



Splunk Integration For Databricks

Installation And Usage Guide 1.2.0

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Version Control

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Overview

Databricks is a unified data analytics platform used for processing and transforming massive quantities of data and exploring the data through machine learning models. It offers a data science workspace, SQL analytics, unified data service, and enterprise cloud services. For more details visit [here](#).

Splunk is a software platform that enables users to search, analyze, and visualize the data gathered from the components of their IT infrastructure or business. It takes in data from websites, applications, sensors, devices, and so on. After you define the data source, Splunk Enterprise indexes the data stream and parses it into a series of individual events that you can view and search. For more details visit [here](#).

With “Splunk Integration For Databricks”, users will be able to:

- Ingest their data present in Databricks delta table into Splunk
- Query their data present in Databricks delta table from Splunk
- Execute Databricks notebooks from Splunk

This integration will consist of mainly 2 things:

- A Splunk application that'll manage authentication with Databricks, provide custom commands to submit queries and jobs in Databricks.
- A Databricks notebook using which users can push their data in the Databricks delta table to Splunk.

Compatibility Matrix

Splunk Version	Operating System	Databricks Runtime	Databricks API Version
8.1	CentOS, Ubuntu, Windows 10, Windows Server 2019	7.3	<ul style="list-style-type: none">• REST API 1.2 for command execution• REST API 2.0 for the rest of the features
8.2	CentOS, Ubuntu, Windows 10, Windows Server 2019	7.3	<ul style="list-style-type: none">• REST API 1.2 for command execution• REST API 2.0 for the rest of the features

9.0	CentOS, Ubuntu, Windows 10, Windows Server 2019	7.3	<ul style="list-style-type: none"> • REST API 1.2 for command execution • REST API 2.0 for the rest of the features
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System Requirements

The system requirements for the Splunk integration are the same as the basic requirements of the Splunk deployment. ([Reference](#))

Installation

Based on your Splunk deployment, follow the steps mentioned below to install the Splunk applications:

- [Standalone Splunk Deployment](#)
- [Distributed Splunk Deployment](#)

In case of deployment in the search head cluster environment use a deployer to push the apps. Follow the below steps to push the apps to search head cluster members:

- On deployer node, extract the app at \$SPLUNK_HOME\$/etc/shcluster/apps.
- Create a “shclustering” stanza at path \$SPLUNK_HOME\$/etc/shcluster/apps/TA-Databricks/local/server.conf and add following information to the stanza: `conf_replication_include.ta_databricks_settings = true` as shown below.

```
[shclustering]
```

```
conf_replication_include.ta_databricks_settings = true
```

- Push the bundle to search head members

If you are using “Distributed Splunk Deployment”, refer to the below table to find where to install which applications:

Splunk Instance Type	Databricks Add-on for Splunk Required?
Heavy Forwarder	-
Indexer/Indexer Cluster	-
Search Head/Search Head Cluster	Yes

Configuration

Users will be required to have databricks_admin role to configure Databricks Add-on for Splunk. Users with databricks_user role will only be able to view the configuration. Users who are not having either of the roles, for them the Configuration Page won't load and will not be able to run the Custom Commands also. This integration allows a user to configure multiple pair of Databricks Instance, its credentials and Databricks Cluster Name at a time. In case a user is using the integration in search head cluster environment, configuration on all the search cluster nodes will be overwritten

Once the installation is done successfully, follow the below steps to configure the app.

Steps to assign databricks_admin role:

- Login as admin.
- Go to Settings->Users.
- If you want to create a new User: Click on "New User". Enter "Name" of the user, set and confirm password. In the Assign roles section select 'databricks_admin' role, it should be shown in Selected Items sections and Save. Go to Administrator and select Logout. Login as the User you created by giving the name and password. While logging as a new User created it will ask to reset password, Reset the password and complete login.
- If you want to edit an existing User: Click on Edit section in Actions of the User you want to update. In the Assign roles section select 'databricks_admin' role, it should be shown in Selected Items sections and Save. Go to Administrator and select Logout. Now Login as the user you created by entering username and password.

