Veeva Network

Veeva Network 18R3.0.1 Release Notes

December 2018

Contents

About these Release Notes **7**

Browser requirements **7**

Release Note updates **7**

What's new **8**

Introduction **11**

Network Customer Master 11

Network widgets **12**

Custom keys 12

Advanced search 13

Example 13

Preset filters 16

Example scenarios 17

Audit 17

Hide widget header 17

More information 17

Profiles **18**

New profile country support 18

New profile enhancements for version 18R2.1 18

Supported countries 18

Cluster management 18

Summary section 19

Summary cards 19

Parent affiliation summary card 20

Adding parent affiliations 20

Expand and collapse sections 20
Map icons 21
Formatted addresses 21
Search 22
Search facet labels 22
Advanced search 23
Opening the advanced search form 23
Menus 24
Using Tab to navigate date fields 26
Using the arrow keys 27
Network Explorer 27
Class of work 27
General updates 28
Entity labels 28
My Profile 29
Data validation rules 29
Inbox 30
DCRs for ParentHCOs 30
DCR indicator 30
Flexible data model 32
Custom object types 32
Supported data model for custom objects 32
Supported data modeling patterns 34
Custom object example 36
Custom object provisioning workflow 37

Provisioning custom objects 37
Required information 37
Standard fields 38
Custom fields 38
Custom keys 39
Enabling custom objects 39
Creating default match rules 45
Loading data for custom objects 46
Running subscription jobs 48
Job history 48
Job details 48
Profile layout configuration 49
Data visibility profiles 52
Defining permissions 53
Assigning DVPs to users 54
Feature considerations for custom objects 54
Search 54
Record profiles 57
Adding custom object records 60
Merging and unmerging records 62
Source rankings 65
Target subscriptions 65
Reporting 66
Features that do not support custom objects 67
Removing custom objects 67

Sub-object icons 68
Choosing an icon 68
Data model 70
HCO accreditation fields for Japan 70
Profile layout changes for Japan 70
JPStandard layout for HCOs 70
JPStandard layout for HCPs 70
New countries supported 70
Localization 71
Data privacy opt-out 71
Cluster management 71
Geocoding 71
Data export 72
Reference data 72
Choosing the reference data version 72
Logs 72
Audit retention periods 72
Define a retention period 73
Log anonymization jobs 74
Anonymized log data 74
Auditing log retention changes 75
Admin settings 75
External credentials 75
Adding external credentials 76
Using saved credentials 77

API 78

Version Update 78

API Updates for Custom Objects 78

vid_key 78

Metadata API 78

Search API 81

About these Release Notes

These Release Notes describe all features that are included in Veeva Network 18R3.0.1.

Browser requirements

The following are the minimum browser requirements:

- Internet Explorer™ 11+
- Google Chrome™ (most stable version at Network release)
- Safari® 10+

Veeva Network is not supported on mobile devices.

Release Note updates

The following enhancement has been added to the Release Notes since the Early version was published:

- **Entity labels** - The Network UI now displays the Network name, instead of just the reference code for entity type labels.
- **HCO accreditation fields for Japan** - The HCO accreditation fields for Japan are no longer treated as a set of fields.
- **Profile layout changes for Japan** - Updates have been made to the default profile layouts for HCOs and HCPs in Japan.

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 18R3.0.1 major release.

18R3.0 - Features newly released for 18R3.0

18R2.x - Features previously introduced in minor releases

			ST	DS	DM	AD
Widgets						
Custom keys	Custom keys can be generated on each record downloaded by the search widget.	18R3.0			●	●
Advanced search	The search widget now includes an advanced search form.	18R2.x	●	●	●	●
Preset filters	The search widget now includes the option to create widgets for a specific set of records.	18R2.x	●	●	●	●
Hide widget header	The search widget can be created without a header to ensure that it integrates seamlessly into your internal application without looking like an external component.	18R2.x	●	●	●	●
Profile						
New profile country support	The redesigned profile is now available for all countries.	18R3.0	●	●	●	●
New Profile enhancements	The redesigned profile page is available for more countries. Enhancements have been added to help users find information more efficiently.	18R2.x	●	●	●	●
Formatted address	Network now uses the administrative area reference code to calculate formatted addresses for US addresses.	18R2.x	●	●	●	●
Search						
Search facets	The search results page and the advanced search form now display the Network name for entity type search facets.	18R3.0	●	●	●	●
Advanced search	Users can use the keyboard to navigate through the advanced search form to quickly define search criteria.	18R2.x	●	●	●	●

			ST	DS	DM	AD
Network Explorer						
Class of Work	The class of work field is now available on relationship summary cards for US records.	18R2.x	●	●	●	●
General Updates						
Entity labels	Labels for HCPs and HCOs now display the Network name, instead of just the reference code.	18R3.0	●	●	●	●
My Profile	Some settings on the My Profile page automatically refresh when changes are made.	18R2.x	●	●	●	●
Data Validation Rules						
Descriptions required	Descriptions are now required on all new validation rules.	18R3.0		●	●	●
Inbox						
DCRs for Parent HCOs	The **Parent Affiliation** column now indicates if there are any changes on the parent HCO in an HCP's DCR.	18R2.x		●	●	●
Custom Objects Data Model						
Flexible data model	Custom objects and custom relationship objects can be created in your Network instance.	18R3.0			●	●
Custom child object icons	Icons can be assigned to custom child objects.	18R3.0			●	●
Network Data Model						
HCO accreditation fields for Japan	The HCO accreditation fields for Japan are no longer treated as a set of fields.	18R3.0			●	●
Profile layout changes for Japan	Updates have been made to the default profile layouts for HCOs and HCPs in Japan.	18R3.0			●	●
New countries supported	A data model has been added for Croatia, Latvia, Lithuania, and Romania. Reference data is translated for these countries, plus Slovenia.	18R3.0			●	●
HCP opt-out	Croatia, Latvia, Lithuania, and Romania have been added to the list of opted-out countries.	18R3.0			●	●

			ST	DS	DM	AD
Cluster management	This feature now supports cluster data for Italy and Portugal for specific providers.	18R3.0			●	●
Geocoding	Geocodes are now persisted for addresses in Italy.	18R3.0			●	●
Data Export						
Reference data	A new version of reference data, V7.5, has been introduced so target alias code and name columns always contain values.	18R3.0			●	●
Logs						
Audit retention	Administrators can define retention periods to remove personal data from Network logs.	18R3.0				●
Admin Settings						
External credentials	Administrators can now store external credentials for Concur in Network.	18R2.x				●
API						
Version update	The Network API is updated to v16.0.	18R3.0		Developers		
Custom objects	The Network API is updated to support custom objects.	18R3.0		Developers		

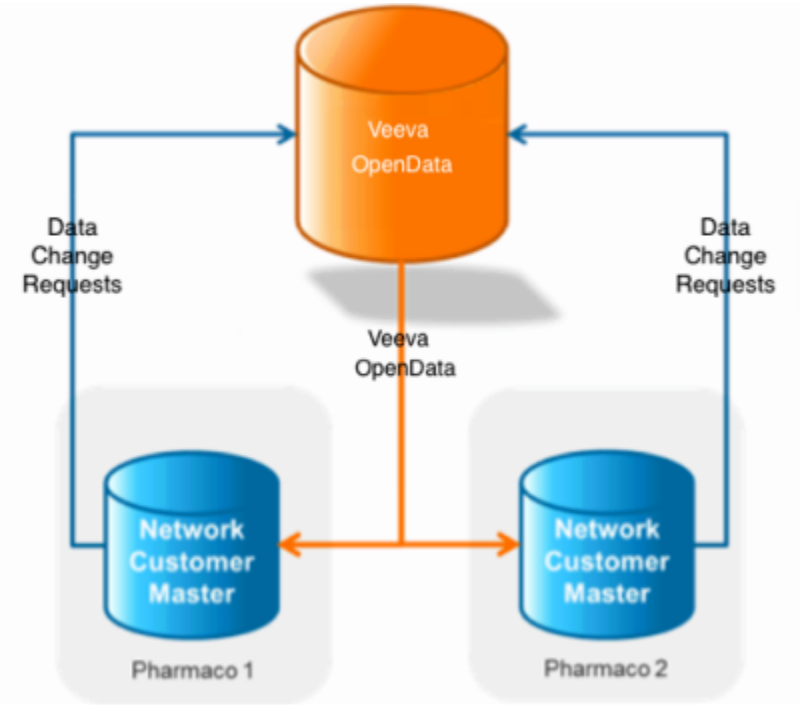
Data Governance - Specific updates for fields and reference data are provided in the *Veeva Network Data Governance* release notes for every minor and major Network release.

Introduction

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

Veeva OpenData provides identity, demographic, and licensure data about Healthcare Professionals and Healthcare 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 org similar in concept to a Veeva CRM or Salesforce.com org).

Where Veeva OpenData is enabled, each Network org 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 org up-to-date and in sync with the data in Veeva OpenData.

Pharmacos can also load their own data into their Network org 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 org that can be shared with Veeva OpenData.

Records that do not match Veeva records will be loaded as customer-stewarded records and updates on those records will not be shared with Veeva OpenData.

Network widgets

The following enhancements have been added to Network's Search Widget.

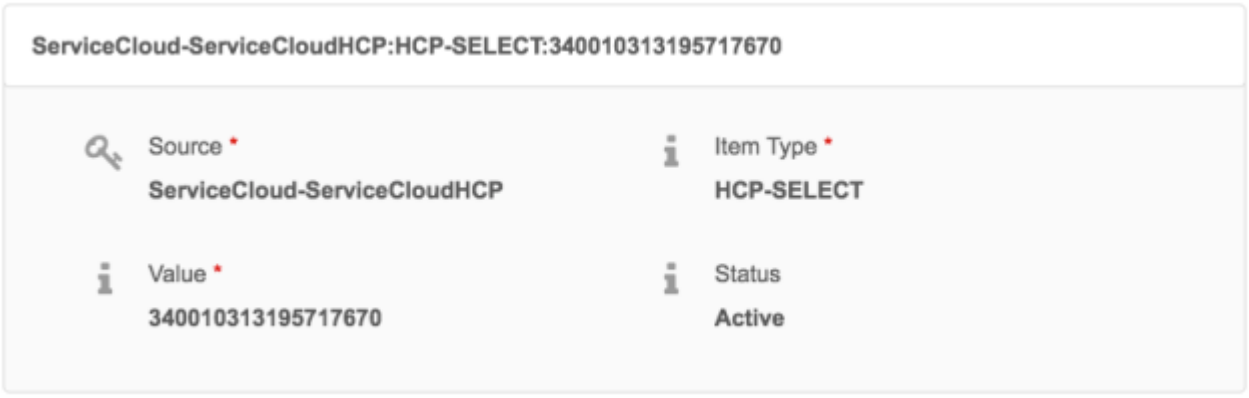
CUSTOM KEYS

Administrators can now track the systems that have downloaded records using the search widget by having custom keys automatically generated during download. This enhancement enables you to identify records that were added or downloaded to your internal application.

The custom key is created using the following format:

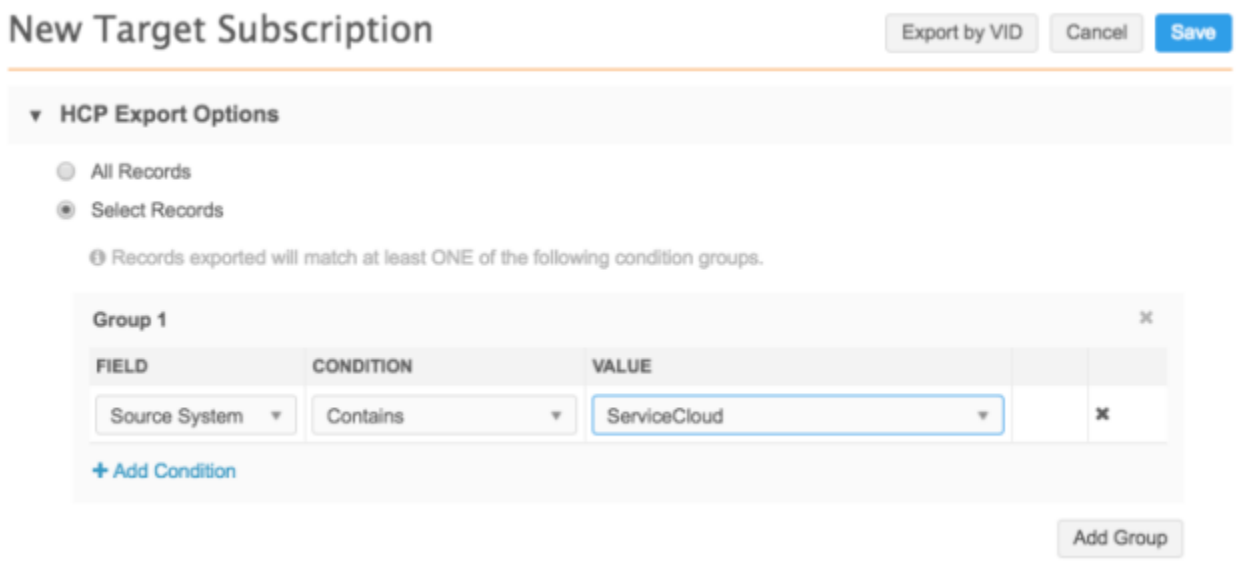
- Source System: The system of the search widget.
- Custom Key Source: <*SystemName*> - <*WidgetName*>
- Custom Key Item: <Entity Type>-SELECT
- Value: The Network entity ID.

Example



Using this information, you can configure a target subscription filter to export records added from the search widget to your downstream system.

For example, you can create a filter in your target subscription to export records that are downloaded to ServiceCloud™.



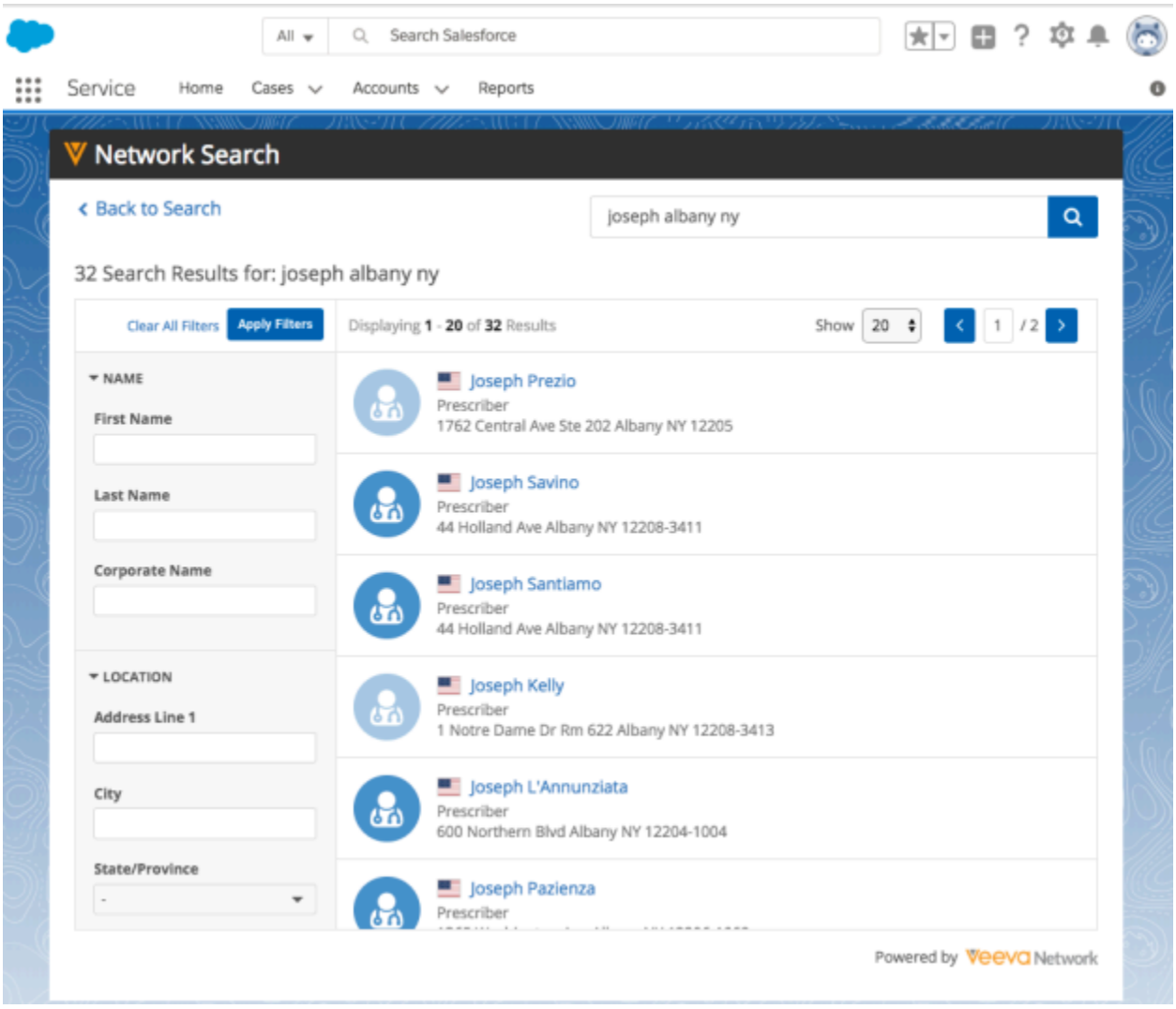
Administrators can enable the option to generate custom keys in their search widget configuration. This setting is not enabled by default.

ADVANCED SEARCH

The Network search widget now enables users to search on predefined fields using an advanced search form. For example, users can search for HCPs by first name, last name, city, state, and NPI number to retrieve the most relevant search results. Administrators can customize the fields that display in the advanced search form.

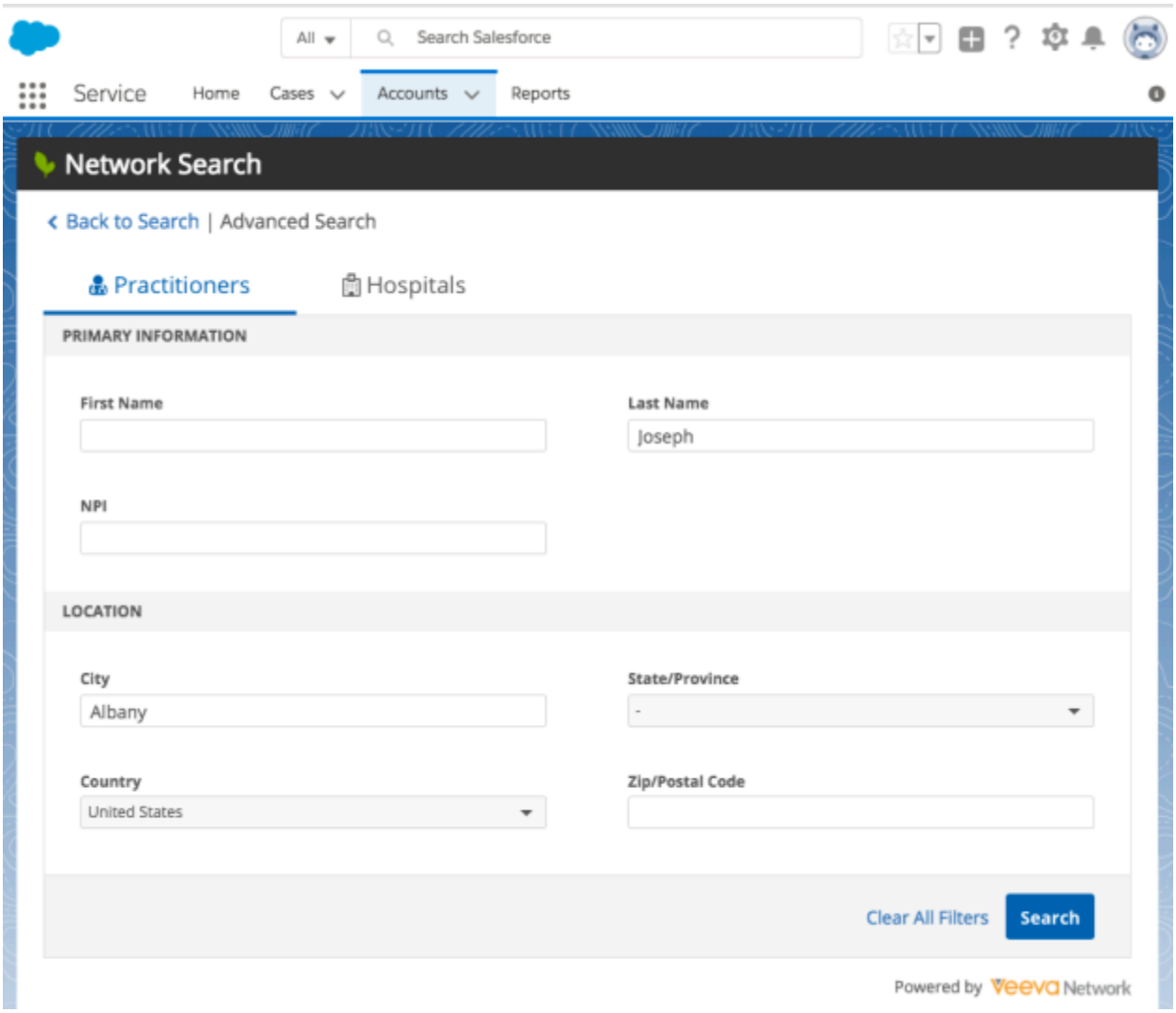
Example

Using quick search, a user might type "*joseph albany*" into the search bar to find a doctor with the last name *Joseph* in *Albany*, New York. Many results could be returned for that search query because HCP and HCO records that contain *Joseph* and *Albany* anywhere in the record profile are listed. The filters in the right pane can be used to further refine the results to find the appropriate doctor.

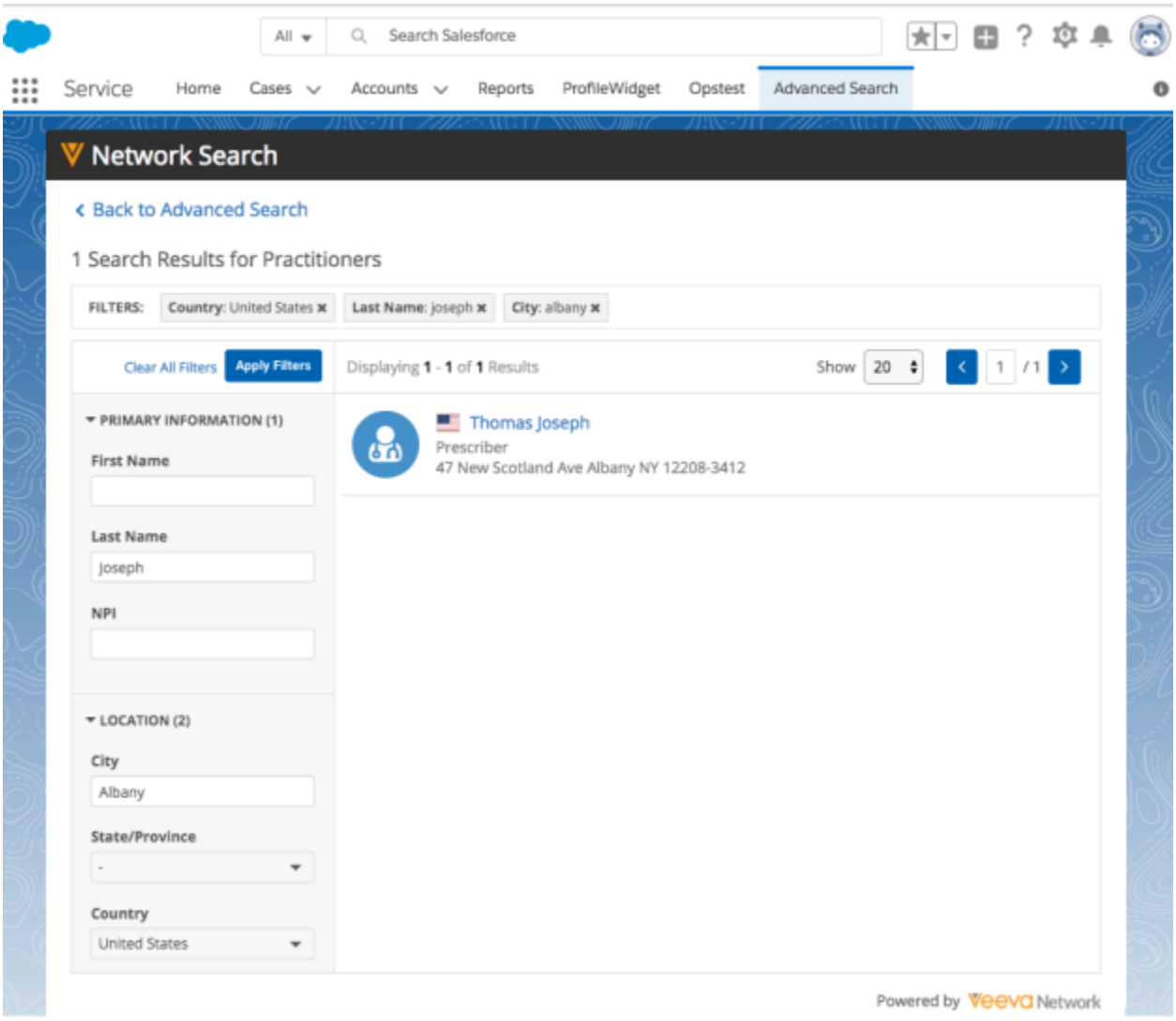


Using the advanced search form, users can specify the fields for the search terms.

Selecting the **Practitioners** tab narrows the search scope to HCPs only. Search terms can be added to the appropriate fields: *Joseph* in the **Last Name** field and *Albany* in the **City** field.



The results page might contain just one doctor because the search widget returns results that match only the specific fields.



PRESET FILTERS

Using the search widget in your internal application, users can search for records in Network; however, some of those records (for example, dentists or veterinarians) might not be relevant for the widget. Also, it might be difficult for users to distinguish and find specific records they are looking for. Now, web developers can add preset filters in the search widget code to define a subset of records that users can view.

Preset filters are defined as a property in the widget's HTML code that developers embed in your internal application. This gives you flexibility to configure one search widget, but use it in different areas in your internal application for different purposes (for example, users can search for pharmacies only in one instance of the widget and hospitals only in another instance of the widget). Providing the preset filters as a property of the embedded widget code avoids having to create and manage several different search widgets.

Example scenarios

Using preset filters, you can create one search widget and use it for different purposes in your internal application.

- In your expense portal, add preset filters so field users searching the widget see only active prescribers in the results.
- Create a widget for your call center application and create preset filters so agents have a search widget for each record type they have to search for (pharmacies, physicians, hospitals).

