



Output Module

# Hitchhiker's Guide

## The Hitchhiker's Guide to the Output Module

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You can find the most up-to-date technical documentation on our Developer portal at

<https://developer.collibra.com/rest/output-module/>

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## What's new

- The Community and Domain entities are now extensions of Organization. (January 2022)
- The Output Module API uses the same terminology as the user interface. (September 2021)
- The guide now contains YAML examples.
- References to the deprecated REST API v1 were removed.
- The Timeout mechanism is described.
- The Result limit mechanism is described.
- The API endpoints are described.



# Introduction

The Output Module is a lightweight graph query engine exposed through the public API. It allows different output formats, such as JSON, XML, Excel, and CSV. It also provides a single API to query most of the Collibra entities, such as assets, communities, domains and types, using SQL-like filtering capabilities. You can sort entities using any of the available properties and page results and view permissions for authenticated users who issue REST calls.



# Prerequisites

Before you begin using the query language used in the Output Module, you must understand the Collibra API model and how to execute REST calls. This guide shows examples that query the REST API but does not explain how to execute REST calls. Refer to external online resources for tutorials and instructional resources.

## Terminology

The Collibra API model was based on the Semantics of Business Vocabulary and Rules (SBVR) standard. Over time, the user interface adopted a simpler terminology set that aligns with Collibra concepts. Since version 2021.09 (5.7.10 for on-premisses), the Output Module API uses the same terminology as the user interface while the legacy one is deprecated.

The following table lists the renamed terminology:

Deprecated	Current
Term	Asset
ConceptType	AssetType
ConceptTypeSpecializedConcepts	ChildAssetTypes
Vocabulary	Domain
VocabularyType	DomainType
VocabularyTypeSpecializedConcepts	ChildDomainTypes
Source	SourceAsset

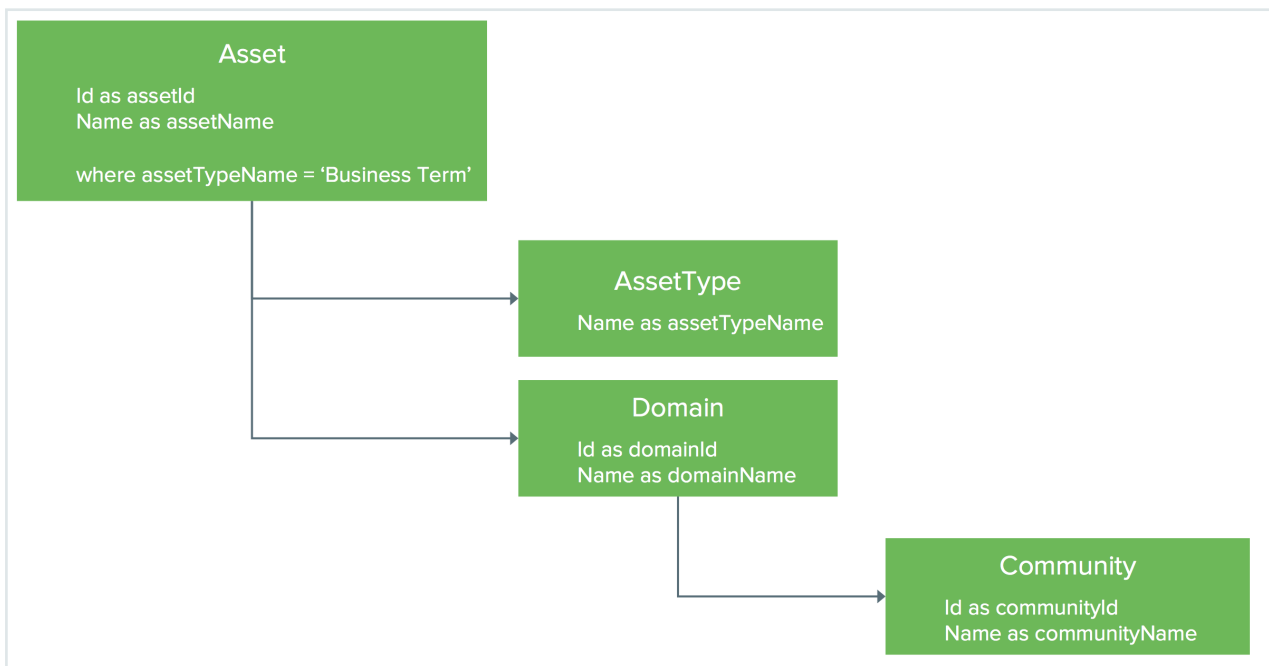
Deprecated	Current
Target	TargetAsset
BinaryFactType	RelationType
HeadTerm	SourceAssetType
TailTerm	TargetAssetType
Member	Responsibility

Tip Use only the new terminology.

## The Output Module query language

The API model has a set of well-defined entities and relations that allow you to create a single-rooted tree graph query and specify constraints that must exist for any of the resulting nodes, such as results filtering.

For example, to query all assets of type **Business Term** and their respective domain and community, specify the following tree graph:



**Note**

- The graph is a single-rooted tree graph.
- Multiple root nodes are not allowed.
- Each node has one parent.
- For each of the selected properties, you must specify a unique alias within the graph query.
- Filtering is specified on the node you want to filter and can reference any property of the current node or a child or grandchildren. The example above shows assets filtered by their related AssetType name.

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# Getting started

The format of the query language is either JSON or YAML. For simplicity, this example starts with a basic query and builds from there.

Select the `Id` and `Name` for all communities as a flat list. The object representing the query is called `ViewConfig`, as it defines a particular view, which is a selection of the data. The object containing the graph part of the query is called `Resources`.

The following example shows the `Community` entity along with its `Id` and `Name` properties.

## JSON

```
{
  "ViewConfig": {
    "Resources": {
      "Community": {
        "name": "Communities",          <---\
        "Id": { "name": "community id" },      ---- a
node can (or must) have a name. Thus the community own 'name'
property must be uppercased to avoid conflicts.
        "Name": { "name": "community name" }    <---/
      }
    }
  }
}
```

## YAML

```
---
ViewConfig:
  Resources:
    Community:
      name: "Communities"          <---\
      Id:                          ---- a node can (or
must) have a name. Thus the community own 'name' property must
be uppercased to avoid
        name: "community id"
      Name:                          <---/
        name: "community name"
```

**Note**

- Entity and property keys are case insensitive, so `Community` and `Id` can be written in any case.
- The other keys are case sensitive. For example, `ViewConfig`, `Resources` or `Name` must be written as shown.
- If a property is spelled out the same way as a reserved keyword, you must use a different casing than the reserved key. For example, you use lowercase `name` as the node name and capitalized `Name` as the community name.

## Test the API

To test the API, use a REST client, such as the Postman plugin for Chrome. Many output formats are available, but the JSON tree is the format that most resembles the query.

This example uses the following endpoint on the `OutputView` resource:

- `{{domain}}/rest/2.0/outputModule/export/json`

Use a POST call with the following body.

### JSON

```
{
  "ViewConfig": {
    "Resources": {
      "Community": {
        "Id": {
          "name": "community id"
        },
        "Name": {
          "name": "community name"
        }
      }
    }
  }
}
```

## YAML

```

---
ViewConfig:
  Resources:
    Community:
      Id:
        name: "community id"
      Name:
        name: "community name"

```

**Note** Remember to set the content type header.

## JSON

```
'Content-Type': 'application/json'
```

## YAML

```
'Content-Type': 'application/x-yaml'
```

The output is formatted as an array of communities.

```

{
  "view": {
    "Community0": [
      {
        "communityId": "c87f166e-041f-4bea-8ff7-c1ffbab2ceeb",
        "communityName": "First Community"
      },
      {
        "communityId": "86a745f5-7e87-4851-a107-a3a272ccea0b",
        "communityName": "Second Community"
      }
    ]
  }
}

```

You can use the ViewConfig queries with the following endpoints:

- `{{domain}}/rest/2.0/outputModule/export/{{xml | json}}`
- `{{domain}}/rest/2.0/outputModule/export/{{xml | json}}-file`
- `{{domain}}/rest/2.0/outputModule/export/{{xml | json}}-job`

## Add related entities to the tree

Use this query example to add the users that have been assigned a role at the community level. To reach those entities, you must retrieve the `Responsibility` entities that represent the assignments between a user, a role and one of the following resources:

- **Asset**
- **Domain**
- **Community**

JSON

```
{
  "ViewConfig": {
    "Resources": {
      "Community": {
        "Id": { "name": "community id" },
        "Name": { "name": "community name" },
        "Responsibility": {
          "User": {
            "Id": { "name": "user id" },
            "FirstName": { "name": "first name" },
            "LastName": { "name": "last name" }
          },
          "Role": {
            "Signifier": { "name": "role name" }
          }
        }
      }
    }
  }
}
```

## YAML

```

---
ViewConfig:
  Resources:
    Community:
      Id:
        name: "community id"
      Name:
        name: "community name"
      Responsibility:
        User:
          Id:
            name: "user id"
          FirstName:
            name: "first name"
          LastName:
            name: "last name"
      Role:
        Signifier:
          name: "role name"

```

Navigating from one entity to another requires nesting the entities. For a complete list of properties and relations for each entity, see [Entities, properties and relations](#).

The following is an example of how the results is formatted.

```

{
  "view": {
    "Community0": [
      {
        "communityId": "c87f166e-041f-4bea-8ff7-c1ffbab2ceeb",
        "communityName": "First Community"
      },
      {
        "communityId": "12345678-0020-0000-0000-000000000000",
        "communityName": "Second Community",
        "Responsibility1": [
          {
            "User2": [
              {
                "userId": "00000000-0000-0000-0000-00000000900002",
                "firstName": "Admin",

```



## Specify an entity alias

Auto-generated aliases in the response are not straightforward. For example, `Community0`, `Responsibility1` or `User2`. For this reason, you must specify an alias.

