KRYON™

BE YOUR FUTURE

User Guide

Kryon Console v5.25.1

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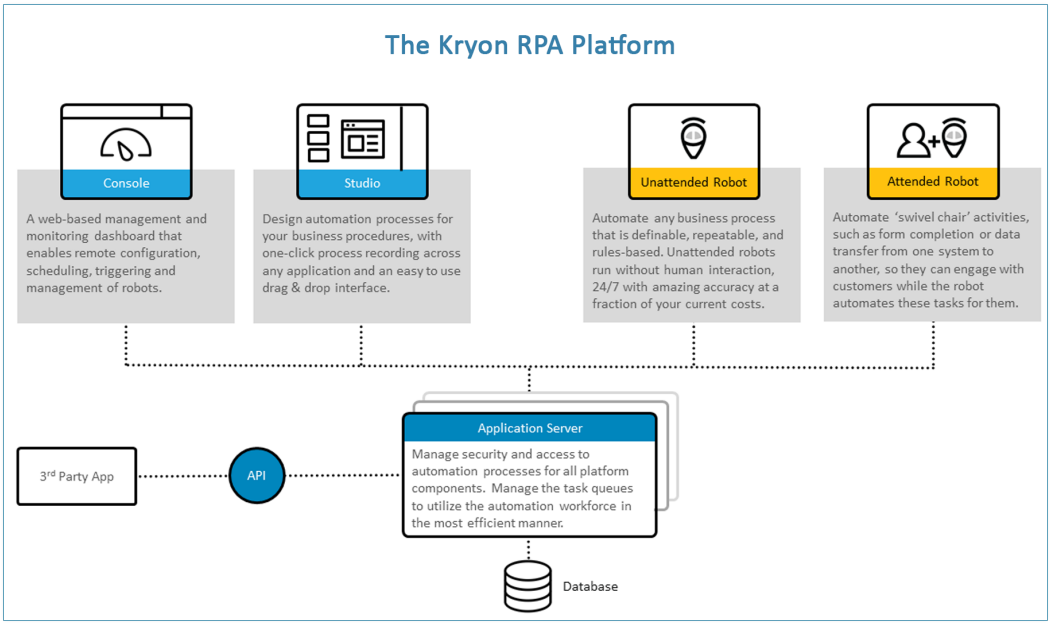
Contents

Introduction To Console

The Kryon RPA Platform is made up of a number of components, each with its own important function.



Console is intended for use by RPA Managers, who deploy and manage the automation solution across a robot-based virtual workforce:

- **Setup:** Console is used in conjunction with the RPA Server to set up the RPA environment: onboarding robots, setting up robot groups, configuring credentials, etc.
- **Manage:** After automation workflows are created in Studio by RPA Developers and business users, Console is used to assign automation-based tasks to the appropriate robots and manage the smooth functioning of the virtual workforce.
- **Monitor:** Last but not least, Console provides an analytics dashboard and other reporting features that allow RPA Managers to monitor robot and task performance – enabling optimal task distribution and consistent high-quality performance.

SET UP

CHAPTER 1: Onboarding Robots

The process of "hiring" and onboarding a robot actually begins outside of Console (either in Kryon Admin or on the robot's machine itself). But no matter where and how the onboarding process begins, a robot must be approved in Console before it can get to work.

Console is also the place in which robot properties are set and managed.

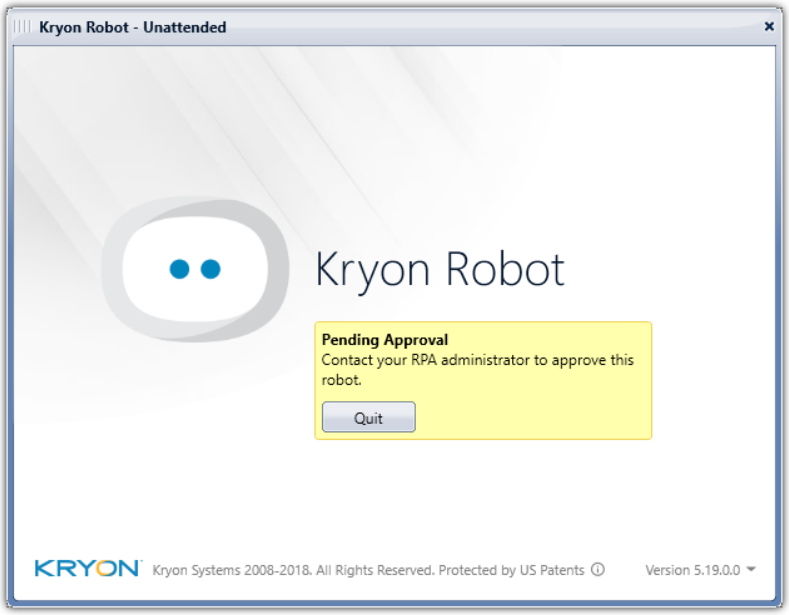
In this chapter:

What Creates a Robot?

The first time a Kryon user logs into a Kryon unattended robot client on particular Windows machine, a robot is born. In other words:

A Kryon user + a Windows machine (whether physical or virtual) = a Kryon robot

Once the robot springs to life, the first thing it sees is the following message (on the robot client):

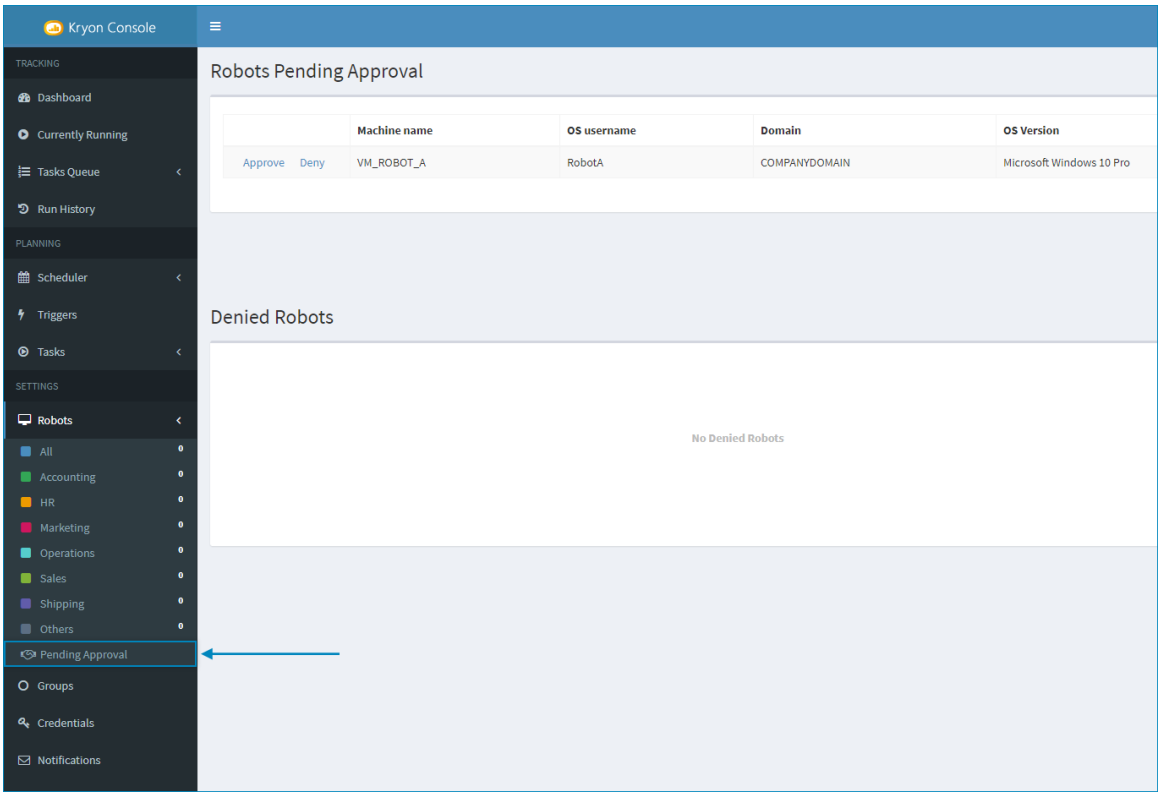


At this point, the robot can do nothing except wait for approval.

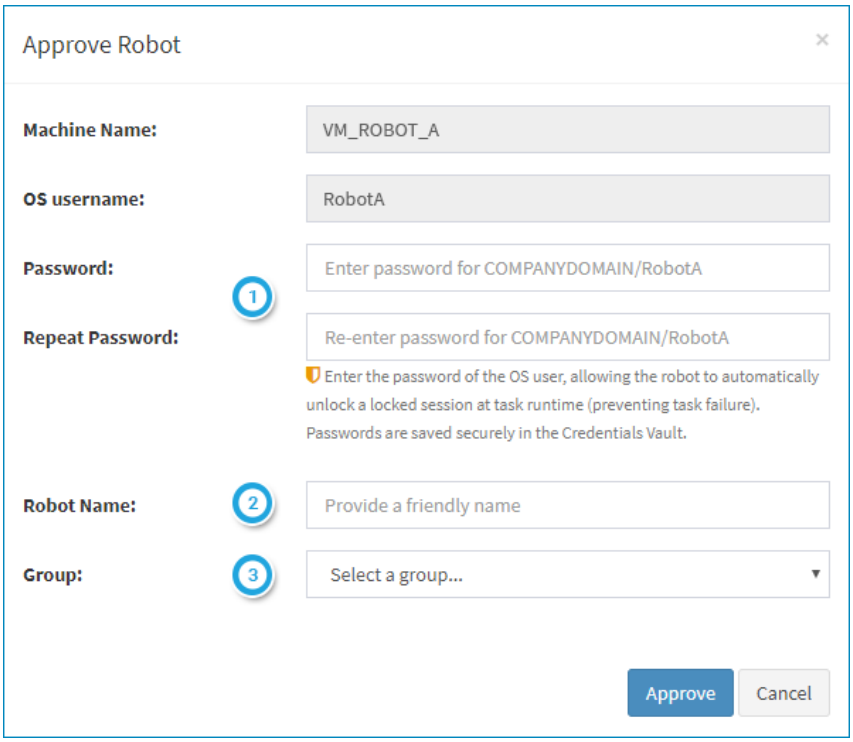
Approving a Robot

In Console, a robot awaiting approval will appear in the on the **PENDING APPROVAL** page (under **SETTINGS > ROBOTS** in the Navigation Pane).

> **NOTE**
>
> If you have configured an email address to receive notifications when new robots are added, an email will be sent to that address. Learn more about Configuring Notifications.



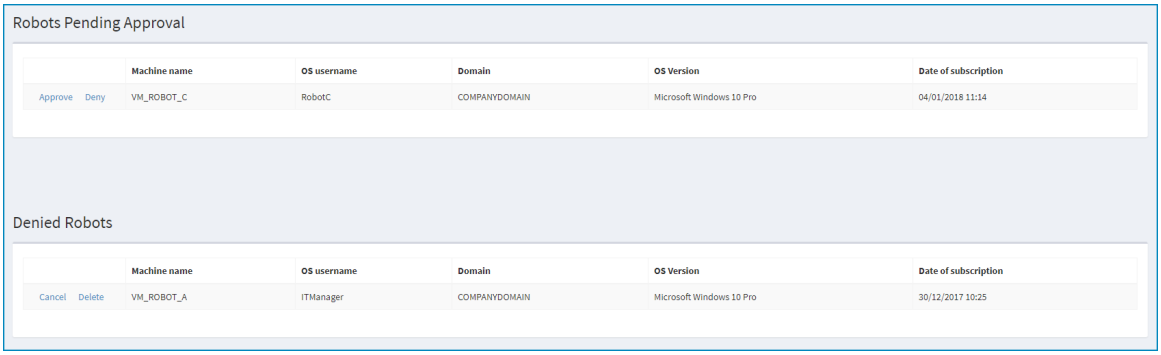
To approve the robot, click **APPROVE**, and complete the options in the following dialog box:



1. Enter and confirm a Windows password for the robot.
   - **Why is this important?** If Windows is locked at the time a task should run, this password will allow the robot to unlock the Windows session in order to run the task.
   - The password you enter will be stored securely in the Credentials Vault (along with the robot's OS username) as an OS User credential.
   - Note that you can add the robot's Windows password later if you don't wish to do so at this point.
2. Enter a friendly name. This field is optional but highly recommended since this is way the robot will be identified on other pages in Console.
3. Assign a robot to a group if you wish to do so. Learn more about Robot Groups.
   - You also have the option here to quickly add a new group if needed.

Denying a Robot

To disapprove a robot on the **PENDING APPROVAL** page (under **SETTINGS > ROBOTS** in the Navigation Pane), click **DENY**. The robot will then appear in the list of **DENIED ROBOTS**.



At this point, you can:

- Click **CANCEL** to return the robot to the list of **ROBOTS PENDING APPROVAL**;
- Click **DELETE** to permanently delete the robot from the **DENIED ROBOTS** list; or
- Do nothing to leave the robot in the **DENIED ROBOTS** list

Why deny a robot?

Remember that a new robot is created whenever a new Kryon user logs in to a robot client on a particular machine. There are times that this can happen inadvertently (especially if your company has elected to create new Kryon users via Windows Active Directory), but denying the robot makes this easy to correct.

CAUTION

Don't forget to delete the user in Kryon Admin

If a Kryon user was inadvertently created via Active Directory, be sure to also delete the user in Kryon Admin so that it is not counted as one of your licensed users.

EXAMPLE

IT users

Consider the following common scenario:

- An IT administrator performing maintenance uses his or her Windows username to log into to a robot's VM.

- The robot client automatically runs and (using Active Directory) creates and logs in a new Kryon user with the IT admin's username.
- A new Kryon username/machine name combination is created, thus creating a new robot.

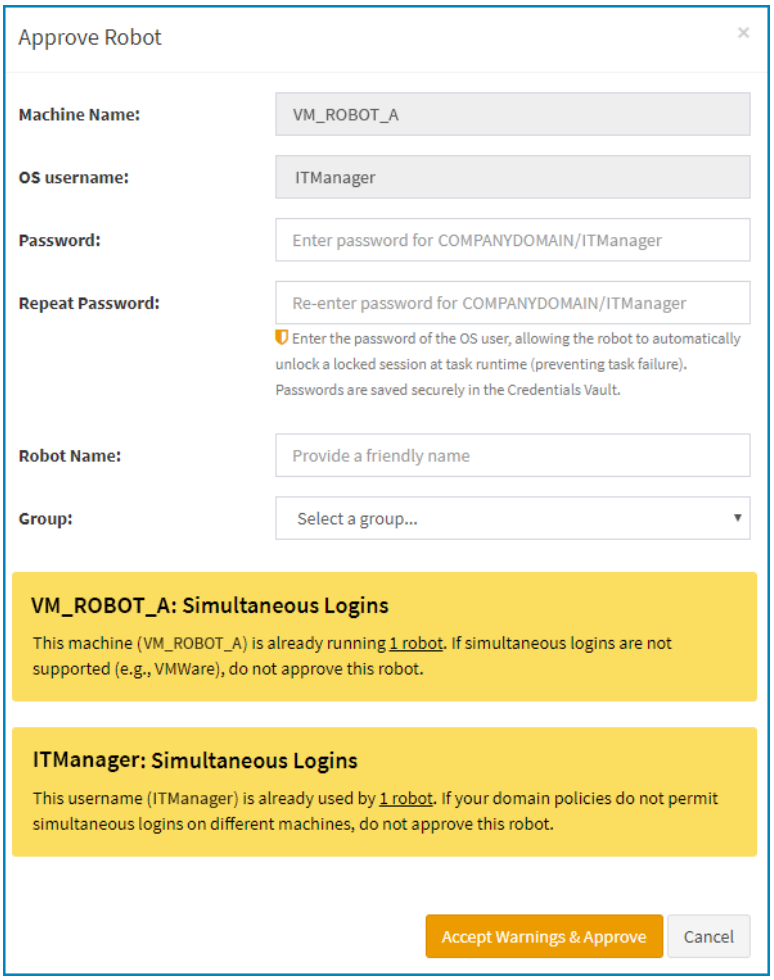
This is exactly the type of robot you would likely choose to deny.

Robot approval warnings

Kryon will warn you when it detects that you are about to approve a robot that might have been created in error:

- When a robot is created on a machine that is already running a robot; or
- When the robot's username is already used by another robot

Depending on your network specifications and configuration, these types of robots may not be problematic at all – in which case you can choose to ignore the warnings and approve the robots.



CHAPTER 2: Robot Groups

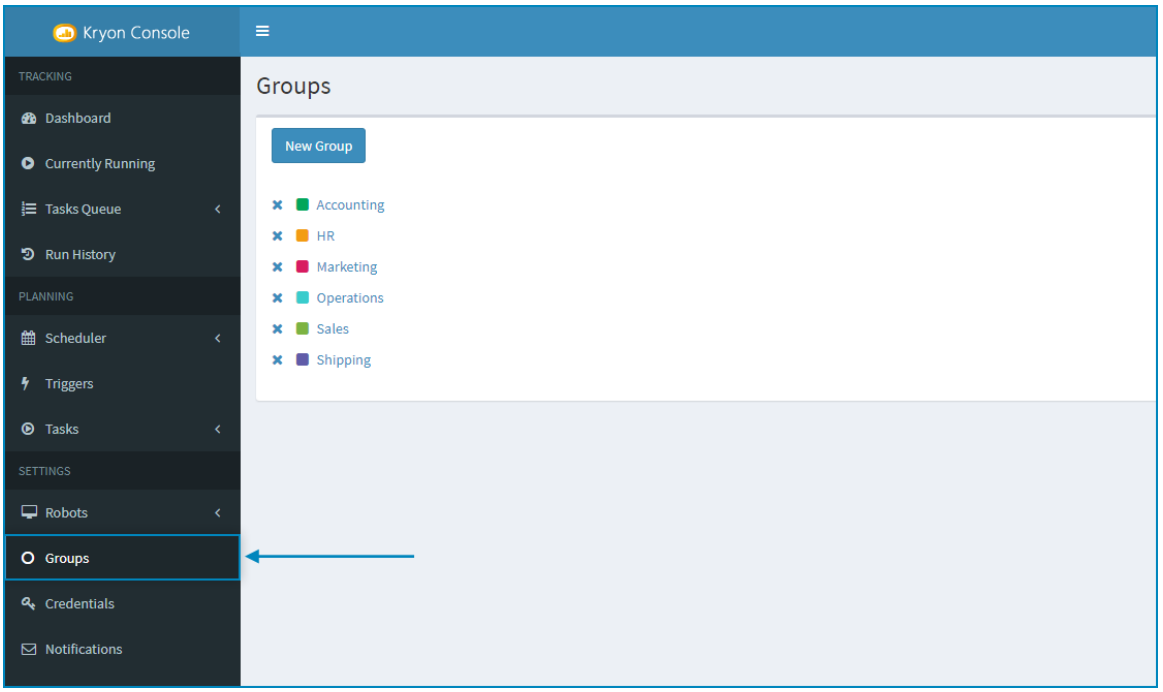
Much as you would organize a human workforce, Kryon gives you the option to create teams of robots and organize them according to whatever criteria you find useful (e.g., department, task type, applications used, etc.) While groups are completely optional, many organizations find that they enhance efficiency in task scheduling, monitoring, utilization, and more.

In this chapter:

Managing Groups

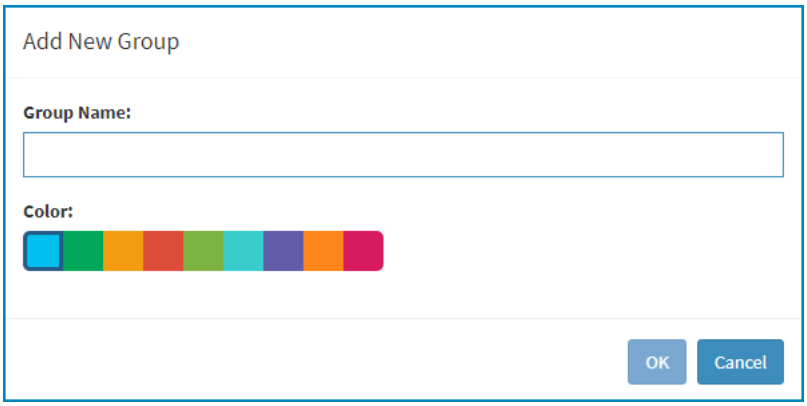
Accessing the Groups Page

To access the **Groups** page, click **GROUPS** from Console's Navigation Pane.



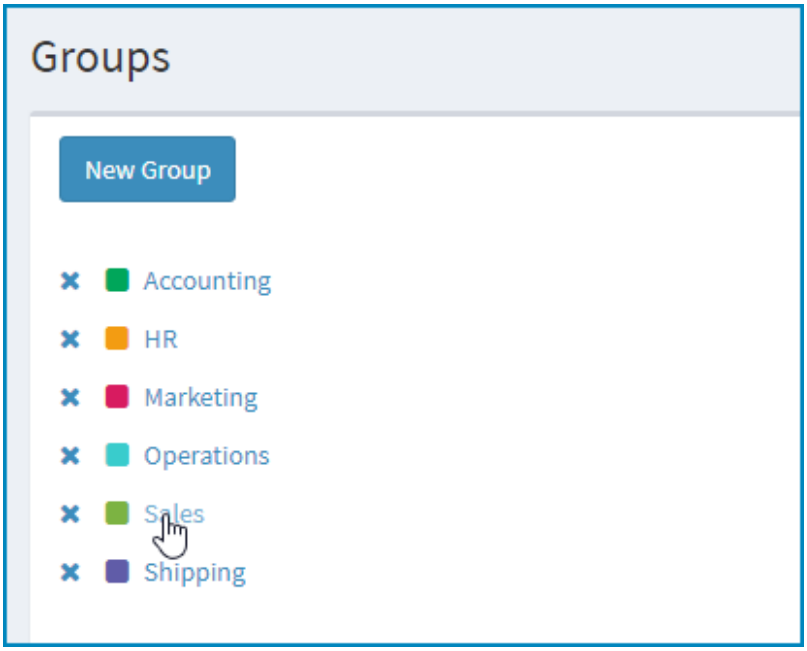
Creating a group

To create a robot group, click the New Group button, then enter a name for the group and select a color to identify it.

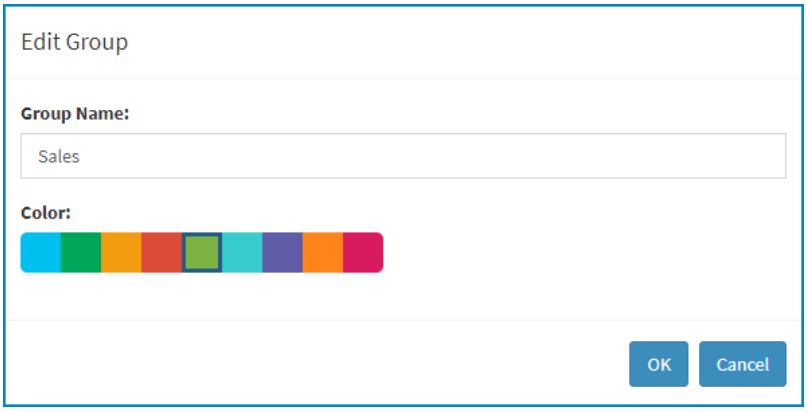


Editing group properties

To edit a group's properties, simply click on it from the **Groups** page.

