

Rsam Platform

HighBond Integration Guide
Part 3 - Automating Storyboards with Robots

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Contents

About this Guide	. 3
Additional References	3
Robots Agent Configuration When to use Robots Agent	
System Requirements & Prerequisites	4
Generating Robots Registration Key	5
Installing Robots Agent	7
Automating Import and Export of Rsam Saved Searches	. 10
Downloading an Existing Robot	10
Importing an Rsam Saved Search into ACL for Windows	11
Updating Script with Import Data	12
Exporting Search Results from ACL for Windows to HighBond Results	14
Updating Script with Export Data	15
Committing the Script to Robots	17
Configurations in HighBond	.18
Creating Tasks for a Robot	18
Running the newly created Task	19
Further Steps	20
Appendix: Designating a Service-Level User for use with HighBond Robots	.21

About this Guide

This guide is for Rsam Administrators intending to manage the integration between Rsam and HighBond. It provides information on importing and exporting Rsam saved searches, configuring robots to automate the storyboard creation, and creating tasks for the robots. The following topics are explained in the document:

- Robots Agent Configuration (Optional)
- Automating Import and Export of Rsam Saved Searches
- Configurations in HighBond

The steps mentioned in <u>Robots Agent installation and configuration</u> are optional and need to be performed only for those Rsam-HighBond integration scenarios where particular security requirements need to be met or for on-prem customers.

Note: Administrators are expected to have read the *Rsam HighBond Integration Guide Part 1 & 2 - Initial Set Up & Creating Storyboards from Rsam Saved Searches* before proceeding with the steps in this document.

Additional References

- Rsam Administrator Help and Rsam End-User Help For detailed information on features of the Rsam framework.
- HighBond <u>Help Docs</u> page in the Galvanize Community Forum For more information on the general use and administration of HighBond and related HighBond product components references in this document.



Robots Agent Configuration

This chapter explains the Robots Agent installation on a dedicated server. In typical scenarios, Robots Agent installation is not required as the HighBond environment would generate an agent in the cloud when necessary.

However, a few scenarios may demand a dedicated Robots Agent server, for example, when certain security requirements need to be met or for integrating Rsam and HighBond for on-premise customers.

When to use Robots Agent

- **Cloud Customers** If your Rsam instance is a cloud instance, you would be using the Robots Agent available in the HighBond cloud. There is no need to install the Robots Agent and you can directly proceed to <u>Automating Import and Export of Rsam Saved Searches</u>.
- **On-premise Customers** If your Rsam instance is an on-premise instance, you would be installing the Robots Agent on a server in your environment to automate the import and export of Rsam Saved Searches as explained in this chapter.

If there is any other particular configuration scenario, you can contact your *Galvanize Customer Representative* to discuss the solution.

This chapter explains the following topics:

- System Requirements & Prerequisites
- Generating Robots Registration Key
- Installing Robots Agent

System Requirements & Prerequisites

For the complete information on the hardware and software requirements for a Robots Agent server, refer the *Robots system requirements* documentation available at https://help.highbond.com/helpdocs/robotics/en-us/Content/robots/administration/robots agent system requirements.htm.

Some additional prerequisites to enable the communication between Rsam and HighBond are as follows:

- Install RSAM API module on the Rsam Web Server
- Have fully qualified DNS for Rsam instance URLs
- Enable Rsam Web Server to access internet using https protocol
- Enable Domain-Join on the Robots Agent server
- Create a Domain Account to run Robots Agent service



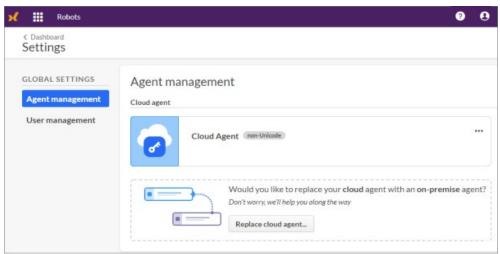
- Enable Robots Agent Server to access internet using https protocol
- Enable https connection for Robots Agent server to Rsam Web Server, Rsam instance, and Rsam API
- Complete the initial set up steps as outlined in *Rsam HighBond Integration Guide Part 1 & 2 Initial Set Up & Creating Storyboards from Rsam Saved Searches*

Generating Robots Registration Key

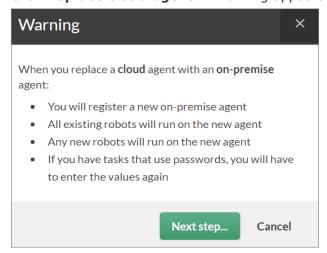
The Robots registration file is used during Robots Agent installation and allows a secure connection between HighBond and the Robots Agent server.

