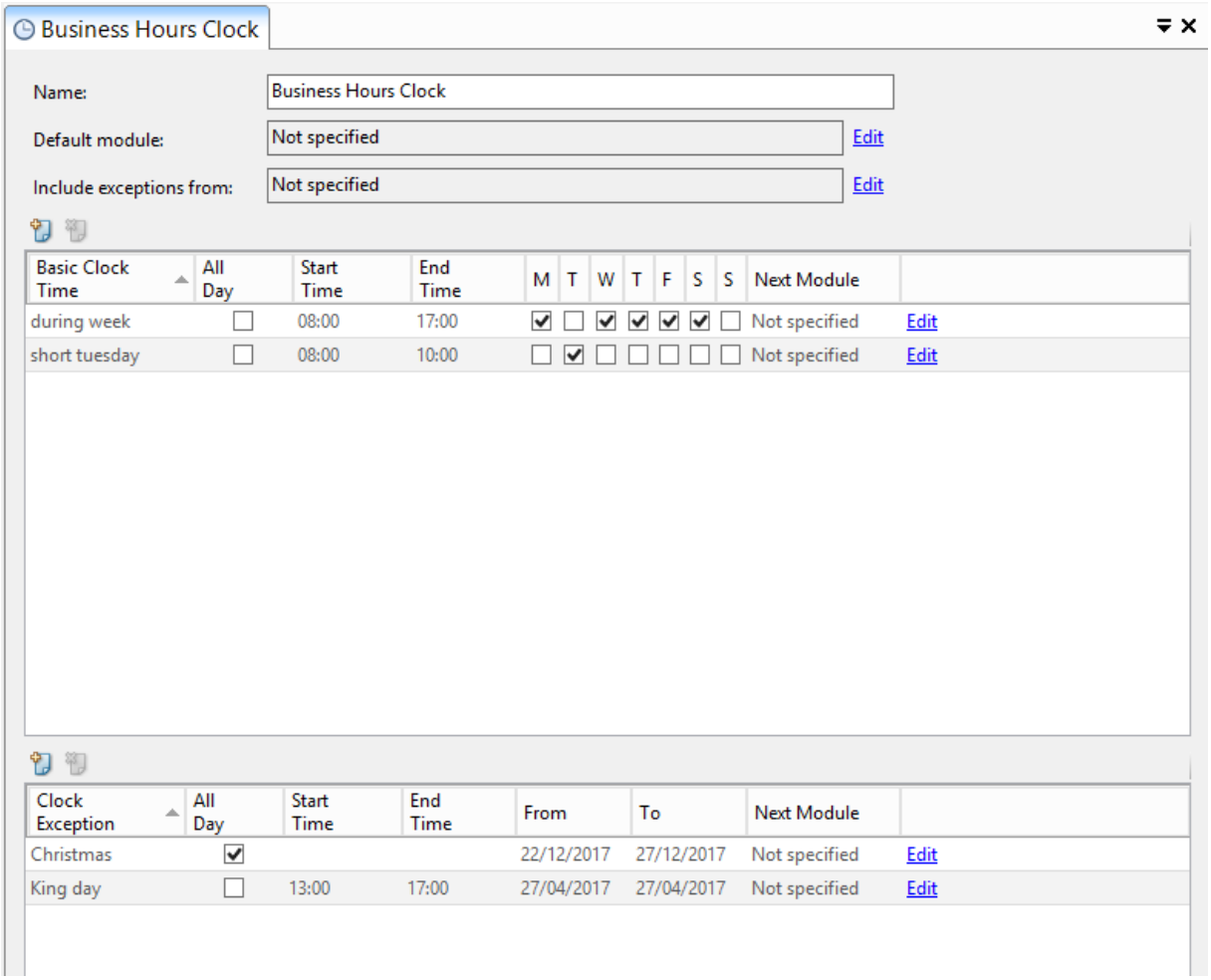


Figure 11-5 Business Hours Clock

In the above example a callback can only be scheduled on Monday, Wednesday, Thursday, Friday Saturday between 8:00 and 17:00 and on Tuesday between 8:00 and 10:00. On Sundays and on the Christmas and King Day between 13:00 and 17:00 the system will not allow any callbacks to be scheduled.

The "Callback moment prompt" has to be recorded in order to offer the caller the possibility to select to be called back on the next business day. The content of this prompt has to be the following:

- *Press 1 to be contacted as soon as possible*
- *Press 2 to be contacted later today*
- *Press 3 to be contacted on the next business day*
- *Press any other key to return to the previous menu*

When options 2 or 3 are selected, the caller will be prompted to enter the time he/she wants to be called back:

- *Enter hours and end with a #. To cancel, press **

A confirmation will be played back to the caller to make sure there are no confusions during the callback scheduling.

If the language used in the call flow is English (United States), English (United Kingdom) or Greek, before being asked for a time, the caller will be prompted to choose between AM and PM.

- *"For AM, press 1, for PM, press 2"*

The callback moment requested by the caller will be validated against the defined business hours intervals. When the callback moment is invalid, the *"Outside business hours prompt"* will be played to the caller to inform about business hours when the agents are working. When recording this prompt, include all time intervals specified in the Basic clock Times.

The system will perform the callback as soon as the indicated time comes (immediately for option 1 and on the time selected for options 2 and 3).
Note: This is of course only done on the condition that an agent is available.

Scheduling the callback does not work in combination with 'Retain Queue Position' feature. By this last one the call will keep the queue position and will be called back as soon as his turn comes and there is an agent available.

11.2. Configuring the Attendant Menu

Create a new menu and select Menu as menu type.

Your interface will contain only the name of the menu and a grid with menu items. Edit the menu name to a convenient and meaningful value.

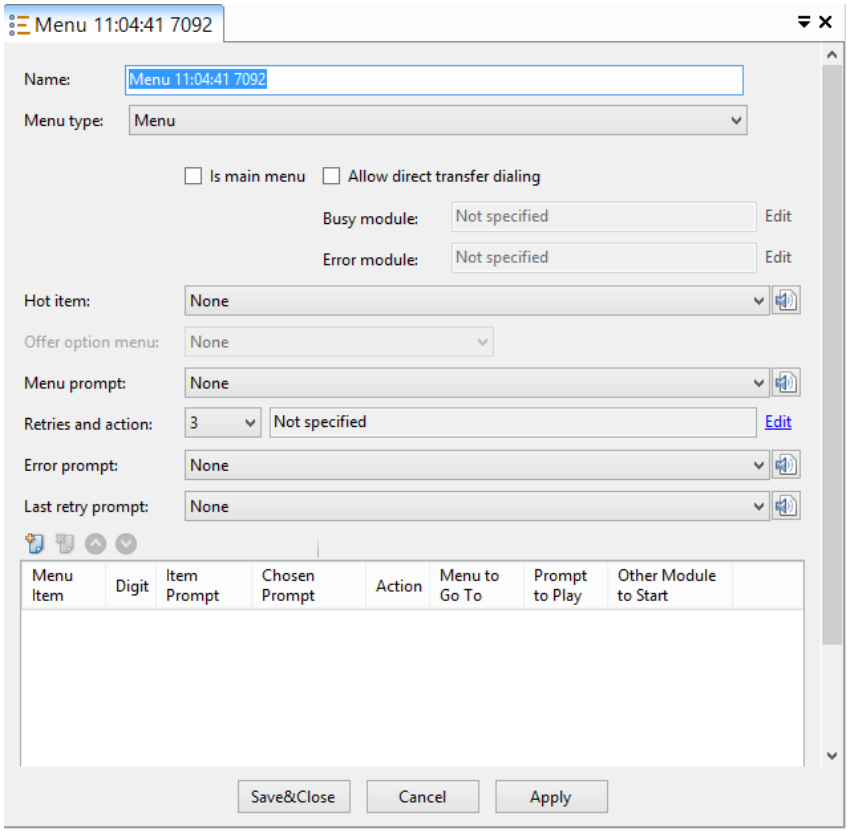


Figure 11-6 Attendant pane

The pane is divided into two parts:

- The upper part displays general menu parameters.
- The lower part displays the configuration of the created menu items.

The general window contains the following parameters:

Name:	The name of the attendant. Enter an understandable name.
Is main menu:	If you check this box, it indicates that this menu is the main menu. So, if a caller chooses to 'go to main menu', (s)he will be redirected to this menu. Make sure that there is only one main menu or the menu system will not work correctly when a caller attempts to “Go back to the main menu”. Select “Is Main menu” is only needed in case of multi- level menus.
Allow direct transfer dialing:	If you check this box, a caller can dial a telephone number during the attendant session. A transfer to the dialed number will be performed. The telephone number should start with a digit that is not defined in one of the menu items.

Allow dialing external destinations	This box is only available when Allow direct transfer dialing is checked. If you check this box, a caller can dial and will be transferred to external telephone numbers, when the PBX allows it via traffic classes. If you uncheck this box, a caller can dial and will be transferred only internal telephone numbers during the attendant session.
Busy module:	Only enabled when Allow direct transfer dialling is checked. Here you can specify a destination to exit the attendant module when the number that is being dialled is busy.
Error module:	Only enabled when Allow direct transfer dialling is checked. Here you can specify a destination to exit the attendant module when the number that is being dialled cannot be reached, for instance does not exist.
Hot item prompt and **Offer option menu:**	A hot item can be explained as a kind of commercial prompt. You may inform the caller about a discount action that is going on at this moment. There are two possibilities to use a hot item: 1. Just play a hot item as a commercial prompt with no further action. In this case, select a prompt to play in the “Hot item” field and select “None” in the “Offer option menu” field. 2. Play a hot item in combination with an option menu (in that case select an option menu in “Offer option menu” drop down field). When a hot item is combined with an option menu, the caller has the option to react on the hot item prompt via the selected option menu. ***Note:*** *When the Call Back feature of the option menu is used an Outbound service is created. This Outbound service is* ***not*** *automatically started. The Supervisor/Administrator has to start the service manual on a suitable moment.*
Menu prompt:	The selected prompt will be played when the caller enters the attendant session.
Retries and action:	When an attendant menu is offered to a caller, the caller may select a digit that is not defined or the caller waits too long to select a digit. In both situations the result is that this is marked as error. You can specify the number of retries the caller is allowed to make. If you enter 1, the caller is allowed to try one more time after an error. The ‘Edit’ link label, next to the error counter enables you to specify a destination to exit the attendant when the maximum number of retries is reached.
Error prompt:	This prompt will be played if the caller enters an invalid choice or makes no choice; e.g. “No valid selection was made”. When there is only one retry left, this prompt is not played.
Last retry prompt:	This prompt is played when the caller has only one retry left. It should warn the caller that this will be the last chance to make a valid choice. E.g. “If you do not make a valid selection, you will be forwarded to the operator”.

Each menu item is listed as one line in the lower part of the main option window.

To create a new menu item, click in the **New** button () above the menu items table. A new line will

be added to the table and you will be able to edit the properties of that menu item below the table. To edit an existing menu item, click on the line in table so that it is highlighted.

Each line has the following parameters:

Menu item:	Enter a descriptive name for the menu item.
Digit:	Select the digit that callers must press to select the option provided by this menu item.
Item Prompt:	The item prompt informs the caller about the available choices. E.g. For sales press 1".
Chosen Prompt:	The chosen prompt informs the caller, which selection is made. E.g. “You have selected sales”.
Action:	Specify the action when the caller selects this item.

Each menu item can lead to one of the following actions:

Go to a menu:	Offers the possibility to link an attendant to the next attendant. With this function you can create a multi- level menu. Example: Offer a language selection in the first attendant and offer a department selection in the second level. Select “Go to a menu” and select next attendant module.
Go to Main menu:	Offers the possibility to give callers an escape to the main menu to repeat the choices. Make sure that one of the used attendants is configured as main menu. Select “Go to main menu”.
Play a prompt:	Select “Play a prompt” and specify the prompt.
Start another module:	Select “Start another module” and use the ‘Edit’ link label to link to another module. Linking modules is explained in Linking Modules.

Menu items are played in the order they are defined on the screen. You can re arrange this order by using the up and down arrows above the table (). Select a menu item and then use the up and down arrows to move an item up or down the list.

Notes:

1. In case a customer has only one prompt-file (containing all menu-items) this one prompt-file must be entered as the ‘Item prompt’ for item 1, so do not use this prompt in the ‘Menu Prompt’, ‘Error prompt’ and ‘Last retry prompt’ should be left empty.
2. During the ‘Error prompt’ and ‘Last retry prompt’ chosen digits are not accepted, so keep this prompt short.

Below you can see a simple menu with 4 menu items.

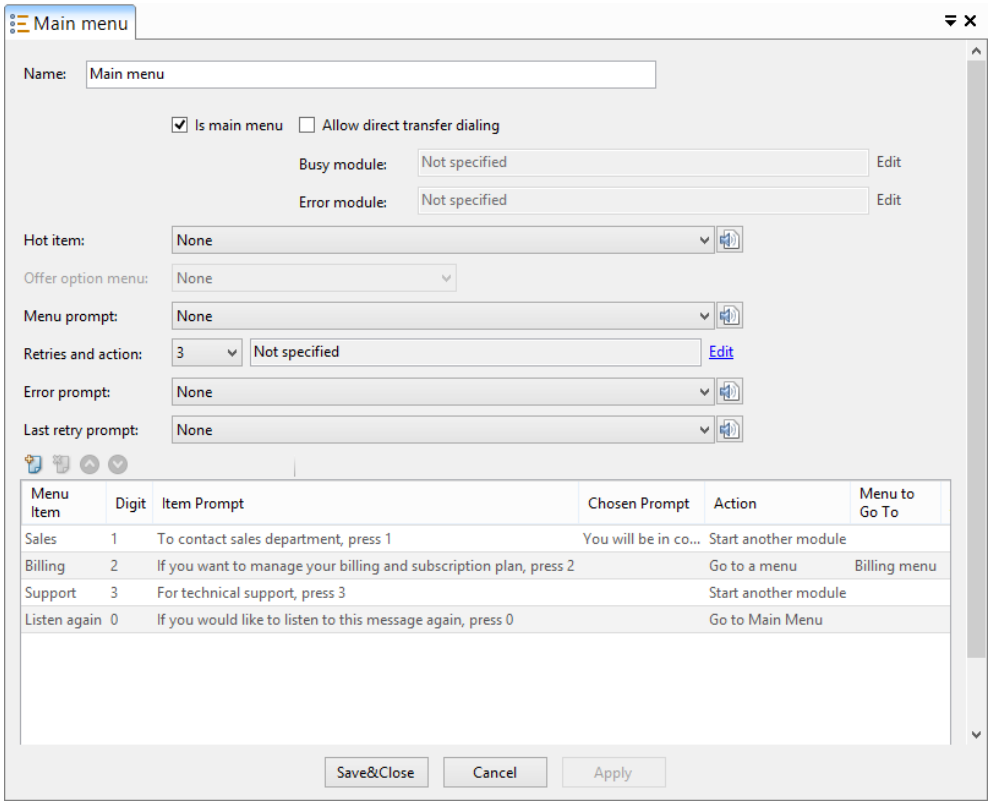


Figure 11-7 Example menu

11.3. Configuring Give-a-line menu

A special application, supported by the Attendant, is providing BCT Operator "Give a line" functionality. Note that this is only supplied for SIP@Net PBX.

In case internal users have no or restricted access to external numbers, they may request the Operator to give them access. The internal caller is given access to a trunk, in order to make an external call via a VMP line.
The internal user calls the Operator, who in turn transfers the caller to the configured "Give a line" starter line. The caller enters the call flow and is connected to the related Attendant menu. In the Attendant menu the caller is prompted to enter the desired external number.

Preconditions:

1. The VMP lines must have a high traffic class to allow the caller to make outgoing trunk calls (use OM command CHTRFC – See PBX documentation FIM Management Facilities).

2. Limit access to this feature for BCT Operators only. To do this, configure dedicated number analysis trees for BCT Operator DNRs to restrict access to the "Give a line" feature starter line DNIS. See PBX documentation.

Configuration:

1. Create a dedicated Attendant menu, with one dummy menu item (menu item is not relevant for this functionality). Create an application prompt via which the caller is invited to enter the desired external number.

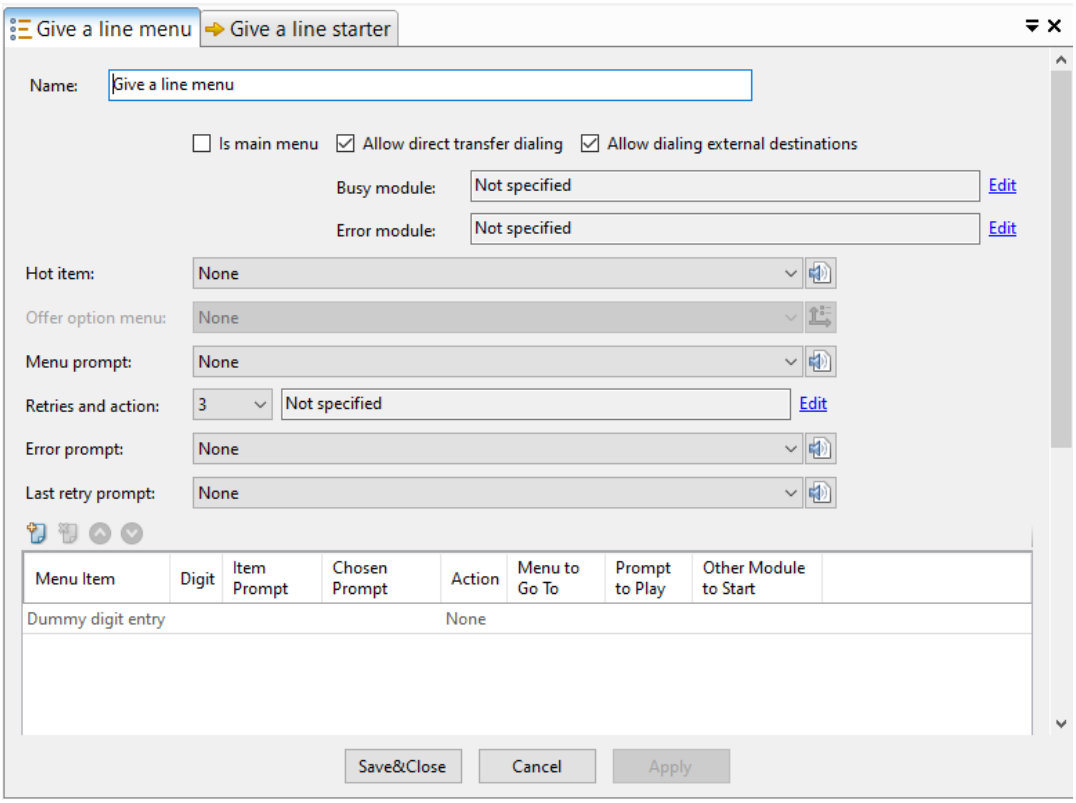


Figure 11-8 Give a line attendant menu

Check the "Allow direct transfer dialing" checkbox and possibly the “Allow dialing external destinations” checkbox.

When desired, it is also possible to configure an application error prompt, last retry prompt and an error module. This error module could for instance be a blind transfer module, transferring the caller to the BCT Operator queue for further assistance.

2. Create a starter line access DNR (DNIS, for example 1234) in the PBX and configure a fixed follow me from this access DNR towards the VMP (IVR) group DNR.
(See BCT Installation Guide chapter 4.6.6 PBX Configuration for Contact Center or Voicemail)

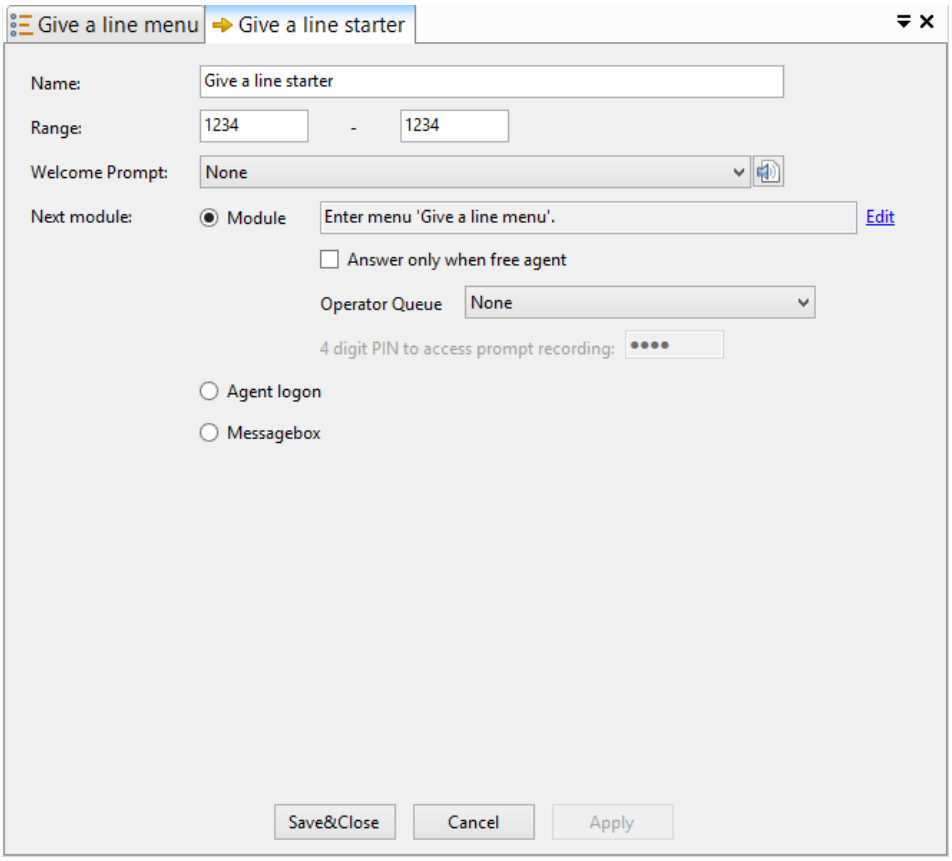


Figure 11-9 Give a line Starter line

12. Router Module

The Router module offers intelligent distribution of calls amongst one or more groups of agents.

A router is in a lot of cases the final destinations in a call flow. A router contains a (adjustable) queue to park callers when all agents are occupied.

A router offers queuing with music on hold, dynamic queue position messages and error and overflow actions.

Calls are routed to an agent within the selected agent group, based upon longest idle or requested skill(s). You can also force a call to be routed to the previously contacted agent.

There are more possibilities how calls are routed to agents. All possibilities are described in Linking Modules.

To list all created routers or to create a new router, open the Call Flow section of the Navigation Panel. You can create new routers by right click the Routers node in the tree and select **New** from the context menu. To duplicate a router, right click an existing router node and select **Duplicate** from the context menu. To see all defined routers, expand the Routers node. If you need to edit a router, double click it in the tree or right click the router that needs to be adapted and select **Edit** from the context menu.

The router module is the most complex module you can define. The interface is split into several tabs: general, queue announcements, agent routing, agent call, supervisors.

Each of the tabs will be described in the following chapters.

12.1. The General tab

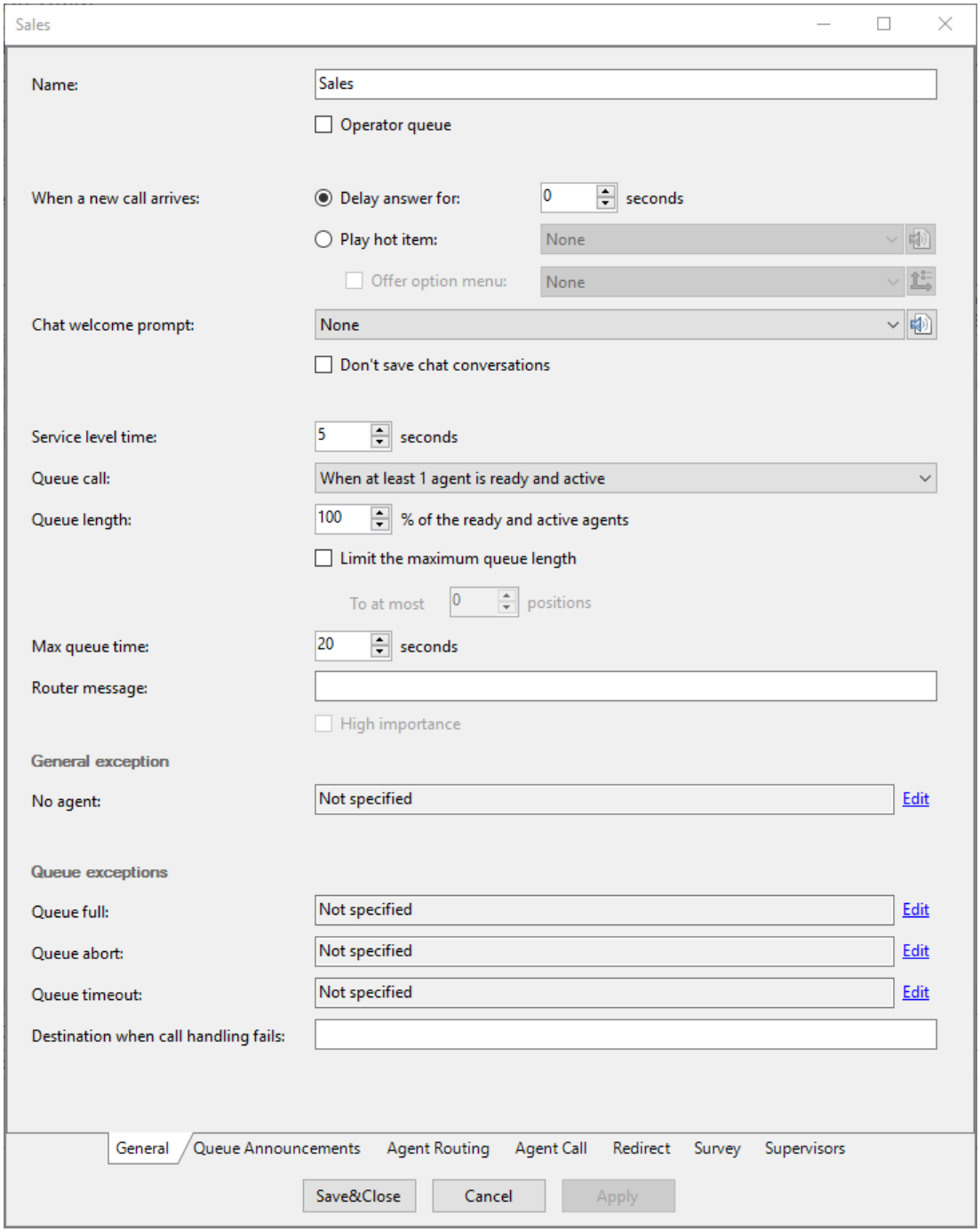


Figure 12-1 Router general settings

In the General tab, you see the following items:

Name:

The name of the Router module. Use understandable names like “Sales”, “Administration” and not “router1”, “router2”. Do not use names that consist of numbers only. If you use the router name in a call type and you change the router name, you also have to change it in the call type.

Note that if your BCT configuration comprises two (or more) servers,

you should use unique router names on both servers.

Operator Queue: Check this box if the router is used for the Operator Queue.

Delay Answer (seconds): The time that is waited before a call that is queued in an operator queue gets automatically answered and receives queue announcements. During this time, a free operator can pick up the call and the caller doesn't get charged for his waiting time.
This feature is intended in the first place to be used for operator handling, but can also be used for agent routing.
As the delay is intended for queued calls, in this case hot items are not applicable.

Play Hot Item: A hot item can be explained as a kind of commercial prompt. You can inform the caller about a discount action that is going on at this moment. The prompt, selected for a hot item message is only played when the "Play Hot Item" option is selected, otherwise the hot item is skipped. The hot item prompt is played when the caller enters the router.
There are two possibilities to play a hot item:

1. Just play a hot item as a commercial prompt with no further action.
2. Play a hot item in combination with an option menu (in that case select the "Offer option menu" check box and select an option menu). Now the caller has the possibility to react on the hot item prompt via the selected option menu. Once you have selected an option menu, you can visualize/edit it by clicking the button next to it ().

Note: *If an option menu is used an Outbound service is created, for a possible callback feature in the option menu. This Outbound service is* ***not*** *automatically started. The Supervisor/Administrator has to start the service manual on a suitable moment.*

Chat welcome prompt: A Chat Welcome Prompt can be configured. This prompt will be sent to the user when the chat is accepted by the router and will be queued.

Don't save chat conversations Check this box if you want to prohibit saving of chat conversations for this router. If checked, only the 'properties' of the chat like the agent name, the time the chat was received, the customer name and/or email are stored in the database.
By default, this is not checked.

Service Level Time: The Service Level is a performance monitor regarding the queue and answering time.
Example: Assume the Service level time is set to 30 seconds. When all calls are answered within 30 seconds, the service level is 100%. When 20% of the calls are answered after 30 seconds, the service level will be 80%.
Note that the service level is calculated from the Call in queue time, added to the alerting time of the agent.
The achieved Service level is displayed in the router monitor and the dashboard.