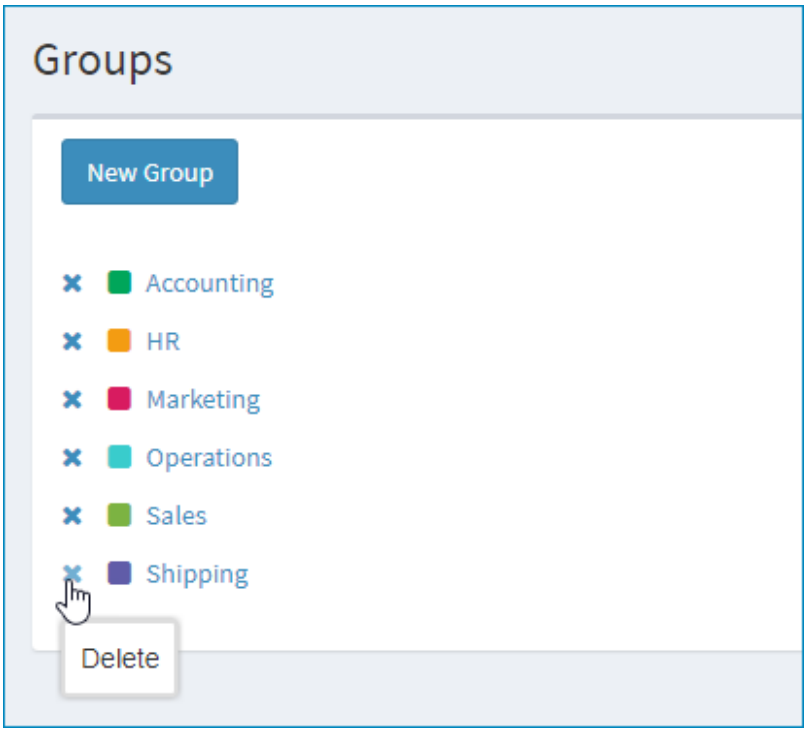


In the dialog box, edit the group's name and/or color as necessary, then click OK to save your changes.



Deleting a group

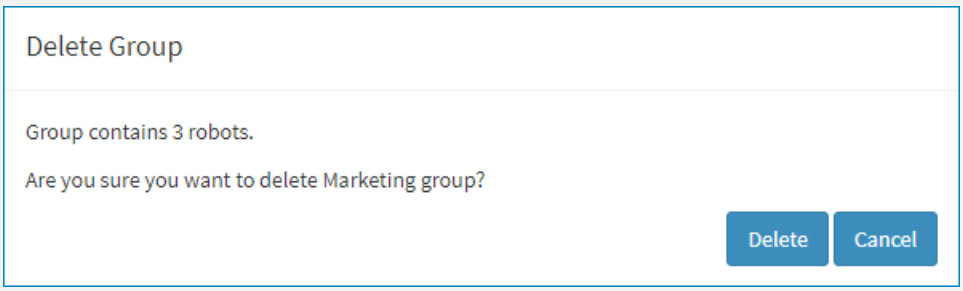
To delete a robot group, click on the ✖ next to its name on the from the **Groups** page.



NOTE

Survival of the robots

Before a group is actually deleted, you will receive a message confirming your action.



But note that even if the group you are deleting contains robots, the robots themselves survive:

- They are no longer part of any group (unless you reassign them)
- When you are viewing robots by group, they will appear on the **OTHERS** page

Robot Group Assignments

Assigning robots to groups

Individual robots

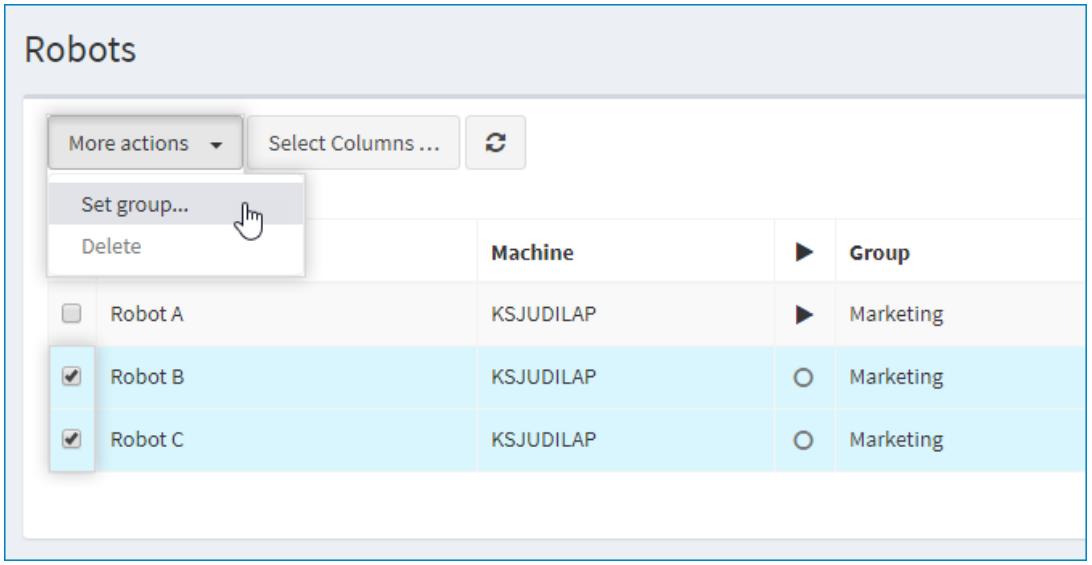
The initial opportunity to assign a robot to a group is during the robot approval process.

Later, you can assign a robot to a group or change the robot's group assignment by editing the robot's properties.

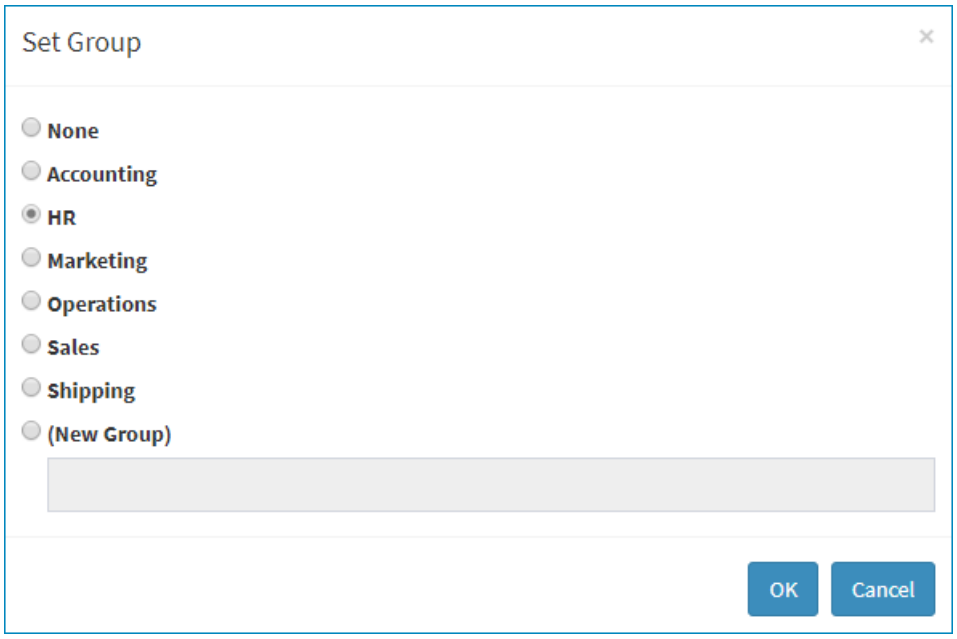
Multiple robots

To assign multiple robots to a group:

1. Go to the main **Robot Settings** page (by clicking **ALL** under **SETTINGS > ROBOTS** in the Navigation Pane)
2. Tick the checkboxes next to the robots you wish to assign to a group
3. Click the **MORE ACTIONS** button, then select **SET GROUP**



4. Choose the group to which you want to assign the selected robots (or enter the name of a new group to which to assign them), then click OK to save the group assignment



CAUTION

One group at a time

A robot can be assigned to only one group, so assigning a robot to a different group overwrites its current assignment.

Removing group assignments

To remove a robot's group assignment without assigning it to a different group (i.e., so that it is not part of any group), simply change its group assignment to **None**.

CHAPTER 3: Working with Robots

Viewing the Robot List

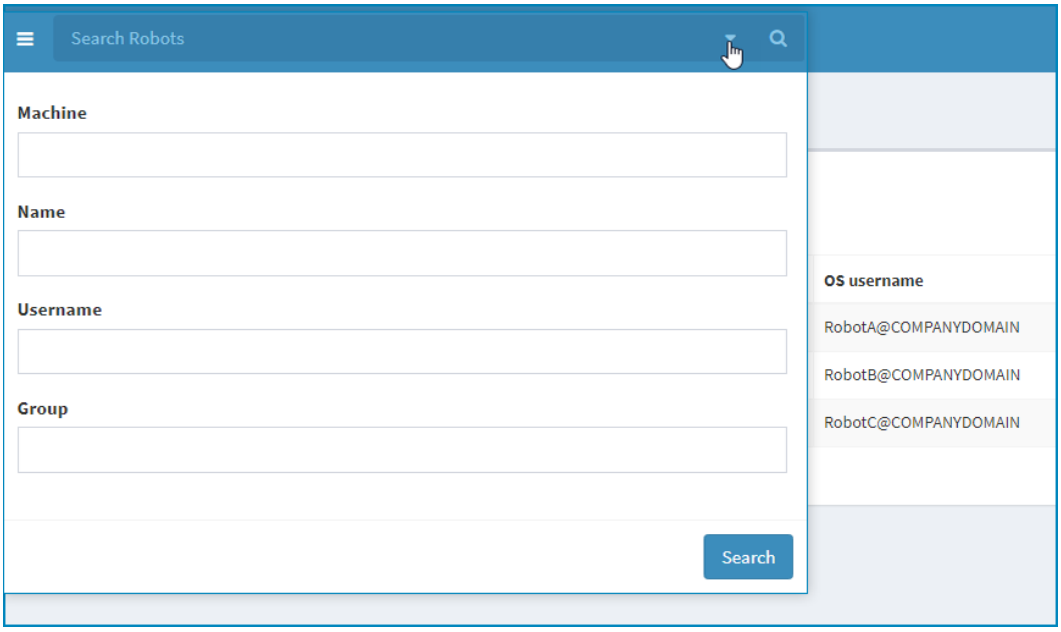
To view a list of all your robots, click on **ALL** under **SETTINGS > ROBOTS** in the Navigation Pane.

To view all the robots in a single robot group, click the name of the group under **SETTINGS > ROBOTS**.

Searching for a Robot

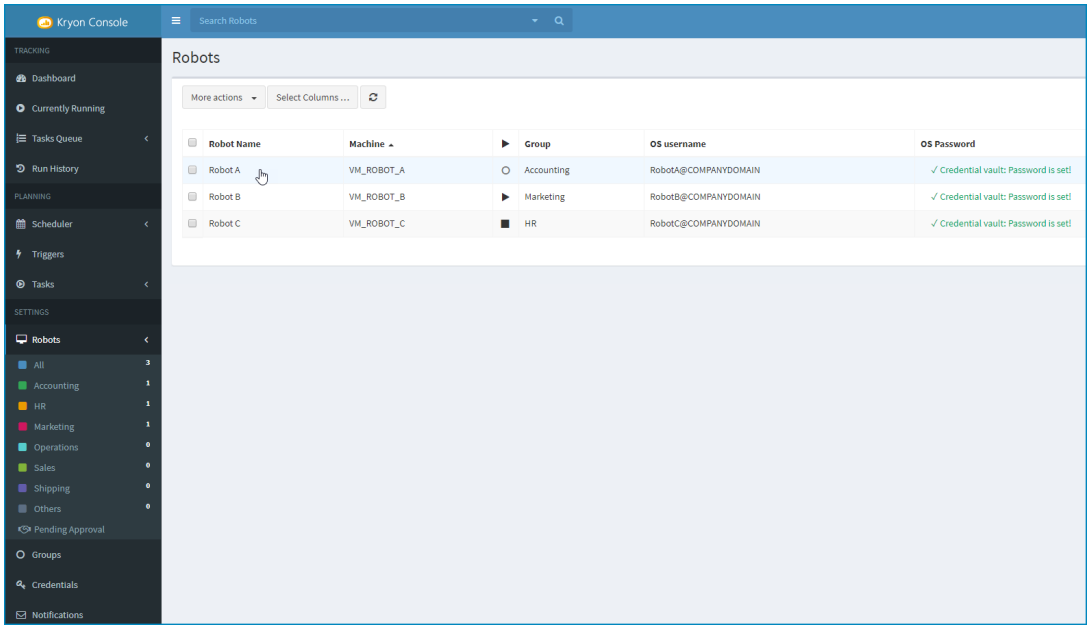
To find a specific robot or robots, click in the search bar at the top of any **Robot Settings** page (under **SETTINGS > ROBOTS** in the Navigation Pane).

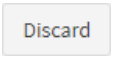
- You can type free text within the search bar, or click on the drop-down arrow to search for the robot based on specific properties.



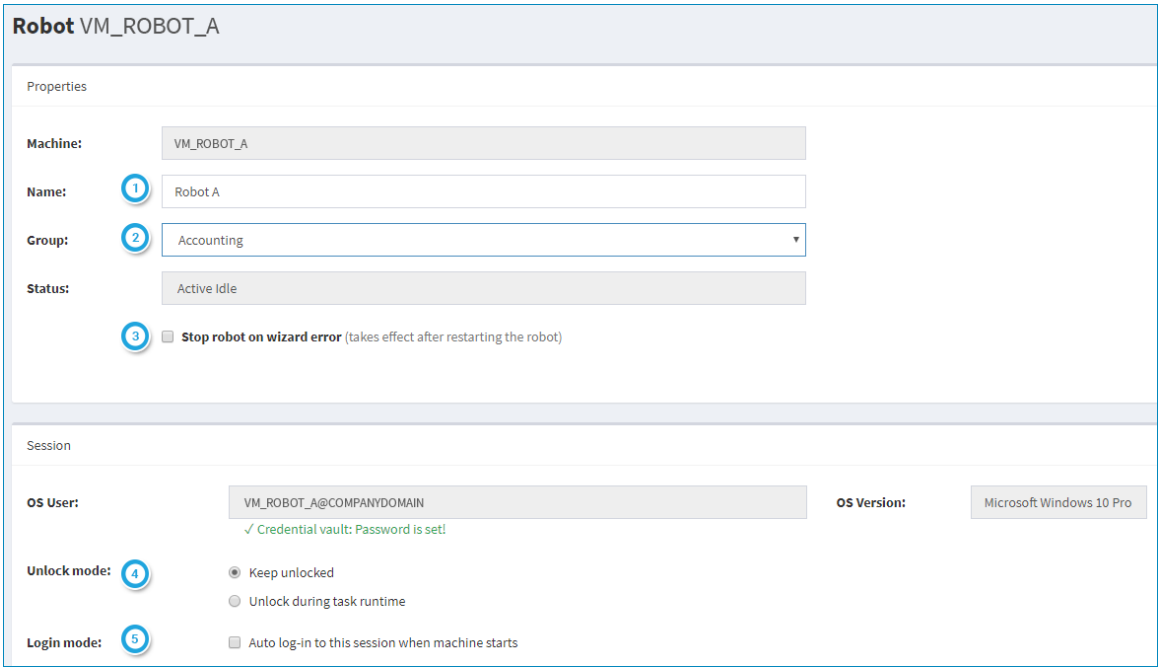
Viewing & Editing Robot Properties

- To see a specific robot's properties, simply click on it from the list.



- To edit the robot's properties, click the  button, then select **EDIT**.
- Modify the robot's editable properties as required, then click  to save your changes or  to discard them.

Editable properties



1 Robot's friendly name (used for identification on other Console pages)

2 Robot's assigned group (optional). Learn more about robot groups.

3 Robot behavior upon wizard error

- When this setting is selected, upon wizard error (that results in the wizard ending):
  - the robot's status will be set to Stopped (i.e., the robot will be unavailable to run additional tasks ; and
  - an email will be sent to the email address (if any) configured to receive notifications when a robot is stopped. Learn more about notifications.
- When this setting is unselected, upon wizard error:
  - the robot will remain active (and available to run additional tasks)

4 Unlock mode

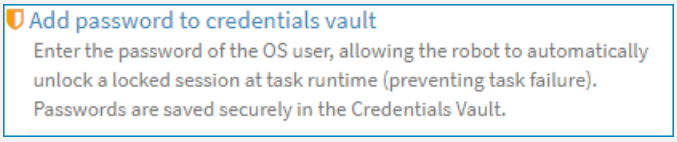
- Keep unlocked – The robot's Windows session will remain unlocked at all times
- Unlock during task runtime – The robot's Windows session will be unlocked (using the robot's Windows password) only when the robot is running a task

5 Login mode

- Tick this checkbox if you wish to automatically log in to this robot's Windows session when the machine starts

NOTE

Options 4 and 5 will not be available if you have not specified a Windows password for this robot. Instead you will see the following option:



Simply click on the link to add the robot's Windows password to the Credentials Vault as an OS User credential.

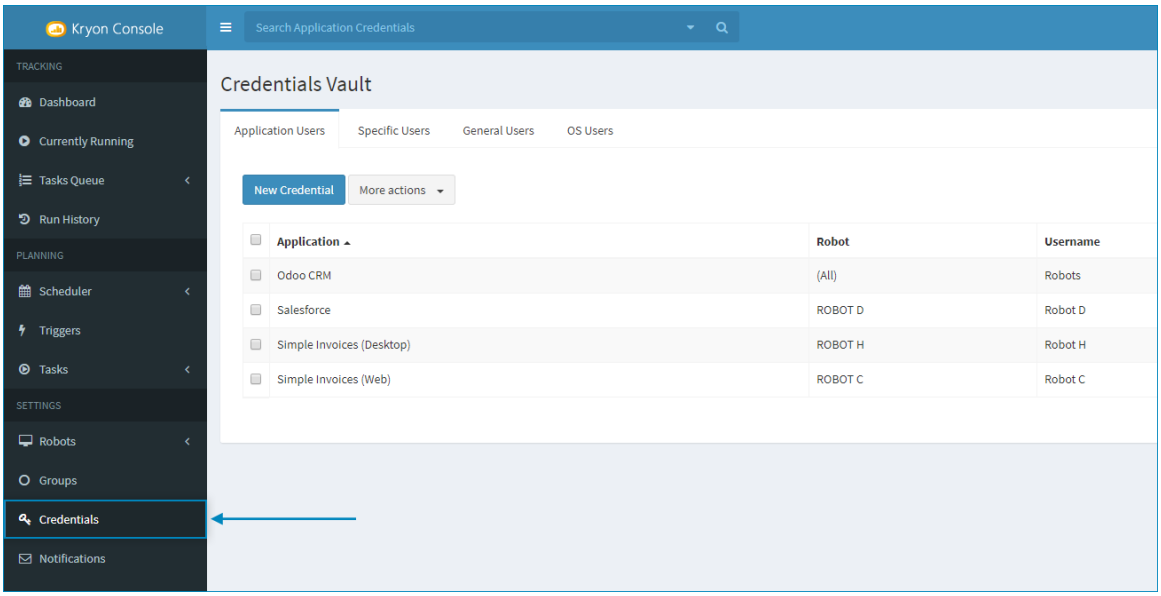
CHAPTER 4: Credentials Vault

The Credentials Vault provides secure storage for the usernames and passwords used by robots. The credentials are stored using a 2-phase encryption mechanism, which allows only Kryon clients to retrieve and decrypt the data and enter the credentials when required.

In this chapter:

Accessing the Credentials Vault

To access the Credentials Vault, click **CREDENTIALS** from Console's Navigation Pane.



TIP

For easy access during wizard development...

You can also access the Credentials Vault directly from Kryon Studio.

Types of Credentials

Credentials Vault can store 4 different types of credentials, each represented by a tab at the top of the **CREDENTIALS VAULT** page:

- Application Users
- Specific Users
- General Users
- OS Users

Application Users

An **Application User** credential is a username-password combination for a specific application ***and for the specific robot using it***. Use this type of credential when the relevant application:

- associates a user with a specific machine; ***or***
- does not permit multiple concurrent uses with the same credentials

When a wizard accesses an Application User credential, Kryon will fetch the correct username-password combination according to the robot on which the wizard is currently running.

To learn how to add an **Application User** credential, see Adding a new Application User credential.

Specific Users

An **Specific User** credential is a username-password combination ***that can be used by any robot*** for a specific application. Use this type of credential when the relevant application:

- allows a user to log in from any machine; ***and***
- permits multiple concurrent uses of the same credentials

To learn how to add a **Specific User** credential, see Adding a new Specific User credential.

General Users

A **General User** credential is a username-password combination that is used to access a general computing resource (such as a mail server or database), as opposed to a specific application.

To learn how to add a **General User** credential, see Adding a new General User credential.

OS Users

An **OS User** credential is a username-password combination that is used by robot to log in to Windows (for purposes of unlocking a locked machine in order to run a wizard). In addition to adding OS User credentials from the Credentials Vault page, you also have the option to create an OS User credential for a robot during the robot approval process.

To learn how to add an **OS User** credential, see Adding a new OS User credential.

