

Cloudera Runtime 7.2.10

## Atlas Audits

Date published: 2021-03-04

Date modified: 2021-06-08

# 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

<b>Audit Operations.....</b>	<b>4</b>
Atlas Type Definitions.....	6
Atlas Export and Import Operations.....	7
Atlas Server Operations.....	8
Audit enhancements.....	9
Examples of Audit Operations.....	12

## Audit Operations

As an Atlas administrator you can view the audit operations listed in the Audits tab in the Atlas UI. The audit data is captured implicitly by Atlas for various operations.

The audit operations include:

- Import
- Export
- Server start
- Server state active (In case of HA environment)
- Type Definition create
- Type Definition update
- Type Definition delete

The Type Definition can be of any type category listed:

- Business Metadata
- Classification
- Enum
- Entity
- Relationship
- Struct

Audit is collected for every create, update and delete operations.



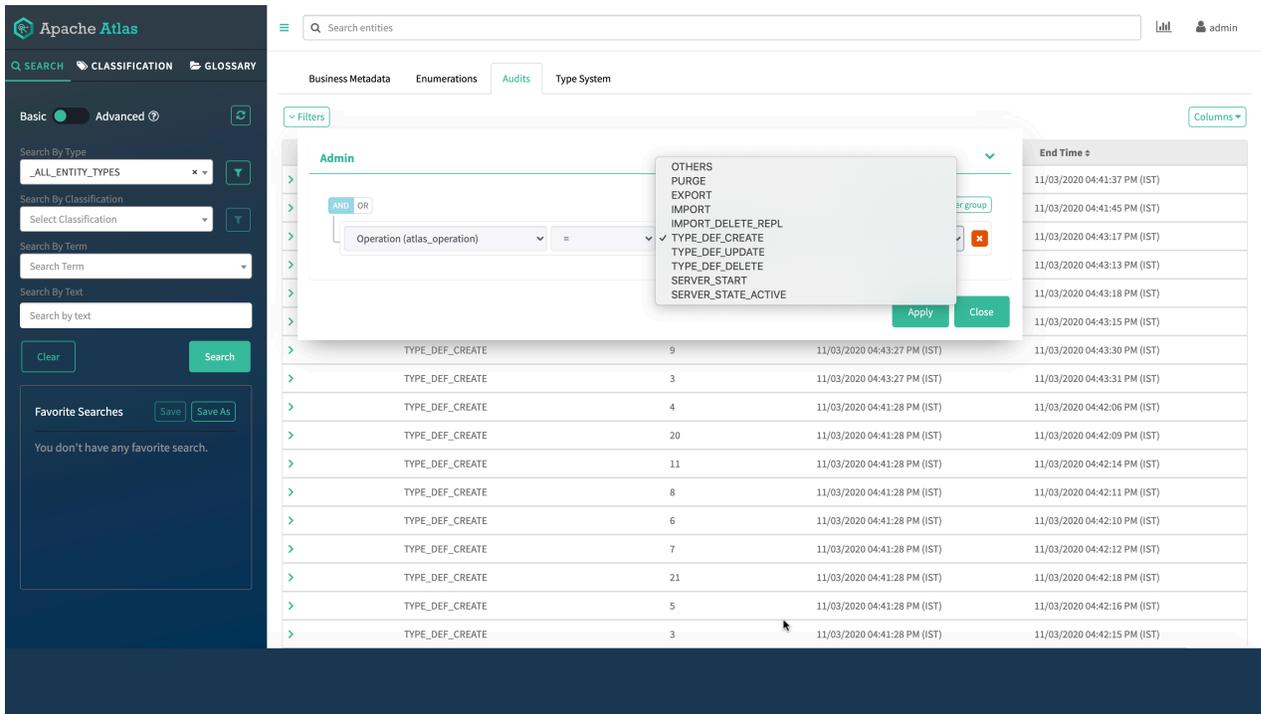
**Note:** A user or a group must have the Admin Audits Ranger permission to access audits and related information.

