computer talk

ice

Administrator

User Manual

Server Version 12

Part Number: UM_IAD_12.x_E_20230929
iceAdministrator Version 12.x

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Welcome to iceAdministrator

As email and web-based communications become more common in today's business world, many call centers are evolving into **contact centers**. This allows businesses to interact with clients over the telephone, through email messages, web chats, social media posts, social media messages, and SMS.

ice is a powerful contact center solution that allows for the integrated handling of **contacts** (calls, email messages, chat requests, etc.) that are directed to your contact center. iceAdministrator is the tool that helps you manage your contact center from your desktop.

Chapter 1: Getting Started describes permissions for each user type, the logon procedure, common error messages, major components of iceAdministrator, and Edit and View modes.

Each subsequent chapter provides information on viewing, creating, modifying, and deleting items in iceAdministrator. Advanced topics can be found in the appendices.

Note: The iceAdministrator User Manual does not discuss workflow, audio messages, building blocks, holidays, or variables. For information on these topics, refer to the iceWorkflow Designer User Manual.

In discussing how this application works, this manual assumes that you:

- Are familiar with the contents of the iceBar User Manual;
- Understand basic telephony terms and concepts, such as queue and contact;
- Have basic navigating skills for standard Windows-based graphical user interfaces. This includes the ability to right-click and left-click, select *options* from a right-click menu, re-size and minimize windows, and navigate and scroll with a mouse pointer.

The following conventions are used in this manual:

- **Notes** highlight important information.
- **Cautions** are used to bring attention to functions and features that can affect the information viewed.
- Words displayed in **bold** font are defined within the paragraph.
- *Italics* are used to indicate buttons found on the software interface.
- The term "right-click" is used to indicate that the secondary mouse button, which by default is the button on the right, should be clicked. This configuration can be changed so that the left mouse button is the secondary button (for personal preference, for example, if the user is left-handed.)

Chapter 1: Getting Started

To view and modify configurations for your contact center, you must first be able to log on and navigate through iceAdministrator. iceAdministrator requires a specific User ID and password to open the application. User type controls the type of information each user can see.

In this chapter you will learn about the following topics: components of iceAdministrator; permissions on iceAdministrator; logon procedures; common error messages; View and Edit modes; and working offline.

Once you are familiar with the interface of iceAdministrator, you can refer to the subsequent chapter for detailed information on configuring your contact center.

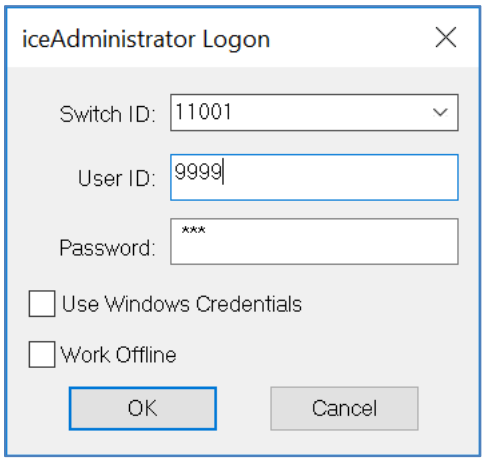
Logging On

Each time you start iceAdministrator, you must verify your five-digit switch ID, your four-digit user ID, and enter your password.

To log on:

1. Double-click on the iceAdministrator icon.

   The 'iceAdministrator Logon' dialog box appears.



   Select the 'Work Offline' checkbox if you wish to use iceAdministrator without loading the configuration for your contact center from the database. For more information on working offline, refer to page 13. When this option is selected, you are not required to enter switch ID, user ID, or password, as described in the steps that follow.

2. In the 'Switch ID' field, enter the five-digit switch ID associated with the switch to which you are assigned.

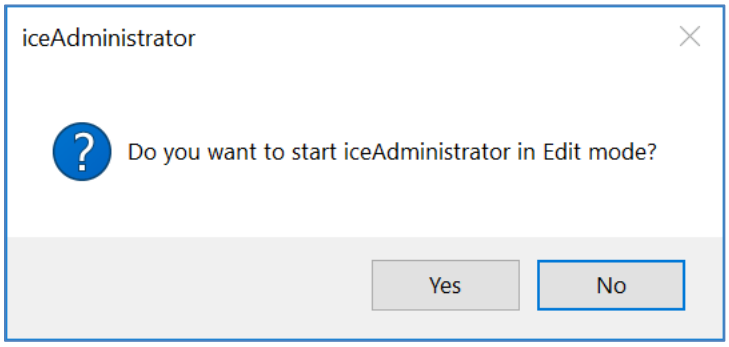
   The default value for the 'Switch ID field' is 11001. If your ice system has more than one switch, the ice administrator (the person responsible for maintaining ice) should provide the switch ID that represents your contact center.

3. In the 'User ID' field, type your four-digit user ID.

4. In the 'Password' field, type your password (up to twenty digits).

5. Click *OK*.

   A message box appears.



6. Click *Yes* to enter the application in **Edit Mode**, which allows you to modify the existing configuration. Click *No* to enter the application in **View Mode**, which allows you to view existing configuration without making changes.

   Once the application is open, you can toggle between these two modes. For more information on Edit Mode and View Mode, refer to page 10.

   Upon making a mode selection, the configuration for your contact center is retrieved from the database, and iceAdministrator opens.

   You have successfully logged on to iceAdministrator. The next time you log on, iceAdministrator remembers the switch ID and user ID last entered. If you are the only person using the computer where iceAdministrator is installed, you only need to enter your password and click *OK*.

   If you have experienced difficulty logging on, refer to the next section for a description of common error messages and ways to resolve them. For a description of the iceAdministrator interface, refer to page 15 when the application is open.

   Note: The information displayed in iceAdministrator is dependent on your user type. For information on permission levels and user types, refer to page 26.

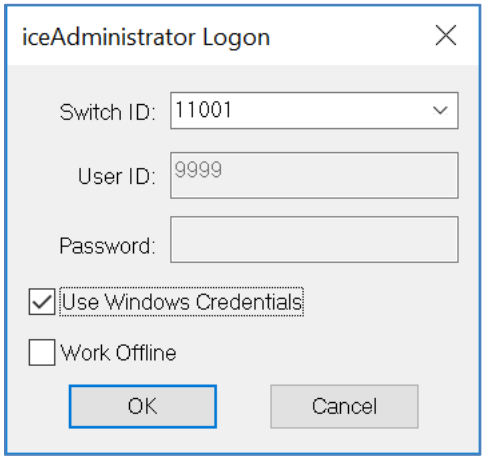
Single Sign-On

If your organization has enabled Single Sign-On for iceAdministrator, you will be able to sign on using your Windows credentials.

Note: To enable Single Sign-On, it will need to be configured using Active Directory in iceAdministrator. For further information on how to enable Single Sign-On, please review Importing Users from Active Directory on page 51.

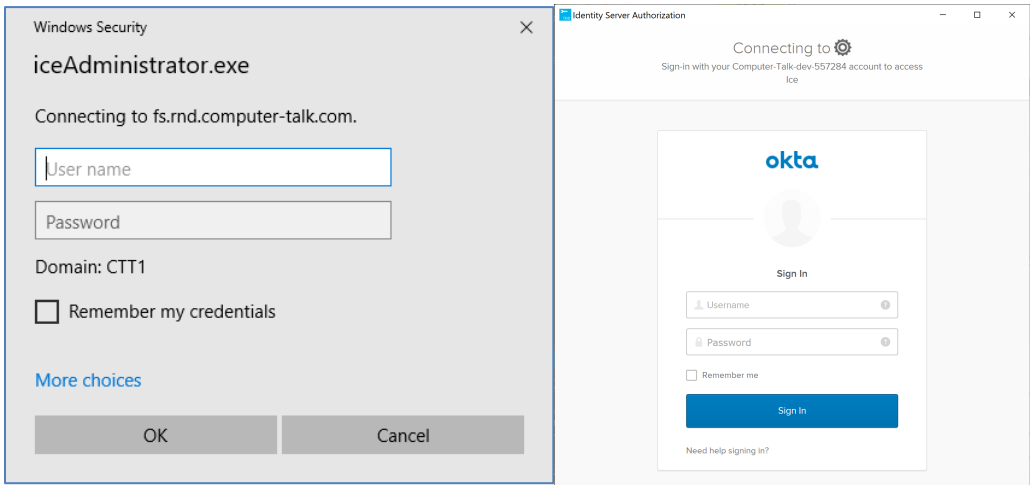
Signing On with Single Sign-On

When Single Sign-On is configured for iceAdministrator, enter the Switch ID you would like to connect to, followed by checking the Use Windows Credentials box when the logon window appears.



1. When you click *OK*, the Single Sign-On dialog box will appear.

2. To sign in with this method, you will use the same credentials that you use to log on to your computer or your company email. Enter your username and password in the boxes.



3. Click *OK* when you are ready to connect to iceAdministrator.

Note:

- If you wish to skip this step for future logins, check the box for *Remember my credentials*. This way, you will not have to enter your Username each time you sign in.
- This dialog box may look different, depending on the way your administrator has configured the system.
- These steps are applicable to other single sign-on methods such as Okta.

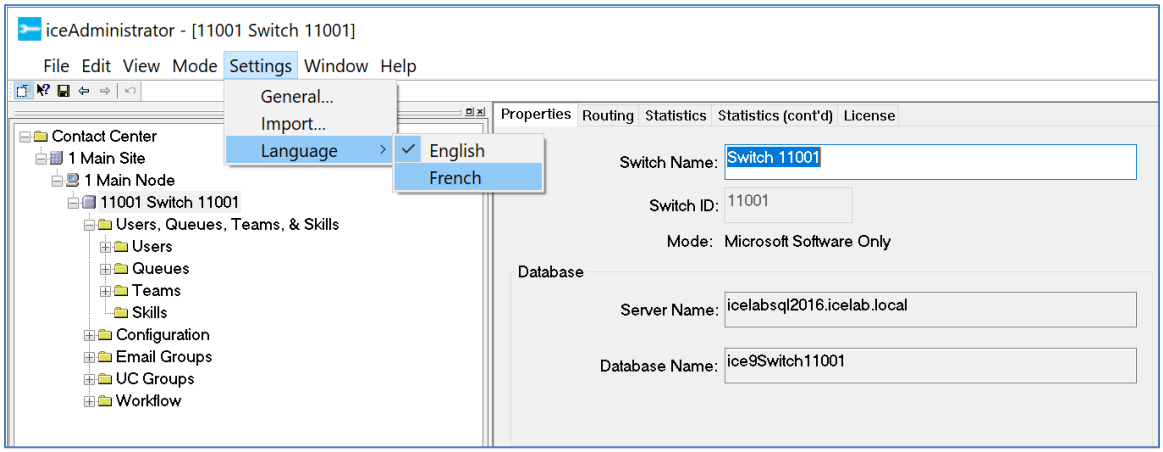
Choose Language

When you are starting iceAdministrator for the first time, the application will try to determine what operating system language you are using and default the application to that language. For example, if you have a French OS installed, it will default the settings to French. If you are using a non-supported language, then it will default the language to English.

The iceAdministrator interface is available in English or French.

To change the language:

1. Log on to the iceAdministrator application as described in the previous section, selecting either *Edit* or *View mode*.
2. Open the *Settings* menu.



3. Select *Language*.
4. Select the desired language. A checkmark appears beside the language currently in use.

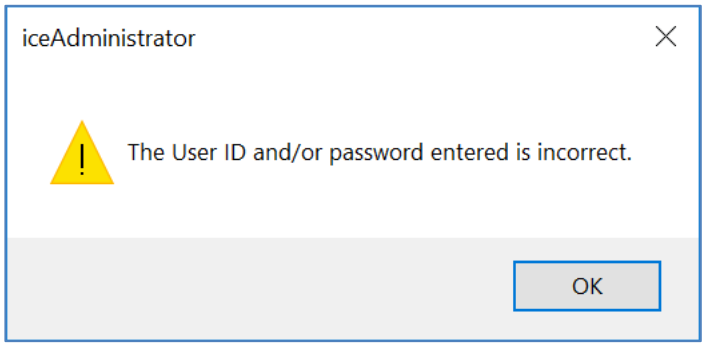
   The application will update to reflect the change.

Common Error Messages

The sections that follow describe some common error messages you might experience when logging on or when the application is running.

Invalid Information

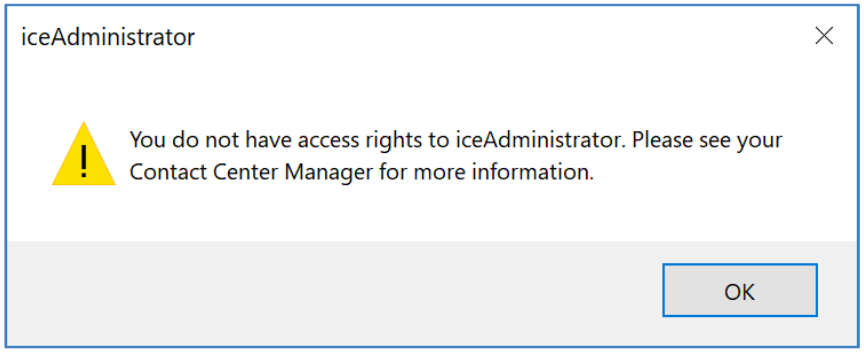
The error message shown below appears when you enter an incorrect password, an invalid user ID, or an incorrect switch ID.



Verify the information that you have entered and try again.

User ID Does Not Have Access Rights

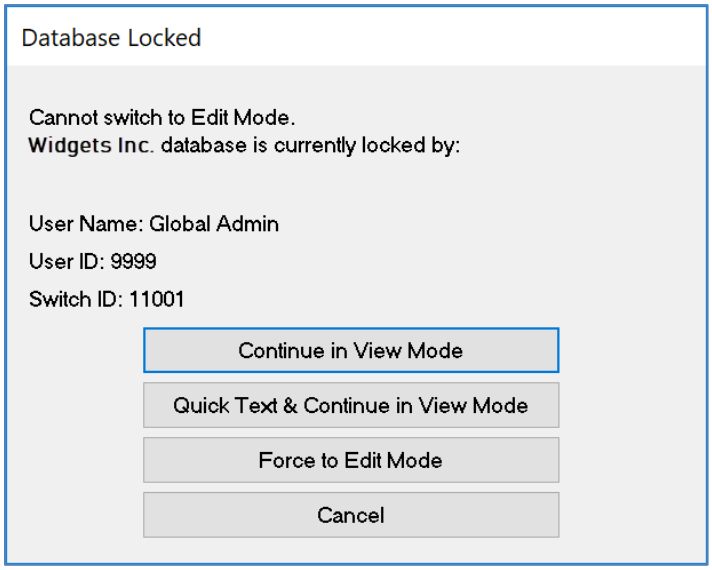
The error message shown below appears when you enter a user ID that does not have access rights to the iceAdministrator application. For information on permission levels and user types, refer to page 26.



Contact your ice administrator to verify if the user ID that was provided has the necessary permission level to access the application.

Database Locked

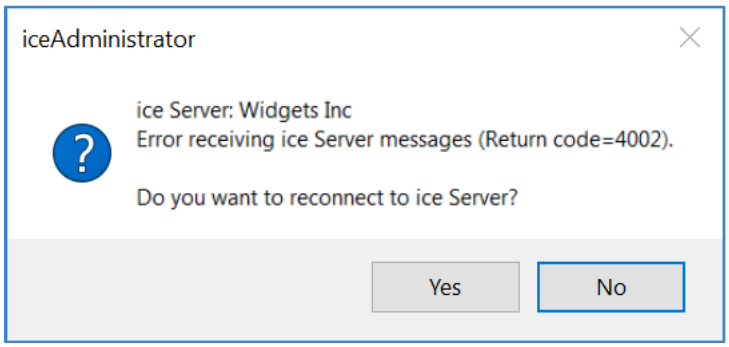
The message shown below appears if you attempt to enter Edit Mode while another user is in Edit Mode.



For more information on database locking, refer to page 12.

Connectivity Error

iceAdministrator must have network connectivity to the ice server to function properly. If your contact center is experiencing network problems, you may see this error message:



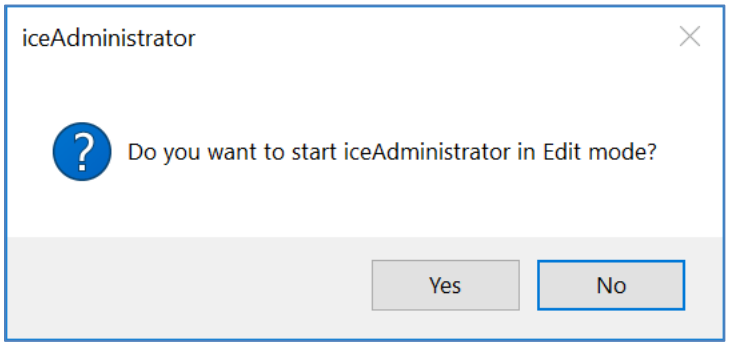
Click *Yes* to try to re-establish your connection with the ice server. Otherwise, click *No* to close the message box and exit from iceAdministrator. Once network difficulties are resolved, you may re-open iceAdministrator.

Caution: If you make changes in iceAdministrator while network connectivity is lost, the changes may eventually be saved to the database (the database may not be reachable if there are network issues) without notifying ice. ice is not notified of these changes until the server is restarted.

iceAdministrator provides a warning message when the database has changed without notifying ice. Click *Retry* on the dialog box once network connectivity is restored. As an alternative workaround, you may modify the changed items again when the connection is re-established. This updates the ice server with the changes, including the changes made while the connection was lost.

Edit Mode and View Mode

Each time you log on, iceAdministrator prompts you to make a selection.



When you click *Yes*, the application opens in Edit Mode, which allows you to make changes to the configuration of your contact center. When you click *No*, the application opens in View Mode, which allows you to view the current configuration of your contact center.

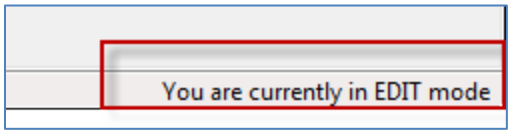
Selecting Edit Mode

You may decide to switch from View Mode to Edit Mode to modify the configuration of your contact center. To toggle from View Mode to Edit Mode, select *Edit* from the *Mode* menu.

The configuration for the contact center is updated from the database and iceAdministrator switches to Edit Mode.

Note:

- When in Edit Mode, a checkmark appears beside the *Edit* option in the Mode menu and the bottom right corner of the iceAdministrator window displays 'You are currently in EDIT mode.'



- While in Edit Mode, you can modify the configuration for the contact center.

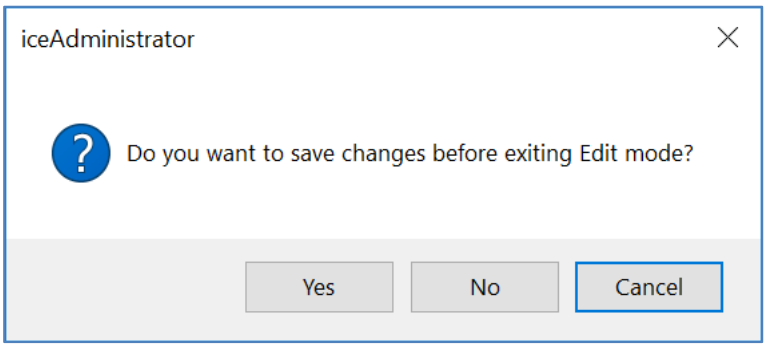
Selecting View Mode

You may decide to switch from Edit Mode to View Mode when you want to see configurations in your contact center.

To toggle from Edit Mode to View Mode:

1. Select *View* from the Mode menu.

   If you have any unsaved changes, iceAdministrator will prompt you to save changes.



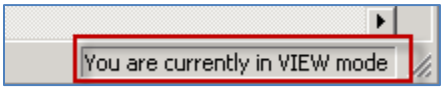
2. Click *Yes* if you want to save any unsaved changes before exiting Edit Mode.

   Click *No* to switch to View Mode without saving changes. The configuration for your contact center is updated from the database and iceAdministrator switches to View Mode.

   Click *Cancel* to stay in Edit Mode without saving changes.

Note:

- When in View Mode, the checkmark does not appear beside the 'Edit' option and the bottom right corner of the iceManager window displays 'You are currently in VIEW mode.'



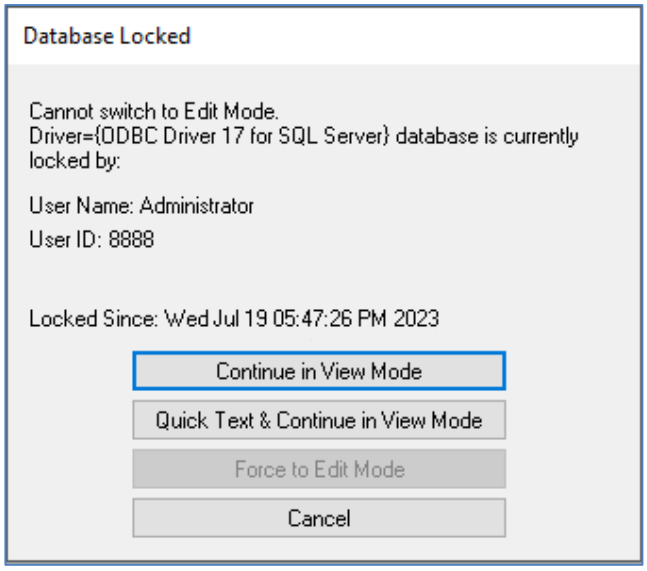
- While in View Mode, you can only view the configuration for the contact center.

Locking the Database

Having a **lock** on the database ensures the data you are viewing is the most up to date and another iceAdministrator user does not overwrite your changes.

When a user successfully enters Edit Mode, a locking mechanism is placed on the ice database. This ensures that two iceAdministrator users are never editing the same portion of the ice database at the same time. If your contact center has only one instance of iceAdministrator, this should never be a concern.

If you attempt to enter Edit Mode while another user has already locked the portion of the database to which you require access, the 'Database Locked' dialog box appears.



This dialog box notifies you that another user has the lock on the database and provides the user ID and user name of the current lock holder. In addition, you will also see the date and time of how long the database has been locked for. Until this user exits Edit Mode, you are limited to View Mode. If you click the *Quick Text and Continue in View Mode* button, you can send a note to the user who has locked the database and you can then proceed to use the application in View Mode. (For more information on quick text messaging, refer to page 36.) Click *Cancel* to close the application.

Force to Edit Mode becomes available only under special circumstances. For example, if your PC crashes, it is possible that ice may think that you still have the lock on the database. When you log on to iceAdministrator and select *Edit Mode*, you may be presented with the 'Database Locked' dialog box with your own user ID appearing as the current lock holder. In this scenario, you can click *Force to Edit Mode* to regain the lock on the database.

Note: Depending on how your system is configured, it is possible to have two users editing the ice system at the same time. For example, two switch administrators assigned to different switches have the ability to make changes to their respective switches simultaneously.

Working Offline

When you log on to iceAdministrator, you have the option to work offline instead of working with a connection to the ice database/ice server. You do not need to specify your user ID and password when working offline. As a result, you have the permissions of a Global Administrator while working offline.

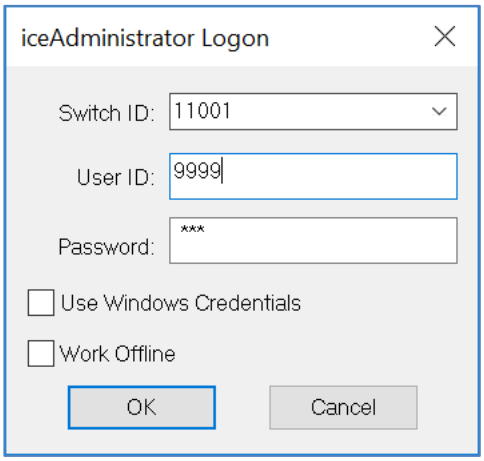
All changes that are saved while you are working offline are saved to a file (e.g., a file on your PC). The next time you log on to iceAdministrator, you can import the changes made while working offline. Keep in mind that iceAdministrator only allows you to import changes that your user type allows. For information on permission levels and user types, refer to page 26.

Note: The quick text messaging feature is not available when you are working offline.

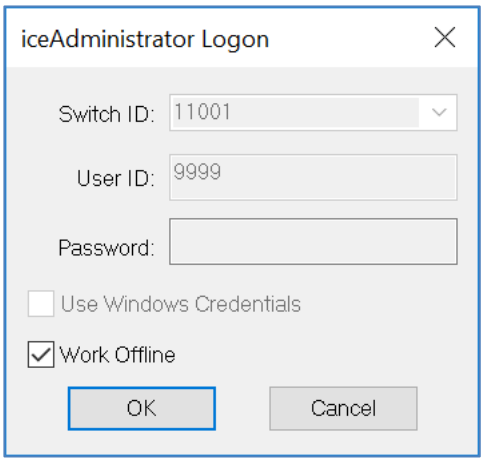
To work offline:

1. Double-click on the iceAdministrator icon.

   The 'iceAdministrator Logon' dialog box appears.



2. Enable the ‘Work Offline’ checkbox.



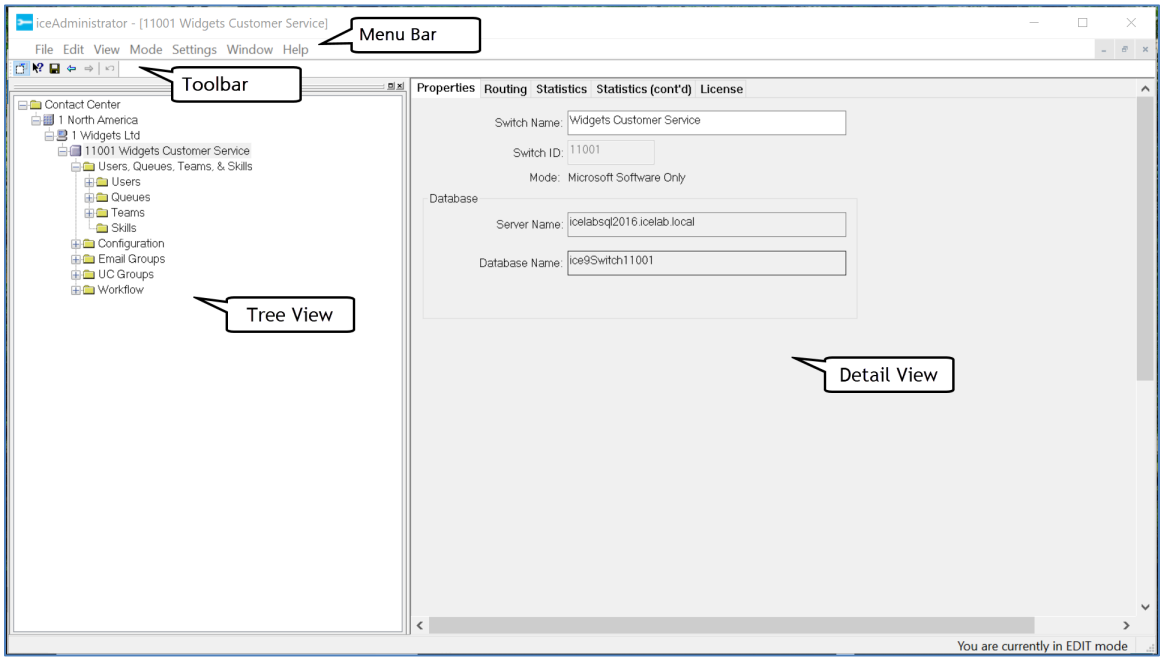
You are not required to supply any other logon information.

3. Click *OK* to open iceAdministrator.

You have successfully opened iceAdministrator, but you will not see any data. It is recommended that you import a switch that you previously exported, or you can create a site, node, and switch as required. For more information on importing data, refer to page 207. For more information on creating sites, nodes, and switches, refer to page 223.

Components of iceAdministrator

The iceAdministrator user interface is composed of a menu bar, toolbar, tree view, and detail view.



Menus

The table below provides a summary of each Menu:

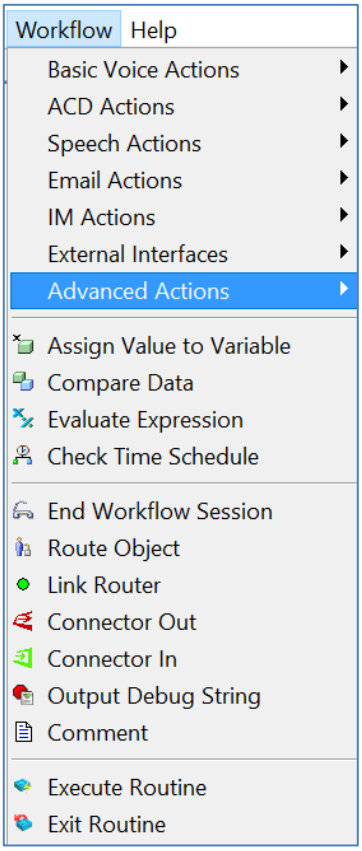
iceAdministrator menus		
Menu	**Menu Items**	**Function**
File	Validate	Validate any changes without updating them in the database. This is useful if you are working offline because you can check the integrity of your work without connecting to the database. After you select *validate*, you are given the option to see the list of items that have changes. For more information, refer to page 32.
	Save	Save changes to the ice database and notify the ice server of the changes. You can cancel the save process at any time by clicking *Cancel* on the 'Progress' dialog box.
	Reload	Reload configuration from the ice database. Any unsaved changes are lost upon selecting *Reload*.
	Work Offline	Work with iceAdministrator without a connection to the ice database or ice server. Changes made while working offline can be saved to an exported file. For more information on working offline, refer to page 13. For more information on exporting, refer to Appendix A: Exporting and Importing.
	Print	Print the workflow page you are viewing.
	Print Preview	Display a print preview of the workflow page you are viewing. To return to the normal view, select this menu option again.
	Page Setup	Configure the paper size and orientation of the paper before printing or previewing the workflow page you are viewing.

iceAdministrator menus		
Menu	**Menu Items**	**Function**
	Send Quick Text Message…	Send a quick text message to any users logged in to iceAdministrator, iceMonitor, iceManager, or iceBar.
	Exit	Close iceAdministrator.
Edit	Undo Delete	Undo the deletion of an item in iceAdministrator. For example, if you delete a user, click *Undo Delete* to undo the change. If you save changes, *Undo Delete* is no longer available for deletions made prior to a save operation. **Note**: If you create a new item that has the same ID as the item that you deleted, *Undo Delete* is no longer available for that item. For example, if you delete user 2502, Undo *Delete* is available. If you then create user 2502, *Undo Delete* is no longer available.
	Cut	Cut an action or a group of actions that you have selected on the workflow page.
	Copy	Copy an action or a group of actions that you have selected on the workflow page.
	Paste	Paste an action or a group of actions onto a workflow page, provided you have copied or cut an action or group of actions from a workflow page.
	Delete	Delete an action or a group of actions that you have selected on the workflow page.
	Select All	Select all of the actions and links on the workflow page.
Layout	Align	Align selected workflow actions on the workflow page. This menu is only available when you are viewing a workflow page and have more than one action

iceAdministrator menus		
Menu	**Menu Items**	**Function**
		selected.
View	Tree	Restore tree view if tree view has been closed.
	Highlight Imported	Highlight imported data in the tree view with red text. For more information on importing and exporting, refer to page 207.
	Grid	Show a grid on the workflow page.
	Snap to Grid	Anchor actions and links to the grid, whether or not the grid is displayed.
	Link Labels	Display link labels on the workflow page.
	All Links	Override any 'Hide Incoming Links' settings for actions on a workflow page in order to see all links.
	Workflow Actions Toolbar…	Open the 'Show Workflow Actions' dialog box. Select the workflow actions to be displayed in the Workflow Actions toolbar.
Mode	Edit	When checked, iceAdministrator is in Edit Mode. When unchecked, iceAdministrator is in View Mode. When working offline, this menu option is greyed out.
Settings	General…	Define ranges for user IDs and queue IDs that can be viewed and added, and select the method for sorting these items. You may also define settings for workflow. iceAdministrator must be restarted for these settings to take effect. **Min ID** – The lowest user/queue ID that can be viewed or added.

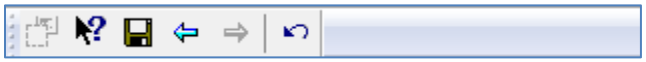
iceAdministrator menus		
Menu	**Menu Items**	**Function**
		Max ID – The highest user/queue ID that can be viewed or added. **Sort by** – The method (ID or Name) used to sort users/queues in iceAdministrator's tree view. **Hunt Group Order** – Defines how users are sorted in the tree view for the queue. **Single Click** – By default workflow pages open with a double-click. Select this check box to open workflow pages with a single click. **Show Workflow Action Properties when dropping on canvas** – By default, the Workflow Action property window opens when you drop an Action on the Workflow canvas. Unselect this checkbox to stop the Workflow Action property window from opening. **Show Workflow Action Properties when using Link Tool** – By default, the Workflow Action property window opens when linking two Workflow Actions. Unselect this check box to stop the Workflow Action property window from opening. **Verify before deleting a user** – Ask for confirmation before deleting a user. **Clear the list of messages to ignore** – When users are importing workflows and there are conflicts, users can choose a default action that is taken for such conflicts. Users can also choose to never see the message again during the import. Disable the checkbox beside this option to have the message pop up during imports.

iceAdministrator menus		
Menu	**Menu Items**	**Function**
	Import…	Determine the action that iceAdministrator takes when a file being imported has the same ID as an existing file. For more information on import settings, refer to page 219.
	Language	Change the language selection in iceAdministrator. Language choices include English and French.
Window	Previous	Select to view the page you just left. This feature is similar to the *Back* button in Microsoft Windows Explorer.
	Next	Select to view the page you were on before selecting the *Previous* button. This feature is similar to the *Forward* button in Microsoft Windows Explorer. You cannot use the *Next* button until you have used the *Previous* button.
	Cascade	Arrange all windows that have been recently viewed in the detail view in cascading order, with the most recently viewed window on top.
	Tile	Arrange all windows that have been recently viewed in the detail view as tiles.
	Close All	Close all recently viewed windows.

iceAdministrator menus		
Menu	**Menu Items**	**Function**
Workflow		When viewing a workflow page, select actions from this menu to place on the page. This is an alternative to using the workflow action icons. **Note:** This menu will only be available when on a Workflow page.
Help	About iceAdministrator	Provides information on the version of iceAdministrator, the ice server version, as well as the connected servers.

Toolbar

The *Edit Mode* and *Save* buttons on the toolbar are always available, as shown below:



When a workflow page is displayed in the detail view, the remaining toolbar buttons will become available:

The table below describes each button on the toolbar. All but the first six buttons are specific to the workflow:

Toolbar buttons		
Button	**Name**	**Function**
	Edit Mode	Toggle between Edit Mode and View Mode.
	Validate All	Validate any changes you have made without updating the ice database.
	Save	Save changes to the ice database and notify the ice server of the changes.
	Back (Previous)	Select to view the page you just left. This feature is similar to the *Back* button in Microsoft Windows Explorer. You cannot use the *Back* button until you have clicked on at least two items in the tree view.
	Forward (Next)	Select to view the page you were on before selecting the *Back* button. This feature is similar to the *Forward* button in Microsoft Windows Explorer. You cannot use the *Next* button until you have used the *Back* button.
	Undo Delete	Undo the deletion of an item in iceAdministrator. For example, if you delete a user, you can click *Undo Delete* to undo that deletion. If you save changes, Undo Delete is no longer available for deletions made prior to a save operation. **Note**: If you create a new item that has the same ID as the item that you deleted, the *Undo* button is no longer available for that item. For example, if you delete user 2502, the *Delete* button is available. If you then create user 2502, the *Undo Delete* button is no longer available.

Toolbar buttons		
Button	**Name**	**Function**
	Select	Select actions and links on a workflow page. By default, this option is enabled.
	Add Link	Add a link between two actions you have placed on a workflow page.
	Delete Node or Link	Delete nodes and links on a workflow page.
	Zoom In	Zoom in on a workflow page.
	Zoom Out	Zoom out on a workflow page.
	Restore Size	After using Zoom In and Zoom Out, use this option to restore the workflow page to its original size.
	Print	Print a workflow page.
	Properties	Show the properties page for the workflow page.

Tree View

Similar to any tree control found in a Windows-based application (e.g., Windows Explorer), the tree view in iceAdministrator is easy to use.

The tree view allows you to:

- Access different levels or components of the system, including individual users, queues, and more. The information available in the tree view is based on your user type. For information on permission levels and user types, refer to page 26.
- When in Edit Mode, many items in the tree view have right-click menus. These menus provide access to options such as importing, exporting, adding, and deleting (e.g., Import Queues, New Queue).

Detail View

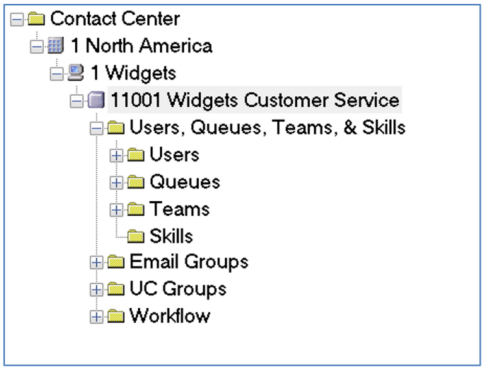
The detail view displays the configurable parameters for the item that you have selected in the tree view. For example, when a user is selected in the tree view, seven tabs are shown in the detail view. Each tab allows you to view or configure a portion of the user's profile.

The information available in the detail view is based on your user type. For more information on permissions on iceAdministrator, refer to page 26.

Sites, Nodes, and Switches

Sites, nodes, and switches represent the hierarchy of an ice system in iceAdministrator.

The following screenshot shows how sites, nodes, and switches appear in the tree view of iceAdministrator for a typical system:



A **switch** contains all configuration requirements for a single contact center. A switch can be thought of as a partition of the ice system.

In iceAdministrator, a switch can be expanded in the tree view to show the following folders: Users, Queues, Teams & Skills; Email Groups; UC Groups; and Workflow. Each folder represents a component of your contact center and is discussed in detail in the chapters that follow.

Sometimes an ice system can be “shared” between two contact centers. In this scenario, each company can be configured with its own switch.

A **node** is comprised of one switch or multiple switches. An ice server is essentially a node.

A **site** is comprised of one node or multiple nodes. Multiple ice servers linked together form a site.

Note: Creating sites, nodes, and switches is an advanced topic that requires license changes. If you have questions, please contact your account executive. Switches must be created using ice Database tools. License checks will occur before a switch is uploaded to a node.

For a step-by-step guide on creating switches, refer to the DB tool user manual.

Permissions on iceAdministrator

Permissions on iceAdministrator are based on your user type.

There are seven user types:

- User
- Team Leader
- Supervisor
- Administrator
- Node Administrator
- Site Administrator
- Global Administrator

All user types, except for Users, have some level of access to iceAdministrator:

- In the tree view, user type determines your ability to view sites, nodes, and switches.
- Within a specific switch, user type determines your ability to view specific folders.
- In the detail view, user type determines your ability to see configuration details for an item selected in the tree view.

Sites, Nodes, and Switches

A user's ability to view sites, nodes, and switches in the tree view and detail view of iceAdministrator is dependent on his or her user type.

The table below describes the tree view and the detail view for each user type in relation to sites, nodes, and switches.

User Types		
User Type	**Access to Sites, Nodes, Switches**	**Icon**
User	Users have no access rights to iceAdministrator. The primary function of a user is to log onto iceBar and handle contacts.	
Team Leader[1]	Team Leaders can view the Users, Queues, Teams, & Skills folder. They cannot access the Skills subfolder within this folder. They cannot view the Switch folder in the tree view or the detail view. They cannot view anything higher than the switch.	
Supervisor[2]	Supervisors can view the Users, Queues, Teams & Skills and the Workflow folders. They cannot view the Switch folder in the tree view or the detail view. They cannot view anything higher than the switch.	
Administrator[3]	Administrators can view all folders within the switch. They can view the Switch folder in the tree view, but cannot view the properties for the switch in the detail view. They cannot view anything higher than the switch. Administrators can create and modify users of the same level.	
Node Administrator[4]	Node Administrators can view all folders for all switches within the node. They can view the Node folder in the tree view, but cannot view the properties for the node in the detail view. They cannot view anything higher than the node. Node Administrators can create and modify users of the same level.	
Site Administrator[5]	Site Administrators can view all details for all nodes within the site. They can view the Site folder in the tree view, but cannot view the properties for the site in the detail view. They cannot view anything higher than the site. Site Administrators can create and modify users of the same level.	

[1] Can only see the team to which he or she belongs.
[2] Can only see the queue to which he or she belongs.
[3] Can only see the switch to which he or she belongs.
[4] Can only see the node to which he or she belongs.
[5] Can only see the site to which he or she belongs.

User Types		
User Type	**Access to Sites, Nodes, Switches**	**Icon**
Global Administrator	Global Administrators can view everything. This includes all details for all sites and the properties for each site. Global Administrators can create and modify users of the same level.	

The Tree View

A switch can be expanded in the tree view to show sub-folders. Each folder represents a component of your contact center and will be discussed in detail in the chapters that follow. Your ability to view switch folders in the tree view is determined by your user type.

The table below describes the folders that can be viewed in the tree view for each user type. A checkmark indicates the user can view the folder.

User Type	UQTS	Email Groups	UC Groups	Workflow [6]
Team Leader	✓ [7]	--	--	--
Supervisor	✓	--	--	✓
Admin	✓	✓	✓	✓
Node Admin	✓	✓	✓	✓
Site Admin	✓	✓	✓	✓
Global Admin	✓	✓	✓	✓

UQTS = Users, Queues, Teams, & Skills

Note: For more information about workflow, refer to the iceWorkflow Designer User Manual.

[6] The workflow folder includes audio messages, building blocks, holidays, and workflow variables. By default, building blocks are visible to users that have an administrator user type or higher, but a unique level of access can be applied to a building block. For more information, refer to the iceWorkflow Designer User Manual.

[7] Team leaders can only see queues and teams to which he or she is assigned, and other users assigned to the same teams. They cannot view the contents of the Skills folder.

The Detail View

In general, a user with a user type of Team Leader or higher can click on an item in the tree view to see more information about that item in the detail view. For the Users, Queues, Teams & Skills folder, the information that a user can view in the detail view is dependent on the user's type, as described below.

Viewing users in detail view

- You can view configuration details for yourself and for other users with a lower user type.
- You can view configuration details for other users with an equal user type.

Viewing queues and teams in detail view

- You can view all details for a queue or team under the 'Properties' tab.
- You can view users with a lower user type under the 'User Assignments' tab for a queue or team.
- If you have an Administrator user type or higher, you can view other users with an equal or lower type on the 'User Assignments' tab for a queue or a team.
- Global Administrators can view all details for any queue or team.

Adding, Changing, or Deleting a User, Team, Queue, or Skill

Adding, changing, or deleting other users

- You can create a new user with a lower user type.
- You can modify all proprieties for an existing user with a lower user type.
- You can delete users with a lower user type.
- An Administrator user type or higher can modify most of the properties for an existing user with an equal user type. The properties you cannot modify are User Name, User ID, User Type, and Password.
- Global Administrators can create and delete all user types. They can also modify the properties of all other users, including other Global Administrators.

Adding, changing, or deleting queues

- A Supervisor user type or higher can create and modify queues.
- An Administrator user type or higher can delete queues[8].

[8] You may be able to delete the queue or team even if a user with a higher type is assigned to the queue or team. In this scenario, the queue/team assignment of the user with the higher type is changed (i.e., the user is removed from the queue/team). This is the only time you can modify the properties of a user with a higher type.

- Global Administrators can create queues and modify or delete any queues.

Adding, changing, or deleting teams

- A Supervisor user type or higher can create, modify, and delete teams[8].
- Global Administrators can create teams and modify or delete any teams.

Adding, assigning, or deleting skills

- A Supervisor user type or higher can create, assign, and delete skills.
- Global Administrators can create skills, assign, or delete any skills.

Validating Data

iceAdministrator checks the integrity of your work before saving it. If there are no errors, your changes are saved to the database. For more information on saving data, refer to page 34.

You can run this integrity test without saving your data by using the 'Validate' feature. This allows you to check your data and can be useful if you are working offline.

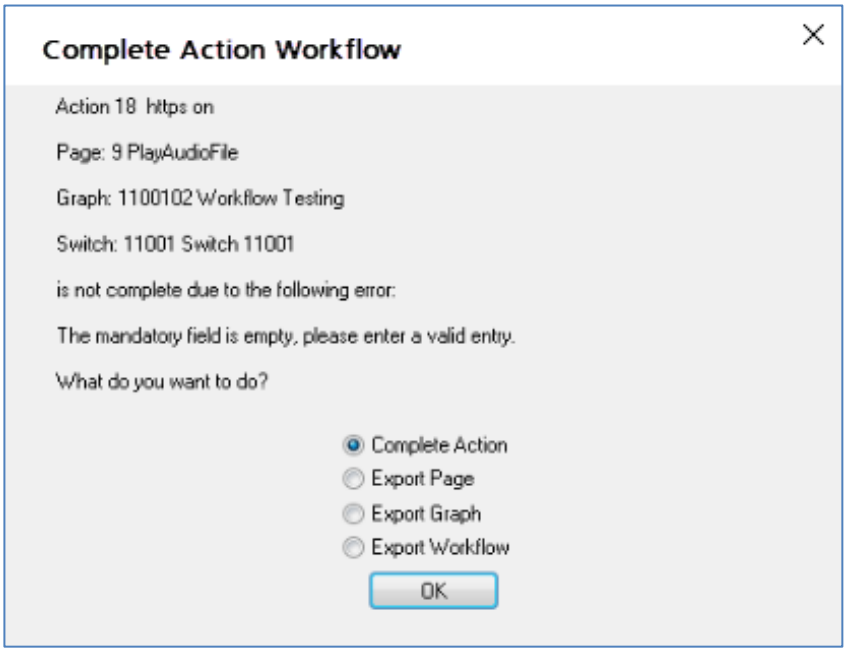
To validate your data:

1. After you have made changes, select *Validate* from the File menu, or click the *Validate* button on the toolbar.

   Note: You can also validate data for a specific switch or for all of the workflow on a switch by right-clicking on the Switch folder or Workflow folder in the tree view and selecting *Validate*.

   If an error in your unsaved data is detected, a message box appears, prompting you to complete or change the relevant data. When you click *OK*, the iceAdministrator window containing the error appears. Once you fix the first error, you can validate your data again. It will find the next error and prompt you to fix it. This repeats until all errors have been fixed.

   The image below shows the message that appears when the properties of a workflow action have not been properly set. You are given the option of completing the action or of exporting the workflow to a file. For more information on exporting data, refer to page 207. If you select the 'Complete Action' radio button and click *OK,* you are taken to the workflow page containing the error.

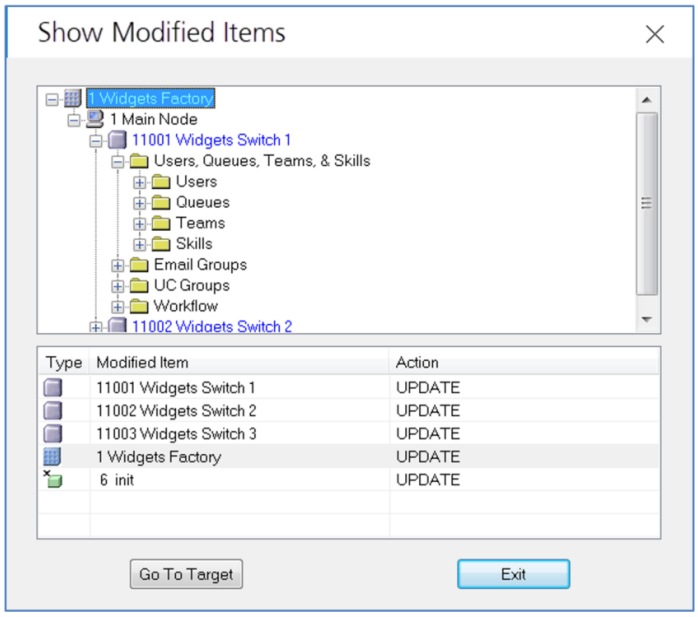


2. Once you have fixed the data containing errors, run the validation process again.

   When the process is complete, and you have no errors, a message box appears. You are asked whether or not you wish to see a list of changes.

3. Click *Yes* to see the 'Show Modified Items' dialog box. Click *No* if you do not want to see it.

   The 'Show Modified Items' dialog box example below shows the list of unsaved items in the system. The unsaved items in the tree are displayed in a different font colour.

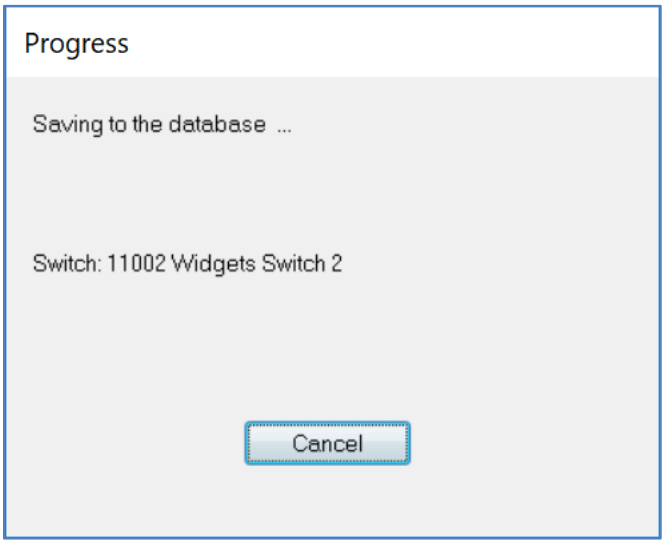


Saving Data

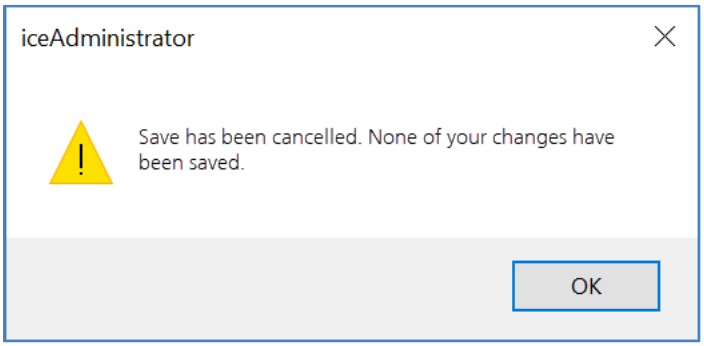
To save changes to the database:

1. Select *Save* from the File menu or click on the Save icon (💾) in the toolbar.

   The 'Progress' dialog box appears.



2. Click *Cancel* on the 'Progress' dialog box at any time to cancel the save operation. When you click *Cancel*, the following pop-up message box appears:

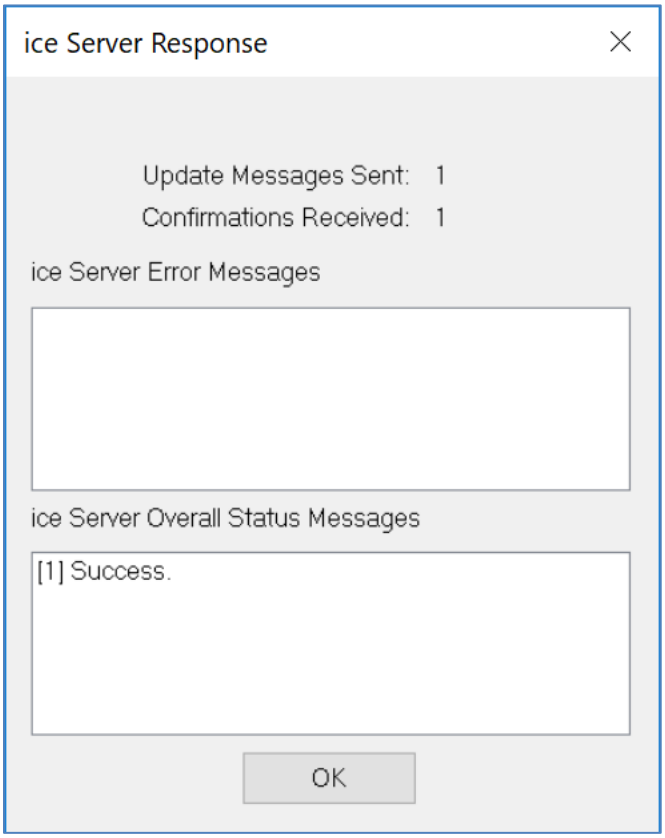


3. Click *OK* to complete the cancel operation.

4. If iceAdministrator detects any errors in the changes you have made, you are prompted to complete or change the relevant data. For more information on validating data, refer to the previous section.

   When the save operation is complete, the 'ice Server Response' dialog box appears. Errors that prevent the database from being updated appear in the 'ice Server Error Messages' dialog box.

   To be certain that saved changes have been successfully applied to ice, it is important to wait for the successful server response. This message is shown below.



5. Click *OK* to close the dialog box.

Quick Text Messaging

Quick text messaging on iceAdministrator allows you to exchange messages with any users logged on to iceAdministrator, iceMonitor, or iceBar.

To send a message:

1. Right-click on a user in the tree view and select *Quick Text…* from the pop-up menu.

   The 'Quick Text Message' dialog box appears.

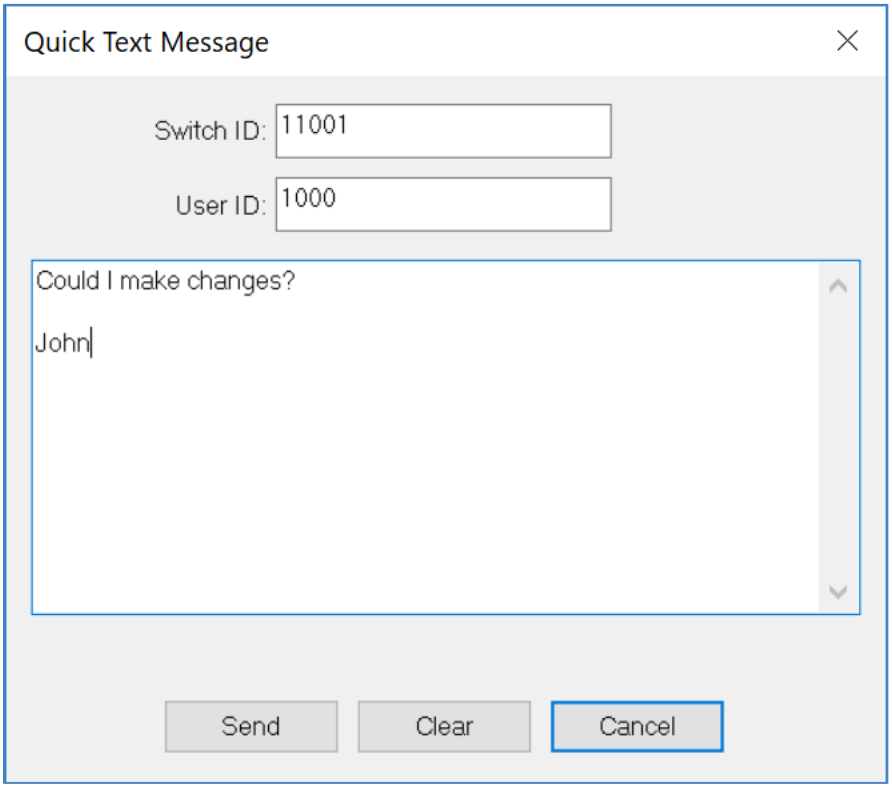
2. In the 'User ID' field, enter the four-digit ID of the user to whom you wish to send a message.

   If you reached the 'Quick Text Message' dialog box by right-clicking on a user in the tree view, the user's ID appears in the 'User ID' text box.

3. From the 'Priority' drop-down list, select *Low, Normal, or High*.

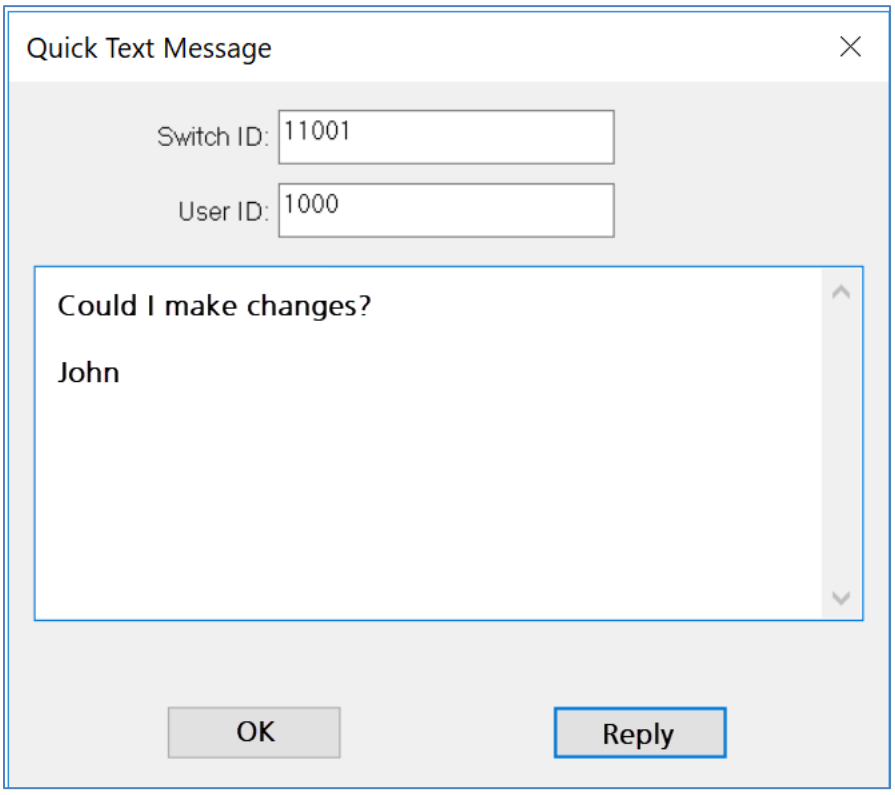
   'Normal' is the default priority.

