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Enterprise Chat and Email Administrator's Guide to Routing and Workflows, Release 12.0(1) ES1

For Unified Contact Center Enterprise

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Welcome to the Enterprise Chat and Email (ECE) feature, which provides multichannel interaction software used by businesses all over the world as a core component to the Unified Contact Center Enterprise product line. ECE offers a unified suite of the industry's best applications for chat and email interaction management to enable a blended agent for handling of web chat, email and voice interactions.

About This Guide

Enterprise Chat and Email Administrator's Guide to Routing and Workflows introduces you to routing and helps you understand how to set up service levels and queues for all types of activities. Workflows which route all email and other activities that are not realtime activities are also discussed in this guide.

Chat interactions occur in realtime and are handled slightly differently from other activities. For details about chat resources, refer to the *Enterprise Chat and Email Administrator's Guide to Chat and Collaboration Resources*.

Change History

This table lists changes made to this guide. Most recent changes appear at the top.

Change	See	Date
Update of Document for Release 12.0(1) ES1		April 2019
New call variable added and the Object field added to call variable creation	"Call Variables" on page 16	
Update of Document for Release 12.0(1)		February 2019
Added steps for queue creation	"Creating Queues" on page 21	
Initial Release of Document for Release 12.0(1)		January 2019
Updated link in Related Documents section to correct URL	"Related Documents" on page 8	

Related Documents

The latest versions of all Cisco documentation can be found online at https://www.cisco.com

Subject	Link
Complete documentation for Enterprise Chat and Email, for both Cisco Unified Contact Center Enterprise (UCCE) and Cisco Packaged Contact Center Enterprise (PCCE)	https://www.cisco.com/c/en/us/support/contact-center/enterprise-chat-email-12-0-1/model.html

Communications, Services, and Additional Information

- ▸ To receive timely, relevant information from Cisco, sign up at Cisco Profile Manager.

- ▸ To get the business impact you're looking for with the technologies that matter, visit Cisco Services.

- ▸ To submit a service request, visit Cisco Support.

- ▸ To discover and browse secure, validated enterprise-class apps, products, solutions and services, visit Cisco Marketplace.

- ▸ To obtain general networking, training, and certification titles, visit Cisco Press.

- ▸ To find warranty information for a specific product or product family, access Cisco Warranty Finder.

Cisco Bug Search Tool

Cisco Bug Search Tool (BST) is a web-based tool that acts as a gateway to the Cisco bug tracking system that maintains a comprehensive list of defects and vulnerabilities in Cisco products and software. BST provides you with detailed defect information about your products and software.

Field Alerts and Field Notices

Cisco products may be modified or key processes may be determined to be important. These are announced through use of the Cisco Field Alerts and Cisco Field Notices. You can register to receive Field Alerts and Field Notices through the Product Alert Tool on Cisco.com. This tool enables you to create a profile to receive announcements by selecting all products of interest.

Log into www.cisco.com and then access the tool at https://www.cisco.com/cisco/support/notifications.html

Documentation Feedback

To provide comments about this document, send an email message to the following address: contactcenterproducts_docfeedback@cisco.com

We appreciate your comments.

Document Conventions

This guide uses the following typographical conventions.

Convention	Indicates
Italic	Emphasis. Or the title of a published document.
Bold	Labels of items on the user interface, such as buttons, boxes, and lists. Or text that must be typed by the user.
`Monospace`	The name of a file or folder, a database table column or value, or a command.
Variable	User-specific text; varies from one user or installation to another.

Document conventions

1

Routing Basics

▸ Key Terms and Concepts

▸ Important Tasks

▸ Services for Queues and Workflows

▸ Settings for Queues and Workflows

▸ Elements of the User Interface

This chapter introduces key concepts related to routing and workflows, and provides information about business objects and settings that need to be configured before you can create workflows and set up your routing scheme.

Key Terms and Concepts

▸ **Queues:** Queues hold incoming customer service activities such as emails and chat sessions that are waiting to be assigned to agents. Email activities are routed to queues by workflows, and then either pushed to, or pulled by agents, depending on the configuration of the queue. Chat activities are also routed to queues, but by the Agent Assignment Service, and then either pushed to, or pulled by users. User access to queues is controlled using permissions. A department can have any number of queues. A single queue can hold multiple activity types like email, chat, and so on. For more details, see "Queues" on page 17.

▸ **Service levels:** In order to provide quality customer service, most organizations measure the performance of their customer service center against established service levels. Using service levels, administrators can set up response time expectations for different types of incoming customer service interactions like email, chat and so on. Once defined, service levels are used in workflows to set the due date of activities. Routing decisions can also be made based on service levels. Service level performance reports are available in the Reports Console. For more details, see "Service Levels" on page 46.

▸ **Transfer codes:** While transferring chats, agents can assign transfer codes to chats, which typically identify the reason why chats are being transferred. For more details, see "Transfer Codes" on page 37.

▸ **Workflows:** Workflows provide a mechanism for applying a sequence of rules on activities. Flexible and easy to use, they allow administrators to define rules to modify business objects, automate the progression of activities through the system, raise alarms and send notifications about the status of activities, and so on.

There are three types of workflows:

❍ Alarm workflows

❍ Inbound workflows

❍ Outbound workflows

For more details, see "Workflows" on page 49.

Important Tasks

For Queues

Before you start configuring queues, make sure that the following objects are ready to be used in queues.

▸ Users and user groups

▸ Articles to be configured as quick links, quick responses, headers, footers, greetings, signatures, and bookmarks

For Workflows

Before you start configuring workflows, make sure that the following objects are ready to be used in workflows.

▸ Queues

▸ Service levels

▸ Classifications

▸ Users and user groups

▸ Departments for transferring activities

▸ Articles to be used in auto-acknowledgement nodes

▸ Macros to be used in the modify object and create object nodes

▸ Usage links to be used in the modify object and create object nodes

Services for Queues and Workflows

Make sure the following services in the System Console are configured properly and are in the running state. For details on setting up these services, see *Enterprise Chat and Email Administrator's Guide to System Console.*

▸ Workflow: Activity pushback

▸ Workflow: Alarm

▸ Workflow: Workflow cache

▸ Workflow: Workflow engine

▸ Agent Assignment Service (For chat)

Settings for Queues and Workflows

Make sure that the following partition and department level settings are configured properly. For more information about settings, see *Enterprise Chat and Email Administrator's Guide to Administration Console.*

Settings at the Partition Level

▸ Alarm service delay

▸ Auto response number

▸ Auto response time (minutes)

Settings at the Department Level

▸ Activities to pull first

‣ Activity type for auto pushback

‣ Include original message for auto acknowledgement

‣ Maximum activities to pull at a time

‣ Personalized activity assignment

Elements of the User Interface

The Administration Console user interface can be divided into five functional areas.
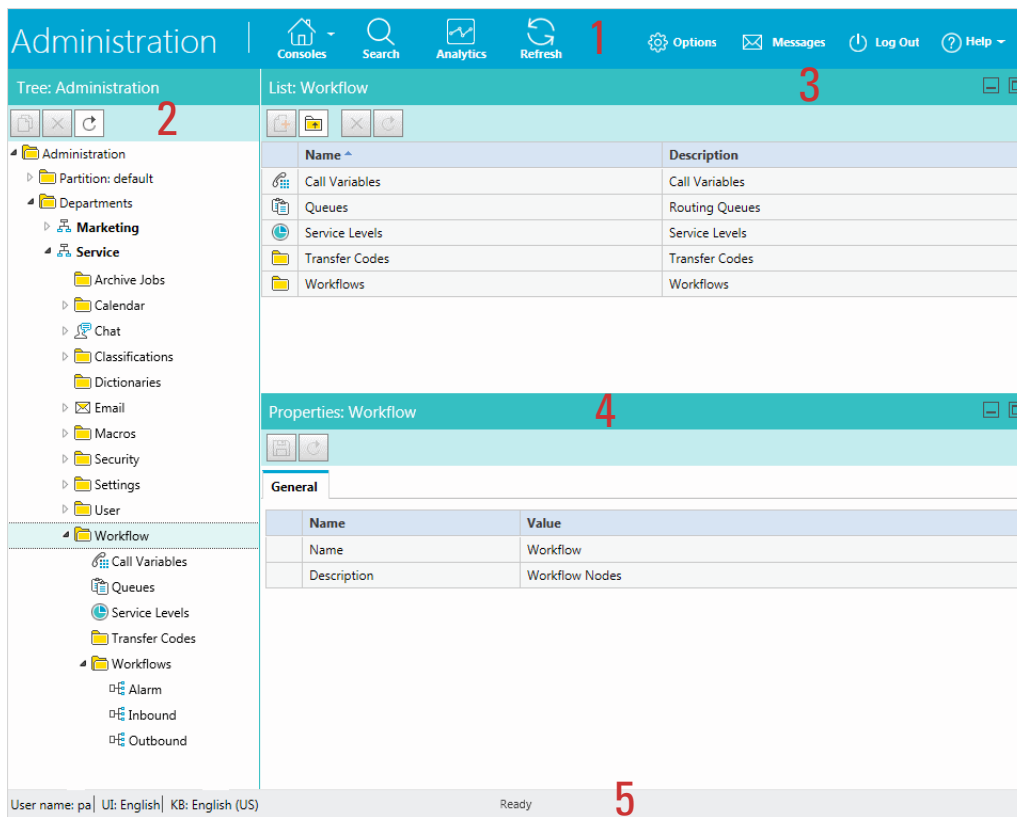
Elements of the Administration Console user interface

1. **Console toolbar**: The main toolbar of the console appears at the top of the screen. Each button on this toolbar allows you to perform a specific function. Some of these are: navigate to other consoles, send and receive internal messages, log out of the system, and access the online help for the Administration Console.

2. **Tree pane**: The Tree pane lists all the business objects in the application, allowing you to select the node that you wish to work in. When you select a folder, its first-level contents are displayed in the List pane.

   To expand all first and second level nodes with a single click, press SHIFT and click the plus [+] button next to the topmost node. The contents of all first and second level nodes are displayed in the Tree pane.

3. **List pane**: The List pane displays first-level contents of the folder selected in the Tree pane. You can view the name, description, date of creation, and so on, of the displayed items. In this pane, you can create items or select existing ones to modify or delete them.

4. **Properties pane**: The Properties pane displays the contents of the business object selected in the List pane. In this pane, you can edit the properties of the selected item.

5. **Status bar**: The status bar is present at the bottom of every screen. It displays the following information:

    ❍ The user name with which the user has logged in the system.

    ❍ The language currently in use.

    ❍ The status of the system (Loading, Ready, and so on).

Call Variables

This chapter will help you configure call variables.

About Call Variables

While sending new activity requests from a queue to Unified CCE, EAAS sends call variables and ECC variables to Unified CCE as task context. By default, the following activity attributes are sent to Unified CCE as ECC variables.

▸ For inbound and outbound email activities: activity_id

▸ For chat activities: activity_id, customer_name

▸ For callback and delayed callback activities: activity_id, customer_name

If you need to pass on other attributes of the activity as call variables or ECC variables to Unified CCE, you need to configure them in Enterprise Chat and Email. These variables can then be used in Unified CCE scripts to configure conditions. For details, see the Unified CCE scripts documentation. If you plan to configure these variables as ECC variables in Enterprise Chat and Email, you need to first create the ECC variables in Unified CCE. For details, see the Unified CCE documentation.

The following attributes are available out-of-the-box: `case_user_last_worked,`
`solution_description, case_description, case_subject, severity, customer_id,`
`owner, case_due_date, case_status, case_id, reroute_flag, contact_point_data,`
`delay_time_in_min, subject, is_escalated, conference_flag, case_type,`
`last_action_reason, queue_id, description, assigned_to, user_last_worked,`
`due_date, when_modified, when_created, activity_priority, customer_phone_no,`
`activity_id, customer_name`

You can create additional variables for custom activity attributes. These custom attributes are created from the Tools Console of Enterprise Chat and Email. For details, see the *Enterprise Chat and Email Administrator's Guide to Tool's Console*.

Creating Call Variables

To create a call variable:

1. In the Tree pane, browse to **Administration > Department >** *Department_Name* **> Workflow > Call Variables.**

2. In the List pane toolbar, click the **New** button.

3. In the Properties pane, on the General tab, provide the following details.

   ❍ **Name:** Type the name for the call variable. The following characters are not allowed in the name: ~ ! @ # $ % ^ & * ( ) _ - + ? > < { } | [ ] = \ / , .(dot) : ; " " ' '. Also, the name cannot start with a digit.

   ❍ **Description:** Provide a brief description.

   ❍ **Object:** This field is automatically assigned and cannot be changed.

○ **Mapped Custom Attribute:** From the dropdown list, select a custom attribute created for the Activity Data from the Tools Console.

Name	Value
Name *	case_description
Description	
Object	Case Data
Mapped Custom Attribute *	Description

Set the general properties

4. Click the **Save** button.

5. From the System Console, restart the EAAS service process and instance.

Deleting Call Variables

Default call variables and call variables used in queues cannot be deleted. To be able to delete the variables that are in use, remove them from the queues first.

To delete a call variable:

1. In the Tree pane, browse to **Administration > Department >** *Department_Name* **> Workflow > Call Variables.**

2. In the List pane, select the call variable you want to delete.

3. In the List pane toolbar, click the **Delete** button**.**

4. Click the **Yes** button when the system prompts you to confirm the deletion.

Queues

About Queues

Queues hold incoming customer service activities such as emails and chat sessions that are waiting to be assigned to agents. There is no limit to the number of queues that can be created in a department. A single queue can hold multiple activity types like email, chat and so on. Agent access to queues is controlled through permissions and the routing methods of the corresponding MRD.

After the necessary MRDs have been imported into ECE from Unified CCE, queues can be created manually within ECE for all activity types. When creating queues in ECE, the MRDs and script selectors can be selected for the queue to provide the extra necessary routing information for the queue.

ECE comes equipped with a Default Exception Queue already available. The routing of activities from this queue is done by Unified CCE. More queues can be added to the application by importing MRDs. This creates a Unified CCE type of queue and the routing of activities from this queue is done by Unified CCE. This queue is mapped to a Unified CCE MRD and a script selector. When the MRD or script selector attributes are modified in Unified CCE, the modifications are automatically retrieved and synchronized in ECE when an administrator clicks the name of the queue in the list pane of the Administration Console. If the MRD or script selector is deleted from Unified CCE, the queue in ECE is unmapped when a user clicks the name of the queue in the Administration Console, and the administrator is shown a message saying that the queue has been unmapped. For more information about importing MRDs, see the *Enterprise Chat and Email Administrator's Guide to the Administration Console*.

> **Important:** **Non-interruptible email MRDs are not supported and cannot be imported to ECE.**

Queues Created by the System

The following queues are created automatically by the system at the time of install and are not directly tied to an MRD.

Exception Queue

By default, an exception queue is created in every department. Activities are routed to the exception queue when:

- There are no active inbound workflows in the department.
- A workflow faces an error while processing activities.
- The queue used in a workflow is made inactive. All the activities coming to the inactive queue are routed to the exception queue.
- Emails are bounced back.
- A `new_task_failure` message is returned by Unified CCE.
- If a connection is lost with the Cisco routing system, for example, if the MR PIM machine temporarily shuts down or restarts.

> **Important:** **The exception queue cannot be deleted or made inactive.**

Call Queue

This queue is not in use.

Chat Queue

This queue is not in use.

Email Queue

This queue is not in use.

Supervisory Queues

By default, a supervisory queue is created for each MRD associated with either the email or the outbound media classes.

Creating Queues

You can manually create queues in the application in addition to the ones created when MRDs are imported.

To create a queue:

1. In the Tree pane, browse to **Administration > Department >** *Department_Name* **> Workflow > Queues.**

2. In the List pane toolbar, click the **New** button.

3. In the Properties pane, on the General tab, provide the following details.

   ○ **Name:** Type a name of the queue. This is required information. The following characters are not allowed in the name: < , . ? : > $ * \ /

   ○ **Description:** Type a brief description.

   ○ **Active:** When a queue is created, by default it is active. Select **No** to make it inactive. If you are using a queue in workflows or are intending to use it, it is advised that you do not make the queue inactive. If a queue is being used in workflows and it is made inactive, no new incoming activities are routed to the queue. All activities coming to an inactive queue are routed to the exception queue. Also, if the queue is being used in workflows, and agents have pull and transfer permissions on the queue, they can pull activities from, and transfer activities to inactive queues. If you want to restrict these actions, remove the pull and transfer permissions on the inactive queue.

   ○ **Type:** Set this to **Unified CCE**.

   ○ **Media Routing Domain:** Select the MRD to which the queue should map. One MRD can be mapped to only one queue. The list of MRDs is dynamically retrieved from Unified CCE. The MRD that is selected determines what tabs and fields can be accessed during the queue editing process.

   While creating queues for outbound emails, make sure you select the MRD created for outbound emails. Similarly, while creating queues for inbound emails, make sure you select the MRD created for inbound emails.

If you are creating a queue for callback or delayed callback activities, select the **Cisco_Voice** MRD from the dropdown. This adjusts the fields that appear below.

○ **Maximum Task Limit:** This is the maximum number of activities or tasks that can reside within the MRD at any point. It is also referred to as the Unified CCE queue depth or the Maximum calls per queue. The value in this field is set automatically based on the selected MRD and it cannot be changed for chat and email queues. To change this, go to Configuration Manager > Media Routing Domain List Tool, and update the field **Max Calls In Queue**.

○ **Routing Priority:** Select the routing priority for activities waiting in the queue. The value chosen here determines the order in which activities are retrieved from the queue, and which new activity requests are sent for routing to Unified CCE. The options available are:

● **Due date:** New activity request with the nearest due date is sent to Unified CCE.

● **Longest waiting:** New activity request with the longest wait time is sent to Unified CCE.

○ **Queue Priority:** Select the priority of the queue. While sending new activity requests from a queue, the priority of a queue is checked. If more than one queue has the same priority, the application looks for a specified activity priority for the activities in the queues with the highest priority. If no activity priority is found, activities are processed based on age, with the oldest being processed first. The EAAS instance (see *Enterprise Chat and Email Administrator's Guide to System Console* for more information) retrieves activities from the highest priority queues first, and the lowest priority queues last. The queue priority can be:

● **Low**

● **Medium**

● **High**

○ **Script Selector**: From the dropdown list, select a script selector associated with the MRD to which the queue is mapped. It is the keyword that identifies the Unified CCE routing script that is executed in Unified CCE on the activity originating from this queue. An MRD can have multiple script selectors associated with it, but you can select only one script selector for a queue.