Allow Conditions:

Hide -

Select Role	Select Group	Select User	Permissions	Delegate Admin
Select Roles	Select Groups	<input checked="" type="checkbox"/> beacon <input checked="" type="checkbox"/> dpprofiler <input checked="" type="checkbox"/> admin <input checked="" type="checkbox"/> nifi	<input checked="" type="checkbox"/> Admin Export <input checked="" type="checkbox"/> Admin Import <input checked="" type="checkbox"/> Admin Purge <input checked="" type="checkbox"/> Admin Audits	add/edit permissions <input checked="" type="checkbox"/> Admin Export <input checked="" type="checkbox"/> Admin Import <input checked="" type="checkbox"/> Admin Purge <input checked="" type="checkbox"/> Admin Audits <input checked="" type="checkbox"/> Select/Deselect All
<div style="border: 1px solid #ccc; padding: 5px;"> <span style="color: red;">⚠</span> Exclude from Allow Conditions:         </div>				

The JSON data is the payload which contains the actual data. You can submit the payload using the appropriate REST API tool.



An audit entry logs the total number of Type Definitions that are created for create, update, and delete operations. Type Definitions are categorized according to entity types, struct types, Enum types, relationships, classification, and Business Metadata. For every Type Definition, the JSON data is stored in the audit entry.

Each audit entry logs the following details:

- Users - Indicates the user name of the user who performed the audit operation..
- Operation - Indicates an operation enum; can be used for searching audit entities as well
- Client ID - Indicates the IP address of the machine from which the request was generated.
- Result Count - Provides the total number of artifacts on which the operation was performed.
- Start Time - Indicates the actual time when the request was generated.
- End Time - Indicates the actual time when the requested operation was completed.
- Duration - Indicates the time taken by a request to complete the intended operation.

Users	Operation	Client ID	Result Count	Start Time	End Time
> hrt_qa	PURGE	██████████	5	11/09/2020 01:03:32 PM (IST)	11/09/2020 01:03:32 PM (IST)
> hrt_qa	PURGE	██████████	5	11/09/2020 01:04:01 PM (IST)	11/09/2020 01:04:01 PM (IST)
> hrt_qa	PURGE	██████████	5	11/09/2020 02:44:36 PM (IST)	11/09/2020 02:44:37 PM (IST)
> hrt_qa	PURGE	██████████	5	11/09/2020 02:43:58 PM (IST)	11/09/2020 02:43:58 PM (IST)
>	TYPE_DEF_CREATE		5	11/09/2020 10:08:58 AM (IST)	11/09/2020 10:09:35 AM (IST)
> hrt_qa	PURGE	██████████	5	11/09/2020 01:02:49 PM (IST)	11/09/2020 01:02:49 PM (IST)
> hrt_qa	PURGE	██████████	5	11/09/2020 01:02:47 PM (IST)	11/09/2020 01:02:47 PM (IST)
> hrt_qa	PURGE	██████████	5	11/09/2020 02:43:04 PM (IST)	11/09/2020 02:43:05 PM (IST)
> hrt_qa	PURGE	██████████	5	11/09/2020 02:43:01 PM (IST)	11/09/2020 02:43:01 PM (IST)
> ██████████	TYPE_DEF_CREATE	██████████	5	11/10/2020 04:57:08 PM (IST)	11/10/2020 04:57:09 PM (IST)

Showing 10 records From 1 - 25

Page Limit : 25

## Atlas Type Definitions

Using Type Definitions, you can create, update, and delete entities of various types.