### JSON

```
{
  "ViewConfig": {
    "Resources": {
      "Community": {
        "name": "community",
        "Id": { "name": "community id" },
        "Name": { "name": "community name" },
        "Responsibility": {
          "name": "responsibility",
          "User": {
            "name": "employee",
            "Id": { "name": "user id" },
            "FirstName": { "name": "first name" },
            "LastName": { "name": "last name" }
          },
          "Role": {
            "name": "role",
            "Signifier": { "name": "role name" }
          }
        }
      }
    }
  }
}
```

## YAML

```

---
ViewConfig:
  Resources:
    Community:
      name: "community"
      Id:
        name: "community id"
      Name:
        name: "community name"
      Responsibility:
        name: "responsibility"
      User:
        name: "employee"
        Id:
          name: "user id"
        FirstName:
          name: "first name"
        LastName:
          name: "last name"
      Role:
        name: "role"
      Signifier:
        name: "role name"

```

The results should then parse like the example below.

```

{
  "view": {
    "community": [
      {
        "communityId": "c87f166e-041f-4bea-8ff7-c1ffbab2ceeb",
        "communityName": "First Community"
      },
      {
        "communityId": "12345678-0020-0000-0000-000000000000",
        "communityName": "Second Community",
        "responsibility": [
          {
            "employee": [
              {
                "userId": "00000000-0000-0000-0000-0000000900002",
                "firstName": "Admin",
                "lastName": "Istrator"
              }
            ]
          }
        ]
      }
    ]
  }
}

```



## JSON

```
{
  "ViewConfig": {
    "Resources": {
      "Community": {
        "Id": { "name": "communityId" },
        "Name": { "name": "communityName" },
        "Responsibility": [
          {
            "Id": { "name": "userResponsibilityId" },
            "User": {
              "Id": { "name": "userId" },
              "FirstName": { "name": "firstName" },
              "LastName": { "name": "lastName" }
            },
            "Role": {
              "Signifier": { "name": "userRoleName" }
            }
          },
          {
            "Id": { "name": "groupResponsibilityId" },
            "Group": {
              "Id": { "name": "groupId" },
              "GroupName": { "name": "groupName" }
            },
            "Role": {
              "Signifier": { "name": "groupRoleName" }
            }
          }
        ]
      }
    }
  }
}
```

## YAML

```

---
ViewConfig:
  Resources:
    Community:
      Id:
        name: "communityId"
      Name:
        name: "communityName"
      Responsibility:
      - Id:
          name: "userResponsibilityId"
        User:
          Id:
            name: "userId"
          FirstName:
            name: "firstName"
          LastName:
            name: "lastName"
          Role:
            Signifier:
              name: "userRoleName"
      - Id:
          name: "groupResponsibilityId"
        Group:
          Id:
            name: "groupId"
          GroupName:
            name: "groupName"
          Role:
            Signifier:
              name: "groupRoleName"

```

To add the same related entity twice under the same node, change the JSON object into an array. In this case, the `Responsibility` JSON object became an array, and the anonymous JSON objects composing the array are multiple responsibilities.

If you add the admin group to the second community, the results would be formatted similar to the example below.

```

{
  "view": {
    "Community0": [

```

```

    {
      "communityId": "c87f166e-041f-4bea-8ff7-c1ffbab2ceeb",
      "communityName": "First Community"
    },
    {
      "communityId": "12345678-0020-0000-0000-000000000000",
      "communityName": "Second Community",
      "Responsibility1": [
        {
          "userResponsibilityId": "0ecb2fff-d5de-43d0-be60-
f7f201c10d41",
          "User2": [
            {
              "userId": "00000000-0000-0000-0000-
000000900002",
              "firstName": "Admin",
              "lastName": "Istrator"
            }
          ],
          "Role3": [
            {
              "roleName": "Admin"
            }
          ]
        },
        {
          "userResponsibilityId": "42b9d114-2c0c-4e96-a1ce-
b645d5e92365",
          "User2": [
            {
              "userId": "00000000-0000-0000-0000-
000000900002",
              "firstName": "Admin",
              "lastName": "Istrator"
            }
          ],
          "Role3": [
            {
              "roleName": "Steward"
            }
          ]
        },
        {
          "groupResponsibilityId": "5fc0cc5f-e30e-488c-94bc-
acdea171219d",
          "User2": [
            {}
          ],
          "Role3": [
            {

```

```

        "roleName": "Admin"
      }
    ]
  },
  "Responsibility4": [
    {
      "userResponsibilityId": "0ecb2fff-d5de-43d0-be60-
f7f201c10d41",
      "Group5": [
        {}
      ],
      "Role6": [
        {
          "groupRoleName": "Admin"
        }
      ]
    },
    {
      "userResponsibilityId": "42b9d114-2c0c-4e96-a1ce-
b645d5e92365",
      "Group5": [
        {}
      ],
      "Role6": [
        {
          "groupRoleName": "Steward"
        }
      ]
    },
    {
      "groupResponsibilityId": "5fc0cc5f-e30e-488c-94bc-
acdea171219d",
      "Group5": [
        {
          "groupId": "4eb1f4a9-14a3-4539-8afc-
733925161179",
          "groupName": "admin"
        }
      ],
      "Role6": [
        {
          "groupRoleName": "Admin"
        }
      ]
    }
  ]
}
]
}

```

```
}
```

**Note** In the example above, the `userResponsibilityId` and `groupResponsibilityId` values contain three unique values in total: two related to a user and one to a group. When no further filtering is requested, adding the same entity twice means selecting the same thing twice. The result is one empty user for the responsibility linked to the group and two empty groups for each responsibility linked to a user.

## Add filtering

To discard irrelevant responsibility results, use filtering.

## JSON

```

{
  "ViewConfig": {
    "Resources": {
      "Community": {
        "Id": { "name": "communityId" },
        "Name": { "name": "communityName" },
        "Responsibility": [
          {
            "Id": { "name": "userResponsibilityId" },
            "User": {
              "Id": { "name": "userId" },
              "FirstName": { "name": "firstName" },
              "LastName": { "name": "lastName" }
            },
            "Role": {
              "Signifier": { "name": "userRoleName" }
            },
            "Filter": { "Field": { "name": "userId", "operator":
"NOT_NULL" } }
          },
          {
            "Id": { "name": "groupResponsibilityId" },
            "Group": {
              "Id": { "name": "groupId" },
              "GroupName": { "name": "groupName" }
            },
            "Role": {
              "Signifier": { "name": "groupRoleName" }
            },
            "Filter": { "Field": { "name": "groupId",
"operator": "NOT_NULL" } }
          }
        ]
      }
    }
  }
}

```

## YAML

```

---
ViewConfig:
  Resources:
    Community:
      Id:
        name: "communityId"
      Name:
        name: "communityName"
      Responsibility:
        -
          Id:
            name: "userResponsibilityId"
          User:
            Id:
              name: "userId"
            FirstName:
              name: "firstName"
            LastName:
              name: "lastName"
          Role:
            Signifier:
              name: "userRoleName"
          Filter:
            Field:
              name: "userId"
              operator: "NOT_NULL"
        -
          Id:
            name: "groupResponsibilityId"
          Group:
            Id:
              name: "groupId"
            GroupName:
              name: "groupName"
          Role:
            Signifier:
              name: "groupRoleName"
          Filter:
            Field:
              name: "groupId"
              operator: "NOT_NULL"

```

`Filter` is a reserved key. The example above first includes a `userId is not null` filtering clause to show responsibilities with a related user by (More on available filters later in this

guide). Then, select the related responsibilities again, this time only keeping those with a related group.

```
{
  "view": {
    "Community0": [
      {
        "communityId": "c87f166e-041f-4bea-8ff7-c1ffbab2ceeb",
        "communityName": "First Community"
      },
      {
        "communityId": "12345678-0020-0000-0000-000000000000",
        "communityName": "Second Community",
        "Responsibility1": [
          {
            "userResponsibilityId": "0ecb2fff-d5de-43d0-be60-
f7f201c10d41",
            "User2": [
              {
                "userId": "00000000-0000-0000-0000-
000000900002",
                "firstName": "Admin",
                "lastName": "Istrator"
              }
            ],
            "Role3": [
              {
                "roleName": "Admin"
              }
            ]
          },
          {
            "userResponsibilityId": "42b9d114-2c0c-4e96-a1ce-
b645d5e92365",
            "User2": [
              {
                "userId": "00000000-0000-0000-0000-
000000900002",
                "firstName": "Admin",
                "lastName": "Istrator"
              }
            ],
            "Role3": [
              {
                "roleName": "Steward"
              }
            ]
          }
        ],
        "Responsibility4": [
```

```

    {
      "groupResponsibilityId": "5fc0cc5f-e30e-488c-94bc-
acdea171219d",
      "Group5": [
        {
          "groupId": "4eb1f4a9-14a3-4539-8afc-
733925161179",
          "groupName": "admin"
        }
      ],
      "Role6": [
        {
          "groupRoleName": "Admin"
        }
      ]
    }
  ]
}

```

**Note** In the result tree, `Responsibility1` shows all related users and `Responsibility4` only contains the groups.

## Filtering performance considerations

When a to-many relation is traversed in the query tree, performance is impacted because a new query is made against the Collibra internal storage engine. In the above example, the relation between the community and responsibility entities is of the to-many kind because a community can have many related responsibilities. Depending on the shape and amount of results, the performance penalty can range from completely irrelevant to a sizeable chunk added to the overall query time.

Here is the optimal way to query.

## JSON

```
{
  "ViewConfig": {
    "Resources": {
      "Community": {
        "Id": { "name": "communityId" },
        "Name": { "name": "communityName" },
        "Responsibility": {
          "Id": { "name": "responsibilityId" },
          "User": {
            "Id": { "name": "userId" },
            "FirstName": { "name": "firstName" },
            "LastName": { "name": "lastName" }
          },
          "Group": {
            "Id": { "name": "groupId" },
            "GroupName": { "name": "groupName" }
          },
          "Role": {
            "Signifier": { "name": "roleName" }
          }
        }
      }
    }
  }
}
```

## YAML

```

---
ViewConfig:
  Resources:
    Community:
      Id:
        name: "communityId"
      Name:
        name: "communityName"
      Responsibility:
      Id:
        name: "ResponsibilityId"
      User:
      Id:
        name: "userId"
      FirstName:
        name: "firstName"
      LastName:
        name: "lastName"
      Group:
      Id:
        name: "groupId"
      GroupName:
        name: "groupName"
      Role:
      Signifier:
        name: "roleName"

```

The results should be formatted like the example below.

```

{
  "view": {
    "Community0": [
      {
        "communityId": "c87f166e-041f-4bea-8ff7-c1ffbab2ceeb",
        "communityName": "First Community"
      },
      {
        "communityId": "12345678-0020-0000-0000-000000000000",
        "communityName": "Second Community",
        "Responsibility1": [
          {
            "responsibilityId": "0ecb2fff-d5de-43d0-be60-
f7f201c10d41",
            "User2": [

```

```

        {
            "userId": "00000000-0000-0000-0000-0000-000000900002",
            "firstName": "Admin",
            "lastName": "Istrator"
        }
    ],
    "Group3": [
        {}
    ],
    "Role4": [
        {
            "roleName": "Admin"
        }
    ]
},
{
    "responsibilityId": "42b9d114-2c0c-4e96-a1ce-b645d5e92365",
    "User2": [
        {
            "userId": "00000000-0000-0000-0000-0000-000000900002",
            "firstName": "Admin",
            "lastName": "Istrator"
        }
    ],
    "Group3": [
        {}
    ],
    "Role4": [
        {
            "roleName": "Steward"
        }
    ]
},
{
    "responsibilityId": "5fc0cc5f-e30e-488c-94bc-acdea171219d",
    "User2": [
        {}
    ],
    "Group3": [
        {
            "groupId": "4eb1f4a9-14a3-4539-8afc-733925161179",
            "groupName": "admin"
        }
    ],
    "Role4": [

```

```

        {
            "roleName": "Admin"
        }
    ]
}
]
}
]
}
}

```

## Sort the results

Use the `Order` clause to sort results. Just like filters, `Order` references one or more declared fields on the entity to be sorted or one of its children, or grandchildren.

