

Cloudera Runtime 7.3.1

Atlas Business Metadata

Date published: 2020-07-28

Date modified: 2024-12-10

CLOUDERA

<https://docs.cloudera.com/>

Legal Notice

© Cloudera Inc. 2024. All rights reserved.

The documentation is and contains Cloudera proprietary information protected by copyright and other intellectual property rights. No license under copyright or any other intellectual property right is granted herein.

Unless otherwise noted, scripts and sample code are licensed under the Apache License, Version 2.0.

Copyright information for Cloudera software may be found within the documentation accompanying each component in a particular release.

Cloudera software includes software from various open source or other third party projects, and may be released under the Apache Software License 2.0 (“ASLv2”), the Affero General Public License version 3 (AGPLv3), or other license terms. Other software included may be released under the terms of alternative open source licenses. Please review the license and notice files accompanying the software for additional licensing information.

Please visit the Cloudera software product page for more information on Cloudera software. For more information on Cloudera support services, please visit either the Support or Sales page. Feel free to contact us directly to discuss your specific needs.

Cloudera reserves the right to change any products at any time, and without notice. Cloudera assumes no responsibility nor liability arising from the use of products, except as expressly agreed to in writing by Cloudera.

Cloudera, Cloudera Altus, HUE, Impala, Cloudera Impala, and other Cloudera marks are registered or unregistered trademarks in the United States and other countries. All other trademarks are the property of their respective owners.

Disclaimer: EXCEPT AS EXPRESSLY PROVIDED IN A WRITTEN AGREEMENT WITH CLOUDERA, CLOUDERA DOES NOT MAKE NOR GIVE ANY REPRESENTATION, WARRANTY, NOR COVENANT OF ANY KIND, WHETHER EXPRESS OR IMPLIED, IN CONNECTION WITH CLOUDERA TECHNOLOGY OR RELATED SUPPORT PROVIDED IN CONNECTION THEREWITH. CLOUDERA DOES NOT WARRANT THAT CLOUDERA PRODUCTS NOR SOFTWARE WILL OPERATE UNINTERRUPTED NOR THAT IT WILL BE FREE FROM DEFECTS NOR ERRORS, THAT IT WILL PROTECT YOUR DATA FROM LOSS, CORRUPTION NOR UNAVAILABILITY, NOR THAT IT WILL MEET ALL OF CUSTOMER’S BUSINESS REQUIREMENTS. WITHOUT LIMITING THE FOREGOING, AND TO THE MAXIMUM EXTENT PERMITTED BY APPLICABLE LAW, CLOUDERA EXPRESSLY DISCLAIMS ANY AND ALL IMPLIED WARRANTIES, INCLUDING, BUT NOT LIMITED TO IMPLIED WARRANTIES OF MERCHANTABILITY, QUALITY, NON-INFRINGEMENT, TITLE, AND FITNESS FOR A PARTICULAR PURPOSE AND ANY REPRESENTATION, WARRANTY, OR COVENANT BASED ON COURSE OF DEALING OR USAGE IN TRADE.

Contents

Business Metadata overview.....	4
Creating Business Metadata.....	4
Adding attributes to Business Metadata.....	5
Associating Business Metadata attributes with entities.....	7
Importing Business Metadata associations in bulk.....	9
Searching for entities using Business Metadata attributes.....	9

Business Metadata overview

Atlas allows you to define your own attributes as key-value pairs to add to the technical metadata Atlas stores for data assets. These attributes are grouped in Business Metadata collections so you can control which users have access to create, update, and assign these attributes.

There's a fixed set of attributes that Atlas collects for each entity type from services on the cluster. You can augment these attributes by updating the entity model, but this requires changing the code in the plugin that manages metadata collection for the service. Defining business metadata attributes allows you to add to the technical metadata for an entity type, but also to control access to those attributes in groups. You can use business metadata groupings or collections in Ranger policies to determine who can view business metadata attributes, who can set their values, and who can create additional attributes. For example, you could create a business metadata collection called "Operations," that included attributes such as IT-owner, Operational Phase, Processing Strategy, and Processed Date. In a Ranger policy, you could expose these attributes only to the IT staff or expose them to all users but only allow the IT staff to set their values. You could define attributes that had meaning for a specific entity type or applied to any entity types.

In Atlas, you define a business metadata collection—simply the label for a group of attributes. You can then define attributes in that business metadata collection. After you've defined business metadata attributes, you can add values through the Atlas UI or apply them in bulk to entities using a bulk import process.