An example of Type Definition - Create

**Admin**

AND OR + Add filter + Add filter group

Operation (atlas\_operation) = TYPE\_DEF\_CREATE Apply Close

Business Metadata Enumerations **Audits** Type System

> Filters Columns

Users	Operation	Client ID	Result Count	Start Time	End Time
>	TYPE_DEF_CREATE		17	11/03/2020 04:41:28 PM (IST)	11/03/2020 04:41:37 PM (IST)
>	TYPE_DEF_CREATE		18	11/03/2020 04:41:28 PM (IST)	11/03/2020 04:41:45 PM (IST)
>	TYPE_DEF_CREATE		12	11/03/2020 04:42:59 PM (IST)	11/03/2020 04:43:17 PM (IST)
>	TYPE_DEF_CREATE		9	11/03/2020 04:42:59 PM (IST)	11/03/2020 04:43:13 PM (IST)
>	TYPE_DEF_CREATE		10	11/03/2020 04:42:59 PM (IST)	11/03/2020 04:43:18 PM (IST)
>	TYPE_DEF_CREATE		7	11/03/2020 04:42:59 PM (IST)	11/03/2020 04:43:15 PM (IST)
>	TYPE_DEF_CREATE		9	11/03/2020 04:43:27 PM (IST)	11/03/2020 04:43:30 PM (IST)
>	TYPE_DEF_CREATE		3	11/03/2020 04:43:27 PM (IST)	11/03/2020 04:43:31 PM (IST)
>	TYPE_DEF_CREATE		4	11/03/2020 04:41:28 PM (IST)	11/03/2020 04:42:06 PM (IST)
>	TYPE_DEF_CREATE		20	11/03/2020 04:41:28 PM (IST)	11/03/2020 04:42:09 PM (IST)
>	TYPE_DEF_CREATE		11	11/03/2020 04:41:28 PM (IST)	11/03/2020 04:42:14 PM (IST)
>	TYPE_DEF_CREATE		8	11/03/2020 04:41:28 PM (IST)	11/03/2020 04:42:11 PM (IST)
>	TYPE_DEF_CREATE		6	11/03/2020 04:41:28 PM (IST)	11/03/2020 04:42:10 PM (IST)
>	TYPE_DEF_CREATE		7	11/03/2020 04:41:28 PM (IST)	11/03/2020 04:42:12 PM (IST)
>	TYPE_DEF_CREATE		21	11/03/2020 04:41:28 PM (IST)	11/03/2020 04:42:18 PM (IST)
>	TYPE_DEF_CREATE		5	11/03/2020 04:41:28 PM (IST)	11/03/2020 04:42:16 PM (IST)
>	TYPE_DEF_CREATE		3	11/03/2020 04:41:28 PM (IST)	11/03/2020 04:42:15 PM (IST)