Use the `ASC`, which is the default, and `DESC` constants to request ordering in ascending or descending order.

### JSON

```

{
  "ViewConfig": {
    "Resources": {
      "Community": {
        "Id": { "name": "communityId" },
        "Name": { "name": "communityName" },
        "Order": [
          { "Field": { "name": "communityName", "order": "ASC" }
        ]
      }
    }
  }
}

```

## YAML

```

---
ViewConfig:
  Resources:
    Community:
      Id:
        name: "communityId"
      Name:
        name: "communityName"
      Order:
        -
          Field:
            name: "communityName"
            order: "ASC"

```

The following example shows assets ordered by the name of a related entity.

## JSON

```

{
  "ViewConfig": {
    "Resources": {
      "Asset": {
        "Id": { "name": "id" },
        "Signifier": { "name": "name" },
        "Relation": {
          "type": "SOURCE",
          "TargetAsset": {
            "Id": { "name": "targetRelatedAssetId" },
            "Signifier": { "name": "targetRelatedAsset" }
          }
        }
      },
      "Order": [
        { "Field": { "name": "targetRelatedAsset", "order":
"ASC" } }
      ]
    }
  }
}

```

## YAML

```

---
ViewConfig:
  Resources:
    Asset:
      Id:
        name: "id"
      Signifier:
        name: "name"
      Relation:
        type: "SOURCE"
      TargetAsset:
        Id:
          name: "targetRelatedAssetId"
        Signifier:
          name: "targetRelatedAsset"
    Order:
      -
        Field:
          name: "targetRelatedAsset"
          order: "ASC"

```

The `type` property on the relation allows you to determine which relationship is used when navigating from the parent asset to the relation. In the example above, there might be more than one `targetRelatedAsset` for each source asset. The query engine orders the related target assets first and uses the first value to order the parent assets. Similar to filtering, the order clause only affects the entities on which it is set. In the example, the `targetRelatedAssets` is not sorted. To sort, you must add another ordering clause on the Relation entity.

You should not sort on the target asset node because ordering only makes sense in a collection. If an asset is the source for many relations and the relation has one target asset, you must sort the collection of relations, not the related target asset directly.

The following query example sorts both collections.

**Note** For simplicity, this query has no filtering. Executing filtering would return all assets and all relations available in Collibra.

## JSON

```
{
  "ViewConfig": {
    "Resources": {
      "Asset": {
        "Id": { "name": "id" },
        "Signifier": { "name": "name" },
        "Relation": {
          "type": "SOURCE",
          "TargetAsset": {
            "Id": { "name": "targetRelatedAssetId" },
            "Signifier": { "name": "targetRelatedAsset" }
          },
          "Order": [
            { "Field": { "name": "targetRelatedAsset", "order":
"ASC" } }
          ]
        },
        "Order": [
            { "Field": { "name": "targetRelatedAsset", "order":
"ASC" } }
          ]
        }
      }
    }
  }
}
```

## YAML

```

---
ViewConfig:
  Resources:
    Asset:
      Id:
        name: "id"
      Signifier:
        name: "name"
      Relation:
        type: "SOURCE"
      TargetAsset:
        Id:
          name: "targetRelatedAssetId"
        Signifier:
          name: "targetRelatedAsset"
      Order:
        -
          Field:
            name: "targetRelatedAsset"
            order: "ASC"
      Order:
        -
          Field:
            name: "targetRelatedAsset"
            order: "ASC"

```

## Differentiate selected properties from properties required in a filter clause

To find the most recently created users, query the `CreatedOn` property and add a filter that uses the `greater than` operator. Adding the `CreatedOn` property to the tree also selects that property.

In cases where you only want the user ID and first and last name, tell the query engine not to return the `CreatedOn` property and use it in the filter.

**Note** `CreatedOn` is a date expressed as the number of milliseconds since 1/1/1970.

## JSON

```
{
  "ViewConfig": {
    "Resources": {
      "User": {
        "Id": { "name": "userId" },
        "FirstName": { "name": "firstName" },
        "LastName": { "name": "lastName" },
        "CreatedOn": { "name": "createdOn", "hidden": true },
        "Filter": { "Field": { "name": "createdOn", "operator":
"GREATER", "value": "1440492290300" } }
      }
    }
  }
}
```

## YAML

```
---
ViewConfig:
  Resources:
    User:
      Id:
        name: "userId"
      FirstName:
        name: "firstName"
      LastName:
        name: "lastName"
      CreatedOn:
        name: "createdOn"
        hidden: true
      Filter:
        Field:
          name: "createdOn"
          operator: "GREATER"
          value: "1440492290300"
```

**Note** Using `hidden: true` on a property removes that property from the results. The default value is `false`.

```

{
  "view": {
    "User": [
      {
        "userId": "9546bbe9-7299-4a99-bfd2-
d97f8256c201",
        "firstName": "Patrick",
        "lastName": "Star"
      },
      {
        "userId": "d9f3cc67-0db7-4aa5-a246-
e83a62ea5c62",
        "firstName": "SpongeBob",
        "lastName": "SquarePants"
      }
    ]
  }
}

```

## Strip HTML from text results

Saved values from Collibra also includes HTML formatting tags. Although not visible to users, the user interface uses the tags to format data. These tags are also included when you query data and may look like garbage in Excel reports.

The example below shows how to strip out the HTML formatting tags, leaving only the values.

### JSON

```

{
  "ViewConfig": {
    "Resources": {
      "Community": {
        "Id": { "name": "communityId" },
        "Name": { "name": "communityName" },
        "Description": { "name": "communityDescription",
"stripHtml": true }
      }
    }
  }
}

```

## YAML

```

---
ViewConfig:
  Resources:
    Community:
      Id:
        name: "communityId"
      Name:
        name: "communityName"
      Description:
        name: "communityDescription"
        stripHtml: true

```

**Note** Use `stripHtml` on any text field. When true, the returned value is stripped from the HTML tags.

## Filtering operators

Operator	Reverse Operator	Parameters	Type compatibility	Description
EQUALS	NOT_EQUALS	1	Text, Number, Boolean	Equal/not equal to the value.
STARTS_WITH	NOT_STARTS_WITH	1	Text	The text starts/does not start with characters.

Operator	Reverse Operator	Parameters	Type compatibility	Description
STARTS_WITH_DIGIT	/	Optional	Text	The text starts with a digit. The optional parameter is a pair of upper and lower boundaries separated by a comma. For example, "3, 8" means any digit from 3 to 8 is included.
ENDS_WITH	NOT_ENDS_WITH	1	Text	The text ends/does not end with characters.
INCLUDES	NOT_INCLUDES	1	Text	The text contains/does not contain the characters.
LESS	GREATER	1	Number	The value is strictly less than/greater than the value.
LESS_OR_EQUALS	GREATER_OR_EQUALS	1	Number	The value is less than or equal to/greater than or equal to the value.
BETWEEN	/	2	Number	The value is included within the values.
NULL	NOT_NULL	None	Text, Number, Boolean	Absence/presence of value.
IN	NOT_IN	Collection	Text, Number, Boolean	The value is in/not in the set of values.

Operator	Reverse Operator	Parameters	Type compatibility	Description
EXISTS	NOT_EXISTS	1 (optional)	n/a	See below.
CR_FILTER_DOMAIN	/	1	n/a	ComplexRelation specific filter. Includes only complex relations with at least one related asset in the domain.

The following table shows samples for each operator.

Operator	Example
EQUALS	<pre>{ "Field": { "name": "domainName", "operator": "EQUALS", "value": "New Business Terms" } }</pre>
STARTS_WITH	<pre>{ "Field": { "name": "domainName", "operator": "STARTS_WITH", "value": "New" } }</pre>
STARTS_WITH_DIGIT	<pre>{ "Field": { "name": "assetName", "operator": "STARTS_WITH_DIGIT" } }</pre>
ENDS_WITH	<pre>{ "Field": { "name": "domainName", "operator": "ENDS_WITH", "value": "Terms" } }</pre>

Operator	Example
INCLUDES	<pre>{ "Field": { "name": "domainName", "operator": "CONTAINS", "value": "Bus" } }</pre>
LESS	<pre>{ "Field": { "name": "lastModified", "operator": "GREATER", "value": "1440492290300" } }</pre>
LESS_OR_EQUALS	<pre>{ "Field": { "name": "lastModified", "operator": "GREATER_OR_EQUALS", "value": "1440492290300" } }</pre>
BETWEEN	<pre>{ "Field": { "name": "lastModified", "operator": "BETWEEN", "values": [ "1440492290300", "1440493000000" ] } }</pre>
NULL	<pre>{ "Field": { "name": "description", "operator": "NULL" } }</pre>
IN	<pre>{ "Field": { "name": "statusName", "operator": "IN", "values": [ "New", "In Review" ] } }</pre>
EXISTS	<pre>{ "Field": { "target": "RelationSource", "operator": "EXISTS", "value": "00000000-0000-0000-0000-000000007001", "name": "assetId" } }</pre>

Operator	Example
CR_FILTER_DOMAIN	<pre>{ "Field": { "operator": "CR_FILTER_DOMAIN", "value": "00000000-0000-0000-0000-000000006013" } }</pre>

## EXISTS/NOT\_EXISTS filter

In the context of a graph query, the `EXISTS` filter tests the existence of a relationship with another entity. This is the only filter that is explicitly limited to filtering on an entity located directly under the filtered node. To specify which relation should exist/not exist, the filter has a `target` key.

You can also pass a parameter to the `EXISTS` filter. This parameter is used as a secondary filtering element. To query the assets with an attribute of type `Description`, use the `EXISTS` filter on the asset with target value `Attribute` and also the `Id` of the `Description` type in the `value` key of the filter.

The table below lists the possible target values and the expected value type for optional parameters.

Filtered Entity	Target value	Optional Parameter	Description
Community, Domain, Asset	Responsibility	Role Id	Filter resources related/not related to a responsibility. Optionally, only responsibilities related to the Role Id.
Asset	Relation	RelationType Id	Filter assets that are/are not the source or target of a relation. Optionally, only relations related to the RelationType Id.