The screenshot displays a user configuration form. At the top, there is a label '8 characters' above a text input field. Below this, there are two dropdown menus: 'Time zone ?' with the selected value '-- Default System Timezone --' and 'Default app ?' with the selected value 'launcher (Home)'. The 'Assign roles ?' section features two lists. The 'Available item(s)' list contains 'admin', 'can_delete', 'databricks_admin' (highlighted with an orange box), 'databricks_user', and 'power'. The 'Selected item(s)' list contains 'databricks_admin' (also highlighted with an orange box). Between these lists are the links 'add all >' and '< remove all'. At the bottom left, there is a checkbox labeled 'Require password change on next login' which is currently unchecked. At the bottom right, there are two buttons: 'Cancel' and 'Save'.

Steps to assign databricks_user role:

- Login as admin.
- Go to Settings->Users.
- If you want to create a new User: Click on "New User". Enter "Name" of the user, set and confirm password. In the Assign roles section select 'databricks_user' role, it should be shown in Selected Items sections and Save. Go to Administrator and select Logout. Login as the User you created by giving the name and password. While logging as a new User created it will ask to reset password, Reset the password and complete login.
- If you want to edit an existing User: Click on Edit section in Actions of the User you want to update. In the Assign roles section select 'databricks_user' role, it should be shown in Selected Items sections and Save. Go to Administrator and select Logout. Now Login as the user you created by entering username and password.

8 characters

Time zone ? -- Default System Timezone -- ▾

Default app ? launcher (Home) ▾

Assign roles ?

Available item(s)	add all >	Selected item(s)	< remove all
admin		databricks_user	
can_delete			
databricks_admin			
databricks_user			
power			

Require password change on next login ☐

Cancel Save

Configure Proxy Details

This step is only required if you want to use a proxy server. To configure proxy details:

- Log in to Splunk UI.
- Go to the Configuration page, either by clicking on the name of the add-on on the left navigation banner on the home page or by going to Manage Apps, then clicking Launch app in the row for Databricks Add-on for Splunk.
- Click the Configuration menu and in the Proxy tab, fill in the required details. Refer to the below table to fill in the details.

Input	Required	Description
Enable	Yes	Whether to use a proxy or not
Proxy Type	Yes	Type of proxy Options: http
Host	Yes	Proxy host
Port	Yes	Port to use
Username	No	Username to use for authentication
Password	No	Password for the provided username.

- Click Save.

The screenshot shows the 'Configuration' page for Databricks. At the top, there are tabs for 'Configuration', 'Databricks Job Execution Details', and 'Search'. Below the tabs, the 'Configuration' section is titled 'Set up your add-on'. There are three sub-tabs: 'Databricks Credentials', 'Proxy', and 'Logging'. The 'Proxy' tab is selected. It contains the following fields:

- Enable:** A checkbox that is checked.
- Proxy Type:** A dropdown menu with 'http' selected.
- Host:** A text input field containing '127.0.0.1'.
- Port:** A text input field containing '4545'.
- Username:** A text input field containing 'proxyuser'.
- Password:** A text input field with masked characters (dots).
- Remote DNS resolution:** A checkbox that is unchecked.
- Save:** A green button at the bottom.

Configure Databricks Credentials

User can authenticate using two ways:

- Using Personal access tokens
- Using Azure Active Directory Tokens

Prerequisites for configuration via Azure Active Directory:

To configure the Add-on with Azure Active Directory, you need to provision a service principal in Azure Portal and add it to the target Azure Databricks workspace.

- To provision, a service principal, follow [these steps](#)
- When creating a client secret, the default Expiry time for the secret is six months. Six months after the creation of the secret, it will expire and no longer be functional. In this case, the user needs to create a new client secret and configure the Add-on again. Users can also set a custom expiration time larger than the default value while creating the secret. Example: 12 months
- To add the provisioned service principal to the target Azure Databricks workspace, follow [these steps](#) and refer to this [example](#)

Note: The service principals must be Azure Databricks workspace users and admins.