4. Type the text of the message.



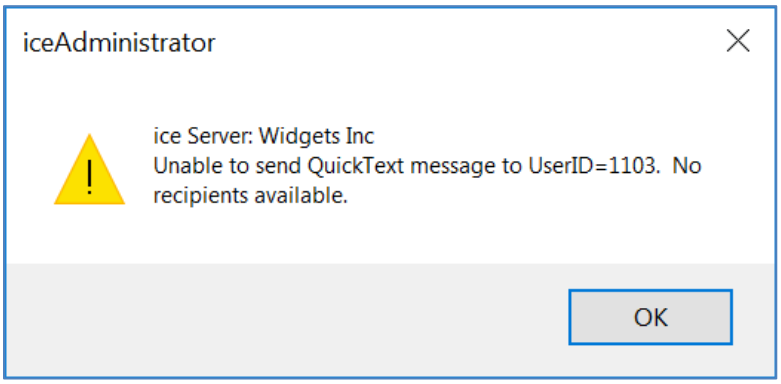
5. Click *Send* to send the message to the specified user.

   The user receives the message, as shown below.



Note:

- To send a message you can also select *Send Quick Text Message* from the File menu.
- Users will receive messages even if they are logged off iceBar, as long as the application itself is open on their computer.
- If the user to which you sent the message does not have iceBar, iceAdministrator, or iceMonitor opened on their computer, you will see the following error message:



- To respond directly to a user that has sent you a message, type your message in the lower portion of the window and click *Send*.
- Quick text messaging is not available when you are working offline.

Chapter 2: Users

iceAdministrator allows you to create, modify, and delete a user. A user might log on to iceBar to handle contacts, or a user might log on to the iceManager applications, as described below:

- A user must specify a valid user ID and password to log on to iceBar. Queue assignments and features selected for the user ID affect the way that user can use iceBar.
- A user must specify a user ID and password to log on to iceMonitor. The user type defined for the user ID determines the user's level of access in iceMonitor. For more information on iceMonitor, refer to the iceMonitor User Manual.
- A user must specify a user ID and password to log on to iceAdministrator. The user type defined for the user ID determines the user's level of access in iceAdministrator. For information on permission levels and user types, refer to page 26.
- A user must specify a user ID and password to gain access to iceReporting. The user type defined for the user ID can be used to determine the user's level of access in iceReporting. For more information, refer to the iceReporting User Manual.

The sections that follow describe how to view users, create and modify users, assign users to queues, assign users to teams, and delete users from ice.

Note:

- iceAdministrator should be used by trained contact center staff. Before you begin modifying or creating users, you must be familiar with your current configuration.
- To view and edit users you must have a user type that allows you to access the Users, Queues, Teams & Skills folder that is part of iceAdministrator's tree view.

This chapter assumes that you are familiar with the permissions on ice, as described in

Chapter 1: Getting Started.

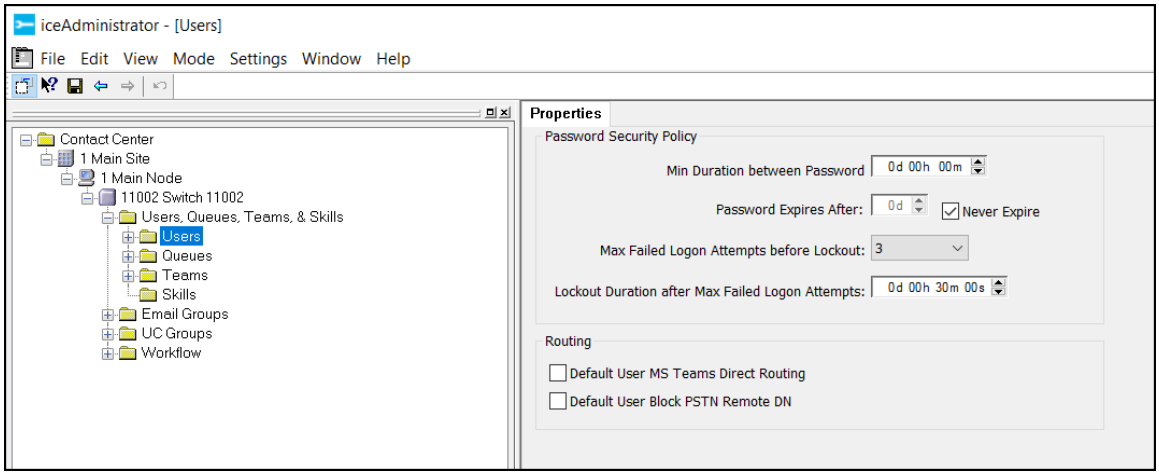
Password Security Policy

A password security policy can be configured and applied to all users. This policy can set the frequency of required password changes and establish how failed logon attempts should be handled. This policy applies to all users. Individual password security settings are also available for each user.

To view and/or modify a password security policy:

Click on the *User* folder under *Users, Queues, Teams & Skills* folder in the tree view.

A Properties page appears in the Detail View.



The table that follows describes each of the fields in the Password Security Policy.

Password Security Policy		
Field	**Description**	**Possible Values**
Min Duration between Password Changes	The minimum amount of time that must pass between password changes. For example, if the value is set to 5d, users will not be able to change their existing password until 5 days have elapsed since the last password change.	d = days h = hours m = minutes
Password Expires After	The number of days after which the current password will expire. For example, if the value is set to 5d, users will be forced to change their password 5 days after their current password was set. Select the checkbox 'never expire' to disable this feature.	d = days ☐ never expire

Password Security Policy		
Field	**Description**	**Possible Values**
Max Failed Logon Attempts before Lockout	The number of allowable failed logon attempts before a user will be locked out of the application.	1 – 20 No max = there will be no lockout for any users based on number of failed logons.
Lockout Duration after Max Failed Logon Attempts	The amount of time that an account will remain locked after the Max Failed Logon Attempts for that account is met.	d = days h = hours m = minutes s = seconds

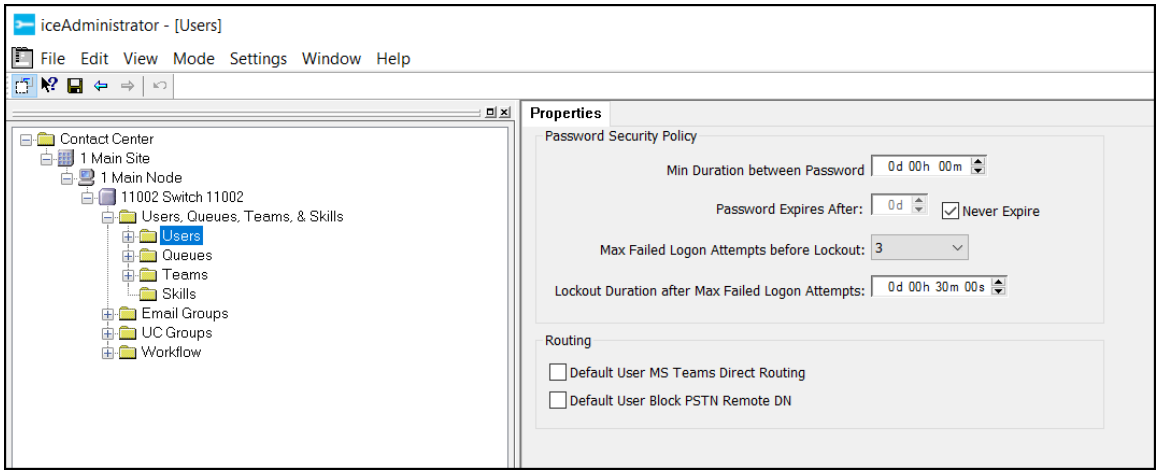
Routing

Routing settings can be configured and applied to all users. The settings configured on the properties page can enable MS Teams Direct Routing and Block PSTN Remote DN for all users. Individual routing settings are also available for each user.

To view and/or modify a routing setting:

Click on the *User* folder under *Users, Queues, Teams & Skills* folder in the tree view.

A Properties page appears in the Detail View.



Note: You must have Global Administrator privileges to modify these settings.

The table that follows describes each of the fields in Routing settings.

Routing	
Field	**Description**
Default User MS Teams Direct Routing	If this setting is enabled, by default, all new users will have *Use MS Teams Direct Routing* enabled in their *Connections* tab. **Note:** This will not apply to users who have already been created. If you wish to enable or disable MS Teams Direct Routing for existing agents, you will need to manually update the setting.
Default User Block PSTN Remote DN	If this setting is enabled, by default, all new users will have *Block PSTN Remote DN* enabled in their *Connections* tab. **Note:** This will not apply to users who have already been created. If you wish to enable or disable Block PSTN Remote DN for existing agents, you will need to manually update the setting.

Viewing a User

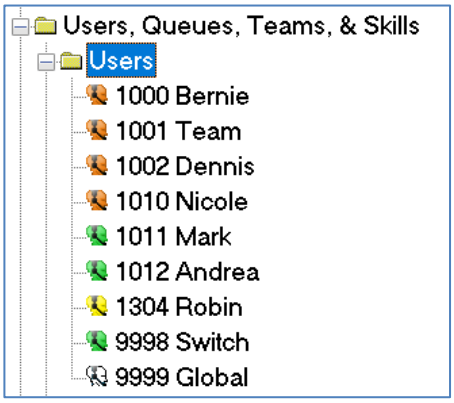
You may wish to view a user if you are planning to change the way that he or she handles contacts, change the user's queue assignments, change the user's team assignments, or delete the user from ice.

Viewing a user involves finding and selecting the user in the tree view. When a user is selected, the right side of the iceAdministrator window displays seven tabs detailing the user's configuration.

Note: To view a user, you must have a user type that allows you to access the Users, Queues, Teams & Skills folder that is part of iceAdministrator's tree view. For information on permission levels and user types, refer to page 26.

To view a user:

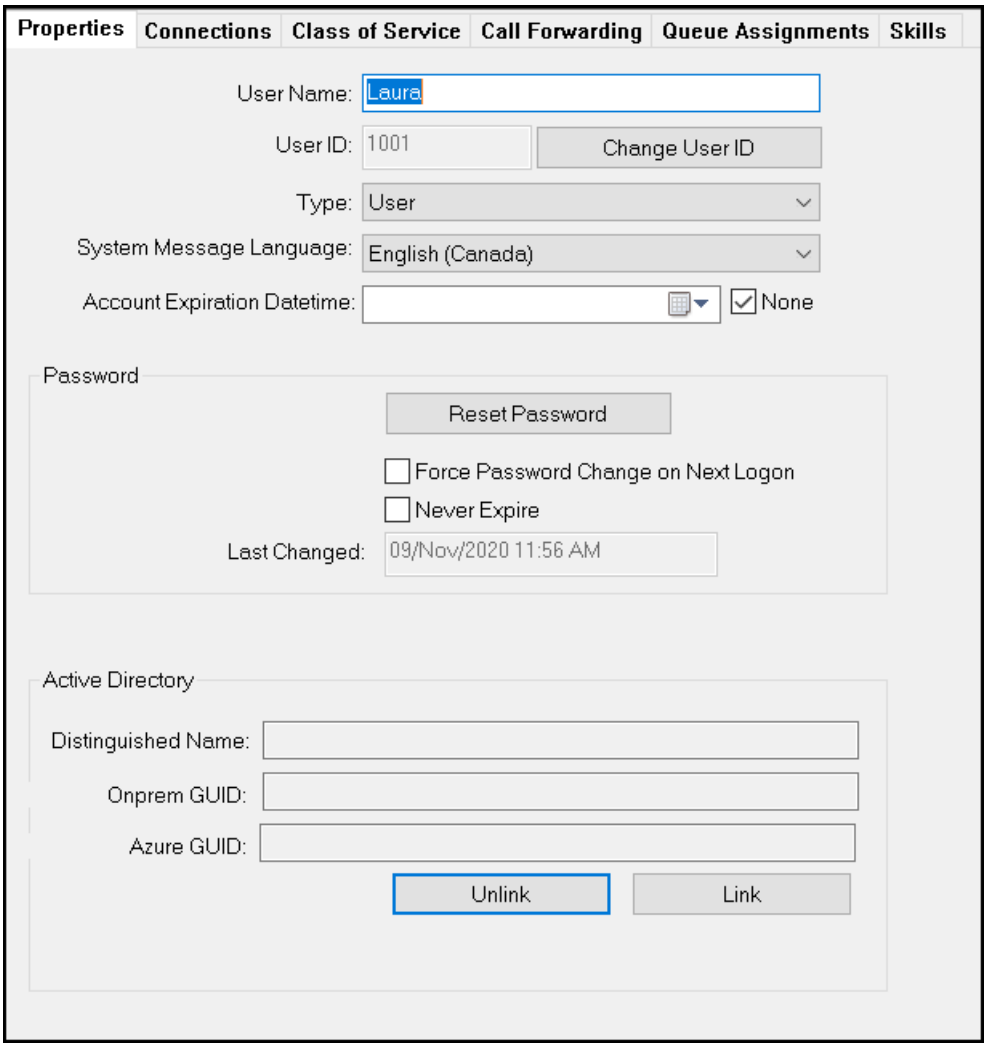
1. Open the Users, Queues, Teams & Skills folder in the tree view.
2. Open the Users folder in the tree view.



3. Click the user in the tree view whose configuration you wish to view.

   Six tabs appear in the detail view: *Properties, Connections, Class of Service, Call Forwarding, Queue Assignments, and Skills*. These tabs allow you to select one of the six pages that hold information about the user's configuration.

By default, the ‘Properties’ page is displayed.



This section explained how to navigate to an existing user. The sections that follow describe how to add and modify settings for a user.

Adding a User

There will be instances where you need to add new users, perhaps to accommodate new staff. There are several ways to add a user:

- Right-click *Users* and select *New User*. This allows you to create one user with iceAdministrator's default properties.
- Right-click *Users* and select *New User(s)*. This allows you to create one user or multiple users. This feature can be helpful if you want new users to have the same properties as an existing user in your contact center.
- Right-click *Users* and select *Active Directory Import*. This allows you to import multiple users from Active Directory. This feature is useful when your users have already been set up in Active Directory.
- Add new user through the standalone 'Active Directory Import Tool.' This allows a user who does not have access to iceAdministrator to export a list of ice users that can later be uploaded to iceAdministrator.
- Add a new user when setting up workflow. This allows you to create users on the spot as workflow is being developed. For more information on workflow, refer to the iceWorkflow Designer User Manual.

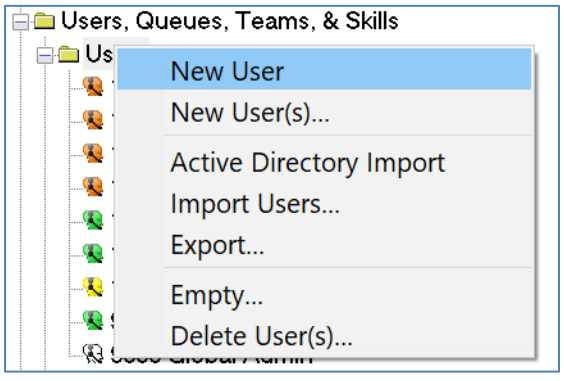
Once you have added a new user, you can configure unique properties for that user. For information on completing configurable properties for users that you have just created or for modifying settings for an existing user, refer to page 56.

Note: To add a user, you must be in Edit Mode and have a user type that allows you to access the Users, Queues, Teams & Skills folder. For information on permission levels and user types, refer to page 26.

To add a new user, complete the following steps:

1. Open the Users, Queues, Teams & Skills folder in the tree view.
2. Right-click on the *Users* folder.

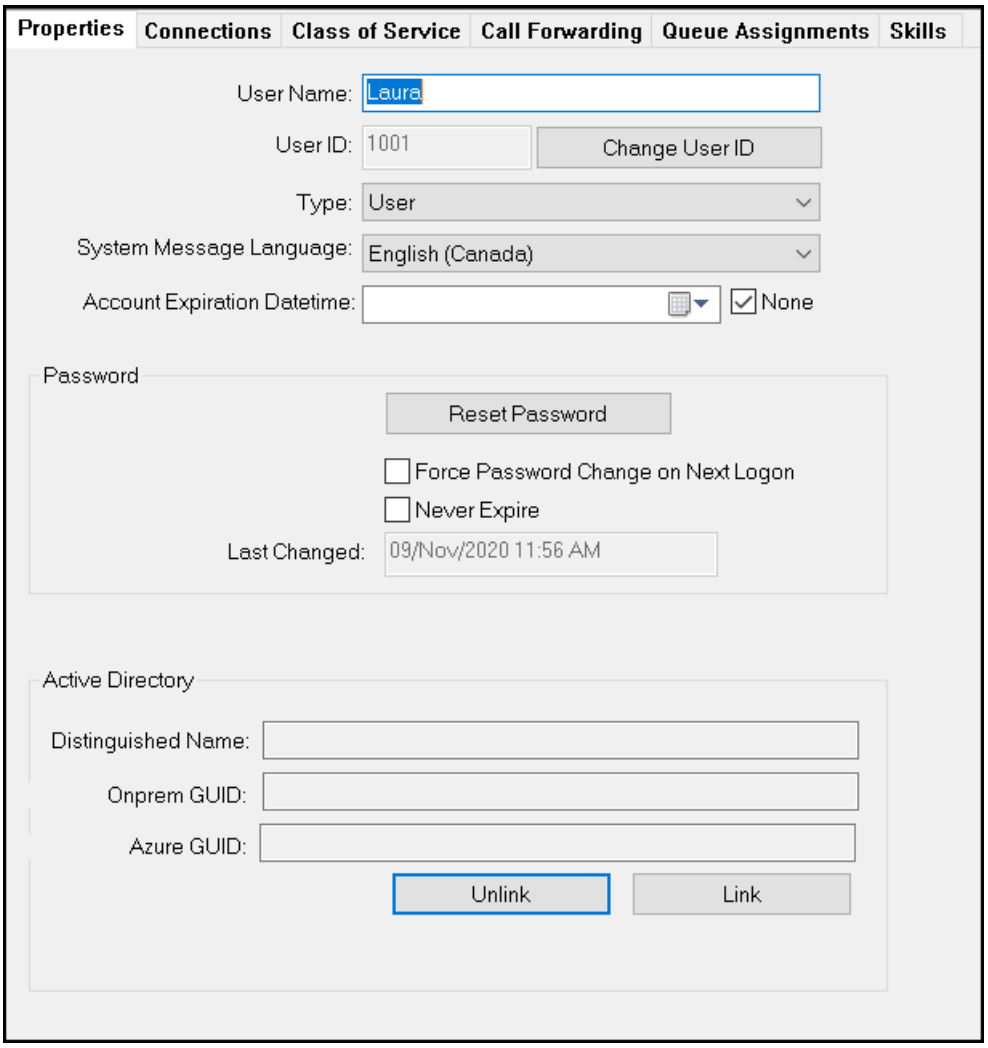
   A menu appears.



3. Select *New User* from the menu.

You may also right click on a queue that you have already created to select the *New User* option. In this case, the new user is created and is assigned to the queue.

Six tabs appear in the detail view. By default, the Properties page is displayed.



4. From the File menu, choose *Save*. (To cancel the save operation, click *Cancel* on the 'Progress' dialog box.)

   This section has explained how to add a user to the tree view with iceAdministrator's default properties. For information on modifying properties for the user that you have just created, refer to page 56. The section that follows describes how to add multiple users to the tree view.

   Note: After adding a new user, the default password for the new account is dependent on the minimum password length. By default, the minimum password length is set to 3, making the default password 123. However, if the minimum password is set to 6, the default password will be 123456.

Adding Multiple Users

iceAdministrator allows you to create multiple users simultaneously:

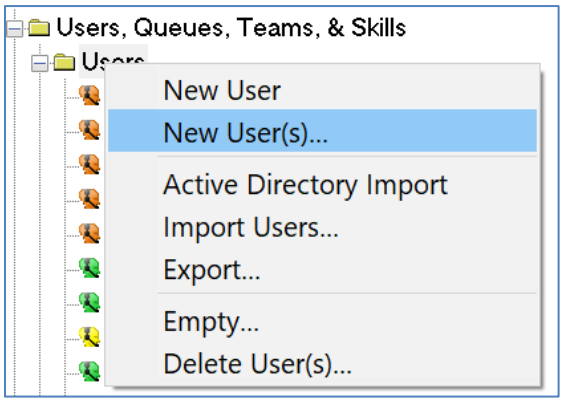
- You can add users based on iceAdministrator's default properties for a user, which is very similar to adding a 'New User', as described in the previous section.
- You can add users based on an existing user's configuration, which is referred to as the 'Template.' This feature can be helpful if you want new users to have the same properties as the existing users in your contact center.

Once you have created the users, you need to configure them so that they have unique Connection Addresses, Call Forwarding rules, etc. For information on modifying properties for users, refer to page 56.

To add multiple users to the tree view:

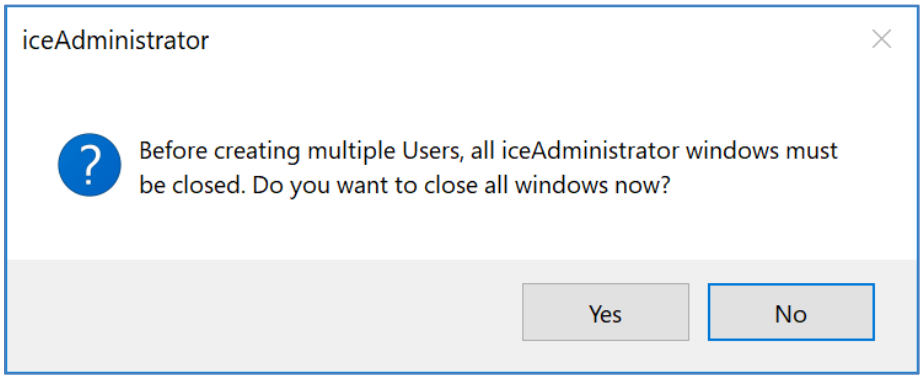
1. Open the *Users, Queues, Teams & Skills* folder in the tree view.
2. Right-click on the *Users* folder.

   A menu appears.



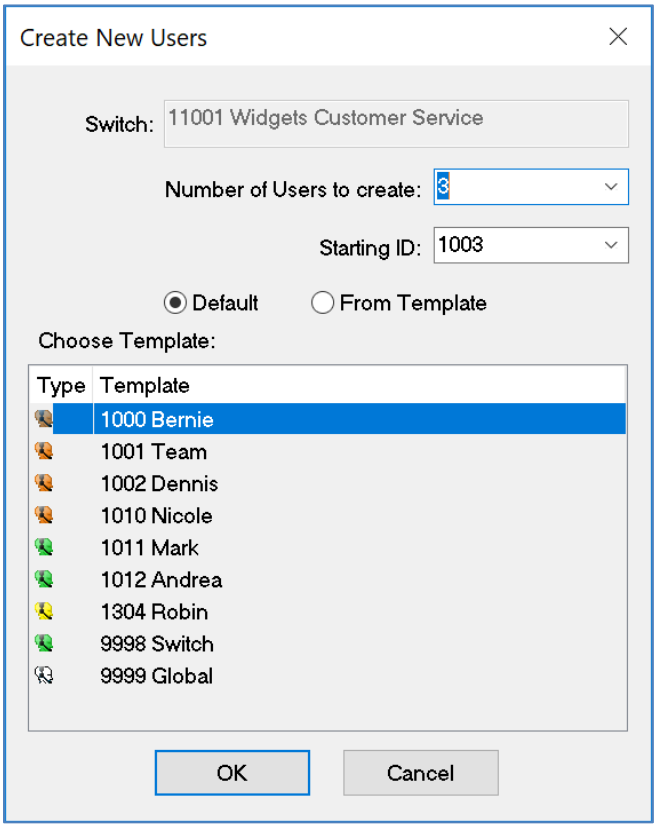
3. Select *New User(s)* from the menu.

   A message box appears.



4. Click *Yes* to continue. Click *No* to cancel the process.

   The ‘Create New Users’ dialog box appears.



5. Select the number of users you wish to create from the ‘Number of Users to create’ drop-down list.

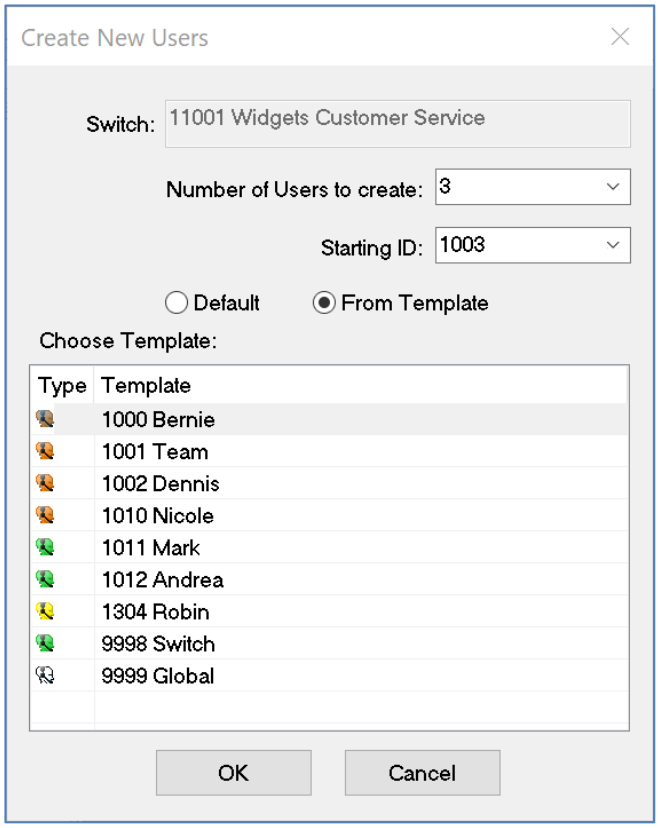
6. Select the starting user ID from the ‘Starting ID’ drop-down list.

   This ID is assigned to the first user. The remaining users are assigned the next available IDs.

7. Select the ‘Default’ radio button if you would like the users to have iceAdministrator’s default user configuration.

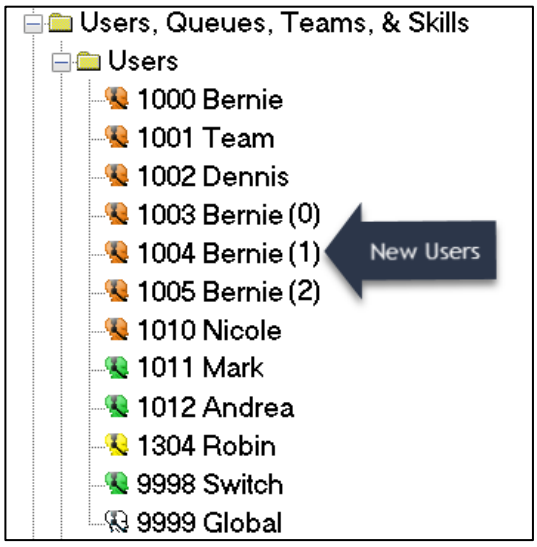
   You can also select ‘From Template’ if you would like each user to have the same configuration as an existing user. When the ‘From Template’ radio button is selected, you can choose a user in the ‘Choose Template’ table.

In the following illustration, Liam Gerbert (user ID: 1000) has been selected as the template.



4. Click *OK* to create the new users.

   The users appear in the tree view.



5. From the File menu, choose *Save*. (To cancel the save operation, click *Cancel* on the 'Progress' dialog box.)

   This section has explained how to add multiple users to the tree view. You may need to configure the new users so that they have unique connection addresses, Call Forwarding rules, etc. The sections that follow provide more information on configuring a user.

Importing Users from Active Directory

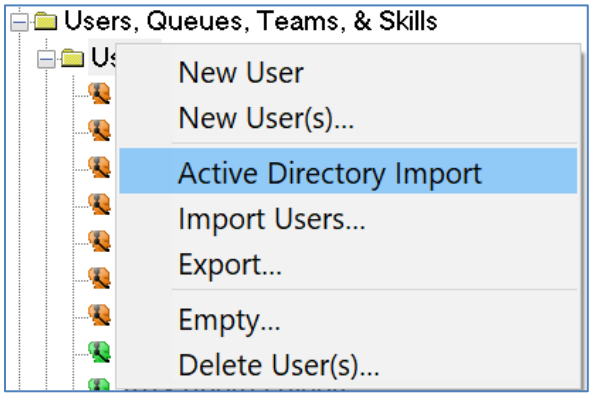
iceAdministrator allows you to import multiple users from Active Directory:

- You can add users within iceAdministrator using the Active Directory Import
- You can use the standalone Active Directory Import Tool if you do not have access to iceAdministrator.

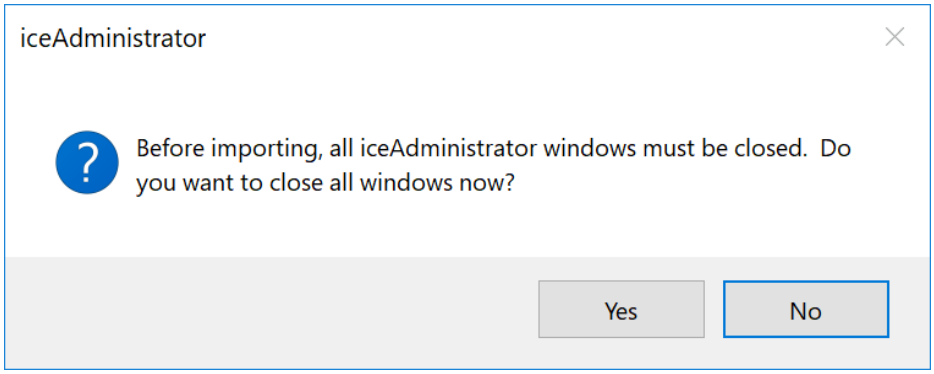
When you import users from Active Directory their unique Connection Addresses will already be configured. For information on modifying properties for users, refer to page 56.

To Import Users with the Active Directory Import Tool:

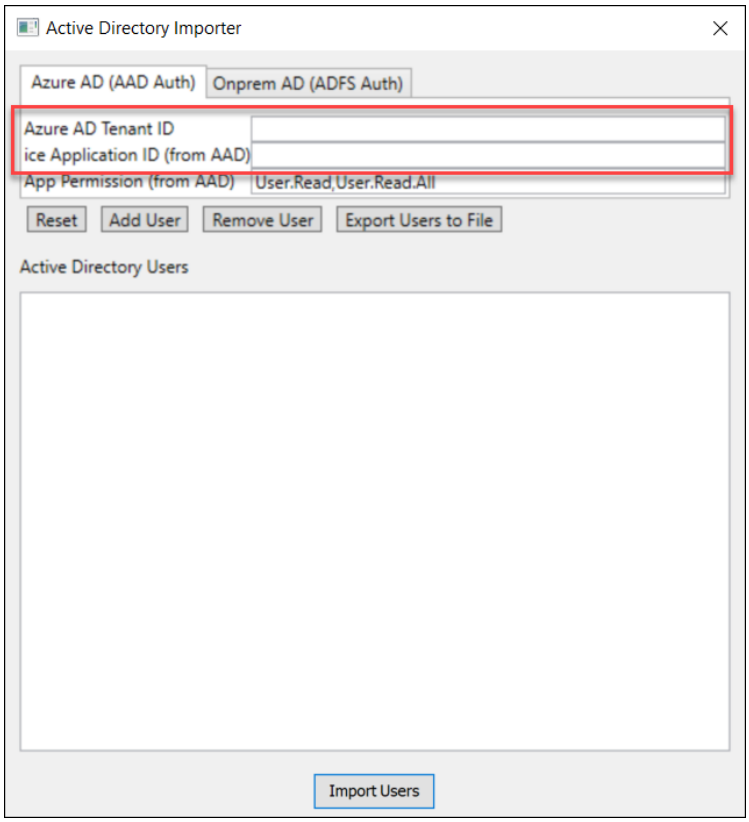
1. If using the standalone Active Directory Import Tool open the application and proceed to step 11.
2. Open the Users, Queues, Teams & Skills folder in the tree view.
3. Right-click on the Users folder.
4. A menu appears.



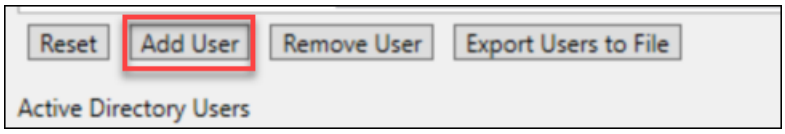
5. Select *Active Directory Import* from the menu.
6. A message box appears.



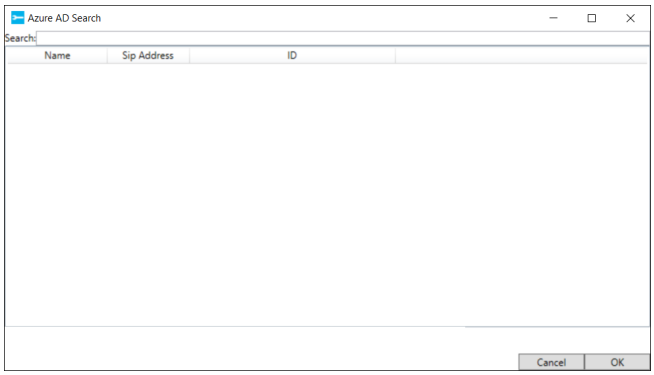
7. Click *Yes* to continue. Click *No* to cancel the process.
8. The 'Active Directory Importer' dialog box appears. Enter the Azure AD Tenant ID and the ice Application ID in their respective fields.



9. Click *Add User.* You may be asked to login with your single sign-on credentials at this step.



10. The ‘Azure AD Search ‘ dialog box appears.



11. Enter the name of the user you wish to add.

12. Select the user you wish to import and click *OK*.
13. In the original Active Directory Importer window you will see the new account added.
14. Click *Import Users* to import the user or click *Add User* to add another user.

Note: If you are using the standalone Active Directory Import Tool you will need to export users by clicking on *Export Users to File*. This exports an .XML file that iceAdministrator can recognize.

Active Directory Import Tool	
Field	**Description**
Language	Select the language for the Active Directory Import Tool fields.
iceAdministrator Columns	These are the fields in iceAdministrator that will be populated by the Active Directory Import Tool.
Active Directory Columns	These are the fields in Active Directory that the Import Tool pulls information from to map to the iceAdministrator Columns.
Reset	This button resets all configurations in the Active Directory Import Tool to default, including removing any users you may have added to the Active Directory Users list.

Active Directory Import Tool	
Field	**Description**
Add User	Add user or group of users to the Active Directory Users list.
Remove User	Remove user from the Active Directory User list. Select user in the 'Active Directory Users' list and click *Remove User*.
Export Users to File	Export users to an .XML file that can be uploaded to iceAdministrator.
Active Directory Users	List of users ready to be imported to iceAdministrator or exported to file.

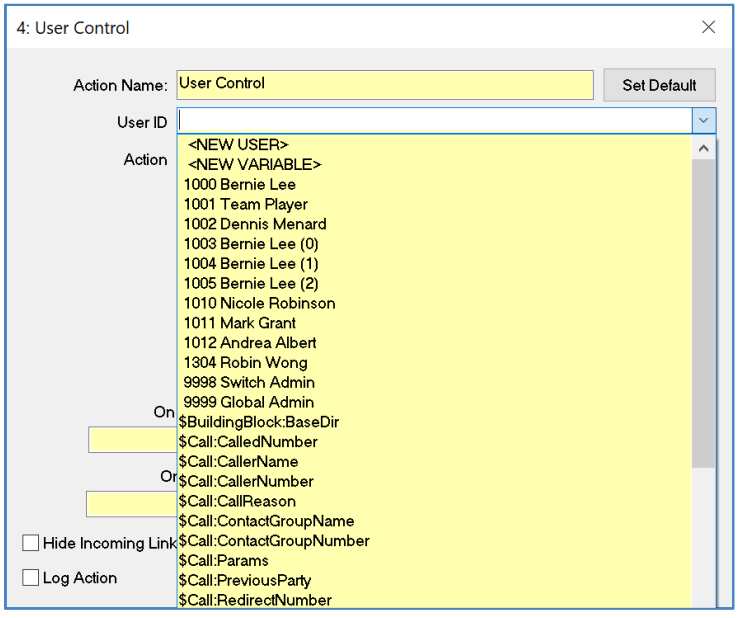
Adding a User from the Properties of a Workflow Action

On the properties page of specific workflow actions that require the selection of a user (e.g., User Control), you can create a new user by using the appropriate drop-down list. For more information on workflow actions, refer to the iceWorkflow Designer User Manual.

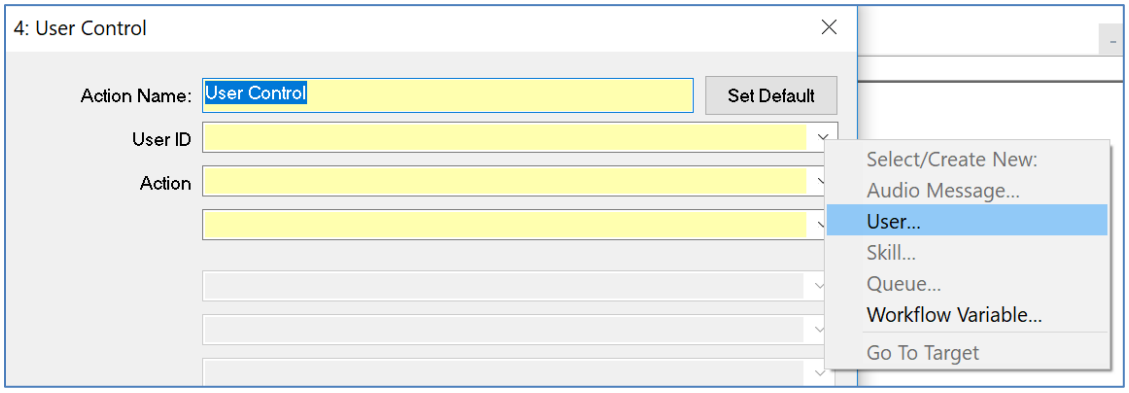
To create a user from the properties dialog box of a workflow action:

1. From the workflow page, double-click the action from which you would like to create the user.
2. In the field that requires a user, select *<NEW USER>* from the drop-down list.

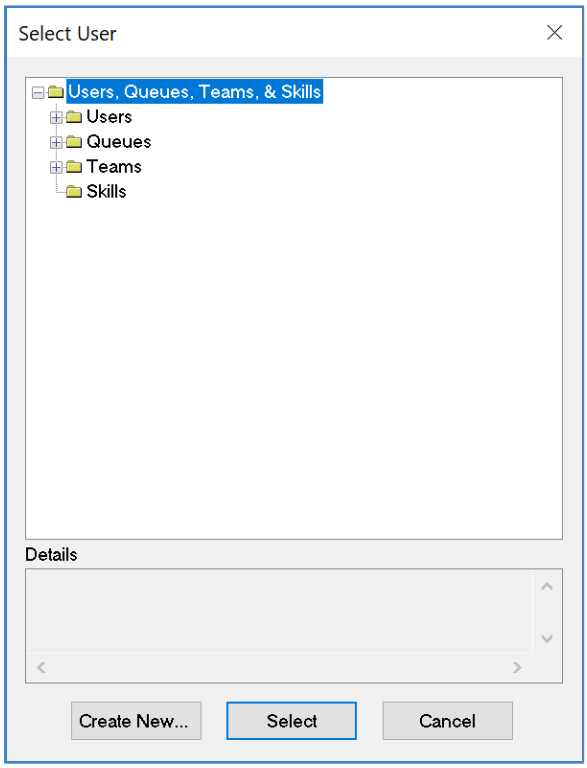
   The following screenshot shows the User Control properties page:



You can also right-click the arrow in the drop-down list and select *User* from the menu that appears.



The 'Select User' dialog box appears.



3. Click *Create New...* on this dialog box.
4. The 'New User' dialog box appears. This dialog box has the same six configuration tabs as the ones that appear when you create a user from the tree view.
5. Click *OK* on this dialog box to add the user.
6. The user is added to the tree view and becomes the selected option in the workflow action field.
7. From the File menu, choose *Save*. (To cancel the save operation, click *Cancel* on the 'Progress' dialog box.)

User Properties

You may wish to modify an existing user to reflect staffing changes, or you may wish to configure a user that you have just created.

Note:

- To modify a user, you must be in Edit Mode and have a user type that allows you to access the Users, Queues, Teams & Skills folder that is part of iceAdministrator's tree view. For information on permission levels and user types, refer to page 26.
- When you have made all your changes, from the File menu, choose *Save*. (To cancel the save operation, click *Cancel* on the 'Progress' dialog box.)

Updating User and User Type

A user's name appears on ice reports. User type determines permissions allowed to the user. For more information on user types and permissions, refer to

Chapter 1: Getting Started.

To modify a user's name or user type:

1. Navigate to the user that you wish to customize or modify.

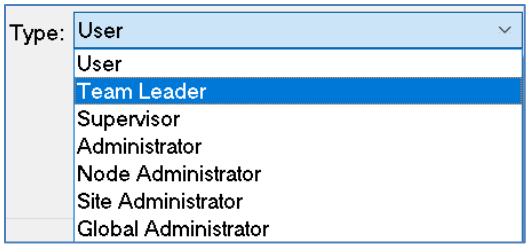
   The 'Properties' page for the selected user appears in the detail view.

2. Enter the name of the user in the 'User Name' field.

   The user's name can be up to 40 characters in length.

3. From the 'Type' drop-down list, select the appropriate user type.

   For more information on user types, refer to the 'User Types' table on page 27.

4. From the File menu, choose *Save*. (To cancel the save operation, click *Cancel* on the 'Progress' dialog box.)

   This section has explained how to configure user names and user types. The section that follows provides information on changing a user's ID.

Changing a User ID

A user ID is required to log on to iceBar, iceMonitor, iceAdministrator, etc.

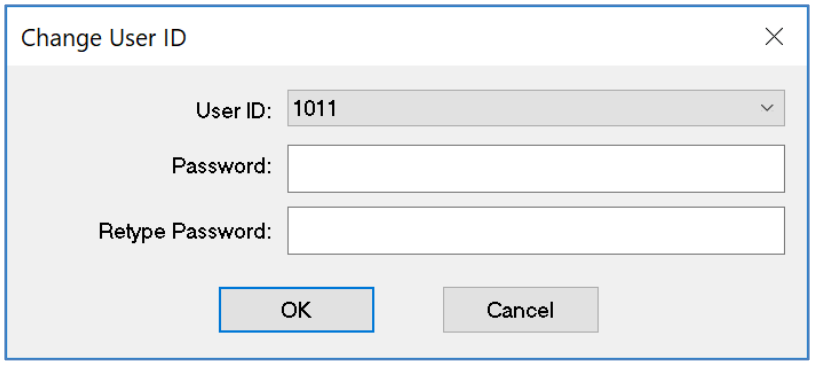
To modify a user ID:

1. Navigate to the user that you wish to customize or modify.

   The 'Properties' page for the selected user appears in the detail view.

2. Click *Change User ID*.

   The Change User ID dialog box appears.



   You may click *Cancel* to close the window without changing the user ID.

3. Select a four-digit number from the 'User ID' drop-down list and enter the user's password in the 'Password' field.

   The drop-down list shows user ID numbers that are not in use.

   The user's password is required to change the user's ID. The default password is 123. If an invalid password is entered, an error message appears. Click *OK* on the error message to return to the Change User ID dialog box and re-enter the password.

   Note: The default password is dependent on the minimum password length. By default, the minimum password length is set to 3. However, if the minimum password is set to 6, the default password will be 123456.

4. Click *OK* on the Change ID dialog box.
5. The new user ID is displayed in the 'User ID' field.
6. From the File menu, choose *Save*. (To cancel the save operation, click *Cancel* on the 'Progress' dialog box.).

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User Account Expiration

A user account can be configured to expire on a particular date. For example, if you have a temporary employee or contractor, you can ensure that their account is automatically disabled after their last scheduled day of employment. By default, the Account Expiration Datetime is set to 'None.'

To set account expiration:

1. Navigate to the 'Properties' page for the user you wish to modify.
2. Uncheck 'None'

3. The field will populate with today's date, with midnight as the time.
4. Click on the down arrow to display a calendar.
5. Select the desired date from the calendar. To specify a time, highlight the time and click the spin box arrows to edit it.
6. Save your changes. For information on user passwords, refer to page 59.

This section has explained how to configure a user ID. The section that follows provides information on resetting a user's password.

User Password

In addition to a user ID, a password is required when a user logs on to iceBar, iceAdministrator, iceMonitor, etc. The default password for a new user is 123.

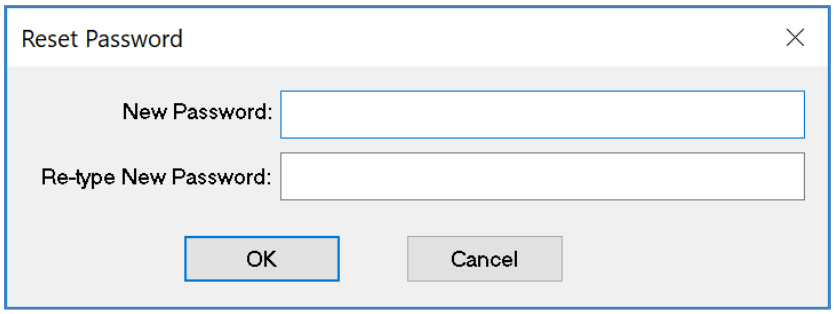
To modify a user's password:

1. Navigate to the user that you wish to customize or modify.

   The 'Properties' page for the selected user appears in the detail view.

2. Click *Reset Password* to modify the user's password.

   The Reset Password dialog box appears.



   Click *Cancel* to close the window without changing the password.

3. Enter the new password in the 'New Password' field and retype the new password in the 'Re-type New Password' field.

   If the minimum password length is set to 3, the password can be from 3 to 31 alphanumeric characters in length.

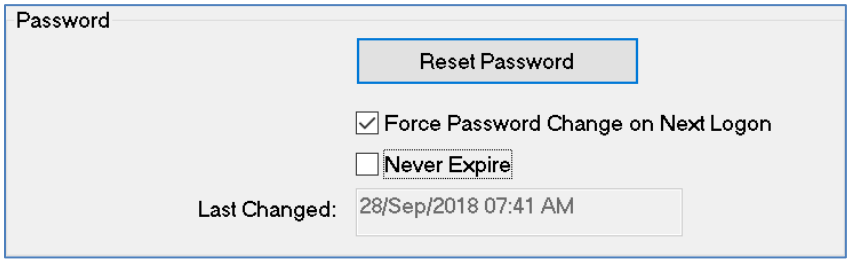
   Note: Users are able to reset their own passwords from iceBar. For more information, refer to the iceBar User Manual.

4. Click *OK* to set the new password and close the 'Reset Password' dialog box.
5. From the File menu, select *Save*. (To cancel the save operation, click *Cancel* on the 'Progress' dialog box.)

   This section has explained how to reset a user password. The section that follows provides information on remote user properties.

To force a password change upon next logon:

1. Select the 'Force Password Change on Next Logon' checkbox.

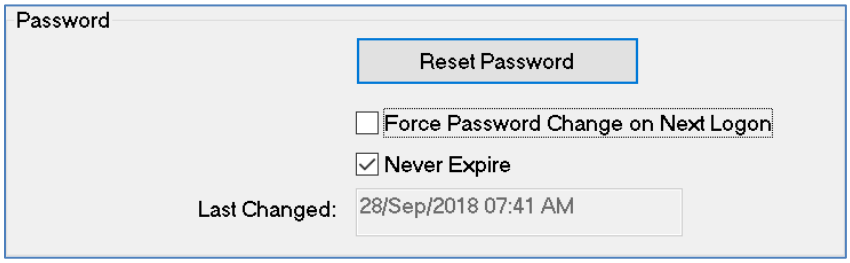


2. From the File menu, choose *Save*.

   The specified user will be prompted to change their password the next time he/she logs on to any ice application.

To ensure that a user's password never expires:

1. Select the "Never Expire" Checkbox.



2. From the File menu, choose *Save*.

Connections

To configure ice server connection properties for a specific user, navigate to the 'Connections' tab for that user.

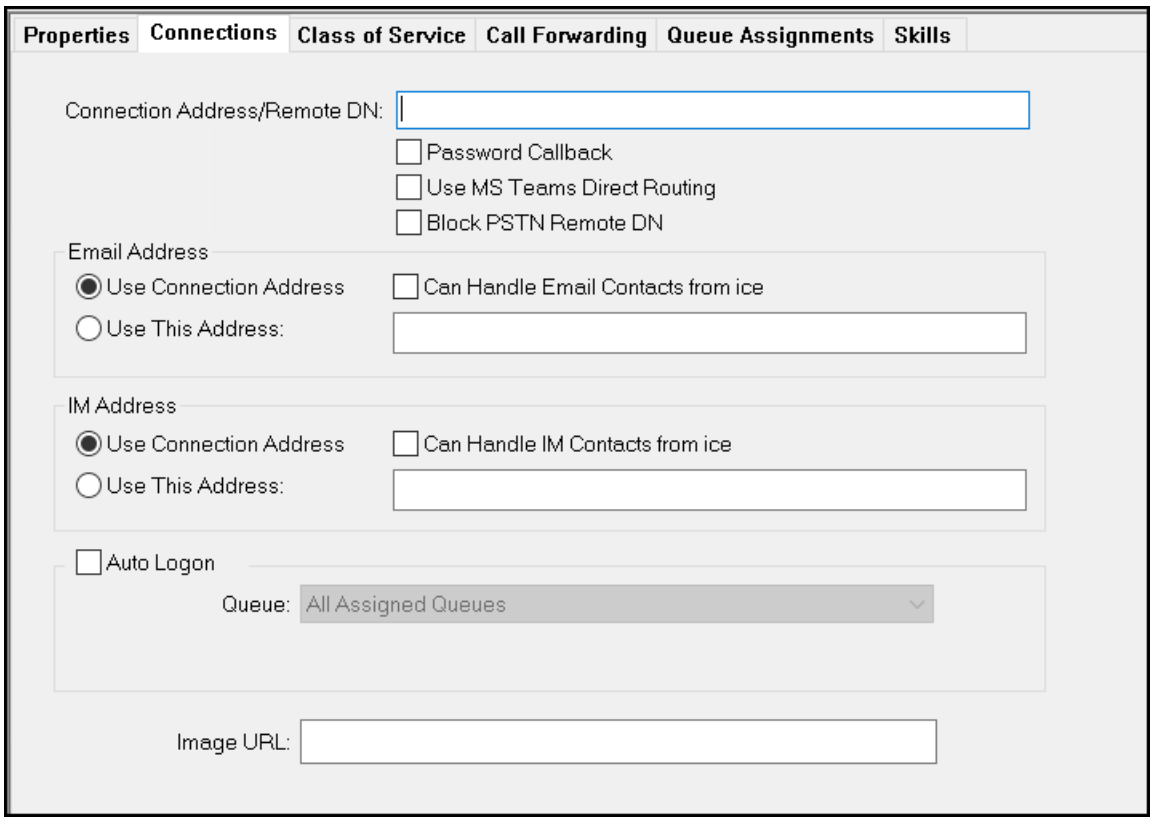
Note: To modify a user, you must be in Edit Mode and have a user type that allows you to access the Users, Queues, Teams & Skills folder that is part of iceAdministrator's tree view. For information on permission levels and user types, refer to page 26.

To modify a user's Connections:

1. Navigate to the user that you wish to customize or modify.

   The 'Properties' page for the selected user appears on the right side of the iceAdministrator window.

2. Click the *Connections* tab to bring that page to the front.



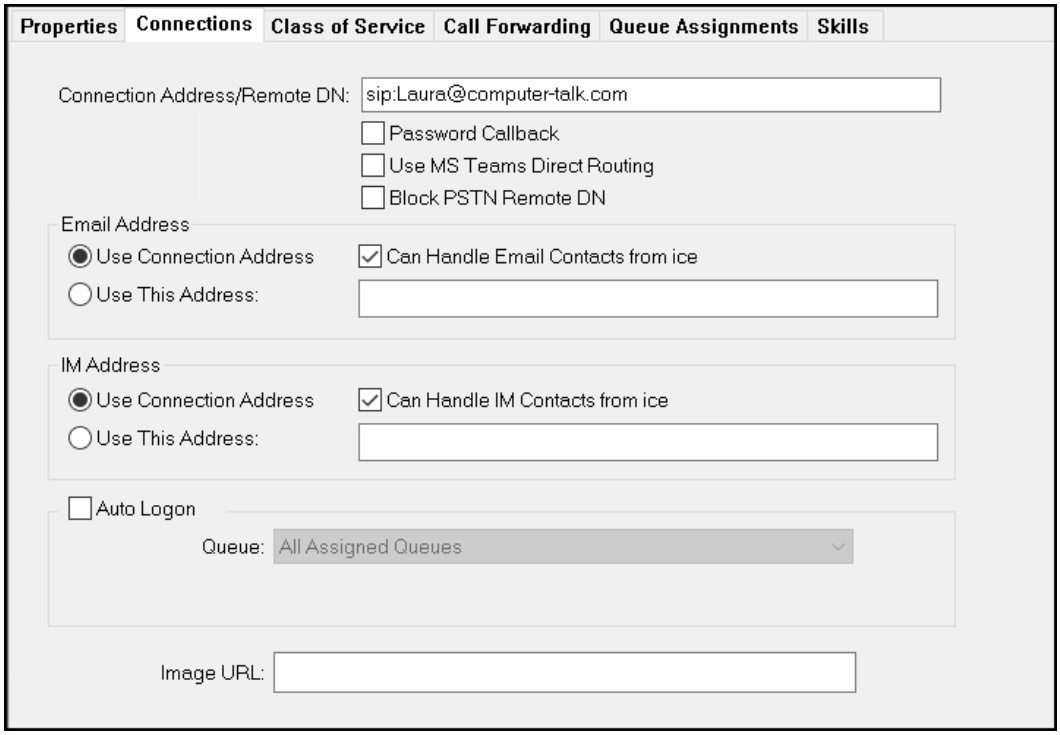
User Connections

When a user logs on to iceBar, a call is placed from the ice server to the address in the Connection Address/Remote DN field (i.e., their phone line, Skype for Business account or Microsoft Teams account at the user's workstation.) When the user answers the call, a voice connection to ice is established.

When configuring a user, you must enter the connection address or the Directory Number (DN) at which ice can reach this user when he or she logs on to iceBar. The connection address is a phone number or SIP address that is routed through Skype for Business or Microsoft Teams. Any workstation with iceBar, a dedicated phone line, or a TCP/IP connection to the ice server can be set up as a remote workstation.

To configure a user's Connections:

1. Navigate to the user's 'Connections' tab.
2. Enter the phone number or SIP address associated with the Skype for Business or Microsoft Teams account of that user in the 'Connection Address/Remote DN' field.



The Connection Address/Remote DN field can hold up to 256 characters.

3. Check 'Password Callback' if you would like ice to call the user each time the user logs on to iceBar.

   The purpose of this feature is to confirm that the user is at the specified address. The user is required to enter his/her ice credentials to verify his/her identity. It is recommended to enable this feature.

4. Check ‘Use MS Teams Direct Routing’ if you would like the agent’s calls to use the dedicated Direct Routing phone lines.

   Note:

   - This option is only available for customers hosted on ComputerTalk’s environment.
   - Setup is required on both ComputerTalk’s environment and your Office 365 tenant.
   - Users must have a line URI assigned to each account; this can be a DID or an internal extension.
   - Each agent requires an E5 or E3+ phone system add on (license).

5. Check ‘Block PSTN Remote DN’ if you would like to restrict agents to SFB Federation or Teams Direct Connect for Agent Remote DN Callbacks. This is to restrict agents when PSTN trunks are not dedicated for agent callbacks.
6. From the File menu, choose *Save*. (To cancel the save operation, click *Cancel* on the ‘Progress’ dialog box.)

   This section has explained how to configure remote user connections. The section that follows provides information on email user connections.

Email Connections

ice allows your users to handle queued email messages. If your contact center handles emails, select the ‘Can Handle Email Contacts from ice’ checkbox in the iceAdministrator user profile. Only users with this feature enabled are eligible to receive queued email messages.

To configure email settings:

1. Select ‘Can Handle Email Contacts from ice’ to allow this user to handle queued email messages.
2. Select ‘Use Connection Address’ to have emails sent to the user’s connection address. If your Connection Address is not linked to an email account, select ‘Use This Address’ and enter the address for your email account.

3. From the File menu, select *Save*. (To cancel the save operation, click *Cancel* on the ‘Progress’ dialog box.)

Note:

- Users with the ‘Can Handle Email Contacts from ice’ feature enabled can handle email messages only, email messages and calls, or another combination of contacts. In order to handle email contacts the user must be assigned to an email queue and must be logged into the email queue on iceBar. For more information, refer to the iceBar User Manual.
- Use the User Control action to retrieve a user’s email address in workflow. This is useful if you have workflow requirements to email information to specific users. For example, workflow can be configured to send a warning email message to a supervisor when all of the users log off from a queue during business hours.