Filtered Entity	Target value	Optional Parameter	Description
Asset	RelationSource	RelationTypeId	Filter assets that are/are not the "source " of a relation. Optionally, only relations related to the RelationTypeId.
Asset	RelationTarget	RelationTypeId	Filter assets that are/are not " target" of a relation. Optionally, only relations related to the RelationTypeId.
Asset	Attribute	AttributeTypeId	Filter assets that have/do not have an attribute. Optionally, only attributes related to the AttributeTypeId.
Asset	StringAttribute	AttributeTypeId	Filter assets that have/do not have a StringAttribute. Optionally, only StringAttributes related to the AttributeTypeId.
Asset	SingleValueListAttribute	AttributeTypeId	Filter assets that have/do not have a SingleValueListAttribute. Optionally, only SingleValueListAttributes related to the AttributeTypeId.

Filtered Entity	Target value	Optional Parameter	Description
Asset	MultiValueListAttribute	AttributeTypeId	Filter assets that have/do not have a MultiValueListAttribute. Optionally, only MultiValueListAttribute related to the AttributeTypeId.
Asset	BooleanAttribute	AttributeTypeId	Filter assets that have/do not have a BooleanAttribute. Optionally, only BooleanAttributes related to the AttributeTypeId.
Asset	NumericAttribute	AttributeTypeId	Filter assets that have/do not have a NumericAttribute. Optionally, NumericAttributes related to the AttributeTypeId.
Asset	DateTimeAttribute	AttributeTypeId	Filter assets that have/do not have a DateTimeAttribute. Optionally, only DateTimeAttributes related to the AttributeTypeId.

Note The EXISTS/NOT\_EXISTS filters are exclusively for communities, domains and assets.

## Filtering in Hierarchy

When the `EQUALS/NOT_EQUALS` and `IN/NOT_IN` operators are used in conjunction with an `Id` property of an asset, a `RelationType` or a `Community` can take an additional `descendants: true` parameter. When true, the query engine will force an `IN` or `NOT_IN` filter and add all `Ids` from the child assets, relation types or communities. This allows selecting the following assets.

- All assets under a community, including the subcommunities.
- All assets that are of type "X" or one of its subtypes.

## Boolean operators

You can combine the filtering operators using Boolean operators. Combining Boolean operators results in a logical binary tree of possibilities. Because the binary tree is not easy to read, the `ViewConfig` provides a way of specifying a `Named Logical Array`.

### JSON

```
"Filter": {
  "AND": [
    { "Field": { "name": "domainId", "operator":
"EQUALS", "value": "02204077-1cd1-4c70-a7c4-4cd845194b81" } },
    { "Field": { "name": "assetId", "operator":
"EXISTS", "value": "00000000-0000-0000-0000-000000007001",
"target": "RelationSource" } },
    { "Field": { "name": "statusName", "operator": "IN",
"values": [ "New", "In Review" ] } }
  ]
}
```

## YAML

```
Filter:
  AND:
  -
    Field:
      name: "domainId"
      operator: "EQUALS"
      value: "02204077-1cd1-4c70-a7c4-4cd845194b81"
  -
    Field:
      name: "assetId"
      operator: "EXISTS"
      value: "00000000-0000-0000-0000-000000007001"
      target: "RelationSource"
  -
    Field:
      name: "statusName"
      operator: "IN"
      values:
      - "New"
      - "In Review"
```

**Note** Filtering elements bundled together in a named array, are logically combined using the name of the array: either **AND** or **OR**. You can also nest these logical arrays, allowing all possible Boolean combinations.

## JSON

```

"Filter": {
  "AND": [
    {
      "OR": [
        { "Field": { "name": "domainId", "operator": "EQUALS",
"value": "02204077-1cd1-4c70-a7c4-4cd845194b81" } },
        { "Field": { "name": "assetId", "operator": "EXISTS",
"value": "00000000-0000-0000-0000-000000007001", "target":
"RelationSource" } }
      ]
    },
    { "Field": { "name": "statusName", "operator": "IN",
"values": [ "New", "In Review" ] } }
  ]
}

```

## YAML

```

Filter:
  AND:
  -
    OR:
    -
      Field:
        name: "domainId"
        operator: "EQUALS"
        value: "02204077-1cd1-4c70-a7c4-4cd845194b81"
    -
      Field:
        name: "assetId"
        operator: "EXISTS"
        value: "00000000-0000-0000-0000-000000007001"
        target: "RelationSource"
  -
    Field:
      name: "statusName"
      operator: "IN"
      values:
      - "New"
      - "In Review"

```

## Filter properties

You can use filter shortcuts to reduce the amount of time required to write a JSON query. For example, `Relation` has a `typeId` parameter that takes an `Id` and eliminates the need to add a `RelationType` node with an `Id` property. These one-line filtering properties are the most commonly used filters because they make the query a lot less verbose.

The following example shows filtering a `StringAttribute` on an `AttributeType` using the `labelId` filtering property.

### JSON

```
"StringAttribute": {
  "labelId": "00000000-0000-0000-0000-000000000202",
  "Id": { "name": "descriptionId" },
  "LongExpression": { "name": "description" }
}
```

### YAML

```
StringAttribute:
  labelId: "00000000-0000-0000-0000-000000000202"
  Id:
    name: "descriptionId"
  LongExpression:
    name: "description"
```

Refer to [Entities, properties and relations](#) for the list of available filter properties for each entity.

## Virtual properties

Collibra does not store virtual properties. It calculates them at runtime and dynamically evaluates the value of each property when the query executes. Virtual properties typically support hierarchical queries that show if the resource has children. Some examples are `hasTaxonomyChildren` and `hasChildForRelation`.

## Clarify the relationship between two entities

When two entities are related in more than one way, nesting the entities inside each other is not enough to determine which path to follow. For example, an asset can be either the `source` or `target` of a relation or a user can be the `creator` or the `lastModifier` of a resource. Depending on the entity, there are two possibilities:

- The name of the child entity is changed. For example, `SourceAsset` or `TargetAsset` should be used under `Relation` instead of `Asset`. In this case, they act and behave just like normal assets and exist for the sole purpose of clarifying the relationship followed.
- A special parameter called the `Parent Relationship Selector` is added to the child entity. For example, `Relation` has a `Type` parameter with possible values of `SOURCE` or `TARGET`. This parameter determines the relationship between the `Relation` and the `parentAsset`.

The following example shows the query going two levels deep.

## JSON

```
{
  "ViewConfig": {
    "Resources": {
      "Asset": {
        "Id": { "name": "id" },
        "Signifier": { "name": "name" },
        "Relation": {
          "type": "SOURCE",
          "TargetAsset": {
            "Id": { "name": "relatedAssetLevelOneId" },
            "Signifier": { "name": "relatedAssetLevelOne" },
            "Relation": {
              "type": "TARGET",
              "SourceAsset": {
                "Id": { "name": "relatedAssetLevelTwoId" },
                "Signifier": { "name": "relatedAssetLevelTwo" }
              }
            }
          }
        }
      }
    }
  }
}
```

## YAML

```

---
ViewConfig:
  Resources:
    Asset:
      Id:
        name: "id"
      Signifier:
        name: "name"
      Relation:
        type: "SOURCE"
      TargetAsset:
        Id:
          name: "relatedAssetLevelOneId"
        Signifier:
          name: "relatedAssetLevelOne"
        Relation:
          type: "TARGET"
        SourceAsset:
          Id:
            name: "relatedAssetLevelTwoId"
          Signifier:
            name: "relatedAssetLevelTwo"

```

These special parameters and custom entity names only exist for a fraction of the available entities. For a complete list, see [Entities, properties and relations](#).

**Note** To reduce the number of assets returned, the query example above is not filtered. Filtering would return a large amount of data and impact performance.

## Page the results

The Output Module also supports paging the results for the root node of the query. You can specify an offset and a length parameter to limit the results to a subset of the complete list.

JSON key	Default value	Description
displayStart	0	The offset in the list of results. This offset is a zero-based index value.
displayLength	-1	The maximum total number of results to return. A negative value means unlimited.
maxCountLimit	-1	The maximum count value. A count of all records can lead to performance problems. When paging, you can limit the max count to this value. Passing 0 means no count is done.

## JSON

```
{
  "ViewConfig": {
    "displayStart": 10,
    "displayLength": 5,
    "maxCountLimit": 10000,
    "Resources": {
      "Community": {
        "Id": { "name": "communityId" },
        "Name": { "name": "communityName" },
        "Description": { "name": "communityDescription" },
        "Order": [ { "Field": { "name": "communityName",
"order": "ASC" } } ]
      }
    }
  }
}
```

## YAML

```

---
ViewConfig:
  displayStart: 10
  displayLength: 5
  maxCountLimit: 10000
  Resources:
    Community:
      Id:
        name: "communityId"
      Name:
        name: "communityName"
      Description:
        name: "communityDescription"
      Order:
        -
          Field:
            name: "communityName"
            order: "ASC"

```

The example query above selects page 3 of all communities, with five results per page.

## Note

- Paged results should always be sorted, otherwise the results might seem inconsistent from page to page.
- The paged results list is recalculated upon each request.
- All entities that have been added or removed will appear/disappear from the list, modifying the indexes of the elements in the results list.
- The Collibra Console allows limiting the number of results returned by queries. The values range from 10 000 to 100 000. If enabled, and the limit is set, then:
  - The default `displayLength` value (-1) is overwritten by the limit set through the console.
  - If the `displayLength` set in the `ViewConfig/TableViewConfig` is larger than the limit value set in the Collibra Console, an exception is thrown.

## Map the results to a tabular format

The Output Module supports a tabular output format and uses a different kind of `ViewConfig`, called `TableViewConfig`. `TableViewConfig` has a `Columns` mapping

section that assigns each selected field to a column. The previous examples use the `ViewConfig` as input to the API to produce a JSON tree format.

The following example uses `TableViewConfig`. This is available under the same `{{domain}}/rest/2.0/outputModule/export/json` endpoint, just using the `TableViewConfig` as the JSON payload.

## JSON

```
{
  "TableViewConfig": {
    "displayLength": 5,
    "displayStart": 10,
    "Resources": {
      "Community": {
        "Id": { "name": "communityId" },
        "Name": { "name": "communityName" },
        "Description": { "name": "communityDescription" }
      }
    },
    "Columns": [
      { "Column": { "fieldName": "communityId" } },
      { "Column": { "fieldName": "communityName" } },
      { "Column": { "fieldName": "communityDescription" } }
    ]
  }
}
```

## YAML

```

---
TableViewConfig:
  displayLength: 5
  displayStart: 10
  Resources:
    Community:
      Id:
        name: "communityId"
      Name:
        name: "communityName"
      Description:
        name: "communityDescription"
  Columns:
  -
    Column:
      fieldName: "communityId"
  -
    Column:
      fieldName: "communityName"
  -
    Column:
      fieldName: "communityDescription"

```

When formatted, this query produces an array of rows, each containing the requested columns.

```

{
  "iTotalDisplayRecords": 48,
  "iTotalRecords": 5,
  "aaData": [
    {
      "communityId": "12345678-0006-0000-0000-000000000000",
      "communityName": "Simple Community 6",
      "communityDescription": ""
    },
    {
      "communityId": "12345678-0007-0000-0000-000000000000",
      "communityName": "Simple Community 7",
      "communityDescription": ""
    },
    {

```

```

        "communityId": "12345678-0008-0000-0000-000000000000",
        "communityName": "Simple Community 8",
        "communityDescription": ""
    },
    {
        "communityId": "12345678-0009-0000-0000-000000000000",
        "communityName": "Simple Community 9",
        "communityDescription": ""
    },
    {
        "communityId": "12345678-0010-0000-0000-000000000000",
        "communityName": "Simple Community 10",
        "communityDescription": ""
    }
]
}

```

**Note** Because the `Columns` mapping determines what should be returned, setting `hidden: true` on a property has no effect in a `TableViewConfig`.