To configure Databricks credentials:

- Log in to Splunk UI.
- Go to the Configuration page, either by clicking on the name of the add-on on the left navigation banner on the home page or by going to Manage Apps, then clicking Launch app in the row for Databricks Add-on for Splunk.
- Click the Configuration menu and in the Databricks Credentials tab click on Add, fill in the required details. Refer to the below tables to fill in the details.
 - If Authentication mechanism to be used is Personal access token

Input	Required	Description
Account Name	Yes	Unique name of the account.
Databricks Instance	Yes	URL of Databricks instance to be used.
Authentication Method	Yes	Databricks personal access token to use for authentication.
Databricks Access Token	Yes	Databricks personal access token to use for authentication when authentication method is “Personal Access Token”

The screenshot shows the Splunk Enterprise Configuration page with the 'Databricks Credentials' tab selected. A modal dialog titled 'Add Databricks Credentials' is open, containing the following fields:

- Account Name:** pat1
- Databricks Instance:** adb-1689883524422868.8.azure.databricks.net
- Databricks Cluster Name:** optional
- Authentication Method:** Personal Access Token
- Databricks Access Token:** [Redacted]

The 'Add' button at the bottom right of the dialog is highlighted with a red box. The background shows the 'Configuration' page with the 'Databricks Credentials' tab selected in the left navigation pane.

- If Authentication mechanism to be used is Azure Active Directory

Input	Required	Description
Account Name	Yes	Unique name of the account.
Databricks Instance	Yes	URL of Databricks instance to be used.
Authentication Method	Yes	Databricks personal access token to use for authentication.
Client Id	Yes	Azure AD Client ID. Required when authentication method is "Azure Active Directory"
Tenant Id	Yes	The application/tenant ID of the registered app in Azure AD you wish to use. Required when authentication method is "Azure Active Directory"
Client Secret	Yes	The client secret from Azure AD. Required when authentication method is "Azure Active Directory"

The screenshot shows the Splunk Enterprise Configuration page with the 'Databricks Credentials' section selected. A modal dialog titled 'Add Databricks Credentials' is open. The dialog contains the following fields:

- Account Name:** aad1
- Databricks Instance:** adb-1689883524422868.8.azure.databricks.net
- Databricks Cluster Name:** optional
- Authentication Method:** Azure Active Directory (selected from a dropdown menu)
- Client Id:** 4c4550a0-4108-473e-92e0-b8979c698e29
- Tenant Id:** 2adbb062e-9e61-48a9-a06d-6d8b0d8c0a20

The 'Add' button at the bottom right of the dialog is highlighted with a red box. The background shows the Splunk Enterprise interface with the 'Configuration' tab selected and the 'Databricks Credentials' section highlighted.

- Click Add.

Note: For validation of the parameters provided, the application will try to get the clusters present in the Databricks instance.

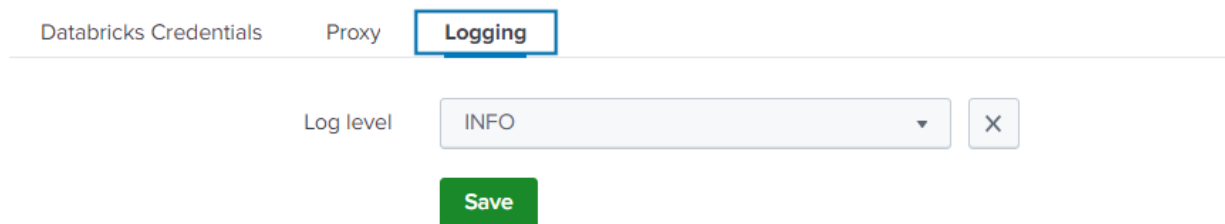
Configure Logging

To configure Logging:

- Log in to Splunk UI.
- Go to the Configuration page, either by clicking on the name of the add-on on the left navigation banner on the home page or by going to Manage Apps, then clicking Launch app in the row for Databricks Add-on for Splunk.
- Click on the Configuration menu and in the Logging tab, select appropriate Log Level from the dropdown.
- Click Save.

Configuration

Set up your add-on



The screenshot shows the 'Configuration' page for the 'Databricks Add-on for Splunk'. At the top, there are three tabs: 'Databricks Credentials', 'Proxy', and 'Logging'. The 'Logging' tab is selected and highlighted with a blue border. Below the tabs, there is a 'Log level' dropdown menu currently set to 'INFO'. To the right of the dropdown is a close button (X). Below the dropdown is a green 'Save' button.