An example of Type Definition - Update

**Admin**

AND OR + Add filter + Add filter group

Operation (atlas\_operation) = TYPE\_DEF\_UPDATE Apply Close

Business Metadata Enumerations **Audits** Type System

> Filters Columns ▾

Users ▾	Operation ▾	Client ID ▾	Result Count ▾	Start Time ▾	End Time ▾
>	TYPE_DEF_UPDATE		1	11/03/2020 04:41:28 PM (IST)	11/03/2020 04:41:46 PM (IST)
>	TYPE_DEF_UPDATE		1	11/03/2020 04:41:28 PM (IST)	11/03/2020 04:41:47 PM (IST)
>	TYPE_DEF_UPDATE		1	11/03/2020 04:41:28 PM (IST)	11/03/2020 04:41:47 PM (IST)
>	TYPE_DEF_UPDATE		1	11/03/2020 04:41:28 PM (IST)	11/03/2020 04:41:48 PM (IST)
>	TYPE_DEF_UPDATE		1	11/03/2020 04:41:28 PM (IST)	11/03/2020 04:41:49 PM (IST)
>	TYPE_DEF_UPDATE		1	11/03/2020 04:41:28 PM (IST)	11/03/2020 04:41:48 PM (IST)
>	TYPE_DEF_UPDATE		1	11/03/2020 04:41:28 PM (IST)	11/03/2020 04:41:49 PM (IST)
>	TYPE_DEF_UPDATE		1	11/03/2020 04:41:28 PM (IST)	11/03/2020 04:41:50 PM (IST)
>	TYPE_DEF_UPDATE		1	11/03/2020 04:41:28 PM (IST)	11/03/2020 04:41:49 PM (IST)
>	TYPE_DEF_UPDATE		1	11/03/2020 04:41:28 PM (IST)	11/03/2020 04:41:50 PM (IST)
>	TYPE_DEF_UPDATE		1	11/03/2020 04:41:28 PM (IST)	11/03/2020 04:41:51 PM (IST)
>	TYPE_DEF_UPDATE		1	11/03/2020 04:41:28 PM (IST)	11/03/2020 04:41:51 PM (IST)
>	TYPE_DEF_UPDATE		1	11/03/2020 04:41:28 PM (IST)	11/03/2020 04:41:53 PM (IST)
>	TYPE_DEF_UPDATE		1	11/03/2020 04:41:28 PM (IST)	11/03/2020 04:41:52 PM (IST)
>	TYPE_DEF_UPDATE		1	11/03/2020 04:41:28 PM (IST)	11/03/2020 04:41:52 PM (IST)
>	TYPE_DEF_UPDATE		1	11/03/2020 04:41:28 PM (IST)	11/03/2020 04:41:54 PM (IST)

An example of Type Definition - Delete

**Admin** ▾

AND OR + Add filter + Add filter group

Operation (atlas\_operation) = TYPE\_DEF\_DELETE ✕

Apply Close

Business Metadata Enumerations **Audits** Type System

> Filters Columns ▾

Users ▾	Operation ▾	Client ID ▾	Result Count ▾	Start Time ▾	End Time ▾
▾	TYPE_DEF_DELETE	██████████	1	11/10/2020 07:27:04 PM (IST)	11/10/2020 07:27:05 PM (IST)
Classification Type Deleted					
• tag_KJBuc					
▾	TYPE_DEF_DELETE	██████████	1	11/10/2020 07:26:51 PM (IST)	11/10/2020 07:26:51 PM (IST)
Classification Type Deleted					
• child_tag					

Showing 2 records From 1 - 25 Page Limit: 25 ▾

## Atlas Export and Import Operations

An audit entry is created for every export and import operation.

An example of - Export operation

**Admin**

AND OR + Add filter + Add filter group

Operation (atlas\_operation) = EXPORT

Apply Close

Business Metadata Enumerations **Audits** Type System

> Filters Columns

Users	Operation	Client ID	Result Count	Start Time	End Time
	EXPORT		3	11/10/2020 07:18:24 PM (IST)	11/10/2020 07:18:26 PM (IST)

Export Entities And Options

hive\_db 3

params (1) {"fetchType": "FULL", "matchType": "startsWith"}

Showing 1 records From 1 - 25 Page Limit: 25

Each import audit entry provides information about the total number of entities imported, along with the number of entities imported with each Type Definition.

An example of - Import operation

**Admin**

AND OR + Add filter + Add filter group

Operation (atlas\_operation) = IMPORT

Apply Close

Business Metadata Enumerations **Audits** Type System

> Filters Columns

Users	Operation	Client ID	Result Count	Start Time	End Time
	IMPORT		2	11/12/2020 06:19:01 PM (IST)	11/12/2020 06:19:01 PM (IST)
	IMPORT		3	11/12/2020 06:16:48 PM (IST)	11/12/2020 06:16:53 PM (IST)

Showing 2 records From 1 - 25 Page Limit: 25

## Atlas Server Operations

When you perform server related tasks, audit entries are logged.

When the Atlas server is started, an audit entry is logged. Also, when the server is started in the Active mode using High Availability (HA), an audit entry is logged. For more information, see [About Atlas High Availability](#).