Audit

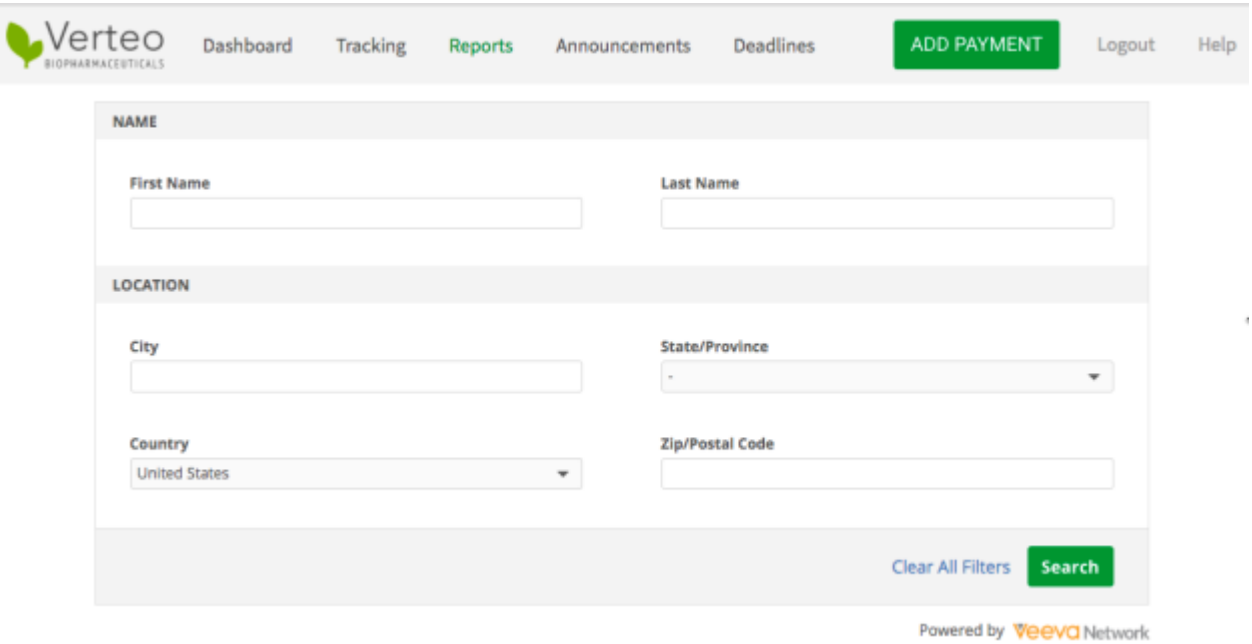
Administrators can view the preset filters in the search audit logs.

HIDE WIDGET HEADER

An additional enhancement to the search widget is the ability to hide the widget header. This enhancement ensures that the Network Search Widget displays seamlessly into your internal portal or service application without looking like an external component.

Example

In this example, the search widget has been added to an expense portal. The widget header has been hidden using the options in the search widget configuration in Network.



More information

For more information about creating and using the Network search widget, contact Veeva Support.

Profiles

NEW PROFILE COUNTRY SUPPORT

Starting in version 18R3.0, the redesigned profile page is available for viewing and editing in all countries. The redesigned Add Record page is also available for these countries.

Users can access the new profile by clicking the **Try our new view!** red ribbon at the top of the classic profile page. Network retains your choice to view the redesigned profile as you view other records and even when you log out and back into the application. To return to the classic profile, click **Back to Classic View** at the top of the new profile page.

The classic view will be replaced with the new profile view in version 19R1.0 for all countries.

For more information about the features on the new profile, see the "New profile" topic in the *Veeva Network Online Help*.

NEW PROFILE ENHANCEMENTS FOR VERSION 18R2.1

The redesigned profile is now available for additional countries. The new profile page also contains several enhancements to help users find information more efficiently.

Review the following sections to learn more about the new enhancements.

Supported countries

The redesigned profile page is available for viewing and editing in many additional countries. The redesigned Add Record page is also available for these countries.

Users can access the new profile by clicking the **Try our new view!** red ribbon at the top of the classic profile page. Network retains your choice to view the redesigned profile as you view other records for that country and even when you log out and back into the application. To return to the classic profile, click **Back to Classic View** at the top of the new profile page.

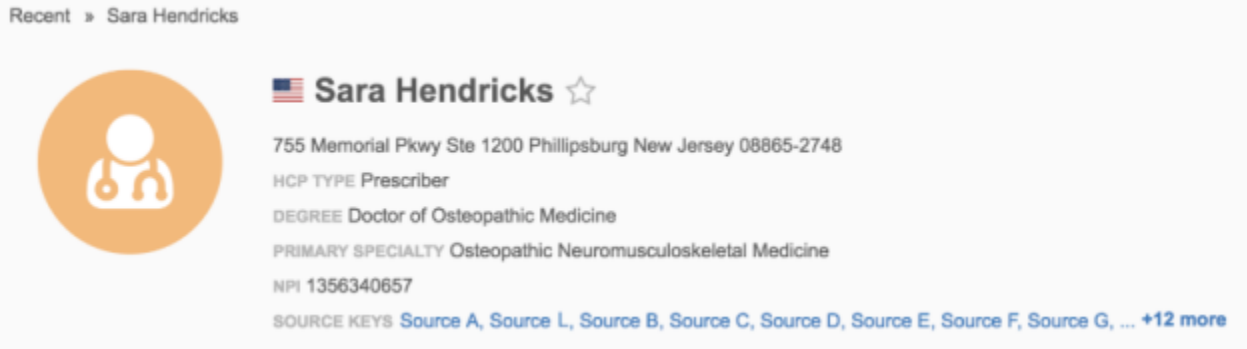
The classic view will be replaced with the new profile view in version 19R1.0 for all countries. For more information about the features and the supported countries for the new profile, see the "New profile" topic in the *Veeva Network Online Help*.

Cluster management

Cluster fields are now supported on the redesigned profile. For more information, see the "Managing clusters" topic in the *Veeva Network Online Help*.

Summary section

The summary section at the top of the new profile page now displays a list of all of the sources and keys that contributed to the record. Data stewards can use this as a quick reference to know if license or other data is missing from the record based on the contributing sources. It is also helpful for looking up information in downstream systems. Click each source to view all of the keys for that record.

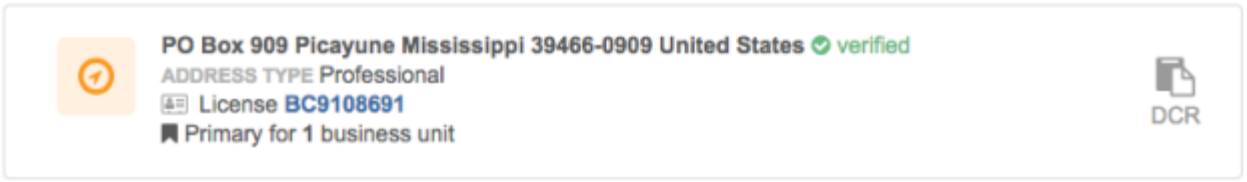


If summary section fields contain links for additional data; for example, **+1 more** in the **Email** field, clicking the link scrolls to the location of that field on the profile. If the data is in a child object section, the page scrolls to the summary card and expands the child object so users can immediately view the information.

If the link contains more than one; for example, **+2 more**, clicking the link scrolls to the location of the second item on the profile page.

Summary cards

Fields on the summary cards (Address, License, Parent Affiliation) now display labels so users understand the data that is being presented. This applies to most of the default fields as well as any fields that have been defined as a summary field in the profile layout. For a list of the default fields that are included in each summary card, see the "New Profile" topic in the *Veeva Network Online Help*.



Default fields that do not display labels on the following summary cards:

- **Address** - Formatted address and address verification status.
- **License** - License number and expiration date.
- **Parent Affiliations** - Corporate name and address.

Parent affiliation summary card

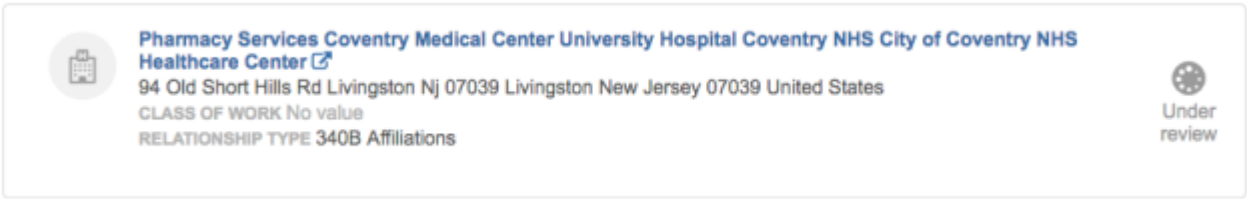
Class of Work field

The **Class of Work** field now displays by default on summary cards in US profiles. If the field is not populated, the **Class of Work** label still displays.

The **Hierarchy Type** field that previously displayed on the summary card has been removed by default. It can be added to the summary card again by defining it as a summary field in the profile layout (**Data Model > Profile Layout**).

Viewing long affiliation names

Parent affiliation and child affiliation names can be lengthy, especially if they begin with a similar name, contain departments, and they are within the same hospital. To help users to easily differentiate between these affiliations, the names now wrap over two lines on the summary cards. Names that do not fit within the two lines are truncated using ellipses (...), but users can hover over the name to display a tooltip containing the complete name.



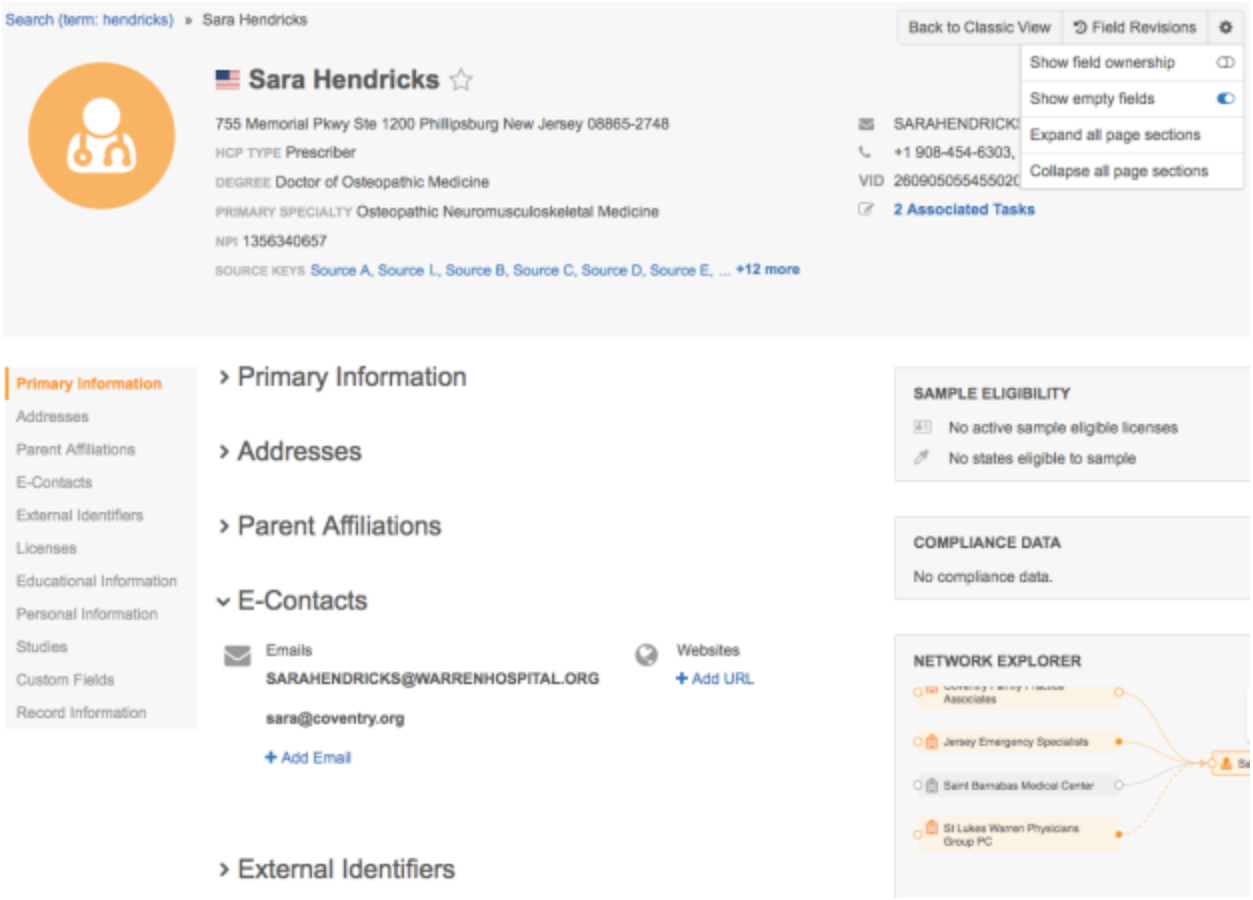
Adding parent affiliations

When users add a parent affiliation, they can now scroll through all of the relevant search results in the **Corporate Name** field. Previously, only five results could be accessed in the list.

Expand and collapse sections

Users can collapse sections on the new profile page and the add record page. This can be helpful if data stewards are working on a specific project and only need to access data in specific sections. Instead of scrolling through the new profile page, they can collapse the sections that do not apply to the project. If sections are collapsed or expanded, Network remembers the action. When users return to the new profile after logging out of Network or navigating to other pages in the same session, the collapsed/expanded section preferences are retained.

Collapse or expand individual sections, or to collapse or expand all sections, click **Expand all page sections** or **Collapse all page sections** the **Options** menu at the top of the page.



Map icons

Addresses associated with each record are pinned on the map. Overlay icons are now available on the pins to help users differentiate inactive addresses, addresses that are under review by data stewards, and addresses that have just been updated or added.

Examples

The address is inactive.

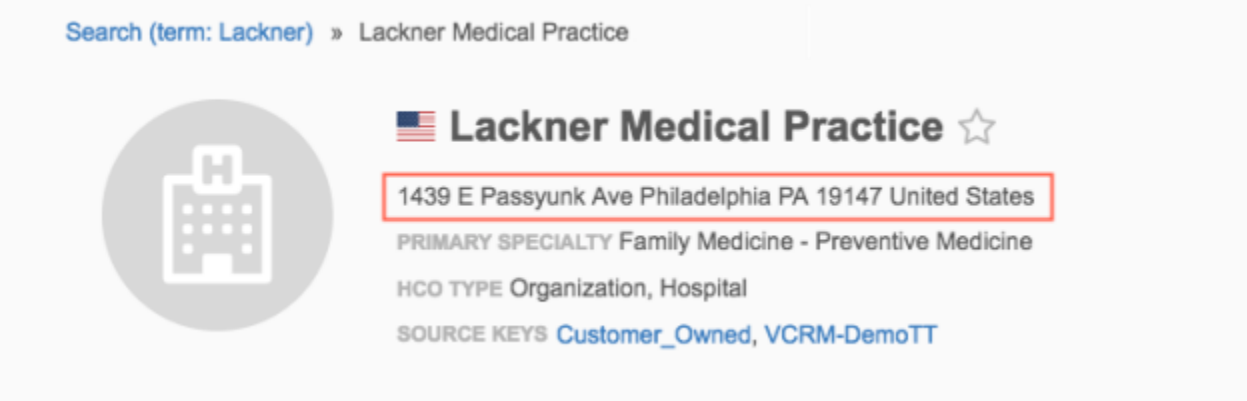
The address has just been added.

The address has just been updated and is under review.

One address in this cluster of two addresses has just been added, the other address has just been updated.

FORMATTED ADDRESSES

To ensure that formatted addresses display consistently, Network now uses the administrative area reference code to calculate formatted addresses for US addresses. Previously, administrative area descriptions (for example, Pennsylvania) were used in Network's calculation, but Network's third party address cleansing tool uses reference codes (for example, PA) so formatted addresses displayed differently. Now, US formatted addresses are calculated consistently.

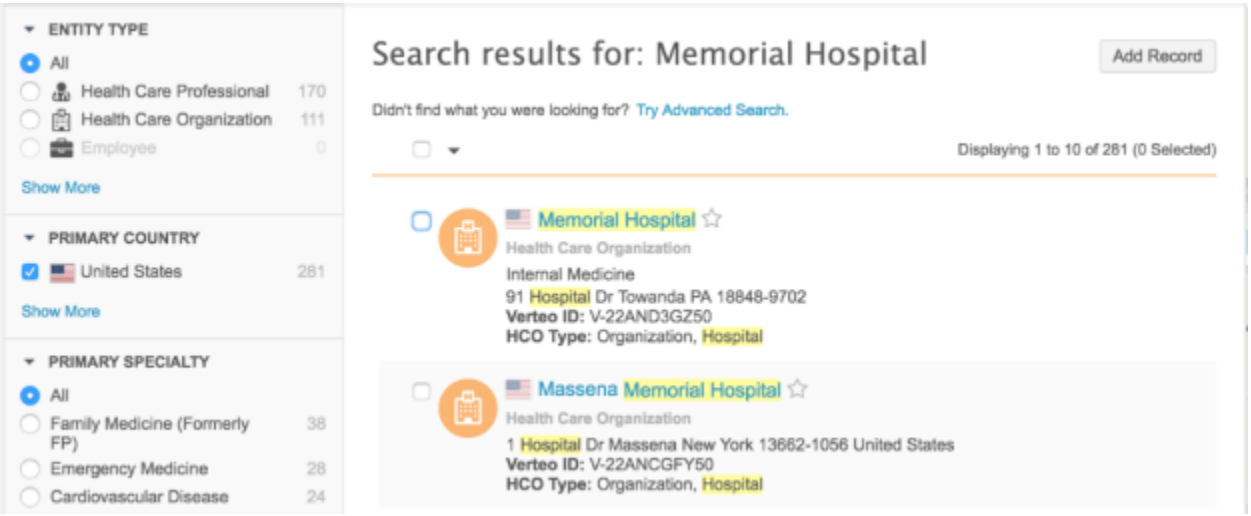


This enhancement is enabled by default in all Network instances and will be applied when US addresses are loaded or updated.

Search

SEARCH FACET LABELS

The search results page and the advanced search form now display the Network name, instead of just the reference code for entity type search facets. For example, the **HCP** reference code is replaced with **Health Care Professional**. This ensures that the label is translated for languages other than English.



The name that displays depends on the Network name defined in the EntityType reference set (**Data Model > Reference Data**).

API facets are not changed; they continue to use reference codes.

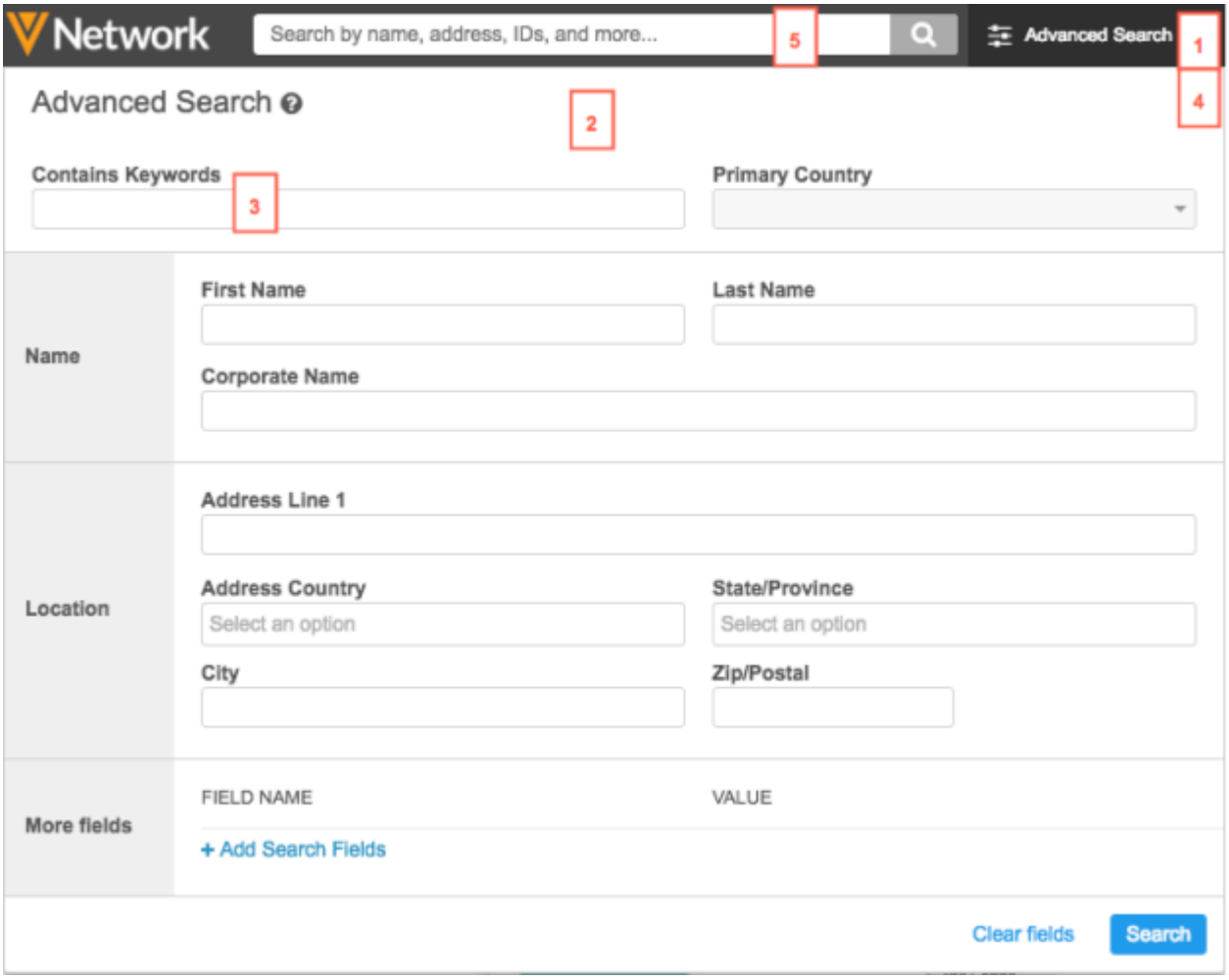
ADVANCED SEARCH

The advanced search form now supports keyboard actions so users can navigate through the form to quickly define search criteria. In general, use the Tab key to navigate from field to field. Use Shift + Tab to reverse the order (navigate backward).

Opening the advanced search form

Review the following Tab key actions to understand how to open and navigate within the form.

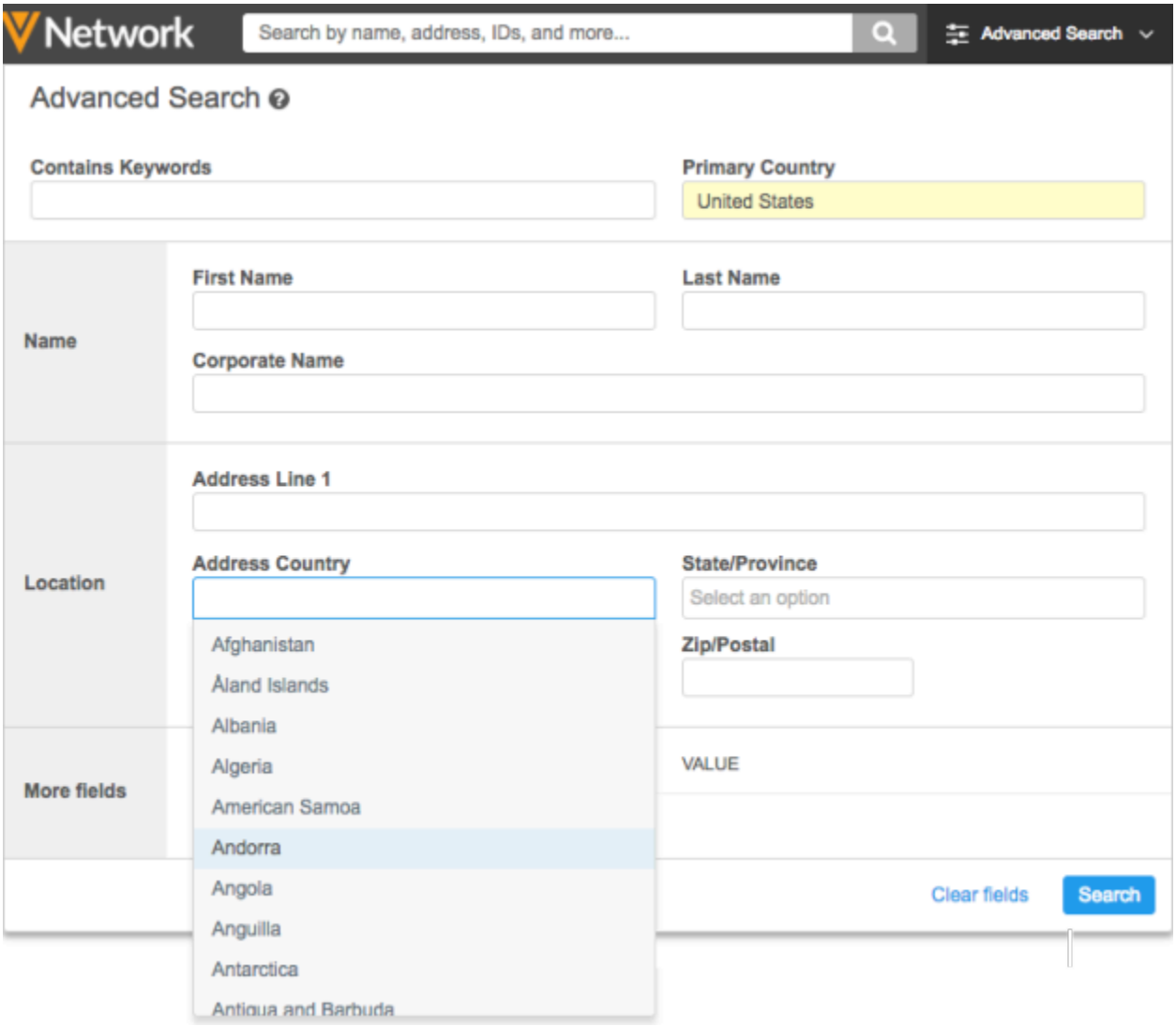
1. Press the Tab key from the Search bar to focus on the **Advanced Search** link.
2. Press the Enter key to expand the advanced search form.
3. Press the Tab key to focus on the first field in the form: **Contains Keywords**.
4. Press Shift + Tab to reverse the focus to the **Advanced Search** link.
5. Press the Enter key to collapse the advanced search form.



Menus

When you have tabbed to a menu field and the focus is on a drop down menu, use the following keys to navigate through the menu:

- Use the Enter key to expand the menu list.
- Use the Up and Down arrow keys to navigate through the list of values.
- Press the Enter key to select a value.
- Press Esc to close the menu. (For single select menus, pressing Enter to select the value also closes the menu).