Executing custom commands

Users will be required to have either a `databricks_admin` or `databricks_user` role in order to execute the custom commands.

Once the users configure Databricks Add-on for Splunk successfully, they can execute custom commands to

- Query their data present in the Databricks table from Splunk.
- Execute Databricks notebooks from Splunk.

Currently, Databricks Add-on for Splunk provides four custom commands. Users can open the Splunk search bar and can execute the commands. Below are the command details.

`databricksquery`

This custom command helps users to query their data present in the Databricks table from Splunk.

- **Command Parameters**

Parameter	Required	Overview
account_name	Yes	Configured account name.
cluster	Yes	Name of cluster you want to query data from
query	Yes	SQL query to get data from Databricks delta
command_timeout	No	Timeout for command execution in seconds. Default to 300 seconds

- **Syntax**

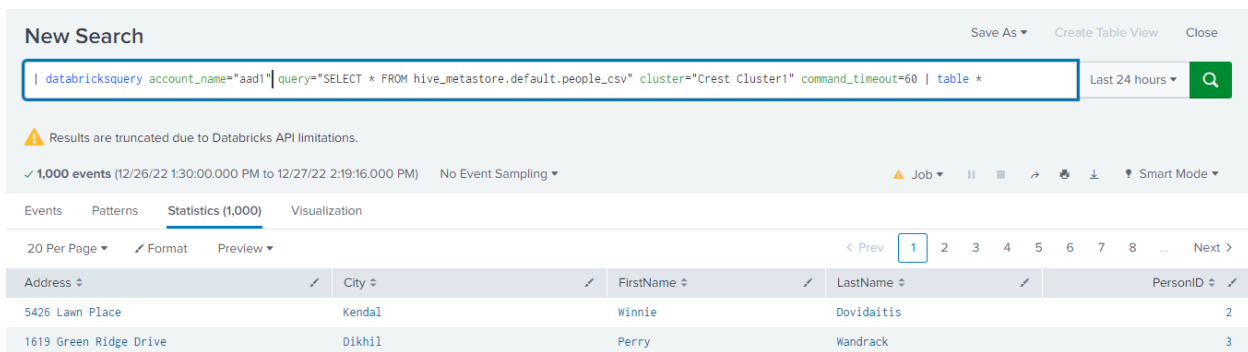
```
| databricksquery account_name="<account_name>" cluster="<cluster_name>"
query="<SQL query>" command_timeout=<timeout_in_seconds> | table *
```

- **Output**

The command will give the output of the query in tabular format. It will return an error message in case any error occurs during query execution.

- **Example**

```
| databricksquery account_name="aad1" cluster="Crest Cluster1" query="SELECT *
FROM hive_metastore.default.people_csv" command_timeout=60 | table *
```



The screenshot shows the 'New Search' interface in Databricks. A search bar contains the command: `| databricksquery account_name="aad1" query="SELECT * FROM hive_metastore.default.people_csv" cluster="Crest Cluster1" command_timeout=60 | table *`. Below the search bar, a warning message states: 'Results are truncated due to Databricks API limitations.' The search results show 1,000 events. The table below displays the first two rows of the query results.

Address	City	FirstName	LastName	PersonID
5426 Lawn Place	Kendal	Winnie	Dovidaitis	2
1619 Green Ridge Drive	Dikhil	Perry	Wandrack	3

databricksrun

This custom command helps users to submit a one-time run without creating a job.

- **Command Parameters**

Parameter	Required	Overview
account_name	Yes	Configured account name.
run_name	No	Name of the submitted run
cluster	Yes	Name of cluster you want to run notebook on
notebook_path	Yes	The absolute path of the notebook to be run in the Databricks workspace. This path must begin with a slash. This field is required.
revision_timestamp	No	The timestamp of the revision of the notebook.
notebook_params	No	Parameters to pass while executing the run. In the form of "key1=value1 key2=value2 ..."