Adding Credentials

The information required to add credentials varies by the type of credential you are creating. Learn to add:

- Application User credentials
- Specific User credentials
- General User credentials
- OS User credentials

TIP

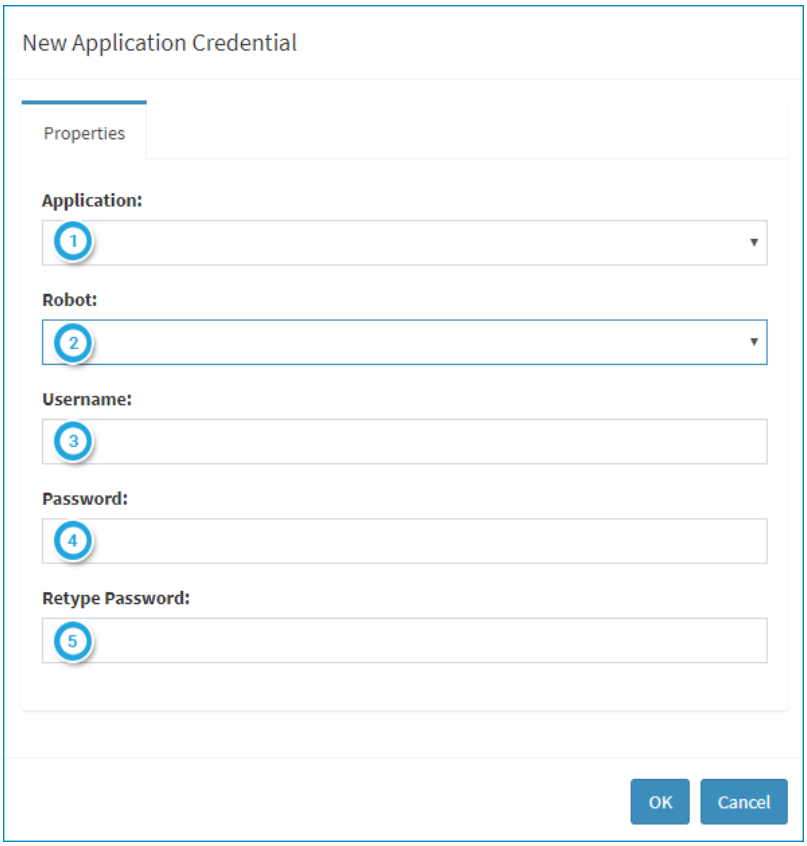
Which credentials do I add? And when do I add them?

As wizards are built in Studio, it becomes easy to determine exactly which credentials will be needed. When a wizard needs to log in to a specific application, it will include a command that essentially says, "Get me the credentials for the XYZ app so I can log into it."

So there's no rush to add credentials in Console just for the sake of adding them. Wait to see how the wizards are built, and the developers will surely let you know exactly which credentials they need!

Adding a new Application User credential

From the **APPLICATION USERS** tab, click New Credential.

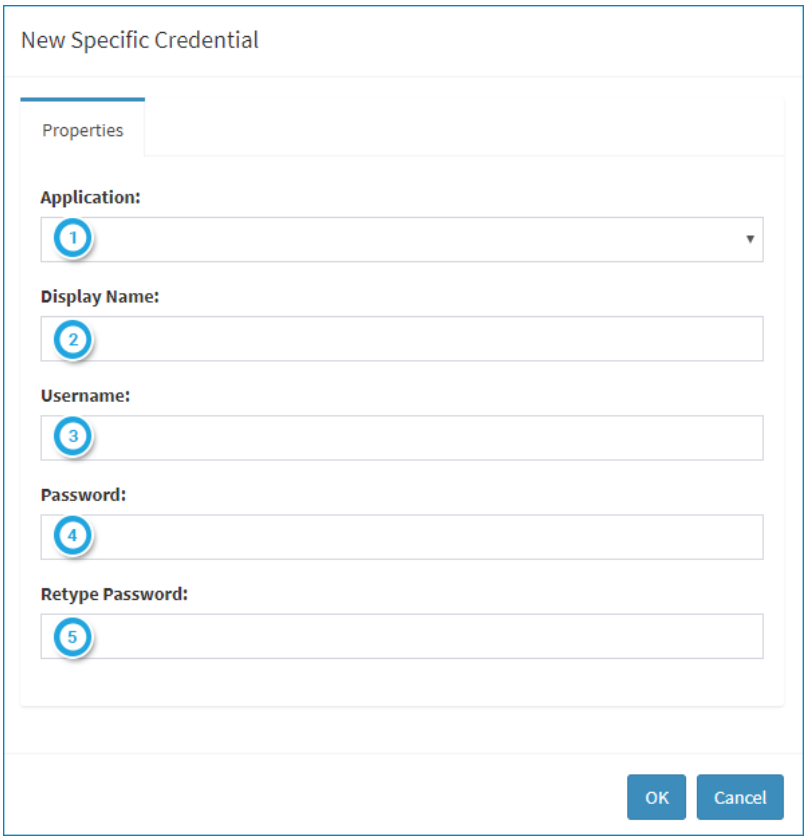


1. From the drop-down list, select the application to which the credential applies
2. Select the robot that will use this credential, or select **(ALL)** if all robots can use it
3. Enter the username
4. Enter the password
5. Retype the password

Click OK to save the new credential.

Adding a new Specific User credential

From the **SPECIFIC USERS** tab, click New Credential.

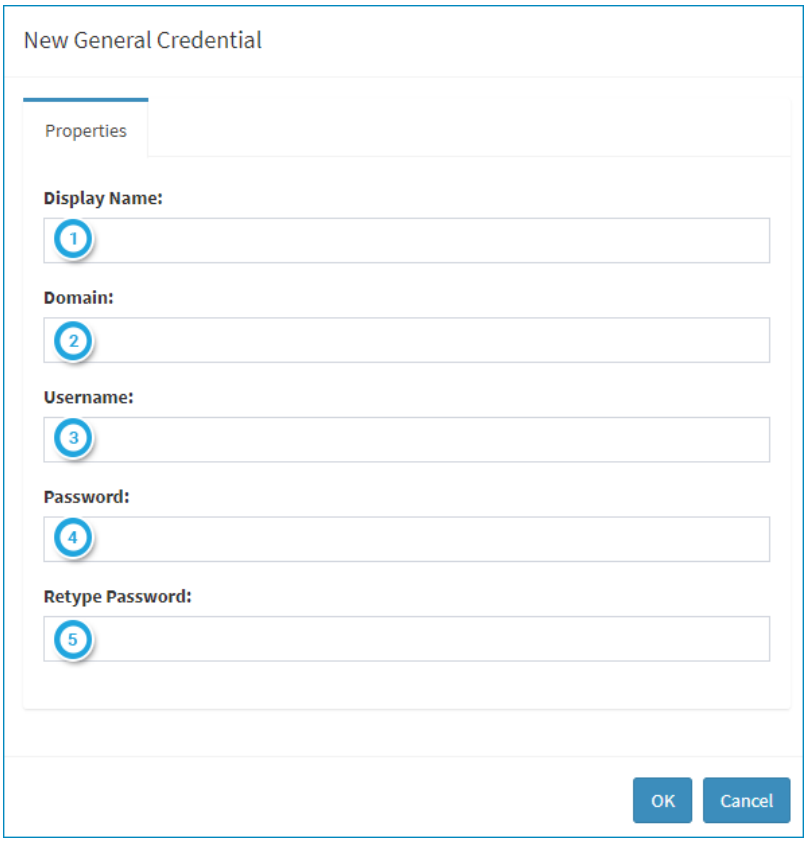


1. From the drop-down list, select the application to which the credential applies
2. Enter a descriptive display name that can be used to later recognize and access this credential
3. Enter the username
4. Enter the password
5. Retype the password

Click OK to save the new credential.

Adding a new General User credential

From the **GENERAL USERS** tab, click New Credential.

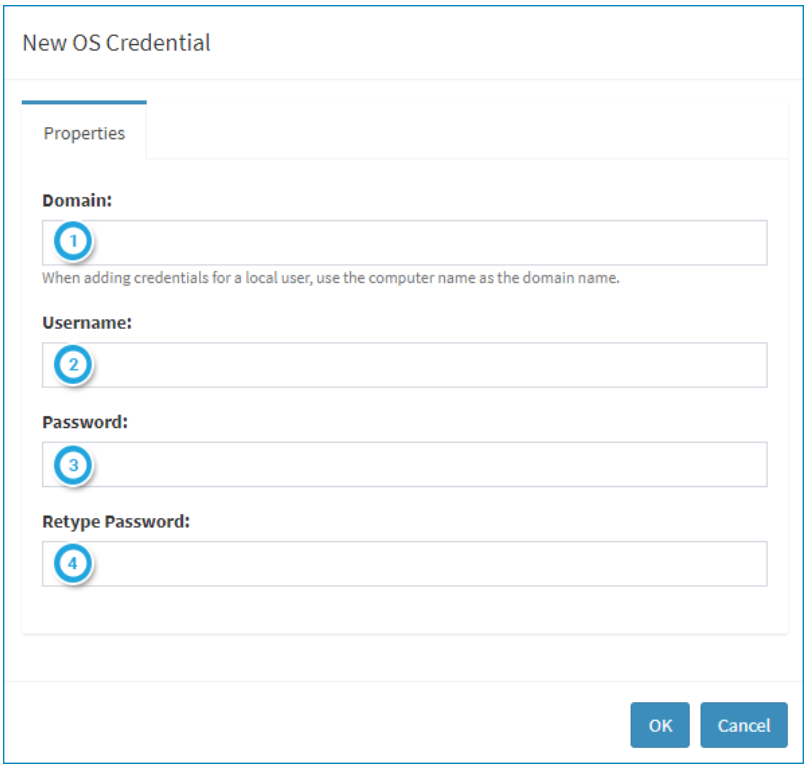


1. Enter a descriptive display name that can be used to later recognize and access this credential
2. Enter the domain on which the relevant resource is located
3. Enter the username
4. Enter the password
5. Retype the password

Click OK to save the new credential.

Adding a new OS User credential

From the **OS USERS** tab, click New Credential.



1. Enter the domain for which the OS user credential is valid.
   - If the credential is for a local user of the machine (as opposed to a domain user), enter the computer name in this field
2. Enter the username
3. Enter the password
4. Retype the password

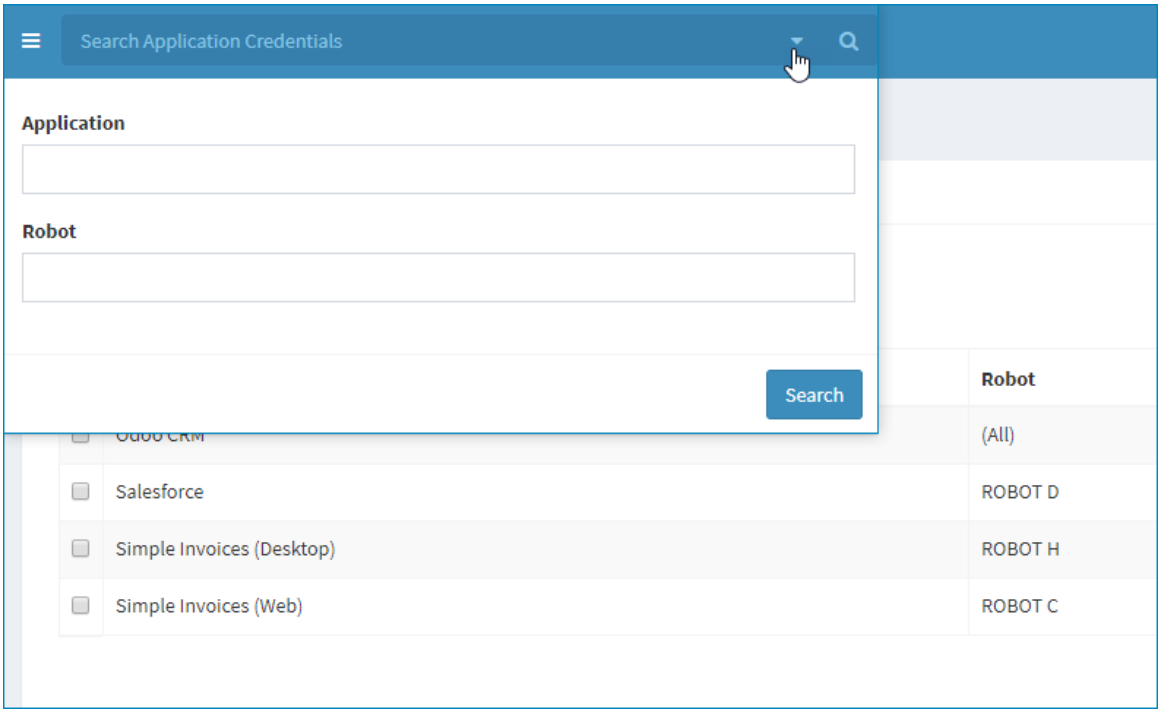
Click OK to save the new credential.

Working with Credentials

Searching for a credential

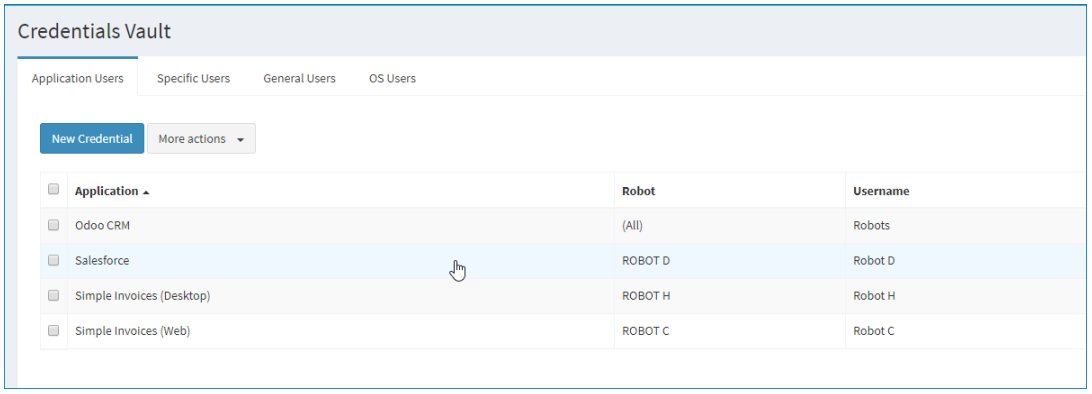
To find a credential, click in the search bar at the top of any Credentials Vault page. Make sure to access the search function from the correct tab (based on the type of credential you are searching for).

- You can type free text within the search bar, or click on the drop-down arrow to search for credentials based on specific properties. (The available properties vary based on the type of credential you are searching for.)

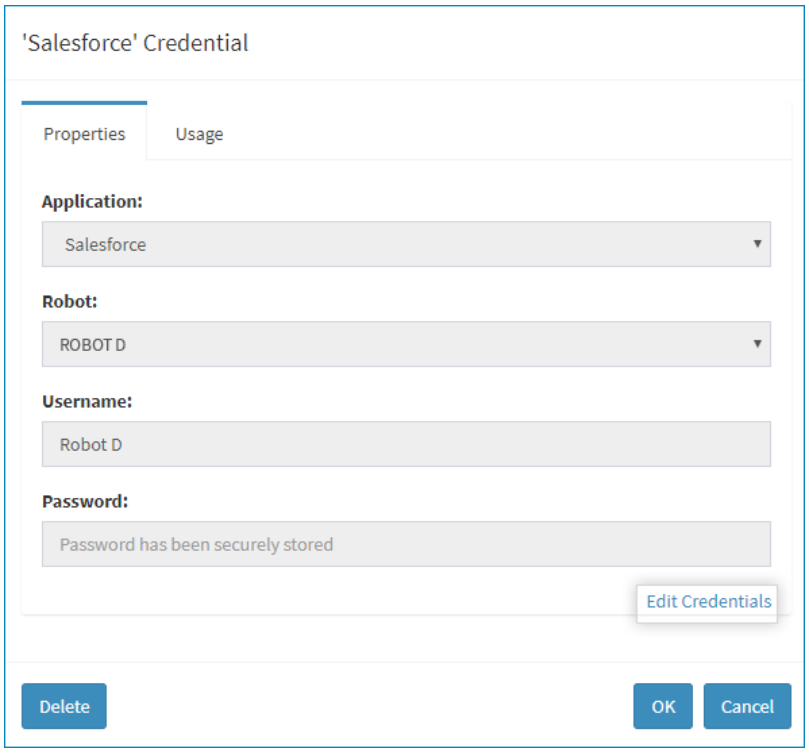


Viewing & editing credential properties

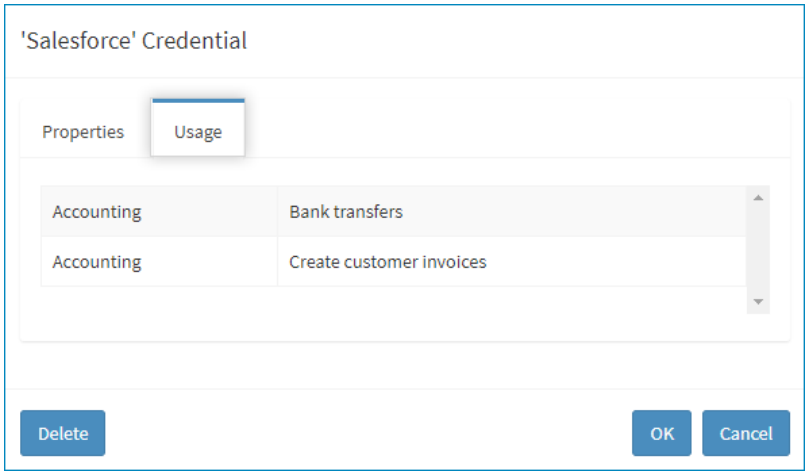
- To view the properties of a credential, simply click on it from the list on the applicable tab of the Credentials Vault.



- To edit the credential's properties, click on **EDIT CREDENTIALS**, make the required changes, then click OK to save.

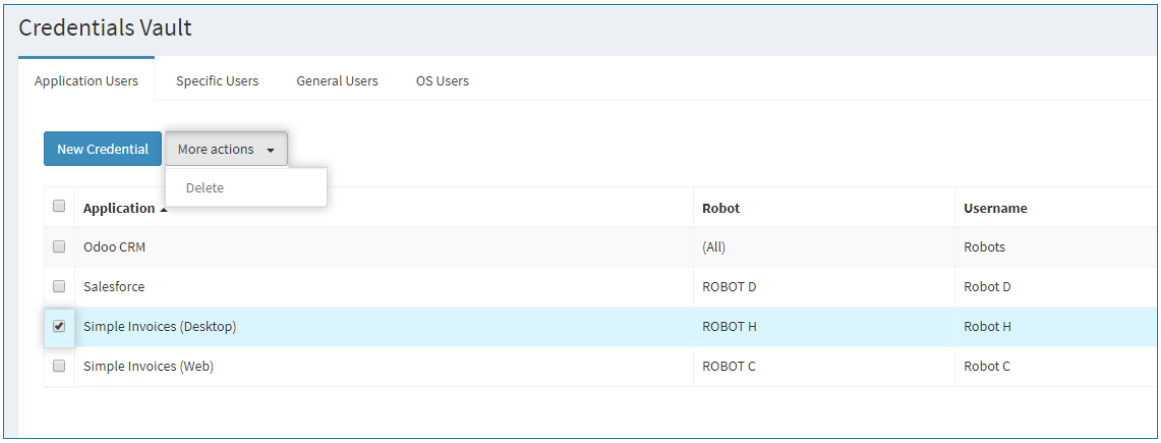


- To view the wizards in which a specific credential is used, click on the **USAGE** tab.
  - **NOTE:** For an OS User credential, the **USAGE** tab will display the robots that utilize the credential instead.



Deleting a credential

To delete a credential, tick its checkbox from the from the list on the applicable tab of the Credentials Vault page, then click **MORE ACTIONS > DELETE**.



CHAPTER 5: Configuring Notifications

Kryon gives you the option to receive email notifications when important events occur:

- **Robot-related events:**

  When a robot –

  - is added;
  - is stopped; or
  - becomes unresponsive (known within the Kryon platform as a "ghost")

  See Robot Notifications.

- **Task-related events:**

  - When a task is started, ended, stopped, paused, etc.;
  - When a task initiated by a trigger is created; or
  - When the wizard being run by a task encounters an error

  See Scheduling Tasks and Creating Triggers.

- **ABBYY FlexiCapture events:** SmartScan+ Feature

  - When documents processed by ABBYY FlexiCapture require manual review

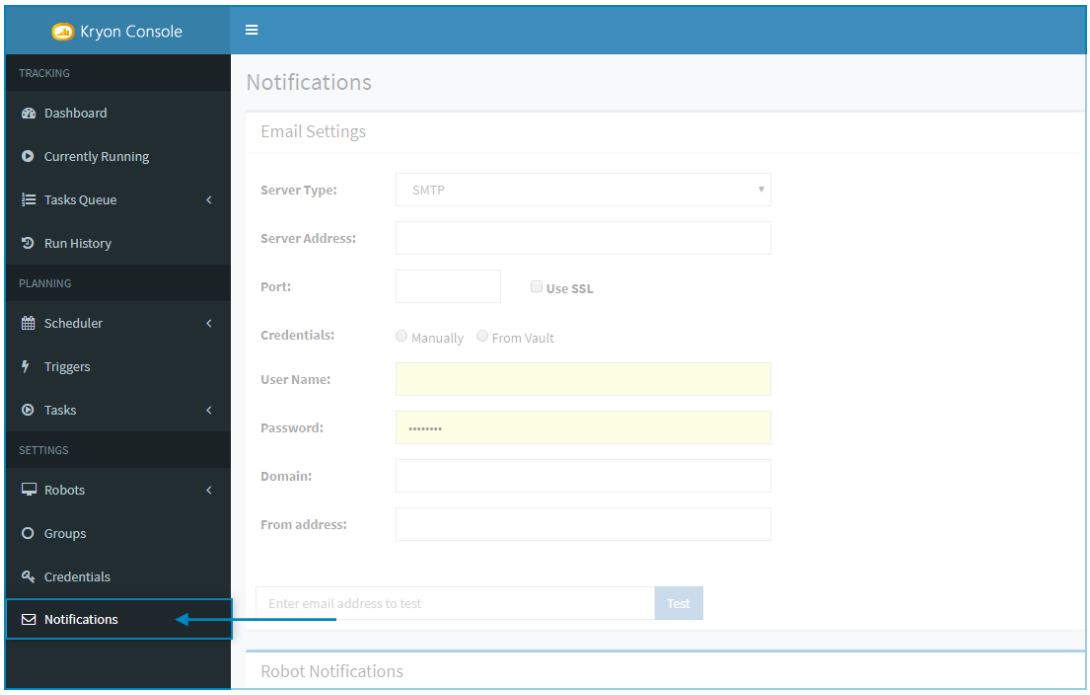
  See ABBYY FlexiCapture Notifications.