An example of - Server Start operation

**Admin** ▼

---

AND OR + Add filter + Add filter group

Operation (atlas\_operation) = SERVER\_START ✕

Apply Close

---

Business Metadata Enumerations **Audits** Type System

> Filters Columns ▼

Users	Operation	Client ID	Result Count	Start Time	End Time
>	SERVER_START		N/A	11/03/2020 08:09:49 PM (IST)	11/03/2020 08:10:11 PM (IST)
>	SERVER_START		N/A	11/03/2020 08:15:10 PM (IST)	11/03/2020 08:15:32 PM (IST)
>	SERVER_START		N/A	11/03/2020 08:07:01 PM (IST)	11/03/2020 08:07:25 PM (IST)
>	SERVER_START		N/A	11/03/2020 04:40:49 PM (IST)	11/03/2020 04:43:52 PM (IST)

An example of - Server State Active operation

**Admin** ▼

---

AND OR + Add filter + Add filter group

Operation (atlas\_operation) = SERVER\_STATE\_ACTIVE ✕

Apply Close

---

Business Metadata Enumerations **Audits** Type System

> Filters Columns ▼

Users	Operation	Client ID	Result Count	Start Time	End Time
>	SERVER_STATE_ACTIVE		N/A	11/03/2020 08:07:25 PM (IST)	11/03/2020 08:07:25 PM (IST)
>	SERVER_STATE_ACTIVE		N/A	11/03/2020 08:10:11 PM (IST)	11/03/2020 08:10:11 PM (IST)
>	SERVER_STATE_ACTIVE		N/A	11/03/2020 04:43:52 PM (IST)	11/03/2020 04:43:52 PM (IST)
>	SERVER_STATE_ACTIVE		N/A	11/03/2020 08:15:32 PM (IST)	11/03/2020 08:15:32 PM (IST)

## Audit enhancements

When any entity is created in Atlas, the created entity is stored in HBase tables.

Currently, when the created entity is modified or updated, for example, entity core attributes, relationship attributes, custom attributes, or associated classifications, the changed entity is captured by Atlas either as a full entity object or partial object (with only updated attributes or relations) and stored in HBase tables.

While processing update requests, Atlas generates entity audit events and stores them in the HBase table. These audit events have complete entity information in the JSON format. Multiple updates on a single entity results in generating multiple audit events, each of which has a complete entity instance duplicated with minimal changes.

For example, if entity A1 is updated or modified for about five times, for every update, along with the changes (minimal), the entire entity is stored in the HBase tables. This process consumes additional storage space in HBase tables. In simple terms, A1 + the number of times the changes made is the resultant output that is saved in the HBase tables. Even if the changes are minimal (updating an attribute or relations or something that is not significant), Atlas captures the complete entity.

The Atlas audit enhancement optimizes storage space by not capturing the entire entity instance in each audit event. You can configure Atlas to store only differential information in audit events.

You must enable the application flag by setting the parameter using:

Cloudera Manager UI > Atlas > Configuration > Click Advanced (Under Category) > Enter the following parameter and the value under Atlas Server Advanced Configuration Snippet (Safety Valve) for confi/atlas-application.properties text field.

`atlas.entity.audit.differential=true`

To have significant savings in the HBase table memory footprint, only the difference between the original and updated entity state is captured in Atlas.

Previously, Atlas exhibited full entity as shown in the image:

The screenshot displays the Cloudera Atlas interface. On the left, a sidebar shows a tree view of entities under 'Entities'. The main panel shows the details for an entity named 'db\_thor\_impala\_tbl\_51'. The entity is owned by 'admin' and was updated on 'Wed Oct 14 2020 16:16:31 GMT-0700 (Pacific Daylight Time)'. The entity details are organized into two main sections: 'Technical properties' and 'Relationship properties', both of which are highlighted with red boxes in the image. The 'Technical properties' section includes fields such as 'aliases', 'comment', 'createTime', 'description', 'displayName', 'lastAccessTime', 'name', 'owner', 'parameters', and 'qualifiedName'. The 'Relationship properties' section includes fields such as 'columns', 'db', 'ddlQueries', 'inputToProcesses', 'meanings', 'outputFromProcesses', 'partitionKeys', 'schema', and 'sd'.

