Veeva Network

Veeva Network 20R3.0.1 Release Notes

December 2020

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About these Release Notes

These Release Notes describe all features that are included in Veeva Network 20R3.0.1.

SUBSCRIBE TO RELEASE NOTIFICATIONS

You can receive email notifications about upcoming software releases and the supporting documentation:

- **Software releases and maintenance** - Go to trust.veeva.com. At the top of the page, click **Subscribe to Veeva Trust Site** and subscribe to the Veeva Network component.
- **Release Notes and Data Governance documents** - PDF files are posted on the Veeva Support website. To be notified when new documents are published, click the **Follow** button on that page or the Announcements section in the Network Community.

For more information, see About Network Releases in the *Veeva Network Online*

Help. Browser requirements

These are the minimum browser requirements for Veeva Network:

- Google Chrome™ (most stable version at Network release)
- Safari® 10+
- Microsoft Edge™

Veeva Network is not supported on mobile devices.

Release Note updates

The following enhancement has been added since the Sandbox version was published:

- **SSL certificate update** - Customers who explicitly download and install certificates must update the certificate for veevanetwork.com.

All material in the Release Notes should be reviewed to ensure that updates to existing topics are noted.

What's new

The following key enhancements comprise the Veeva Network 20R3.0 major release.

			ST	DS	DM	AD
General updates						
SSL certificate update	Customers who explicitly download and install certificates must update the certificate for veevanetwork.com.	20R3.0				●
Browser support	Internet Explorer™ 11 is no longer supported for Veeva Network.	20R3.0	●	●	●	●
Environment tag	Tags have been added to Production instances to help you quickly identify the environment you are using.	20R3.0			●	●
Home dashboard widget	A new widget provides an overview of the data domains and records that are loaded in your Network instance.	20R3.0			●	●
Sandbox URL	Sandbox instances now have unique URLs.	20R3.0				●
Profiles						
Task visibility	Standard users can be given access to view tasks submitted by all users, not just their own tasks.	20R3.0	●			
Candidate records	Sub-objects are now deleted when candidate records are deleted.	20R3.0		●	●	●
Reports						
Tree view	The SQL Query Editor displays a tree view of the data domains, tables, and fields in your Network instance to help you create queries.	20R3.0	●	●	●	●
Inbox						
Assigning tasks	Improvements have been made to help data stewards quickly reassign tasks.	20R3.0		●	●	
Suspect match	Usability improvements help data stewards process these tasks.	20R3.0		●	●	
Data validation rules						
Custom keys	Data validation rules can be created for custom keys on HCO and HCP objects.	20R3.0		●	●	●
Data updater						
Address cleansing	Data updater jobs for address objects now contain an option to enable address cleansing.	20R2.1			●	●

			ST	DS	DM	AD
Data model						
Network Expression (NEX) rules	The LOOKUPN(), JOIN(), GETTARGETTYPE(), and DELETE() functions are supported for NEX rules.	20R3.0			●	●
Data domains						
ERD view	Network now provides an entity relationship diagram (ERD) view for each data domain in your Network instance.	20R2.1			●	●
Lookup tables						
Reporting on lookup tables	Advanced reporting users can report on and query against lookup tables using SQL queries.	20R3.0			●	●
Veeva OpenData subscriptions						
NCPDP IDs	National Council for Prescription Drug Programs (NCPDP) data is now available only to customers with NCPDP licenses.	20R3.0			●	●
Additional OpenData Parent HCO records	The tooltips that displayed beside the options for this setting have been removed.	20R3.0			●	●
Convert opted-out records	When HCPs opt-out of OpenData, the records can now be automatically converted to customer-managed records.	20R2.1			●	●
Filter labels	Some field labels for filters are updated to more accurately reflect how the filters work.	20R2.1			●	●
Source systems						
System types	Source systems include a type and icon so it can be immediately identified as a Veeva system, SAP Concur system, or custom system.	20R3.0			●	●
Source subscriptions						
Job error log	The job error log now contains a Native Key column.	20R3.0				
Record state management	A new advanced property can be used to determine which records should be updated during a job.	20R2.1			●	●
Target subscriptions						
Exported files	Target subscriptions contain options to define fixed FTP folder names and exported file formats.	20R2.1			●	●

			ST	DS	DM	AD
Network integrations						
Integration Dashboard	A new dashboard tracks all integration activities from a single location.	20R3.0			●	●
Network Bridge - Migration	Network instances that use the CRM Data Subscription will be migrated to the Network Bridge by spring 2021.	20R3.0			●	●
Network Bridge - Error log	Error report logs can now be downloaded in Microsoft Excel (.xlsx) format.	20R3.0			●	●
Veeva Connector support for reports	Upsert jobs can now export data to CRM or Vault directly from Network reporting results.	20R3.0			●	●
Veeva CRM - Delta IDs	Delta IDs for rejected DCRs are incremented to ensure data is synced between Network and CRM	20R2.1			●	●
Veeva Connector - Nitro	The target subscription for the Nitro Connector now exports individual .gz files to your FTP server.	20R2.1			●	●
Admin settings						
Workflow settings for sub-objects	Administrators can define rules to route custom sub-object types to local data stewards.	20R2.1				●
Users						
Data visibility profiles	The Read-only access permission is renamed to Data Read-only access. The permission applies only to data.	20R3.0				●
New user type	A new user type called System and Data Admin combines the capabilities of system administrators and data stewards.	20R2.1				●
Welcome email	The new user welcome email is updated to include the user type and Network instance URL details.	20R2.1				●
API						
Version update	The Network API is updated to v22.0.	20R3.0		Developers		
Search exclusion filters	Integration users can now exclude records from search results using custom fields without excluding Veeva OpenData results.	20R2.1		Developers		

Note: The System and Data Admin user has all of the capabilities of the System Administrator and Data Steward users. Features and enhancements that apply to those users also apply to the System and Data Admin user.

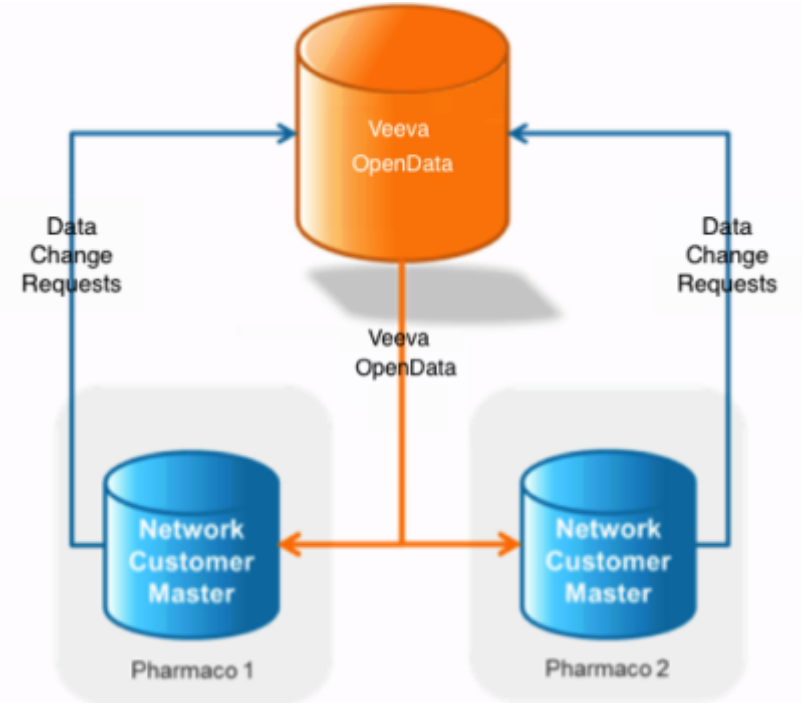
Data Governance - Specific updates for fields and reference data are provided in the *Veeva Network Data Governance* release notes for every minor and major Network release.

Introduction

Veeva Network includes Network Customer Master, and for applicable countries, Veeva OpenData Customer Data.

Veeva OpenData provides identity, demographic, and licensure data about Health Care Professionals and Health Care Organizations.

Network Customer Master is a SaaS Master Data Management (MDM) application that is populated with a subset of the data from Veeva OpenData, according to each pharmaco's contract with Veeva.



Network Customer Master

Veeva Network Customer Master is a multi-tenant SaaS Master Data Management (MDM) application. Each pharmaco that subscribes to Veeva Network has its own Network Customer Master tenant (often referred to as a Network instance similar in concept to a Veeva CRM or Salesforce.com org).

Where Veeva OpenData is enabled, each Network instance comes pre-populated with data from the Veeva OpenData databases to which the pharmaco has subscribed. Veeva Network automatically keeps the data in each production Network instance up-to-date and in sync with the data in Veeva OpenData.

Pharmacos can also load their own data into their Network instance and match and merge it with the Veeva OpenData data. Veeva is responsible for stewarding the quality of the Veeva-provided data as well as any new records added in the Network instance that can be shared with Veeva OpenData.

Records that do not match Veeva records will be loaded as locally managed records and updates on those records will not be shared with Veeva OpenData.

General updates

SSL CERTIFICATE UPDATE

The SSL certificate for veevanetwork.com will be updated before the current certificate expires on January 14, 2021. Only customers who explicitly download and install certificates on any site caches or proxy servers must update their certificates. This new certificate expires on January 1, 2022.

The following certificates can be updated after your Network instance is upgraded to version 20R3.0.1 on December 11, 2020:

veevanetwork.com certificate

Installing this certificate covers all sandbox and production Network instances and `login.veevanetwork.com`.

```
-----BEGIN CERTIFICATE-----
MIIGYjCCBUqgAwIBAgIQBYwD+dMPey7NQxJY2HON7DANBgkqhkiG9w0BAQsFADBP
MQswCQYDVQQGEwJVUzEVMBMGA1UEChMMRGlnaUNlcnQgSW5jMSkwJwYDVQQDEyBE
aWdpQ2VydCBUTFMgUlNBIFNIQTI1NiAyMDIwIENBMTAeFw0yMDEyMDEwMDAwMDBa
Fw0yMjAxMDEyMzU5NTlaMHExCzAJBgNVBAYTAlVTMRMwEQYDVQQIEwpDYWxpZm9y
bmlhMRMwEQYDVQQHEwpQbGVhc2FudG9uMRswGQYDVQQKExJWZWV2YSBTeXN0ZW1z
IEluYy4xGzAZBgNVBAMMEioudmVldmFuZXR3b3JrLmNvbTCCASIwDQYJKoZIhvcN
AQEBBQADggEPADCCAQoCggEBANu94bQ5bzHV4I7PAAvosaU21zBjGDV1L+y9uwCc
RuPjSxgoilwL1KupJwLVbWYudVm2b9fm3PilPk01XrmYwJv4UhguA4HEF9Euj09/
r0DhiBa+1BeniXiWFNgYM8RZ5sqB7u5EIDFuGOhWq3Gu1tq1uYpbBtf2CYWCkv6b
9tcMkmfXyIwB4rXtjkOOQepjiILDdCiqFUHAl7rzT/ivIAejnJwFChu391V0UsgS
LOvM6VXEk8meEsIrgHFENjFL5JX0hAi9eOoARHZnz1+PH2kPCVdy0ZDdb2ODdUJm
9r6dGCKNlhnDI4kDinUfh3Urtqd8fDRL/q5TgsrJHA8qbrECAwEAAaOCAxYwggMS
MB8GA1UdIwQYMBaAFLdrouqoqoSMeeq02g+YssWVdrn0MB0GA1UdDgQWBBRx93xY
uk3YVGMJo26MIO2wywzRsTAvBgNVHREEKDAmghIqLnZlZXZhbmV0d29yay5jb22C
EHZlZXZhbmV0d29yay5jb20wDgYDVR0PAQH/BAQDAgWgMB0GA1UdJQQWMBQGCCsG
AQUFBwMBBggrBgEFBQcDAjCBiwYDVR0fBIGDMIGAMD6gPKA6hjhodHRwOi8vY3Js
My5kaWdpY2VydC5jb20vRGlnaUNlcnRUTFNSU0FTSEEyNTYyMDIwQ0ExLmNybDA+
oDygOoY4aHR0cDovL2NybDQuZGlnaWNlcnQuY29tL0RpZ2lDZXJ0VExTUlNBU0hB
MjU2MjAyMENBMS5jcmwwTAYDVR0gBEUwQzA3BglghkgBhv1sAQEwKjAoBggrBgEF
BQcCARYcaHR0cHM6Ly93d3cuZGlnaWNlcnQuY29tL0NQUzAIBgZngQwBAgIwfQYI
KwYBBQUHAQEEcTBvMCQGCCsGAQUFBzABhhhodHRwOi8vb2NzcC5kaWdpY2VydC5j
b20wRwYIKwYBBQUHMAKGO2h0dHA6Ly9jYWNlcnRzLmRpZ2ljZXJ0LmNvbS9EaWdp
Q2VydFRMU1JTQVNIQTI1NjIwMjBDQTEuY3J0MAwGA1UdEwEB/wQCMAAwggEFBgor
BgEEAdZ5AgQCBIH2BIHzAPEAdgApeb7wnjk5IfBWc59jpXflvld9nGAK+PlNXSZc
JV3HhAAAAXYflIe5AAAEAwBHMEUCIFpVo30i2xURt5SzKsciztqkHyUlMvQW8LRB
boxo2SyaAiEAndVEJjf63R5HUtgyziR4+4RqReFbMYkS7wQarNHxARcAdwAiRUUH
WVUkVpY/oS/x922G4CMmY63AS39dxoNcbuIPAgAAAXYflIgbAAAEAwBIMEYCIQCP
eJ5gbwY5FNxqK3mtmjUu51ws4Bq9kaeqv5TVWFXwGQIhAM5oVJea+s7jO+nKmr63
AiQi4Tu+rLi2W4dpuIkKRh/hMA0GCSqGSIb3DQEBCwUAA4IBAQAMsMpgDdID3LqD
7CVXgFG+BBh9h54OPfYb27TwV6S5IK0NmQ5KXyOpdLjfrcZJ+EwAXmPrvUlU+dpx
vuJt/KVLXIoRvVzJF2AcRkRFEOjSSgXPc8vsilTPg/2ypYIHZE9Wu8B3jQrZ/jW8
s5GGEh2M5y8OpoH9NKjKj9of6QWMIarrpebcVhHh+jZ8PG6JLzVttsqaO9NNOQIs
ma7Yp5CEDHzdu7+45eYfrhpcq1Unu6E1LD/zrURjpNWaBwXm/Yn+lWHzHuq3EK8p
PQi2OeIEmhKSvBdFKtot3fKiDRP/viNQqWSnbCMqG5rkRBTuLEf6RMRfV4Twe6lh
JpelrdSI
-----END CERTIFICATE-----
```

Intermediate CA certificate cert

Install this CA certificate to ensure that the SSL certificate is fully trusted by the supported browsers and client computers.

```
-----BEGIN CERTIFICATE-----
 MIIE6jCCA9KgAwIBAgIQCjUI1VwpKwF9+K1lwA/35DANBgkqhkiG9w0BAQsFADBh
 MQswCQYDVQQGEwJVUzEVMBMGA1UEChMMRGlnaUNlcnQgSW5jMRkwFwYDVQQLExB3
 d3cuZGlnaWNlcnQuY29tMSAwHgYDVQQDExdEaWdpQ2VydCBHbG9iYWwgUm9vdCBD
 QTAeFw0yMDA5MjQwMDAwMDBaFw0zMDA5MjMyMzU5NTlaME8xCzAJBgNVBAYTAlVT
 MRUwEwYDVQQKEwxEaWdpQ2VydCBJbmMxKTAnBgNVBAMTIERpZ2lDZXJ0IFRMUyBS
 U0EgU0hBMjU2IDIwMjAgQ0ExMIIBIjANBgkqhkiG9w0BAQEFAAOCAQ8AMIIBCgKC
 AQEAwUuzZUdwvN1PWNvsnO3DZuUfMRNUrUpmRh8sCuxkB+Uu3Ny5CiDt3+PE0J6a
 qXodgojlEVbbHp9YwlHnLDQNLtKS4VbL8Xlfs7uHyiUDe5pSQWYQYE9XE0nw6Ddn
 g9/n00tnTCJRpt8OmRDtV1F0JuJ9x8piLhMbfyOIJVNvwTRYAIuE//i+p1hJInuW
 raKImxW8oHzf6VGo1bDtN+I2tIJLYrVJmuzHZ9bjPvXj1hJeRPG/cUJ9WIQDgLGB
 Afr5yjK7tI4nhyfFK3TUqNaX3sNk+crOU6JWvHgXjkkDKa77SU+kFbnO8lwZV21r
 eacroicgE7XQPUDTITAHk+qZ9QIDAQABo4IBrjCCAaowHQYDVR0OBBYEFLdrouqo
 qoSMeeq02g+YssWVdrn0MB8GA1UdIwQYMBaAFAPeUDVW0Uy7ZvCj4hsbw5eyPdFV
 MA4GA1UdDwEB/wQEAwIBhjAdBgNVHSUEFjAUBggrBgEFBQcDAQYIKwYBBQUHAwIw
 EgYDVR0TAQH/BAgwBgEB/wIBADB2BggrBgEFBQcBAQRqMGgwJAYIKwYBBQUHMAGG
 GGh0dHA6Ly9vY3NwLmRpZ2ljZXJ0LmNvbTBABggrBgEFBQcwAoY0aHR0cDovL2Nh
 Y2VydHMuZGlnaWNlcnQuY29tL0RpZ2lDZXJ0R2xvYmFsUm9vdENBLmNydDB7BgNV
 HR8EdDByMDegNaAzhjFodHRwOi8vY3JsMy5kaWdpY2VydC5jb20vRGlnaUNlcnRH
 bG9iYWxSb290Q0EuY3JsMDegNaAzhjFodHRwOi8vY3JsNC5kaWdpY2VydC5jb20v
 RGlnaUNlcnRHbG9iYWxSb290Q0EuY3JsMDAGA1UdIAQpMCcwBwYFZ4EMAQEwCAYG
 Z4EMAQIBMAgGBmeBDAECAjAIBgZngQwBAgMwDQYJKoZIhvcNAQELBQADggEBAHer
 t3onPa679n/gWlbJhKrKW3EX3SJH/E6f7tDBpATho+vFScH90cnfjK+URSxGKqNj
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 ULkwKXq/YFkQZhM6LawVEWwtIwwCPgU7/uWhnOKK24fXSuhe50gG66sSmvKvhMNb
 g0qZgYOrAKHKCjxMoiWJKiKnpPMzTFuMLhoClw+dj20tlQj7T9rxkTgl4ZxuYRiH
 as6xuwAwapu3r9rxxZf+ingkquqTgLozZXq8oXfpf2kUCwA/d5KxTVtzhwoT0JzI
 8ks5T1KESaZMkE4f97Q=
 -----END CERTIFICATE-----
```

View or download the updated certificates

After the certificates are updated, they can be viewed and downloaded by running the following command:

```
openssl s_client -connect login.veevanetwork.com:443 -showcerts
```

BROWSER SUPPORT

Veeva Network no longer supports Internet Explorer™ 11.

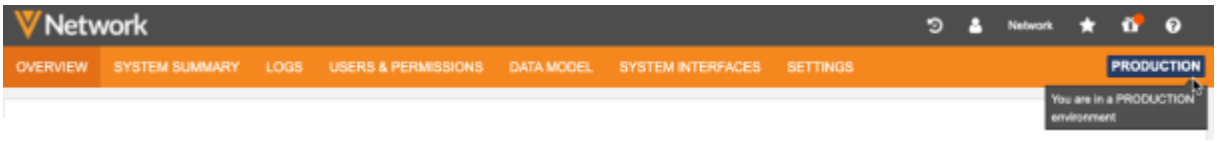
For optimal user experience, use one of the supported browsers:

- Google Chrome™ (most stable version at Network release)
- Safari® 10+
- Microsoft Edge™

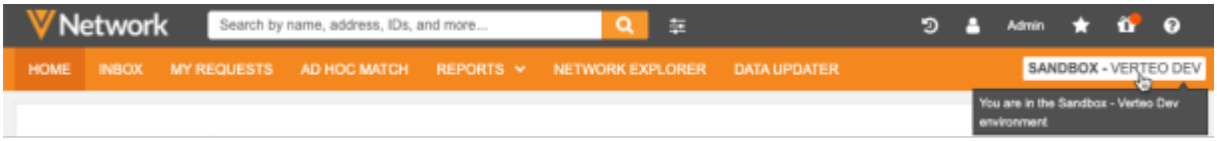
INSTANCE ENVIRONMENT TAGS

Tags have been added to Production instances to help you quickly identify the environment you are using. Sandbox environments already contained a tag, but they are updated to include the instance name in case you have multiple Sandbox instances. These tags are displayed for awareness, but also help prevent administrators and data managers from accidentally changing data in the wrong environment, which can be time-consuming and costly to fix.

The **Production** tag is visible on all of the Admin areas in a Production instance.



The **Sandbox** tag displays throughout the Sandbox instance; on the Network menu and in the Admin console. It now displays the instance name. If you have multiple instances, you can identify which instance you are in.



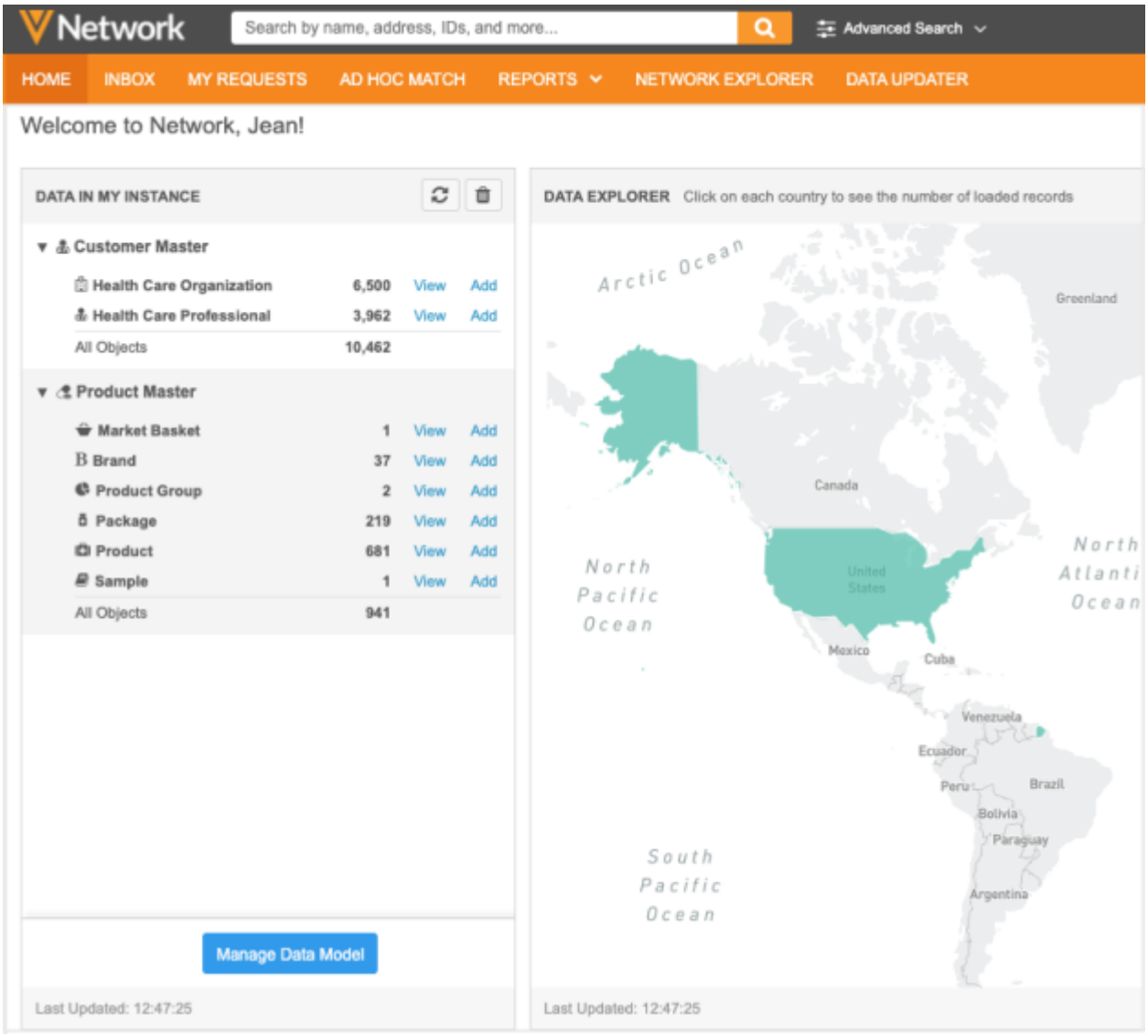
The environment tags display in your Network instances by default.

HOME DASHBOARD WIDGET FOR DATA DOMAINS

A new home dashboard widget, **Data in my Instance**, provides an overview of the data domains and records that are loaded in your Network instance. The widget is available on the Network homepage for administrators and data managers.

Use this home dashboard widget to immediately find the following information:

- All the data domains that exist in the Network instance.
- All objects (standard or custom) that exist in these domains.
- The number of records loaded into the Network instance.



Add the widget to your home dashboard

The new widget displays by default on the home dashboard for new administrator and data manager users. Existing users can add the widget to their dashboard using the **Manage Dashboard** button.

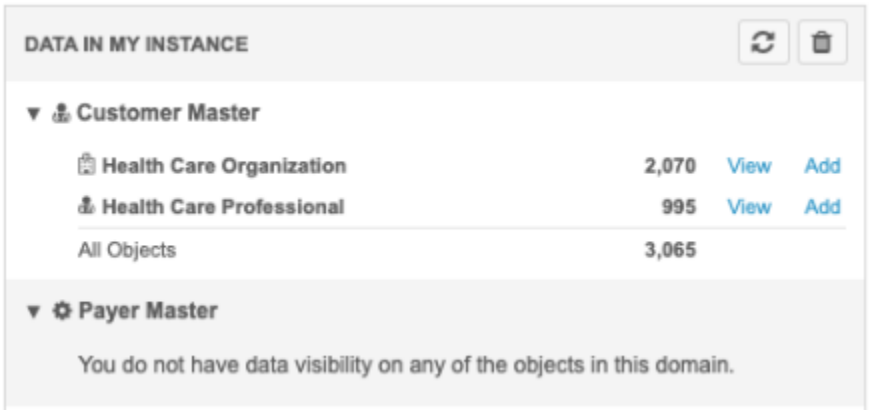
View the data domain widget

The **Data in my Instance** widget displays all of the data domains in your Network instance. The Customer Master data domain displays first. Any custom domains that you have created in your Network instance display below the Customer Master domain. The domain cards are expanded by default so you can quickly view the object and record counts for that domain.

Object data

Each data domain displays the main objects in the domain. Beside each object, a total count of the valid records displays. This total includes the records for all countries and all data providers (local, Veeva OpenData, and third party data).

You can view the objects and record counts that you have access to through your data visibility profile permissions.



If you do not have access to the objects in the domain, a message displays to explain why the objects are not available. A different message will display if there are no objects in the domain.