Queue length: The maximum length of the queue. This can be set as percentage of the

	number of ready and active agents, but also as a fixed limit when the “Limit the maximum queue length” is checked and a number of positions between 0 and 200 is set. Example: If the number of active and ready agents is 5 and the queue length percentage is set to 100 %, then there are 5 queue positions available. The sixth call that arrives will not be queued but transferred to a destination, specified in the exceptions section. If the “Limit the maximum queue length” is checked and the number of maximum positions is set to 4, then the fifth call that arrives will not be queued but transferred to a destination, specified in the exceptions section. **Note:** In case "Limit the maximum queue length" is checked and value is set to 0, all calls will immediately exit the router using the queue full exit.
Queue call:	Following queue call behaviors can be selected: **When at least 1 agent is ready and active:** Calls are only queued when at least 1 agent is ready and active in the group. **When at least 1 agent is logged in and active:** Calls are only queued when at least 1 agent is logged in (but not necessarily ready) and active in the group. **Always:** Allow a queue on an empty group. An empty group is a group that does not have agents ready.
Max Queue Time:	The maximum time a call can be parked in a queue. When the timer expires, the call will be routed according to specifications in the exceptions section.
General exception, No Agent:	If a call is routed to a router and all agents of the router are logged off or switched not ready, the caller will be directed to the destination selected for the “No Agent” exception. If skill based routing is used it may be possible that there are agents ready but that the agent skill rating is below the minimum skill score of the router. These agents will be marked as not ready.
Router Message:	Message to be displayed in the router statistics on the desktop client (agent/operator).
High Importance:	When High Importance is set for the router message the message will be displayed in red color.
Queue exceptions **Queue full:**	When the maximum number of queue places is reached, no more callers will be accepted. These callers will be redirected to the destination selected for the “Queue full” exception.
Queue abort:	When the router offers an option menu, the caller can select the option “stop waiting”. The caller will be directed to the destination that is specified for the “Queue abort” exception.
Queue timeout:	One of the timers that can be specified for a queue is the time that callers are allowed to occupy the queue. When the timer expires, the caller will be directed to the destination that is selected as “Queue timeout” exception.
Destination when call handling fails	The phone number to which the contact will be transferred to in case the call cannot be routed or handled by the PBX.

Outbound Caller Id:	The Outbound Caller Id area is only shown when supported by the connected PBX. A checked Change Outbound Caller Id with a filled in Name and Phone number can be selected by an agent of this router. The Phone Number format must be in accordance of the rules of the PSTN provider, to get a proper representation to the called customer.

12.2. The Queue Announcements Tab

Queue Announcements can be defined dynamically. A list with announcements can be defined where the user can choose for every list item what type of queue announcement has to be played on that position. This is making the queue announcements as flexible as a user wants. In between announcements the user can add a delay during which MOH (music on hold) is played or nothing if MOH is not selected. Also the option menu has become part of the list and can be played at any position where it is desired.

The tab contains the setting for music on hold and the announcements table.

In case you want to change the Music on Hold (MOH) that is played while a caller is waiting, then locate the files on the BCT Server at C:\Program Files (x86)\NEC\UCS-Module\MOH. There are several categories (like Classic, Jazz, etc.). Select the one you want to replace. You must replace the file with a new one (same filename). It must be a WAV file with the format: CCIT uLaw, mono, 8-bit, 8 kHZ or 16-bit PCM mono (any clock rate). You can also add your own extra WAV files, or remove existing ones.

Note: After adding or deleting MOH files in C:\Program Files (x86)\NEC\UCS-Module\MOH on the BCT Server, you need to run the BCT Supervisor Dashboard once as Administrator on the BCT Server, in order for these changes to be synchronized with the database.

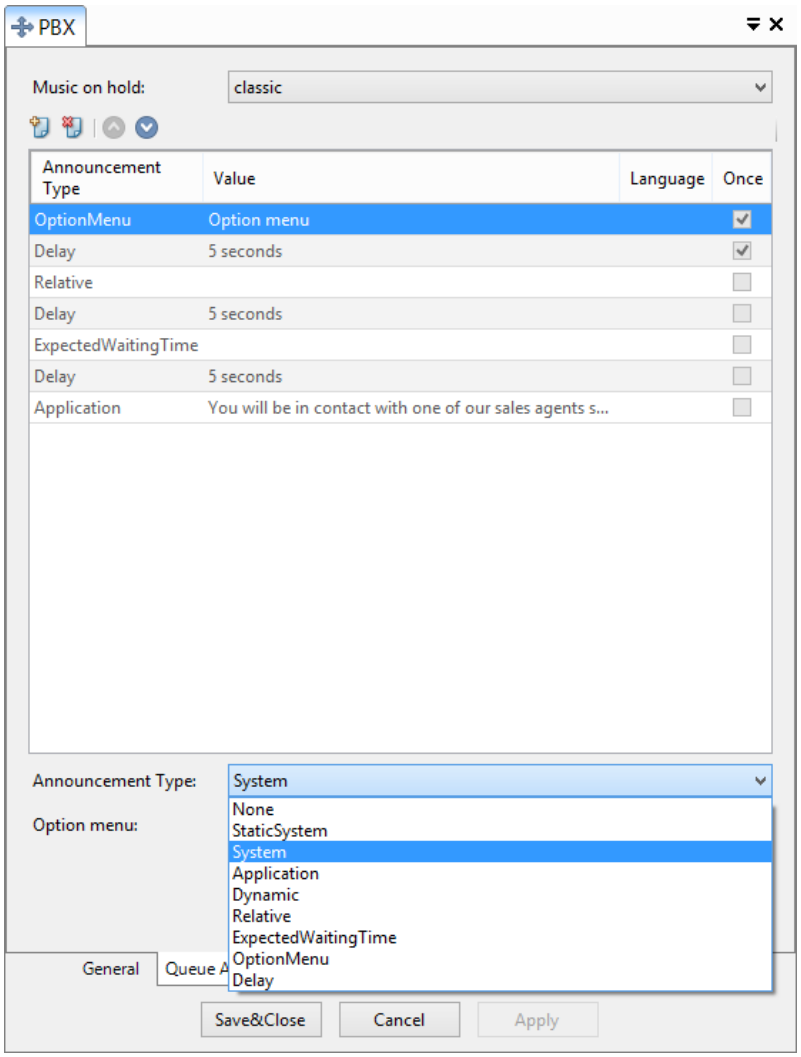


Figure 12-2 Router Queue Announcements

You can create new announcements by clicking the **New** button ( ) above the announcements table.

For each announcement, you can set the following properties:

Announcement type Defines the announcement type.

Following announcement types can be defined:
Static System: Callers get an announcement that they are queued. No information is given concerning the number of queued callers. It is a system prompt.
System: Callers get an announcement that can be selected from the system prompt list.
Application: Callers get an announcement that can be selected from the application (used defined) prompt list.
Dynamic: Callers get an announcement about what place in the queue the caller occupies.
Relative: Callers get an announcement regarding the position of the caller in the queue divided by the number of ready agents.
Relative messages tell the callers their position in the queue based on the number of active agents. For example, if there are 10 callers queued and there are 5 active

agents, then callers in queue positions 1-5 will hear the message “You are first in the queue”. Callers in queue positions 6-10 will hear a message informing them that they are second in the queue.
Expected waiting time: Callers get an announcement of the expected waiting time, such as “The expected waiting time is less than 1 minute”. The expected waiting time is calculated as a ‘running average’ in which the last five calls mainly determine the result. Be careful with the expected waiting time when the call duration varies a lot between consecutive calls. The result of the calculation can become unreliable is such cases, because the EWT is depending heavily on the call duration of the last received calls.
Option menu: When callers are queued, you can offer them a menu to leave a message or to ask to be called back etc. See Attendant Module for a complete overview of the option menu functions.
Select the “Option Menu” announcement type to offer the caller an option menu. Select the menu you want to play from the drop down list.
Delay: Finally between each of the previous announcement types it is possible to define a delay in seconds. By creating a separate item for the delay in the list, it is possible to insert different length delays between different announcement types. When the music on hold checkmark is marked, the defined MOH will be played during the delay.
Note: Not all items in the type list are strictly announcements, like delay and option menu.

Value: The actual prompt for System and Application types of announcements, the name of the option menu for option menu announcement type, the number of seconds for Delay, etc.

Language: Each announcement type can be played in any available language, except for the delay and the option menu.

Once: This checkmark determines whether the item is only played during the first cycle or when not checked during every cycle.
Note: after the first cycle, the loop continues at the first non Once option from the top of the list.

Every type of queue announcement, in every available language can be played either once or repeatedly during every cycle. A cycle consists of playing of the queue announcements from the first to the last position and then starts at the first position again. When the Once checkmark is marked, the item is only played during the first cycle.

The queue announcements are defined in an ordered list. You can reorder the announcements by using the buttons above the table ().

The expected waiting time announcements contain “The expected waiting time” is less than 1, 2, 3, 4, 5, 6, 8, 10 minute(s) and more than 10 minutes (system prompts 920…928).
For English-US extra values are available: “The expected waiting time” is less than 15, 20, 25, 30, 40, 50, 60 minutes and more than 1 hour (system prompts 929…936).
For other languages prompts 929…936 are also available but with the same text as prompt 928 (The expected waiting time is more than 10 minutes) they can be recorded if required.
Note: Make sure that the recorded system prompts are saved and copied to a save location because they can be overwritten (e.g. in case of an upgrade).

12.3. The Agent Routing Tab

In the Agent Routing tab, you will find options for configuring how a call is routed to an agent (how is an agent chosen, how will the call reach that agent and what happens when the agent is unexpectedly busy). In the Agent Routing tab, you see the following items:

(Route to) previously contacted agent:

Check this box if you want a caller to be connected to the same agent as the last time. This applies to voice-calls, web chats and chats via Social media. Note however, that it only applied when the same identifier is used. Both voice-calls and social media chats from Whatsapp and SMS are identified by a telephone-number, while web chats are identified by e-mail address. Twitter Direct messages, Facebook Messenger, Line messages or iMessage are identified by respectively Twitter ID, Facebook ID, Line ID and iMessage ID. So e.g. a previous web chat contact with a (current) voice-call contact will not result in the same agent.
When this check box is checked, the "If available within X seconds" and "if contacted in the last X days" fields will be enabled.

The value in the numeric up-down box "If available within X seconds" represents the number of seconds to wait for the agent to become available. If the number of seconds is set to 0 (the default value) BCT will not wait.

If the checkbox "If contacted in the last X days" is not checked, BCT will search through the entire history to determine the last agent contacted by the caller (if any). If it is checked, BCT will only search for the last contacted agent within the previous X days (90 by default). The numeric up-down box can contain any value between 1 and 365 days.

If the agent is not ready, or logged off, or there is no last contacted agent, the call will be routed to any other available agent. If the agent is ready but not free, BCT will wait for the agent to become free for a maximum of "If available within X seconds".

(Route to) Other agent if not available:

This option is valid in case the previously contacted agent is not available within the specified time.
If checked, the calls will be routed to another available agent.
If unchecked, the call will be sent to the "no agent" exception destination specified for this router.

Route to virtual agent

This option can be used when UIP integration is present in the system. By checking this flag an incoming web chat call will be offered first to a virtual agent if there is such an agent configured for the router. If this setting is checked but no UIP integration or no virtual agent present, the chat call will be routed to a regular agent after a 10 seconds delay.
Note that the 'Queue call' property of the router is also used for chat routing, so possibly an agent must be logged on (and a virtual agent does not count as a logged on agent).

Minimum Skill Score:

The minimum average score an agent must have on the requested skill(s) to be able to receive a call.

If the skill rating of agent X is below the minimum skill score, the call will not be routed to agent X.

There are exceptions on this rule. See chapter Skill Based Routing for detailed

information regarding skill based routing.

Controlled transfer to agent's phone:

The agent's phone starts ringing and the agent accepts the call by answering the phone. Answer detection is applied that might result in slight delays before a speech connection is established.
Mark the "Auto Answer"-check box if you want for all agents that BCT automatically answers (including outbound calls). By default, "Auto Answer" is not active.
"Auto Answer" only works for terminal types that support it!
You can define the ring time before auto answer in seconds. The default "Auto Answer Delay" is 0 seconds (direct answer).

Action if agent is unexpectedly found busy:

Although the system keeps track of agent status, a collision may occur when a call is routed to an agent. Normally, the system should register an agent as busy on the moment a busy situation is unexpectedly encountered. However, if the agent is a remote agent and busy because of a private call, he may never be 'released' again. Therefore, setting this agent 'Not ready' is a better solution.
Choose the appropriate radio button.

Forced Not Ready Time (seconds)

The time the agent has to answer a call from the start of ringing. If the agent does not answer within the defined time, the agent is switched 'Not ready' by the system. The agent will not receive routed calls until the agent switches 'Ready' again.

Reset FNR after (seconds)

You can arrange to have Forced Not Ready agents switched automatically back to Ready after a configurable time (in seconds).
Note 1: When this value is set to 0 seconds, the feature is not operational. Forced Not ready agents remain Not Ready.
Note 2: This feature also works in Operator Routers.

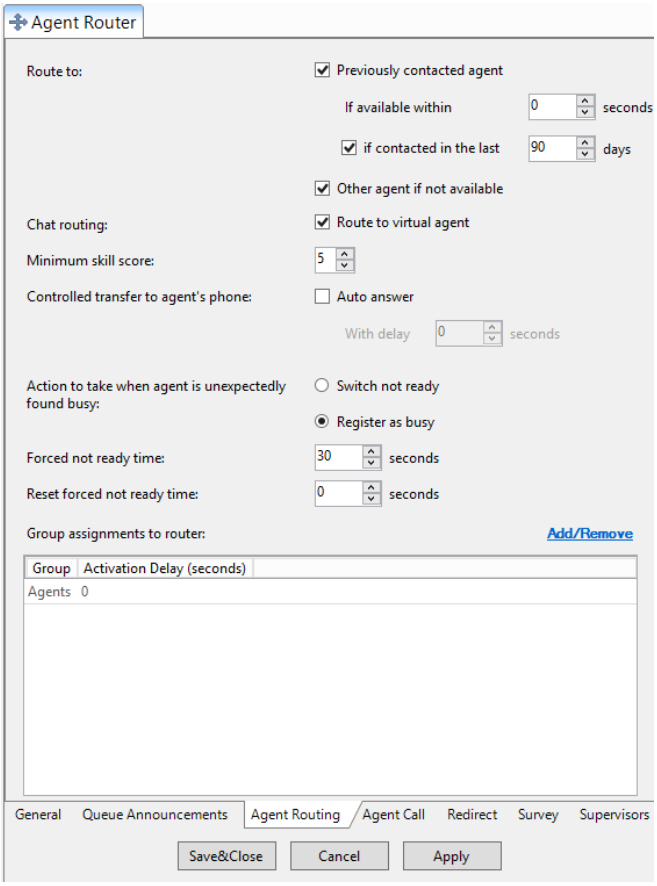


Figure 12-3 Router Agent Routing settings

In this tab you can configure the groups assigned to a router.

To edit group assignment to routers, click on 'Add/Remove' link label above the "Group Assignments to Router" grid. The interface will change and you will see two lists. The left list contains all the available groups. The right list contains the groups assigned to the router being edited. If the group you want to assign is not in the list of available groups, you have to first create the group. To assign a group to the router, select the group in the left grid and press the > button. You can assign multiple groups at once by multiple selection. Pressing the >> button assigns all groups (selected or not).

To remove router groups, select the group (or multiple groups) in the right grid and press the < button. Pressing the << button will remove all router groups, selected or not.

When you have finished assigning groups to the router press 'Done' link label.

The Activation delay determines when a group is used to receive calls.
In the previous window, all calls will be offered to the group 'Sales Team' without any delay (Activation delay is 0 seconds).
If all agents of the agent group 'Sales Team' are occupied and calls are in the queue for more than 20 seconds, also the agent group 'Support Team' will be used to handle the calls. It can take up to 10 seconds before the agent group 'Support Team' gets the call after these 20 seconds.
Make sure that the used "Activation Delay" is smaller or equal to the "Max queue time" (General tab of the router). If the "Max queue time" is less than the "Activation Delay", callers will be transferred to the "Queue timeout" exception exit instead of the second agent group.

If all agents of the agent group Sales are absent, the call is offered to the Support group immediately (without delay). If all agents of the Support group are busy, the call is queued.
If all agents of the agent group Sales are busy and all agents of the Support group are absent, then the call will never be offered to the Support group. The call goes to the first free agent of the first group.
If all agents of both agent groups are absent, then 'queue calls, always' will start, provided that this option is chosen.

12.4. The Agent Call Tab

In the Agent Call tab, you will find options for configuring what happens during and after a router call. In the Agent Call tab, you see the following items:

During routed calls: Show PID to agents	By default 'Show PID to agents' is not active. When active and an Identification module with a PID for its members precedes the agent router, the PID will be shown to agents. **Note:** This feature also works for operators in Operator Routers.
During routed calls: Show call history to agents	When active and the agent gets a routed voice call or chat, related voice call and chat history will be shown to the agent. By default 'Show call history to agents' is not active.
During routed call: Agents are allowed to enter call notes	When active, the 'Call notes' textbox will be shown to the agents and they will be able to enter call notes during the call or when in after call work time. By default 'Show call history to agents' is not active.
Last agent logging out: Show warning	By default, if the last agent connected to this router logs out, this agent gets a warning (only applicable for Desktop client and Agent App). If you don't want this, uncheck the box.
Call Type Selection: Mandatory	Check this box when it is mandatory for an agent to select a call type. • The agent will not receive new routed calls until a call type has been entered. • If no call types have been defined, then selecting a call type will not be mandatory. • Mandatory call types do not apply to operators. If call types are not mandatory, uncheck the box (default).
After Call Work Time:	The time the agents are allowed to finish of administration. No routed calls will be transferred to the agent before the After call work time is expired.

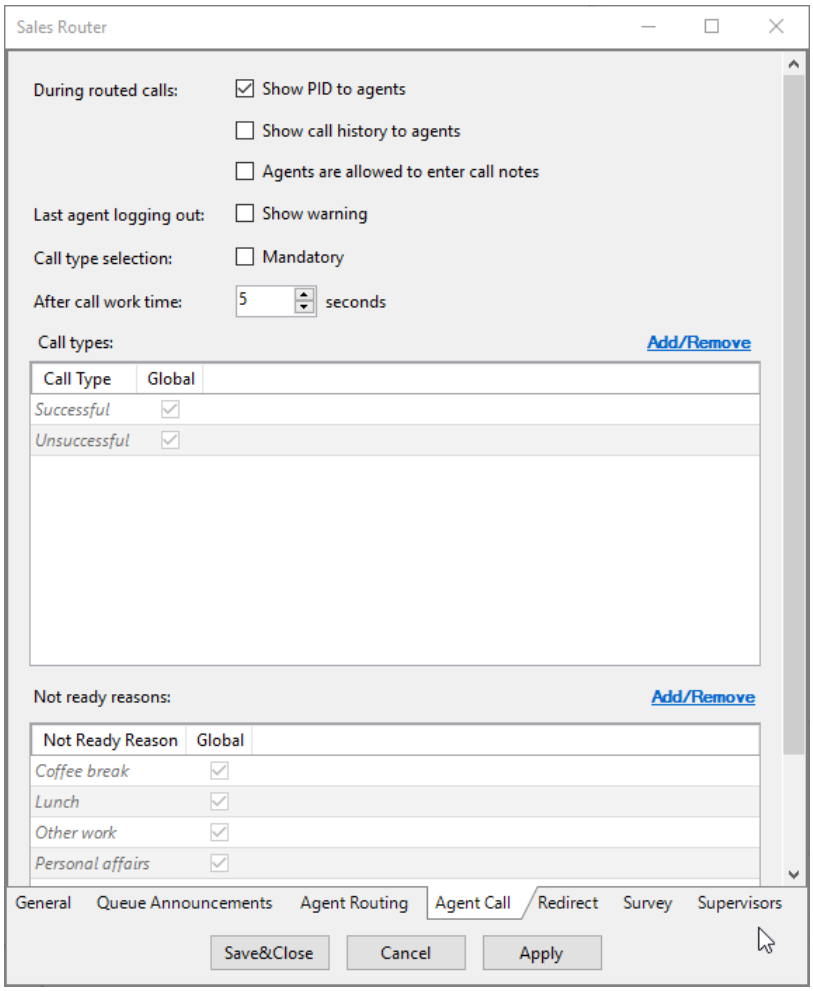


Figure 12-4 Router Agent Call settings

12.4.1. Assigning Call Types to a Router

To assign Call Types to the router, click on 'Add/Remove' link label above the Call Types grid. The interface will change and you will see two lists. The left list contains all the available Call Types. The right list contains the Call Types assigned to the router being edited. To assign a Call Types to the router, select the Call Type in the left grid and press the > button. You can assign multiple Call Types at once by multiple selection. Pressing the >> button assigns all Call Types (selected or not).

To remove router Call Types, select the Call Types (or multiple Call Types) in the right grid and press the < button. Pressing the << button will remove all Call Types, selected or not.

Some of the assigned Call Types are Global, meaning that they are applicable for all Routers. The Global items can be identified by the italic font style and they cannot be selected (there is no way to remove them from the Router, even if the << button is used, the Global items will not be removed).

When you have finished assigning Call Types to the router press 'Done' link label.

12.4.2. Assigning Not Ready Reasons to a Router

To assign Not Ready Reasons to the router, click on ‘Add/Remove’ link label above the Not Ready Reasons grid. The interface will change and you will see two lists. The left list contains all the available Not Ready Reasons. The right list contains the Not Ready Reasons assigned to the router being edited. To assign a Not Ready Reasons to the router, select the Not Ready Reasons in the left grid and press the 

button. You can assign multiple Not Ready Reasons at once by multiple selection. Pressing the 

button assigns all Not Ready Reasons (selected or not).

To remove router Not Ready Reasons, select the Not Ready Reasons (or multiple Not Ready Reasons) in the right grid and press the 

button. Pressing the 

button will remove all Not Ready Reasons, selected or not.

Some of the assigned Not Ready Reasons are Global, meaning that they are applicable for all Routers. The Global items can be identified by the italic font style and they cannot be selected (there is no way to remove them from the Router, even if the 

button is used, the Global items will not be removed).

When you have finished assigning Not Ready Reasons to the router press ‘Done’ link label.

12.5. The Redirect Tab

You can assign redirects to routers. These redirects are used to change the normal behavior for a router.

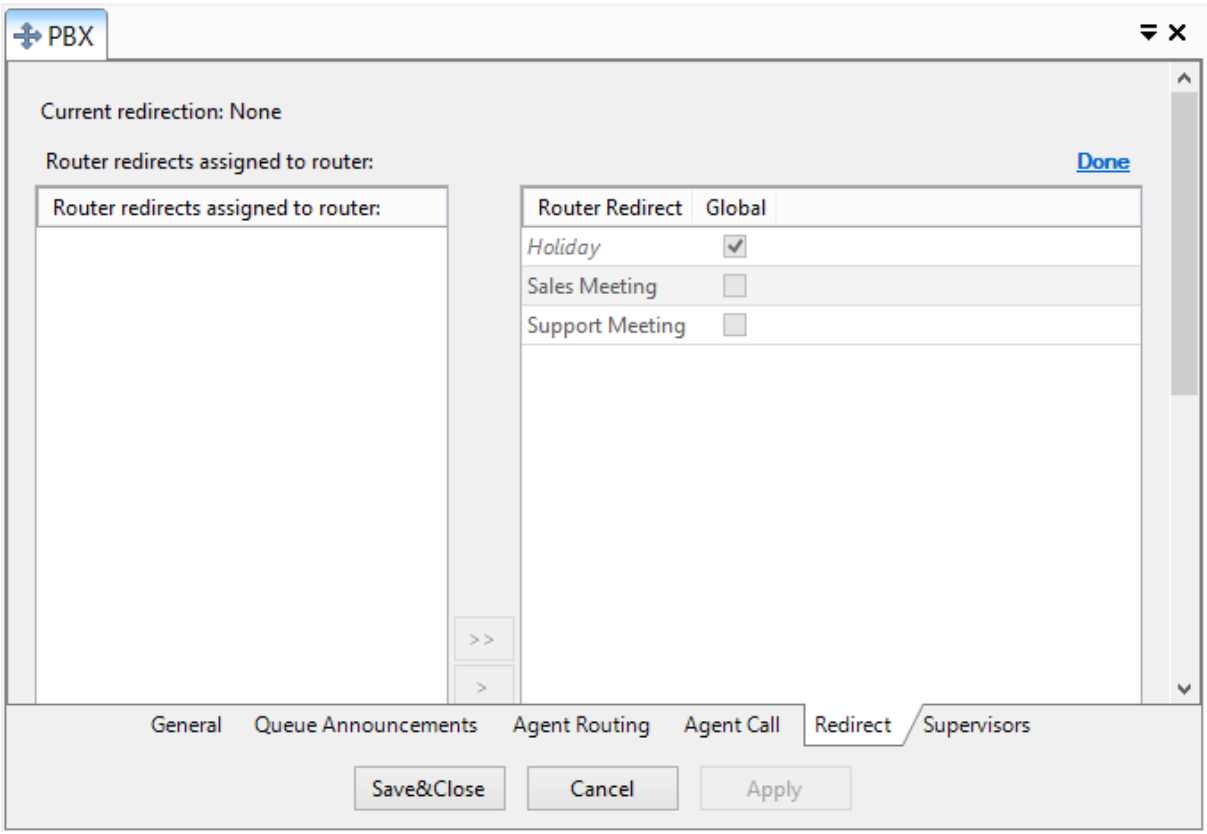


Figure 12-5 Router Redirects settings

To assign Router Redirects to the router, click on 'Add/Remove' link label above the Router Redirects grid. The interface will change and you will see two lists. The left list contains all the available Router Redirects. The right list contains the Router Redirects assigned to the router. To assign a Router Redirect to the router, select the Router redirect in the left grid and press the > button. You can assign multiple Router Redirects at once by multiple selection and press the > button. Pressing the >> button assigns all Router Redirects (selected or not).

To remove an assigned Router Redirect, select the Router Redirect (or multiple Router Redirects) in the right grid and press the < button. Pressing the << button will remove all Router Redirects, selected or not.

Some of the assigned Router Redirects are Global, meaning that they are applicable for all Routers. The Global items can be identified by the italic font style and they cannot be selected (there is no way to remove them from the Router, even if the << button is used, the Global items will not be removed).

When you have finished assigning Router Redirects to the router press 'Done' link label.

Note: *If a redirect is the current redirection for a router, a warning will be displayed when trying to remove this redirect.*

12.6. The Survey Tab

Use the Survey tab to assign a survey to a router and set some important aspects of a survey like survey activation, approval prompt and approval moment.

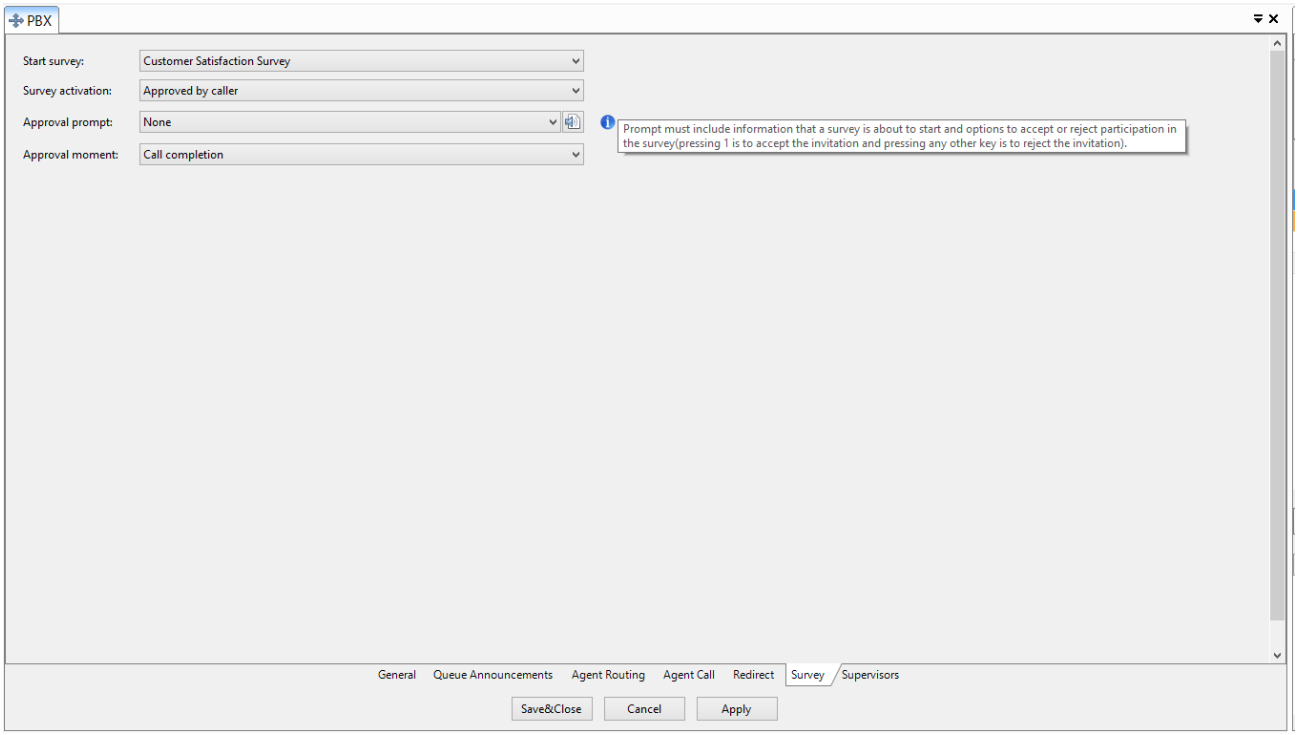


Figure 12-6 Survey Tab

When configured, incoming and outbound routed calls related to this router will make use of this survey.