In this chapter:

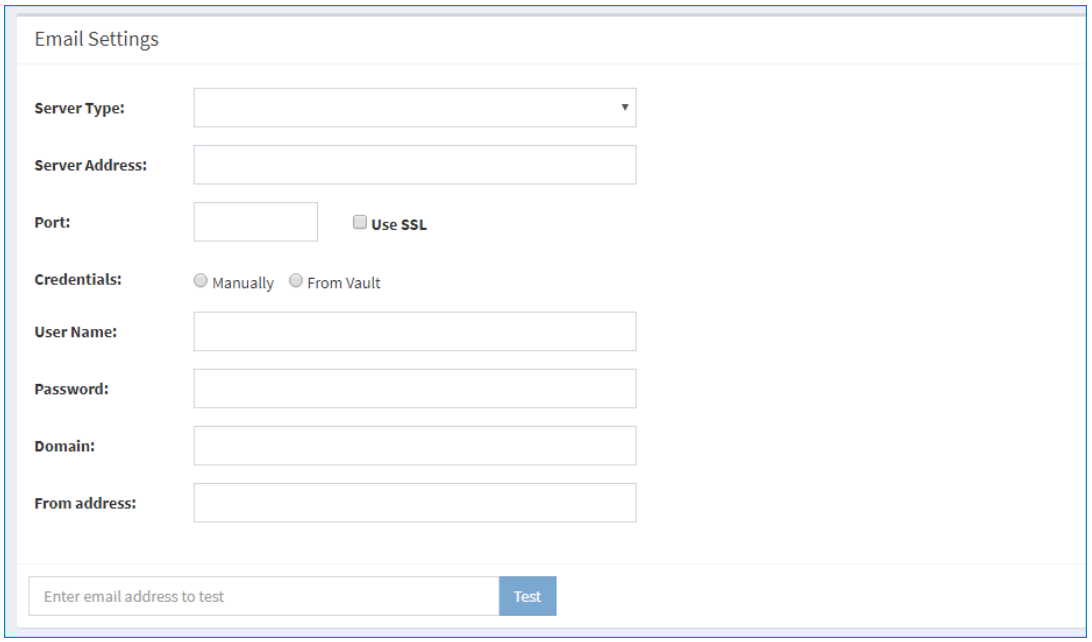
Email Settings for Notifications

In order to receive email notifications, configure the email account from which the notifications will be sent:

1. To access the **Notification Settings** page, click **NOTIFICATIONS** (under **SETTINGS** in the Navigation Pane)



2. In the **EMAIL SETTINGS** section, enter the settings required to access the outgoing email server and account



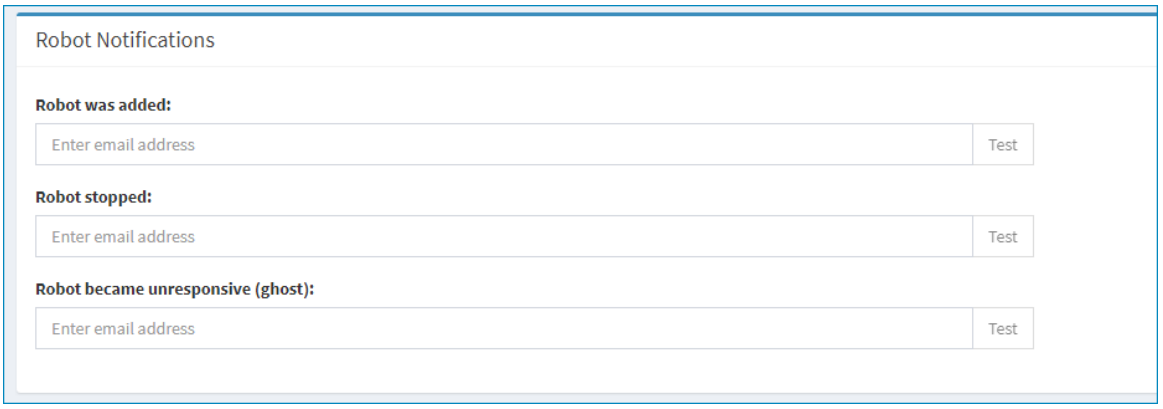
3. (Optional) Verify your settings: Specify an email address to which to send a test email, and click Test

Robot Notifications

Specify the email address(es) to which you'd like notifications to be sent:

- Email addresses can be the same or different for each event type (robot added, robot stopped, etc.)
- Enter only one email address per event type

(Optional) Click Test to send a test email to the specified address.



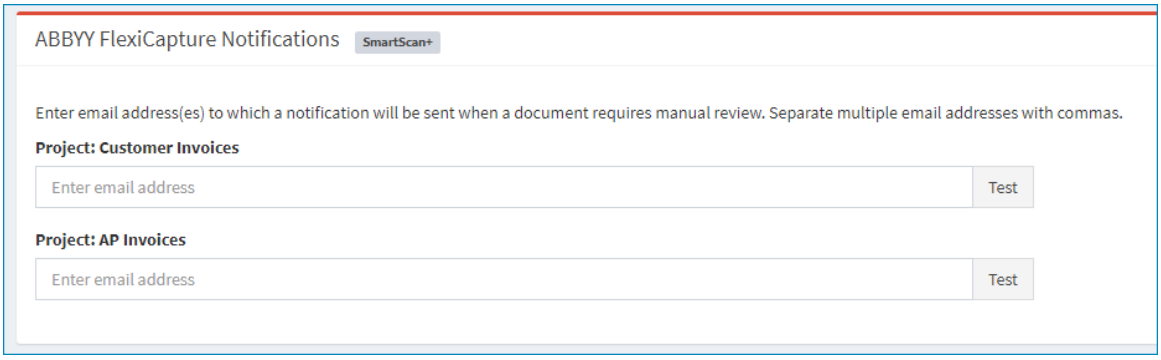
ABBYY FlexiCapture Notifications

SmartScan+ Feature

Specify the email address(es) to which you'd like notifications to be sent when documents processed by ABBYY FlexiCapture require manual review:

- Email addresses can be the same or different for each project
- You can enter multiple email addresses for each project, separated by commas

(Optional) Click Test to send a test email to the specified address(es).



MANAGE

CHAPTER 6: Tasks

Once you've hired and onboarded your robot workforce, it's time to get the robots to work! How? By assigning them tasks to perform. And just as if you were managing human employees, you can schedule and prioritize these tasks as required.

In this chapter:

What is a Task?

1 wizard assigned to 1 robot = 1 task

But this doesn't necessarily mean that the wizard will only run one time. When you schedule a task, you have the option to add repetition and recurrence.

Repetition = the same wizard run consecutively, either:

- a specified number of times;
- for a specified length of time; or
- forever (until manually stopped)

Recurrence = the same wizard run on multiple dates according to a specified pattern, either:

- daily;
- weekly;
- monthly; or
- yearly

EXAMPLE

Repetition, Recurrence & Robots (oh my!)

Let's say you want to schedule a wizard (let's call it the "Process Invoices" wizard) to run on a single robot. You want the wizard to run 3 times every night for the next 10 nights. In total, the wizard will run 30 times, but it is still considered a single task.

Now, let's say you want to run the Process Invoices wizard on the same schedule, but this time, you want to assign it to 4 robots. In total, the wizard will run 120 times, but since it's assigned to 4 robots, it's considered 4 tasks.

To learn more about adding repetition and recurrence to tasks, see Scheduling Tasks.

RECOMMENDED

Use a time-based trigger instead!

For even more flexibility and precision in defining the pattern by which tasks should recur, use Kryon Console's new time-based trigger feature instead of scheduling tasks with recurrence.

How are Tasks Created?

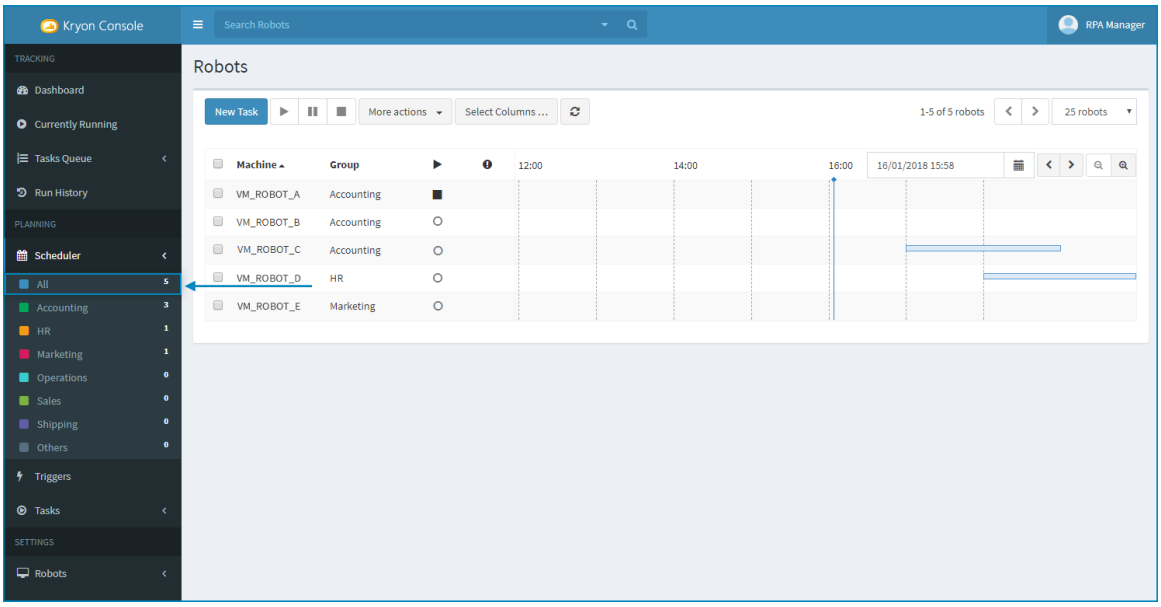
Tasks can be created and assigned to robots in a number of ways:

- You can schedule them. See Scheduling Tasks.
- They can be triggered whenever a predefined event occurs. See Triggers.
- They can be created by API call. See the document: ***Kryon RPA - Web Service API*** (Add Task); ***and***
- They can be created by human or robot users when the wizards they are running include the **ADD AUTOMATION TASK TO QUEUE** Advanced Command. See the document: ***Advanced Commands Reference Guide*** (Add Automation Task to Queue).

Scheduling Tasks

Accessing the Scheduler

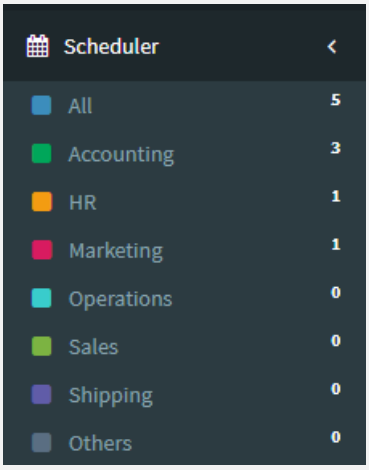
To access the **Scheduler** (for all robots), click **SCHEDULER > ALL** from Console's Navigation Pane.



TIP

Looking for a more focused view?

To access the **Scheduler** by robot group, click the name of the relevant group under **SCHEDULER** in the Navigation Pane.



The view will then be filtered as follows:

- The timeline will be visible only for robots in the selected group

- When creating a new task from this view, only robots within this group will be visible (i.e., eligible to have tasks assigned to them)

Need even more focus?

To access the **Scheduler** a specific robot (or robots) using the search bar at the top of any **Scheduler** page.

- You can type free text within the search bar, or click on the drop-down arrow to search for the robot(s) based on specific properties

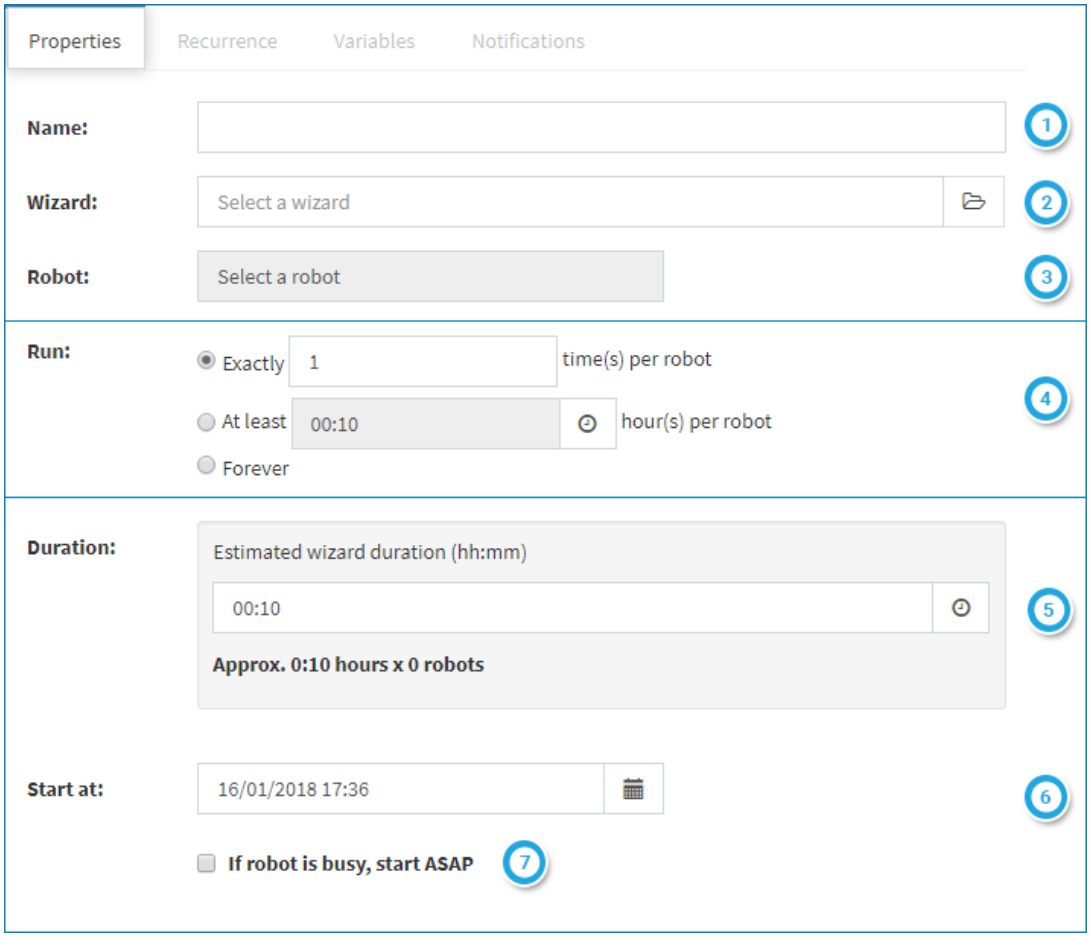
The view will then be filtered as follows:

- The timeline will be visible only for robots that meet the entered search criteria
- When creating a new task from this view, only robots that meet the entered search criteria will be visible (i.e., eligible to have tasks assigned to them)

Creating a new task

1. To create a new task, click the New Task button
   - On the left are the 4 tabs in which you enter new task's details
   - On the right is the timeline for all robots eligible to have the new task assigned to them (based on the view you were in when you clicked the New Task button)
2. Enter the task details as follows:

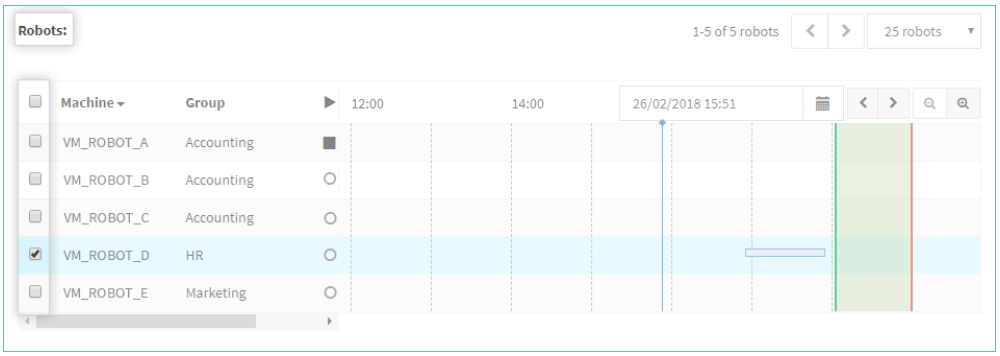
Properties tab



1. Create a name for the task. (The task will be identified by this name on other pages in Console, so give it a name you will recognize.)

2. Click the button to open the Kryon catalog and browse or search for the wizard that the task will execute

3. When you select robot(s) to which to assign the new task, your selection will appear in this field. But you actually select the robots in the timeline on the right side of the screen, by ticking the checkbox(es) of the robot(s) you want.



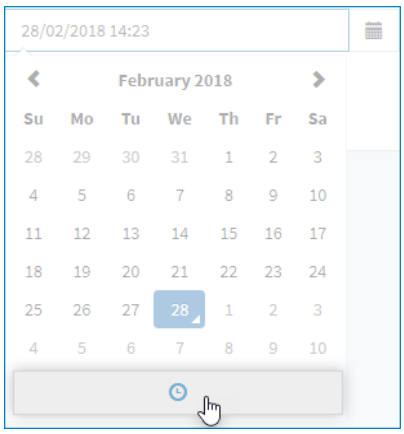
4. Choose repetition method and enter the relevant details:
   - a specified number of times;
   - for a specified length of time; or
   - forever (until manually stopped)

   NOTE: If you choose to repeat the wizard for a specified length of time, when the time elapses, the wizard will stop only after the current run is completed (i.e., it won't be cut off in the middle of a run)

5. Enter the estimated time the wizard takes to run one (1) time

   Why does this matter? The estimated wizard duration is used for robot scheduling (e.g., for the timeline view display, for calculating the estimated number of times a wizard will run in a specified length of time, etc.) The more accurate the estimated wizard duration, the more it can help you in managing your virtual workforce.

6. Enter the start date/time for the task
   - To set the date, click the  button
   - To set the time, the icon at the bottom of the calendar dialog



7

- Instruct Kryon what to do if the robot is busy at the time the task is scheduled to start:
  - Tick the checkbox next to **IF ROBOT IS BUSY, START ASAP** if you want the task to start as soon as the robot is free
  - Leave this checkbox blank if you want the task to be skipped

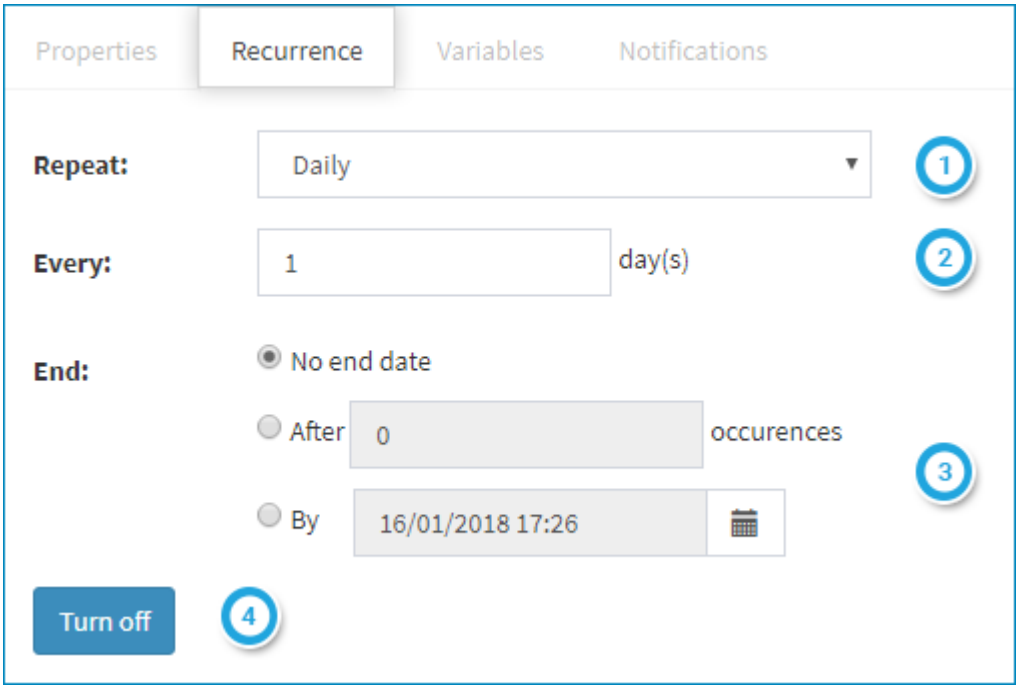
Recurrence tab (optional)

RECOMMENDED

Use a time-based trigger instead!

For even more flexibility and precision in defining the pattern by which tasks should recur, use Kryon Console's new time-based trigger feature instead of using the Recurrence tab.

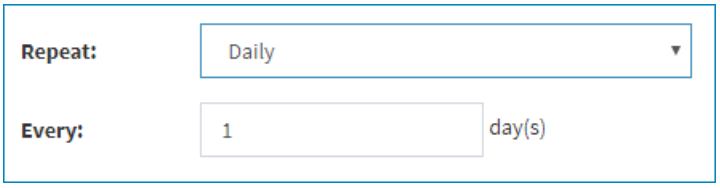
If you want the task to run on multiple dates, according to a specified pattern, go to the **Recurrence** tab and click the Turn on button.