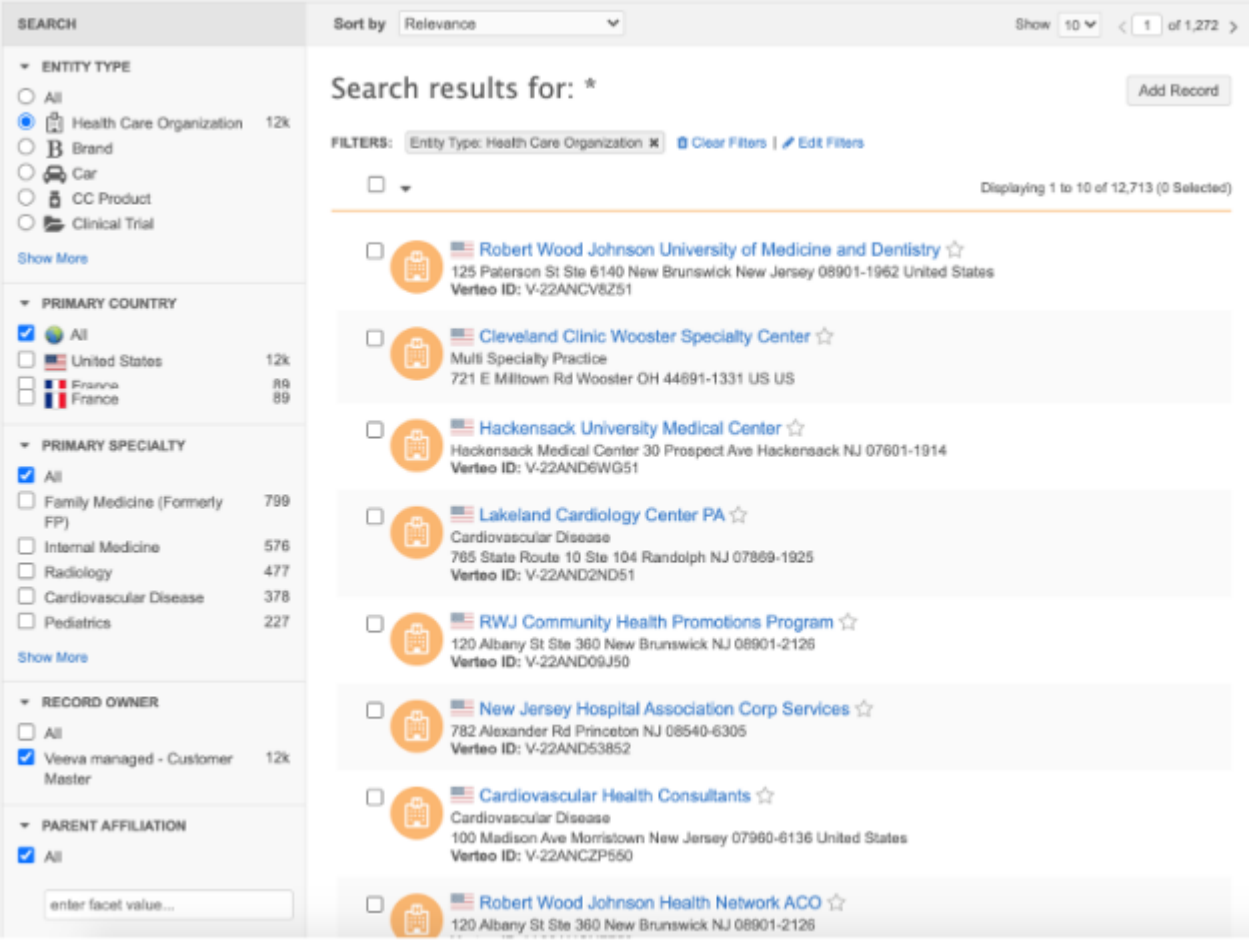
Note: Sub-objects do not display in the dashboard widget. You can obtain the total number of sub-objects in your instance using Network reports.

Available actions

The following actions are available beside each object:

- **View** - Click this link to navigate to the Network search results to see a list of all of the records for that object.

  The total count of the records in your Network instance displays above the list of records.



- **Add** - Click this link to submit a new record. In the **Add Record** dialog, the record type for that object is selected. Choose the primary country and click **Next** to complete the record information.
- **Manage Data Model** - Click the button to navigate to the Data Domains page to explore the domains.

SANDBOX INSTANCE URLS

Sandbox instances now have their own URL. Previously, Sandbox instances had a generic URL; for example, `sandbox.veevanetwork.com`. Providing a unique URL allows you to display the single sign-on button on your Sandbox instance's login page. There is no impact on existing API or FTP integrations. The previous URL for your Sandbox instance will still be valid.

Example

A Network customer, Verteo, has one Production instance and two Sandbox instances.

Instance	Login URL - Before 20R3.0	Login URL - After 20R3.0
Verteo (Production)	`verteo.veevanetwork.com`	`verteo.veevanetwork.com`
VerteoDev (Sandbox)	`sandbox.veevanetwork.com`	`verteodev.veevanetwork.com` or `sandbox.veevanetwork.com`
VerteoQA (Sandbox)	`sandbox.veevanetwork.com`	`verteoqa.veevanetwork.com` or `sandbox.veevanetwork.com`

This enhancement is enabled by default. If you have any questions, contact Veeva Support.

Profiles

STANDARD USER TASK VISIBILITY

Standard users can now see all tasks that are pending for a record. By default, standard users can view only the data change requests (DCRs) that they've submitted (on the My Requests page). Previously, on the profile page, these users could see that there are associated tasks for a record, but could view any details. Now, standard users can access the **Associated Tasks** link on record profiles to view the task information and drill into the task the way all other users can. This enables standard users to see what changes have already been submitted so they don't resubmit the same information.

This enhancement is not enabled by default. Administrators can enable it for their Network instance.

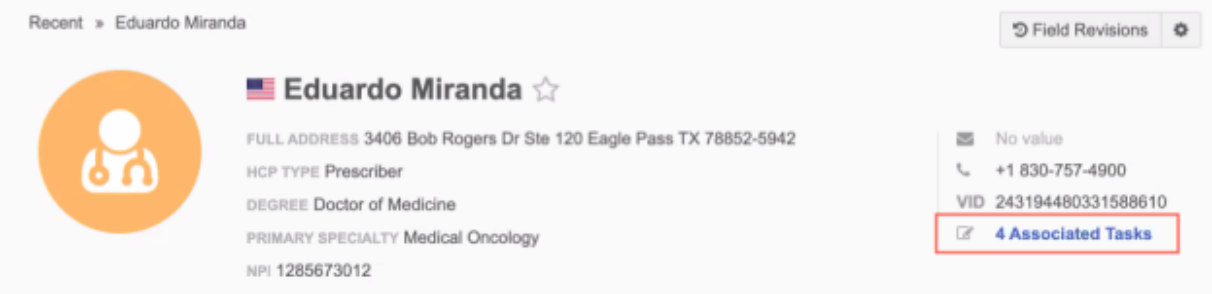
Enable the feature

1. In the Admin console, click **Settings > General Settings**.
2. At the top of the page, click **Edit**.
3. In the **Feature Settings** section, find the **User Interface Options** heading.
4. Click **Standard User Task Visibility**. Confirm your choice in the pop-up window that displays.
5. **Save** your changes.

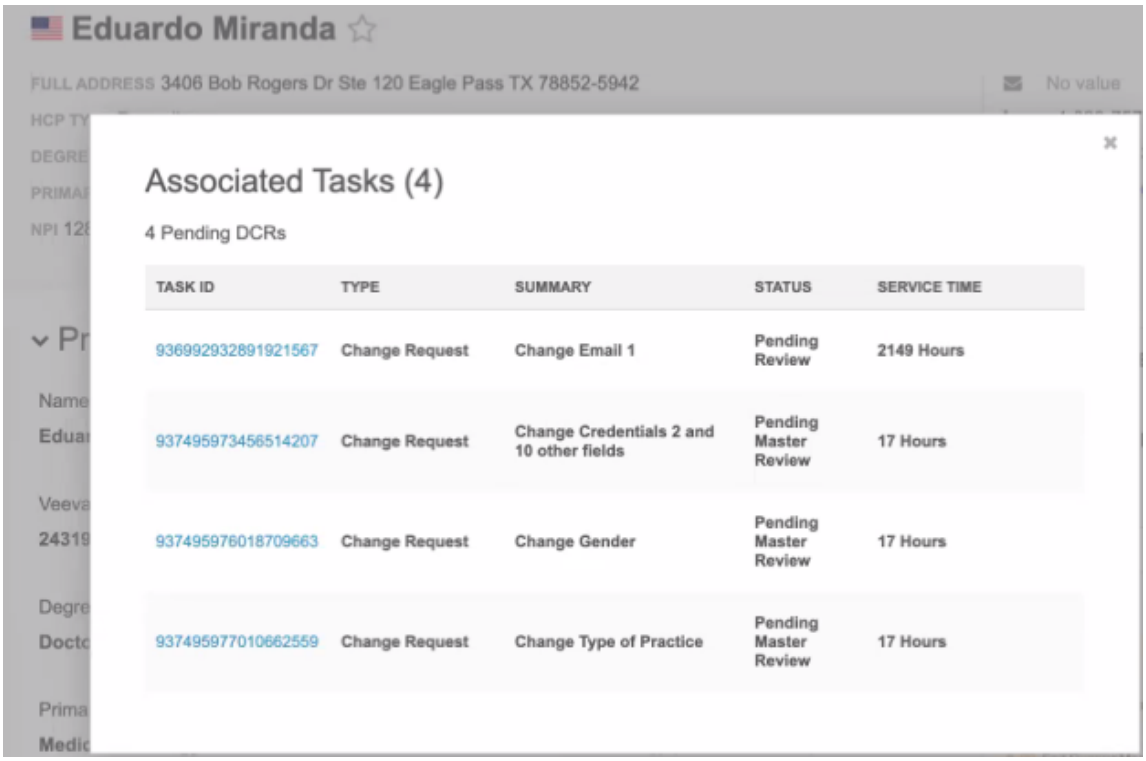
Viewing task details

Record profiles indicate if there are pending tasks on the summary header. Standard users can now click the **Associated Tasks** link to see tasks that have been submitted by any user.

If this enhancement has not been enabled, the associated tasks link is text only.

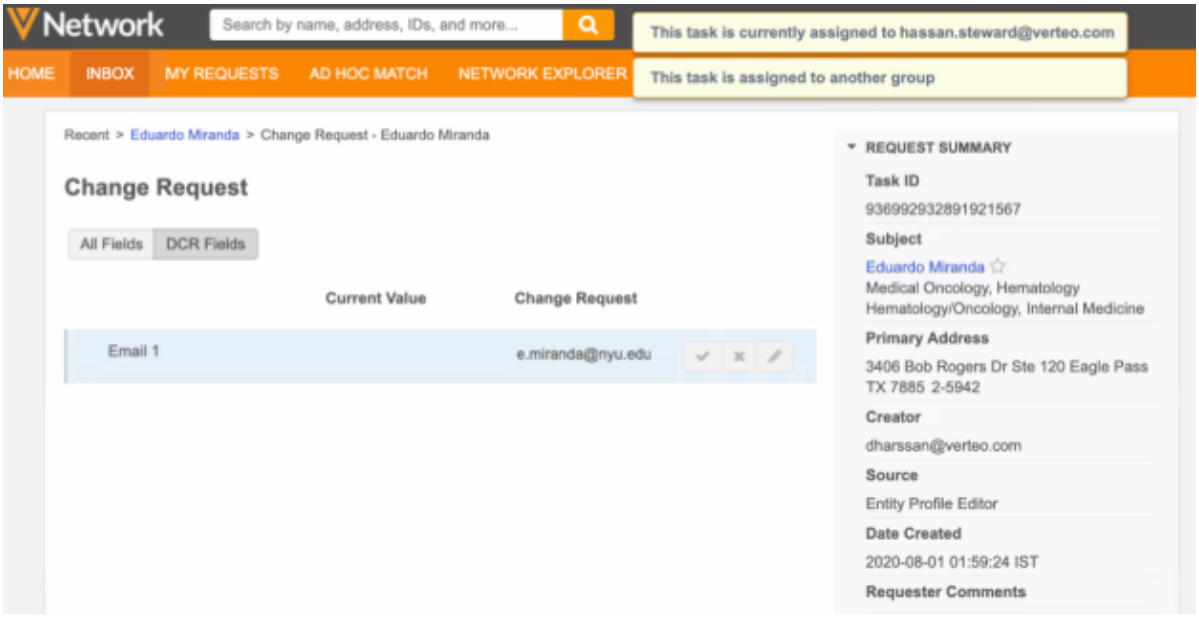


A pop-up displays a summary of each pending DCR.



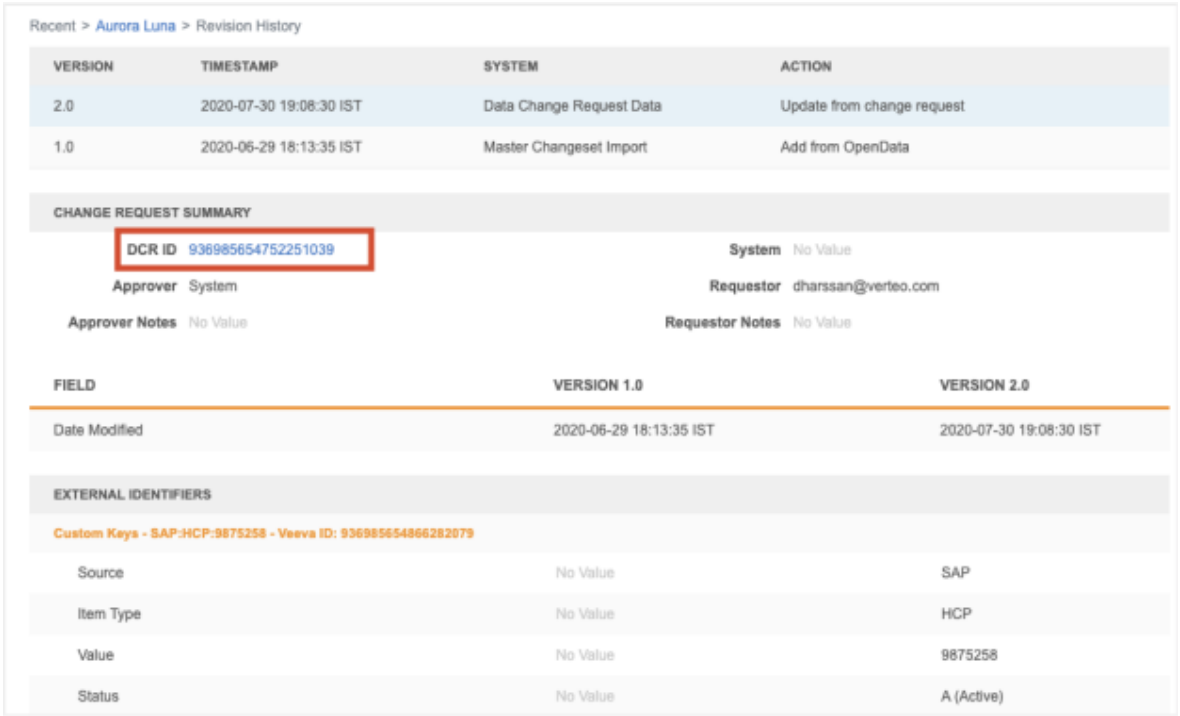
Click the **Task ID** to open the task.

Standard users can view the change request in read-only mode, the same as administrators can.



Revision history

Standard users can now also view data change requests through the revision history. On the profile page, click **More Details** in the **Revision History** preview box. When this feature is enabled, you can click into each revision to see the details from the change requests. Click the **DCR ID** to navigate to the task.



If the feature is not enabled, a permission error message displays instead of the change request details.

CANDIDATE RECORDS

Sub-objects will now be deleted when candidate records are deleted. This ensures that administrators can load a new candidate record with the same key. Previously, when candidate records were deleted, only the record was deleted. The custom keys remained active and the sub-objects remained active and valid. When administrators loaded records with the same key using source subscriptions, it updated the deleted candidate record instead of creating a new candidate record.

Now, when a candidate record is deleted, the following behavior occurs:

- Sub-objects are deleted (record state) and become inactive (record status).
- Sub-objects are removed from the candidate record's profile.
- Custom keys on the sub-objects become inactive.
- Custom keys on the object become inactive.

Profile page

When data stewards delete a candidate record on the profile page, this behavior is enabled by default.

Source subscriptions

To delete candidate records through data loading, the source file must include the `VDM_DIRECTIVE_NAME` column with the *delete* value .

Example

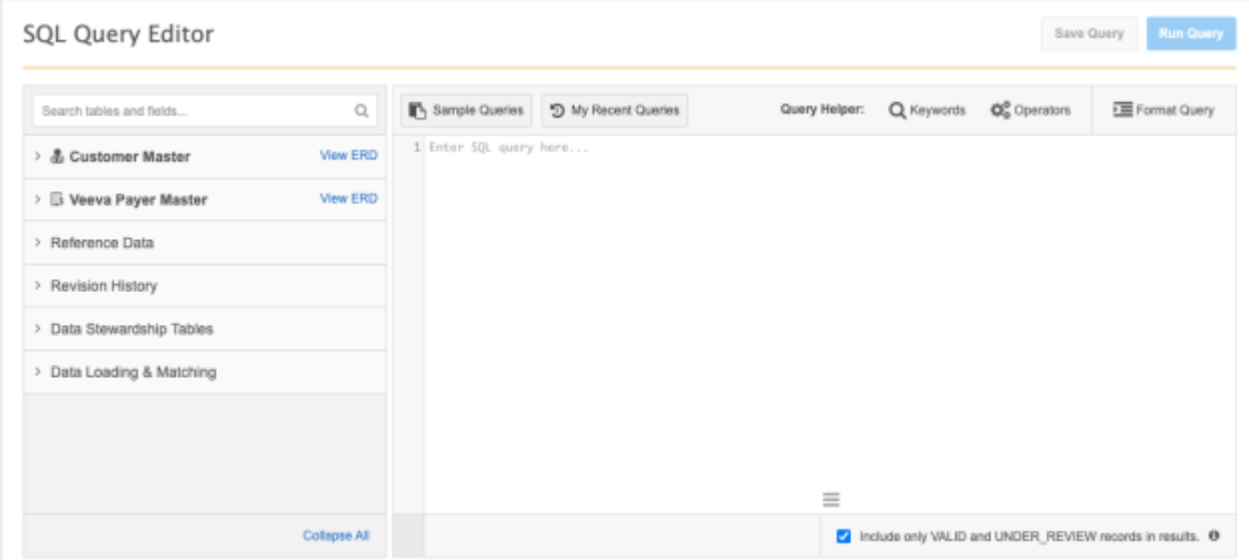
vid__v	VDM_DIRECTIVE_NAME
937336230802161697	Delete

You can also use the DELETE () Network expression (NEX) rule in the source subscription configuration to delete and inactive sub-objects and inactivate custom objects. For more information, see the “Network expression (NEX) rules” topic in these Release Notes.

Reports

REPORTING TREE VIEW

The SQL Query Editor now contains a tree view of the data domains and additional reporting tables available to you to query against in your Network instance. The tree view gives you the visibility to see your data model and reporting structure to help you create queries. Each data domain and reporting table category can be expanded so you can view its tables, fields, field metadata, and reference codes. Use the tree view to become familiar with the data model structure and to help you build your query by understanding the fields that can be joined. Some reporting users do not have access to the data model, so the tree view provides visibility to the data that is available to query.



This enhancement is available by default in your Network instance.

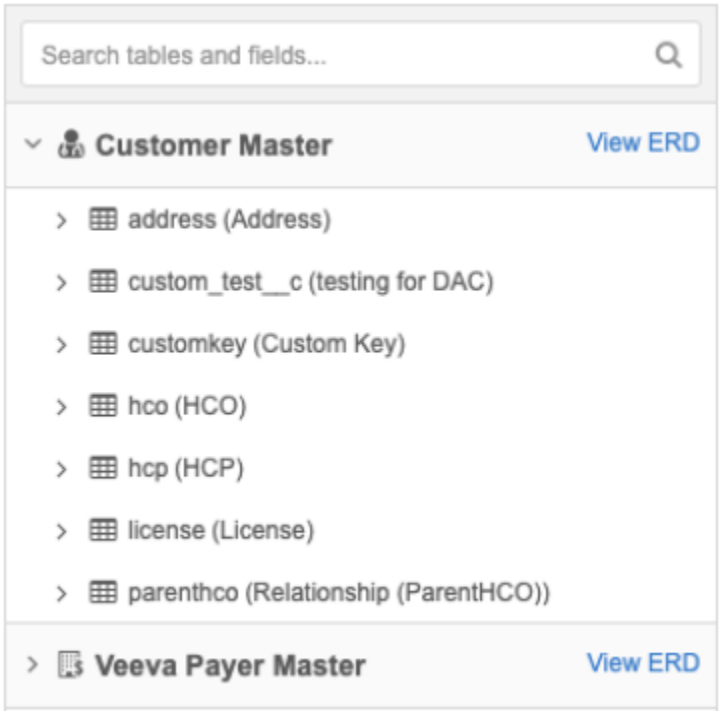
Tip: View a quick video about the tree view in the *Veeva Network Online Help*.

About the tree view

The left pane of the SQL Query Editor contains the tree view. Use this hierarchical structure to understand the tables, fields, field metadata, and reference codes that are available to query.

The view contains the following information:

- **Data domains** - The Customer Master domain displays at the top by default. Custom domains are listed in alphabetical order after the Customer Master domain. Expand each data domain to view its tables, fields, and field metadata.



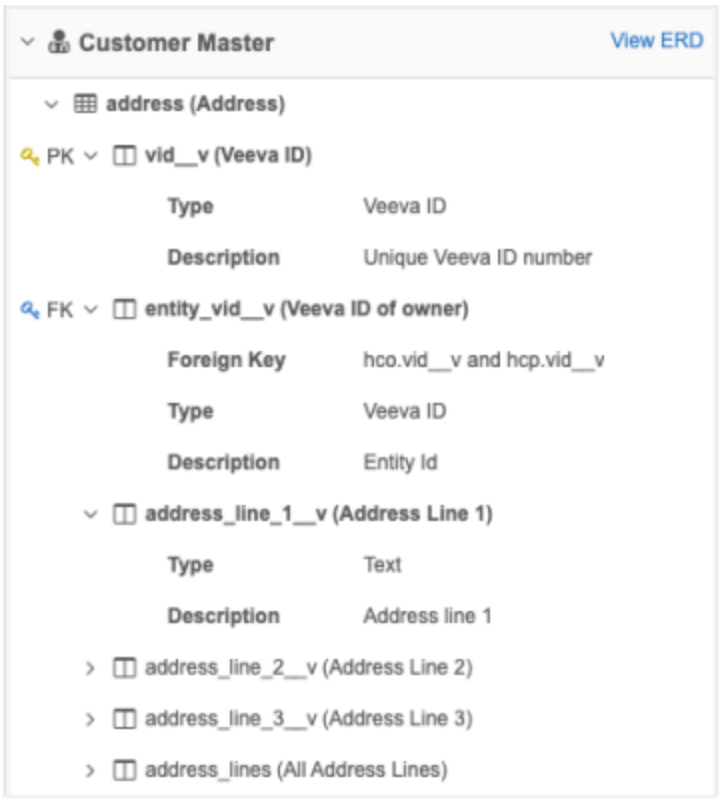
- **Tables** - Tables are listed alphabetically in the respective domain or the appropriate reporting table category; for example, change request tables are located in the Data Stewardship Tables category.
- **Fields** - Expand the table to see the fields. Only fields that are enabled in the data model display. Primary keys and foreign keys are listed first. The remaining fields are listed alphabetically.
    - **Primary key** - This field uniquely identifies the object.
    - **Foreign key** - The primary key field from a main object that is used to reference a main object on a sub-object or relationship object.

      The foreign key metadata includes the JOIN() description. This is helpful when you want to include multiple tables in the same SQL query.

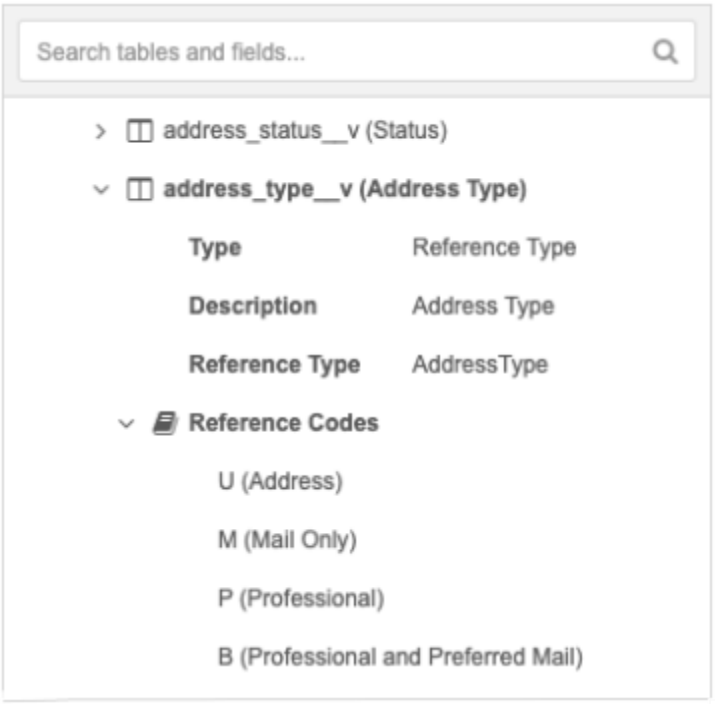
      Example

      To understand how to join the Address table and HCP table in a query, use the metadata in the Address table's foreign key.

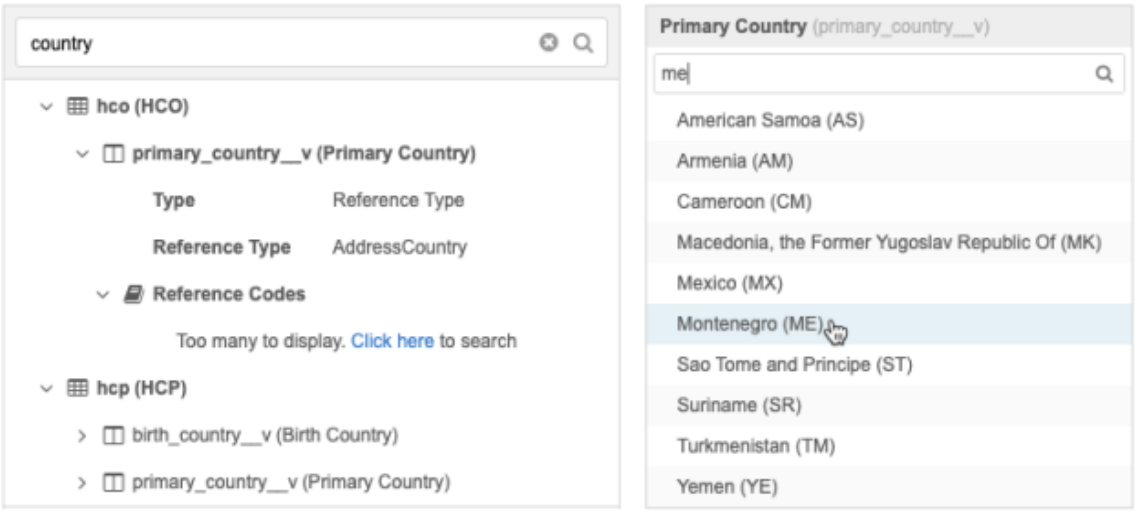
      ```
      from hcp INNER JOIN address ON hcp.vid__v = address.entity_vid__v
      ```



- **Field metadata** - Expand each field to see the type and description. Reference type fields also contain the types and codes.
- **Reference Data** - When you expand a reference type field, the reference type name and codes display.



If there are more than ten reference codes for the reference type, click the link to display the full list in a pop-up. Each pop-up contains a search bar so you can quickly find a code.



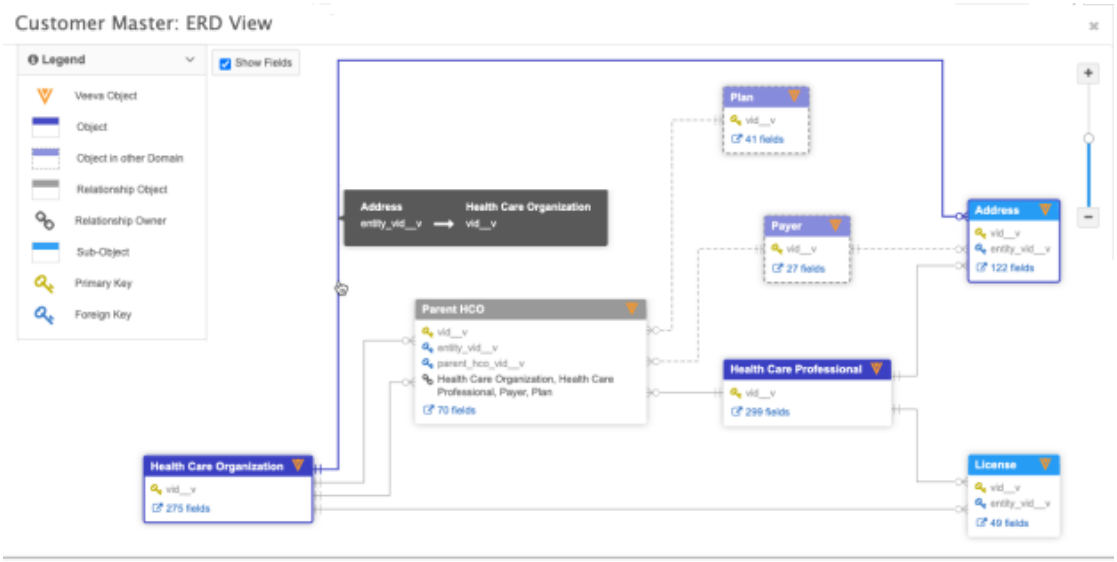
The following reporting category tables are only accessible through the SQL Query Editor.

- **Revision History** - This category contains the revision history tables.
- **Data Stewardship Tables** - This category contains change requests and suspect match tables.
- **Data Loading & Matching** - This category contains the job tables from source subscriptions.
- **Lookup Tables** - This category displays if you have uploaded one or more lookup tables in your Network instance.