Properties: <New>		
General	Call Variables	Application Strings	Expanded Call Variables	Concurrent Task Limit	Skill Groups	Precision Queues

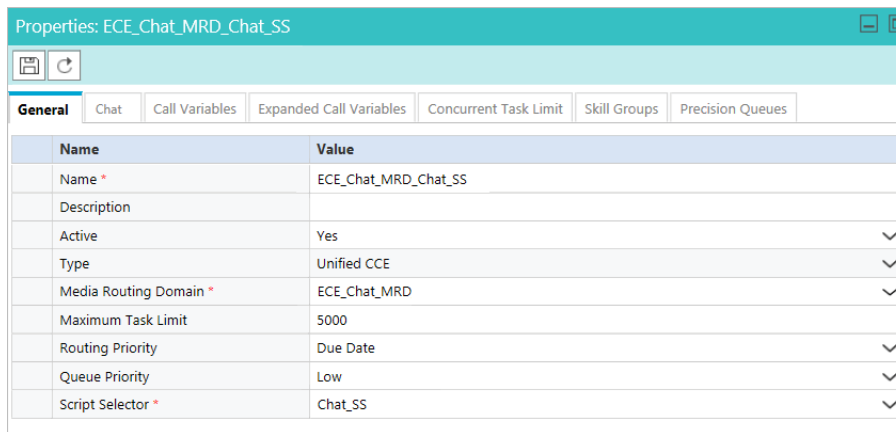|	**Name**	**Value**	
●	Name *	New queue	
	Description		
	Active	Yes	∨
●	Type	Unified CCE	∨
●	Media Routing Domain *	Cisco_Voice	∨
●	Maximum Task Limit	5000	
	Routing Priority	Due Date	∨
	Queue Priority	Low	∨
●	Script Selector *	CV_Sasha_SS	∨

Provide the general properties of the queue

4. Click the **Save** 🖫 button. Once the queue has been created, you can begin editing it. For more information, see .

Editing Queues

Each queue that is created in the application or after importing the designated MRD can be edited and adjusted to suit your needs.

To edit a queue:

1. In the Tree pane, browse to **Administration > Department >** *Department_Name* **> Workflow > Queues.**

2. In the List pane toolbar, select the desired queue.

3. In the Properties pane, on the General tab, adjust the details as needed. For more details about each field, see "Creating Queues" on page 21.

Name	Value
Name *	ECE_Chat_MRD_Chat_SS
Description	
Active	Yes
Type	Unified CCE
Media Routing Domain *	ECE_Chat_MRD
Maximum Task Limit	5000
Routing Priority	Due Date
Queue Priority	Low
Script Selector *	Chat_SS

Properties: ECE_Chat_MRD_Chat_SS

General | Chat | Call Variables | Expanded Call Variables | Concurrent Task Limit | Skill Groups | Precision Queues

Set general properties

4. Next, go to the Chat tab and set the following properties. This tab is enabled only for queues that belong to a chat MRD.

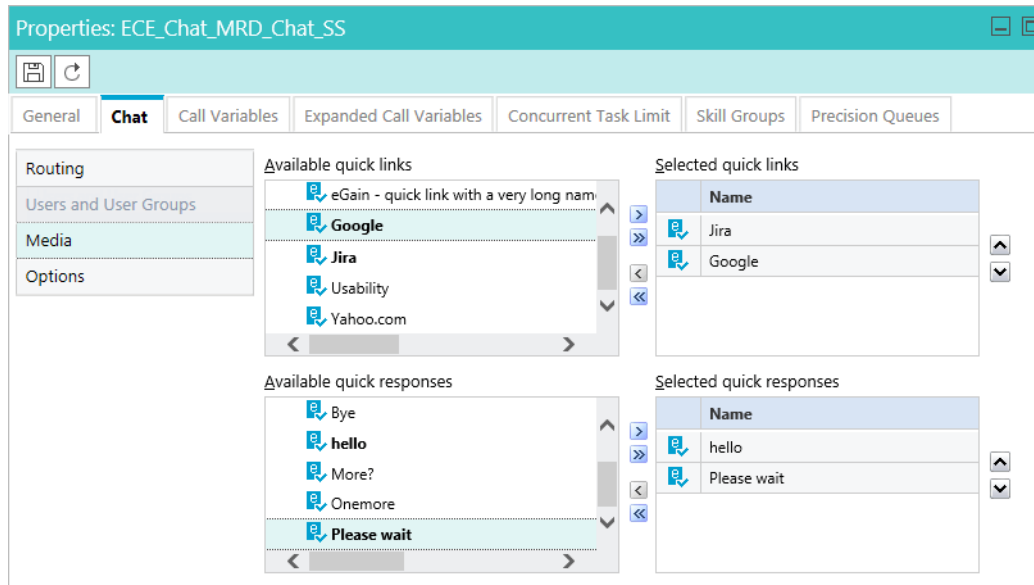> Important: **This feature is not available for callback and delayed callback activities.**

In the Media section, set the following:

- **Chat - Quick links:** From the available quick links, select the quick links to be associated with the queue.

❍ **Chat - Quick responses:** From the available quick responses, select the quick responses to be associated with the queue.

Select quick links and quick responses

In the Options section, set the following:

❍ **Display alternative engagement option:** Select **Yes** to display the alternate engagement options in the chat window while customers are waiting to be serviced by agents. The default value is **No**. For details about configuring these options, see *Enterprise Chat and Email Administrator's Guide to Chat and Collaboration Resources.*

❍ **Display alternative engagement option after (minutes):** Define the time after which the alternate engagement options will be presented to the customer. If you do not set a value, customers will see the options as soon as they start the chat.

❍ **Enable chat attachments for agents and customers:** If Chat attachments are enabled in the partition, in the Options section, you can select **Yes** to allow agents and customers to send attachments during chat sessions or select **No** to prevent agents and customers from being able to send attachments during chat sessions. Image attachments sent during chat interactions appear in line. The allowed or blocked file types and the size limits of the chat attachments are configured at the partition level. For more information about configuring attachments settings, see the *Enterprise Chat and Email Administrator's Guide to Administration's Console.*
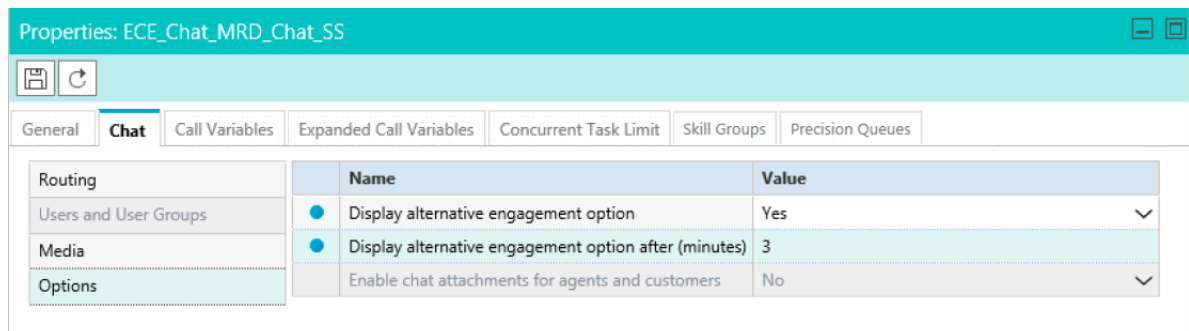
5. Next, in the Email tab, set the following properties. Routing and Users and User Groups sections are disabled for queues. This tab is enabled only for queues that belong to an email MRD.

    ○ Go to the Media section, and select the headers, footers, greetings, and signatures to be associated with the queue. For each queue, you can configure the header, footer, signature and greeting to be associated with the queue. The selected header, footer, signature and greeting are available to the agents in the Reply pane toolbar, for quick access. The selected header, footer, signature, and greeting are also automatically added to the Reply pane, and the agent can choose to use them or delete them, if he does not want to use them. Provide the following details:

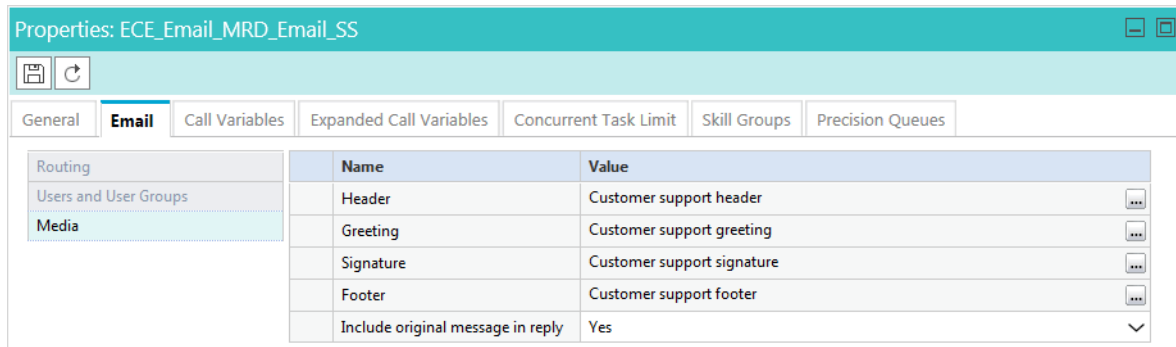   > **Important:** **You must create the headers, footers, greetings, and signatures articles in the Knowledge Base Console. Each queue can have only one greeting, header, footer, and signature associated with it.**

    - **Greeting:** To select a greeting, click the **Assistance** ⊡ button. In the Select Article window that appears, select a greeting article.

    - **Header:** To select a header, click the **Assistance** ⊡ button. In the Select Article window that appears, select a header article.

    - **Footer:** To select a footer, click the **Assistance** ⊡ button. In the Select Article window that appears, select a footer article.

    - **Signature:** To select a signature, click the **Assistance** ⊡ button. In the Select Article window that appears, select a signature article.

    - **Include original message:** Enable this option to display the incoming message from the customer in the Reply pane. If this option is disabled, the incoming message is displayed in the Activity section of the Information pane. By default this option is enabled. Select **No** to disable it.

Configure media settings

6. Go to the Call Variables tab. This tab displays the call variables that map to specific attributes of an activity (for example: activity_id, activity_subject). Provide a unique value in the Call Identifier field to apply this ID to calls that come through this queue. This field is optional.

    Next, select the call variables (Call Variable 1 through 10) to be passed along with activity requests originating from this queue. The selected call variables can then be used in Unified CCE scripts to facilitate and influence routing. For more information about configuring these variables, see "Call Variables" on
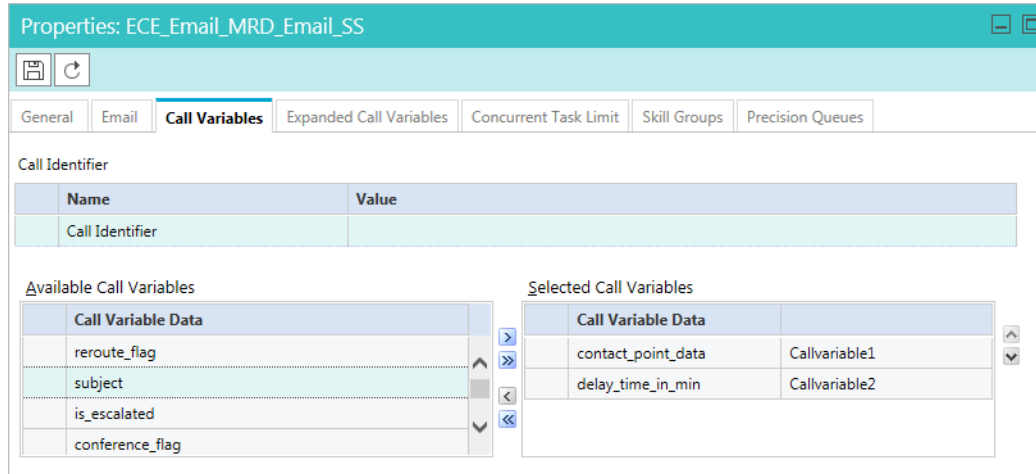
Select call variables

7. Go to the Application Strings tab. This tab displays the application string that map to specific attributes of an activity (for example: activity_id, activity_subject). For queues for callback and delayed callback type of activities, select the variables that can be passed as application strings. By default, the customer phone number (customer_phone_number) is passed as an application string to Unified CCE. The selected application strings can then be used in Unified CCE scripts to facilitate and influence routing. For more information about configuring these variables, see "Call Variables" on page 16.

> **Important:** This tab is available for callback and delayed callback type of queues only.
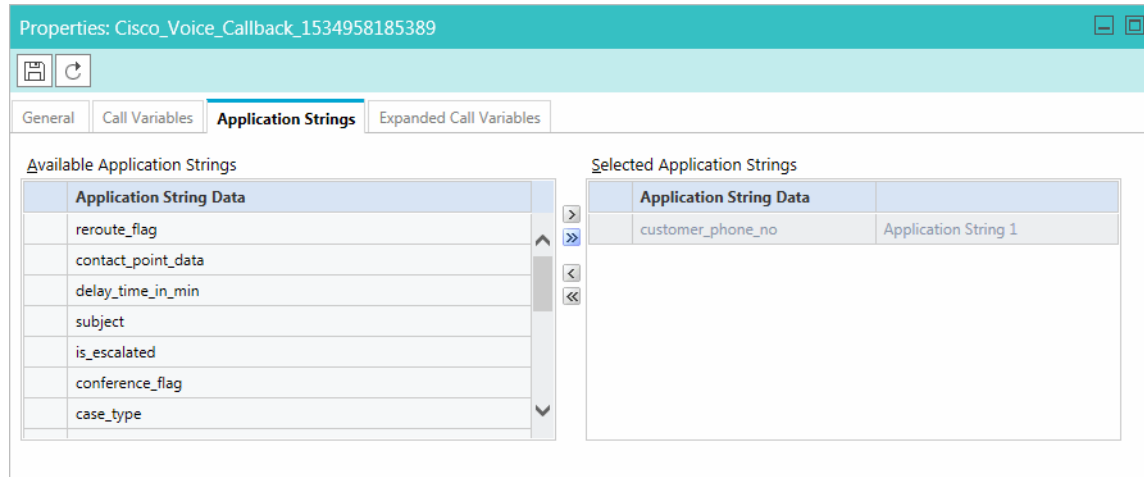
Select application strings

8. Go to the Expanded Call Variables tab. This tab displays the ECC variables that map to specific attributes of an activity (for example: activity_id, activity_subject). Select the Expanded Caller Context (ECC) variables. The selected ECC variables can then be used in Unified CCE scripts to facilitate and influence routing. Both Scalar and Array ECC variables are supported. For more information about configuring these variables, see "Call Variables" on page 16.

ECC variables must be created in Unified CCE before they are used to map object attributes in ECE, as the mapping must be registered in Unified CCE before the variables are sent with requests to Unified CCE.

By default, the following activity attributes are sent to Unified CCE as ECC variables:

❍ For email activities: activity_id

❍ For chat activities: activity_id, customer_name

❍ For callback and delayed callback activities: activity_id, customer_name

> **Important:** **When you associate ECC variables with a queue, or remove the association, you need to restart the EAAS service instance. For details, see the** *Enterprise Chat and Email Administrator's Guide to System Console.*
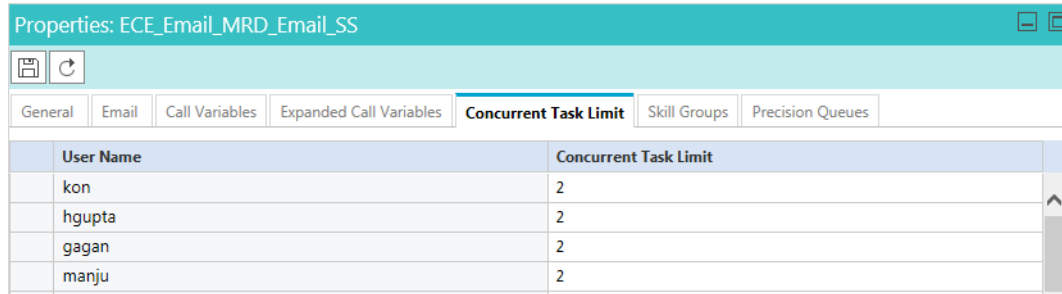
Select expanded call variables

9. Go to the Concurrent Task Limit tab. For queues that handle email or chat activities, set the maximum number of tasks that a given agent can handle at a time. This value is also known as the maximum concurrent task limit for an agent. There are two types of agents that are displayed here:

❍ Agents who belong to the skill group associated with the Unified CCE MRD selected in the General tab.

❍ Agents whose Attribute is used in Precision Queue (PQ) routing steps, and that PQ is mapped to the Unified CCE MRD selected in the General tab.

If more than one queue is mapped to the same MRD, then the highest value assigned to the agent for any of those queues will apply as the concurrent task limit. In such cases, users must go to the Concurrent Task Limit tab for each queue mapped to that same MRD to view the actual value that the system considers.

The Concurrent Task Limit for a user cannot be greater than the maximum task limit of the queue. The maximum task limit of a queue can be viewed from the **Maximum Task Limit** field on the General tab. The value for this field is configured in the **Max Calls In Queue** in the Configuration Manager > Media Routing Domain List Tool.

The concurrent task limit for an agent is valid only as long as the agent remains in the same skill group. When the agent is reskilled, the value is lost. If the agent is added to the same skill group again, this field must be manually updated.
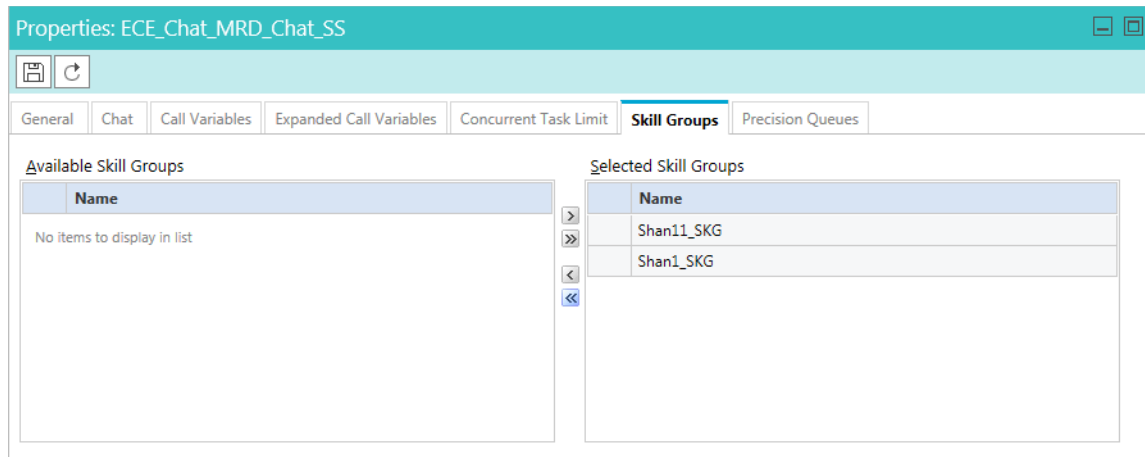
Set maximum concurrent task limit for agents

10. Add precision routing to the queue by adding Skill Groups and Precision Queues to the queue under their respective tabs. Skill Groups and Precision Queues applied to the queue determine how activities can be routed or transferred to agents or other queues. For more information about how Skill Groups and Precision Queues affect the routing of activities in a queue, see "How Queues Assign Work to Agents" on page 29.