- **Syntax**

```
| databricksrun account_name="<account_name>"
notebook_path="<path_to_notebook>" run_name="<run_name>"
cluster="<cluster_name>" revision_timestamp="<revision_timestamp>"
notebook_params="<params_for_job_execution>" | table *
```

- **Output**

The command will give the details about the executed run through the job.

- **Example**

```
| databricksrun account_name="account_name" notebook_path="/path/to/test_notebook"
cluster="test_cluster" notebook_params="key1=value1||key2=value2" | table *
```

account_name	command_status	created_time	error	identifier	kv_status	output_url	param
aad1	Success	1672131691.2192457	-	-	KV Store updated successfully	https://adb-1689883524422868.8.azuredatabricks.net/?o=1689883524422868#job/1061068515959928/run/147476	account_name=aad1 notebook_path=/Users/dhruvil.bhatt@crestdatasys.com cluster=Crest Cluster1 notebook_params=a=1 b=2

databricksjob

This custom command helps users to run an already created job now from Splunk.

- **Command Parameters**

Parameter	Required	Overview
account_name	Yes	Configured account name.
job_id	Yes	Job ID of your existing job in Databricks
notebook_params	No	Parameters to pass while executing the job. In the form of "key1=value1 key2=value2 ..."

- **Syntax**

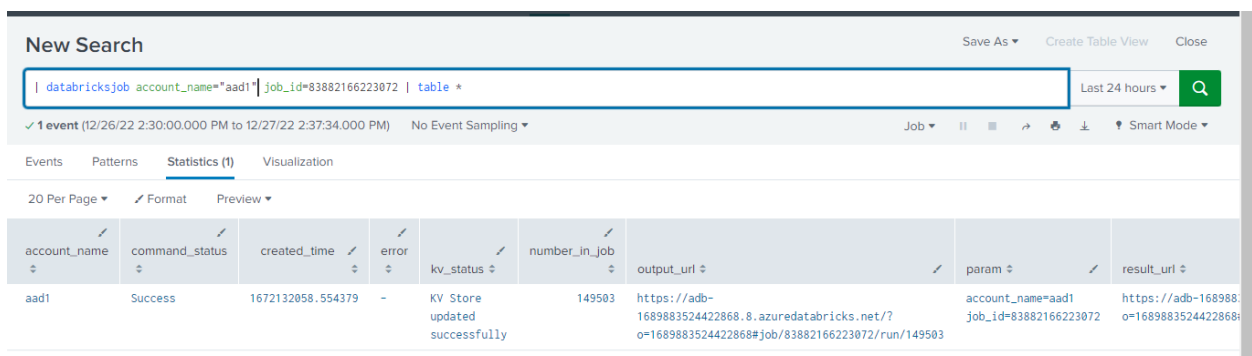
```
| databricksjob account_name="<account_name>" job_id=<job_id>  
notebook_params="<params_for_job_execution>" | table *
```

- **Output**

The command will give the details about the executed run through the job.

- **Example**

```
| databricksjob account_name="account_name" job_id=2  
notebook_params="key1=value1||key2=value2" | table *
```



The screenshot shows a Splunk search interface with the query `| databricksjob account_name="aad1" job_id=83882166223072 | table *`. The results table displays the following data:

account_name	command_status	created_time	error	kv_status	number_in_job	output_url	param	result_url
aad1	Success	1672132058.554379	-	KV Store updated successfully	149503	https://adb-1689883524422868.8.azuredatabricks.net/?o=1689883524422868#job/83882166223072/run/149503	account_name=aad1 job_id=83882166223072	https://adb-1689883524422868...

databricksretiredrun

This command is used to delete the records based on the provided parameter from the submit_run_logs lookup, which maintains the details of notebook runs. To run the command at least one of the parameters is required. When all parameters are provided, it will delete the records matching all the parameters together.

- **Command parameters**

Parameter	Required	Overview
account_name	Yes	Configured account name.
days	No	The number of days, records older than which will be deleted from submit_run_log lookup
run_id	No	ID of the submitted run.
user	No	Name of an existing splunk user.