Available actions

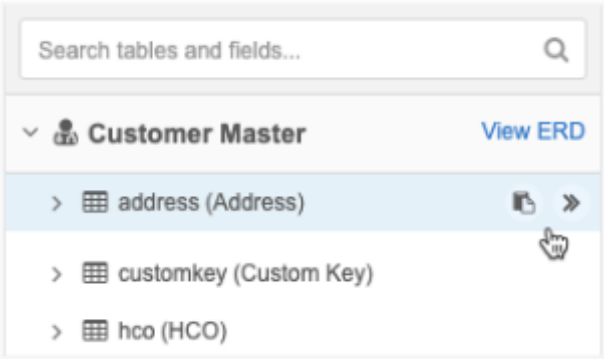
View ERD

Click the **View ERD** link beside each data domain to open a window that displays a relationship diagram. Click the line between two objects to see the fields that you can use to JOIN those object tables.



Copy to clipboard

Click the **Copy to Clipboard** button to copy the table or field name from the tree view to your clipboard. The button displays when you hover over any table or field name.



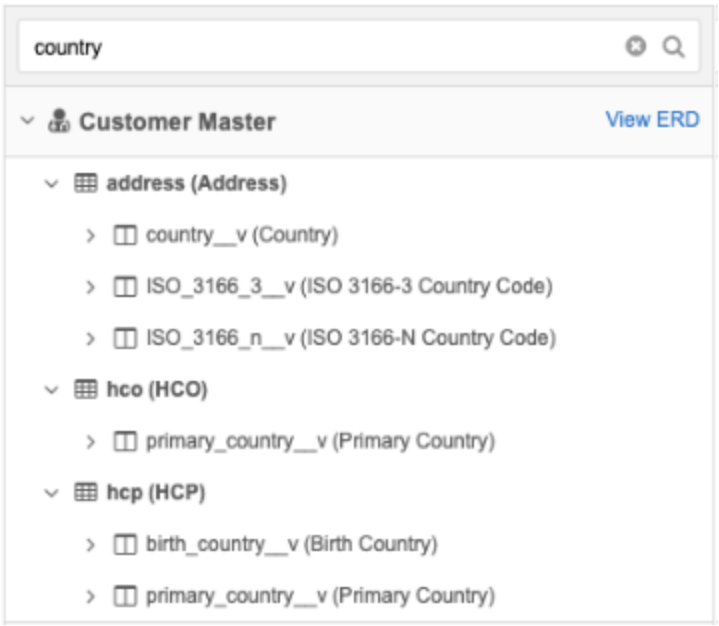
Add to query

Click the **Add to Query** button to insert the table, field, or reference code into your SQL query editor box. The text will be inserted wherever your cursor is located in the query box.

Search

Use the search bar at the top of the pane to find tables and fields. Reference codes do not display in these search results. If a reference type contains more than ten codes, a pop-up displays and includes a search bar.

As you type, the list automatically refines to display matches for any table and field name or label. The tables will automatically expand so you can quickly view all of the results.



Example - Create a SQL query

Create a query to find all of the doctors with active addresses in Austria.

To create this query, we need to find all of the addresses that meet the following criteria:

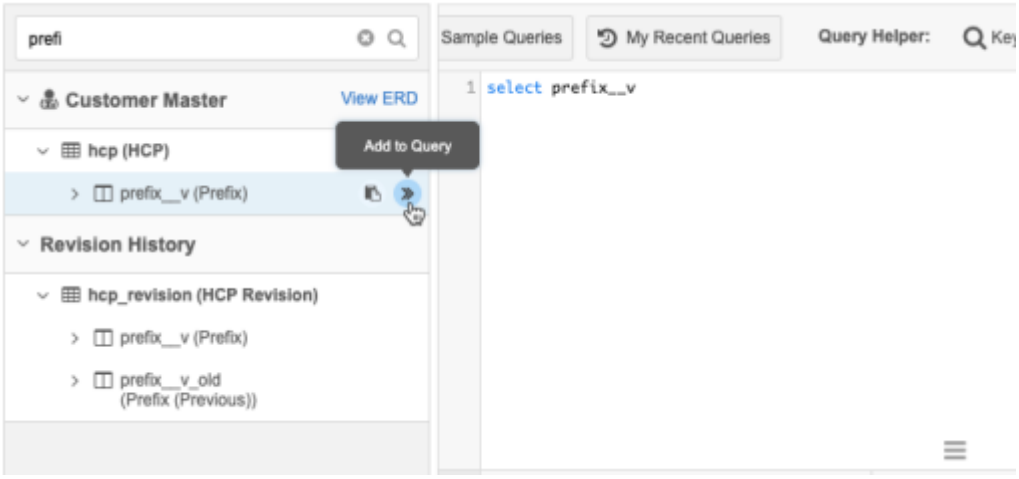
- The address status is active.
- The country is Austria.
- The address belongs to an HCP with the HCP type Doctor.

In the report result, we want to display the following fields:

- HCP Prefix
- First Name
- Last Name
- HCP Type
- All Specialties
- Address Line 1
- Address Line 2
- City
- Province
- Postal code
- Country (on the address object)

To create the query:

1. Begin the query with a `SELECT` statement.
2. Add the fields that you want to see in the report results.
   a. To find the HCP Prefix field, type *prefix* in the search box.
   b. Find the field in the search results and click the **Add to Query** button to insert the field into the SQL editor box.

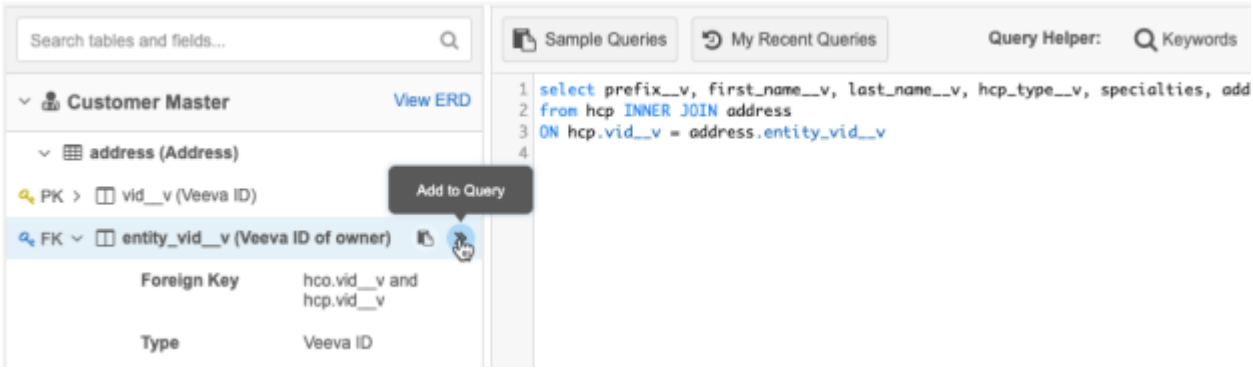


The `prefix__v` field is inserted after the `SELECT` statement.

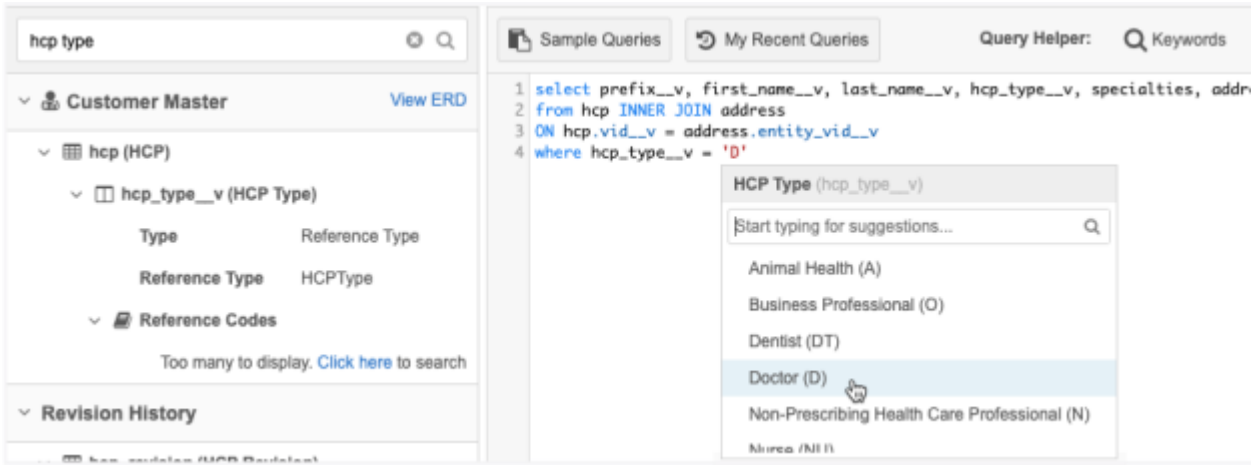
Tip: The text is inserted wherever your cursor is in the SQL editor box, so leave spaces and punctuation whenever applicable.

   c. Continue searching for the remaining fields and insert them into the query.

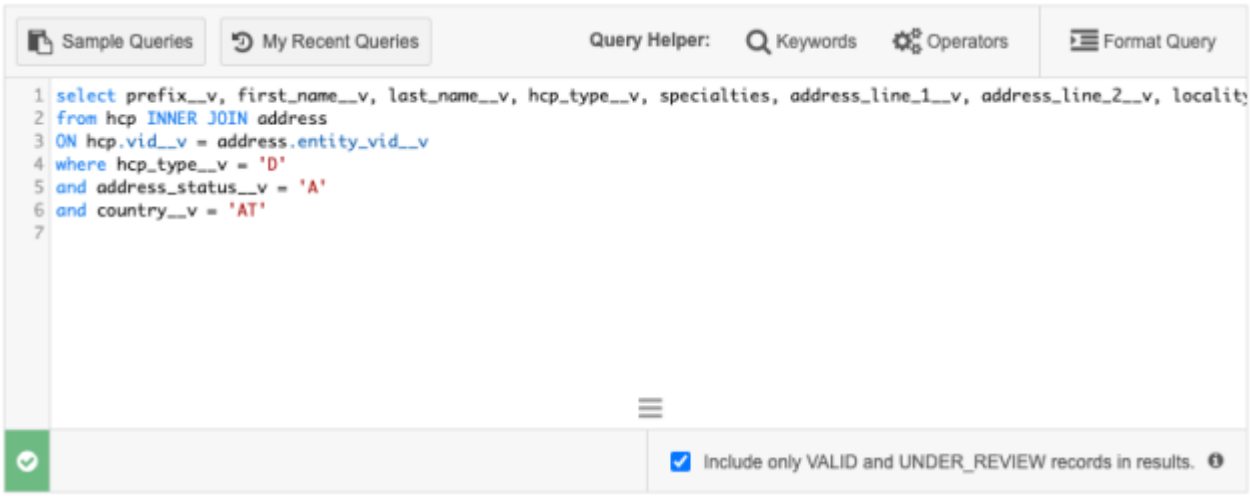
3. Use a `FROM` statement to tell the query which tables to use. To find the addresses that belong to HCPs, we need to join the HCP and Address tables.
    a. To understand how to join the HCP and Address table, expand the foreign key on the Address table.
    b. Based on the foreign key description, we can see that the field `entity_vid__v` on the Address table (`address.entity_vid__v`) joins to the field `vid__v` on the HCP table (`hcp.vid__v`).
    c. You can copy and paste the `hcp.vid__v` field into the SQL editor box.
    d. On the foreign key, click **Add to Query** to insert it into the query. Ensure that you preface the foreign key with `address.`; for example, `address.entity_vid__v`.



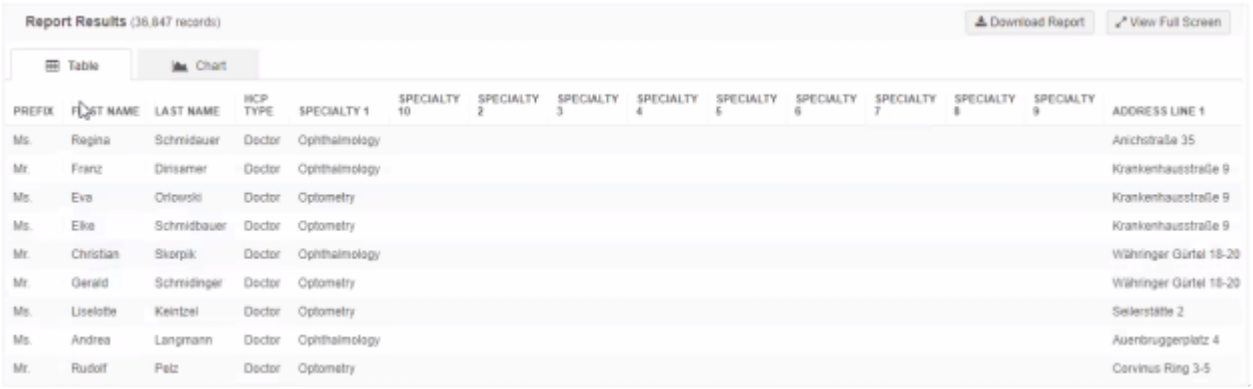
4. Create a `WHERE` statement to insert the criteria for the query.
    a. **The HCP type must be Doctor** - Search for the HCP Type field and add it to the query. To find the reference code for Doctor, expand the **Reference Codes** for the `hcp_type__v` field and click the link to display the codes. Click **Doctor (D)** to add the code to the query.



    b. **The Address status must be active** - Search for the address status field in the tree view pane and click **Add to Query**. Expand the `address_status__v` field to find the reference code for **Active**. Add the reference code to the query.
    c. **The country must be Austria** - Search for the country field in the tree view pane and click **Add to Query**. Under the `country__v` field, expand **Reference Codes** and click the link to find the code for **Austria**. Add the reference code to the query.



5. Ensure that the query is valid.
6. Click **Run Query** to see the report results.



Inbox

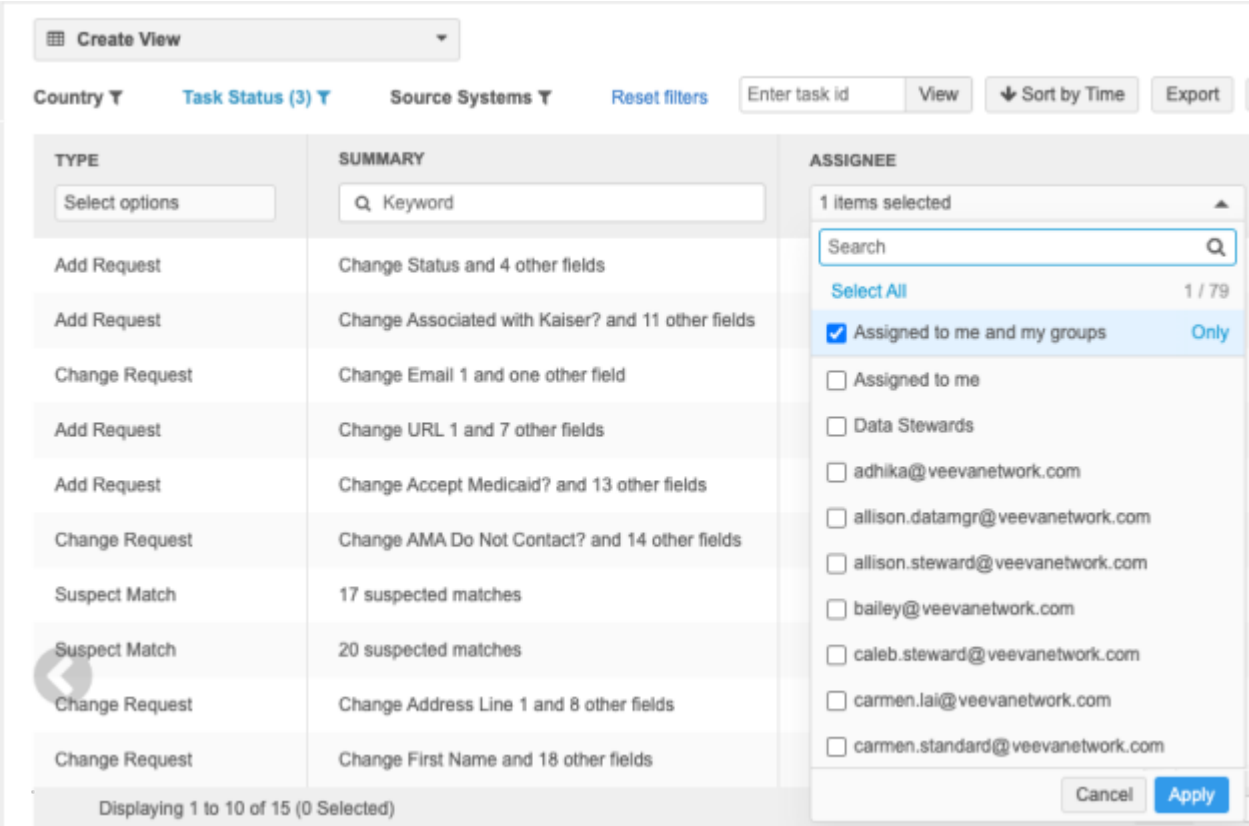
ASSIGNING TASKS

The inbox is updated to improve performance for data stewards when they are assigning tasks.

These enhancements are enabled by default in your Network instance.

Assignee column

The **Assignee** column list now only displays active users from your inbox task group. Previously, the list also contained inactive users. Removing these inactive users helps the list to load more quickly.



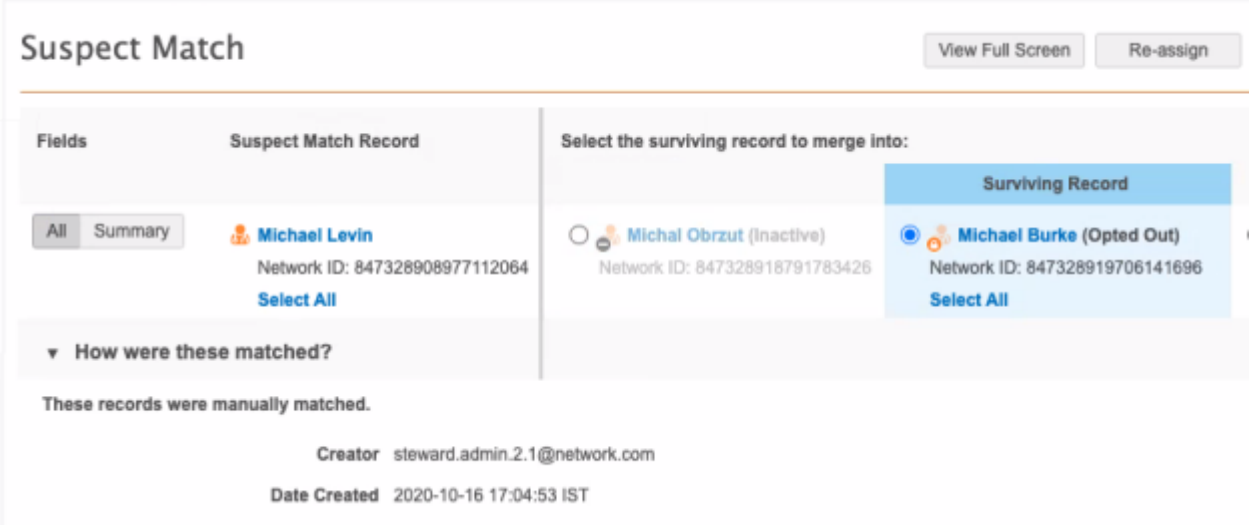
If you have an inbox view saved with an inactive user in the **Assignee** column, the tasks will no longer display in the inbox and the inactive user is removed from the **Assignee** list. If you click on the **Assignee** list, a message displays "*This view has been updated. Save changes*". This message is just informational to make you aware that the view has been changed to remove the inactive user.

Reassign tasks

When you reassign a task, the inbox now remains on the current page so you can continue from where you were. For example, if there are three pages of tasks, when you reassign a task from page three, the inbox remains on page three when you are finished. Previously, the inbox returned to page one. If there are no tasks remaining on the current page, the inbox returns to page one.

SUSPECT MATCH

The Suspect Match page is updated to help data stewards more easily process matches.



These enhancements are enabled by default in your Network instance.

Updates

Record information

Specific information displays beside the record name so data stewards can quickly identify different types of records to help them determine if the record is appropriate to match.

The following record status will display:

- Dead (HCP only)
- Inactive
- Retired (HCP only)
- Undetermined

The following record information will display:

- Candidate
- Opted Out (HCPs only)

  If an opted out record is also a candidate record or has one of these statuses, **Opted Out** displays; the opted out information takes precedence over the other statuses or candidate information.

Surviving record

When a record is selected as a match, the record is highlighted and **Surviving Recording** displays above the column. Previously, this information displayed beside the record name where the record information now displays.

Select all values

When a record is selected, a **Select All** link displays below the record heading. If data stewards click **Select All**, the link will now be dimmed to indicate that no further actions are required for the individual field values.

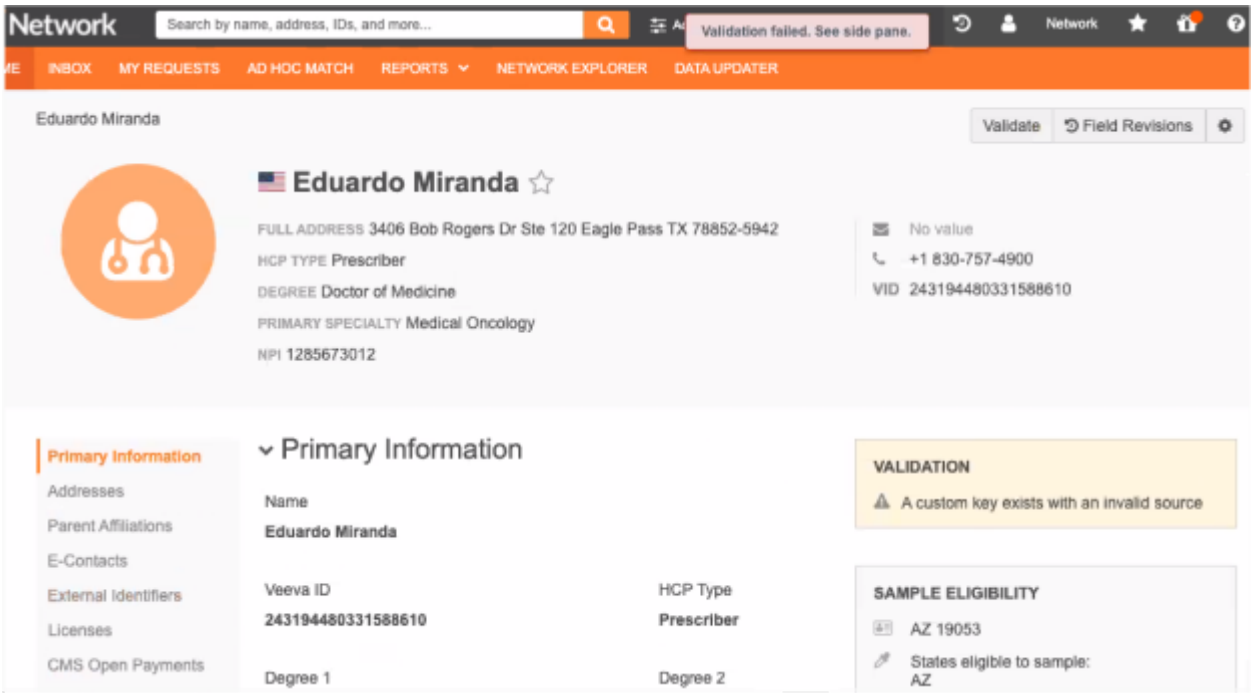
Data validation rules

CUSTOM KEYS

Data validation rules can now be created for custom keys on HCP and HCO objects. This is helpful if you manually maintain custom keys and need to validate the Source and Value fields; for example, to check for specific sources and the length of values.

Data validation rules should run only on custom keys that have just been manually created on a record profile. When custom keys are saved, they are read-only and cannot be edited. If validation rules fire for existing custom keys, data stewards cannot resolve the issue on the profile page; it must be resolved through data loading. For this reason, these data validation rules must be thoroughly tested before they are used in production.

This enhancement is enabled in your Network instance by default.



Supported objects

Custom keys supported for HCPs and HCOs only. Custom keys are not supported for sub-objects because custom keys cannot be edited for sub-objects on the profile page.

Clean up existing keys

Before you create data validation rules for custom keys, clean up existing custom keys. Use reports to query existing custom keys and ensure that the Source and Value fields are correct. Existing custom keys are read-only and can conflict with the new rules. If a rule fails on an existing custom key, it must be addressed through data load.

Create a validation rule for a custom key

1. In the Admin console, click **System Interfaces > Data Validation Rules**.
2. In the **HCP** or **HCO** section, click the **Add** icon to add a new rule.

   Custom key data validation rules can't be applied to both HCPs and HCOs so rules must be created for both objects.
3. Type a **Description** for the rule. For example, *Ensure all custom keys on HCPs contain valid sources*.
4. Select the **Countries** that this rule applies to.
5. In the **Failure Message** section, click **Add Language**. Choose the **Language** and type the **Message**. For example, *A custom key exists with an invalid source*. This is the error that data stewards will see on the profile page.
6. Expand the **Groups** section and choose **Custom Key** as the **Object Type**.
7. Click **Add Filter** to limit the rule to run on specific records. For example, these data validation rules should run only on custom keys that are manually created, so exclude custom keys that are automatically added or are created from master sources.
   a. In the **Field** list, choose **Source**.
   b. In the **Condition** list, choose **Not Equals**.
   c. In the **Value** list, type the source name; for example, `MASTER__v` for Veeva OpenData custom keys.

      Every record has a default custom key with `MASTER__V` as the source, so this source should always be added as a filter. When records are created using the Network UI, custom keys with the sources `WORKFLOW__v` and `CUSTOMER__v/3/change_request` are automatically added. These sources should also be excluded from the rules.

   d. Click **Add Filter** to specify additional sources to exclude. Choose the **AND** operator for the filters.
8. Click **Add Condition** to define the condition that will cause the rule to fail. For example, we want the data validation rule to fail if the source is not `SAP`.
   a. In the **Field** list, choose **Source**.

      Only the fields that are visible in the Network UI are available in the list: Item Type, Source, Status, and Value. This ensures that a data steward can edit the field value to resolve the validation error.

b. In the **Condition** list, choose **Not In**.

> **Note:** If you use the **Not Find** or **Not Equals** conditions, custom keys that are automatically added to records (`WORKFLOW__v` and `CUSTOMER__v/3/change_request`) can cause issues. Ensure that you add filters for these sources so data validation rules do not run for them.

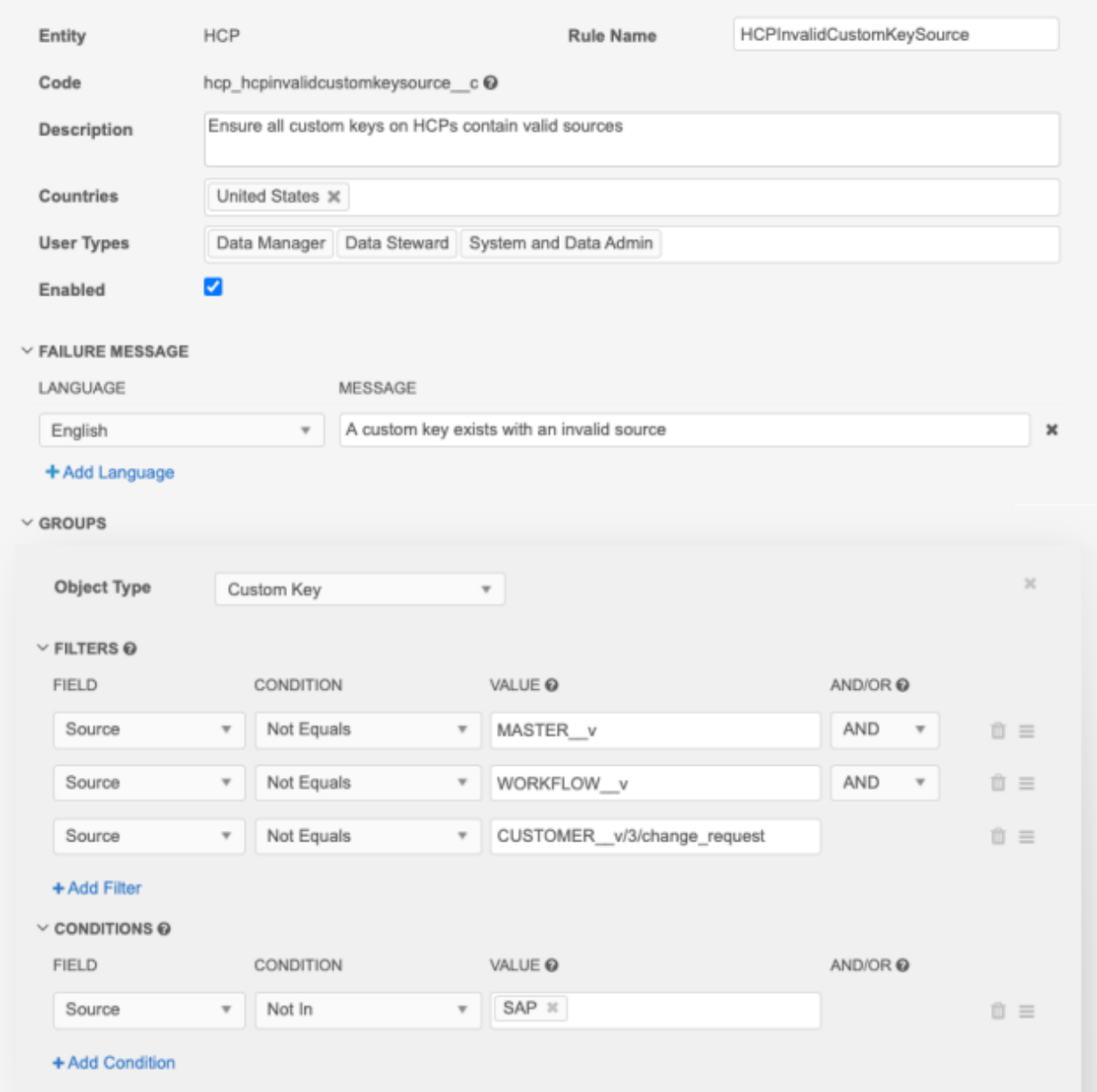
c. In the **Value** list, type the source name; for example, `SAP`.