Currently, Atlas displays only the differences between the original and updated entity state as shown in the image

The screenshot shows the Cloudera Atlas interface. On the left, there is a tree view under 'Entities' with categories like file\_system, hdfs\_path, hive, impala, and other\_types. On the right, a detailed view of an entity is shown. The entity name is 'e7d578c9-5978-43d9-aaaa-000000013034'. A 'Technical properties' section is highlighted with a purple box, containing the following data:

comment	Some Comment
description	Some Description
owner	sysstest-2

Below this, there are several 'Entity Updated' log entries with timestamps and user names.

As a use case, previously when you add data under user-defined-properties, for example, key\_1 and val\_1, Atlas displayed the same as seen in the image.

The screenshot shows the 'information\_schema' entity details in Cloudera Atlas. The entity name is 'information\_schema'. The 'Technical properties' section includes fields like clusterName, description, location, managedLocation, name, owner, ownerType, parameters, qualifiedName, replicatedFrom, replicatedTo, typeName, and userDescription. The 'Relationship properties' section includes ddlQueries, locationPath, managedLocationPath, meanings, and tables. The 'User-defined properties' section at the bottom shows two properties: 'key\_1' and 'val\_1', both highlighted with purple boxes.

Currently Atlas displays only the changed or updated entity values.

## information\_schema (hive\_db)

Classifications: [+](#)Terms: [+](#)

Properties Relationships Classifications **Audits** Tables

Users	Timestamp	Actions
hrt_ga	04/14/2021 03:04:40 PM (IST)	User-defined Attribute(s) Updated

Name: 60fa182a-d2dc-435a-b51a-e3f2c1be85d9

Technical properties

No Record found!

User-defined properties

key\_1 value\_1

## Examples of Audit Operations

Some examples of payload submission for audit operations.

An example of creating a Type Definition:

```
enumDefs:
1.days_of_week
entityDefs:
1.Country
2.State
3.Vehicle

relationshipDefs:
1.country_state_rel
curl --location --request POST -u admin:admin 'http://car123.test1234.root
.hwx.site:23400/api/atlas/v2/types/typedefs' \
--header 'Content-Type: application/json' \
--data-raw '{
"enumDefs": [
{
"name": "days_of_week",
"typeVersion": "1.0",
"elementDefs": [
{
"ordinal": 1,
"value": "MONDAY"
},
{
"ordinal": 2,
"value": "TUESDAY"
},
{
"ordinal": 3,
"value": "WEDNESDAY"
},
{
"ordinal": 4,
"value": "THURSDAY"
},
{
"ordinal": 5,
```

```
"value": "FRIDAY"
},
{
  "ordinal": 6,
  "value": "SATURDAY"
},
{
  "ordinal": 7,
  "value": "SUNDAY"
}
]
},
],
"entityDefs": [
{
  "category": "ENTITY",
  "createdBy": "admin",
  "updatedBy": "admin",
  "createTime": 1537261952180,
  "updateTime": 1537262097732,
  "version": 1,
  "name": "Vehicle",
  "description": "desc Vehicle",
  "typeVersion": "1.1",
  "attributeDefs": [
    {
      "name": "no_of_wheels",
      "typeName": "int",
      "isOptional": true,
      "cardinality": "SINGLE",
      "valuesMinCount": 1,
      "valuesMaxCount": 1,
      "isUnique": false,
      "isIndexable": false,
      "includeInNotification": false
    }
  ]
},
{
  "category": "ENTITY",
  "createdBy": "admin",
  "updatedBy": "admin",
  "createTime": 1537261952180,
  "updateTime": 1537262097732,
  "version": 1,
  "name": "Country",
  "description": "desc Country",
  "typeVersion": "1.1",
  "attributeDefs": [
    {
      "name": "ISD_CODE",
      "typeName": "string",
      "isOptional": false,
      "cardinality": "SINGLE",
      "valuesMinCount": 1,
      "valuesMaxCount": 1,
      "isUnique": false,
      "isIndexable": false,
      "includeInNotification": false
    }
  ]
},
{
  "category": "ENTITY",
```

```

"createdBy": "admin",
"updatedBy": "admin",
"createTime": 1537261952180,
"updateTime": 1537262097732,
"version": 1,
"name": "State",
"description": "desc State",
"typeVersion": "1.1",
"attributeDefs": [
{
"name": "STD_CODE",
"typeName": "string",
"isOptional": false,
"cardinality": "SINGLE",
"valuesMinCount": 1,
"valuesMaxCount": 1,
"isUnique": false,
"isIndexable": false,
"includeInNotification": false
}
]
},
],
"relationshipDefs": [
{
"name": "country_state_rel",
"typeVersion": "1.1",
"relationshipCategory": "AGGREGATION",
"endDef1": {
"type": "Country",
"name": "state_st",
"isContainer": false,
"cardinality": "SINGLE",
"isLegacyAttribute": true
},
"endDef2": {
"type": "State",
"name": "country_ct",
"isContainer": true,
"cardinality": "SET"
},
"propagateTags": "NONE"
}
]
}'