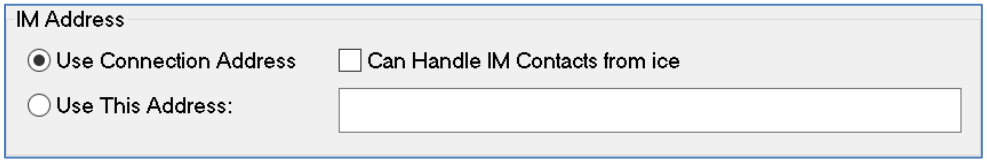
  This section has explained how to configure email properties. The section that follows provides information on instant messaging connections.

IM Connections

ice allows your users to handle queued instant messages (IM).

To configure IM settings:

1. Check ‘Can Handle IM Contact from ice’ to allow user to handle queued IMs.
2. Select ‘Use Connection Address’ to have IMs sent to the user’s connection address. Select ‘Use This Address’ to have IMs sent to a different address.



   The user’s IM address can be up to 255 characters in length.
3. From the File menu, select *Save*. (To cancel the save operation, click *Cancel* on the ‘Progress’ dialog box.)

Note:

- Users with the ‘Can Handle IM Contacts from ice’ feature enabled can handle IM messages only, IM messages and calls, or another combination of contacts. In order to handle IM contacts the user must be assigned to an IM queue and must be logged into the IM queue on iceBar. For more information, refer to the iceBar User Manual.
- Use the User Control action to retrieve a user’s IM address in workflow.

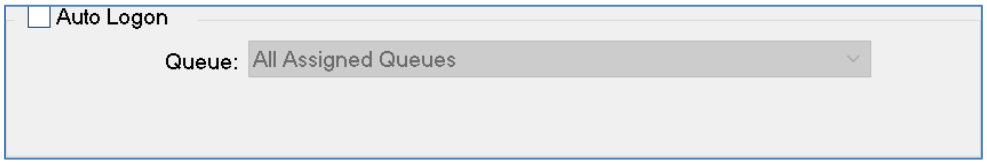
  This section has explained how to configure IM properties. The section that follows provides information on auto logon properties.

Auto Logon Properties

Auto Logon allows users to automatically log on each time the ice server is restarted. You can select the queues to which the user will automatically log onto, using the drop-down list.

To enable Auto Logon:

1. Enable the 'Auto Logon' checkbox on the 'Properties' tab.



2. Select 'All Assigned Queues' or a specific queue from the 'Queue' drop-down list.

   The user is automatically logged on to the selected queue(s) each time the ice server is restarted.

3. From the File menu, select Save. (To cancel the save operation, click *Cancel* on the 'Progress' dialog box.)

   Note: If the user is not assigned to any queues, 'All Assigned Queues' will be the only option available in the 'Queues' drop-down list.

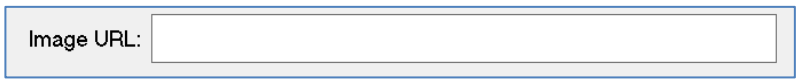
   This section has explained how to configure auto logon properties. The section that follows provides information on Image URL.

Image URL

Image URL configuration is only required for iceMonitor settings. The image URL is the picture file you want to use as your ice display picture.

To configure Image URL properties:

1. In the 'Image URL' field, enter the URL associated with the image displayed for the user.



2. From the File menu, select *Save*. To cancel the save operation, click *Cancel* on the 'Progress' dialog box.

This section has explained how to configure display picture properties. The section that follows provides information on class of service features.

Class of Service Features

Class of Service features are used to determine user privileges with respect to iceBar and the manner in which a user handles contacts.

Note: To modify a user, you must be in Edit Mode and have a user type that allows you to access the Users, Queues, Teams & Skills folder that is part of iceAdministrator's tree view. For information on permission levels and user types, refer to page 26.

To modify a user's Class of Service features:

1. Navigate to the user that you wish to customize or modify.

   The 'Properties' page for the selected user appears on the right side of the iceAdministrator window.

2. Click the *Class of Service* tab to bring that page to the front.

3. Check the checkbox(s) beside the appropriate class of service feature(s) for the user.

   For more information on the features, refer to the sections that follow.

4. From the File menu, choose *Save*. (To cancel the save operation, click *Cancel* on the 'Progress' dialog box.)

This section has explained how to configure a user's class of service features. The sections that follow provide detailed information on each class of service feature.

Allow Multi Contact Handling

By default, a user enters an On Contact state (eg., On Call, On IM, or On Email) upon receiving a queued contact. The user remains in the On Contact state until he or she releases the contact. Pressing the *Ready* or *Not Ready* button while in an On Contact state determines the state to which the user returns (i.e., Ready state or Not Ready state) when the contact is released.

When 'Allow Multi Contact Handling' is checked, the user can handle multiple contacts at the same time. For example, while handling a voice contact the user can be alerted to handle an IM or Email contact as well.

- Max Concurrent IMs: limit the number of IMs that this user can handle at the same time.
- Max Concurrent Emails: limit the number of emails that this user can handle at the same time.

Note:

- Only 1 voice contact can be handled at one time.
- For example, if the user has Max Concurrent IMs field is set to 3 and Max Concurrent Emails field is set to 3, this agent can handle 3 IMs, 3 emails, and 1 voice contact at the same time.

For more information on IM and Email handling, refer to the iceBar User Manual.

Auto Answer Calls

By default, a user hears one beep in his or her headset when a call arrives at his or her workstation. The user connects with the call by clicking the *Answer* button on iceBar.

When 'Auto Answer' is checked, the user is automatically connected to each call that reaches his/her workstation, provided that the user is in the Ready state and the phone is off-hook.

Note: If a phone is on-hook when the call arrives, it rings, and the user is automatically connected to the call when the phone becomes off-hook.

Only require answer button when off-hook

By default, when 'Auto Answer' is disabled, a user must press the *Answer* button to answer calls, when the phone is on-hook and off-hook.

When ‘Only require answer button when off-hook’ is checked, the user will only need to press the *Answer* button when the phone is off-hook.

Auto Answer Email or IM

By default, the user must click *Answer* on iceBar Toolbar to be connected with the email or IM that alerts at his/her workstation.

When 'Auto Answer Email or IM' is checked, the user is automatically connected to each IM or email message that is presented.

Disable Auto Not Ready

By default, the user is put into the Not Ready state after a contact that alerted at his/her workstation goes unanswered. This default setting is recommended for contact center users.

When 'Disable Auto Not Ready' is checked, the user stays in the Ready state after a contact that alerted at the workstation goes unanswered.

Disable PAQ Queuing

By default, a user's direct calls wait in the user's Personal Access Queue (PAQ) when the user is in Not Ready state or if the user is already handling a contact. Direct calls are calls that did not come from a queue.

Consider the following examples of direct contacts:

- A user-to-user call.
- Your contact center provides a number to family and friends, allowing them to reach a specific user. When the family member or friend calls the number, he or she is prompted to enter the four-digit user ID.
- The caller is transferred directly to the user from another user.

When 'Disable PAQ Queuing' is checked, the user's direct calls are automatically redirected to the dial number for PAQ Overflow when the user is in Not Ready state or if the user is already handling a contact. The caller is not queued in the user's PAQ. If 'PAQ Overflow' is not enabled, the caller receives a busy signal. For more information on 'PAQ Overflow' and call forwarding, refer to page 79.

Note: If PAQ Overflow is disabled and the direct call originates in workflow, workflow can be designed to route the caller elsewhere if the user is in Not Ready state or handling another contact. For example, the caller could be routed to a queue.

Emergency Contact

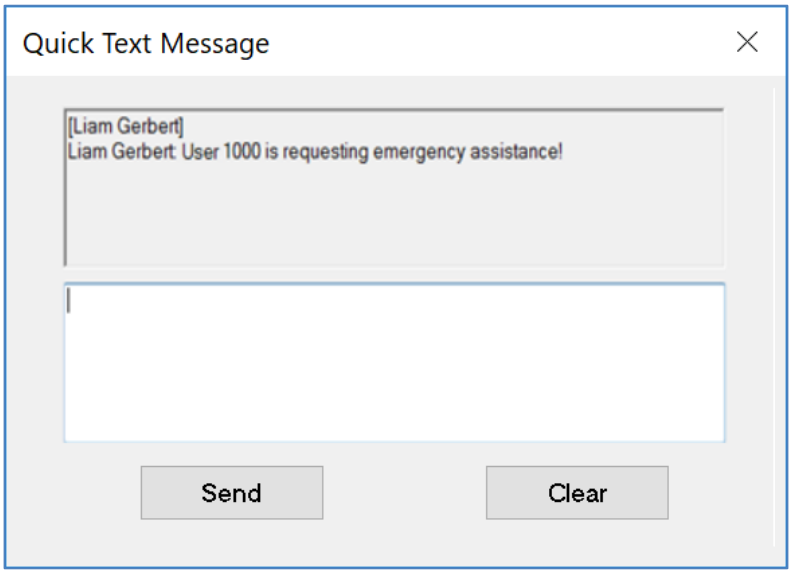
By default, a user is not an emergency contact.

When ‘Emergency Contact’ is checked, ice considers the user to be an emergency contact.

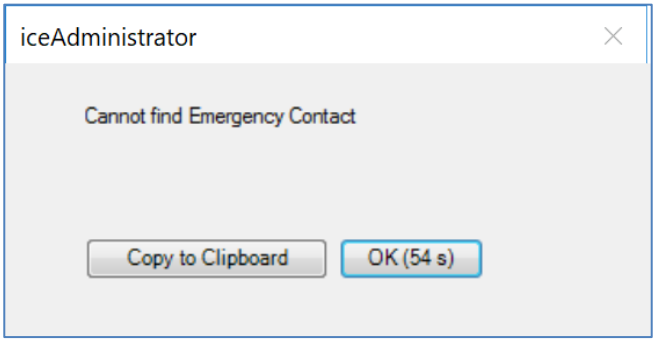
ice looks for an emergency contact when a user submits an emergency request by clicking the iceBar *Emergency* button.

To receive notification of an emergency request, the emergency contact must be logged on to iceBar and must belong to one of the same queues as the requesting user. ice scans for the emergency contact who has been idle the longest and is in the Ready state. If no emergency contacts are found in the Ready state, ice scans for the emergency contact who has been idle the longest and is logged on.

When a suitable emergency contact is found, ice sends a message to the emergency contact through iceBar.



When no emergency contact can be found, the requesting user receives the following message.



For more information, refer to the iceBar User Manual.

Enable Cleardown

By default, the ‘Enable Cleardown’ feature is disabled.

When ‘Enable Cleardown’ is checked, a fastbusy tone is played to ensure that a user does not get another call until the phone is placed on-hook. The fastbusy tone is played when the other party hangs up first and on the termination of a dial tone, a busy signal, and other tones. The fastbusy tone is played until the user places the phone on-hook.

Consider the following example of when the ‘Enable Cleardown’ feature can be used:

Users have handsets, and the ‘Auto Answer Calls’ class of service is enabled. There is a chance that users are presented with a call while they are hanging up their phone. If ‘Enable Cleardown’ is enabled, then the user can hang up the phone after completing a call without fear of disconnecting an incoming caller.

Drop ice User Line Between Calls

By default, the ‘Drop ice User Line Between Calls’ feature is disabled. ice keeps the user off-hook, so the user is constantly on a call with the ice server.

When ‘Drop ice User Line Between Calls’ is checked, ice will hang up the call to the user, after the caller has disconnected.

This feature takes precedence over Enable Cleardown, described above.

Logon to Not Ready

By default, a user enters the Ready state as soon as he/she logs on to ice. Users who log on to Ready state must be prepared to handle contacts immediately upon log on.

When ‘Logon to Not Ready’ is checked, the user enters the Not Ready state as soon as he/she logs on to ice and does not receive a queued contact until he/she is in the Ready state.

Disable Whisper

By default, a user hears a “whisper” message when it has been configured in workflow. A whisper announces the purpose of the call. For more information on whisper, refer to the Set User Whisper action in the Workflow Designer User Manual.

When ‘Disable Whisper’ is checked, the user will not hear the User Whisper message, even when it is configured in workflow.

Recording Notification

ice has the ability to provide conversation recording. Recording Notification is only relevant for contact centers using recordings. By default, the user does not receive any notification of being recorded.

When Recording Notification is enabled, the user sees the *Recording Notification* button flashing when they are being recorded, provided that this iceBar button has been configured.

Note: If the 'User Initiated Recording' feature is enabled in iceManager, a user can click on the *Recording Notification* button during a call that is not already being recorded to initiate a recording of the call.

Recording Error Notification

ice has the ability to provide conversation recording. 'Recording Error Notification' is only relevant for contact centers using recordings.

By default, the user does not receive notification of any recording errors that may occur, unless the recording was self-initiated.

When 'Recording Error Notification' is enabled, the user sees a message box with the appropriate error message if a recording error occurs during a call.

If the recording is 'Supervisor Initiated' and a recording error occurs, the user does not see an error message even when Recording Error Notification is enabled.

Note: The most common errors are those having to do with scheduled recordings, which cannot be started due to low disk space or the unavailability of recording resources.

Send Callers ANI to User Device

With this class of service enabled, the caller's ANI (i.e., name and phone number) is sent to the user's phone, Skype for Business or Microsoft Teams client.

With this class of service disabled, the information presented to the physical phone/device will be the configured UC Group settings. The caller's ANI information would be displayed only in iceBar, as Originator Name and Originator Number.

Silent Monitoring Privilege

'Silent Monitoring Privilege' is available to Team Leader user types and higher. By default, the user cannot perform silent monitoring of other users.

When 'Silent Monitoring Privilege' is enabled, the user can perform silent monitoring of other users if they satisfy the following conditions:

- The user has the appropriate user type to be monitoring the target user;
- The user is assigned to at least one queue to which the target user is also assigned;
- The user has the *Silent Monitoring* button configured on iceBar.

Note: For the target user to receive notifications that they are being silent monitored, the *Silent Monitoring* button has to be configured on iceBar and the Silent Monitoring Notification class of service checked.

For more information on silent monitoring, refer to the iceBar User Manual.

Silent Monitoring Notification

By default, the user does not receive any notification of being silently monitored.

When 'Silent Monitoring Notification' is enabled and the button is configured on iceBar, the *Silent Monitoring* button flashes to notify the user when his/her calls are being monitored.

Screen Monitoring Privilege

'Screen Monitoring Privilege' is available to Team Leader user types and higher. This class of service is only available after the 'Silent Monitoring Privilege' is checked. By default, the user cannot perform screen monitoring of other users.

Similar to 'Silent Monitoring Privilege', when 'Screen Monitoring Privilege' is enabled, the user can perform screen monitoring of other users if they satisfy the following conditions:

- The user has the appropriate user type to be monitoring the target user;
- The user is assigned to at least one queue to which the target user is also assigned;
- The user has the *Silent Monitoring* button configured on iceBar;
- *Screen Recording* is enabled and installed.

Play Call Waiting Tone

By default, the user does not hear any call waiting notification.

When ‘Play Call Waiting Tone’ is enabled, the user hears a beep in his/her headset if there is a call waiting in his/her PAQ. The user hears one beep per call, up to a maximum of 4 beeps. The user also hears a beep if the number of calls waiting in the PAQ drops.

Virtual User

This class of service is reserved for users that are used exclusively to integrate ice to third-party IVR systems. This feature should remain unchecked for all other users.

Wrapup After Queued Call

By default, the user returns to the Ready state upon completion of a queued call. An exception to this rule occurs when a user picks a call out of a queue while in the Not Ready state. In this case, the user returns to the Not Ready state upon completion of the call.

Note: A user can change his/her state while on a call, in which case the user remains in the state they have selected upon completion of the call.

When ‘Wrapup After Queued Call’ is checked, the user enters the Wrapup state upon completion of a queued call. Each Queue’s ‘Auto Wrap’ timer determines the length of time that a user stays in Wrapup state.

This can be used to ensure that users have time to record Line of Business (LOB) codes, which describe the reason for the call. For more information on configuring LOB codes, refer to the iceBar User Manual.

Wrapup After Placed Call

By default:

- If the user is in Ready state or in Wrapup state when placing a call, the user returns to Ready state upon completion of the call.
- If the user is in Not Ready state when placing a call, the user returns to Not Ready state upon completion of the call.

  When ‘Wrapup After Placed Call’ is enabled, the user enters the Wrapup state upon completion of a placed call. The ‘Auto Wrap Time’ that is selected for the user determines the length of time that the user stays in Wrapup state after a placed call. The ‘Auto Wrap Time’ drop-down list becomes available when you enable ‘Wrapup After Placed Call.’

Not Ready Cancels Timed Wrapup

By default, when the user is in a timed Wrapup (i.e. it will expire after a set period and is not set to infinite) and selects a not ready reason, they will enter into a pending not ready

state. When the timed Wrapup automatically ends, the user will enter into a Not Ready state.

When ‘Not Ready Cancels Timed Wrapup’ is enabled, a user who selects a Not Ready Reason while in timed Wrapup will immediately enter the Not Ready state chosen. Selecting a Not Ready Reason will automatically cancel the timed Wrapup and set the user to Not Ready.

Request to Select Next Contact

By default, if the user has ‘Allow Multi Contact Handling’ enabled, the user can handle multiple contacts at the same time. For example, the user can be alerted to handle IM and Email contacts while handling a voice contact.

When ‘Request to Select Next Contact’ is enabled, the user can manually choose when they are presented with their next contact. If a user is handling a contact, they will not be automatically alerted for additional contacts. To handle additional contacts at the same time, the user will need to select the ‘Request New Contact’ button on their iceBar.

For example, a user handling a voice call will not be alerted for an additional Email or IM contact in queue until they select the ‘Request New Contact’ button on their iceBar.

For more information on how to use the button, refer to the iceBar User Manual.

Disable Voice while on IM

By default, if the user has ‘Allow Multi Contact Handling’ enabled, they can handle voice, IM, and/or email contacts at the same time.

When ‘Disable Voice while on IM’ is enabled, the user will not receive voice contacts while on an IM.

Disable Voice while on Email

By default, if the user has ‘Allow Multi Contact Handling’ enabled, they can handle voice, IM, and/or email contacts at the same time.

When ‘Disable Voice while on Email’ is enabled, the user will not receive voice contacts while on an email.

Disable IM while on Voice

By default, if the user has ‘Allow Multi Contact Handling’ enabled, they can handle voice, IM, and/or email contacts at the same time.

When ‘Disable IM while on Voice’ is enabled, the user will not receive IM contacts while on a voice contact.

Disable IM while on Email

By default, if the user has ‘Allow Multi Contact Handling’ enabled, they can handle voice, IM, and/or email contacts at the same time.

When ‘Disable IM while on Email’ is enabled, the user will not receive email contacts while on an IM.

Disable Email while on Voice

By default, if the user has ‘Allow Multi Contact Handling’ enabled, they can handle voice, IM, and/or email contacts at the same time.

When ‘Disable Email while on Voice’ is enabled, the user will not receive email contacts while on a voice contact.

Disable Email while on IM

By default, if the user has ‘Allow Multi Contact Handling’ enabled, they can handle voice, IM, and/or email contacts at the same time.

When ‘Disable Email while on IM’ is enabled, the user will not receive email contacts while on an IM.

Not Ready Reason drop-down

The Not Ready Reason drop-down becomes available once you have enabled ‘Logon to Not Ready.’ This will enable you to select a user’s Not Ready Reason, which will be visible on iceMonitor and reported in iceReporting.

Auto Wrap Time(s) drop-down

The default setting for the 'Auto Wrap Time' for calls is 'Infinite' seconds. With the default setting, the user stays in the Wrapup state until they change themselves to either Ready state or Not Ready state. You can also select a number as the 'Auto Wrap Time.' In this case, the value selected determines the number of seconds a user stays in the Wrapup state. If the user takes no action, he/she is placed in the Ready state when the selected timer expires. If the user selects *Not Ready* while in the Wrapup state, the user is placed in the Not Ready state when the timer expires.

This feature is useful for users making calls for outbound campaigns. It can also be used to ensure that users have time to record LOB codes, which describe the reason for the call. For more information on configuring LOB codes, refer to the iceBar User Manual.

Smart Routing

Smart Routing compares dialed numbers with users' remote DNs. This feature modifies ice call routing so that calls are routed within ice as much as possible to ensure the following:

- All ice call forwarding and busy rules take effect in this case, including Not Ready state, PAQ, and Not Logged On.
- ice reports/stats will track these calls and attribute them to an agent
- Subsequent call control operations by the agent will be performed as that agent (instead of by a remote PBX system).
- Agent based call recording rules will be adhered to when calls are routed this way.

Smart Routing Options	
Options	**Description**
Use switch default	ice uses the settings from the switch in ice Registry Set. **Note:** ice Registry Set is an advanced topic. It is a configuration tool used to set some system level and switch level settings.
Use smart routing	Over-rides the switch settings to enable smart routing
Don't use smart routing	Over-rides the switch settings to disable smart routing

ACS Settings

Enable ACS Voice

This feature allows a user to enable and use the icePhone. If the Enable ACS Voice is enabled, the user can handle voice contacts using icePhone. By default, this feature is disabled.

Enable ACS IM

This feature allows a user to enable and use the icePhone. If the Enable ACS IM is enabled, the user can handle chat contacts using icePhone. By default, this feature is disabled.

Outbound Presentation

Send Name to PBX

Note: This feature applies to users who use physical phones.

This feature can be used when ice is integrated with an existing PBX through a media gateway.

By default, the 'Outbound Caller Name' that is specified for the UC Group is displayed when the user makes a call to the PBX.

When 'Send Name to PBX' is enabled, the name specified in the 'Name to Send' field is displayed when the user makes a call to a user on the PBX, provided that the PBX phone has the ability to display this information. The name specified here overrides the 'Outbound Caller Name' configured for the UC Group.

Send Name to PSTN/SIP Display Name

Note: This feature applies to users who use physical phones.

By default, the 'Outbound Caller URI' that is specified for the UC Group is populated with the outbound call information when the user makes an outbound call.

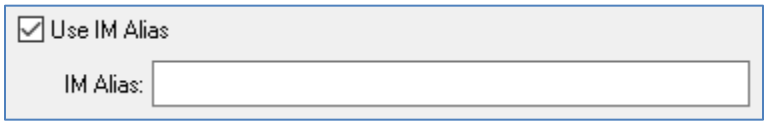
When 'Send Name to PSTN/SIP Display Name' is enabled, the name specified in the 'Name to Send' field is used when the user makes an outbound call.

Use IM Alias

This feature allows you to specify the name of the user that appears in an IM chat.

To enable the Use IM Alias feature:

1. Check the box beside Use IM Alias
2. Enter the IM Alias of the user in the IM Alias field.



Note: When this feature is not enabled the IM chat will show the user's ID number.

Call Forwarding

Call forwarding can be used to send a user's direct calls to another user ID, to a DN that has been created in workflow with the Assign DN action, or to an external number. Call forwarding does not affect queued calls that are presented to a user's workstation, unless the queued call was answered and then transferred to the user. For more information on contact handling, refer to the iceBar User Manual.

Note: To modify a user, you must be in Edit Mode and have a user type that allows you to access the Users, Queues, Teams & Skills folder that is part of the iceAdministrator's tree view. For information on permission levels and user types, refer to page 26.

By default, call forwarding is disabled for users. The table below describes what happens when the call forwarding rules are disabled:

Rules when call forwarding is disabled	
Rule	**Description**
No Logon	When the user is logged off from ice, direct callers hear a fast-busy tone.
No Answer	When the user does not answer a direct call within the 'No Answer Threshold', the direct caller hears a fast-busy tone.
PAQ Overflow	A direct call waits in the user's **Personal Access Queue** (PAQ) until the user answers the call, or until the caller hangs up. The PAQ is a holding place for direct contacts that are presented to a user while they are handling another contact, or in the Not Ready state. Callers that have been parked in the user's PAQ are not subject to the 'PAQ Overflow Threshold.' **Note:** If the class of service feature 'Disable PAQ Queuing' is enabled, then a direct call receives a busy signal and does not wait in the user's PAQ. For more information on this class of service feature, refer to page 69.

If you decide to enable call forwarding, the following options are available:

Call forwarding options	
Option	**Description**
All Calls	When enabled, all direct calls to the user are re-routed to a specified number and the user will not receive direct calls even when in the Ready state. When this option is selected, it will override other call forwarding options.

Call forwarding options	
Option	**Description**
No Logon	When enabled, direct calls to the user are re-routed to a specified number when the user is not logged on to ice.
No Answer	When enabled, direct calls to the user are re-routed to a specified number when the user does not answer the call alerts within the 'No Answer Threshold.'
PAQ Overflow	When enabled, direct calls to the user are re-routed to a specified number if the caller's wait time in the user's PAQ reaches the 'PAQ Overflow Threshold.' Callers that have been parked in the user's PAQ are not subject to the 'PAQ Overflow Threshold.' **Note:** If the class of service feature 'Disable PAQ Queuing' is enabled, then a direct call goes directly to the dial number for PAQ Overflow and does not wait in the user's PAQ. For more information on this class of service feature, refer to page 69.

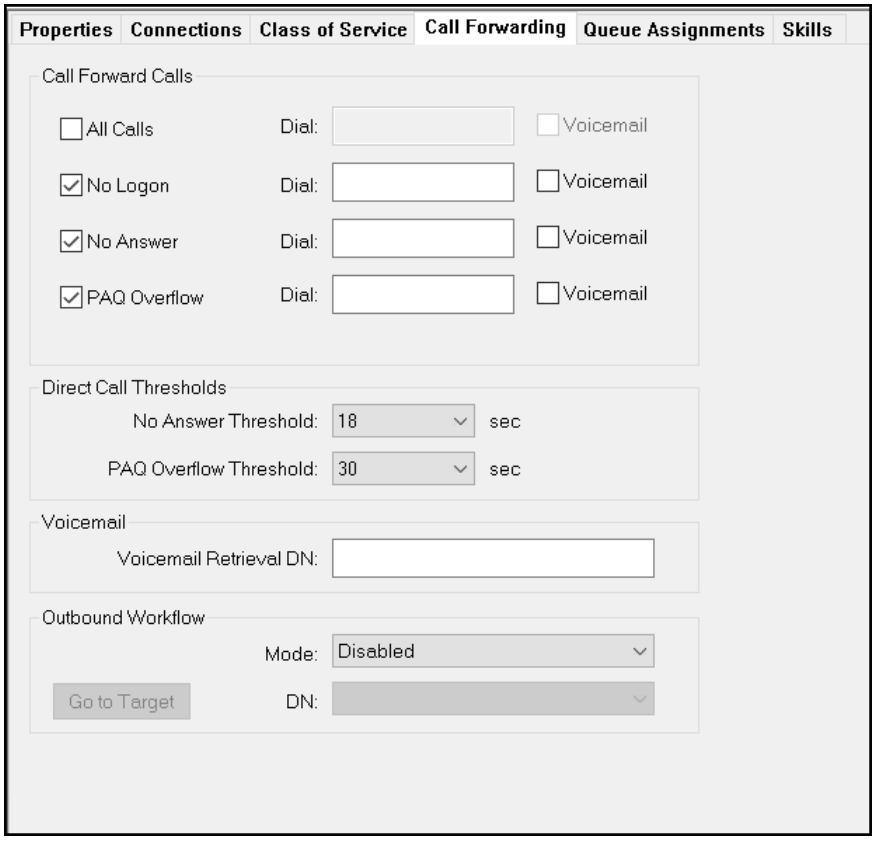
To create or modify a user's call forwarding features:

1. Navigate to the user you wish to customize or modify.

   The 'Properties' page for the selected user appears on the right side of the iceAdministrator window.

2. Click the *Call Forwarding* tab to bring that page to the front.

3. Check the call forwarding options that you wish to enable.



4. Enter the appropriate number in the 'Dial' fields.

   The same number is usually entered in each of these fields.

   Note: If you are using a third-party voicemail system, the iceBar *Voicemail* button does not blink automatically. If you would like this button to blink to alert users when messages have been transferred to their mailbox, select the Voicemail checkboxes.

5. From the 'No Answer Threshold' drop-down list, select the number of seconds that a caller should alert at the user's workstation before being directed to the call forwarding number specified for 'No Answer.'

6. From the 'PAQ Overflow Threshold' drop-down list, select the number of seconds that a caller should wait in the user's PAQ before being directed to the call forwarding number specified for 'PAQ Overflow.'

7. In the 'Voicemail retrieval DN' field, enter the number where you will retrieve the voicemails.

8. From the File menu, choose *Save*. (To cancel the save operation, click *Cancel* on the 'Progress' dialog box.)

This section has explained how to configure call forwarding for a user. The section that follows provides information on configuring outbound workflow to control the user's outbound calls.

Outbound Workflow

Instead of directly routing a call to a number that a user dials, the call can first be passed to an outbound workflow for inspection and treatment. Before you can enable outbound workflow for a user, the outbound workflow must already be created with an Assign DN action. Workflow has access to the number the user dialed through the Variable $System:DialedNumber. For more information on variables and workflow, refer to iceWorkflow Designer User Manual.

Consider the following examples of outbound workflow:

- **Call blocking:** If the user attempts to dial a number that is restricted by workflow, the user hears a message indicating the number cannot be dialed.
- **Least cost routing:** Workflow determines the carrier with lowest rates for the number dialed. The call is placed using a UC Group associated with the lowest cost carrier.
- **Long distance PIN's:** If workflow determines that a dialed number is a long distance call, the user is prompted to enter a PIN before the call can be completed.
- **Dial string manipulation:** On a system that uses SIP ports to place outbound calls, the outbound dial string must be in a specific format. For example, it might be sip:4164662411@192.233.60.20, where 4164662411 is the number the user is calling and 192.233.60.20 is the sip gateway from which the call is placed. To avoid having users dial this long dial string for each outbound call, outbound workflow can be built so that users simply dial 4162662411 from iceBar. The outbound workflow generates the appropriate dial string before sending the call out.

For each user, you can choose one of the following four modes for outbound workflow:

Outbound workflow modes	
Mode	**Description**
Disabled	The default setting. There is no treatment of the user's outbound calls using outbound workflow.
All Calls Except Calls to Users	This includes external calls and calls to workflow DNs (Directory Number). There is no treatment of calls from the user to other users.
All Calls Placed	This includes external calls, calls to workflow DNs, and calls to other users on ice.
External Calls Only	Includes external calls only.

Outbound workflow can be enabled for each user, as described in the instructions that follow, or can be enabled for an entire switch. For more information on enabling outbound workflow for a switch, refer to Appendix B: Switches, Nodes, & Sites.

Note: To modify a user, you must be in Edit Mode and have a user type that allows you to access the Users, Queues, Teams & Skills folder that is part of the iceAdministrator's tree view. For more information on permissions on iceAdministrator, refer to page 26.

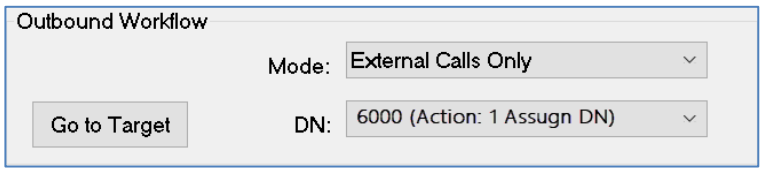
To enable outbound workflow for a user's calls:

1. Navigate to the user that you wish to customize or modify.

   The 'Properties' page for the selected user appears on the right side of the iceAdministrator window.

2. Click the *Call Forwarding* tab to bring that page to the front.

   For this process, you need to work with the 'Outbound Workflow' portion of the page.



3. From the 'Mode' drop-down list choose one of the four modes: Disabled, All Calls Except Calls to Users, All Calls Placed, or External Calls Only.

   For all modes except Disabled, you must choose the DN that points to the outbound workflow from the 'DN' drop-down list. If your user type is Supervisor or higher, you can click *Go To Target* to view the outbound workflow.

4. From the File menu, choose *Save*. (To cancel the save operation, click *Cancel* on the 'Progress' dialog box.)

   This section has explained how to configure outbound workflow for a user's calls. The section that follows provides information on configuring a user's queue assignments.

Queue Assignments

A user that is not assigned to any queues is permitted to log on to iceBar. This accommodates contact centers with users whose focus is placing outbound calls and users who do not handle queued calls.

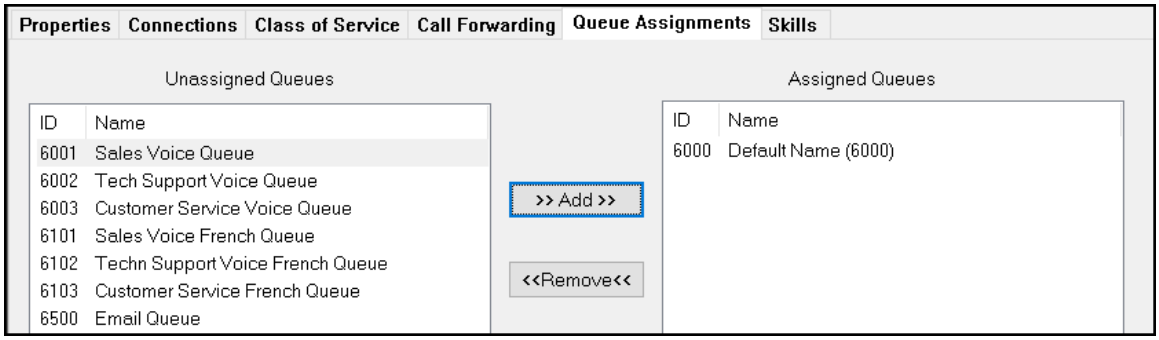
Most users are assigned to the queues from which they are required to handle contacts.

Note: To modify a user, you must be in Edit Mode and have a user type that allows you to access the Users, Queues, Teams & Skills folder that is part of the iceAdministrator's tree view. For information on permission levels and user types, refer to page 26.

To add or remove queue assignments:

1. Navigate to the user that you wish to customize or modify and click on the *Queue Assignments* page.

   The user's current queue assignments are shown in the 'Assigned Queues' column, while queues that the user is not assigned appear in the 'Unassigned Queues' column.



Note: If there is more than one queue in the 'Unassigned Queues' or the 'Assigned Queues' column, you can sort the list numerically by queue ID or alphabetically by name by clicking on the *ID* or *Name* column headings.

2. To assign a user to a queue, highlight the queue in the 'Unassigned Queues' column by clicking on it and then click *Add*.

   To remove a user from a queue, highlight the queue in the 'Assigned Queues' column by clicking on it and then click *Remove*.

3. From the File menu, choose *Save*. (To cancel the save operation, click *Cancel* on the 'Progress' dialog box.)

   This section has explained how to configure a user's queue assignments. The section that follows provides information on assigning skills to a user.

Assigning Skills to Users

iceAdministrator requires configuration in order to route contacts to the user with the most appropriate skills. One of these areas is the 'Skills' page for a user. For more information on configuring skills, refer to

Chapter 5: Skills.

Note: To modify a user, you must be in Edit Mode and have a user type that allows you to access the Users, Queues, Teams & Skills folder that is part of the iceAdministrator's tree view. For more information on permissions in iceAdministrator, refer to page 26.

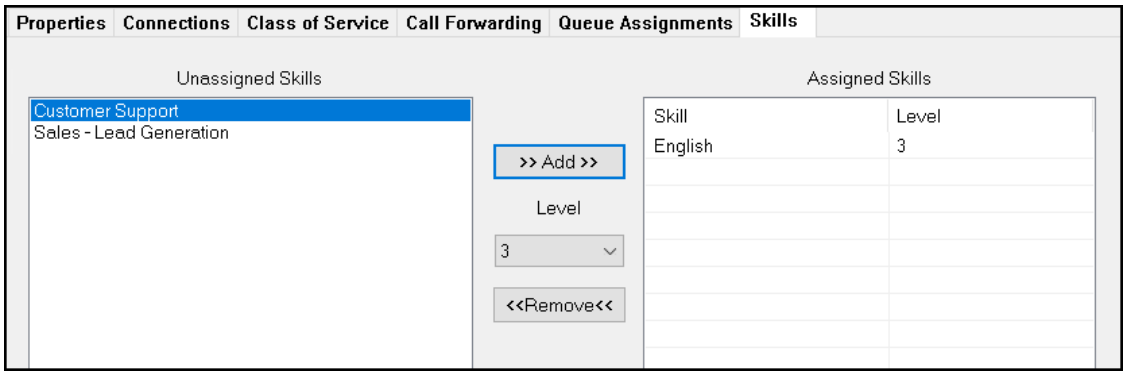
To modify a user's skills:

1. Navigate to the user that you wish to customize or modify.

   The 'Properties' page for the selected user appears on the right side of the iceAdministrator window.

2. Click the *Skills* tab to bring that page to the front.

   The user's current skill assignments are shown in the 'Assigned Skills' column, while unassigned skills appear in the 'Unassigned Skills' column.

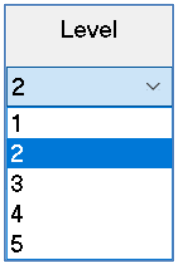


   Note: If there is more than one skill in the 'Assigned Skills' column, you can sort the list alphabetically by name or numerically by level by clicking on the 'Skill' or 'Level' column headings.

3. Highlight the skill you wish to assign to the user in the 'Unassigned Skills' column.

   Note: The available skills are the skills that have been added to the 'Skills' folder in the tree view. For more information on adding a new skill, refer to page 151.

4. From the 'Level' drop-down list, select a number between one and five that represents the user's proficiency in the skill.



Five represents the highest level of proficiency in a skill.

5. Click *Add* to assign the skill to the user.

   To remove a skill from a user, highlight the skill in the 'Assigned Skills' column and click *Remove*.

6. From the File menu, choose *Save*. (To cancel the save operation, click *Cancel* on the 'Progress' dialog box.)

   This section has explained how to configure a user's skill assignments. The section that follows provides information on making modifications to multiple users simultaneously.

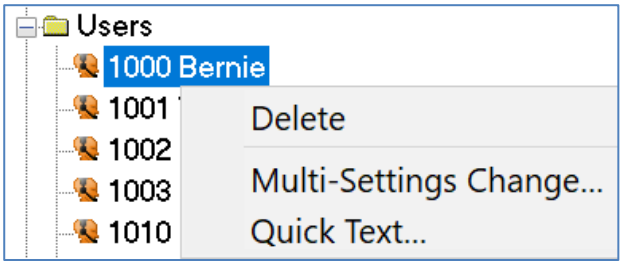
Modifying Multiple Users

Use the ‘Multi-Settings Change’ feature to avoid modifying each user’s settings individually when you need to change the same settings for a subset of your users. For example, use this feature when you want to disable the ‘Logon to Not Ready’ setting on the Class of Service tab for all users.

To modify the settings for multiple users:

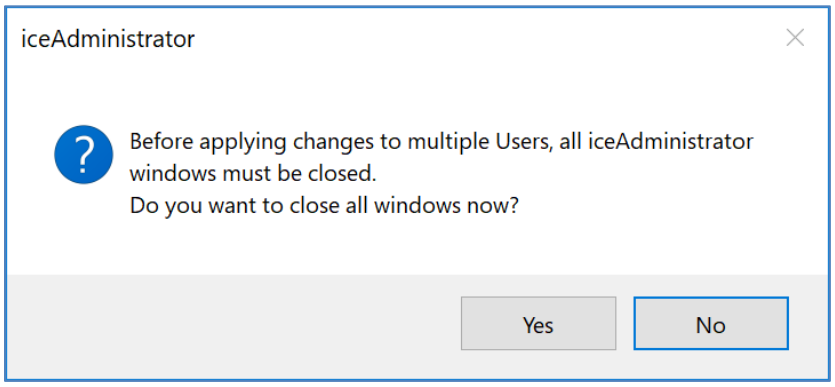
1. Right-click on any user in the tree view.

   A menu appears.



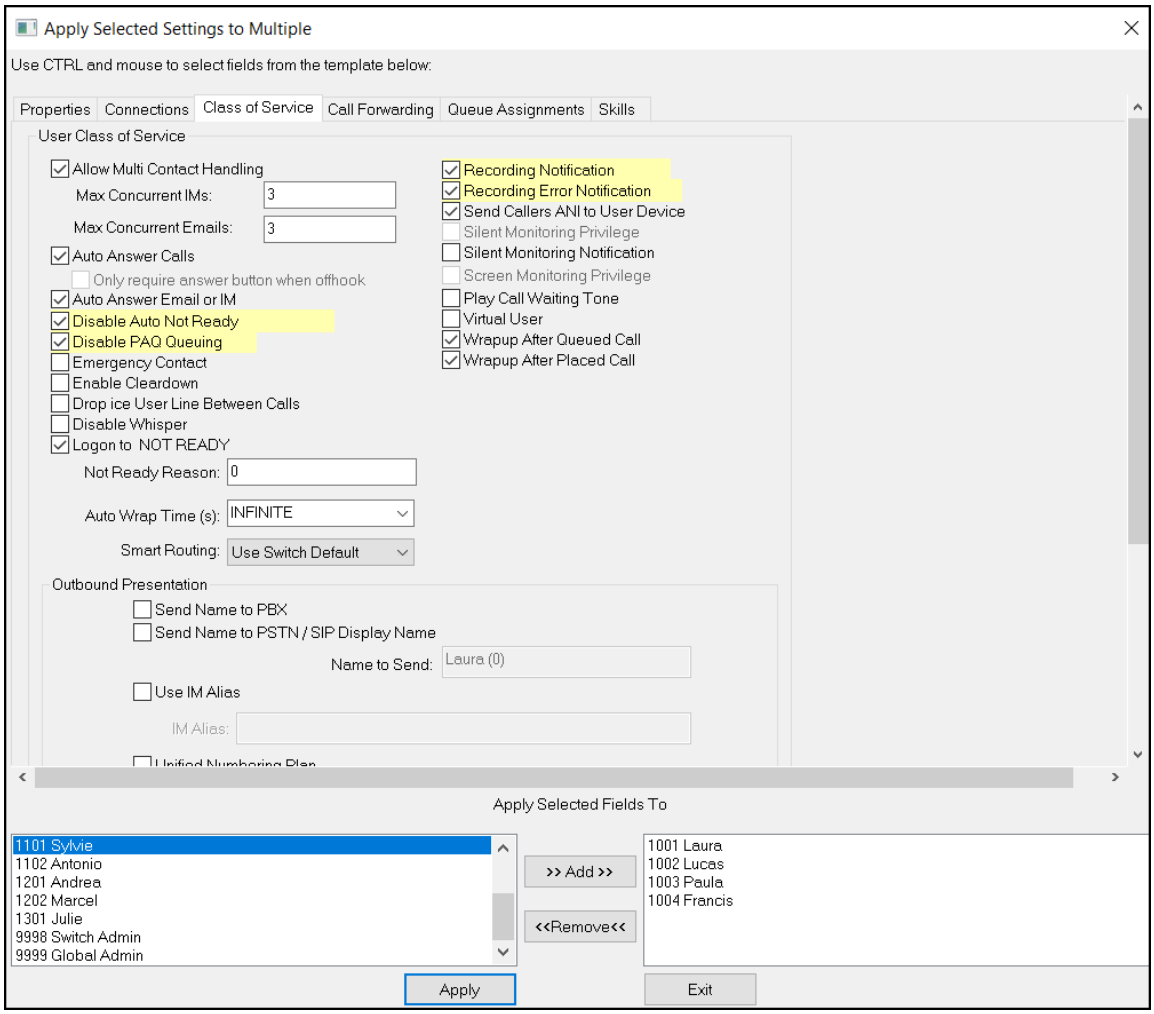
2. Select *Multi-Settings Change* from the menu.

   A message box displaying the following message appears:



3. Click *Yes* to continue. Click *No* to cancel the process.

   The 'Apply Selected Settings to Multiple Users' dialog box appears. This dialog box contains the same tabs and configuration settings as those that appear for a single user. The difference lies at the bottom of the dialog box, where you can select the users for whom you want to change the settings.



4. You must highlight the fields that you want to change for the change to be applied. Hold the Ctrl key and click the field you want to highlight. To deselect the field, hold the Ctrl key and click the field again.

   The field remains highlighted even if you move to a different tab. When you save your changes, all highlighted fields will be changed to the values that you set for each selected user.

5. Click on the box beside the field to select or deselect an option.

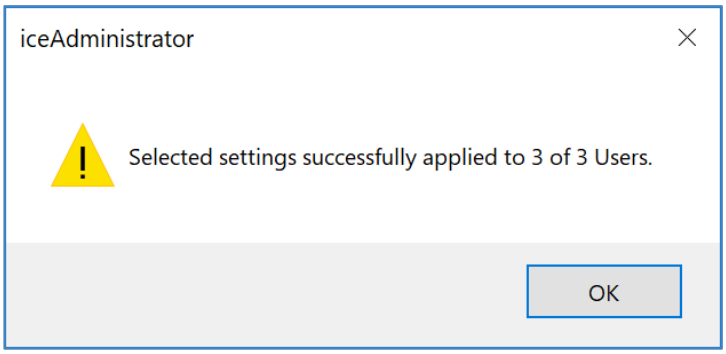
   Note: You must highlight the field by holding the Ctrl key before selecting or deselecting an option.

6. To apply the changes to other users, highlight the users in the left column on the bottom of the page and click *Add*.

To remove a user from ‘Apply Selected Fields To’ section, highlight the user in the right column and click *Remove*.

7. Click *Apply* to make the changes. Click *Exit* to close the dialog box without making any changes.

   Once you click *Apply,* the following message appears.



8. Click *OK* to close the message box.
9. Click *Exit* or click the close (X) button to close the ‘Apply Selected Settings to Multiple Users’ dialog box.
10. From the File menu, choose *Save*. (To cancel the save operation, click *Cancel* on the ‘Progress’ dialog box.)

Deleting a User

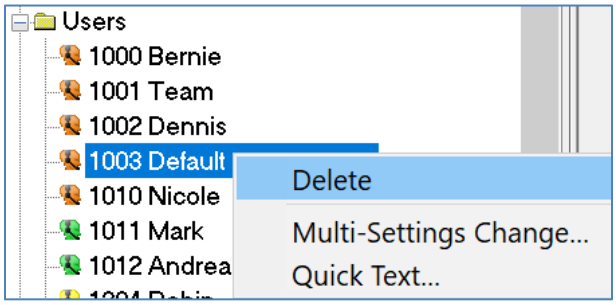
If you wish to completely remove a user from iceAdministrator, then the user should be deleted. To remove a user from a queue without completely removing the user, refer to page 84.

Note: To delete a user, you must be in Edit Mode and have a user type that allows you to access the Users, Queues, Teams & Skills folder. For information on permission levels and user types, refer to page 26.

To delete a user:

1. Navigate to the user that you wish to delete.
2. Right-click on the user in the tree view.

   A menu appears.



3. Select *Delete* from the menu that appears.

   For the first time, you will get a delete confirmation. If you do not want to be shown the confirmation message, you can click 'Do not show this message again' checkbox.

4. From the File menu, choose *Save*. (To cancel the save operation, click *Cancel* on the 'Progress' dialog box.)

   This section has explained how to delete a single user. The section that follows provides information on deleting all users.

   Note:

- If the user that you delete is used in workflow, the actions where the user ID is used may fail. For example, if you use Route Object to send calls directly to the user, this action will follow the failure condition when the user ID no longer exists.
- For more information on actions and workflow, refer to the iceWorkflow Designer User Manual.

Deleting Multiple Users

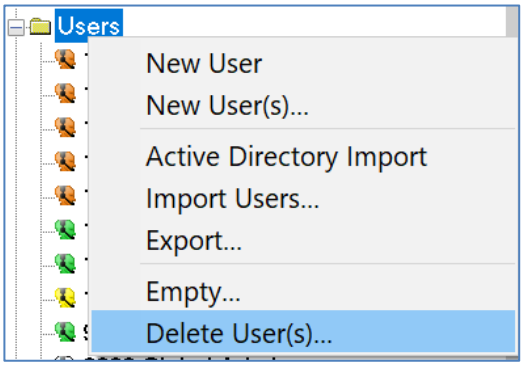
If you wish to completely remove users from iceAdministrator, then the users should be deleted. To remove users from a queue without completely removing the users, refer to page 84.

Note: To delete users, you must be in Edit Mode and have a user type that allows you to access the Users, Queues, Teams & Skills folder. For information on permission levels and user types, refer to page 26.

To delete multiple users, complete the following steps:

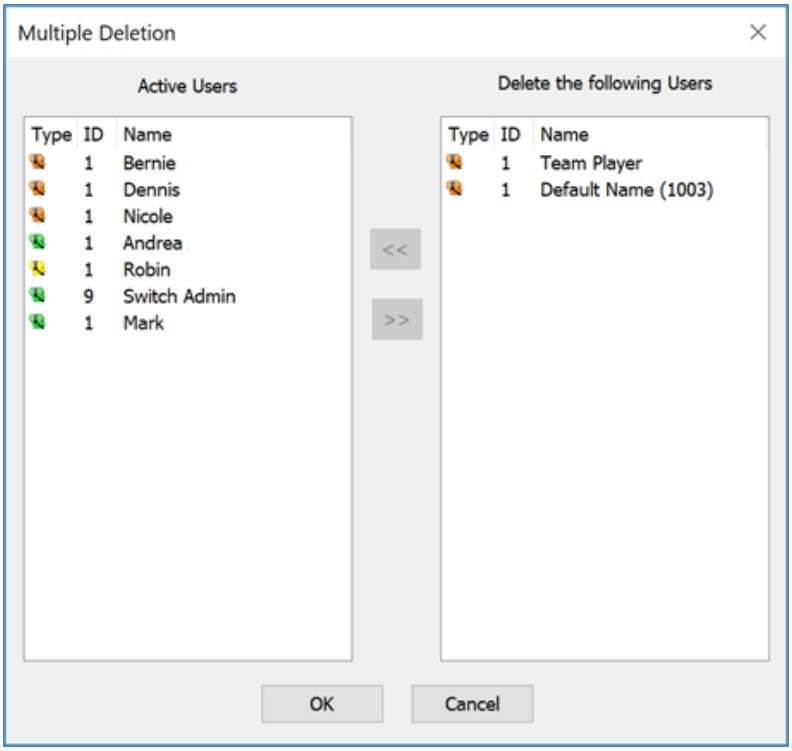
1. Navigate to the Users subfolder in the tree view.
2. Right-click on the *Users* subfolder.

   A menu appears.



3. Select *Delete User(s)...* from the menu.

   A menu appears.



4. Highlight the user(s) that you would like to delete. You can use the Ctrl or Shift key while clicking to make multiple selections.
5. Click the arrow >> to move the selected user(s) over to the right.
6. Click OK.
7. From the File menu, choose *Save*. (To cancel the save operation, click *Cancel* on the 'Progress' dialog box.)

   The selected user(s) are deleted.

   This section has explained how to delete multiple users. The section that follows provides information on emptying the Users subfolder.

Note:

- If the users that you delete are used in workflow, the actions where the User IDs are used may fail. For example, if you use Route Object to send calls directly to the users, this action will follow the failure condition when the User IDs no longer exist.
- For more information on actions and workflow, refer to the iceWorkflow Designer User Manual.

Emptying the Users Folder

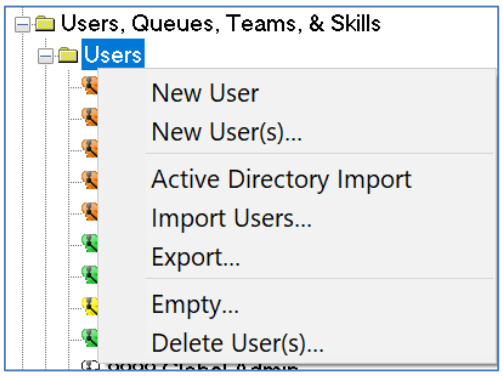
Global Administrators can empty the Users subfolder. This will delete all users from iceAdministrator. You may decide to delete all these users to avoid conflict messages when importing users.

Note: To delete all users, you must be in Edit Mode and have the Global Administrator user type.

To empty the Users subfolder, complete the following steps:

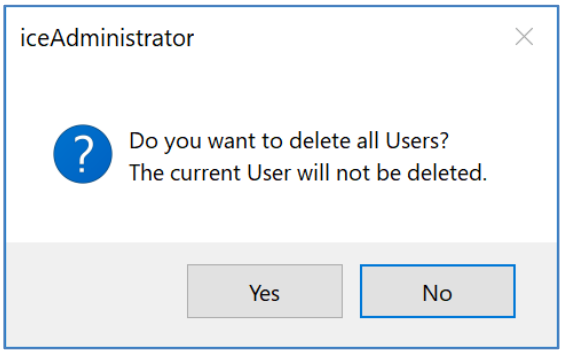
1. Right-click on the *Users* subfolder.

   A menu appears.



2. Select *Empty...* from the menu.

   A warning appears.



3. Click *Yes* to delete all of the users, except the user ID that you used to log in to iceAdministrator, or click *No* to cancel the deletion.
4. From the File menu, choose *Save*. (To cancel the save operation, click *Cancel* on the 'Progress' dialog box.)

   Note:

   If the users that you delete are used in workflow, the actions where these IDs are used may fail. For example, if you use Route Object to send calls directly to certain users, this action will fail if one of the user IDs no longer exists. For more information on actions and workflow, refer to the iceWorkflow Designer User Manual.

Emptying the Users, Queues, Teams & Skills Folder

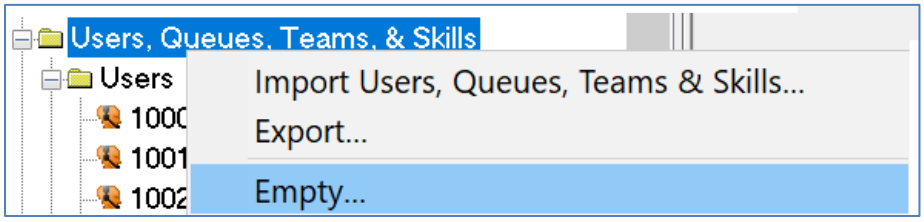
Global Administrators can empty the Users, Queues, Teams & Skills folder. This means that all users, queues, teams, and skills are deleted from iceAdministrator. You may decide to delete all of these items to avoid conflict messages when importing users, queues, teams, and skills.

Note: To delete all users, queues, teams, and skills, you must be in Edit Mode and have the Global Administrator user type.

To empty the Users, Queues, Teams & Skills folder:

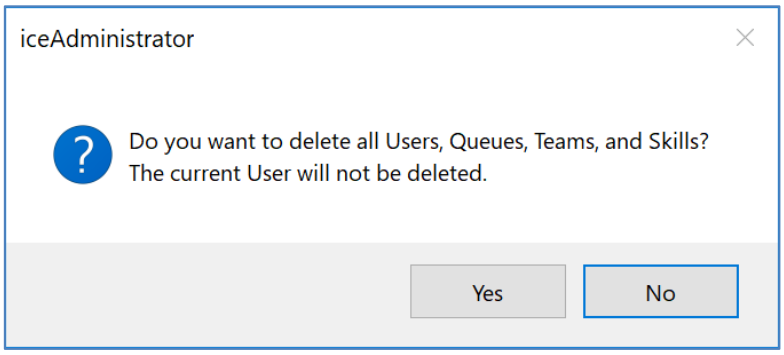
1. Right-click on the *Users, Queues, Teams & Skills* folder.

   A menu appears.



2. Select *Empty* from the menu.

   A warning appears.



3. Click *Yes* to delete all of the users (except the user ID that you used to log in to iceAdministrator), queues, teams and skills or click *No* to cancel the deletion.
4. From the File menu, choose *Save*. (To cancel the save operation, click *Cancel* on the 'Progress' dialog box.)

   Note:

- If the users that you delete are used in workflow, the actions where the User IDs are used may fail. For example, if you use Route Object to send calls directly to the users, this action will follow the failure condition when the user IDs no longer exists.
- If the queue or skill(s) that you delete is used in workflow, you will need to complete or modify the workflow before you can save your changes.
- If the skill(s) that you delete is used in workflow, you will need to complete or modify the workflow before you can save your changes.
- For more information on actions and workflow, refer to the iceWorkflow Designer User Manual.

icePhone Connection and Backup Settings

Voice Settings

The following table describes the settings required to configure icePhone as a primary or backup connection for voice calls. This includes settings in iceManager Configuration groups, as well as settings in iceAdministrator.

For more information on the settings in iceManager, refer to the iceManager User Manual.

iceAdministrator						iceManager Configuration Groups	
Voice		Enable ACS Voice	Connection address (Remote DN)	Use MS Teams Direct Routing	Block PSTN remote DN	Default User Connectivity	
Primary	Backup					Voice Primary	Voice Backup
Teams Direct Routing	icePhone	✓	Direct Routing number	✓	✓	iceAdministrator-defined	icePhone
Teams Direct Routing	PSTN		PSTN number	✓		iceAdministrator-defined	iceAdministrator-defined
PSTN	icePhone	✓	PSTN number			iceAdministrator-defined	icePhone
icePhone	PSTN	✓	PSTN number			icePhone	iceAdministrator-defined
icePhone	Teams Direct Routing	✓	Direct Routing number	✓	✓	icePhone	iceAdministrator-defined

Note: If the *User Connectivity Changeable From iceBar* setting is enabled in iceManager Configuration Groups, the iceBar remote DN will override any settings in iceAdministrator and iceManager. For more information, refer to the iceManager User Manual**Error! Reference source not found.**.