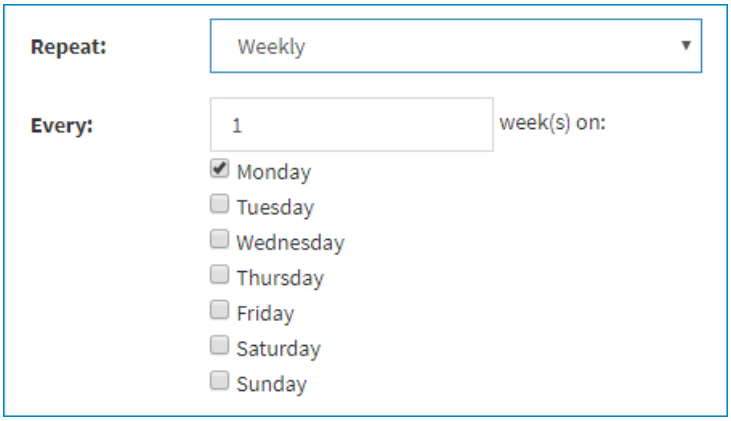


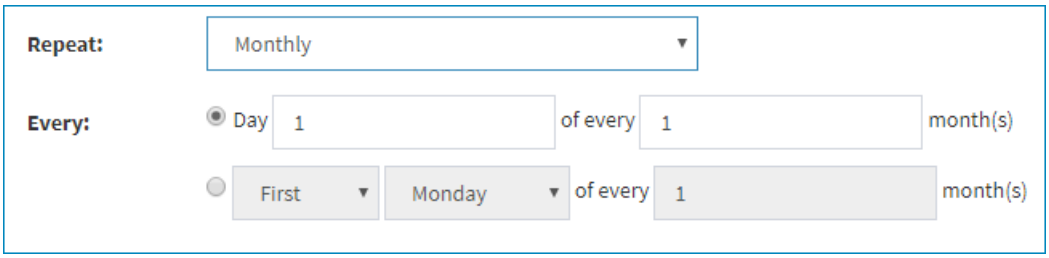
1. Select the frequency with which the task should repeat (daily, weekly, monthly or yearly)

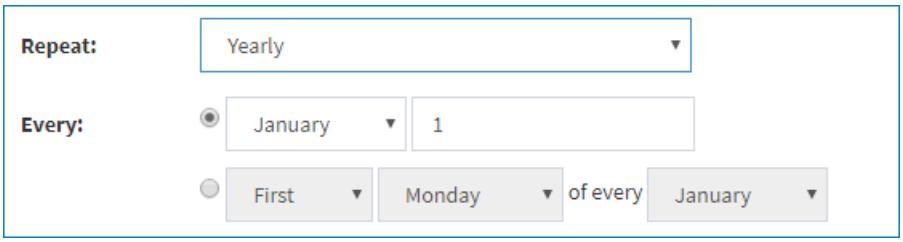
2. Customize the desired frequency so that the task runs exactly according to the schedule you need

   The options available will vary according to the frequency you selected:



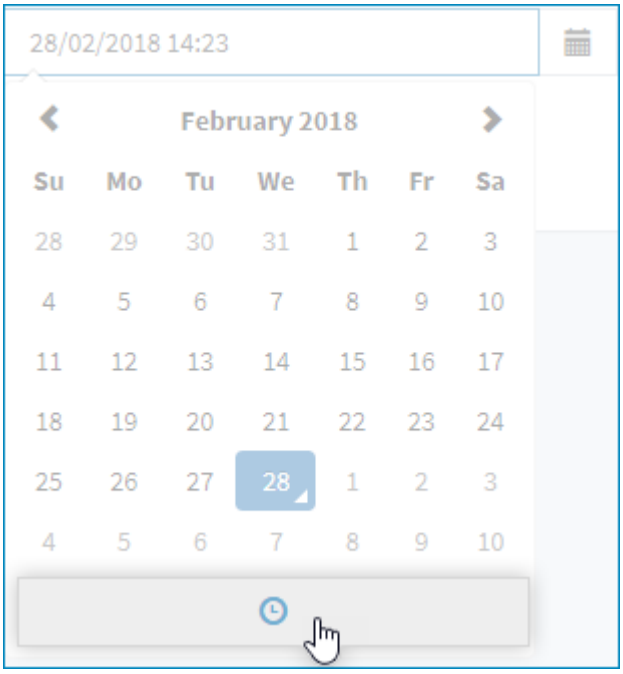






3 Specify when you want the recurring task to end:

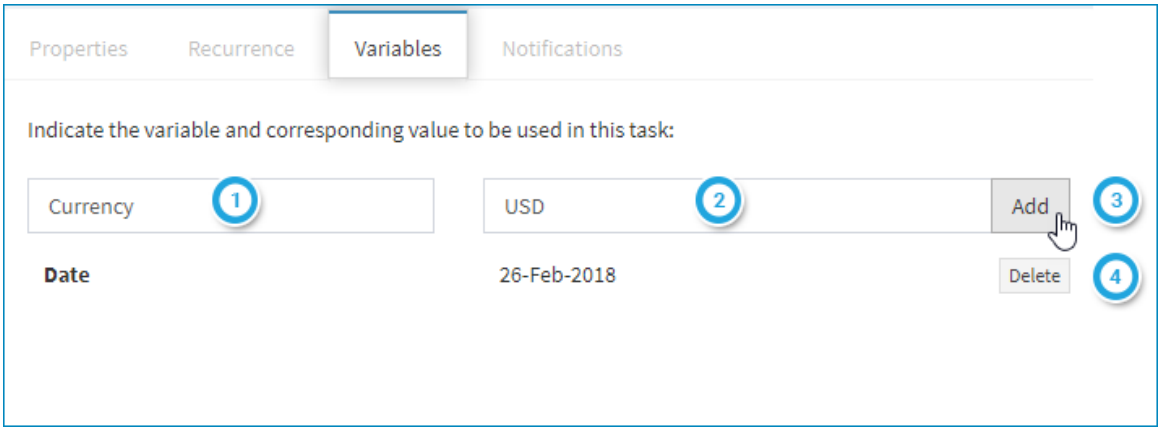
- no end date;
- after a specified number of occurrences; or
- by a specified date/time
  - To set the date, click the button
  - To set the time, the icon at the bottom of the calendar dialog



4 If you decide to turn off recurrence (so that the task will run only once), click the Turn off button

Variables tab (optional)

If you want the wizard to begin with specified values for certain variables each time it runs, set these values on the **Variables** tab.



1. Enter the name of the variable for which you would like to set a starting value

   NOTE: The name entered here must exactly match the name of a variable in the selected wizard (not case-sensitive)

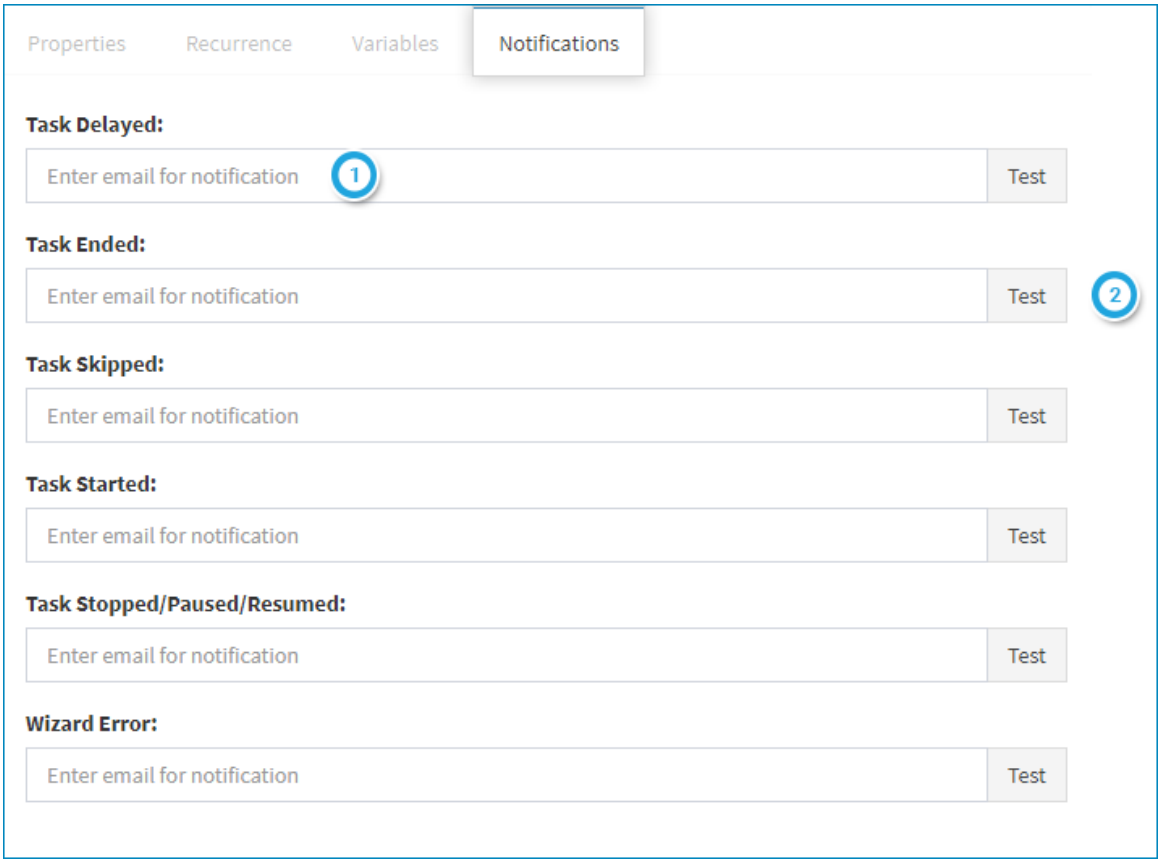
2. Enter the starting value for the variable

3. If you wish to set the value for another variable, click the Add button to add a row

4. To delete a variable/value you have already set, click the Delete button

Notifications tab (optional)

If you wish to have notifications sent by email when certain task-related events occur, go to the **Notifications** tab.



1. Enter the email address to which a notification should be sent when the indicated event occurs (a maximum of one email address per event type)
2. If you wish to send a test email to entered address, click the Test button

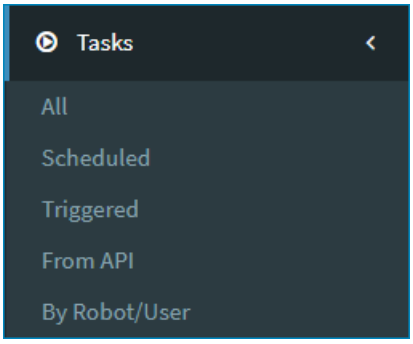
> **NOTE**
>
> Notifications will be sent from the email configured on the Notification Settings page.

Working with Tasks

Viewing the Task List

To view a list of all tasks, click **ALL** under **TASKS** in the Navigation Pane.

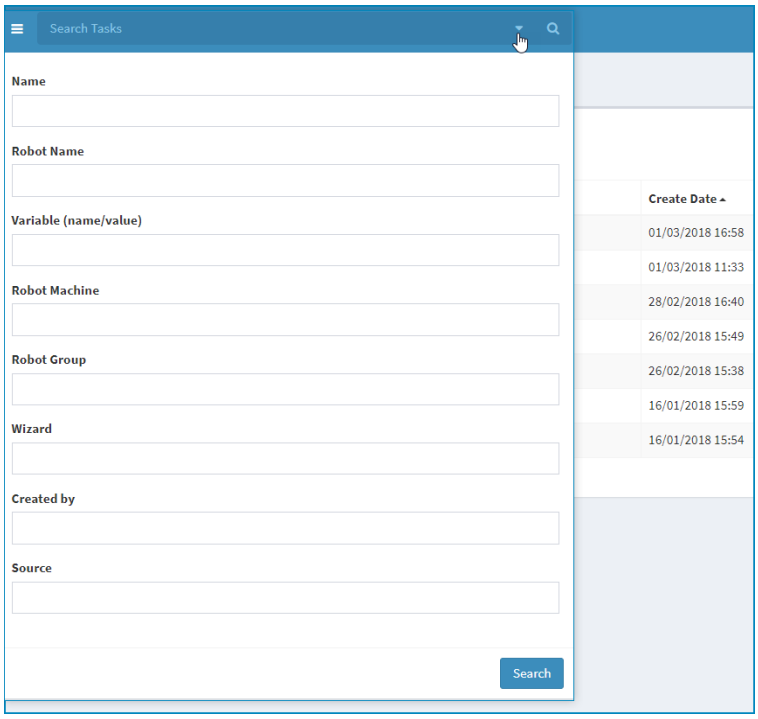
To view a list of tasks that were created by a certain method, click the description of that method under **TASKS**.



Searching for a task

To find a specific task or tasks, click in the search bar at the top of any **Task List** page (under **TASKS** in the Navigation Pane).

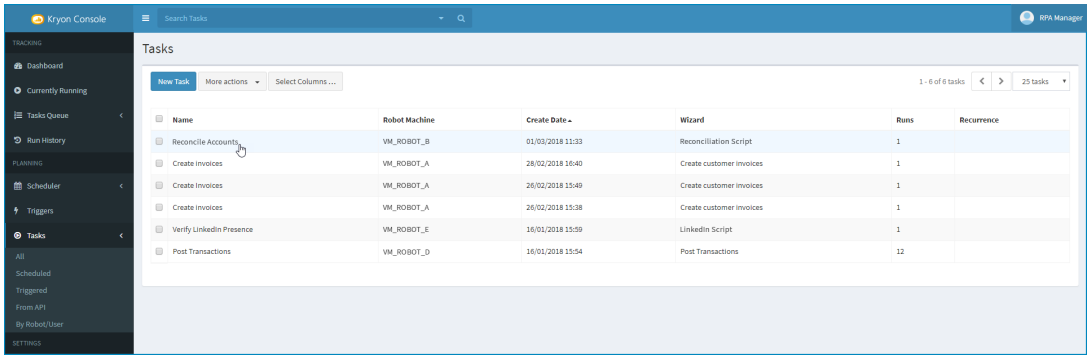
- You can type free text within the search bar, or click on the drop-down arrow to search for the task based on specific properties.



Viewing & editing scheduled task properties

To view a list of scheduled tasks (i.e., tasks created from the Scheduler), click **TASKS > SCHEDULED** from Console's Navigation Pane.

- To see a specific task's properties, simply click on it from the list.



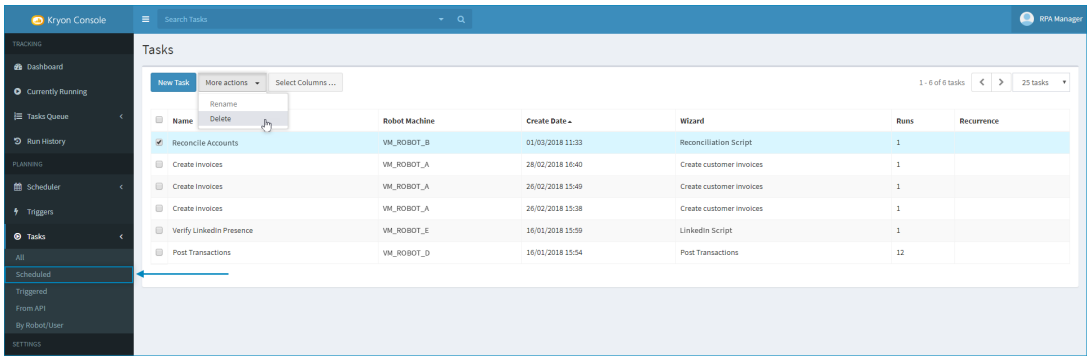
- To edit the task's properties:

  1. From the task properties page that opens, click the button, then select **EDIT**
  2. Edit the task details as necessary, then click Save to save your changes or Discard to discard them

Deleting a scheduled task

To delete one or more scheduled tasks:

1. Click **TASKS > SCHEDULED** from Console's Navigation Pane
2. Tick the checkbox of the task(s) you wish to delete
3. Click the More actions button, then select **DELETE**



CHAPTER 7: Triggers

In this chapter:

What is a Trigger?

The Kryon RPA Platform includes the ability to create triggers in two primary categories:

- Time-based triggers
- Event-based triggers

Time-based triggers

A time-based trigger is an instruction to the Kryon Server to assign a task to a robot according to a schedule you specify. The scheduling of time-based triggers is extremely flexible and can be in time frames as small as minutes or as large as years.

Event-based triggers

An event-based trigger is an instruction to the Kryon Server to monitor events on your company's network and assign a task to a robot whenever a particular event occurs.

EXAMPLE

Challenge: Assume you work for an insurance company, and every day the Claims Department emails an Excel file called `Claims To Be Paid - {date}` to the Accounts Payable Department. The time that the email is sent varies from day to day depending on how busy the Claims Department has been. You have created a wizard called `Transfer Claims` that will download the Excel file and transfer the data into your accounting system, but the wizard can only run after Accounts Payable receives the daily email.

Solution: Set up a trigger to monitor the Accounts Payable inbox for the `Claims To Be Paid` email. Every day when the email is received, a task to run the `Transfer Claims` wizard will be created and assigned to a robot for execution.

Event-based trigger types

You can create triggers instructing the Kryon server to monitor for the following types of events:

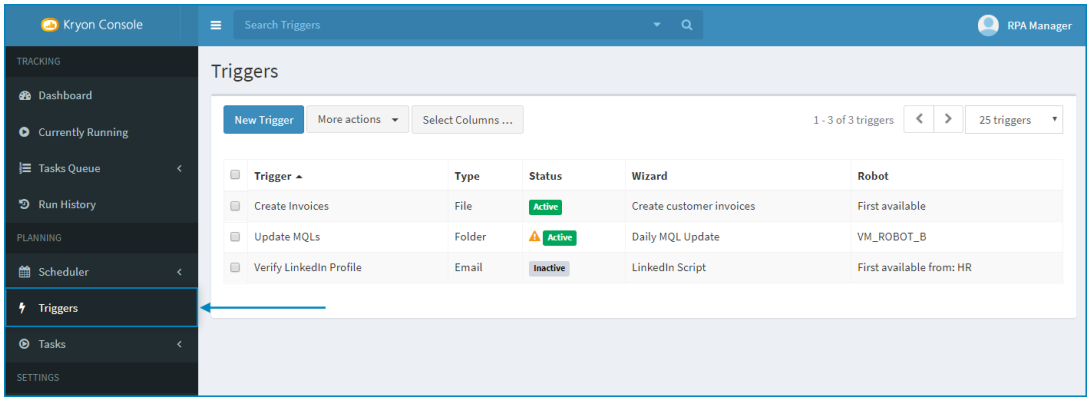
- **File trigger** – initiates a new task whenever a file is created, modified, or deleted
- **Folder trigger** – initiates a new task whenever a folder is created or deleted
- **Email trigger** – initiates a new task whenever an email is received
- **Database trigger** – initiates a new task whenever database records are inserted, updated, or deleted

Creating Triggers

Accessing the New Trigger page

To access the **New Trigger** page:

1. Click **TRIGGERS** from Console's Navigation Pane



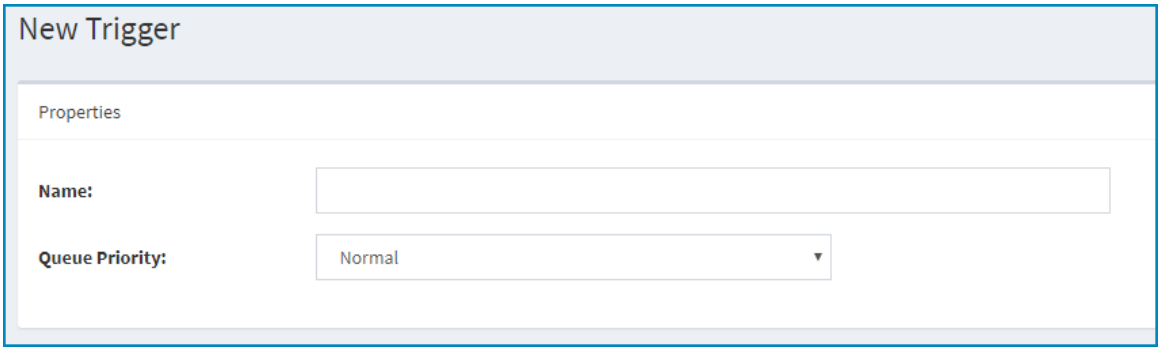
2. Click the 

button

Creating a new trigger

Creating a new trigger is a 5-step process. Four of the five steps (all but Step #2) are the same no matter what type of trigger you are creating.

Step #1: Define general trigger properties



a. Create a name for the trigger. (The trigger will be identified by this name on other pages in Console, so give it a name you will recognize.)

b. Choose whether the tasks initiated by the trigger should have **Normal** or **High** queue priority

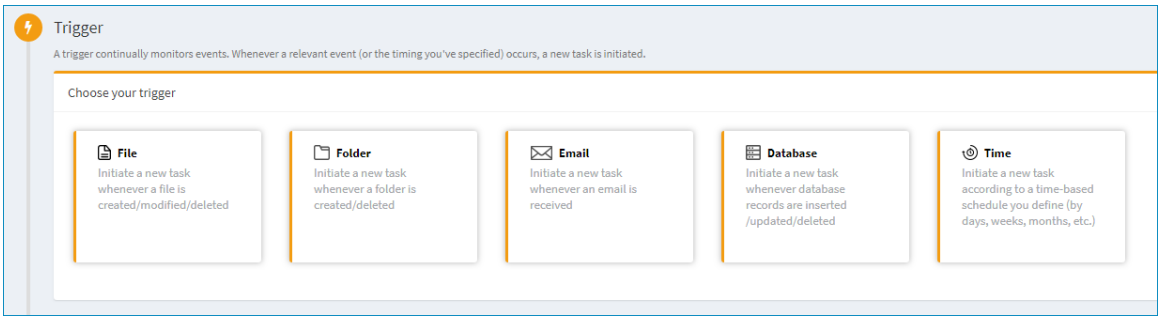
NOTE

What is queue priority?

All tasks other than scheduled tasks (i.e., tasks invoked by trigger, API call, or the **ADD AUTOMATION TASK TO QUEUE** advanced command) go into the task queue until they are assigned to a robot for execution:

- A new task with **Normal** queue priority enters the queue at the bottom of the list
- A new task with **High** queue priority enters the queue at the top of the list (though under other high-priority tasks already in queue)

Step #2: Choose trigger type & configure



a. Select the type of trigger you want to create

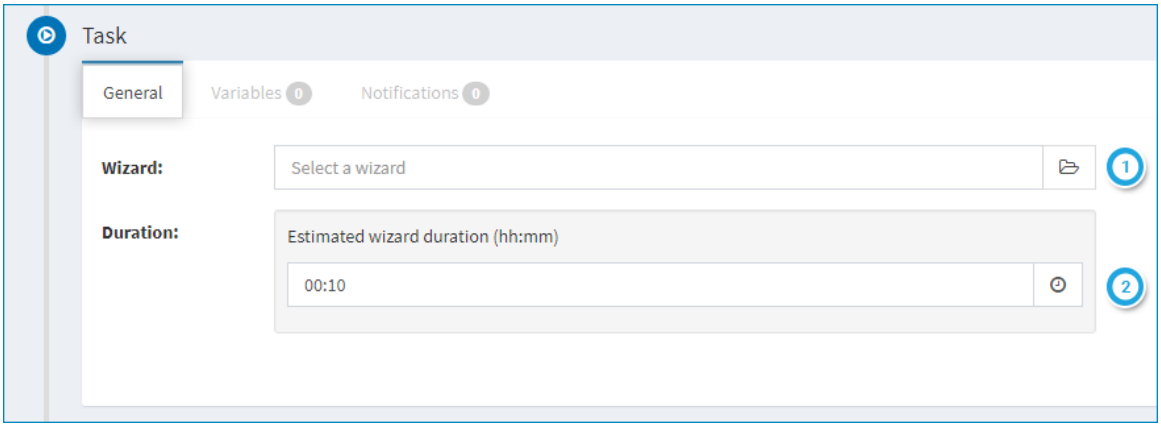
b. The details required to configure the trigger vary widely depending on its type. For details, see:

- Creating File Triggers
- Creating Folder Triggers
- Creating Email Triggers
- Creating Database Triggers
- Creating Time-Based Triggers

Step #3: Configure task

Enter the details of the tasks to be initiated by the trigger as follows:

General tab

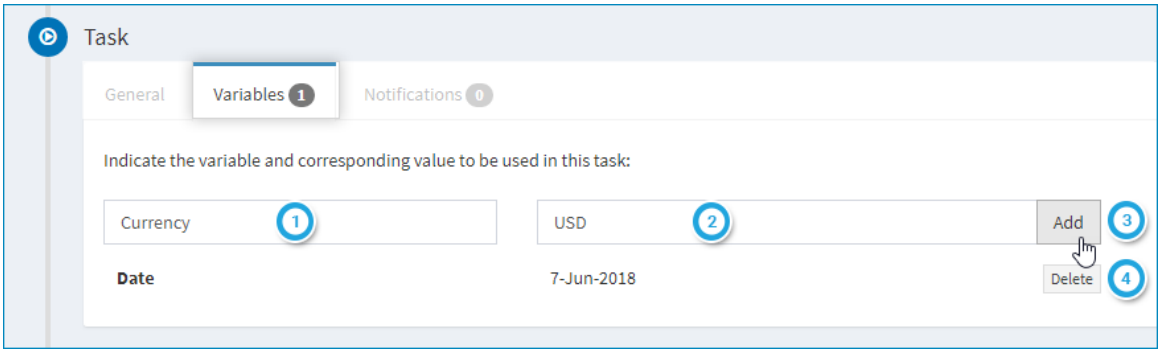


1. Click the button to open the Kryon catalog and browse or search for the wizard that the task will execute
2. Enter the estimated time the wizard takes to run one (1) time

   Why does this matter? The estimated wizard duration is used for robot scheduling. The more accurate the estimated wizard duration, the more it can help you in managing your virtual workforce.