In the Survey tab, you see the following items:

Start survey: The name of the survey you would like to assign to the router.

Survey activation: This defines the way in which a survey will start: 'Agent transfer' or 'Approved by caller'. When configured as 'Agent transfer' (the default), the agent is required to manually transfer the call to the survey starter line in order to start the survey. The approval prompt and approval moment play no role in this mode and therefore cannot be configured. When configured as 'Approved by caller' the survey will start when the agent ends the call with the agent application Call End button or manually transfers the call to the survey starter line. In this mode performing the survey is conditioned by the customer decision to accept or reject the survey upon the approval prompt.

Approval prompt: Select the prompt for the participation question (example "We would appreciate if you can help us improve our performance by answering a few questions. Please press 1 if you accept to take part to our survey"). Approval prompt should also include prompting of the caller for acceptance or rejection of the participation in the survey. To edit prompts, click on the prompts button ( ).

Approval moment: Select when the caller should accept or reject the survey participation. This can be:

- connect to agent - just before caller is connected to the agent
- queue arrival - when caller enters the router queue
- call completion - when the agent presses the Call End call button (or transfer the call to the starter line)

By default this is set to 'call completion'.

Note: *Approval moment of type "queue arrival" and "connect to agent" is not applicable to routed outbound calls. If configured so, the survey will only be played for incoming routed calls.*

12.7. Supervisors Tab

You can assign supervisors to routers. These supervisors are allowed to see information about this router.

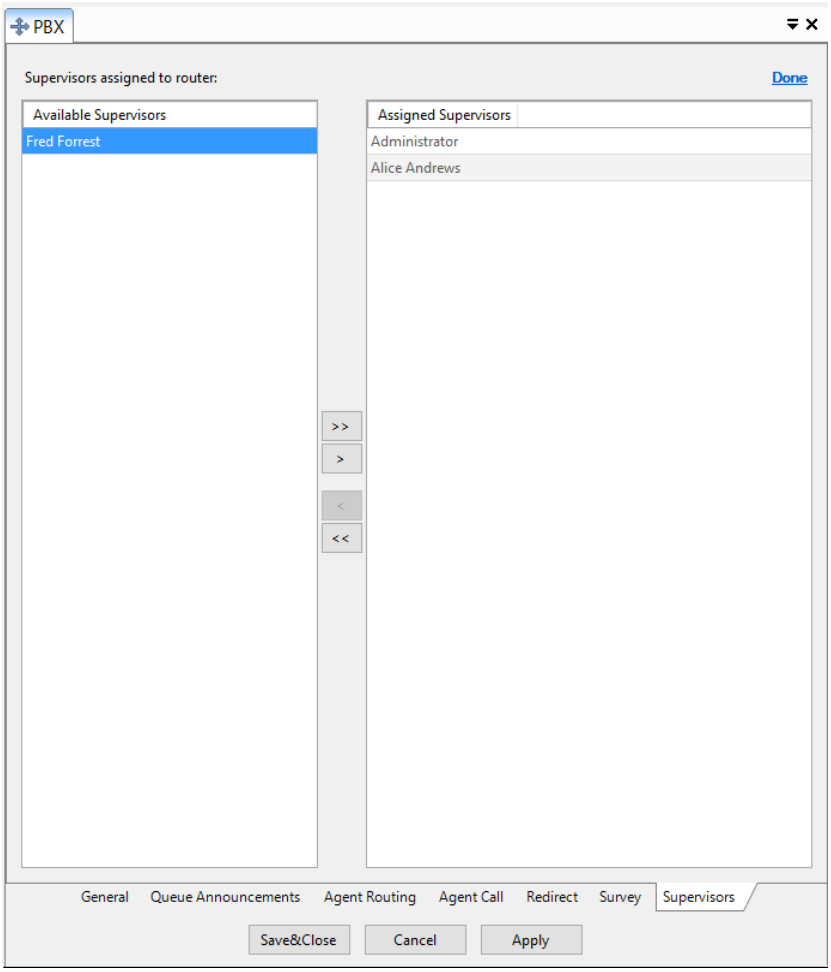


Figure 12-7 Router Supervisors

To assign supervisors to the router, click on 'Add/Remove' link label above the Supervisors Assigned to Router grid. The interface will change and you will see two lists. The left list contains all the availa-

ble supervisors (i.e users in your company directory that were marked as supervisors). The right list contains the supervisors assigned to the router being edited. To assign a supervisor to the router, select the supervisor in the left grid and press the > button. You can assign multiple supervisors at once by multiple selection. Pressing the >> button assigns all supervisors (selected or not).

To remove router supervisors, select the supervisor (or multiple supervisors) in the right grid and press the < button. Pressing the << button will remove all supervisors, selected or not.

When you have finished assigning supervisors to the router press 'Done' link label.

12.8. Routing Algorithm

Besides the general routing functionality (like skill-based, longest idle, previous Agent) there are also some dependencies related to routing various media. For voice-calls, web chats and emails (and some interactions), the next rules apply:

1. An Agent must be 'capable' of handling voice-calls and/or web chat and/or email. The 'simultaneous' property must have a value of 1 or higher, see Agents.
2. An Agent can have at most 1 voice call at a time.
3. The behavior of simultaneous voice calls and web chats is governed by the Agent properties "Allow voice call during a chat" and "Allow chat during a voice call".
4. Email routing does not depend on having a voice call or one or more web chats. Email is considered being a background task and is always routed to an agent when his capacity for email is not exceeded.
5. The setting 'Decrement the number of emails being handled by an agent after x minutes' (See Creating Email Rules) affects the actual number of emails being handled by an agent. In case an agent did not reply to an email within x minutes, this number is decremented by one. So in case an agent receives a spam message (or any other unwanted message he does not have to reply), after x minutes he will be able to receive one new message.
6. Picking up chat calls or emails from the agent visual queue will override the chat and email configured capacity.
7. To avoid that an agent gets 'busy' with only unwanted messages, the Supervisor is able to mark an email conversation as being handled using the Email monitor. (See the BCT Supervisor Guide for details)

12.8.1. Using a Starter or Router for Web chat/Social media

A starter or router can also be exclusively used to route web chats (or social media) to agents, but can also be combined used to route also voice calls and/or emails as well. But different from routing voice calls, routing web chats can only be embedded in a call flow starter module.

There are some differences with routing web chats compared to routing voice calls:

- A starter must have a "Next Module" and the type of module can only be "Router"
- A router or starter configured as Operator Queue cannot be used to route web chats.
- When using a starter, agent skills, priority and alternate language can be used to route web chats.
- Router exceptions do not cause a transfer to a next call flow module, but result in an error message that is sent to the user. The error messages are system prompts:
    - General Exception: No Agent ➔ System prompt 622.

    - Queue Exception: Full ➔ System prompt 623.
    - Queue Exception: Abort ➔ This exception is in fact “Abort when no answer” and it is not used for web chat.
    - Queue Exception: Time Out ➔ System prompt 624.
- Chat accept prompt (620)
  Shown when the Agent has accepted the chat.
  This Prompt will not be used for Virtual Agents, will only be shown when an Agent has accepted the chat.
- Queue Announcements configured for the router are not used for web chats. For queued web chats the announcements are fixed: initially system prompt 500 is sent to the user and thereafter every 5 seconds one of the system prompts 501-510 to notify the user about the current queue position. A queue-position prompt is not repeated when the queue position has not changed. Queue announcements (501-510) will not be given to social media chats.

When using a starter, prompts configured in the starter (e.g. welcome, next module) will be sent to the user when the chat is accepted.

A Chat Welcome Prompt can be configured on the General tab page of the Router properties pane. This prompt will be sent to the user when the chat is accepted by the router and will be queued.

12.8.2. Using a Router for Email

A router can also be exclusively used to route email messages to agents, but can also be combined used to route also voice calls and/or web chats as well. But different from routing voice calls, routing web chats cannot yet be embedded in a call flow.

There are some differences with routing emails compared to routing other kinds of calls:

- Agent skills are not used to route emails.
- Router exceptions do not cause a transfer to a next call flow module, but result in the email remaining ‘pending’ to be routed to an agent (when available again).
- Queue Announcements configured for the router are not used for email-messages.

13. Message box Module

Note: *The Message box module requires an IVR line.*
Note: *The Message box module cannot be used if an external Voicemail System is configured. See BCT Installation Guide chapter Server Configuration/Generic Configuration/Miscellaneous point 6. For use of the external voicemail system as exception destination, use the Transfer Module.*

The Message box module gives callers the opportunity to leave a message. Reasons why you could use a message box:

- destination for exception handling in a router;
- when the contact center is called outside office hours;
- one of the menu items in an attendant;
- for an agent or group of agents.

A general message box is created with the BCT Configurator, in the same way a user is added to the system. The role which is assigned to this user is “Allow user to use voicemail”.

When a message box is used as an escape from a router (exception handling) only the basic functionality will be used. If the caller that is redirected to the message box leaves a message, a notification is sent to an available agent (agent must be assigned to the router) that there is a message. The agent can read out the message box and take further action. It is possible to read out the voicemail box, to rerecord the greeting and to change the pin code when the agent's phone is used.

When a message box is configured as mailbox for agents (or other employees) of the contact center, the full message box functionality can be used (see BCT SmartClient).

It is possible that some extension numbers or other items in a message box appear as font type bold. This indicates that these settings are restricted in the message box profile.

BCT users can define their own general voicemail settings.

To view the Message Boxes, open the Call Flow section of the Navigation Panel and expand Messageboxes node. As already mentioned, you cannot create or delete messageboxes. To edit the properties of a messagebox, right click the messagebox and select **Edit** from the context menu.

13.1. Message box General Tab

Select the **General** tab and you see the following window:

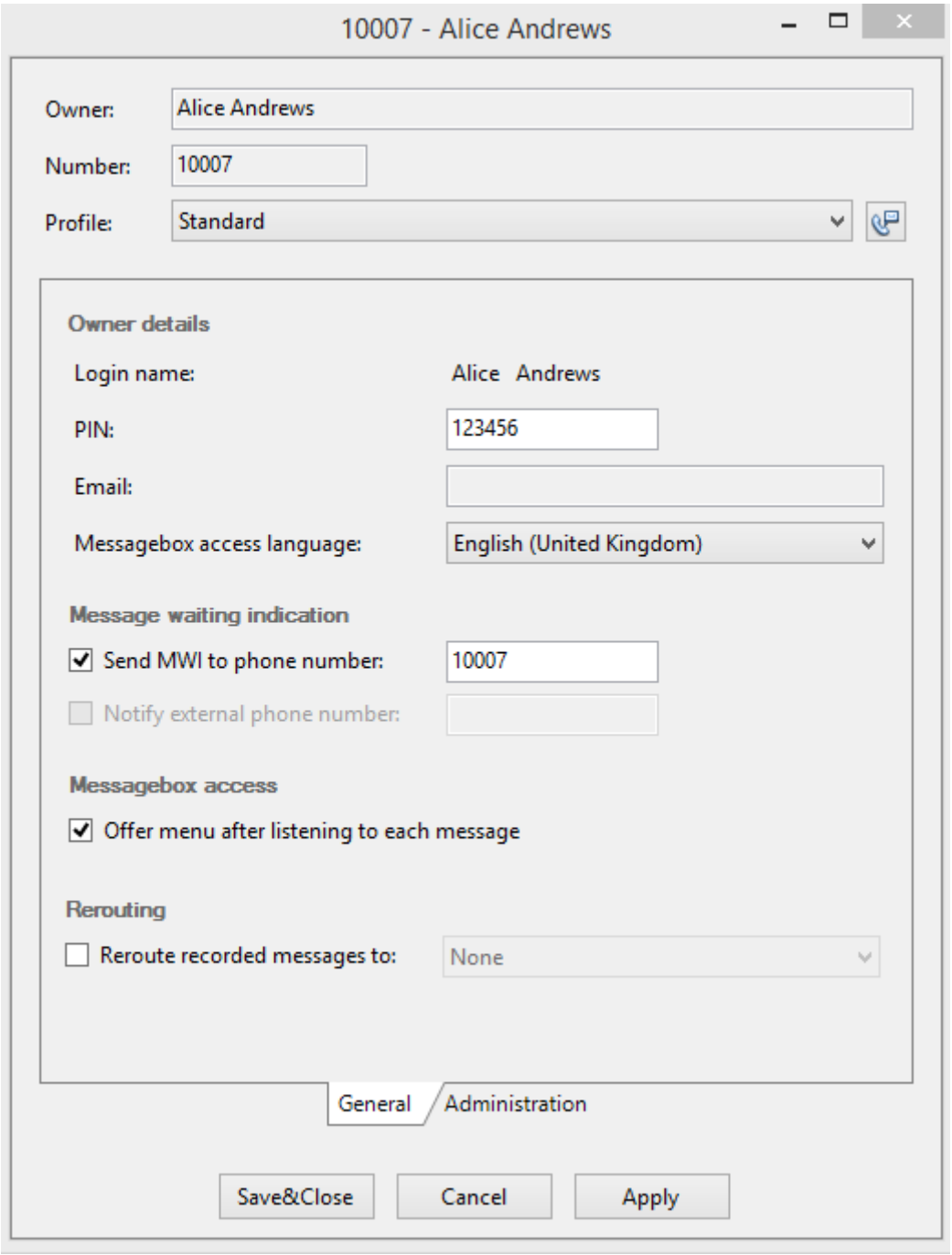


Figure 13-1 General tab of message box module pane

Owner: The full name of the owner (readonly).

Number: Phone number (readonly).

Profile: Select a Profile here. For more information on how to create Profiles, see Section Message box Profile. To edit the selected profile, click the button next to the drop down list.

Login name: The login name of the owner (readonly).

PIN: Enter the Pin code to be used for voicemail and / or Agent by Phone

	login. Without the Pin code the user cannot access his messagebox from any telephone other than his/her own phone. 0-6 digits, must be unique.
Email:	The email address of the owner.
Message box access language:	Represents the prompt language used by the system during message-box access.
Send WMI to phone number:	Enter the extension number of the telephone to which the MWI must be sent.
Notify external phone number:	Enter the external number to which the MWI must be sent. If this field is disabled, you must mark the “External notification” check box in the Message box Profile pane.
Offer menu after listening to each message:	When checked (Default): when the telephony user interface is used to listen to the recorded voice messages a menu is offered after a mes-sage is played. With this menu it is possible to repeat the message or to play the next message.
Reroute recorded messages to:	Select the router (from the drop down list) to which you want to re-route the call.

13.2. Message box Administration Tab

Select the **Administration** tab and you see the following window:

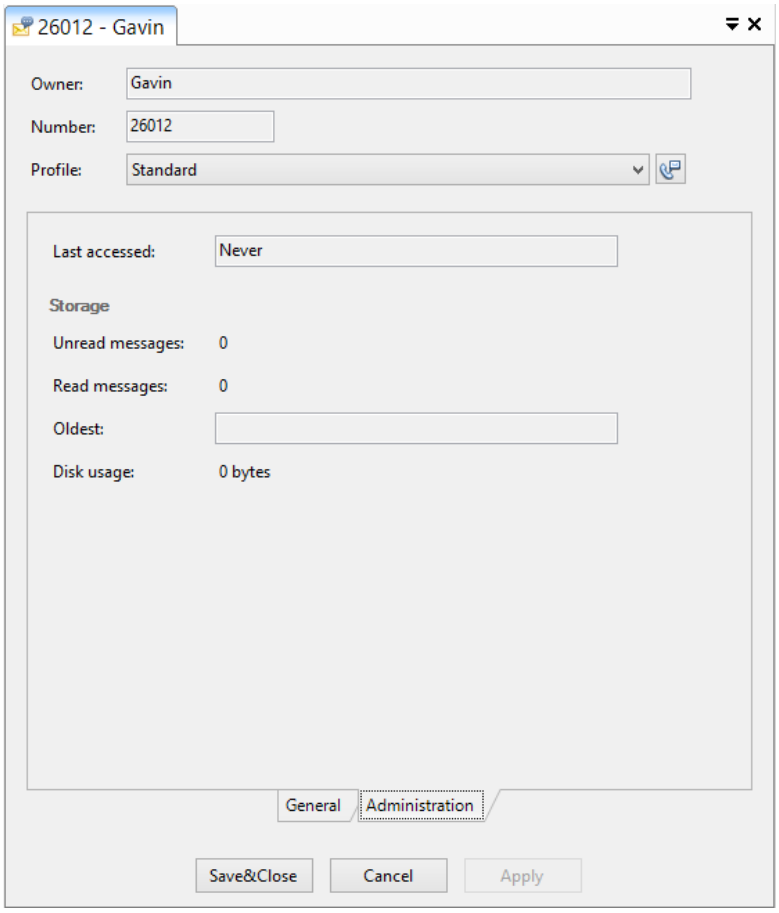


Figure 13-2 Administration tab of message box module pane

Last accessed:	Last time the message box was accessed by users or owners.
Nbr. of unread messages:	The amount of unread messages in the mailbox.
Nbr. of read messages:	The amount of read messages in the mailbox.
Oldest:	Timestamp of the oldest message.
Disk usage in bytes:	The amount of data in the mailbox.

14. Identification Group Module

Note: *The PID identification within the Identification module requires an IVR line.*

The Identification module is used to identify callers by information stored in a database. Callers identified by this module can be routed to specific modules. Conversely, you may use the identification module to exclude callers from certain services.

Example: A multinational technical company has offices all over the world. The technical helpdesk offers support for all ICT related problems that occur. Per office, the company would like to keep track of the number of calls that are made to the international helpdesk. Also the information of the caller must be displayed on the agent's screen. For each office a group of callers is defined which are allowed to call the international helpdesk. These callers are entered in the identification module. Per office one description is used. The result is that in reporting, every call can be traced back and the agents are informed by the identity of the caller and from which office the caller is making the call.

Other examples are: to offer better service to paying customers and free basic service. Or to differ between known callers and new callers.

Identification can be done via the following methods:

- **CLI - The Calling Line Identity**
  Store the caller's telephone number in the database. When calls from that number are received, they will be associated with that caller. Screen based agents can see all information related to that caller. The caller's telephone number must be in Standard Telephone Number Format.
  It is allowed to use a wildcard in the CLI. The character for a wildcard is a "*". This makes it possible to identify a caller on the first part of the CLI. This is useful if you would like to route calls on country or area code.
- **Called number**
  (Also referred to as the DNIS.) If you set up a "special" number for callers from a certain organization, any call arriving on that number is from that organization. They can then be treated accordingly. The called telephone number must be in Standard Telephone Number Format.
- **PID - A Personal Identity**
  A unique "PIN" number that the callers key in to prove their identity. This way of identification is used to offer special service to a specific group of customers. Also used by service personal calling from various locations and extensions.
- **PID with confirmation**
  This is a variation on the PID personal identification. The starting point is the same. After the PID is entered, the caller must confirm the entered PIN.

By identifying callers it is possible to provide an additional degree of service. Callers who have been identified:

- Have their name and details displayed on the agent's screen.
- May be directed to a branch of the "call flow" offering a service especially created for their needs. Such a service may include customized prompts (for example "Safe and Sure welcomes you to the Gold Service assistance point").
- May have priority assigned to their call, so they are placed higher in any queue.

The list of Identification Groups already created can be seen by opening the Call Flow section of the Navigation Panel and expanding the Identification Groups node. You can edit or delete an existing group by right click on it and select **Edit** or **Delete** from the context menu.

To create a new identification group, right click on Identification Groups and select **New**, or on an existing node and select **Duplicate.**

The identification module enables you to:
- Add members to the identification list (including personal data).
- Define the type of identification used.
- Define the module to which their call is routed.
- Define the prompts that they hear while interacting with this module.

14.1. Identification Group General Tab

Select the **General** tab and you see the following window:

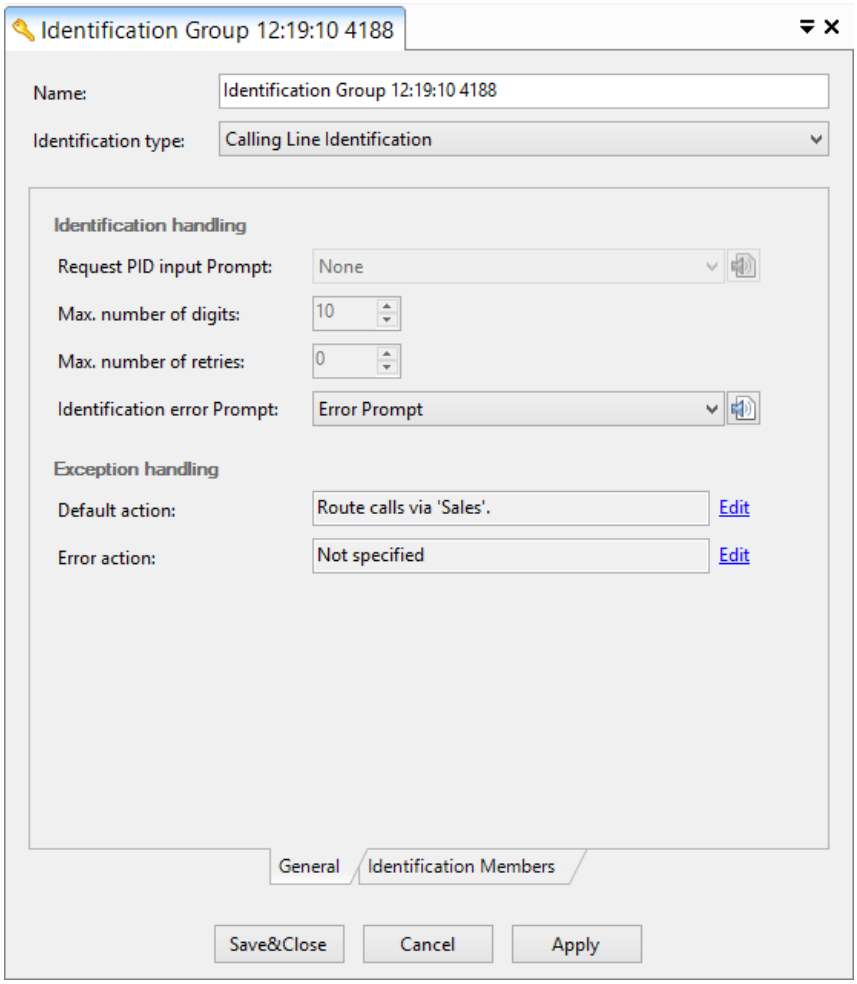


Figure 14-1 Identification Group General Tab

The following items are available in the General Tab:

- **Name**
  Enter an understandable name for the identification module.
- **Identification type**
  How the caller is recognized. This can be by:
  - CLI - The Calling Line Identity
  - Called number
  - PID - A Personal Identity

- PID with confirmation

- **Identification Handling**
  If the identification types PID or PID with confirmation is used, you should enter the following information:
  - **Request PID input Prompt**
    This prompt will be played when the caller enters the identification module. Example is: “Please enter your personal registration number and end with a Hash”. If the caller ends with the hash key, the system will process the input at that moment. When the hash key is not pressed, the system will wait 20 seconds and process the information after the 20 seconds are expired.
  - **Max. number of digits**
    This is the maximum number of digits that can be used for the PID.
  - **Max. number of retries**
    Maximum number of times the caller can enter the PID in case of entering the wrong one. The number specified is the number of retries after the first attempt. If the caller exceeds the value specified as maximum, the caller will be routed to the destination specified as Error action in the Exception handling area.
  - **Identification error Prompt**
    This prompt will be played after the caller entered a wrong PID.
- **Exception handling**
  There are two types of exception:
  - **Default action**: When a caller reaches the identification module and the caller is identified but no next module or action is selected, the caller will be routed to the destination entered as Default action.
  - **Error action**: If the caller exceeds the value specified as Max. Number of retries, or no match is found, the caller will be routed to the destination specified as Error action.

14.2. Identification Group Identification Members Tab

From here you can manage the members from the identification group. You can create, edit or delete a member or you can import them manually or automatically. Furthermore, from this tab you have the possibility of exporting the existing member of a group.

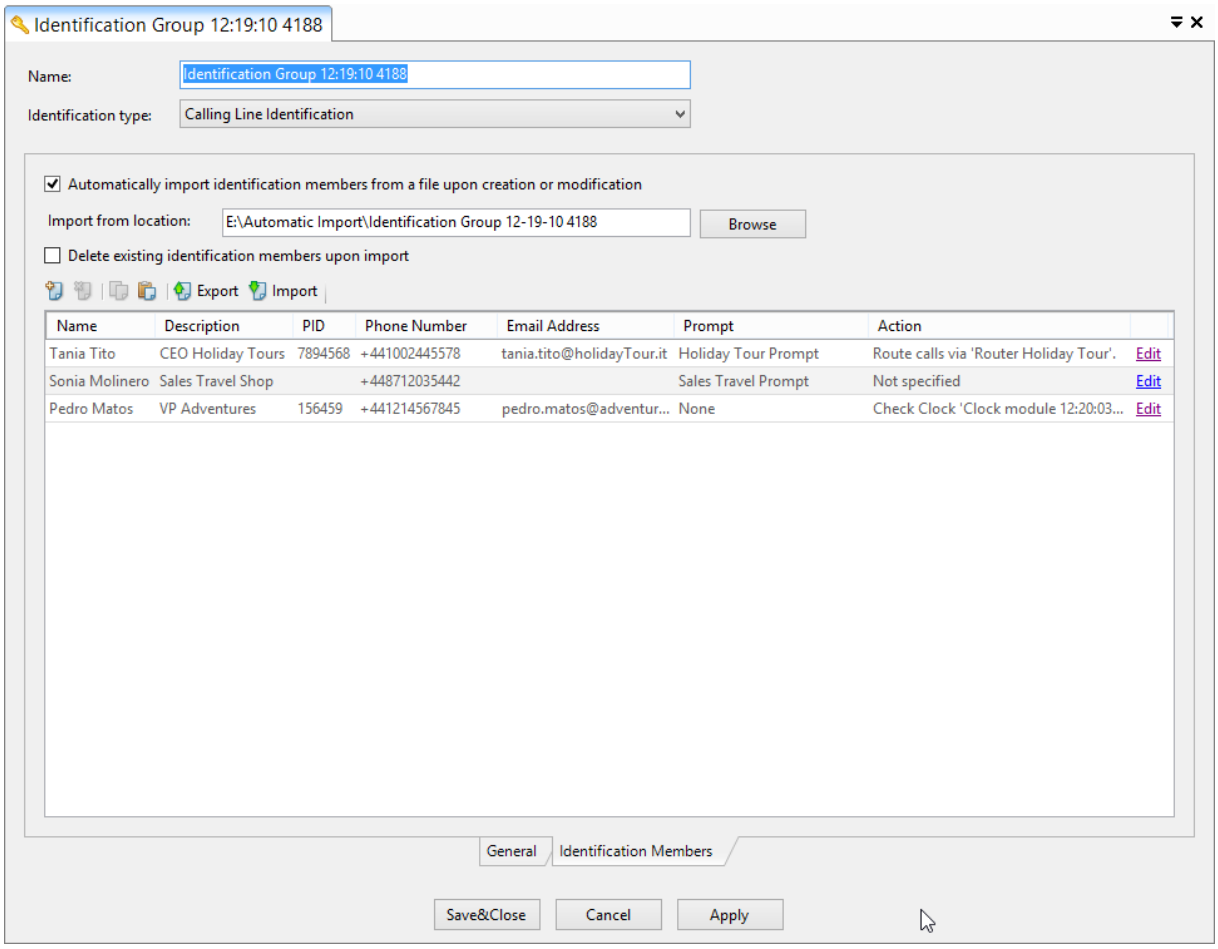


Figure 14-2 Identification Group Identification Members Tab

In the Identification Members Tab you can see the following items:

- **Automatically import identification members from a file upon creation or modification**
  Check the box if you want to enable and select a folder where new identification data will be exported by external applications. See Automatic Data Import.
- **Delete existing identification members upon import**
  Check the box if you want to delete all existing identification members before the actual import of new identification members is executed.

At this moment the general identification settings are set for the created identification module. The following step is to create members. For members the following settings are available:

- **Name**
  Enter the name of the caller. This field can also be used if a group of callers needs to be identified. In that case the name of the group or service can be entered.
- **Description**
  The description is an information field that appears on the screen of the agent that receives the

call. Descriptions may be type of user, organization, status or any other description that helps the agent to assist the caller.