- **Syntax**
| databricksretiredrun account_name="*<account_name>*" days="*<number_of_days>*" run_id="*<run_id>*" user="*<user_name>*"
- **Output**
The command will delete the details of notebook runs from submit_run_log lookup.
- **Example 1**
| databricksretiredrun account_name="*<account_name>*" days=90
- **Example 2**
| databricksretiredrun account_name="*<account_name>*" user="john doe"
- **Example 3**
| databricksretiredrun account_name="*<account_name>*" run_id="12344"
- **Example 4**
| databricksretiredrun account_name="*<account_name>*" days=90 user="john doe" run_id="12344"

Lookups

The Add-on contains two KV store lookups :**submit_run_logs** and **execute_job_logs** that store the details of the Notebooks and jobs run using commands **databricksrun** and **databricksjob** respectively.

Macro

Macro **databricks_run_retiring_days** specifies the days, records older than which will be deleted from submit_run_log lookup using saved search **databricks_retire_run**. The default value configured is 90 days.

To modify Macro from Splunk UI,

1. Go to **Setting -> Advanced search -> Search Macros**.
2. Select **Databricks Add-on for Splunk** in the App context.
3. Configure the macro by clicking on the **Name** of the Macro, go to the **Definition** field and update it as per requirements.

Saved Search

Saved search **databricks_retire_run** uses the databricksretiredrun command to delete the records older than days specified in macro **databricks_run_retiring_days** from the **submit_run_logs** lookup. By default, it is invoked once every day at 1:00 hrs and deletes records older than 90 days. The **databricks_run_retiring_days** can be modified to change the default 90 days.

Dashboards

The dashboard will be accessible to all the users. A user with admin_all_objects capability can navigate to

“<splunk_instance_host_or_ip>:<splunk_web_port>/en-US/app/TA-Databricks/dashboards” to modify the permissions for dashboards.

This app contains the following dashboards

Databricks Job Execution Details:

The dashboard provides the details about the one-time runs and jobs executed using databricksrun and databricksjob custom commands respectively.

The dashboard uses the following parameters from user

Parameter	Required	Overview
Creation Time Filter	Yes	Time range when the job/notebook was run.

Submission status	Yes	Status of the job/run . Values: Failed, success, All default: All
User Filter	Yes	Name of an existing Splunk use who ran the job/run default: All

Created Time	User	Notebook Params	Run ID	Submission Status	Output URL	Result URL
2022-02-08T14:04:24.014	admin	notebook_path=/Users/0237f3be-20e3-4815-8e5a-91498d6fafe7/sum notebook_params=a3 b=4 cluster=test_cluster identifier=0:scheduler__admin_VEEtRGf0WJyaNrcw__RMD5dedcfce05ccb8975_at_1644308760_120	5388	Success	https://adb-1689883524422868.8.azuredatabricks.net/?o=1689883524422868#job/4357/run/5388	https://adb-1689883524422868.8.azuredatabricks.net/?o=1689883524422868#job/4357/run/5388/resultsOn
2022-02-08T14:01:13.980	admin	notebook_path=/Users/0237f3be-20e3-4815-8e5a-91498d6fafe7/sum notebook_params=a4 b=0 cluster=test_cluster identifier=0:scheduler__admin_VEEtRGf0WJyaNrcw__RMD5dedcfce05ccb8975_at_1644308760_120	-	Failed	-	-

Launch Notebook:

The dashboard allows users to execute a notebook on their Databricks cluster by providing the required parameters. The users can then navigate to the results page on the Databricks instance using the link in the dashboard panel.

The dashboard uses the following parameters from user

Parameter	Required	Overview
Notebook Path	Yes	The absolute path of the notebook to be run in the Databricks workspace. This path must begin with a slash.
Notebook revision timestamp	No	The timestamp of the revision of the notebook.
Notebook Parameters	No	Parameters to pass to the notebook. In the form of “key1=value1 key2=value2 ...”
Cluster Name	No	Name of cluster you want to run the notebook on.
Account Name	Yes	Configured account name.

Auto Forward	Yes	Yes - If you directly want to be redirected to the Databricks result URL No - If you want to manually redirect to the Databricks URL by clicking on the URL hyperlink. This is the default selection.
--------------	-----	--

You can refer to the **Launching a Notebook through dashboard** panel in the Intro dashboard for example after the app installation.