> **Important:** The Precision Queues tab appears only if the ECE installation has been integrated with Unified CCE 12.0(1).

Assign the skill groups to a queue

11. Click the **Save** 🖫 button.

Deleting Queues

You can only delete queues for which you have delete permissions. You cannot delete queues that have open activities, or queues that are being used in workflows or chat entry points or the queues that are associated with activity sub types (from the Tools Console). Also, the default queues provided with the system cannot be deleted.

To delete a queue:

1. In the Tree pane, browse to **Administration > Department >** *Department_Name* **> Workflow > Queues.**

2. In the List pane, select the queue you want to delete. You can select multiple queues.

3. In the List pane toolbar, click the **Delete** ⊠ button**.**

> Important: **The Delete button is enabled only if you have permission to delete a queue.**

How Queues Assign Work to Agents

Permissions are automatically assigned to queues mapped to MRDs and they cannot be changed in ECE.

Important Things to Note About Picking and Pulling Activities

Emails

‣ Agents can pick emails from other agents that belong to the same set of skill groups.

‣ Only agents who are part of a skill group that is associated with the queue can pick or pull from that queue.

‣ Only agents who match the attributes of a Precision Queue (PQ) that is associated with the ECE queue can pick or pull from that queue.

‣ Based on the **Maximum Assignment Beyond Concurrent Task Limit** setting, agents who have reached their concurrent task limit can pick additional activities. The maximum number of activities is defined as part of the setting.

> Important: **If the application is integrated with a version prior to Unified CCE 12.0(1), agents cannot pick activities beyond the concurrent task limit.**

‣ When working on a non-interruptible chat or voice call:

  ◦ Agents can pick or pull interruptible emails from queues and other agents.

  ◦ Agents cannot pick or pull non-interruptible emails from queues or other agents.

> Important: **If the application is integrated with a version prior to Unified CCE 12.0(1), agents cannot pick activities while working on non-interruptible chats or voice calls.**

‣ Agents with the Administrator Role can pick from the Default exception queue.

> **Important:** **Emails with exception keywords that are routed to the Default exception queue should not be transferred to other queues. These emails cannot be picked or pulled upon being transferred to other queues.**

Chats

‣ Agents are assigned chats by the system automatically. They cannot pull chat activities from queues. Pick does not apply to chats.

Important Things to Note About Transferring Emails

‣ Multiple emails can be selected and transferred to another user or queue at the same time, so long as the emails are new and have no draft responses. If an email has any draft responses, or is not a new incoming email, it must be transferred individually.

‣ Outbound emails created by agents can only be transferred to users and not to queues.

> **Important:** **For installations that have upgraded from a version prior to 12.0(1), a routing script must be applied to the Pick/Pull node for the outbound MRD in order for agents to pick, pull, or transfer outbound emails. For more information about the script, see the** *Scripting and Media Routing Guide for Cisco Unified CCE*.

‣ Disabled users are not listed in the list of users to whom you can transfer activities.

‣ You can transfer activities only if you have the Transfer action. For more information about actions, see the *Enterprise Chat and Email Administrator's Guide to the Administration Console.*

Transferring to Queues:

‣ An email can be transferred to any queue that belong to the same media class. From there, the activity is routed based on the queue-to-script mapping.

Transferring to Agents:

‣ Agents can transfer emails to other agents that belong to the same set of skill groups.

‣ Based on the **Maximum Task Limit** setting, agents can transfer additional activities to agents who have reached their concurrent task limit. The maximum number of activities is defined as part of the setting.

‣ Emails cannot be transferred to departments directly. If the **Allow Transfer of Activities to Integrated Queues in Other Departments** setting is enabled, agents can transfer activities to queues of other departments.

‣ If the **Allow email transfer to agents who are not available** setting is enabled, agents can transfer activities to other agents who are not available to work on new activities. To be able to transfer an email to an agent, the agent must be logged in to the application, should not have met the concurrent task limit, and should not be working on a non-interruptible activity. If these requirements are not met, the agent is not displayed in the Transfer Activities window.

▸ If the **Allow email transfer to agents who are not logged in** setting is enabled, agents can transfer activities to other integrated agents who are not logged in to the application. To be able to transfer an email to an agent, the agent should not have met the concurrent task limit. If this requirement is not met, the agent is not displayed in the Transfer Activities window.

▸ An agent can transfer interruptible email activities to another agent. An agent cannot transfer non-interruptible email activities to another agent. The concurrent task limit of the agent is considered in these instances.

Important Things to Note About Transferring Chats

▸ Only one chat activity can be transferred at a time.

▸ Only open chat activities, in which the customer has not left the chat session, can be transferred.

▸ Disabled users are not listed in the list of users to whom you can transfer activities.

▸ You can transfer activities only if you have the Transfer action. For more information about actions and permissions, see the *Enterprise Chat and Email Administrator's Guide to the Administration Console.*

Transferring Chats to Queues:

▸ Only agents who match the attributes of a Precision Queue (PQ) that is associated with an ECE queue can transfer chats to that queue.

▸ Chats cannot be transferred to departments directly. If the **Allow Transfer of Activities to Integrated Queues in Other Departments** setting is enabled, agents can transfer activities to queues of other departments.

▸ To be able to transfer a chat to a queue, at least one agent who can receive work from that queue must be logged in, must be available, and must not have met the concurrent task limit. The queue must also not be at its maximum task limit.

▸ A chat can be transferred to any queue that belong to the same media class. From there, the activity is routed based on the queue-to-script mapping.

Transferring Chats to Agents:

Agents who do not meet these conditions are not displayed in the transfer window.

▸ Agents can transfer chats to other agents that belong to the same set of skill groups.

▸ Only agents who are part of a skill group that is associated with a queue can transfer chats to that queue.

▸ The receiving agent must be logged in to the application.

▸ The receiving agent must be available, depending on how the **Allow chat transfer to agents who are not available** setting is configured.

▸ The receiving agent should not have met the concurrent task limit, unless you are working on non-interruptible chat activities. This may be affected by the **Override CTL** setting.

▸ Based on the **Override CTL** setting, agents can transfer additional activities to agents who have reached their concurrent task limit. The maximum number of activities is defined as part of the setting.

▸ If the **Allow chat transfer to agents who are not available** setting is enabled, agents can transfer activities to other integrated agents who are not available to work on new activities. To be able to transfer a chat to an agent, the agent must be logged in to the application. Also, the agent should not be at the concurrent task

limit (CTL), and the queue associated with the agent should not be at its maximum task limit (MTL). If the CTL and MTL for the agent have been reached, or if the agent is not logged in, the agent is not displayed in the Transfer Activities window.

▸ An agent can transfer chat activities to another agent who is working on an interruptible email activity or a non-interruptible chat activity. If the receiving agent is working on a non-interruptible voice call, only interruptible chat activities can be transferred to that agent. Agents working on non-interruptible voice calls cannot be transferred non-interruptible chats.

Changing the Status of Queues

When a queue is created, by default it is active. If you are using a queue in workflows or are intending to use it, do not make the queue inactive. If a queue used in workflows is made inactive, no new incoming activities are routed to the queue. All activities coming to the inactive queue are routed to the exception queue.

If the queue used in workflows, and agents have pull and transfer permissions on the queue, they can pull activities from, and transfer activities to inactive queues. If you want to restrict these actions, remove the pull and transfer permissions for the inactive queue.

Queues used in chat entry points cannot be made inactive.

To change the status of a queue:

1. In the Tree pane, browse to **Administration > Department >** *Department_Name* **> Workflow > Queues.**

2. In the List pane, select a queue.

3. In the Properties pane, on the General tab, change the value in the **Active** field to make the queue active or inactive.

4. Click the **Save** button.

Preparing for Workflows

Before configuring queues for workflows, knowledge resources should be mapped to the queues. Short and simple articles (no more than 500 characters long) can be assigned to queues, or implemented in workflows to assist agents and improve response time. These articles serve a specific purpose, depending on the channel for which they are created.

Articles are created in the Standard folder of the KB Console and are organized by Mail and Chat functions. Aside from auto-acknowledgements, these articles are accessible by agents in the Agent Console, based on the activity on which they are working. Once selected, agents can then use the articles in their replies.

> Important: **New folders cannot be created within the Content folder and sub-folders for a department in the KB Console. New articles can only be created in the Standard folders.**

▸ For Email activities, the standard articles are:

- **Headers, Footers, Signatures, and Greetings:** Short introductory and closing statements or images that agents can use in their responses to customers.

- **Auto-Acknowledgements:** Messages that can be created and used in inbound workflows as a reply that is automatically sent to customers at the time an email enters the workflow. These articles are only used in workflows and cannot be accessed from the Agent Console. For more information on how to use auto-acknowledgements in workflows, see "Configuring the Auto-Acknowledgement Node" on page 63.

‣ For Chat activities, the standard articles are:

- **Quick Responses:** Quick responses are frequently used messages that can be easily used by agents in chat sessions. Instead of remembering and typing them each time, agents can use these standard responses. For example, *Welcome* can be a quick response that corresponds to the standard welcome message used across all departments and by all agents. The text of this quick response can be "*Thank you for contacting the Customer Care center. How may I assist you today?*" Instead of typing the whole welcome message repeatedly, the agent can use the quick response. Quick responses can be up to 600 characters long.

- **Quick Links:** Quick links are frequently used web page URLs that can be easily used by agents in chat sessions. For example, *Yahoo Finance* can be a quick link that points to the URL *http://finance.yahoo.com/*.

It is important to note that the headers, greetings, footers, signatures, quick responses, and quick links must be mapped to a queue. Only the mapped articles are made available in the Agent Console. For more information, see "Editing Queues" on page 23.

Creating Articles

Articles are created from the Knowledge Base (KB) Console. Articles can be in various stages of development, and you can easily tell their current status by the icons displayed in the article list pane.

The following table explains what each image represents:

Item	Description
🔶 Draft	Article is a draft and not available for use.
✅ Published	Article has a version that is published and available for use.
🔒 Locked	Article has been checked out by a user.

Creating Content

To create an article:

1. In the Tree pane of the KB Console, browse to **Knowledge Base > Departments >** *Department_Name* **> Content > Shared > Standard.**

2. Select the folder in which you want to create a new article.

3. In the List pane toolbar, click the **New article** 🔲 button.

   The Properties pane refreshes to show the attributes of the new article.

4. In the Properties pane, go to the General tab and provide the following details:

   ❍ **Translation status**: This field tells you whether the translation is up to date or whether the content needs to be translated. This field is updated by the system.

   ❍ **Folder**: It displays the path of the folder in which you are creating the article. The value of the field is generated automatically and it cannot be changed.

   ❍ **Name:** Type a name of the article. This is required information.

   ❍ **Description:** Type a brief description.

   ❍ **Language:** Displays the language of the article. The value in the field gets automatically selected and cannot be changed.

   ❍ **Type:** Select the type as **Content**.

   ❍ **Created By:** Shows the name of the user who created the article.


Set the general properties

5. Now, the Content tab, create the content of the article.

   a. Type the content of the article in the text box. All articles are HTML. To create pure text articles, do not use any rich text formatting while creating content. You can use the various formatting tools available to format the article content. You can also add hyperlinks to the HTML articles.

   When you are creating quick responses and quick links, remember that the content is displayed in plain text when agents use the quick responses and quick links during a chat session. The content of the quick

responses and quick links is displayed in the same font and style as are the other messages that the agent types.
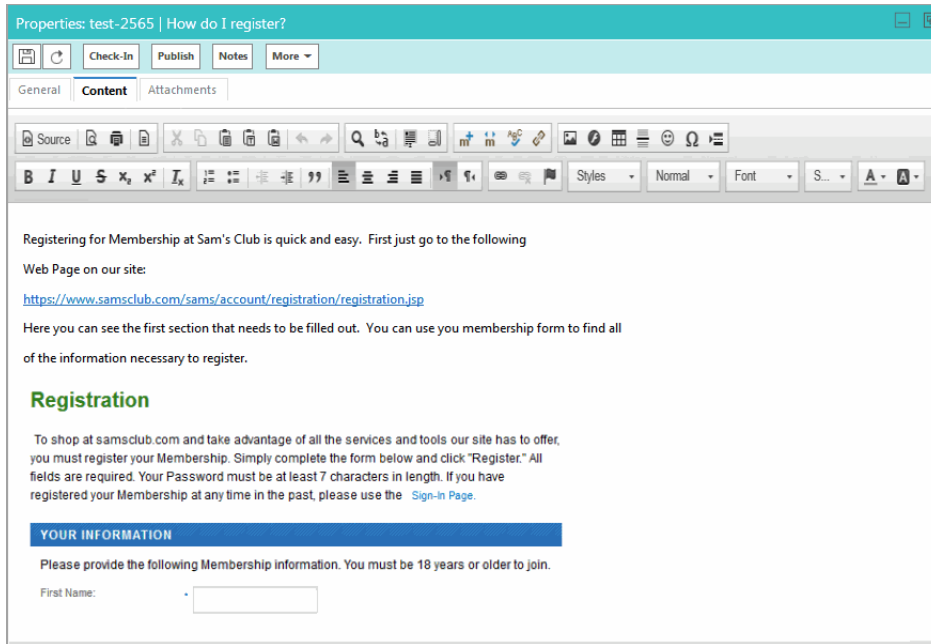
Create the content of the article

b. To add hyperlinks to the article content, click the **Insert Hyperlink** 🔗 button in the Text box toolbar and in the Link window, enter the details of the hyperlink you want to add. You can also specify a target for how the content should open (same window, new window, and so on), and configure advanced options like language direction (for example, right to left, for Arabic). Click **OK** to add the link.
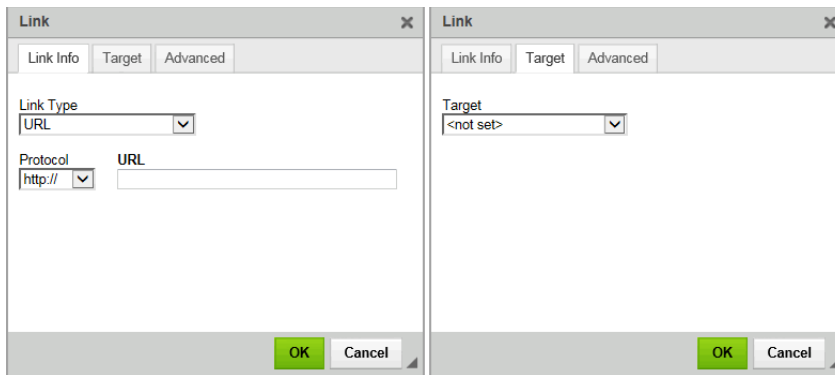

Configure the link

After creating content, you can run the spell-checker on the content.

c. To run the spell-checker, in the Text box toolbar, click the **Spell Check** ᴬᴮᶜ button. The Spelling Check window appears. This button is disabled if the article content is in a language that does not have spell-checker support. The Not in dictionary section shows the misspelled words in red and the Suggestions section shows the suggested words for them. You can either ignore the suggestions or you can change

the misspelled word to the suggested words. You can also suggest the word to be added to the dictionary by using the **Suggest** button. You can also add a word to your personal dictionary by clicking the **Add** button.
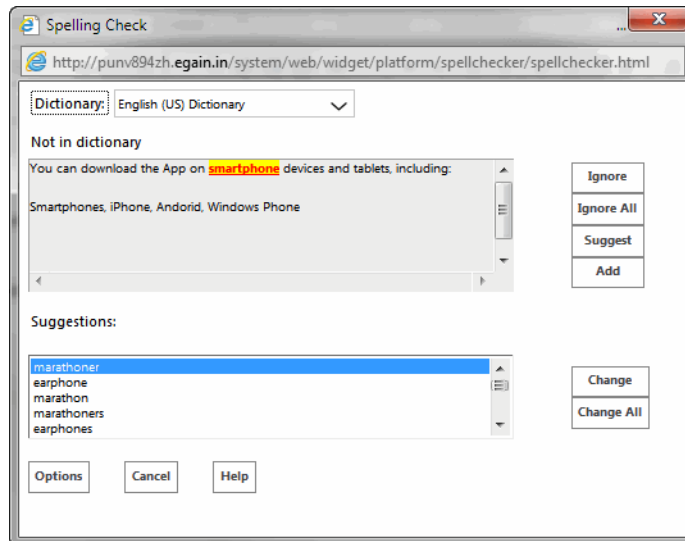
Run the spelling checker

d. To insert an image from an external location, click the **Image** button and provide the URL in the Explorer User Prompt window. The images should be stored at a location that is accessible to external user. If the image is removed from this external resource or the address is changed, the inserted image will no longer be visible. Instead, a red X or a placeholder may appear in its place.
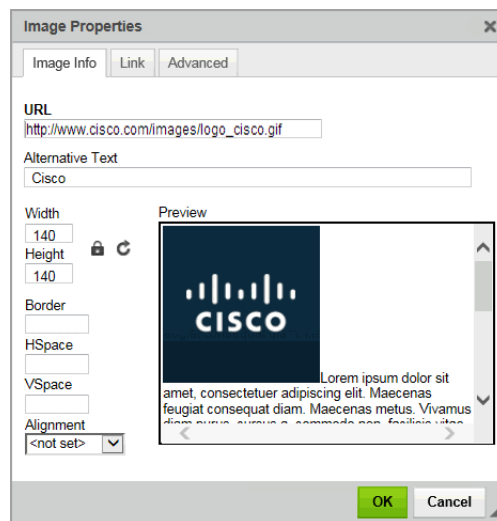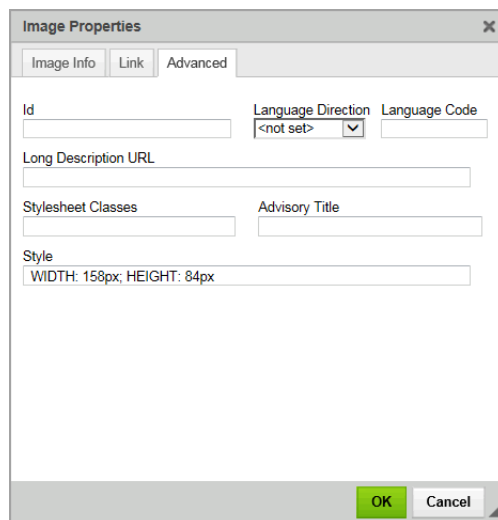

Type the URL of the image

To specify a URL that should be launched when the user clicks the image, click the Link tab and enter the required information.
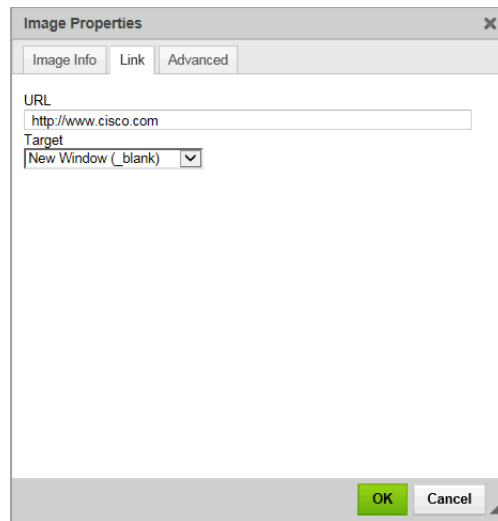
Type the URL to be launched from the image

Use the Advanced tab to specify additional details such as long URL, language, and so on.