In the following example, the "displayLength" value is set to 0. This query shows the number of entities without retrieving actual results.

**Note** The JSON Data Table output contains the total number of available records in Collibra for this query, which is `iTotalDisplayRecords`. It also contains the number of records returned in this set, which is `iTotalRecords`.

```

{
  "iTotalDisplayRecords": 48,
  "iTotalRecords": 0,
  "aaData": []
}

```

You can use the `TableViewConfig` queries with the following endpoints:

- `{{domain}}/rest/2.0/outputModule/export/{{json | csv}}`
- `{{domain}}/rest/2.0/outputModule/export/{{json | csv | excel}}-file`

- `{{domain}}/rest/2.0/outputModule/export/{{json | csv | excel}}-job`

## Handling to-many results in a tabular format

You can select all assets from a domain together with their `Note` attributes. Each asset may have multiple notes. When there are multiple notes, the most recent note should be ordered at the top of the list.

The `TableViewConfig` may look similar to the example below.

### JSON

```
{
  "TableViewConfig": {
    "Resources": {
      "Asset": {
        "Id": { "name": "assetId" },
        "Signifier": { "name": "assetName" },
        "StringAttribute": {
          "LongExpression": { "name": "note" },
          "CreatedOn": { "name": "noteCreatedOn" },
          "Order": [ { "Field": { "name": "noteCreatedOn",
"order": "DESC" } } ]
        },
        "Domain": {
          "Id": { "name": "domainId" }
        },
        "Filter": { "Field": { "name": "domainId", "operator":
"EQUALS", "value": "f342423f-54fd-4643-935b-adbd9e7f5e25" } },
        "Order": [ { "Field": { "name": "assetName" } } ]
      }
    },
    "Columns": [
      { "Column": { "fieldName": "assetId" } },
      { "Column": { "fieldName": "assetName" } },
      { "Column": { "fieldName": "note" } }
    ]
  }
}
```

## YAML

```

---
TableViewConfig:
  Resources:
    Asset:
      Id:
        name: "assetId"
      Signifier:
        name: "assetName"
      StringAttribute:
        LongExpression:
          name: "note"
      CreatedOn:
        name: "noteCreatedOn"
      Order:
        -
          Field:
            name: "noteCreatedOn"
            order: "DESC"
      Domain:
        Id:
          name: "domainId"
      Filter:
        Field:
          name: "domainId"
          operator: "EQUALS"
          value: "f342423f-54fd-4643-935b-adbd9e7f5e25"
      Order:
        -
          Field:
            name: "assetName"
    Columns:
      -
        Column:
          fieldName: "assetId"
      -
        Column:
          fieldName: "assetName"
      -
        Column:
          fieldName: "note"

```

Depending on the format requested, the results might be different. In Excel or CSV format, each asset is duplicated on a new row for each note value.

	A	B	C	D
1	termId	termName	note	
2	c20d5b39-6c5d-411b-adcb-82a1dd3851cc	Business Term 1	Second Note	
3	c20d5b39-6c5d-411b-adcb-82a1dd3851cc	Business Term 1	First note	
4	1a6a8f73-43b0-4a29-84c3-baaa3467be70	Business Term 2	Single note on BT2	
5	7329349e-0631-41a7-a740-738979d887c6	Business Term 3	Single Note on BT3	
6				

This is similar to using SQL queries to join two tables with a one-to-many relationship. Unlike SQL, if you select an asset with two notes and three responsibilities, the asset would use three lines of the Excel table, not six, and the third row in the note column would be empty.

JSON format, on the other hand, does not add duplicate rows to the results. Instead, it returns the first note found and discards the other notes.

#### Example "First note" is missing for "Business Asset 1"

```
{
  "iTotalDisplayRecords": 3,
  "iTotalRecords": 3,
  "aaData": [
    {
      "assetId": "c20d5b39-6c5d-411b-adcb-82a1dd3851cc",
      "assetName": "Business Term 1",
      "note": "Second Note"
    },
    {
      "assetId": "1a6a8f73-43b0-4a29-84c3-baaa3467be70",
      "assetName": "Business Term 2",
      "note": "Single note on BT2"
    },
    {
      "assetId": "7329349e-0631-41a7-a740-738979d887c6",
      "assetName": "Business Term 3",
      "note": "Single Note on BT3"
    }
  ]
}
```

For tabular formats that do not duplicate rows, you can add the `Group` mapping construct to the `Columns` section.

## JSON

```

{
  "TableViewConfig": {
    "Resources": {
      "Asset": {
        "Id": { "name": "assetId" },
        "Signifier": { "name": "assetName" },
        "StringAttribute": {
          "LongExpression": { "name": "note" },
          "CreatedOn": { "name": "noteCreatedOn" },
          "Order": [ { "Field": { "name": "noteCreatedOn",
"order": "DESC" } } ]
        },
        "Domain": {
          "Id": { "name": "domainId" }
        },
        "Filter": { "Field": { "name": "domainId", "operator":
"EQUALS", "value": "f342423f-54fd-4643-935b-adbd9e7f5e25" } },
        "Order": [ { "Field": { "name": "assetName" } } ]
      }
    },
    "Columns": [
      { "Column": { "fieldName": "assetId" } },
      { "Column": { "fieldName": "assetName" } },
      {
        "Group": {
          "name": "Notes",
          "Columns": [
            { "Column": { "fieldName": "note" } }
          ]
        }
      }
    ]
  }
}

```

## YAML

```
---
TableViewConfig:
  Resources:
    Asset:
      Id:
        name: "assetId"
      Signifier:
        name: "assetName"
      StringAttribute:
        LongExpression:
          name: "note"
      CreatedOn:
        name: "noteCreatedOn"
      Order:
        -
          Field:
            name: "noteCreatedOn"
            order: "DESC"
      Domian:
        Id:
          name: "domainId"
      Filter:
        Field:
          name: "domainId"
          operator: "EQUALS"
          value: "f342423f-54fd-4643-935b-adbd9e7f5e25"
      Order:
        -
          Field:
            name: "assetName"
    Columns:
      -
        Column:
          fieldName: "assetId"
      -
        Column:
          fieldName: "assetName"
      -
    Group:
      name: "Notes"
      Columns:
        -
          Column:
            fieldName: "note"
```

A `Group` mapping allows grouping multiple results for a single parent. A `Group` must receive a user-defined name that will be used when formatting the results.

```
{
  "iTotalDisplayRecords": 3,
  "iTotalRecords": 3,
  "aaData": [
    {
      "assetId": "c20d5b39-6c5d-411b-adcb-82a1dd3851cc",
      "assetName": "Business Term 1",
      "Notes": [
        {
          "note": "Second Note"
        },
        {
          "note": "First note"
        }
      ]
    },
    {
      "assetId": "1a6a8f73-43b0-4a29-84c3-baaa3467be70",
      "assetName": "Business Term 2",
      "Notes": [
        {
          "note": "Single note on BT2"
        }
      ]
    },
    {
      "assetId": "7329349e-0631-41a7-a740-738979d887c6",
      "assetName": "Business Term 3",
      "Notes": [
        {
          "note": "Single Note on BT3"
        }
      ]
    }
  ]
}
```

#### Note

Here are some rules about `Group`:

- `Group` mappings cannot be nested, a `Group` defined within a `Group` is not supported.
- All columns within a group must be related to the same parent entity.

## Set an execution timeout

Queries that run on complicated or large amounts of data may be slower than expected. Usually, the best approach is to paginate the results. In cases where the complexity or amount of data is unknown, a timeout can break up the execution. The Output Module can timeout, not only on the execution logic level, but also break running database queries to protect the database load from stress.

You can set a timeout for each `ViewConfig` and `TableViewConfig` execution on the main config level. Defining it in the body of the query is optional.

If a timeout is not set in the `ViewConfig` or `TableViewConfig`, then a default value is added. You can configure the default value in the Collibra console, the default setting is eight hours.

### Warning

- No single query may run longer than 24 hours, which is the maximum value.
- Pagination is recommended for queries that may run longer.
- Those values will significantly smaller in the next major release, so it would be prudent to think about pagination.
- If the `queryTimeout` is more than 24 hours, the system will overwrite it with the maximum 24-hour limit value.
- Important exceptions are the `{{domain}}/rest/2.0/outputModule/export/{{csv | excel}}-job` endpoints. Here, data is calculated in chunks, with the size of the chunk defined in the Collibra Console. A separate query calculates each chunk and the timeout value set in the `TableViewConfig` will be a timeout value calculation for that chunk.

JSON key	Minimum value	Default value	Maximum value	Description
queryTimeout	1 minute	8 hours (configurable)	24 hours	Timeout in number of seconds that computation of the output can last. No decimal point allowed. Negative values are invalid. Zero means no timeout. Positive values will stop execution and return an error if the execution takes longer than the given number of seconds.

Example of ViewConfig with a timeout set:

## JSON

```
{
  "ViewConfig": {
    "queryTimeout": 5,
    "Resources": {
      "Domain": {
        "name": "d",
        "Name": {
          "name": "vocName"
        },
        "Asset": {
          "name": "t",
          "Signifier": {
            "name": "assetName"
          },
          "AssetType": {
            "name": "tt",
            "Name": {
              "name": "assetType"
            }
          }
        }
      }
    }
  }
}
```

## YAML

```

---
ViewConfig:
  queryTimeout: 5
  Resources:
    Domain:
      name: "d"
      Name:
        name: "vocName"
    Asset:
      name: "t"
      Signifier:
        name: "assetName"
      AssetType:
        name: "tt"
        Name:
          name: "assetType"

```

After the timeout is reached, the REST request will receive a response with HTTP error code 408. Instead of a results message, the body will contain a JSON with the error description.

## Structural validation of the query

Because writing `ViewConfigs` and `TableViewConfigs` is a tedious and error-prone task, the following endpoints allow using the `validationEnabled` parameter.

- `{{domain}}/rest/2.0/outputModule/export/{{xml | json | csv}}`
- `{{domain}}/rest/2.0/outputModule/export/{{xml | json | csv | excel}}-file`
- `{{domain}}/rest/2.0/outputModule/export/{{xml | json | csv | excel}}-job`

This parameter, when set to true, enables validation of the input

`ViewConfig/TableViewConfig`. By default, the parameter value is set to false.