9. **Save** the data validation rule.

Example 1 - Validate the source

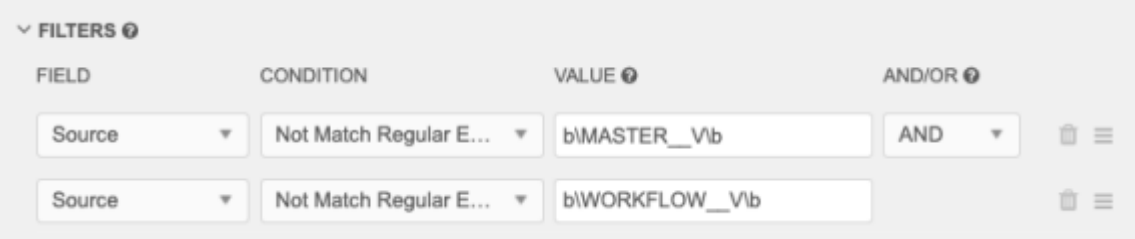
Create a data validation rule to check that a custom key source name matches the predefined list of sources. In this example, the only source is SAP.

The rule ensures that any custom keys from Veeva OpenData (`MASTER__v`) or from records that were added using the Network UI (`WORKFLOW__v` and `CUSTOMER__v/3/change_request`) are excluded from the rule.



Case sensitive sources

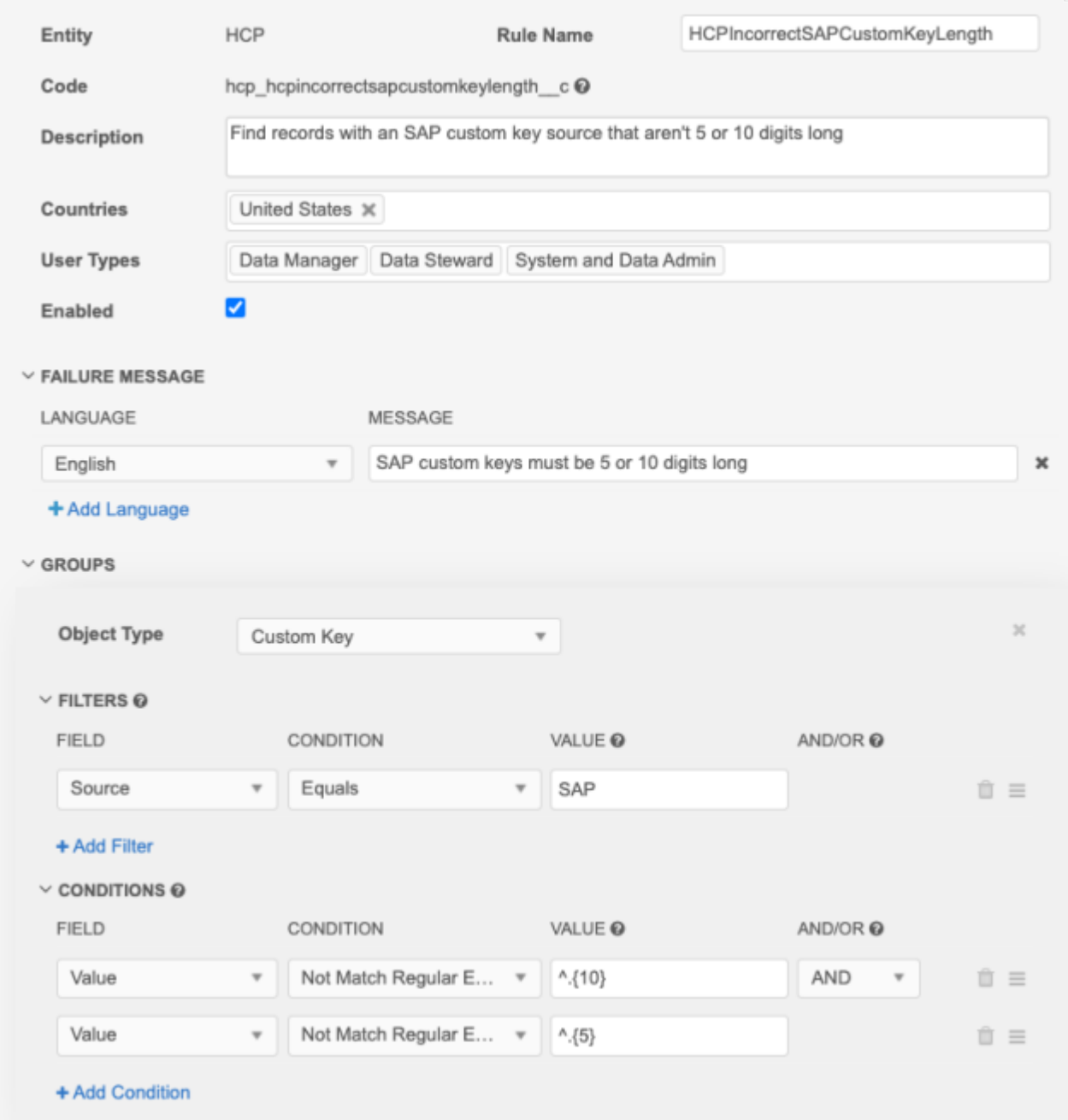
For case sensitive sources, use regular expression conditions. The **Find**, **Not Find**, **Equals**, and **Not Equals** comparisons are not case sensitive. Also, wrap the source name text with `\b`; for example, `\bMASTER__V\b`. Spaces can be included without quotations.



Example 2 - Validate the value length of the custom key

In this example, if the **Value** field of the custom key is not 5 digits or 10 digits long, the rule will fail. The rule only validates custom keys from the SAP source.

Note: The AND operator must be used for the condition. If OR is used, the rule will always fail.



Testing validation rules

Data validation rules should be thoroughly tested before they are used in production. Create the data validation rules in your Sandbox instance. You might need to adjust the rule or adjust the data manually using source subscriptions. If data stewards encounter a rule that fails for an existing custom key, it cannot be edited on the profile page. The steward will need an administrator to either edit or disable the rule, or to run a source subscription and adjust the custom key values.

To validate the rules before finalizing them, run reports that mimic the rule criteria.

After the rules have been tested, export the rules to your Production instance using the Export Configurations feature. For more information, see Exporting configurations. Custom fields or reference codes are not exported by default when you export the custom key. These dependencies must be independently added to the export.

New sources

When new sources are added, update your data validation rules.

Data updater

ADDRESS CLEANSING

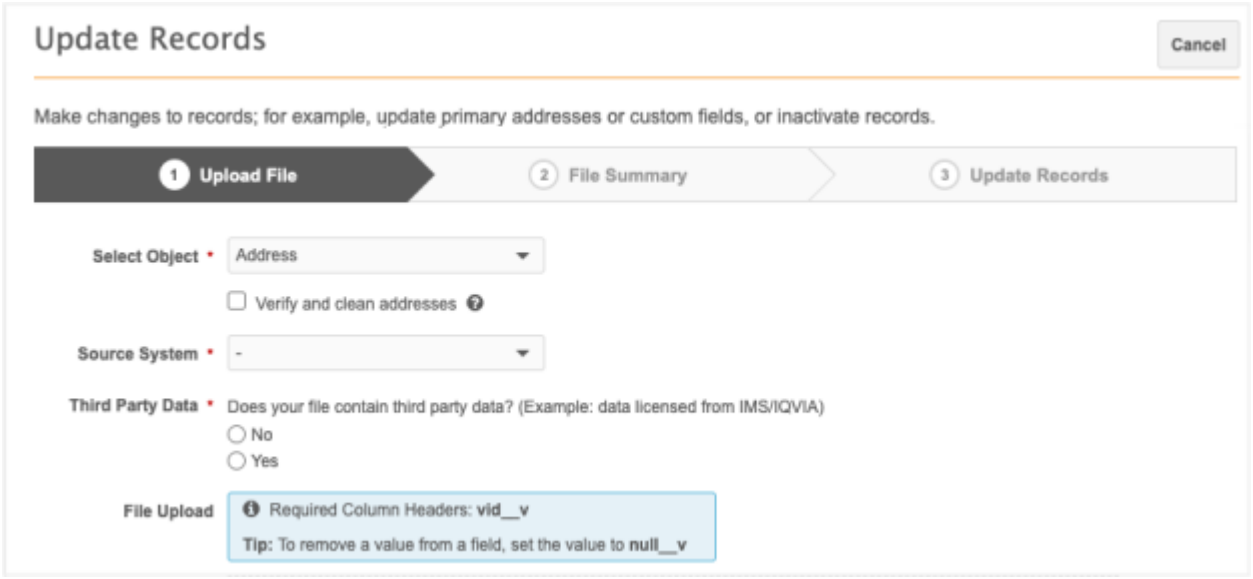
Administrators and data managers can now choose to enable address cleansing when they run a data updater job to update addresses. Address cleansing verifies addresses and parses the data into Network fields. Because cleansing can change the address data in your uploaded file, you might not want cleansing to occur; for example, if you are correcting postal codes on existing addresses. However, it is helpful to use Network's address cleansing to correct entire addresses. Now, you have the option to enable address cleansing depending on the address data in your file.

This enhancement is available by default in your Network instance.

Address cleansing options

Disable cleansing

When you create a data updater job, the option for address cleansing displays after you choose the address object. The option is disabled by default.



When address cleansing is disabled, only the `vid__v` column is required in the file that you upload. When the job runs, the updates in your file are applied to existing address records.

Enable cleansing

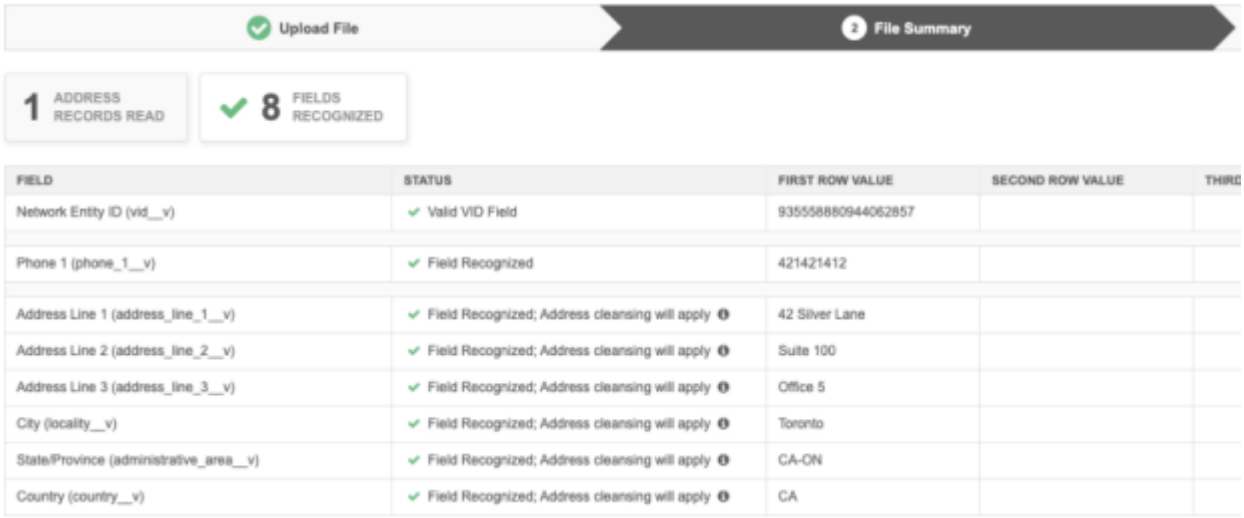
If you enable the **Verify and clean addresses** option, address cleansing occurs during the job. Network's third party cleansing service verifies and parses addresses into Network's address fields. This is helpful if you are using the data updater job to correct entire addresses.

When address cleansing is enabled, several column headers (fields) are required in your file:

- `vid__v`
- `address_line_1__v`
- `locality__v`
- `administrative_area__v`
- `country__v`
- `postal_code__v`

Click **See Example** to view an example file with the required fields. These fields ensure that address cleansing can occur. If the fields are not in your file as column headers, the upload will fail.

On the **File Summary** tab, the **Status** column confirms that address cleansing will apply to the field.

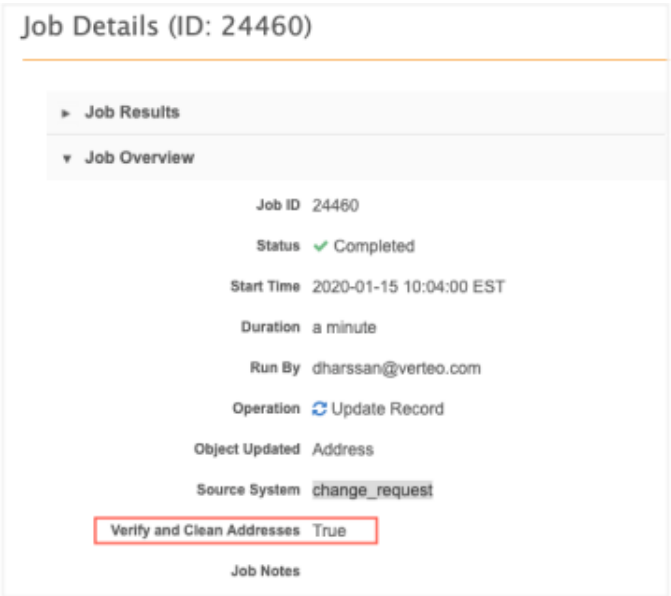


If address cleansing is not enabled for a country, but the **Verify and Clean Addresses** option is set, the data updater job simply skips the address verification and cleansing for any records for that country.

Network remembers your choice for the next time you log in and create a data updater job for addresses.

Job Details

The **Verify and Clean Addresses** heading on the Job Details page indicates whether address cleansing occurred for jobs for address objects. The heading does not display for jobs for other objects.



Data model

NETWORK EXPRESSION (NEX) RULES

Several new functions are available by default in your Network instance.

LOOKUPN()

This function is used specifically for lookup tables.

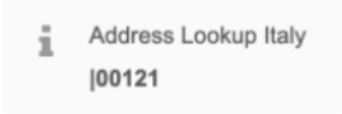
Use this function to lookup all values matching a key in the defined lookup table. For example, you can use the functions to store a product family in a custom field. This new function is very similar to the LOOKUP() function, but it returns all matching values on the table; the LOOKUP() function ends after it finds the first value.

By default, LOOKUPN() returns 100 results. You can specify a parameter to limit the number of lookups returned. The maximum limit is 500 values. If more than 500 is defined, the NEX rule automatically fails. In a source subscription, the job will complete, and the error displays in the Job Error Log.

Syntax

```
LOOKUPN('lookup_table_name', 'column_name', <limit_parameter>,
<lookup_column_1>: <expression1>, <lookup_column_2>: <expression2>)
```

If a field contains an empty value, the empty value is returned in the results. For example, if the lookup returns two values but the first value is null, the null value and separator displays with the text value.



JOIN()

Use this function to format an array of values using a delimiter.

Tip: To ensure that the array returned by the LOOKUPN() function can be easily managed in a field or another calculation, always use the JOIN function with LOOKUPN()

Syntax

```
JOIN(<collection>,<separator>)
```

Example NEX rule

In a source subscription, create an after update rule for the lookup table, `address__t`, that returns a maximum of 10 postal codes from the United States and Spain. Format the returned array so each value is separated by a pipe (|).

```
[
   "postal_code_list__c = JOIN( LOOKUPN('address__t', 'postal_code__v', 10,
country__v: ['US', 'ES']), '|')"
 ]
```

Support for field collections

A collection of fields can now be referenced in LOOKUP or LOOKUPN functions for NEX rules.

Example

You can include some of the specialty set of fields (`speciality_1__v` to `specialty_10__v`) in the LOOKUPN() function.

```
JOIN(LOOKUPN('speciatlymatrix__t', 'product_family_name__c',
product_specialty__c: [specialty_1__v, specialty_2__v, specialty_3__v,
specialty_4__v, specialty_5__v], product_specialty_indicator__c: 'E'), ';')
```

GETTARGETTYPE()

The `GETTARGETTYPE()` function can be used to check the entity type of the record. This function can be used when you write Network Expression (NEX) rules in source subscriptions and for custom fields.

The function is available by default in your Network instance.

Syntax

```
GETTARGETTYPE()
```

Example 1

In this example, the function is used on a custom field to add an alternate key to HCP and HCO records. The format of the alternate key is determined by the entity type of the record. For example, if the entity type is HCP, prefix the key with HCP (`HCP-<ID_number>`).

```
IF(gettargettype() == 'HCP',
 NEWALTERNATEID('HCP-{#########}', 'SEQ:100000000,999999999,HCP'),
 NEWALTERNATEID('HCO-{#########}', 'SEQ:100000000,999999999,HCO'))
```

Example 2

In this example, the function is on a custom field to concatenate the entity type with a value; for example, the Network entity ID (VID).

```
concat(gettargettype(),vid__v)
```

Source subscriptions

The `GETTARGETTYPE()` function can be used in any of the rule points: File Preparation, Transformation, After Update, and Feed Acceptance.

If the function is used in the File Preparation stage, the item type (alias name) is returned because the object is not yet mapped to the Network object type in that stage. For example, you might see ACCOUNT returned in the File Preparation stage, which will be mapped to HCP or HCO in a later stage.

DELETE()

Use this function to delete objects and sub-objects during data load. Sets the record state to DELETED (effectively removing objects and sub-objects from Network) and the status to INACTIVE, and inactivates all custom keys on the object and sub-objects.

Syntax

```
DELETE()
```

Example

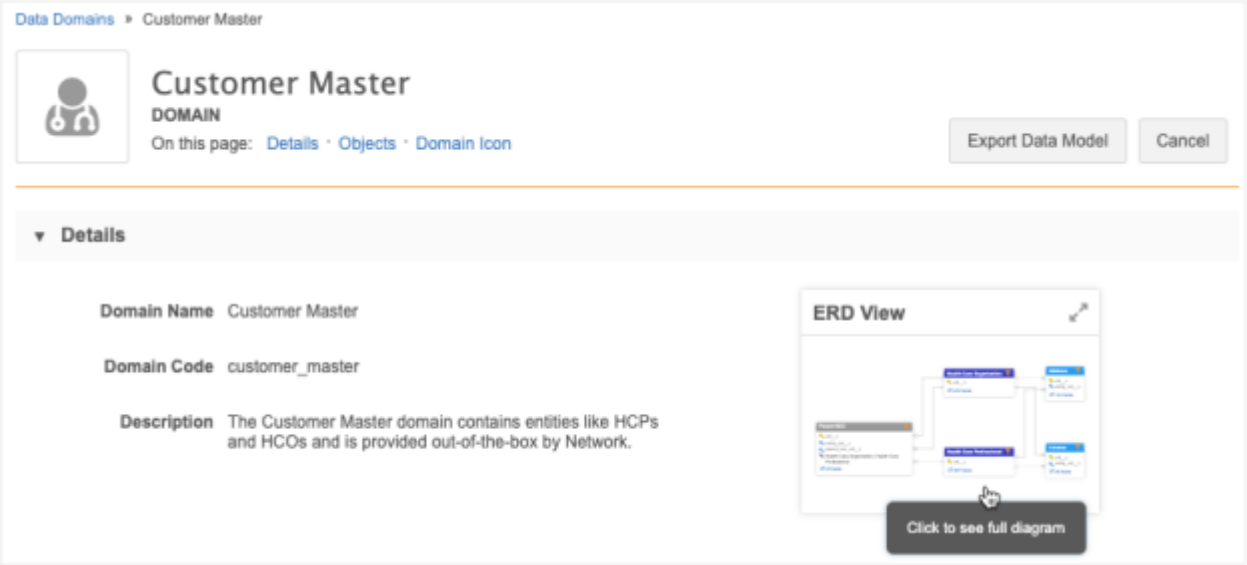
In this example, if the main object's record state is DELETED, delete the related sub-objects for the record, and inactive all custom keys for the main object and sub-objects.

```
IF(hco_status__v=='D',DELETE())
```

Data domains

ERD VIEW

An entity relationship diagram (ERD) view is now available for each data domain in your Network instance. Use this view to get a better and faster understanding of your data model. This is also helpful to use for reporting to understand what tables you can join in your SQL query. The view is read-only, but if you update your data domain the view immediately refreshes so you can see the changes.



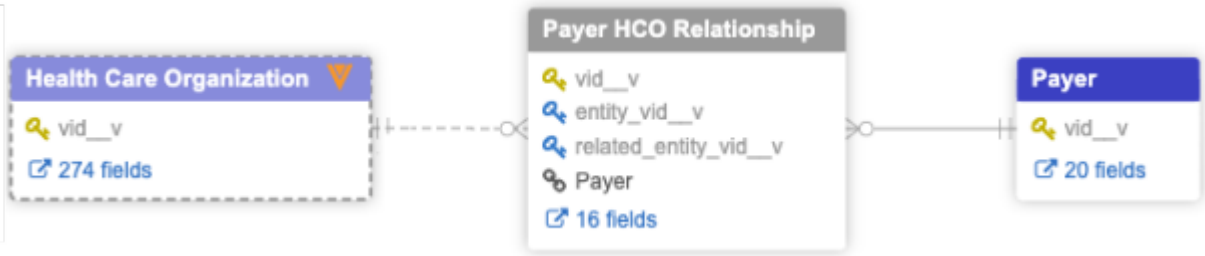
This feature is available by default in your Network instance.

The ERD view loads when you open a data domain page. Click the view to see the full diagram.

Objects

All enabled and disabled objects assigned to the data domain display in the ERD view. Custom keys do not display. Object types are identified by the colors in the legend. Veeva-owned objects are indicated by a Veeva icon next to the object name.

When a relationship object contains a main object that is not in the current domain, the object still displays in the ERD so you have a complete view of the relationship. A dotted line on the object indicates that the main object is in another domain.



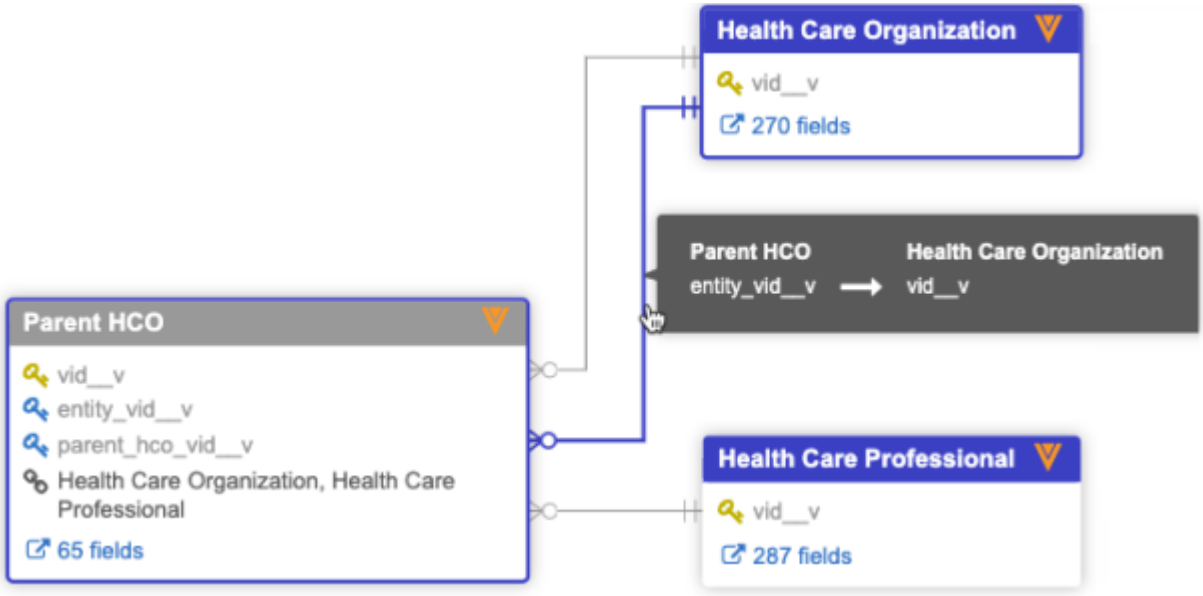
Each object identifies the following items:

- **Primary key** - The field that uniquely identifies an object and that is used to associate a main object to sub-objects and relationship objects.
- **Foreign Key** - The primary key field from a main object that is used to reference a main object on a sub-object or relationship object. Relationship objects contain two foreign keys; one for the owner object and one for the related object in the relationship.

  Hover your cursor over the line that connects two objects to view a tooltip that shows the related objects as well as the primary and foreign keys used to connect the objects.

  Example

  In this example, there are two lines connecting the Parent HCO and HCO objects because the HCO object is both an owning and related object in the relationship. The Parent HCO's foreign key, `entity_vid__v`, is used to associate it to the HCO's primary key, `vid__v`.

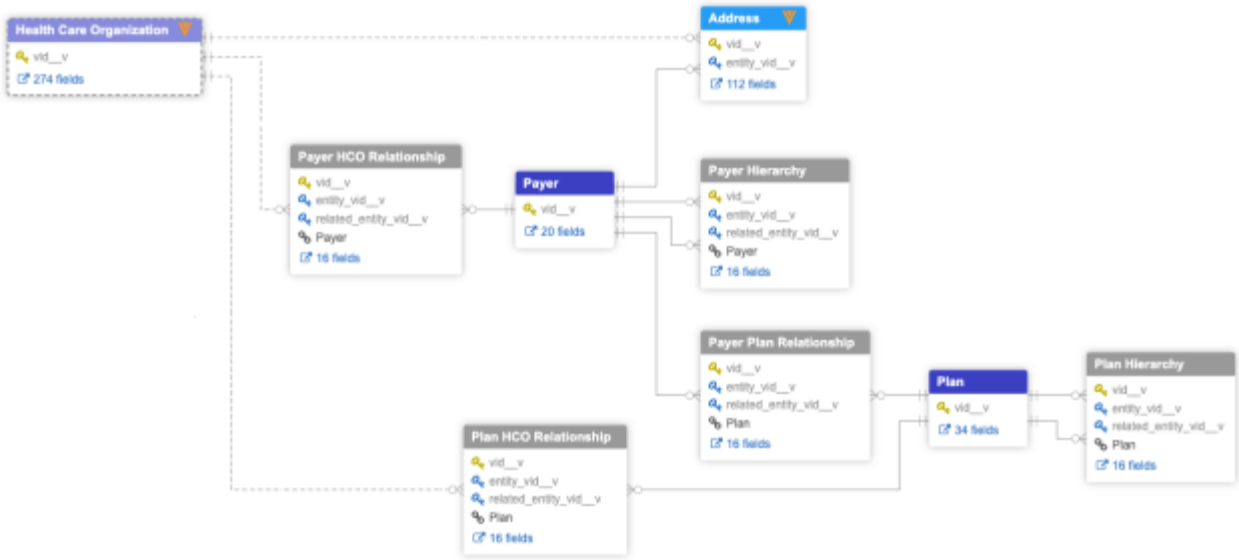


- **Relationship owner** - Relationship objects only. The main object that is the owner of the relationship.
- **Fields** - A count of the fields for the object. Click the link to navigate to the object's configuration page to view the fields in more detail.

Clear the **Show Fields** option to see a more simplified view of the ERD diagram.

Custom data domain example

The Payer Master domain contains Veeva standard objects and custom objects.



Lookup tables

REPORTING ON LOOKUP TABLES

You can now include lookup tables in SQL queries. Previously, reporting was not supported for lookup tables. Now you can run a query so you can analyze the table data and generate reports. When lookup tables are loaded or reloaded into your Network instance, they are immediately available in reporting. Existing lookup tables will be automatically available to report on.