- **PID**
  If PID identification is used a PID must be entered for each member .
- **Phone Number**
  When the CLI is used as identification, the system will use this number as reference. This number must be in Standard Telephone Number Format.
- **Email Address**
  An Email address of the member can be entered. This Email address will be displayed on the agent's screen.
- **Prompt**
  For each member a dedicated prompt can be recorded and played to the member after the member is identified by the system.
- **Action**
  It specifies how the identification member is routed to the next destination. You can change or add the next destination details by clicking the 'Edit' link button. This will open another window which looks like the one from the image below:

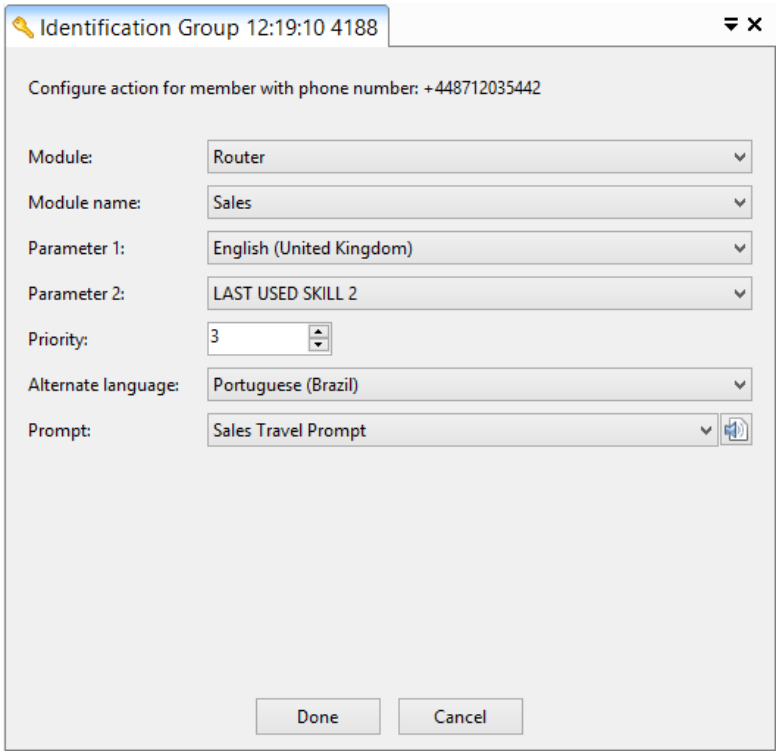


Figure 14-3 Identification Group Configure Action Window

The following routing parameters are available:

- **Module**
- **Module name**
- **Parameter 1**
- **Parameter 2**
- **Priority**
- **Alternate language**
- **Prompt**

The routing parameters are discussed in great detail in chapter Linking Modules. Please refer to that section for more information

There are three ways to create members:

1. You can create members manually by entering them one by one in the member area of the Identification module. Click the **Create New Identification Member** image button on top of the grid and simply enter the information in the fields. The changes will be persisted after clicking Apply or Save&Close buttons.
2. You can import members via a Microsoft Excel/ Comma Separated Values/ Text file. If a large number of members need to be created, it is better to use the import/export tool.
3. You can automatically import contacts after you enable the feature by checking the "Automatically import identification members from a file upon creation or modification" box and selecting a custom folder for adding the Microsoft Excel (only with **.xls** format)/ Comma Separated Values/ Text files to be imported.

14.2.1. Manually Importing and Exporting

You can import and export Identification Group data into Microsoft Excel/ Comma Separated Values/ Text file. If you plan to use this facility, it is a good idea to export an Identification Group list in the desired format. This will create a file in the correct format, containing all the headings.
The import and export buttons can be found in the Identification Group Identification Members tab, see Figure 14-2 Identification Group Identification Members Tab.

Note: If you leave the Priority field empty, it will get the value 1, which means that other calls routed with priority will always be handled first.
Note: Telephone numbers should be in Standard Telephone Number Format.
Note: When trying to import a Microsoft Excel file, make sure that it is not open.

Exporting Identification Members

You have to open the Identification Group you wish to export and click on the Export button. A Windows explorer dialog box is displayed. Choose the format of the export file and specify the location to which you want the data exported. When you click OK an Exporting**…** progress circle is displayed until the export is finished. When the export is done, the Identification Members grid will be visible again.

Importing Identification Members

To import data, open the identification group into which you want to import the information and click the Import button. A Windows File open dialog box is displayed, from which you will choose the import file.

Make sure that the selected file contains a cultural sensitive header and at least one line of data. For getting the correct header you can make an export and take the header from the generated file.

An import file has to include the mandatory columns (Personal ID/Phone Number, depending on the identification type), the rest of the columns being optional.

For the CSV and text files, all columns have to be separated by a comma/ semicolon/ pipe/ <TAB>. If the value of a column includes the used separator, the value has to be enclosed by double quotes.

In case the “Delete existing identification members upon import” box is checked, then, before the actual import is executed, all existing members will be deleted.

When you click OK**,** an Importing**…** circle progress bar is displayed as long as the import is performing. After the import finishes, the identification members grid is displayed instead of the progress bar, including also the members from the file. If there is invalid data in the import file, when trying to save the changes, validation bullets will be displayed in front of each grid row that contains errors. For more details about the error you can move the mouse over the red bullet and read the

details from the tooltip. Saving the members will not be possible until all errors are corrected.

When importing an identification member file, there can be 3 scenarios:

- Importing a member that doesn't exist in the group (there is no member in the group with that Personal ID/Phone Number depending on the identification type). For each of these items, a new row will be created in the grid, containing the data from the file. The validation is performed when trying to save the changes.
- A member from the file has the exact data as one from the grid. In this case, the imported member is ignored so that no duplicates will be added.
- A member in the importing file has the same value for the mandatory column (Personal ID/ Phone Number) as one from the grid. A window to solve the collision will be offered, giving the possibility to overwrite or to keep the old data. The window offers the possibility to handle all collisions in the same way, by checking the 'Do this for all conflicts' checkbox.

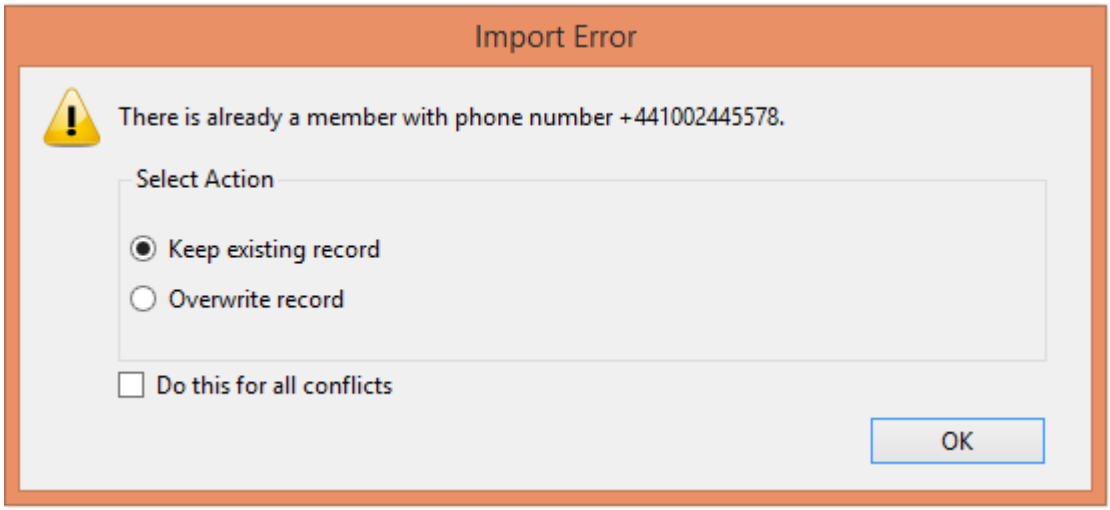


Figure 14-4 Identification Group Import Collision Window

Note: *There is no cancel possibility during import*

Note*: If you want to change the import file, copy it first to a location other than the import folder, update it, and then copy it back to the import folder. This prevents interference with BCT using the file simultaneously.*

14.2.2. Automatic Data Import

If the "Automatically import identification members from a file upon creation or modification" box has been checked (see Figure 14-2 Identification Group Identification Members Tab) you can enter or select a folder where the import file will be added.

In case the "Delete existing identification members upon import" box is checked, then, before the actual import is executed, all existing members will be deleted.

Note: *Automatic import is only supported for files with a ".xls" extension, the format of such identification data file(s) should be the same as for manual import.*
Import will happen automatically when a file is updated or added in that folder or after saving the import location for a group, if the folder already contains a file. The Identification Import Handler will automatically start processing it, and import contacts as Identification Members to the Identification Group for which this option was enabled.

Note: *Only English column names are supported.*
Mandatory column: "Personal ID" for identification group type PID or "Telephone" for identification group type CLI
Optional columns: "Personal ID", "Name", "Description", "Telephone", "Email", "Prompt", "Module", "Instance", "Param1", "Param2", "Priority", "Language".

Note: *The result of the import will not be visible unless the window is refreshed by reopening it.*

Note*: Make sure the file is not open while the automatic import is performing.*

Note*: The location should be accessible from the BCT server using the specified path.*

Note*: It is not allowed to set the same import folder for multiple groups. This is because the contacts will be imported to all the identification Groups that have that location configured.*

Note*: For network locations take the following into consideration:*

The Local System account on the BCT Server (that identifies as the computer it is running on) needs the necessary permissions (file read access and register file watches) to the network share. The permissions are used by the NEC UCSRuntime Service that hosts the Identification Import Handler.

The following settings in [Control Panel\Administrative Tools] Local Security Policy\Local Policies\Security Options\ might help:

On the BCT server:
Network security: Allow Local System to use computer identity for NTLM
And on the computer hosting the network share:
Network access: Let Everyone permissions apply to anonymous users

Note: *If the network share location is not accessible from the BCT Server you can also consider configuring the share for anonymous access.*

The following settings in [Control Panel\Administrative Tools] Local Security Policy\Local Policies\Security Options\ might help:

On the computer hosting the network share:
Accounts: Guest account status
Network access: Restrict anonymous access to Named Pipes and Shares
Network access: Shares that can be accessed anonymously

If there were validation warnings and/ or errors at the time of import, the error button will be enabled. The error button has the icon adapted to the severity of all errors. The *Warning* icon means only warnings. The *Error* icon is displayed when there is at least one error in the list. Click it to see the errors (Figure 14-5 Identification Group Automatic Import Errors Window). The following window appears:

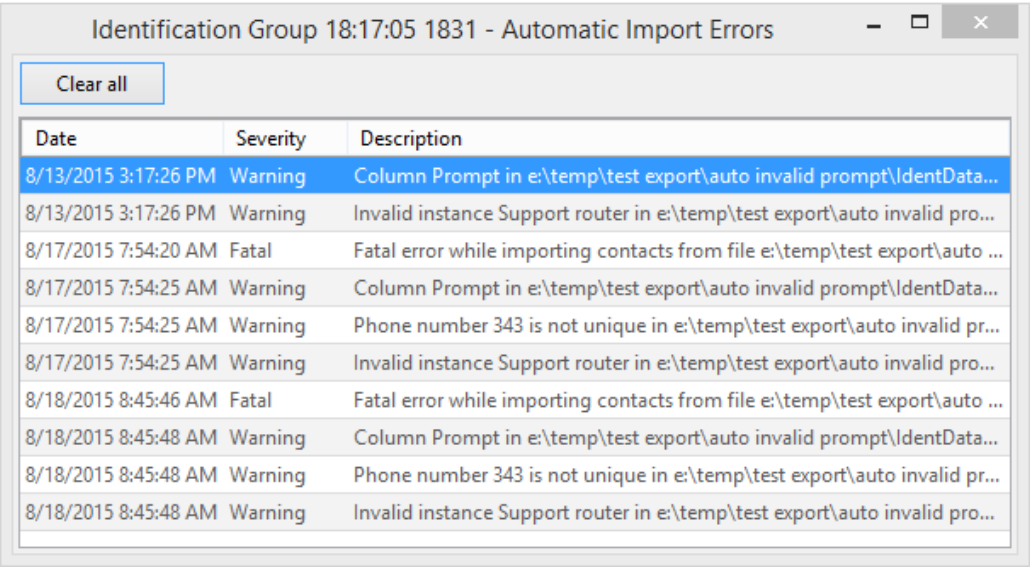


Figure 14-5 Identification Group Automatic Import Errors Window

Use the Clear All button to clear all the errors that occurred up to that moment on importing data for the current identification group. A message box asking for confirmation will be displayed: 'Do you want to delete all errors?.' Press "Yes" to confirm or "No" to cancel the operation.

The following error messages might be met in this window:

Severity	Meaning	Result
Fatal	Critical error occurred on importing from the file. The error cause can be related to an invalid or corrupted file, to a file that has improper settings (i.e. the mandatory columns are not filled in), no data or even to an application bug (the details can be seen in Diag@Net).	No contact has been imported.
Error	The contact has invalid but required data	The contact has been skipped and the import continues.
Warning	The imported contact has some invalid or duplicated data.	The contact has been imported and requires user intervention in order to maintain a healthy system.

14.2.3. Copy to Clipboard and Paste from Clipboard

Copy data to Clipboard

When one or more rows from the grid are selected, press Ctrl-C or use the Copy to Clipboard button from the top of the grid in order to add data of the selected members to the clipboard. The header will also be added, before the first row.

Paste data from Clipboard

When having identification members data in clipboard, press Ctrl-V or use the Paste from Clipboard

button in order to add the data to the grid.

The data for each column in the clipboard has to be separated by <TAB>.

The header is not mandatory. If the header is present, all the not mandatory columns may be missing. If the header is not present, all the columns must be added in the clipboard and they will be copied in the grid in the order they appear in the clipboard, one by one.

If members with duplicate PID/ Phone number are found, the same import collision window from the import will be displayed (see Figure 14-4 Identification Group Import Collision Window).

14.2.4. Validation rules for identification members

There are validation rules applied for all four options of creating identification members (manual entry, manual import, automatic import and paste from clipboard):

CLI/DNIS/PID are mandatory dependent on the Identification type

Identification Type	Validation rule
PID entered by caller *PID + confirmation to caller*	PID is mandatory
Calling Line Identification *Called Number*	CLI/DNIS (telephone number) is mandatory

- The contacts with empty CLI/DNIS/PID are not added in the database when doing an automatic import and for the other three options, the member will be added in the grid but saving is not allowed until a valid value is provided.

CLI/DNIS/PID are unique dependent on the Identification type

Identification Type	Validation rule
PID entered by caller *PID + confirmation to caller*	PID must be unique
Calling Line Identification *Called Number*	CLI/DNIS (telephone number) must be unique

- When manually creating contacts, the ones with duplicated CLI/DNIS/PID will not be saved. The manual import and copy from clipboard will ask if you want to overwrite. The prompted window will let you choose if you want to keep the first member or update it with the second's data.
- The automatic import will overwrite the existing record and will generate warning.

Module Type and Module Name should be valid

Module Type and Module Name are not mandatory but, when filled in, this should contain valid data. The automatic import will save the contact and will generate a warning. All the other import methods will add a row in the grid for this member but will display 'INVALID LINK' text in the correspond-

ing column. Saving the new data will not be allowed, the user being informed of this through the error bullets displayed at the beginning of the rows with invalid data.

Prompt value should be valid

If the provided value for prompt is invalid, the member will still be added in the grid, but 'INVALID PROMPT' text is displayed in the corresponding cell and saving is not allowed until a valid data is added.

Phone numbers should be valid

The value provided for phone number should be in Standard Telephone Number Format, otherwise the data will not be saved. Error bullets with details about the cause will be displayed at the beginning of the rows with invalid data.

PID value should be valid

The allowed characters for the PID value are 0-9 and *.

Consecutive Identification Modules

When in a call-flow consecutive Identification modules are configured, empty parameter values from PID, description and email address, will not overwrite values gained from a previous identification module.

15. Survey Module

Note: *The Survey module requires 'Post Call Survey' license and an IVR line.*
Without 'Post Call Survey' license it is still possible to configure surveys, but it's not possible to transfer a call to the survey.

The Survey module is used to create a customer survey for different purposes (example: customer satisfaction, product review). Every survey has a number of questions and each question has one or more answers depending on question's type.

Example:

- Question with multiple answer: Was your call answered quickly? For yes press 1 and for no press 2

- Question with one answer: Please provide your membership number.

There are guidelines regarding the best way of offering a survey. This is called Telephony User Interface (TUI). The following list can be used as a guide line to create and configure a survey. Be aware that this list does not pretend to be complete, hopefully it helps to setup a user friendly survey. The number of questions, answers and the use of prompts highly depend on the nature of a contact center.

- Record all prompts with the same voice. Different voice types in one survey will not sound professional.
- Do not speak too fast.
- Offer in every question the possibility to repeat the choices.
- Always end the answer with the digit that should be pressed. "For sales, press 1" and not "Press 1 for sales". Callers will remember the digits that should be pressed better when the digit is the last part of the answer.
- Do not offer more than 5 choices in a question.

To open the Surveys pane select Call Flow section of Navigation Panel, expand Surveys node and double click on a survey.

To create a new survey, right click the Surveys node and select **New** from the context menu. To duplicate a survey, right click an existing survey and select **Duplicate** from the context menu.

The following pane will open:

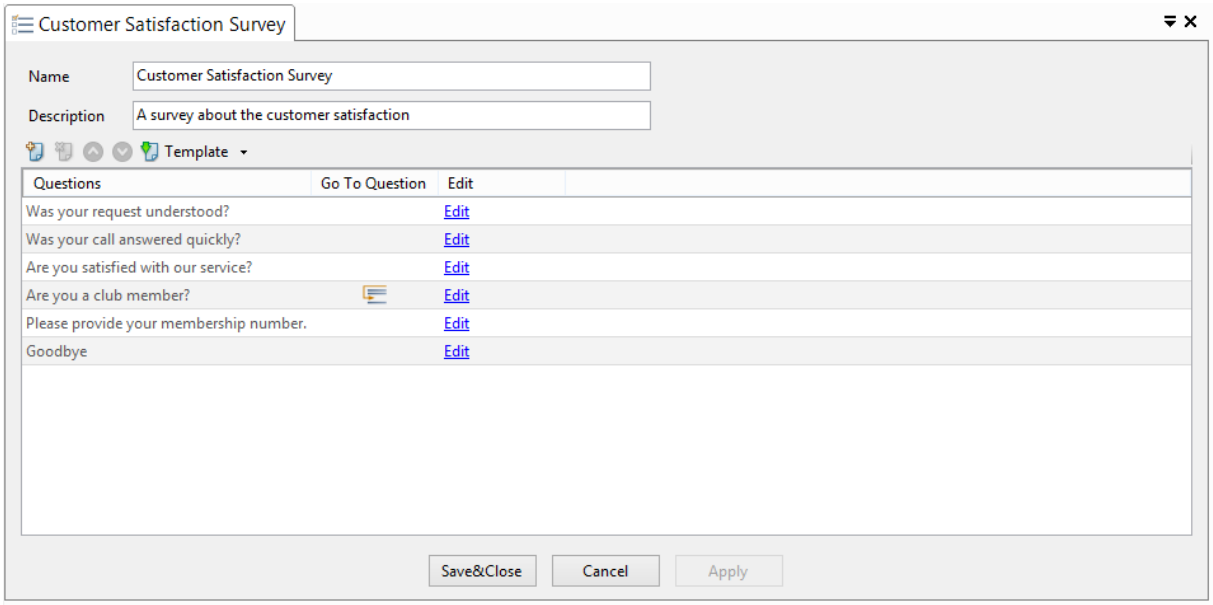


Figure 15-1 Survey pane, new survey

The following options can be edited:

Name A unique name for this Question Template.

Description A short description of this Survey

Every survey can have a number of questions. To create a new question, click in the **New** button ( ) above the table. A new line will be added to the table and you will be able to edit the properties of that question.

The following columns can be viewed in the table:

Questions: A short name for that question. This property can be edited in the table

Go to question: When a question has answers that have action 'Go to question' then this column will display an icon suggestion that at least one answer of the question can skip questions in the survey and jump to other question. The tooltip for this icon will display a list will all the answers that are jumping and the question to jump to.

Edit: A link to edit that question.

Another option to create a question is to use the **template button** (Template). When you click on this button a list with all *configured template questions* will be shown. You can choose one question and it will be added to table. After that you can edit all properties for this question.

Questions are played in the order they are displayed on the screen. You can re-arrange this order by using the up and down arrow buttons above the table ( ). Select a question and then use the up and down arrow to move an item up or down the list.

To remove a question, click on that line so it is highlighted and click **Delete** button above the table ( ). You can also remove a question by right click it in the grid and select **Delete** from the context menu.

To edit a question click on the link from the edit column. The following pane will open:

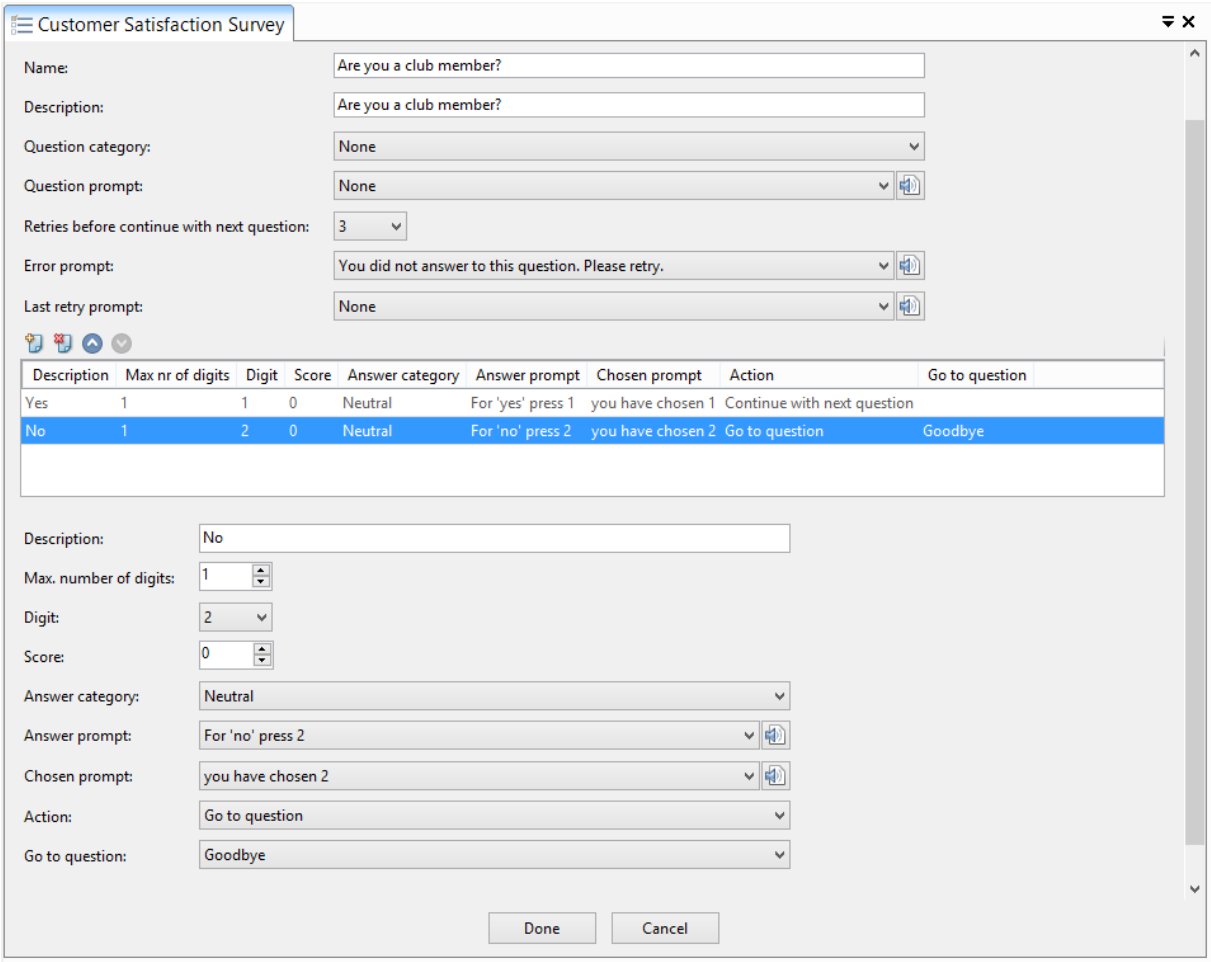


Figure 15-2 Edit question pane

The pane is divided into two parts:

- The upper part displays general question parameters.
- The lower part displays the configuration of the answers.

The general part contains the following parameters:

Name:	The name of the question. Enter an understandable name.
Description:	A short description of the question.
Question category:	A category for the question.
Question prompt:	The prompt that is played to ask the question.
Retries before continue with next question:	The number of times the caller is given the opportunity to answer the question. Default is 3. If you choose '0' for this property, the 'Last retry prompt' will be disabled.
Error prompt:	The prompt which is played when no answer is given.
Last retry prompt:	This prompt is played when the caller has only one retry left. It

should warn the caller that this will be the last chance to give an answer.

Each answer is listed as one line in the lower part of the main option window.

To create a new answer, click in the **New** button () above the answers table. A new line will be added to the table and you will be able to edit the properties of that answer below the table. To edit an existing answer, click on the line in table so that it is highlighted.

Each line has the following parameters:

Description:	Enter a descriptive name for the answer.
Max. number of digits:	The maximum number of digits that the caller can provide. If this number is higher than 1 then this answer should be the only one answer for this question.
Digit:	Select the digit that callers must press to select the answer.
Score:	This is a value range from 0 to 100. Score is used for reporting.
Answer category:	A category for this answer.
Answer prompt:	The prompt that is played to ask the answer.
Chosen prompt:	The chosen prompt informs the caller, which selection is made.
Action:	Specify the action when the caller selects this item. This could be 'Continue with next question' or 'Go to question'. For 'Go to question' item
Go to question:	Offers the possibility to link a question to another question. When the selected action is 'Go to question' this dropdown is enabled and you can choose a question where the caller should be redirected if he choose this answer.

Answers are played in the order they are defined on the screen. You can re arrange this order by using the up and down arrows above the table (). Select an answer and then use the up and down arrows to move an item up or down the list.

To remove an answer, click on that line so it is highlighted and click **Delete** button above the table (). You can also remove an answer by right click it in the grid and select **Delete** from the context menu.

16. Outbound Services Module

Note: *The Outbound Services module requires an IVR line.*

The outbound Service Module can be used to setup automatically generated outbound calls or announcements.

The BCT contact center part can not only be used as inbound contact center, with the Outbound Service Module, also automatic outbound calls can be generated.

The difference between inbound and outbound is that inbound contact centers mainly handle calls made to the contact center, examples are helpdesk, info center, etc. An outbound contact center's main task is dialing to contacts outside the contact center, examples are commercial contact centers, gathering statistical data etc.

An outbound contact center uses a database and the Outbound Service Module to dial out to the people that must be contacted. The contact information (name, address phone number etc.) is entered in the database. After the outbound service is created, the outbound service must be started. From this moment on the system automatically dials the contacts that are entered in the database for this particular outbound service. Note that the agents are not dialing the contacts but this is done for them by the outbound service dialer.

Routing outbound calls to agents can be based on skills, similar to inbound call routing. See Do's and Don'ts in Call Flows for more details.

There are two types of outbound services:

- **System Created Outbound Service**
  For the following modules, outbound services are created automatically when the system needs them in a call flow:
  - Message box
  - For every message box, the system creates an outbound service to inform the message box owner that there are messages left by callers.
  - Option menu
  - A caller can ask for a call back via an option menu. The system will create an outbound service to start the call back requests.
- **User Created Outbound Service**
  A user created outbound service is created to reach a predefined number of contacts for a particular reason. For example to promote a new product.
  A user created outbound service will use the agents from a router, selected during the creation of the outbound service.
  There are two types of dialing possible to reach a contact:
  - Power dialing
    The contact is called first by the outbound service. When the contact answers the phone, a greeting prompt is played. BCT attempts to contact an agent from the selected router. The contact's details are displayed on the agent's screen and the agent can answer the call.
  - Preview dialing
    The agent is contacted first and a prompt informs the agent that this is an outbound call. Details of the contact to be called are displayed on the agent's screen. When the agent accepts the call, the contact's phone starts ringing. When the contact answers the phone, an agent is ready to talk.

It is also possible to send a message to a number of predefined contacts. This feature can be used, for example, to inform a number of contacts that a new brochure is available, the ordered package is

delivered, or any other message that you would like to send to a group of contacts.

To view already created outbound services, open the Call Flow section from the Navigation Panel, expand the Outbound Services node and then the System-defined or the User-defined node, depending on which ones you wish to view. You can edit or delete an existing service by right click on it and select **Edit** or **Delete** from the context menu. To create a new User-defined outbound service, right click on the User-defined outbound Service node or on a User-defined outbound service and select **New**. To duplicate a User-defined outbound service, right click on an existing node and select **Duplicate**.

16.1. Outbound Service General Tab

When creating a new outbound service, or editing an existing one, the following window is displayed (both actions are done from the same window).