IM Settings

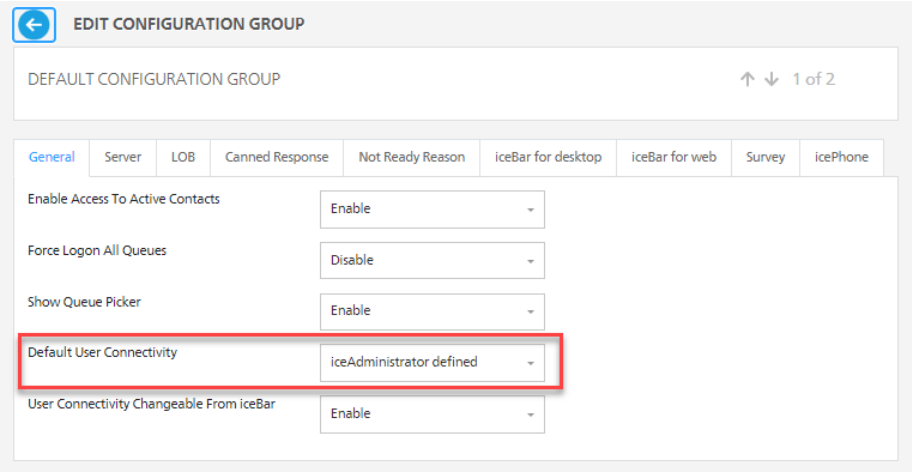
The following table describes the settings required to configure icePhone as a primary or backup connection for IMs. These settings are configured in iceAdministrator.

iceAdministrator			
IM		Enable ACS IM	IM Address
Primary	Backup		
icePhone	SIP	✓	Sip address
SIP	icePhone	✓	Sip address

Consider the following example to set Teams Direct Routing as the primary connection, and icePhone as the backup.

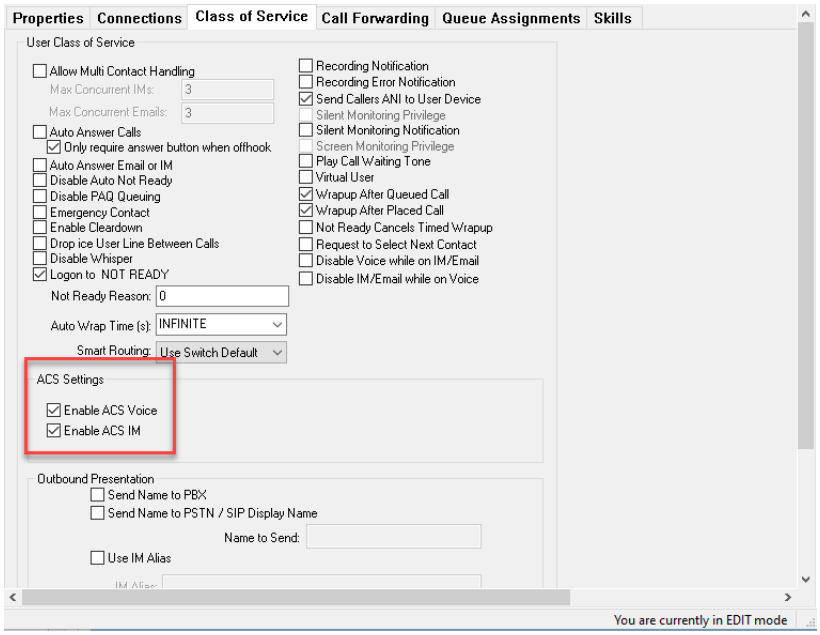
In iceManager

1. In iceManager settings, locate the correct Configuration Group, and open the General Tab.
2. Set the *Default User Connectivity* to iceAdministrator defined.

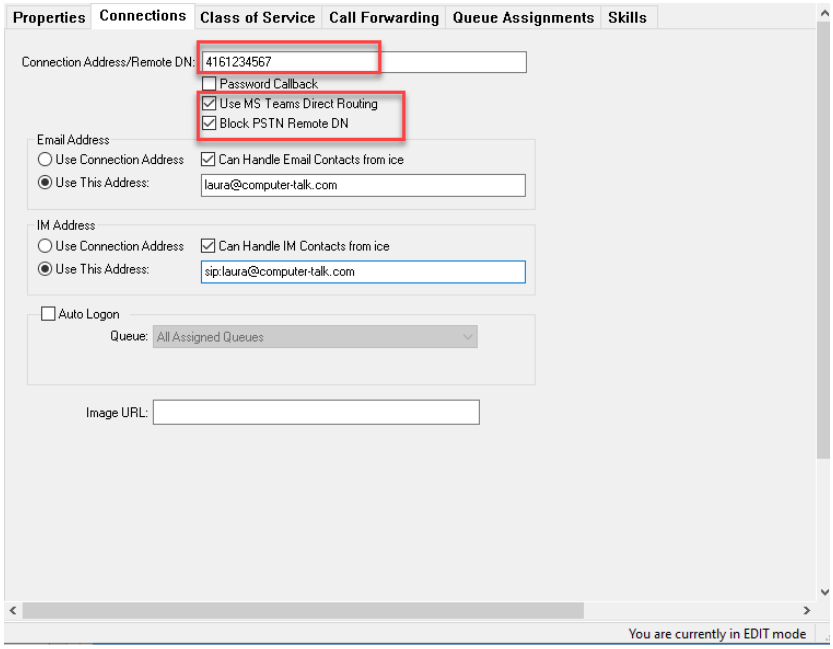


In iceAdministrator

1. In iceAdministrator, ensure that both the *Enable ACS Voice* and *Enable ACS IM* class of service features are enabled.



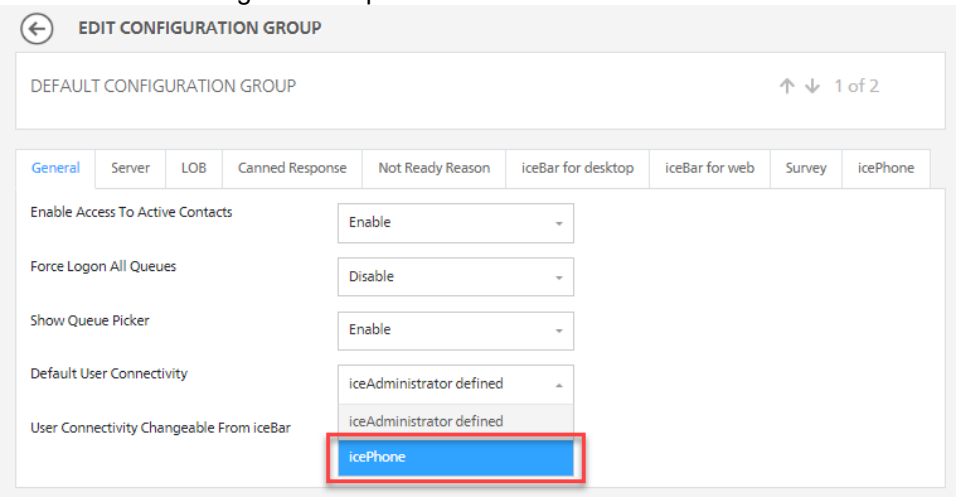
2. In the user's Connections tab, set the Connection address to their Direct Routing number.
3. Ensure both *Use MS Teams Direct Routing* and *Block PSTN Remote DN* are enabled.
   Note: *Use MS Teams Direct Routing* and *Block PSTN Remote DN* can only be enabled by the Global Administrator. If you require these settings to be enabled, please contact Computer Talk.



4. Set the user's IM Address to their sip address, and enable the "Can Handle IM Contacts from ice" checkbox.

To switch the connection from the primary to the backup

Open Configuration Groups in iceManager, and set the *Default User Connectivity* to 'icePhone'. No changes are required in iceAdministrator.



Chapter 3: Queues

Queues are holding places where inbound contacts wait to be handled by users. iceAdministrator allows you to add, modify, and delete queues as required by your contact center. Configurable properties for a queue can affect the way contacts are handled within the queue. For example, if you want calls about certain topics to be answered first, you may manipulate a contact's priority within the queue by modifying queue properties.

In addition to the properties described in this chapter, the treatment of contacts waiting in queue is determined by the design of workflow. For example, workflow determines if callers hear messages and music while waiting in queue. For more information on workflow, refer to the iceWorkflow Designer User Manual.

The sections that follow describe how to view existing queues, add new queues, modify queues, assign users to queues, and delete queues from ice.

Note:

- iceAdministrator should be used by trained contact center staff. Before you begin modifying or creating queues, you must be familiar with your current configuration.
- To view and edit queues, you must have a user type that allows you to access the Users, Queues, Teams & Skills folder that is part of the iceAdministrator's tree view. This chapter assumes that you are familiar with the permissions on ice, as described in

  Chapter 1: Getting Started.
- Special configuration is not required for a queue that handles email messages.

Viewing a Queue

You may wish to view a queue if you are planning to change its parameters, change user assignments, or delete the queue from ice.

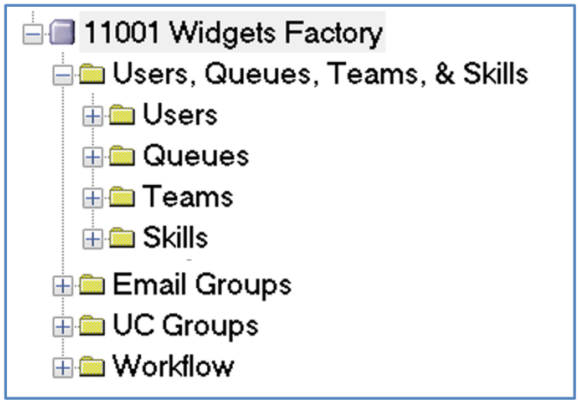
Viewing queues involves finding and selecting a queue in the tree view. When a queue is selected, the right side of the iceAdministrator window displays two tabs detailing the queue's configuration.

Note: To view a queue you must have a user type that allows you to access the Users, Queues, Teams & Skills folder. For information on permission levels and user types, refer to page 26.

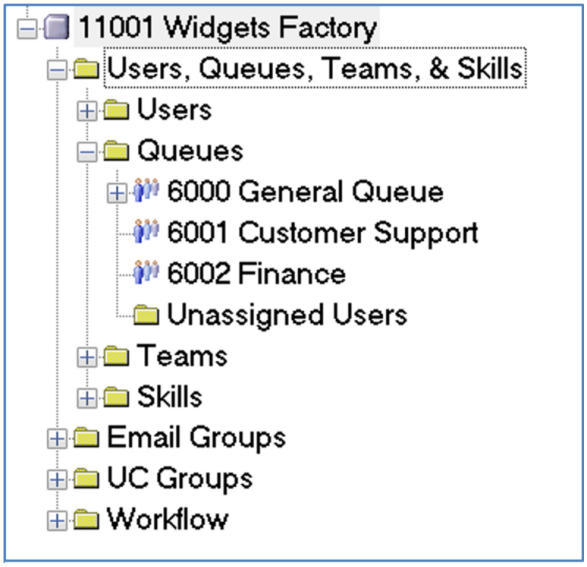
To navigate to a queue:

1. Open the Users, Queues, Teams & Skills folder in the tree view.

   The queues sub-folder is displayed.



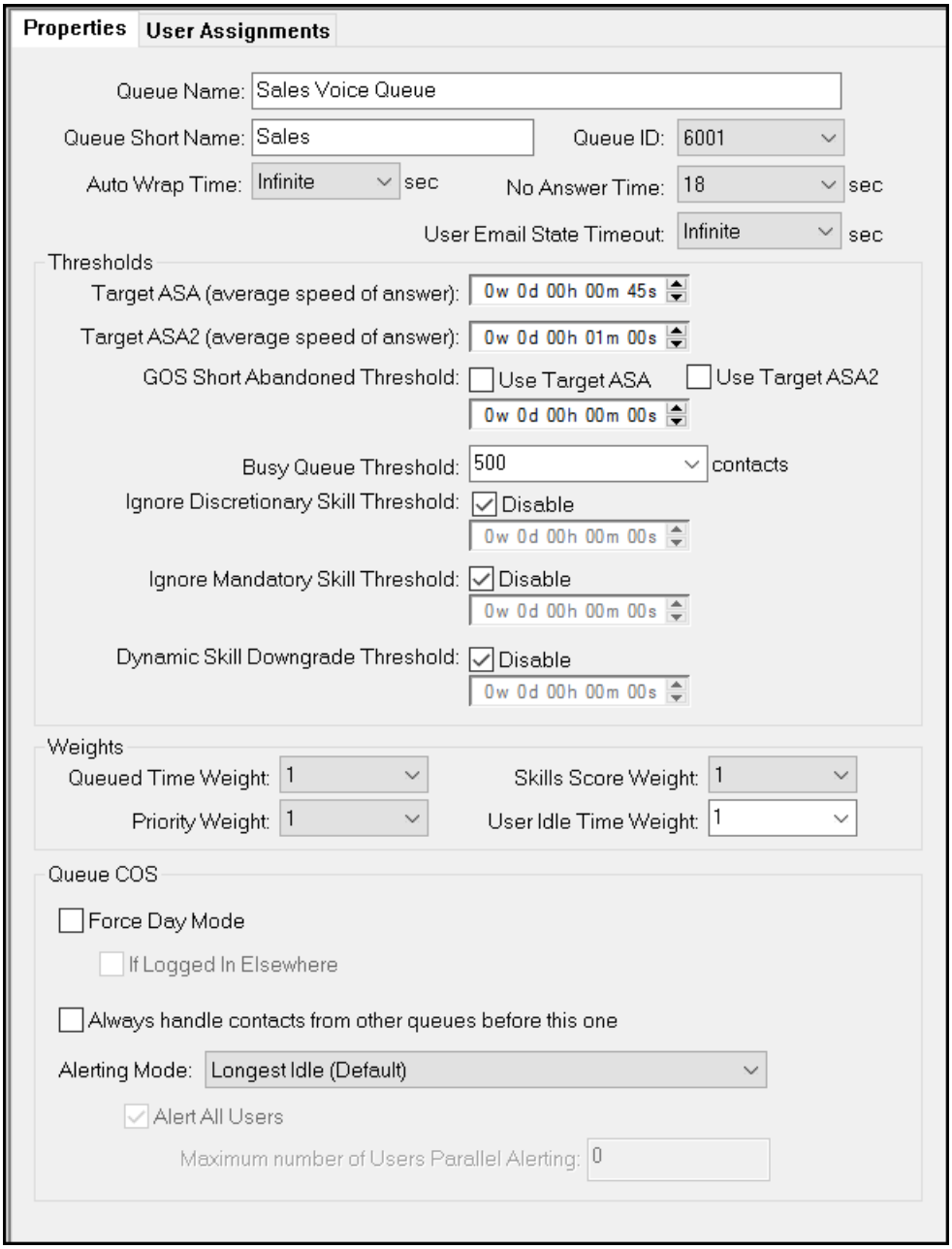
2. Open the queues folder in the tree view.



The queues that have already been created are displayed in the tree view. Each queue can be expanded to show the users that have been assigned to the queue. The 'Unassigned Users' folder expands to show users that have not yet been assigned to a queue.

3. Highlight the queue to view its configuration.

   Two tabs appear in the detail view: the 'Properties' tab, and the 'User Assignment' tab. By default, the 'Properties' page is displayed.



This section has explained how to navigate to a queue. The sections that follow describe how to add a new queue and explain how to modify the properties for a queue.

Adding a Queue

A new queue may need to be added to accommodate changes in your contact center.

There are several methods of adding a queue:

- Add a ‘New Queue.’ This allows you to create one queue with iceAdministrator’s default properties.
- Add ‘New Queue(s).’ This allows you to create one queue or many queues. This feature can be helpful if you want new queues to have the same properties as an existing queue in your contact center.
- Add a new queue when setting up workflow. This allows you to create queues on the spot as workflow is being developed. For more information on workflow, refer to the iceWorkflow Designer User Manual.

Once you have added a new queue, you can configure unique properties for that queue. For more information on completing configurable properties for newly-created queues or modifying existing queues, refer to page 110.

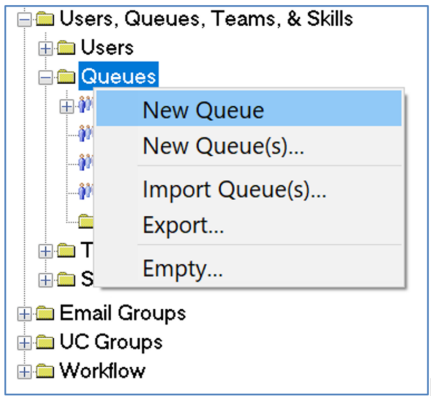
Note: To add a queue, you must be in Edit Mode and have a user type that allows you to access the Users, Queues, Teams & Skills folder that is part of the iceAdministrator’s tree view. For information on permission levels and user types, refer to page 26.

Adding a New Queue

To add a new queue:

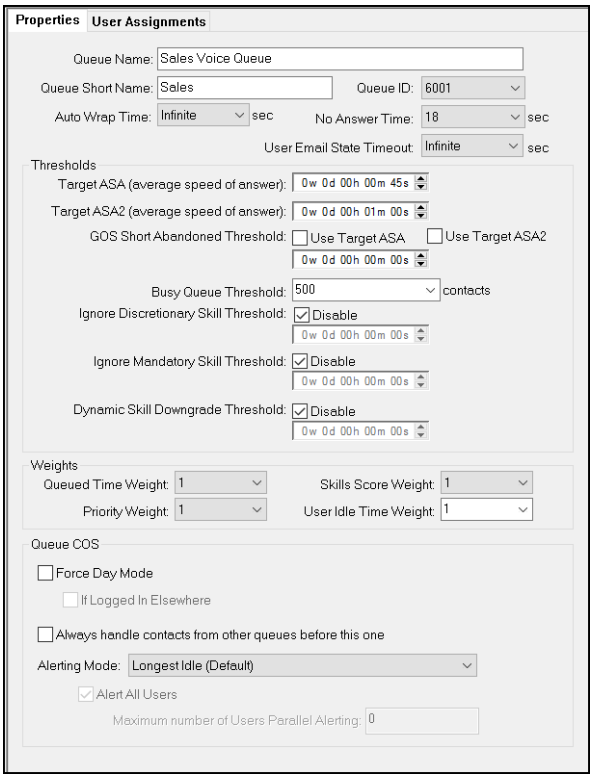
1. Right-click on the *Queues* folder in the tree view.

   A menu appears.



2. Select *New Queue* from the menu.

   Two tabs appear in the detail view: the 'Properties' tab, and the 'User Assignment' tab. By default, the 'Properties' page is displayed.



3. From the File menu, choose *Save*. (To cancel the save operation, click *Cancel* on the 'Progress' dialog box.)

This section has explained how to add a queue with the default properties. For more information on modifying the properties of a newly-created queue, refer to page 110. The section that follows describes how to add multiple queues to the tree view.

Adding Multiple Queues

iceAdministrator allows you to create multiple queues simultaneously:

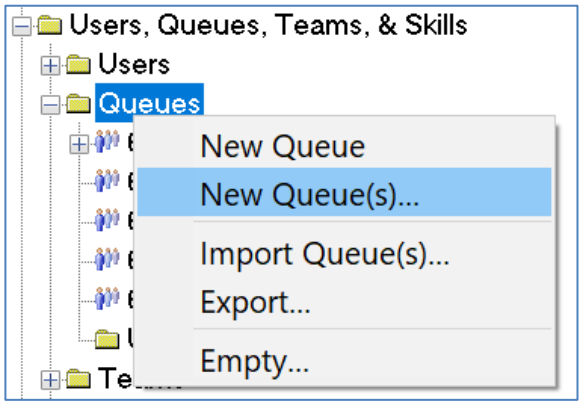
- You can add queues based on iceAdministrator's default properties for a queue. This is similar to adding a New Queue, which was described in the previous section.
- You can add queues based on an existing queue's configuration, which is called a 'Template.' Use this feature if you want new queues to have the same properties as the existing queues in your contact center.

Once you have created the queues, you should configure their properties. For more information on modifying queue properties, refer to page 110.

To add multiple queues:

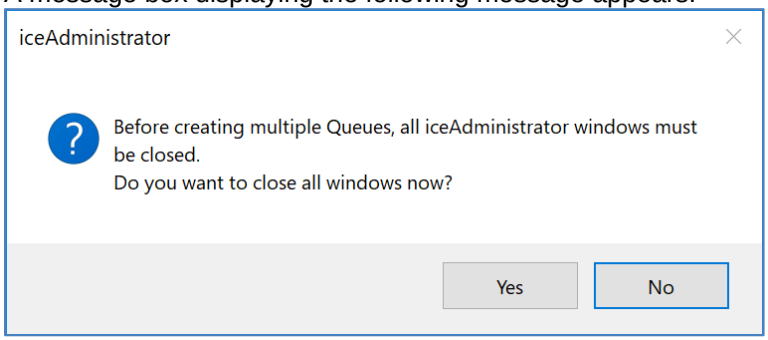
1. Right-click on the *Queues* folder in the tree view.

   A menu appears.



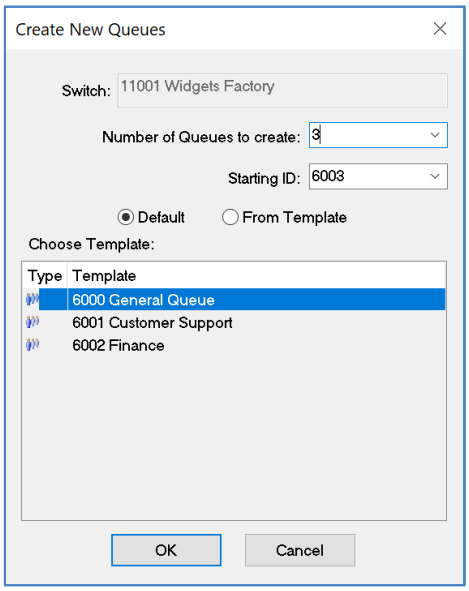
2. Select *New Queue(s)* from the menu.

   A message box displaying the following message appears:



3. Click *Yes* to continue. Click *No* to cancel the process.

4. The ‘Create New Queues’ dialog box appears.



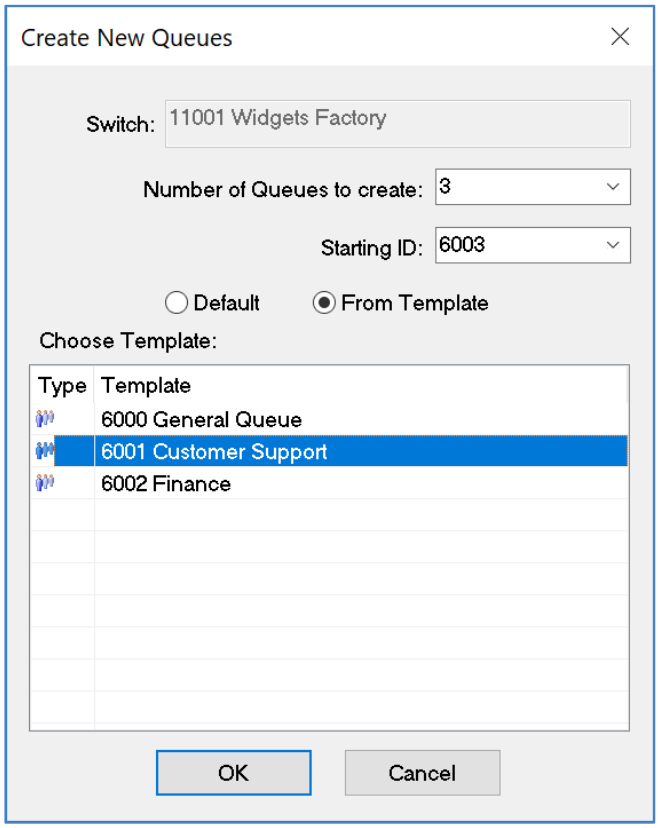
5. Select the number of queues that you wish to create from the ‘Number of Queues to create’ drop-down list.
6. Select the starting queue ID from the ‘Starting ID’ drop-down list.

   This ID is assigned to the first queue. The next available queue IDs are assigned to any additional queues you are creating.
7. Choose the configuration for your queue.

   Select the ‘Default’ radio button if you would like the queues to have the default queue configuration.

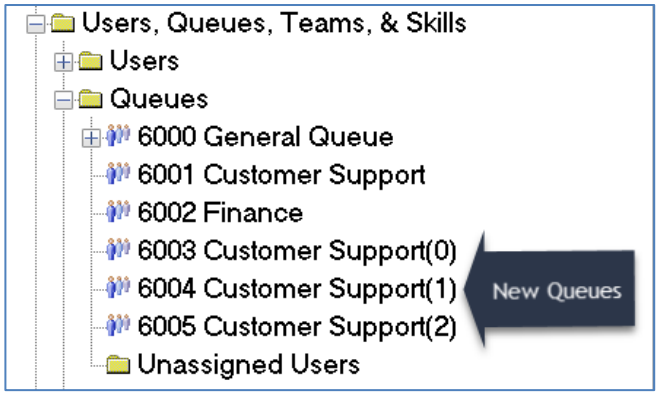
   Select ‘From Template’ if you would like each queue to have the same configuration as an existing queue. When the ‘From Template’ radio button is selected, you can select a queue in the ‘Choose Template’ table.

   This illustration shows that queue 6001 has been selected as the template.



8. Click *OK* to create the new queues.

   The queues appear in the tree view.



9. From the File menu, choose *Save*. (To cancel the save operation, click *Cancel* on the 'Progress' dialog box.)

Adding a Queue from the Properties of a Workflow Action

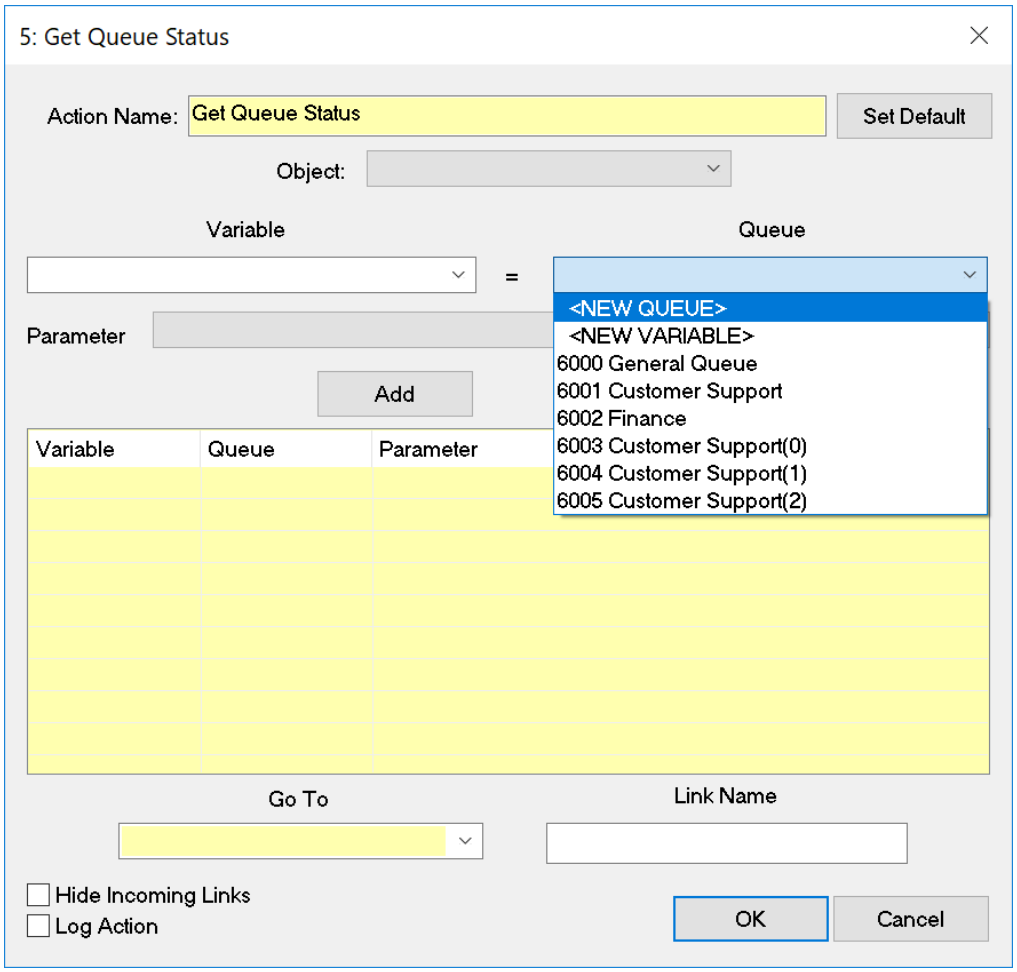
On the properties page of specific workflow actions that require the selection of a queue, you can create a new queue by using the appropriate drop-down list. For more information on workflow actions, refer to the iceWorkflow Designer User Manual.

To create a queue from the properties dialog box of a workflow action:

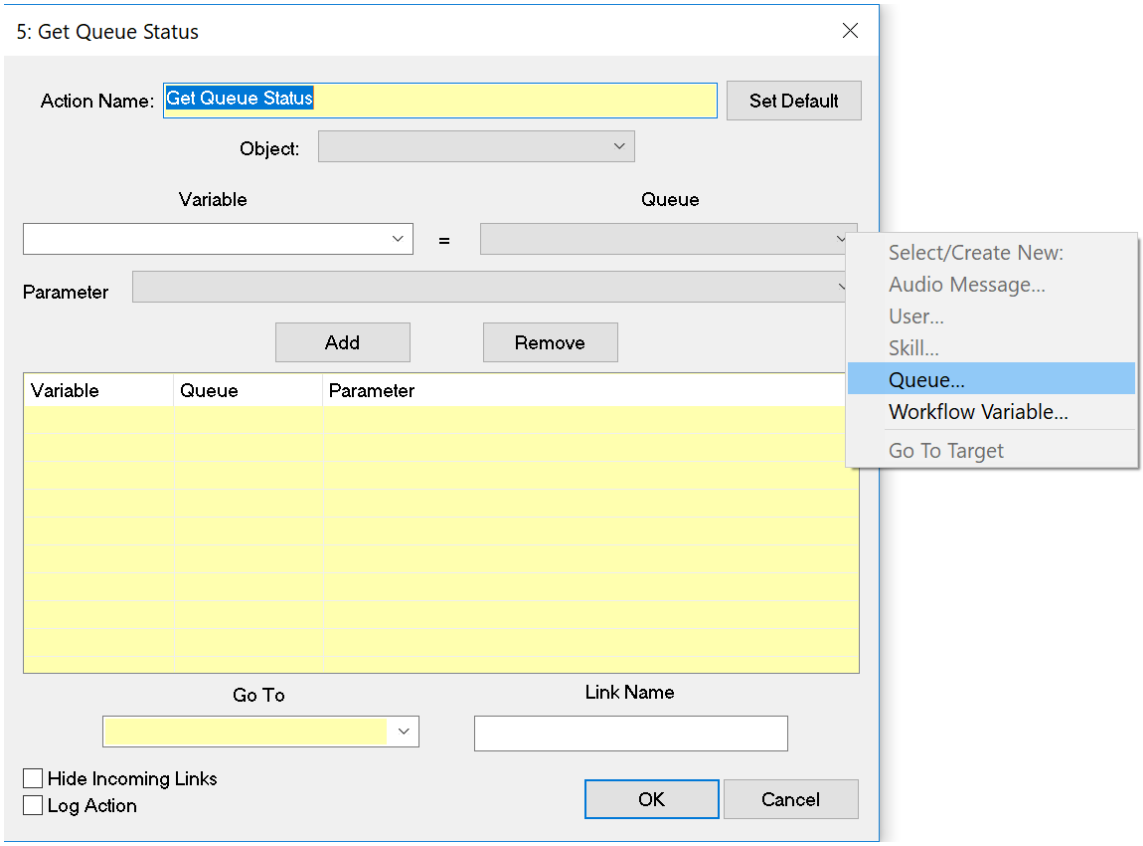
1. From the workflow page, double-click the action from which you would like to create the queue.

   Note: Not all actions allow you to create a queue. Queue Object is an example of an action that allows the creation of queues.

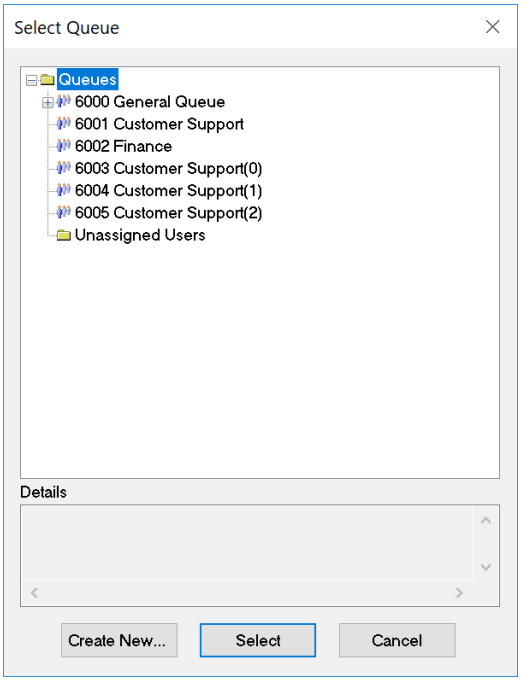
2. In the field that requires a queue, for example, the 'Queue' field on the Get Queue Status workflow action's properties page, select *<NEW QUEUE>* from the drop-down list.



You can also right-click the arrow in the drop-down list box and select *Queue* from the menu that appears.



The ‘Select Queue’ dialog box appears.



3. Click the *Create New* button on this dialog box.

   The ‘New Queue’ dialog box appears. This dialog box has the same configuration tabs as the ones that appear when you create a queue from the tree view.

4. Click *OK* on this dialog box to add the queue.

   The queue is added to the tree view and becomes the selected option in the workflow action field.

5. From the File menu, choose *Save*. (To cancel the save operation, click *Cancel* on the ‘Progress’ dialog box.)

General Properties

You may wish to modify an existing queue to reflect changes in your contact center, or you may wish to configure a queue that you have just added.

General properties for a queue include queue name, short name, and queue ID.

Note: To modify a queue, you must be in Edit Mode and have a user type that allows you to access the Users, Queues, Teams & Skills folder that is part of the iceAdministrator's tree view. For information on permission levels and user types, refer to page 26.

To modify a queue's general properties:

1. Navigate to the queue that you wish to customize or modify.

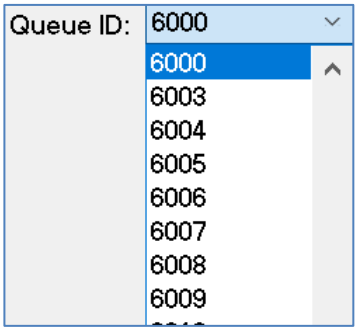
   The 'Properties' page for the selected queue appears on the right side of the iceAdministrator window.

2. Enter the name of the queue in the 'Queue Name' field.

   The queue's name can be up to 40 characters in length.

3. Select a four-digit number from the 'Queue ID' drop-down list.

   The queue ID is used to identify the queue when creating workflow and when generating reports.

4. Enter a short name for the queue in the 'Short Name' field.

   The short name of the queue appears in the queue statistics within iceBar. The short name can be up to 8 characters in length.

5. From the File menu, choose *Save*. (To cancel the save operation, click *Cancel* on the 'Progress' dialog box.)

   This section has explained how to configure a queue's general properties. The section that follows provides information on configuring properties for Auto Wrap Time.

Auto Wrap Time

Users can enter a Wrapup state after each queued contact they receive. While in Wrapup state, a user cannot receive any contacts from a queue. Wrapup state is commonly used to allow a user to finish post-contact work before handling a new contact.

For example, a user that handles contacts from two queues can stay in Wrapup state for ten seconds after handling a call from the Sales queue and for thirty seconds after handling a call from the Support queue. Other users in the same queues may not receive any time for Wrapup state if they do not have the 'Wrapup After Queued Call' class of service feature enabled.

The following settings determine how Wrapup state is used for queued calls:

- For a user to enter Wrapup state, the 'Wrapup After Queued Call' class of service feature must be enabled in his/her user profile. For more information on this feature, refer to page 74.
- The default setting for the 'Auto Wrap Time' is 'Infinite' seconds. With the default setting, the user stays in Wrapup state until they change themselves to either Ready state or Not Ready state. You can also select a number as the 'Auto Wrap Time.' In this case, the value selected determines the number of seconds a user stays in Wrapup state. If the user takes no action, he or she is placed in the Ready state when the selected timer expires. If the user selects *Not Ready* while in Wrapup state, the user is placed in the Not Ready state when the timer expires. If the user selects *Ready* while in Wrapup state, the user is immediately placed in the Ready state. For more information, refer to the iceBar User Manual.
- You can disable the 'Auto Wrap Time' for a queue by selecting 'Disable' from the drop-down list. In this case, if a user has the 'Wrapup After Queued Call' class of service enabled, he/she does not enter the Wrapup state for this particular queue.

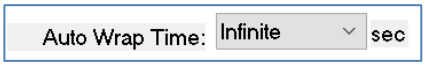
Note: To modify a queue, you must be in Edit Mode and have a user type that allows you to access the Users, Queues, Teams & Skills folder that is part of iceAdministrator's tree view. For more information on permissions in iceAdministrator, refer to page 26.

To modify the queue's Auto Wrap Time:

1. Navigate to the queue that you wish to customize or modify.

   The 'Properties' page for the selected queue appears on the right side of the iceAdministrator window.

2. Select the number of seconds of allowed time for Wrapup state from the 'Auto Wrap Time' drop-down list.

3. From the File menu, choose *Save*. (To cancel the save operation, click *Cancel* on the 'Progress' dialog box.)

No Answer Time for a Queue

'No Answer Time' determines how long a queued call alerts at a user's workstation before it is directed back to the queue. The default setting for 'No Answer Time' is 18 seconds.

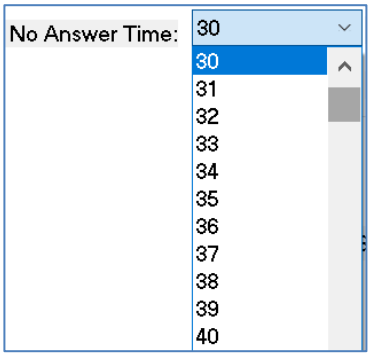
Note: To modify a queue, you must be in Edit Mode and have a user type that allows you to access the Users, Queues, Teams & Skills folder. For information on permission levels and user types, refer to page 26.

To modify the queue's No Answer Time:

1. Navigate to the queue you wish to customize or modify.

   The 'Properties' page for the selected queue appears on the right side of the iceAdministrator window.

2. Select the number of seconds of allowed alerting time from the 'No Answer Time' drop-down list.



3. From the File menu, choose *Save*. (To cancel the save operation, click *Cancel* on the 'Progress' dialog box.)

   This section has explained how to configure 'No Answer Time' for a queue. The section that follows provides more information on configuring a queue's properties.

   Note:

- A user that misses a queued call is automatically placed into the Not Ready state, provided that the 'Disable Auto Not Ready' class of service feature is disabled (unchecked) in his/her user profile. This feature is disabled by default.
- A 'No Answer Threshold' is also set in each user profile. The setting in the user profile affects direct calls, while the setting for 'No Answer Time' affects queued calls.

  Caution: If a user has the class of service feature 'Auto Answer' enabled and the ice telephone line is off-hook, it is possible for a caller to be presented to an unattended workstation. Users should always place themselves in the Not Ready state when they are not available to handle contacts from the queue.

User Email State Timeout

The default setting for the 'User Email State Timeout' is 'Infinite' seconds. With the default setting, the user enters the Email state upon receiving an email message from ice and stays in the Email state until they change themselves to either Ready state or Not Ready state.

You can select a number as the 'User Email State Timeout.' In this case, the value selected determines the maximum number of seconds a user stays in the On Email State. If the user takes no action, he/she is placed in the Ready state when the selected timer expires. If the user selects *Not Ready* while in the On Email state, the user is immediately placed in the Not Ready state. If the user selects *Ready* while in the On Email state, the user is immediately placed in the Ready state. For more information, refer to the iceBar User Manual.

You can also set 'User Email State Timeout' to 'Immediate.' With this valued selected, the user does not enter the email state upon receiving an email message from ice.

Note: To modify a queue you must be in Edit Mode and have a user type that allows you to access the Users, Queues, Teams & Skills folder. For information on permission levels and user types, refer to page 26.

To modify User Email State Timeout:

1. Navigate to the queue you wish to customize or modify.

   The 'Properties' page for the selected queue appears on the right side of the iceAdministrator window.

2. Select *Infinite*, *Immediate*, or the number of seconds for the Email state from the 'User Email State Timeout' drop-down list.

3. From the File menu, choose *Save*. (To cancel the save operation, click *Cancel* on the 'Progress' dialog box.)

   This section has explained how to configure User Email State Timeout for a queue. The section that follows provides more information on configuring a queue's properties.

Queue Targets and Thresholds

There are several thresholds that can be modified for a queue, as described in the sections that follow.

Target Average Speed of Answer

Target ASA (average speed of answer) and Target ASA2 express the longest amount of time a contact should wait in queue before being handled by a user. These settings represent targets used to calculate the grade of service and grade of service 2 for reporting purposes and have no bearing on how long users actually take to answer queued contacts. For more information on the grade of service, refer to page 115.

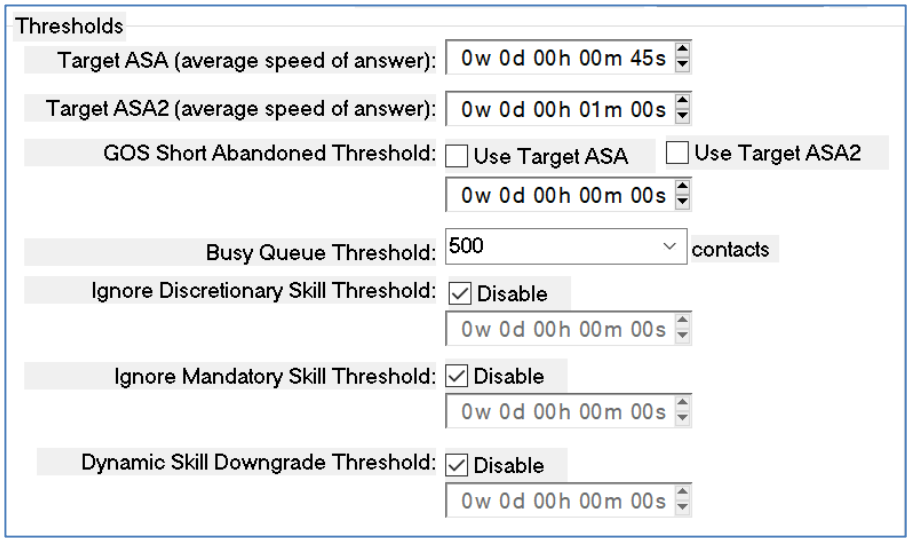
Note: To modify a queue you must be in Edit Mode and have a user type that allows you to access the Users, Queues, Teams & Skills folder that is part of iceAdministrator's tree view. For information on permission levels and user types, refer to page 26.

To configure the Target ASA or Target ASA2 for a queue:

1. Navigate to the queue that you wish to customize or modify.

   The 'Properties' page for the selected queue appears on the right side of the iceAdministrator window.

   For this process, you need to use the Thresholds portion of the page.



2. Select the first target from the 'Target ASA' spin box.

   The default value is 45 seconds. You may set the Target ASA to reflect any number of seconds, minutes, days, or weeks. For example, you may click on *0d* and increase the Target ASA to 1 day. This can be useful for queues that handle email contacts.

3. Select the second target from the ‘Target ASA2’ spin box.

   The default value is 1 minute. This target can be set to any number of seconds, minutes, days, or weeks, as described in step 2.

4. From the File menu, choose *Save*. (To cancel the save operation, click *Cancel* on the ‘Progress’ dialog box.)

   This section has explained how to configure a queue’s target average speed of answer. The section that follows provides information on the grade of service calculation that is displayed in reports and in iceMonitor.

Grade of Service

The **Grade of Service** (GOS) is the percentage of offered contacts that have been handled in less than the Target ASA (Average Speed of Answer). The **Grade of Service 2** (GOS2) is the percentage of offered contacts that have been handled in less than the Target ASA2 (Average Speed of Answer2). Both the GOS and the GOS2 are displayed in iceMonitor, iceBar, and on reports.

To better understand GOS, consider how ice calculates GOS for a caller. To arrive at GOS or GOS2, ice looks at handled callers wait time in queue. A caller’s wait time in queue starts once they have successfully passed through the Queue Object action in workflow, and the caller’s wait time in queue ends when they are connected with a user. The number of calls that have been handled in less than the target ASA is divided by the number of calls offered to the queue. The result is expressed as a percentage.

Consider the following example for a queue with a 30 second target ASA:

- Caller A enters the queue, waits 5 seconds, and hangs up.
- Caller B enters the queue, waits 45 seconds, and hangs up.
- Caller C enters the queue, waits 5 seconds, and is answered.
- Caller D enters the queue, waits 45 seconds, and is answered.

Four calls were offered to the queue, but only one call (Caller C) was answered in less than 30 seconds. Therefore, the grade of service is 25% (1 divided by 4, multiplied by 100).

For details on how you can ignore the calls that waited for a short time in queue and remove them from the GOS calculation, refer to the following section.

GOS Short Abandoned Threshold

GOS can be calculated without including the callers who hung up after waiting for a short period of time (e.g., five seconds). This can be accomplished with the GOS Short Abandoned Threshold. Calls that ended in less than the number of seconds that you specify as the GOS Short Abandoned Threshold will be excluded from GOS calculations.

Consider the following example for a queue with a 30 second target ASA and a 10 second GOS Short Abandoned Threshold:

- Caller A enters the queue, waits 5 seconds, and hangs up.
- Caller B enters the queue, waits 45 seconds, and hangs up.
- Caller C enters the queue, waits 5 seconds, and is answered.
- Caller D enters the queue, waits 45 seconds, and is answered.

Four calls were offered to the queue, but one call will be ignored because it was abandoned in less than the GOS Short Abandoned Threshold. One call (Caller C) was answered in less than 30 seconds. Therefore, the grade of service is 33% (1/3, multiplied by 100).

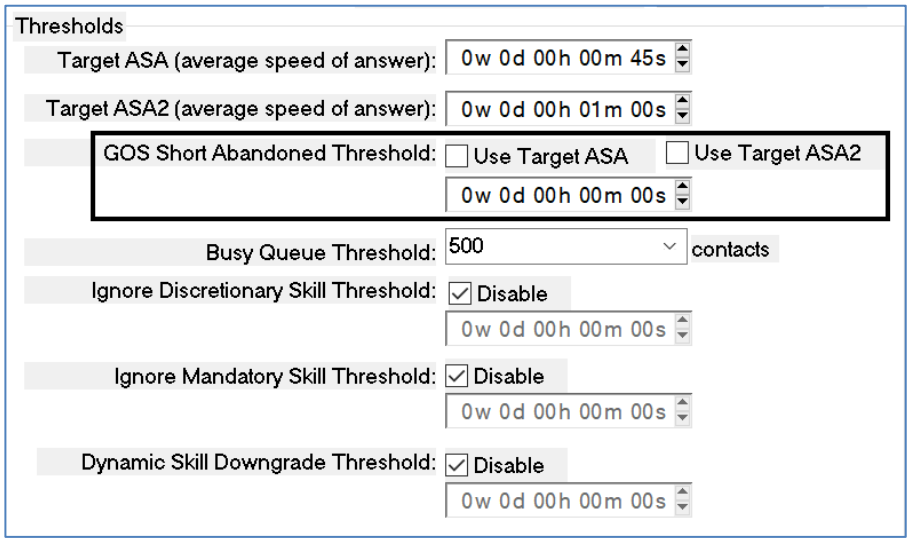
Note: To modify a queue, you must be in Edit Mode and have a user type that allows you to access the Users, Queues, Teams & Skills folder. For information on permission levels and user types, refer to page 26.

To configure the GOS Short Abandoned Threshold for a queue:

1. Navigate to the queue that you wish to customize or modify.

   The 'Properties' page for the selected queue appears on the right side of the iceAdministrator window.

   For this process, you need to use the Thresholds portion of the page.



2. Select the threshold from the ‘GOS Short Abandoned’ spin box.

   The default value is 0 seconds. You may set the threshold to reflect any number of seconds, minutes, days, or weeks. For example, you may click on *0d* and increase the threshold to 1 day. This can be useful for queues that handle email contacts.

   You may also select the ‘Use Target ASA’ or ‘Use Target ASA2’ checkboxes to use either of those targets as the GOS Short Abandoned Threshold.

3. From the File menu, choose *Save*. (To cancel the save operation, click *Cancel* on the ‘Progress’ dialog box.)

   This section has explained how to configure a queue’s GOS Short Abandoned Threshold. The sections that follow provide information on the queue thresholds.

Busy Queue Threshold

Busy Queue Threshold expresses the maximum number of contacts that the queue can accommodate before it stops accepting contacts. Once this maximum is reached, the queue enters busy mode and contacts that workflow attempts to place in the queue are directed to the action specified in the 'On Busy Mode Go To' field that is part of the Queue Object action.

The default value is for the Busy Queue Threshold is 500. For more information on queue modes, refer to page 125.

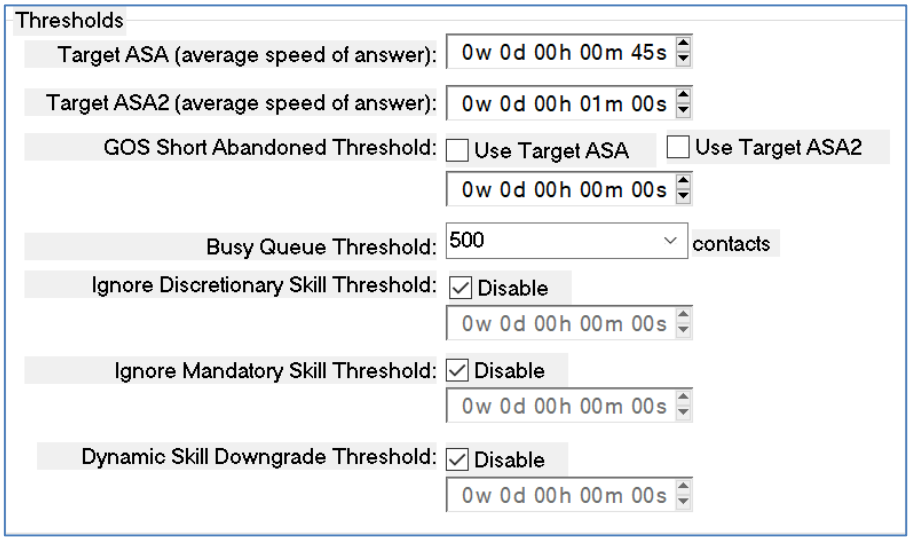
Note: To modify a queue, you must be in Edit Mode and have a user type that allows you to access the Users, Queues, Teams & Skills folder. For information on permission levels and user types, refer to page 26.

To configure the Busy Queue Threshold for a queue:

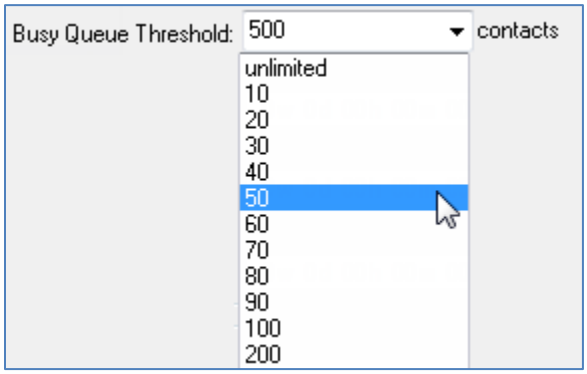
1. Navigate to the queue that you wish to customize or modify.

   The 'Properties' page for the selected queue appears on the right side of the iceAdministrator window.

   For this process, you need to use the Thresholds portion of the page.



2. From the ‘Busy Queue Threshold’ drop-down list, select the number of contacts that must be waiting in the queue before it is considered to be in busy mode.



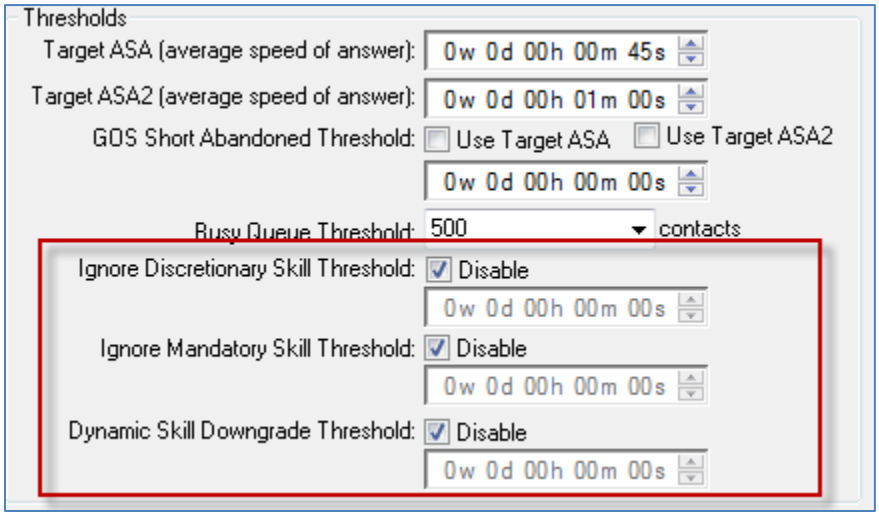
3. From the File menu, choose *Save*. (To cancel the save operation, click *Cancel* on the ‘Progress’ dialog box.)

This section has explained how to configure the Busy Queue Threshold for a queue. The section that follows provides more information on configuring a queue’s skill thresholds.

Skill Thresholds for a Queue

There are three skill thresholds that you can enable at the queue level which affect the use of skills in ice:

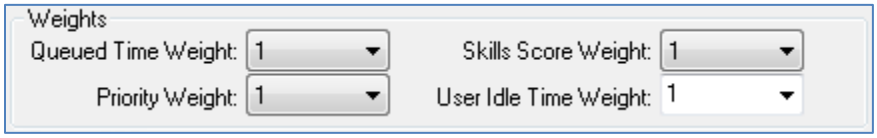
- Ignore Discretionary Skill Threshold.
- Ignore Mandatory Skill Threshold.
- Dynamic Skill Downgrade Threshold.



For information on these thresholds, refer to Queue Skill Thresholds on page 165.

Queue Weights

By modifying settings in a queue and in workflow, several factors can be used to determine the contact's position in queue and the user's suitability for a contact. These factors are Queued Time Weight, Skills Score Weight, Priority Weight, and User Idle Time Weight.



By default, the contact that has been waiting for the longest period of time in a queue is handled first. For example, a contact that has been waiting for 30 seconds is handled before a contact that has just entered the queue.

If multiple contacts are waiting in queue and a user becomes available to handle a contact, the user's suitability for each of the contacts waiting to be handled is calculated. This equation takes into consideration the skills score of the user, compared with the needs of each contact, the time each contact has been waiting in the queue, and the priority of each contact. The contact with the highest score is presented to the user. The equation is as follows:

(SC * SW) + (QT * QW) + (PL * PW)

The abbreviations are explained in the table below.

If multiple users are available to take a particular contact, the most suitable user will receive the contact. This is calculated based on the skills score of each user compared to the needs of that contact and the amount of time each user has been idle. The equation is as follows:

(SC * SW) + (AT * AW)

The table below explains the abbreviations used in the equations.

Queue weight equation variables	
Variable	**Meaning**
SC	The user's **skills compatibility score** (i.e., proficiency of the user in relation to what the contact wants). For more information refer to page 176.
SW	The **skill** score **weight** that has been selected for the queue.
QT	The actual amount of **time**, in seconds, the contact has been waiting in **queue**.
QW	The **queued time weight** that has been selected for the queue.
PL	The **priority level** the contact has been assigned in the Queue Object action that is part of workflow.
PW	The **priority weight** that has been selected for the queue.

Queue weight equation variables	
Variable	**Meaning**
AT	The actual amount of time, in seconds, the user has been idle. A **user's idle time** is calculated from the time that they last completed a queued contact. Changing states (i.e., toggling *Ready*/*Not Ready*, receiving a direct call, placing an outbound call) does not reset the user's idle time. The user's idle time refreshes once they have completed a queued contact.
AW	The **user idle time weight** that has been selected for the queue.

The ways that queue weights affect a contact's position in queue or a user's suitability for a contact are described in the sections that follow.

Queued Time Weight

'Queued Time Weight' can allow contacts that have been waiting in the queue for a long time to be handled even when other contacts have a higher level of priority or a skill requirement. Decreasing 'Queued Time Weight' (e.g., by setting it to 0) allows the caller's actual wait time in queue to be ignored so that they are routed based only on priority and/or skills.

Caution: It is not recommended to set 'Queued Time Weight' to 0 unless you have configured the queues to route calls based solely on priority and/or skills. When 'Queued Time Weight' is set to 0, the caller's actual wait time in queue is not considered when determining the position of contacts in the queue.

A queue's default 'Queued Time Weight' is 1, but the drop-down list allows you to select a number between 0 and 100. The number selected is multiplied by the contact's actual wait time. The resulting value is used as part of the calculation described on page 121 to determine the contact's position in queue.

Priority Weight

By modifying settings in workflow and settings for a queue, a contact's position in queue can be affected by priority:

- A queue's default 'Priority Weight' is 1, but the drop-down list allows you to select a number between 0 and 100. The selected number is used in an equation that also takes into consideration the contact's priority level. If you choose 0, priority weight is not considered when determining the position of contacts in the queue.
- Priority is assigned to a contact when it passes through the Queue Object action. The value selected from the 'With Priority' field in the Queue Object action determines a contact's priority level when it is presented to the queue.