All users with access to create SQL queries using the SQL Query Editor or on the Saved Reports page can run reports against lookup tables that have been loaded to their Network instance. The Basic Report Builder and Aggregate Report Builder do not support lookup tables.

This enhancement is available by default.

Create a query

The SQL Query Editor supports lookup tables. Use the tree view to display the lookup tables and fields that are available to report against. You can also perform JOIN operations between lookup tables and any table available in your Network instance; for example, Network defined tables or custom tables.

To query a lookup table:

1. On the Network menu bar, click **Reports > SQL Query Builder** to run a query against the table.

   If you have just loaded or reloaded the lookup table, a spinner might display as the reporting schema is being updated to include the lookup table and fields.

2. Type your query in the query box.

   Lookup table options:

   - **Add the lookup table** - Use the tree view beside the SQL Query Editor box to find the table. To choose the lookup table, find the table in that category. Click the **Add to Query** button to insert the table into the query box.

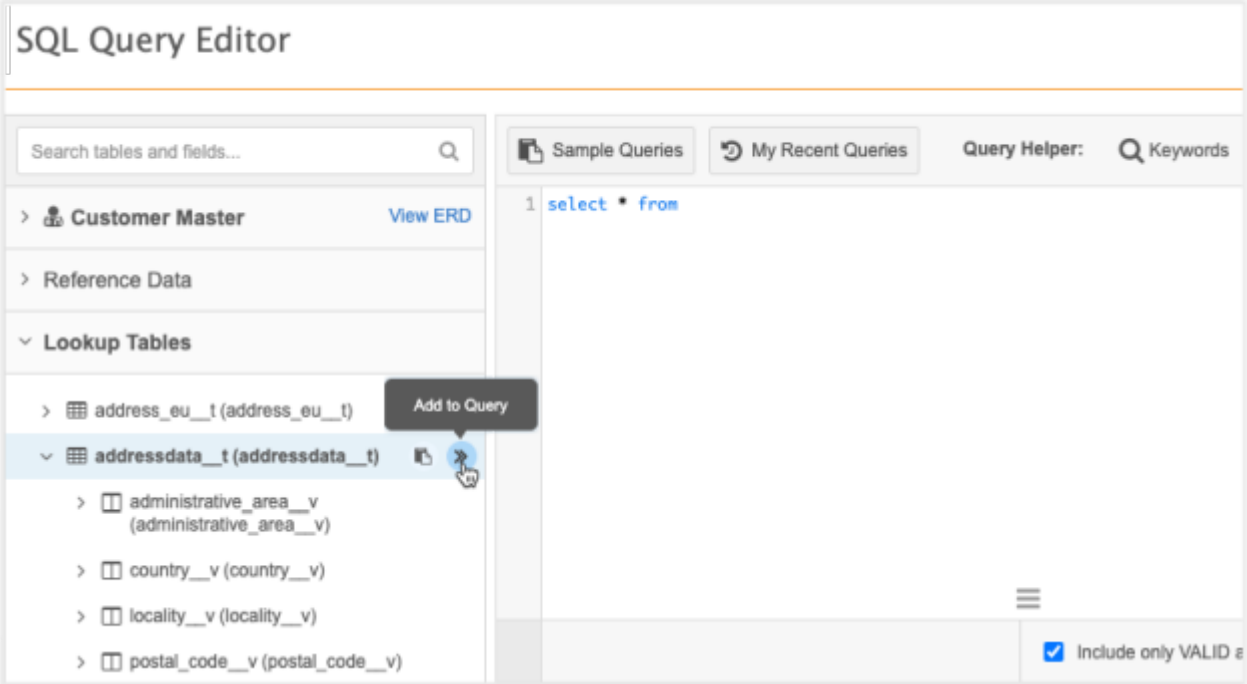
     The **Lookup Tables** category displays if you have uploaded at least one lookup table.

     Tip: You can also find fields and tables using the search bar in the tree view or using the CTRL-Space keyboard shortcut.

     To help you recognize which tables are lookup tables, the lookup table names contain the `__t` suffix.

     Example

     Create a query using the `addressdata__t` lookup table.



- **Add fields** - Expand the **addressdata__t** table. The fields (columns) are listed alphabetically.

  Click the **Add to Query** button to insert each field into the query box.

- **Perform JOIN operations** (optional) - >Join the lookup table with another lookup table or any table in your Network instance.

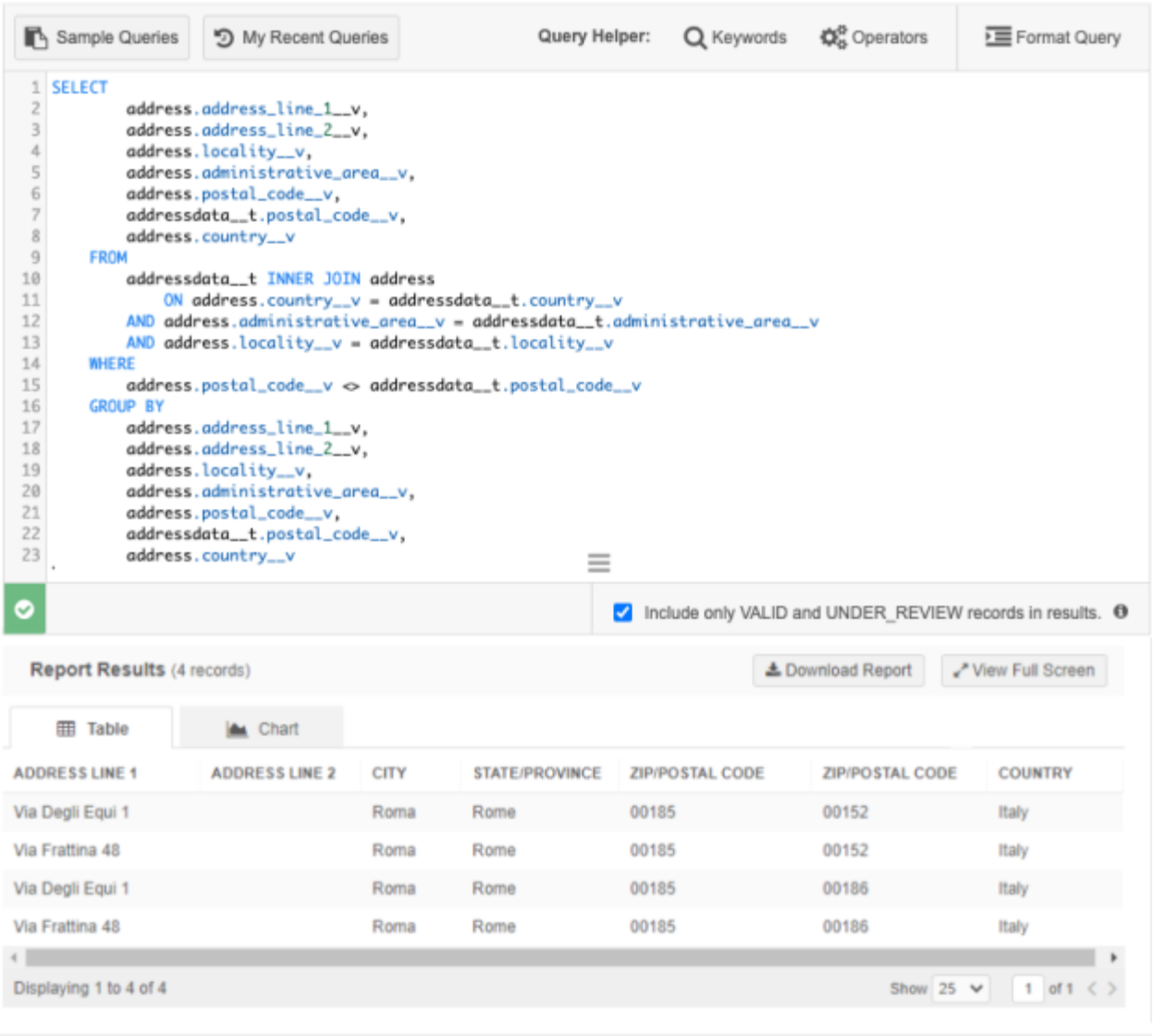
  Example

  To compare postal codes in your lookup table to postal codes in your Network instance, join the lookup table (`addressdata__t`) to Network's `Address` table. This example returns the addresses where the postal code from the lookup table does not match the postal code in Network's address table, but the city, state and country are the same.

```
SELECT
          address.address_line_1__v,
          address.address_line_2__v,
          address.locality__v,
          address.administrative_area__v,
          address.postal_code__v,
          addressdata__t.postal_code__v,
          address.country__v
     FROM
          addressdata__t INNER JOIN address
              ON address.country__v = addressdata__t.country__v
          AND address.administrative_area__v =
addressdata__t.administrative_area__v
          AND address.locality__v = addressdata__t.locality__v
     WHERE
          address.postal_code__v <> addressdata__t.postal_code__v
```

```
        GROUP BY
            address.address_line_1__v,
            address.address_line_2__v,
            address.locality__v,
            address.administrative_area__v,
            address.postal_code__v,
            addressdata__t.postal_code__v,
            address.country__v
```

3. Click **Run Query** to view the results.



4. Download the report results or save the query.

Deleted lookup tables

When lookup tables are removed from your Network instance, the table is also removed from Network Reporting. The table will not be available in the query helper buttons. Saved reports or queries that contain the table will not validate.

Note: If you have used a lookup table in a NEX rule, the deleted table is not automatically removed from the rule. Ensure that you remove the lookup table from the NEX rule.

SQL reserved words

Lookup tables can contain column headers that are also SQL reserved words; for example, `where`. To ensure these words do not cause issues when Network validates the query, double quotes (") are automatically added to the word when you select the column from the query helper; for example, `"where"`.

If you type the column header into the query, a validation error displays if double quotes (") are not used.

OpenData subscriptions

NCPDP IDs

Veeva OpenData subscriptions for the United States now contain the option to receive National Council for Prescription Drug Programs (NCPDP) IDs for HCOs. For compliance, Veeva OpenData can provide NCPDP data only to customers that have a NCPDP license. Previously, NCPDP ID data was available to all customers.

There is no extra cost for enabling this subscription and receiving this data.

Enable the NCPDP subscription

The **Include NCPDP data** field-level subscription is disabled by default in all Network instances. The `ncpdp_num__v` field is also disabled by default. For existing customers, the subscription can be enabled when your license is verified by Veeva OpenData. When the subscription is enabled, you must also enable the `ncpdp_num__v` field so it can be managed by OpenData.

If you do not have a license, or your license has not yet been verified (new customers), the **Include NCPDP data** option is dimmed in your US OpenData subscription.

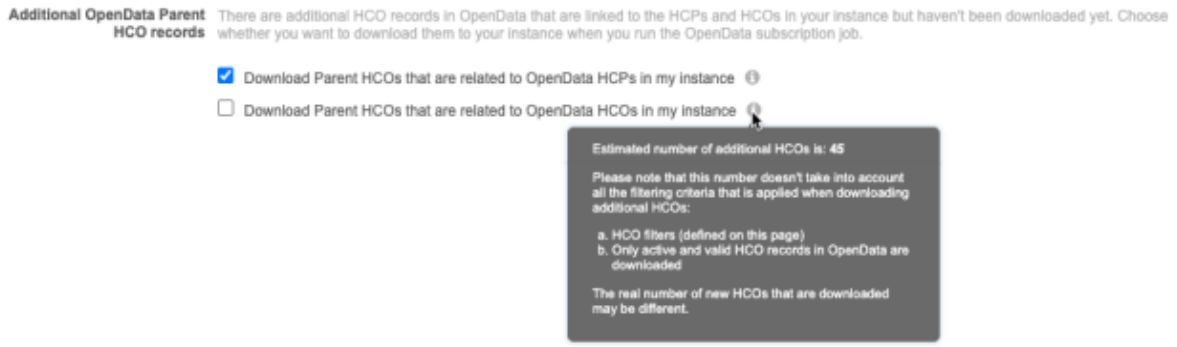
Locally managing NCPDP data

The NCPDP field can be useful for matching purposes. If you do not have a license, the `ncpdp_num__v` field for HCOs can be enabled and managed locally; data change requests on the NCPDP ID will be sent to local data stewards.

For information about using Veeva standard fields to load local data, see Enabling data model fields.

Additional OpenData Parent HCO records

The tooltips that displayed beside the **Additional OpenData Parent HCO records** options have been removed. The tooltips contained a count of the records that could be downloaded into your Network instance the next time the subscription job ran. The count could be vastly overstated because it could not reflect the filtering criteria that is applied before records are downloaded. The tooltips have been removed to avoid misrepresenting the count of records that could be downloaded.

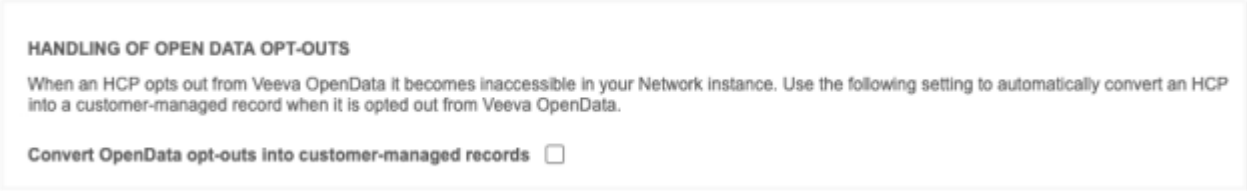


Converting OpenData opt-outs

Administrators now have the option to configure an OpenData subscription so opted out records for Veeva OpenData HCPs are automatically converted into customer-managed records.

Today, when HCPs opt out of OpenData, the record is no longer actionable; it disappears from your Network instance and is masked in Veeva CRM. However, some HCPs that opt-out of OpenData still consent to customers continuing to store and process their data. In this case, Network can convert the OpenData record into a customer-managed (local) record that keeps the same Network entity ID. This enables you to retain the history of transactions and to continue engaging with the HCP.

OpenData country subscriptions contain the setting to convert opted-out HCP records into customer-managed records. The setting is managed by country so you have the flexibility to convert records in some countries but not others. For example, your compliance team might have a policy for some countries that opted-out records in OpenData must be opted out in your Network instance also.



When records are converted, the following information is retained on the customer-managed record:

- All IDs on the record (Veeva ID, alternate IDs, custom keys).
- The account record in Veeva CRM including all of its transactional data.

This enhancement is available in all OpenData country subscriptions in your Network instance. The setting is disabled by default.

Note: This feature applies only to future records that are opted-out of OpenData; it does not apply to records that have been opted-out in the past.

Some countries do not use the data privacy opt-out feature. If the setting is enabled for the country, there is no impact to your data.

Supported records

OpenData records can be converted into local records if the record existed in your Network instance before it was opted-out. If the HCP record was not downloaded before the record was opted-out, it cannot be converted to a local record.

Convert records

In Europe, when HCPs request to be opted out, OpenData sends an email every 15 days to inform customers about the requests. Ten days later, the `data_privacy_opt_out__v` field is set to `True` for those HCP records. If you enabled the option to convert opted-out records in your OpenData country subscription, the next time you sync with OpenData, the record will become a local record.

To enable the option:

1. In the admin console, click **System Interfaces > OpenData Subscriptions**.
2. Open a country subscription and select **Convert OpenData opt-outs into customer-managed records**.

After the record is converted, it will no longer be updated by OpenData. It cannot be downloaded from OpenData again and the Send to OpenData button on the profile is hidden from local data stewards so the record cannot be taken over by OpenData.

If the opted-out record is not converted into a customer-managed record, it is no longer available in your Network instance. This is the existing data privacy opt-out behavior.

Updates to converted records

When Veeva OpenData records are converted to local records, the following changes are applied:

Changes to fields

Fields are updated to identify the change in ownership.

Field	Old Value	New Value
record_owner_type__v	OpenData	Locally Managed
record_owner_name__v	OpenData	Local
is_veeva_master__v	True	False
data_privacy_opt_out__v	No/False	No/False

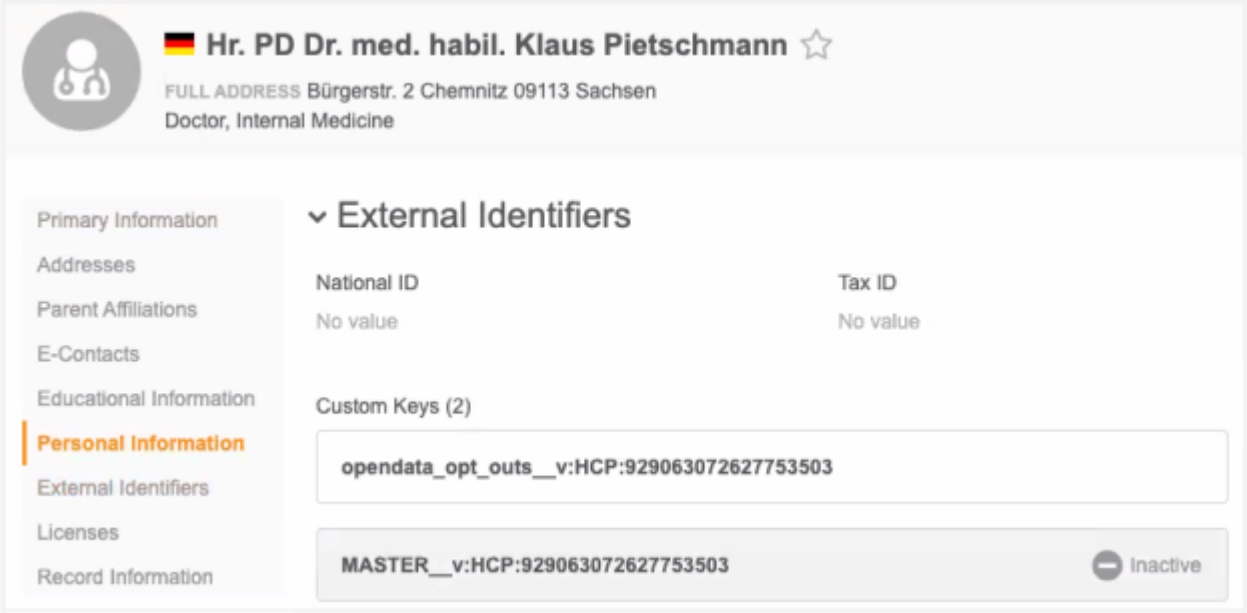
All locally managed fields and sub-objects are retained when the OpenData record is converted to a locally managed record.

New source system

A new Veeva-owned system called `opendata_opt_outs__v` is added to your Network instance. Any opted-out OpenData record that is converted will be assigned to this system. This enables you to easily track the records that have been converted. The system cannot be used in source and target subscriptions.

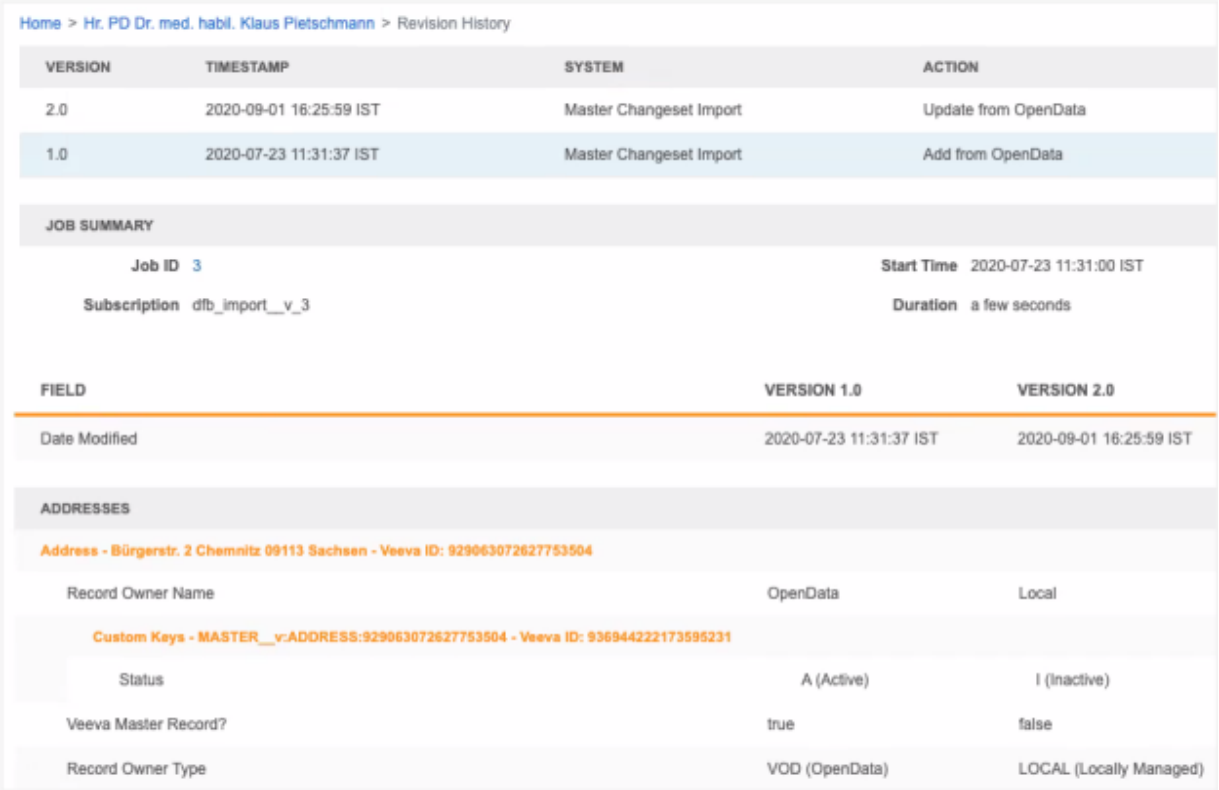
Custom keys

On the new local record, the MASTER_v source key will be inactivated. The MASTER__v source key is added to every OpenData record that is downloaded to your Network instance. A new custom key for the `opendata_opt_outs__v` system is added. That new custom key contains the Network entity ID.



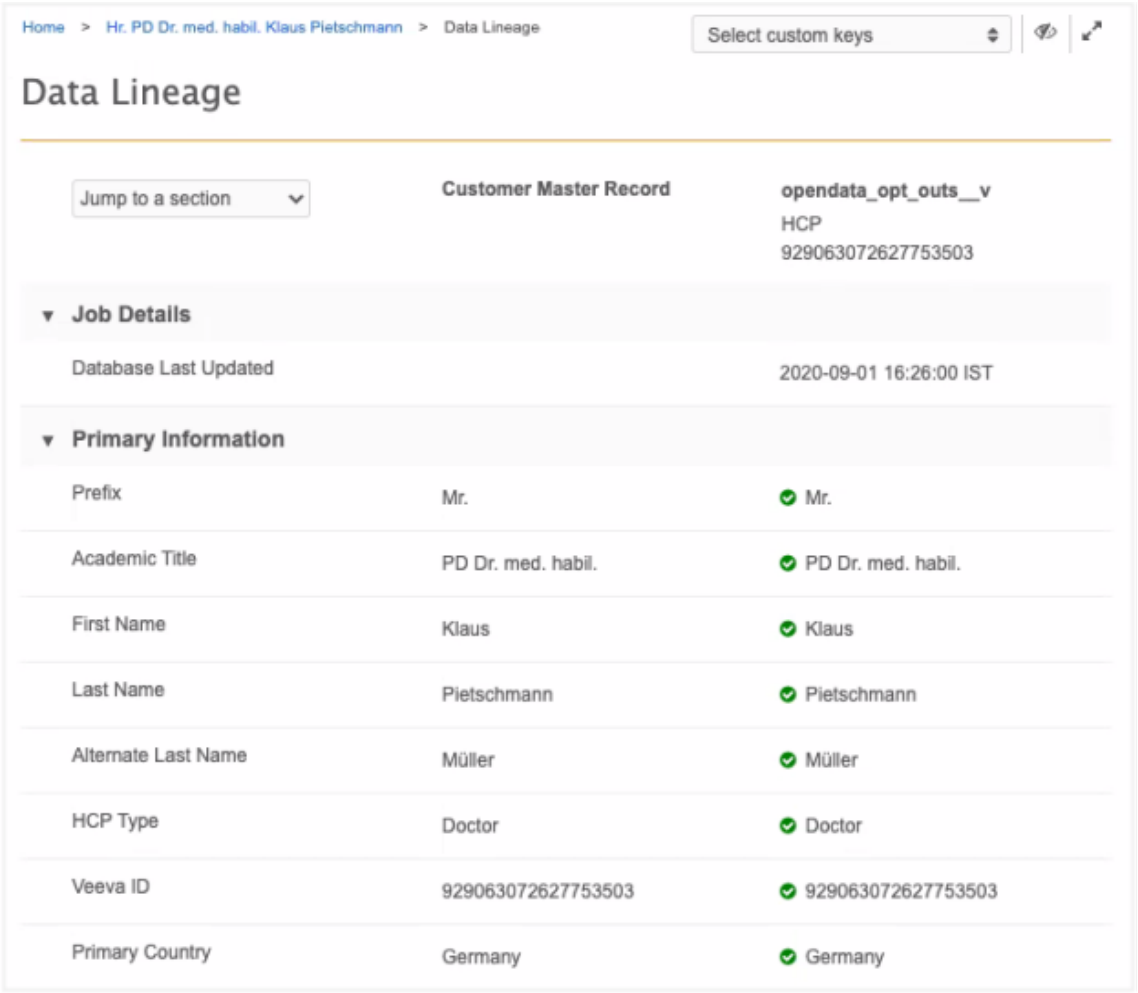
Revision history

In the record's Revision History, you can view the previous revisions and the changes that occurred during the conversion; for example, the change in record owner name and type.



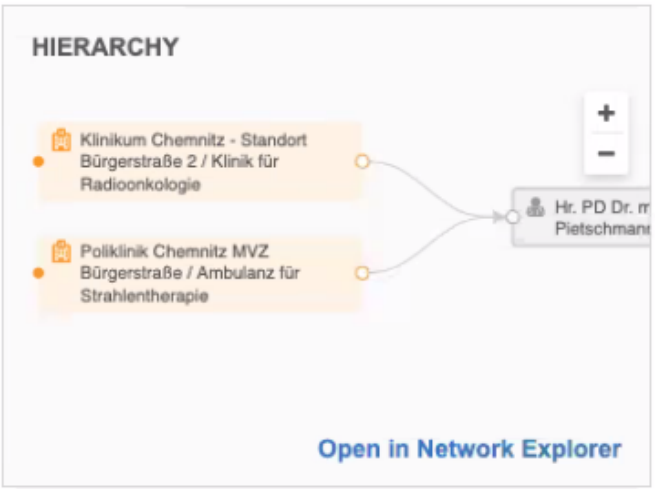
Data lineage

On the data lineage page for the converted local record, all of the OpenData sources are replaced with the new system, `opendata_opt_outs`.



Relationship considerations

If a converted record has relationships to OpenData HCOs, the relationship is converted to a local relationship. You can view these relationships in detail using Network Explorer.



Merge records

After opted-out records are converted into local records, they can be merged into other local or master records as usual.

Change requests

Updates to the converted HCP record will be routed to local data stewards. If the record was not converted to a local record, the DCR is automatically rejected.