Configure advanced options

    e.   Lastly, before saving the article you can preview it to see if it appears as you want it to. In the Properties pane toolbar, point to **More** and select **Preview article**. The Preview Article window appears. Here you can preview the content and attachments of the article.

6.   Click the **Save** ▣ button. The list pane updates to display the Locked ⬤ state for this article. The Properties pane refreshes to show the Article ID and Article Name in the title.

If you are done working on the article for the moment, click the **Check-In** button. This allows other users to check out the article and make edits to it, but does not make it available for use in the Agent Console. The list pane updates to display the Draft state ⬣ for this article.

To make the article available for use, click the **Publish** button. The list pane updates to display the Published state ✅ for this article. Publishing the article automatically checks it in and removes your lock on it.

Deleting Articles

You can delete articles from a folder only if you have the permission to delete articles. Articles can be only deleted from the KB Console.

An article cannot be deleted if it is used in the Media tab of a queue.

> **Important:** **When you delete an article, all its previously stored versions also get deleted.**

To delete an article:

1. In the Tree pane, browse to **Knowledge Base > Departments >** *Department_Name* **> Content > Shared.**

2. Go to a sub folder and select the article you want to delete. You can select multiple articles.

3. In the List pane toolbar, click the **Delete** ✕ button.

> **Important:** **The Delete button is enabled only if you have permission to delete the article.**

Updating Articles

You can modify or update articles globally. This is especially useful if there are terms such as company name, name of personnel, and other specifications that have to be updated across all or selective articles.

To update an article:

1. In the Tree pane, browse to **Knowledge Base > Departments >** *Department_Name* **> Content > Shared.**

2. Either select a single article or a folder in which you want to update the content. You must check and article out before you update it. When you select a folder, all the articles in the folder and its sub folder get selected.

3. In the Properties pane toolbar, click the **Find and Replace** button.

4. In the Find and Replace window provide the following details:
   ❍ **Find what:** Type the word or phrase you want to find.
   ❍ **Replace with:** Type the word or phrase with which you want to replace the existing content.
   ❍ In the Find where section, specify the scope of search. Choose from one of the following options:
      • **Current article:** Finds and replaces the term only in the currently selected article.
      • **All articles in current folder:** Finds and replaces the term in the folder, in which the article is selected.
      • **All articles at and below current folder:** Finds and replaces the term in the folder in which the article is selected, and all its sub folders.
   • **All articles in all folders:** Finds and replaces the term in all articles in the KB.

❍ **Match case:** Select this option if you want the search to be case sensitive.

For example, if you select the **Match case** option, and the word you give in the **Find what** field is in upper case, then it will only find the words in upper case and ignore the words in lower case.

❍ **Find whole word only:** The search will look for the exact word as specified in the **Find what** field.

For example, you want to replace the word *invest* in an article, and the article contains words *invest, investment, investing,* and *invested.* If you select this option, it will replace only the word *invest*. If you don't select this option, it will replace the word *invest* in all the words - *invest, investing, invested,* and *investment.*

❍ **Unattended replace:** This option is enabled only when the scope of search is more that one article. If, in the Find where section you have selected **Current article**, then this option is disabled. It replaces all instances of the term without asking for replacement of every occurrence. You should select this option only when you are very sure of what you are doing.

> Important: **The Find and Replace operation restricts itself to articles that you have checked out. If you see the "No article matched the search" message in error, check to make sure that all the articles have been checked out.**

After specifying the parameters of your search, select what you want to do. The following options are available:

❍ **Find Next:** Finds the next occurrence.

❍ **Replace:** Replaces the selected term.

❍ **Replace All:** Replaces all the occurrences of the searched word and in the end tells the number of words that were replaced. This option is available only when you are editing text in a single article, or you have selected the **Unattended replace** option.
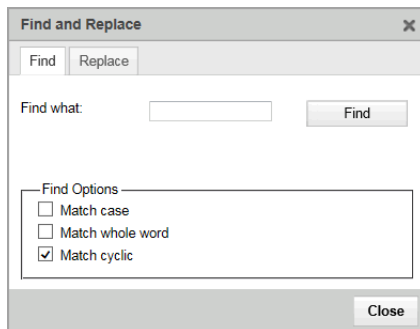
Find and replace text

Working With Notes

Notes can be added to articles for internal usage. Use notes to convey specific comments and to share tips and information with co-authors.

Adding Notes

To add a note:

1. In the Tree pane, browse to **Knowledge Base > Departments >** *Department_Name* **> Content > Shared >** *Folder_Name*.

2. Select the article to which you want to add a note.

3. In the Properties pane toolbar, click **Notes**.

   The View Notes window appears. This displays the existing notes, if any.
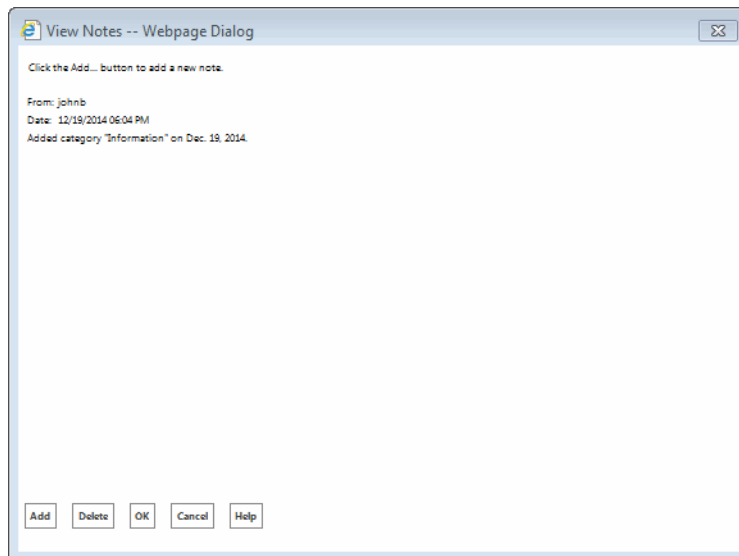
Existing notes, if any, are displayed in the View Notes window

4. Click the **Add** button to add a new note. The Add Notes window appears. In the window, type the content of the note and click the **OK** button.

Add a note

5. Click the **OK** button to close the View Notes window.

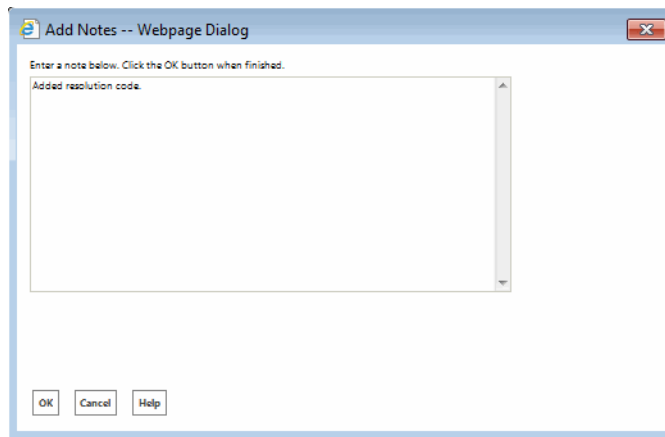## Deleting Notes

To delete a note:

1. In the Tree pane, browse to **Knowledge Base > Departments >** *Department_Name* **> Content > Shared >** *Folder_Name***.**

2. Select the article from which you want to delete a note.

3. In the Properties pane toolbar, point to **More** and select **Notes**.

    The View Notes window appears. This displays existing notes, if any.

4. In the View Notes window, select the note you want to delete and click the **Delete** ☒ button.

5. Click the **OK** button to close the View Notes window.

Creating Copies of Articles

You can easily create copies of articles or move them among different KB folders. You can either remove an article from one folder and move it to another folder or you can simply create a copy of the article in another folder.

To create copies of an article:

1. In the Tree pane, browse to **Knowledge Base > Departments >** *Department_Name* **> Content > Shared >** *Folder_Name*.

2. Select the article for which you want to create copies.

3. If you want to move the article from one folder to another, use the **Cut** ✂ button to remove the article from the folder in which it exists and go to the folder in which you want to add it, and in the List pane toolbar click the **Paste** 📋 button.

4. If you simply want to create a copy of the existing article, use the **Copy** ⬚ button to copy the article and go to the folder in which you want to add it, and in the List pane toolbar click the **Paste** ⬚ button.

    Edit the properties of the newly created article.

Managing Versions

A new version of an article is created every time the article is checked out. The KB Console stores and displays all such versions of each KB article. The version details of an article can be accessed only from the KB Console.

When an article is published, you have the option to enter a summary of the changes that have been made. In addition, you can edit the summary for other article states in the Manage Article Versions window.

If you decide you like an older version of an article better, you can revert back to that version. When an article is deleted, all its versions are deleted automatically.

Viewing Versions

To view versions of an article:

1. In the Tree pane, browse to **Knowledge Base > Departments >** *Department_Name* **> Content > Shared >** *Folder_Name*.

2. Select the article for which you want to view the versions.

3. In the Properties pane toolbar, point to **More** and select **Manage Versions**.

    The Manage Versions window appears. Here you can see all the previous versions of the article listed in descending order. You can view the general properties, content, and attachments of the previous versions.

Versions of custom attributes cannot be created, hence they are not displayed in General tab of the Properties pane.

> **Important:** As quick responses and quick links don't have attachments, the Attachments tab is not available for them.
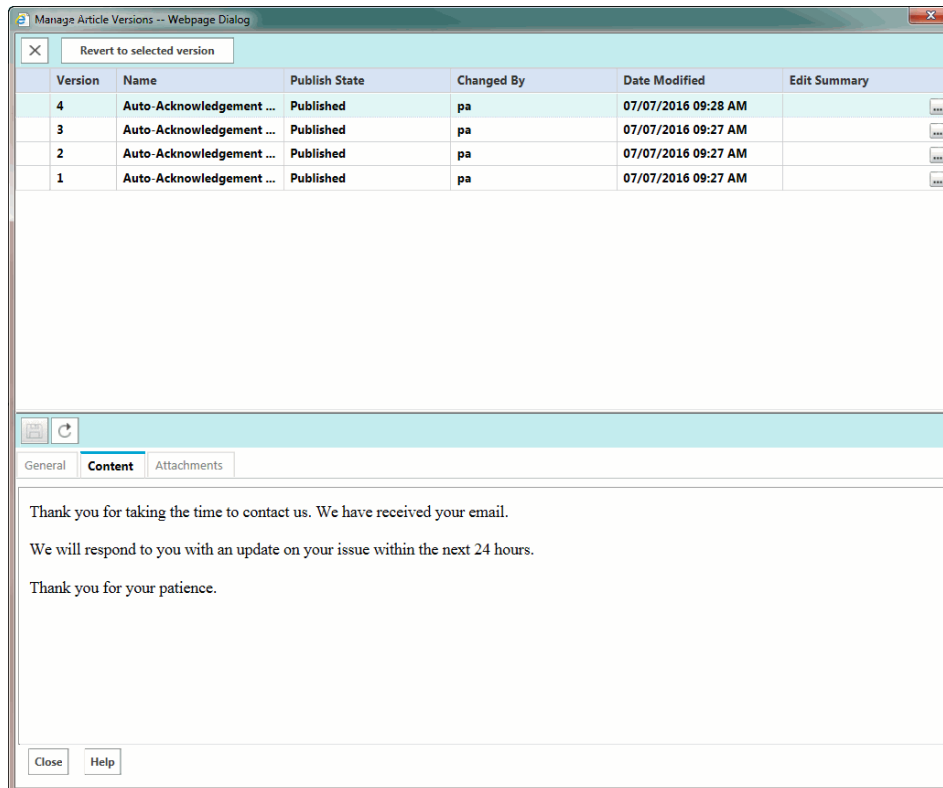
View older versions of an article

Editing the Summary of Article Version

To edit the summary of an article version:

1. In the Manage Article Versions window, select the article version for which you want to add or edit the summary.

2. In the Edit Summary column, click the Assistance ⋯ button.

The Edit Summary window appears. Enter a summary (up to a maximum of 255 characters) and press OK.

Revert to a Previous Article Version

To revert to a previous article version:

1. In the Manage Article Versions window, select the article version you wish to revert to.

2. Select the article for which you want to view the versions.

3. Click the **Revert to selected version** button. This automatically checks the article out, and reverts it to the selected version. If the previous article version had not been published, it's Publish State is updated to Abandoned.

   You can now edit, check-in, or publish the article.

Requesting Article Locks

If you wish to edit an article that another user has checked-out and hence locked, you may request the lock on that article.

To request a lock:

1. In the Tree pane, browse to **Knowledge Base > Departments >** *Department_Name* **> Content > Shared >** *Folder_Name*.

2. Select the article you wish to edit, but is currently checked out by another user.

3. Click the **Request Lock** button in the properties pane.

   This sends a message to the user who has checked out the article, requesting her to check it back in. A message is also sent to everyone with the **Reset Lock** action, requesting them to reset the lock.

   Once the user who locked the article checks the article back in, a message is sent to the user requesting the lock, as well as anyone with the **Reset Lock** action, informing them that the article has been checked in.

Unlocking Articles

Administrators and users with the **Reset Lock** action have the ability to reset locks on articles that are currently checked out by another user.

To reset a lock:

1. In the Tree pane, browse to **Knowledge Base > Departments >** *Department_Name* **> Content > Shared >** *Folder_Name*.

2. Select the article for which wish to reset the lock.

3. Click the **Reset Lock** button in the properties pane.

   If you are prompted for it, enter a reason for resetting the lock and click OK.

   This message is sent to the user who had checked out the article, and thus locked it. Other users can now check the article out and edit it. Keep in mind that resetting the article will not change its state—it will remain in a draft state until it is published.
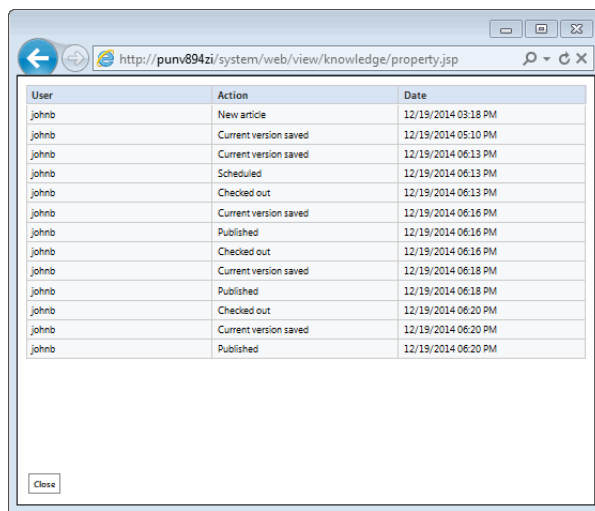
Viewing Audit Details

An audit trail of all the action taken on an article is available from the Properties pane.

To view audit details of an article:

1. In the Tree pane, browse to **Knowledge Base > Departments >** *Department_Name* **> Content > Shared >** *Folder_Name*.

2. Select the article for which you want to view the audit trail.

3. In the Properties pane toolbar, point to **More** and select Article Audit Details.

    The Article audit details window appears. Here you can see a list of all the actions performed on this article, along with the name of the user who performed the action, and the date and time at which the action was performed.

Article audit details

Service Levels

This chapter will help you configure service levels.
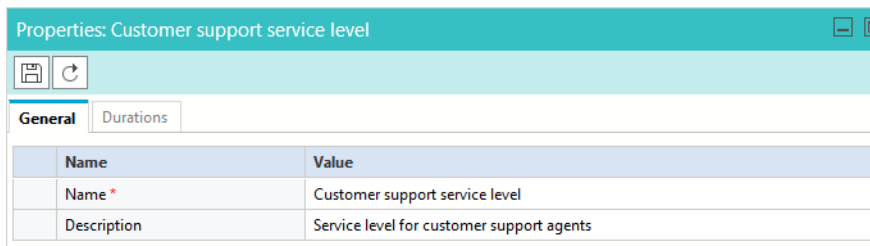
About Service Levels

Service levels allow you to set up response time expectations for incoming customer service interactions. Service levels can be defined for cases and all activities other than chat activities. Once defined, they are used in workflows to influence activity routing. Service level performance reports are available in the Reports Console.

Creating Service Levels

To create a service level:

1. In the Tree pane, browse to **Administration > Department >** *Department_Name* **> Workflow > Service Levels.**

2. In the List pane toolbar, click the **New** 🔲 button.

3. In the Properties pane, on the General tab, provide the following details.

   ❍ **Name:** Type the name of the service level.

   ❍ **Description:** Provide a brief description.

Set the general properties

4. Next, go to the Durations tab and specify the service level for various type of work units. They are:

   ❍ **Case:** Specify the service level in minutes or business hours.

   ❍ **Email:** Specify the service level in minutes or business hours.

If there are any custom activity types created in the system, they are also available in this list and you can set service levels for them.

