HDFS Connector How To Configure

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Step 1. Launch Aspire and open the Content Source Management Page

Launch Aspire (if it's not already running). See:

- Launch Control
- Browse to: http://localhost:50505.
  For details on using the Aspire Content Source Management page, please refer to Admin UI

Step 2. Add a new HDFS Content Source

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To specify exactly what shared folder to crawl, we will need to create a new "Content Source".

To create a new content source:

1. From the Content Source , click on "Add Source" button.
2. Click on "HDFS Connector".

Step 2a. Specify Basic Information

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In the "General" tab in the Content Source Configuration window, specify basic information for the content source:

1. Enter a content source name in the "Name" field.
   a. This is any useful name which you decide is a good name for the source. It will be displayed in the content source page, in error messages, etc.
2. Click on the **Scheduled** pulldown list and select one of the following: *Manually, Periodically*, *Daily, Weekly or Advanced.*
   a. Aspire can automatically schedule content sources to be crawled on a set schedule, such as once a day, several times a week, or periodically (every N minutes or hours).For the purposes of this tutorial, you may want to select Manually and then set up a regular crawling schedule later.
3. Click on the **Action** pulldown list to select one of the following: *Start, Stop*, *Pause,* or *Resume.*
   a. This is the action that will be performed for that specific schedule.
4. Click on the **Crawl** pulldown list and select one of the following: *Incremental, Full*, *Real Time,* or *Cache Groups.*
   a. This will be the type of crawl to execute for that specific schedule.

After selecting a Scheduled, specify the details, if applicable:

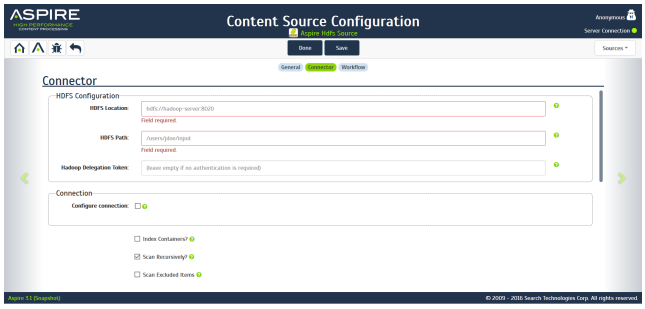
- *Manually*: No additional options.
- *Periodically*: Specify the "Run every:" options by entering the number of "hours" and "minutes."
- *Daily*: Specify the "Start time:" by clicking on the hours and minutes drop-down lists and selecting options.
- *Weekly*: Specify the "Start time:" by clicking on the hours and minutes drop-down lists and selecting options, then clicking on the day checkboxes to specify days of the week to run the crawl.
- *Advanced*: Enter a custom CRON Expression (e.g. 0 0 0 ? * *)

You can add more schedules by clicking in the **Add New** option, and rearrange the order of the schedules.

If you want to disable the content source just unselect the the "Enable" checkbox. This is useful if the folder will be under maintenance and no crawls are wanted during that period of time.

Real Time and Cache Groups crawl will be available depending of the connector.

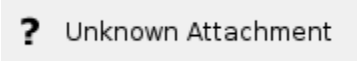
Step 2b. Specify the Connector Information



In the "Connector" tab, specify the connection information to crawl the HDFS.

1. Enter **HDFS location** URL
    a. Example: http://mycloudera.local:50070/webhdfs/v1
2. Enter the **HDFS Path** to crawl
    a. Example: /user/cloudera-scm/aspire-files
3. If your HDFS Cluster is Kerberized, enter the delegation token into **"Hadoop Delegation Token"**. Visit Prerequisites for more information on how to generate this token.
4. If you need to customize the connection options select the **"Configure Connection"** option.
    a. **Connection timeout**: The maximum time to wait for the initial connections
    b. **Read timeout:** The maximum time to wait when reading the data
    c. **Retries**: In case of any connection error, how many times to retry the same request.
    d. **Retry delay**: How long to wait before retrying a failed request.
    e. **Retry policy**:
        i. **Fixed**: The retries delays are always the same
        ii. **Increasing**: The delay is calculated as R x RetryDelay, with R being the retry attempt number.
            - **Maximum retry delay**: The maximum time to wait regardless of the retry attempt number.
        i. **Cumulative**: The delay increases by a specified multiplier on the last delay time.
            - **Retry delay multiplier**: The factory by which to increase the retry delay on each retry.
            - **Maximum retry delay**: The maximum time to wait regardless of the retry attempt number.

Step 2c. Specify Workflow Information



In the "Workflow" tab, specify the workflow steps for the jobs that come out of the crawl. Drag and drop rules to determine which steps should an item follow after being crawled. This rules could be where to publish the document or transformations needed on the data before sending it to a search engine. See Workflow for more information.

1. For the purpose of this tutorial, drag and drop the *Publish To File* rule found under the *Publishers* tab to the **onPublish** Workflow tree.
    a. Specify a *Name* and *Description* for the Publisher.
    b. Click *Add*.

After completing this steps click on the **Save** then **Done** and you'll be sent back to the Home Page.

Step 3: Initiate a Full Crawl

Now that the content source is set up, the crawl can be initiated.

1. Click on the crawl type option to set it as "Full" (is set as "Incremental" by default and the first time it'll work like a full crawl. After the first crawl, set it to "Incremental" to crawl for any changes done in the repository).
2. Click on the Start button.

During the Crawl

During the crawl, you can do the following:

- Click on the "Refresh" button on the Content Sources page to view the latest status of the crawl.
  The status will show **RUNNING** while the crawl is going, and **CRAWLED** when it is finished.
- Click on "Complete" to view the number of documents crawled so far, the number of documents submitted, and the number of documents with errors.

If there are errors, you will get a clickable "Error" flag that will take you to a detailed error message page.

Step 4: Initiate an Incremental Crawl

If you only want to process content updates from the HDFS (documents which are added, modified, or removed), then click on the "Incremental" button instead of the "Full" button. The HDFS connector will automatically identify only changes which have occurred since the last crawl.

If this is the first time that the connector has crawled, the action of the "Incremental" button depends on the exact method of *change* discovery. It may perform the same action as a "Full" crawl crawling everything, or it may not crawl anything. Thereafter, the Incremental button will only crawl updates.

> Statistics are reset for every crawl.