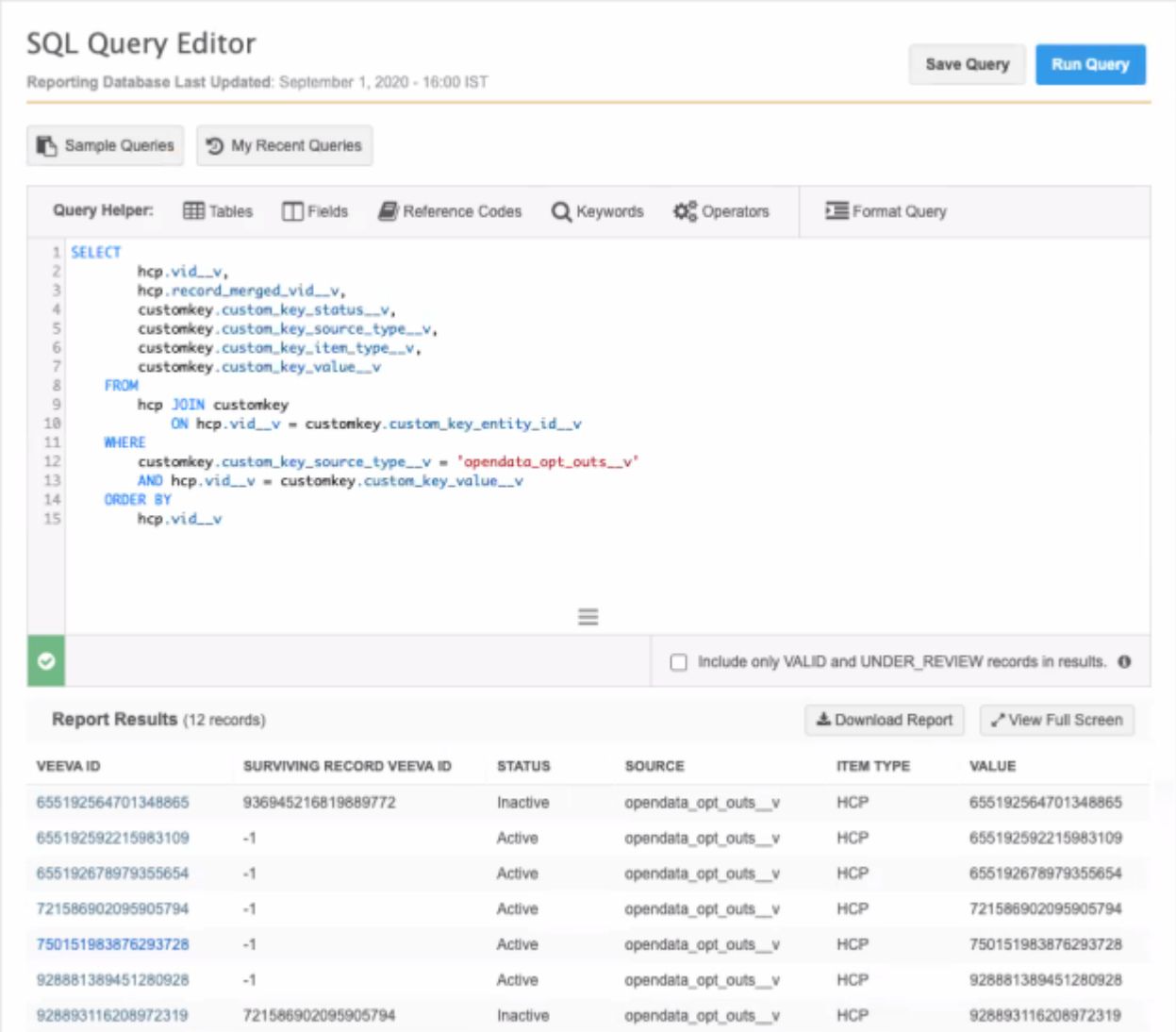
Reporting on converted records

To report on records that have been converted in your Network instance, you can run a SQL query.

Sample query

```
SELECT
          hcp.vid__v,
          hcp.record_merged_vid__v,
          customkey.custom_key_status__v,
          customkey.custom_key_source_type__v,
          customkey.custom_key_type__v,
          customkey.custom_key_value__v
      FROM
          hcp JOIN customkey
              ON hcp.vid__v = customkey.custom_key_entity_id__v
      WHERE
          customkey.custom_key_source_type__v = 'opendata_opt_outs__v'
          AND hcp.vid__v = customkey.custom_key_value__v
      ORDER BY
          hcp.vid__v
```

This query includes merge losers because converted records could be merged into other local records. In the report results, the surviving record ID displays if the record was merged into another record.

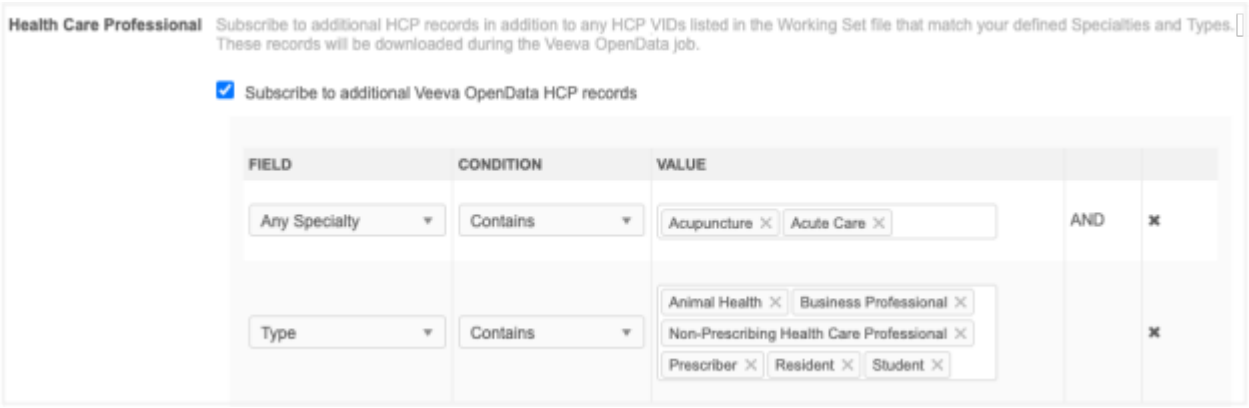


Ad Hoc Download

Converted records cannot be downloaded to your Network instance using **Ad Hoc Download** in an OpenData subscription. If the Network entity ID (VID) of an opted-out record or converted record is added, an error displays.

FILTER LABELS

The filter labels that are used to subscribe to additional HCPs and HCOs in country subscriptions are updated to more accurately reflect how the filters actually work.



Updated labels

The following labels have been updated.

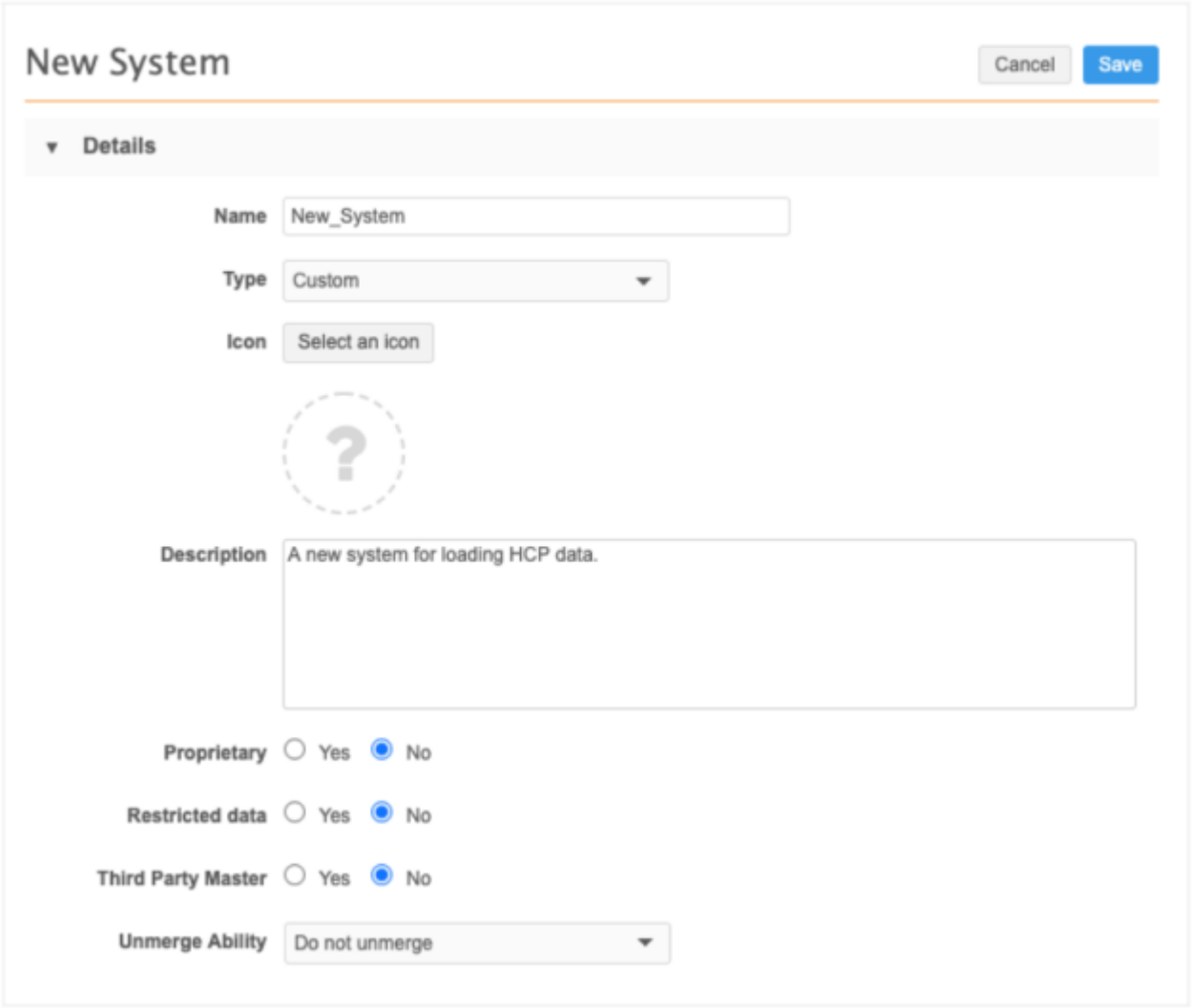
Previous Field Label	Updated Field Label	Description
All Specialties	Any Specialty	The filter looks for the value in any of the fields in the specialty field set: `specialty_1__v` to `specialty_9__v`.
Types	Type	The filter looks for the value in the object type field: `hco_type_v` or `hcp_type__v`.

Source systems

SYSTEM TYPES

Source systems now include a type and icon so it can be immediately identified as a Veeva system, SAP Concur® system, or custom system.

This enhancement is available by default in your Network instance.



When you create or edit a system (**System Interfaces > Systems**), a type is now assigned to the system.

Choose one of the following options from the **Types** list:

- Concur
- Custom (default)
- Veeva CRM
- Veeva Nitro
- Veeva Vault

By default, **Custom** is selected.

You can also optionally add an icon for the system. Click **Select an icon** to choose one from the icon library.

Source subscriptions

ERROR LOG

The **Job Error Log** now includes a **Native Key** column. If you set a native key in your source subscription, it will display in the error log so you can identify which incoming record experienced the error. This is helpful if the record does not have the Network entity ID (VID) as the key.

The option to export the job error log to your FTP server is available in the **General Settings** section of your source subscription configuration.

This enhancement is enabled by default in your Network instance.

RECORD STATE MANAGEMENT

Administrators and data managers can add a new advanced property to source subscriptions to determine which records should be updated based on record state. Updates to non-valid records (merge losers, invalid or deleted) typically have no benefit because they are not visible in the Network UI. Updates to merge losers after they have been merged are not shared with the winning record. So, although these updates are lost, they are still processed in other subscription jobs (for example, target subscriptions). You can use this property to specify that only Valid records are updated to reduce processing times.

This property is available in your Network instance by default. If the property is not defined, the default behavior (ANY) is applied to new and existing subscriptions to ensure that existing behavior in your source subscription does not change.

New advanced property

Add the property to the **Advanced Mode** in your source subscription to determine the records that are updated.

New property

```
job.merge.allowUpdatesForRecordsWithState
```

Supported values

- ANY (default)
- VALID
- INVALID
- UNDER_REVIEW
- MERGED_INTO

The property supports the non-valid record options because there might be situations where you need to make updates to non-valid records.

This property only applies when updates are done through key matching (using custom keys and/or Network Entity IDs (VIDs)) within a source subscription. Updates to non-valid records should be uncommon because custom keys are typically copied to the surviving record in a merge or inactivated in other situations, so key matching directs the incoming update to the valid record.

Job details

If a source subscription attempts to update a record whose record state is different from the property value in that subscription, a warning displays in the **Job Error** section. You can investigate the incoming updates further; for example, if updates were attempted to a merge loser, you might want to add them to the merge winner.

Target subscriptions

EXPORTED FILES

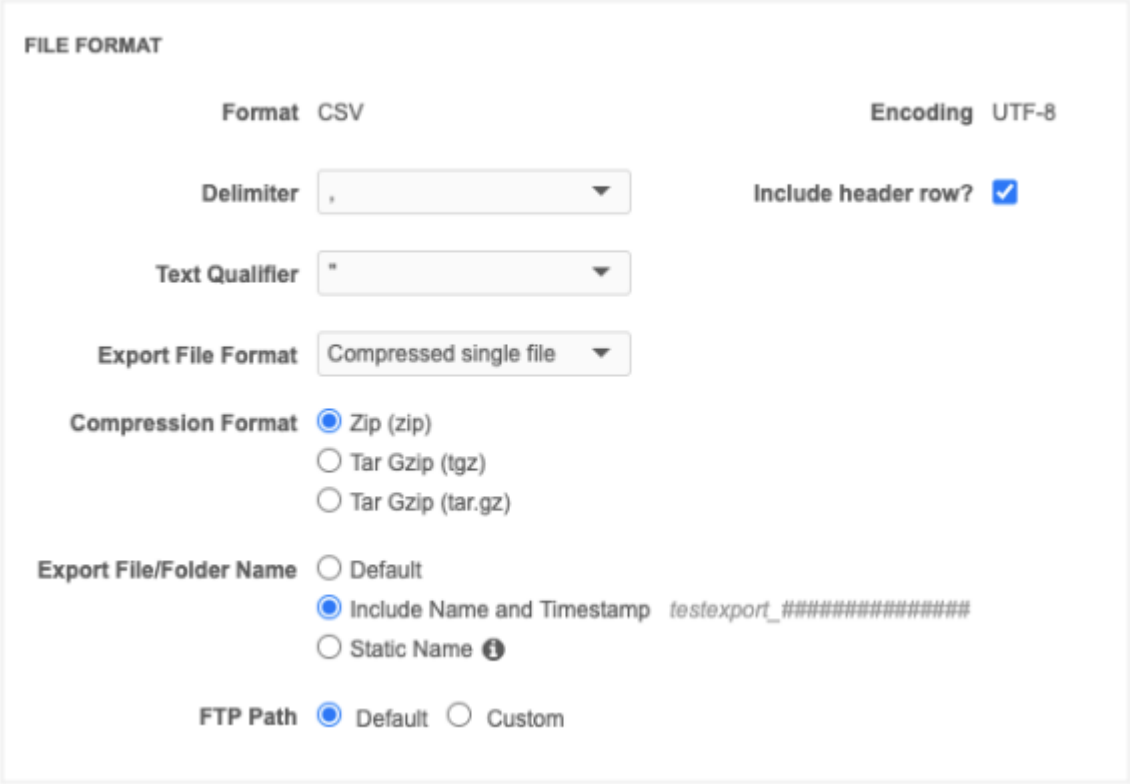
Target subscriptions now contain options for defining the exported file format and file name. This enhancement enables you to have more control over the exported files.

This enhancement is enabled by default in your Network instance.

Define the file format and name

To specify the file details

1. Create or edit a target subscription (**System Interfaces > Target Subscriptions**).
2. In the **General Export Options** section, find the **File Format** heading.
3. Expand the **Export File Format** list and select one of the following options:
    - **Compressed single file** (default) - One compressed file that contains a .csv file for each object.
    - **Compressed individual files** - A compressed file for each object is created.
    - **Uncompressed** - An uncompressed file for each object is created.



4. Choose a **Compression Format**:
    - Zip (zip) - Supported for **Compressed single file** and **Compressed individual files**.
    - Gzip (gzip) - Supported for **Compressed individual files**.
    - Tar Gzip (tgz) - Supported for **Compressed single file**.
    - Tar Gzip (tar.gz) -Supported for **Compressed single file** only.

    If you chose to export an **Uncompressed** file, these options do not display.

5. Beside **Export File/ Folder Name**, choose one of the following options:
    - **Default** - The file exported with the following naming convention: `exp_########`.
    - **Include Name and Timestamp** - The file is exported with the following naming convention: `<subscription name>_YYMMDDTHHMMSSSSS`; for example, `CRM_Target_170113T191503397`.
    - **Static Name** - Define a name so the file will always be exported with the same name. The file and folder will be overridden each time the job runs.
6. **FTP Path** - Choose the **Default** path or create a **Custom** path.

    The default path is `outbound/<system_name>`.

When the target subscription runs, the data will be exported with the format and name that you've specified.

Examples

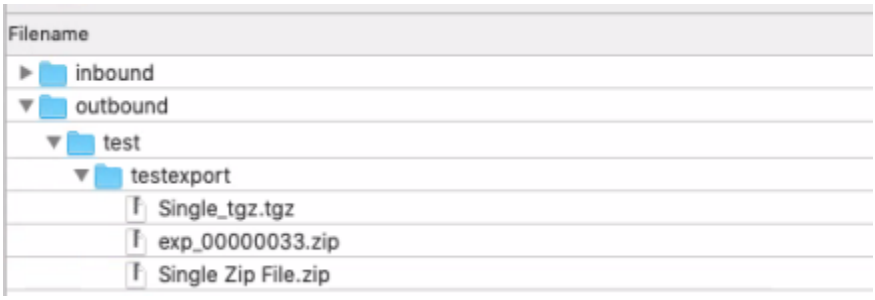
In these examples, the source system and the target subscription have the following names:

- **System** - `test`
- **Target subscription** - `testexport`

Example 1

If you choose to export a **Compressed single file** using the **Default** FTP path, the files are placed in the `outbound/test/testexport` folder.

- Single_tgz.tgz = **Tar Gzip (tar.gz)** file with a **Static Name**.
- exp_00000033.zip = **Zip** file with a **Default** name.
- Single Zip File.zip = **Zip** file with **Static Name**.

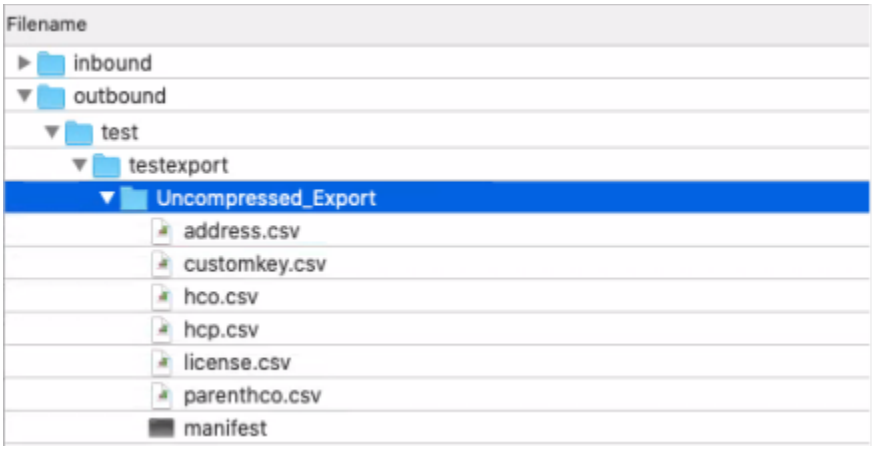


Example 2

If you choose to export **Uncompressed** using the **Default** FTP path, the files are placed in the `outbound/test/testexport` folder.

- Uncompressed_Export = **Static Name**

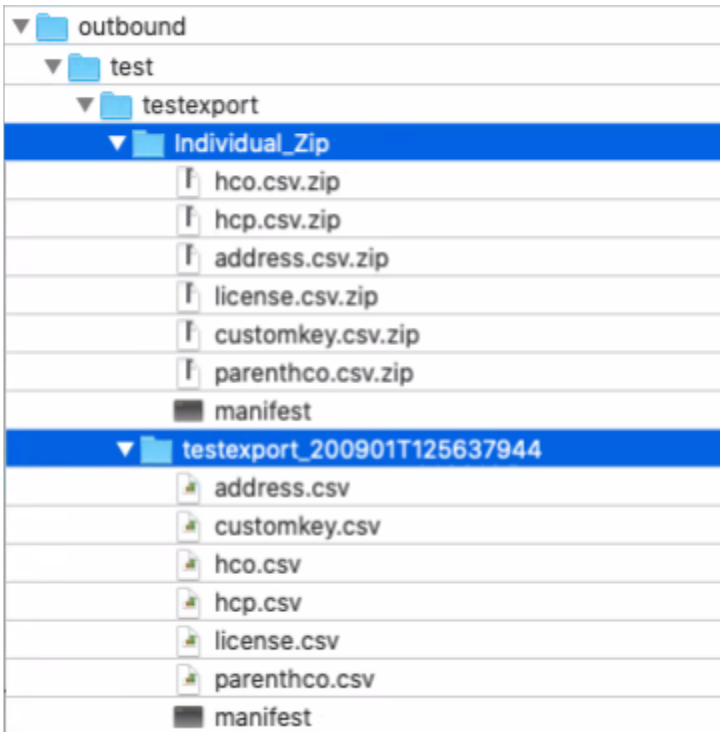
When you choose **Uncompressed**, the files are exported in .csv format.



Example 3

If you choose to export **Compressed individual files** using the **Default** FTP path, the compressed file is placed in the `outbound/test/testexport` folder.

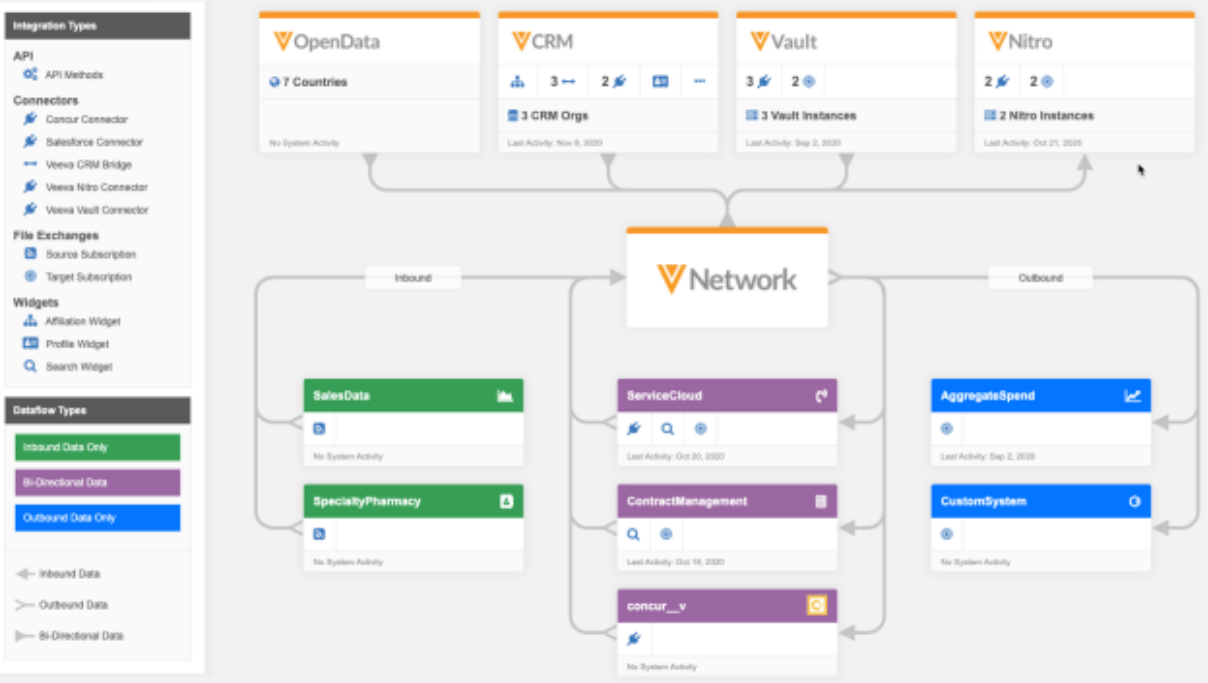
- Individual_Zip = **Zip** file with **Static Name**.
- testexport_200901T125637944 = **Zip** file with **Include Name and Timestamp**.



Network integrations

INTEGRATION DASHBOARD

The Integration Dashboard provides an organized view of all the integrations coming in and out of Network. Administrators can use the dashboard to track integration activities by system from a single location.



The Integration Dashboard is enabled by default.

Access the dashboard

Administrators and data managers can open the dashboard by clicking **Integrations** on the Admin console menu.

Dashboard

All systems integrated with your Network instance are represented on the dashboard. Veeva systems are located at the top of the dashboard.

Other systems that you have defined in your Network instance are added by default and are grouped by the dataflow directions:

- **Inbound** - The system only has inbound integrations.
- **Outbound** - The system only has outbound integrations.
- **Bidirectional** - The system has bi-directional integrations or has both an inbound and an outbound integration.

Each dataflow group is sorted so that the systems that are most frequently used are at the top of the list.

Viewing system cards

Each system has a card that provides the following information:

- **System Name** - The name that you defined when you created the system (**System Interfaces > Systems**).
- **Icon** - A Veeva icon for Veeva systems, or a predefined icon for non-Veeva systems.
- **Type** - The Veeva product name or **Other** for non-Veeva systems. The **Type** is defined when you create the system.
- **Dataflow Type** - Inbound, Bidirectional, or Outbound.
- **Integrations** - Data integrations represented by icons, for example, target subscriptions or source subscriptions. See the **Integration Types** legend for details.

  Systems with multiple integrations of one type have a count beside the icon; for example, **2** means that there are two target subscriptions configured for the system. Only active integrations display on the dashboard; for example, disabled target subscriptions do not display.
- **Last Activity** - The date that the most recent integration ran. No System Activity message means that the integration has yet been run.

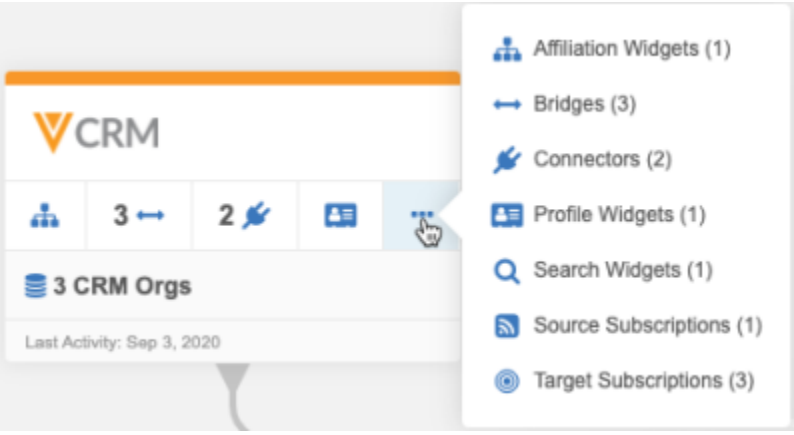
View Veeva system cards

Veeva cards display for each product that you integrate with. Cards for CRM, Vault, and Nitro are similar.

Example

The Veeva CRM card displays all CRM systems (orgs) in your Network instance. If the card does not have room to display all the integrations, click the ellipses (....) to expand the integrations.

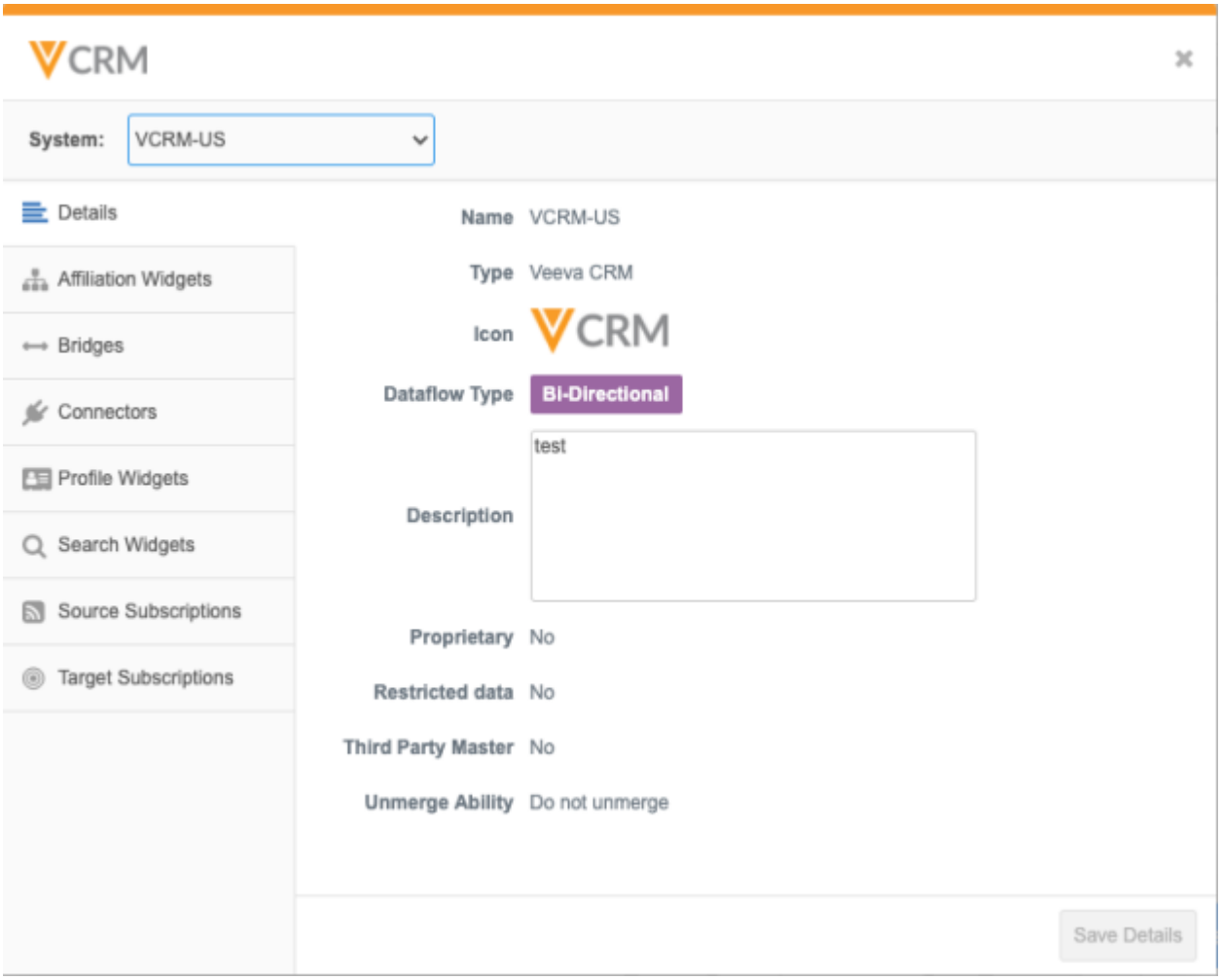
The count beside each integration is a total for all CRM systems in your Network instance. For example, if you have two CRM orgs and two target subscriptions, that could mean that each org has one target subscription.