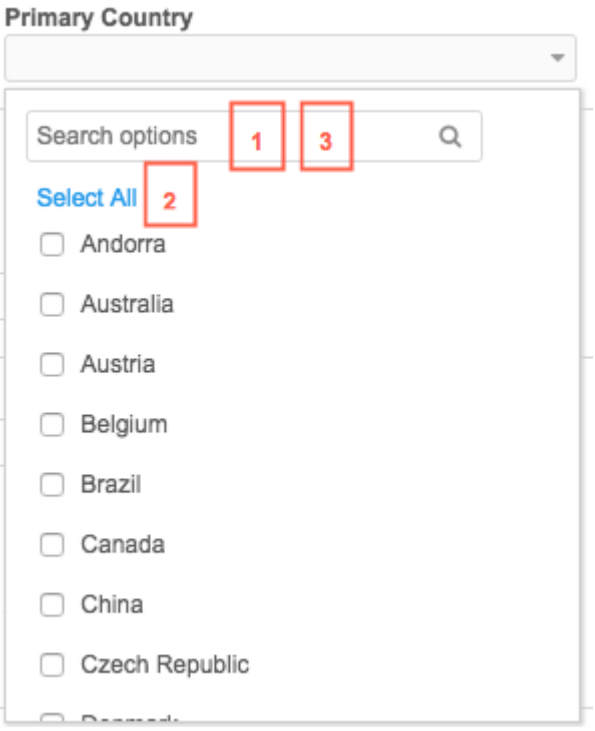
Primary Country menu

If you continue pressing the Tab key on the **Primary Country** menu, the focus changes between search box and the **Select All** link. The Primary Country menu is the only list with the **Select All** link.

1. Press the Tab key to focus on the **Select All** link. Press the Enter key to select all of the options in the menu. The menu stays open in case you want to clear one option.

   Note: While the focus in on the **Select All** link, arrow key navigation through the list of options is disabled.

2. Press the Tab key or Shift + Tab to focus on the search box again. Use the Up and Down arrow keys to navigate the list items.
3. Press the Enter key to select a value
4. Press Esc to close the menu. Or, to select one country and close the menu, press Alt + Enter.



Note: If you change a primary country, a message displays in the **More Fields** section to advise that defined search fields may not be applicable to that new country. The menu remains open so you can decide whether to keep the selection. If the window closes with the selected country, fields that do not apply to that country are removed from the **More Fields** section.

Using Tab to navigate date fields

Use the Tab to navigate through each of the options in the calendar in date fields; for example, HCO Created Date.

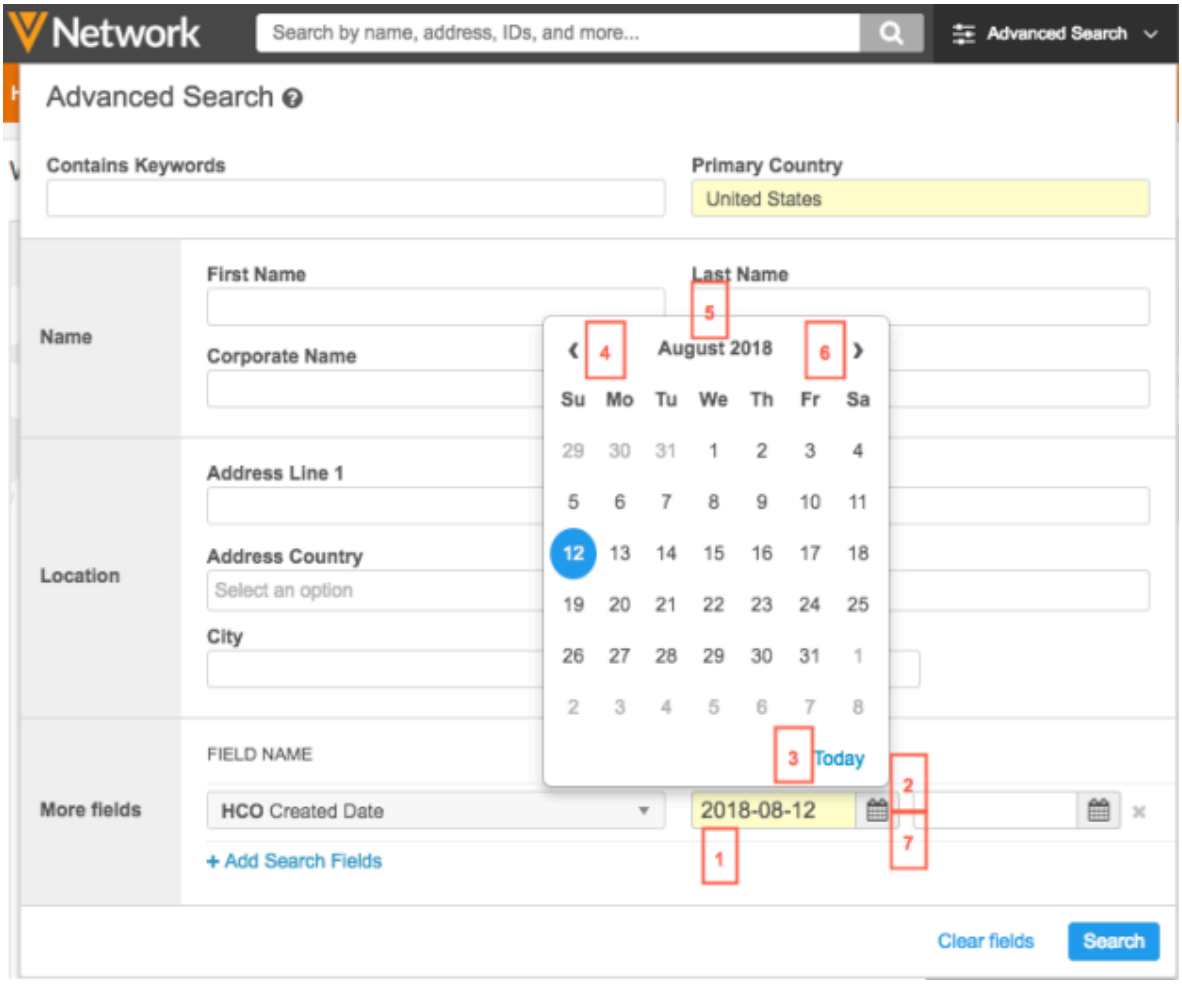
1. Press the Tab key to focus on the date field where you can manually enter a date.
2. Press the Tab key again to focus on the **Calendar** button.

   Press the Enter key to open the calendar. Today's date will be in focus. Use the arrow keys to navigate through the dates.

   When the calendar is open, press the Tab key to navigate through the various options in this order:

3. Tab to focus on the **Today** link.
4. Tab to focus on the previous (**<**) current month / year range.
5. Tab to focus on the month / year range.
6. Tab to focus on the next (**>**) current month range.
7. Tab to focus on the **Calendar** button again.

Tip: Use Shift + Tab to reverse the sequence.



Using the arrow keys

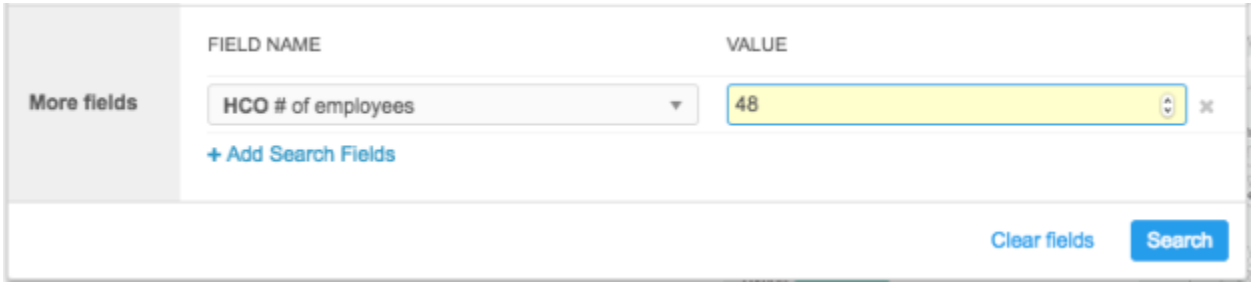
Review the following ways to navigate through the calendar using the arrow keys (Up, Down, Right, and Left).

- When the calendar is open and the focus is on the **Calendar** button, use the arrow keys to navigate through the following views:
  - **Date view** - Press the Right/Left Arrow keys to move forward/backward one day. Use the Up/Down Arrows to move forward/backward one week.
  - **Month view** - Press the Right/Left Arrow keys to move forward/backward one month. Use the Up/Down Arrows to move above/below the selected month.
  - **Year view** - Press the Right/Left Arrow keys to move forward/backward one year. Use the Up/Down Arrows to move a year above/below the selected year.

  When you find the desired date, press Enter to pick the date and close the calendar.

  Note: When the focus is not on the **Calendar** button, arrow key navigation through the list of options is disabled.

- On fields that use integers or decimals, use the Up/Down Arrow keys to increment/decrement the numbers.



Network Explorer

CLASS OF WORK

Relationship summary cards now contain the **Class of Work** field so users can quickly identify the type of relationship between the HCP and its parent HCO. This field is only available on US record profiles.

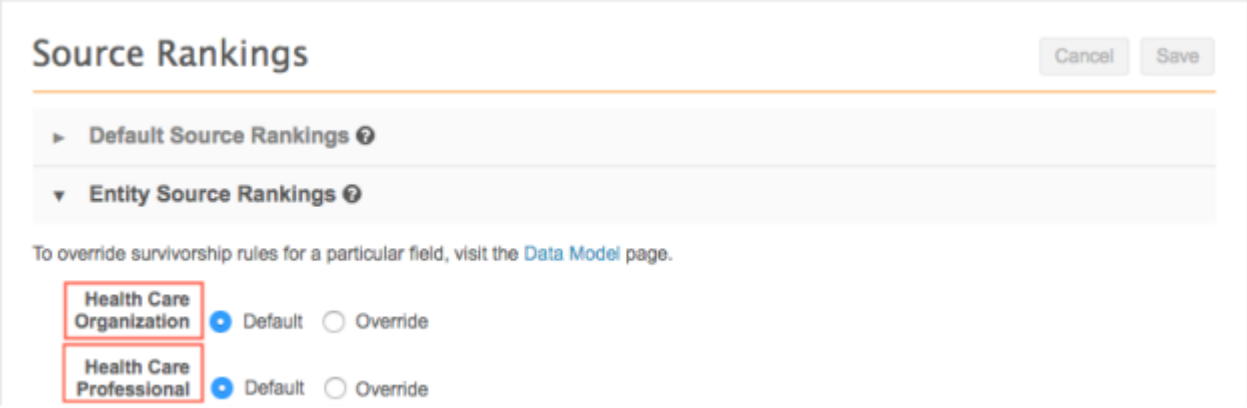
To view the relationship summary card on the Network Explorer canvas, click the connecting line between the HCP and its affiliated HCO.

General updates

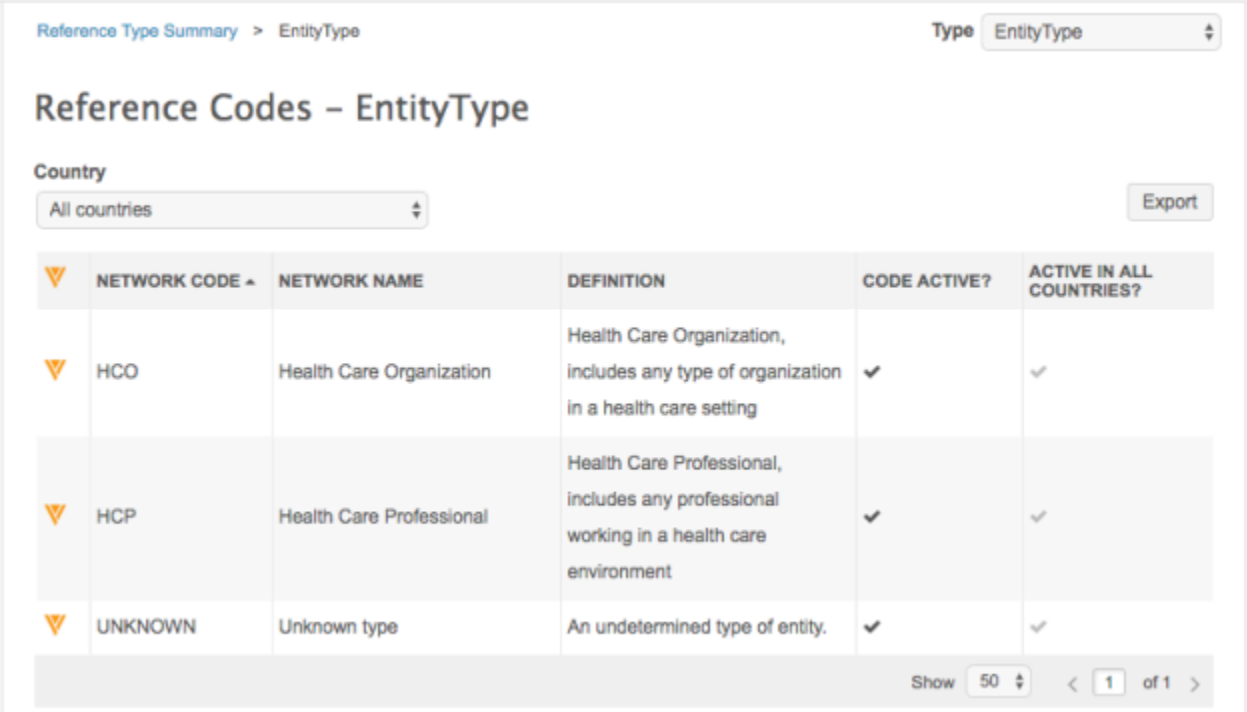
ENTITY LABELS

The Network UI now displays the Network name, instead of just the reference code for entity type labels. For example, the **HCP** reference code is replaced with **Health Care Professional**. This ensures that the label is translated for languages other than English.

This change is enabled by default wherever the entity label displays in the Network UI; for example, subscriptions, search, profile page, and so on.



The name that displays depends on the Network name defined in the EntityType reference set (**Data Model > Reference Data**).



My Profile

When you update your user profile, changes to **Locale** and **Timezone** will now automatically refresh. Previously, manually refreshing the page or logging into Network again was required for all changes to update.

To edit your user profile, on the main Network bar, click your user name and choose **My Profile**.

Data validation rules

Descriptions are now required for all new data validation rules. This enhancement ensures that data stewards can see a relevant message if a rule fails when they are submitting changes to a record. Previously, a description was not required, so data stewards might see a data validation failure without any details about the rule that failed.

This enhancement applies to all new validation rules. If existing rules are edited, a description must be added before the rule can be saved.

Inbox

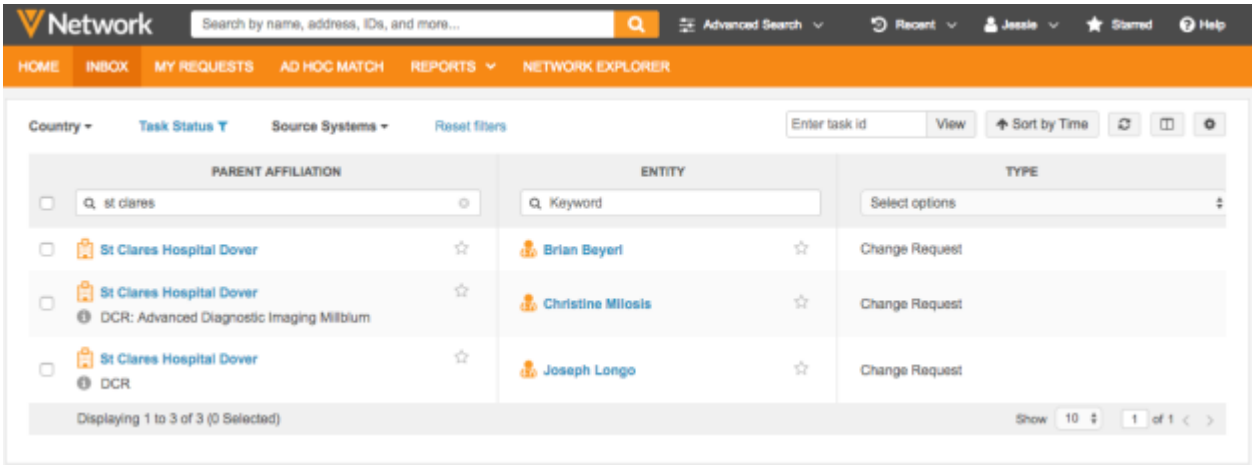
DCRs for ParentHCOs

The **Parent Affiliation** column in the inbox now indicates if there are any change to the parent HCO in a DCR. This enables data stewards to filter tasks more efficiently by grouping related DCRs by the same parent HCOs. It is also helpful when HCPs have multiple parent HCOs because the **Parent Affiliation** column displays either the change request value or the primary affiliation. Now that the parent affiliation DCR value displays, data stewards know which parent HCO (hospital or department) to call to validate the HCP change request.

This enhancement is enabled by default on all Network instances.

DCR indicator

When tasks contain changes to parent affiliations, a DCR indicator displays in the **Parent Affiliation** column. If the column is filtered for a specific corporate name, the matched result could return either the entity's existing affiliation or a change request value. If the DCR contains changes to the existing parent affiliation, the DCR badge displays below the corporate name. If the filter returns the existing parent affiliation, but the DCR contains changes for a different parent affiliation, the **DCR** badge displays and includes the corporate name of the other parent affiliation.



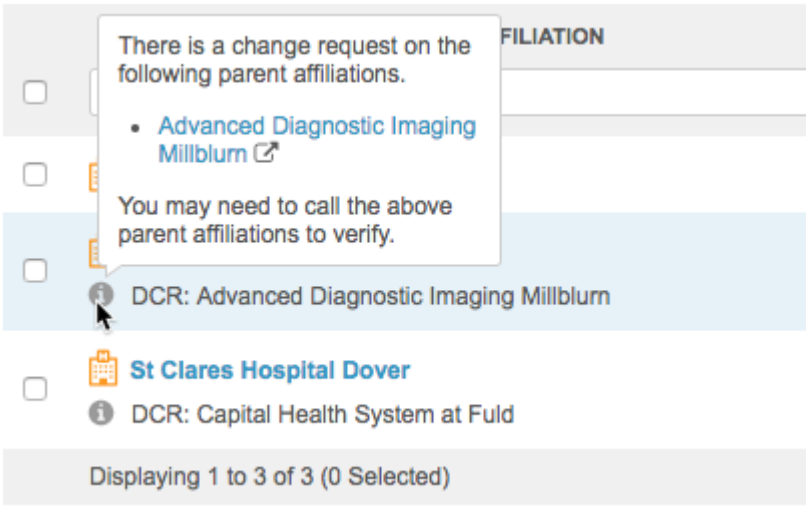
Example

In the screenshot above, the **Parent Affiliation** column is filtered on the corporate name "st clares." Previously, all of the returned tasks might be assigned to a data steward to process together because it looks like all of the tasks could be validated by calling one hospital. Now, however; you can see that there are DCRs for different parent affiliations on one task, so these tasks should not be assigned to the same data steward.

Review the following examples to understand how the DCR badge in the **Parent Affiliation** column indicates changes:

- Brian Beyeri: No DCR badge - there are no changes for parent affiliations in this task.
- Christine Milosis - DCR badge and corporate name - There is at least one change on the task for a parent HCO that is not the existing primary affiliation, St Clares Hospital Dover.
- Joseph Longo - DCR badge only - There is a change on the task for the existing parent affiliation, St Clares Hospital Dover.

When you hover over the DCR badge, a popup displays to advise which parent HCO has changes on the task. This is useful especially if there are changes for multiple parent HCOs; each parent HCO will be listed.



To add the **Parent Affiliation** column to your inbox view:

1. Click the **Column Options** icon and choose **Select Columns**.
2. In the **Available Columns** pane, expand the **Parent HCO** section and select **Parent Affiliation**.
3. Click the **Right Arrow** icon to move **Parent Affiliation** into the **Selected Columns** pane.
4. To define **Parent Affiliation** as the first column in your inbox view, use the handle on the **Parent HCO** heading and move it to the top of the pane.
5. Click **OK**.

Flexible data model

Network now provides the option to create custom objects in your Network instance to store data that is essential to your business but is not part of the standard data model. For example, you might want to store clinical trial data, research papers, sales organizations, or employee data that is affiliated to the HCOs and HCPs in your Network instance. Using custom objects, you can load this data into Network and maintain it using standard Network features. Custom objects are provisioned for a specific use and are specific to your Network instance.

Custom objects are not enabled by default. To create a custom object in your Network instance, contact Veeva Support.

CUSTOM OBJECT TYPES

The flexible data model supports the following types of custom objects:

- **Custom objects** - Root entities that are independent of any other entity. Custom objects are provisioned for a unique use and are specific to your Network instance. They are analogous to Veeva's standard entities; HCPs and HCOs.
- **Custom sub-objects** - Objects that depend on the existence of a root entity. Custom sub-objects have been supported in Network since version 17R3.1 (previously called *custom child objects*), but now they can be associated to both custom objects and Veeva standard entities.
- **Custom relationship objects** - Objects that link two root entities. The custom relationship object uses the entity IDs of the root entities to link them. Custom relationship objects cannot be used to link Veeva sub-objects (previously called *child objects*), custom sub-objects, or Veeva relationship objects (Parent HCOs).

Supported data model for custom objects

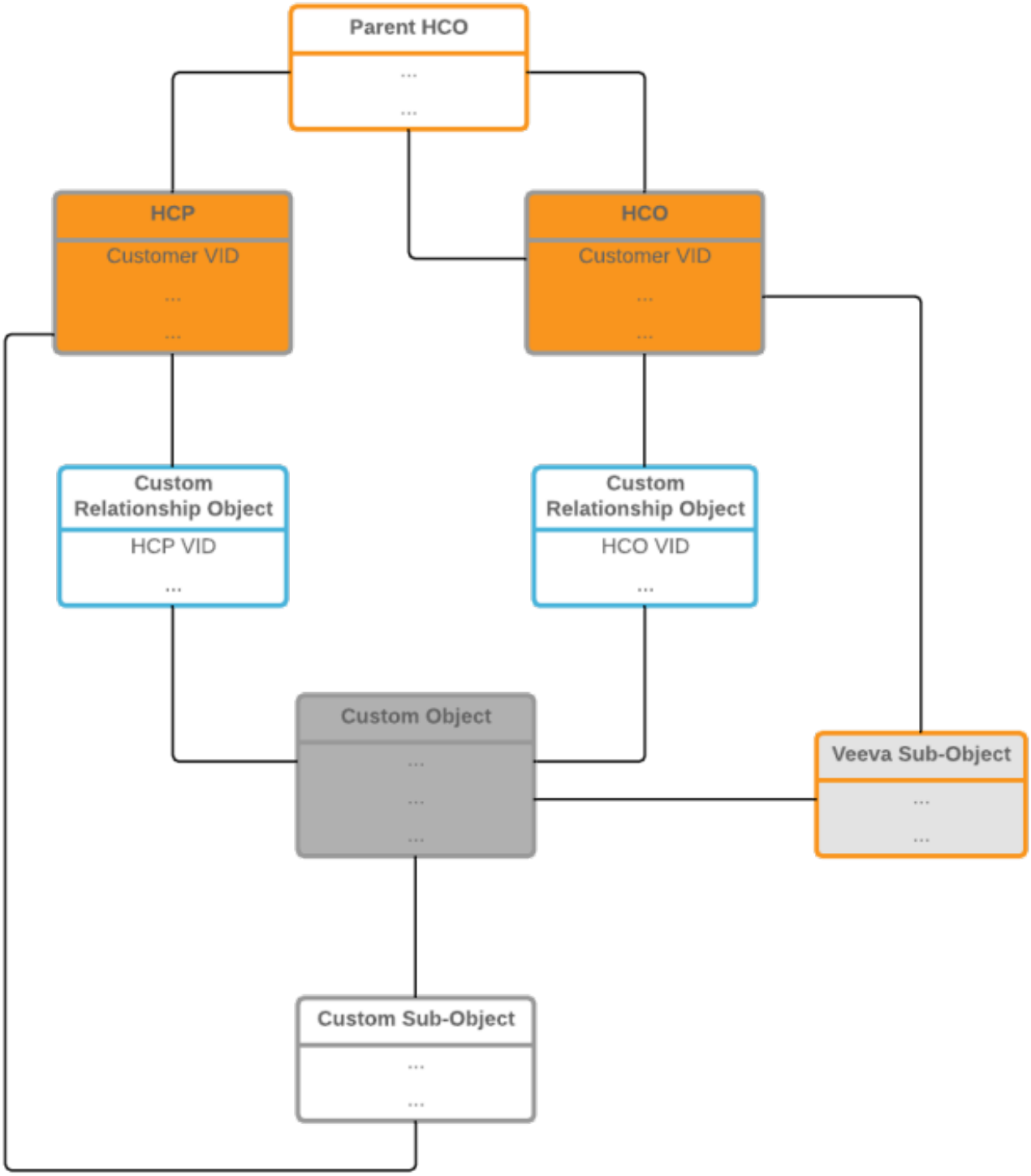
When you add a custom object (root entity) in your Network instance, you can associate it to any of the following objects:

- other custom objects (using custom relationship objects)
- custom sub-objects,
- Veeva entities (using custom relationship objects)
- Veeva sub-objects (licenses, addresses).

  For example, if it's applicable, including the address sub-object in your custom data model enables you to use the map feature in Network.

Parent HCO relationships are only supported for Veeva entities; they cannot be associated to any type of custom object in your custom data model.

Example of a data model that includes custom objects



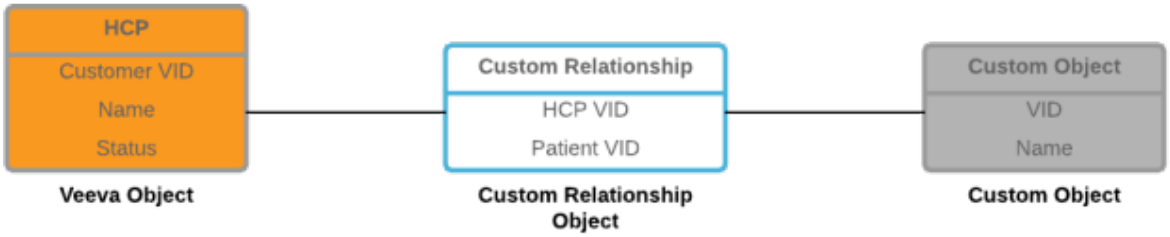
Supported data modeling patterns

Using custom relationship objects, Network supports the following types of relationships between root entities.

Many-to-many relationships

This is the most typical modeling pattern. For example, a STUDY custom object can have a many-to-many relationship with HCPs; a clinical trial will have multiple HCPs participating in it, while one HCP can participate in multiple clinical trials.

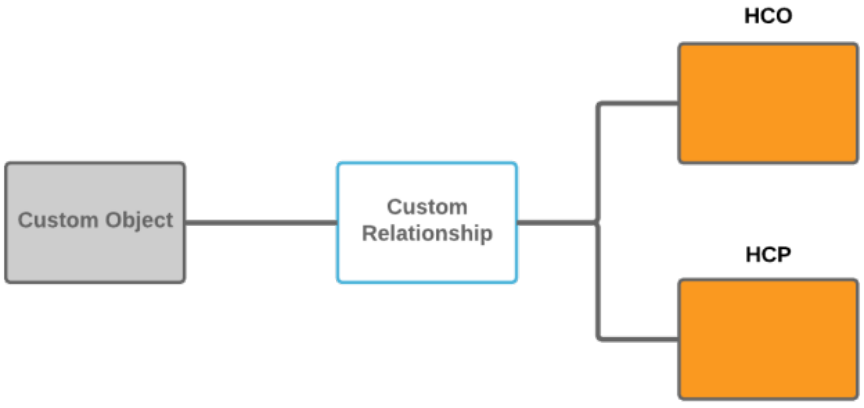
Using this modeling pattern, a custom relationship object called STUDYINVESTIGATOR can be created to track the relationship between STUDIES and HCPs. The HCP root entity will be the controlling entity of the relationship, so users with access to HCPs are permitted to access the clinical trials that an HCP is participating in. However, users with access only to STUDIES do not have access to see the participating HCPs; this means that on a STUDY record profile, users will not see the affiliated HCPs.