The example below shows a small typo in the filter. `userID` is used instead of `userId`.

When you make a POST request to

{{domain}}/rest/2.0/outputModule/export/json?validationEnabled=true,  
the following body results.

## JSON

```
{
  "ViewConfig": {
    "displayLength": 5,
    "Resources": {
      "Community": {
        "Id": { "name": "communityId" },
        "Name": { "name": "community" },
        "Responsibility": {
          "Id": { "name": "responsibilityId" },
          "User": {
            "Id": { "name": "userId" },
            "FirstName": { "name": "userName" }
          }
        }
      },
      "Filter": { "Field": { "name": "userID", "Operator": "NOT_
NULL" } }
    }
  }
}
```

## YAML

```
---
ViewConfig:
  displayLength: 5
  Resources:
    Community:
      Id:
        name: "communityId"
      Name:
        name: "community"
      Responsibility:
      Id:
        name: "responsibilityId"
      User:
      Id:
        name: "userId"
      FirstName:
        name: "userName"
    Filter:
      Field:
        name: "userID"
        Operator: "NOT_NULL"
```

The response will be similar to the example below.

```
{
  "viewConflict": [
    {
      "type": "View Configuration Conflict",
      "message": "Field 'userID' is unknown.",
      "id": "7c723d33-dc8d-484b-90df-91e3364d771a"
    }
  ]
}
```

# API endpoints and query formats

The available rest API endpoints URL are:

- `{{domain}}/rest/2.0/outputModule/export/{{format}}`
- `{{domain}}/rest/2.0/outputModule/export/{{format}}-file`
- `{{domain}}/rest/2.0/outputModule/export/{{format}}-job`

The available formats are XML, JSON, CSV and Excel.

## In this chapter

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## Endpoints and formats

Endpoint	CSV	JSON	CSV	EXCEL
• <code>{{domain}}/rest/2.0/outputModule/export/{{format}}</code>	YES	YES	YES	NO
• <code>{{domain}}/rest/2.0/outputModule/export/{{format}}-file</code>	YES	YES	YES	YES
• <code>{{domain}}/rest/2.0/outputModule/export/{{format}}-job</code>	YES	YES	YES	YES

## ViewConfig/TableViewConfig and formats

Format	Supports ViewConfig	Supports TableViewConfig
XML	YES	NO
JSON	YES	YES
CSV	NO	YES
EXCEL	NO	YES

## Single query and multi-query

Multi-query endpoints have less chance to timeout because of execution time limits, and thus can be used for larger exports.

Endpoint	CSV	JSON	CSV	EXCEL
<code>{{domain}}/rest/2.0/outputModule/export/{{format}}</code>	SINGLE	SINGLE	SINGLE	SINGLE

Endpoint	CSV	JSON	CSV	EXCEL
{{domain}}/rest/2.0/outputModule/export/{{format}}-file	SINGLE	SINGLE	SINGLE	SINGLE
{{domain}}/rest/2.0/outputModule/export/{{format}}-job	SINGLE	SINGLE	MULTI	MULTI

# Entities, properties and relations

Entity		
Entity is the base abstract class of all other entities. An abstract entity cannot be queried, thus <code>Entity</code> cannot be used in the query tree.		
Properties		
id	Text (36)	Universally unique identifier (UUID).

Resource		
Extends Entity		
Resource is an abstract entity, which is the base class of most other entities. Most other entities share the following properties and relations. An abstract entity cannot be queried, thus <code>Resource</code> cannot be used in the query tree.		
Properties		
createdOn	Number	Creation date (# milliseconds since 1/1/1970).
createdOnTimestamp	Number	Creation date (# milliseconds since 1/1/1970).

createdBy	Text	Id of the user who created this Resource.
lastModified	Number	Last modification date (# milliseconds since 1/1/1970).
lastModifiedTimestamp	Number	Last modification date (# milliseconds since 1/1/1970).
lastModifiedBy	Text	Id of the last user who modified this resource.
system	Boolean	Is this resource reserved by the system.
<b>Relations</b>		
User	Many-to-one	<ul style="list-style-type: none"> <li>• the user who created the resource.</li> <li>• the user who last modified the resource.</li> <li>• the user who created or last modified the resource. See User for details on specifying which kind of relationship is used.</li> </ul>

## Representation

Extends Resource

Representation is an abstract entity, which is the base class for Asset. All assets share the following relationships. An abstract entity cannot be queried, thus `Representation` cannot be used in the query tree.

### Properties

/		
<b>Relations</b>		
Status	Many-to-One	The current status of the representation.
Domain	Many-to-One	The domain containing the representation.
AssetType	Many-to-One	The AssetType of the representation.
Attribute	One-to-Many	The collection of attributes in the representation.
StringAttribute	One-to-Many	The collection of StringAttributes in the representation.
ScriptAttribute	One-to-Many	The collection of ScriptAttributes in the representation.
SingleValueListAttribute	One-to-Many	The collection of SingleValueListAttributes in the representation.
MultiValueListAttribute	One-to-Many	The collection of MultiValueListAttributes in the representation.
BooleanAttribute	One-to-Many	The collection of BooleanAttributes in the representation.

NumericAttribute	One-to-Many	The collection of NumericAttributes in the representation.
DateTimeAttribute	One-to-Many	The collection of DateTimeAttributes in the representation.
DateAttribute	One-to-Many	The collection of DateAttributes in the representation.

## Organization

Extends Resource

Represents the hierarchy of organizations available in Collibra.

### Properties

name	Text (255)	The name of the organization.
description	Text	The description of the organization.
uri	Text (255)	The URI of the organization.
language	Text(255)	The name of the language used.
meta	Boolean	Indicates if the community is related to the meta model, such as a hidden organization.
hasNonMetaChildren	Boolean	Indicates if the organization contains non-meta subcommunities or domains.

hasNonMetaChildCommunity	Boolean	Indicates if the organization contains non-meta communities.
organizationType	Text	Indicates if the organization is a community ("C") or a domain ("D")
<b>Relations</b>		
ParentCommunity	Many-to-One	The parent community of this organization. Null for root communities. Optional.
Community	One-to-Many	The collection of subcommunities.
Domain	One-to-Many	The collection of vocabularies contained in the organization.
Responsibility	One-to-Many	The collection of responsibilities playing a role in the organization.
SubCommunities	One-to-Many	The collection of domains contained in the community.
Comment	One-to-Many	The collection of comments contained in the community.
Asset	One-to-Many	The collection of assets contained in the community.
DomainType	One-to-Many	The type of domain.
Mapping	One-to-Many	The collection of mappings corresponding to this domain.
<b>Filtering Property</b>		

rootCommunity	Boolean	When true, the query engine adds a filter retaining only root communities. Only available when the community is also root of the query tree.
---------------	---------	----------------------------------------------------------------------------------------------------------------------------------------------

## Community

Extends Organization

Exact synonym of an organization but with default filtering on organizationType equal to "C"

## ParentCommunity

Extends Community

Exact synonym of a community. It can only be used as a child of the community to disambiguate the relationship followed.

## Domain

Extends Organization

Synonym of an organization but with default filtering on organizationType equal to "D" and with overridden relation for Community

### Relations

Community	Many-to-One	The parent community.
-----------	-------------	-----------------------

<h1>DomainType</h1>		
Extends Resource		
Each domain has a <code>DomainType</code> .		
Properties		
signifier	Text (255)	The name of the <code>DomainType</code> .
name		Synonym for signifier.
description	Text	The description of the <code>DomainType</code> .
meta	Boolean	Indicates if the <code>DomainType</code> is related to the Col-libra meta model.
Relations		
Domain	One-to-Many	The collection of domain instances of the <code>DomainType</code> .
<code>DomainType</code>	Many-to-One	The parent <code>DomainType</code> of the <code>DomainType</code> . Null for root <code>DomainTypes</code> . Optional.
ChildDomainTypes	One-to-Many	The collection of <code>DomainType</code> children.

<h1>ChildDomainTypes</h1>
Extends <code>DomainType</code> Collection of <code>DomainType</code>
Exact synonym of <code>DomainType</code> . Can only be used as a child of <code>DomainType</code> to disambiguate the relationship followed.

<h1>RelationType</h1>		
Extends Resource		
A <code>RelationType</code> defines a class of relationship between two <code>AssetTypes</code> , also called <code>AssetTypes</code> .		
Properties		
<code>role</code>	Text	The label of the relation when followed from head to tail.
<code>corole</code>	Text	The label of the reversed relation, when followed from tail to head.
<code>description</code>	Text	The description of the <code>RelationType</code> .
Relations		
<code>Relation</code>	One-to-Many	The collection of relation instances with this <code>RelationType</code> .
<code>SourceAssetType</code>	Many-to-One	The <code>AssetType</code> that is head of the <code>RelationType</code> . <code>SourceAssetType</code> is a synonym of <code>AssetType</code> and clarifies which path is followed from the <code>Relation</code> entity to its child. In this case, the child node is the head.
<code>TargetAssetType</code>	Many-to-One	The <code>AssetType</code> that is the tail of the <code>RelationType</code> . <code>TargetAssetType</code> is a synonym of <code>AssetType</code> and clarifies which path is followed from the <code>Relation</code> entity to its child. In this case, the child node is the tail.

<b>Parent Relationship Selector</b>	
<b>type</b>	This parameter allows specifying which path should be followed from the parent <code>AssetType</code> entity to the <code>RelationType</code> . The possible values are either <code>HEAD</code> or <code>TAIL</code> , which tells whether the parent <code>AssetType</code> is the head or the tail of the <code>RelationType</code> . The default value is <code>HEAD</code> .

<h1>Relation</h1>		
Extends Resource		
A <code>Relation</code> links two <code>Assets</code> together.		
Properties		
<code>startingDate</code>	Number	The optional start date for this relation.
<code>endingDate</code>	Number	The optional end date for this relation.
<code>isGenerated</code>	Boolean	True if this relation was generated.
Relations		
<code>RelationType</code>	Many-to-One	The type of this relation.
<code>SourceAsset</code>	Many-to-One	The source asset of this relation.
<code>TargetAsset</code>	Many-to-One	The target asset of this relation.
<b>Parent relationship selector. Only if the parent is a asset node or is of type inheriting from an asset node.</b>		

type	This parameter allows specifying which path should be followed from the parent asset entity to this relation. The possible values are either SOURCE or TARGET, which tells whether the parent asset is the source or target of the relation. This parameter is mandatory because there is no default value.
<b>Filtering Property</b>	
typeld	Allows filtering relations using the Id value of their related RelationType.

## ComplexRelation

Extends Asset

A `ComplexRelation` is an anonymous asset, whose signifier, or name, has been generated.