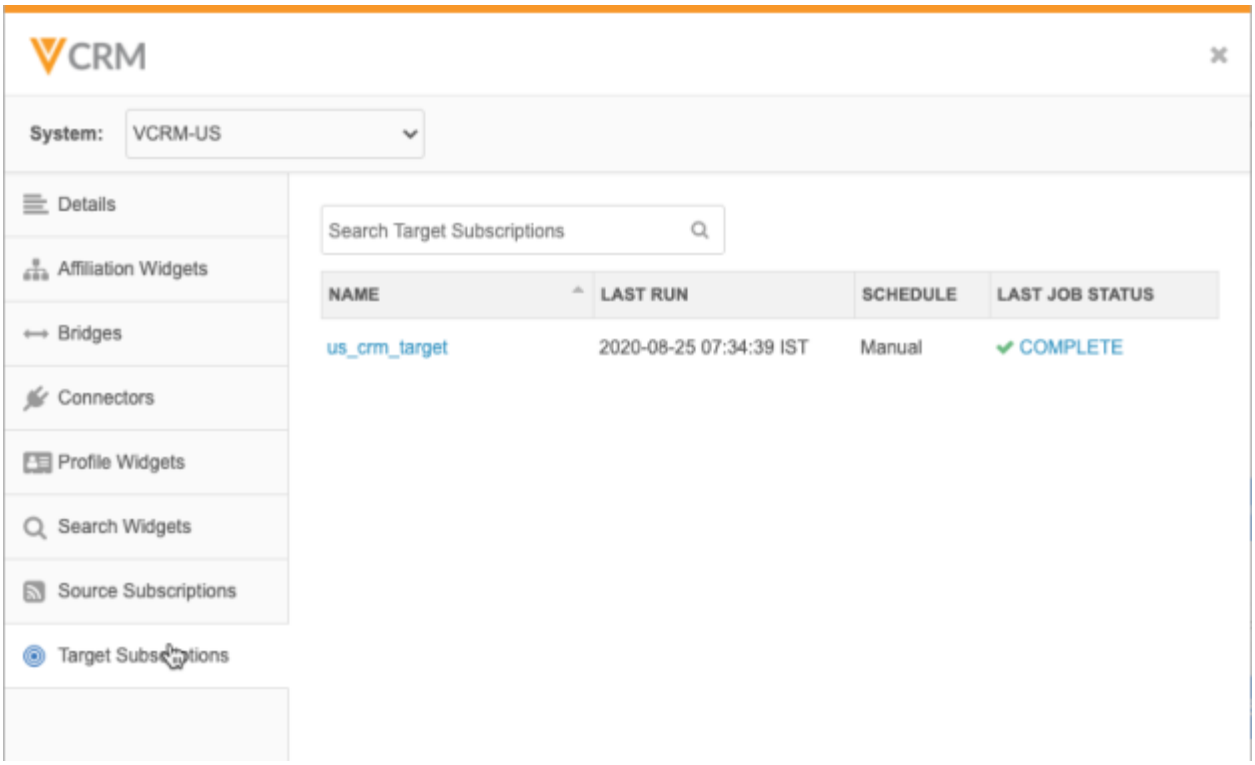
Click the card to open it.

In this example, the Network instance has three CRM orgs defined. The system that displays by default is first alphabetically by name.

The integrations for the system display in the left panel. Use the **System** list to switch to the other CRM system.

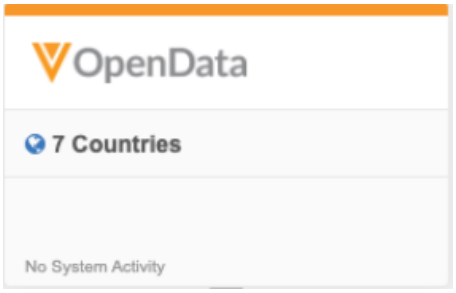


Click on an integration to view more details. For example, click **Target Subscriptions** to see details about the subscription jobs. The time of the last job displays in your timezone. Click the link in the **Name** column to navigate to that subscription configuration.

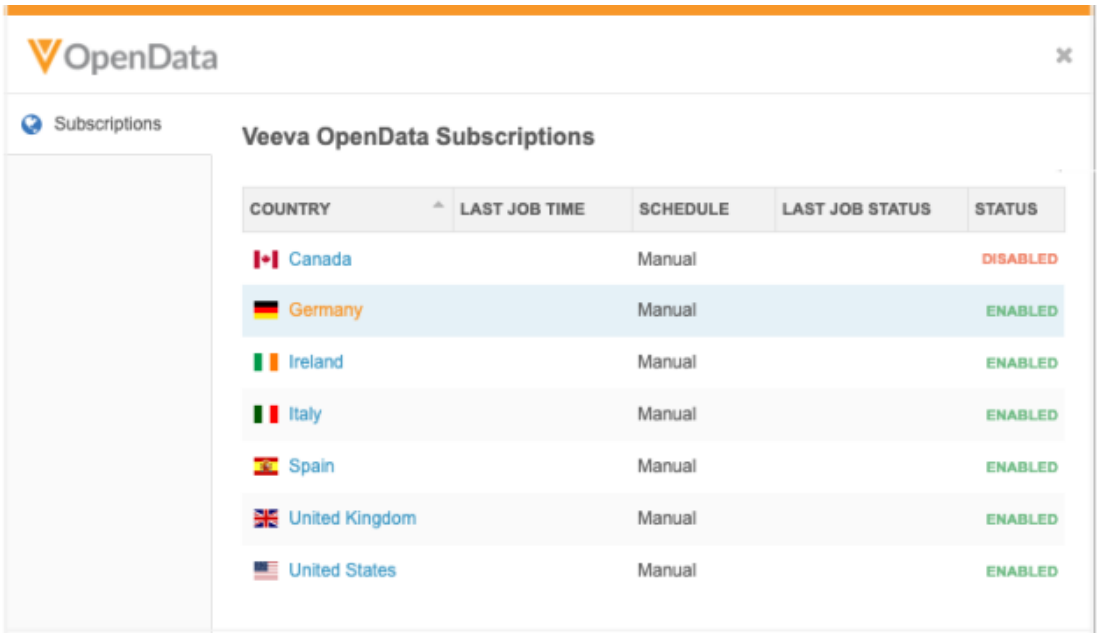


Veeva OpenData system card

If you subscribe to OpenData, the card displays the count of countries that you have subscribed to.

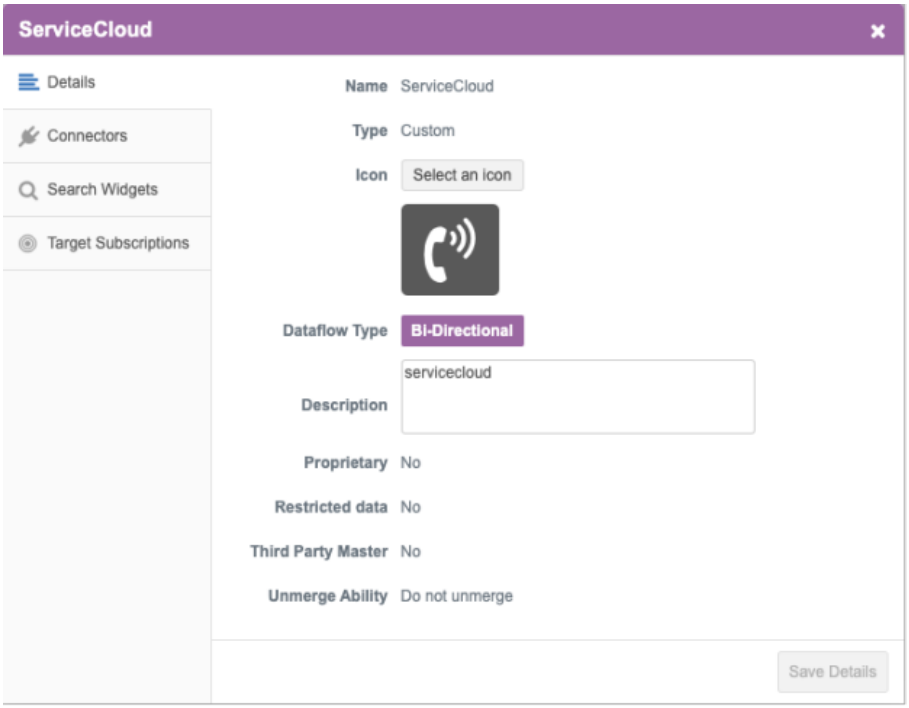


Click the card to view the list of countries. Each country subscription displays the subscription status and details about the most recent jobs. Click the country link to navigation to the subscription configuration.



Add and edit custom systems

When you create a new system in your Network instance (**System Interfaces > Systems**) the system will automatically display on your Integration Dashboard once an active integration is created; for example, after a target subscription is created for the system. The system can be edited to change the icon and description. The system properties (for example, **Proprietary** and **Unmerge Ability**) are read-only on the Integration Dashboard.



Veeva and SAP Concur system cards are read-only.

MIGRATION TO NETWORK BRIDGE

Network instances that use the CRM Data Subscription to export data from Network to CRM will be migrated to the Network Bridge by spring 2021. The Network Bridge enables you to run and monitor these data subscription jobs within Network.

The Network Bridge has been in production for early adopters since version 18R1.0. The migration process has been available to do (through a Veeva Support ticket) since Network version 20R2.1.

For more information, see the Network Bridge topic in the *Veeva Network Online Help*.

Initiate the migration

The CRM Data Subscription will be supported until spring 2021, but you can begin the migration process to the Network Bridge early. Contact Veeva Support to create a support ticket. Provide your Network environment and the CRM 18-digit Org ID.

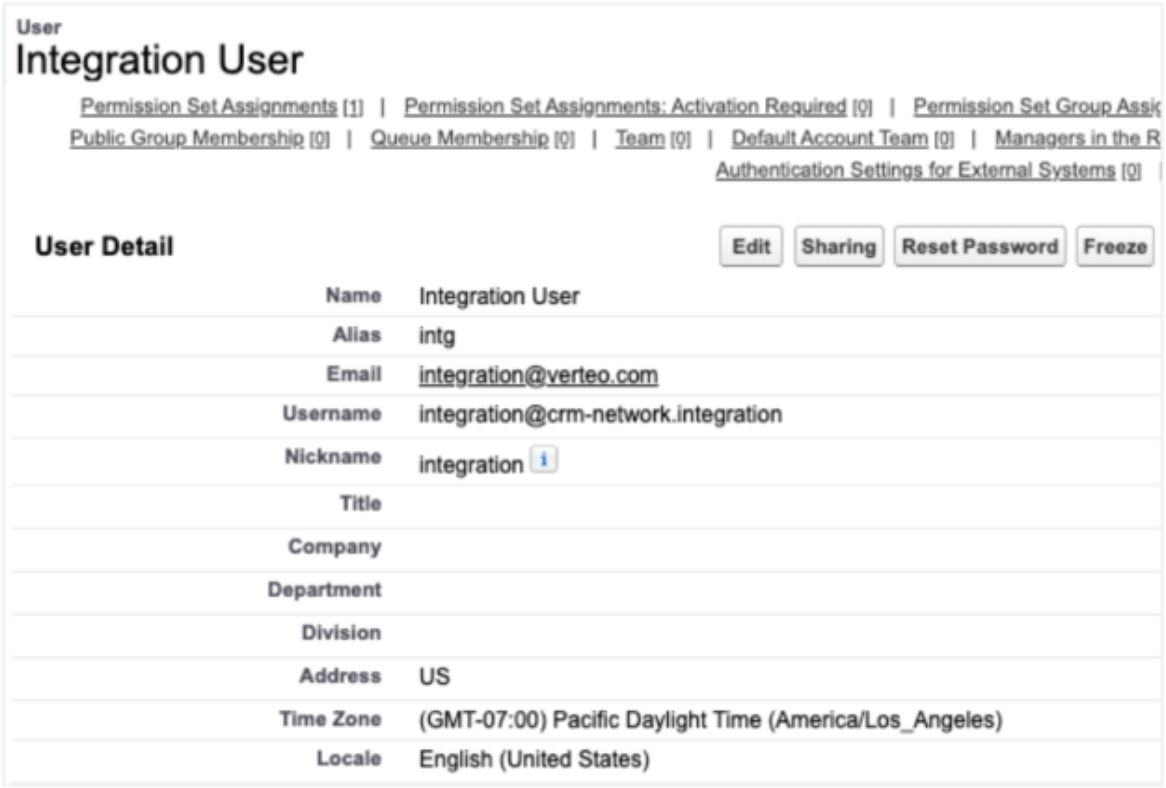
Pre-migration checks

Validate the following details to ensure the migration will be successful:

- **Network Integration user** - Ensure that the user in CRM is a valid user in your Network instance.
- **CRM Integration user** - Ensure that the credentials are valid.
- **CRM data subscriptions** - A valid country must be populated for each subscription.
- **Target subscriptions** - Ensure they exist and are linked to the correct CRM system.
- **Subscription schedules** - For schedules to migrate successfully, the CRM integration user's timezone must be the same as the timezone that is set in the Veeva Process Scheduler.

  Example

  Verify the **Time Zone** that is set on the CRM Integration User's details page (**Setup > Administration Setup > Manage Users > Users**).



On the Process Scheduler page, ensure that the timezone that displays in the **Next Queue Time** column matches the timezone for the Integration User.

Migration details

During the migration, changes occur in your CRM org and your Network instance.

CRM org

The following actions occur in your CRM org:

- **Credentials verified** - The Salesforce credentials and the Integration User's credentials for your CRM org are used to verify that the migration is occurring on the correct Network instance.
- **CRM data subscriptions** - Existing data subscriptions are removed so they will no longer run.
- **Veeva Process Scheduler** - The Network Subscription Process scheduler is deactivated. The existing schedules will be replicated on the new Network Bridge jobs that are created in your Network instance.

Network instance

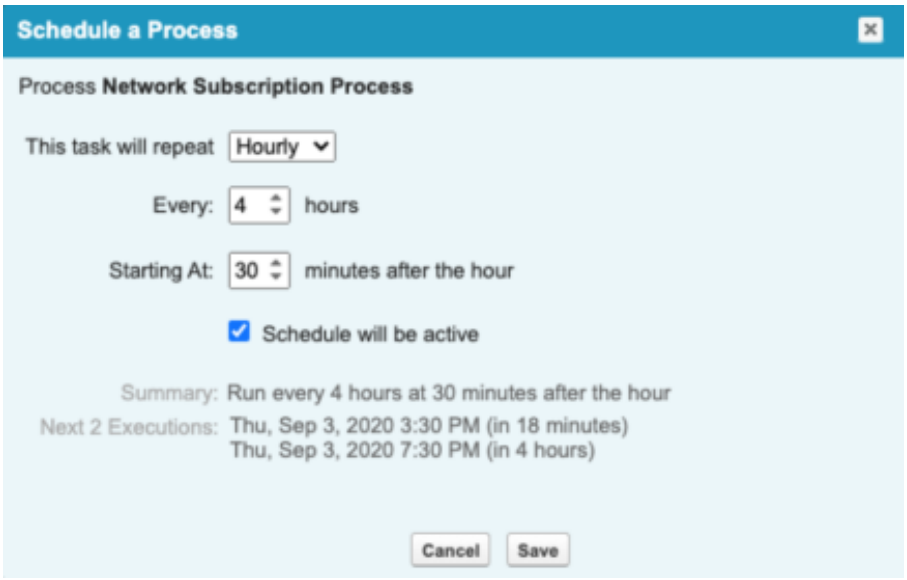
The following actions occur in your Network instance:

- **External Credentials** - A CRM org credential is created (**Settings > External Credentials**).
- **Network Bridge subscription**s - New subscriptions are created to replace the CRM data subscriptions. Each subscription name has a `bm_` prefix to identify it as a migrated subscription (**System Interfaces > Network Bridge**).
- **Subscription schedules** - The schedules that you had on your CRM data subscription are created for your new Network Bridge subscriptions.

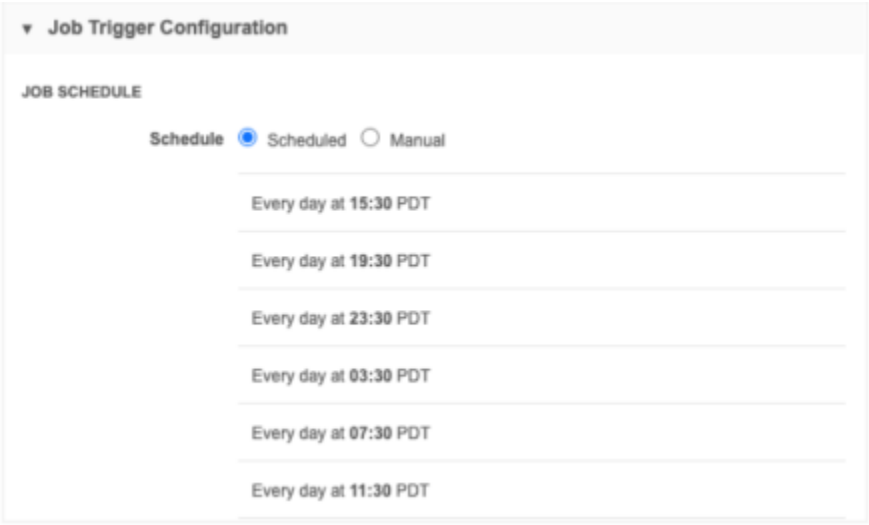
  Hourly schedules might display differently in Network. For example, if your CRM data subscription has one hourly schedule set for every 4 hours, the Network schedule has several daily schedules set for four hours apart.

  Example

  CRM Process schedule



Network schedule



Network Bridge subscription jobs

The first time a Network Bridge subscription runs, it is a full run (delta starts at 0). If the export options on the target subscription are set to **Delta**, the subsequent run will pick up the delta.

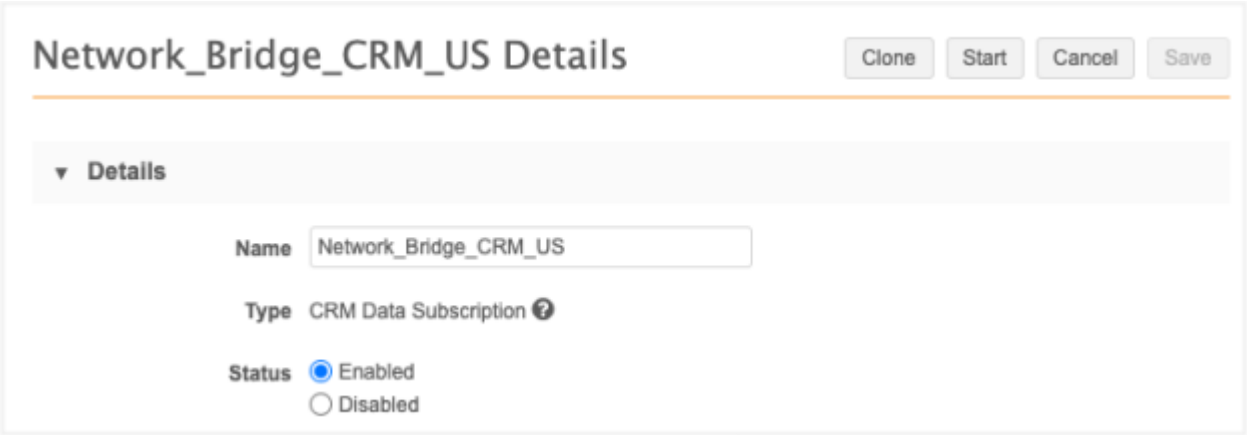
Disabled subscriptions

The Network Bridge is migrated as disabled if a schedule was not active for your CRM Data Subscription. This ensures that the Bridge subscription job does not automatically run.

The migrated Network Bridge will be disabled in the following conditions:

- The CRM Data Subscription had no schedule.
- The CRM Data Subscription schedule was deactivated.
- The CRM Data Subscription was inactive.

To enable the Network Bridge, open the subscription and click **Enabled**.



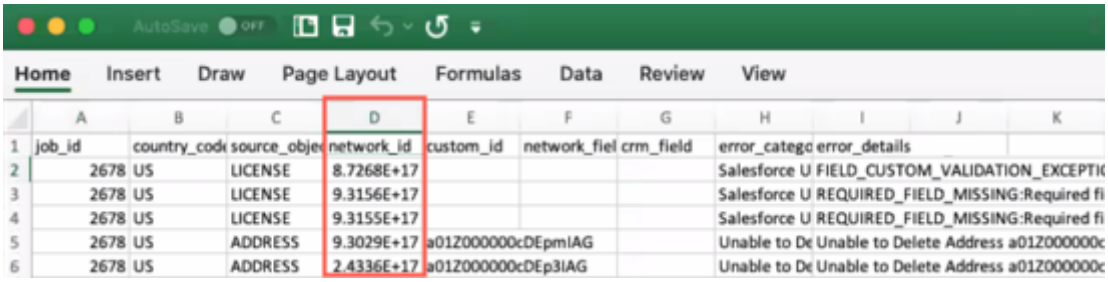
NETWORK BRIDGE ERROR LOGS

The error logs can now be exported in Microsoft Excel (.xlsx) format. Previously, the logs could only be exported as .csv files. When .csv files are opened in Microsoft Excel, the Network entity IDs (VIDs) are automatically rounded, so exporting directly to Microsoft Excel ensures that the VIDs do not change. This enables you to easily view and copy the VIDs from the file.

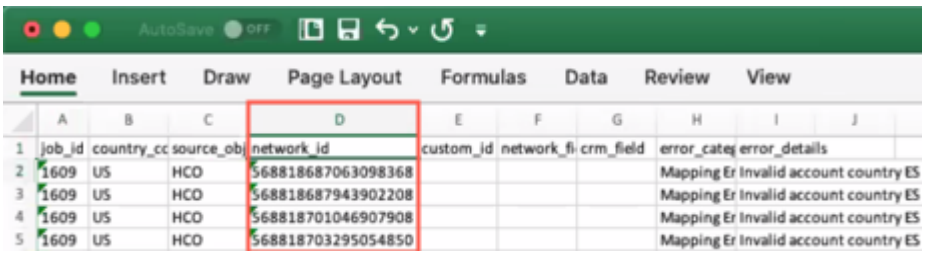
This enhancement is enabled in your Network instance by default.

Examples

Error log downloaded as .csv and opened in Microsoft Excel.



Error log downloaded as .xlsx format and opened in Microsoft Excel.



Download the error log

To download the error log in Microsoft Excel format:

- On the Job Details page, click **Download Error Report Log**. In the pop-up, select **Microsoft Excel (.xlsx)**.

VEEVA CONNECTOR SUPPORT FOR REPORTS

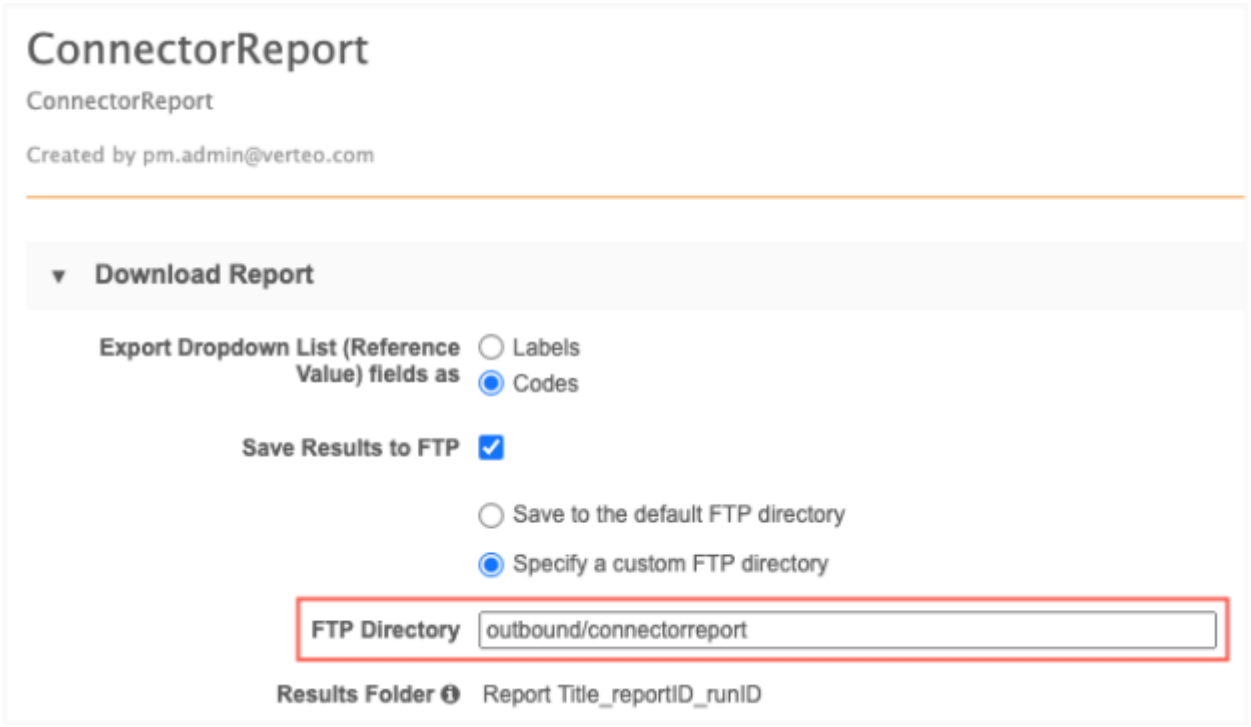
Data in Veeva CRM and Veeva Vault can now be updated on a scheduled basis from Network reports using the Veeva Connector upsert jobs. The Veeva Connector can read the files generated on the FTP server from Network reports. The results are exported into unique subfolders which the Veeva Connector can now find the latest .zip file during upsert jobs.

This enhancement is enabled in your Network instance by default.

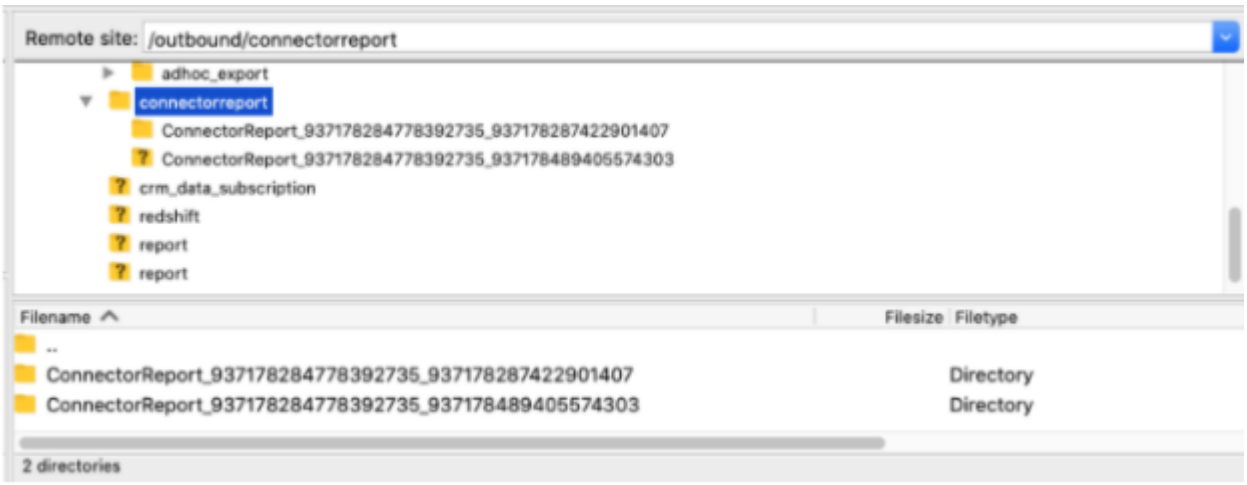
Example

Network Reports enable you to define your own report with specific results using SQL. You can regularly update your data in Veeva Vault or Salesforce™ using the report results.