Alert action

The **Launch Notebook** alert action is used to execute a parameterized notebook based on the provided parameters. The alert can be scheduled or run as ad-hoc. It can also be used as Adaptive response action in "**Enterprise Security > Incident Review dashboard**".

When this alert action is run as Adaptive response action from "**Enterprise Security > Incident review dashboard**", a launch_notebook link will be visible in the Adaptive Responses table in the Incident review dashboard which will redirect to the Launch Notebook dashboard with parameters.

You can refer to the **Launching Notebook through Adaptive Response** panel in the Intro dashboard for example after the app installation.

Note:

- The redirection will work properly only when the status is in Success state.
- Once the Adhoc-Alert action is run from the "**Enterprise Security > Incident review dashboard**", in Adhoc mode, you will need to refresh and check for status update.

Response	Mode	Time	User	Status
Launch Notebook	adhoc	2022-02-08T14:04:08+0530	admin	✓ success

Upgrade instructions

General upgrade steps:

- Log in to Splunk Web and navigate to Apps -> Manage Apps.
- Click Install app from file.
- Click Choose file and select the Databricks Add-on for Splunk installation file.
- Check the Upgrade checkbox.
- Click on Upload.
- Restart Splunk.

Upgrade from Databricks Add-On for Splunk v1.1.0 to v1.2.0

- Follow the below steps to upgrade the Add-on to 1.2.0
 - Follow the General upgrade steps section.
 - Navigate to Settings > Users.
 - Create new user or provide existing user with "databricks_admin" role.
 - Login with the user having "databricks_admin" role.
 - Navigate to Databricks Add-on for Splunk > Configuration.
 - Click on Add button, and reconfigure account with required information.
 - The logged in user will now able to execute any custom commands.

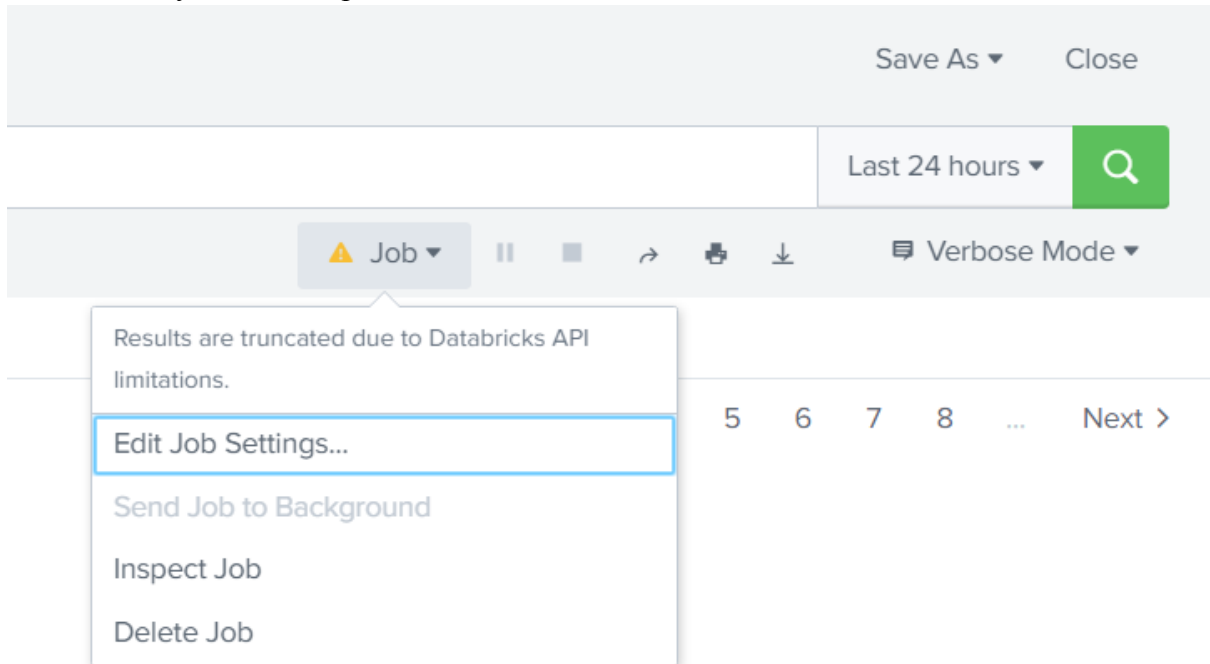
Note: Create new user or provide existing user with "databricks_user" role in order to restrict them from configuring/modifying the credentials.