### Properties

/

### Relations

ComplexRelationType	Many-to-One	The type of this complex relation.
---------------------	-------------	------------------------------------

### Filtering Property

typeld	Allows filtering ComplexRelations using the Id value of their related ComplexRelationType.
--------	--------------------------------------------------------------------------------------------

### Additional Parameters

separator	The character to be used to separate related asset names in an Excel or CSV export.
quote	The character to be used to quote related asset names in an Excel or CSV export.

<h2>ComplexRelationType</h2> <p>Extends AssetType</p>		
A <code>ComplexRelationType</code> determines the type of a <code>ComplexRelation</code> .		
<b>Properties</b>		
/		
<b>Relations</b>		
<code>ComplexRelation</code>	OneToMany	The collection of <code>ComplexRelation</code> instances with the <code>ComplexRelationType</code> .
<code>ComplexRelationLegType</code>	OneToMany	The collection of <code>ComplexRelationLegTypes</code> linked to the <code>ComplexRelationType</code> .
<code>ComplexRelationAttributeType</code>	OneToMany	The collection of <code>ComplexRelationAttributeTypes</code> linked to the <code>ComplexRelationType</code> .

## ComplexRelationLegType

Extends Resource

A `ComplexRelationLegType` is a `RelationType` used in the context of a `ComplexRelationType`. The `SourceAssetType` of those `RelationTypes` of the `ComplexRelationType`. It can only be used as a child of `ComplexRelationType`.

### Properties

min	Number	The minimum occurrences of this <code>RelationType</code> in the <code>ComplexRelationType</code> .
max	Number	The maximum occurrences of this <code>RelationType</code> in the <code>ComplexRelationType</code> .
legOrder	Number	Order of this <code>ComplexRelationLegType</code> in the <code>ComplexRelationType</code> .

### Relations

<code>RelationType</code>	Many-to-One	The <code>RelationType</code> of the <code>ComplexRelationLegType</code> .
---------------------------	-------------	----------------------------------------------------------------------------

## ComplexRelationAttributeType

Extends Resource

A `ComplexRelationAttributeType` is an `AttributeType` used in the context of a `ComplexRelationType`.

Can only be used as a child of `ComplexRelationType`.

Properties		
min	Number	The minimum occurrences of this AttributeType in the ComplexRelationType.
max	Number	The maximum occurrences of this AttributeType in the ComplexRelationType.
readOnly	Boolean	Indicates if the attribute can be edited or not.
attributeOrder	Number	Order of this ComplexRelationAttributeType in the ComplexRelationType.
Relations		
AttributeType	Many-to-One	The AttributeType of this ComplexRelationAttributeType.

Asset		
Extends Representation		
An <code>Asset</code> is the basic building block capturing information about the assets available in Collibra.		
Properties		
signifier	Text (2000)	The full name of the asset.
displayName	Text (2000)	The display name of the asset.
articulationScore	Number	Result of the last calculation of the articulation score.

hasChildrenForRelation (deprecated)	Boolean	<p>Virtual calculated property indicating if this asset has children for the relation type defined at the query level. This property takes two additional parameters:</p> <ul style="list-style-type: none"> <li>• <code>the RelationType</code></li> <li>• <code>direction (role or co-role)</code></li> </ul> <p>For example:</p> <pre> "HasChildrenForRelation": {   "name": "hasChildren",   "relationTypeId": "000000000-0000-0000-0000- 0000000007005",   "roleDirection": true } </pre> <p>It can only be used if <code>Asset</code> is a root node of the query. It is not inherited by nodes extending the <code>Asset</code> node.</p>
avgRating	Number	Average value of all ratings assigned to the asset.
ratingsCount	Number	Number of all ratings signed to the asset.
class	Text	With other entities that extend the asset, can be used to differentiate amongst the various subclasses.
<b>Relations</b>		
Relation	One-to-Many	The collection of relations this asset has. See <code>Relation</code> for a mandatory type parameter.

Responsibility	One-to-Many	The collection of responsibilities this asset has.
Mapping	One-to-Many	The related mappings.
Tag	Many-to-Many	The collection of tags associated with this asset.

### Filtering Property

rootOfRelation

An array relation types/direction pairs. Root assets are not the child of any of the relations.

For example:

```
"rootOfRelation": [
  {
    "relationTypeId": "00000000-0000-
0000-0000-000000007038",
    "roleDirection": true
  },
  {
    "relationTypeId": "00000000-0000-
0000-0000-000000007005",
    "roleDirection": true
  }
],
```

## SourceAsset

Extends Asset

Exact synonym of `Asset`. It can only be used as a child of relation to disambiguate the relationship followed.

## TargetAsset

Extends Asset

Exact synonym of `Asset`. It can only be used as a child of a relation to disambiguate the relationship followed.

## SourceAssetType

Extends AssetType

Exact synonym of `AssetType`. It can only be used as a child of `RelationType` to disambiguate the relationship followed.

## TargetAssetType

Extends AssetType

Exact synonym of `AssetType`.  
Can only be used as a child of `RelationType` to disambiguate the relationship followed.

## AssetType

Extends Resource

A `AssetType`, also called `AssetType`, determines the type of asset, which is an `Asset`

### Properties

signifier	Text (255)	The name of this <code>AssetType</code> .
-----------	------------	-------------------------------------------

name		Synonym for signifier.
description	Text	The description of the <code>AssetType</code> .
meta	Boolean	Is the <code>AssetType</code> related to the Collibra meta model.
color	Text	The color of the <code>AssetType</code> .
icon	Text	The icon of the <code>AssetType</code> .
acronym	Text	The acronym of the <code>AssetType</code>
symbolType	Text	Defines the icon or acronym used in Collibra. Possible values are: <code>ICON</code> , <code>ACRONYM</code> and <code>NONE</code> .
displayNameEnabled	Boolean	Indicates if the display name is enabled for all assets of this <code>AssetType</code> .
ratingEnabled	Boolean	Are ratings enabled for all assets of this <code>AssetType</code> .
<b>Relations</b>		
Asset	One-to-Many	The collection of instances of this <code>AssetType</code> .
AssetType	Many-to-One	The parent <code>AssetType</code> of this <code>AssetType</code> .
ChildAssetTypes	One-to-Many	The collection of concept types that have this <code>AssetType</code> as parent.

## ChildAssetTypes

Extends `AssetType`  
Collection of `AssetType`

Can only be used as a child of `AssetType` to disambiguate the relationship followed.

The `ComplexRelationType`, despite inheriting from `AssetType`, does not support `ChildAssetTypes` node.

## Attribute

Extends `Resource`

Attribute represents an attribute linked to a representation.

### Properties

value	Text	The text value of this attribute.
class	Text	With other entities, extends attribute. You may use the <code>class</code> qualifier to differentiate between the various subclasses.

### Relations

AttributeType	Many-to-One	The type of attribute.
Asset	Many-to-One	The asset to which the attribute belongs.

### Filtering Property

labelId	Allows filtering the attributes based on the <code>Id</code> of their related <code>AttributeType</code> .
---------	------------------------------------------------------------------------------------------------------------

## StringAttribute

Extends Attribute

A `StringAttribute` is an attribute dedicated to text values.

### Properties

<code>longExpression</code>	Text	The unbounded text value. Obsolete, but returns the same content as <code>Attribute:value</code> .
-----------------------------	------	----------------------------------------------------------------------------------------------------

## ScriptAttribute

Extends Attribute

A `ScriptAttribute` is an attribute dedicated to script values.

### Properties

<code>script</code>	Text	The script. Obsolete, but returns the same content as <code>Attribute:value</code> .
---------------------	------	--------------------------------------------------------------------------------------

## SingleValueListAttribute

Extends Attribute

A `SingleValueListAttribute` is an attribute dedicated to storing a single value selected from a list.

## MultiValueListAttribute

Extends Attribute

A `MultiValueListAttribute` is an attribute dedicated to storing multiple values selected from a list.

### Properties

values	Text	The multiple values
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## BooleanAttribute

Extends Attribute

A `BooleanAttribute` is an attribute dedicated to Boolean values.

### Properties

booleanValue	Boolean	The value
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## NumericAttribute

Extends Attribute

A `NumericAttribute` is an attribute dedicated to numeric values.

### Properties

numericValue	Number	The stored number.
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## DateTimeAttribute

Extends Attribute

A `DateTimeAttribute` is an attribute dedicated to date values that also keep track of time.

### Properties

<code>dateTime</code>	Number	The date and time values expressed as the number of milliseconds since 1/1/1970.
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## DateAttribute

Extends Attribute

A `DateAttribute` is an attribute dedicated to date values.

### Properties

<code>date</code>	Number	The date value expressed as the number of milliseconds since 1/1/1970.
<code>timestamp</code>	Number	The date value expressed as the number of milliseconds since 1/1/1970.

## AttributeType

Extends Resource

The `AttributeType` determines the type of an attribute.

### Properties

signifier	Text(255)	The name of the <code>AttributeType</code> .
name		Synonym for signifier.
description	Text	The description of this <code>AttributeType</code> .
attributeKind	Text(255)	The <code>AttributeType</code> kind. The possible values are: BOOLEAN, STRING, NUMERIC, DATE, DATE_TIME, SINGLE_VALUE_LIST, MULTI_VALUE_LIST and SCRIPT.
language	Text(255)	The name of the language used. The kind is SCRIPT.
isInteger	Boolean	Indicates if the <code>AttributeType</code> defines an integer or decimal. If true, it defines an integer. If false, it defines a decimal. The kind is NUMERIC.
allowedValues	Text	Comma separated list of values. The kind is SINGLE_VALUE_LIST or MULTI_VALUE_LIST.
<b>Relations</b>		
Attribute	One-to-Many	The collection of <code>Attributes</code> of this type

<h1>User</h1>		
Extends Resource		
Represents Collibra users. Any resource has a creation date and the last modification date. Collibra also stores which user made each of these operations. The User entity is related to all types as the creator and/or last modifier of the entity.		
<b>Properties</b>		
userName	Text	The user name.

firstName	Text	The first name.
lastName	Text	The last name.
fullName	Text	Virtual property containing the first and last name together, which is useful for filters.
gender	Text	The gender.
language	Text	The user language.
activated	Boolean	Indicates if the user is activated.
ldapUser	Boolean	Indicates if the user is a LDAP User.
apiUser (deprecated)	Boolean	Indicates if this is an API user.
enabled	Boolean	Indicates if the user is enabled.
emailAddress	Text	The user's primary email address.
guest	Boolean	Indicates if this is a guest user.
<b>Relations</b>		
Email	Many-to-Many	The collection of emails owned by the user.
Phone	Many-to-Many	The collection of phone numbers owned by the user.
InstantMessagingAccount	Many-to-Many	The collection of <code>InstantMessagingAccount</code> accounts owned by this user.