To generate the Robots Registration key, perform the following steps:

- 1. Log in to Rsam and navigate to **HighBond > Robots**. The HighBond Robots page appears listing all the robots configured.
- 2. Click **Settings**. The Agent management page appears.

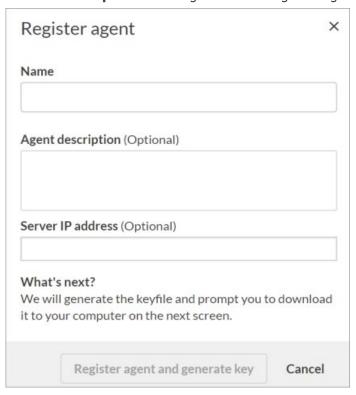


3. Click **Replace cloud agent**. A warning appears.

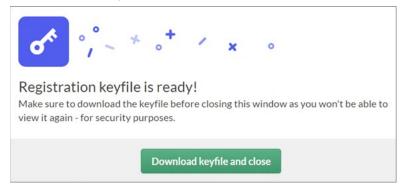




4. Click **Next step** in the dialog box. The Register agent dialog box appears.



- 5. In the Register agent dialog box, perform the following steps:
 - a. Provide a **Name** for the agent.
 - b. (Optional) Provide the **Server IP address**. The value provided here will be used to populate the server IP in the server profile connecting Analytics and the Robots Agent.
 - c. Click **Register agent and generate key**. The dialog refreshes to display the button to download the keyfile.



- d. Click **Download keyfile and close**. The keyfile is downloaded to the system.
- 6. Move the keyfile to a location on the server where you intend to run the Robots Agent.



Installing Robots Agent

To download and install Robots Agent, perform the following steps:

- 1. Log in to the Robots Agent server.
- Log in to your Rsam instance as a HighBond Administrator and navigate to HighBond >
 Launchpad. The HighBond Launchpad appears.
- 3. Navigate to **Resources > Downloads** in the Launchpad.
- 4. Select the **Robots Agent** tab and click **Download Version 14.x**. The installer is downloaded to your **Downloads** folder.



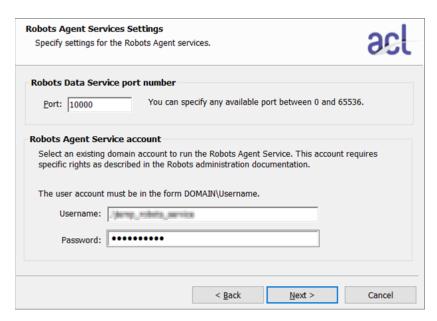
5. Run the installer to install the Robots Agent application.

Note: Depending on your server environment you may be prompted to install certain prerequisite software at the start of the installation. The installer package comes with the required software and will check and deploy the software upon your confirmation.

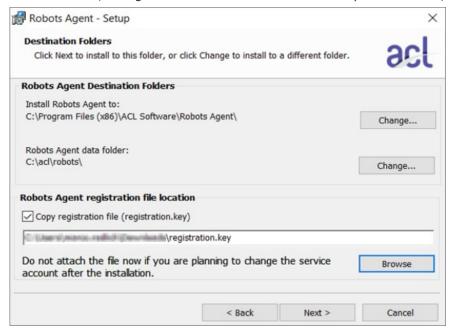
- 6. Ensure that you install the **Non-Unicode** version.
- 7. In the Robots Agent Services Settings page, perform the following:
 - a. Specify a port for the data service in the **Port** field.
 - Specify the domain account credentials to run the Robots Agent service.
 It must be a domain account and provided in the **Domain\Username** format.

Note: The installer may prompt to grant **Log on as a service** right to the account. Click **Yes** to grant the right.





- c. Click **Next** to continue the installation.
- 8. In the **Destination Folders** page, perform the following:
 - a. Select the checkbox corresponding to **Copy registration file (registration.key)** to provide the keyfile generated.
 - b. Click Browse, navigate to the location where the keyfile is stored, and select it.



c. Click Next to continue the installation.