Variables tab (optional)

If you want the wizard to begin with specified values for certain variables each time it runs, set these values on the **Variables** tab.



1. Enter the name of the variable for which you would like to set a starting value

   NOTE: The name entered here must exactly match the name of a variable in the selected wizard (not case-sensitive)

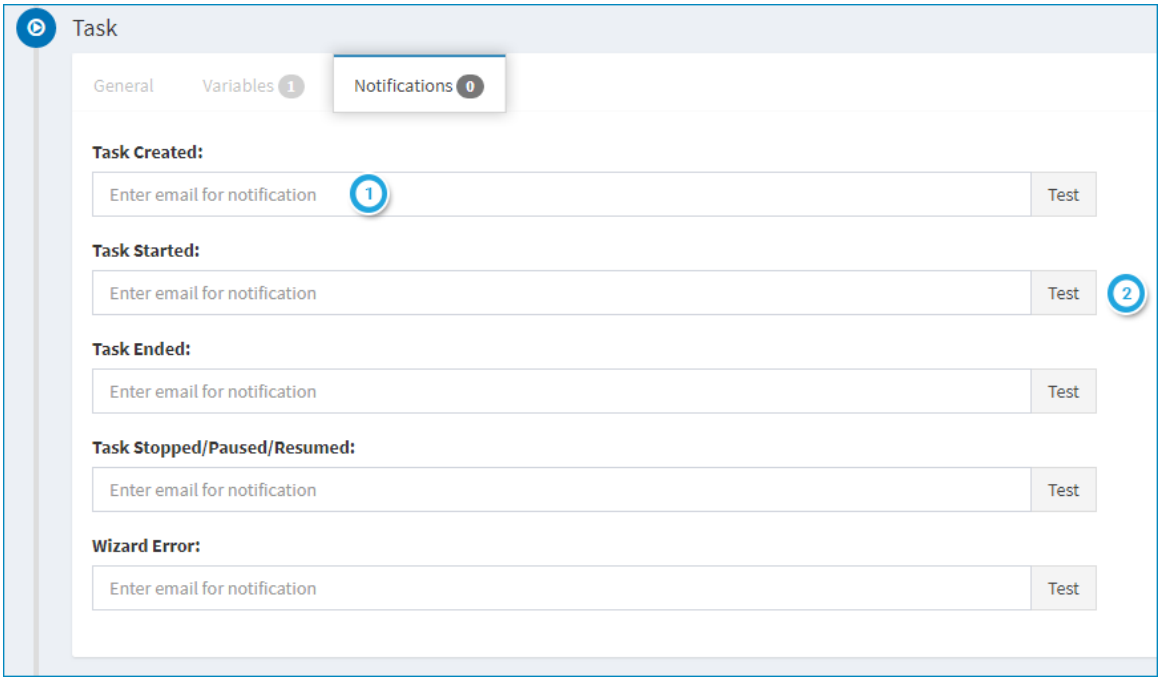
2. Enter the starting value for the variable

3. If you wish to set the value for another variable, click the Add button to add a row

4. To delete a variable/value you have already set, click the Delete button

Notifications tab (optional)

If you wish to have notifications sent by email when certain task-related events occur, go to the **Notifications** tab.



1. Enter the email address to which a notification should be sent when the indicated event occurs (a maximum of one email address per event type)
2. If you wish to send a test email to entered address, click the Test button

NOTE

Notifications will be sent from the email configured on the Notification Settings page.

NOTE

Triggers, wizards, and Advanced Commands

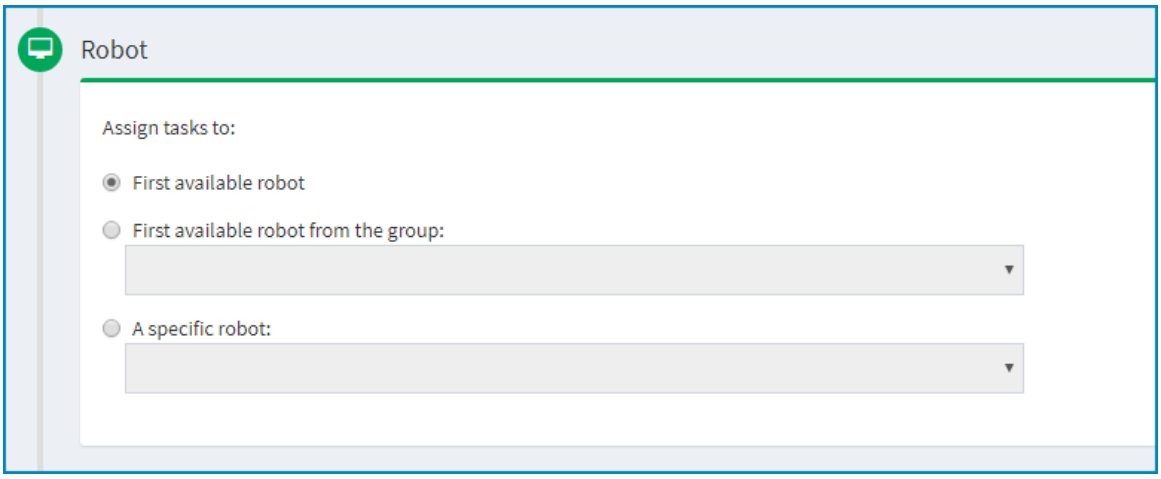
While monitoring events, an event-based trigger collects data (for example, the filename and path of a newly created file or the data contained in modified database records) and stores it on the Kryon Application Server. Then, when the trigger activates a task, the task executes the wizard specified in the trigger configuration (in the **General** tab, as shown above).

But how does the wizard identify and access the necessary data collected and stored by the trigger? **Through an Advanced Command.**

Any wizard that is designed to be initiated by an event-based trigger should include the appropriate Advanced Command (determined by trigger type) to retrieve the data collected by the trigger and read it into variables for use by the wizard. To learn more about the use of these Advanced Commands, see the following topics in the ***Advanced Commands Reference Guide:***

- Get File Trigger Input
- Get Folder Trigger Input
- Get Email Trigger Input
- Get Database Trigger Input

Step #4: Assign tasks to a robot



Indicate to which robot you want the tasks initiated by the trigger to be assigned:

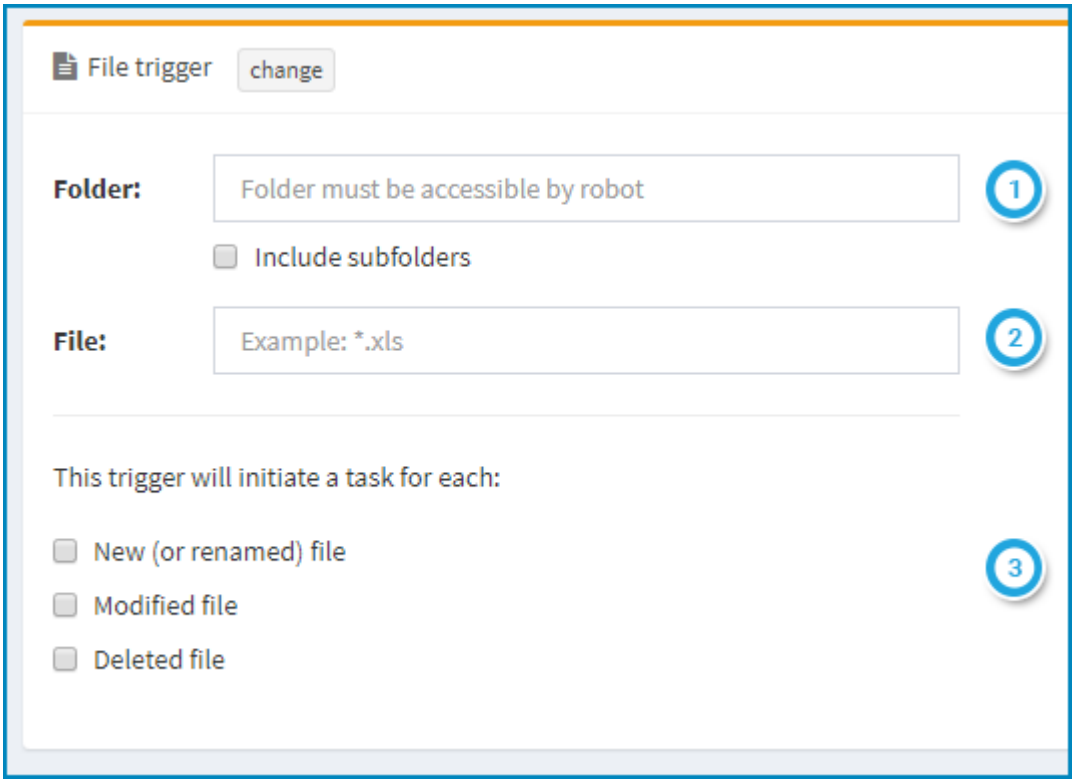
- The first available robot (any robot in your organization)
- The first available robot in a specific group (select the group from the drop-down list); or
- A specific robot (select the robot from the drop-down list)

Step #5: Save/activate trigger

- To save the trigger you have created and get it started monitoring events immediately, click the Save & Activate Trigger button.
- To save the trigger you have created but wait before activating it, click the Save Trigger button.

Creating File Triggers

A file trigger initiates a new task whenever a file is created, modified, or deleted in a specified location. To create a file trigger:



1. Enter the **full path** of the folder that the trigger should monitor; and

   Tick the checkbox if you want the trigger to monitor subfolders as well

   NOTE:

   - Each robot that could have a task assigned to based on this trigger must have connectivity and access rights to the specified folder (so that it can read and act on the files within it)
   - The Kryon Application Server must also have access to this folder (in order to monitor it)

2. Enter the filename for which the trigger should monitor

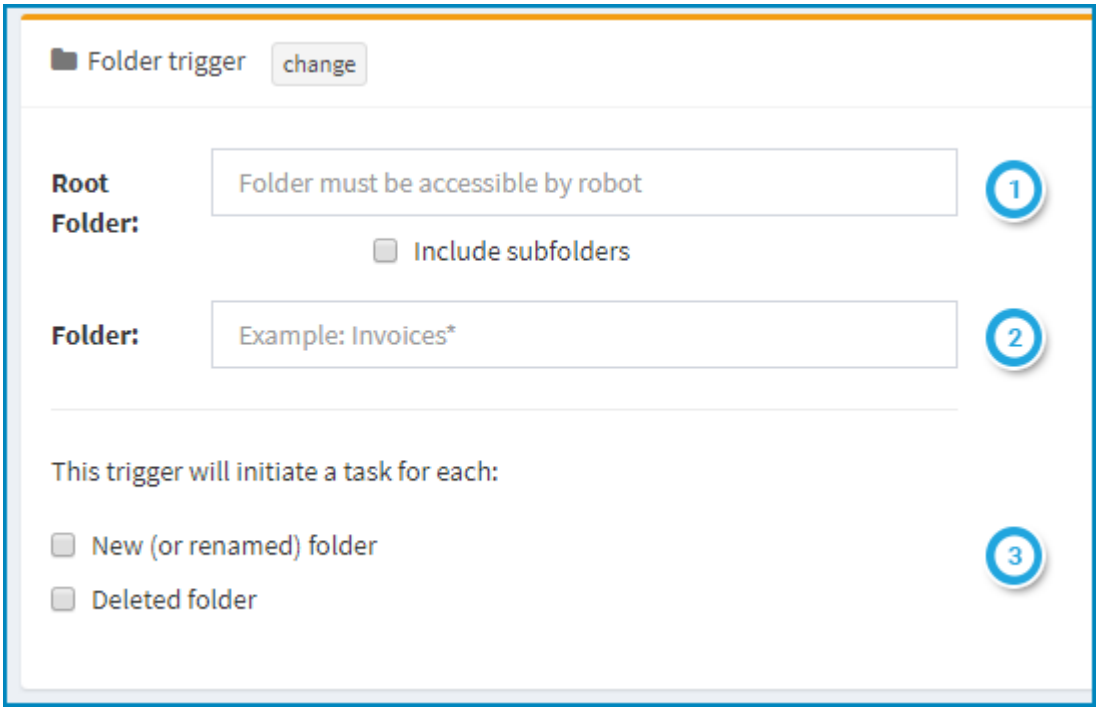
   - You can use an asterisk as a wildcard for one or more characters within the filename, for example:
     - If you enter the filename `*.docx`, the trigger will look for files with a `*.docx` extension (such as `invoice1.docx` and `premium notice.docx`)
     - If you enter the filename `*invoice.*`, the trigger will look for files with the word `invoice` in the filename (such as `december 2017 invoice.xlsx` and `invoice122017.pdf`)

3. Indicate one or more event(s) for which the trigger should monitor

NOTE: Electing to monitor for a new or renamed file will enable the following option: ☐ Include existing files. Select this option if you wish the trigger to initiate tasks based on files existing in the specified folder at the time the trigger is created.

Creating Folder Triggers

A folder trigger initiates a new task whenever a folder is created or deleted in a specified location. To create a folder trigger:



1. Enter the **full path** of the root folder that the trigger should monitor; and

   Tick the checkbox if you want the trigger to monitor subfolders as well

   NOTE:

   - Each robot that could have a task assigned to based on this trigger must have connectivity and access rights to the specified root folder (so that it can read and act on the folders/files within it)
   - The Kryon Application Server must also have access to this folder (in order to monitor it)

2. Enter the folder name for which the trigger should monitor

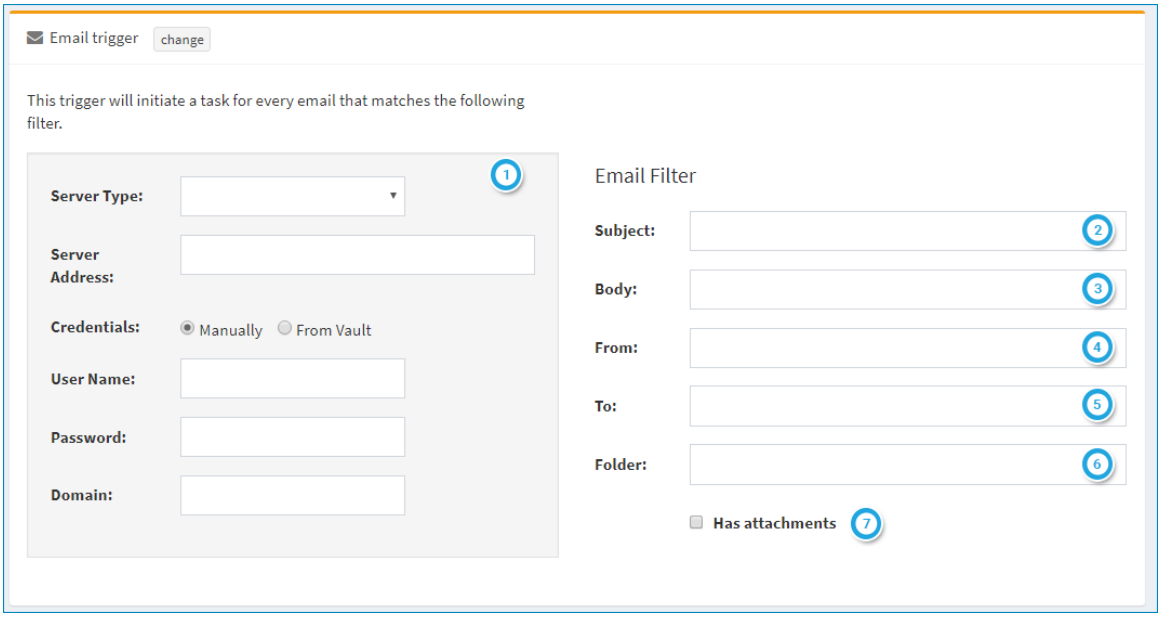
   - You can use an asterisk as a wildcard for one or more characters within the folder name, for example:
     - If you enter the folder name `invoices*`, the trigger will look for folders with the word `invoices` at the beginning (such as `invoices2017` and `invoices for processing`)
     - If you enter the folder name `*claims`, the trigger will look for folders with the word `claims` at the end (such as `2017_claims` and `approved claims`)

3. Indicate one or more event(s) for which the trigger should monitor

NOTE: Electing to monitor for a new or renamed folder the following option: ☐ Include existing folders. Select this option if you wish the trigger to initiate tasks based on folders existing in the specified root folder at the time the trigger is created.

Creating Email Triggers

An email trigger initiates a new task whenever an email message matching a specified filter is received. To create an email trigger:



1 Enter the settings required to access the incoming email server and account

EMAIL FILTER:
Enter the characteristics of an email message that will cause the trigger to initiate a new task –

2 (Optional) **Subject:** A word or a phrase that the subject of the message must contain

3 (Optional) **Body:** A word or a phrase that the body of the message must contain

4 (Optional) **From:** The email address **from** which the message must be sent

5 (Optional) **To:** The email address **to** which the message must be sent

6 (Required) **Folder:** The email folder to which the message must be delivered

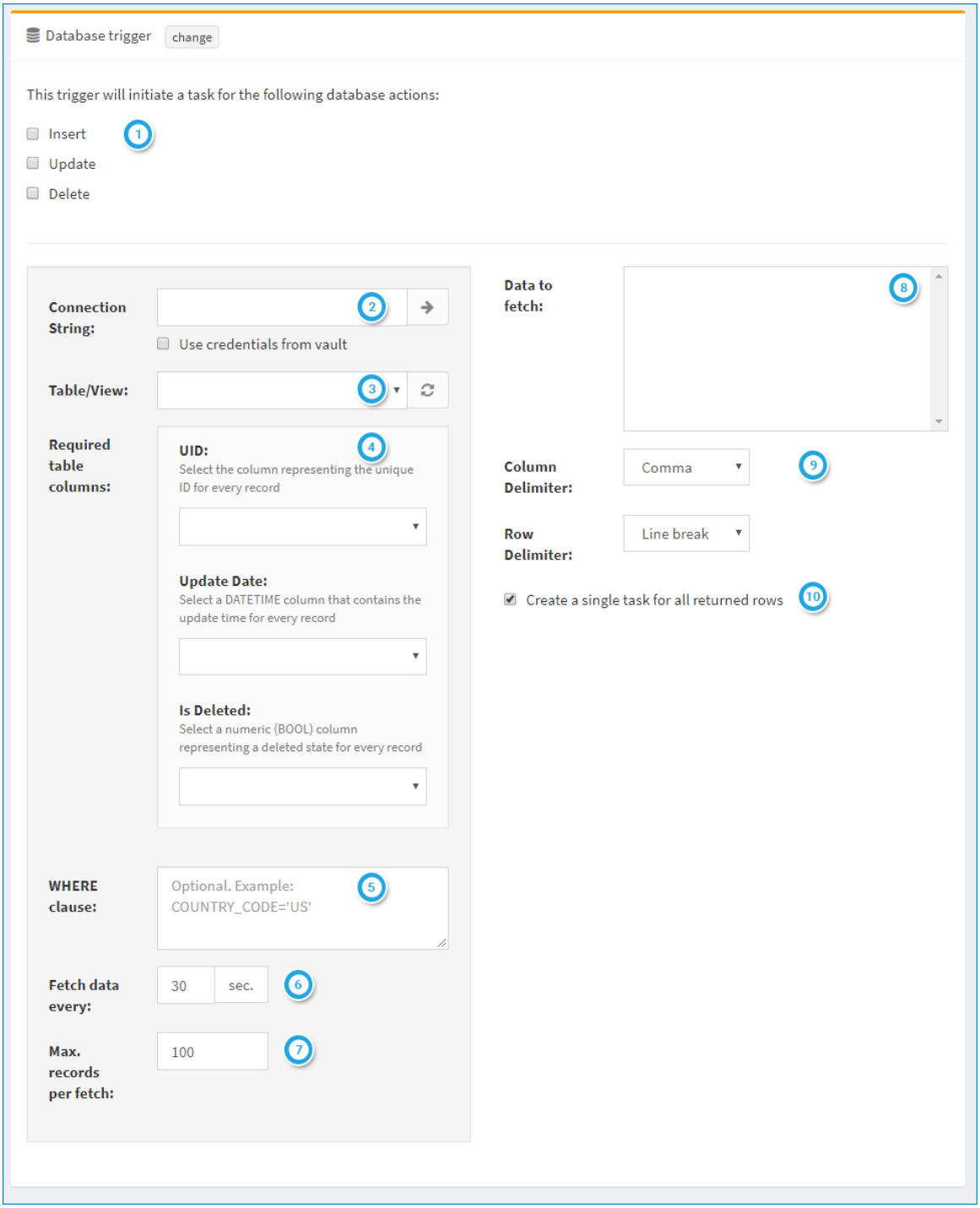
NOTE: This is the folder on the email server that will be monitored for messages matching the other email filter requirements. Generally, the name of this folder is `Inbox` (or a translation of `Inbox`), but it can vary based on email server/account configuration.