Related Information

[Creating Business Metadata](#)

[Adding attributes to Business Metadata](#)

[Associating Business Metadata attributes with entities](#)

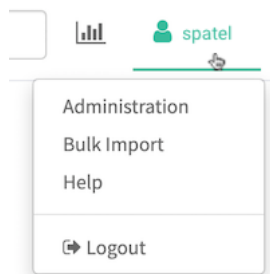
[Importing Business Metadata associations in bulk](#)

[Searching for entities using Business Metadata attributes](#)

Creating Business Metadata

Create Business Metadata collections from the Administration page.

1. To access the Atlas Administration features, choose Administration from the user menu in the top right of the Atlas window.



Users need administrator privileges to access the Administration panel features.

2. In the Business Metadata tab, click Create Business Metadata:

The screenshot illustrates the process of creating business metadata. It shows the 'Business Metadata' tab in the Atlas interface, which contains a table with columns for Name, Description, and Action. A callout box labeled '1' points to the '+ Create Business Metadata' button. Below this, the 'Create Business Metadata' dialog is shown, with a callout box labeled '2' pointing to the 'Name*' field containing 'Finance' and another callout box labeled '3' pointing to the 'Create' button. The dialog also includes a 'Description' field with the text 'Metadata extensions for tracking financial requirements and...' and a '+ Add Business Metadata attribute' button.

Business Metadata names can be 255 characters. Names must start with a letter and can contain letters, numbers, underscores, and spaces. Descriptions can be 1024 characters and contain any characters.

Note that, once the Business Metadata collections are created, the following scenarios are applicable:

- You can add new attributes to the existing business metadata.
- You cannot remove or delete any existing attribute associated with the business metadata.
- You cannot change or rename the business metadata or the associated attribute.

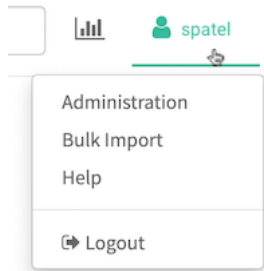
Adding attributes to Business Metadata

Business Metadata attributes allow you to extend the metadata for a given entity type. Create them in a Business Metadata collection from the Administration page.



Important: At this time, Atlas doesn't support searching on business metadata attributes that allow multiple entries (arrays).

1. To access the Atlas Administration features, choose Administration from the user menu in the top right of the Atlas window.



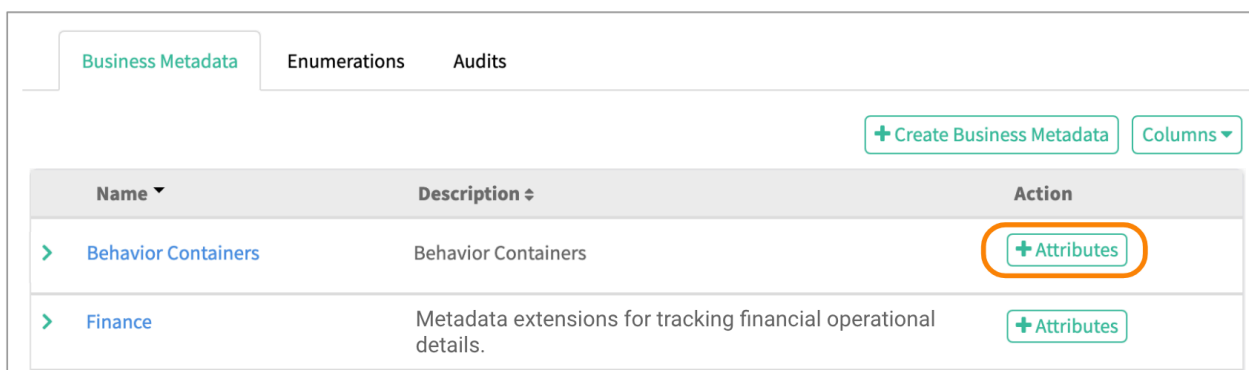
Users need administrator privileges to access the Administration panel features.

2. Open the Business Metadata tab.

For a new Business Metadata collection, you can add attributes when you define the Business Metadata collection.

A screenshot of the 'Create Business Metadata' form. The form has two tabs: 'Definitions' and 'Audits'. The 'Definitions' tab is active. The main form contains a 'Name' field with the value 'Finance' and a 'Description' field with the value 'Metadata extensions for tracking financial requirements an'. Below the description is a button '+ Add Business Metadata attribute' which is highlighted with an orange box and labeled '3'. To the right of this button is an orange arrow pointing left with the text 'Click again to add another attribute'. Below this is a modal window for adding an attribute, labeled '4'. The modal contains fields for 'Name' (Tax Standard), 'Type' (string), 'Search Weight' (5), 'Enable Multivalues' (checkbox), 'Max length' (50), and 'Applicable Types' (hive_table). At the bottom of the modal is a red 'x' icon. Below the modal is a green '5' label. At the bottom of the main form are 'Cancel' and 'Create' buttons.