- 9. In the **Ready to Install the Program** page, click **Install**.
- 10. Click **Finish** when the installation completes successfully.

For further information on installing and setting up Robots Agent, refer the *Installing or upgrading a Robots Agent* section from the HighBond <u>Help Docs</u> page in the Galvanize Community Forum.

- 11. Open **Services** and verify that the following Robots Agent services are running:
 - Robots Agents Runs the Robot tasks
 - **Robots Data Service** Provides the connectivity to allow users to open Robots Agent tables in Analytics.

Automating Import and Export of Rsam Saved Searches

Users can download existing robots, which can be used as a baseline and modify those and automate the robots as required. These robots can be configured to execute a different set of tasks. The steps involved are as follows:

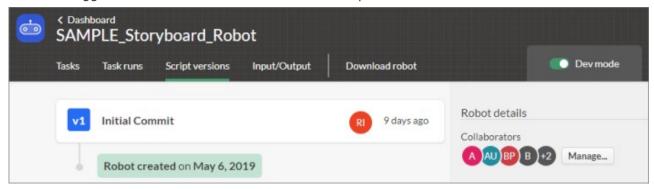
- Downloading an Existing Robot
- Importing an Rsam Saved Search into ACL for Windows
- Updating Script with Import Data
- Exporting Search Results from ACL for Windows to HighBond Results
- Updating Script with Export Data
- Committing the Script to Robots

For information on installing and activating ACL for Windows and configuring Rsam data source, refer to the *Rsam HighBond Integration Guide Part 1 – Initial Set Up*.

Downloading an Existing Robot

To download existing robots from HighBond, perform the following steps:

- 1. Log in to Rsam and navigate to **HighBond > Robots**. The Robots page appears listing all the robots configured in HighBond.
- 2. Select the required robot. The details page opens.
- 3. Click the toggle Dev mode to switch to the Developer version.



- 4. Click **Download robot**. The robot is downloaded to your system.
- 5. Double-click the downloaded robot file. The Analytics project opens.

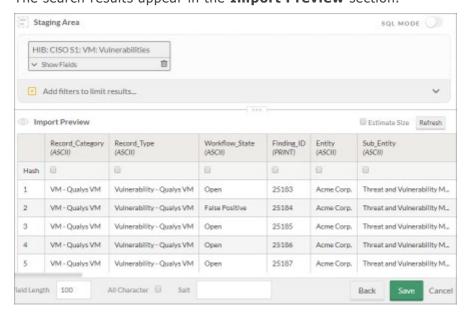


Importing an Rsam Saved Search into ACL for Windows

To import a HighBond-enabled Rsam Saved Search into ACL for Windows, perform the following steps:

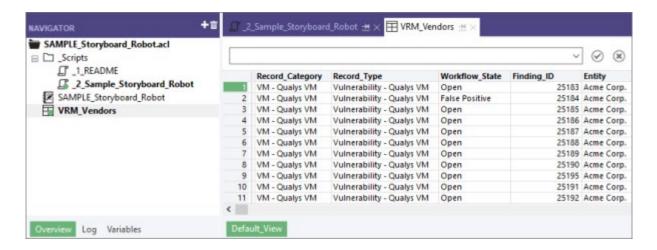
- 1. Double-click the downloaded robot file. The Analytics project opens.
- 2. Select Import > Database and application.
- 3. In the Connect to a data source dialog, select the Rsam data source.
- 4. Enter the URL of the Rsam instance to connect to in the Host field.
- 5. Enter the **name** of the *Admin* user that will be used to connect to Rsam.
- 6. Select API Key in the Authentication Method drop-down field.
- 7. In the **API Key** field, provide the API key for the *Admin* user designated for the purpose. For more information, see <u>Appendix: Designating a Service-Level User for use with HighBond Robots</u>.
- 8. Click **Connect**. The Data Access window appears.
- 9. Select the required Rsam Saved Search from the **Available Tables** section. The Saved Search details appear in the **Staging Area**.
- 10. Click **Refresh** to fetch the latest results for the Saved Search.

 The search results appear in the **Import Preview** section.



- 11. Click **Save** to save the imported saved search results.
- 12. Provide a name for the table in the prompt that appears and click **Save**. The newly imported results table is listed in the *Analytics* window.