Arc relationships

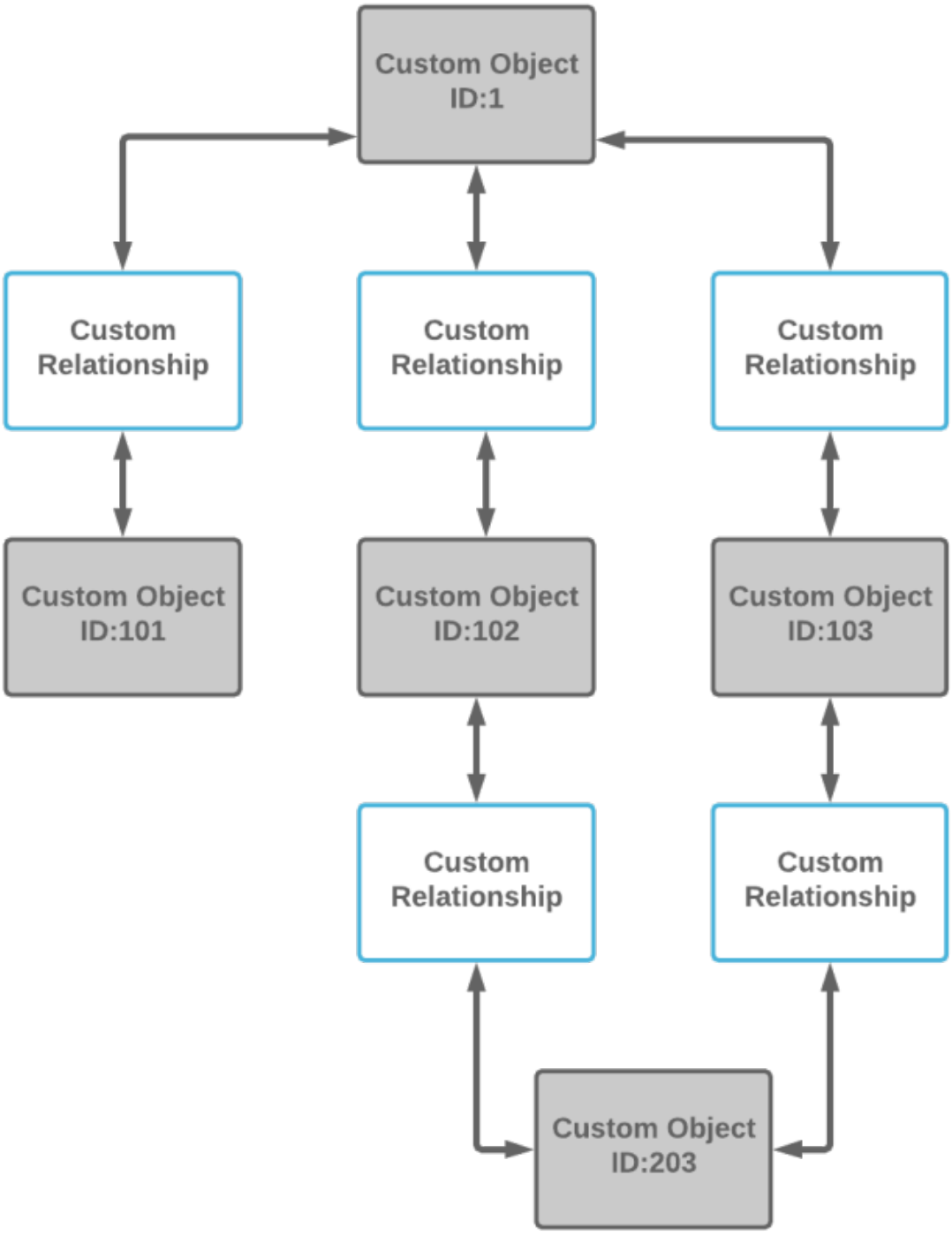
A root entity can be linked to one or more root entity types using the same custom relationship object. This modeling pattern can be used when an entity has a similar relationship to one or more root entities; for example, an `Employee` custom object can have a similar relationship with HCPs and HCOs, so the relationship object will contain data model fields that can be used by both of those root entities. When one entity type is related to two or more entity types using the same relationship object, the arc ensures that the entity has only one valid relationship to another root entity type for each relationship record.

Using an arc pattern, a sales employee could have a relationship to accounts with HCPs and HCOs. The arc ensures that the `Employee` custom object has an exclusive relationship with each HCP and HCO.



Recursive relationships

Custom relationship objects can be used so that one entity type can refer to itself. For example, sales organizations have hierarchies and are typically divided by geography and disease state (US Cardiology, EU Diabetes).



In this example, the recursive relationship could be a hierarchy of organization levels. The custom object uses the same custom relationship object to refer back to itself.

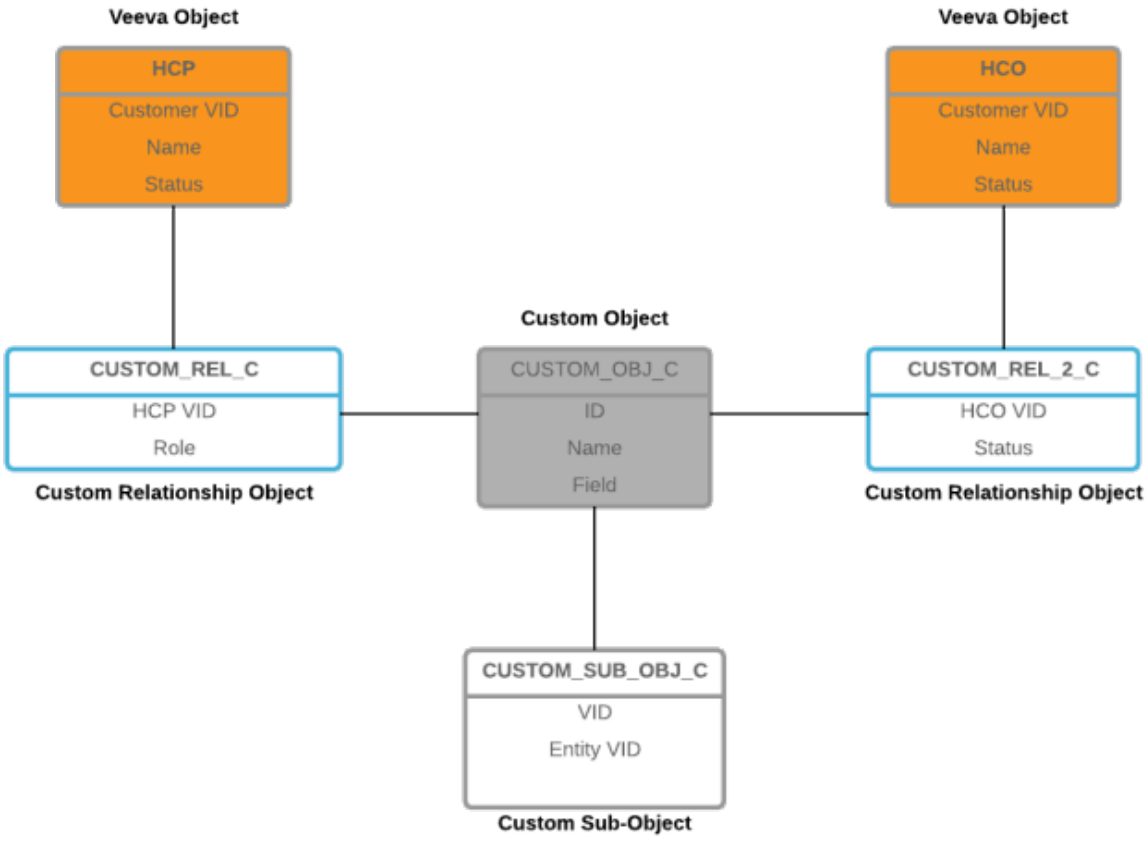
Custom object example

To help explain the process of creating and managing custom objects, throughout this document we'll use a custom object for clinical trials called STUDY as an example. Verteo, the customer, wants to track HCP participation in clinical trials, as well as the HCOs where the trials took place. The STUDY custom object has a many-to many-relationship to Veeva entities and uses a custom sub-object.

The STUDY custom object is associated with the following objects in this Network instance:

- **STUDYFACILITY** - A custom relationship object that links the STUDY and HCO root entities. User access to this relationship object is inherited from its controlling entity.
- **HCO** - A Veeva entity - The HCO controls the relationship (STUDYFACILITY) to the STUDY custom object.
- **STUDYINVESTIGATOR** - A custom relationship object that links the STUDY and HCP root entities. User access to this relationship object is inherited from its controlling entity.
- **HCP** - A Veeva entity - The HCP controls the relationship (STUDYINVESTIGATOR) to the STUDY custom object.
- **CONDITION** - A custom sub-object. A clinical trial can be used to track more than one condition (disease state), so this custom sub-object will be used to store a set of conditions for each clinical trial.

Note that for this example there is no relationship between the STUDY custom object and Veeva's license and address sub-objects. Parent HCOs are not supported for custom objects.



CUSTOM OBJECT PROVISIONING WORKFLOW

There is a recommended workflow for adding and configuring custom objects for use in your Network instance. The recommended process includes the following high-level steps:

1. **Create custom objects** - Contact Veeva Support to create custom objects in your Network instance. Veeva will work with you to create the appropriate objects for mastering your custom data.
2. **Enable the object** - Administrators and data managers can enable and configure the objects in their Network instance. Custom fields can be added for specific data for your custom objects.
3. **Create default match rules for custom objects** (*optional*) - Before loading data, you can define match rules for your custom objects. Match rules can be created using the advanced XML.
4. **Load data** - Run a source subscription to load custom object data into your Network instance. It's recommended to load data before configuring the profile layout so you can use the data to preview the layout as you configure it.
5. **Configure a profile layout for the custom object** - Define and organize sections to include the data model fields for the data that users can see on custom object records.
6. **Provide access to custom objects through data visibility profiles** - Access to objects in Network are defined by data visibility profiles (DVPs). After a custom object is enabled, all DVPs are set for no access to the custom object by default. Records cannot be viewed until the profile layout is added to a DVP and access is assigned. Add the profile layout to existing DVP for the appropriate country, or create a new DVP.
7. **Assign new data visibility profiles to user profiles** - If you created a new data visibility profile for the custom object, assign it to the appropriate users so they can access custom object records throughout the Network instance.

When these steps are complete, the custom object is ready for use in all of the other Network features that support it.

PROVISIONING CUSTOM OBJECTS

To create custom objects, contact Veeva Support. Veeva creates the custom object in your Network instance using an approved naming convention. After the custom object has been created, it displays in the Network data model only; it does not display anywhere else in your Network instance because it is disabled by default. Administrators and data managers must enable the custom object in their Network instance.

Required information

The following information is required for creating the custom object:

- **Object type** - Identify the custom object type as an object (root level entity), a sub-object, or a relationship object.

- **Associated objects** - Depending on the object type, identify the associated Veeva objects and custom objects:
    - Root entity - What sub-objects (Veeva and custom) will be assigned to this custom object?
    - Sub-Objects - What root entities will be associated with this custom sub-object? Root entities can be Veeva entities (HCPs or HCOs) or custom objects in your Network instance.
    - Relationship object - What root entities should be linked by this custom relationship object. Define the root entity that controls the relationship object. Access to the relationship object is inherited from the controlling entity's permissions. Naming conventions for custom relationship objects will include the linking entities. For example, to link a STUDY custom object and an HCO might be called STUDYFACILITY.

      Custom relationship objects must be controlled by one of the root entities so that access to the relationship object can be inherited from its controlling entity. To help you decide which entity to choose as the controlling object, you might want to consider the entity with stricter access requirements. For example, if a relationship object links the `Employee` custom object and the HCP entity; the HCP entity would be the controlling entity to restrict `Employee` records to those users who have access to the HCP.

Standard fields

When custom relationship objects are provisioned in your Network instance, they are assigned a set of standard Veeva fields that are available in all countries. The properties of Veeva standard fields cannot be changed. Standard fields include Network entity ID, primary country, and metadata like Created Date, Record State, and so on. Other Veeva fields cannot be added to custom objects. The complete list of fields can be viewed in the Custom Object Data Model when the custom object is provisioned in your Network instance.

Custom fields

Administrators and data managers can add custom fields to the custom object to provide unique characteristics to the record. For example, for a STUDY custom object, an administrator might create the following custom fields:

- `start_date__c`
- `study_id__c`
- `results_first_submitted__c`
- `enrollment__c`
- `phase__c`

Note: After a custom field is added to an object, it cannot be removed. It can be disabled though.

Provisioned custom fields

Network automatically adds the following custom fields to new custom objects:

- <*object_name*>_name__c - The display name of the custom object. For example, if the name of a STUDY custom object (study_name__c) is *Cancer Research*, that name persists throughout the Network UI using this custom field; it displays on the profile page and in search, summary cards, the My Requests page, and so on.

  This custom field applies only to custom objects; it is not added to custom sub-objects and custom relationship objects.

- <*object_name*>_status__c - The status of the object that displays in the Network UI; for example, as badges on summary cards in the profile, and as overlays on entity icons. Reference code values for *Active* and *Inactive* status are automatically assigned to this custom field. Additional reference values can be added to the reference code; for example, *Deleted*, *Merged_Into*, *Under_Review*.

These fields cannot be edited.

Custom keys

Custom objects will have one or more custom keys to track the primary key or ID of the contributing sources. Custom keys for custom objects include the same attributes as all other standard custom keys:

- Source - The name of the contributing source system.
- Item type - The object type.
- Value - The ID of the record from the contributing system

Custom keys are used for key matching for all custom objects types in the same manner as Veeva entities.

ENABLING CUSTOM OBJECTS

After a custom object has been added to your Network instance, administrators or data managers can enable it. When a custom object is enabled, it displays throughout your Network instance in the supported features; for example, on profiles, subscriptions, and so on.

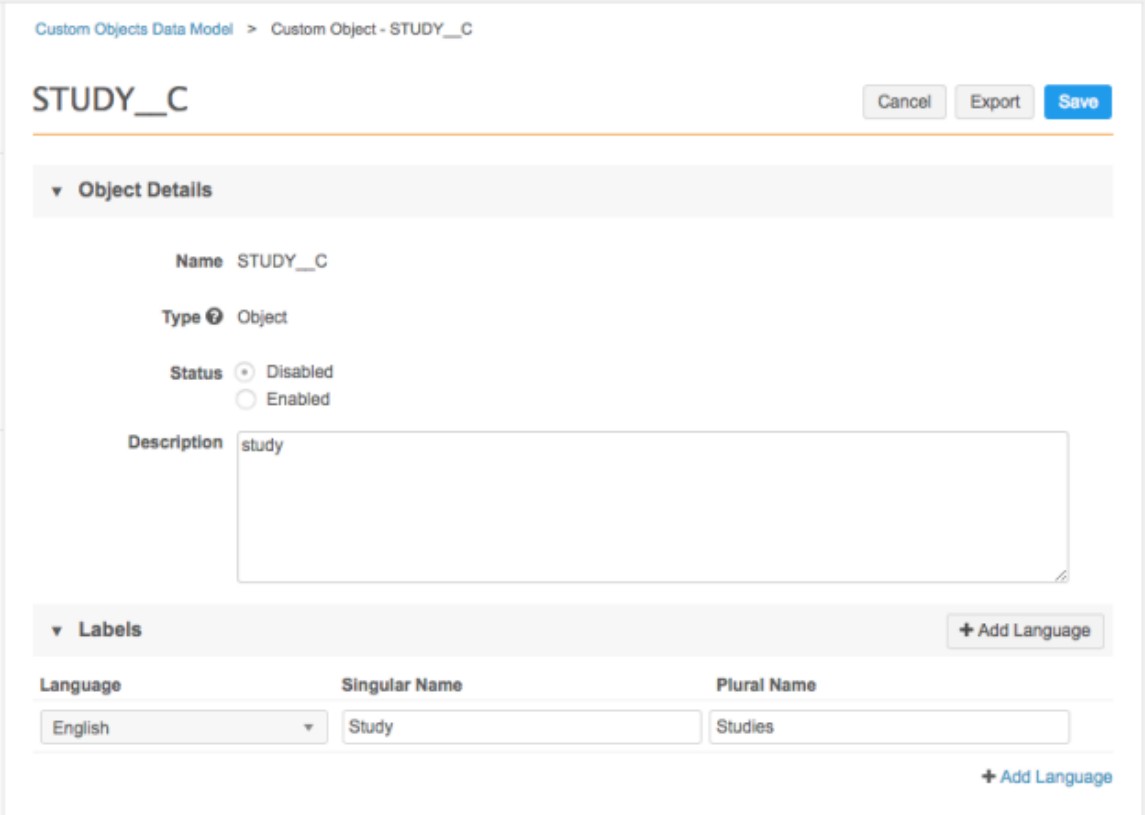
Note: Custom objects cannot be removed, so it is very important that Network administrators explicitly enable objects for their Network instance when they are ready to start loading data.

To enable a custom object:

1. In the Admin console, click **Data Model > Custom Objects Data Model**.

   The Custom Objects Data Model page displays a list of all of the custom objects types created for your Network instance.

2. Click the custom object that you want to enable. For this example, we'll enable the custom object called STUDY.



3. In the **Object Details** section, following details are displayed:
    - **Name** - The code name given to the custom object when it was created by Veeva; for example, *STUDY__C*. The name cannot be edited. The code is used when you refer to the object in source subscription model maps, match rules, the Network API, and advanced ad hoc queries.
    - **Type** - Possible types include Object, Relationship Object, and Sub-Object. The type cannot be edited.
    - **Status** - New custom objects are **Disabled** by default. The object should only be enabled when its configuration is complete.

      If you enable the custom object and **Save** your changes now, it will be visible on profiles and other Network features that support it.

      Note: A custom object cannot be disabled after it has been enabled.

    - **Description** - Type a description of the custom object.
4. In the **Labels** section, any languages and labels that were defined when the custom object was created display. To add labels for a language, click **+ Add Language**. Choose the language from the list and type the appropriate names in the **Singular Name** and **Plural Name** fields.

   At least one language must be defined with labels. If only one language is defined, the language and labels can be edited but they cannot be removed.

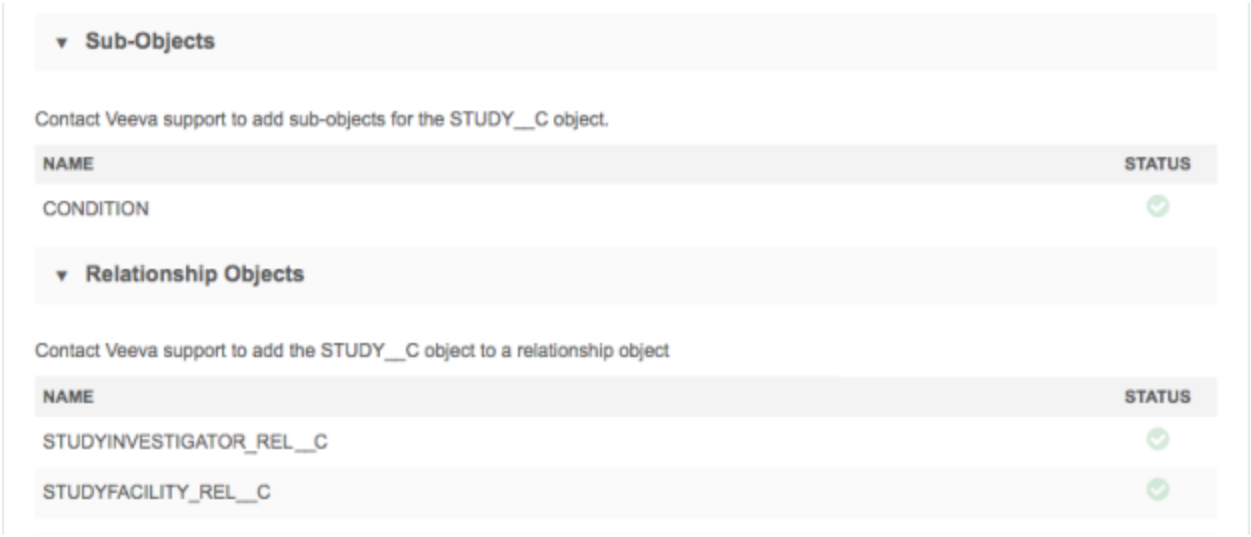
5. The next sections are for related objects. Each section lists objects that are related to the custom object that you are configuring. The lists include

   The **Status** column indicates whether or not the related custom object is enabled in the Network instance. Click a related custom object to navigate to its configuration page. For Veeva objects, clicking the object navigates you to its location on the Network Data Model page. If additional objects should be assigned to the custom object, contact Veeva Support.

   The related object sections are specific to the type of custom object you are configuring.

   Custom Objects

   - **Sub-Objects** - Lists all of the sub-objects (Veeva and custom) assigned to the custom object.
   - **Relationship Objects** - Lists all of the custom relationship objects assigned to the custom object.



   Custom Sub-Objects

   - **Parent Objects** - Lists all of the root entities assigned to the custom sub-object.

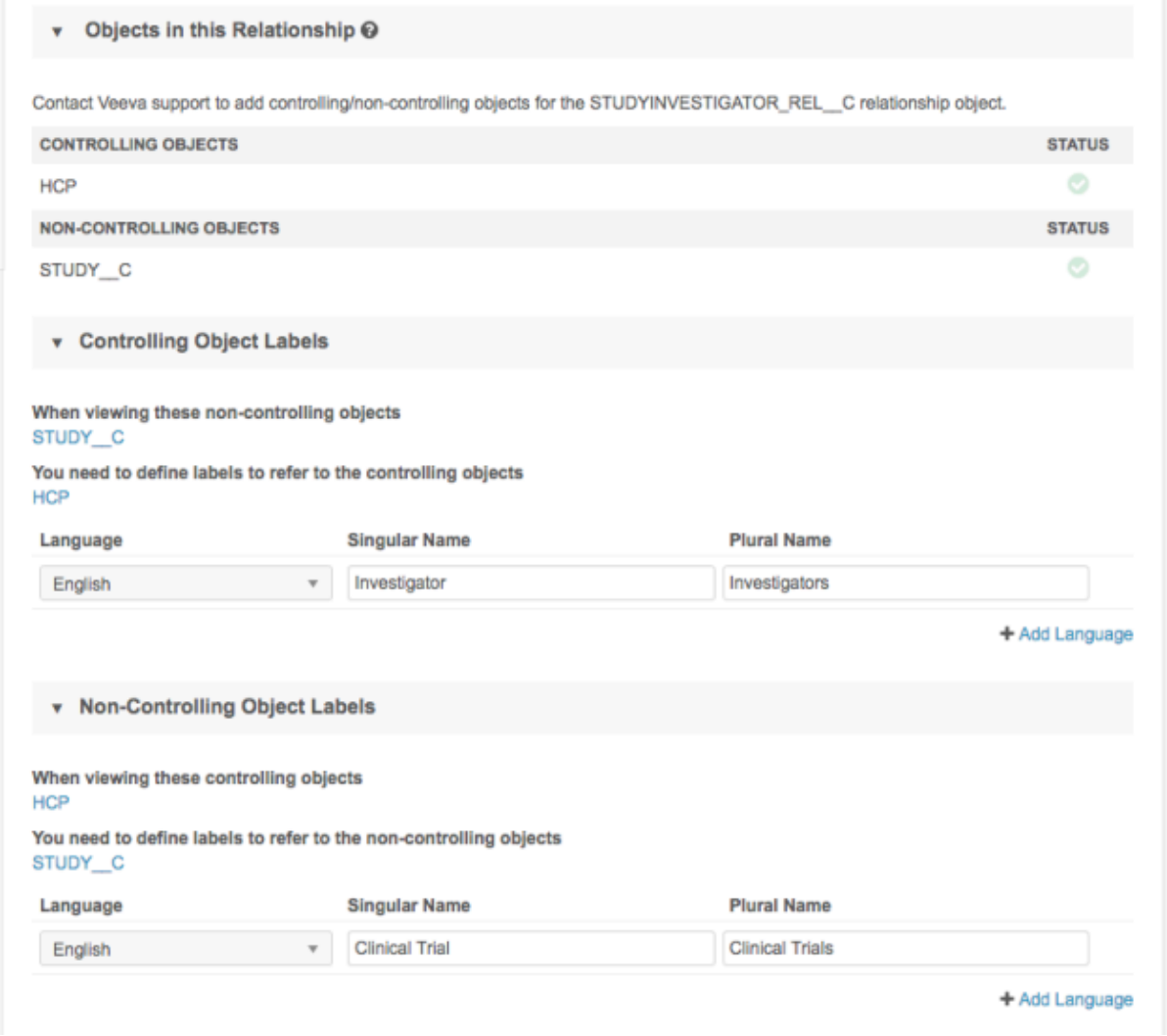
   Custom Relationship Objects

   These label sections provide the option of defining a more appropriate label for the root entities in the context of the entity profile that you're viewing.

   - **Objects in this Relationship** - This section lists the root entity objects that this relationship object links. The section is divided by **Controlling Objects** and **Non-Controlling Objects**. Access to the relationship object is inherited from the controlling object.
   - **Controlling Object Labels** - In this section, define the language and labels to refer to the controlling object from the non-controlling object record profile.
   - **Non-Controlling Object Labels** - In this section, define the language and labels to refer to the non-controlling object from the non-controlling object record profile.

Example

For the STUDYINVESTIGATOR relationship object, HCP is the controlling object and STUDY __C is the non-controlling object. When users view a record profile for a STUDY, the related HCPs will be labeled as **Investigators**, which makes more sense than Health Care Professional in the context of a STUDY record. Similarly, when users view an HCP profile, they will see **Clinical Trials** (the label defined in the **Non-Controlling Objects** section for STUDY).