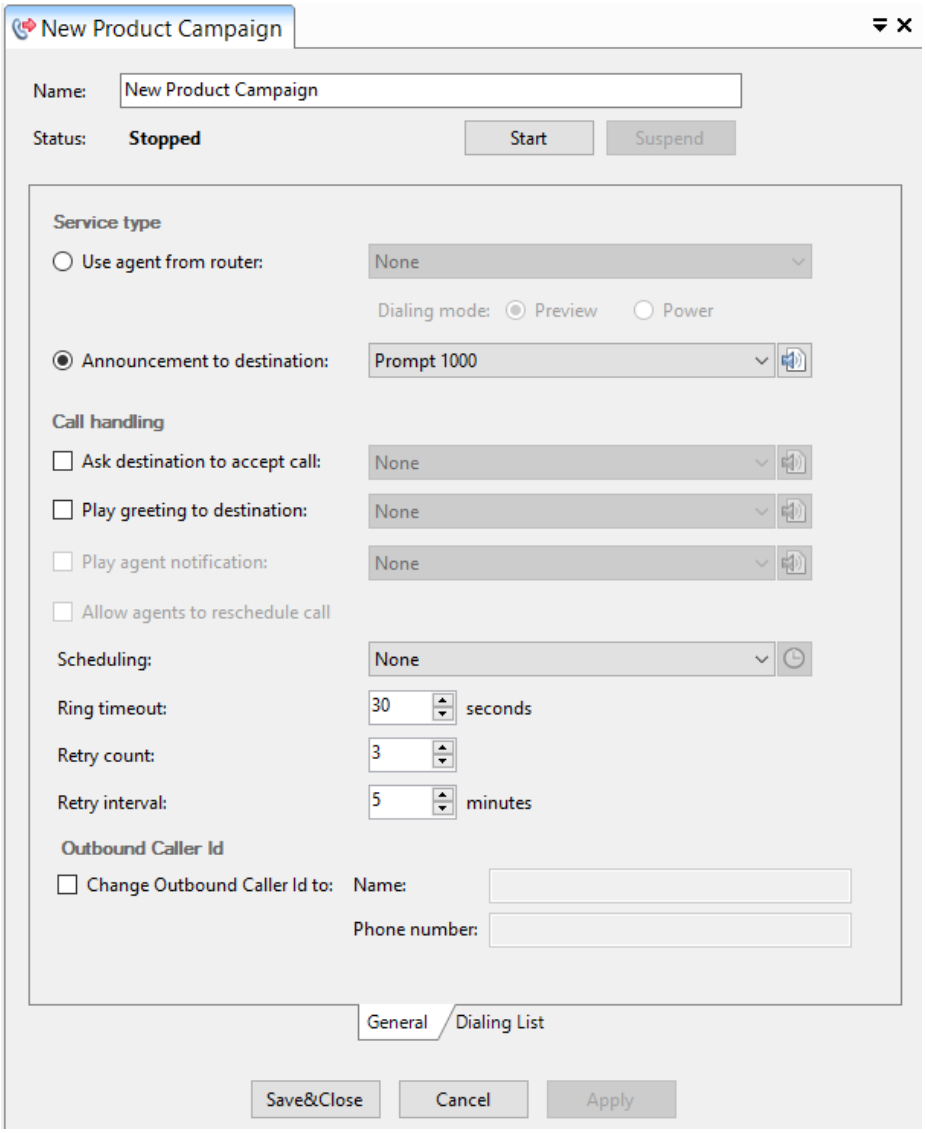


Figure 16-1 Outbound service general tab

In the general tab you can enter the required information. Depending on the outbound configuration, some of the fields may not be used.

- **Name**

Enter an understandable name for the outbound service.

- **Service Type**
  There are two service types.
  - If the outbound service is used to reach contacts via an outbound service, then select 'Use agent from router' and select a router from the pull down menu.
    - Select 'Preview' if the agent must be called first. After the agent has answered the call, the contact will be dialed. The prompt selected from the 'Agent Notification' field is played, informing the agent that this is an automatic outbound call.
    - Select 'Power' if the contact must be dialed first. The prompt selected from the 'Greeting to Destination' field is played first. After the contact has answered the call, an agent will be dialed.
  - If you want to send a recorded announcement to a number of contacts, then select 'Announcement to Destination' and select the required prompt from the pull down list.
- **Ask Destination to Accept Call**
  Ask Destination to Accept Call can only be used in combination with "power dial". When an outbound service is started in power dial mode, the contact is called first. The contact can reject the call by pressing a *. The contact can accept the call by pressing any other key. In that case an agent will be contacted. When the contact presses a * the connection is cleared.
  Record a prompt that informs the contact about these options, e.g. "press any key to accept this call or press * to reject the call". Select this recorded prompt as 'Ask Destination to Accept Call' prompt. Before this prompt, the contact will hear the prompt, which is selected in the 'Greeting to Destination' field. An example may be "This is an automatic generated call".
- **Greeting to Destination / Agent notification**
  The prompts are available dependent on the selected configuration.
  For 'Announcement to Destination' the prompt that was selected in the Greeting to Destination field is played to the contact.
  For 'Use agent from router' prompts can be selected for both Greeting to Destination and Agent Notification. Outbound calls performed via power dial will first play the prompt that was selected in the 'Greeting to Destination' field to the contact. Next, after agent answers the call the prompt that was selected in the 'Agent Notification' field is played to the agent. Outbound calls performed via preview dial will first play the prompt that was selected in the 'Agent Notification' field to the agent. Next, after contact answers the call the prompt that was selected in the 'Greeting to Destination' field is played to the contact. Both situations must inform the called person that this is an automatic generated outbound call.
- **Allow agents to reschedule call**

  The rescheduling option is only available for 'Use agent from router' and 'Reroute voicemail message to' types of services. It allows the agents receiving the routed calls to register a scheduled callback, based on information provided by the customer.

  More details about this setting are described in the Rescheduling a Routed Call chapter.
- **Scheduling**

  By selecting a clock module you can specify scheduling hours intervals. To edit the clock module, press the edit button 

  More details about this setting are described in the Starting, Stopping, Suspending and Resuming a Service chapter.

Note: *Pay attention when you use this clock together with "Select business hours from" clock from the corresponding option menu (see Configuring the Option Menu). In this case it is recommended to use the same clock in both places to avoid scenarios like: Customer dials in, chooses to be called back later, selects 16:00 as available time (allowed by Business Hours clock), but the*

callback outbound service does not execute the callback because 16:00 is out of range for its Scheduling clock.

- **Ring time out**
  The number of seconds the outbound service is waiting for a connection when a contact is called.
- **Retry count**
  The number of attempts the system tries to call a contact from the contact list.
- **Retry interval**
  The number of minutes between every attempt.
- **Outbound Caller Id**
  The Outbound Caller Id area is only shown when supported by the connected PBX. A checked Change Outbound Caller Id with a filled in Name and Phone number can be selected by an agent of this router. The Phone Number format must be in accordance of the rules of the PSTN provider, to get a proper representation to the called customer.

At this moment the outbound service is configured. The next step is entering contact information.

Note: *It is possible to use copy/paste to create a new Outbound Service (Only User Services). The contact information is not copied.*

16.2. Outbound Service Dialing List tab

After an outbound service is created, contact information must be entered. All contacts that are entered for an outbound service will be used to perform outbound calls.

Select the **Dialing List** tab (see Figure 16-2 Dialing List tab - contact information). The following window is displayed.

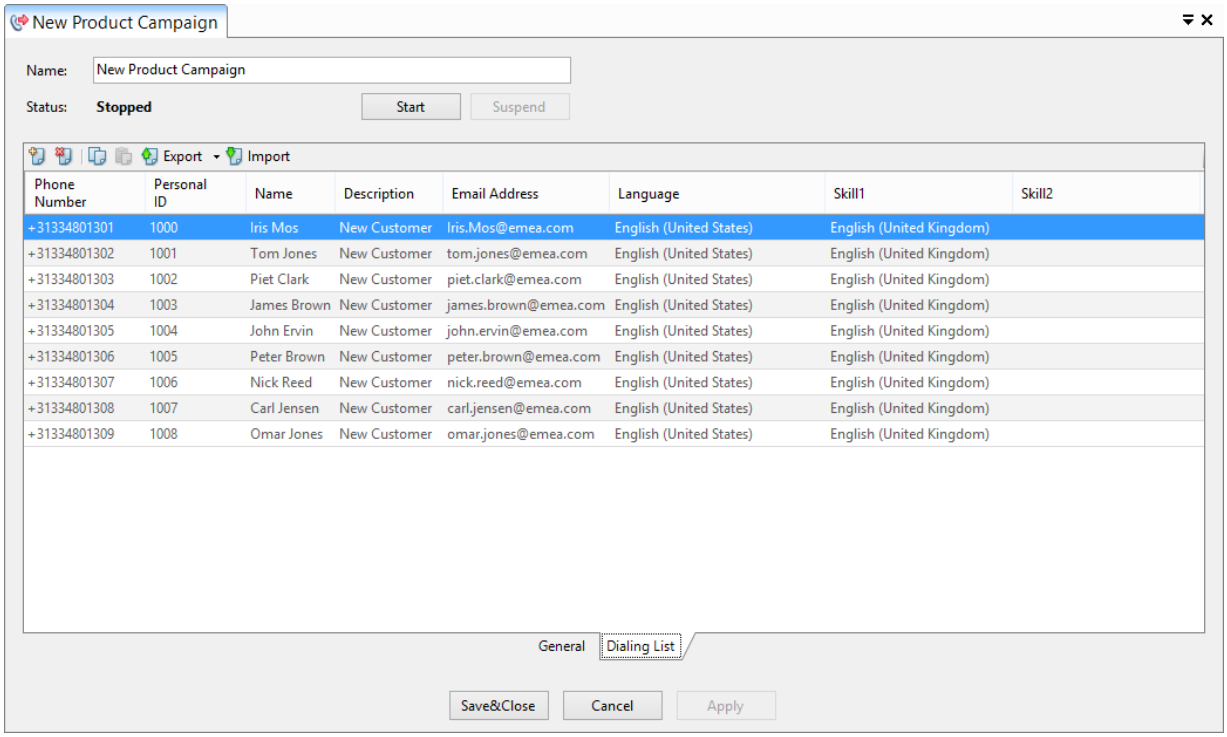


Figure 16-2 Dialing List tab - contact information

Each line represents a contact. The outbound service will try to setup a call to all contacts entered in

the contact list.

The following information can be entered for a contact:

- **Telephone**
  The number that is used by the outbound service to dial the contact. This number should be in Standard Telephone Number Format (like +31334801303). (if you don't use the standard format, then make sure that the number does not include an outside access code).
- **Personal ID**
  A contact registration number that may be used for contact identification. If this number is entered for the created contacts it appears on the agent's screen.
- **Name**
  Name of the contact as displayed on the agent's screen.
- **Description**
  A description can be used to mark a contact with specific information. Examples are: new contact, known contact, contact location or department etc. This information is displayed on the agent's screen.
- **Email Address**
  The entered Email address of the contact appears on the agent's screen.
- **Language**
  The language is used to select the correct prompts that are played during the outbound session.
- **Skill1**
  First agent skill to take into account for outbound call routing. See also Skill Based Routing With One Skill.
- **Skill2**
  Second agent skill to take into account for outbound call routing. See also Skill Based Routing With Two Skills.

Contact information can be entered one by one. If a large number of contacts needs to be entered you can also perform an import.

16.2.1. Importing and Exporting

You can import and export Outbound service data into Microsoft Excel/ Comma Separated Values/ Text file. If you plan to use this facility, it is a good idea to export an Outbound Service Dialing list in the desired format. This will create a file in the correct format, containing all the headings.
The import and export buttons can be found in the Identification Outbound Service Dialing List tab, see Figure 16-2 Dialing List tab - contact information.

Note: *Telephone numbers should be in Standard Telephone Number Format.*

Note*: When trying to import a Microsoft Excel file, make sure that it is not open.*

16.2.1.1. Exporting Contact Information

You have to go to the Dialing List tab of the Outbound Service you want to export. At the top of the grid, notice that the export button is a dropdown button which lets you choose which jobs to export:

- All Jobs(default)
- Completed Jobs

- Incomplete Jobs

This can be seen in Figure 16-3 Outbound Service export options.

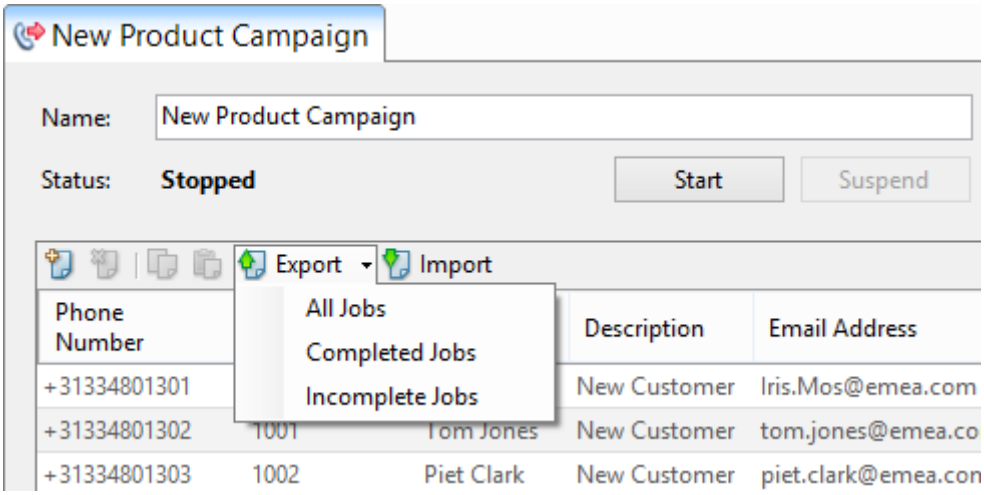


Figure 16-3 Outbound Service export options

Once an export option is clicked a Windows explorer dialog box is displayed. Choose the format of the export file and specify the location to which you want the data exported. The name of the file is "Joblist_<outbound service name>_<export option>.xls", where <outbound service name> is the name of the outbound service that is used to create the export file, and <export option> can be “All”, “Completed” or “Incomplete”, depending on the type of export chosen. When the OK button is clicked, a progress circle with the message “Exporting…” is displayed instead of the grid. When the export is done, the grid will be visible again.

16.2.1.2.Importing Contact Information

To import data, open the outbound service into which you want to import the information and click the Import button. A Windows File open dialog box is displayed, from which you will choose the import file.

Make sure that the selected file contains a cultural sensitive header and at least one line of data. For getting the correct header you can make an export and take the header from the generated file.

An import file has to include the Phone Number column, which is mandatory, the rest of the columns being optional. Columns named “Additional1” .. “Additional6” can be used to display customized information to an Agent receiving a dialed contact. See BCT Installation Guide for detailed information.

For the CSV and text files, all columns have to be separated by a comma/ semicolon/ pipe/ <TAB>. If the value of a column includes the used separator, the value has to be enclosed by double quotes.

When you click the OK button a circle progress bar with the message “Importing…” is displayed as long as the import is performing. After the import finishes, the grid is displayed instead of the progress bar, including also the contact information from the file. If there is invalid data in the import file, when trying to save the changes, validation bullets will be displayed in front of each grid row that contains errors. For more details about the error you can move the mouse over the red bullet and read the details from the tooltip. Saving the members will not be possible until all errors are corrected.

When importing a dialing list file, there can be 3 scenarios:

- Importing a contact that doesn’t exist in the service dialing list (there is no contact in the dialing list with that Phone Number). For each of these items, a new row will be created in the grid, containing the data from the file. The validation is performed when trying to save

the changes.

- A contact from the file has the exact data as one from the grid. In this case, the imported contact is ignored so that no duplicates will be added.
- A contact in the importing file has the same value for the mandatory column (Phone Number) as one from the grid. A window to solve the collision will be offered, giving the possibility to overwrite or to keep the old data. The window offers the possibility to handle all collisions in the same way, by checking the 'Do this for all conflicts' checkbox**.**

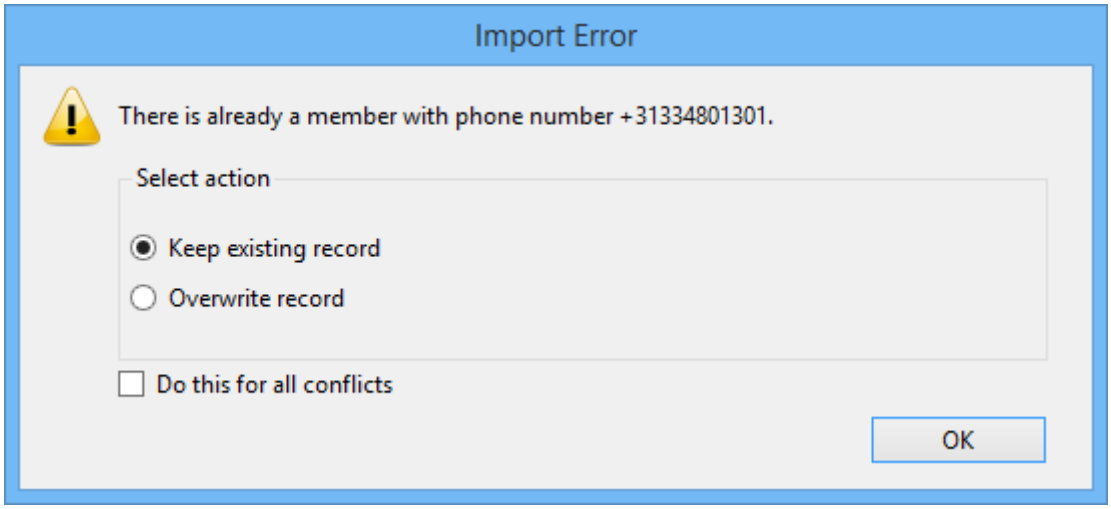


Figure 16-4 Outbound Service Import Collision Window

Note: *There is no cancel possibility during import*

16.2.1.3.Copy to Clipboard and Paste from Clipboard

Copy data to Clipboard
When one or more rows from the grid are selected, press Ctrl-C or use the Copy to Clipboard button from the top of the grid in order to add the data of the selected contacts to the clipboard. The header will also be added, before the first row.

Paste data from Clipboard
When having contact data in clipboard, press Ctrl-V or use the Paste from Clipboard button in order to add the data to the grid.

The data for each column in the clipboard has to be separated by <TAB>.

The header is not mandatory. If the header is present, all the not mandatory columns may be missing. If the header is not present, all the columns must be added in the clipboard and they will be copied in the grid in the order they appear in the clipboard, one by one.

If contacts with duplicate Phone number are found, the same import collision window from the import will be displayed (see Figure 16-4 Outbound Service Import Collision Window).

16.3. Starting, Stopping, Suspending and Resuming a Service

After the outbound service is configured and the contact information is entered or imported, the outbound service is ready to start. An outbound service will only start dialing contacts after the service is started. In addition, when a Scheduling clock module is configured, the Basic Clock Times will specify the valid call time intervals. Its Clock Exceptions, together with the Clock Exceptions of its included clock, if any, will specify the invalid call time intervals. When no Scheduling clock module is

configured, the calls are not time restricted and the contacts will be dialed whenever the service is started.

To start a service, select the required outbound service from the outbound service list under the "Outbound Service" node. The Outbound Service general tab should appear. Click the Start button. The outbound service will begin to contact the people entered in the contact list, taking into account the Scheduling clock, if one is configured.

After an outbound service is started, the progress can be monitored in the Outbound Monitor window (described in the BCT Supervisor Guide).

If necessary, the outbound service can be suspended by clicking the Suspend button. The system will stop dialing contacts. To continue with the outbound service, click the Resume button.

It is also possible to stop an outbound service. Click the Stop button and the system will stop dialing contacts.

Note: *There is an important difference between Suspend and Stop. After a Suspend Service followed by a Resume Service the system continues with the contacts that are not handled yet. After a Stop Service you can only continue with Start Service. The system will start dialing all contacts again.*

When a user-defined outbound service is restarted, all its rescheduled jobs will be deleted, even if they were not finished.

16.4. Rescheduling a Routed Call

When the 'Allow agents to reschedule call' setting is enabled for any outbound service, the agent answering routed calls will have the possibility to schedule a callback based on the information provided by the customer. The agent has the possibility of choosing:

- The date and time when the customer wants to be called back. When a Scheduling clock module is configured for the outbound service, the Basic Clock Times will specify the valid call time intervals. Its Clock Exceptions, together with the Clock Exceptions of its included clock, if any, will specify the invalid call time intervals. When the call time is not valid, an error message is displayed to the agent and the request fails to register. When no Scheduling clock module is configured, the calls can be rescheduled anytime the customer wants to.
- The telephone number on which the customer wants to be called back. This can be the current number the customer was called on or he can provide a new one. In case the new number entered is blacklisted, an error message is displayed to the agent and the request fails.

When the reschedule request is successful, an outbound callback job is created for the outbound service the call went through, or for the system-defined (callback) service related to the router that delivered the call to the agent. Hence it will behave taking into account the properties of that service (e.g.: retry count, retry interval). The system will perform the callback at the indicated time and when an agent is available.

Note: *Registering a callback for an incoming routed call, a manual outbound call, or a recorded voice message is only possible when a system-defined outbound service exists for the router. A system-defined outbound service is created for a router when an option-menu is assigned to the announcements for that router: see* The Queue Announcements Tab*. In case no option-menu (or any announcement) is required, this option menu can be immediately removed again, as this does not delete the created system-defined outbound service.*

17. Email Router

Not only calls can be routed to agents of the contact center, also Email that is sent to the contact center can be distributed among the agents.

The Email router handles incoming Email, distributes the Email to agents and guards response times. Automatically, reply Email can be generated for acknowledgment of receipt or for self-service requests.

An agent will be notified by his own Email client (like Windows Mail, Outlook, Thunderbird) that Email is sent to him. Reading the received Email and replying to this Email must be done using his own Email client.

Note: *Note that during Email handling, the system will continue to route voice calls to the agent.*

For a correct working Email function, the following modules must be created within BCT:

- **Email Server**
  BCT does not include an own Email server but uses an external Email server to send and receive Email. Properties required to access this Email server (server-address, Email-protocol, etc.) must be defined in BCT. In most cases there will be one external Email server created. In case more Email servers need to be used in the network, you have to create an Email server in BCT for each used Email server.
- **Email Account**
  An Email Account (with its related, unique Email address) can be seen as the starting point for handling Email that is sent to the contact center. You can compare the Email account with a starter-line for call handling. Every Email address that is used by customers to send Email to the contact center needs to have its own Email account.
- **Email Rule**
  The Email will be routed to agents based upon the settings specified in the rules. Per Email account one or more rules can be created.

17.1. Preconditions for Email

Besides a correct configured Email Module within BCT, also some preconditions are required for distributing Email:

- An Email server must be installed and reachable via the network. This Email server must be able to handle (multiple) POP3/IMAP, SMTP or Microsoft Graph requests.
- On all agent computers, a mail client must be installed with a correct configured mail account. The mail accounts must be unique on the network.

17.2. Create an Email Server

Before Email accounts can be created, an Email Server must be defined. The Email Server must be an existing external Email server and is not part of the BCT installation.

In Supervisor Dashboard, select **Configuration** from the Tools menu. This will open the Configuration window where Email Servers can be defined. From the left section of the window, select Email, then Servers.

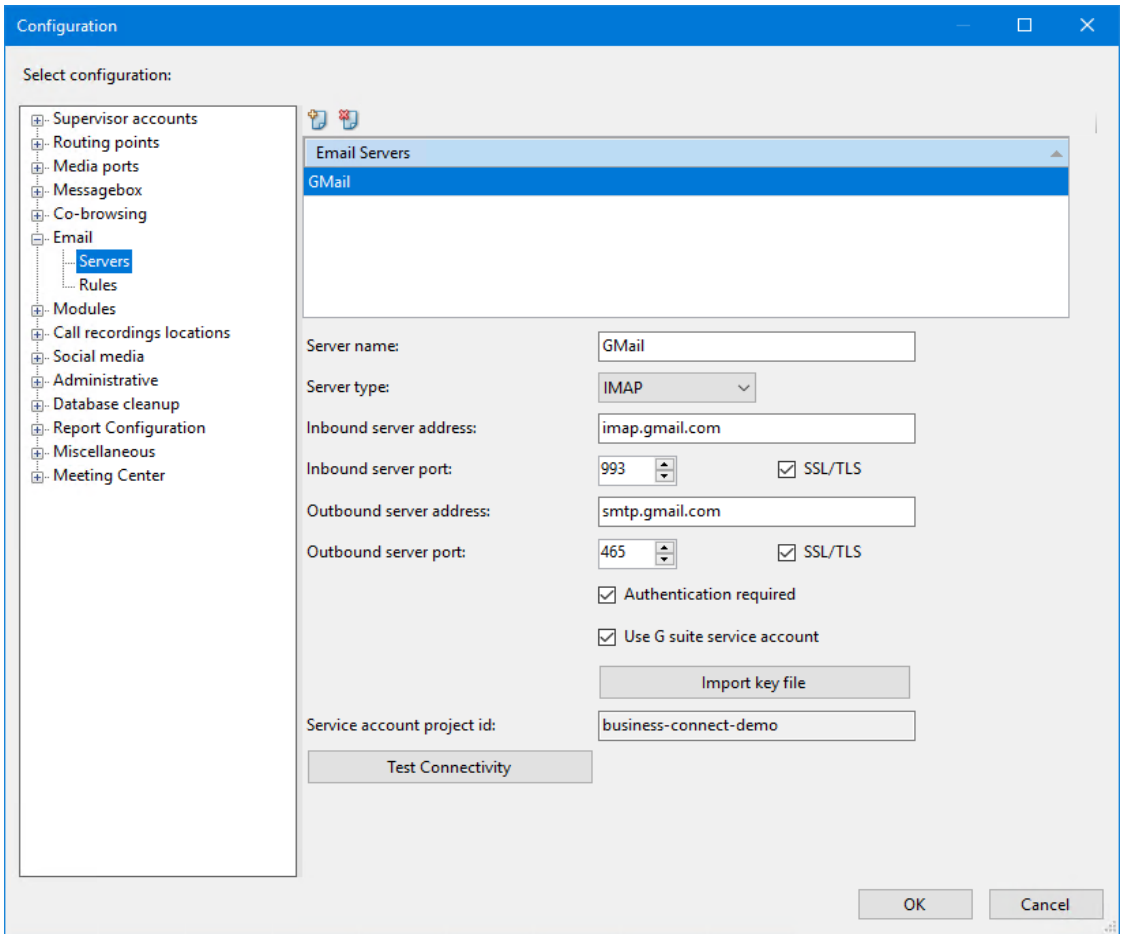


Figure 17-1 Email Server window

If one or more Email Servers are already created, they will be displayed in the Email Server window.

Select **New** ( ) to create a new Email Server. Enter the following information:

- **Server name**
  This is the identification of the created server. This description appears on the pull down menu in the Email account.
- **Server type**
  Select the type of your email server: POP3 or IMAP or Microsoft Graph.
- **Inbound server address**
  The inbound server address is the name or IP address of the computer that hosts the Email Server application. If DNS name resolving is enabled or the computer name is entered in the host table, you can use the name of the computer (or the name that is used in the DNS server). If no name resolving is used you must use the IP address.
  (Note: when using certificates, it is required to use the same server-name as is used in the certificates' Subject (CN=) attribute).
- **Inbound server port**
  There are a number of standardized port numbers. The inbound server port is most likely:
  110 for POP3
  995 for POP3 (when "Use SSL" is checked)
  143 for IMAP
  993 for IMAP (when "Use SSL" is checked)
  The used port number can be found in the configuration settings of the Email server application.

(Note that, when StartTLS is configured on the Email server, “Use SSL” should be unchecked and the non-SSL port-number (110 or 143) must be used).

- **Inbound server Use SSL**
  Must be checked to enable SSL/TLS when reading mail from the Email server.
- **Outbound server address**
  The outbound server address is the name or IP address of the computer that hosts the Email Server application. If DNS name resolving is enabled or the computer name is entered in the host table, you can use the name of the computer (or the name that is used in the DNS server). If no name resolving is used you must use the IP address.
  (Note: when using certificates, it is required to use the same server-name as is used in the certificates’ Subject (CN=) attribute).
- **Outbound server port**
  There are a number of standardized port numbers. The outbound server port is most likely:
  25 for non-encrypted SMTP
  465 for using SSL
  587 for using StartTLS
  The used port number can be found in the configuration settings of the Email server application.
  (Note that, when StartTLS is configured on the Email server, “Use SSL” should be unchecked and the port-number 25 or 587 must be used).
- **Outbound server Use SSL**
  Must be checked to enable SSL/TLS when delivering mail to the Email server.
- **Authentication required**
  If this option is selected, the BCT server must logon to the email account every time a mail is sent. The account name and password are derived from the Email server application.

The next properties for an Email Server are only visible in case a Gmail server is configured and authentication is checked. They are relevant to configure and use OAuth authentication for a service account that is configured within a G suite domain.

- **Use G suite service account**
  If this option is selected, OAuth authentication will be enabled.

- **Import key file**
  Press this button to import a service account key-file that must have been created when a service account is configured in the G suite developers console.
  Upon import of this key file, BCT will encrypt the obtained data and store it in its database. Afterwards, the key file itself can be removed.

- **Service account project id**
  After successful import of the key file, the project id of the related G suite service account will be shown here. In case no key file (or an invalid key file) is imported, this label will show ‘Not imported’.

The required key-file can be generated using the G suite developers console: https://console.developers.google.com/iam-admin/serviceaccounts:

- Create a service account without adding roles (step 2) and without granting user access.
- After creating the account, edit its properties and enable domain-wide delegation.
- Finally, create a key. Note that BCT only allows key files in a Json format. Keep this key file and also keep a copy of the Unique ID of the service account.

Within the G suite domain, for the created service account domain-wide delegation must be enabled using the administrator console: https://admin.google.com/ac/owl.

- Add a new delegation.
- As Client ID enter the kept Unique ID and

- use only one OAuth scope: https://mail.google.com/.

The next properties for an Email Server are only visible in case a Microsoft Graph email server is configured. All other properties i.e. inbound server address/port required are invisible.

- **Tenant ID**
  The Tenant ID (Directory ID) of the Azure account.
- **Client ID**
  The Client ID (Application ID) associated to the application name.
- **Client Secret**
  The Client Secret generated to access and associated to the application.