Consider a contact that passes through a Queue Object action with a value of 10 in the 'With Priority' field. This contact is registered in the queue that has a Priority Weight of 10. The equation to determine 'Priority Weight' is Priority multiplied by Priority Weight. In this example, 100 seconds (Priority multiplied by Priority Weight) are added to the contact's actual wait time in queue, putting the contact ahead of contacts that have not been assigned priority and have been waiting in the queue for less than 100 seconds. This contact has a greater chance of being handled more quickly in the queue because the queue is configured to handle the contact that has been waiting for the longest period of time first.

Skills Score Weight

A queue's Skills Score Weight' is 1, but the drop-down list allows you to select a number between 0 and 100. The selected number is used in an equation that also takes into consideration a user's skills compatibility score. This score measures his/her ability to handle a contact. For more information on the skill compatibility score, refer to page 176.

An increased Skills Score Weight places more value on the compatibility score when calculating a contact's position in queue or when finding the best user for contacts in the queue. If you choose 0, skills compatibility score is not considered when determining the position of contacts in the queue or when finding the best user for contacts in the queue.

For more information on using skills to route contacts in your contact center, refer to

Chapter 5: Skills.

User Idle Time Weight

'User Idle Time Weight' affects the suitability of particular users for contacts in the queue. If you give user idle time a heavy weight, you could ensure that users who have been idle for a long time would receive contacts, even if users who have higher skill scores are available.

A queue's default 'User Idle Time Weight' is 1, but the drop-down list allows you to select a number between 0 and 100. The number selected is multiplied by the amount of time the user has been idle. The resulting value is used as part of the calculation described on page 121 to determine a user's suitability for a contact in queue. If you choose 0, the amount of time a user is idle is not considered when finding the best users for contacts in the queue.

Modifying Queue Weights

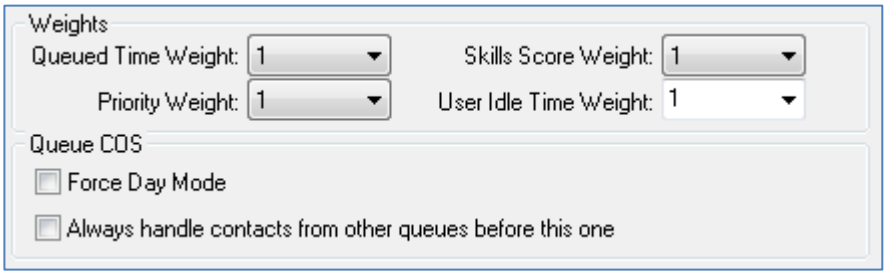
Note: To modify a queue, you must be in Edit Mode and have a user type that allows you to access the Users, Queues, Teams & Skills folder that is part of the iceAdministrator's tree view. For information on permission levels and user types, refer to page 26.

To modify any Weights setting:

1. Navigate to the queue that you wish to customize or modify.

   The 'Properties' page for the selected queue appears on the right side of the iceAdministrator window.

   For this process, you need to use the 'Weights' area of the page.



2. For each of the different weights, select a number from the drop-down list box. For information on how these numbers are used to calculate a contact's wait time in queue, refer to the equation on page 121.
3. From the File menu, choose *Save*. (To cancel the save operation, click *Cancel* on the 'Progress' dialog box.)

Queue COS

Queues have two Class of Service (COS) features: 'Force Day Mode' and 'Always handle contacts from other queues before this one.'

The sections that follow provide more information on the Class of Service features for a queue.

Day Mode, Night Mode, and Busy Mode

To understand Force Day Mode, you must understand what the different modes are. Workflow directs contacts to a queue through the Queue Object action. Based on the queue's current status, workflow can provide a contact unique treatment:

- A queue is in **day mode** when at least one user is logged on. A contact presented to the queue while it is in day mode is successfully registered in the queue and is directed to the action specified in the 'On Success Go To' field.
- A queue is in **night mode** when all users have logged off from the queue. A contact presented to the queue while it is in night mode is not registered in the queue and is directed to the action specified in the 'On Night Mode Go To' field.
- A queue is in **busy mode** when the 'Busy Queue Threshold' is met. A contact presented to the queue while it is in busy mode is not registered in the queue and is directed to the action specified in the 'On Busy Mode Go To' field.

Force Day Mode

Selecting 'Force Day Mode' for a queue allows you to force workflow to follow the path that is specified for day service as described above, even when all of the users log off from the queue. When the 'Force Day Mode' feature is enabled, the night treatment for a queue is ignored.

- A contact presented to the queue while it is in day mode is successfully registered in the queue and is directed to the action specified in the 'On Success Go To' field.
- A contact presented to the queue while it is in night mode is successfully registered in the queue and is directed to the action specified in the 'On Success Go To' field.

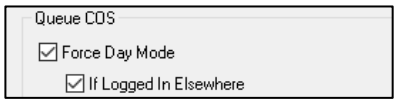
  A contact presented to the queue while it is in busy mode is not registered in the queue and is directed to the action specified in the 'On Busy Mode Go To' field. **Note:** To modify a queue, you must be in Edit Mode and have a user type that allows you to access the Users, Queues, Teams & Skills folder. For information on permission levels and user types, refer to page 26.

To enable Force Day Mode:

1. Navigate to the queue that you wish to customize or modify.

   The 'Properties' page for the selected queue appears on the right side of the iceAdministrator window.

2. Click the ‘Force Day Mode’ checkbox to enable this feature.



3. From the File menu, choose *Save*. (To cancel the save operation, click *Cancel* on the ‘Progress’ dialog box)

Caution: When ‘Force Day Mode’ is disabled and a queue goes into night mode while contacts are queued, the contacts are not handled unless a user picks them out of the queue, or unless a user logs on to the queue to handle the remaining contacts.

If Logged in Elsewhere
Selecting this option forces the queue to be in Day Mode, only if agents are logged into the same queue on another server. If agents are not logged into the queue on the current server, or any other server, the queue will be in night mode. It allows contacts to enter the queue during failover.

Note:

- This option is only available if ‘Force Day Mode’ is selected.
- This option should only be used for non-24/7 queues.

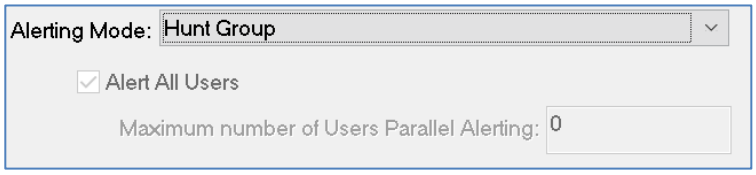
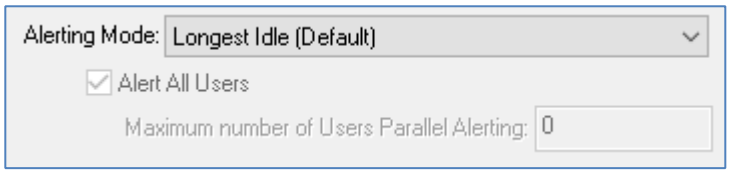
Always handle contacts from other queues

This class of service feature allows you to assign a prioritization setting to a queue. If selected, the contacts for this queue will never be handled unless all other queues are empty. This class of feature would be used for a queue which only receives email contacts. By enabling this setting, the contact center would always handle queued voice calls before queued emails.

If multiple queues have this class of service, their contacts, weights, and priority calculations are treated equally.

Alerting Mode

There are three queue alerting modes; hunt group, longest idle, and parallel. A queue can only be configured with one of the alerting modes at a time and alerting modes apply to all modalities that can be placed into the queue.

Alerting Modes	
Mode	**Description**
Hunt Group	Hunt Groups alert users in a pre-specified order. The alerting order can be specified under 'User Assignments.' For more information on viewing or changing the Hunt Group order, view Hunt Group Order on page 129. 
Longest Idle	This is the default alerting mode. This mode will alert the user who has been idle (not on call) the longest. 
Parallel	This alerting mode rings multiple users at once. If the 'Alert All Users' box is selected, ice will alert all users up to the "Max Parallel Alert" setting specified during the ice deployment. By deselecting the 'Alert All Users' box, you can enter the 'Maximum number of Users Parallel Alerting.' This means ice will alert as many users who are in the Ready State until it reached the maximum number. 

Note:

- Max number of users parallel alerting – if the max is higher than the number of agents logged in, ice will alert all agents logged in.
- Parallel alerting is incompatible with Multi-contact handling, SwitchID Tagging, Teams Direct Routing Fallback to PSTN/SIP and Teams Direct Routing PSTN Block.

User Assignments

As described in

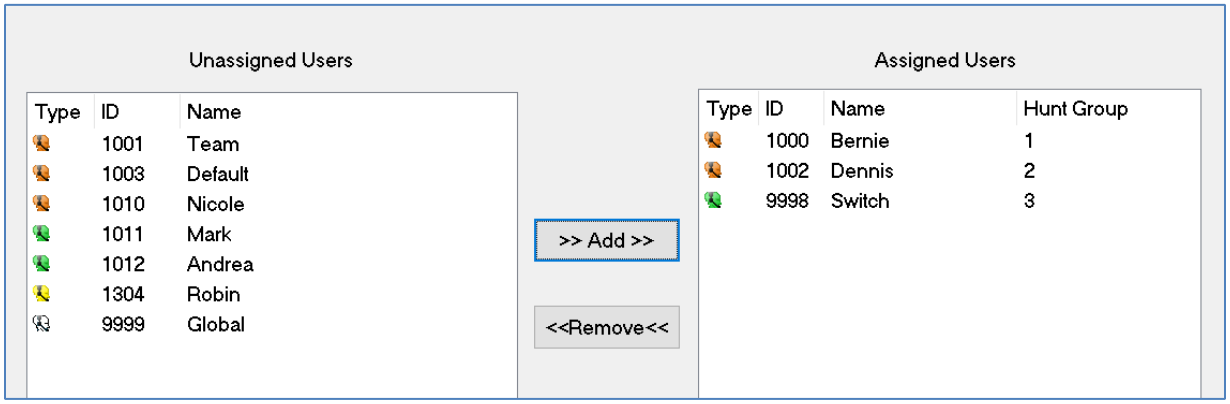
Chapter 2: Users, a user can be assigned to queues from his or her user profile. Use this feature if you want to assign one user to different queues. Alternatively, you may assign multiple users to a single queue from the 'User Assignments' page that is available for each queue.

Note: To modify a queue you must be in Edit Mode and have a user type that allows you to access the Users, Queues, Teams & Skills folder. For information on permission levels and user types, refer to page 26.

To add users to a specific queue:

1. Navigate to the queue that you wish to customize or modify.
2. Click the *User Assignments* tab to bring that page to the front.

The queue's current user assignments are shown in the 'Assigned Users' column. The left column displays all of the users that have not been assigned to the queue.



Note: If there is more than one user in the 'Unassigned Users' or the 'Assigned Users' column, you can sort the list numerically by user ID or alphabetically by name by clicking on the *ID* or *Name* column headings. You can also click on the *Type* column to sort by user type (e.g., User, Team Leader, Supervisor, or Administrator).

3. To add a user to the queue, highlight the user in the left column and click *Add*.

   To remove a user from the queue, highlight the user in the right column and click *Remove*.

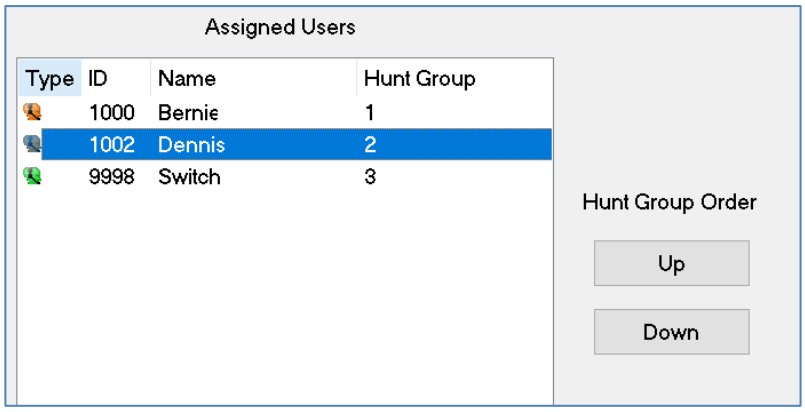
4. From the File menu, choose *Save*. (To cancel the save operation, click *Cancel* on the 'Progress' dialog box.)

Hunt Group Order

A Hunt Group queue will alert agents in the order specified under 'Assigned Users.' For more information on Hunt Groups, view Alerting Mode on page 126.

To change the alerting order:

1. Select the user whose position you want to change.
2. Click the *Up* button to move the user up in the order, or the *Down* button to move the user down in the order.



This section has explained how to configure a queue's user assignments. The section that follows provides information on deleting a queue.

Note: If you remove a user from a queue while they are logged on to the queue, the user is automatically logged off from the queue when you save your changes.

Modifying Multiple Queues

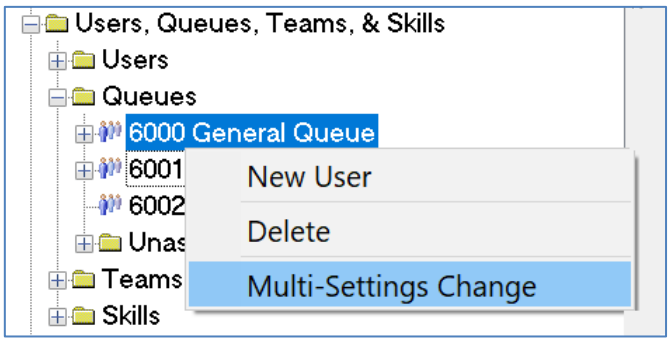
Use the 'Multi-Settings Change' feature if you want to avoid modifying each user's settings individually when you need to change the same settings for all queues or a subset of queues. For example, you want to change the 'No Answer Time' on the 'Properties' tab to 15 seconds for all queues. You could change this for all queues all at once using this feature, rather than modifying each queue's settings individually.

Note: To modify a queue, you must be in Edit Mode and have a user type that allows you to access the Users, Queues, Teams & Skills folder. For information on permission levels and user types, refer to page 26.

To modify the settings for multiple queues:

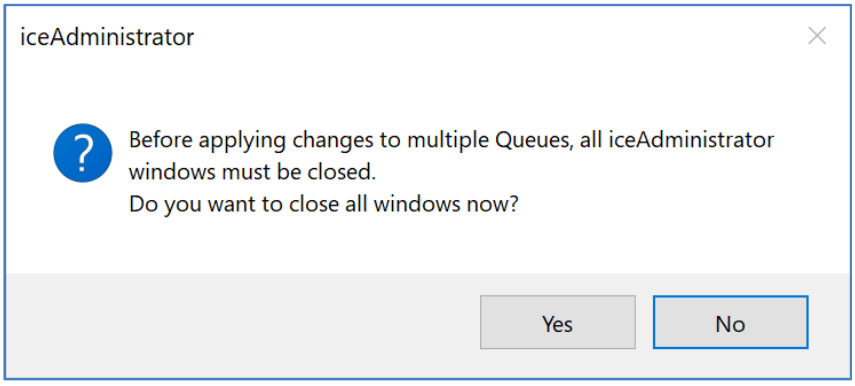
1. Right-click on any queue in the tree view.

   A menu appears.



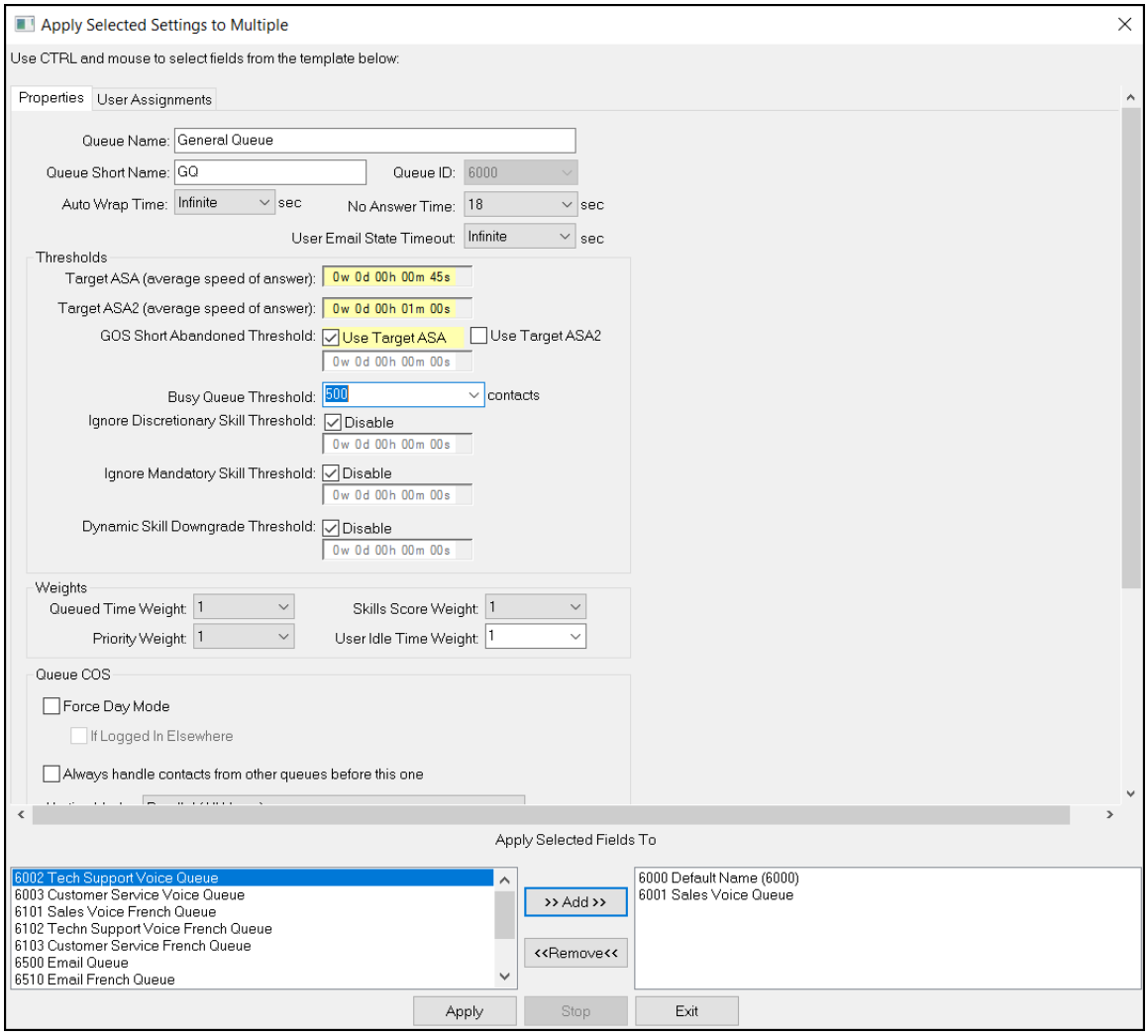
2. Select *Multi-Settings Change* from the menu.

   The following message appears:



3. Click *Yes* to continue. Click *No* to cancel the process.

   The 'Apply Selected Settings to Multiple Queues' dialog box appears. This dialog box contains the same tabs and configuration settings as those that appear for a single queue. At the bottom of the dialog box, you can select the queues for which you want to change the settings.



You must highlight the fields that you want to change.

4. Hold the Ctrl key and click the field you want to highlight. To deselect the field, hold the Ctrl key and click the field again.

   The field remains highlighted even if you move to a different tab. When you save your changes, all highlighted fields will be changed for each selected queue to the values that you set.

5. Click on the box beside the field to select or deselect an option.

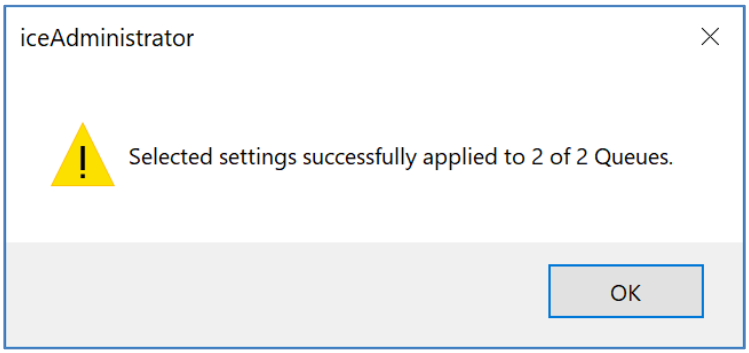
   Note: You must highlight the field by holding the Ctrl key before selecting or deselecting an option.

6. To apply the changes to other queues, highlight the queues in the left column and click *Add*.

   To remove a queue from the 'Apply Selected Fields To' section, highlight the queue in the right column and click *Remove*.

7. Click *Apply* to make the changes. (Click *Exit* to close the dialog box without making any changes.)

   A message similar to the one below appears:



8. Click *OK* to close the message box.
9. Click *Exit* or click the close (X) button to close the ‘Apply Selected Settings to Multiple Queues’ dialog box.
10. From the File menu, choose *Save*. (To cancel the save operation, click *Cancel* on the ‘Progress’ dialog box.)

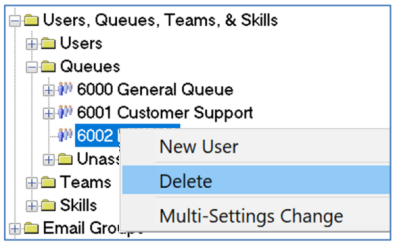
Deleting a Queue

If you wish to completely remove a queue from iceAdministrator, you should delete the queue.

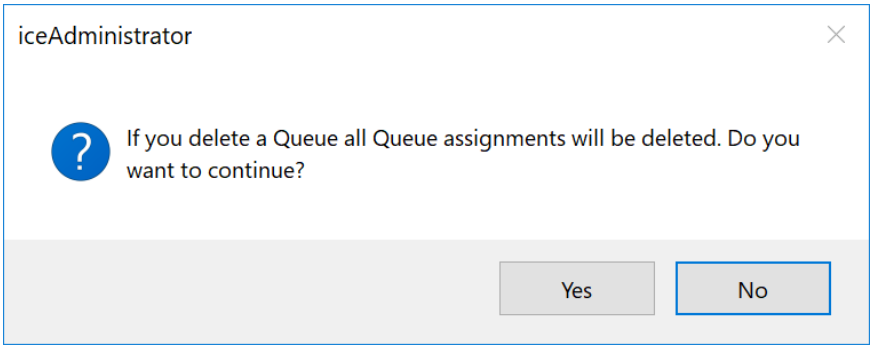
Note: To delete a queue, you must be in Edit Mode and have a user type that allows you to access the Users, Queues, Teams & Skills folder that is part of iceAdministrator's tree view. For information on permission levels and user types, refer to page 26.

To delete a queue, complete the following steps:

1. Navigate to the queue that you wish to delete.
2. Right-click on the queue in the tree view and select *Delete* from the menu that appears.



3. A warning appears:



Click *Yes* to delete the queue or click *No* to cancel the deletion.

4. From the File menu, choose *Save*. (To cancel the save operation, click *Cancel* on the 'Progress' dialog box.)

Note:

- All users are automatically unassigned from the deleted queue.
- If the queue that you delete is used in workflow, an error message appears to inform you that a specific action in workflow is incomplete. You will not be able to save your changes until you make the appropriate modifications to the specified action in workflow.
- The *New User* option is also available from the right-click menu. Selecting this option allows you to create a new user that is also assigned to this queue. For more information on creating users, refer to page 46.

This section has explained how to delete a queue. The section that follows provides information on deleting multiple queues.

Emptying the Queues Folder

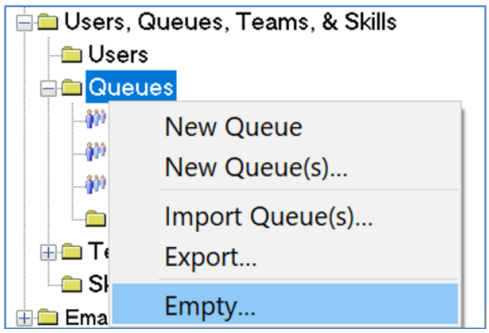
You may decide to delete all queues to avoid conflict messages when importing queues.

Note: To delete a queue, you must be in Edit Mode and have a user type that allows you to access the Users, Queues, Teams & Skills folder. For more information on permissions on iceAdministrator, refer to page 26.

To delete all queues:

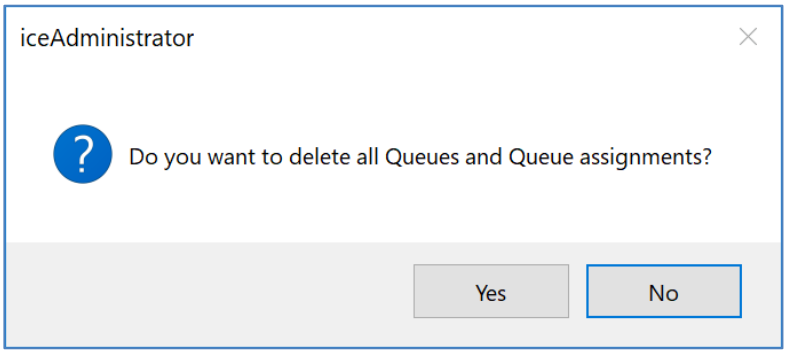
1. Right-click on the *Queues* folder.

   A menu appears.



2. Select *Empty* from the menu.

   A warning appears.



3. Click *Yes* to delete all of the queues or click *No* to cancel the deletion.
4. From the File menu, choose *Save*. (To cancel the save operation, click *Cancel* on the 'Progress' dialog box.)

   Note: If a deleted queue was used in workflow, the actions where the queue was used must be completed before you can save your changes. For example, if the queue that was specified in the queue object action was deleted, the action is now incomplete and changes cannot be saved.

Chapter 4: Teams

Team Leaders and other user types can use teams to view groups of users in iceMonitor. For more information on iceMonitor, refer to the iceMonitor User Manual.

The sections that follow describe how to view existing teams, add new teams, modify teams, assign users to teams, and delete teams from ice.

Note:

- iceAdministrator should be used by trained contact center staff. Before you begin modifying or creating teams, you must be familiar with your current configuration.
- To view and edit teams, you must have a user type that allows you to access the Users, Queues, Teams & Skills folder that is part of iceAdministrator's tree view. This chapter assumes that you are familiar with the permissions on ice, as described in

  Chapter 1: Getting Started.
- Team Leaders can manage users that are part of their team, within the confines of the permissions allowed to the Team Leader user type.

Viewing a Team

You may wish to view a team if you are planning to change its name, the user assignments, or delete the team from ice.

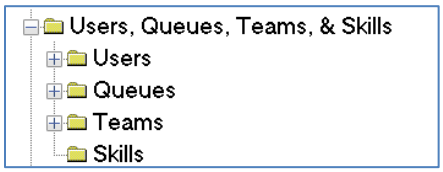
Viewing teams involves finding and selecting a team in the tree view. When a team is selected, the right side of the iceAdministrator window displays two tabs that detail the team's configuration.

Note: To view a team, you must have a user type that allows you to access the Users, Queues, Teams & Skills folder. For information on permission levels and user types, refer to page 26.

To navigate to a team:

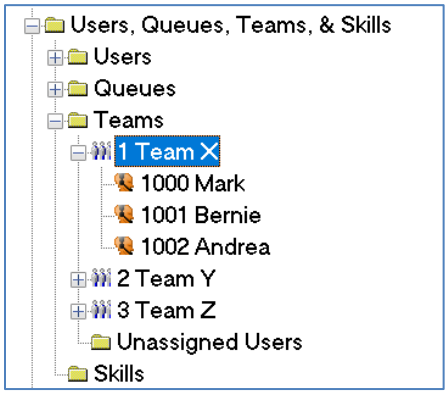
1. Open the Users, Queues, Teams & Skills folder in the tree view.

   The Teams sub-folder is displayed.



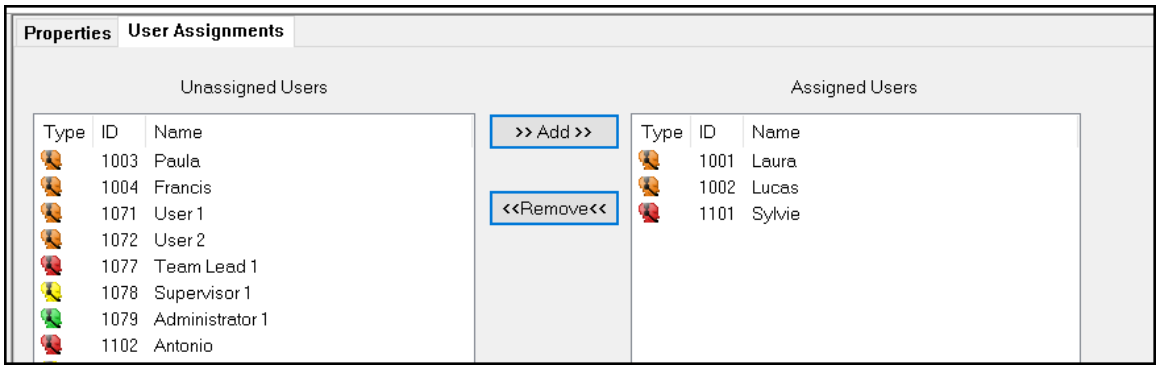
2. Open the Teams folder in the tree view.

   The teams that have already been created are displayed in the tree view. Each team can be expanded to show the users who have been assigned to the team.



3. Highlight a team to view its configuration.

   Two tabs appear in the detail view: the ‘Properties’ tab, and the ‘User Assignment’ tab. By default, the ‘Properties’ page is displayed.



This section has explained how to navigate to a team. The sections that follow describe how to add a new team, and how to modify the properties for a team.

Adding a Team

A new team may need to be added to accommodate changes in your contact center.

There are two methods of adding a team:

- Add a 'New Team.' This allows you to create one team with iceAdministrator's default properties.
- Add 'New Team(s).' This allows you to create one team or many teams. Use this feature if you want new teams to have the same properties (e.g., User Assignments) as an existing team in your contact center.

The sections that follow describe each method of creating teams.

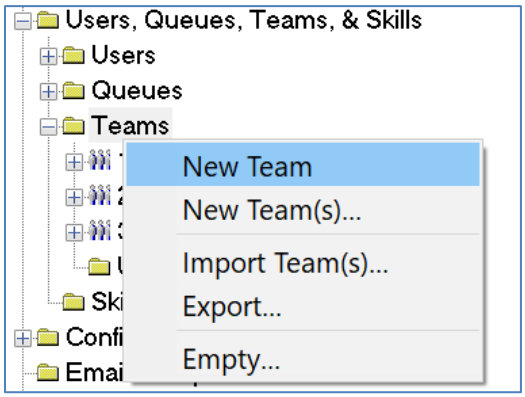
Note: To add a team, you must be in Edit Mode and have a user type that allows you to access the Users, Queues, Teams & Skills folder that is part of iceAdministrator's tree view. For information on permission levels and user types, refer to page 26.

Adding a New Team

To add a new team:

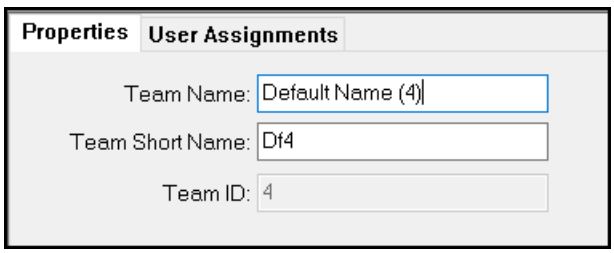
1. Right-click on the *Teams* folder in the tree view.

   A menu appears.



2. Select *New Team* from the menu.

   Two tabs appear in the detail view: the 'Properties' tab, and the 'User Assignment' tab. By default, the 'Properties' page is displayed on top.



3. In the 'Team Name' field, enter a name for the team.

This name can be up to 40 characters in length. The name of the team appears on ice reports.

4. In the ‘Short Name’ field, enter a short name for the team.

   This name can be up to 8 characters in length. The short name of the team appears in iceMonitor.

5. From the File menu, choose *Save*. (To cancel the save operation, click *Cancel* on the ‘Progress’ dialog box.)

   This section has explained how to add a team with the default properties. The section that follows describes how to add multiple teams.

Adding Multiple Teams

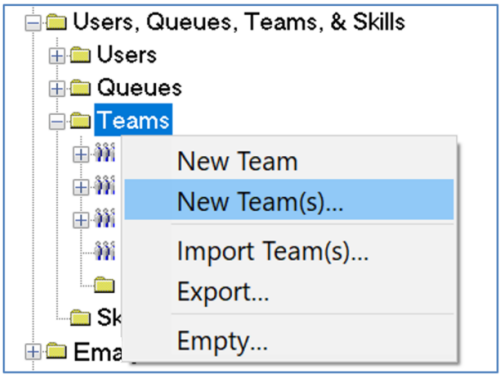
iceAdministrator allows you to create multiple teams simultaneously:

- You can add teams based on iceAdministrator's default properties, which is very similar to adding a 'New Team', as described in the previous section.
- You can add teams based on an existing team's configuration, which is referred to as the 'Template.' This feature can be helpful if you want the new teams to have the same properties as the existing teams in your contact center.

To add multiple teams:

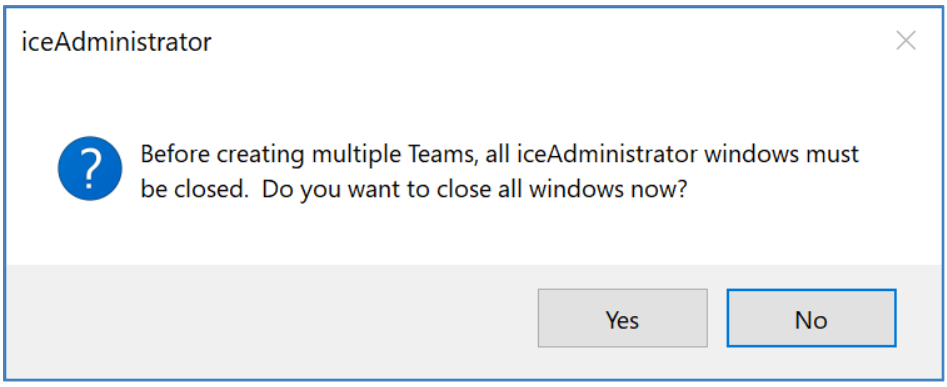
1. Right-click on the *Teams* folder in the tree view.

   A menu appears.



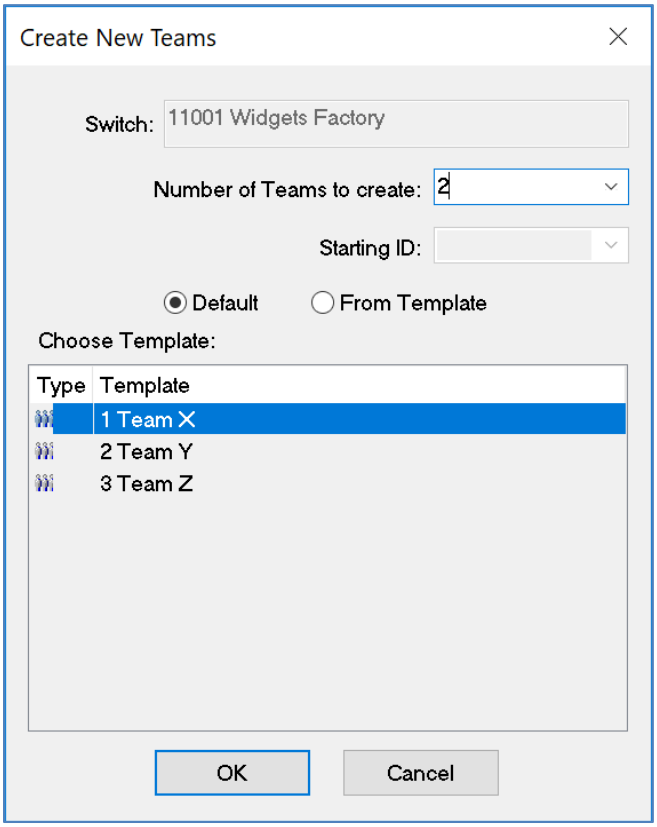
2. Select *New Team(s)* from the menu.

   The following message box appears:



3. Click *Yes* to continue. Click *No* to cancel the process.

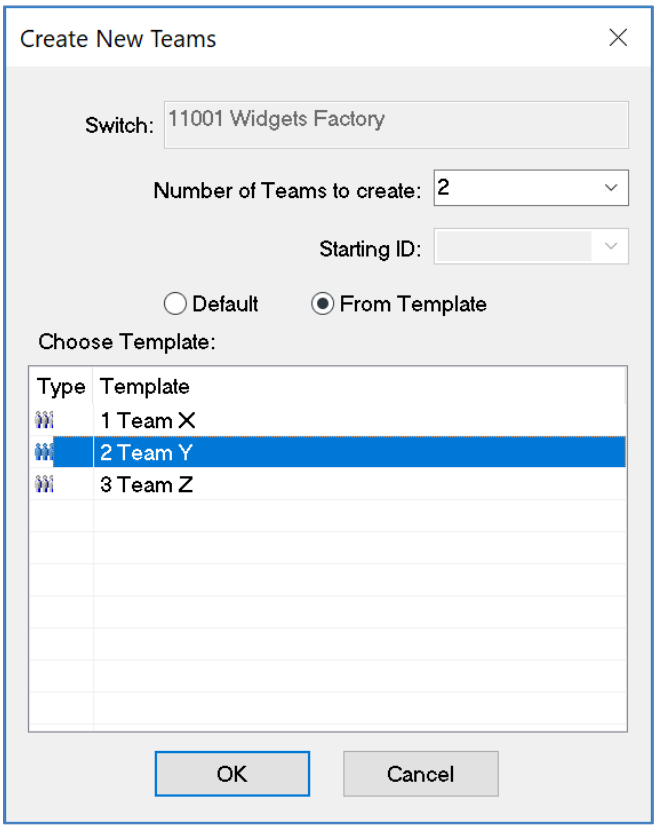
   The ‘Create New Teams’ dialog box appears.



4. Select the number of teams that you wish to create from the ‘Number of Teams to create’ drop-down list.
5. Select the ‘Default’ radio button if you would like the new teams to have the default team configuration or select ‘From Template’ if you would like each new team to have the same configuration as an existing team.

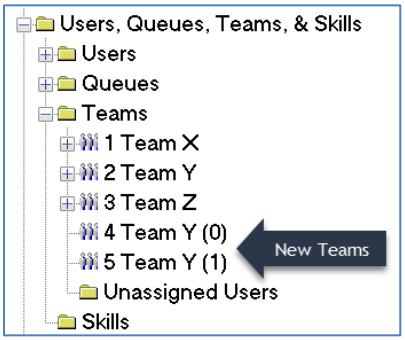
   When the ‘From Template’ radio button is selected, you can highlight a team in the ‘Choose Template’ table.

The illustration below shows that Team Y has been selected as the template.



6. Click *OK* to create the new teams.

   The teams appear in the tree view.



7. From the File menu, choose *Save*. (To cancel the save operation, click *Cancel* on the 'Progress' dialog box.)

User Assignments

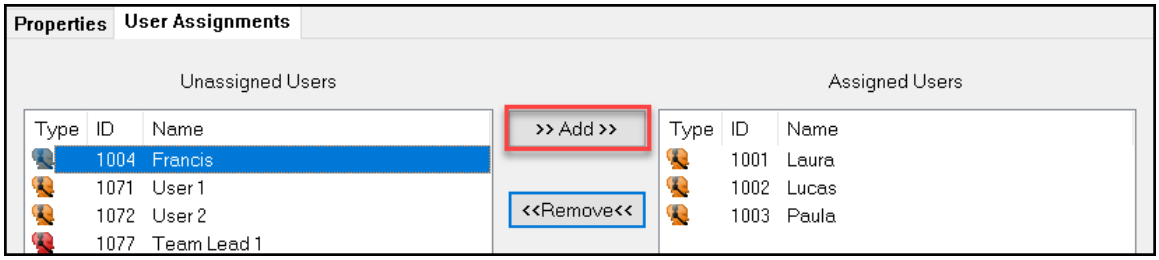
As described in Chapter 2: Users, a user can be assigned to queues from his or her user profile. Use this feature if you want to assign one user to different queues. Alternatively, you may assign multiple users to a single queue from the 'User Assignments' page that is available for each queue.

Note: To modify a team, you must be in Edit Mode and have a user type that allows you to access the Users, Queues, Teams & Skills folder. For information on permission levels and user types, refer to page 26.

To add users to a team:

1. Navigate to the team that you wish to modify.
2. Click the *User Assignments* tab to bring that page to the front.

   The team's current user assignments are shown in the 'Assigned Users' column. The left column displays all of the users that have not been assigned to the team.



Note: If there is more than one user in the 'Unassigned Users' or the 'Assigned Users' column, you can sort the list numerically by user ID or alphabetically by name by clicking on the *ID* or *Name column* headings respectively.

3. To assign a user to the team, highlight the user in the left column and click *Add*.

   To remove a user from the team, highlight the user in the right column and click *Remove*.

4. From the File menu, choose *Save*. (To cancel the save operation, click *Cancel* on the 'Progress' dialog box.) When you save your changes, the user is automatically added to or removed from the team.

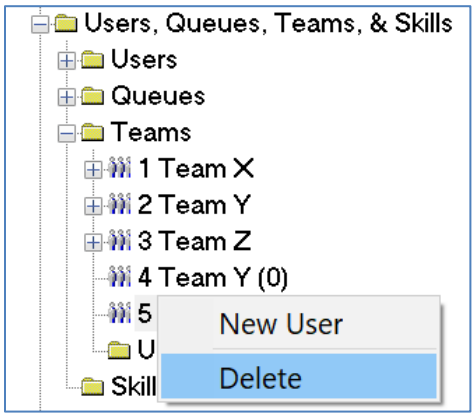
Deleting a Team

If you wish to completely remove a team from iceAdministrator, you should delete the team.

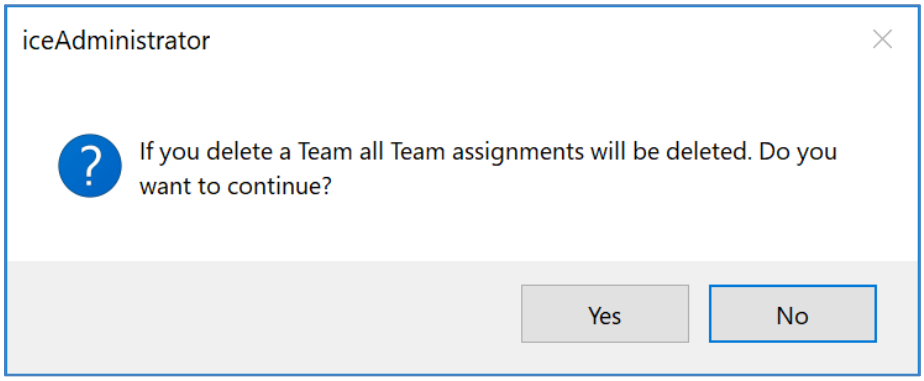
Note: To delete a team, you must be in Edit Mode and have a user type that allows you to access the Users, Queues, Teams & Skills folder that is part of the iceAdministrator's tree view. For information on permission levels and user types, refer to page 26.

To delete a team:

1. Navigate to the team that you wish to delete.
2. Right-click on the team in the tree view and select *Delete* from the menu that appears.



3. The following confirmation message appears:



4. From the File menu, choose *Save*. (To cancel the save operation, click *Cancel* on the 'Progress' dialog box.)

   When you save your changes, the team is deleted and the users are automatically removed from the team.

Emptying the Teams Folder

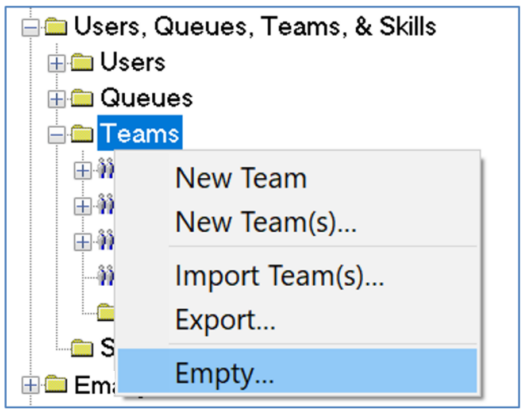
You may decide to delete all teams to avoid conflict messages when importing teams.

Note: To delete a team, you must be in Edit Mode and have a user type that allows you to access the Users, Queues, Teams & Skills folder. For information on permission levels and user types, refer to page 26.

To delete all teams:

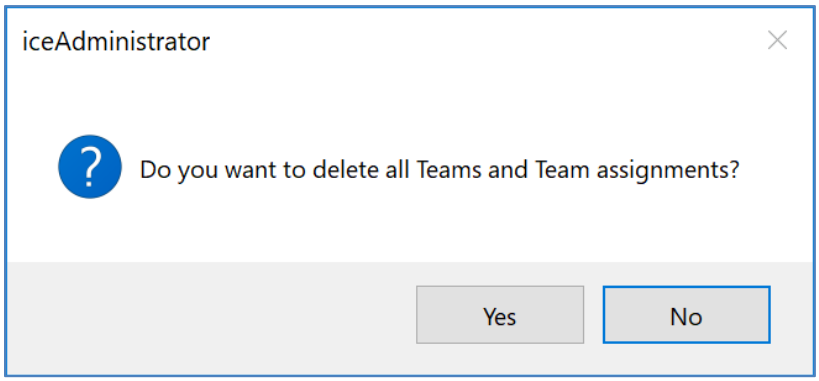
1. Right-click on the *Teams* folder.

   A menu appears.



2. Select *Empty* from the menu.

   A warning appears.



3. Click *Yes* to delete all of the teams or click *No* to cancel the deletion.
4. From the File menu, choose *Save*. (To cancel the save operation, click *Cancel* on the 'Progress' dialog box.)

Chapter 5: Skills

Skills can be used to route contacts with particular needs to a user who is best qualified to meet those needs. Instead of routing contacts to the user who has been idle the longest in a queue, you may route the contact to the user who has the highest skill level. To direct contacts requiring particular skills to the most qualified users possible, you can do the following:

- Create skills in the Skills folder
- Use workflow to determine contact needs (e.g., tagging a contact with specific skills)
- Assign skills to users
- Modify queue thresholds and weights

The sections that follow describe how to view existing skills, create new skills, assign skills to contacts, assign skills to users, modify skill parameters in a queue, and delete skills from ice.

Note:

- This chapter assumes you are familiar with the concepts of workflow. For more information on workflow, refer to iceWorkflow Designer User Manual.
- iceAdministrator should be used by trained contact center staff. Before you begin modifying or creating skills, you must be familiar with your current configuration.
- To view and edit skills you must have a user type that allows you to access the skills subfolder that is part of the Users, Queues, Teams & Skills folder in iceAdministrator's tree view. This chapter assumes that you are familiar with the permissions on ice, as described in

  Chapter 1: Getting Started.

Viewing a Skill

You may wish to view existing skills if you are planning to modify the way in which skills are used in your contact center.

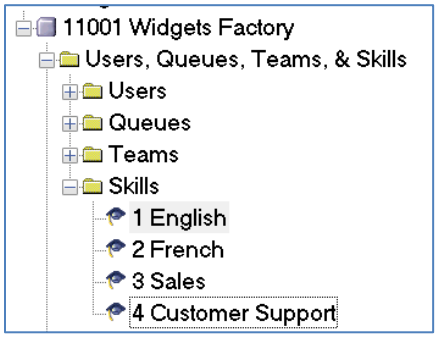
Viewing a skill involves finding and selecting the skill in the tree view. When a skill is selected, the right side of the iceAdministrator window displays some information about the skill.

Note: To view skills, you must have a user type that allows you to access the Skills subfolder in the Users, Queues, Teams & Skills folder. For more information on permissions on iceAdministrator, refer to page 26.

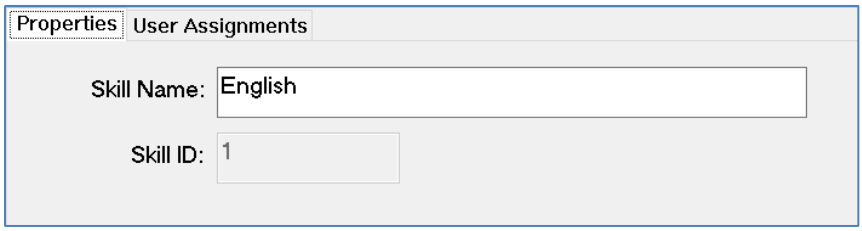
To navigate to a skill:

1. Open the Skills subfolder in the tree view.

   The skills that are currently configured are displayed.



2. Highlight a skill to view its skill ID and skill name on the right side of the iceAdministrator window.



This section has explained how to navigate to a skill. The sections that follow describe how to add a new skill, and how to modify the properties for a skill.

Adding a Skill

You might need to create a new skill to accommodate changes at your contact center.

There are two methods of adding skills:

- Add a skill in the tree view.
- Add a skill when setting up workflow. This allows you to create skills on the spot as workflow is being developed. For more information on workflow, refer to the iceWorkflow Designer User Manual.

The sections that follow describe each method of creating skills.

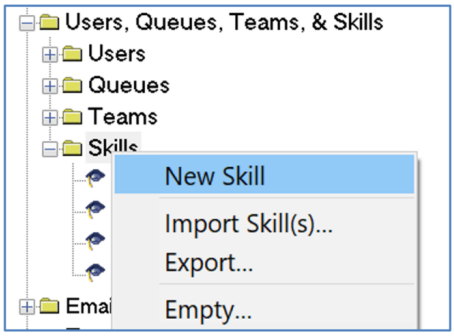
Note: To add a skill, you must be in Edit Mode and have a user type that allows you to access the Skills folder. For more information on permissions on iceAdministrator, refer to page 26.

Adding a Skill in the Tree View

To add a skill to the tree view:

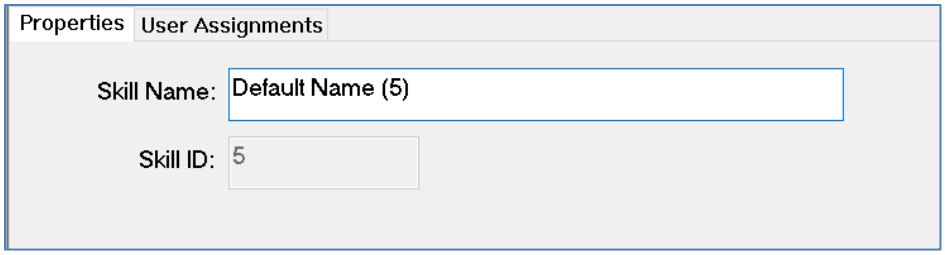
1. Right-click on the *Skills* subfolder in the tree view.

   A menu appears.



2. Select *Add Skill* from the menu.

   The detail view displays a 'Properties' page for a new skill.



3. Specify a name for the skill in the ‘Skill Name’ field.

   The name can be up to 40 characters in length.

4. From the File menu, choose *Save*. (To cancel the save operation, click *Cancel* on the ‘Progress’ dialog box.)

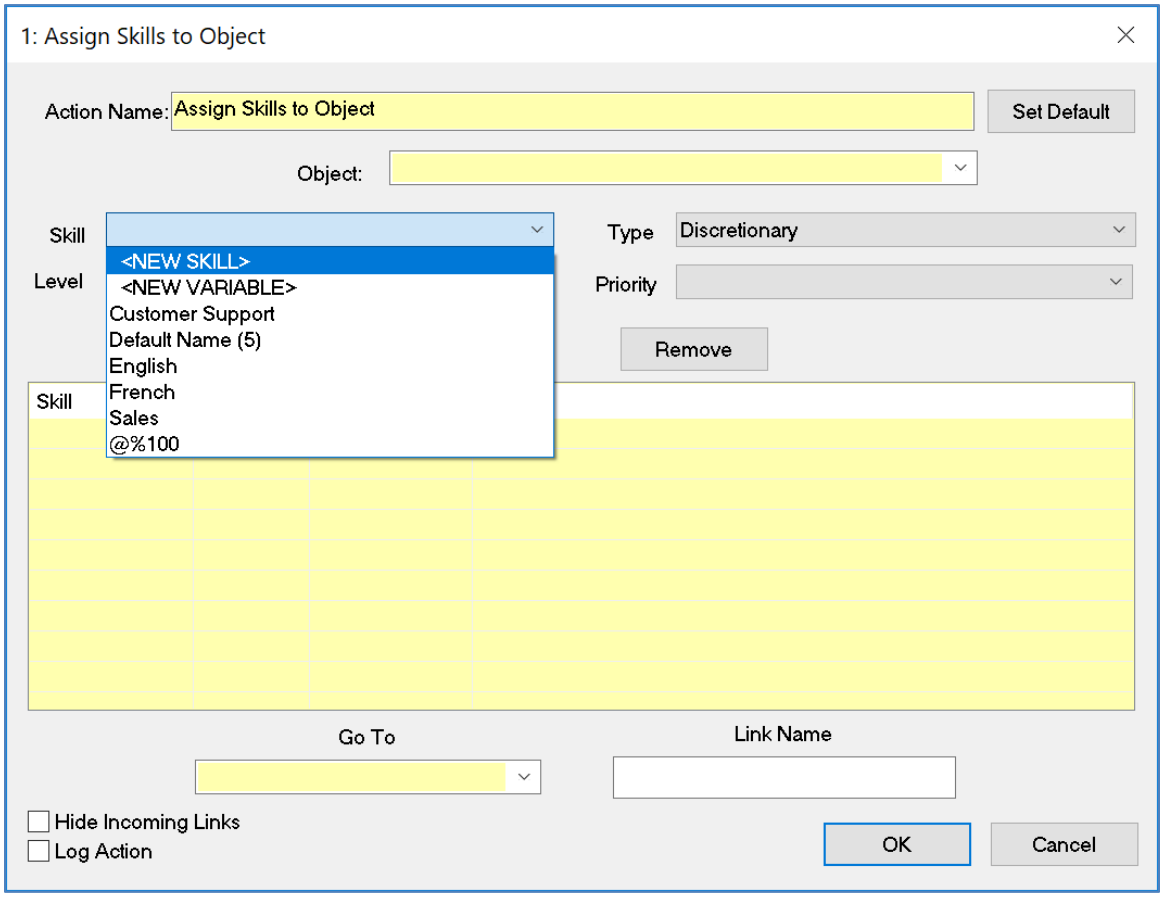
   A new skill does not have any impact on your contact center until it has been assigned to users and workflow has been designed to assign the skill to contacts.

Adding a Skill from the Properties of a Workflow Action

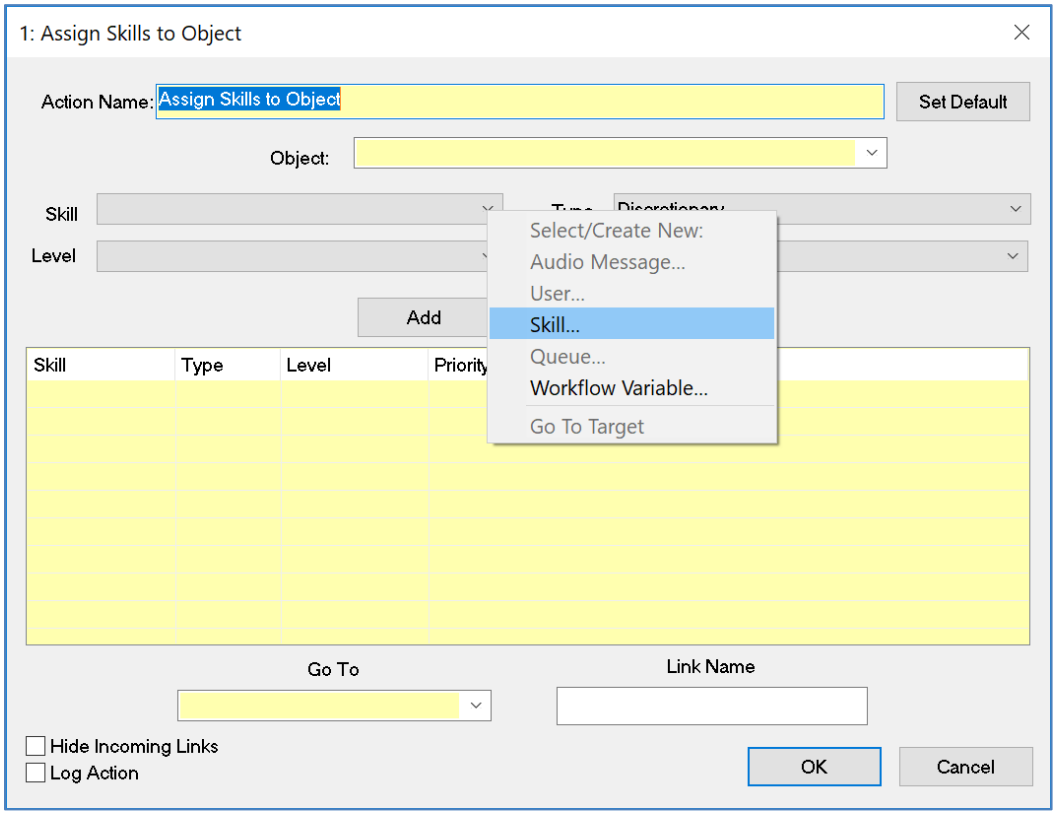
On the properties page of a workflow action, you can create a new skill from a drop-down list that requires the selection of a skill.