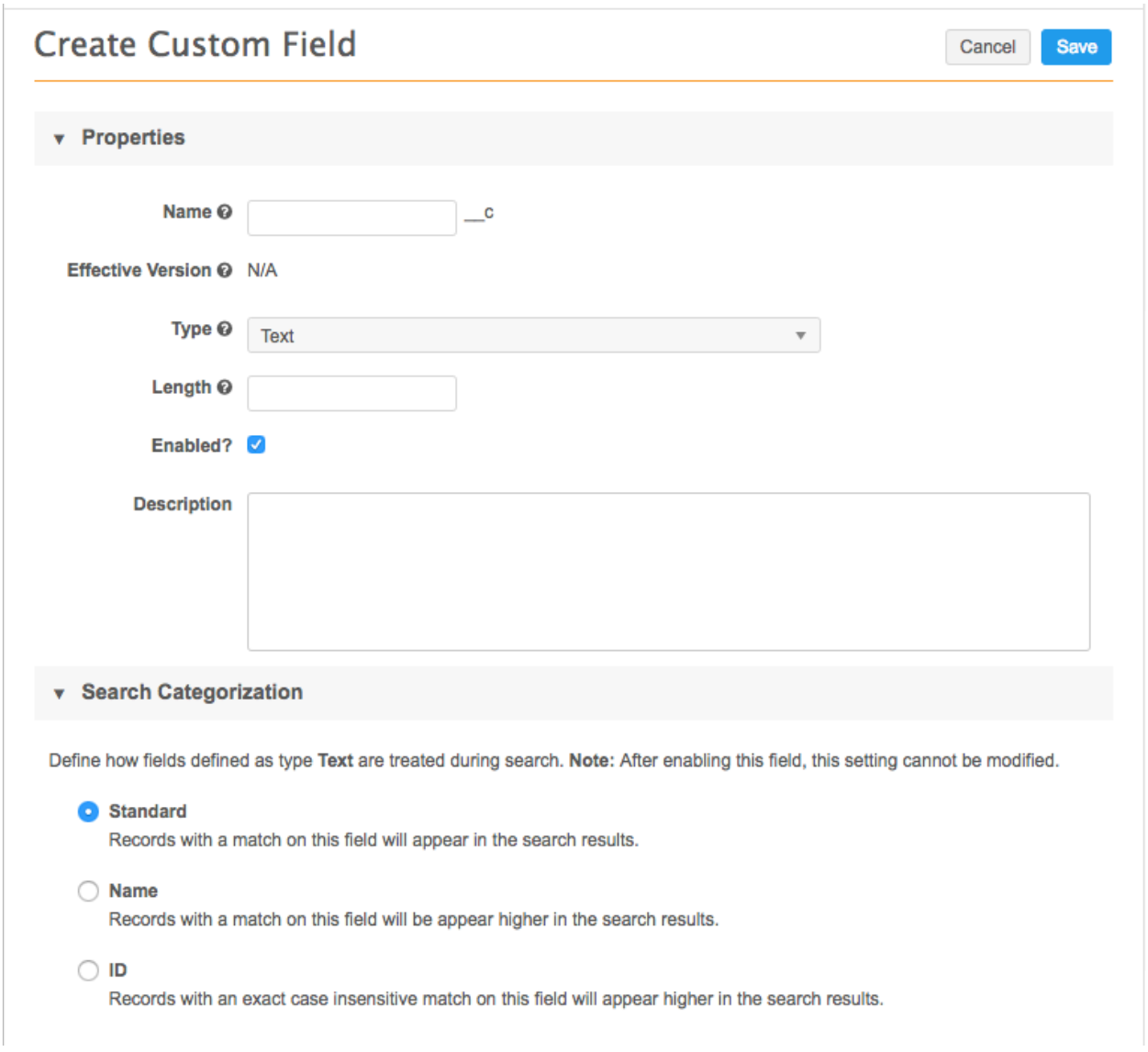


6. In the **Fields** section, the default Veeva fields that are added for each new object are listed. The default Veeva fields depend on the custom object type. Create new custom fields to use for this object.

   To create a new custom field, click **+ Add Field** and configure the field with the required information. For example, for a custom object for STUDY data, you might want to add custom fields for phases, start and end dates, enrollment, results first submitted date, and so on. If the new custom field is a reference field, reference codes must also be added if required.

For custom fields that are text type fields, the **Search Categorization** section enables you to define how they are treated during search. Choose one of the following options:

- **Standard** - Use for fields that contain data that are not names or IDs. This option is selected by default.
- **Name** - Use for fields that contain a name. Name fields are prioritized so matches on these fields are ranked higher in search results. This option is only available on custom fields for custom objects (root level entities).
- **IDs** - Use for fields that contain numerical IDs. Records that match the field values (case insensitive and exact match) are ranked higher in search results.



7. **Duplicate Detection Rule** (*custom sub-objects and custom relationship objects only*) - This section enables you to define the unique fields for Network to use for determining duplicates and merging custom object records. If the IDs or all the defined field values match, then the custom objects are treated as duplicates and the records are merged.

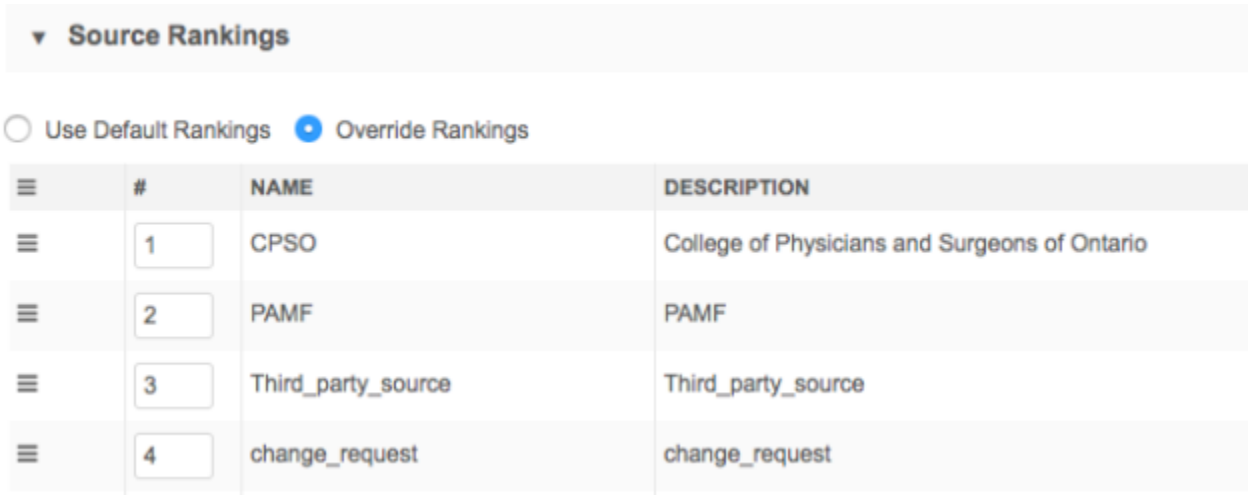
   For example, for a STUDY custom object, matching on fields such as **Study ID** and **Study Type** would find duplicates because those field values would be the same among sources. Matching on fields such as **Study Start Date** and **Results First Posted Date** fields would not be advisable because those date values could vary slightly among sources, so duplicates would not be found.

   You can select up to 10 fields. Some system fields cannot be used for matching and are dimmed in the list.

   If no fields are defined, Network matches on custom keys and alternate keys.

8. **Summary Fields** (*custom sub-objects and custom relationship objects only*) - In this section, select any fields that you want to display when the custom sub-object or custom relationship object is collapsed on the root entity profile page. These are typically fields that help you to distinguish one object from another object.

9. Use the **Source Rankings** section to define the priority of sources for the custom object. For example, data for custom objects might be bought from specific sources, so those sources should be prioritized above of the sources of your standard data.
   - **Default Rankings** - The default ranking for your Network instance are selected by default. To view the default rankings, click **System Interfaces > Source Rankings**.
   - **Override Rankings** - Click to override survivorship for this custom object. Use the control to reorder the sources for the Ranking (**#**) column.



10. **Object Icon** (*custom objects and custom sub-objects only*) - In this section, click **Choose Icon** to open the icon library and select an icon to represent this custom object in the Network UI. For example, for the custom object called STUDY, we'll use a book icon. The **Icon Preview** displays the **Active** and **Inactive** states for the object.
11. If you are ready to enable the custom object so it's visible on the profile page and other supported Network features, beside the **Status** option at the top of the page, choose **Enabled**.

    For relationship objects, the controlling object and non-controlling object must be enabled first.

    Note: After you enable a custom object in your Network instance, it cannot be removed.

    You can save the custom object without enabling it.
12. **Save** your changes.

    A message displays at the top of the page to remind you that additional tasks must be completed so the object is visible in the Network UI.

The custom object is enabled and ready to have data loaded.

CREATING DEFAULT MATCH RULES

(*Optional*) Before you load data for your custom object, you can configure match rules to prevent duplicates from being loaded into your Network instance. Match rules and data groups can be defined for custom objects and custom sub-objects. Very basic default match rules have been provided for custom objects, but they can be expanded on to suit your data. Match rules for your Network instance can be configured using the Match Configuration feature (**System Interfaces > Match Default Configuration**). Additionally, match configurations can be configured in each source subscription. Match rules for custom objects are defined in the advanced mode using XML.

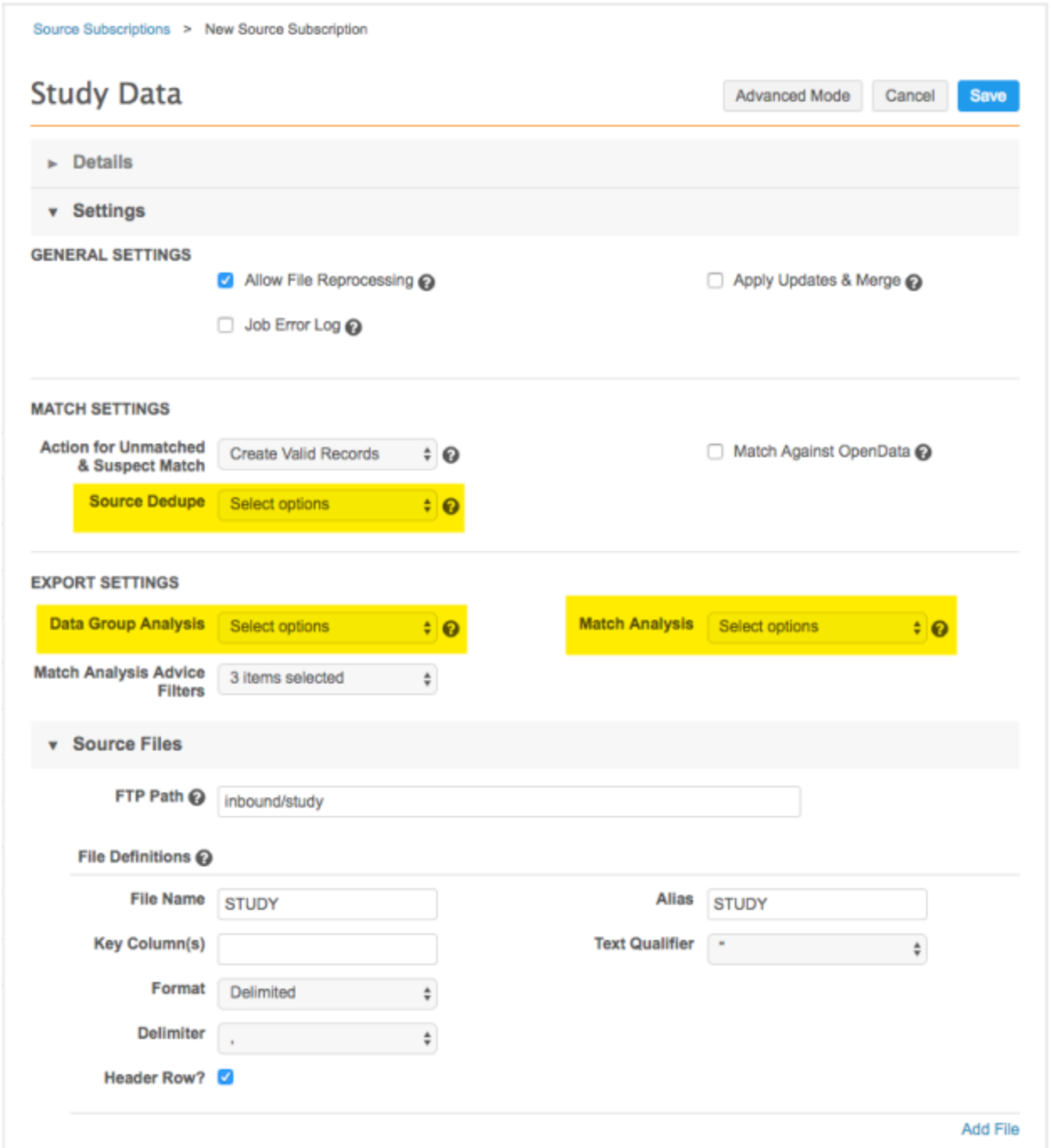
Defining match rules in the **Ad Hoc Match Configuration** and **Add Request Match Configuration** is not supported.

For assistance with match rules, contact your Veeva representative.

LOADING DATA FOR CUSTOM OBJECTS

Custom object data can be loaded to your Network instance as soon as you enable the custom object. Administrators and data managers can update or add new source subscriptions to load data for the new custom object.

To configure source subscriptions, in the Admin console, click **System Interfaces > Source Subscriptions**.



The following source subscription settings apply to custom objects that are enabled in your Network instance:

- **Source Dedupe** - Similar to Veeva entities and sub-objects, you can select all custom object types (objects, sub-objects, relationship objects) so that duplicates are merged during data loading. Network uses the duplicate detection rules that you configured in the custom sub-object and custom relationship object for matching.
- **Match Analysis** - Select custom objects so that you can track any that were matched and merged during the source subscription job. A separate log file will be created for the custom object.
- **Data Group Analysis** - Select custom objects if you want to export a log of the data group details.
- **File Definitions** - Provide the name and alias of the source file for the custom objects. You can also define the qualifier and delimiters for the file.
- **Model Map** - You can configure a model map so that data can be loaded for custom objects. Configuring a model map for a custom object is similar configuring one for HCPs or HCOs.
- **Field Normalization** - Define the field mappings from columns in an incoming source file to the fields in the Network data model.
- **Network Expression Rules** - **File Preparation**, **Transformation**, and **After Update** rules can be created for all custom object types.

  For example, you could create a file preparation rule to convert the text in the Institution field from all uppercase to proper case. Or, if you have an `Employee` custom object and you want calculate the `<employee>_name__c` field using the first name, middle name, and last name, you can create a NEX rule to do that calculation using those three fields.

  NEX rules can be used to make changes to the data as it is loaded through the source subscription.

- **Match Configuration** - Match rules can be configured for custom objects using the **Advanced Mode**. Basic default match rules are defined for custom objects, but they can be expanded on to suit your custom data. For more information about configuring match for custom objects, see the section called "Creating default match rules." When new custom object data is loaded into Network, it is matched and merged with the existing custom object records. If suspect matches are found, tasks are generated for each pair of records.

  Logs for matches and data groups can be exported after the job runs if you selected it for custom objects in the **Export Settings** section.

Running subscription jobs

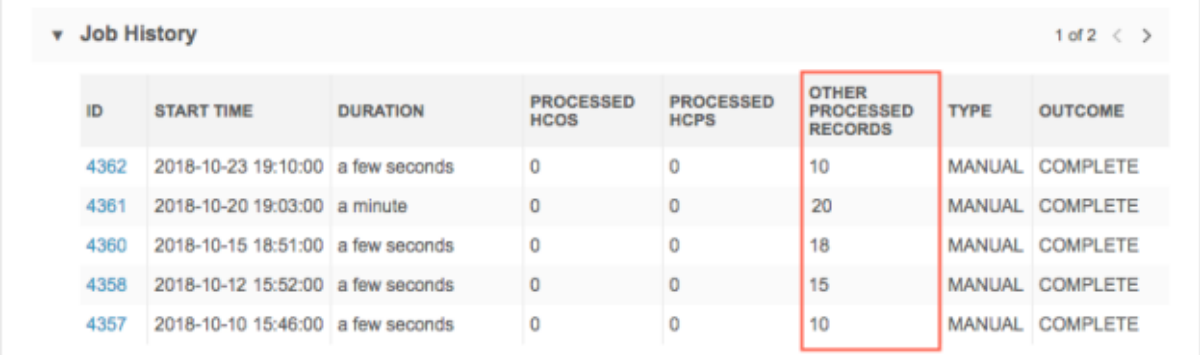
Before running the job, ensure that you have fully configured your custom object, particularly the duplicate detection rules so that you do not load duplicate data into your Network instance. Testing the subscription in a Sandbox instance is recommended.

Also, if the source system uses code values that are different from Network's values, add reference aliases to map the codes for reference type fields in custom objects. For more information, see the "Reference aliases" topic in the *Veeva Network Online Help*.

When the source subscription configuration is complete, you can run the job to load data into the custom object.

Job history

The **Job History** section provides a summary of the job details. A new column, **Other Processed Records**, has been added to include the number of processed records for all root level custom objects that are loaded during the job. For example, if the subscription loaded two custom objects and each record count was 10, the column displays a count of 20 records.



Job History 1 of 2

ID	START TIME	DURATION	PROCESSED HCOS	PROCESSED HCPS	OTHER PROCESSED RECORDS	TYPE	OUTCOME
4362	2018-10-23 19:10:00	a few seconds	0	0	10	MANUAL	COMPLETE
4361	2018-10-20 19:03:00	a minute	0	0	20	MANUAL	COMPLETE
4360	2018-10-15 18:51:00	a few seconds	0	0	18	MANUAL	COMPLETE
4358	2018-10-12 15:52:00	a few seconds	0	0	15	MANUAL	COMPLETE
4357	2018-10-10 15:46:00	a few seconds	0	0	10	MANUAL	COMPLETE

Job details

After a source subscription runs, the custom object is included in the summary data that was processed for the job on the Job Details page.

The following sections have not changed, but have been updated to support custom objects:

- **Data Load Summary** - The list uses the aliases that were modeled in the source subscription configuration. All custom objects types can be included in the list.
- **Processed Data Summary** - This list includes all of the Veeva objects and custom objects types enabled in your Network instance.
- **Match Summary** - This list includes root entities only; Veeva entities or custom objects.
- **Job Results Summary** - This list includes all of the Veeva entities and custom objects enabled in your Network instance.

The custom object data is loaded into your Network instance, so the next steps are to create a profile layout for the custom object and then add the layout to a data visibility profile so records can be viewed in the Network UI.

PROFILE LAYOUT CONFIGURATION

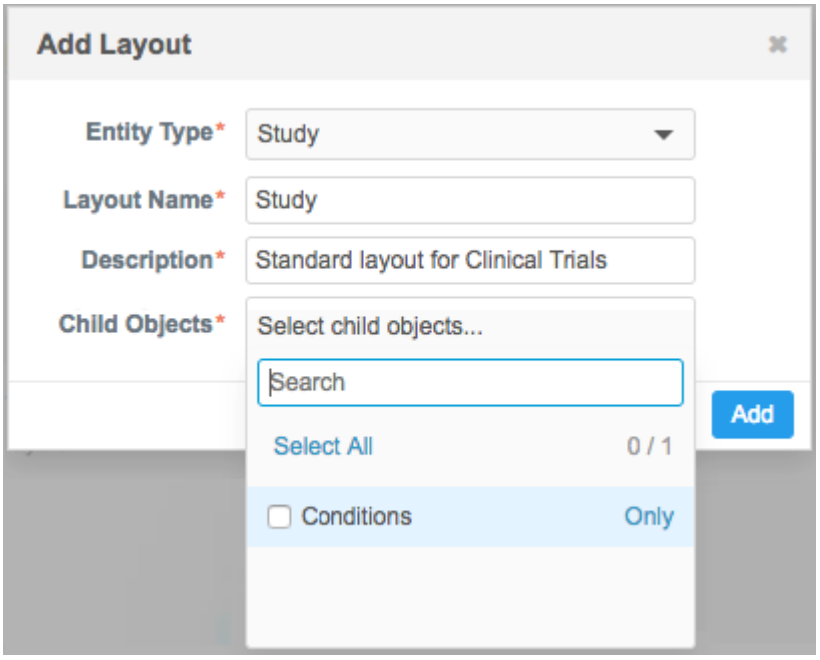
Administrators and data managers can create custom profile layouts to define how the data displays for custom object's profile page. Loading data before configuring a profile layout is recommended so you can preview the layout with field values as you create it.

To create a profile layout for a custom object:

1. In the Admin console, click **Data Model > Profile Layouts**.

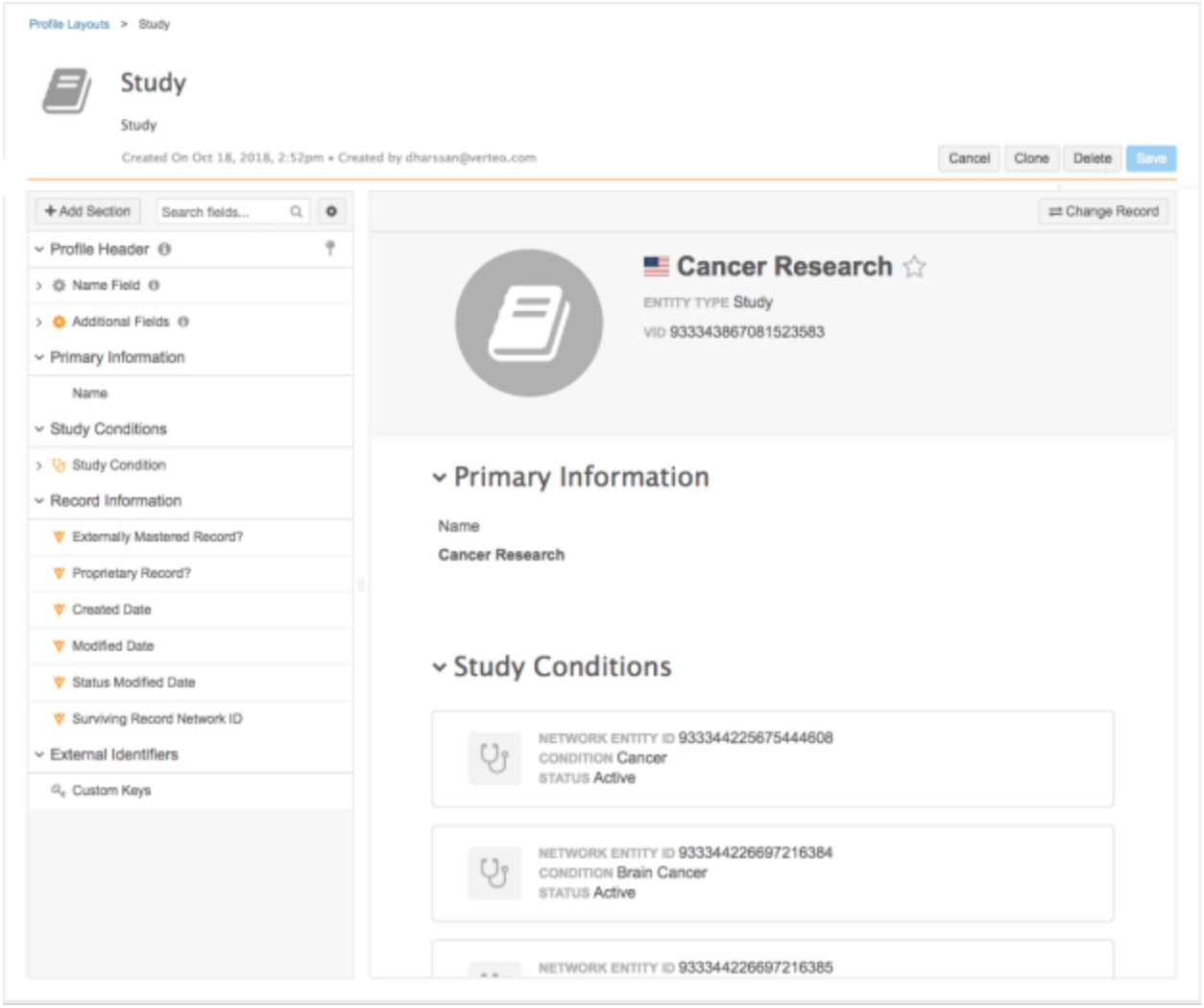
   The Profile Layout page displays the list of existing layouts in your Network instance.

2. Click **Add Layout**.
3. On the **Add Layout** dialog, expand the **Entity** list and select the custom object. For our example, we're using the STUDY custom object.
4. Provide a **Name** for the layout. For example, if the layout is specific to a region, you might prefix the object with a region; NASTUDY; a profile layout for STUDY custom objects for North America.
5. Type a meaningful **Description** for the layout.
6. Expand the **Child Objects** list and select the objects assigned to the custom object. Only sub-objects that are assigned to the custom object display in the list.



7. Click **Add** to create the layout.

   The profile layout displays with the default sections and fields displayed in the right pane.



The profile layout displays with the following default sections in the right pane:

- **Profile Header** - A new section where you can define the fields that display in the summary header at the top of the profile page. This section cannot be removed from the profile layout.

  Note: This section is applied on the new profile only. Users viewing the record on the classic profile will not see the fields that are configured here.

  The **Name Field** sub-section cannot be removed. It contains the formatted name for the object. The **Additional Fields** sub-section contains the Entity Type and VID fields by default. Fields can be added to the **Additional Fields** sub-section; for example, if the country is important for the custom object record, you can add the Primary Country field to this section.

  If you add a field to the **Profile Header** section, choose whether the field should always display on the header profile, even as you scroll through the record.

The **Profile Header** section is also now available for Veeva entities and includes **Name**, **Record Details**, and **Contact Information** sub-sections that cannot be updated to add, edit, or remove the default fields.

- **Primary Information** - This section contains the display name field configured in the data model.
- **Record Information** - All of the standard Veeva fields that are added for the custom object are included in this section.
- **External Identifiers** - This section contains the custom key placeholder.
- **Child Objects** - A section for each sub-object that was added to the profile layout. These sections will include all of the fields that are available and enabled in the data model for these objects.

This feature supports configuring layouts for custom objects in the same way as for Veeva entities. Administrators and data managers can add and remove sections, add fields, clone layouts, and so on. For information, see the "Configuring profile layouts" topic in the *Veeva Network Online Help*.

On the Preview Layout pane, search for a record for that entity type to see how the profile page looks with record date. After you make changes to the layout, reload the preview pane to review those changes.