The following window will appear if the server type Microsoft Graph is selected:

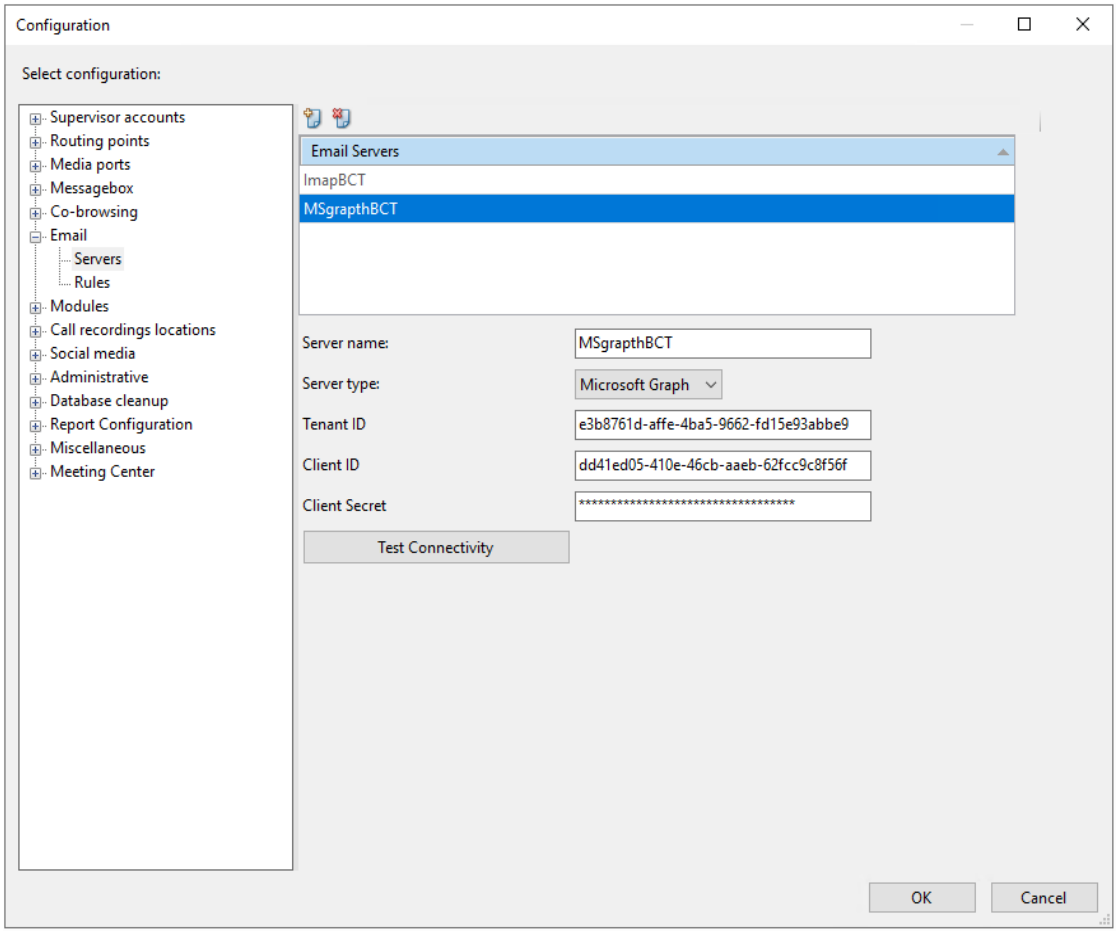


Figure 17-2 Microsoft Graph Email Server window

Click OK to save your changes and close the window. After the Email Server information is created, mail accounts can be created.

To remove an Email Server, open the Configuration window from the Tools menu navigate to Email Servers. Select the Email Server you want to remove and select **Delete** ( ). Click OK to save your changes and close the window. Email Servers that have Email Accounts cannot be deleted.

To verify whether the correct server addresses and ports are entered and/or whether the servers are accessible from the Business ConneCT server click **Test Connectivity**.

17.3. Create an Email Account

An Email account can be compared with a starter from the call flow. An Email account contains an Email address. Customers can send Emails to this Email address. Based on the settings in the Email account and its related rules, the Email is distributed to agents or supervisors.
Note that Business ConneCT can only use existing email accounts on an email server and creation of these accounts is outside the scope of Business ConneCT.

To list all created Email Accounts or to create a new Email Account, open the Call Flow section of the Navigation Panel. You can create new Email Accounts by right click the Email Accounts node in the tree and select **New** from the context menu or by right click an existing Email Account and select **Duplicate** from the context menu. You cannot create a new Email Account if you have no Email Servers defined. If you try to define an Email Account and there are no Email Servers configured, then the Configuration window will open instead, focused on the Email Servers section.

To see all defined Email Accounts, expand the Email Account node. If you need to edit an Email Account, double click it in the tree or right click the router that needs to be adapted and select **Edit** from the context menu.

The following window will appear:

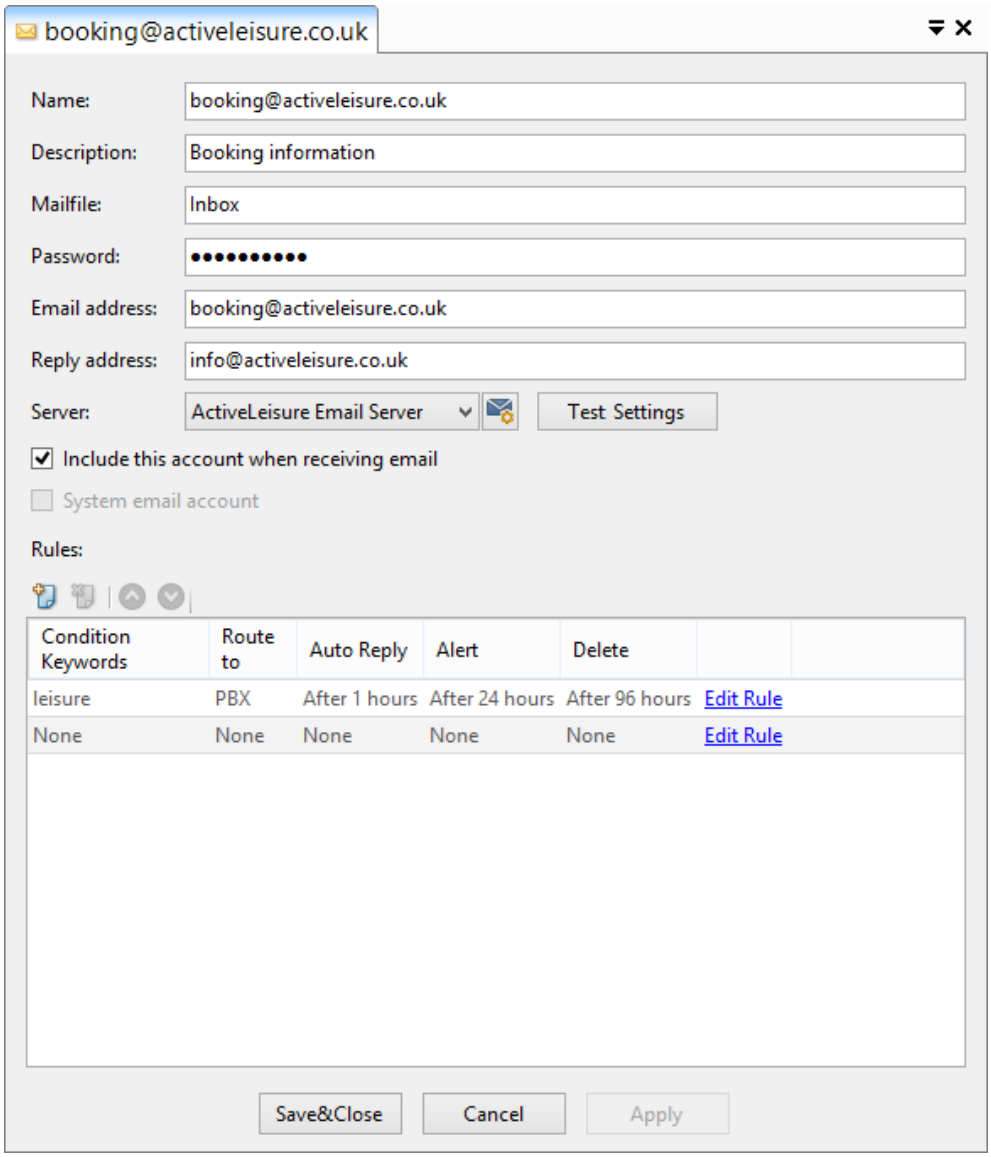


Figure 17-3 Email account properties window

The following information must be entered:

- **Name**
  Use the account-name that is already configured on the Email server.
  Constraint:
  If an Exchange server is used, the name must have the following syntax:
  "domainname/user/mailalias".
  If a Microsoft Graph email server is used, the name must be a complete email address.
- **Description**
  Description of the Email account. Use an understandable name.
- **Mailfile:**
  The folder on the IMAP email server or Microsoft Graph email server to connect and read email messages from. Only required when creating an email account for an IMAP email server or Microsoft Graph email server. Default value is "Inbox".
- **Password**
  The password as specified in the Email client account information. Maximum length of the password is 80 characters.
  In case a Gmail account is used with two-step verification, instead of the password an App

Password can be generated (using Google) and entered here.
(See www.google.com/2step for details about two-step verification and App passwords).
In case a G Suite email account is used with OAuth authentication, the password of individual accounts is not used for authentication.
In case a Microsoft Graph account is used the password field is disabled.

- **Email address**
  The Email address that is announced to the customers of the contact center.
- **Reply address**
  When customers send Email to this Email account, the contact center may automatically reply to that mail. If the customer replies on mail that is sent by BCT, this address will be used as reply destination. It is allowed to use another reply address than the address used as Email address.
- **Server**
  Select the Email Server, created in chapter Create an Email Server.
- **Test Settings**
  You can test the Email account settings by clicking the **Test Settings** button. Besides checking the account credentials it will also verify the connectivity towards the selected Email server.
- **Checkbox: Include this account when receiving email.**
  You can temporarily enable or disable an email account. If an email account is disabled, the system will not check periodically for new email for this account. This account is used for email routing.
- **Checkbox: System email account.**

  System email account is described in the BCT Installation Guide. This account is used for voicemail to email functionality and for sending reports via email.

Select **OK** to save the changes.

After an Email account is created, proceed with the creation of one or more Email rules.

17.4. Creating Email Rules

Routing rules define the way that incoming Email is handled. Per Email account one or more Email rules must be created.
The routing rules for the selected Email account are displayed in the same configuration pane as the Email Account, see Figure 17-3 Email account properties window.

You can create new Email Rules by clicking the **New** button ( ) above the rules table, or you can remove email rules by selecting the Delete button above the rules table. The email rules are defined in an ordered list. You can reorder the rules by using the buttons above the table ( ).

Note: *Be aware that rules are checked in the 'order of creation'. This means that a rule with condition None, must be created as last rule. Otherwise it will catch Emails that were meant for other (following) rules.*

To Edit an Email Rule, select the Edit Rule link placed on the last column of the Email Rules table. The following information is displayed in the Email Account configuration pane:

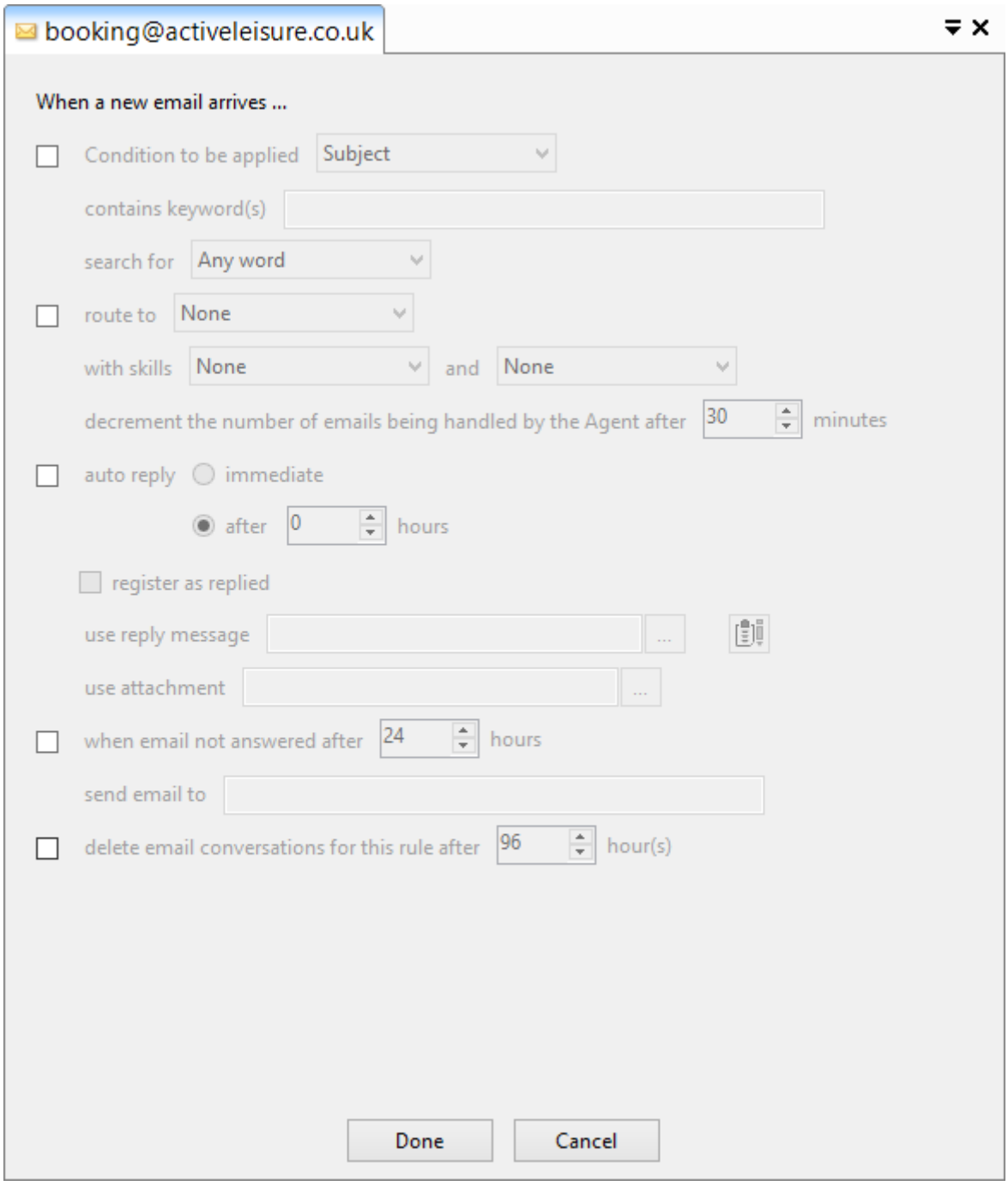


Figure 17-4 Email rule window

The window contains all information that can be configured for an Email Rule. Every function can be enabled by checking the corresponding checkbox. The following sections explain the information and related function that can be configured for each rule.

17.4.1. Condition to be applied

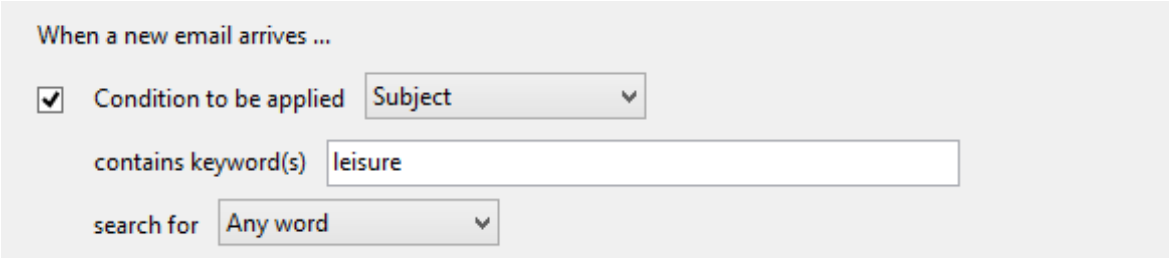


Figure 17-5 Condition tab of email rule window

Incoming mail can be filtered based on information within the Email.

Example: Create two rules. In rule Sales you filter on the word “sales”. All Email that matches this filter will be sent to the Sales group. The rule Helpdesk will search for the words Network and Printer. All Email with these words will be sent to the Helpdesk group. Note that if you want to expand the search, more rules must be created.

Note: *In the example, Email is filtered on Sales, Network and Printer. Be aware that the rest of the Email (Email without the words Sales, Network, and Printer) will not be routed to agents. The remaining Email will be sent to the general supervisor.*

This filtering can be switched on or off. If “Condition to be applied” is not enabled, all incoming mail will be treated equally. So if no filtering is required, do not use this section of the rule. The result will be that all incoming Email will be sent to the agents specified in the Routing tab. “Containing Keyword(s)” and “Search” are only applicable if you enable this section by using the corresponding checkbox.

If you select the radio button under None, Email will be filtered according to the configuration in the “Condition” tab. The following options are available:

- **Subject**
  If “Subject” is selected, the subject part of the message is checked for words that are entered in the **Containing keyword(s)** field.
- **Body**
  If “Body” is selected, the actual Email message is checked for words that are entered in the **Containing keyword(s)** field.
- **Body or Subject**
  In this situation both parts of the Email will be checked on words that are entered in the **Containing keyword(s)** field.
- **Sender Address**
  If “Sender Address” is selected, the Email will be filtered based on the Email address entered in the **Containing keyword(s)** field.

The **Containing keyword(s)** field can contain one or more words or an exact phrase. The system reads the information, entered in the **Containing keyword(s)** field, based on the selection made in the **Search** field. The following options are possible:

- **Any word**
  If ‘Any word’ is selected, the Email will be filtered on one or more words that are entered in the **Containing keyword(s)** field.
- Example: If the words “sales” and “service” are entered in the **Containing keyword(s)** field, the system will check the Email on these words. An Email that contains the word “sales” or “service”

will be selected. An Email that contains both words will be selected as well. Where the words appear in the Email is not important.

- **All words**
  If 'All words' is selected as search, all entered words in the **Containing keyword(s)** field must exist in the Email.
  Example: If the words "sales" and "service" are entered in the **Containing keyword(s)** field, the system will check the Email on these two words. An Email that contains the word "sales" but not the word "service" (or vice versa) will not be selected. Only Email that contains both words will be selected. Where the words appear in the Email is not important.
- **Exact phrase**
  When 'Exact phrase' is selected, the system will check the Email on the exact entered phrase entered in the **Containing keyword(s)** field.
- Example: In the **Containing keyword(s)** field the words "sales and service" are entered. The system will check the Email for this combination of words. Only Email that contains that exact phrase will be selected. Email with only sales, only service or another order of these words will be ignored.

17.4.2. Route to

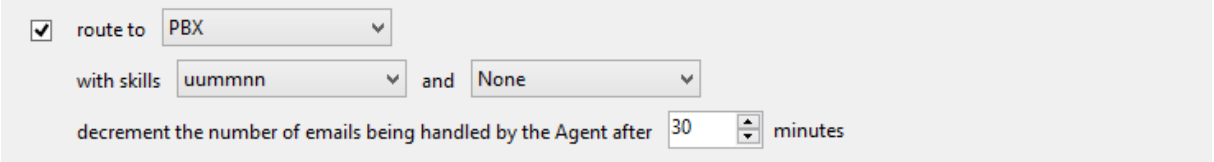


Figure 17-6 Routing configuration of an email rule

The configuration specified in the "route to" section determines the destination of the Emails that have been selected according to the parameters you have defined in the "condition to be applied" section.

If 'None' is selected, the Email will not be routed to any agent. The Email will be sent to the Email address that is entered for the "General Supervisor" in the "General" tab.

You can select a router and leave the skill field empty, the Email will be distributed to any available agent assigned to the selected router. It is also possible to select one or two skills. If skills are entered the selected Email will only be distributed to agents that match the skills and skill rating.

Example: Email is filtered in the Condition tab on the word "Sales", so only Email that contains the word "Sales" will be selected for routing in this tab. If you select the skill Sales in the Routing tab, the selected Email will be distributed among the agents that have the skill "sales" and match the minimum skill score.

Decrement the number of Emails being handled by then agent after nn minutes: See section Routing Algorithm for an explanation.

17.4.3. Auto reply

Figure 17-7 Auto reply tab of email rule window

Settings in this section enable you to setup an auto reply message to the caller's Email address. The sender of the received Email will receive confirmation that the mail has been received instantaneously or after a specified delay time. You can also add attachments (for example, brochures or questionnaires) to the Email.

If an auto reply must be sent to all Email that is received, enable this section by using the corresponding checkbox and select 'Immediate' or 'After'. When 'Immediate' is selected the reply will be sent directly after the Email is received by the system. If you select 'After', the reply Email will be sent after the specified number of hours. If the "Register as replied" check box is checked, the status of the email conversation is set to "closed" when the autoreply is generated.

The text in the reply Email is derived from the content of a text file, specified in the "use Reply message" field. Select a location and text file. By clicking the notepad icon next to the "use Reply message" field you can create a text file in note pad.

An example of an auto reply is: "*Your Email is received. Thank you for contacting our company. This is an automatic generated reply. One of our agents will contact you as soon as possible.*"

It is also possible to enter a tracking number in the reply mail as a reference number.

An example of an auto reply with tracking number is: "*Your Email is received. Thank you for contacting our company. This is an automatic generated reply. One of our agents will contact you as soon as possible". Your email is stored under reference number 1000.*

The text file that will generate the reply Email will contain the following text:

```
Your Email is received. Thank you for contacting our company. This
is an automatic generated reply. One of our agents will contact you
as soon as possible". Your email is stored under reference number
<MTNR>.
```

The expression "<MTNR>" will trigger the system to generate a sequence number that will be substituted for the expression "<MTNR>"

The first number that is used for the tracking number is specified in the Tools\Configuration window, Email\Rules section. See section General Email Rules Configuration.

If you select an attachment file in the "use attachment" field, also an attachment is included in the reply Email.

17.4.4. Alert

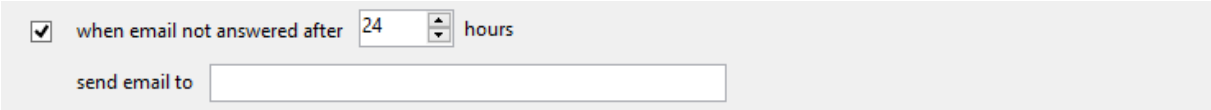


Figure 17-8 Alert section of email rule

If an Email is not answered within a defined time period, it can be forwarded to the supervisor. If you select “when email not answered after” and you enter a number of hours, the Email is forwarded to the Email address specified in the “send mail to” field.

17.4.5. Delete

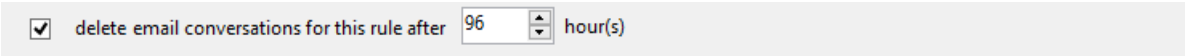


Figure 17-9 Deletion section of email rule

Email conversations can be deleted from the database after a defined time period. If you select “delete email conversations for this rule after” and you specify a number of hours, all emails within the conversation will be deleted after the specified time is expired.

17.4.6. General Email Rules Configuration

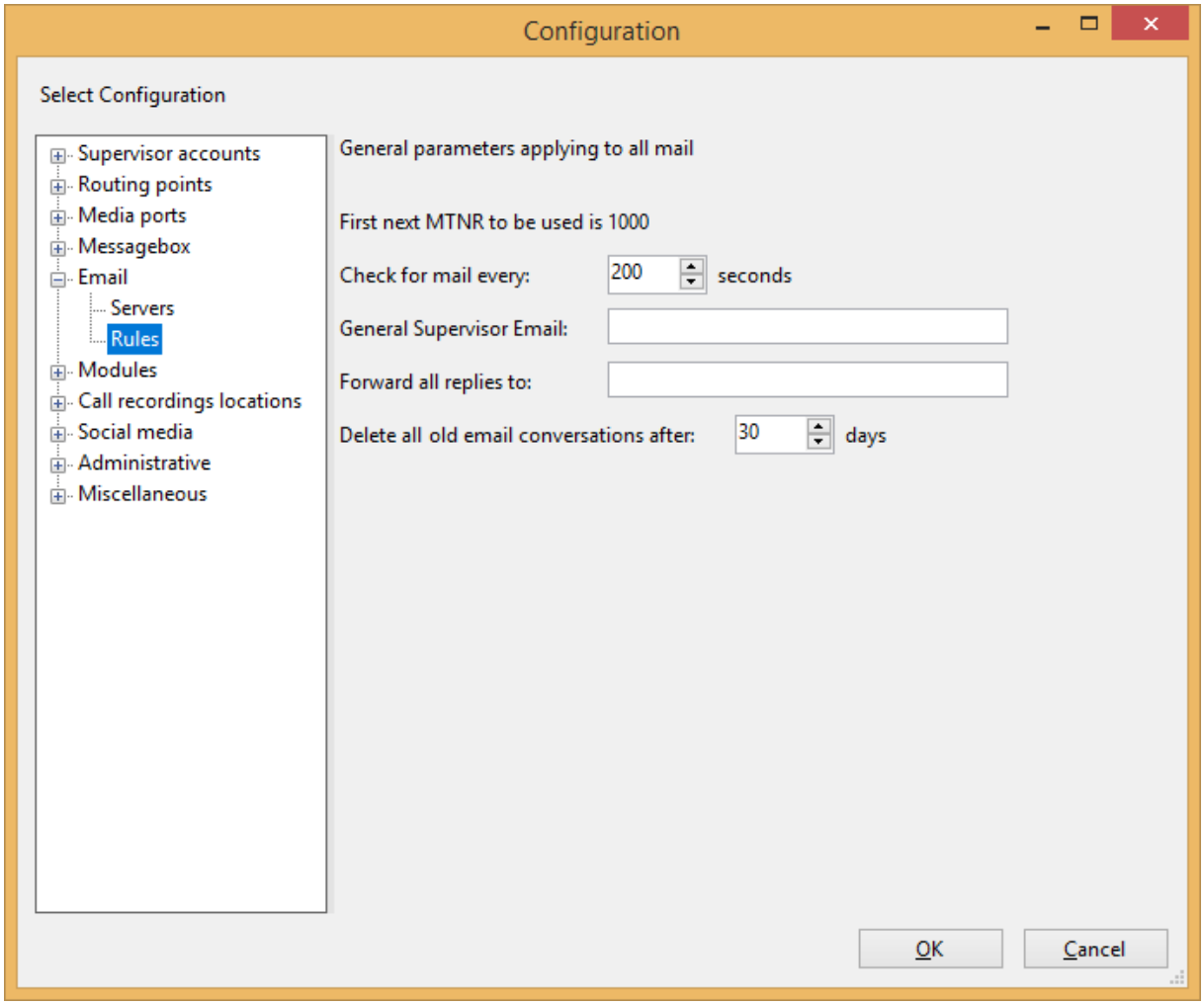


Figure 17-10 General tab of email rule window

In Supervisor Dashboard, select **Configuration** from the Tools menu. This will open the Configuration window where Email Servers can be defined. From the left section of the window, select Email, then Rules.

The following functions can be configured in the "General Email Rules Configuration":

- **Check for mail every ..... seconds**
  The Email server will be queried every number of seconds specified in this field. You may want to ask the local IT manager for advice regarding the network load.
- **General Supervisor Email**
  Email that cannot be delivered for whatever reason is forwarded to the Email address specified in the **General Supervisor** field.
- **Forward all replies to**
  Every email that is sent by BCT will also be sent to the email address defined here. This includes received emails that are sent (routed) to an agent, replies (of an agent) sent to the customer and informational emails sent to the Supervisor.
- **Delete all old email conversations after ..... days**
  All Emails in the conversations that are older than the specified number of days will be deleted from the Email server.

Note: *Settings in the General tab are valid for all rules and Email accounts that exist in BCT contact center part.*

Note: *The "First next MTNR to be used" is a read only field. It indicates the **M**ail **T**racking **N**umbe**R** that will be used to generate a reference number for automatic generated reply Email. See section Auto reply for more info.*

18. Privileges

With Supervisor Accounts configuration a Supervisor with Administration privilege can configure Passwords and Privileges for all Supervisor accounts in the system.

To view the Supervisor Accounts, click on **Tools** in the BCT Supervisor Dashboard. Under Tools select Configuration. If not already selected, in the Configuration window, select 'Supervisor Accounts'.