7 (Optional) **Has attachments:**

- When this box is checked, a message must include attachments in order cause the trigger to initiate a new task
- If left unchecked, any message matching the other filter requirements (whether or not it includes attachments) will cause the trigger initiate a new task

Creating Database Triggers

A database trigger initiates a new task whenever database records are inserted, updated, or deleted. To create a database trigger:



1. Indicate one or more event(s) for which the trigger should monitor (database records inserted/updated/deleted)

2. Enter the connection string for the data source; ***and***
   Indicate whether you would like to retrieve database login credentials from the Kryon Credentials Vault

   NOTE: You can test connectivity to the data source with the entered string by clicking the → button

3. Select the table/view the trigger should monitor from the drop-down list

   NOTE: The list will display the available tables/views after you have connected successfully to the selected database

4. Identify required columns

   NOTE: Depending on the event(s) you selected in Step 1, one or more of these fields will be displayed (and are mandatory)

5. (Optional) Enter any applicable WHERE clauses to further refine the events to monitor

6. Indicate how often the trigger should fetch data (i.e., check for the events specified in Step 1)

7. Indicate the maximum number of records to be returned each time the trigger checks for the specified events

8. Select the data (database columns) to be fetched for each record returned

   NOTE: Available columns will be displayed after you have connected successfully to the selected database

9. Enter the delimiters to use to separate each row and column in the returned data

   NOTE: These delimiters will be used by the wizard the trigger initiates to loop through the retrieved data

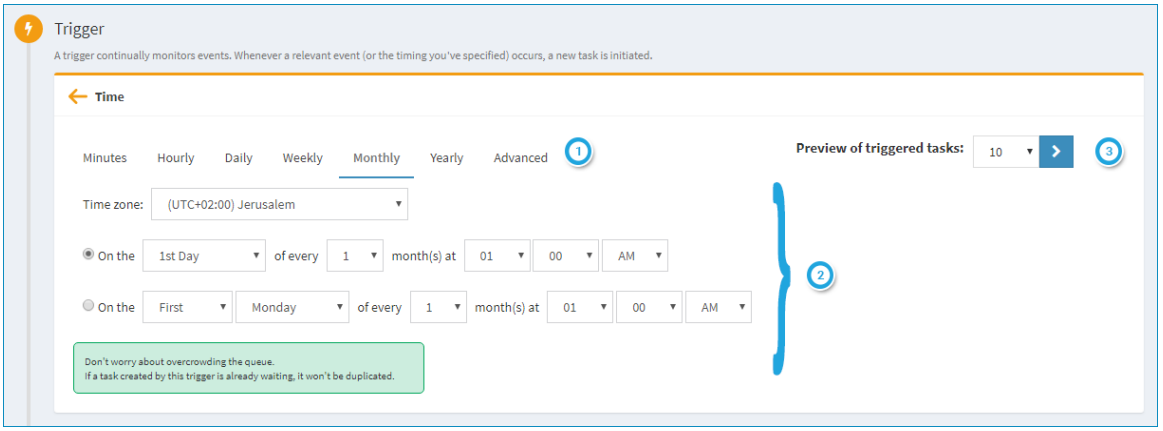
10. Indicate whether to create a single task for all returned rows

    NOTE:

    - By default this box will be checked
    - If unchecked, an individual task will be initiated for each record returned

Creating Time-Based Triggers

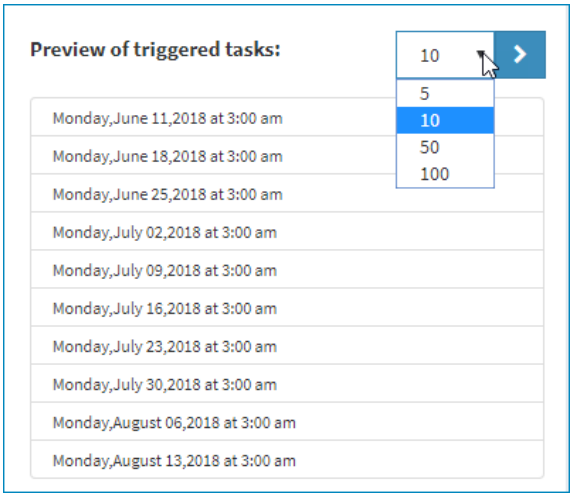
A time-based trigger initiates new tasks according to a schedule you specify. To create a time-based trigger:



1. Choose the time frame (based on how often you want the task to recur)

2. Fill in the information required to establish the pattern of recurrence you need

3. To view dates/times of the next tasks that the trigger will initiate, select the number of tasks to preview from the drop-down list and click the button. The list of the next triggered tasks will appear:



CAUTION

Keep the calendar in mind!

If you elect to run a task on a day that doesn't exist, the task will be skipped for that recurrence. Take a careful look at the **preview of triggered tasks** to ensure that this won't happen.

For example, if you specify a task to run monthly on the 31st, you will notice that February, April, June, September, and November are skipped in the list of triggered tasks.

NOTE

If a task initiated by a time-based trigger is still waiting in queue at the time the next recurrence is triggered, the second task won't be added to the queue. This will prevent unnecessary duplication of tasks and overcrowding the queue.

TIP

Using ADVANCED time-based triggers

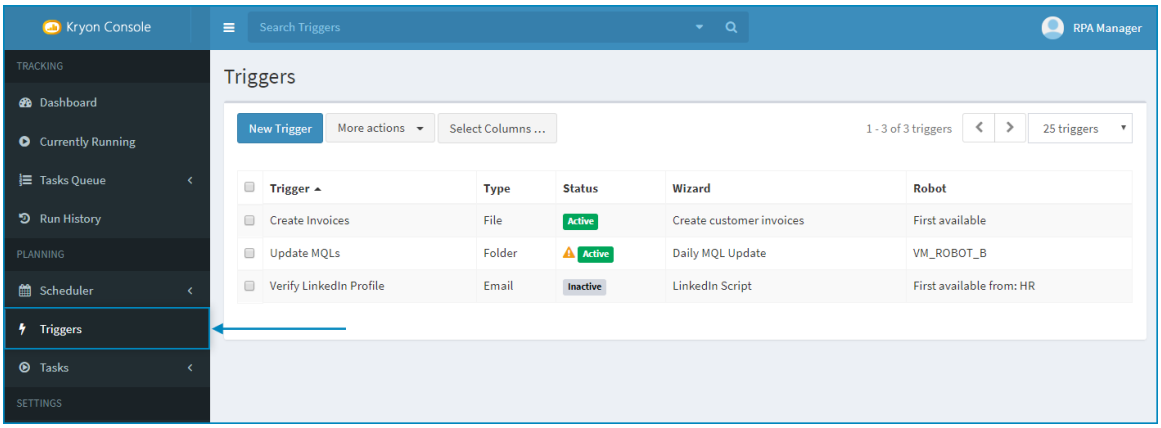
Selecting the **ADVANCED** time-based trigger tab allows even more precision by giving you the option to use cron expressions to define the recurrence pattern. Learn more about how to create cron expressions here.

- Console gives you real-time feedback on the validity of the cron expression you've entered:
  - If the entered expression is valid, the icon will appear
  - If the entered expression is invalid, the icon will appear
- Use the preview of triggered tasks to check the recurrence pattern created by the cron expression you've entered

Working with Triggers

Accessing the Trigger Page

To view a list of all triggers, click **TRIGGERS** from Console's Navigation Pane.



Trigger status

For each trigger, the **Status** column displays one of three possible trigger statuses:

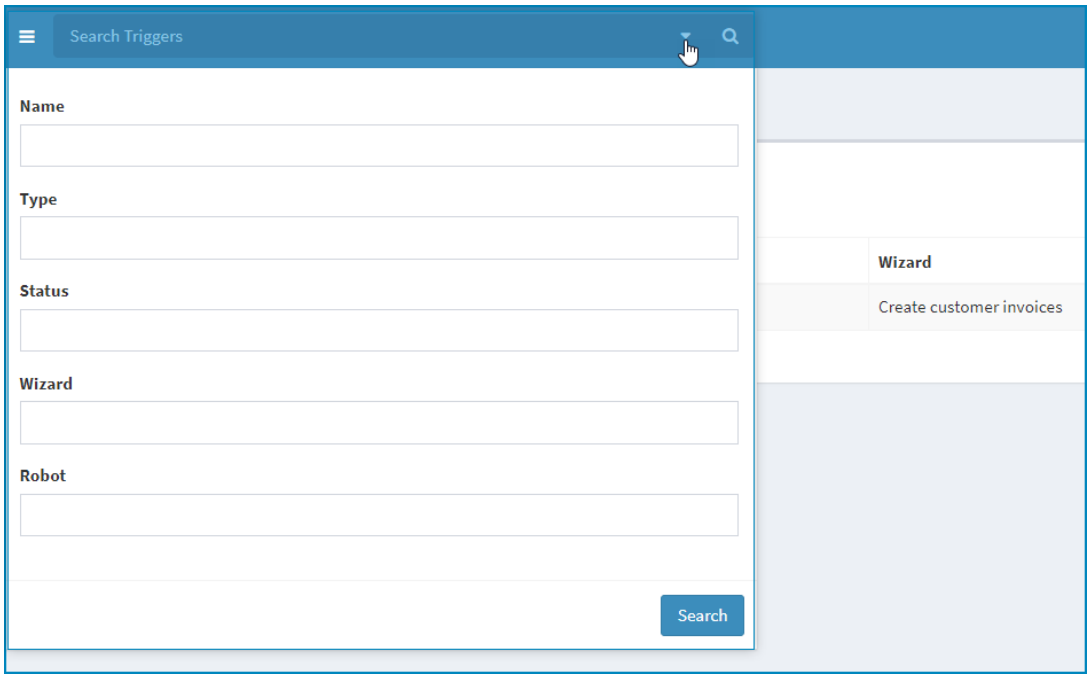
Active	The trigger is active and currently monitoring the event(s) it is configured to monitor
⚠ Active	The trigger is active but currently unable to monitor event(s) • This is generally caused by the trigger's inability to access the resource it is configured to monitor (file, folder, email account, or database) • Correct this status by confirming connectivity to the specified resource or by editing the trigger's properties (if necessary)
Inactive	The trigger is currently set not to monitor events

Learn more about Activating/Deactivating triggers.

Searching for a trigger

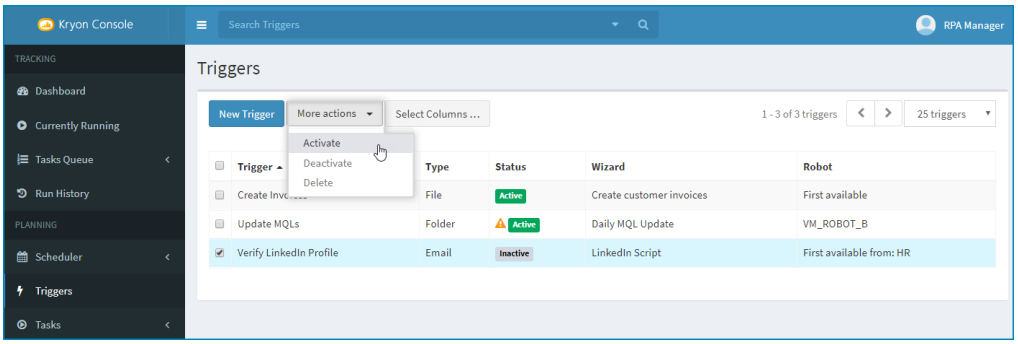
To find a specific trigger or triggers, click in the search bar at the top of the **TRIGGERS** page.

- You can type free text within the search bar, or click on the drop-down arrow to search for the trigger based on specific properties.



Activating/Deactivating triggers

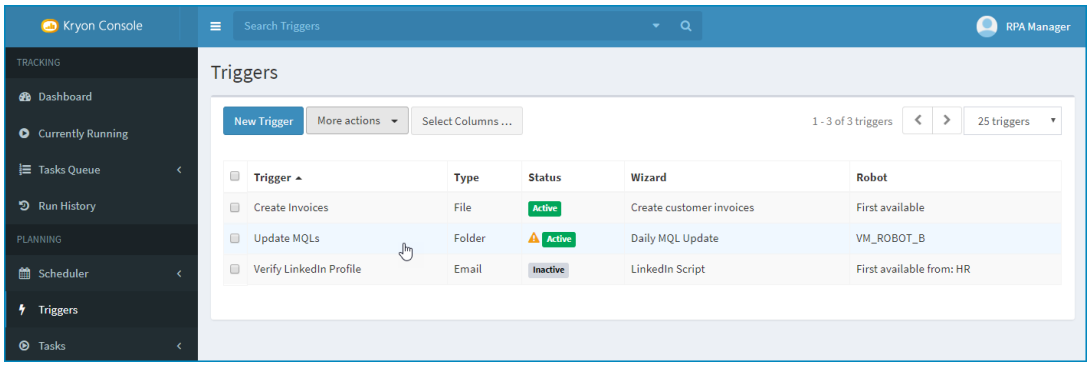
- To activate one or more triggers:
  1. Tick the checkbox of the trigger(s) you wish to activate
  2. Click the More actions button, then select **ACTIVATE**



- To deactivate one or more triggers:
  1. Tick the checkbox of the trigger(s) you wish to deactivate
  2. Click the More actions button, then select **DEACTIVATE**

Viewing & editing trigger properties

- To see a specific trigger's properties, simply click on it from the list.



- To edit the trigger's properties:

1. From the trigger properties page that opens, click the button, then select **EDIT**

> **NOTE**
>
> Triggers can be edited only when they are inactive. If the trigger you elect to edit is currently active, you will be given the option to deactivate it in order to edit it.

2. Edit the trigger details as necessary, then click Save to save your changes or Discard to discard them

> **CAUTION**
>
> Don't forget to reactivate your trigger (if desired) if you deactivated it in order to edit it!

Deleting a trigger

To delete one or more triggers:

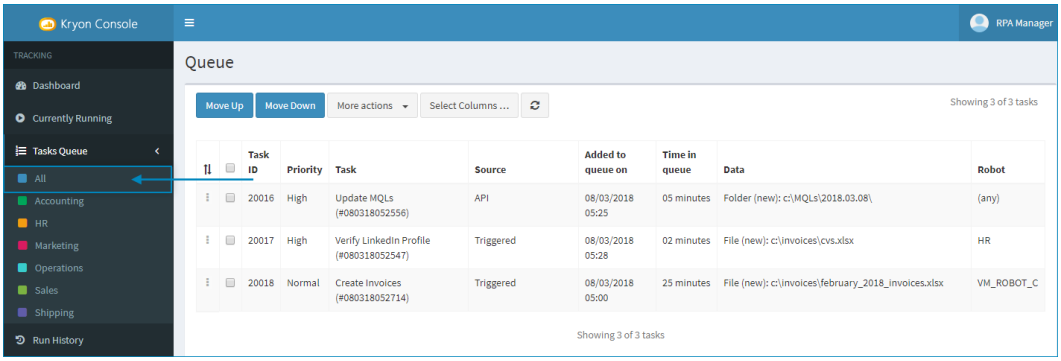
1. Click **TRIGGERS** from Console's Navigation Pane
2. Tick the checkbox of the trigger(s) you wish to delete
3. Click the More actions button, then select **DELETE**

CHAPTER 8: Task Queue

The **Task Queue** displays tasks that are currently waiting for assignment to a robot. By default, tasks are executed in accordance with a defined Queue Priority. However, you can manage the Task Queue to change the order in which tasks will be assigned and executed.

Accessing the Task Queue

To access the Task Queue for all robots, click **ALL** under **TASK QUEUE** in Console's Navigation Pane.



To view the Task Queue for the robots in a single robot group, click the name of the group under **TASK QUEUE**.

What Appears in the Task Queue?

Tasks created by the following methods appear in the Task Queue:

- Triggered tasks
- Tasks created by API call
- Tasks created by human or robot user when the wizards they are running include the **ADD AUTOMATION TASK TO QUEUE** Advanced Command.

Scheduled tasks (i.e., tasks created from the Scheduler) do not appear in the Task Queue. To learn more about the methods by which tasks can be created, see How are Tasks Created.

Once tasks have been assigned to a robot (i.e., have begun execution), they are removed from the Task Queue.

Managing the Order of Tasks in the Queue

Tasks appear in the queue in the order in which they will be assigned and executed.

To change the order of tasks in the queue:

1. Tick the checkbox of the task you wish to move up or down
2. Click the Move Up button to move the selected task higher in queue (i.e., to be executed sooner)
3. Click the Move Down to move the selected task lower in queue (i.e., to be executed later)

Alternatively, you can reorder tasks in the queue by dragging and dropping them into the desired order:

1. In the column with the header, hover your mouse over the icon of task you want to move
2. Once the mouse cursor turns into a four-headed arrow, drag the task into the desired location in queue

Deleting Tasks from the Queue

To delete one or more tasks from the queue:

1. Tick the checkbox of the task(s) you wish to delete
2. Click the More actions button, then select **DELETE**

> **CAUTION**
>
> Deleting a task from queue is irreversible, so make sure this is really what you want to do!

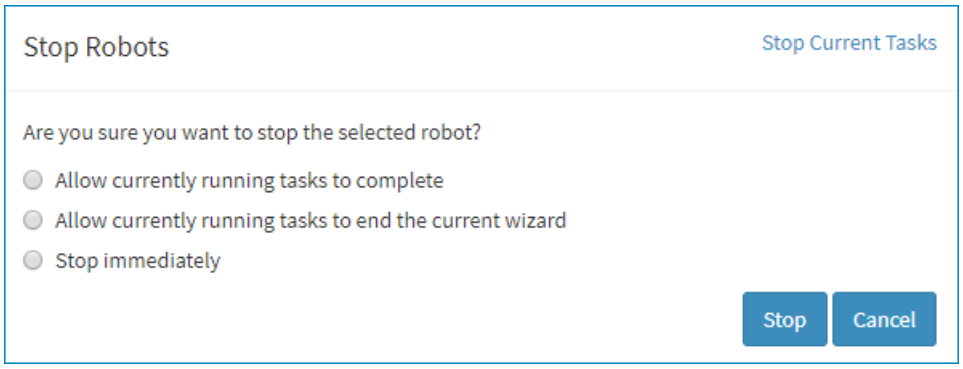
CHAPTER 9: Managing Running Robots & Tasks

To manage running robots and tasks, open the Scheduler.

Stopping a Robot or its Tasks

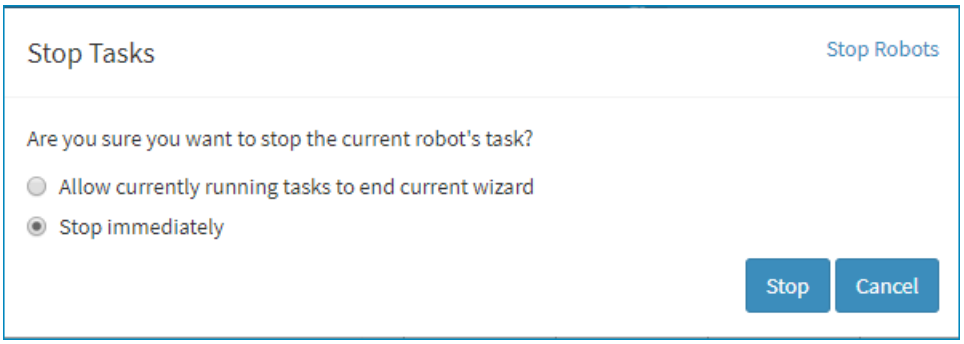
To stop a currently running robot or the tasks it is running:

1. Tick the checkbox of the robot you wish to stop
2. Click the ■ button
3. The following dialog box will open:



4. Choose the desired option:
   - Allow the currently running tasks to finish completely (including repeated wizard runs if the task is so configured) before stopping the robot
   - Allow the currently running tasks to finish their current wizard run before stopping the robot; ***or***
   - Stop the robot immediately
5. Alternatively, if you wish to stop the selected robot's tasks instead of the robot itself, click the Stop Current Tasks link

a. The following dialog box will open:



b. Choose the desired option:

- Allow the currently running tasks to finish their current wizard run before stopping them; ***or***
- Stop the tasks immediately

c. If you decide to stop the robot itself instead of its tasks, click the Stop Robots link

NOTE

What's the difference between stopping a robot and stopping its tasks?

When you stop a **robot**:

- The tasks it is currently running will stop (according the option chosen in the **Stop Robots** dialog box described above); and
- The robot will **not be available to run other tasks until it is restarted**

When you stop a robot's **tasks**:

- The tasks will stop (according to the option chosen in the **Stop Tasks** dialog box described above); and
- The robot **will be immediately available** to run other tasks

Pausing a Robot

To pause a currently running robot:

1. Tick the checkbox of the robot you wish to pause
2. Click the button
3. In the dialog box that opens, confirm that you wish to pause the selected robot

NOTE

What's the difference between stopping and pausing a robot?

When you **stop** a robot:

- The tasks it is currently running will stop (according the option chosen in the **Stop Robots** dialog box described above); ***and***
- When the robot is restarted, the tasks that were running **will not** resume

When you **pause** a robot:

- The tasks will be paused; ***and***
- When the robot is restarted, the tasks that were running **will** resume

Restarting a Stopped or Paused Robot

1. Tick the checkbox of the robot you wish to restart
2. Click the button

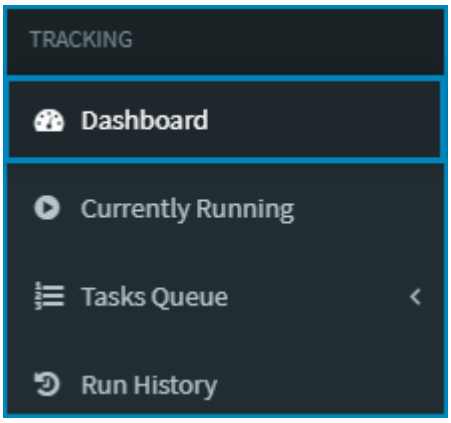
MONITOR

CHAPTER 10: Analytics Dashboard

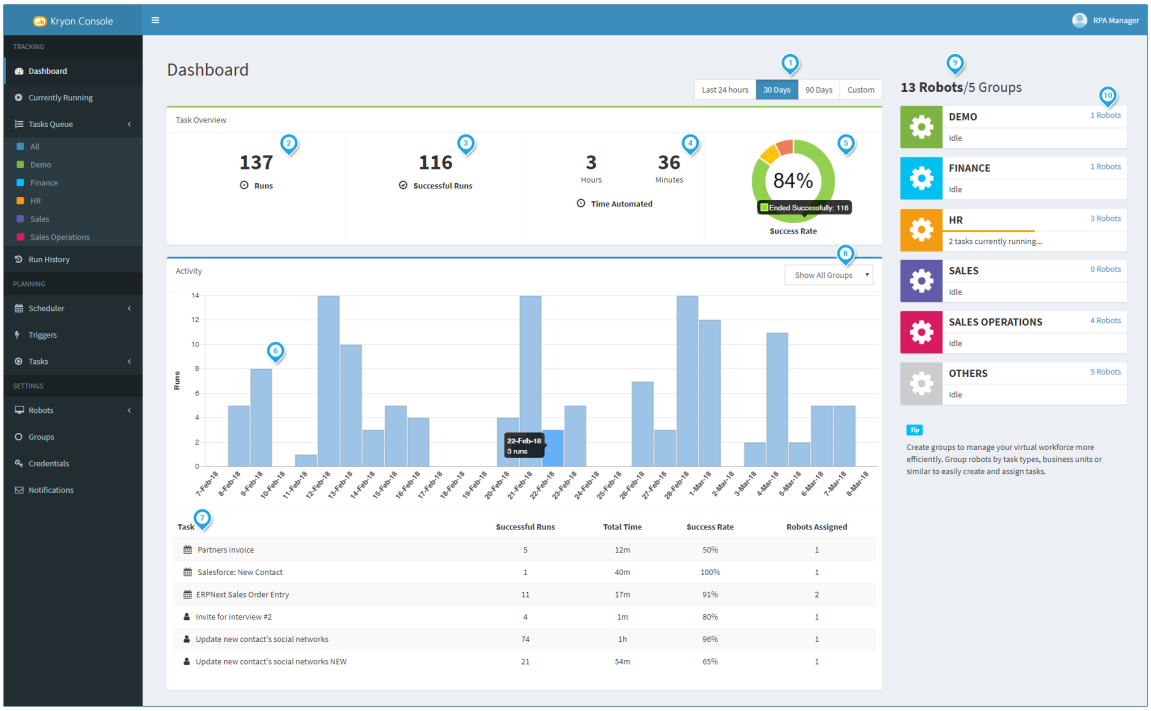
The Analytics Dashboard is the page you'll see when you first enter Console. It provides a visual overview of your entire robot workforce with high-level charts and statistics for task volume and performance – filterable by time range and by robot group. Additionally, it provides an easy way to dig deeper into the details, down to the granular level of individual robots and tasks.