```

An example of updating a Type Definition:

```

enumDefs:days_of_week
entityDefs:Country
curl --location --request PUT -u admin:admin 'http://car123.car123-1.root.
hw.x.site:31000/api/atlas/v2/types/typedefs' \
--header 'Content-Type: application/json' \
--data-raw '{
"enumDefs": [
{
"name": "days_of_week",
"typeVersion": "1.0",
"elementDefs": [
{
"ordinal": 1,
"value": "MONDAY"
}
}
]
}'

```

```

},
{
  "ordinal": 2,
  "value": "TUESDAY"
},
{
  "ordinal": 3,
  "value": "WEDNESDAY"
},
{
  "ordinal": 4,
  "value": "THURSDAY"
},
{
  "ordinal": 5,
  "value": "FRIDAY"
},
{
  "ordinal": 6,
  "value": "SATURDAY"
},
{
  "ordinal": 7,
  "value": "SUNDAY"
},
{
  "ordinal": 8,
  "value": "HOLIDAY"
}
],
"entityDefs": [
{
  "category": "ENTITY",
  "createdBy": "admin",
  "updatedBy": "admin",
  "createTime": 1537261952180,
  "updateTime": 1537262097732,
  "version": 1,
  "name": "Country",
  "description": "desc Country Updated",
  "typeVersion": "1.1",
  "attributeDefs": [
{
  "name": "ISD_CODE",
  "typeName": "string",
  "isOptional": false,
  "cardinality": "SINGLE",
  "valuesMinCount": 1,
  "valuesMaxCount": 1,
  "isUnique": false,
  "isIndexable": false,
  "includeInNotification": false
}
]
}
]
]
}'

```

An example of deleting a Type Definition:

```
curl --location --request DELETE -u admin:admin
```

```
'http://car123.car123-1.root.hwx.site:31000/api/atlas/v2/types/typedef/name/Vehicle'
```

An example of exporting an Atlas entity:

```
'{
  "itemsToExport": [
    { "typeName": "DB", "uniqueAttributes": { "name": "Sales" }},
    { "typeName": "DB", "uniqueAttributes": { "name": "Reporting" }}
  ],
  { "typeName": "DB", "uniqueAttributes": { "name": "Logging" }}
  ],
  "options": { "fetchType": "full" }
}'
```

For additional reference related to exporting entities, see <https://atlas.apache.org/#/ExportAPI>.

An example of importing an Atlas entity:

Performing an import operation should create an entry in the audits tab.

For additional reference related to exporting entities, see <https://atlas.apache.org/#/ImportAPI>.