You can also add attributes to an existing Business Metadata collection.



The screenshot shows a web interface with three tabs: 'Business Metadata', 'Enumerations', and 'Audits'. The 'Business Metadata' tab is active. In the top right corner, there are two buttons: '+ Create Business Metadata' and 'Columns'. Below these is a table with the following structure:

Name ▾	Description ⇅	Action
> Behavior Containers	Behavior Containers	+ Attributes
> Finance	Metadata extensions for tracking financial operational details.	+ Attributes

Related Information

[Defining Apache Atlas enumerations](#)

Associating Business Metadata attributes with entities

Assign Business Metadata attributes to entities in the entity detail page.

To add a Business Metadata attribute and value in the detail page for an entity:

1. Click Add in the Business Metadata section.
2. Select the Business Metadata collection and attribute from the drop-down menu.
3. Set the attribute value associated with this entity.
4. Click Save.

The screenshot shows the Cloudera interface for the entity **customer_combined (hive_table)**. The **Business Metadata** section is highlighted with an orange circle and arrow labeled **1**. An **Add** button is circled in orange and labeled **2**. A dropdown menu is open, showing **Industrial Zone Exemptions (string)** selected, labeled **3**. A **Save** button is circled in orange and labeled **4**.

Technical properties:

columns (4)	code description total_emp salary
createTime	Thu Apr 02 2020 16:55:27 GMT-0700 (Pacific Daylight Time)
db	default
lastAccessTime	Thu Apr 02 2020 16:55:27 GMT-0700 (Pacific Daylight Time)
name	customer_combined
owner	admin
parameters	<pre>{ "transactional_properties": "inse rt_only", "transient_lastDdlTime": "1585871 727", "ORC_ENABLE_OPTS": "HIVEMANAGERD "</pre>
qualifiedName	default.customer_combined@cm

The final result appears in the Business Metadata section:

The final result in the Business Metadata section is shown below:

Business Metadata Edit

Finance

Industrial Zone Exemptions (string)	FED-2019.c1-33
-------------------------------------	----------------

You can update the value of Business Metadata attributes from an entity by clicking **Edit**, then entering a new value. Be sure to click **Save**.

You can remove Business Metadata attributes from an entity by clicking **Edit**, then using the **X** button next to the attribute.

Related Information

[Importing Business Metadata associations in bulk](#)

Importing Business Metadata associations in bulk

After defining Business Metadata attributes, you can assign values to these attributes for individual entities in bulk by creating and importing a comma-separated values file, one row for each assigned attribute value.

To import business metadata attribute values:

1. Log into Atlas.
2. From the user menu, chose Bulk Import Business Metadata Download Import template to download a template for the bulk import file.
3. Fill in the template with the entity names and the attribute values you want to assign to the entities.

Each line in the file assigns a value to one business metadata attribute on one entity. To assign the value for more than one business metadata attribute to an entity, include multiple lines in the file that refer to the same entity.

Field	Description	Example Value
EntityType	The model type definition for the entity.	hive_table or aws_s3_object.
EntityUniqueAttributeValue	The value of the unique attribute that identifies the entity. By default, the unique-attribute is qualifiedName; however you can specify a different unique attribute name in the optional field EntityUniqueAttributeName (see below).	financedb.annualized_earnings@uswest1 if EntityUniqueAttributeName is not set. annualized_earnings if EntityUniqueAttributeName is set to "name"
BusinessAttributeName	The name of the business metadata attribute to assign to the entity. The name is in the form: <business metadata>.<attribute>	operations.itowner
BusinessAttributeValue	The business metadata attribute value to set for this entity. The value must conform to the data type defined for the attribute. Enclose the value in quotes if it includes spaces or more than one value; use to separate values.	spatel nyork
EntityUniqueAttributeName	The name of the technical attribute to use to identify the entity if not qualifiedName.	location name

4. From the user menu, chose Bulk Import Business Metadata Import Business Metadata and select the file to upload.

If a row in the input file does not import successfully, you will see an error in the UI; additional errors in the same import are not shown. Rows that are correct import even if you see an error for a row that does not import. If you see an error, fix the error and reimport the file. Rows that have already been successfully imported are reapplied without error. Note that if you provide a single entry for an array, the new value replaces all the values of the array. To see all the errors for a given import, look in the Atlas Server log.

Related Information

[Accessing Atlas logs](#)

Searching for entities using Business Metadata attributes

Because business metadata attributes are centrally defined and consistently applied across entities, they provide an excellent framework for building an index of search terms that reflect the terminology of your business users. You can add attribute values as filters in Atlas searches.