Object	Value	Unit
Email	15	Business hours
Case	8	Business hours

Set the service level for various type of work units

5.   Click the **Save** 🖫 button.

Deleting Service Levels

Important: **Before deleting a service level, make sure that it is not used in any workflow.**

To delete a service level:

1.   In the Tree pane, browse to **Administration > Department >** *Department_Name* **> Workflow > Service Levels.**

2.   In the List pane, select the service level you want to delete.

3.   In the List pane toolbar, click the **Delete** ☒ button**.**

4.   Click the **Yes** button when the system prompts you to confirm the deletion.

Workflows

About Workflows

Workflows provide a mechanism for applying a sequence of rules on activities. Flexible and easy to use, they allow administrators to define rules to modify business objects, automate the progression of activities through the system, raise alarms and send notifications about the status of activities, and so on.

Visually, a workflow is defined as a set of interconnected nodes created with the help of the Workflow Editor. Each node contains definitions of a list of rules that are applied as an activity passes through that node. Each rule consists of a set of conditions along with the set of actions to be performed when the conditions evaluate to true or false.

Types of Workflows

There are three types of workflows:

▸ Alarm workflows

▸ Inbound workflows for email activities

▸ Outbound workflows

Alarm Workflows

Configure alarm workflows to process activities in the system and perform actions such as notifications, reassignments, and so on, depending on the specified conditions. Alarm workflows can also route activities from queues or users to other queues or users. Alarm workflows are typically used to provide customer service based on customer value. Alarm workflows act on all activities except for chat activities.

Additional workflows can be configured to work on activities processed by the alarm workflows.

Alarm workflows can be run on:

▸ Users

▸ Queues

Each department comes with a default alarm workflow. It is:

▸ **Exception Queue Alarm Workflow:** A workflow configured to send notifications when activities are routed to the exception queue because of workflow errors encountered while processing activities. This workflow is active by default and it runs every 12 hours to check if there are any activities with the substatus "Workflow-Error" in the exception queue. If any such activities are found, a notification email with the list of activity IDs is sent. The notification email is sent to the address specified in the "To address: for Notification for services" setting. This is the default configuration of the workflow; however it can be changed to meet your business needs. Although it is possible to delete the workflow, it should not be deleted. If you do not wish to use the workflow, make it inactive. For some sample workflows, see "Sample Alarm Workflows" on page 118.

Inbound Workflows for Email Activities

Inbound workflows define rules for all emails coming in to the system. Some special inbound workflows also route activities transferred from other departments.

Activities from inbound workflows can be routed to:

‣ Users

‣ Queues

‣ Other inbound workflows

‣ Other departments

Each department comes with three default inbound workflows. You can also create your own workflows.

The three default workflows are as follows:

1. **Start Workflow - Standard**: The first workflow that acts on all new, incoming activities. This workflow is ignored for activities transferred from other departments.

   The system provided workflow creates a new case for activities that do not have a case, and for activities which already have cases, it associates the activities with the existing cases. If the existing case is closed, the workflow reopens the case and assigns the activity to the reopened case. Then, the workflow checks if the incoming activities are bounce backs, and routes such activities to the Exception queue. This is the default behavior of the workflow and it can be changed to meet your business needs; however it cannot be made inactive.

2. **Start Workflow - Transfer**: This workflow is responsible for processing activities transferred from other departments. Users from other departments can transfer activities only to the departments that have active transfer workflows.

   The system provides a blank transfer workflow. You can modify the workflow according to your business requirements.

3. **Finish Workflow**: This workflow applies on activities only if no user-defined inbound workflow has been applied to the activity. For example, if you have configured three aliases in your department and you have configured inbound workflow for only one alias, the activities from that alias are handled by the configured inbound workflow. Activities from the other two alias are handled by the finish workflow.

   The system provides a blank finish workflow. You can modify the workflow according to your requirements. You can choose not to use the finish workflow.

For some sample workflows, see "Sample Inbound Workflows" on page 80.

In addition to the pre-packaged workflows, new workflows can be defined in a department. Also, workflows can be chained in such a way that one workflow takes over the processing of activities after another one has finished.

If there are no inbound workflows configured in a department, or if the inbound workflows are marked inactive, all the incoming activities coming to the aliases configured in the system are moved to the exception queue after an hour.

Outbound Workflows

An outbound workflow identifies the set of rules that are applied on activities generated when email responses are sent out. The outbound workflow is primarily used to review and enforce the quality of outbound email responses.

Outbound workflows are applied on outbound email responses generated by a configured set of users or user groups. They can also be configured to apply on responses to activities that belong to certain queues. However, outbound workflows are not applicable to emails forwarded and redirected from the system.

When there are multiple outbound workflows configured in a department, and an activity qualifies for all the workflows, then the workflow for a user take precedence over the workflow for a user group, and the workflow for the user group takes precedence over the queue. For example, if there is one workflow for a user group and another workflow for a queue, and the user from the user group defined in the workflow sends out an email, which belongs to the queue defined in the other workflow, then the workflow configured for the user group will act on the activity, and the workflow for the queue will be ignored. Likewise, if there is another workflow configured for the user, and an activity qualifies for all three workflows, then the workflow for the user group and queue will be ignored and the workflow for the user will act on the activity.

Outbound Email Review Workflows

To ensure high quality replies to email inquiries, customer service managers may wish to review the content of replies before they are sent out to customers. The outbound email review workflow can be used to set up a supervisory loop that addresses this need. A supervisory loop allows you to route a reply from an agent to another user – a supervisor - based on pre-determined conditions, before the reply leaves the system. The supervisor can then accept the reply, sending the email to the customer, or reject it, returning it to the original agent for revision. During this process, supervisors can edit replies, modify attachments, and provide feedback to the agent using notes. Activities that are generated as part of the supervisory loop are not included in activity reports.

Some important things to note about outbound email review workflows are:

▸ The end node of an outbound email review workflow must be a queue. No other end nodes are supported.

▸ You cannot configure multi-level supervision. Once a supervisor approves an email, the email is sent out of the system. If another outbound workflow is configured for the supervisor, the email is processed by all the nodes, but it is not routed to another queue. The email is sent out to the customer.

For details on creating workflows and workflow nodes, see:

▸ "Creating Workflows" on page 54

▸ "Configuring Nodes" on page 56

For some sample workflows, see "Sample Outbound Workflows" on page 114.

Workflow Editor

The visual Workflow Editor makes it easy to create workflows via a palette of nodes. Each node performs a specific function. For example, the Service Level node allows service levels to be set at that point of the workflow. Placing nodes on the workflow canvas and linking them with connectors creates a system workflow. The Diagram tab in the property sheet of a workflow opens the Workflow Editor.

The following table lists the available workflow nodes.

Node	Related information
Auto-acknowledge node	For details, see "Configuring the Auto-Acknowledgement Node" on page 63.
Alarm node	For details, see "Configuring the Alarm Node" on page 74.
Branch node	For details, see "Configuring the Branch Node" on page 76.
Filter node	For details, see "Configuring the Filter Node" on page 67.
Classification node	For details, see "Configuring the Classification Node" on page 65.
Completion node	For details, see "Configuring the Completion Node" on page 69.
Department node	For details, see "Configuring the Department Node" on page 68.
Modify object node	For details, see "Configuring the Modify Object Node" on page 71.
Queue node	For details, see "Configuring the Queue Node" on page 66.
Service level node	For details, see "Configuring the Service Level Node" on page 72.
Start node	For details, see the following: "Configuring the Start Node in Inbound Workflows" on page 56 "Configuring the Start Node in Standard Start Workflow" on page 57 "Configuring the Start Node in the Standard Transfer Workflow" on page 59 "Configuring the Start Node in the Standard Finish Workflow" on page 60 "Configuring the Start Node for Alarm Workflows" on page 61 "Configuring the Start Node in Outbound Workflows" on page 62
Workflow node	For details, see "Configuring the Workflow Node" on page 70.

List of nodes available in the Workflow Editor

Creating Workflows

To create a workflow:

1. In the Tree pane, browse to **Administration > Department >** *Department_Name* **> Workflow > Workflows**
   > *Workflow Type.*

2. In the List pane toolbar, click the **New** [+] button.

3. In the Properties pane, on the General tab, provide the following details.

   ❍ **Name:** Type the name of the workflow.

   ❍ **Description:** Provide a brief description.

   ❍ **Active:** From the dropdown list, select **Yes** to make the workflow active.

   > **Important:** To apply a workflow on activities, you have to make the status active.

Name	Value
Name *	Sample Workflow
Description	
Active	Yes

Set the general properties

4. Next, go to the Diagrams tab, and configure the workflow using the various nodes available in the Workflow Editor toolbar.

   a. First, add the nodes in the **Workflow Editor.** To add a node, click a node button in the **Workflow Editor** toolbar, and then click in the **Workflow Editor.** The node is added in the **Workflow Editor** and a window for configuring the node properties opens. For more details on setting up all the nodes, see "Configuring Nodes" on page 56.

      For nine nodes, you can also add a copy of the nodes created in other workflows or the same workflow. To add a copy of a node, click the arrow next to the node button in the **Workflow Editor** toolbar, and select the option to add a copy of the node.

   b. After adding nodes, you need to connect them to determine the flow of the workflow. All nodes should be connected to each other. A connector from one node can only point to one other node, but multiple connectors can point towards the same node. In the **Workflow Editor** toolbar, click the **Connect nodes in workflow** ➡ button. Then, click on the node and without releasing the mouse button, click on the second node. A connector appears between the two nodes, indicating the flow of the workflow.

c. After you have created the workflow you can use the auto layout option to arrange the nodes neatly. In the **Workflow Editor** toolbar, click the **Autolayout nodes on canvas** button. All the nodes in the workflow are arranged systematically.
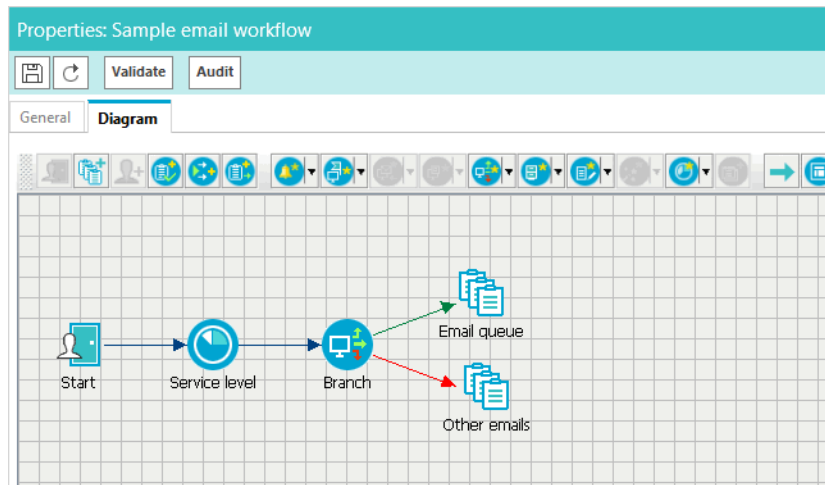
Layout the workflow

5. Click the **Save** button.

6. Click the **Validate** button to validate the workflow. A workflow is validated only if it is in active state. If you have not completed creating the workflow and want to save whatever is done, you can do that by keeping the workflow inactive.

7. Click the **Audit** button to view an audit trail of the users who have made changes to the workflow and the date and time when the change was made.

Copying Workflows

Copy workflows to reuse existing workflows, and to test workflows. Users with the Create Workflow action can copy workflows. The copied workflow is named as "Copy of *Workflow_Name*" and saved as an inactive workflow, without a start node. In the copied workflow, add the start node, evaluate the end nodes to see if they need to be changed, and when the workflow is ready, make it active. The time taken by the copying process varies based on the size of the workflow, and the user cannot work in the application during this time.

Workflows cannot be copied across departments and the following three standard inbound workflows are not available for copying: Start Workflow – Transfer, Start Workflow – Standard, and Finish Workflow.

To copy a workflow:

1. In the Tree pane, browse to **Administration > Departments >** *Department_Name* **> Workflow > Workflows >** *Workflow_Type.*

2. In the List pane, select the workflow you want to copy.

3. In the List pane toolbar, click the **Copy** button.

4. A message appears notifying that based on the size of the workflow, the copy process might take some time, and the user would not be able to use the application during the process. In the message, click **Yes** to create a copy of the workflow.

After a copy of the workflow is created, a message is displayed that tells the name of the copied workflow. In the copied workflow, add the start node, evaluate the end nodes to see if they need to be changed, and when the workflow is ready, make it active.

Deleting Workflows

> 🖐️ Important: **Before deleting a workflow, ensure that it is not in use.**

To delete a workflow:

1. In the Tree pane, browse to **Administration > Departments >** *Department_Name* **> Workflow > Workflows > Workflow Type.**

2. In the List pane, select the workflow you want to delete.

3. In the List pane toolbar, click the **Delete** ☒ button.

Configuring Nodes

This section describes how to configure the various nodes in workflows.

Configuring the Start Node in Inbound Workflows

A start node is the starting point of a workflow and no workflow can be created without a start node. An inbound workflow can have two types of start points - Alias and Workflow. All emails coming to an alias, specified as the starting point of an inbound workflow, are routed by that workflow. You can add more than one aliases as the start point of a workflow, but one alias can be a start point of only one inbound workflow. After saving a workflow, if you add the workflow as an end node in another workflow, then the second workflow becomes the start point of the first workflow. This means, that the activities routed by the second workflow are processed by the first workflow. An inbound workflow can have both aliases and workflows as the start point.

A workflow can have only one start node.

The start node

To configure the start node in an inbound workflow:

1. In the Tree pane, browse to **Administration > Departments >** *Department_Name* **> Workflow > Workflows > Inbound.**

2. In the List pane, select an inbound workflow or create a new one.

3. In the Properties pane, on the Diagram tab, add the **Start** node in the Workflow Editor.

   In the Add Start Node window, in the Start Points tab, select the email alias to be set as the start point for this workflow. All emails coming to the selected alias are routed by this inbound workflow. You can add more than one aliases as the start point of a workflow, but one alias can be a start point of only one inbound workflow.
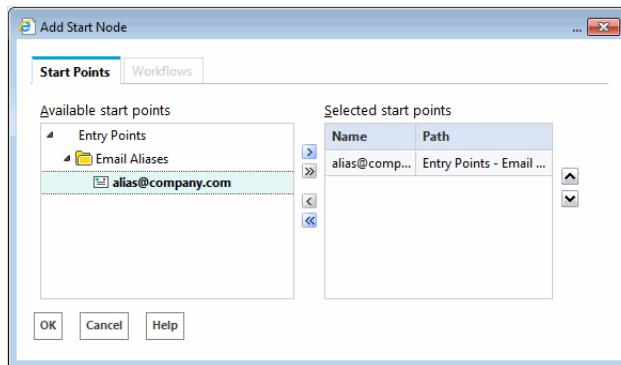
Select an alias as the start point

The Workflows tab is enabled only after a workflow is saved. After saving the workflow, if you add the workflow as an end node in another workflow, then that workflow is listed in the Workflows tab. This means, that the activities routed by the other workflow are processed by this workflow. An inbound workflow can have both aliases and workflows as the start point.
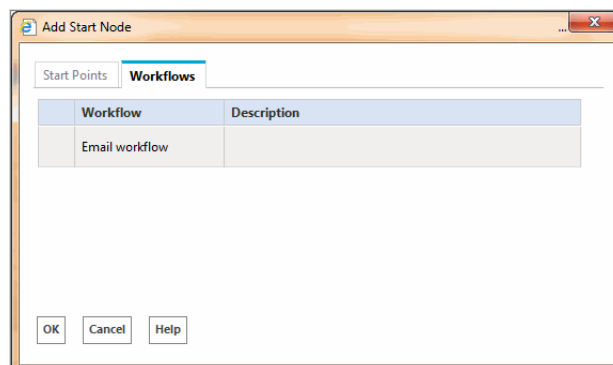
View the workflows

4. Click the **OK** button to close the window.

Configuring the Start Node in Standard Start Workflow

A start node is the starting point of a workflow and no workflow can be created without a start node. In the start node of a standard start workflow, you make the important decision of creating or not creating cases for each incoming activity. By default, the node is configured to create a new case for activities that do not have a case and for activities which already have a case, associates the activity with the existing case. If the existing case is

already closed, the workflow reopens the case and assigns the activity to the reopened case. This is the default configuration of the node and it can be changed to meet your business needs.

A workflow can have only one start node.

The Start node

To configure the start node in the standard start workflow:

1. In the Tree pane, browse to **Administration > Departments >** *Department_Name* **> Workflow > Workflows > Inbound.**

2. In the List pane select **Start Workflow - Standard.**

3. In the Properties pane, on the Diagram tab, add the **Start** node in the Workflow Editor.

4. In the Add Start Node window, select one of the following options.

   ○ **Always create a new case for the activity:** If you select this options, all options, except for the option to associate cases for activities that have existing cases, in the window are disabled.

   ○ **Create a new case or assign to current case under the following conditions:** If you select this option, you can further specify the conditions when a case is to be created.

   • Specify what is to be done when an activity has an existing case and the case is open. The following options are available:

     • Always associate this activity to open case

     • Always create new case

     • If the existing case has been open for more than *n* number of days, then create a new case else associate to old case: You can specify the number of days to be considered for this option.

   • Now, specify what is to be done when an activity has an existing case and that case is closed. The following options are available:

     • Always reopen the case and assign the activity to the case

     • Always create new case

- If the existing case has been closed for more than n number of days, then create a new case else associate to the old case. You can specify the number of days to be considered for this option.
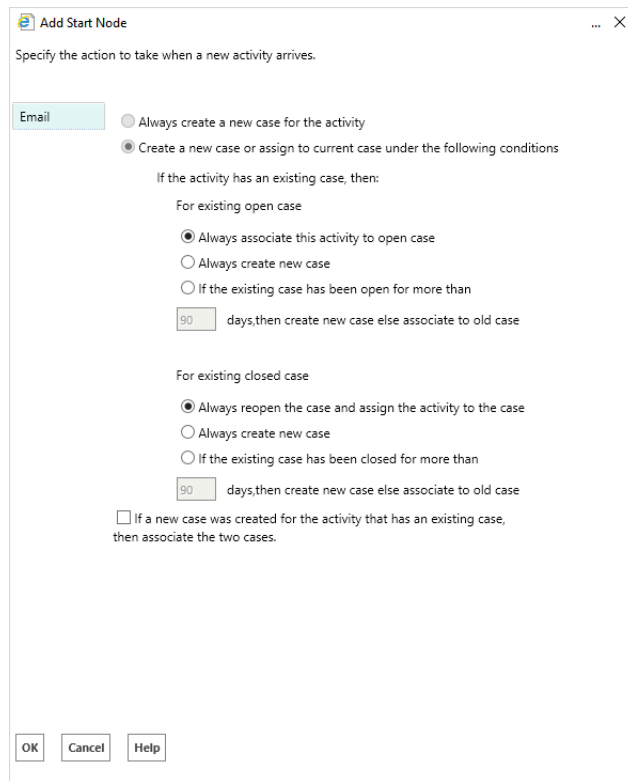
Set the start node for a standard start workflow

5. Lastly, you can associate two cases, if a new case was created for the activity that has an existing case. In the Add Start Node window, select the **If a new case was created for the activity that has an existing case, then associate the two cases** option.