To create a skill from the properties dialog box of a workflow action:

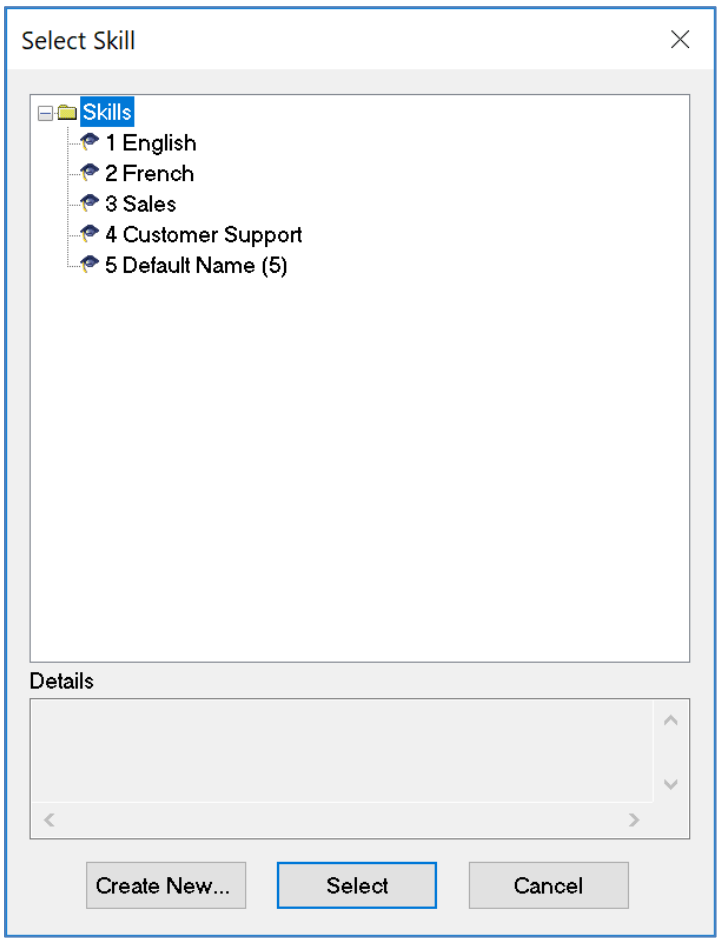
1. From the workflow page, double-click the action from which you would like to create the skill.
2. In the field that requires a skill, for example, the ‘Skill’ field on the Assign Skills to Object workflow action’s properties page, select *<NEW SKILL>* from the drop-down list box.



You can also right-click the arrow in the drop-down list box and select *Skill* from the menu that appears.



The ‘Select Skill’ dialog box appears.



3. Click the *Create New* button on this dialog box.

   The ‘New Skill’ dialog box appears. This dialog box has the same properties page as the one that appears when you create a skill from the tree view.

4. Click *OK* on this dialog box to add the skill.

   The skill is added to the tree view and becomes the selected option in the workflow action field.

5. From the File menu, choose *Save*. (To cancel the save operation, click *Cancel* on the ‘Progress’ dialog box.)

Assigning Skills to Users

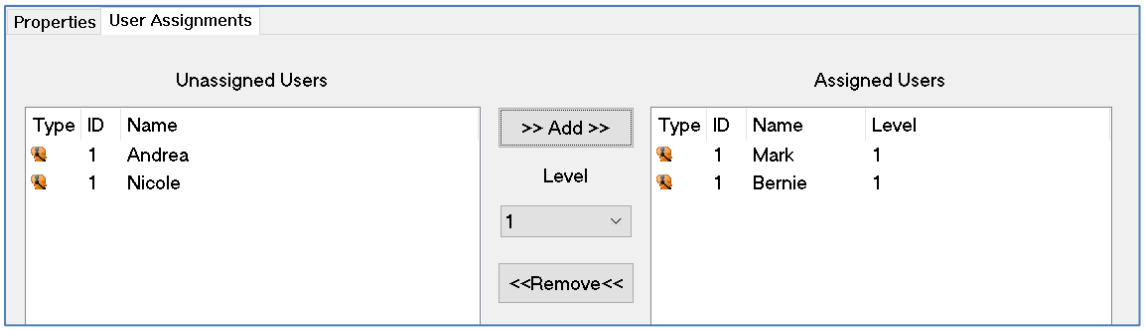
As described in Chapter 2: Users, skills can be assigned to a user from his or her user profile. This tab is useful if you wish to assign multiple skills to one user. Alternatively, you may assign a single skill to multiple users using the 'User Assignments' page that is available for each skill.

Note: When you assign skills to users from the 'User Assignments' page of that skill, you are modifying the users in question. You must have a user type that allows you to modify users. For information on permission levels and user types, refer to page 26.

To assign a skill to users:

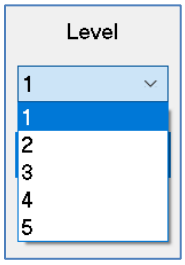
1. Navigate to the skill that you wish to modify.
2. Click the *User Assignments* tab to bring that page to the front.

   The users with this skill are shown in the 'Assigned Users' column. The left column displays all of the users that have not been assigned the skill.



   Note: If there is more than one user in the 'Unassigned Users' or the 'Assigned Users' column, you can sort the list numerically by user ID or alphabetically by name by clicking on the *ID* and *Name* column headings.

3. Highlight the user that you wish to assign to this skill in the 'Unassigned Skills.'
4. From the 'Level' drop-down list, select a number between one and five that represents the user's proficiency in the skill.



   Five represents the highest level of proficiency in a skill.

5. Click *Add* to assign the skill to the user.

   To remove the skill for a particular user, highlight the user in the right column and click *Remove*.

6. From the File menu, choose *Save*. (To cancel the save operation, click *Cancel* on the 'Progress' dialog box.)

When you save your changes, the skill is automatically assigned to the user(s) or removed from the user(s)' list of skills.

Note: To assign skills to a particular user from the user's own properties pages, refer to 'Assigning Skills to Users ' on page 85.

Deleting a Skill

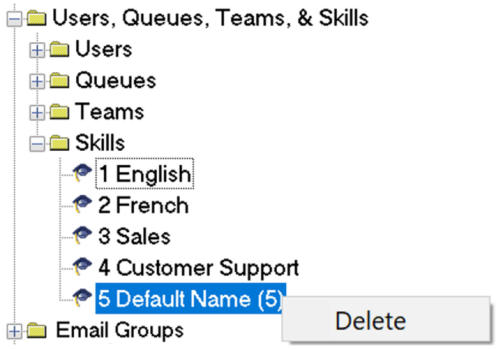
A skill that is no longer required can be deleted.

Note: To delete a skill, you must be in Edit Mode and have a user type that allows you to access the Skills subfolder that is part of iceAdministrator's tree view. For information on permission levels and user types, refer to page 26.

To delete a skill:

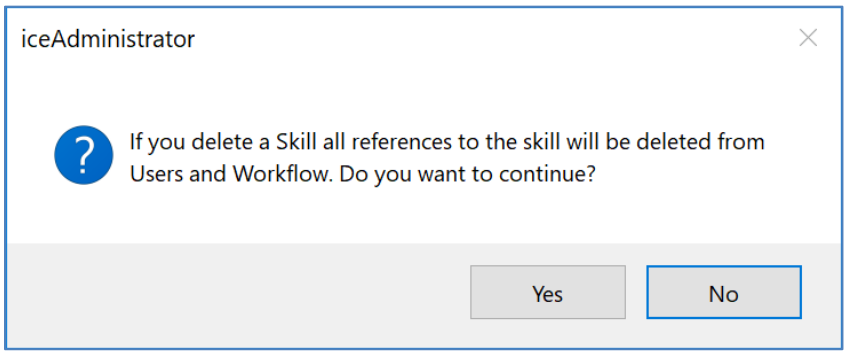
1. Navigate to the Skills subfolder and right-click on the skill you wish to delete.

   A menu appears.



2. Select *Delete* from the menu.

   A message box appears.



3. Click *Yes* to proceed or click *No* to cancel the deletion.
4. From the File menu, choose *Save*. (To cancel the save operation, click *Cancel* on the 'Progress' dialog box.)

   This section has explained how to delete a skill that is no longer required. The next section provides information about deleting all skills.

   Note: If the skill you have deleted was used in workflow, you may have to complete any Assign Skills to Object actions or modify workflow before you can save your changes.

Emptying the Skills Folder

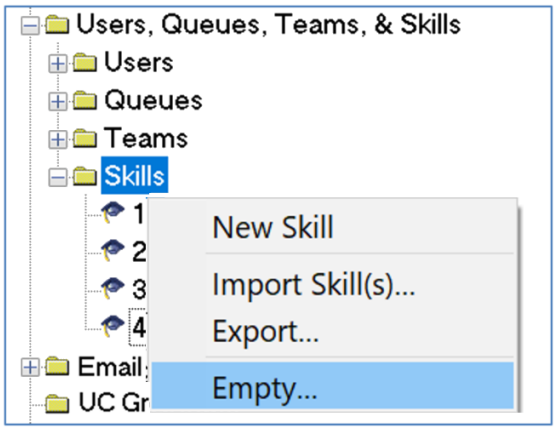
You may decide to delete all skills to avoid conflict messages when importing skills.

Note: To delete a skill, you must be in Edit Mode and have a user type that allows you to access the Skills folder. For information on permission levels and user types, refer to page 26.

To delete all skills:

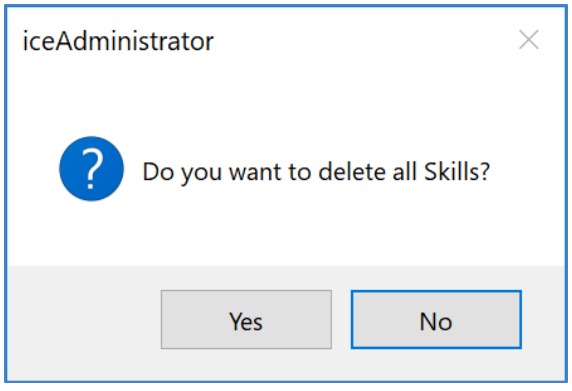
1. Right-click on the *Skills* folder.

   A menu appears.



2. Select *Empty* from the menu.

   A warning appears.



3. Click *Yes* to delete all of the skills or click *No* to cancel the deletion.
4. From the File menu, choose *Save*. (To cancel the save operation, click *Cancel* on the 'Progress' dialog box.)

Assigning Skills to Contacts

Workflow can be designed so that contacts are answered by users who possess the skills necessary to handle them.

Skills are assigned to a contact using the Assign Skills to Object action in workflow. The properties for the Assign Skills to Object action include a series of drop-down lists allowing you to select a skill, a skill type, a skill level, and a skill priority. These settings are used to calculate the compatibility of each user with the contact waiting in the queue based on the contact's requirements and each user's skill level. Multiple skills can be assigned to a contact.

- The skill type is either discretionary or mandatory. For more information, refer to 'Queue Skill Thresholds' on page 165.
- The skill level setting determines the skill level required by a user in order to handle the contact. The skill level can be set to a number or 'Dynamic.' For more information on the dynamic skill level feature, refer to Dynamic Skill Downgrade Threshold on page 166.
- The skill priority sets the importance of a skill relative to the other skills assigned to the contact. For more information, refer to 'How Skill Priority Affects Skills Score ' on page 178.

For more information on completing the properties of the Assign Skills to Object action, refer to iceWorkflow Designer User Manual.

Before the Assign Skills to Object action is used, workflow must have a means to determine the contact's needs. This is accomplished by using actions such as Check ANI, Check DNIS, Get Caller Input, Compare Data, Evaluate Expression, Database actions, Check Email, etc. to determine information about the contact.

Any action that makes a routing decision can be used to determine whether a contact requires a user with specific skills (e.g., did the caller dial a specific number?). Multiple actions in workflow can help clarify contact demands further (e.g., did the caller make a selection for assistance in French?).

The sections that follow describe some of the ways that skills can be assigned to contacts.

Assigning Skills Based on DNIS or ANI

Check DNIS and Check ANI can be used to assign skills to contacts. This method is recommended for contact centers that:

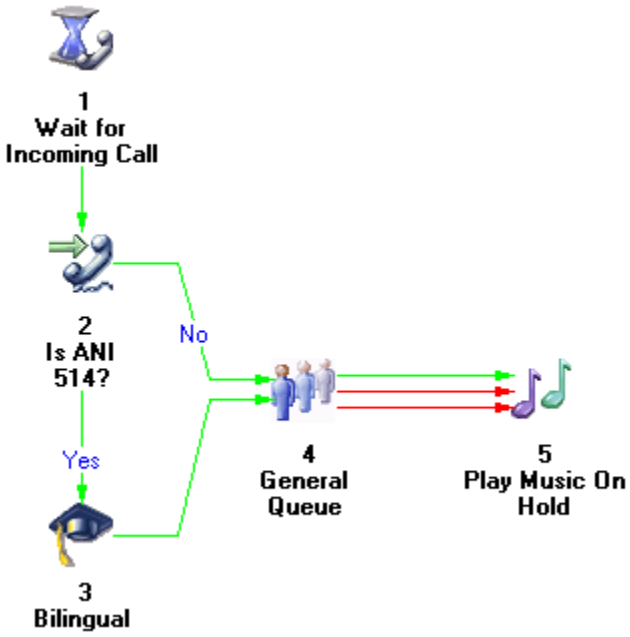
- Have a relatively low number of skills to associate with contacts;
- Publish multiple telephone numbers and are able to identify contact needs by numbers dialed;
- Segment callers on the basis of geography.

To understand how Check ANI can be used to assign skills to a contact, consider a contact center that provides technical support service for PCs and employs a certain number of bilingual staff. The ice administrator, knowing that any contact from Montreal's 514 area code could be either an English- or French-speaking client, might:

- Assign the skill "Bilingual" to the appropriate users.
- Use the Check ANI action to scan for the 514 area code, and route the contacts with this area code to an Assign Skill action.
- Assign the skill "Bilingual" to the contacts that pass through the Assign Skill action.

These actions examine the area code of each contact that arrives and instructs ice to exclude, as a routing possibility, any user who is not bilingual whenever the originating telephone number has an area code of 514.

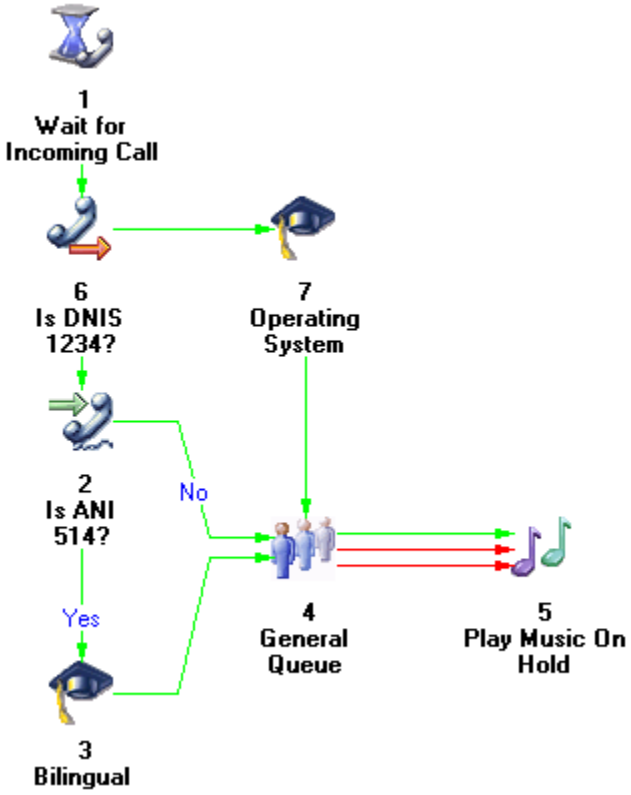
The following illustration provides an example of the workflow required for this configuration. A green link indicates success (e.g., caller makes a valid selection). A red link indicates failure (e.g., caller makes an invalid selection).



Using the Check DNIS action can help to further clarify caller demands. For example, the same contact center might provide clients with a special telephone number to dial whenever they have questions specifically about operating systems. Only certain personnel are knowledgeable about this topic. In this case the ice administrator could:

- Assign the skill “Operating System” to the appropriate users.
- Use the Check DNIS action to scan for the DNIS associated with the special telephone number, and route contacts that have dialed this number to an ‘Assign Skills to Object’ action.
- Assign the skill “Operating System” to the contacts that pass through the Assign Skills to Object action.

The following illustration provides an example of the workflow required for this configuration.



Assign Skills Based on Caller Input

Get Caller Input can be used to assign skills to contacts by prompting a contact to identify the nature of his/her call through touch-tone commands (DTMF signals). This action can be used multiple times in workflow to narrow the pool of eligible users.

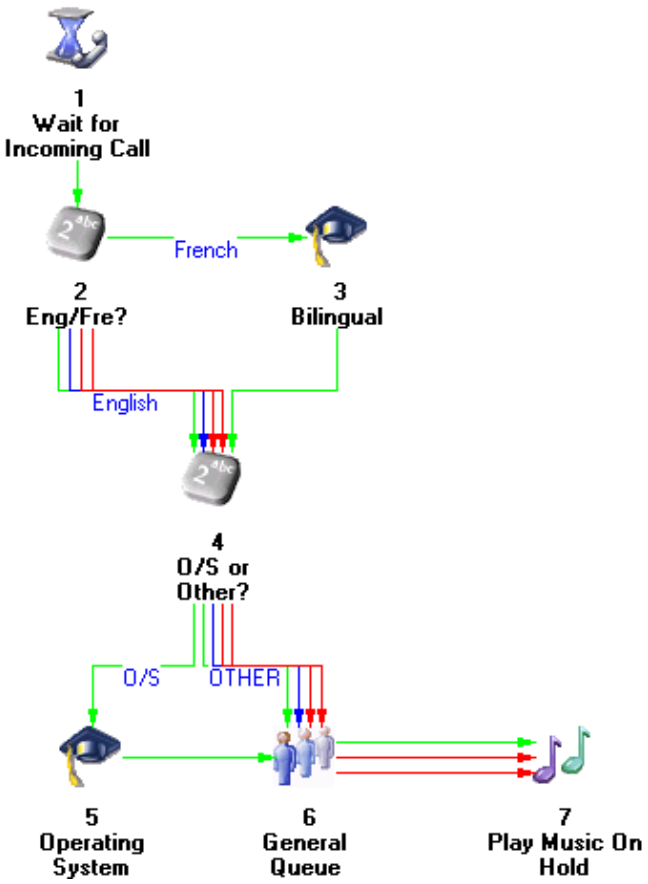
Consider a caller who encounters the following instructions:

- For service in English, press one; pour le service en français, appuyez sur deux.
- If your question is about your operating system, press one; otherwise, press two.

If the contact presses 2 for French, then his or her call can be routed to an 'Assign Skills to Object' action that assigns the skill 'Bilingual' to the contact. The caller is then routed to the second set of options in French.

In the second example, if the caller presses one at this decision point, then his or her call can be routed to an 'Assign Skills to Object' action that assigns the skill 'Operating System.' In this scenario, the contact is 'tagged' as one requiring a user who is bilingual and has a specialty in operating systems.

The following illustration provides an example of the workflow required for this configuration. A blue link indicates a timeout has occurred (e.g., caller does not make a selection.)



Assign Skills based on Database Query

Database actions might be used to query a database. Data that is returned to workflow from the database can be analyzed (e.g., by the Compare Data or Evaluate Expression actions) to determine if the contact requires skills.

There are two possible ways of identifying a client so that his/her profile can be retrieved from the database:

- Through an account number that the caller is prompted to enter (i.e., through the Get Caller Input action).
- Through the telephone number that the caller dialed (i.e., through the Check DNIS action).

Consider a contact center that sets the following parameters:

- Calls from Montreal and surrounding areas require bilingual users.
- Calls from clients who have purchased their operating systems in the past three months require users with expertise in operating systems.

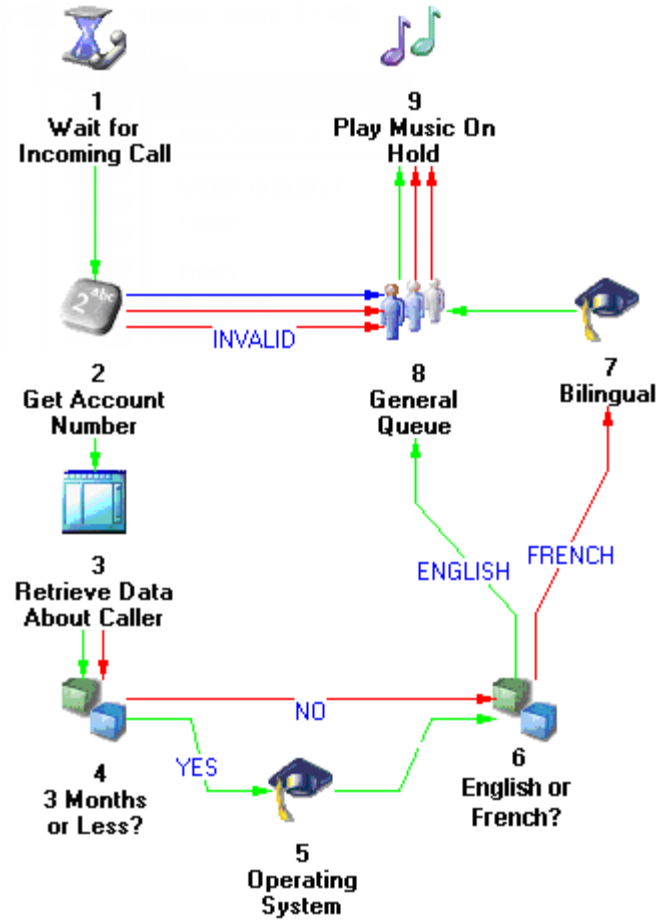
Three clients call the contact center on March 14, 2017, with profiles as follows:

Sample clients			
	Client A	**Client B**	**Client C**
Name	John Smith	Thunderbolt Consulting	Jean Monchamp
Address	100 Green Street	73 Rue de l'Anse-Bleu	42 Rue Talbot
City	Toronto	Laval	Montreal
Province	Ontario	Quebec	Quebec
Postal Code	M7T 3R8	H7N 4B1	H3B 5E7
System Purchased	January 26, 2015	June 28, 2006	February 28, 2017

Based on the parameters outlined above:

- Client A would not be assigned any skills.
- Client B would be assigned a "Bilingual" skill.
- Client C would be assigned "Bilingual" and "Operating System" skills.

The following illustration provides an example of the workflow required for this configuration.



Queue Skill Thresholds

Queue thresholds can affect the skill requirements calculation for a contact waiting in a queue.

Ignore Discretionary/Mandatory Skill Threshold

The Assign Skill action in workflow allows you to set a skill as either discretionary or mandatory. The Assign Skill action also allows you to choose the skill level that is required by the contact.

When a skill is designated as discretionary, ice considers any user with a skill proficiency that is equal to or greater than the skill level required as qualified. However, when the 'Ignore Discretionary Skill Threshold' is reached, a user with a lesser skill level or no skill level for that skill may be presented with the contact. This threshold cannot be greater than the 'Ignore Mandatory Skill Threshold.'

When a skill is designated mandatory, ice considers any user with a skill proficiency that is equal to or greater than the skill level required as qualified. However, when the 'Ignore Mandatory Skill Threshold' is reached, a user with a lesser skill level or no skill level for that skill might be presented with the contact. This threshold cannot be less than the 'Ignore Discretionary Skill Threshold.'

By default, these thresholds are disabled so that the skill requirement that you set in the Assign Skill action is never removed from the contact.

Caution: If you disable these thresholds, it is important that users with the skill levels required by contacts are logged onto the queues. If the logged on users do not have the required skill level, the contact could wait indefinitely for the user with the appropriate skill set.

Dynamic Skill Downgrade Threshold

The Assign Skills action allows you to set the skill level required by the contact to 'Dynamic', which indicates that, initially, the contact requires the highest level of skill available.

When the queue threshold 'Dynamic Skill Downgrade Threshold' is reached, ice automatically downgrades the contact's skill requirement by one level. The downgrade threshold acts as an interval, so that at each interval the contact's skill requirement continues to decrease to a minimum of level of 1.

Consider a contact center that currently has two users logged on to a queue that uses a "Bilingual" skill to route callers to the user with the best skill set:

- The caller has been assigned the "Bilingual" skill with a dynamic skill level.
- The 'Dynamic Skill Downgrade Threshold' has been set to 10 seconds.
- User A has been assigned level 4 in the "Bilingual" skill.
- User B has been assigned level 3 in the "Bilingual" skill.

As a result of the above settings, User A should be presented with the call because this user has the highest level in the required skill. If User A is not available, the call waits for 10 seconds for a user with the highest skill level to become available. After 10 seconds, the skill requirement is decreased by one level, and the call can be answered by either User A or User B.

By default, the 'Dynamic Skill Downgrade Threshold' is disabled so the skill requirement stays constant as the highest level of skill available. A contact with a dynamic skill requirement is also subject to the discretionary/mandatory skill thresholds as described in the previous section.

Configuring Queue Thresholds

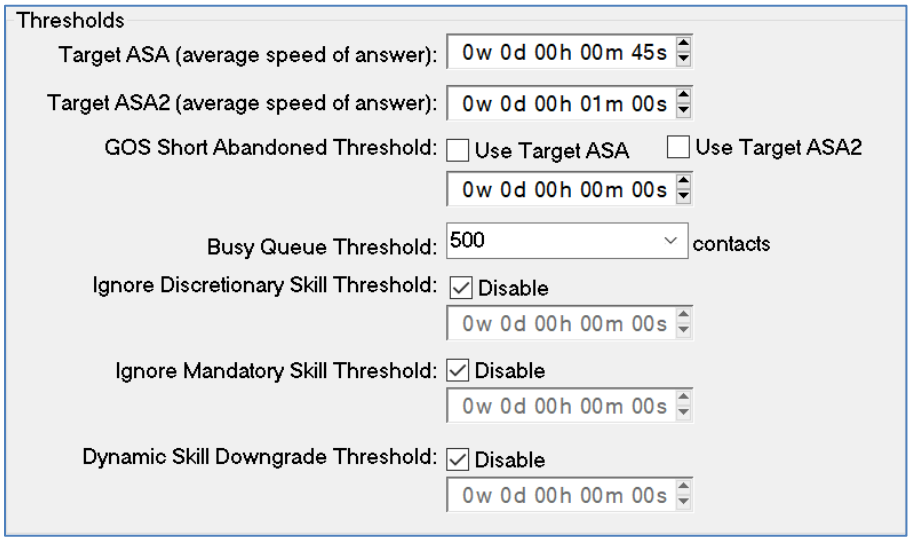
Note: To modify a queue, you must be in Edit Mode and have a user type that allows you to access the Users, Queues, Teams & Skills folder. For information on permission levels and user types, refer to page 26.

To configure the thresholds for a queue:

1. Navigate to the queue that you wish to customize or modify.

   The 'Properties' page for the selected queue appears on the right side of the iceAdministrator window.

   For this process, you need to use the Thresholds portion of the page.



2. To enable the 'Ignore Discretionary Skill Threshold', uncheck the 'Disable' checkbox and select the number of seconds for the threshold from the spin box.

   The default value is 0 seconds. You may set the threshold to reflect any number of seconds, minutes, days, or weeks. For example, you may click on *0d* and increase the threshold to 1 day. This can be useful for queues that handle email contacts.

3. To enable the 'Ignore Mandatory Skill Threshold', uncheck the 'Disable' checkbox and select the number of seconds for the threshold from the spin box.

   The default value is 0 seconds. This threshold can be set to any number of seconds, minutes, days, or weeks, as described in step 2.

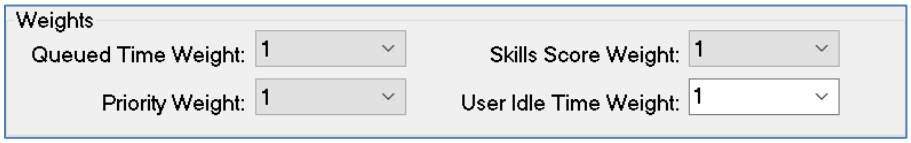
4. To enable the 'Dynamic Skill Downgrade Threshold', uncheck the 'Disable' checkbox and select the number of seconds for the threshold from the spin box.

   The default value is 0 seconds. This threshold can be set to any number of seconds, minutes, days, or weeks, as described in step 2.

5. From the File menu, choose *Save*. (To cancel the save operation, click *Cancel* on the 'Progress' dialog box.)

Queue Weights

Queue weights can affect skills.



A queue's default 'Skills Score Weight' is 1, but the drop-down list allows you to select a number between 0 and 100. The selected number is used in an equation that also takes into consideration a user's skills score, which measures his or her ability to handle a contact.

An increased 'Skills Score Weight' places more value on the skill score (and less value on both the contact's queued time and user's idle time) when calculating a contact's position in queue.

In addition to the 'Skills Score Weight', each queue also has a 'Priority Weight', a 'Queued Time Weight', and a 'User Idle Time Weight.' For more information on configuring a queue's weights, refer to page 121.

Finding the “Best User” for a Contact

As soon as a contact with skill requirements arrives in a queue, ice calculates a **total** against that contact for each user who meets all of the following eligibility conditions: against that contact for each user who meets all of the following eligibility conditions:

- Currently logged into the queue.
- Currently in the Ready state (in other words, available to receive a contact).
- Assigned at least the minimum proficiency level in each of the skills assigned to the contact.

The formula to calculate a user’s total score against a contact is as follows:

(SC * SW) + (AT * AW)

The table below explains the abbreviated variables above.

Best User equation variables	
Variable	**Meaning**
SC	The user’s skills compatibility score (i.e., proficiency of the user in relation to the contact. For more information on the skills compatibility score, refer to page 176).
SW	The skills score weight that has been selected for the queue.
AT	The actual amount of time the user has been idle, expressed in seconds. A user’s idle time is calculated from the time that they last completed a queued contact. Changing states (i.e., toggling *Ready*/*Not Ready*, receiving a direct call, placing an outbound call) does not reset the user’s idle time. The user’s idle time refreshes once they have completed a queued contact.
AW	The user’s idle time weight that has been selected for the queue.

The user who meets all three eligibility conditions and registers the highest total score against the contact is the one who will receive the contact. If there are no users who meet every condition, no total scores are calculated and the contact waits in queue.

Calculating Users’ Scores Against a Contact

To understand how users’ total scores are calculated against a contact, consider Users A and B, who are currently in the Ready state and operating in the same queue. The queue has a ‘Skills Score Weight’ of 1, a ‘User Idle Time Weight’ of 1, and each user’s last contact was completed 60 seconds ago. A contact, for which User A’s skills compatibility score is 45% and User B’s skills compatibility score is 80%, arrives in the queue. For more information on calculating a user’s skills compatibility score against a contact, refer to page 176.

The total score that User A registers against this newly arrived contact is calculated as follows:

(45 * 1) + (60 * 1) = 105

The total score that User B registers against the contact is calculated as follows:

(80 * 1) + (60 * 1) = 140

Because User B registers the higher of the two total scores, the newly arrived contact is sent to him.

How User Idle Time Weight Affects a User's Score

Consider the result if User A's skills score was still 45%, but his last contact was completed 45 seconds ago and User B's skills score was still 80%, but his last contact was completed 20 seconds ago:

User A's total score against the contact is calculated as follows:

(45 * 1) + (45 * 1) = 90

User B's total score against the contact is calculated as follows:

(80 * 1) + (20 * 1) = 100

In the above case, the skills score is still more important, and User B receives the contact. If the user's idle time is given more weight, however, the results could be different. Consider the same scenario, but with a 'User Idle Time Weight' of 2:

User A's total score against the contact is calculated as follows:

(45 * 1) + (45 * 2) = 135

User B's total score against the contact is calculated as follows:

(80 * 1) + (20 * 2) = 120

User A now receives the contact, despite his much lower skills compatibility score. By including user idle time weight in the formula for a user's total score, ice allows your contact center to reduce the likelihood that less qualified users remain unoccupied for indefinite periods while more qualified ones become overburdened by contacts.

How Skills Score Weight Affects a User's Score

To illustrate the effect of different skills score weights on a user's total score, consider the result if the 'Skills Score Weight' for the same queue was 10 (and all the above circumstances remained the same).

User A's total score against the newly arrived contact would be calculated as follows:

(45 * 10) + (45 * 2) = 540

User B's Total Score would be calculated as follows:

(80 * 10) + (20 * 2) = 840

In this case, User B receives the contact once again, even though he has been idle for less than half of the time that User A has. By including ‘Skills Score Weight’ in the formula for a user’s Total Score, ice allows your contact center to improve the likelihood that contacts requiring certain user capabilities are handled by the most qualified user possible, despite greater idle time experienced by less suitable users.

Finding the "Best Contact" for an Available User

Each time any user in a queue enters the Ready state, ice calculates a contact score for that user for each queued contact he/she is qualified to handle. The contact that registers the highest contact score against the user is the one that ice sends to the user.

The formula to calculate a queued contact's score against any qualified, newly available user is as follows:

(SC * SW) + (QT* QW) + (PL * PW)

The table below explains the abbreviated variables above.

Best Contact equation	
Variable	**Meaning**
SC	The user's **skills compatibility score** (i.e., proficiency of the user in relation to the contact. For more information on the skills score, refer to page 176).
SW	The **skills** score **weight** that has been selected for the queue.
QT	The actual amount of **time** the contact has been waiting in **queue**.
QW	The **queued time weight** that has been selected for the queue.
PL	The **priority level** the contact has been assigned in the queue object action that is part of workflow.
PW	The **priority weight** that has been selected for the queue.

Note:

- The default setting for each queue weight is 1.
- For more information on configuring a queue's weights, refer to page 121.

Calculating Contacts' Scores Against a User

To understand how the contact scores are calculated against a newly available user, consider Contacts X and Y, who have been waiting for an available user for 20 seconds.

If a user with a skills compatibility score of 30% for Contact X and 50% for Contact Y becomes available, Contact X's contact score against that user, assuming a 'Skill Score Weight' of 1 a 'Queued Time Weight' of 1, and a 'Priority Weight' of 1, is calculated as follows:

(30 * 1) + (20 * 1) + (0 * 1) = 50

Contact Y's contact score against the user is calculated as follows:

(50 * 1) + (20 * 1) + (0 * 1) = 70

Because Contact Y registers the higher score, this contact is sent to the newly available user.

How Priority Affects a Contact's Score

Consider the result if Contact X, in being directed to this queue, has received a level of priority of 6, while Contact Y has received a level of priority of 8. This could occur if each contact passed through different Queue Object actions, where the level of priority is set in the 'With Priority' field.

If a user with a skills compatibility score of 30% for each contact becomes available after 20 seconds, Contact X's contact score against that user, assuming a 'Skills Score Weight' of 1 and a 'Queued Time Weight' of 1, and a 'Priority Weight' of 1, is calculated as follows:

(30 * 1) + (20 * 1) + (6 * 1) = 56

Contact Y's contact score against the user is calculated as follows:

(30 * 1) + (20 * 1) + (8 * 1) = 58

Because Contact Y registers the higher contact score against the newly available user, Contact Y is routed to the user.

By including priority in the calculation for contact scores, ice allows your contact center to improve the likelihood that any contact assigned a high priority level in the Queue Object action is the one sent to the next available and qualified user.

How Queued Time Affects a Contact's Score

Consider the result if Contact X had arrived in the queue 15 seconds sooner. Its contact score against the newly available user would be calculated as follows:

(30 * 1) + (35 * 1) + (6 * 1) = 71

In this case, Contact X is routed to the user. By including contact age in the formula for queued contacts, ice allows your contact center to improve the likelihood that any contact assigned a low priority level or skill requirements does not wait indefinitely in queue.

Preventing Perpetual Wait for the “Perfect User”

Built-in mechanisms prevent contacts from waiting forever to reach the perfect user.

Ignore Discretionary Skill Threshold

Once any contact requiring skills has waited in a queue until that queue’s ‘Ignore Discretionary Skill’ threshold is reached, ice modifies the eligibility conditions in order to broaden the pool of qualified users. A score against the contact is now calculated for each user who meets all the following criteria:

- Currently logged into the queue.
- Currently in the Ready state.
- Assigned at least the minimum proficiency level in each of the mandatory skills assigned to the contact.

In other words, skills defined as discretionary no longer have any bearing on a user’s inclusion in the pool of routing possibilities. With potentially more users qualified to answer the contact, ice sends the contact to the user who registers the highest score against the contact (assuming mandatory skills are present). If these modified eligibility conditions fail to yield at least one additional qualified user, the contact remains in queue; however, each time another user becomes available, ice continues to measure his/her eligibility using the new standard.

Note: For more information on the ‘Discretionary Skill Threshold’ for a queue, refer to page 114.

Ignore Mandatory Skill Threshold

Once any contact requiring skills has waited in a queue until that queue’s ‘Ignore Mandatory Skill’ threshold is reached, ice modifies the eligibility conditions once again. A score against the contact is now calculated for each user who is both:

- Currently logged into the queue
- Currently in the Ready state

In other words, skill proficiency levels no longer have any bearing on a user’s inclusion in the pool of routing possibilities. With this pool as large as possible, ice sends the contact to the available user who has been idle the longest. If there are no available users logged into the queue, the contact continues to wait, and ice immediately directs it to the next user who becomes available.

Note: For more information on the ‘Mandatory Skill Threshold’ for a queue, refer to page 114.

Dynamic Skill Level

Dynamic skill level prevents contacts from waiting unnecessarily for a specific skill level that may not be available.

The Assign Skills action allows you to set the skill level required by the contact to ‘Dynamic’, which indicates that the contact requires the highest level of skill possessed by users assigned to the particular queue.

In addition, the ‘Dynamic Skill Downgrade Threshold’ can be set to automatically downgrade the required skill level at a timed interval. This feature prevents contacts from waiting for long periods of time for users who may otherwise be occupied. For more information on ‘Dynamic Skill Downgrade Threshold’, refer to page 166.

Overflowing Contacts

In workflow, a contact can “overflow” when it is registered in another queue with the Queue Object action. When this happens, a user in the originating queue or a user in any of the subsequent queues in which the contact has been registered, can answer the contact.

If, after waiting in the originating queue, a contact is registered in another queue, the criteria used to determine its final destination does not change. In other words, ice never allows a contact to be handled by any user who would have been ineligible, under the same circumstances, to receive that contact in the originating queue.

Registering a contact in the second queue starts a new set of Discretionary and Mandatory Skill Ignore timers. Each queue has its own set of timers. It is recommended that you register a contact in another queue before the discretionary/mandatory thresholds expire as a final means of ensuring that a waiting contact is matched with a reasonably qualified user before the system frees the call to be answered by anybody in the originating queue.

Skills Compatibility Score

To understand how ice determines a user's skills compatibility score for any contact, consider User C, who is currently available to receive a contact in the queue that she is operating in. Her skill assignments are as follows:

Skill assignments for User C	
Skill	**Skill Level**
French	4
Intranet	5
Hardware	3

Note: For information on configuring a user's skills, refer to page 85.

A contact with the following parameters arrives in the queue:

Skill requirements for a contact		
Skill	**Required Skill Level**	**Skill Priority Level**
French	2	2
Intranet	3	1
Hardware	2	3

Note: For more information on assigning skills to contacts, refer to page 159.

Because User C meets every minimum proficiency level that the contact requires, she is qualified to receive the contact ice begins to calculate her skills score in order to determine whether she is the best suited of all the available users. To do so, ice first totals User C's proficiency levels in the required skills, each of which is expressed as a Score out of 10, as follows:

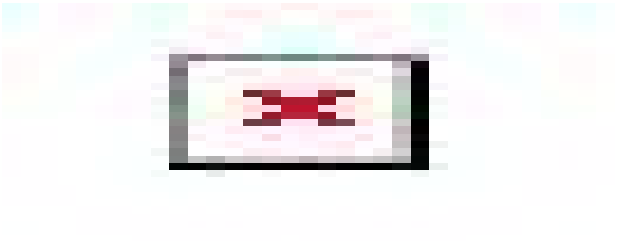
ice then accounts for the priority levels assigned to the contact's assigned skills by duplicating User C's proficiency level once for each skill with an assigned level of priority greater than 1. Therefore, the calculation changes to:

This calculation can also be expressed as:

To complete the equation, ice determines the average of User C's proficiency levels in all skills involved. To do so, it divides the sum of the skills' assigned priority levels into the result of the above calculation, as follows:

= **.73**

Therefore, the figure that ice uses to represent User C's degree of aptitude for the demands of the newly arrived contact is **.73**; in other words, her skills score is 73%. The more formal expression for this calculation is as follows:



How Skill Priority Affects Skills Score

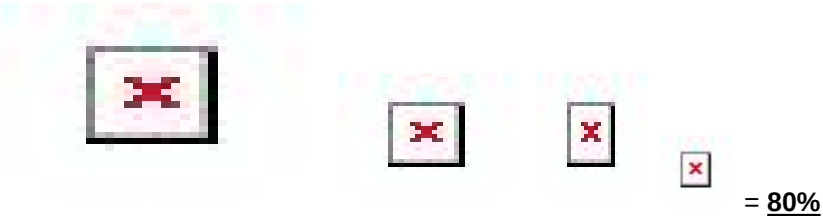
To understand the effect of different skill priority levels on a user's skills score, consider User D, whose skill assignments are as follows:

Skill assignments for user D	
Skill	**Skill Level**
French	3
Intranet	3
Hardware	5

The skill requirements for the contact are as follows:

Skill requirements for a contact		
Skill	**Required Skill Level**	**Skill Priority Level**
French	2	2
Intranet	3	1
Hardware	2	3

His skills score for the same contact used to calculate User C's skill compatibility score is calculated as follows:



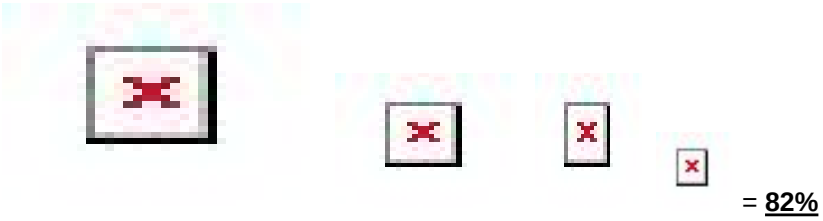
= **80%**

Because User D has the higher of the two skill scores, he receives the contact. Even though he is weaker in two of the skills (namely, French and Intranet), he is stronger in Hardware, which has the highest priority. His skill in Hardware makes him the more suitable user to handle the contact.

However, consider the result if the contact's assigned priority level for Intranet were 4. The contact now has the following parameters:

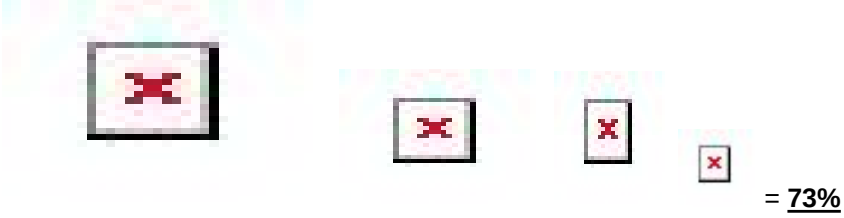
Skill requirements for a contact		
Skill	**Required Skill Level**	**Skill Priority Level**
French	2	2
Intranet	3	4
Hardware	2	3

User C's compatibility grade would be calculated as follows:



= **82%**

User D's skills score would be calculated as follows:



= **73%**

Because User C now has the higher of the two skills scores, she receives the newly arrived contact, even though she is weaker in one of the skills (namely, Hardware). By including skill priority levels in the formula for skills scores, ice allows your contact center to improve the likelihood that any contact with a strong need for certain user aptitudes are handled by the most qualified user possible.

Chapter 6: Email Groups

Email groups enable ice to accept email messages and route them to workflow so that email messages can be treated in workflow and queued for the first available user.

In iceAdministrator, one or more email addresses used to reach your contact center can be grouped together in an **email group**. With the initial installation of ice, each email address is configured on the system and assigned to an appropriate email group. After the initial installation, email addresses and email groups can be created, deleted, and modified as your contact center's requirements change.

The sections that follow describe how to view and understand email groups that have already been created, as well as how to add, modify, and delete email groups.

Caution: Many tasks involving email addresses and/or email groups may require the involvement of the person that oversees your mail server.

Note:

- iceAdministrator should only be used by trained contact center staff. Before you begin modifying or creating email groups, you must be familiar with your current configuration.
- To view and edit email groups, you must have a user type that allows you to access the Email Groups folder that is part of iceAdministrator's tree view. This chapter assumes that you are familiar with the permissions on ice, as described in

  Chapter 1: Getting Started.

Viewing an Email Group

You may wish to view an email group if you are planning to change the way that inbound email messages are handled.

Viewing email groups involves finding and selecting an email group in the tree view. When an email group is selected, the right side of the iceAdministrator window displays two tabs that detail the group's configuration.

Note: To view an email group, you must have a user type that allows you to access the Email Groups folder that is part of iceAdministrator's tree view. For information on permission levels and user types, refer to page 26.

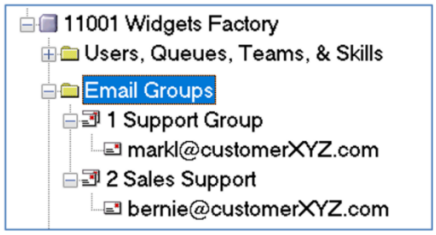
To navigate to an email group:

1. Open the Email Groups folder in the tree view.

   The email groups that are currently configured are displayed.

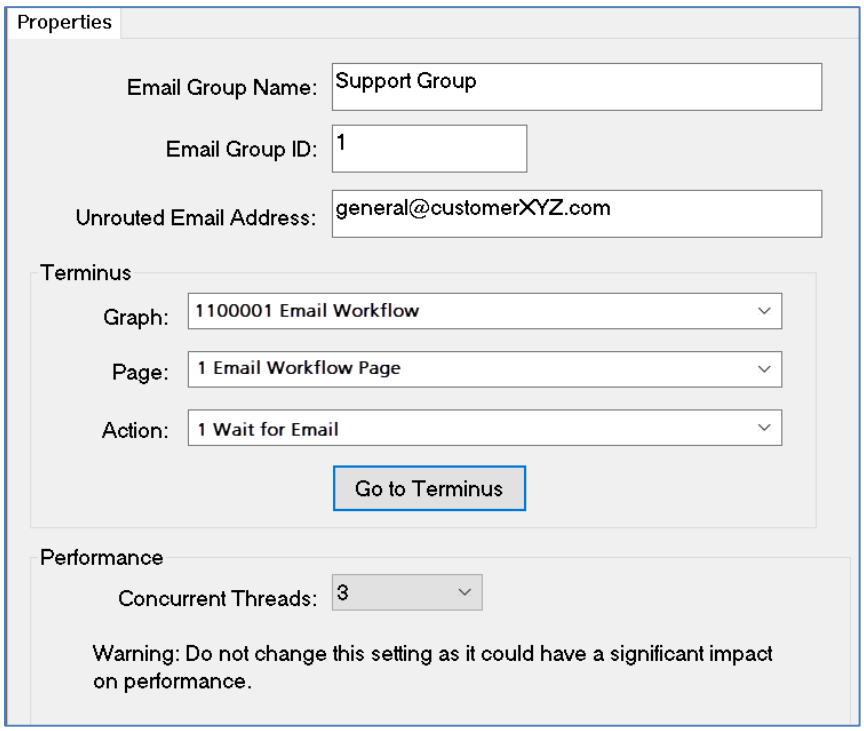
2. Open an email group to view the email addresses that are currently assigned to the group.

   The assigned email addresses are displayed.



3. Click on an email group to highlight it and view its configuration settings.

   The ‘Properties’ page for the email group appears in the detail view.



This section has explained how to navigate to an existing email group. The sections that follow describe how to add and modify settings for an email group.

Adding an Email Group

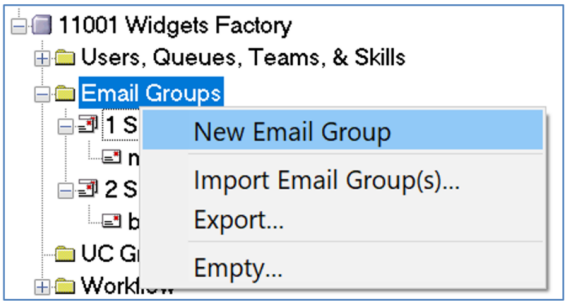
An email group can be added or modified to meet requirements for new email addresses.

Note: To add an email group, you must be in Edit Mode and have a user type that allows you to access the Email Groups folder that is part of iceAdministrator's tree view. For more information on permissions on iceAdministrator, refer to page 26.

Adding an email group involves adding a new profile to the Email Groups folder in the tree view. To add an email group:

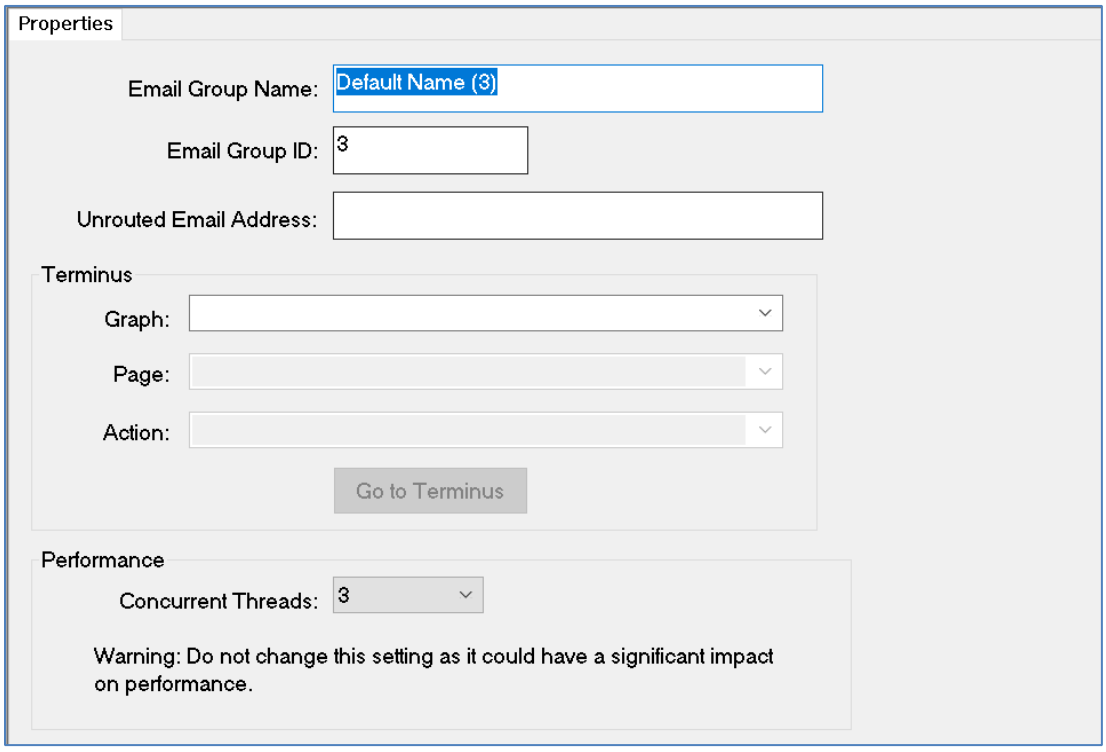
1. Right-click on the *Email Groups* folder in the tree view.

   A menu appears.



2. Select *New Email Group* from the menu.

   The 'Properties' page for the new email group appears on the right side of the iceAdministrator window.



3. In the ‘Email Group Name’ field, enter a name for the email group.

   This name can be up to 40 characters in length. The name of the email group appears on ice reports.

4. In the ‘Unrouted Email Address’ field, enter the email address to which any unrouted email messages will be sent.

   The email address can be up to 250 characters in length. Email messages are directed to this address in the event the contact is closed without being routed to a user (e.g., the message is never queued or is removed from queue before it was presented to a user).

   The email group cannot be saved until the Terminus is selected, as described in the section that follows.

   Caution: The default setting for ‘Concurrent Threads’ is 3. This setting controls the performance of the processing of email messages. Do not change this setting unless instructed to do so by a trained technician.

Defining a Terminus

You must specify an Email Terminus to save the Email Group. A Terminus is a starting point for emails in workflow. Any email that is sent to an email address that is part of the Email Group is directed to the terminus that you specify.

If you are not already familiar with workflow, then you may wish to review the iceWorkflow Designer User Manual. To create a terminus, workflow must already be created, and you must be familiar with the following terms:

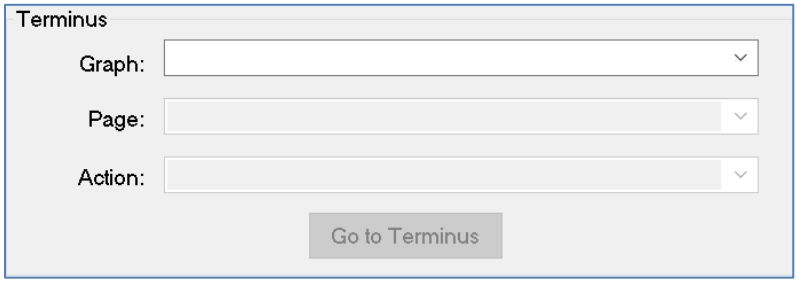
- In general, **workflow** is used to create logical routing for contacts. Workflow is composed of graphs, pages, actions, and links, as described below.
- A **workflow graph** is a holding place for one or more workflow pages that may or may not be linked together. For example, workflow can become so large that it requires the canvas of two workflow pages, and these pages are usually part of the same workflow graph.
- A **workflow page** displays a graphical representation of the logical routing for contacts that has been designed for your contact center.
- **Actions** are placed on the workflow page. **Links** are placed between the actions to create the logical routing for contacts.

Note: To modify an email group, you must be in Edit Mode and have a user type that allows you to access the Email Groups folder that is part of iceAdministrator's tree view. For more information on permissions on iceAdministrator, refer to page 26.

To define the terminus for an email group:

1. Navigate to the email group for which you want to define the terminus.

   For this process, you need to work with the ‘Terminus’ area that is part of the ‘Properties’ page.



2. Select the appropriate workflow graph from the ‘Graph’ drop-down list.

   The graph that you select should contain the workflow page to which you wish to direct email messages.

3. Select the appropriate workflow page from the ‘Page’ drop-down list.

   Only the pages belonging to the graph you selected are listed.

4. Select the appropriate action from the ‘Action’ drop-down list.

   Only the actions on the workflow page you selected are listed. Contacts that arrive on this email group are directed to the selected action.

5. From the File menu, choose *Save*. (To cancel the save operation, click *Cancel* on the ‘Progress’ dialog box.)

   All email messages that are sent to an email address that is part of this email group will be directed to the terminus that you have selected. Click *Go to Terminus* if you wish to view the starting point in the workflow for the email messages. For more information on adding email addresses to the email group, refer to the next section.

Adding an Email Address

Email addresses can be added to an email group to meet new requirements for the contact center.

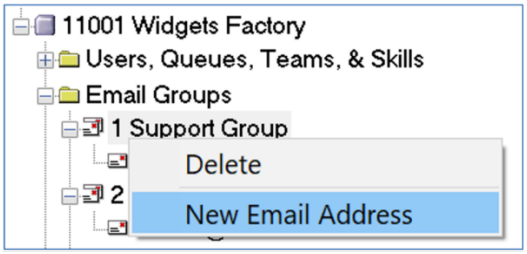
The following instructions describe how to add new email addresses. These instructions assume that the appropriate steps have been taken to add email addresses to the mail server and that messages sent to the new addresses are directed from the mail server to the ice server.

Note: To modify an email group, you must be in Edit Mode and have a user type that allows you to access the Email Groups folder. For information on permission levels and user types, refer to page 26.

To add email addresses to an email group:

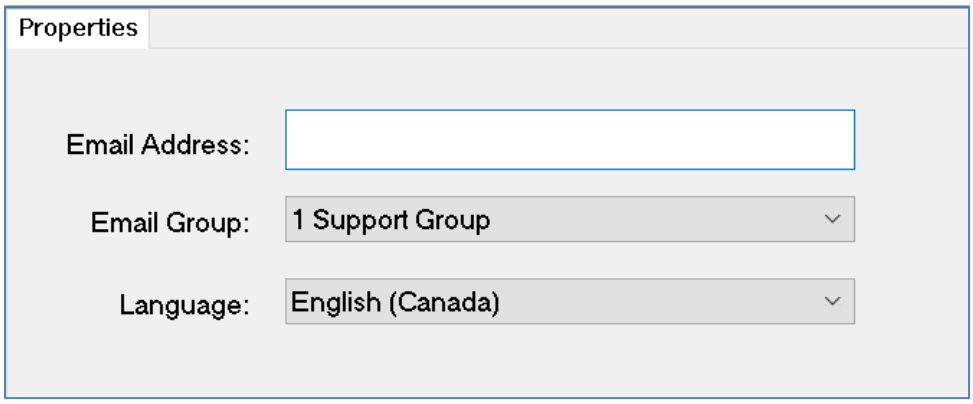
1. Navigate to the email group that requires additional addresses.
2. Right-click on the email group.

   A menu appears.



3. Select *New Email Address* from the menu.

   The 'Properties' page for the email address appears on the right side of the iceAdministrator window.



4. In the ‘Email Address’ field, enter the email address from which your contact center will receive email messages.

   This email address can be up to 80 characters in length.

5. From the File menu, choose *Save*. (To cancel the save operation, click *Cancel* on the ‘Progress’ dialog box.)

   This section has explained how to add email addresses to an email group. The section that follows explains how to delete an email address.