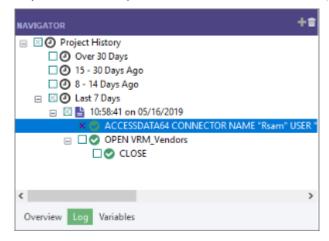


Updating Script with Import Data

You can modify the existing scripts to suit your requirements. To modify the scripts, perform the following steps:

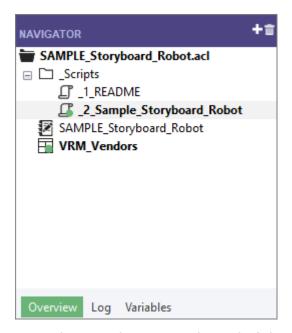
- 1. In the Analytics project, click the **Log** tab at the bottom of the **Navigator** panel.
- Expand Project History and select the check box corresponding to ACCESSDATA64 command.

If you have multiple ACCESSDATA64 commands, select the latest entry.



- Right-click ACCESSDATA64 and select Copy.
- 4. Clear the check box selection.
- 5. In the **Overview** tab, expand the **Scripts** folder and double-click the required script to open it.





6. Paste the copied syntax at the end of the script.

You will need to update the parameters highlighted in the following image.

```
■ □ ○ □ ★ ○ ► ► ▼ ☆ □ Φ
                                                FROM
                                                                    "RSANDO-00006307-6CBB421B3A0847EBB825096AF6922E38" "HIB_ASMT_S1_ASMT_Assets_by_Workflow"
        68
                                     ACCESSDATA64 CONNECTOR NAME "Ream" USER "r admin" PROMPT PASSWORD TO "C:\Users\mamma\Downloads\VRM_Vendors.FIL" CHARMAX 50 MEMORGAN 50URCE( host-https://us2-lab-ream-02-dev.ream.com/eappname-ream_apr:convertdatetimetogmt-true)
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                                  SOURCE ( host
                                                               EXT

"HIB CISO_SI VM Vulnerabilities"."FF11" AS "Record_Category",

"HIB CISO_SI VM Vulnerabilities"."FF11" AS "Record_Type",

"HIB CISO_SI VM Vulnerabilities"."FF11" AS "Record_Type",

"HIB CISO_SI VM Vulnerabilities"."FF11" AS "Record_Type",

"HIB CISO_SI VM Vulnerabilities"."FF110" AS "Finding_ID",

"HIB CISO_SI VM Vulnerabilities"."OF21 AS "Entity",

"HIB CISO_SI VM Vulnerabilities"."OF24" AS "Sub_Entity",

"HIB CISO_SI VM Vulnerabilities"."OF24" AS "Object_Type Model",

"HIB CISO_SI VM Vulnerabilities"."OF34 AS "Aspect_Farent",

"HIB CISO_SI VM Vulnerabilities"."OF34 AS "Aspect_Farent",

"HIB CISO_SI VM Vulnerabilities"."OF34 AS "Date_Of_Entry",

"HIB CISO_SI VM Vulnerabilities"."OF34 AS "Entered_By",

"HIB CISO_SI VM Vulnerabilities"."RSAM-O0200-FA139" AS "VM Vulnerability_ID",

"HIB CISO_SI VM Vulnerabilities"."RSAM-O0200-FA148" AS "UN_Vulnerability_Name",

"HIB CISO_SI VM Vulnerabilities"."RSAM-O0200-FA148" AS "UN_Lorenty_Risk",

"HIB CISO_SI VM Vulnerabilities"."RSAM-O0200-FA148" AS "UN_Lorenty_Risk_CISO_SIONERATESSBALFIL2-FA742" AS "U_Required_Closure_Date",

"HIB CISO_SI VM Vulnerabilities"."RSAMOI-O0000650-6836E23A08E84746864E74BAD665F91C-FA558" AS "U_Days_Open",

"HIB CISO_SI VM Vulnerabilities"."RSAMOI-O0000650-6836E23A08E84746864E74BAD65F91C-FA558" AS "U_Date_SIONER",

"MSAMMADA-000006780-838868ADATAGEATETHY_UNDERDE"."

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                                                                    *RSAMA9-00006789-3B91635406C34795AA7AC47D71090D8D" "HIB_CISO_S1_VM_Vulnerabilities"
```

- 7. Update the parameters as follows:
 - a. Change **PROMPT_PASSWORD** to **PASSWORD 1**.