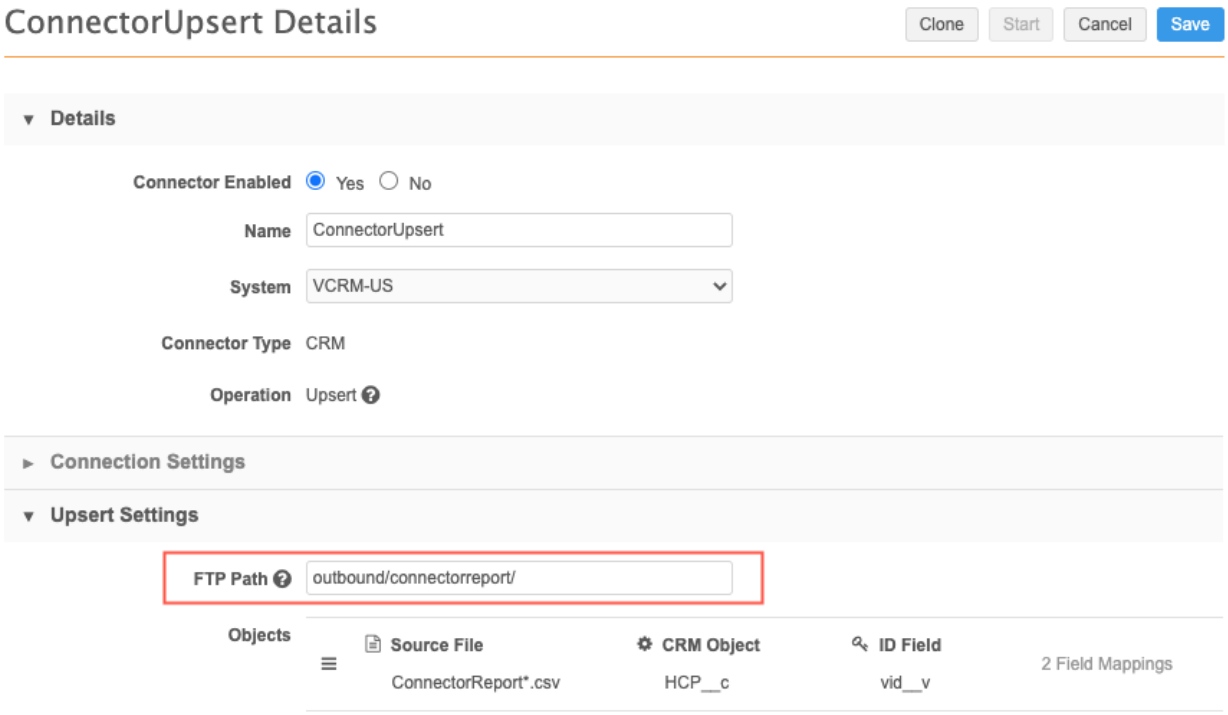
When you save a report, you can define a custom directory for the FTP path.



Each time the report runs, the results are saved in .zip format in a unique subfolder.



In your CRM Upsert Connector configuration, specify the FTP path for the report results. The upsert connector will find the latest results in the path, including any subfolders the .zip file might be in.



INCREMENT DELTA IDS FOR VEEVA CRM

Network now increments the delta ID for entities related to rejected data change requests so records remain synced between CRM and Network.

Veeva CRM users can immediately save updates to DCR_Editable fields in CRM before the changes are processed by data stewards. However, if the data change request is rejected, the record is not considered changed in Network and is not included in the subsequent target subscription. This means

the field value in CRM is now out-of-sync with Network. To prevent this, Network will increment the delta ID for any rejected DCRs so the target subscription includes the record to update CRM.

For example, if you configure email fields as DCR_Editable in CRM, when a user updates an email in CRM but it is rejected in Network, the target subscription updates the record in CRM so the email value becomes synced with Network again.

This enhancement is enabled by default in your Network instance.

VEEVA CONNECTOR FOR NITRO

The Veeva Connector for Nitro is updated to use Intelligent Load. The runTaskJob in the CTL file will be set to `jb_ftp_intelligentload__v`. To support Intelligent Mode, the Nitro Connector jobs will export individual .gz files to your FTP server. Previously, .zip files were exported. Using .gz files avoids issues that occurred when Network uploaded the files because of special character handling for .csv files.

These changes are enabled by default.

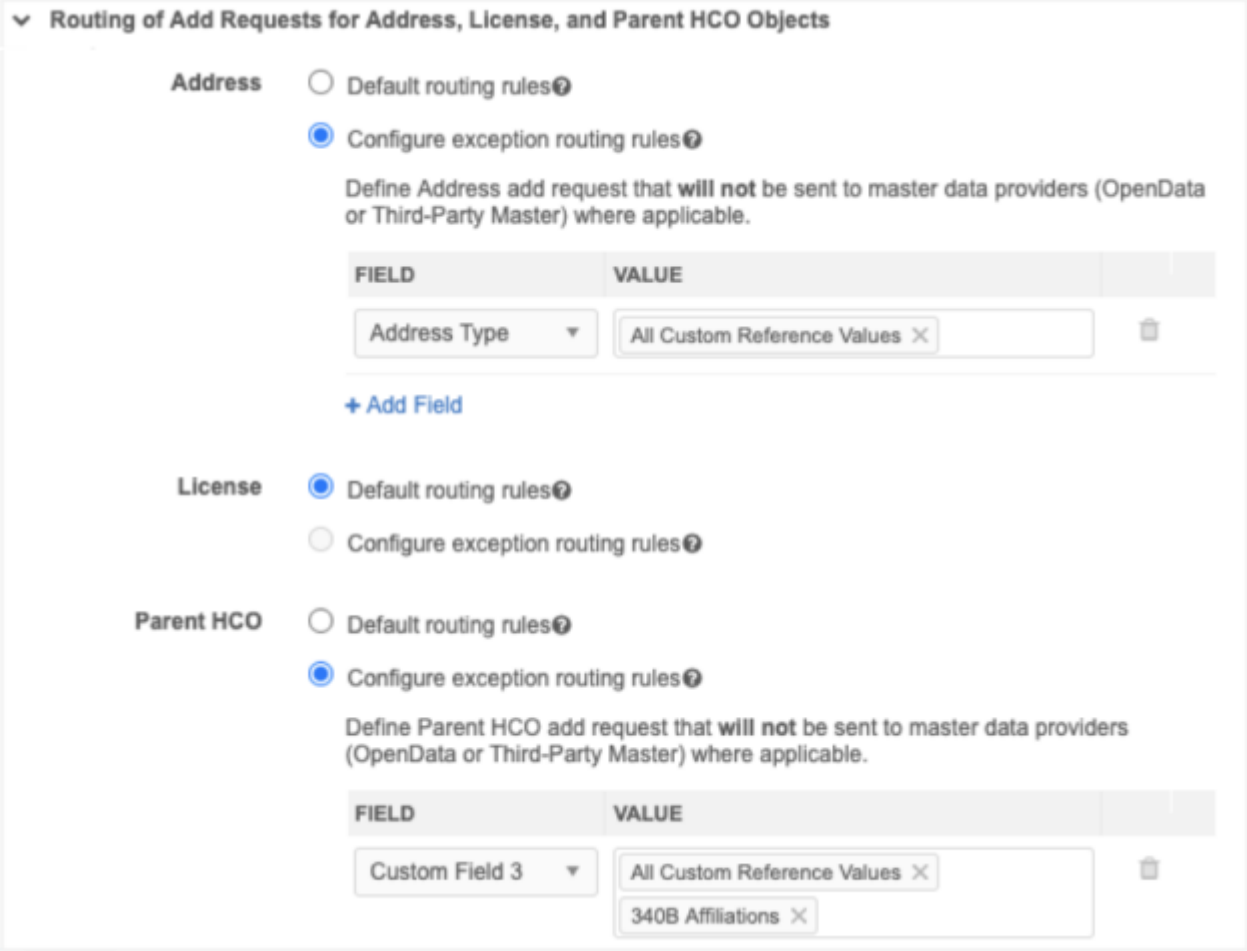
Admin settings

WORKFLOW SETTINGS FOR SUB-OBJECTS

Administrators can now define routing rules in the workflow settings so sub-object (address, license, parent HCO) add requests are routed directly to local data stewards, even if the object is owned by a master data source. Previously, all sub-object add requests for master records were first routed to master data stewards for processing.

- If the add request was accepted, the sub-object was created and a local DCR was routed to local data stewards to process custom fields.
- If the add request was rejected, the DCR was routed to local stewards if the review rejection setting was enabled.

Now, you can define rules to route sub-objects directly to local stewards. For example, if you define a custom address type, you specify that any add requests with that address type are routed.



This feature is enabled by default in your Network instance.

Important:

- If you create a sub-object exception routing rule, contact Veeva Support to update your sub-object comparison rules. These rules are not visible in the Network UI.
- Do not use sub-object routing for addresses and parent HCOs in countries where the Network Address Inheritance feature is enabled.

Sub-object routing rules

A new section called **Routing of Add Requests for Address, License, and Parent HCO Objects** is added to the workflow settings so you can determine where add requests for sub-objects are sent. Change requests for sub-objects are routed to the respective owner.

There are two options for each Veeva standard object (addresses, licenses, and parent HCOs):

- **Default routing rules** - This option is selected by default.

  When add requests are submitted, the following behavior occurs:

  - **OpenData records** - Add requests are sent to OpenData data stewards.
  - **Third party master records** - Add requests are sent to third party master data stewards.
  - **Locally managed records** - Add requests are sent to local data stewards
- **Configure exception routing rules** - Override the default behavior and send add requests for specific sub-object types to local data stewards.

  Note: Rules can only be defined for standard fields with custom reference values and for custom fields that use standard and custom reference values.

Define sub-object exception routing

You can create an exception for any sub-object add request or for add requests for specific countries.

1. In the Admin console, click **Settings > Workflow settings**.
   - To create an exception for all countries, complete the following steps in the **Default Workflow Settings**.
   - To create the exception for a specific country, expand the **Country Exceptions** section and choose an existing country or click **Add Exception** to define a new country exception.
2. In the **Routing of Add Requests for Address, License, and Parent HCO Objects** section, select **Configure exception routing rules** for the applicable object.
3. In the **Field** list, choose the field for the sub-object. For example, in the **Address** section, choose **Address Type**.
4. In the **Value** list, select values for the type field. For example, choose the `Ship To` custom reference value.

   Exception routing can be defined on any standard fields with custom references, or custom fields with custom or standard reference values.
5. **Save** your changes.

Now, if an add request is submitted with that custom type, the request is routed to local data stewards for review.

Exception routing considerations

If the add request is for a new master record, the DCR is first sent to the master data steward for processing and then the sub-object is routed to a local data steward.

If an add request for a master record is rejected, the sub-object record state is updated to Invalid and the sub-object will not be routed to local data stewards. If review rejections is enabled, the add request is routed to local data stewards, as usual, regardless of the sub-object type and exception routing.

Users

DATA VISIBILITY PROFILES

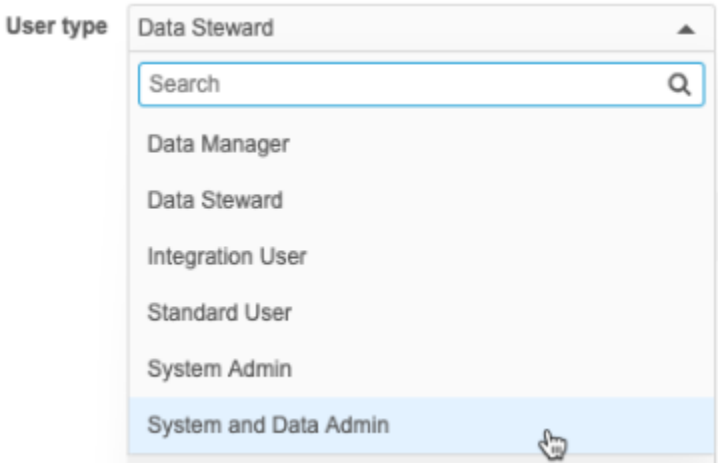
Read only access permission

The **Read-only access** permission on data visibility profiles is renamed to **Data Read-only access** because it restricts edit access to data only. If users have read-only access to data, they can view records, but they cannot add or edit records. Previously, the **Read-only access** permission also prevented users from adding and editing reports as well as data if they only had one data visibility profile. The restrictions for reports have been removed so users with **Data Read-only access** can edit and create reports based on their user type.

This enhancement is enabled by default in your Network instance.

NEW USER TYPE USER

A new user type called **System and Data Admin** is now available. This user type combines the System Admin and Data Steward capabilities so you no longer need alternate user IDs to completely manage your Network instance.



This new user type is available by default in your Network instance.

User capabilities

As a System and Data Admin user, you have complete access to Network; all the capabilities of the system administrator user plus the data steward user.

Highlights of capabilities

- **Admin console** - All menu items and feature capabilities are available; for example, you can configure and run subscriptions and data maintenance jobs; view and edit the data model; create users; configure Network widgets, and view audit logs.
- **Home dashboard** - Network displays the administrator's home dashboard when you log into Network. All dashboard widgets are available to you.
- **Ad Hoc Match** - Jobs created by all users are listed.
- **Inbox** - All jobs and data change requests display and are ordered by newest tasks. You have full data steward capabilities for data change requests. If you open a task that is not assigned to another user, the task is automatically assigned to you.
- **Data change requests** - Any type of task can be processed (add or change requests and suspect matches). Also, if the workflow settings are configured to review rejections by Veeva OpenData, record changes that you make will be automatically accepted. The resolution note for these requests will display: *System approved - created by data steward*.
- **Reports** - All reporting capabilities are available.
- **Network Explorer** - You can view and edit hierarchies.
- **Data Updater** - Jobs for updating or merging records can be created.
- **Record profiles** - All of the data steward capabilities are available to you.

  This includes the following capabilities:

  - Find Suspect Match (for local records)
  - Viewing and processing associated tasks
  - Access to the **Validate** button to run data validation rules.
  - Access to the **Send to OpenData** button to send a record to OpenData for ownership change.
  - Promoting or rejecting candidate records
  - Managing multi-country HCPs
- **Data validation rules** - This user type is automatically added to existing rules and new rules and cannot be removed.
- **Reporting** - Access to all Network reporting capabilities, including viewing and editing reports saved by other users.

Create a new user

To create a user with this new type:

1. In the Admin console, click **Users & Permissions > Users**.
2. On the Users page, click **Add User**.
3. On the Add New User page, define the **Username** and **Email**.
4. In the **User type** list, select **System and Data Admin**.
5. The **Inbox Task Groups** field is automatically populated with the **Data Loading Jobs** and **Data Stewards** groups. This ensures the user has data change requests and job warnings in their inbox.
6. Configure the remainder of the user profile as usual.

The new System and Data Admin user has the same default settings as a Data Manager. Also, the **SQL Query Editor** and **Data Quality Report Access** permissions that display when you create a Data Steward user also display but default to **Allow**; Data Stewards do not have access to these features by default.

SWITCHING EXISTING USERS

Administrators can switch user types for an existing user. For example, if you have IDs for a data steward and a system administrator, you can switch one of these IDs to the System and Data Admin user type.

When you switch a user type in the user's profile, the user type changes but data permissions and settings are not updated automatically. You must adjust permissions for the System and Data Admin user to they have access to the data and settings they need.

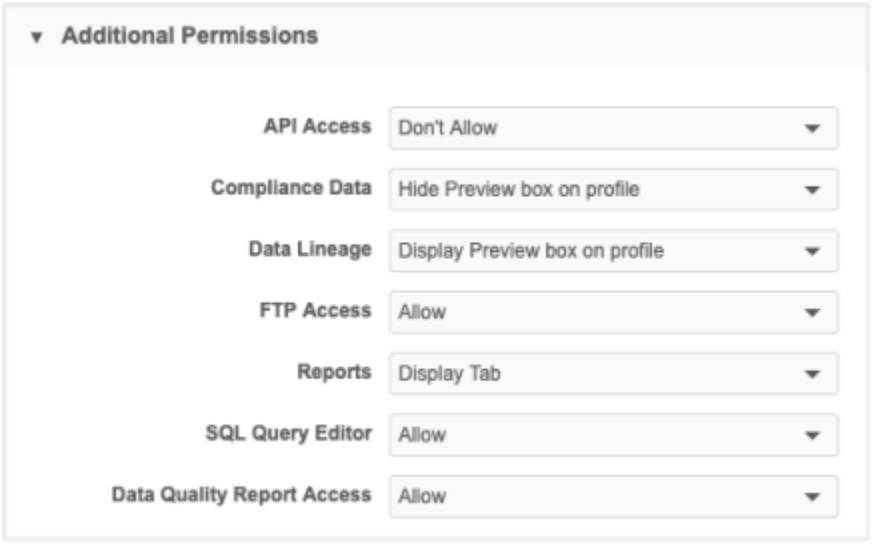
Consider switching the most active Network user with access to as many groups and features as possible. The newly updated user should belong to the superset of groups from each of the previous users.

After you've updated one of the user types, remember to inactivate users you no longer need.

Switching from a data steward user type

When switching from a data steward to System and Data Admin type, you might want to manually adjust the following settings so the user has all of the intended capabilities:

- **Inbox Task Group** - Add the **Data Loading Jobs** group.
- **Data Visibility Profiles** - Add data visibility profiles for relevant countries and data sets.
- **Data Updater - Merge Records** permission - Change to **Allow**.
- **FTP Access** permission - Change to **Allow** or **Allow Directory**.
- **SQL Query Editor** permission - Change to **Allow**.
- **Data Quality Report Access** permission - Change to **Allow**.

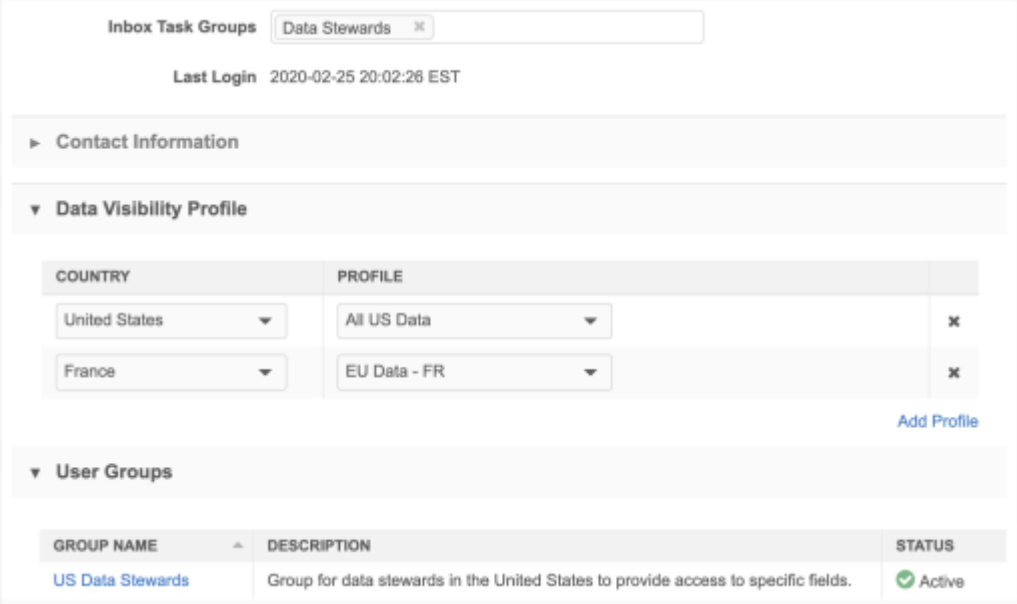


Switching from an admin user type

When switching from an admin user to System and Data Admin type, you will likely have a number of groups and profiles to assign to the new user type.

Update the user profile to include all new groups and data visibility profiles:

- **Inbox Task Group** - Add relevant inbox task groups.
- **User Groups** - Add relevant user groups.
- **Data Visibility Profiles** - Add data visibility profiles for relevant countries and data sets.

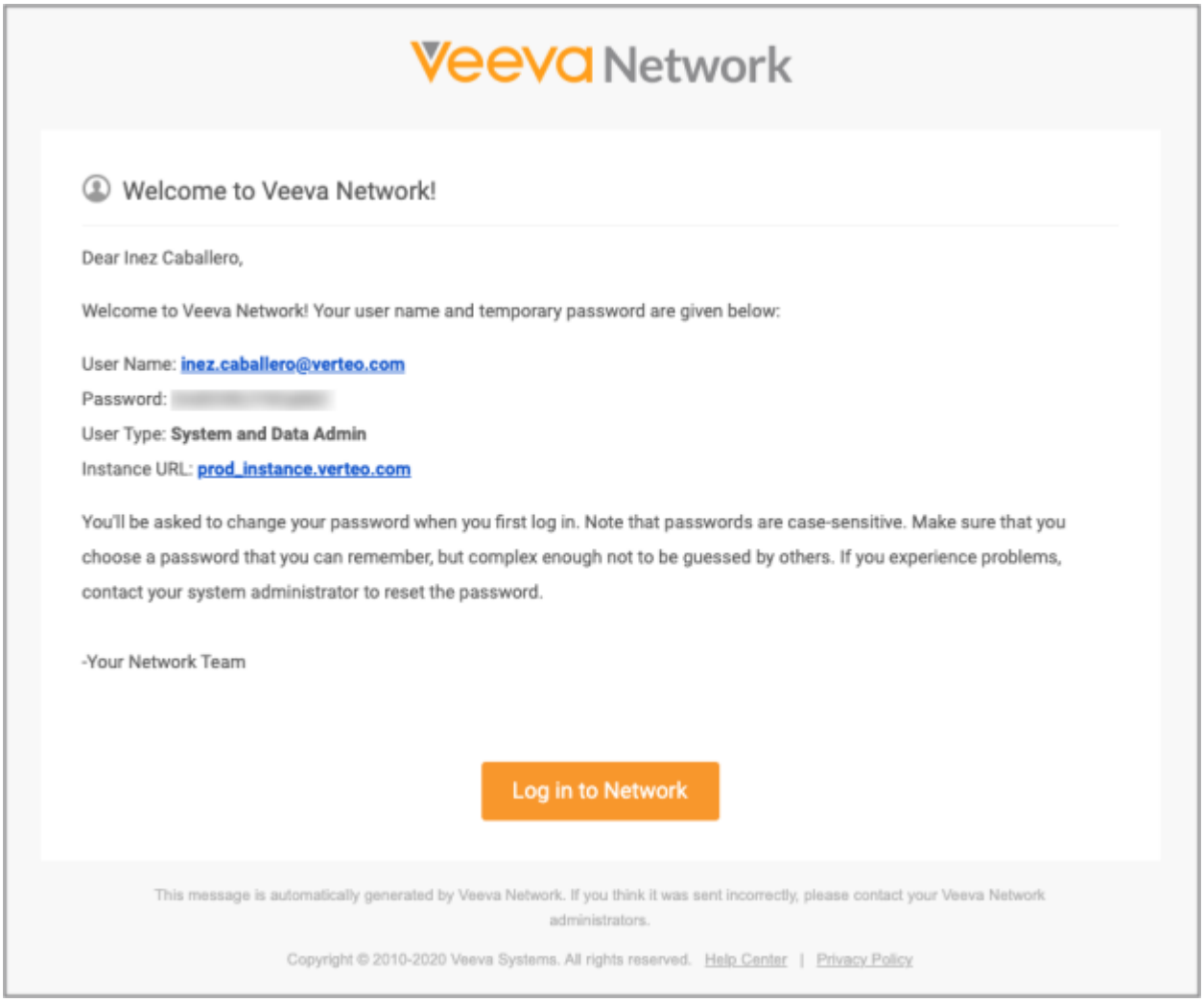


Provisioning new instances

When a new Network instance is created, the user type that is created will now be a System and Data Admin. Previously, the provisioned user was a System Admin.

WELCOME EMAIL

The new user welcome email now includes the user type and Network instance URL details. Previously, only the user name and temporary password were included in the email details.



When administrators create new users, a welcome email is sent to the user if the **Generate temporary password and notify user option** is selected. Users can click **Log In to Network** to navigate to the instance's login page to change their temporary password.

This enhancement is enabled by default.

API

VERSION UPDATE

The Network API is updated to v22.0.

As with all version updates, integration users should continue to use v21.0 until there is a change for v22.0 that they want to apply.

For more information about the Network API, see the *Veeva Network API Reference* at http://developer.veevanetwork.com.

SEARCH FILTER EXCLUSIONS

Integration users can now exclude records from search results using custom fields without excluding Veeva OpenData results. Previously, any filters used on custom fields automatically excluded OpenData-only records because those records do not have the custom field. You can use custom fields to identify the records that you want to exclude while still being able to search OpenData.

The exclusion filter supports the following:

- Multiple values
- Scoped entities
- Field sets
- Parent HCOs

NOT EQUAL

Use this exclusion filter to exclude objects from the search results if the object contains a certain value on a field. If Search against OpenData is enabled in the Network instance and the exclusion filter is on a custom field, OpenData records could be included in the results.

Example

Verteo uses a custom field `top_institution__c` to identify Top Institution Accounts. They want to exclude HCO records where `top_institution__c` = Y in Veeva CRM, because including them will cause an issue for roll-up reports. Verteo still wants reps to be able to search for other HCOs that do not have `top_institution__c` = Y (including OpenData records).

API call

```
{{URL}}/api/v21.0/search?q=*&excludefilters=top_institution__c:Y
```

NOT IN

Integration users can use this filter to exclude records from the search results if the record contains a value from a set of values on a field.

If Search against OpenData is enabled in the Network instance and the exclusion filter is on a custom field, OpenData records could be included in the results.

Example

Verteo wants to exclude objects that have a primary pediatric specialty. OpenData has multiple specialty values for different types of pediatricians.

API call

```
{{URL}}/api/v21.0/search?q=*&excludefilters=specialty_1__v:CPP,PMG,PPM,PDM,
EMP,PD,PDN,CHC
```

Note: This example excludes the records that contain a value in the `specialty_1__v` field. To exclude records that contain the value in any of the specialty fields, see "Field sets" below.

Parent HCO

Parent HCOs can be excluded from the search results. The Parent HCO filters should filter the search results from the parent_hco__v section and the supplementalResults section.

Example

Verteo wants to exclude hospital departments in search results. The reference code for hospital departments is `4:1`.

API call

```
{{URL}}/api/v21.0/search?q=*&excludefilters=hco_type__v:4:1&parenthcoexclud
efilters=hco_type__v:4:1
```

Field sets

Use exclusion filters to search an OR condition across field sets during search.

Supported field sets:

- **specialty** (specialty_1__v to specialty_10__v)
- **credentials** (credentials_1__v to credentials_5__v)
- **medical_degree** (medical_degree_1__v to medical_degree_5__v)

Example

Verteo wants to exclude entities with a Pediatric specialty. OpenData has multiple specialty values for different types of Pediatricians.

This API call excludes records that has these values in any of the specialty fields (specialty_1__v to specialty_10__v)

API Call

```
{{URL}}/api/v21.0/search?q=*&excludefilters=specialty:CPP,PMG,PPM,PDM,EMP,PD,PDN,CHC
```

Using with the parent HCO exclusion filter

You can also apply field sets to the parent hco filter.

API call

```
{{URL}}/api/v21.0/search?q=*&excludeparenthcofilters=specialty:CPP,PMG,PPM,PDM,EMP,PD,PDN,CHC
```

Scoped objects

You can apply field sets to entity-scoped exclusion filters during search.

Example

Verteo wants to exclude HCPs with a pediatric specialty. OpenData has multiple specialty values for different types of pediatricians.

API call

```
{{URL}}/api/v21.0/search?q=*&excludefilters=hcp.specialty:CPP,PMG,PPM,PDM,EMP,PD,PDN,CHC
```

Using multiple filters

Integration users can use multiple exclusion filters for search. The filters should be "AND" together.

Example API call

```
{{URL}}/api/v21.0/search?q=*&excludefilters=hcp.specialty:CPP,PMG,PPM,PDM,EMP,PD,PDN,CHC&excludefilters=hcp.hcp_type__v:P
```

Example API call - multiple parent HCO exclusion filters

```
{{URL}}/api/v21.0/search?q=*&parenthcoexcludefilters=hco_type__v:4:1&parent
hcoexcludefilters=is_veeva_master__v:Y
```

Search widget filters

The exclusion filter can be used on preset filters for the search widget.

Widget filter

```
preset-exclude-filter="hcp.specialty_1__v=A"
```

You can also use exclusion parenthco filters on preset filters.

Widget filter with parent HCO filters

```
phco-preset-exclude-filter="hco.hco_type__v=11:98,11:2&hco.hco_status__v=A"
```