Deleting an Email Address

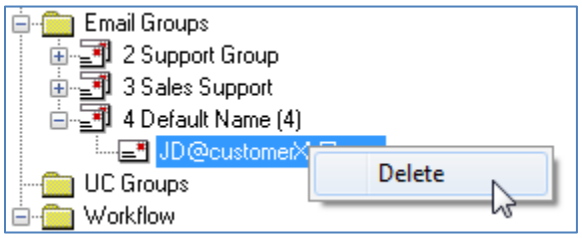
An email address that is no longer required can be deleted from iceAdministrator. The following instructions assume that the email address has already been removed from the mail server or is no longer directed to ice.

Note: To modify an email group, you must be in Edit Mode and have a user type that allows you to access the Email Groups folder. For information on permission levels and user types, refer to page 26.

To delete an email address that is no longer required:

1. Right-click on the email address in the tree view.

   A menu appears.



2. Select *Delete* from the menu that appears.
3. From the File menu, choose *Save*. (To cancel the save operation, click *Cancel* on the 'Progress' dialog box.)

   This section has explained how to delete email addresses from an email group. The section that follows explains how to delete an email group.

Deleting an Email Group and its Email Addresses

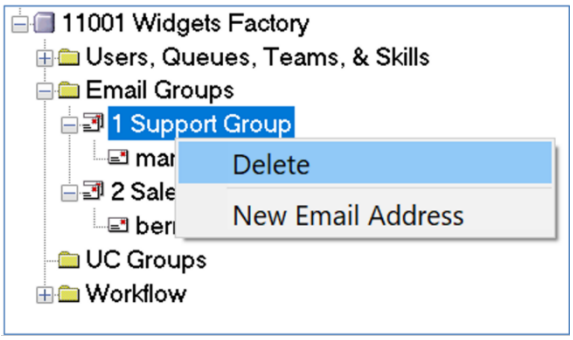
Email groups that are no longer required can be deleted from the iceAdministrator. Email addresses are also deleted when the email group they belong to is deleted.

Note: To delete an email group, you must be in Edit Mode and have a user type that allows you to access the Email Groups folder. For more information on permissions on iceAdministrator, refer to page 26.

To delete an email group that is no longer required:

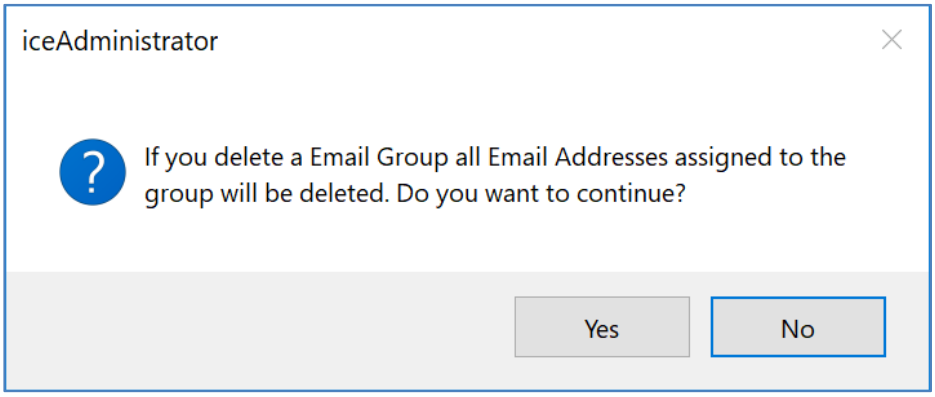
1. Right-click on the email group in the tree view.

   A menu appears.



2. Select *Delete* from the menu that appears.

   A message box appears to notify you that deleting the email group also deletes all email addresses that are part of the group.



3. Click *Yes* to proceed, or click *No* to cancel the deletion.
4. From the File menu, choose *Save*. (To cancel the save operation, click *Cancel* on the 'Progress' dialog box.)

   This section has explained how to delete an email group. The section that follows explains how to delete all email groups.

Emptying the Email Groups Folder

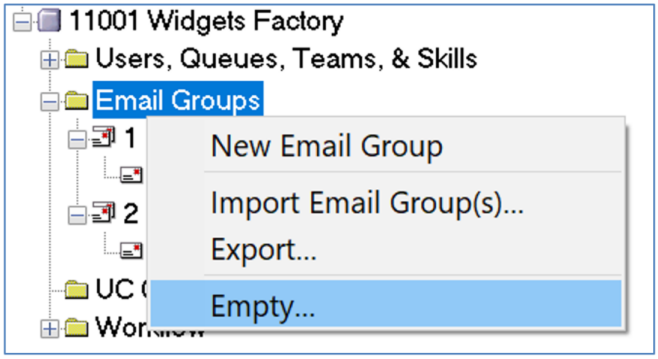
You may decide to delete all email groups to avoid conflict messages when importing email groups.

Note: To delete an email group, you must be in Edit Mode and have a user type that allows you to access the Email Groups folder. For more information on permissions on iceAdministrator, refer to page 26.

To delete all email groups:

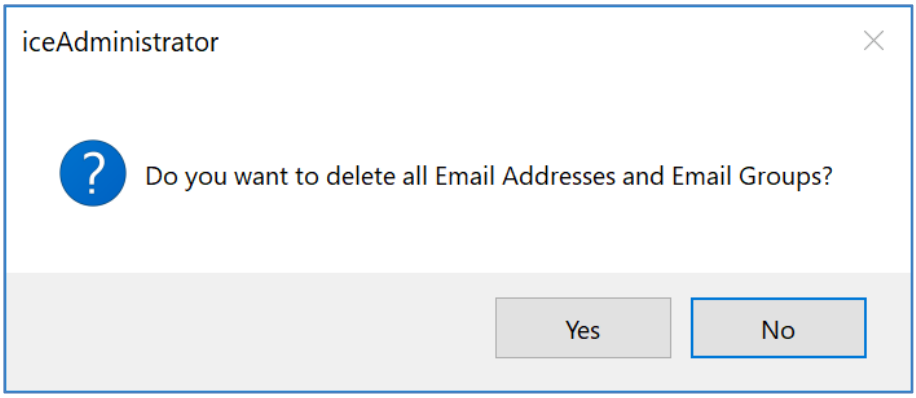
1. Right-click on the *Email Groups* folder.

   A menu appears.



2. Select *Empty* from the menu.

   A pop-up message box appears.



3. Click *Yes* to delete all of the email groups or click *No* to cancel the deletion.
4. From the File menu, choose *Save*. (To cancel the save operation, click *Cancel* on the 'Progress' dialog box.)

Chapter 7: UC Groups

UC Groups control which workflow is used for incoming contacts. They enable ice to accept instant messages and inbound and outbound calls. ice routes them to workflow so that they can be treated in workflow and queued for the first available user.

In iceAdministrator, UC addresses can be grouped together in a UC group. With the initial installation of ice, each UC address is configured on the system and assigned to an appropriate UC group. After the initial installation, UC addresses and UC groups can be created, deleted, and modified as your contact center's requirements change.

The sections that follow describe how to view and understand UC groups that have already been created, as well as how to add, modify, and delete UC groups.

Caution: Many tasks involving UC addresses and UC groups may require the involvement of the person that oversees your Skype for Business Server.

Note:

- iceAdministrator should only be used by trained contact center staff. Before you begin modifying or creating UC groups, you must be familiar with your current configuration.
- The UC account connection point must be provisioned in the Skype for Business server before you create a UC Group in iceAdministrator.
- To view and edit UC groups, you must have a user type that allows you to access the UC Groups folder that is part of iceAdministrator's tree view. This chapter assumes that you are familiar with the permissions on ice, as described in

  Chapter 1: Getting Started.
- Instant messaging on ice works in conjunction with Skype for Business Server. Skype for Business Server must be installed at your office and configured to communicate with ice before users can receive queued instant messages through ice.

Viewing a UC Group

You may wish to view a UC Group if you are planning to change the way SIP calls and instant messages are handled.

Viewing UC Groups involves finding and selecting a UC group in the tree view. When a UC Group is selected, the right side of iceAdministrator window displays two tabs that detail the group's configuration.

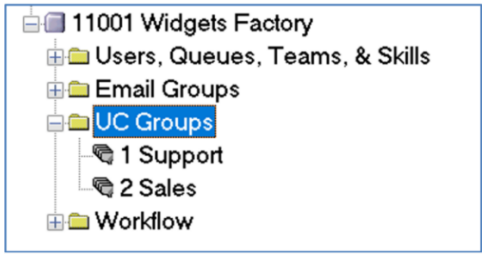
Note: To view a UC Group, you must have a Supervisor user type or higher. To edit a UC Group, you must have switch administrator user type or higher. For information on permission levels and user types, refer to page 26.

Changing some of these features may require a restart of the ice server.

To navigate to a UC Group:

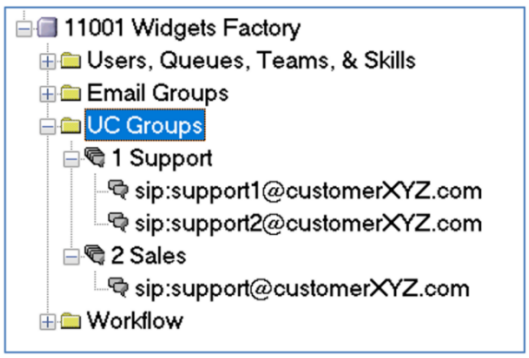
1. Open the UC Groups folder in the tree view.

   The UC Groups that are currently configured are displayed.



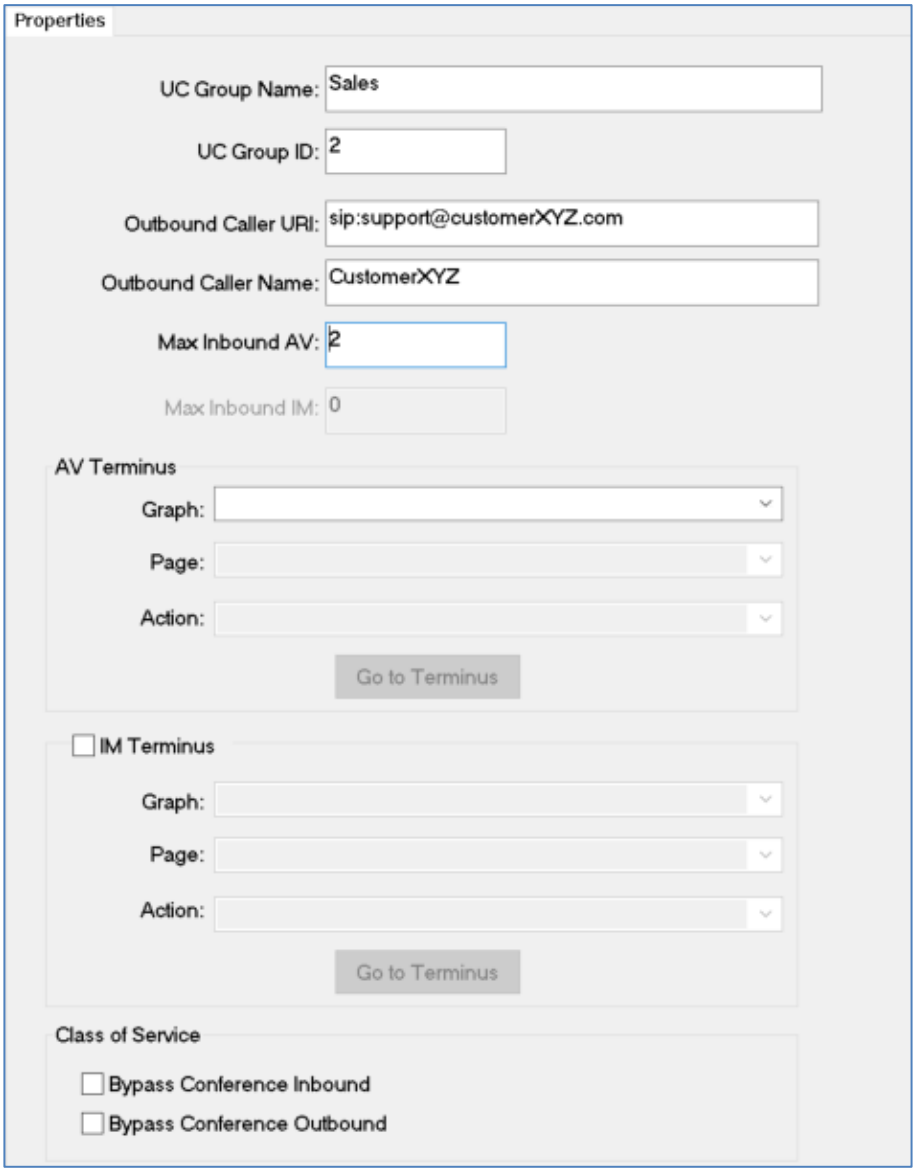
2. Open a UC Group to view the UC addresses that are currently assigned to the group.

   The assigned UC addresses are displayed.



3. Click on a UC Group to highlight it and view its configuration settings.

   The ‘Properties’ page for the UC group appears in the detail view.



The following table provides more information on each of the settings on the UC Group Properties page.

UC Group Settings	
Setting	**Description**
UC Group Name	Enter a name for the UC Group. This display name helps identify the purpose of the Group to users. This name can be up to 40 characters in length. Information about this group is presented in ice reports, under the name of the group.
UC Group ID	The internal Group ID that is used to identify this group.
Outbound Caller URI	Specify the From URI that ice will place outbound SIP calls under certain calling scenarios. **Note:** Depending on the configured options, the outbound caller URI may be derived from other data (such as the inbound caller URI.
Outbound Caller Name	Specifies the display name portion of the From URI that ice will place in outbound SIP calls.
Max Inbound AV	Maximum number of simultaneous inbound calls allowed in this group. **Note:** Once the maximum is reached, subsequent calls will be rejected with the AV Reject Code specified in workflow.
Max Inbound IM	Maximum number of simultaneous inbound IM sessions allowed in this group. **Note:** Once the maximum is reached, subsequent instant messages will be rejected with the IM Reject Code specified in workflow.
AV Terminus	This defines the action to start on when an inbound AV call is received in ice. Typically this is a Wait For Incoming Call action. For more information on workflow actions, refer to the iceWorkflow Designer User Manual.
IM Terminus	This is an optional setting: this defines the action to start on when an inbound IM session is received in ice. Typically this is a Wait For Instant Message action. For more information on workflow actions, refer to the iceWorkflow Designer User Manual. **Note:** If you do not want to allow IM handling, you can leave the checkbox unchecked. In this case, inbound IMs will be rejected with the IM Reject Code.

This section has explained how to navigate to an existing UC Group. The sections that follow describe how to add and modify settings for a UC Group.

Adding a UC Group

A UC Group can be added or modified to meet requirements for new UC addresses.

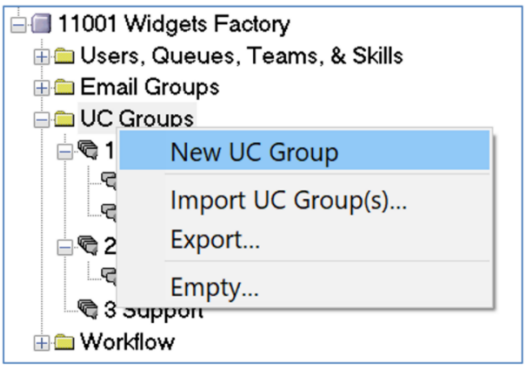
Note: To add a UC group, you must be in Edit Mode and have a user type that allows you to access the UC Groups folder. For more information on permissions on iceAdministrator, refer to page 26.

Adding a UC group involves adding a new profile to the IM Groups folder in the tree view.

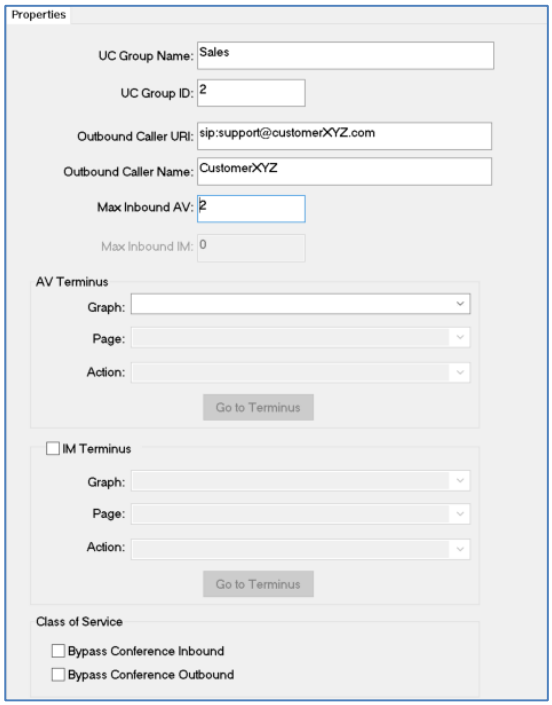
To add a UC group:

1. Right-click on the *UC Groups* folder in the tree view.

   A menu appears.



2. Select *New UC Group* from the menu. The 'Properties' page for the new UC group appears in the detail view.



3. Fill in the appropriate fields. For more information about each field, refer to the table that follows.
4. From the File menu, choose *Save*. (To cancel the save operation, click *Cancel* on the 'Progress' dialog box.)

Note:

- Once a UC Group has been created, you must create a route to use the group for calls, otherwise they will fail.
- The UC group cannot be saved until the fields in the AV Terminus section has been filled, as described in the section that follows.

Defining a Terminus

You must specify an AV Terminus to save the UC Group. You can also specify an IM Terminus, if you wish to route IMs through workflow. A Terminus is a starting point for audio calls and IMs in workflow. Any audio calls and IM that is sent to a UC address that is part of the UC group is directed to the terminus that you specify.

If you are not already familiar with workflow, then you may wish to review the iceWorkflow Designer User Manual. To create a terminus, workflow must already be created, and you must be familiar with the following terms:

- In general, workflow is used to create logical routing for contacts. Workflow is composed of graphs, pages, actions, and links, as described below.

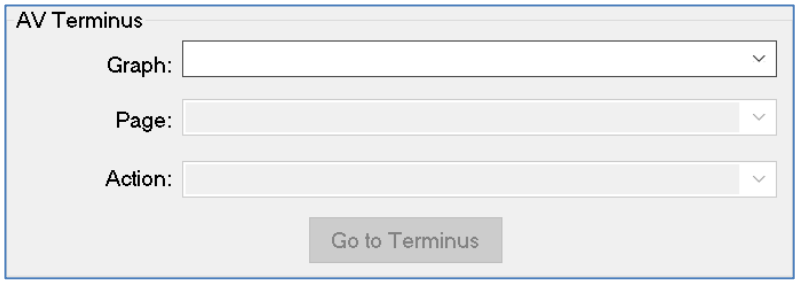
- A workflow graph is a holding place for one or more workflow pages that may or may not be linked together. For example, workflow can become so large that it requires the canvas of two workflow pages, and these pages are usually part of the same workflow graph.
- A workflow page holds the workflow that has been designed for your contact center.
- Actions are placed on the workflow page. Links are placed between the actions to create the logical routing for contacts.

  Note: To modify a UC group, you must be in Edit Mode and have a user type that allows you to access the UC Groups folder that is part of iceAdministrator's tree view. For more information on permissions on iceAdministrator, refer to page 26.

To define the AV terminus for a UC group:

1. Navigate to the UC group for which you want to define the terminus.

   For this process, you need to work with the 'AV Terminus' area that is part of the 'Properties' page.



2. Select the appropriate workflow graph from the 'Graph' drop-down list.

   The graph that you select should contain the workflow page to which you wish to direct calls and emails.

3. Select the appropriate workflow page from the 'Page' drop-down list.

   Only the pages belonging to the graph you selected are listed.

4. Select the appropriate action from the 'Action' drop-down list.

   Only the actions on the workflow page you selected are listed. Contacts that arrive on this UC group are directed to the selected action.

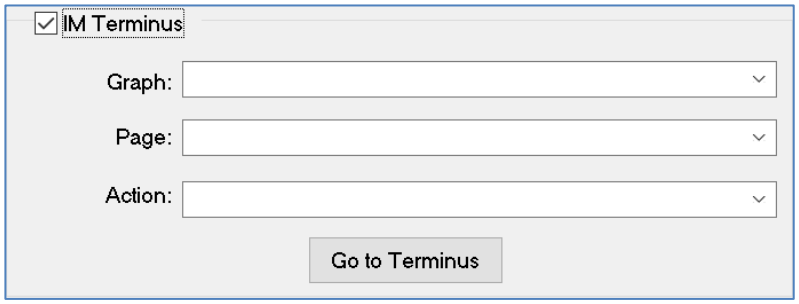
5. From the File menu, choose *Save*. (To cancel the save operation, click *Cancel* on the 'Progress' dialog box.)

   All audio calls that are sent to a UC address that is part of this UC group will be directed to the terminus that you have selected. Click *Go to Terminus* if you wish to view the starting point in the workflow for the audio message.

To define the IM terminus for a UC group:

1. Navigate to the UC group for which you want to define the terminus.

   For this process, you need to work with the 'IM Terminus' area that is part of the 'Properties' page.



2. Enable IM Terminus to make the options available.
3. Select the appropriate workflow graph from the 'Graph' drop-down list.

   The graph that you select should contain the workflow page to which you wish to direct instant messages.
4. Select the appropriate workflow page from the 'Page' drop-down list.

   Only the pages belonging to the graph you selected are listed.
5. Select the appropriate action from the 'Action' drop-down list.

   Only the actions on the workflow page you selected are listed. Contacts that arrive on this UC group are directed to the selected action.
6. From the File menu, choose *Save*. (To cancel the save operation, click *Cancel* on the 'Progress' dialog box.)

   All IMs that are sent to a UC address that is part of this UC group will be directed to the terminus that you have selected. Click *Go to Terminus* if you wish to view the starting point in the workflow for the IM. For more information on adding UC addresses to the UC group, refer to the next section.

Adding a UC Address

UC addresses can be added to a UC group to meet new requirements for the contact center. UC Addresses are SIP URIs from which contacts will be routed to ice for handling. They are associated with the Skype for Business account for the ice server.

Example: sip:LiamGerbert@widgets.ca

UC Addresses must be configured both in Skype for Business and in the iceAdministrator UC Group settings before they can be used. This should be completed by someone who knows how to provision a Skype for Business address.

UC addresses. These instructions assume that the appropriate steps have been taken to add the UC address to the Skype for Business Server and that messages sent to the new address are directed from the Skype for Business Server to the ice server.

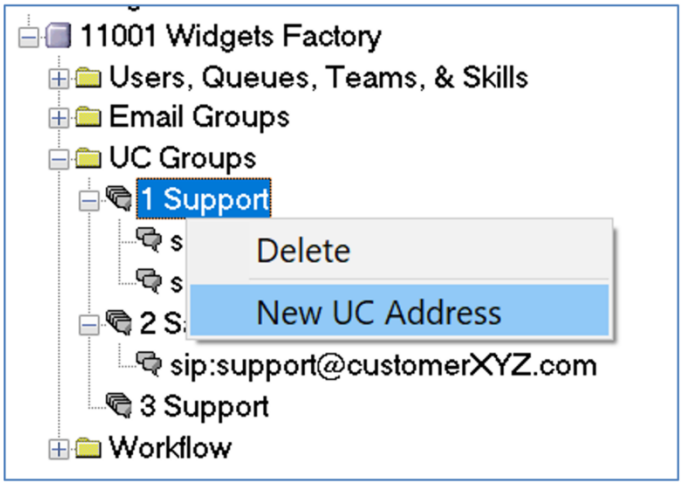
Note:

- To modify a UC group, you must be in Edit Mode and have a user type that allows you to access the UC Groups folder that is part of iceAdministrator's tree view. For information on permission levels and user types, refer to page 26.

To add UC addresses to a UC group:

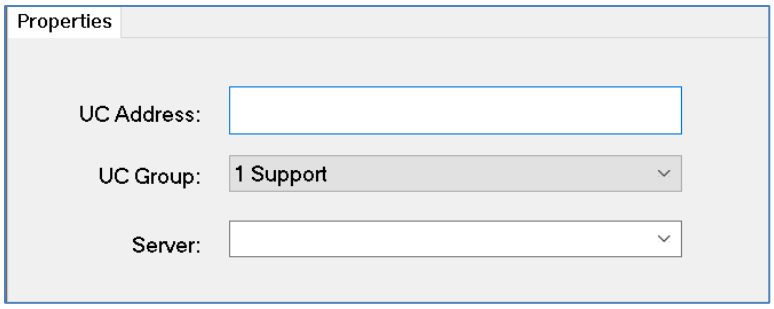
1. Navigate to the UC group that requires additional addresses.
2. Right-click on the UC group.

   A menu appears.



3. Select *New UC Address* from the menu.

   The 'Properties' page for the UC address appears in the detail view.



4. In the 'UC Address' field, enter the UC address from which your contact center will receive calls and instant messages.

   Example of required format: sip:LiamGerbert@widgets.ca

   The UC address can be up to 256 characters in length.

5. From the File menu, choose *Save*. (To cancel the save operation, click *Cancel* on the 'Progress' dialog box.)

   This section has explained how to add UC addresses to a UC group. The section that follows explains how to delete a UC address.

Deleting a UC Address

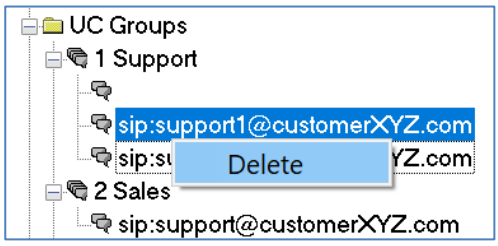
A UC address that is no longer required can be deleted from iceAdministrator. The following instructions assume that the UC address has already been removed from the Skype for Business Server, or is no longer directed to ice.

Note: To modify a UC group, you must be in Edit Mode and have a user type that allows you to access the UC Groups folder that is part of iceAdministrator's tree view. For information on permission levels and user types, refer to page 26.

To delete a UC address that is no longer required:

1. Right-click on the UC address in the tree view.

   A menu appears.



2. Select *Delete* from the menu that appears.
3. From the File menu, choose *Save*. (To cancel the save operation, click *Cancel* on the 'Progress' dialog box.)

This section has explained how to delete UC addresses from a UC group. The section that follows explains how to delete a UC group.

Deleting a UC Group and its UC Addresses

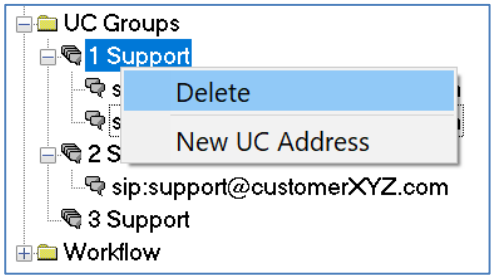
UC groups that are no longer required can be deleted from iceAdministrator. IM addresses are also deleted when the IM group they belong to is deleted.

Note: To delete a UC group, you must be in Edit Mode and have a user type that allows you to access the IM Groups folder that is part of iceAdministrator's tree view. For more information on permissions on iceAdministrator, refer to page 26.

To delete an IM group that is no longer required:

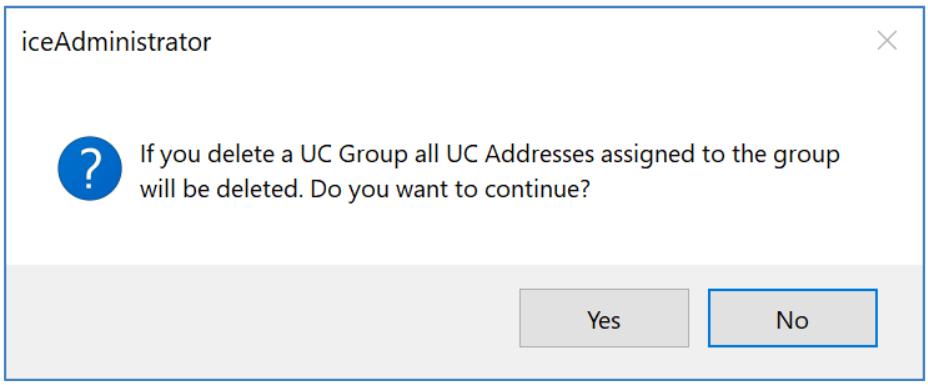
1. Right-click on the IM group in the tree view.

   A menu appears.



2. Select *Delete* from the menu that appears.

   A message box appears to notify you that deleting the IM group also deletes all IM addresses that are part of the group.



3. Click *Yes* to proceed, or click *No* to cancel the deletion.
4. From the File menu, choose *Save*. (To cancel the save operation, click *Cancel* on the 'Progress' dialog box.)

This section has explained how to delete a UC group. The section that follows explains how to delete all UC groups.

Emptying the UC Groups Folder

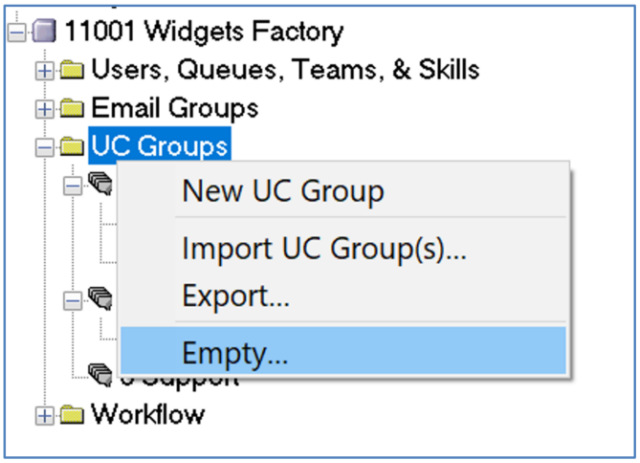
You may decide to delete all UC groups to avoid conflict messages when importing UC groups.

Note: To delete a UC group, you must be in Edit Mode and have a user type that allows you to access the IM Groups folder that is part of iceAdministrator's tree view. For more information on permissions on iceAdministrator, refer to page 26.

To delete all UC groups:

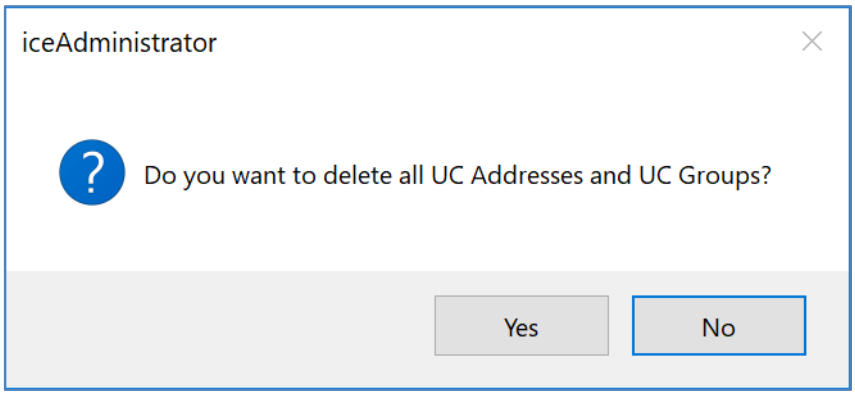
1. Right-click on the *UC Groups* folder.

   A menu appears.



2. Select *Empty* from the menu.

   A pop-up message box appears.



3. Click *Yes* to delete all of the UC groups and UC addresses or click *No* to cancel the deletion.
4. From the File menu, choose *Save*. (To cancel the save operation, click *Cancel* on the 'Progress' dialog box.)

Appendix A: Exporting and Importing

Data in iceAdministrator can be exported to a file (*.xml). You might use this feature to copy data from one system to another or to save items with incomplete properties. Once information has been exported, it can then be imported to another system, or to the same system. iceAdministrator supports the importing of .xml and .ima.

In general, to export data, right-click on a folder and select *Export* (refer to the 'Export Folder' column in the table below). To import data, right-click on the folder and select *Import* (refer to the 'Import Folder' column in the table below).

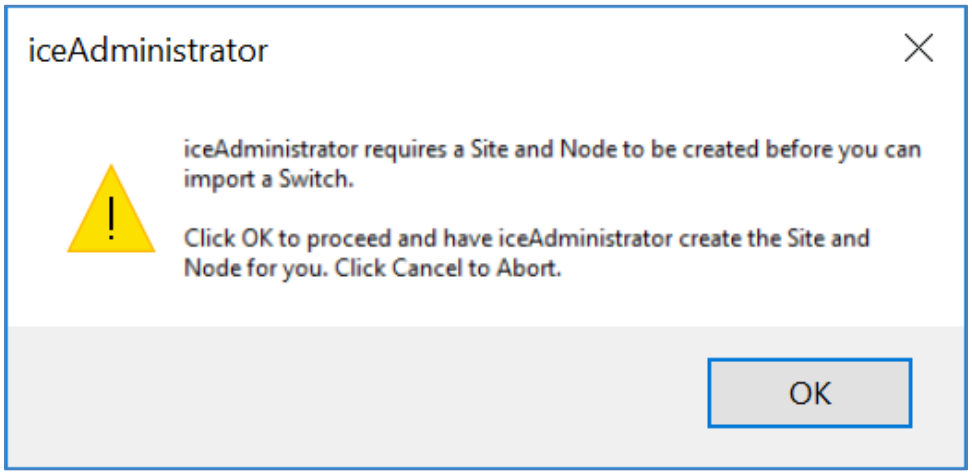
Importing and exporting			
Item(s)	**Description of Exported Data**	**Export Folder**	**Import Folder**
Users, Queues, Teams & Skills	All details of the users, queues, teams & skills that are part of the folder. **Note:** Users, queues, teams and skills can also be exported individually, as described below.	Users, Queues, Teams & Skills	Users, Queues, Teams & Skills
Users	All details of the users, except for queue assignments.	Users	Users
Queues	All details of the queues, except for user assignments.	Queues	Queues
Teams	All details of the teams, except for user assignments.	Teams	Teams
Skills	All skills.	Skills	Skills

Importing and exporting			
Item(s)	**Description of Exported Data**	**Export Folder**	**Import Folder**
Email Groups	All email groups, including the email addresses within each group.	Email Groups	Email Groups
Workflow	All details of the audio messages, holidays, variables, workflow graphs, and workflow pages.	Workflow	Workflow
Audio Messages	All audio messages.	Audio Messages	Audio Messages
Holidays	All holidays.	Holidays	Holidays
Building Blocks Folder	All details of the building blocks folder, including the individual building blocks and associated audio messages, variables, and routines.	Building Blocks Folder	Building Blocks Folder
Building Block	All details of the individual building block, including audio messages, variables, and routines.	Building Block	Building Blocks Folder
Routine	All workflow that is part of the routine.	Routine	Building Block
Variables	All user-defined variables.	Variables	Variables
Workflow Graphs	The workflow graph and all pages that are part of the workflow graph. All details of the audio messages, holidays, and variables that are used in the workflow graph.	Workflow Graph	Workflow
Workflow Pages	The workflow page and all details of the audio messages, holidays, and variables that are used on that workflow page.	Workflow Page	Workflow Graph
Switches	All details of each folder in the switch, and the properties for the switch (e.g., settings for statistics, etc.).	Switch	Node or Contact Center*
Nodes	All details for each switch within a node, and the properties for the node (e.g., node name and IP address of ice server).	Node	Site

Importing and exporting			
Item(s)	**Description of Exported Data**	**Export Folder**	**Import Folder**
Sites	All details for each node within a site, and the properties for the site (e.g., site name).	Site	Site or Contact Center
Contact Center	All details for each site that make up the contact center.	Contact Center	Contact Center

Note: If importing a switch to the Contact Center, you must select *Import Switch*. If a site and node do not already exist (e.g., if you are working offline), iceAdministrator automatically creates these items. A site and node are required before the switch can be added.

The following message appears to confirm the addition of the site and node.

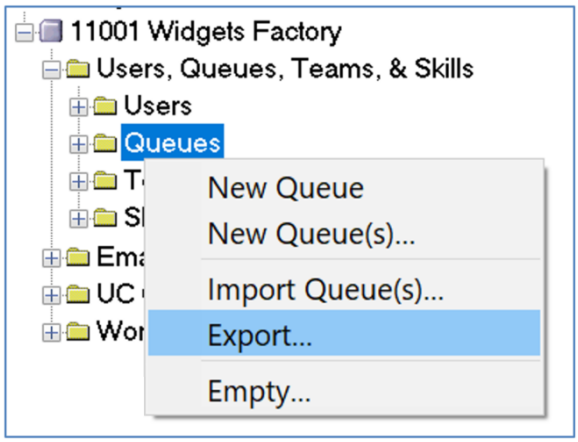


Exporting

iceAdministrator:

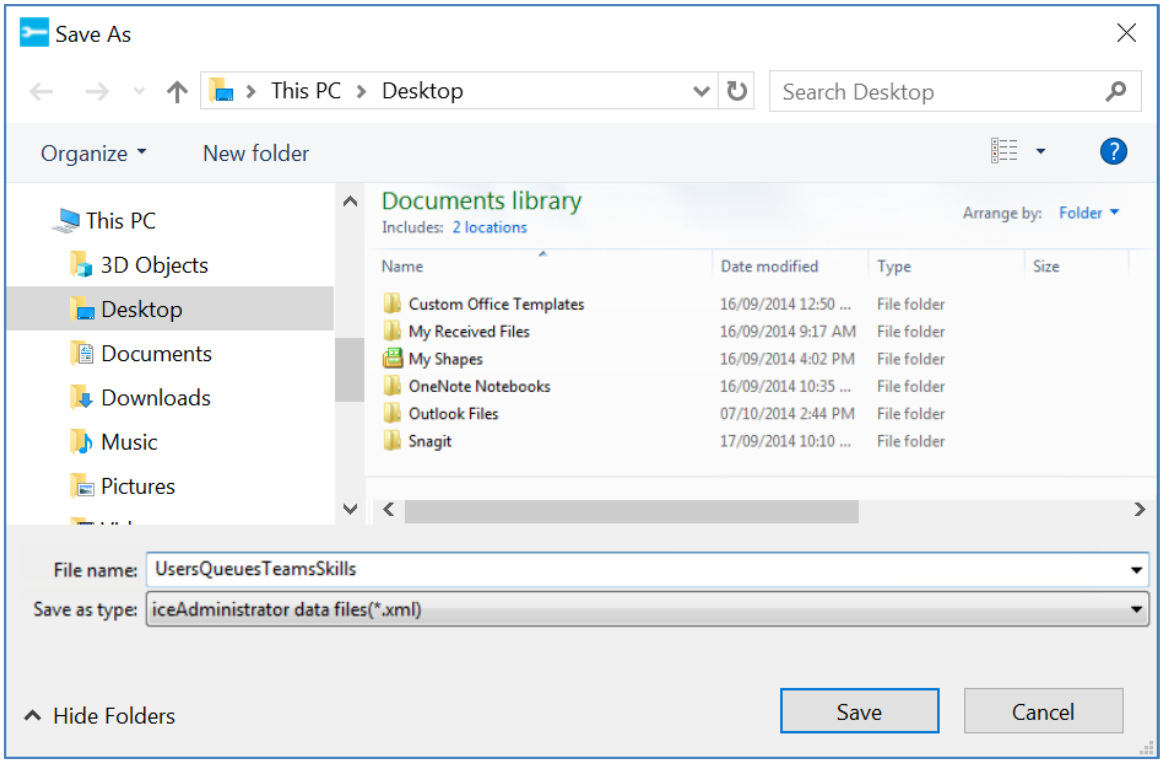
1. Right-click on the folder in the tree view that contains the data you wish to export.

   A menu appears, like the one below when you right-click on the *Queues* folder.



2. Select *Export* from the menu.

   The 'Save As' dialog box appears.



3. Select a directory where the exported data will be saved.
4. Type the name for the exported data in the 'File name' field.

The default name corresponds with the exported data. For example, if exporting queues, the default name is Queues.ima. If you change the name, it is recommended to use a name that allows you to easily recognize what the ima file contains.

5. Click *Save*.

   The data that you have selected is exported and saved to the chosen directory.

Importing

To make importing easier, it is recommended that you save your changes before you import the data. If you have changes with incomplete properties when you attempt to import data, you are prompted to complete the properties before you continue.

You can import .xml files and .ima.

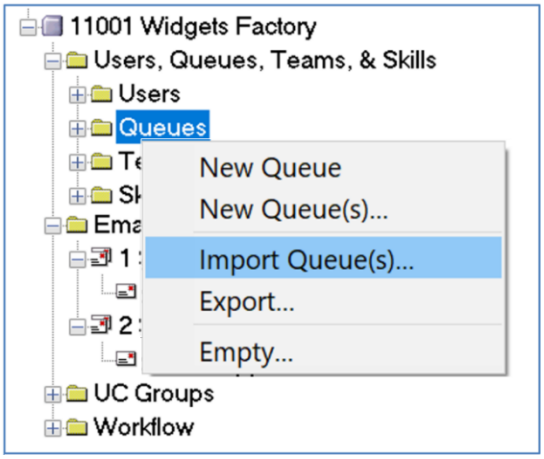
Caution: ice should not be receiving calls when you are importing workflow.

Note: To import to a new switch, you must first create the new switch in the DB tool, apply the license, and then port the file into the switch in iceAdministrator.

To import data:

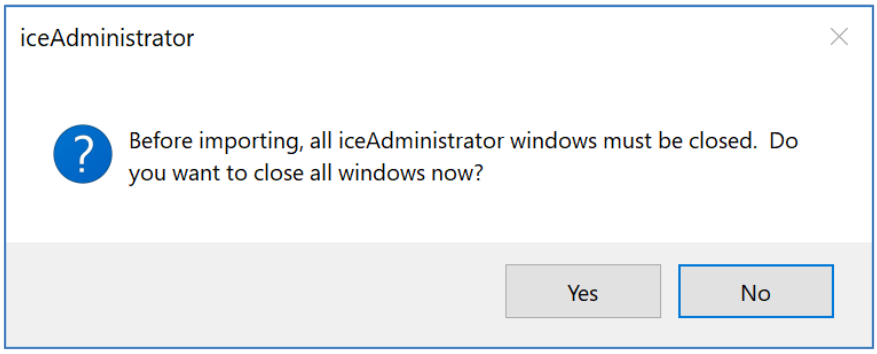
1. Right-click on the folder where you wish to import data.

   A menu appears, like the one below when you right-click on the *Queues* folder.



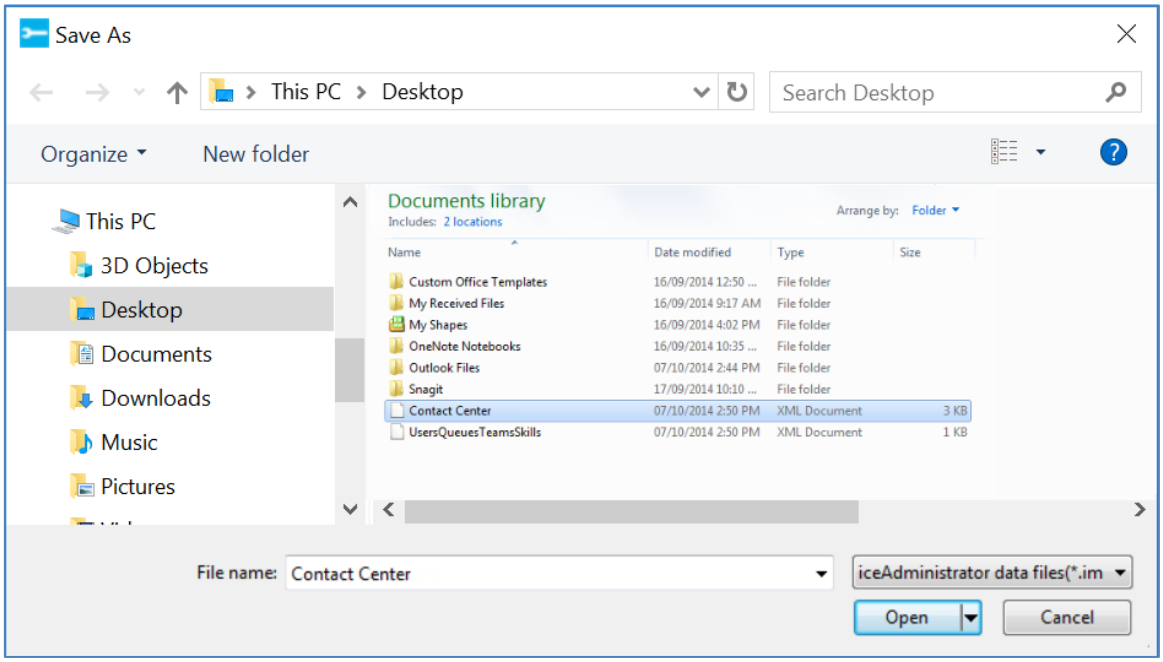
2. Select *Import* from the menu.

   If you have any windows open in the detail view of iceAdministrator, a message box appears.



3. Click *Yes* to close all windows in the detail view. Click *No* if you do not want to continue importing.

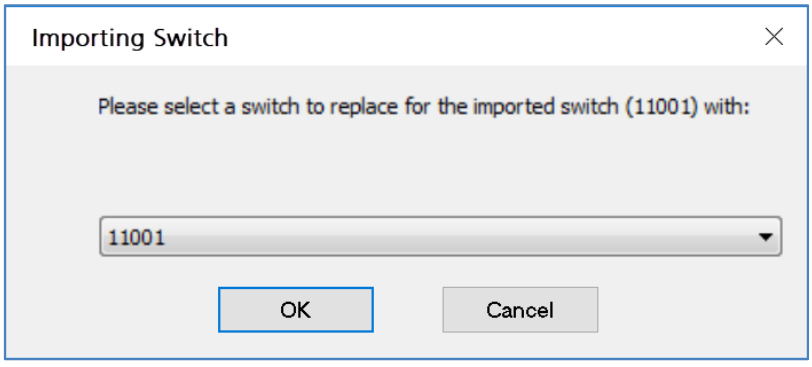
   The 'Open' dialog box appears.



4. Select the iceAdministrator file (*.ima) that you have previously exported, and click *Open*.

   Ensure that the file you are importing contains the correct data for the folder selected.

   Refer to the section that follows for an explanation of the messages that may appear while importing. For example, if any items that you are importing have the same ID as an existing item, an 'Import Conflict Resolution' dialog box appears.

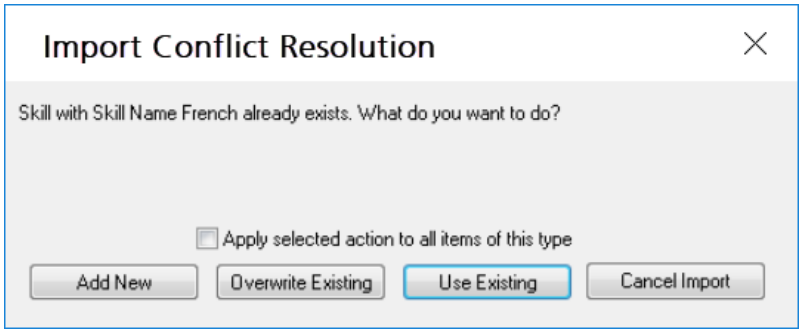


5. From the File menu, choose *Save*. (To cancel the save operation, click *Cancel* on the 'Progress' dialog box.)

Common Error Messages

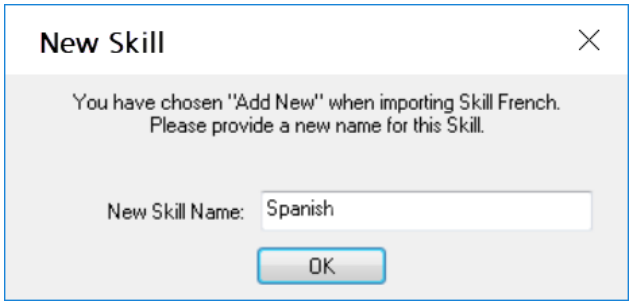
Duplicate Name

Within their respective folders, the skills, audio messages, and variables cannot have the same name. For example, if you import a skill that has the same name as an existing skill, you are prompted with an ‘Import Conflict Resolution’ dialog box.



You can choose to add a new skill, overwrite the existing skill with the same name, or discard the imported skill and use the existing skill. If you check the ‘Apply selected action to all items of this type’ checkbox, the option you choose is applied to all imported skills that are in conflict with existing skills. If you do not check this checkbox, the option you choose is only applied to the particular skill mentioned in the dialog box. You will have to repeat the conflict resolution process for every imported skill that has the same name as an existing skill.

If you click *Add New*, the ‘New Skill’ dialog box appears. Enter a unique name for the skill in this dialog box and click *OK*.

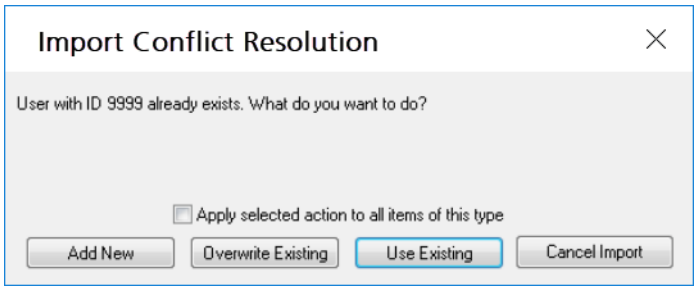


Duplicate ID

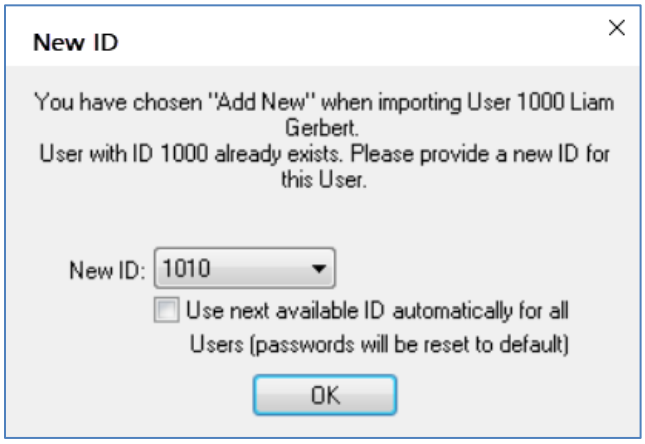
If any items that you are importing have the same ID as an existing item, an 'Import Conflict Resolution' dialog box appears.

- Select *Add New* to import the item and assign a unique ID (iceAdministrator uses the next available ID number).
- Select *Overwrite Existing* to copy the imported item over the existing item.
- Select *Use Existing* to discard the imported item (the existing item is unchanged).

If you check the 'Apply selected action to all items of this type' checkbox, the option you choose is applied to all imported items that are in conflict with existing items. If you do not check this checkbox, the option you choose is only applied to the particular item mentioned in the dialog box. You will have to repeat the conflict resolution process for every imported item that has the same ID as an existing item.



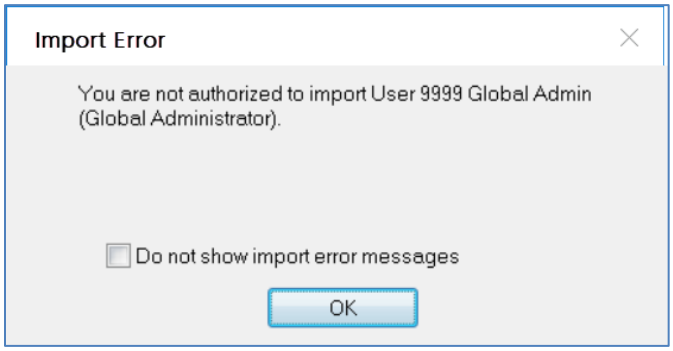
If you click *Add New,* the 'New ID' dialog box appears. Select a unique ID for the new user and select the option if you want iceAdministrator to use the next available ID for other users. Click *OK* after you have made the required changes.



Exceeding Permissions

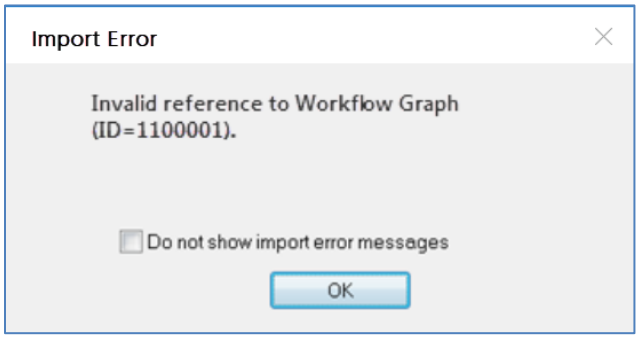
If you attempt to import an item that exceeds the permissions for your user type, the 'Import Error' dialog box appears. Click *OK* on this dialog box to continue importing. The

item that you have been warned about is not imported. For more information on permissions on ice, refer to page 26.



Invalid Workflow Reference

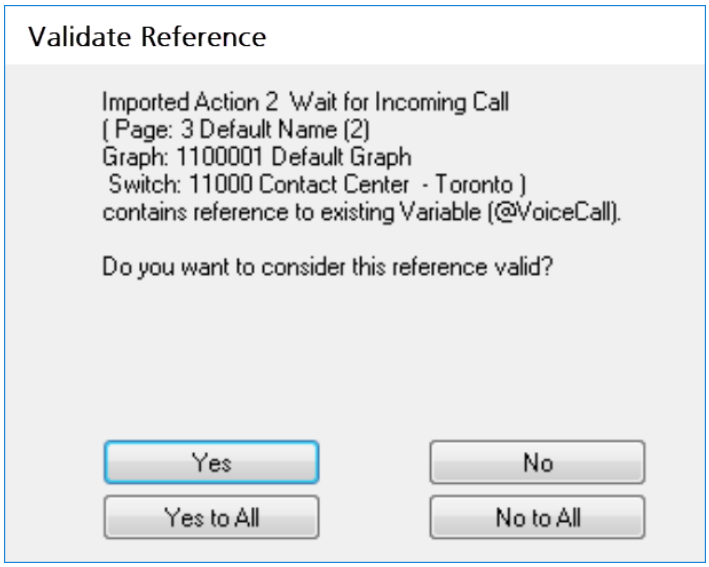
When importing email groups or workflow, the ‘Import Error’ dialog box appears if you attempt to import an item containing a reference to workflow that does not exist. Click *OK* on this dialog box to continue importing. You will need to complete the properties of the items with the invalid references before you can save your changes.



Validate Reference

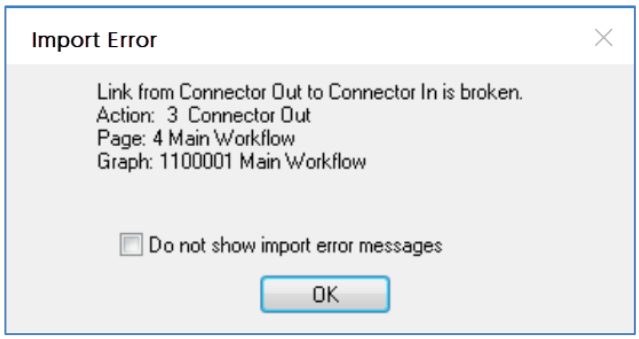
The 'Validate Reference' dialog box appears when you import contact groups (i.e., UC groups). This dialog box asks you to verify a reference to another item in iceAdministrator: for contact groups, the message asks you if the terminus contains a reference to existing workflow.

When prompted with this message, click *Yes* to validate the reference. Click *Yes to All* to validate all references. Click *No* to remove the reference. Click *No to All* to remove all references to other items in iceAdministrator. If you have selected *No* or *No to All,* you will need to complete the properties of the item(s) before your changes can be saved.



Broken Links

When importing a workflow graph or page, some links between pages may be broken. The 'Import Error' dialog box notifies you of broken links. Click *OK* to continue importing. When importing is completed, you will need to manually repair the broken links before your changes can be saved.



Exporting and Importing Workflow

When importing a workflow page, iceAdministrator automatically completes actions when the ID in the action matches the appropriate component in iceAdministrator. In the case of queues, if no queue in iceAdministrator with an ID matching the one in the action exists, it will be created as part of the import process. For other components, if no component in iceAdministrator with the same ID exists, the action will not be complete until that component is manually created in iceAdministrator. For example:

- If the Queue Object action has been used to register a contact in queue 6001, this action will be completed automatically. If queue 6001 does not already exist, it will be created in the Queues folder as part of the import process.
- If the Assign Skill to Object action has been used to assign a skill (e.g., with skill ID 2) to a contact, this action will be completed automatically, provided that the skill ID (e.g., skill ID 2) is found in the Skills folder. If the skill does not exist, the action will be incomplete.
- If the Play Audio Message action plays message 90011.wma. This action will be completed automatically, provided that message 90011.wma is added to the Audio Messages folder. If the message does not exist, the action will be incomplete.

The automatic completion of actions requires special attention when you import workflow that was created on a different switch. In this scenario, it is important that the Queue Object actions, Skills actions, Play Audio Message actions, etc. are double-checked to ensure they are using the appropriate queues, skills, and audio messages.

Import Settings

Import settings allow you to:

- Configure iceAdministrator's actions when an item being imported has the same ID as an existing item in iceAdministrator.
- Configure a prompt for a new switch number when importing switches.

Import Actions

By default, all items are set to 'Prompt Me', allowing you to decide which action to take while importing the data.

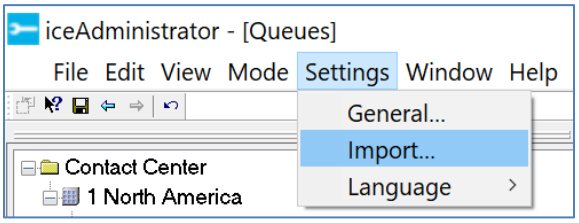
You can change the default setting of 'Prompt Me' to one of the following:

- Add New Item – if an item with the same ID is found, the imported item is created with a different ID number (i.e., the first available ID number).
- Overwrite Existing – if an item with the same ID is found, the imported item overwrites the existing item.
- Use Existing – if an item with the same ID is found, the item is not imported. The existing item is unchanged.