Known Issues

- When the commands fail, sometimes an indistinct/unclear error message is displayed in UI, not giving a precise reason for the failure. To troubleshoot such cases, please check the logs at \$SPLUNK_HOME/var/log/TA-Databricks/<command_name>_command.log to get the precise reason for the failure.
- When the Adaptive response action `Launch Notebook` is run more than once for the same notable event in Enterprise Security security, clicking on any of the `launch_notebook` links will redirect to the Launch Notebook dashboard with the latest run details.

Limitations

- The Databricks API used in the `databricksquery` custom command has a limit on the number of results to be returned. Hence, sometimes the results obtained from this custom command may not be complete.



Troubleshooting

- Instance URL should not start with scheme: Provide a Databricks instance without HTTP/HTTPS scheme. HTTPS scheme will be hard-coded before making any network calls.
- Unable to request Databricks instance. Please validate the provided Databricks and Proxy configurations or check the network connectivity.
- Configuration page failed to load, the server reported internal errors which may indicate you do not have access to this page.
- b'{"messages":[{"type":"ERROR","text":"You (user=databricks_user) do not have permission to perform this operation (requires capability: \$db_write_conf\$)."}]}'
- Lack of "databricks_user" role for the current user. Refer to the "Provide Required Access" section in the Intro page.
- Invalid access token. Please enter the valid access token: Provided Access token is not a valid token. Please verify the token.
- Addon is not configured. Navigate to addon's configuration page to configure the addon.
- Error in SQL statement. AnalysisException. Table or view not found: You have entered invalid table name or invalid database name.

- API limit exceeded. Please try again after some time: You have made too many requests and the API limit has been exceeded.
- MaxContextException: Too many execution contexts are open right now: You have requested too many executions. Please try again after some time.
- Ensure that the cluster is in the running state. Current cluster state is {Terminated/Pending}
- No cluster found with name {cluster_name}. Provide a valid cluster name.
- Given job does not contain the notebook task. Hence terminating the execution.
- Databricks cluster is required to execute this custom command. Provide a cluster parameter or configure the cluster in the TA's configuration page.
- Could not complete the query execution. Status {Cancelled/Error}: Submitted SQL query could not complete the execution on Databricks instance and returned error.
- Encountered unknown result type, terminating the execution: The SQL query returned something else other than the tabular result, which cannot be parsed by Splunk.
- Command execution timed out: The SQL query could not return anything. Try re-running the command after increasing the value for command_timeout parameter.
- Authentication Failure: Check the network connectivity and verify that the details provided for the authentication mechanism are correct.
- The Add-on does not require a restart after the installation for all functionalities to work. However, the icons will be visible after one Splunk restart post-installation.
- If all custom commands/notebooks fail to run with HTTPS response code [403] then most probably the client secret has expired. Please regenerate your client secret in this case on your Azure portal and configure the add-on again with the new client secret. Set the client secret's expiration time to a custom value that you see fit. Refer to this [guide](#) for setting a client secret in Azure Active Directory.
- For any other unknown failure, please check the log files \$SPLUNK_HOME/var/log/ta_databricks*.log to get more details on the issue.

Uninstall & Cleanup Steps

- Remove \$SPLUNK_HOME/etc/apps/TA-Databricks/
- Remove \$SPLUNK_HOME/var/log/TA-Databricks/
- Remove \$SPLUNK_HOME/var/log/splunk/**ta_databricks*.log**
- To reflect the cleanup changes in UI, restart Splunk instance. Refer to [Start Splunk](https://docs.splunk.com/Documentation/Splunk/8.0.6/Admin/StartSplunk) documentation to get information on how to restart Splunk.

Note: \$SPLUNK_HOME denotes the path where Splunk is installed. Ex: /opt/splunk