This is required to no longer prompt for a password during the execution of the analytic in Robots. The analytic is supposed to be scheduled at any time and to run without user interaction. Thus, the password is captured as part of the analytic header, which is set prior to the schedule and run of the analytic.



b. Remove the file path.

The file path is typically a unique location on your system, and it is not guaranteed that the same path will exist on the Robot that is going to execute the analytic. By removing the file path, the table will be saved in the same folder (path) where the project is going to reside during run-time.

c. Change the host value to **%v_RSAM_instance%**.

Replacing the hardcoded instance name with a parameter allows you to reuse the analytic and point to different instances (granted that the same searches and fields exist).

```
ACCESSDATA64 CONNECTOR NAME "Rsam" USER "r_admin" PASSWORD 1 TO "VRM_Vendors.FIL" CHARMAX 50 MEMOMAX 100 SOURCE ( host av RSAM_instance; appname=rsam_api; convertdatetimetogmt=true)

SQL_QUERY(

SELECT

"HIB CISO S1 VM Vulnerabilities"."FF11" AS "Record Category",

"HIB CISO S1 VM Vulnerabilities"."FF12" AS "Record Type",

"HIB CISO S1 VM Vulnerabilities"."FF13" AS "Workflow State",

"HIB CISO S1 VM Vulnerabilities"."FF10" AS "Finding ID",

"HIB CISO S1 VM Vulnerabilities"."OF1" AS "Entity",

"HIB CISO S1 VM Vulnerabilities"."OF2" AS "Sub_Entity",

"HIB CISO S1 VM Vulnerabilities"."OF2" AS "Object_Type_Model",
```

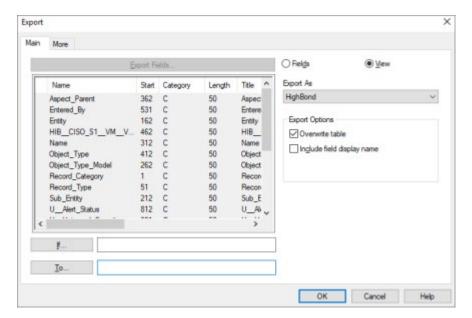
- 8. (Optional) Update the fields to be imported in the SQL SELECT query as needed. For example, you can remove fields that are no longer required to be imported.
- 9. Save the script and close it.

Exporting Search Results from ACL for Windows to HighBond Results

To export the results of an Rsam Saved Search from *ACL for Windows* to HighBond *Results*, perform the following steps:

- 1. In the Analytics window, open the required local data (results) from the **Navigator** panel.
- 2. Select **Data** > **Export**. The **Export** dialog box appears.





3. Select **Fields** or **View** as required.

If you select Fields, select all the required fields to be exported by click **Export Fields**.

- 4. Select **HighBond** from the **Export As** drop-down list.
- 5. Select the check box corresponding to **Overwrite table** if you want the data to be overwritten for any existing fields.
- 6. Click **To**. The **Select Destination Test** dialog box appears.
- 7. Select your organization's account and then select the collection My Sample Collection.

Note: Customers can create additional Collections in HighBond and those collections will be available for selection from within ACL for Windows.

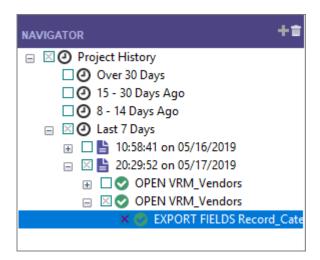
- 8. Select My Sample Analysis.
- Provide a name for the search in the **New data analytic** field and click **Create**.
 The Test ID is automatically populated.
- 10. Click **OK** in the **Export** dialog box. The results are exported to the destination successfully.
- 11. Log in to HighBond and confirm that the data has been created in the *Results* app by navigating to the *Collection* where the data is created.

Updating Script with Export Data

You can modify the script to use the EXPORT command by performing the following steps:

- 1. In the Analytics window, click the **Log** tab at the bottom of the **Navigator** panel.
- 2. Expand **Project History** and select the check box corresponding to **EXPORT** command.





- 3. Right-click EXPORT command and select **Copy**.
- 4. Clear the check box selection.
- 5. In the Overview tab, expand the Scripts folder and double-click the required script to open it.
- Paste the copied syntax at the end of the script.You need to update the parameter highlighted in the following image.

```
END

SET COMMENT

STATEMENT STATEMENT

SET COMMENT

STATEMENT STATEMENT

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SET COMMENT

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```

7. Add **PASSWORD 2** before the keyword **TO**.

This is required to no longer prompt for a password during execution of the analytic in Robots. The analytic is supposed to be scheduled at any time and to run without user interaction. Thus, the password is captured as part of the analytic header, which is set prior to the schedule and run of the analytic.