The following window will be displayed:

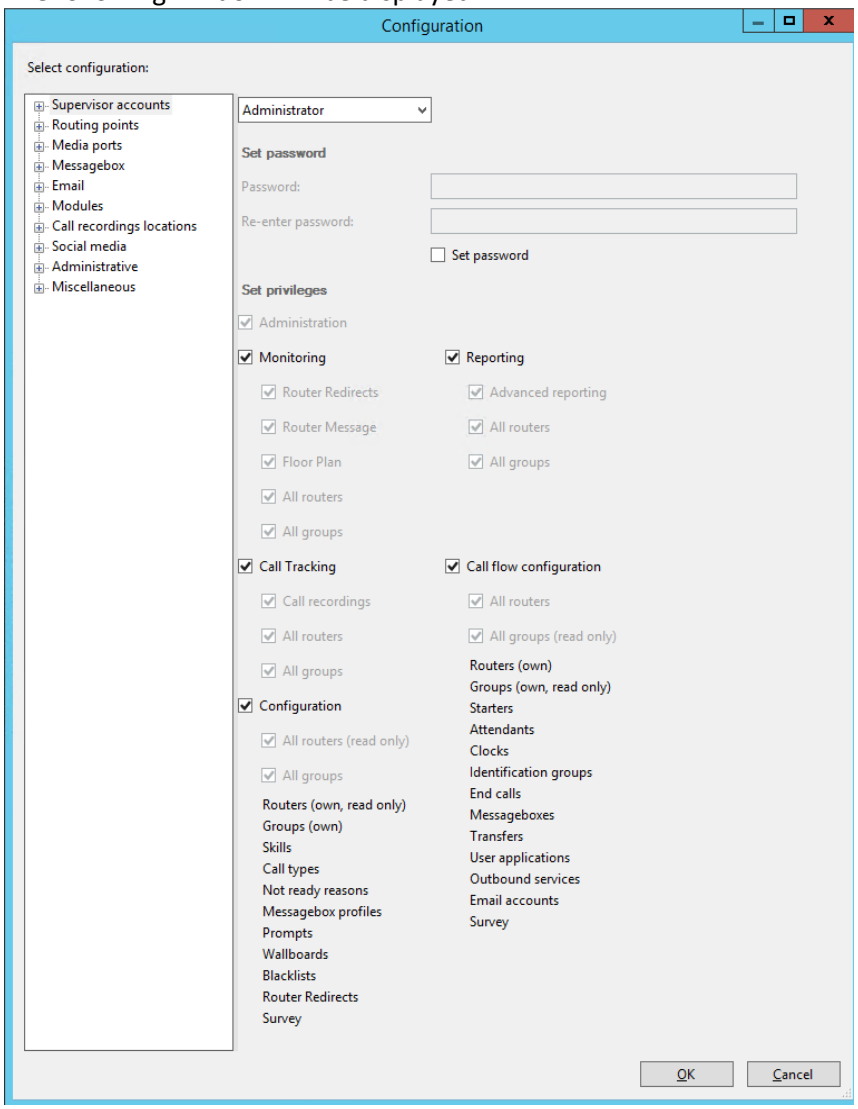


Figure 18-1 Supervisor Accounts dialog box

There are three sections on this window:

- Supervisor Accounts dropdown list: all Supervisor accounts defined in the system are available for selection in this list. Selecting a supervisor account will allow you to configure that supervisor account. All settings in this window will apply to the selected supervisor account.
- 'Set Password': This will allow you to change the password for the selected Supervisor account.
- 'Set Privileges': This will allow you to set/remove one or more privileges for the selected Supervisor account.

You may change multiple supervisor accounts before saving the changes with the 'OK' button.
In order for the new settings to be used, currently logged in Supervisors must logout and then login

again.

18.1. Reset Password

This section of the Supervisor Accounts configuration allows a Supervisor with Administration privilege to reset the password of individual Supervisor accounts.

Note: *All Supervisors can change their own password with 'Tools - Change Password' and this option will be available only when they are logged in using basic authentication.*

To reset a password for a Supervisor account

- On the dropdown list available on the top of the pane select the Supervisor account for which you want to reset the password.
- In the Set Password section, check the Set Password checkbox, to enable the Password fields.
- If you want to set a new password for the selected Supervisor account, fill the two textboxes with the new password. The two entered passwords must match.
- If you want to set a blank password for the selected Supervisor account, leave the two textboxes empty. If you left the fields empty, then when you click OK or change the current selected Supervisor account, you will be asked for confirmation of the empty password.
- You can set passwords for multiple Supervisor accounts before saving the data with the OK button.
- To save the changes made to Supervisor accounts in this window, click the OK button. This will also close the window.
- To discard all changes you made for all Supervisor accounts, click the Cancel' button.

Note: *If logged in using windows authentication, you will not be able to change your own password. For that you have to log in using basic authentication. The password of user "Administrator" can only be changed by "Administrator".*

18.2. Set Privileges

The following privileges can be set for a Supervisor: Administration, Reporting, Monitoring, Call Tracking, Configuration and Call Flow Configuration.

18.2.1. Administration

Administration privilege will identify a system administrator capable of configuring and maintaining the system. If a Supervisor has Administration privilege, the following functionality is available for that user:

- **Tools** (under Tools menu in Supervisor Dashboard): Configuration (including managing Supervisor accounts), Export Data and Cleanup Database.

- **System Monitor** (under View menu in Supervisor Dashboard)

Note: *Administration privilege cannot be removed from user "Administrator".*

18.2.2. Reporting

Reporting privilege will enable the Reporting feature available in Supervisor Dashboard for the selected Supervisor account. For that user the Reporting section will be visible in Supervisor Dashboard and Reports can be defined.

Note: *When the Supervisor has Reporting privilege but no reporting license, only a summary report is available.*

Advanced Reporting:
For some Report types an additional privilege is required. Refer to the BCT Supervisor Guide for Report types requiring Advanced Reporting privilege.

Note: *When a Supervisor has Administration privilege, Advanced Reporting will be enabled by default.*

18.2.3. Monitoring

This privilege will grant the Supervisor access to:

- Monitoring panes: They can be accessed by the Add New Pane button available on the top right of the Supervisor Dashboard. Also Monitoring panes are available as part of the 'Default View'. If the user has no Monitoring privilege, the 'Default View' will be empty.
- Analysis (described in the BCT Supervisor Guide)
- Floor Plan (described in the BCT Supervisor Guide), can be accessed when besides Monitoring also the Floor Plan privilege is assigned.
- Router Redirects to grant permission for a Supervisor to set or reset the redirect for a router.
- Router Message to grant permission for a Supervisor to set or clear the message for a router.

Note: *The Monitoring privilege requires a Supervisor License. If there is no Supervisor License available, the Supervisor can login to the Supervisor Dashboard but items that require a Supervisor License will not be available (will be grayed out).*

18.2.4. Call Tracking

This privilege will allow the Supervisor to find information about individual routed calls that arrived at the contact center. This functionality is described in the BCT Supervisor Guide.

The Call recordings privilege will allow the Supervisor to show and access call recordings in the Call Tracking details (only applicable for SIP@Net Call Recordings, dvsAnalytics Encore recordings and "BCT Compliance Recordings"). Recordings can be listened to and saved.

18.2.5. Configuration

This privilege will allow the Supervisor to configure the items under the Resources section: Agents, Groups, Skills, Router Redirects, Call Types, Not Ready Reasons, Messagebox Profiles, Prompts, Blacklists, Wallboards and Survey.

Some resources that can be used by a call flow module (e.g. Skills, Router Redirects, Call Types, Not Ready Reasons, Messagebox Profiles, Prompts, Blacklists, Survey) require also “Call Flow Configuration” privilege.

18.2.6. Call Flow Configuration

This privilege will allow the Supervisor to build and maintain Call Flows with the modules under the Call Flow section: Starters, Attendants, Clocks, Identification Groups, End Calls, Messageboxes, Routers, User Applications, Outbound Services, Email Accounts and Surveys.

Users who have ‘Call Flow Configuration’ privilege must have ‘Configuration’ privilege as well.

18.2.7. ‘All Routers’ and ‘All Groups’ Settings

The ‘All Routers’ and ‘All Groups’ settings apply to the Reporting, Monitoring, Configuration and Call Tracking privileges. It is not possible to set them for one specific privilege only, they apply to all granted privileges.

If ‘All Routers’ is not selected, then the Supervisor will only have access to own routers (routers where this Supervisor is assigned in the Supervisors tab). If ‘All Groups’ is not selected, then the Supervisor will only have access to own groups (groups where this Supervisor is also assigned as a member).

Note: *If a Supervisor has Administration privilege, then ‘All Groups’ and ‘All Routers’ will be enabled by default.*

19. Call recording

NOTE: *Only applicable for SIP@Net recording, dvsAnalytics Encore recording and "BCT Compliance Recording"*

Routed calls can be recorded and played by the Supervisor. The type of call recording is dependent on the type of PBX.
For SIP@Net the PBX will record calls and makes the recordings available on a (shared) drive.
For SV9100-TAPI, SV8300/S9300, SV8500/SV9500 and 3C "dvsAnalytics Encore™ Call Recording" can be used to record routed calls. "dvsAnalytics Encore™ Call Recording should be purchased separately.
For SV9100-TAPI and 3C "BCT Compliance Recording" can be used to record routed calls. "BCT Compliance Recording" should be purchased separately.

When configuring call recording, the call recording type and the location must be defined.

19.1. Preconditions

To be able to use the SIP@Net Recording feature you first need to:

- Configure the SIP@Net PBX for Call recording (see BCT Installation Guide).
- Make sure you know the file location where the PBX stores the recorded files and get a valid user account with access rights on this file location.

To be able to use the Encore Call Recording feature you first need to:

- Configure the dvsAnalytics Encore™ call recording product. Contact your reseller for more information.
- Make sure you know the Web Service URL to the Encore server.

To be able to use the "BCT Compliance Recording" feature you first need to:

- Configure the "BCT Compliance Recording" product. Contact NEC for more information.
- Make sure you know the Server address of the "BCT Compliance Recording" server.

19.2. Create a Call recording location

In the Supervisor Dashboard go to the Tools menu and select the Configuration option. Here you can configure a call recording location to match the location set for your call recording source. In the Call recording type select the type of call recording source.

Once finished configuration it must be assigned to the PBX via the System Settings, Connectivity, PBX Edit page. Note that:

- For iS3000 PBXes only the call recording locations with type "SIP@Net Recording" can be selected.
- For SV8300/SV9300 and SV8500/SV9500 PBXes only the call recording locations with type "dvsAnalytics Encore" can be selected.
- For SV9100-TAPI and 3C PBXes either the call recording locations with type "dvsAnalytics Encore" or "BCT Compliance Recording" can be selected.

19.2.1. Call recording location for SIP@Net

When “SIP@Net Recording” is selected as Call recording type then you will see the configuration settings as shown below.

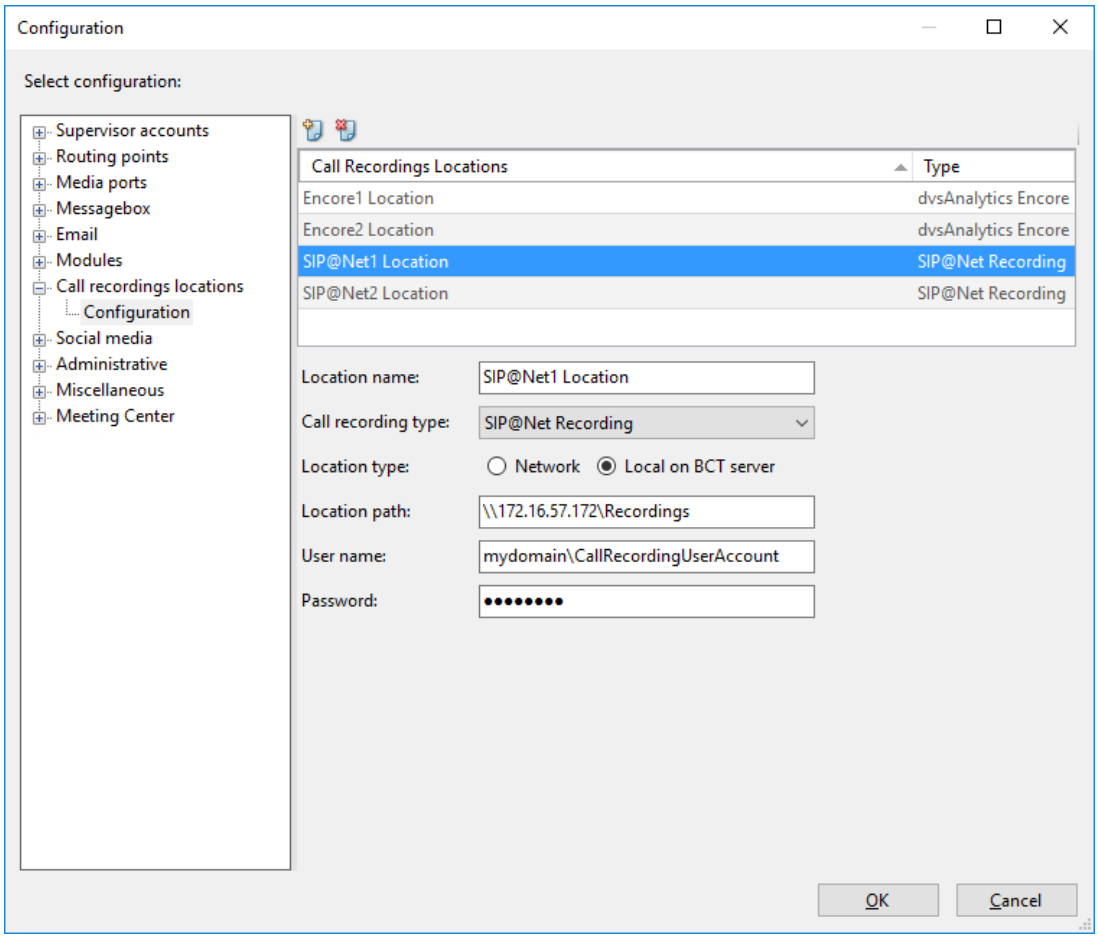


Figure 19-1 Call recording location configuration for SIP@Net Recording

The following data are available for a call recording location:

Location name: Name to describe the (shared) location. Give a meaningful description as you will find this name in the list of Call recording locations from System Settings, Connectivity, PBX Edit window.

Location type: Specify if this is a Network file location or a Local file folder on the BCT server (e.g. \\172.16.57.172\Recordings , C:\MyRecordings).

Location path: The path to the (shared) location where SIP@Net stores the recorded files.

User name: The user name of the account with access rights on the machine where SIP@Net saves the recorded files. If that machine is part of a domain, use the fully qualified domain username. (e.g.” mydomain\CallRecordingUser). Only when type is Network.

Password: The password of the specified user name. Only when type is Network.

19.2.2. Call recording location for Encore Call Recording

When “dvsAnalytics Encore” is selected as Call recording type you will see the configuration settings as shown below.

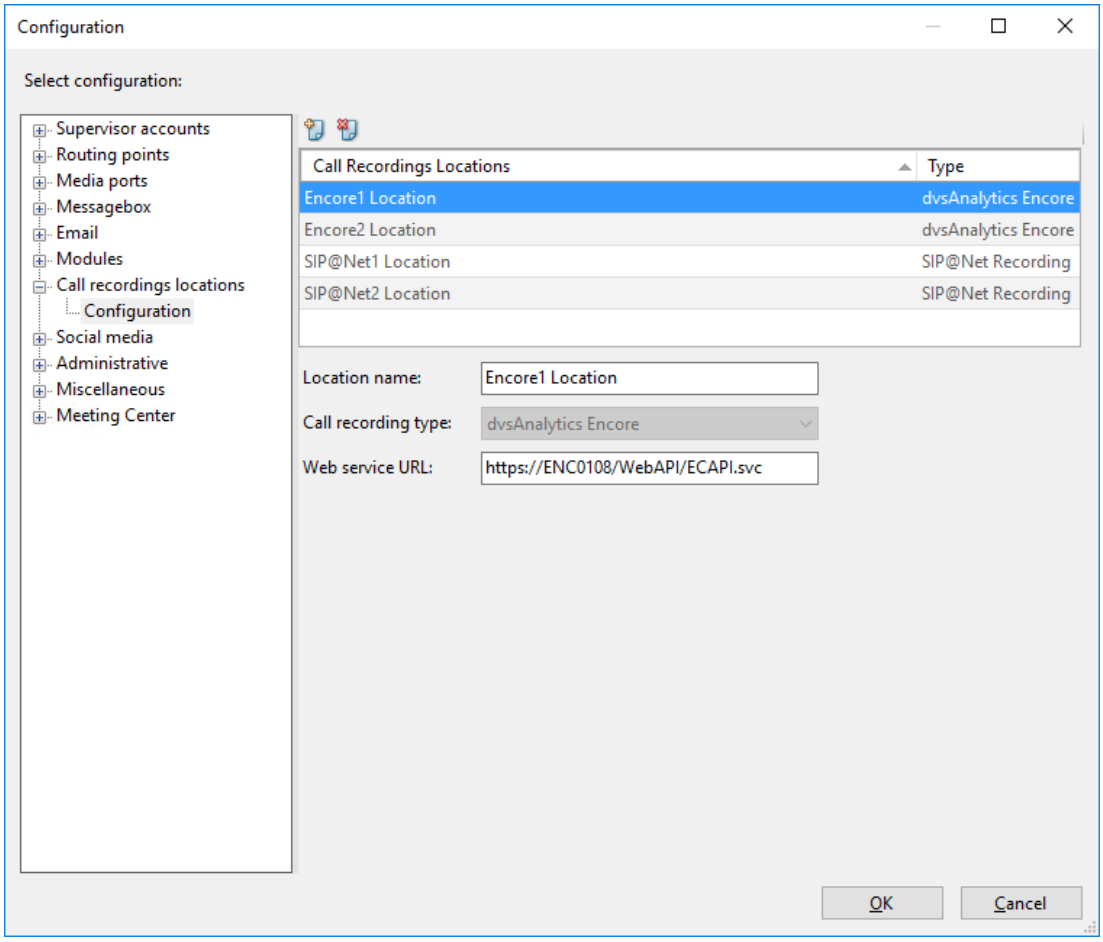


Figure 19-2 Call recording location configuration for dvsAnalytics Encore

The following data are available for a call recording location:

Location name: Name to describe the (shared) location. Give a meaningful description as you will find this name in the list of Call recording locations from System Settings, Connectivity, PBX Edit window.

Web service URL: The Encore Web Service URL that the system will use to retrieve the links to the recordings. Typically it will be `https://[encoreservername]/WebAPI/ECAPI.svc`

19.2.3. Call recording location for “BCT Compliance Recording”

When “BCT Compliance Recording” is selected as Call recording type you will see the configuration settings as shown below.

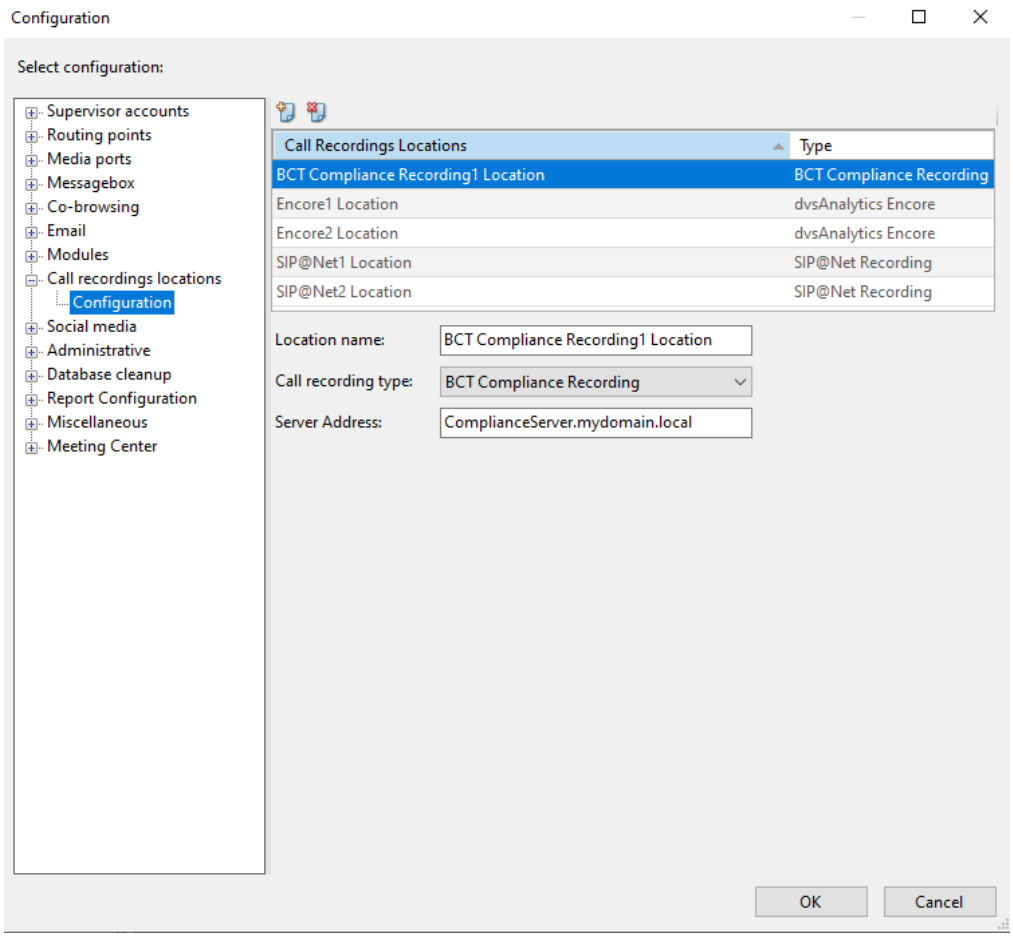


Figure 19-3 Call recording location configuration for “BCT Compliance Recording”

The following data is available for a call recording location:

Server Address: Name of the server where the “BCT Compliance Recording” system has been installed. If needed a fully qualified domain name (FQDN) can be used.

19.3. Call Recording limitations

- Changing the location path, URL or server address of a call recording location will make the existing call recording files inaccessible. The same will happen in case the call recording location is deleted.
- One single call recording location should be created in Supervisor Dashboard for a (shared) SIP@Net location. A shared location can be accessed only by a single user account. It is not supported to have multiple connections with different user accounts to the same (shared) location.

Note: also in a SIP@Net dual server configuration, make sure that both servers store their call recordings in the same location.

20. Social Media

In the traditional contact centers voice, chat and e-mail are being used to interact. However, nowadays many customers use social media to communicate to companies. BCT was extended with these new social media channels, offering support for the agents of the Contact Center to communicate directly with the customers.

20.1. Create a Social Media Provider

In the Supervisor Dashboard go to the Tools menu and select the Configuration option. Here you can configure the connection to a 3rd party provider, a Social Media Provider.

When you add a new row in the Social Media Provider grid you will see a window that looks like the one in the image below:

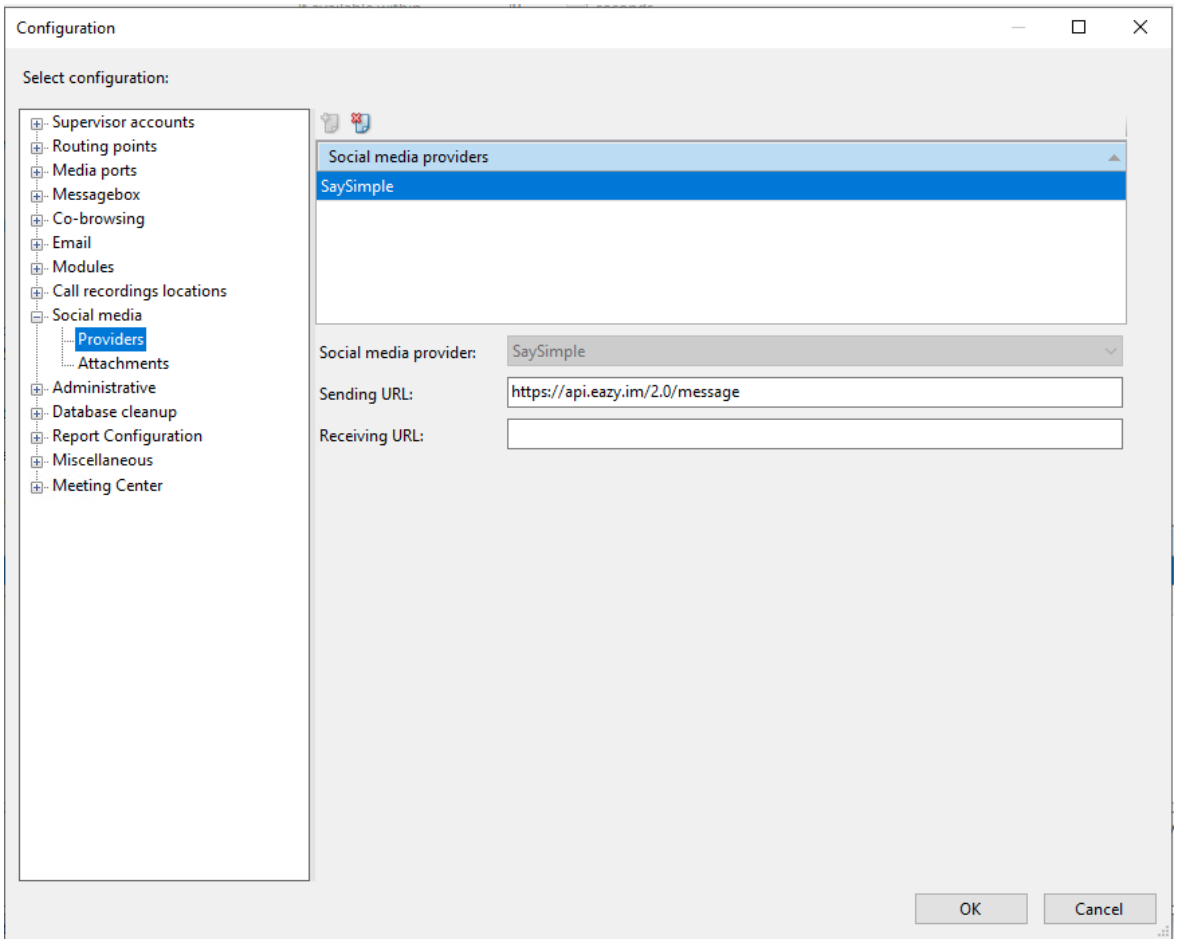


Figure 20-1 Social Media Provider configuration window

If one or more Social Media Providers are already created, they will be displayed in the Social Media Provider window.

Select **New** ( ) to create a new Social Media Provider. The following data is available for a social media provider:

Social Media List of available social media providers. Only one entry per social media pro-

Provider	vider is possible.
Sending URL	This is the URL configured for sending messages from BCT to the 3rd part provider, who in its turn sends the messages to the social media channel. It is mandatory to enter this URL.
Receiving URL	This is the URL configured for receiving messages from the 3rd party provider. It is not mandatory to configure it. This URL is provided by the 3rd party provider.

Click OK to save your changes and close the window. After the Social Media Provider information is created, Social Media accounts can be created.

To remove a Social Media Provider, open the Configuration window from the Tools menu navigate to Social Media. Select the Social Media Provider you want to remove and select **Delete** (). Click OK to save your changes and close the window. Social Media Providers that have Social Media Accounts cannot be deleted.

20.2. Configure Social Media Attachments

In Supervisor Dashboard, select Configuration from the Tools menu. This will open the Configuration window where Social Media Attachments options can be configured. From the left section of the window, select Social Media, then Attachments.

The following data is available to be configured for handling Social Media attachment received from a Social Media Provider:

- **Path to save attachments**
  Enter the directory on the BCT server that will be used for downloading and storing attachments files received from a Social Media Provider.
  The path can be changed and the browse button is available when the BCT Supervisor Dashboard runs on the BCT server.

  Note: *When changes to the Social Media Attachments Path are made, the physical path of the virtual folder is automatically changed in IIS. If you want to continue to have access to the already saved attachments, copy all information (all subdirectories and files) to the new location.*

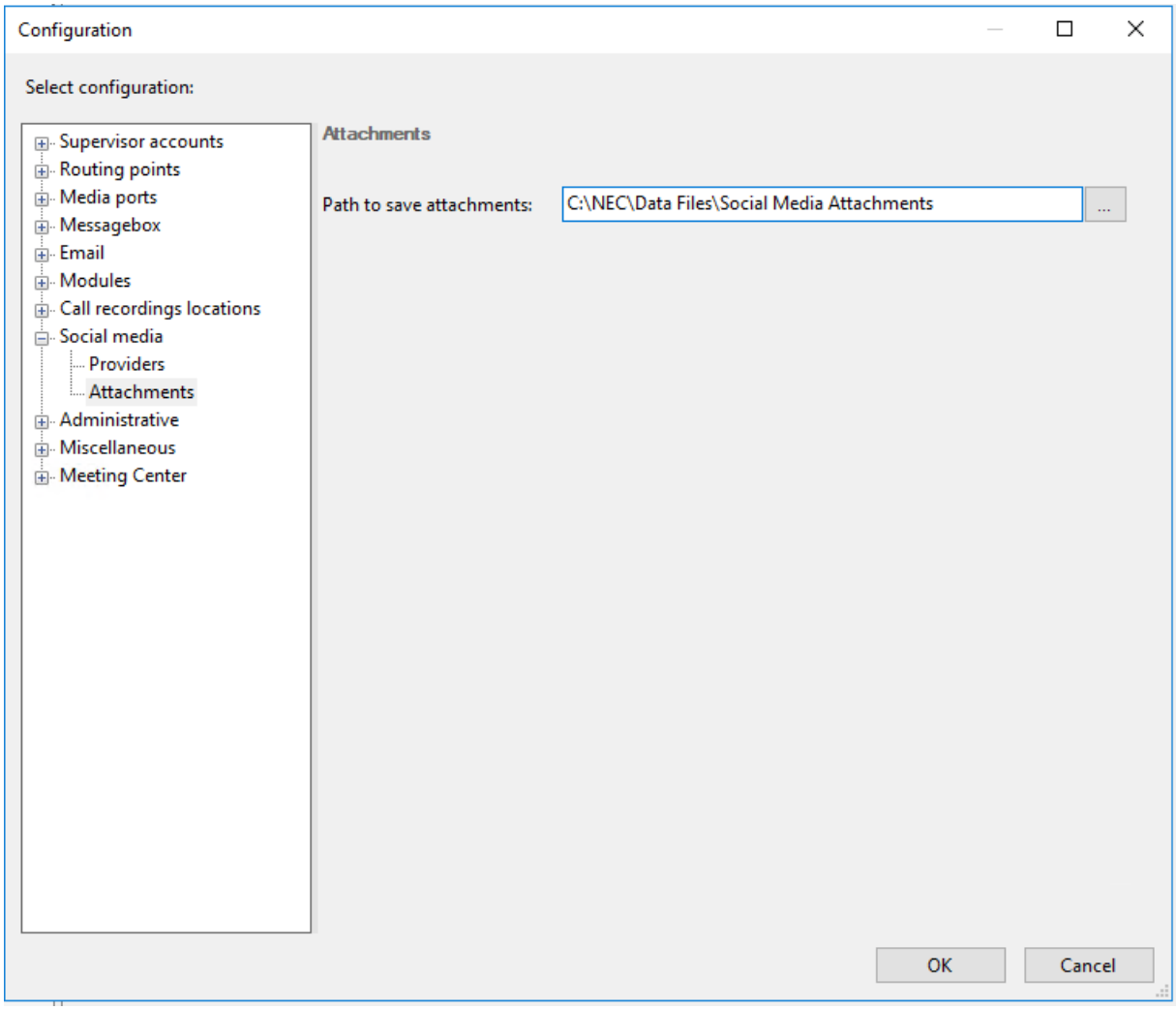


Figure 20-2 Social Media Attachments configuration window

20.3. Create a Social Media Account

In the Supervisor Dashboard go to the Call Flow navigation, there you can create a Social Media Account to use the Social Media Provider you just created.