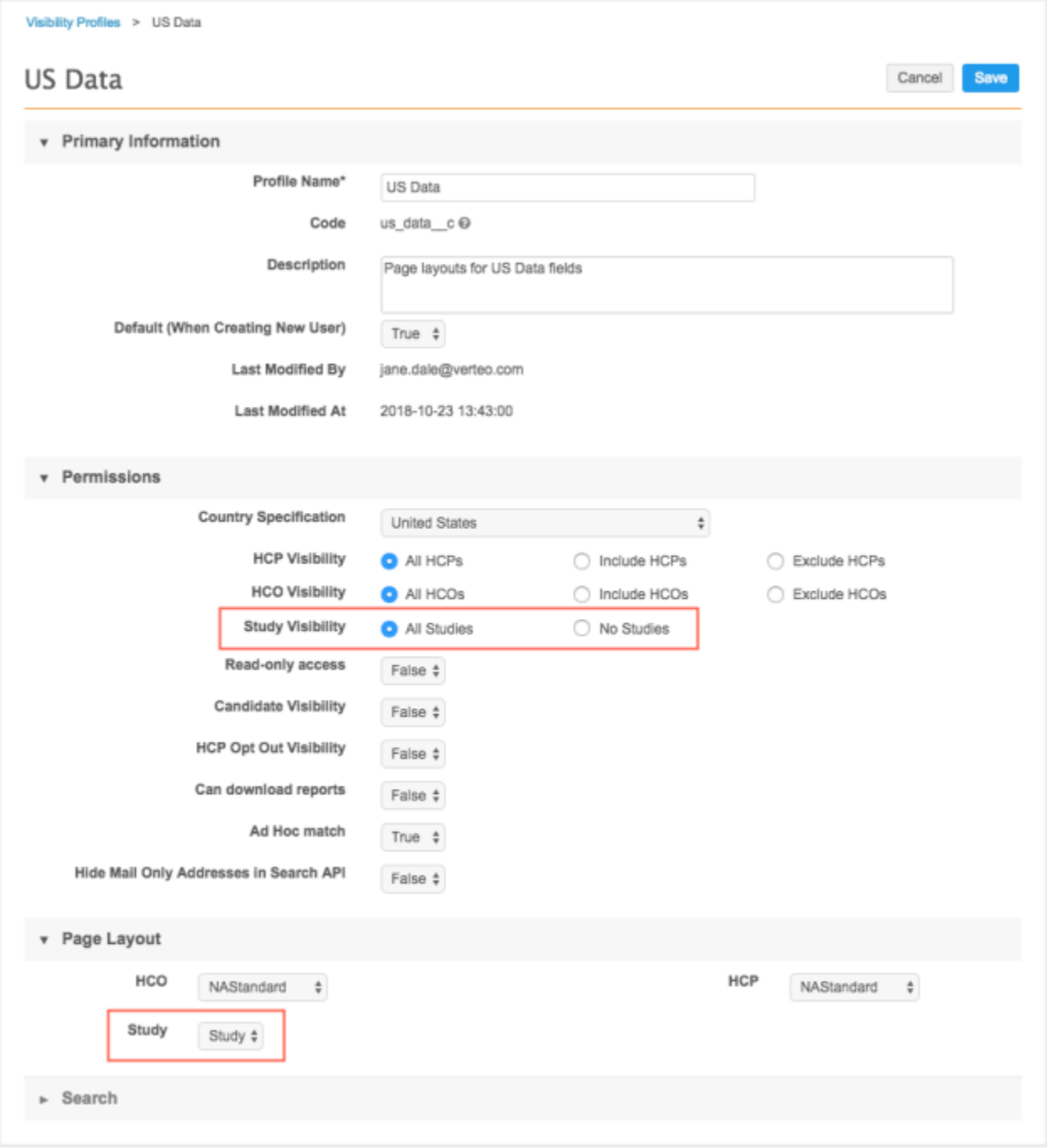
Note: The preview pane cannot display anything until the records are loaded for the custom object. Only the new profile is available in the preview pane for custom objects.

To enable users to view the custom object records, the profile layout must be added to a data visibility profile.

DATA VISIBILITY PROFILES

As with Veeva entities, user access to search for and view custom objects is determined by a user's data visibility profile (DVP) (**Users > Data Visibility Profile**). Each custom object includes a primary country, so access to the object is based on the privileges configured in the user's DVP that matches the country of the record.

By default, when custom objects are enabled in your Network instance, access to them is disabled in all existing DVPs.



Depending on the custom object, you might add it to an existing DVP, or you might create a new DVP. Review the following examples:

Example 1 - Appended access

For the custom object, STUDY, record visibility might be required for several countries because clinical trials can include participants and facilities in multiple countries. The data is not sensitive, so on existing DVPs for the applicable countries, administrators set the **Study Visibility** permission to **All Studies** and add the STUDY profile layout to the **Page Layout** section.

Example 2 - Restricted access

A custom object called EMPLOYEE, for sales employee data, should be restricted to a specific subset of users that are authorized to view that personal data. Administrators can create a new DVP for each country that has that EMPLOYEE record. For each new DVP, set the **Employee Visibility** permission to **All Employees** and add the EMPLOYEE profile to the **Page Layout** section. For all existing DVPs, the **Employee Visibility** permission is set to **No Employees** by default.

Defining permissions

By default, access to custom objects on DVPs is **None**. When you edit a DVP you can choose **All** or **No**.

The following functions are available for users with the **All** access permission:

- Search - Users can search for a record and open the profile of the record. This includes advanced search. Objects related to the custom object are also visible.
- View - Users can view the record profile for custom objects
- Reporting - The records are included in report results where the query would include the record.
- Related object profiles - The record is visible on the profile of a related object.
- Editing fields - Data stewards and data managers can add and edit custom objects, including custom sub-objects and custom relationship object fields. Admin users and standard users cannot edit custom object types.

  Note: The **Read-only access** permission must also be set to *False* for data stewards and data managers to be able to add and edit custom object types.

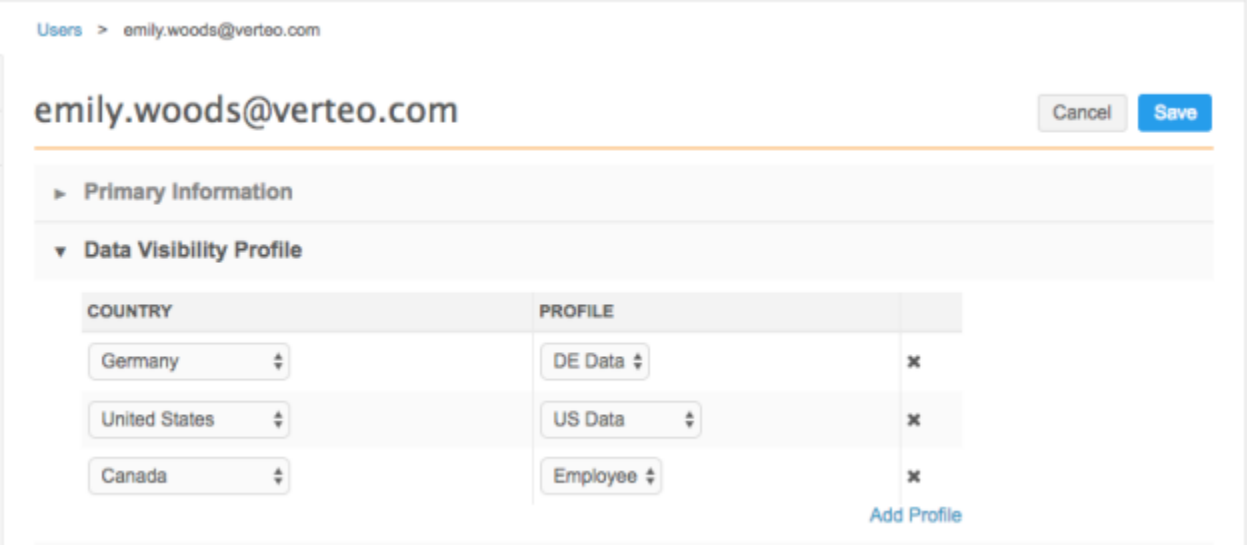
- Target subscriptions - Records are available for export if they meet the filter criteria configured in the subscription.
- API - Users with API permissions can access the instance of the custom object with the same primary country using the following API calls: Retrieve Entity, Batch Retrieve Entities, Search.
- Suspect Match - Data stewards can find and resolve suspect matches with corresponding records.

If a data visibility profile specifies **No** visibility to the custom objects, the list above is not available for users assigned to that DVP.

Assigning DVPs to users

If you added the profile layout and assigned custom object permissions to existing DVPs, the users assigned to those DVPs will automatically have access to the custom object. If you created a new data visibility profile for the custom object, assign the DVP to the users that need to access those records.

1. In the Admin console, click **Users** and select a user.
2. In the **Data Visibility Profile** section, click **Add Profile**.
3. Select the **Country** and corresponding **Profile**.
4. **Save** your changes.



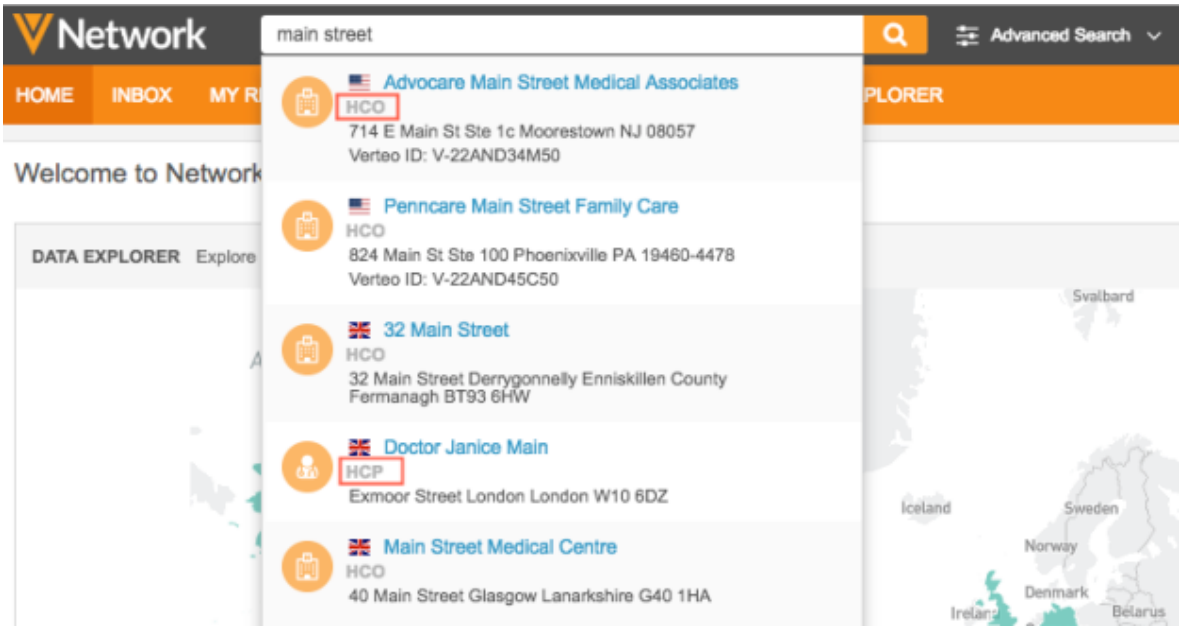
FEATURE CONSIDERATIONS FOR CUSTOM OBJECTS

When custom objects are configured and enabled in your Network instance and data has been loaded, users can search for and view records in the Network UI. Many of the features in your Network instance support custom objects. For more information about these features, review the following sections.

Search

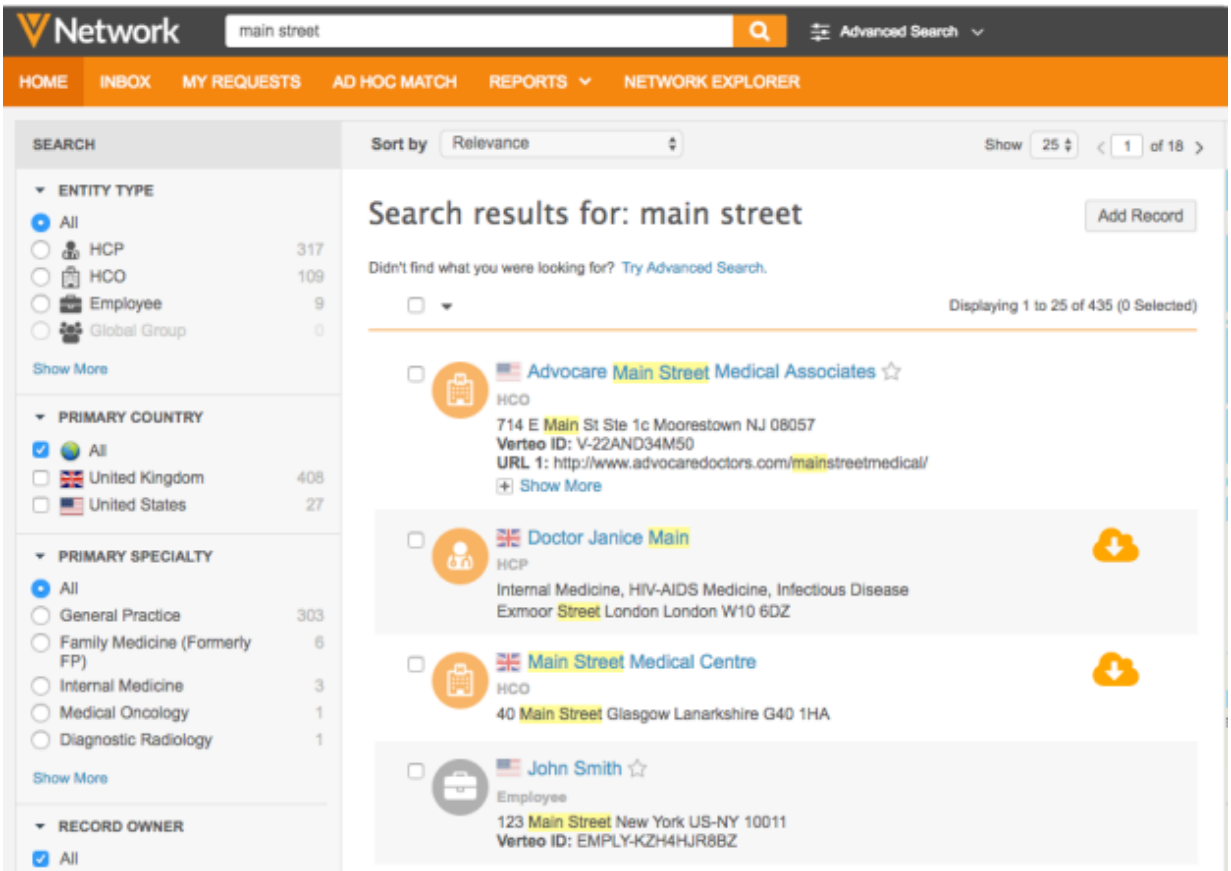
Network users can search for custom objects using the Network search bar or the advanced search form. Custom objects can be selected in the search facets and in the advanced form to filter your search results.

From the Network search bar, the typeahead results display the entity type in the initial results list to easier to distinguish the entity type, especially if the icons are similar.



Search facets

All custom object types, that a user can access, display in the **Entity Type** list. Select a specific entity, or search for All entities. The search results for All entities displays the entity type in the object summary.



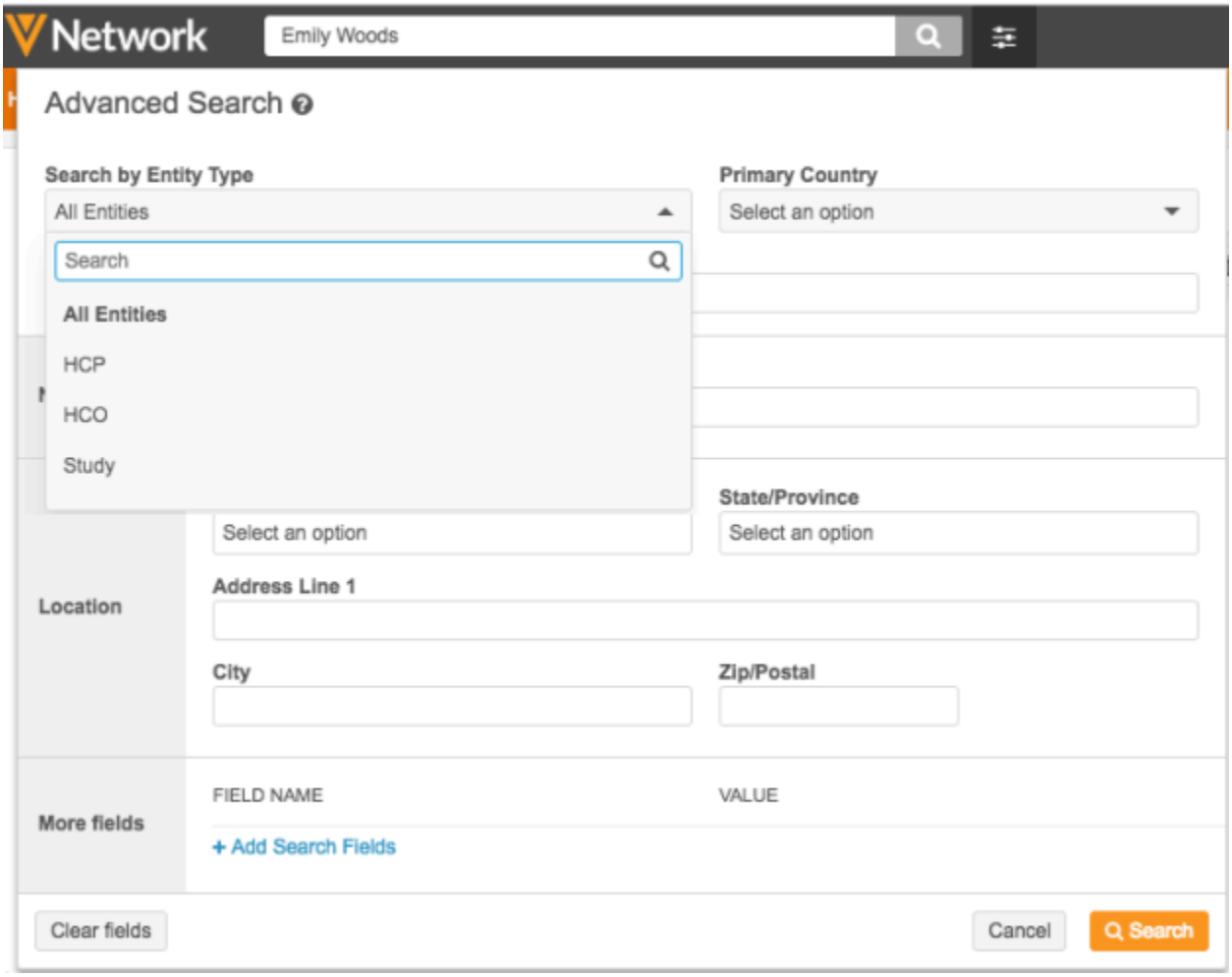
Map

Search results for custom objects display on the map if the Veeva address sub-object is assigned to the custom object.

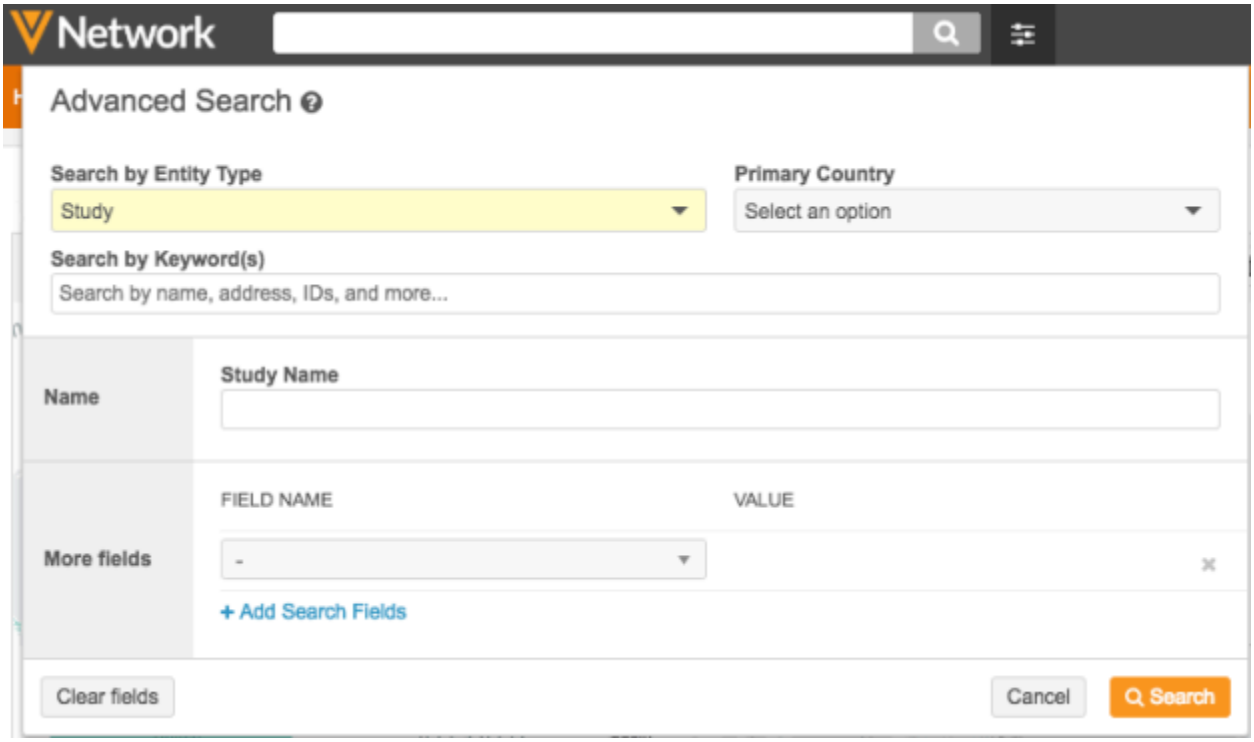
Advanced search

The advanced search form now includes an option to **Search by Entity Type**. Expand the list to select a Veeva entity or custom object. If you search by **All Entities**, Network searches across all root entities that are available to you through your data visibility profile.

When you log out of Network and log in again, the advanced search form defaults to search **All Entities**.



If a specific entity is selected, the form updates to include only the sections relevant to that entity. For example, the STUDY custom object does not include addresses, so the **Location** section is removed from the form.



More fields

The **Field Name** list in the **More fields** section is filtered to include only the fields that apply to the custom object. This includes fields on that custom object, the Veeva and custom sub-objects assigned to the object, and relationship objects when custom object is the controlling object.

The filter fields for each entity type are saved for each user so they don't have to be selected each time the entity type is switched in the form.

Network users can use the **More fields** section to search for related objects using the custom relationship object.

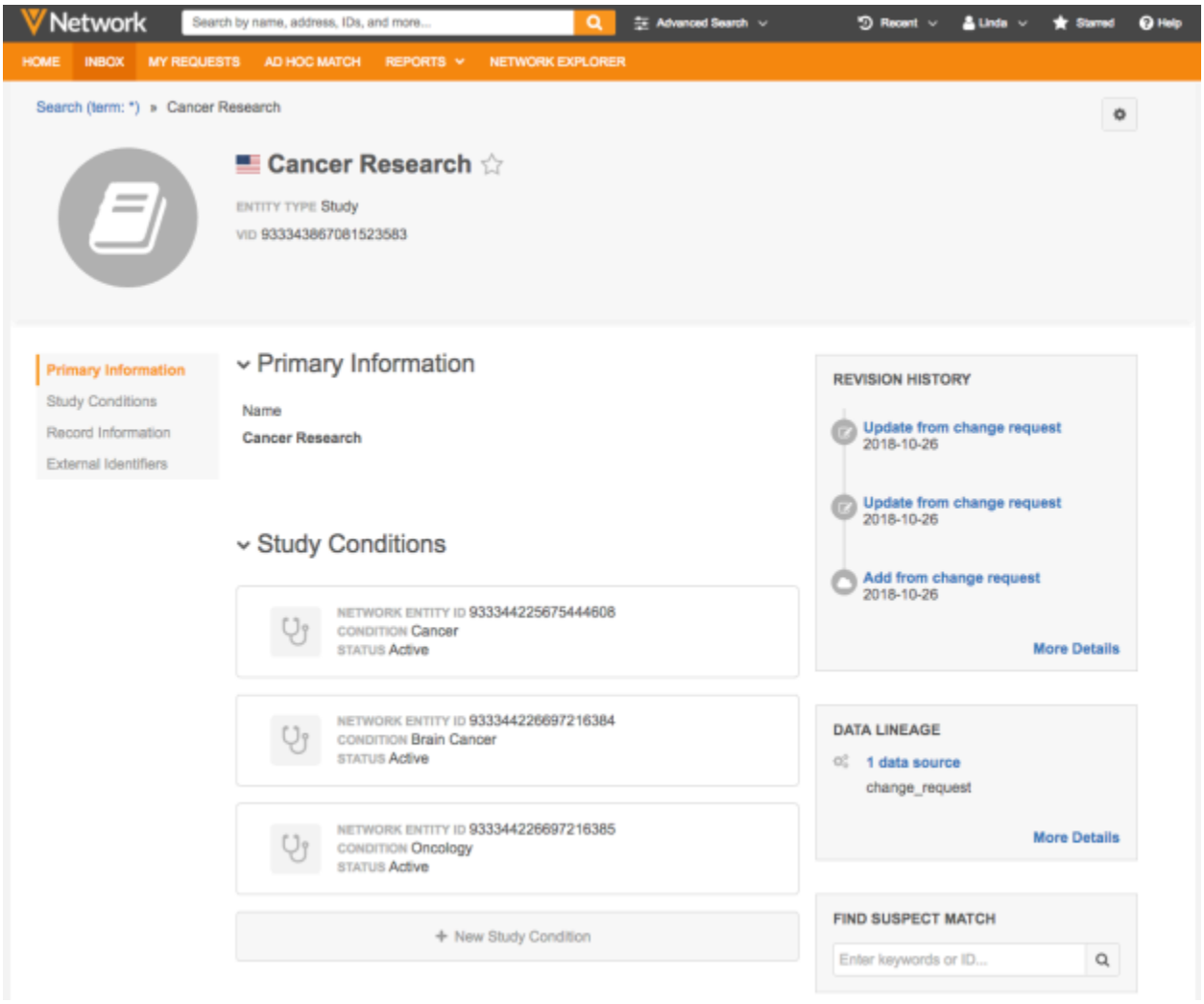
Record profiles

Custom object records are available to view on the new profile only. The new profile is supported for all countries. The profile page displays the sub-objects (Veeva and custom) and custom relationship objects assigned to the custom object.

Note: Users can view HCPs and HCOs on the classic profile, but custom relationship objects do not display properly if the HCO or HCP is the owning root entity.

The summary header, by default, contains the custom object icon, name, entity type, and Network Entity ID (VID). The record status is indicated by an overlay on the icon; for example, the icon indicates that the record is *Active* (no overlay), *Inactive*, or *Under_Review*. Administrators can define additional fields or remove the default fields that display in the summary header using the **Profile Header** section of the custom object's profile layout configuration.

Any associated suspect match tasks display on the right side of the summary header. Suspect matches are the only supported tasks for custom objects in this release.



The sections that display on the page are determined by the profile layout that was configured for the custom object.

Preview boxes

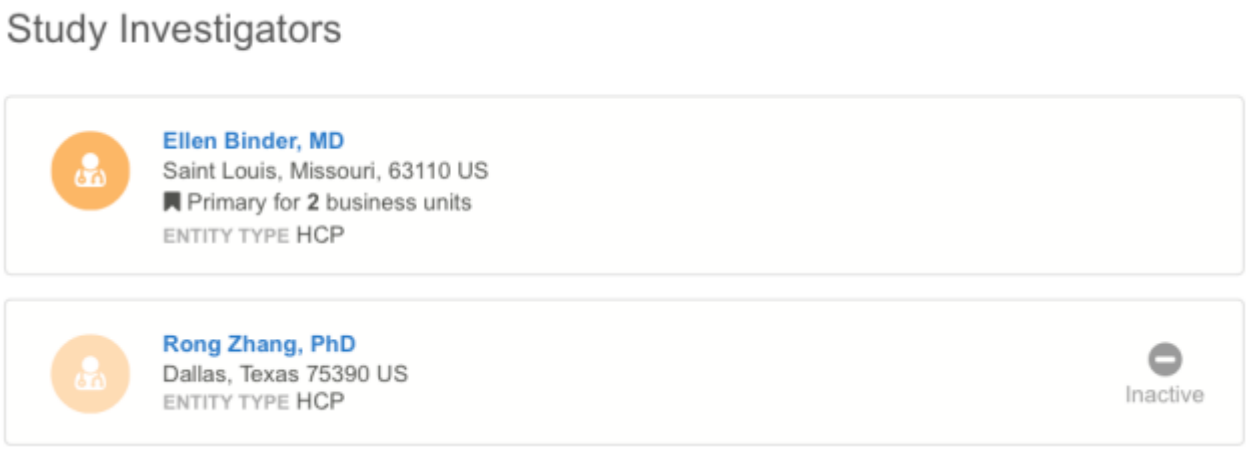
Preview boxes for **Revision History** and **Data Lineage** display by default on custom object records. The **Revision History** displays the history of changes to custom object records. The **Data Lineage** enables users to view the sources that contributed to custom object record updates. Data stewards and data managers can also access the **Find Suspect Match** box. For more information on suspect matches, see the section below called "Merging and unmerging."