Website	Many-to-Many	The collection of websites owned by the user.
Address	Many-to-Many	The collection of addresses owned by the user.
Community	One-to-Many	The collection of communities created or last modified by the user.
Domain	One-to-Many	The collection of vocabularies created or last modified by the user.
DomainType	One-to-Many	The collection of <code>DomainTypes</code> created or last modified by the user.
RelationType	One-to-Many	The collection of <code>RelationType</code> created or last modified by the user.
Relation	One-to-Many	The collection of relations created or last modified by the user.
ComplexRelation	One-to-Many	The collection of <code>ComplexRelations</code> created or last modified by the user.
Asset	One-to-Many	The collection of assets created or last modified by the user.
AssetType	One-to-Many	The collection of <code>AssetTypes</code> created or last modified by the user.
Attribute	One-to-Many	The collection of attributes created or last modified by the user.

StringAttribute	One-to-Many	The collection of <code>StringAttributes</code> created or last modified by the user.
ScriptAttribute	One-to-Many	The collection of <code>ScriptAttributes</code> created or last modified by the user.
SingleValueListAttribute	One-to-Many	The collection of <code>SingleValueListAttributes</code> created or last modified by the user.
MultiValueListAttribute	One-to-Many	The collection of <code>MultiValueListAttributes</code> created or last modified by the user.
BooleanAttribute	One-to-Many	The collection of <code>BooleanAttributes</code> created or last modified by the user.
NumericAttribute	One-to-Many	The collection of <code>NumericAttributes</code> created or last modified by the user.
DateTimeAttribute	One-to-Many	The collection of <code>DateTimeAttributes</code> created or last modified by the user.
DateAttribute	One-to-Many	The collection of <code>DateAttributes</code> created or last modified by the user.
AttributeType	One-to-Many	The collection of <code>AttributeTypes</code> created or last modified by this user.

User	One-to-Many	The collection of users created or last modified by this user.
Group	Many-to-Many	The collection of groups to which this user belongs.
Responsibility	One-to-Many	The collection of responsibilities linking this user to a role on an asset, domain or community.
Role	One-to-Many	The collection or roles created or last modified by this user.
Status	One-to-Many	The collection of statuses created or last modified by the user.
WorkflowTaskInfo (deprecated)	One-to-Many	The collection of <code>WorkflowTaskInfos</code> created or last modified by the user.
Mapping	One-to-Many	The collection of mappings created or last modified by the user.
<b>Parent Relationship Selector</b>		

linkType	<p>This parameter allows specifying the path that should be followed from the parent resource to a user. When the parent resource is responsibility or group, linkType is not used and the relationship defined for responsibility or group is used. When a user is the parent node, linkType determines the relationship with the child resources that have a created or last modified kind of relationship. See relations above. The possible values are CREATED, MODIFIED, "CREATED_OR_MODIFIED or CREATED OR MODIFIED. CREATED_OR_MODIFIED is the default value, but can only be used when User is root of the query tree. CREATED_OR_MODIFIED turns into a simple CREATED when User is not the root of the query.</p>
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## Email

Extends Resource

Email represents one of the user's email addresses. It can only be used as a child of the user ser.

### Properties

emailAddress

Text

The email address.

## Phone

Extends Resource

Phone represents one of the user's phone numbers. It can only be used as a child of the user.

### Properties

phoneNumber	Text	The phone number.
phoneType	Text	The phone type: FAX, MOBILE, OTHER, PAGER, PRIVATE and WORK.

## InstantMessagingAccount

Extends Resource

`InstantMessagingAccount` represents one of the user's instant messaging account. It can only be used as a child of the user.

### Properties

account	Text	The account id
instantMessagingAccountType	Text	The instant messaging type: AOL, GTALK, ICQ, JABBER, LIVE_MESSENGER, SKYPE or YAHOO_MESSENGER.

## Website

Extends Resource

Website represents one of the user's websites. It can only be used as a child of the user.

### Properties

url	Text	The URL of the website.
websiteType	Text	The type of website: FACEBOOK, LINKEDIN, MYSPACE, TWITTER or WEBSITE.

# Address

Extends Resource

Address represents one of the user's addresses. It can only be used as a child of the user.

## Properties

street	Text	The street.
number	Text	The street number.
city	Text	The city.
postalCode	Text	The zip code.
state	Text	The state.
country	Text	The country.
addressType	Text	The address type: HOME or WORK.

# Group

Extends Resource

A group is a named collection of users.

## Properties

groupName	Text	The name of the group.
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## Relations

User	One-to-Many	The users that are part of this group.
Responsibility	One-to-Many	The collection of responsibilities linking this group to a role on an asset, domain or community.

## Responsibility

Extends Resource

A responsibility links a user or group with a role on an asset, domain or community.  
Mutually exclusive.

### Properties

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### Relations

User	Many-to-One	The related user. Empty if linked to a group.
Group	Many-to-One	The related group. Empty if linked to a user.
Role	Many-to-One	The related role.
Asset	Many-to-One	The associated asset.
Domain	Many-to-One	The associated domain.
Community	Many-to-One	The associated community.

### Filtering Property

roleId	Allows filtering responsibilities using the Id property of the related role.
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## Role

Extends Asset (deprecated)

The Role that a user plays. For example, Steward or Admin.

## Status

Extends Resource

The status of an asset.

### Properties

signifier	Text(255)	The name of the status.
description	Text	The status description.

### Relations

Asset	One-to-Many	The assets of this status.
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## WorkflowTaskInfo (deprecated)

Extends Resource

`WorkflowTaskInfo` holds all information about an ongoing workflow task.

### Properties

description	Text	The description of the task.
title	Text	The title of the task.
dueDate	Number	The due date of the task expressed as the number of milliseconds since 1/1/1970.
itemResourceId	Text	The related item Id.
itemResourceType	Text	The related resource type.
itemVerbalized	Text	The verbalized version of the related item.
taskType	Text	The type of task.
assignee	Text	The id of the assigned user.
candidateUsers	Text	The ids or candidate users.
domain	Text	The related domain Id.
community	Text	The related community Id.
status	Text	The status of the task.

## Mapping

Extends Resource

A `Mapping` links an externally defined entity, such as an asset or domain, to one entity.

### Properties

extSystemId	Text	The identifier of the external system.
extEntityId	Text	The external identifier of the entity.

extEntityUrl	Text	The external URL of the entity.
lastSyncDate	Number	The last synchronization date.
syncAction	Text	The last synchronization action: ADD, UPDATE or REMOVE.
description	Text	Description of this mapping.
<b>Relations</b>		
Asset	Many-to-One	The related asset.
Domain	Many-to-One	The related domain.

## Tag

Extends Resource

A `Tag` allows categorizing assets by adding one or more labels.

### Properties

name	Text	The name of the tag.
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### Relations

Asset	Many-to-Many	The related assets.
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## DataQualityRule (deprecated)

Extends Resource

A `DataQualityRule` describes the rules for the data quality of an asset.

Properties		
name	Text	The name of the DataQualityRule.
description	Text	The description of the DataQualityRule.
Relations		

Scope		
Extends Resource		
A <i>Scope</i> describes the scope of an assignment.		
Properties		
name	Text	The name of the scope.
description	Text	The description of the scope.
Relations		

Comment		
Extends Resource		
Comment represents a single comment of a resource.		
Properties		
content	String	The content of this comment.
resourceType	String	A type of the resource to which this comment belongs.

Relations		
ParentComment	Many-to-One	The parent comment of this comment.
Comment	One-to-Many	List of subcomments of this comment
Asset	One-to-One	The asset to which this comment is linked.
Domain	One-to-One	The domain to which this comment is linked.
Community	One-to-One	The community to which this comment is linked.
Filtering property		
rootComment	Boolean	When true, the query engine adds a filter retaining only root comments.

## ParentComment

Extends Resource

`ParentComment` can only be used as a child of a comment to disambiguate the relationship followed.

## Data Type (deprecated)

Extends Entity

A `DataType` is a Catalog entity that characterizes a data element's data type.

### Properties

name	Text	The name of the type: Date or SSN.
description	Text	Description of the type.
class	Text	The class of <code>DataTypes</code> : BASE and ADVANCED.
logicalDataType	Text	The corresponding logical data type used by the profiling job. It is one of the base types.

### Relations

<code>DataTypeMatch</code>	One-to-Many	The related <code>DataTypeMatches</code> holding a specific percentage of match value for a Data Element instance.
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## AdvancedDataType (deprecated)

Extends `DataType`

An `AdvancedDataType` is an extension of one of the base `DataTypes`, for example, Text, Numeric or Date, that provides patterns that help the profiling job detect the Data Type.

### Properties

### Relations

<code>DataTypePattern</code>	One-to-Many	The patterns associated with this advanced data type.
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## DataTypePattern (deprecated)

Extends Entity

A `DataTypePattern` contains a pattern associated with an `AdvancedDataType`.

### Properties

value	Text	The pattern.
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### Relations

AdvancedDataType	Many-to-One	The related <code>AdvancedDataType</code> .
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## DataTypeMatch (deprecated)

Extends Entity

A `DataTypeMatch` contains profiling results indicating the percentage of the actual data behind a `DataElement` asset that matches a `DataType`.

### Properties

percentage	Double	The matching percentage.
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### Relations

Asset	Many-to-One	The related Data Element.
DataType	Many-to-One	The matched <code>DataType</code> .

## BaseView (deprecated)

Extends Resource

An abstract entity base class of `View` and `DiagramPicture`.

### Properties

name	Text	The name of the <code>baseView</code> .
description	Text	The description of the <code>baseView</code> .
config	Text	The JSON config of the <code>baseView</code> .
originalView	Text	The Id of the <code>originalView</code> of this base view, meaning the view from which this base view was created.
isDefault	Boolean	Indicates if this is a default <code>baseView</code> .
isPreferred	Boolean	Indicates if this a preferred pinned <code>baseView</code>

### Relations

## View (deprecated)

Extends BaseView

A view in Collibra.

### Properties

### Relations

## DiagramPicture (deprecated)

Extends BaseView

A diagram illustration.

### Properties

svg	Text	Text field containing an SVG representation of the diagram picture.
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### Relations

View	Many-to-One	The view used to create or take the picture.
DiagramPictureSharingRule	One-to-Many	The sharing rules of the diagram picture.
AssignmentRule	Many-to-Many	The assignment rules of the diagram picture.

## DiagramPictureSharingRule (deprecated)

Extends Resource

A `DiagramPicture` sharing rule. A diagram picture can be shared with a user, group or role.

### Properties

### Relations

Role	Many-to-One	The role linked to this rule.
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Group	Many-to-One	The group linked to this rule.
User	Many-to-One	The user linked to this rule.

## AssignmentRule (deprecated)

Extends Resource

An assignment rule, only exposed to the graph query engine to show the asset linked to a `DiagramPicture`.

### Properties

### Relations

Asset	Many-to-One	The asset linked to this rule.
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