To list all created Social Media Accounts or to create a new Social Media Account, open the Call Flow section of the Navigation Panel. You can create new Social Media Accounts by right click the Social Media Accounts node in the tree and select **New** from the context menu or by right click an existing Social Media Account and select **Duplicate** from the context menu. You cannot create a new Social Media Account if you have no Social Media Providers defined. If you try to define a Social Media Account and there are no Social Media Providers configured, then the Configuration window will open instead, focused on the Social Media Providers section.

To see all defined Social Media Accounts, expand the Social Media Account node. If you need to edit a Social Media Account, double click it in the tree or right click the item that needs to be adapted and select **Edit** from the context menu.

When you create a new Social Media Account you will see a configuration pane that looks like the one in the image bellow:

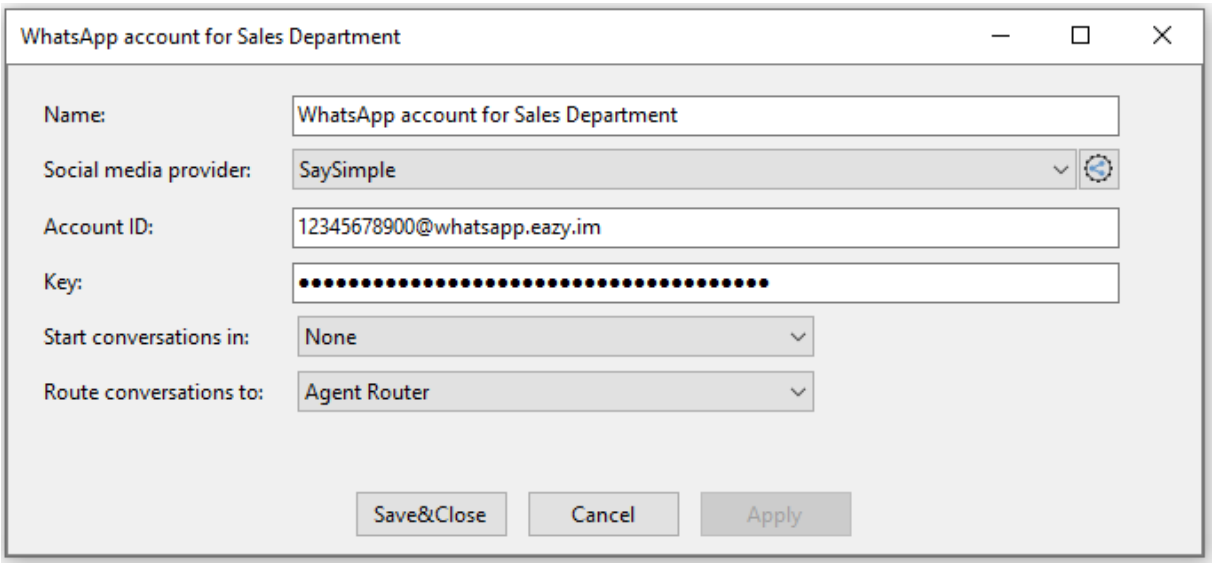


Figure 20-3 Social Media Account configuration window

The following data is available for a social media account:

Account Name — Name for the Social media account. Use a meaningful name so you can identify which account goes with which provider.

Social Media Provider — This list is made up of the Social Media Providers you configured in the Configuration window.

Account ID — This is where you enter the ID that was provided to you by the 3rd party provider. It is equal to the contract number without leading zeros followed by "@whatsapp.eazy.im". E.g. contract number +31 655544333 results in Account ID 31655544333@whatsapp.eazy.im.
For Twitter Direct message, the account-id ends with "@twitter.eazy.im".
For Facebook Messenger, the account-id ends with "@messenger.eazy.im".
For Line, the account-id ends with "@line.eazy.im".
For iMessage, the account-id ends with "@apple.eazy.im".
For SMS, the account-id ends with "@sms.eazy.im".

Key — This key is also offered by the 3rd party provider.

Start conversations in — Here you can select the starter you want to use for routing the social media conversations sent to this account.

Route conversations to — Here you can select the router you want to use for routing the social media conversations sent to this account.

Note: When a starter has been selected, a router cannot be selected anymore and vice versa.

Press Save&Close or Apply to save the Social Media Account.

21. Co-browsing

Co-browsing stands short for “Collaborative Browsing“ and basically allows screen sharing on a website – without downloading and installing any additional software. In addition on web chat it allows an Agent to join a web chat visitor website session and see their screen. This way an Agent retrieve instant context about visitor problem and can help more precisely. Optionally an Agent can take control within the website session and navigate the visitor through the site. Notice – an Agent won’t have access to other open tabs in visitor browser, their desktop or anything else except for the view on this exact page.

Business ConneCT uses a third party platform 'Xaleon' (formerly Chatvisor, and Chatvisor will still be used in public endpoints) for the co-browse solution. In order to authenticate against the Xaleon API it is required to generate an access token for your tenant. This token can be created by any admin user in the Xaleon product suite portal via Settings > API > Keys.

21.1. Configuration

In Supervisor Dashboard, select Configuration from the Tools menu. This will open the Configuration window where co-browsing options can be configured. From the left section of the window, select Co-browsing.

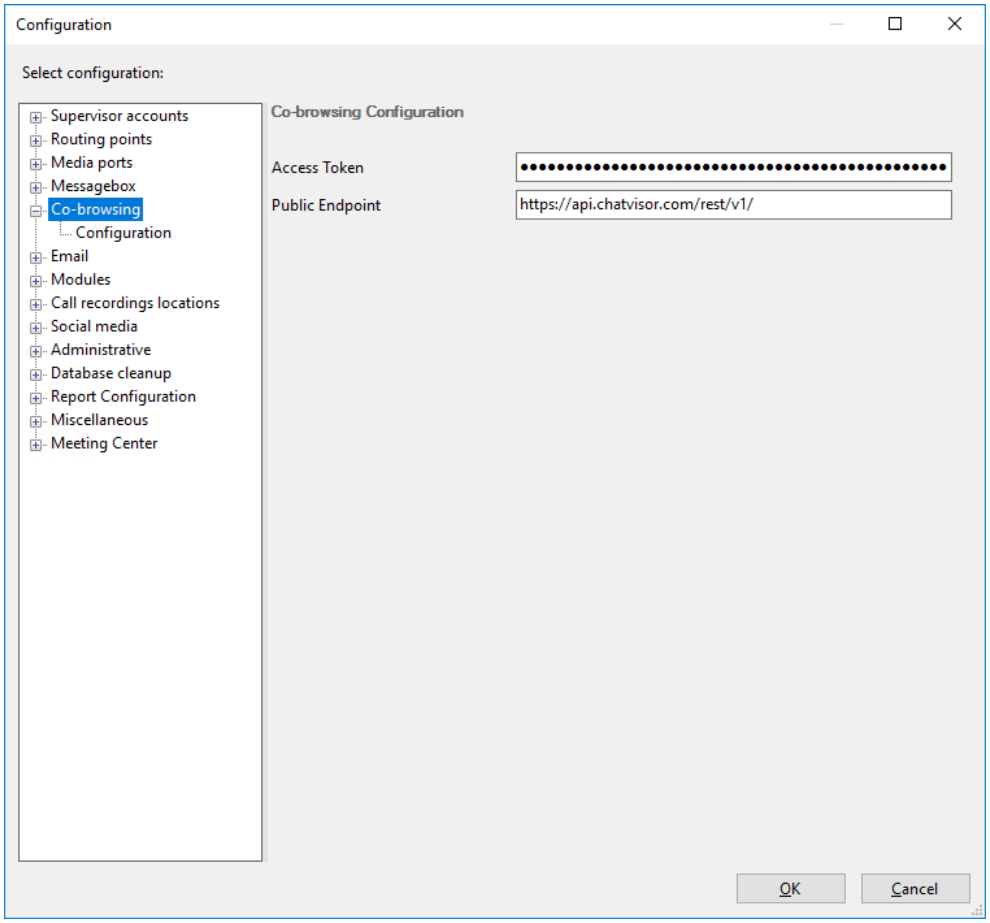


Figure 21-1 Co-browsing configuration window

The following data is available to be configured for co-browsing using Xaleon:

- **Access Token**

Here the ‘Access Token’ obtained from Xaleon portal can be configured.

- **Public Endpoint**
  The Xaleon REST API public endpoint can be configured here. Typically the default pre-configured value ‘https://api.chatvisor.com/rest/v1/’ do not need any change.

22. Meeting Center

In addition on web chat this meeting center feature allows an Agent to create a collaboration meeting with the customer currently in a chat or social media session. When activated, both agent and customer can collaborate in a meeting using a browser session to join each other; talk, share screen etc.
An application server with NEC Meeting Center (NMC) installed is used to connect both parties.

22.1. Configuration

In Supervisor Dashboard, select Configuration from the Tools menu. This will open the Configuration window where Meeting Center options can be configured. From the left section of the window, select Meeting Center.

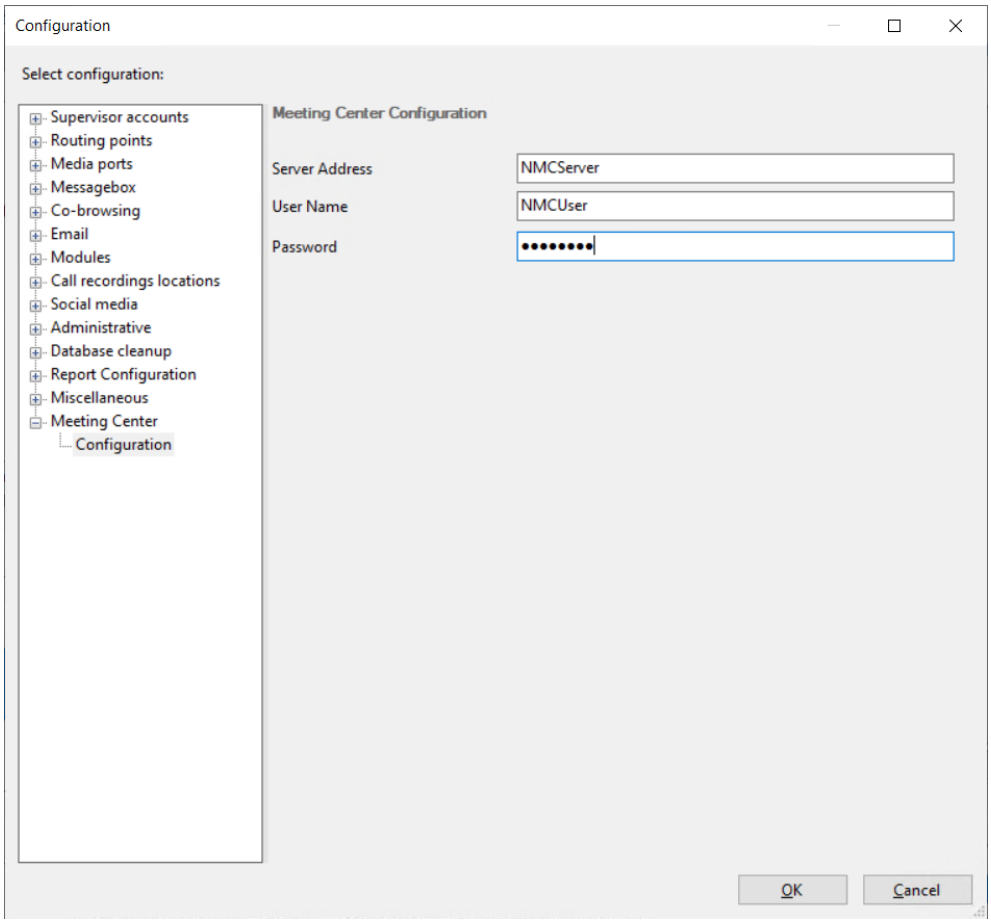


Figure 22-1 Meeting Center configuration window

The following data is available to be configured for Meeting Center:

- **Server Address**
  Here the address of the server running the NMC can be configured (hostname/IP-address), e.g. NMCServer.mydomain.com.

- **User Name**
  The User Name can be configured here, this name shall be equal to the user account configured in the NMC server in Administration > System Settings: Account Name.
  Note the User Name is case sensitive.

- **Password**
  The password can be configured here, this password shall be equal to the password of the user account configured in the NMC server in Administration > System Settings: Change Password To.

For each BCT agent able to use the Meeting Center feature, within the NMC server an Account Name/Login must be available with the same name as the BCT login name (Not the NT login name) where spaces are replaced by underscores. See NMC server Resources > Accounts.

Note that the NMC server address will be used to compose a URL that is provided to both agent and customer to open the collaboration meeting in a browser. The URL (thus the NMC server address) shall be resolvable for both parties via the public internet.

23. Reports and Statistics

Reports and Statistics are described in the BCT Supervisor Guide.

23.1. Configure default settings for reports

In the Supervisor Dashboard go to the Tools menu and select the Configuration option. Here you can configure certain default values that will be used when creating new reports:

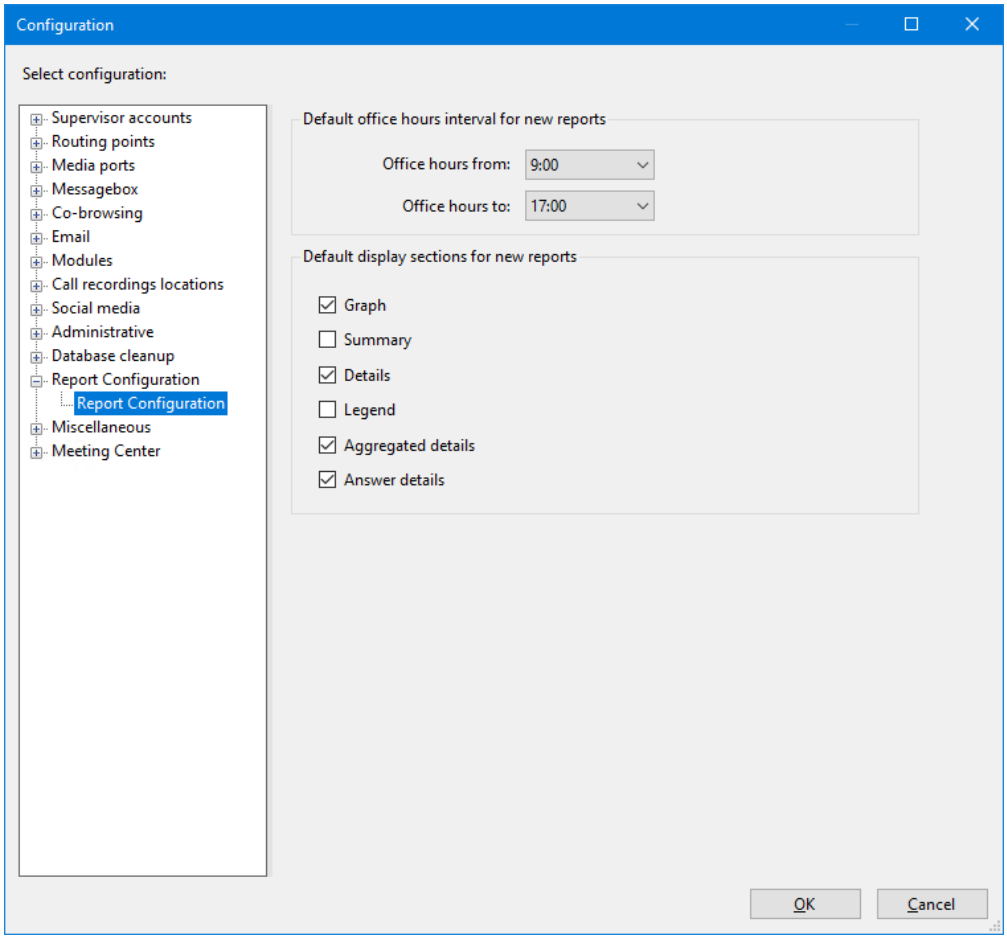


Figure 23-1 Report configuration window

- **Default office hours interval.**
  The Office hours from and Office hours to values define the initial values for the from- and to-time used in the Report Period step when creating a new report.
- **Default display sections.**
  The checked display sections define the initial values for the display sections used in the Report Fields step when creating a new report.

24. System Maintenance

24.1. Backup

Backups should be made at regular intervals, at least when major changes to the system or application have been made. Creating a backup and restoring backups are described in the BCT Installation Guide.

Not only backups must be created on a regular base, also other database maintenance actions must be performed. These actions are described in the BCT Installation Guide as well.

24.2. Exporting the Database

The statistical data in the database can be exported to MS Excel files. These files can be used to perform off line detailed analysis. Note that an excel spreadsheet is limited in size.

Choose **Export Data** from the Tools menu and select a folder to store the exported files in. The following data files will be exported:

Attendant call data	A list of chosen menu options.
Call Type data	A list of call type items used by agents.
End call data	A list of all end call actions.
Group status data	Information regarding the group status.
Identification call data	Information regarding identified callers via the identification module.
Outbound call data	Information regarding all contacts that are used during outbound services.
Router agent data	A list of states of all agents.
Router call data	A detailed list of all calls handled by the routers.
Router error data	A list of all errors in the router. Also status changes are listed.
Router agent global status data	A detailed list of the global status of an agent.
Email conversation data	A detailed list of email conversations.
Starter call data	A list of all calls handled by the starters and the next destination.
Transfer call data	A list of all transfer attempts.
User call data	Information regarding users of the system.

The information in the previous table is not a complete description of the content of the data files. It only describes the type of information.

24.3. Database Cleanup

During the operation of Business ConneCT, all information that is created by calls, chats

conversations, call notes, call logs and voice mails are stored in the database.
Due to privacy regulations it can be required to delete information that is no longer required or is older than a number of days. This can be done with an automatic or manual cleanup function.

Note: *Do not remove data directly from the database with other tooling. Doing this will result in corrupting the database. Important information will be lost and BCT will no longer function.*

Note*: Do not manually rename the social media attachments files from the configured server path. Doing this they will not be deleted anymore when a database cleanup is executed.*

A database cleanup will delete all data older than the specified date.

There are two types of data in the database: historic call data and configuration data. Historic call data relates to calls and chat conversations. Examples are: number of calls per router, number of abandoned calls, number of times agents switch not ready, social media chat attachments files, calls in Call logs, Voicemails, Recordings, etc. Configuration data is data that is entered for building call flows, agents, modules etc. With a cleanup only historic call data will be removed, configuration data is always preserved.

WARNING: A DATABASE CLEANUP REMOVES ALL HISTORIC CALL DATA OLDER THAN THE SPECIFIED DATE. BE AWARE THAT INFORMATION IN REPORTS IS ALSO HISTORIC CALL DATA. AFTER THE CLEANUP THERE WILL BE NO 'OLD' REPORT INFORMATION. REPORTS THAT NEED INFORMATION OLDER THAN THE SPECIFIED NUMBER OF DAYS CANNOT BE GENERATED.

Before a database cleanup:

1. Generate reports and store them on a safe place.
2. Create a database backup. (See the BCT Installation Guide for more information.)
3. Create a backup for social media attachments folder located on the configured server path (See Configure Social Media Attachments).

To automate the cleanup function a cleanup scope and schedule can be defined.

In Supervisor Dashboard, select **Configuration** from the Tools menu. This will open the Configuration window where Scheduled Cleanup can be configured under Database Cleanup. From the left section of the window select the history data types to cleanup. After selecting one or more data types, the number of days to keep the data can be selected for every data type. Finally define a cleanup schedule by selecting the weekdays and time to execute the cleanup. Click OK to confirm the scheduled cleanup.

For historic call data it is also possible to anonymize the data. In that case the names, telephone numbers, email addresses and Identification member information is replaced by “*****” to hide the identity data.

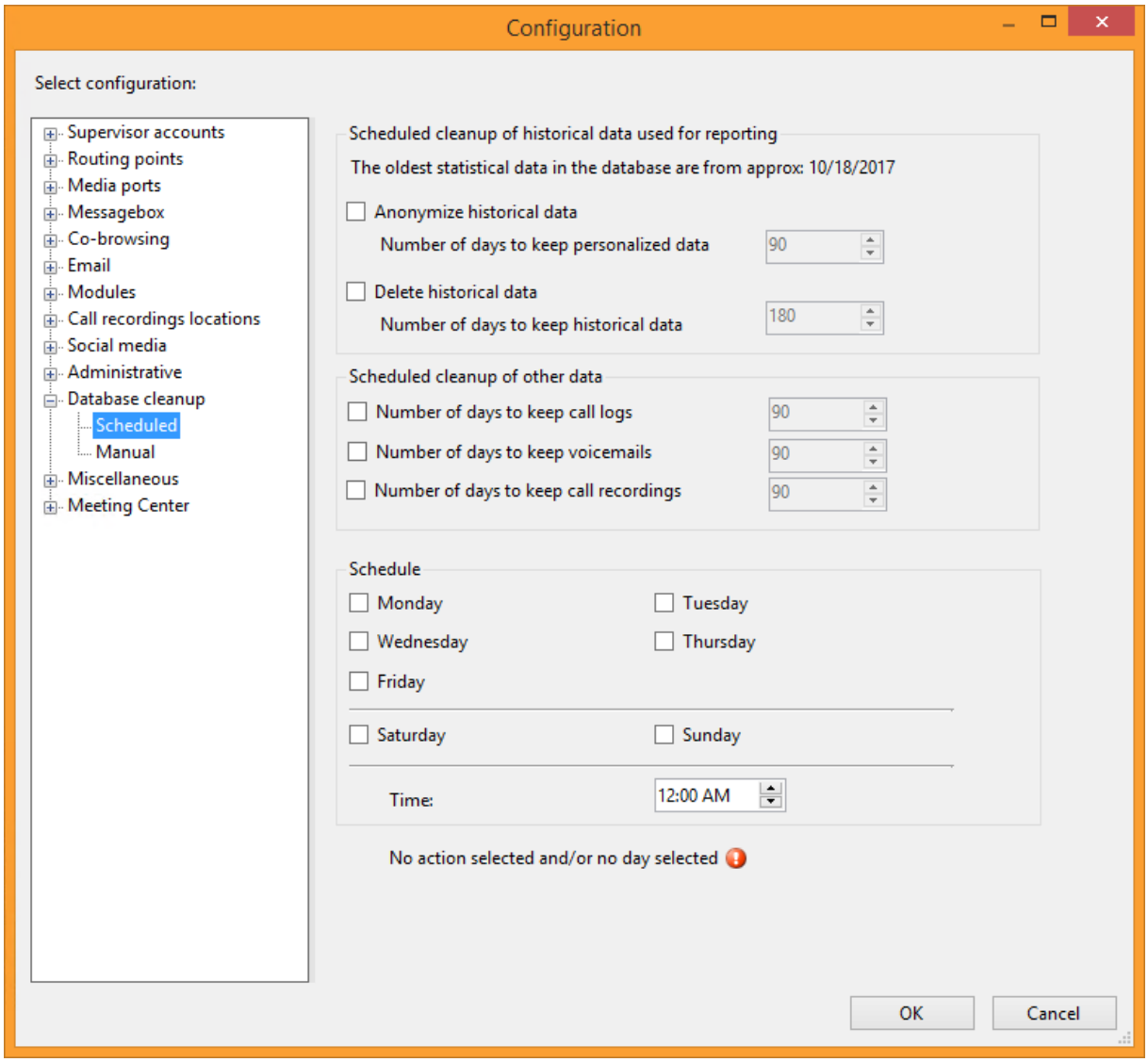


Figure 24-1 Scheduled cleanup configuration window

Note: *Cleanup operation is very resource-intensive. Select the cleanup schedule in a quiet period. Make sure that there are no supervisors monitoring the call center activity during the cleanup, as this prolongs the duration of the cleanup and may lead timeout errors.*

It is also possible to manual cleanup the historic call data. In Supervisor Dashboard, select **Configuration** from the Tools menu and under Database Cleanup select Manual. This will open the Manual cleanup. Select what type of history data to cleanup and enter the date from where the historic call data must be deleted. Historic call data that is older than that date will be deleted. Click OK to initiate the cleanup. A message box will ask for confirmation of the cleanup. Read the message box carefully to make sure what the cleanup will do. Press “Yes” to confirm and start the cleanup or press “No” to cancel the cleanup and keep the historic call data.

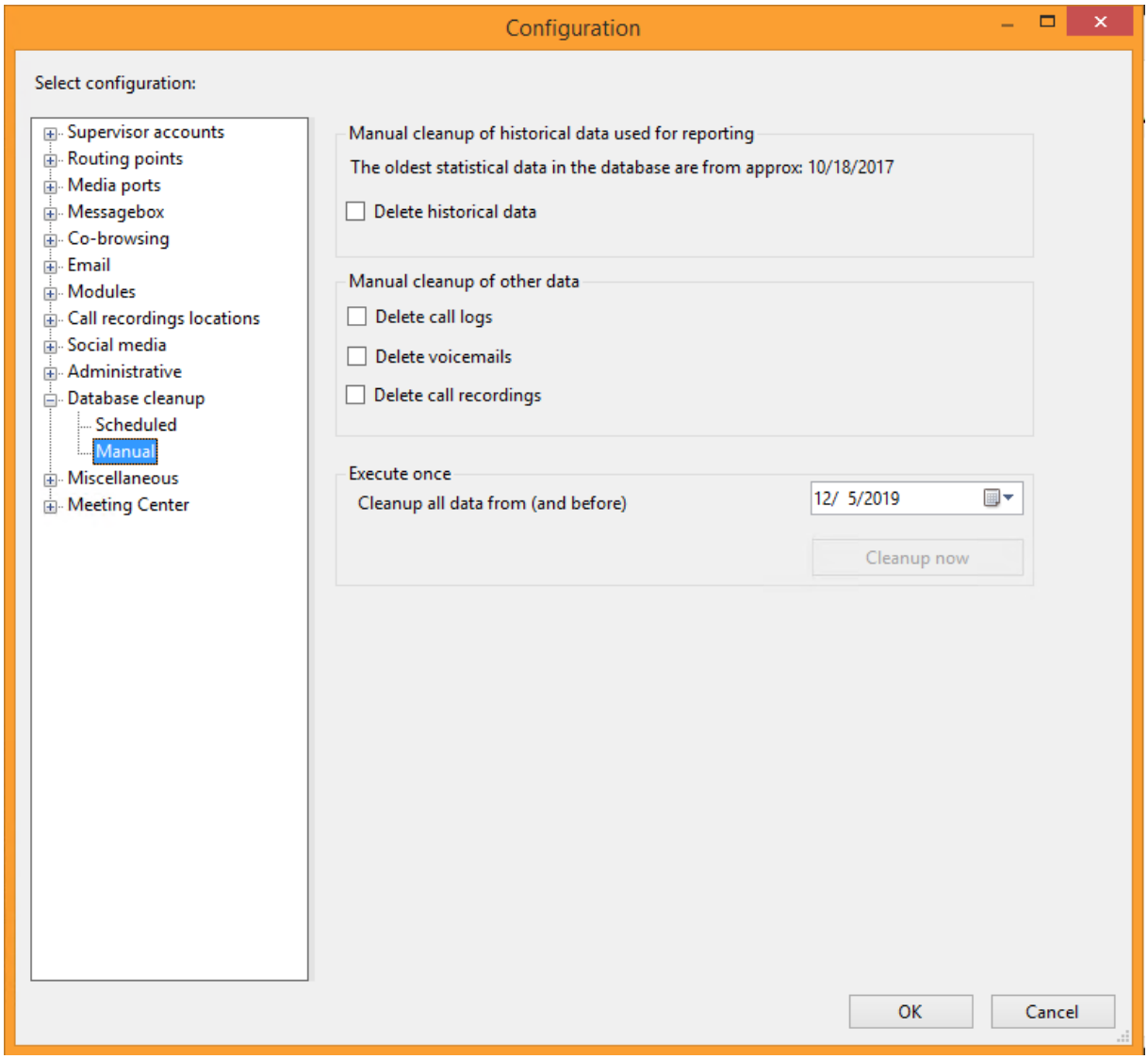


Figure 24-2 Manual cleanup configuration window

Note: *Cleanup may take a long time if the database contains a large amount of calls. Once started, it is not possible to cancel the cleanup operation.*

Note: *Cleanup operation is very resource-intensive and should be done in a quiet period. Make sure that there are no supervisors monitoring the call center activity during the cleanup, as this prolongs the duration of the cleanup and may lead timeout errors. Should an error occur during the cleanup, perform it again using the same date, to avoid leaving historical data in an inconsistent state.*