Custom sub-objects and relationship objects

Users can view the custom sub-objects and custom relationship objects on the root entity record profile if they have access to those objects through their data visibility profile. For example, users that do not have access to the STUDY custom object might have permission to view HCP records but they will not be able to view the custom relationship object section on that record, so they would not see the Clinical Trials that the HCP is participating in.

Summary cards for Veeva and custom sub-objects and custom relationship objects display the summary fields that were defined in the profile layout by the administrator. For custom relationship objects, the icon color reflects the ownership of the entity on the other side of the relationship. For example, if the relationship is to another custom object, the icon color is gray because the custom object is locally managed. If the relationship is to a Veeva HCP, the icon color is orange because the HCP is Veeva managed. Badges display on the summary card to indicate the record state and primary designations.

Click the title or name on the summary card to go to that record profile, or click the summary card to expand it and view the details about the custom relationship object.

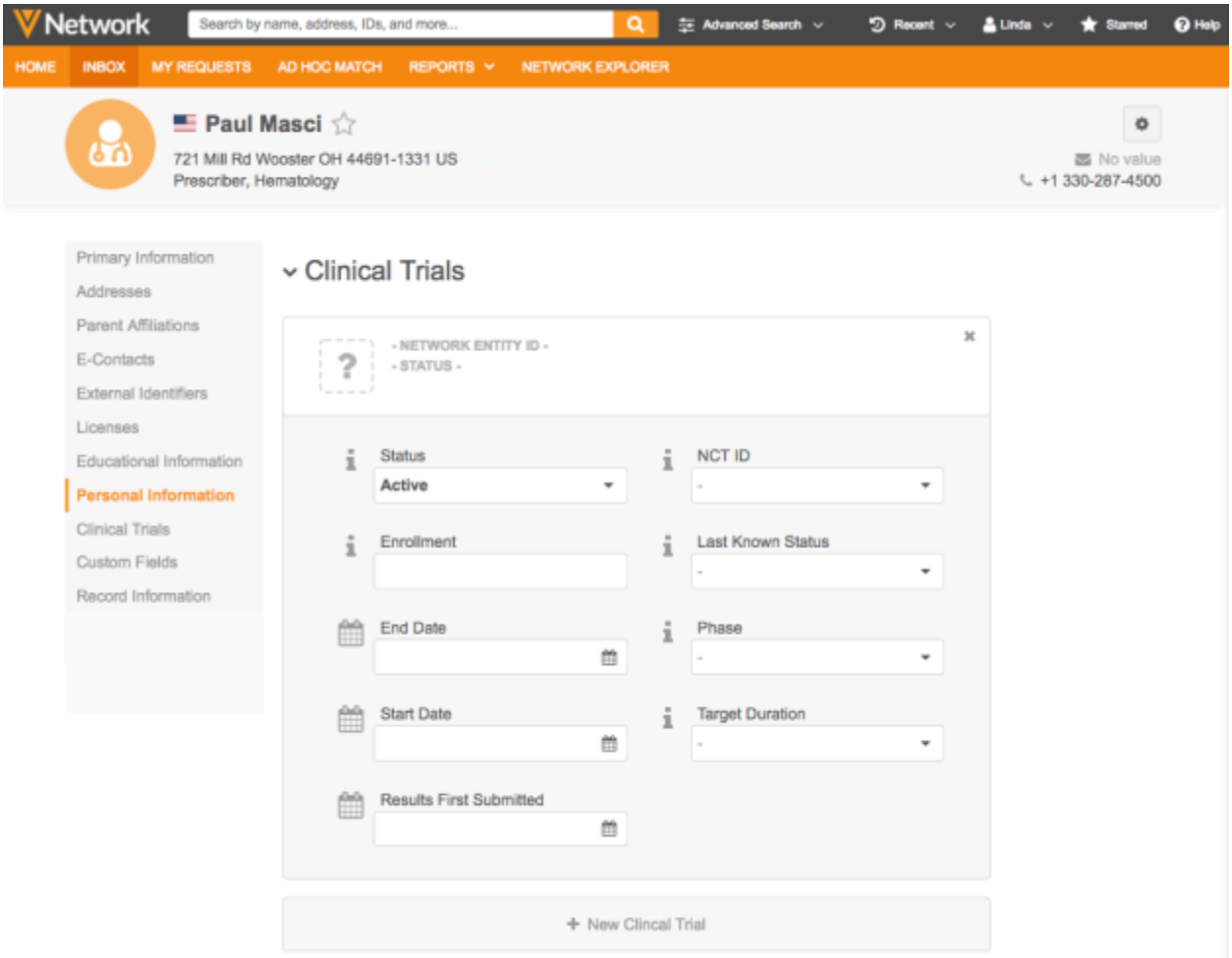


Editing custom objects

Data stewards and data managers can add or edit all types of custom objects if they have edit permission; meaning, the **Read-only access** permission in the data visibility profile for that country is *False*. Sub-objects (Veeva and custom) and custom relationship objects can be added to custom object records. Custom relationship objects can be added to the record of the controlling root entity only. Administrators and standard users cannot add or edit custom relationship objects on custom object records or Veeva entity records.

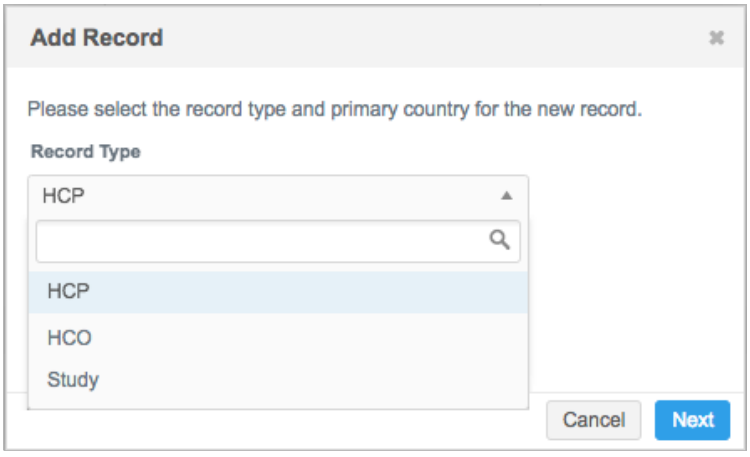
Example

On this HCP profile, a data steward is adding a Clinical Trial. This is the STUDYINVESTIGATOR custom relationship object but it is called *Clinical Trials* on the HCP record because that is the label defined by the administrator when the custom relationship object was configured.

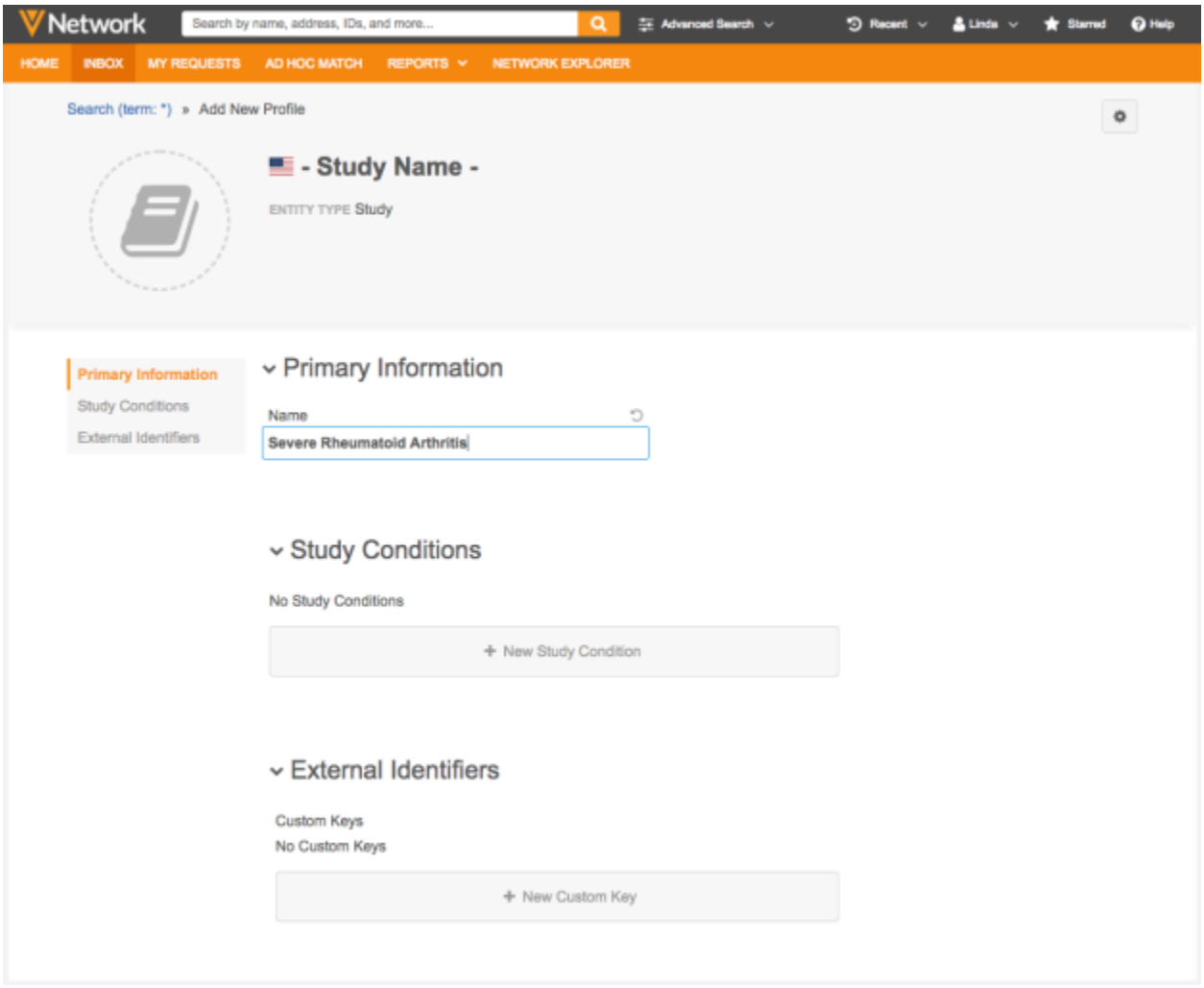


Adding custom object records

Data stewards and data managers can add a custom object from the inbox, My Request page, or the Search results page. The custom object is available in the **Record Type** list if a profile layout has been defined and the user has edit permission for the custom object; the **Read-only access** permission in the data visibility profile for that country is *False*.

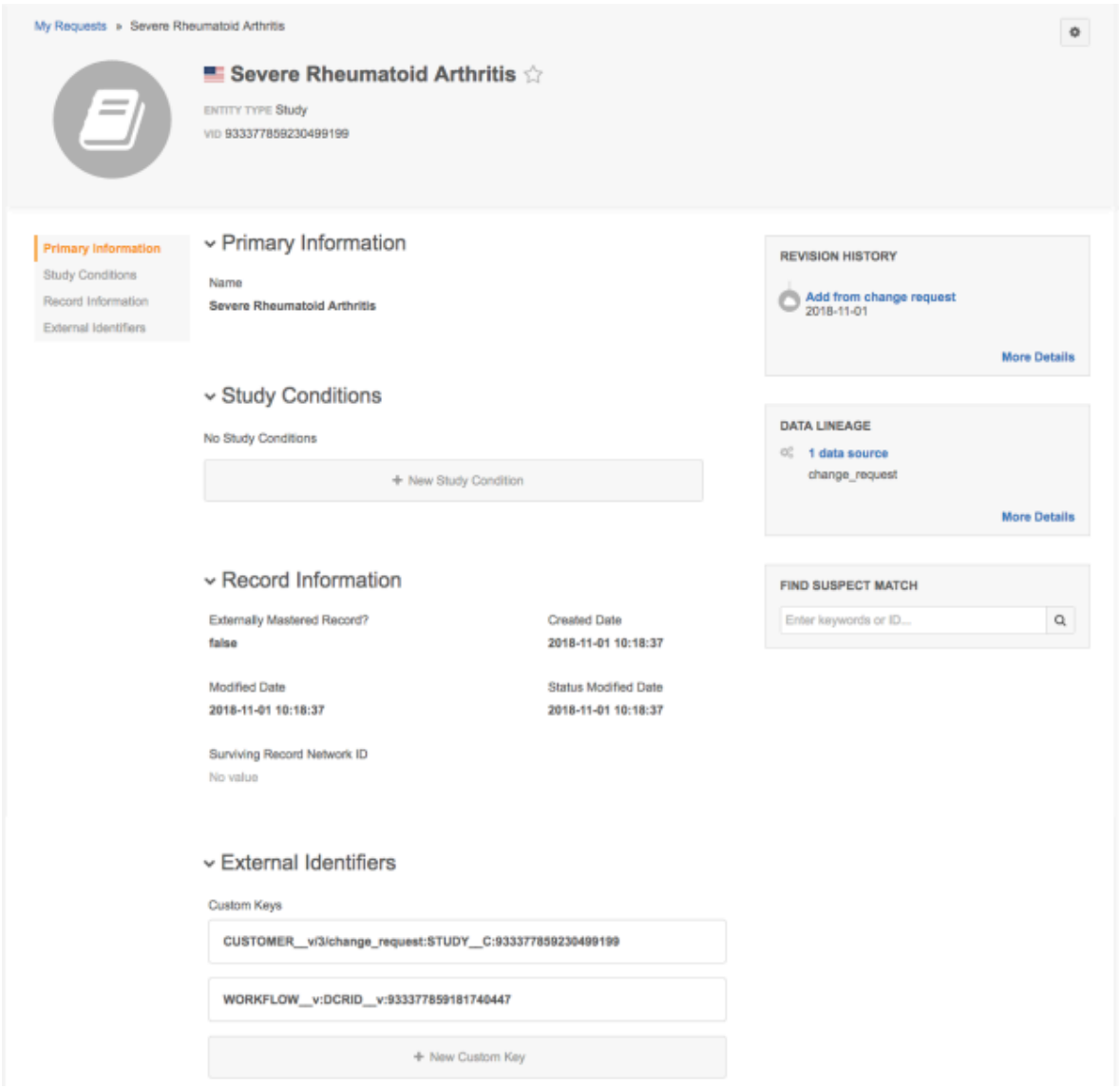


The Add New Profile page displays the custom object as defined by the page layout. The summary header section includes a blank header with a generic title and the primary country. Sections and fields that are defined in the profile layout display. Values can be added for any of the fields.



After you apply your changes to the new record, Network processes the request and adds the record. You can see the record on your My Requests page.

When you open the new record, the profile page contains the **Revision History**, **Data Lineage**, and **Find Suspect Match** preview boxes. The **Record Information** section is populated with the latest data and the **External Identifiers** section includes any keys generated by Network during the add request process.



Merging and unmerging records

Data stewards and data managers can manually merge custom objects that exist in their Network instance using the Find Suspect Match feature or administrators can merge duplicate records in bulk using source subscriptions. Records can only be merged if they are the same custom object type; for example, a STUDY record cannot be merged into a TRAINING record. The records must also have the same primary country.

Bulk merge

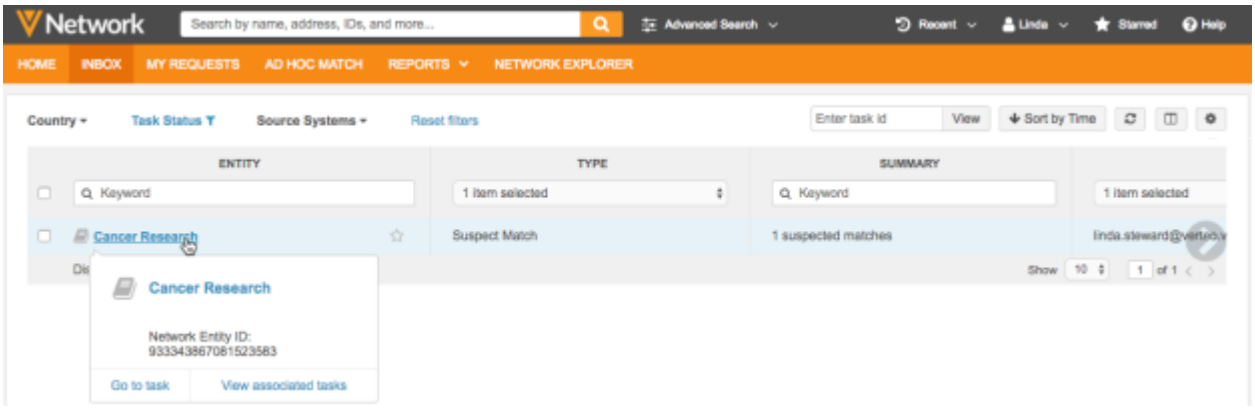
To merge many duplicate custom object records at one time using source subscriptions, create a .csv file that includes the Network entity IDs (VIDs) of the match pairs. Create a new source subscription to load the .csv file.

The bulk merge job action is enabled by setting the "`job.merge.allowSourceMerge`" property to *true*. When the subscription job runs, Network merges the records. For more information, see the topic called "Bulk Merge" in the *Veeva Network Online Help*.

Manual merge

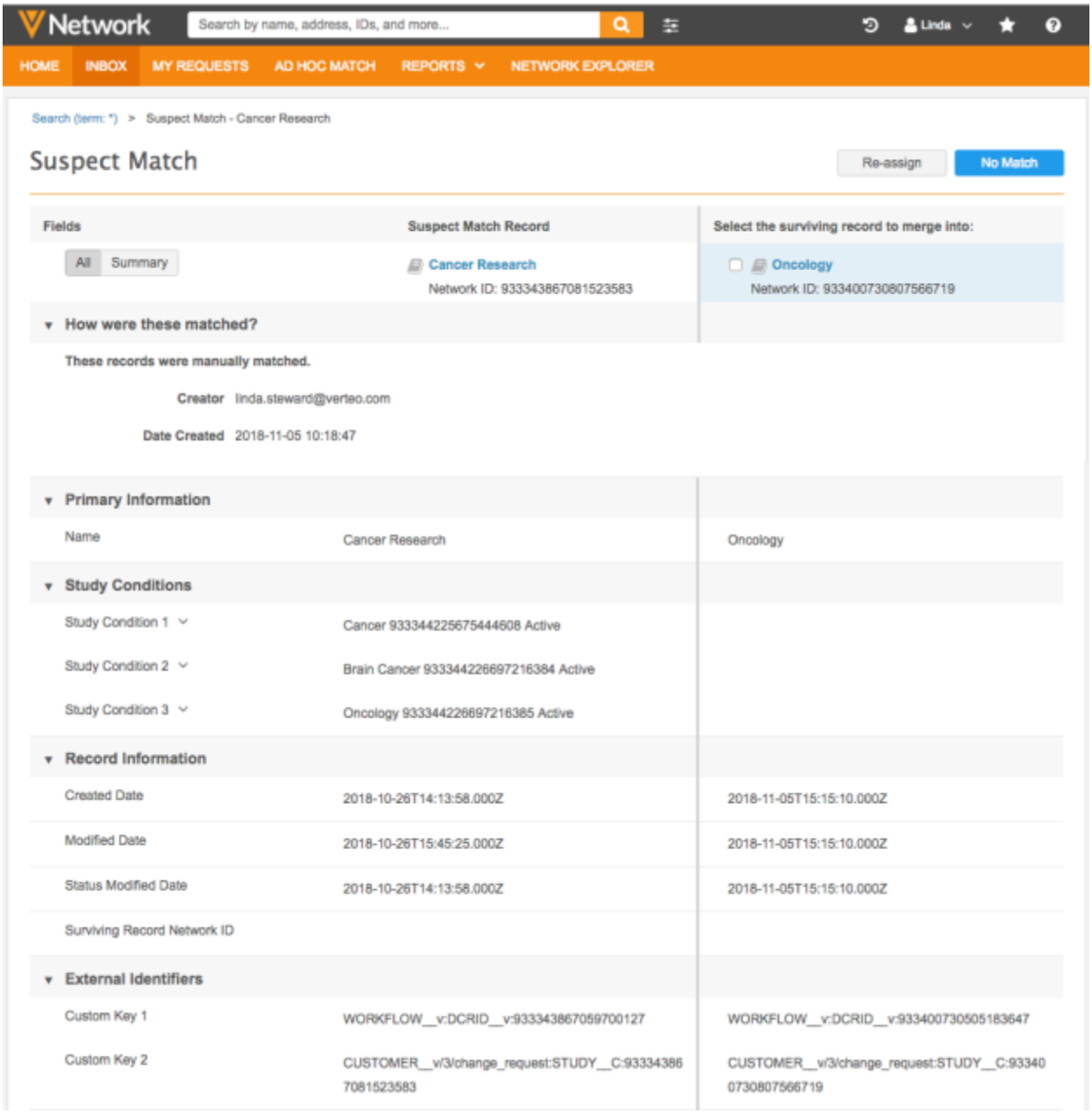
On the new profile page, data stewards and data managers manually merge duplicate custom object records using the Find Suspect Match feature to search for duplicate records using the target record's VID or a keyword. When a match is found, create a suspect match task to merge the two records. For more information, see the topic called "Merge records manually" in the *Veeva Network Online Help*.

Suspect matches display in the inbox for stewardship; they are the only type of tasks that can be created for custom objects. Data stewards can filter the inbox by entity type or task type to find the suspect matches for a custom object. Hover over the task link to view the summary card for the custom object. To open the suspect match, click **Go to task**.



On the suspect match task, data stewards can compare the records side by side but they cannot select the attributes from each record that will be copied to the winning record. If data stewards merge two custom objects, the following actions occur:

- All existing external IDs are copied to the surviving record and then they are deactivated on the losing record.
- Duplicate sub-objects and custom relationship objects are removed.
- Relationships are repointed to the surviving record. Relationship are removed if they point to the losing record in the merge.



Unmerging records

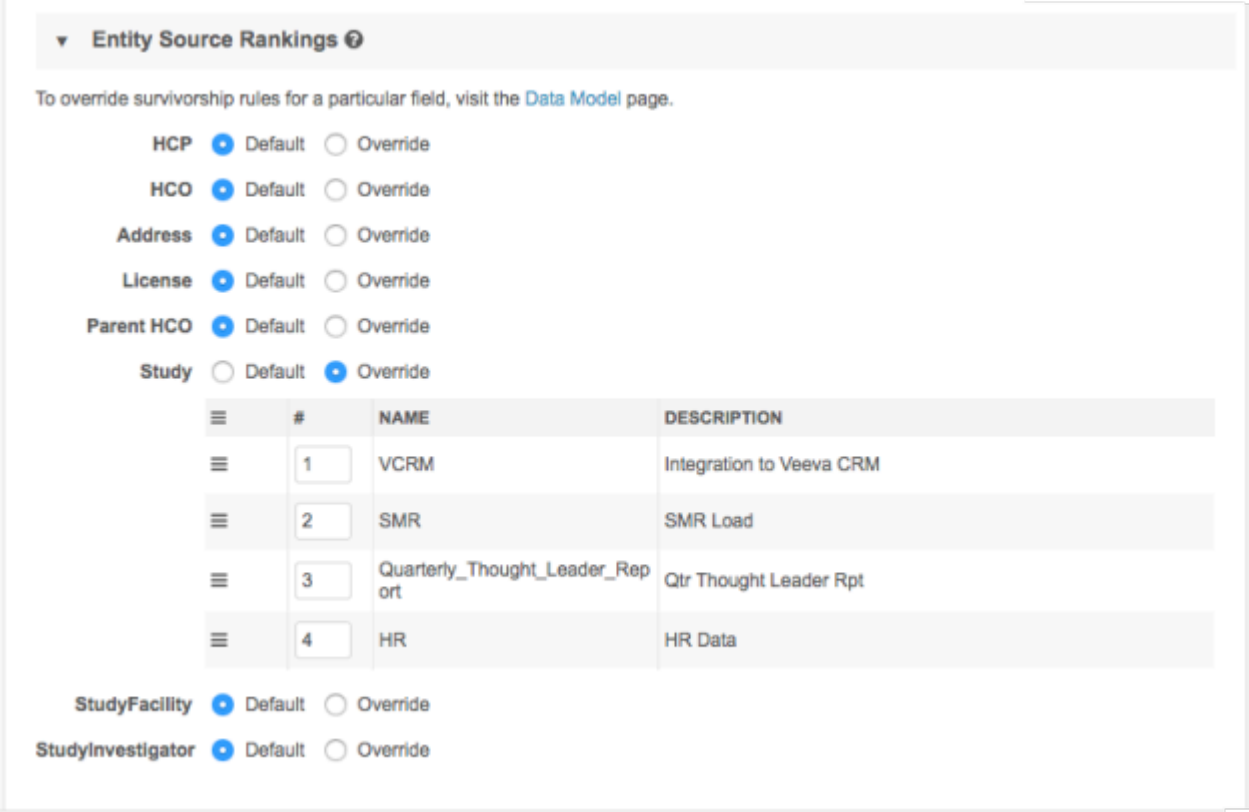
Custom object records can be unmerged if the source system setting, **Unmerge Ability** allows (**System Interfaces > Systems).** For unmerging records, a new Network entity ID (VID) is assigned to custom objects and custom sub-objects.

Source rankings

To set the priority order for source systems during merges or update, you can define source ranking for custom objects at the root entity level (**System Interfaces > Source Rankings**). You might have several sources that are contributing to custom object records, so you can prioritize the source precedence for each object.

Source rankings can be set at three levels: default, object, and field. The default source rankings define the ranking across all data sources, but you can override those rankings specifically for a custom object. To override the rankings for a particular field, go to the Data Model page and update the field. The default source rankings will be listed on the data model field page; not any object rankings that you have defined.

Field-level survivorship takes precedence. If there are no field-level settings, Network uses source rankings defined for the object and then default settings if there are no object settings.