```
COMMENT FIELDS Entity AS 'Entity' Sub_Entity AS 'Sub_Entity' Object_Type_Model AS 'Object_Type_Model' Name AS 'Name' Object_Type AS 'Object_Type AS 'Morkflow State AS 'Workflow State' Finding_ID AS 'Finding_ID' Entity AS 'Entity' Sub_Entity AS 'Sub_Entity' Object_Type_Model AS 'Object_Type_Model' Name AS 'Name' Aspect Parent AS 'Aspect Parent' Object_Type AS 'Object_Type' HIB_CISO_SI_VM_Vulnerabilities Workflow State AS 'MIB_CISO_SI_VM_Vulnerabilities Workflow State AS 'MIB_CISO_SI_VM_Vulnerability_ID AS 'VM_Vulnerability_ID' VM_Vulnerability_Name AS 'VM_Vulnerability_Name' UD_NOTENBRIDE AS 'UD_DAYS_OPEN' UD_DAYS_OPEN' UD_DA
```

Note: You can export up to 100,000 records to Results at a time.

8. Save the script.

Committing the Script to Robots

When you commit an analytic to Robots (from Analytics), the analytic is sent to a container in Robots. Within each robot container, you can automate your scripts to run as per a schedule that best suits your organizational needs. The robot then handles the recurring tasks according to how this automation is configured. To commit the scripts, perform the following steps:

- 1. Select File > Commit Scripts As.
 - The **Select Destination** dialog box appears.
- 2. Provide a name for the robot in the **New Robot** field and click **Create**.
 - The **Commit Scripts** dialog box appears.
- 3. Provide a message in the **Commit Message** field and click **OK**.
 - The **Commit Scripts Successful** dialog box appears listing the URL where the robot is created.
- 4. Click the first URL to navigate to the tasks page for the robot.

Configurations in HighBond

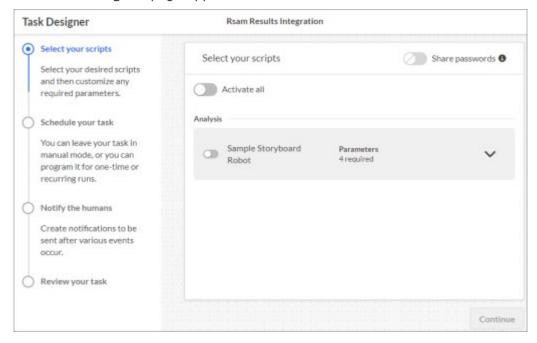
The robots, once configured and committed to HighBond, must be configured and scheduled to run automatically as required. This chapter explains the following topics:

- Creating Tasks for a Robot
- Running the newly created Task
- Promoting to Production

Creating Tasks for a Robot

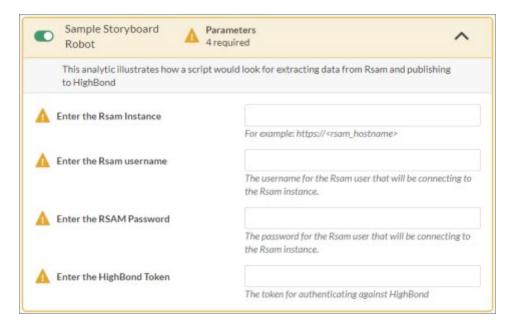
To create tasks for a robot, perform the following steps:

- 1. From the Tasks page of the robot that you created, click +Create task.
- Provide a name for the task in the Name your task dialog box and click Save.
 The Task Designer page appears.



- 3. Click the **Activate all** toggle to activate the task.
- 4. Click wto expand the parameters section for the robot.

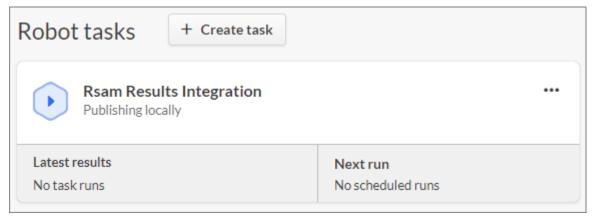




5. Provide values for the parameters in the respective fields.

Note: The HighBond Token can be obtained from **My Profile** section in HighBond. Click **Manage** in the **Application Tokens** section. Click **Create Token** > **HighBond API** and copy the token created.

- 6. Click Continue after providing the values.
- 7. You can schedule the task, create notifications, and review the task details.
- 8. Click **Confirm and create task**. The task is created.



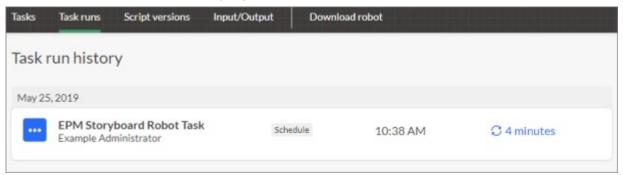
Running the newly created Task

To run the newly created task, perform the following steps:

- 1. Navigate to the newly created task.
- 2. Click ••• > Enable to activate your task.



- 3. Click ••• > Run now corresponding to the task.