Accessing the Dashboard

Get back to the Dashboard at any time by clicking **DASHBOARD** from Console's Navigation Pane.



A Tour of the Dashboard



1. Allows you to choose the time frame for which the data in the dashboard is displayed: the last 24 hours; last 30 days; last 90 days; or a custom date range

2. Displays the aggregate number of wizard runs during the selected time frame (for all wizards and robots)

3. Displays the aggregate number of successful wizard runs during the selected time frame (for all wizards and robots)

4. Displays the total time utilized by all wizard runs during the selected time frame (for all wizards and robots)

5. Pie chart displaying the percentage of wizard runs that ended successfully/ended unsuccessfully/were stopped during execution

   - Rollover any segment of the pie chart to see a pop-up displaying additional details

6. Bar graph displaying the wizard run volume by time unit during the selected time period

   - Rollover any bar of the graph to see a pop-up displaying additional details

7. Table displaying detailed wizard run volume and statistics broken down by wizard

8. Allows you to filter the bar graph and table by robot group

9 Displays the aggregate number of robots and groups and the number/status of robots broken down by group

10 Clickable links to the Scheduler page for each robot group – from which you can access detailed information by robot: properties, tasks, run history, and change history

- Run and change history are available: (1) aggregated for the robot; and (2) segregated by individual task

CHAPTER 11: Digging Into Performance Details

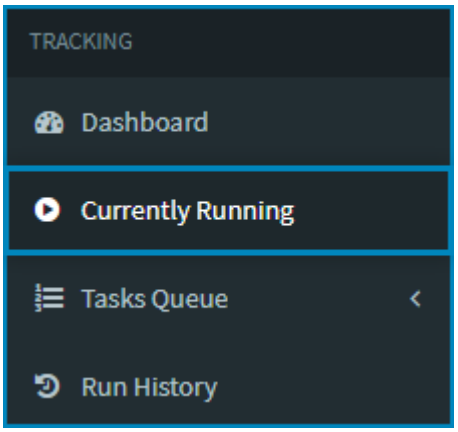
Once you've seen high-level charts and statistics for your entire robot workforce in the Analytics Dashboard, you can dig further into the details of robot performance directly from there. Console also provides detailed monitoring capabilities for current and historical task performance.

In this chapter:

Currently Running

Currently Running displays the details of currently running tasks.

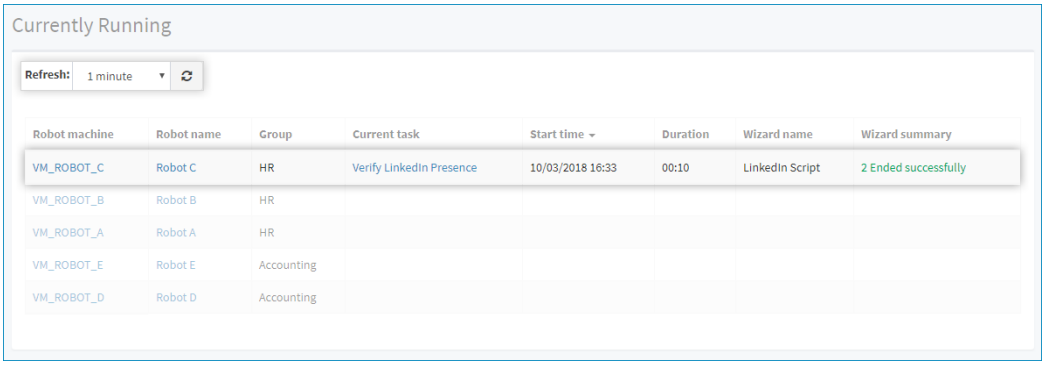
Access this page by clicking **CURRENTLY RUNNING** from Console's Navigation Pane.



- **Currently Running** displays currently running tasks **within the context of all robots in the organization**

> **TIP**
>
> Robots currently running tasks display data in the **CURRENT TASK** column and in the columns to the right.

- By default the page refreshes every 10 seconds
  - To change the refresh interval, select the desired interval from the drop-down list

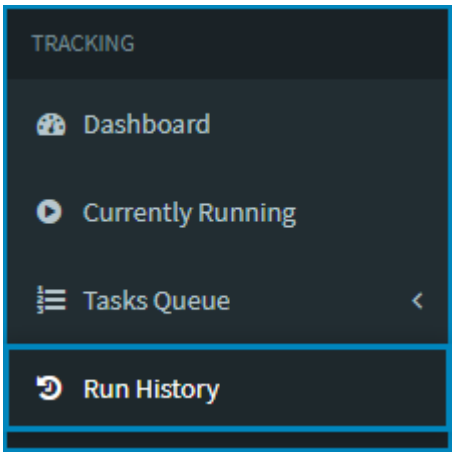


- Click on the link in the **ROBOT MACHINE** column or the **ROBOT NAME** column to go to that robot's **Robot Properties** page
- Click on the link in the **CURRENT TASK** column to go to that task's **Task Properties** page

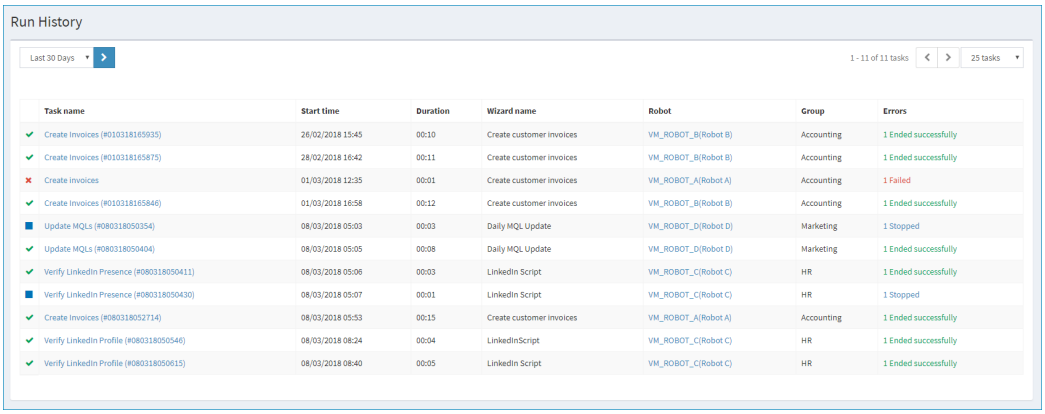
Run History

Run History displays the history and results of all tasks executed by all robots in the organization.

Access this page by clicking **RUN HISTORY** from Console's Navigation Pane.



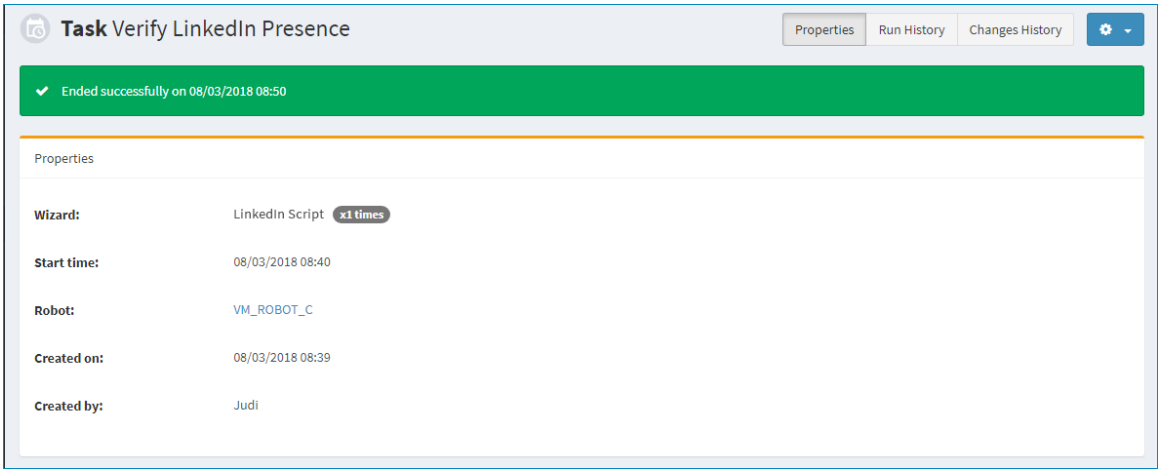
- By default, **Run History** will display data for the last day
  - Select your desired time frame from the drop-down list, then click the button to apply the selected time frame to the view



- Click on the link in the **ROBOT** column to go to that robot's **Robot Properties** page
- Click on the link in the **TASK NAME** column to go to that task's **Task Properties** page

Task Performance & History

To access detailed task performance history for an individual task, start by accessing that task's **Task Properties** page from Run History or Currently Running.



From the **Task Properties** page, the following types of detailed information are available:

- Run History (for this task only)
- Change History (for this task only)

Run History (for task)

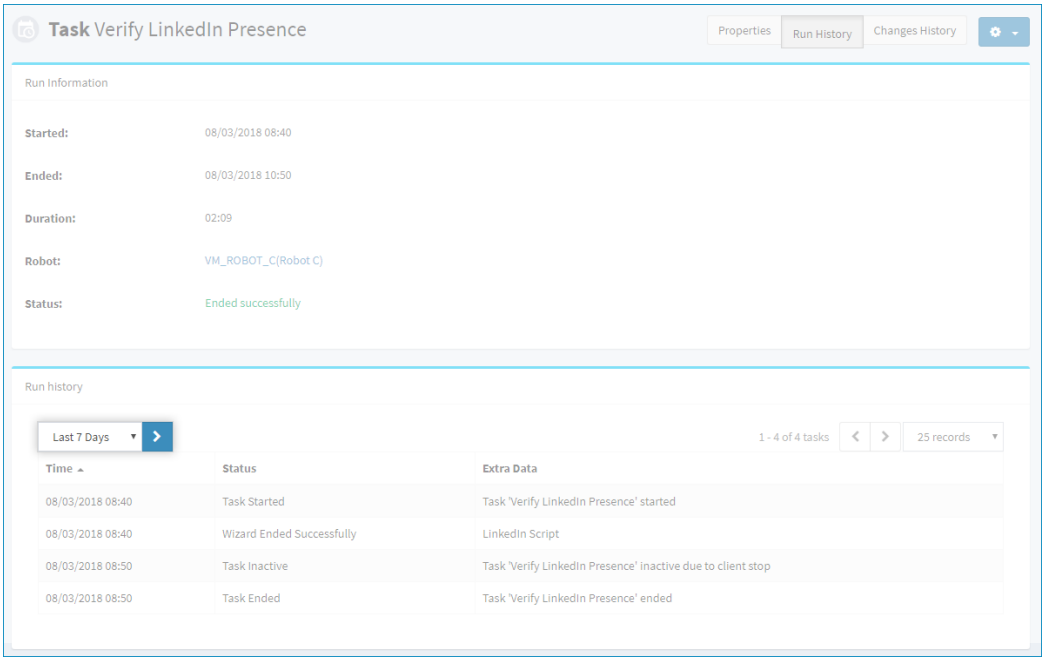
Click on the Run History button to see detailed data about the task's most recent run and the task's entire run history.

TIP

Looking for info on why a task failed? Here's where you'll find it!

Run History for an individual task is often the source of exactly the information you need. It's here that you can find detailed information about task failures – including wizard step number and reason for the failure.

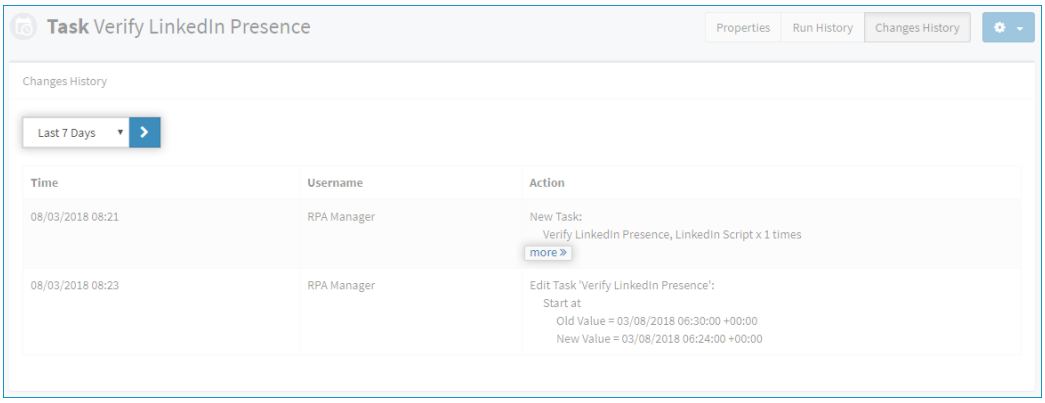
- By default, **Run History** will display data for the last hour
  - Select your desired time frame from the drop-down list, then click the button to apply the selected time frame to the view



Change History (for task)

Click on the Changes History button to see a detailed history of the task and all changes made to it.

- By default, **Change History** will display data for the last hour
  - Select your desired time frame from the drop-down list, then click the button to apply the selected time frame to the view
  - Click the more » link for additional information (when relevant)

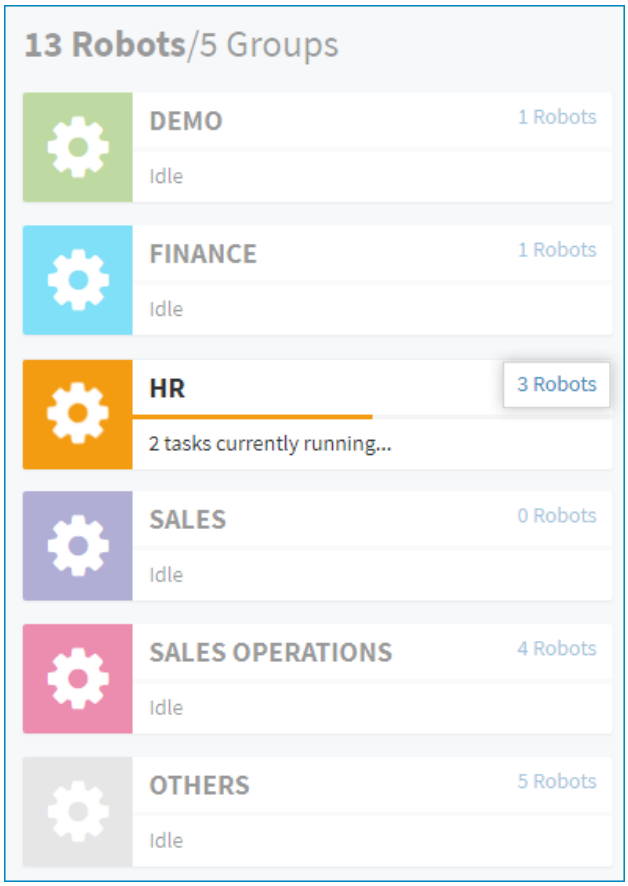


Robot Performance & History

Accessing Detailed Robot Data

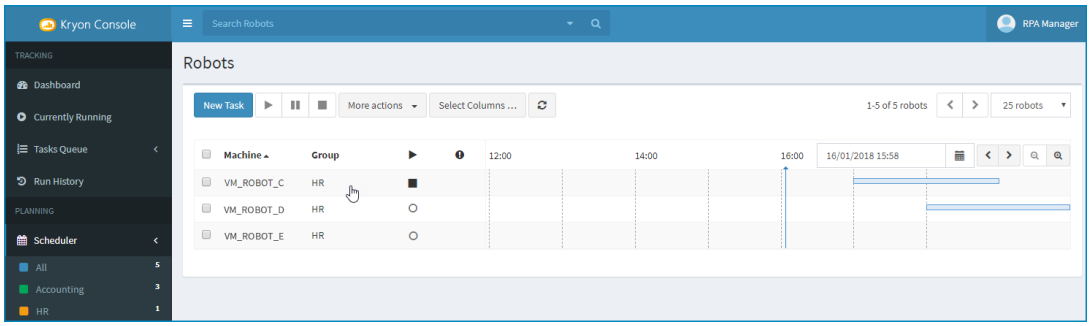
To access detailed robot data:

1. From the **Analytics Dashboard**'s display of robot groups, click on the *number of robots* link in the group you want to explore



- The **Scheduler** for that group will open

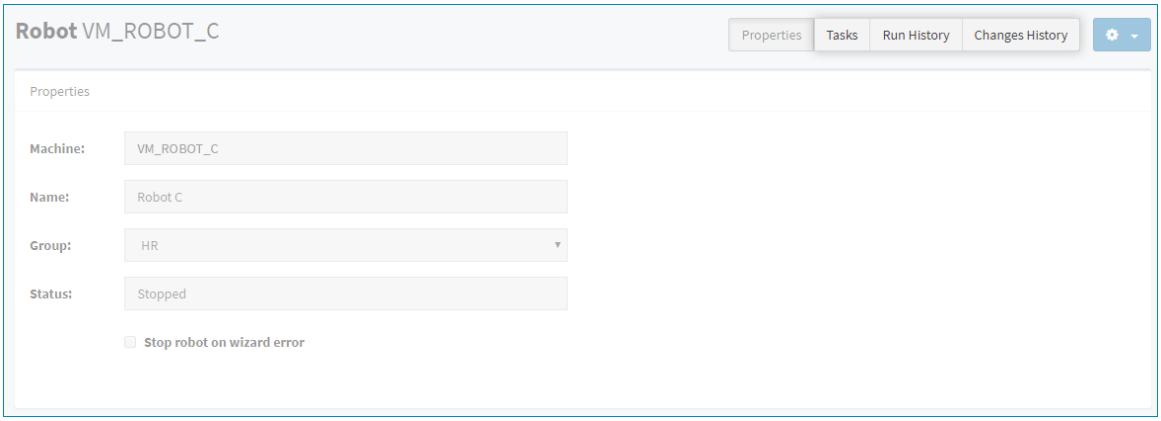
2. Click on the row of the robot for which you want to see detailed information



- The **Robot Properties** page for that robot will open

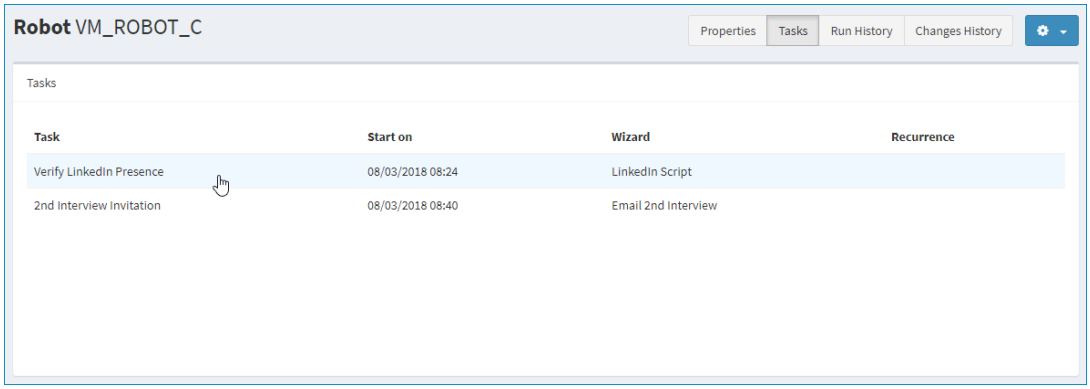
From the **Robot Properties** page, click on the relevant button to access detailed data:

- Tasks (for this robot)
- Run History (for this robot – aggregate of all tasks)
- Change History (for this robot – aggregate of all tasks)



Tasks (for robot)

1. Click on the Tasks button to see a list of all tasks that have ever been assigned to this robot, along with some basic information about each task

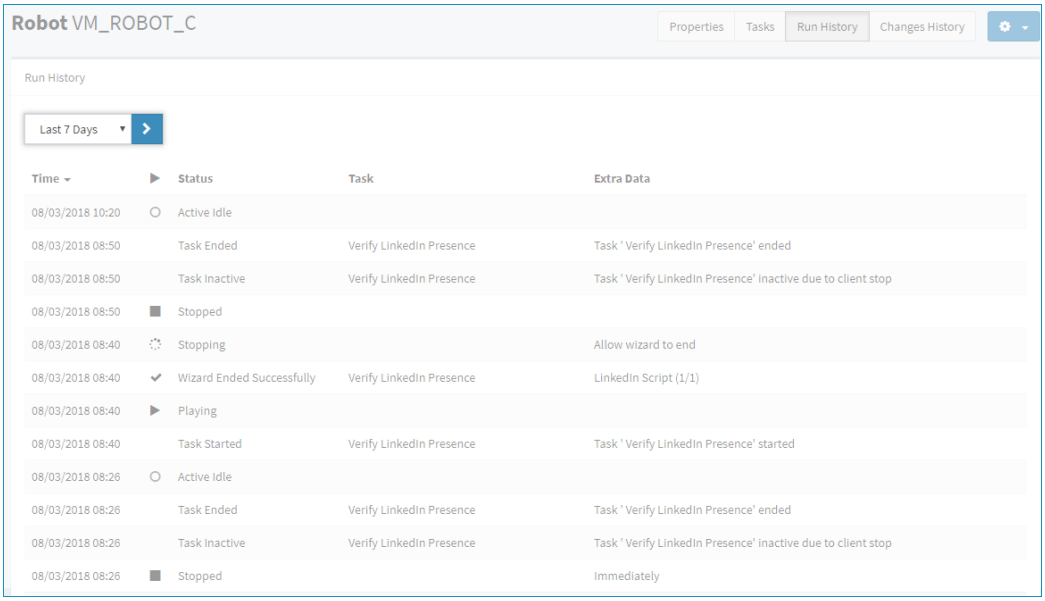


2. From this list, click on the row of any task for which you want to see detailed information
   - That task's **Task Properties** page will open

Run History (for robot)

Click on the Run History button to see a detailed history of the robot's status, activity, and all tasks executed by the robot.

- By default, **Run History** will display data for the last hour
  - Select your desired time frame from the drop-down list, then click the button to apply the selected time frame to the view



Change History (for robot)

Click on the Changes History button to see a detailed history of all new tasks and changes to the tasks assigned to this robot.

- By default, **Change History** will display data for the last hour
  - Select your desired time frame from the drop-down list, then click the button to apply the selected time frame to the view