6. Click the **OK** button to close the window.

Configuring the Start Node in the Standard Transfer Workflow

A start node is the starting point of a workflow and no workflow can be created without a start node. For the start node of a transfer workflow, you do not need to configure any properties. All the activities that are transferred from other departments form the start point of the transfer workflow.

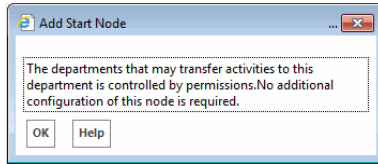A workflow can have only one start node.

The Start node

To configure the start node in the standard transfer workflow:

1. In the Tree pane, browse to **Administration > Departments >** *Department_Name* **> Workflow > Workflows > Inbound.**

2. In the List pane select **Start Workflow - Transfer.**

3. In the Properties pane, on the Diagram tab, add the **Start** node in the Workflow Editor.

4. In the Add Start Node window you will see a message that the transfer of activities from other departments is controlled by permissions. No additional properties need to be set for this node of the workflow.

Set the start node for a standard transfer workflow

5. Click the **OK** button to close the window.

Configuring the Start Node in the Standard Finish Workflow

A start node is the starting point of a workflow and no workflow can be created without a start node. No properties need to be set for the start node of a finish workflow. The start node of the standard finish workflow picks up all the incoming activities that are not processed by any other custom inbound workflow. Activities are routed to the finish workflow only after they are processed by the Standard - Start Workflow.

A workflow can have only one start node.

The start node

To configure the start node in a standard finish workflow:

1. In the Tree pane, browse to **Administration > Departments >** *Department_Name* **> Workflow > Workflows > Inbound.**

2. In the List pane select **Finish workflow.**

3. In the Properties pane, on the Diagram tab, add the **Start** node in the Workflow Editor.

4. In the Add Start Node window you will see a message that the workflow will run only after the start workflow has processed the activity. No additional properties need to be set for this node of the workflow.
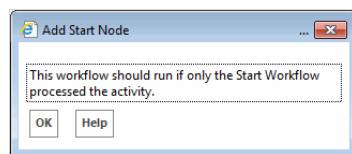
Set the start node for a standard finish workflow

5. Click the **OK** button to close the window.

Configuring the Start Node for Alarm Workflows

A start node is the starting point of a workflow and no workflow can be created without a start node. In the start node of the alarm workflow, specify the objects you want to monitor. You can select from queues, users, and user groups. Along with the objects, you have to specify the schedule when the alarm workflow should run. You can run the alarm workflow only once or multiple times. Additionally, you can specify the end date and start date of the scheduled alarm workflow.

A workflow can have only one start node.

The start node

To configure a start node for an alarm node:

1. In the Tree pane, browse to **Administration > Departments >** *Department_Name* **> Workflow > Workflows > Alarm.**

2. In the List pane, select an alarm workflow or create a new one.

3. In the Properties pane, on the Diagram tab, add the **Start** node in the Workflow Editor.

4. In the Add Start Node window, on the Objects tab, select from the list of users and queues.
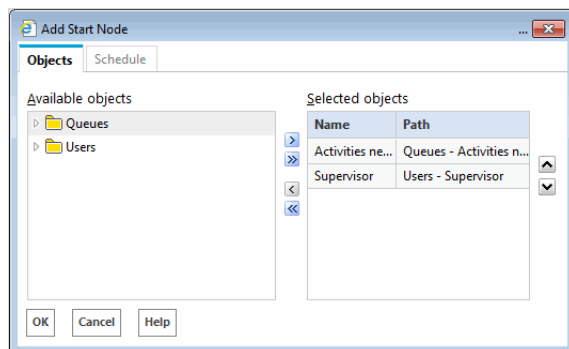
Select from the users or queues

5. Next, in the Add Start Node window, on the Schedule tab, set the schedule for the alarm workflow. The following options need to be set:

    ❑ **Specify the time or times that the workflow should be run:** By default **The workflow should be run once at** *Time Date* is selected. You can select from one of the following options.

        ● **The workflow should be run once at** *Time Date*

        ● **This workflow should be run multiple times**

    ❑ **Specify the duration of the recurring workflow:** Set the start date for the workflow. For the end date, select from one of the following options.

        ● No end date

        ● End after *n* occurrences

        ● End by the specified date

    ❑ **Specify the recurrence pattern of the workflow:** Select one of the following options.

- **Daily:** Set the workflow to run:

  - Every *n* day

  - Every weekday

- **Weekly:** Set the workflow to recur every *n* weeks on *the days of the week*

- **Monthly:** Set the workflow to run:

  - Day *n* of every *n* month

  - The first, second, third, fourth, or last *Day* of every *n* month

- **Yearly:** Set the workflow to run:

  - Every *Month Date*

  - Every first, second, third, fourth, or last *Day* of *Month*

- **On the day that the workflow runs, run the workflow:** Select one of the following options.

  - Once at *the specified time*

  - Every *n* hours starting at *the specified time* and ending at *the specified time*
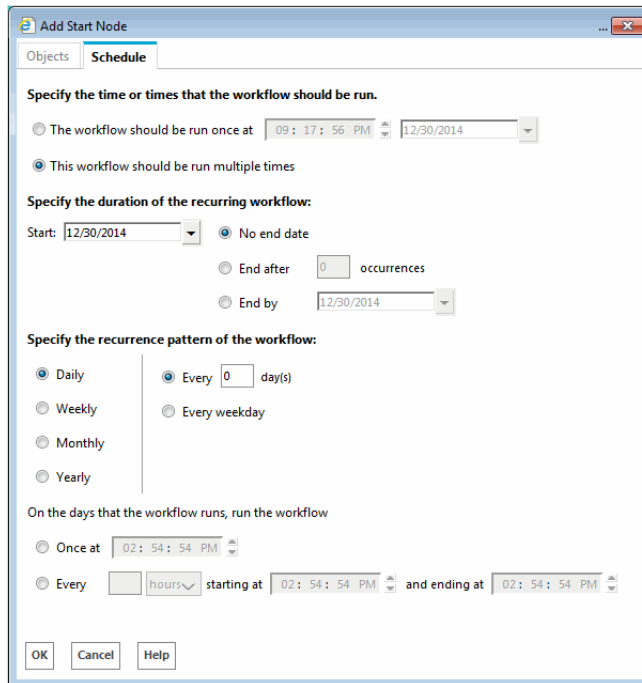
Set the schedule for the alarm workflow

6. Click the **OK** button to close the window.

Configuring the Start Node in Outbound Workflows

A start node is the starting point of a workflow and no workflow can be created without a start node. The start point of an outbound workflow can be a queue, a user, or a user group. You can select multiple objects as the start point of the same workflow. Also, every workflow has a unique object as its start point. For example, the same user cannot be a start point of two outbound workflows.

A workflow can have only one start node.

The start node

To configure a start node in an outbound workflow:

1. In the Tree pane, browse to **Administration > Departments >** *Department_Name* **> Workflow > Workflows > Outbound.**

2. In the List pane, select an outbound workflow or create a new one.

3. In the Properties pane, on the Diagram tab, add the **Start** node in the Workflow Editor.

4. In the Add Start Node window, on the Start Points tab, select from the list of users, queues, and user groups. Note that if you are creating a supervisory loop, the start node must be a user or user group.
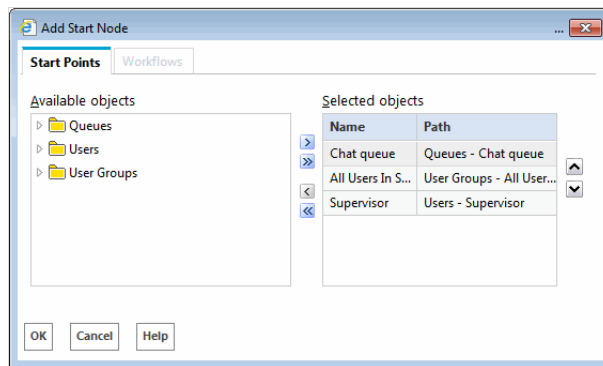
The Workflows tab is enabled only after the workflow is saved. After saving the workflow, if you add this workflow as an end node in another workflow, then that workflow is listed in the Workflows tab. This means, that the activities routed by the other workflow are processed by this workflow.
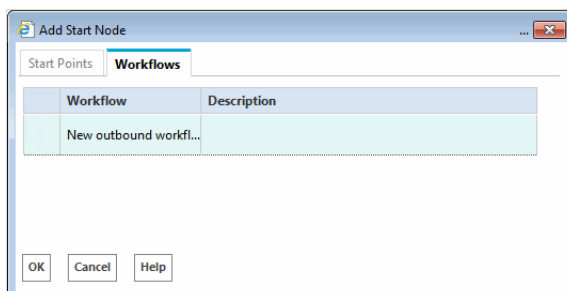
View the workflows

5. Click the **OK** button to close the window.

Configuring the Auto-Acknowledgement Node

Use this node to automatically send acknowledgements for incoming emails. Auto-acknowledgement are emails that are sent to customers when conditions set in the auto-acknowledgement node are met. Create the content for these auto-acknowledgements in the form of articles in the KB Console. Then, configure the conditions under

which auto-acknowledgments are to be sent to customers. You can configure a set of rules, and for each rule, configure a different auto-acknowledgement.

The auto-acknowledgement node

To configure an auto-acknowledgement node:

1. In the Properties pane, on the Diagram tab, add the **Auto-acknowledgement** node in the Workflow Editor.

2. In the Auto Acknowledgement Rule Configuration window, provide the following details.

   a. In the **Name** field, provide a name for the node.

   b. In the **Rule Name** filed, provide a name for the rule and press the Enter Key. Select the rule name to configure the rule properties.

   c. Select one of the following options:

      - **This rule is always true**

   - **This rule is true under the following conditions**

      If you have selected the **This rule is true under the following conditions** option, configure the conditions when the rule is true. For a list of objects available for configuring the conditions, see "Appendix: Reference Information" on page 89.

   d. Next, select the articles to be sent as an auto-acknowledgement if the conditions configured in the rule are met. Click the **Select Article** button and from the Select Article window select articles for auto-acknowledgement. You can select multiple articles and configure the order in which they should appear in the reply. When the auto-acknowledgement is sent, all the selected articles are combined together in the order they are selected and sent out as one email.

      Likewise, you can create multiple rules.

   e. If you have created more than one rule, use the **Move Up** and **Move Down** button to change the order of the rules.

f. Lastly, you can also send an auto-acknowledgement if no rules are found true. Select the **If no TRUE rule is found, then send this article** option, and select the articles to be sent as auto-acknowledgement. Click the **Select Article** button, and from the Select Article window, select articles for auto-acknowledgement.
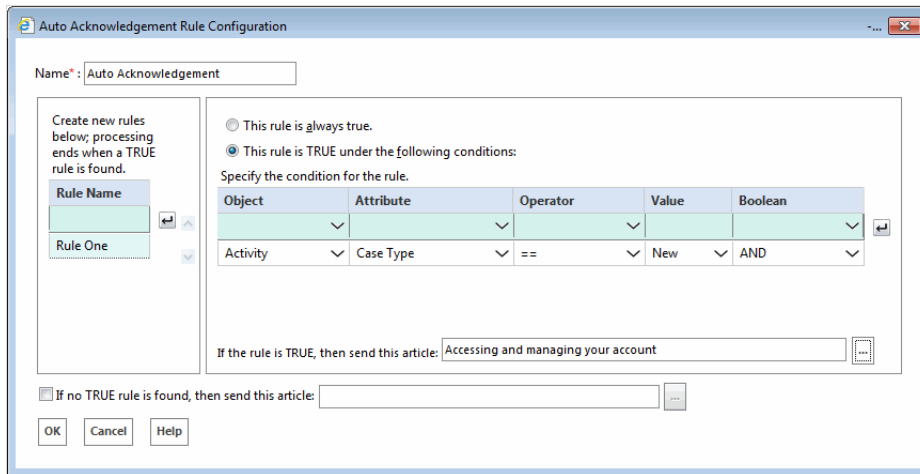
Set the auto-acknowledgment node

3. Click the **OK** button to close the window.

Configuring the Classification Node

Use this node to automatically assign categories and resolution codes to activities processed by the workflow. Create these classifications from the Administration Console. Then, configure the conditions under which classifications should be assigned to activities. You can configure a set of rules, and for each rule, configure a different set of classifications to be assigned to activities.

The classification node

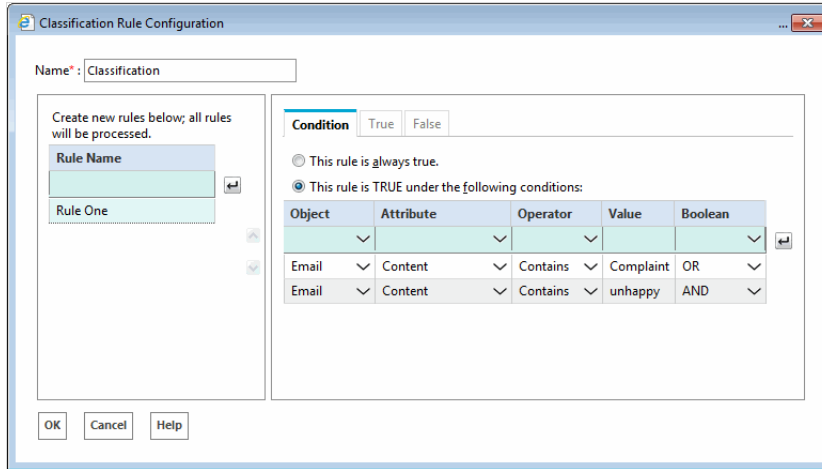**To configure a classification node:**

1. In the Properties pane, on the Diagram tab, add the **Classification** node in the Workflow Editor.

2. In the Classification Rule Configuration window, provide the following details.

    a. In the **Name** field, provide a name for the node.

    b. In the **Rule Name** filed, provide a name for the rule and press the Enter Key. Select the rule name to configure the rule properties.

    c. On the Condition tab, select one of the following options:

        ● **This rule is always true**

        ● **This rule is true under the following conditions**

        If you have selected the **This rule is true under the following conditions** option, configure the conditions when the rule is true. For a list of objects available for configuring the conditions, see "Appendix: Reference Information" on page 89.

d. Next, go the True tab and select the categories or resolution codes to be assigned to activities when the conditions configured in the rule are met.

e. Next, go the False tab and select the categories or resolution codes to be assigned to activities when the conditions configured in the rule are not met. The False tab is enabled only if you have selected the **This rule is true under the following conditions** option on the Condition tab.

Likewise, you can create multiple rules.

f. If you have created more than one rule, use the **Move Up** and **Move Down** button to change the order of the rules.

Set the classification node

3. Click the **OK** button to close the window.

Configuring the Queue Node

In this node, specify the queue to which activities should get routed after they are processed by a workflow. Activities from queues are routed to agents based on the routing method defined in the queue. Queue node is a terminating node of a workflow and you cannot add any nodes after it.
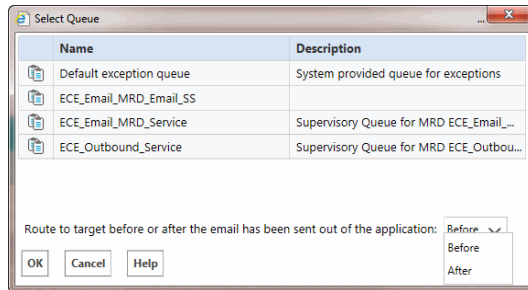

The queue node

The process of adding a queue node for outbound workflows is slightly different than for inbound workflows. In outbound workflows, you must select whether the outbound email is routed to the queue for supervisory review before or after a response has been sent to the customer.

‣ **If set to Before:** The supervisor is able to review the response before it is sent. If the supervisor Approves the response, it is sent to the customer. If the supervisor Rejects the response, it is sent back to the agent for improvements.

‣ **If set to After:** If a shorter SLA is high priority, set the queue to route the email **After** it has been sent, at which point the supervisor can mark the agent's response as Quality Met or Quality not Met.

To configure a queue node:

1. In the Properties pane, on the Diagram tab, add the **Queue** node in the Workflow Editor.

2. In the Select Queue window, select a queue.

	Name	Description
	Default exception queue	System provided queue for exceptions
	ECE_Email_MRD_Email_SS	
	ECE_Email_MRD_Service	Supervisory Queue for MRD ECE_Email_...
	ECE_Outbound_Service	Supervisory Queue for MRD ECE_Outbou...

Route to target before or after the email has been sent out of the application: Before

OK   Cancel   Help

Set the queue node

3. If the queue is being selected for an outbound workflow, select to route the response to the queue **Before** or **After** the email has been sent out of the application.

4. Click the **OK** button to close the window.

Configuring the Filter Node

This node allows you to control the percentage of outgoing email activities that are sent to a location for review. The filter node assists supervisors by reducing and controlling the total outbound agent emails to be reviewed for quality assurance. An outbound email review workflow without the filter node sends all outgoing emails from a user or queue to the target node in the workflow, while the filter node allows the administrator to control the percentage of outgoing activities to be routed to the review destination. Rerouting of outgoing activities can be done in increments of 5%.


The Filter Node

The filter node is only available while configuring outbound email workflows.

To configure a filter node:

1. In the Properties pane, on the Diagram tab, add the **Filter** node in the Workflow Editor.

2. In the Filter Rule Configuration window, perform the following:

   a. Provide a name for the node.

b.   From the dropdown menu, select the percentage of emails to be randomly routed to the target node.
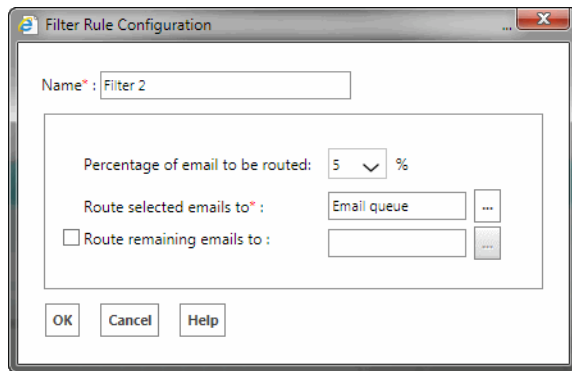
Select the target nodes and filter percentage

c.   Select the target node to which the selected emails are routed. This object must already be present in the workflow diagram area to be eligible. Click the Select Target button and from the Select Target window select the target node. You can choose from the following nodes:

- Queue
- Workflow
- Department
- Completion
- Auto-acknowledgement
- Branch
- Classification
- Modify object
- Service level
- User

d.   If necessary, select the option to route the remaining emails to an alternate target node and follow the same steps of selecting a target.