- 4. Click **Task runs** tab to view the progress and results of the execution.



5. Open the Results section and confirm the data has been created.

Now that you have successfully scheduled and ran your first Robot, you may want to promote the project to a Production environment.

- Each Robot has a DEV and a PROD environment. See the DEV mode toggle on the top right corner of each Robot.
- Once you commit a project to Robots, the project is placed into the DEV environment of the Robot. Every new commit of a project creates a new entry under the **Script Versions** tab in the DEV environment. Scheduled tasks in the Dev environment will always run against the most recent version of the script.
- Once you have tested the Robot, you can promote the project to PROD. To promote the project to PROD, in the DEV environment, click the **Script Versions** tab, select the most recent version, and click **Activate version**.
- You can switch to the PROD environment using the DEV mode toggle. You can create tasks and schedules in PROD environment.
- Committing new version to the same Robot will leave the PROD environment unaffected as new commits always go to the DEV environment first. Once the new project is tested and ready to be deployed, you can activate and promote the new version to PROD.
- If you want to go back to an old version, you can activate the required previous version from the **Script Versions** tab in the DEV environment.

Further Steps

To proceed further with the configurations, perform the following steps:

- 1. Repeat the steps detailed in this guide with another RSAM Saved Search.
- 2. Take a copy of the script you created and paste it into the same project.
- 3. Re-execute the steps with the new Rsam Saved Search.

For more information on enabling an Rsam Saved Search for HighBond, see *Rsam HighBond Integration Guide Part 1 & 2 – Initial Set Up and Creating Storyboards from Rsam Saved Searches.*



Appendix: Designating a Service-Level User for use with HighBond Robots

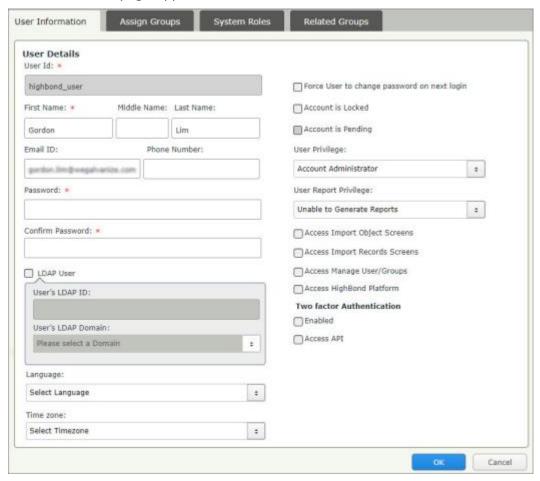
A service-level user must be designated access to Inbound API and HighBond to be used by *Robots* while automating the storyboards.

To designate HighBond access for a service-level user, perform the following steps:

- 1. Log in to Rsam as an Administrator.
- 2. Navigate to Manage > Users/Groups. The Manage Users page appears.
- 3. Select the service-level user to be designated the HighBond access.

Note: Do not use the r_admin account because it is a generic account and HighBond requires a unique email address for registration.

The User Details page appears.



4. Select the check box corresponding to **Access API**. The **Permanent API key details** section appears.





5. Click **Generate Key** to generate an API key for the user.



6. Click to copy the generated API key.

Note: After generating the API key and once the changes are saved, the API key will be masked. Only the respective user—to whom the API key belongs—can unmask and view the key.

So, note down the key so that it can be used later in *Robots*.

7. Click **OK** to save the user details.