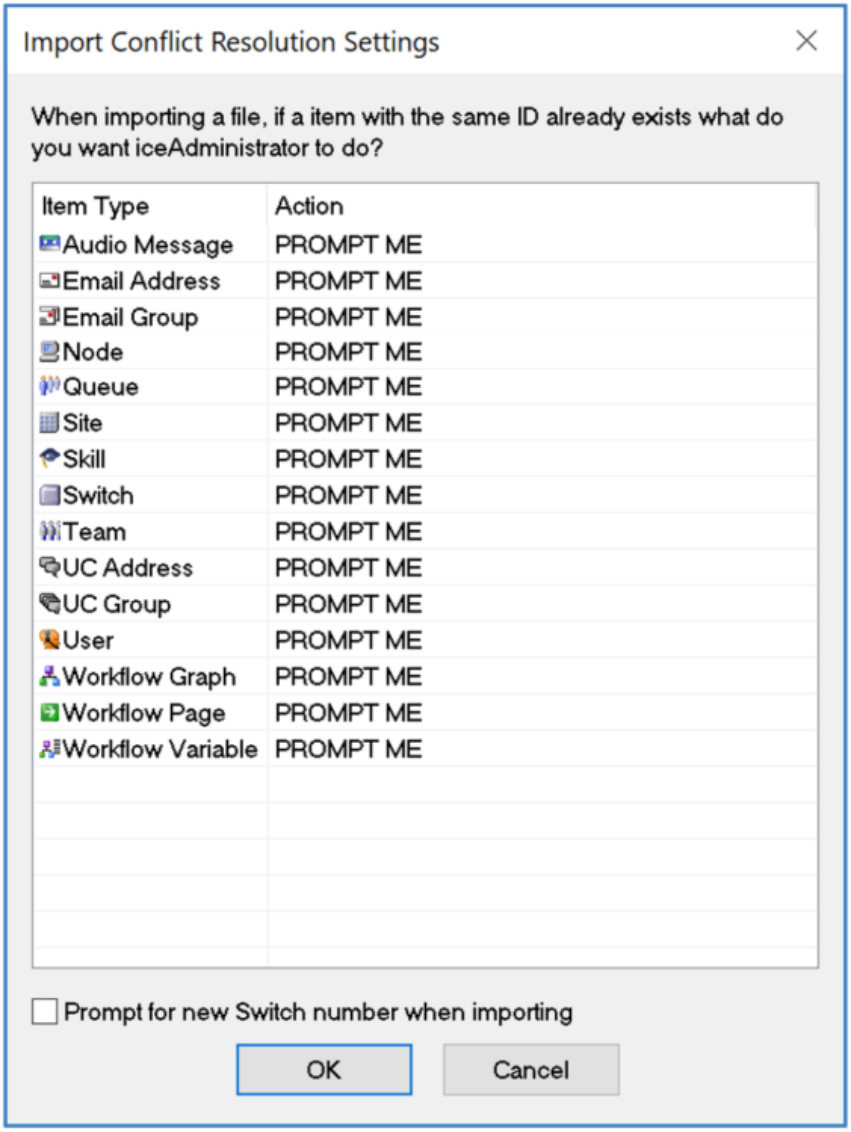
You can choose one of these options for each item that can be imported. The option to Add New Item is not available for Configuration Value and Email Address.

To change import settings:

1. Select *Import* from the Settings menu.

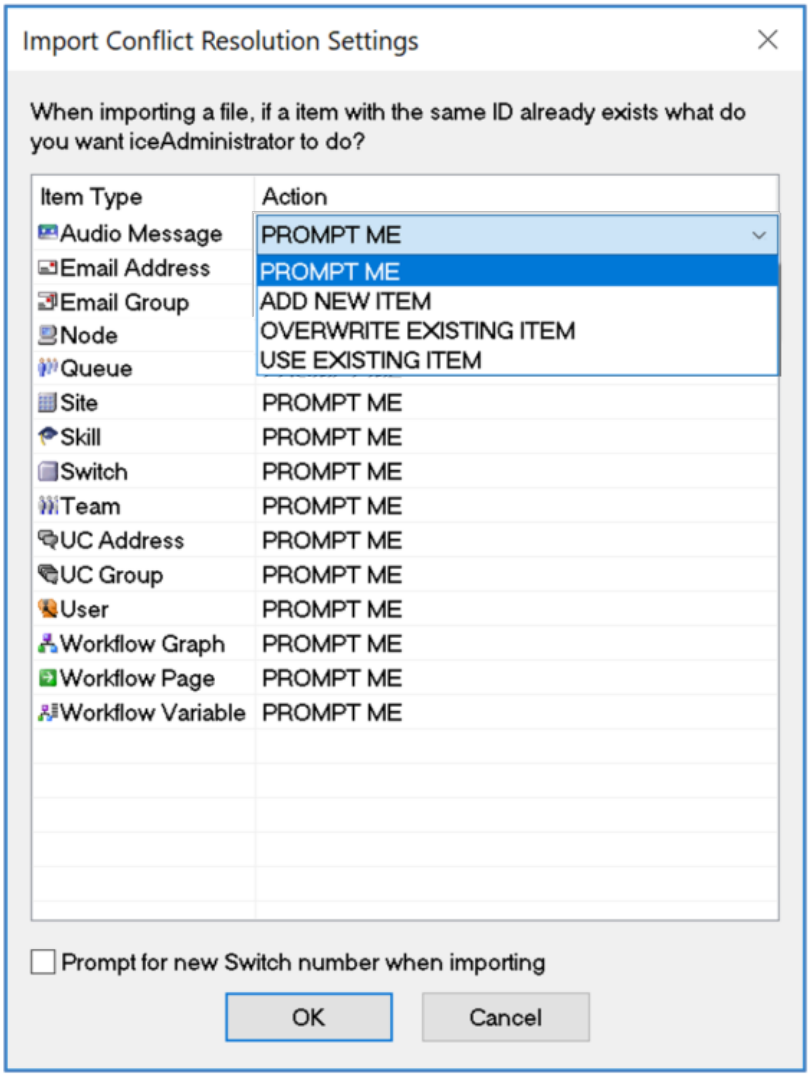


The 'Import Conflict Resolution Settings' dialog box appears.



2. To change the default action for an item, double-click directly in the action field for that item.

   A drop-down list appears with a list of options.



3. Select the option that you want to use for the item, as described on page 219.
4. Click *OK* to save your changes and close the dialog box. Click *Cancel* to close the dialog box without saving your changes.

   The new settings will be used the next time you import data into iceAdministrator.

Prompt for New Switch

Click the ‘Prompt for Switch number when importing’ checkbox at the bottom of the ‘Import Contact Resolution’ dialog box if you wish to prompted to identify the destination switch number (e.g., 1 for switch 11001) each time you import a switch. If this checkbox is not checked, you will still be prompted if there are conflicts with an existing switch ID (provided ‘Prompt Me’ is selected as the import setting for switches).

Appendix B: Switches, Nodes, & Sites

Caution: This is an advanced topic and should not be attempted without first contacting Computer Talk.

Switches, nodes, and sites represent the hierarchy of an ice system in iceAdministrator:

- A switch contains all configuration required for a single contact center. In iceAdministrator, a switch can be expanded in the tree view to show the following folders: Users, Queues, Teams & Skills, Email Groups, UC Groups, and Workflow. Each folder represents a component of your contact center.
- A node is comprised of one switch or multiple switches. An ice server is essentially a node.
- A site is comprised of one node or multiple nodes. Multiple ice servers linked together form a site.

Note: To view and edit switches, nodes, and sites, you must have a user type that allows you to access these folders in iceAdministrator's tree view. This appendix assumes that you are familiar with the permissions on ice allowed to user types, as described in

Chapter 1: Getting Started.

Adding a Switch

Many ice systems have a single switch, node, and site at the time of installation. When the needs of your contact center change, there may be a requirement to add a new switch.

Consider the following example. An ice system can be “shared” between two contact centers. For example, two departments in the same company might use the same ice system for their respective contact centers. In this scenario, each department could be configured with its own switch, which can also be thought of as a partition of the ice system.

Caution: This is an advanced topic and should not be attempted without first contacting Computer Talk.

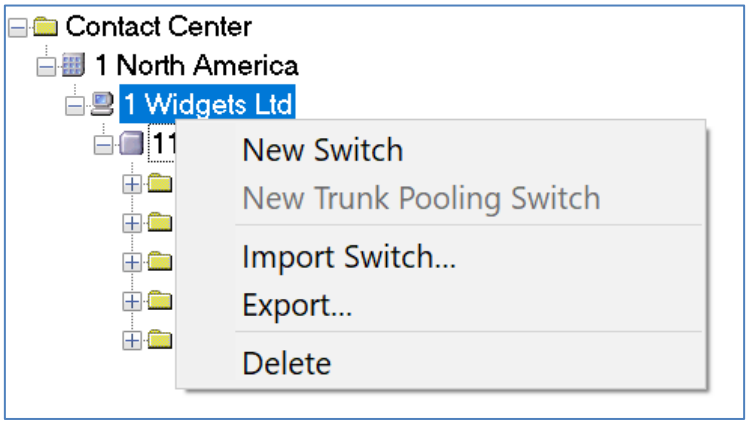
Note:

- To add a switch, you must be in Edit Mode and have a user type that allows you to access the Switch folder that is part of iceAdministrator’s tree view. For more information on permissions on iceAdministrator, refer to page 26.
- Adding a switch requires that the ice server be restarted.

To create a new switch:

1. Right-click on the *Node* folder in the tree view.

   A menu appears.



2. Select *New Switch* from the menu.

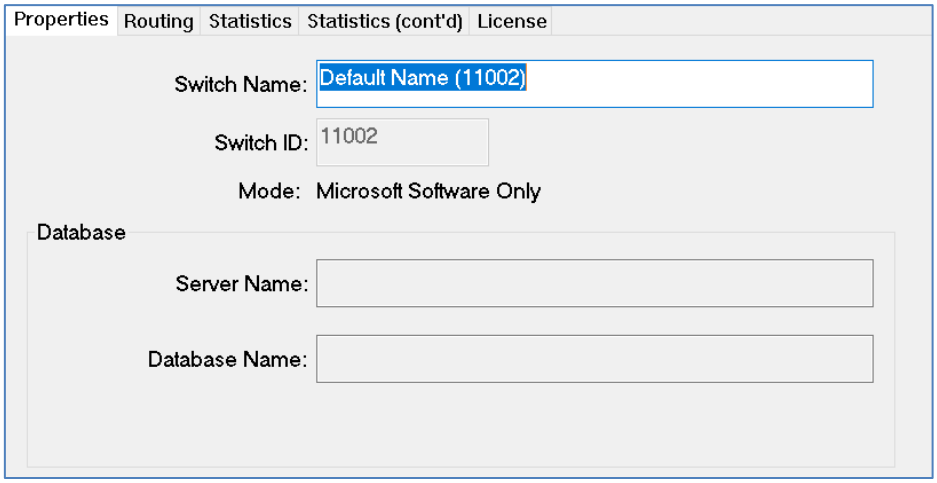
   A message box displaying the following message appears:

   “ice Server must be restarted in order to use a newly created switch. Do you want to continue?”

3. Click *Yes* to continue. Click *No* if you do not want to add a new switch.

   Note: The message in Step 2 is a reminder only. Clicking *Yes* does not start the ice server restart. You will still have to do restart ice in order to use the newly created switch.

   Five tabs appear in the detail view: 'Properties', 'Routing' 'Statistics', 'Statistics (cont'd)', and 'License.' By default, the 'Properties' page is displayed.



4. Specify a name for the switch in the 'Switch Name' field.

   The name can be up to 40 characters in length.

   A switch name can be changed at any time. Before you can save the switch, you must enter a valid license code, as described on page 239.

Routing

Caution: This is an advanced topic and should not be attempted without first contacting Computer Talk.

The ‘Routing’ page provides access to the configurable parameters for routing at the switch level. Perl Compatible Regular Expressions (PCRE) is used to define routing rules for outbound calls. These settings are not frequently modified. Changes to the Routing settings can only be performed by a node administrator, site administrator and global administrator. Changes should be made only by individuals familiar with the Regular Expression syntax. The PCRE library is a set of functions that implement regular expression pattern matching using the same syntax and semantics as Perl 5. PCRE has its own native API, as well as a set of wrapper functions that correspond to the POSIX regular expression API. More Information on PCRE is readily available on the Internet.

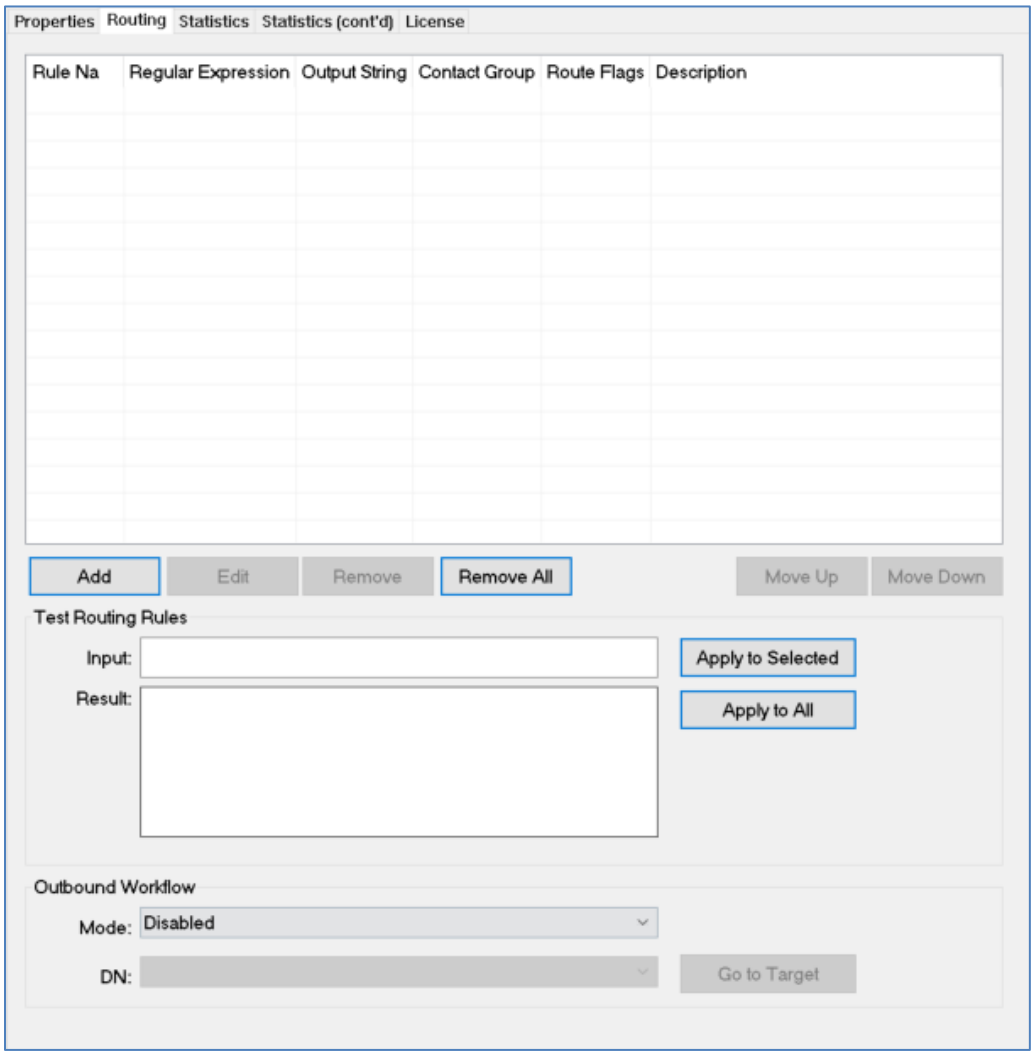
Changes to these settings must then be saved and the ice server would need to be restarted.

Multiple routing rules can be configured on a switch.

Examples of routing rules:

- All calls placed to area code 905 will be assigned a particular contact group.
- All calls placed to 705 and 514 area codes will be prefixed with a 1.

The default Routing page is shown below.



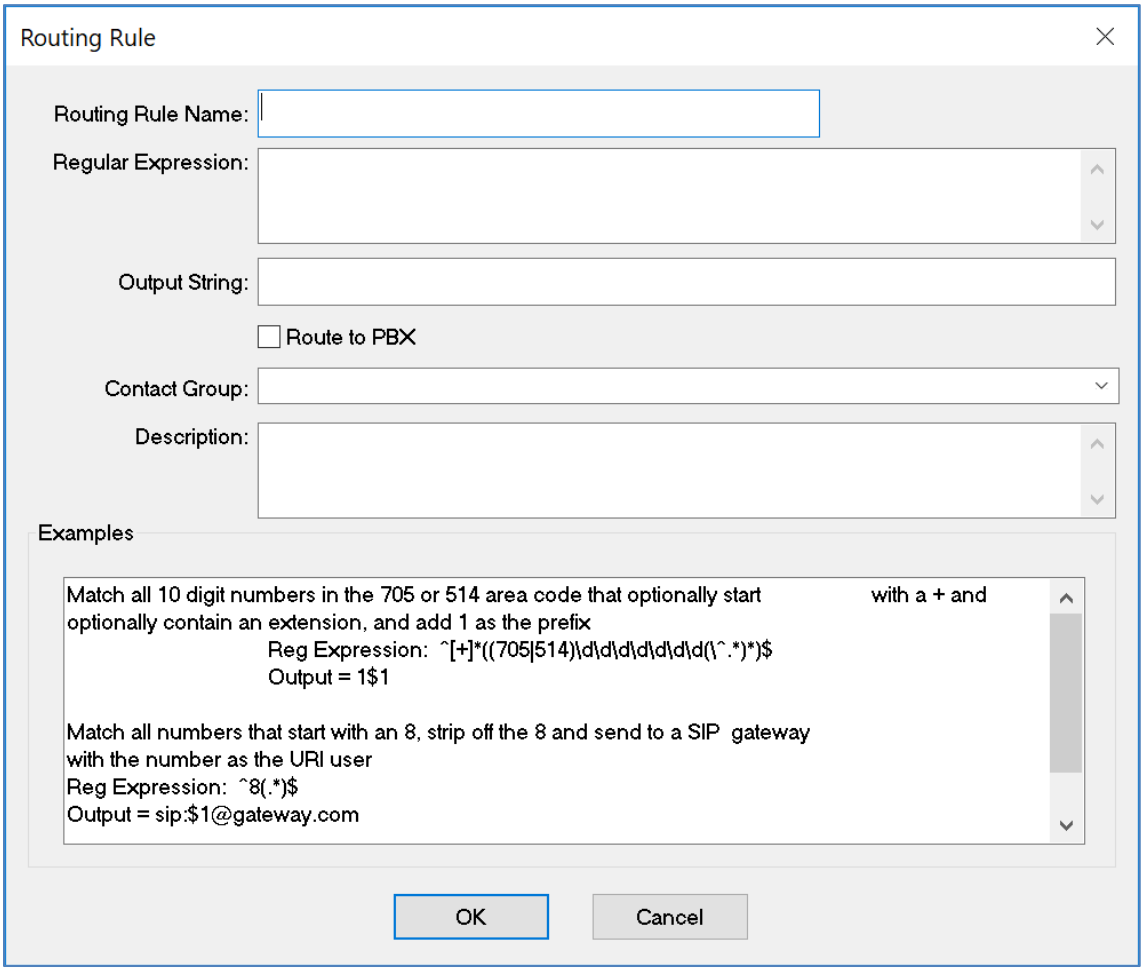
The table that follows describes the settings found on the routing page:

Routing	
Field	**Description**
Routing Rule Name	A name for the routing rule, corresponding to its functionality.
Regular Expression	Contains your PCRE syntax.
Output String	The end result of this routing rule if a match is found.
Contact Group	The contact group that corresponds to this routing rule.
Route Flags	Indicates whether this routing rule should be sent to a PBX.
Description	A description of this routing rule.

To add a new routing rule:

1. Click *Add* on the Routing page.
2. Fill out the fields as described in the Routing table.

   There are examples of PCRE code in the bottom portion of the window.



3. Click *OK* to add the routing rule to the table. Click *Cancel* to discard the routing rule.
4. Save your changes.

To edit a routing rule:

1. Highlight the rule you wish to edit by single-clicking on it.
2. Click *Edit*.
3. Edit the fields as described in the Routing table.
4. Click *OK* to add the routing rule to the table. Click *Cancel* to discard the edits.
5. Save your changes.

To remove a routing rule:

1. Highlight the rule you wish to remove by single-clicking on it.
2. Click *Remove*.
3. Save your changes.

The order of conditions within the Routing table is important because a search for a matching condition is performed from the top down, and the first matching condition is used to route the contact.

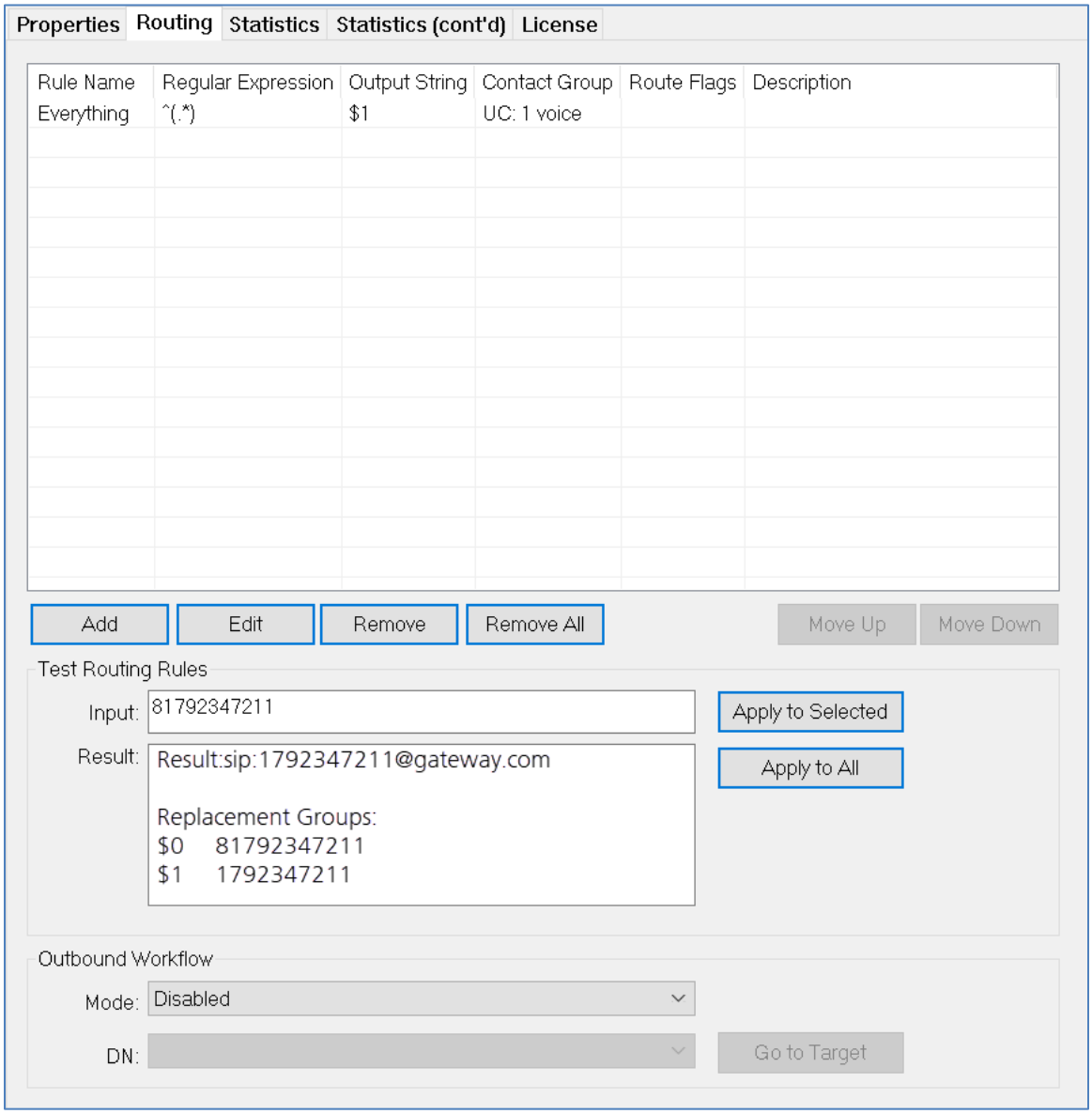
To change the order of the rules in the table:

1. Highlight the rule you wish to promote/demote.
2. Click *Move Up* to promote it or *Move Down* to demote it. Click the button as many times as required to move the condition to the desired position in the table.
3. Save your changes.

The Routing page provides a testing capability for your routing rules.

To test a routing rule:

1. Key in the input you wish to test. For example, 81792347211.
2. If you wish to test this input against a particular routing rule, highlight the row containing the rule and click *Apply to Selected*. To test this input against all rules, click *Apply to All*.



The result field will populate with the result based on the output string. In the example above, the phone number 81792347211 will become sip: 1792347211@gateway.com. The test verified that the regular expression was formatted correctly since the 8 was removed from the beginning of the number and sip: and @gateway.com were added to it.

Outbound Workflow

Instead of directly routing a call to a number that a user dials, the call can first be passed to an outbound workflow for inspection and treatment. Before you can enable outbound workflow for a user, the outbound workflow must already be created with an Assign DN action. Workflow has access to the number the user dialed through the variable $System:DialedNumber. For more information on variables and workflow, refer to iceWorkflow Designer User Manual.

Consider the following examples of outbound workflow:

- **Call blocking**: If the user attempts to dial a number that is restricted by workflow, the user hears a message indicating the number cannot be dialed.
- **Least cost routing**: Workflow determines the carrier with lowest rates for the number dialed. The call is placed using a UC Group associated with the lowest cost carrier.
- **Long distance PIN's**: If workflow determines that a dialed number is a long distance call, the user is prompted to enter a PIN before the call can be completed.
- **Dialed number manipulation**: For example, a user on SIP-based systems can place a call by dialing a telephone number. Outbound workflow can manipulate the number dialed so that it is in the appropriate format in order to be sent out to the SIP port. If the user dials 4162411234, the outbound workflow can generate the following dial string before the call is sent out on the sip port – for example, sip:4162411234@sipgateway.com.

For the switch, you can choose one of four modes of outbound workflow:

- **Disabled**: The default setting. There is no treatment of the user's outbound calls using outbound workflow.
- **All Calls Except Calls to Users**: This includes external calls and calls to workflow DN's (Dial Number). There is no treatment of the calls from the user to other users.
- **All Calls Placed**: This includes external calls, calls to workflow DN's, and calls to other users on ice.
- **External Calls Only**: Includes external calls only.

Outbound workflow can be enabled for the switch, as described in the following instructions, or it can be enabled on a user-by-user basis. For more information on enabling outbound workflow for a user, refer to page 82.

Caution: This is an advanced topic and should not be attempted without first contacting Computer Talk.

Note: To modify a switch, you must be in Edit Mode and have a user type that allows you to access the Switch folder that is part of iceAdministrator's tree view. For information on permission levels and user types, refer to page 26.

To enable outbound workflow for a switch:

1. Navigate to the switch that you wish to customize or modify.

   The ‘Properties’ page for the selected switch appears on the right side of the iceAdministrator window. This process calls for the outbound workflow part of the page.

2. From the ‘Mode’ drop-down list choose one of the four modes: Disabled, All Calls Except Calls to Users, All Calls Placed, and External Calls Only.

   If you have chosen any mode except Disabled, you must choose the DN that points to the outbound workflow from the ‘DN’ drop-down list.

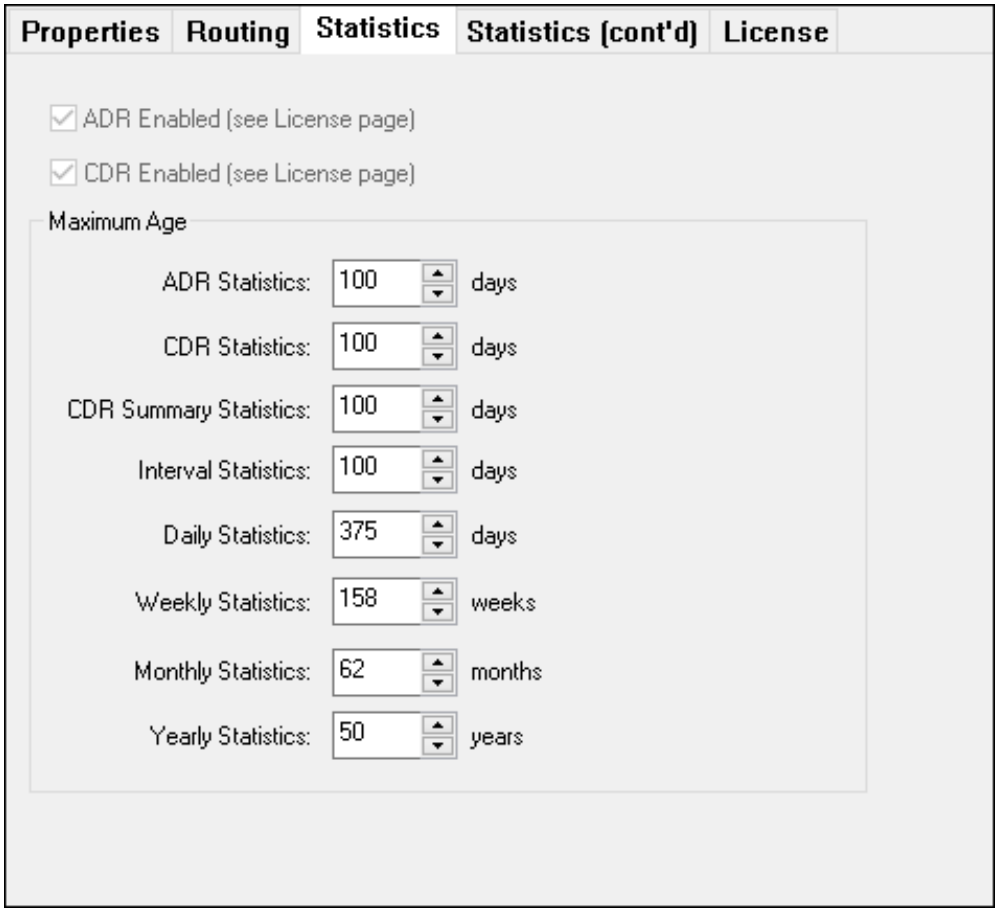
   You can click *Go To Target* to view the outbound workflow.

3. From the File menu, choose *Save*. (To cancel the save operation, click *Cancel* on the ‘Progress’ dialog box.)

Statistics

Caution: This is an advanced topic and should not be attempted without first contacting Computer Talk.

The ‘Statistics’ pages provide access to the configurable parameters for statistics generated by a switch. These settings are not frequently modified. Changes to the Statistic settings can only be performed by a Node Administrator, Site Administrator or Global Administrator. Changes to these settings must then be saved and the ice server would need to be restarted.



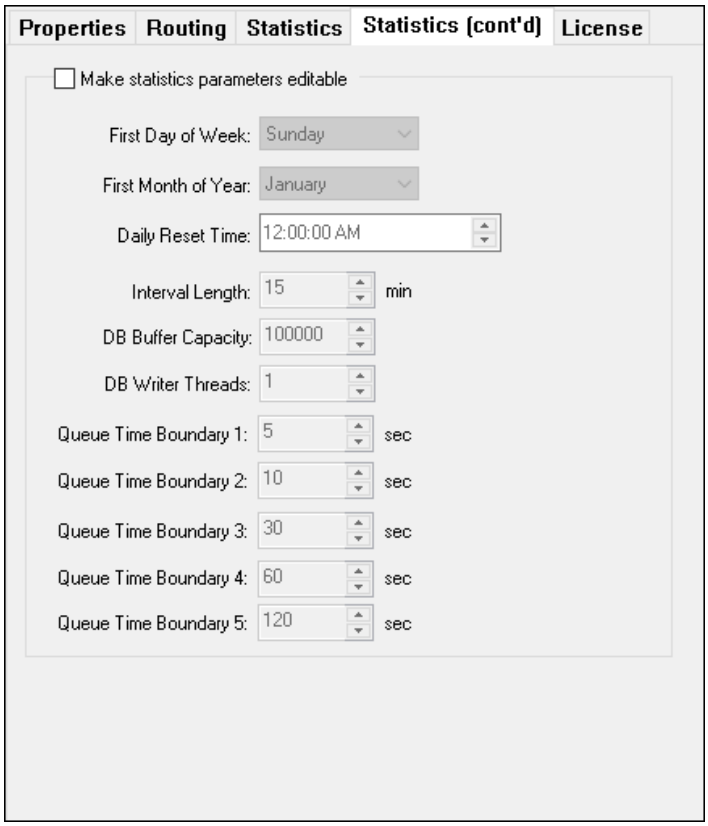
The table below describes the fields found on the ‘Statistics’ page.

Statistics	
Field	**Description**
ADR Enabled	Indicates if User Agent Detail Record (ADR) is enabled. For more information on ADR, refer to the iceReporting User Manual.
CDR Enabled	Indicates if Contact Detail Record (CDR) is enabled. For more information on CDR, refer to the iceReporting User Manual.
Maximum Age	Determines the number of days, weeks, months, or years that statistics are saved in the database. Statistics older than the selected number of days, weeks, months, or years are purged from the database.

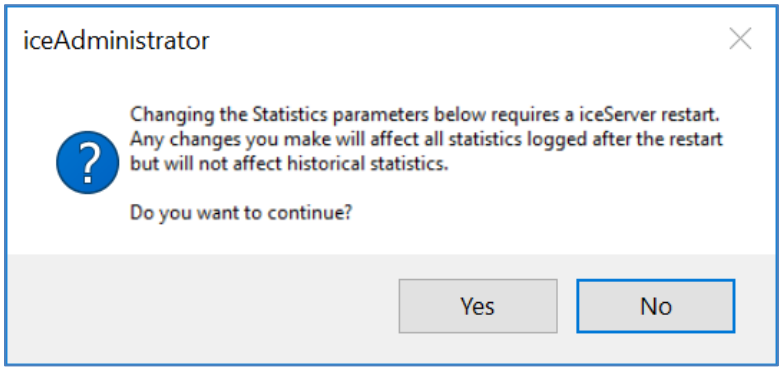
Statistics (Cont'd)

Caution: This is an advanced topic and should not be attempted without first contacting Computer Talk.

The Statistics (Cont'd) page contains advanced configurable statistics parameters. These settings are not editable by default, but if you enable 'Make statistics parameters editable', you will be able to change the values in the fields.



The following message appears when you enable 'Make statistics parameters editable.'



The table below describes the fields found in the 'Statistics (Cont'd)' page.

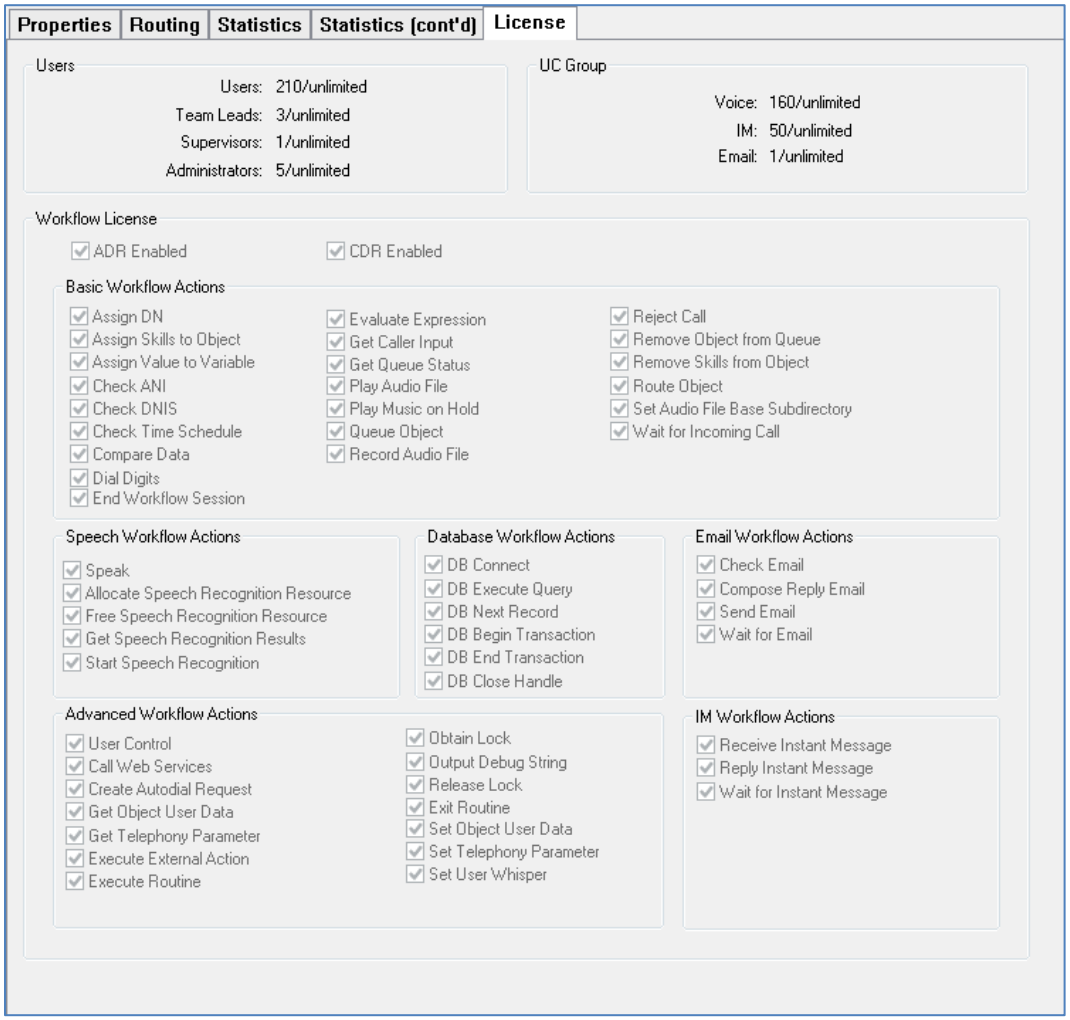
Statistics (continued)	
Field	**Description**
First Day of the Week	Determines the start of the week. By default, this is set to Sunday. If this setting is changed, the accuracy of previous statistics cannot be guaranteed. Statistics will be accurate from the date modified.
First Month of the Year	Determines the start of the year. By default, this is set to January. If this setting is changed, the accuracy of previous statistics cannot be guaranteed. Statistics will be accurate from the date modified.
Daily Reset Time	Determines when statistics are refreshed in the iceMonitor and in the 'Queue Statistics' window in iceBar. By default, these statistics refresh every day at 12: 00:00 AM. For more information on the iceMonitor, refer to the iceMonitor User Manual. For more information on iceBar, refer to the iceBar User Manual.
Interval Length	Determines how often interval statistics are written to the database. By default, interval statistics are written to the database every 15 minutes. Changes to this setting require that ice is restarted.
DB Buffer Capacity	Determines how many records are buffered in the event that ice loses connectivity to the database. By default, up to 100,000 records are buffered. Changes to this setting require a restart of ice.
DB Writer Threads	Allows concurrent database writes. The recommended setting is 3. This setting should not be changed unless you are instructed to do so by Computer Talk Technology, Inc. Changes to this setting require a restart of ice.

Statistics (continued)	
Field	**Description**
Queue Time Boundary 1 through to 5.	Boundaries are used in several reports. For example, a report can show how quickly contacts were handled based on the boundaries. By default the boundaries are set to 5, 10, 30, 60, and 120 seconds. Changes to these settings require a restart of ice. In the report sample below, the default boundaries affect the report by showing the number of contacts handled in 0-4 seconds, 5-9 seconds, 10-29 seconds, 30-59 seconds, 60-119 seconds, and >=120 seconds. Interval / Ctcs Offrd / Handled In This Queue: Total / 0-4 / 5-9 / 10-29 / 30-59 / 60-119 / >=120 Queue 3001 - Technical Support 08/06/02 — 29 — 28 — 4 — 14 — 8 — 1 — 0 — 1 **08/06/02-08/06/02 — 29 — 28 — 4 — 14 — 8 — 1 — 0 — 1**

License

The license page is an overview of the licenses you have available for your ice Contact Center.

Note: Contact Computer Talk to change your licenses.



Deleting a Switch

Caution: This is an advanced topic and should not be attempted without first contacting Computer Talk.

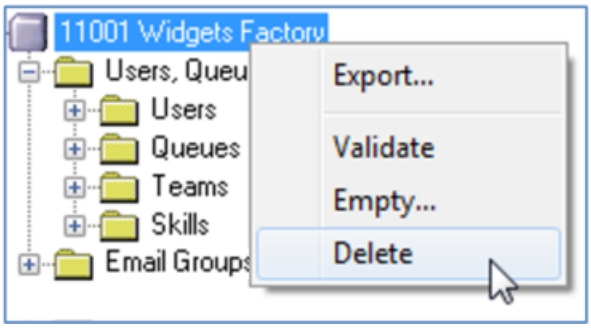
When a switch is no longer used, you may wish to delete it from ice.

Note: To delete a switch, you must be in Edit Mode and have a user type that allows you to access the switch folder that is part of iceAdministrator's tree view. For more information on permissions on iceAdministrator, refer to page 26.

To delete a switch:

1. In the tree view, right-click the switch that you wish to delete.

   A menu appears.



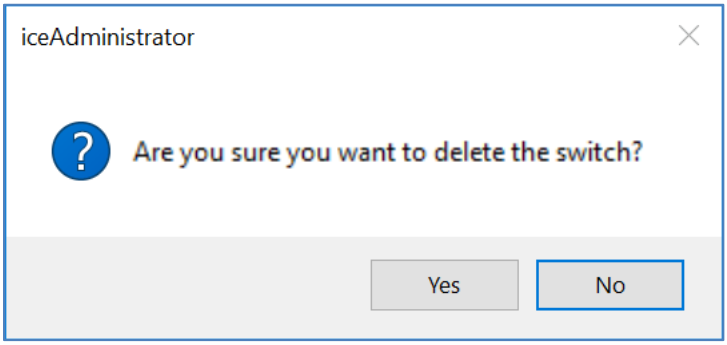
2. Select *Delete* from the menu.

   Note: If you are logged in as a user belonging to the switch you are trying to delete, a message box displaying the following message appears:

   "Cannot delete a switch containing current iceAdministrator user <user name>."

3. Click *OK* to close this message box.

   Otherwise, if you have permission to delete the switch, a message box appears.



4. Click *Yes* to confirm the deletion or click *No* to cancel.
5. From the File menu, choose *Save*. (To cancel the save operation, click *Cancel* on the 'Progress' dialog box.)

Emptying a Switch

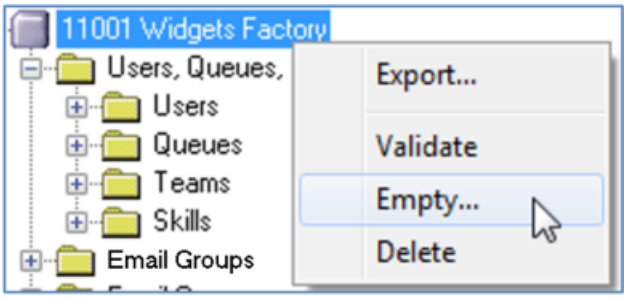
Caution: This is an advanced topic and should not be attempted without first contacting Computer Talk.

You may decide to delete all items in a switch to avoid conflict messages when importing a switch.

To delete all items in the switch:

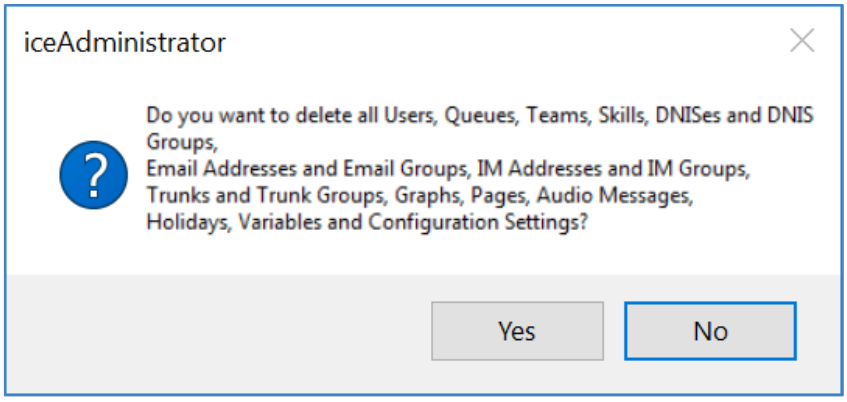
1. Right-click on the *Switch* folder.

   A menu appears.



2. Choose *Empty.*

   A warning appears.



3. Click *Yes* to delete the entire configuration for the switch, or click *No* to cancel the deletion.
4. From the File menu, choose *Save*. (To cancel the save operation, click *Cancel* on the 'Progress' dialog box.)

Adding a Node

Caution: This is an advanced topic and should not be attempted without first contacting Computer Talk.

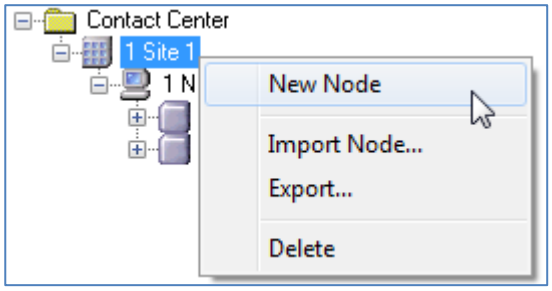
iceAdministrator. The instructions that follow assume that the appropriate hardware has been installed to support the new node. The instructions that follow assume that the appropriate hardware has been installed to support the new node.

Note: To add a node, you must be in Edit Mode and have a user type that allows you to access the Node folder. For information on permission levels and user types, refer to page 26.

To create a new node:

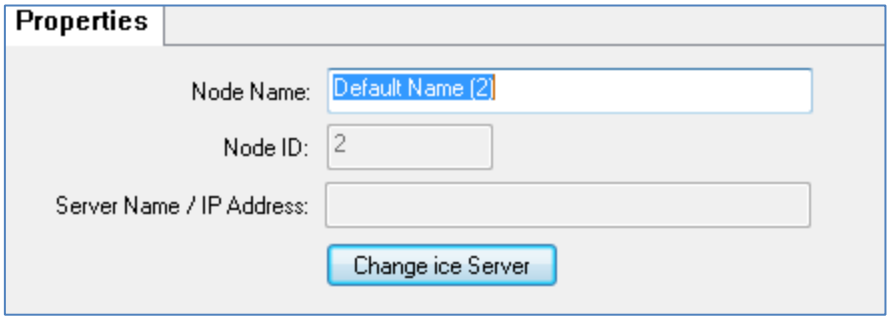
1. Right-click the *Site* folder in the tree view.

   A menu appears.



2. Select *New Node* from the menu.

   A ‘Properties’ page appears in the detail view.

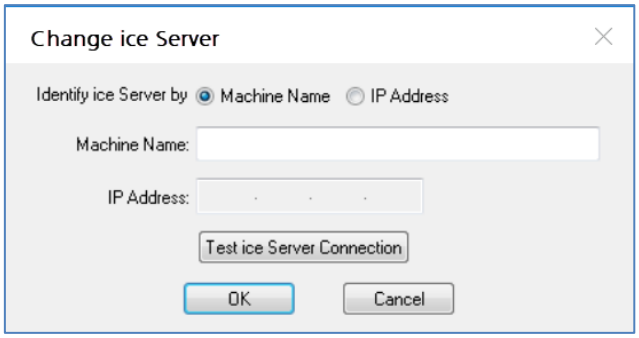


3. Specify a name for the node in the ‘Node Name’ field.

   The name can be up to 40 characters in length.

4. Click *Change ice Server*.

   The ‘Change ice Server’ dialog box appears.



5. In the ‘Machine Name’ field, enter the name of the ice server

   If the server name cannot be recognized, select the ‘IP Address’ radio button, and enter the IP address for the ice server into the ‘IP Address’ field.

6. Click *OK* to accept changes and close the dialog box, or click *Cancel* to cancel the changes and close the dialog box.

7. From the File menu, choose *Save*. (To cancel the save operation, click *Cancel* on the ‘Progress’ dialog box.)

Deleting a Node

Caution:

- This is an advanced topic and should not be attempted without first contacting Computer Talk.
- When deleting a node, all switches that are part of the node are also deleted.

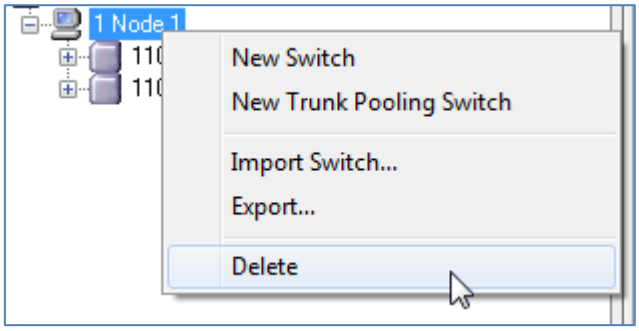
When a node is no longer used, you may wish to delete it from ice by following the steps below.

Note: To delete a node, you must be in Edit Mode and have a user type that allows you to access the Node folder. For more information on permissions on iceAdministrator, refer to page 26.

To delete a node:

1. In the tree view, right-click on the node that you wish to delete.

   A menu appears.



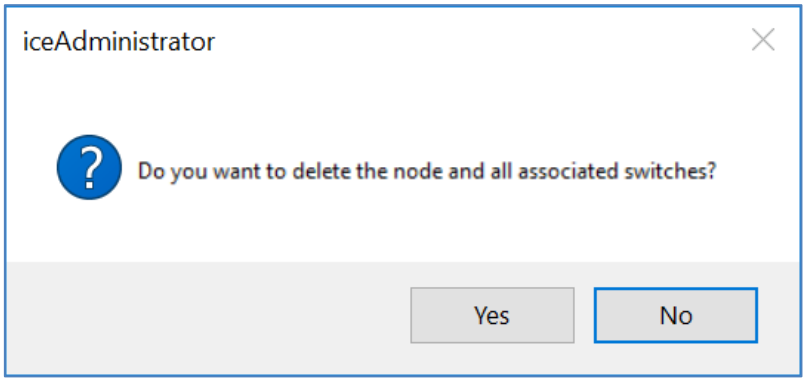
2. Select *Delete* from the menu.

   Note: If you are logged in as a user belonging to the node you are trying to delete, a message box displaying the following message appears:

   "Cannot delete a node containing current iceAdministrator user <user name>."

   Click *OK* to close this message box.

   Otherwise, if you have permission to delete the node, a pop-up message box appears.



3. Click *Yes* to confirm the deletion, or click *No* to cancel.

4. From the File menu, choose *Save*. (To cancel the save operation, click *Cancel* on the 'Progress' dialog box.)

Adding a Site

Caution: This is an advanced topic and should not be attempted without first contacting Computer Talk.

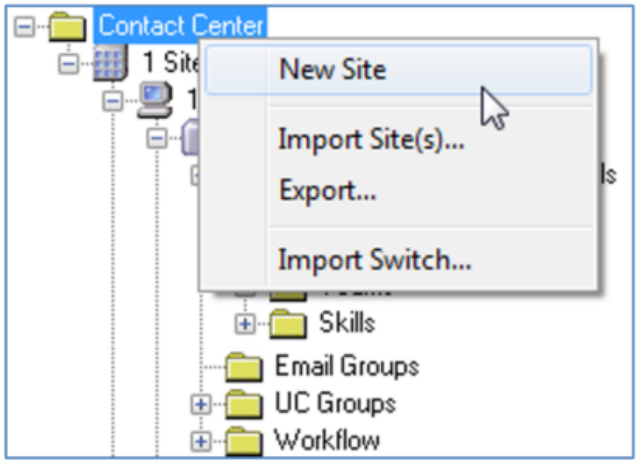
A site is comprised of one node or multiple nodes. Multiple ice servers linked together form a site. When an additional site is required, it can be added to iceAdministrator. The instructions that follow assume that the appropriate hardware has been installed to support the new site.

Note: To add a site, you must be in Edit Mode and have a user type that allows you to access the Site folder. For information on permission levels and user types, refer to page 26.

To create a new site:

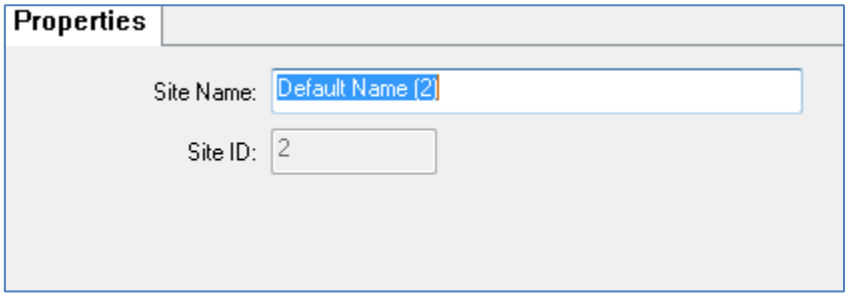
1. Right-click on the *Contact Center* folder in the tree view.

   A menu appears.



2. Select *New Site* from the menu.

   The ‘Properties’ page appears in the detail view.



3. Specify a name for the site in the ‘Site Name’ field.

   The name can be up to 40 characters in length.

4. From the File menu, choose *Save*. (To cancel the save operation, click *Cancel* on the ‘Progress’ dialog box.)

Deleting a Site

Caution:

- This is an advanced topic and should not be attempted without first contacting Computer Talk.
- When deleting a site, all nodes that are part of the site are also deleted.

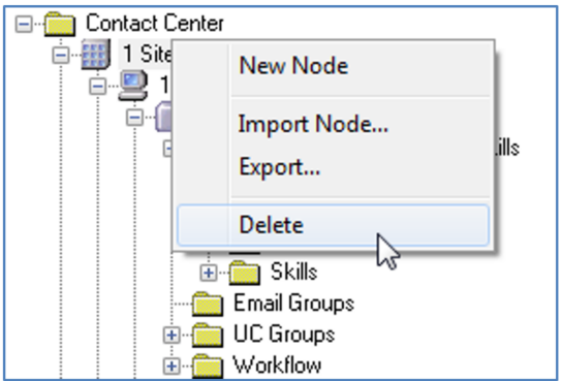
When a site is no longer used, you may wish to delete it from ice by following the steps below.

Note: To delete a site, you must be in Edit Mode and have a user type that allows you to access the Site folder. For more information on permissions on iceAdministrator, refer to page 26.

To delete a site:

1. In the tree view, right-click the site that you wish to delete.

   A menu appears.



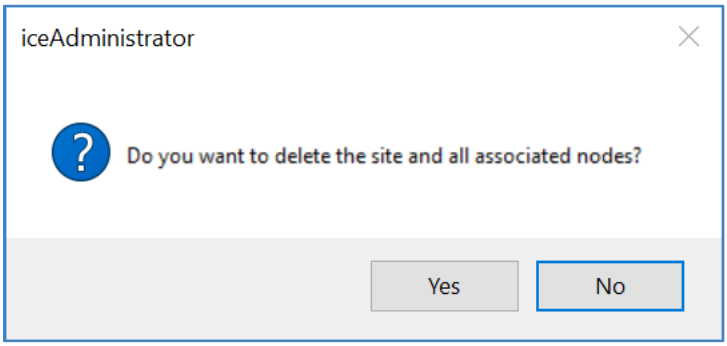
2. Select *Delete* from the menu.

   Note: If you are logged in as a user belonging to the site you are trying to delete, a message box displaying the following message appears:

   "Cannot delete a site containing current iceAdministrator user <user name>."

3. Click *OK* to close this message box.

   Otherwise, if you have permission to delete the node, a pop-up message box appears.



4. Click *Yes* to confirm the deletion, or click *No* to cancel.

5. From the File menu, choose *Save*. (To cancel the save operation, click *Cancel* on the 'Progress' dialog box.)

Appendix C: Acknowledgement

The following are copyright and license notices for the third-party software components used in the creation of the ice SIP solution for VoIP call handling.

ares

OpenSSL

OpenSSL License
- - - - - -------------------------

/* =-=
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 *
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 * OF THE POSSIBILITY OF SUCH DAMAGE.
 * =-=
 *
 * This product includes cryptographic software written by Eric Young
 * (eay@cryptsoft.com). This product includes software written by Tim
 * Hudson (tjh@cryptsoft.com).
 */

Original SSLeay Licence

PCRE

PCRE License
- - - - - ------------------------
PCRE is a library of functions to support regular expressions whose syntax and semantics are as close as possible to those of the Perl 5 language.

Release 6 of PCRE is distributed under the terms of the “BSD” license, as specified below. The documentation for PCRE, supplied in the “doc” directory is distributed under the same terms as the software itself.

The basic library functions are written in C and are freestanding. Also included in the distribution is a set of C++ wrapper functions.

THE BASIC LIBRARY FUNCTIONS

Written by: Philip Hazel
Email local part: ph10
Email domain: cam.ac.uk

University of Cambridge Computing Service,
Cambridge, England. Phone: +44 1223 334714.

THE C++ WRAPPER FUNCTIONS

Contributed by: Google Inc.

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popt

ReSIProcate/Repro

Oracle Berkeley DB

```
=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=
/*
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