3.   Click **OK**.

Once you have configured the targets in the filter node, the filter node and target nodes are automatically connected by arrows. The green arrow points to the target node to which the selected emails are routed. The red arrow points to the alternate target node. These arrows cannot be added or removed manually. They are added or removed automatically when you make changes to the filter node.

Configuring the Department Node

Use this node to route activities to other departments. Activities can be routed only to departments that are shared with the current department, and that have active transfer workflows. Only such departments are available
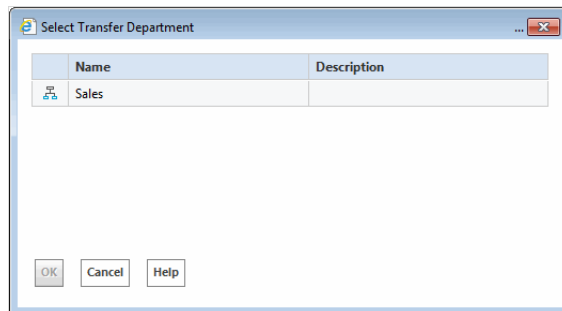
in the department list. The department node is a terminating node of a workflow and you cannot add any nodes after it. This node is not available in outbound workflows.

The department node

To configure a department node:

1. In the Properties pane, on the Diagram tab, add the **Department** node in the Workflow Editor.

2. In the Select Transfer Department window, select a department to which you want to transfer activities from this workflow. Only the departments that are shared with the current department, and that have an active **Start Workflow - Transfer** workflow, are available in this list.

Set the department node

3. Click the **OK** button to close the window.

Configuring the Completion Node

This node allows you to complete activities automatically. When activities reach this node, the status of the activities is changed to "Completed". Use this node only when you are sure that no additional work needs to be done, and the activity can be completed automatically, without being viewed by any agent. No properties need to be set for this node of the workflow.
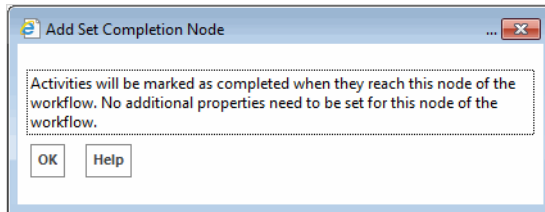
The completion node

To configure a completion node:

1. In the Properties pane, on the Diagram tab, add the **Completion** node in the Workflow Editor.

2. In the Add Set Completion Node window you will see a message that activities will be marked as completed when they reach this node of the workflow. No additional properties need to be set.

Set the completion node

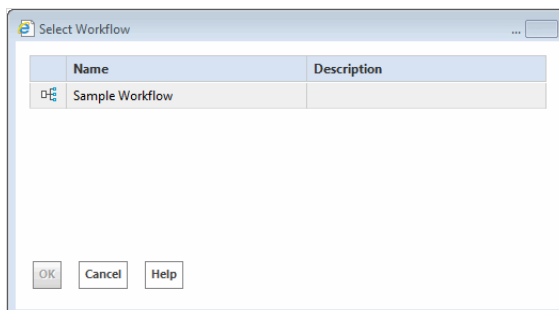3. Click the **OK** button to close the window.

Configuring the Workflow Node

Use this node to specify the workflow to which activities should get routed after they have been processed by the current workflow. Only workflows of the same type are available for routing activities, except for inbound workflows, where you can route activities to both inbound and general workflows. Workflow node is a terminating node of a workflow and you cannot add any nodes after it.

The workflow node

To configure a workflow node:

1. In the Properties pane, on the Diagram tab, add the **Workflow** node in the Workflow Editor.

2. In the Select Workflow window, select the workflow to which activities should get routed after they have been processed by the current workflow. Only active workflows are available in this list.

Set the workflow node

3. Click the **OK** button to close the window.

Configuring the Modify Object Node

Use this node to modify properties of the following objects - activities, cases, customers, emails, and custom activities.

The modify object node

To configure a modify object node:

1. In the Properties pane, on the Diagram tab, add the **Modify Object** node in the Workflow Editor.

2. In the Modify Object Rule Configuration window, provide the following details.

    a. In the **Name** field, provide a name for the node.

    b. In the **Rule Name** filed, provide a name for the rule and press the ENTER key. Select the rule name to configure the rule properties.

    c. On the Condition tab, select one of the following options:

    -   **This rule is always true**

    -   **This rule is true under the following conditions**

    If you have selected the **This rule is true under the following conditions** option, configure the conditions when the rule is true. For a list of objects available for configuring the conditions, see "Appendix: Reference Information" on page 89.

    Set conditions for the modify object node

    d. Next, go to the True tab and select the object you want to modify, and specify the values for the attributes that are to be modified. Through this node you can modify the following attributes of the objects.

    -   **Activity:** Activity priority, assigned to, description, due date, due date time, queue, subject

    -   **Case:** Description, due date, due date time, owner, severity, solution description.

    -   **Email:** Content, subject

    -   **Customer - common:** Entitlements, how referred, industry, level, marketing segment, preferred agent

- **Customer - individual:** Date of birth, employment status, first name, middle name, last name, gender, job title, marital status

- **Customer - group:** Customer name, group type, no. of members, region

- **Customer - organization:** Customer name, no. of employees, region, sector type

There are four ways in which you can provide values for these attributes. They are:

- **Macro:** The macro specified here is expanded and the value of the macro is assigned as the value for the attribute.

- **Link:** The data usage link specified here is executed and the value of the link is assigned as the value for the attribute.

- **Constant:** The value specified here is assigned directly as the value for the attribute.

- **Pattern:** The pattern specified here is searched for in the body of the activity. The value immediately following the pattern, till the end of the line, is assigned as the value for the attribute.
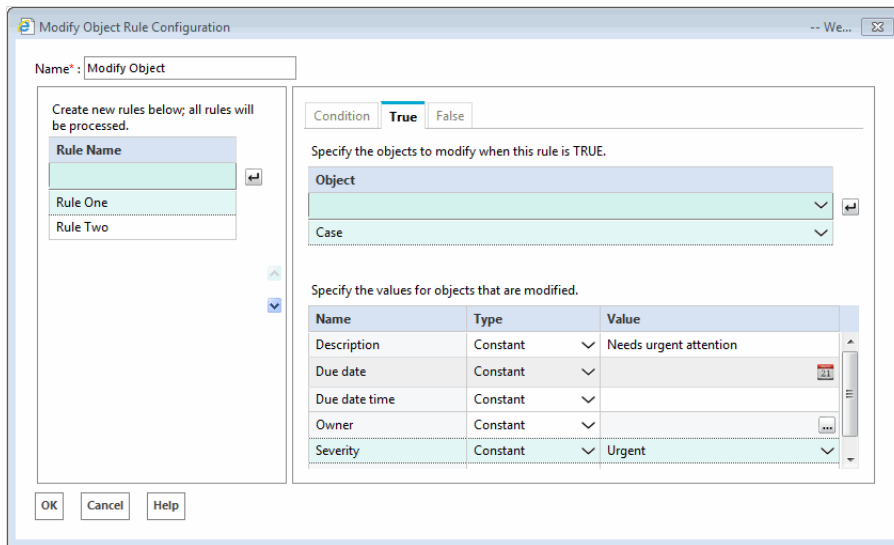
Configure the properties of the object to be modified

e. Next, go the False tab and select the object to be modified if the conditions configured in the rule are not met. The False tab is enabled only if you have selected the **This rule is true under the following conditions** option on the Condition tab. It is optional to configure the False tab.

   Likewise, you can create multiple rules.

f. If you have created more than one rule, use the **Move Up** and **Move Down** button to change the order of the rules.

3. Click the **OK** button to close the window.

Configuring the Service Level Node

Use this node to automatically set service levels for activities. Service levels allow you to set up response time expectations for various emails and custom activities being processed by the workflow. Create the service levels from the Service Levels node in the Administration Console. Then, configure the conditions when a service level

should be set for an activity or case. You can configure a set of rules, and for each rule, configure a different service level.
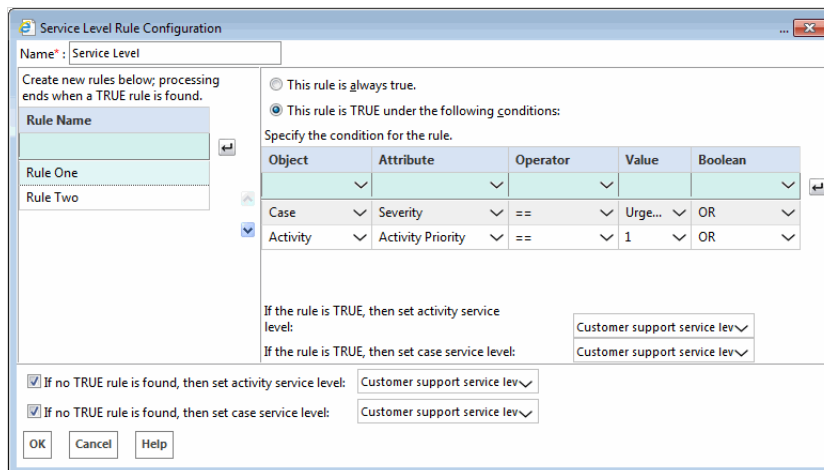

The service level node

To configure a service level node:

1. In the Properties pane, on the Diagram tab, add the **Service Level** node in the Workflow Editor.

2. In the Service Level Rule Configuration window, provide the following details.

    a. In the **Name** field, provide a name for the node.

    b. In the **Rule Name** field, provide a name for the rule and press the Enter Key. Select the rule name to configure the rule properties.

    c. Select one of the following options:

      - **This rule is always true**

      - **This rule is true under the following conditions**

      If you have selected the **This rule is true under the following conditions** option, configure the conditions when the rule is true. For a list of objects available for configuring the conditions, see "Appendix: Reference Information" on page 89.

    d. Next, select the service levels to be set for activities and cases, if the conditions configured in the rule are met.

      Likewise, you can create multiple rules.

    e. If you have created more than one rule, use the **Move Up** and **Move Down** button to change the order of rules.

    f. Lastly, you can also set service levels if no rules are found to be true. Set the following:

      - Select the **If no TRUE rule is found, then set activity service level** option, and select a service level from the dropdown list.

      - Select the **If no TRUE rule is found, then set case service level** option, and select a service level from the dropdown list.

Configure the service level node

3. Click the **OK** button to close the window.

Configuring the Alarm Node

Using this node, you can set up alarms if certain conditions are met. You can monitor some specific attributes of cases and activities, and you can send internal and external notifications if the conditions are met. For activity alarm rules, you can also filter activities based on a defined criteria. The filtered activities can then be further processed by the alarm workflow.

An alarm workflow can have only one alarm node and it should be the second node in the workflow, that is, the node following the start node.

The alarm node

To configure an alarm node:

1. In the Tree pane, browse to **Administration > Departments >** *Department_Name* **> Workflow > Workflows > Alarm.**

2. In the List pane, select an alarm workflow.

3. In the Properties pane, on the Diagram tab, add the **Alarm** node in the Workflow Editor.

4. In the Alarm Rule Configuration window, provide the following details.

    a. In the **Name** field, provide a name for the node.

    b. Next, on the Condition tab, configure the conditions under which the rule is true. Only the following objects are available in the alarm node - Activity and Case, and you can set conditions for only one object in one alarm node. Another important thing to note is that you cannot set conditions using only the "Count" and "Percentage" attributes. You must select another attribute with these two attributes to be able to save the node. For a list of objects available for setting alarm conditions, see "Appendix: Reference Information" on page 89.

Configure conditions for the alarm node

c. Next, on the True tab, configure the action to be performed when the alarm conditions are met. You can do one of the following:

- Send notifications to users. This option is available in alarm rules configured for both cases and activities. Set up internal messages or emails to be sent when an alert condition is met. Specify the following - users to whom you want to send a message (you can send messages to internal user accounts or external email addresses.); the subject of the message; the content of the message.
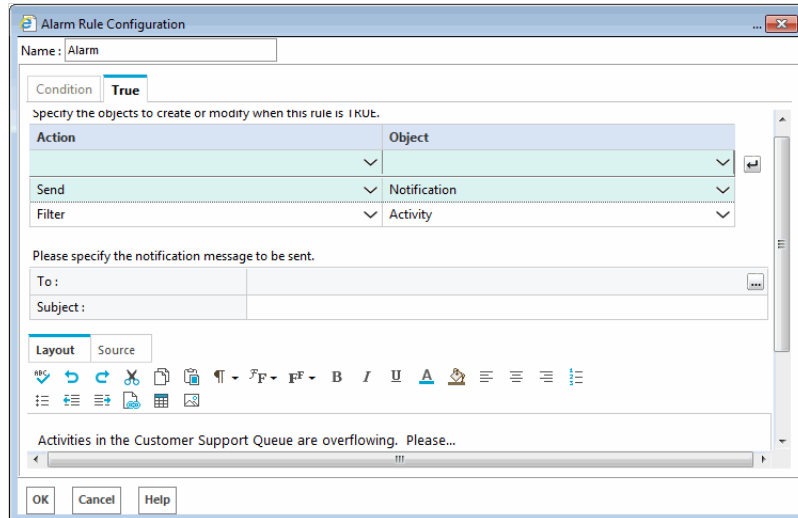
Configure a notification for the alarm node

- Filter activities, based on a defined criteria. This option is available only in alarm rules configured for activities. Set up the criteria of activities to be further processed by this workflow.
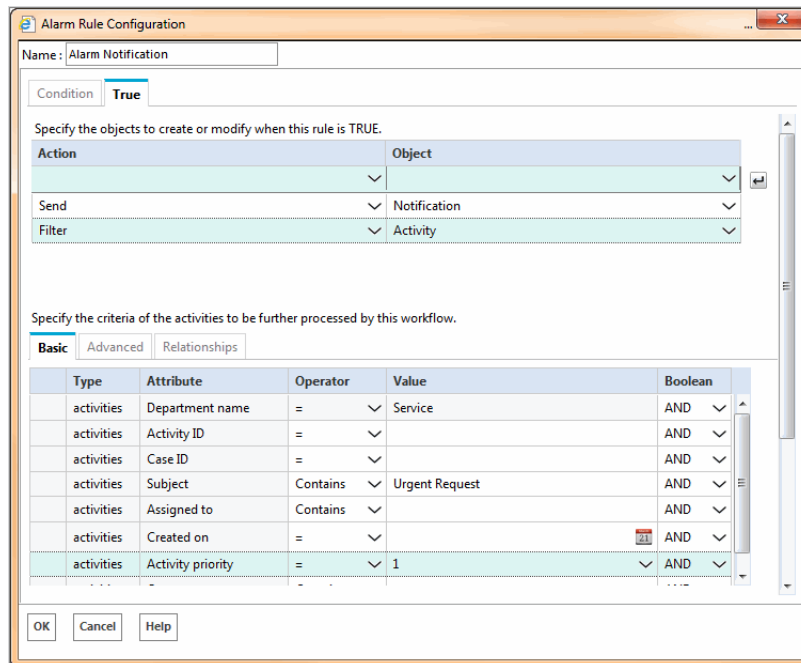
Configure a filter for activities to be further processed by the workflow

5. Click the **OK** button to close the window.

Configuring the Branch Node

Branch node is a decision point where you decide what kind of work is to be routed to which resource. Using rules, you can automatically route work to the resources capable of handling it. Activities can be routed to users, queues, departments, or another workflow. You can create various rules in which you can specify the conditions when a particular type of work should be routed to a specified resource. You can configure the system in a way that when one set of conditions are met the work is routed to one resource, and when another set of conditions are met the work is routed to a different resource. Like this you can configure different sets of conditions and for each set of met conditions, a different resource. For example, your system handles three types of queries - orders, inquiries, and support, and you want to automatically route each type of work to a different queue. Using the branch node, you can set rules and automatically route the work to the appropriate queues.

In the Branch node, along with the rules, you have to also define the resources to which the work is to be routed. So, before configuring the Branch node you have to first add the nodes to the Workflow Editor, to which you want to route the work.

The branch node

To configure a branch node:

> Important: **In the branch node, along with the rules, you have to also define the resources to which the work is to be routed. So, before configuring the branch node you have to first add the nodes to the Workflow Editor, to which you want to route the work.**

1. In the Properties pane, on the Diagram tab, add the **Branch** node in the Workflow Editor.

2. In the Branch Rule Configuration window, provide the following details.

    a. In the **Name** field, provide a name for the node.

    b. In the **Rule Name** field, provide a name for the rule and press the Enter Key. Select the rule name to configure the rule properties.

    c. Select one of the following options:

    - **This rule is always true**
    - **This rule is true under the following conditions**

    If you have selected the **This rule is true under the following conditions** option, configure the conditions when the rule is true.

    d. Next, select the target node. Click the **Select Target** button and from the Select Target window select the target node. You can choose from the following nodes:

    - Queue
    - Workflow
    - Department
    - Completion
    - Auto-acknowledgement
    - Branch
    - Category

- Modify object
- Service level
- User
- Filter (outbound workflow)

Likewise, you can create multiple rules.

e. If you have created more than one rule, use the **Move Up** and **Move Down** button to change the order of rules.

f. Lastly, you can also select a target node if no rules are found true. Select the **If no TRUE rule is found, then route to this target** option, and select the target node. Click the **Select Target** button and from the Select Target window select the target node.

Configure the branch node

3. Click the **OK** button to close the window.

Once you have configured the rules in the branch node, the branch node and target nodes are automatically connected by arrows. Green arrows are added pointing to targets for true conditions. And, a red arrow is added pointing to the target for activities when no true rule is found. These arrows cannot be added or removed manually.

6

Sample Workflows

Inbound: Processing Inquiries at a Phone Company

This workflow demonstrates how to manage emails coming into a phone company. First, an auto-acknowledgement is sent to customers and a service level is set for the emails. Then, data is automatically extracted from emails and it is saved as part of the case and customer attributes. Then, the workflow starts routing activities. First, emails about landline services are routed to the landline service queue. Emails about mobile services are routed to the mobile service queue. Computer generated emails and emails about any other topic are routed to their respective queues.