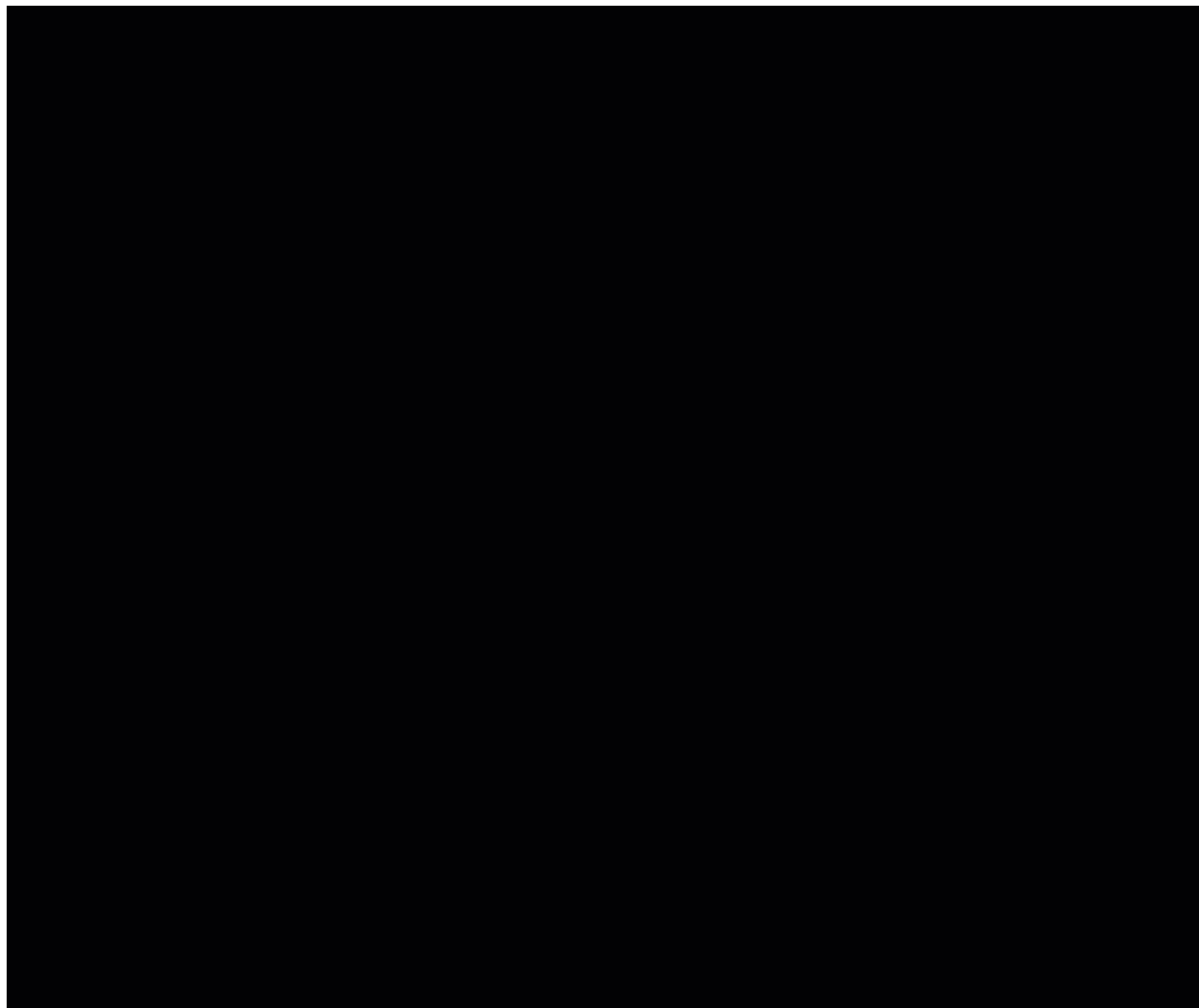
About this task

After your organization has defined business metadata attributes and data stewards have applied values to the attributes in Atlas entities, users can use the attribute values for searching.

Before you begin



Important: At this time, the free-text search includes only string type Business Metadata attributes. To search on business metadata attributes of other data types, use the attribute filter in Basic Search as shown here. Attributes that allow multiple string values (arrays) are not searchable in free-text or Basic search.



Procedure

1. Select the type of entity you want to search for in the left navigation panel.
2. Click the filter icon.
3. Select the Business Metadata attribute to search for.
4. Form the filter criteria, using operators such as equal, contains, not null, etc.
5. Click Apply if you want to add more filters from the left navigator panel.
6. Click Search to apply this filter and run the search.

Results

Entities with the attribute value appear in the search results.

Related Information

[Using Basic Search](#)