Before creating any workflow, you need to create some objects which are then used in the workflow. For this workflow, you need to create the following objects:

▶ From the Administration Console:

  ❍ Aliases

  ❍ Three service levels named - 8 hours SLA, 24 hours SLA, and 48 hours SLA

  ❍ Four queues, with the following names - Landline service, Mobile service, Computer generated email - no reply needed, Unknown

▶ From the Knowledge Base Console:

  ❍ An auto-acknowledgment article. Set the article macro as `auto_ack_mobile`.

▶ From the Tools Console:

  ❍ One custom case attribute, with the name "Tracking number". For details on creating and adding the attributes in the screens, see the *Enterprise Chat and Email Administrator's Guide to Tools Console*.

> **Important:** **Nodes are not necessarily configured in the order in which they appear in the workflow. For example, before configuring the Branch node, you need to first configure the nodes that need to be used in the rules in the Branch node. To help you better understand the workflow, the nodes in the sample workflow figure are numbered in the order in which they are to be configured.**
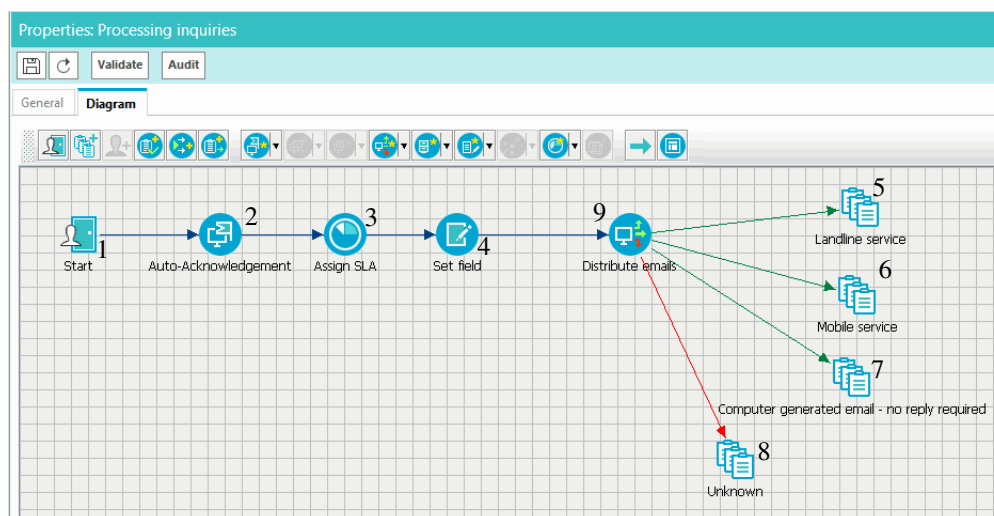
Sample workflow for processing inquiries at a phone company

To create the workflow:

1. In the **Start** node, select aliases.

2. In the **Create object** node (named as Auto-acknowledgement), create the following rules:

   a. Landline service: Check if the subject of an email contains "Landline service". If the condition is met, create a new email activity with the following attributes:

      i. Set the subject using the macro "activity_subject".

      ii. Set the "from" and "to" email addresses.

      iii. Set the content using the "auto_ack_landline" article macro.

      iv. Set the case and customer as "current".

      v. Set the activity substatus as "Ready for outbound workflow".

Create an auto-acknowledgement

   b. Mobile service: Check if the subject of the email contains "Mobile service". If the condition is met, create a new email activity with the following attributes:

      i. Set the subject using the macro "activity_subject".

      ii. Set the "from" and "to" email addresses.

      iii. Set the content using the "auto_ack_mobile" article macro.

      iv. Set the case and customer as "current".

v. Set the activity substatus as "Ready for outbound workflow".

Create a new email

Connect the **Start** node with this node.

3. In the **Service Level** node (named as Assign SLA), configure the following rules.

   a. Landline service SLA: Check if the subject of the email contains "Landline service". If the condition is met, set the activity service level as "24 hours SLA".

Set an SLA

b. Mobile service SLA: Check if the subject of the email contains "Mobile service". If the condition is met, set the activity service level as "8 hours SLA".

Set an SLA

c. If none of the rules configured in this node are true, set the activity service level as "48 hours SLA".

Connect the **Create object** node (named as Auto-acknowledgement) with this node.

4. In the **Modify object** node (named as Set Fields), configure the following rules.

a. Set tracking number: Configure the following conditions for the rule.

   ● Email content contains "Tracking number:", OR

   ● Email content contains "Rebate ID:", AND

   ● Case type is "New"

Configure conditions for the rule

If the conditions are met, set the value in the "Tracking number" field (custom field) using the pattern "Tracking number:"

Set the tracking number

b. Set customer name: Configure the following conditions for the rule.

- Email content contains "First name:", AND

- Email content contains "Last name:", AND

- Case type is "New"

Configure conditions for the rule

If the conditions are met, set the value in the "First name" and "Last name" fields using the patterns "First name:" and "Last name:" respectively.

Set the customer name

Connect the **Service Level** node (named as Assign SLA) with this node.

5. In the **Queue** node (named as Landline service), select the "Landline service" queue.

6. In the **Queue** node (named as Mobile service), select the "Mobile service" queue.

7. In the **Queue** node (named as Computer generated email - no reply needed), select the "Computer generate email - no reply needed" queue.

8. In the **Queue** node (named as Unknown), select the "Unknown" queue.

9. In the **Branch** node (named as Distribute emails), create the following rules. In this node, we will use the nodes configured in steps 5–8.

   a. Landline service emails: Configure following conditions for the rule:

   ● To email address is "landlineservice@company.com", AND

   ● Email content does not contain "auto-ack", AND

   If the conditions are met, route the activity to the "Landline service" queue.

Configure conditions for the rule

b. Mobile service emails: Configure the following conditions for the rule:

- The To email address is "mobileservice@company.com", AND

- Email content does not contain "auto-ack" AND

If the conditions are met, route the activity to the "Mobile service" queue.

Configure conditions for the rule

c. No reply needed: Configure following conditions for the rule:

- Email content contains "auto-ack" AND

If the conditions are met, route the activity to the "Computer generate email - no reply needed" queue.

Configure conditions for the rule

d. If none of the rules configured in this node are true, route the activity to the "Unknown" queue.

The Distribute emails node is automatically connected to the queue nodes used in the various conditions. Connect the **Modify object** node (named as Set Fields) with the **Branch** node (named as Distribute emails).

Outbound: Reviewing Outgoing Emails From Trainee Agents

This workflow routes all outbound emails created by users in the user group Trainee, that have the word Urgent in the subject, to a Supervision queue. Supervisors can then pull the emails from the queue and accept or reject the response after reviewing it.

Before creating any workflow, you need to create some objects which are then used in the workflow. For this workflow, you need to create the following objects:

‣ From the Administration Console:
  ○ A user group named Trainees.
  ○ A Supervision queue imported from the MRD, from which supervisors can pull activities for review.

> **Important:** **Nodes are not necessarily configured in the order in which they appear in the workflow. For example, before configuring the Branch node, you need to first configure the nodes that need to be used in the rules in the Branch node. To help you better understand the workflow, the nodes in the sample workflow figure are numbered in the order in which they are to be configured.**
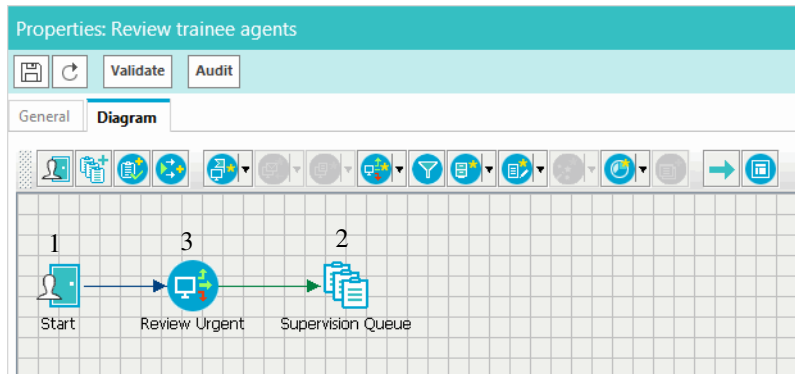
Sample outbound email review workflow

To create the workflow:

1. In the **Start** node, select the "Trainees" user group.

2. In the **Queue** node (named as Supervision), select the "Supervision" queue.

3. In the Select Queue window, select the **Before** option to route the responses to the Supervision queue before the email has been sent out of the application.
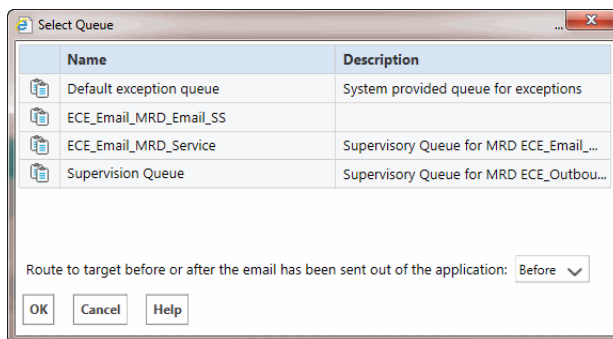
Select the option to route responses to the queue before the email is sent

4. Click **OK**.

5. In the **Branch** node (named as Review 'Urgent'), check the activity subject for the word "Urgent". If the condition is met, route the activity to the "Supervision" queue. This node is automatically connected to the **Queue** node. Connect the **Start** node with the **Branch** node.

Configure the branch rule

Alarm: Monitoring Activities About to be Due in One Hour

Create a workflow to check for activities that are about to be due in an hour, and notify the supervisor of the same.
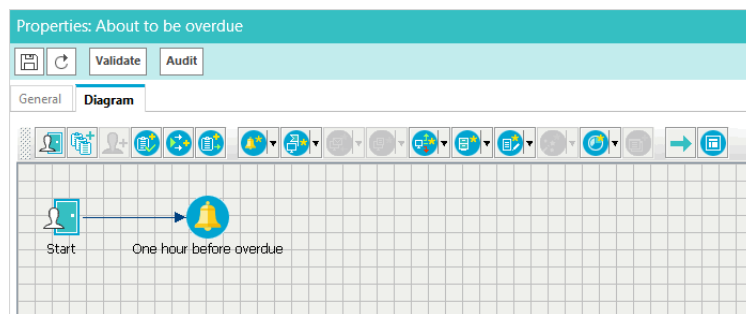
Sample workflow for monitoring activities that are about to be due in an hour

To create the workflow:

1. In the **Start** node, select the queues to be monitored and set the schedule.

2. In the **Alarm** node (named as One hour before overdue), do the following.

   a. In the Condition tab, set the following conditions:

      i. Activity is going to be due in an hour, AND

      ii. Activity status is not "Completed".

Set the conditions

    b.   In the True tab, create a notification to be sent to supervisors, if the conditions are met.

        i. Set the To email addresses.

        ii. Set the subject as "There are activities due in one hour".

        iii. Create the content of the email.

Set the notification

3.   Connect the **Start** node with the **Alarm** node.

Appendix: Reference Information

This chapter lists the objects available for setting conditions in various workflow nodes.

Objects Available for Setting Conditions in Rule Nodes

> **Important:** When selecting an operator, keep in mind that "==" is for an exact value while "match" is used for basic expressions.

Activity

Attributes	Values	Operators
Activity mode	Inbound, Outbound, None	==, !=
Activity priority	1 to 7	==, !=, <, >, <=, >=
Activity subtype	Email - General, Email - Webform, Email - Secure, Email - Permanently undeliverable, Email - Temporary undeliverable, Email - Reply, Email - Forward, Email - Compose, Email - Auto acknowledgement, Email - Group reply, Email - Redirect, Email - Undispatch, Email - Supervisory accept, Email - Supervisory reject, Email - Supervisory reattempt, Email - Notification, Email - Transcript, Phone - General Email - Reviewable,	==, !=
Activity type	Email	==. !=
Case type	None, Existing, New	==. !=
Contact person ID	—	==. !=, <, >, <=, >=
Contact point ID	—	==. !=, <, >, <=, >=
Customer ID	—	==, !=, <, >, <=, >=
Description	—	Contains, Not contains, Matches, Not matches, Begins with, Not begins with
Language	Afrikaans, Albanian, Arabic, Bengali, Bulgarian, Croatian, Czech, Danish, Dutch, English, Estonian, Finnish, French, German, Greek, Gujarati, Hebrew, Hindi, Hungarian, Indonesian, Italian, Japan, Kannada, Korean, Latvian, Lithuanian, Macedonian, Malayalam, Marathi, Nepali, Norwegian, Persian, Polish, Portuguese, Punjabi, Romanian, Russian, Simplified Chinese, Slovak, Slovene, Somali, Spanish, Swahili, Swedish, Tagalog, Tamil, Telugu, Thai, Traditional Chinese, Turkish, Ukrainian, Urdu, Vietnamese	==, !=

Attributes	Values	Operators
Last action reason	Assigned by system, Forwarded, Redirected, Replied, Save draft, Assigned for supervision, Rejected, Waiting for approval, Save draft to supervise, Sent	==, !=
Subject	—	Contains, Not contains, Matches, Not matches, Begins with, Not begins with

Case

Attributes	Values	Operators
Description	—	Contains, Not contains, Matches, Not matches, Begins with, Not begins with
Severity	Urgent, High, Medium, Low	==, !=
Solution description	—	Contains, Not contains, Matches, Not matches, Begins with, Not begins with
Subject	—	Contains, Not contains, Matches, Not matches, Begins with, Not begins with

Customer - Common

Attributes	Values	Operators
Entitlements	—	Contains, Not contains, Matches, Not matches, Begins with, Not begins with
How referred	Website, Customer, Partner, Reseller	==, !=
Industry	Finance, Health care, Telecom	==, !=
Level	Gold, Platinum, Premium, Silver, Standard	==, !=
Marketing Segment	—	Contains, Not contains, Matches, Not matches, Begins with, Not begins with
Preferred agent	User names	==, !=

Customer - Group

Attributes	Values	Operators
Customer name	—	Contains, Not contains, Matches, Not matches, Begins with, Not begins with
Group type	Association, Club, Household, Joint account, Membership, other	==, !=

Attributes	Values	Operators
No. of members	—	==, !=, <, >, <=, >=
Region	Asia Pacific, Europe, United States	==, !=

Customer - Individual

Attributes	Values	Operators
Date of birth	Date	==, !=, <, >, <=, >=
Employment status	Part time, Full time, Temporary, Contract, Intern, Unemployed	==, !=
First name	—	Contains, Not contains, Matches, Not matches, Begins with, Not begins with
Gender	Male, Female	==, !=
Job title	—	Contains, Not contains, Matches, Not matches, Begins with, Not begins with
Last name	—	Contains, Not contains, Matches, Not matches, Begins with, Not begins with
Marital status	Married, Single, Separated, Divorced, Widowed	==, !=
Middle name	—	Contains, Not contains, Matches, Not matches, Begins with, Not begins with

Customer - Organization

Attributes	Values	Operators
Customer name	—	Contains, Not contains, Matches, Not matches, Begins with, Not begins with
No. of employees	—	==, !=, <, >, <=, >=
Region	Asia Pacific, Europe, United States	==, !=
Sector type	—	Contains, Not contains, Matches, Not matches, Begins with, Not begins with

Email

Attributes	Values	Operators
Bcc email address	—	Contains, Not contains, Matches, Not matches, Begins with, Not begins with
cc email address	—	Contains, Not contains, Matches, Not matches, Begins with, Not begins with
Content	—	Contains, Not contains, Matches, Not matches, Begins with, Not begins with
Content type	.htm, .txt	==, !=
From email address	—	Contains, Not contains, Matches, Not matches, Begins with, Not begins with
Header	—	Contains, Not contains, Matches, Not matches, Begins with, Not begins with
Reply to email address	—	Contains, Not contains, Matches, Not matches, Begins with, Not begins with
Subject	—	Contains, Not contains, Matches, Not matches, Begins with, Not begins with
To email address	—	Contains, Not contains, Matches, Not matches, Begins with, Not begins with
To or cc email address	—	Contains, Not contains, Matches, Not matches, Begins with, Not begins with

Queue

Available only in outbound workflows and alarm workflows.

Attributes	Values	Operators
Queue name	—	Contains, Not contains, Matches, Not matches, Begins with, Not begins with

User

Available only in outbound workflows and general workflows.

Attributes	Values	Operators
First name	—	Contains, Not contains, Matches, Not matches, Begins with, Not begins with
Last name	—	Contains, Not contains, Matches, Not matches, Begins with, Not begins with

Attributes	Values	Operators
Manager	Manager names	==, !=
User name	—	Contains, Not contains, Matches, Not matches, Begins with, Not begins with

Objects Available for Setting Conditions in the Alarm Node

Case

Attributes	Values	Operators
Age days	—	==, !=, <, >, <=, >=
Age hours	—	==, !=, <, >, <=, >=
Age minutes	—	==, !=, <, >, <=, >=
Case status	Closed, Open, Ready for closure	==, !=
Count	—	==, !=, <, >, <=, >=
Count over due	—	==, !=, <, >, <=, >=
Days after due	—	==, !=, <, >, <=, >=
Days till due	—	==, !=, <, >, <=, >=
Hours after due	—	==, !=, <, >, <=, >=
Hours till due	—	==, !=, <, >, <=, >=
Minutes after due	—	==, !=, <, >, <=, >=
Minutes till due	—	==, !=, <, >, <=, >=
Percentage	—	==, !=, <, >, <=, >=
Percentage over due	—	==, !=, <, >, <=, >=

Activity

Attributes	Values	Operators
Activity status	Assigned, Assignment, Completed, New, Pre-completion, preworkflow, workflow	==, !=
Activity substatus	Assigned - New, Assigned - Pending, Assigned - Wrap up, Assigned - Error, Assigned - In progress, Assigned - Ready for internal assignment, Assigned - Ready for external assignment, Assignment - Error, Assignment - In progress, Assignment - Scheduled,	==, !=
Age days	—	==, !=, <, >, <=, >=
Age hours	—	==, !=, <, >, <=, >=
Age minutes	—	==, !=, <, >, <=, >=
Count	—	==, !=, <, >, <=, >=
Count over due	—	==, !=, <, >, <=, >=
Days after due	—	==, !=, <, >, <=, >=
Days till due	—	==, !=, <, >, <=, >=
Hours after due	—	==, !=, <, >, <=, >=
Hours till due	—	==, !=, <, >, <=, >=
Last action reason	Assigned by system, Forwarded, Redirected, Replied, Save draft, Assigned for supervision, Rejected, Waiting for approval, Save draft to supervise, Sent	==, !=
Minutes after due	—	==, !=, <, >, <=, >=
Minutes till due	—	==, !=, <, >, <=, >=
Percentage	—	==, !=, <, >, <=, >=
Percentage over due	—	==, !=, <, >, <=, >=