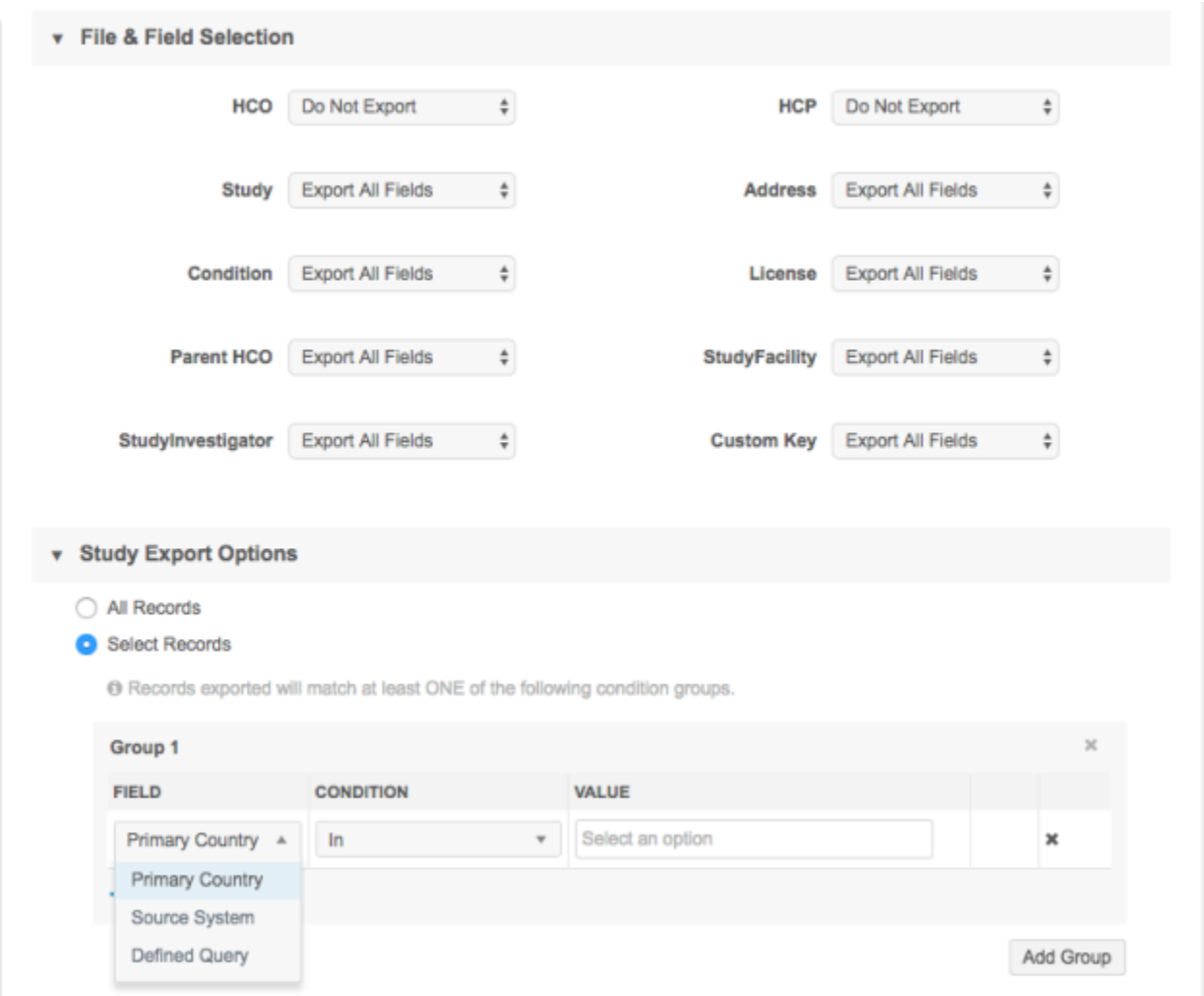
Target subscriptions

Data for any objects in your flexible data model can be exported to downstream systems in target subscriptions using subscription filters or the **Export by VID** button.

For target subscription filters, the **File & Field Selection** section is updated to support custom objects. All objects in your Network instance are listed in this section and are set to **Export All Fields** by default. Users that do not have access to the custom objects will still see them listed here and can export them.

If you choose **Export Some Fields** or **Export All Fields** for an object, you can configure additional filters in the **Export Options** section. If you choose **Select Records**, you can specify the records using groups of filters. For custom objects, the **Field** can be filtered by Primary Country, Source System, and Defined Query only.

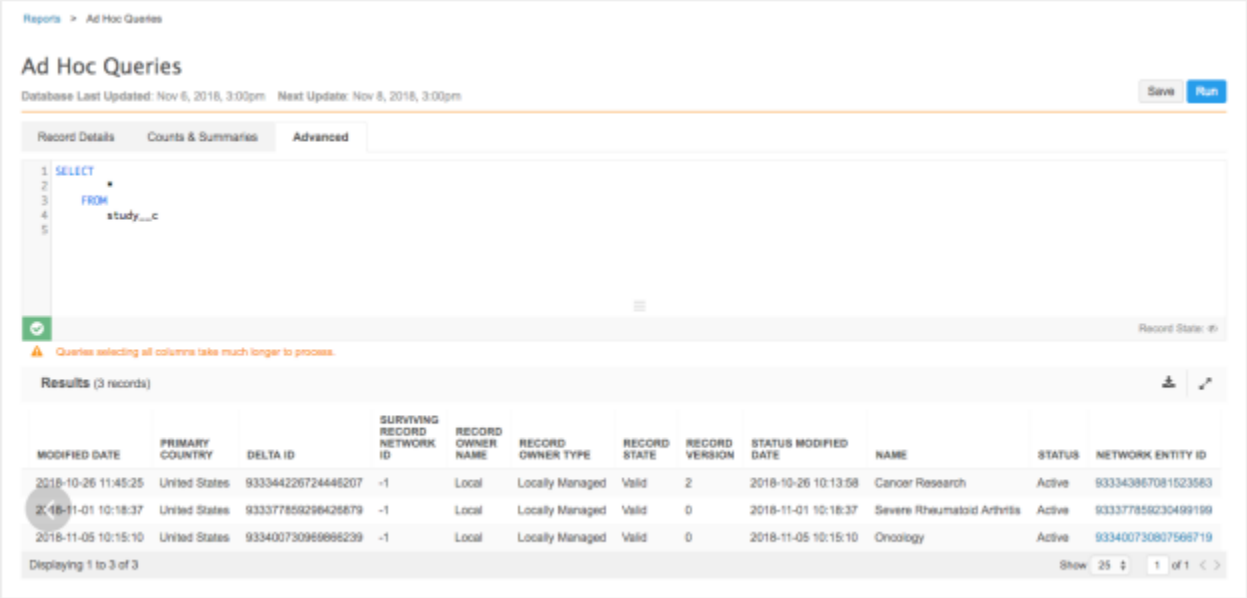
For more information about using filters, see the "Add a target subscription" topic in the *Veeva Network Online Help*.



Reporting

Users can use advanced SQL queries to report on custom objects. All custom object types and their fields and reference values are available for advanced queries. After the report runs, the results can be viewed in the Network UI and downloaded so they can be analyzed.

Access to advanced reporting, the custom objects that you can report on, and the ability to download reports are determined by permissions in each user's profile and through their data visibility profile.



FEATURES THAT DO NOT SUPPORT CUSTOM OBJECTS

Some features in Network do not support custom objects in this release:

- Ad Hoc Match
- Add Request Match Rules
- Candidate records
- Configuration management (exporting and importing configurations between environments)
- Concur
- CRM bridge integration
- Data change requests (Custom object records that are added or updated by data stewards and data managers are automatically approved by Network).
- Data maintenance features
- Data quality reports
- Data validation rules (Rules cannot be created for custom objects, but validation rules can fail on custom object records if they apply to a Veeva field (for example, a status field).
- Network Explorer

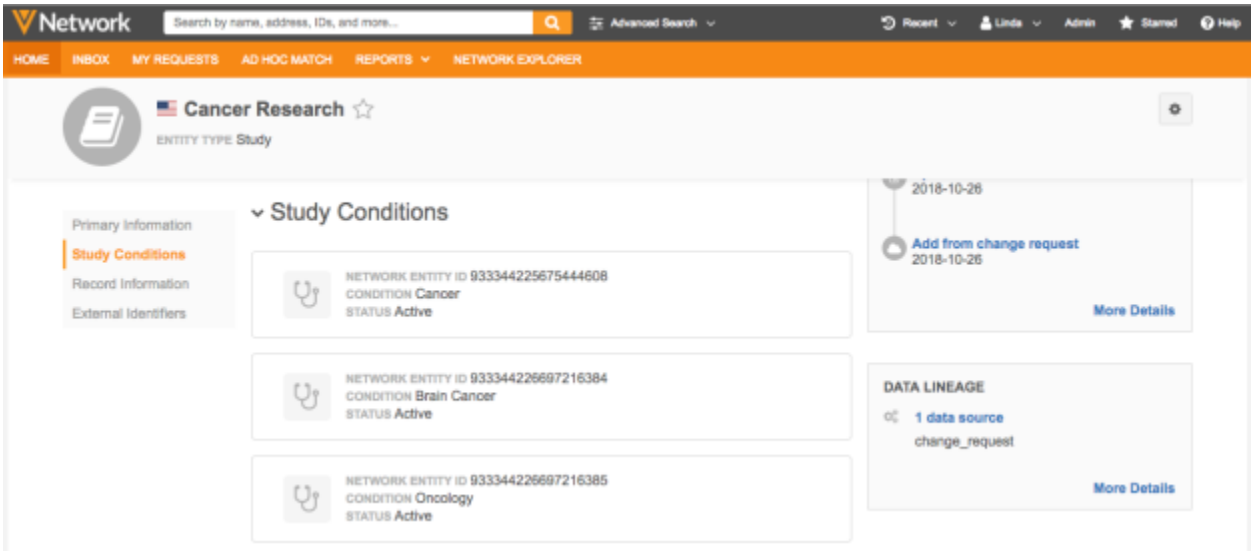
REMOVING CUSTOM OBJECTS

After a custom object has been created and enabled in your Network instance, it cannot be removed. The object can be invalidated so that it is not exported to downstream systems and cannot be found during search. Any features that support the custom object will continue to display the object in the Network UI; for example, search results will continue to display the STUDY custom object.

SUB-OBJECT ICONS

Administrators can now choose icons for each sub-object (previously called *custom child object*) in their Network instance. Previously, a default icon was used for all sub-objects. Choosing a specific icon enables users to visually distinguish between each sub-object on the profile page and provides an indication of the information that it contains.

This enhancement is enabled by default if sub-objects exist in your Network instance.

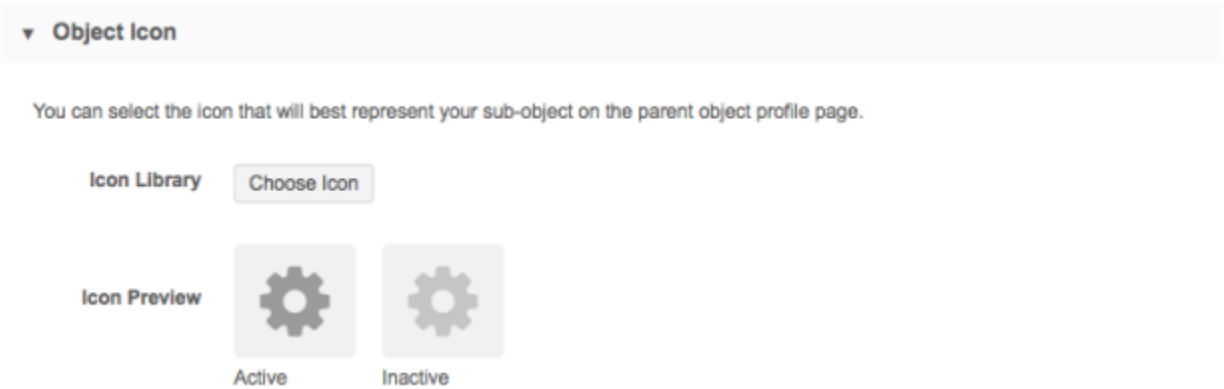


Choosing an icon

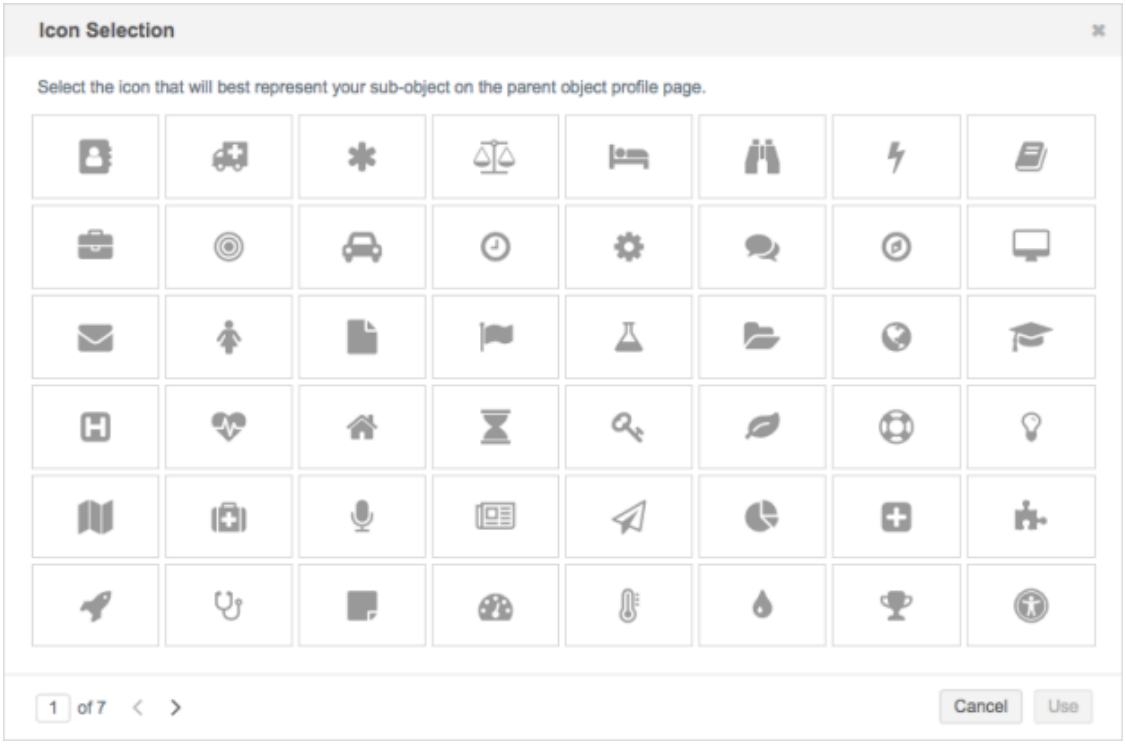
Sub-objects are created at your request by Veeva. When the sub-object is available in your Network instance, administrators must select an icon; a default icon does not display.

To add an icon:

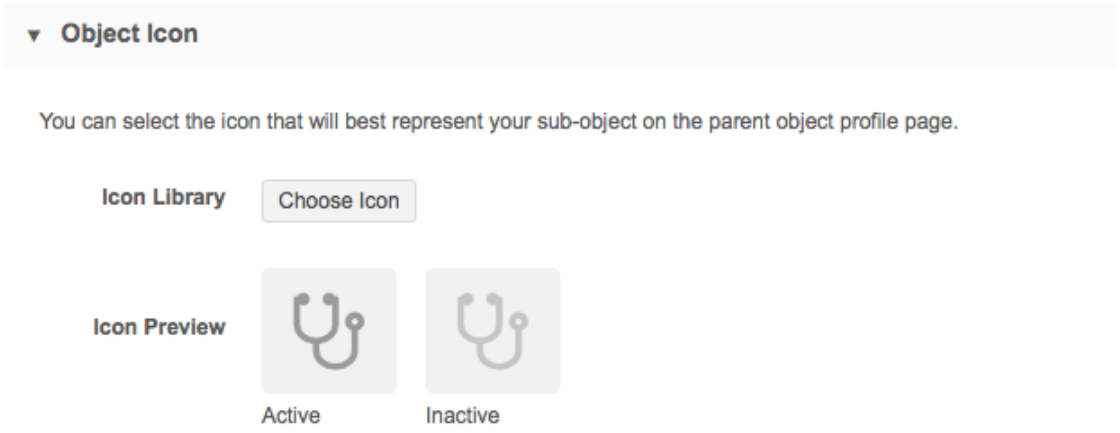
1. In the Admin console, click **Data Model > Custom Objects Data Model**.
2. Select the sub-object.
3. On the sub-object page, expand the **Object Icon** section. The **Cog** icon is selected by default.



4. Click **Choose Icon**.
5. In the **Icon Selection** dialog, review the available icons. Use the left and right arrows (**< >**) to scroll through the icon choices.



6. To choose the icon that best represents the sub-object, select the icon and then click **Use**. For example, for a sub-object called Condition, you might use the Stethoscope icon
7. The **Icon Preview** displays the active and inactive states for the icon that you chose.



8. **Save** your changes.

The profile page and all business cards immediately update to display the icon you have chosen for the sub-object.

Data model

HCO ACCREDITATION FIELDS FOR JAPAN

The HCO accreditation fields (`hco_accreditation_1__v` to `hco_accreditation_10__v`) for Japan are no longer treated as a set of fields. Previously, as a set, when data change requests were submitted on these fields for a Japanese record, Network would automatically resort the entries and remove any spaces in earlier fields. Now, each field is considered an individual field so changes to one accreditation field does not impact the other accreditation fields. The JPStandard profile layout for HCOs is updated to reflect this change.

This change is applied by default for Network instances for Japan only. Other countries that use these fields are not affected by this change.

PROFILE LAYOUT CHANGES FOR JAPAN

Updates have been made to the default profile layouts for HCOs and HCPs in Japan.

JPStandard layout for HCOs

The JPStandard profile layout for HCOs is updated with the following changes:

- Each HCO accreditation field is now considered an individual field instead of being treated as a set of fields. Each Accreditation field is listed in the General Information section on the profile layout.
- The Specialties field is now a full-width field by default. This means that the Primary Specialty and Other Specialties fields will each have their own row on record profiles.
- Email and phone fields are moved to a higher position in the Parent Affiliation section.

JPStandard layout for HCPs

The JPStandard profile layout for HCPs is updated with the following change:

- Email and phone fields are moved to a higher position in the Parent Affiliation section.

NEW COUNTRIES SUPPORTED

A data model has been added for four new countries for the European Union (EU):

- Croatia
- Latvia
- Lithuania
- Romania

The reference data is based on the EU master data model.

To view the data model for these new countries, in the Admin console, click **Data Model > Network Data Model**. On the Network Data Model page, expand the **Country** list and select the country.

Localization

Languages for these countries are translated only for reference data in the Network UI. In addition, Slovenian is also translated for reference data.

DATA PRIVACY OPT-OUT

These newly supported countries have been added to the list of opted-out countries in the Veeva OpenData EUMaster:

- Croatia
- Latvia
- Lithuania
- Romania

Records that are opted-out by Veeva OpenData do not display and cannot be accessed in downstream systems. This ensures data privacy for opted-out HCPs to satisfy regional regulatory requirements.

To review the list of opted-out countries in the `data_privacy_opt_out__v` field, in the Admin console, click **Data Model > Network Data Model** and select the field.

CLUSTER MANAGEMENT

Customers can now enrich addresses in additional countries by adding cluster codes. In this release, Network has included support for the following third party cluster provider / country combination:

- Portugal - HMR™
- Italy - IQVIA™

A TPA must be signed with the third party cluster provider to use the cluster management feature. For more information about this feature, see the topic called "Managing clusters" in the *Veeva Network Online Help*.

GEOCODING

Latitude and longitude fields are now populated and persisted for addresses in Italy after an address is cleansed in Network.

Geocodes can be used in downstream systems to assist your business processes: for example, event planning and sales performance. You can use the data, for example, to visualize the following on a map:

- HCP locations - Use the data to understand where HCPs practice within proximity to an organization when setting up events.
- Sales data on individual geocoded HCPs - Use the data to compare it against sales data tied to a territory to identify where sales are under performing.
- Coverage across regions - Use the data to align sales reps accordingly.

This enhancement is enabled by default for addresses in Italy when address cleansing is enabled in your Network instance. These values will display on address records after they are loaded, or after they have been updated.

Data export

REFERENCE DATA

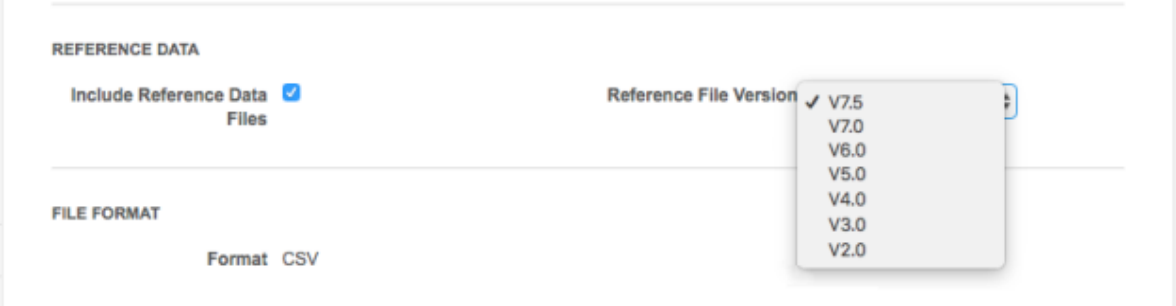
A new version of the reference data is now available for reference data exports in target subscriptions. If administrators or data managers choose to export reference data and select **V7.5**, the exported .csv file will always have a value for the **Target Alias** and **Target Alias Name** columns. In V7.0, these columns would be empty if a target alias code or name did not exist for a particular row. In V7.5, values display in these columns using the following rules:

- **Target alias** - If a target alias code does not exist for a row, display the Network Code.
- **Target alias name** - If a target alias name does not exist for a row, display the English (EN) translation of the Network code.

The new reference data version is available in all Network instances by default.

Choosing the reference data version

In new target subscriptions (**System Interfaces > Target Subscriptions**), **V7.5** will be selected by default. Existing subscriptions will not be automatically updated, but you can select the new version if you want your exported reference data file to always have values for these columns.

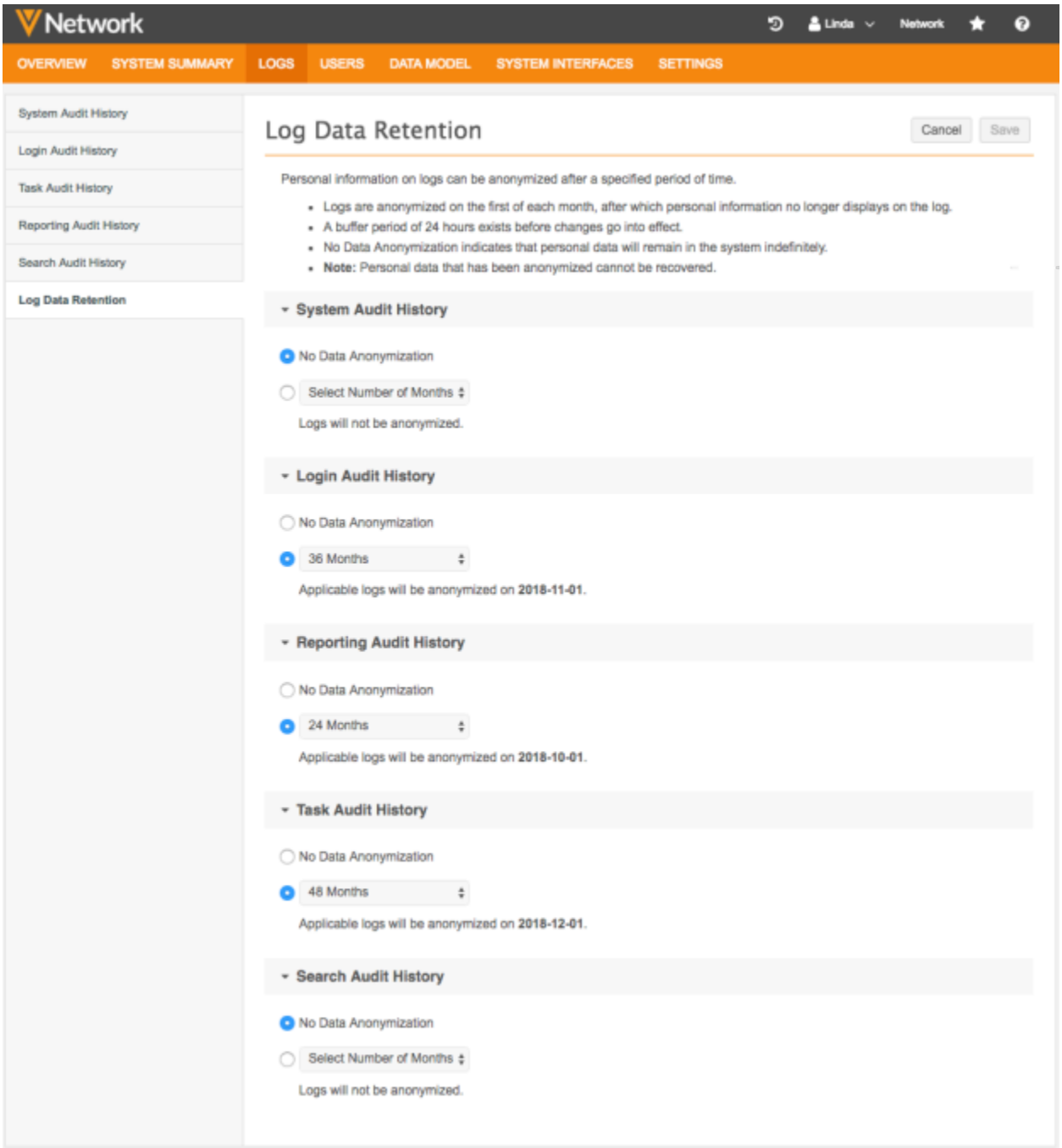


Logs

AUDIT RETENTION PERIODS

Administrators can now define data retention settings so personal data in Network's audit logs can be anonymized and no longer processed. For example, administrators can set a retention period for all, or some logs, so personal data is anonymized after a defined period of time. All event data remains in the audit log, but any personal data is removed. This feature protects the privacy of Network users and helps customers comply with the European General Data Protection Regulation (GDPR) to keep personal data for only as long as necessary. Previously, personal log data was stored for an unlimited period of time.

This feature is enabled in your Network instance by default.



Define a retention period

Administrators can specify if and when personal data should be removed for each type of Network audit log. For example, personal data in the Login Audit History log can be anonymized after 36 months, but personal data in the Search Audit History log can be retained indefinitely.

By default, all personal data in audit logs is retained unless you specify a log retention schedule.

Note: Personal data in logs that has been anonymized cannot be recovered.

To define retention periods for logs:

1. In the Admin console, click **Logs > Log Data Retention**.
2. For each type of Network log, choose one of the following options:
    a. **No Data Anonymization** - Personal data in the log will be stored for an unlimited period of time. This option is selected by default to ensure that your data is not anonymized without your input.
    b. **Select Number of Months** - From the list, choose a predefined time of 12, 24, 36, 48, or 60 months. For example, if you choose 24 for the Search Audit History log, personal data will be anonymized in any log events that are older than 24 months. To customize the schedule, choose **Other**.

       Values for the **Other** option must be positive integers greater than five months and less than 121 months.

    If you choose a log retention time period, a message displays so you will know when the logs will be anonymized.

3. **Save** your changes.

Log anonymization jobs

Anonymization jobs run on the first day of each month. Jobs do not run until 24 hours after data retention settings are made. This buffer time ensures that you have time to make changes to the settings without accidentally anonymizing the logs.

Buffer time examples

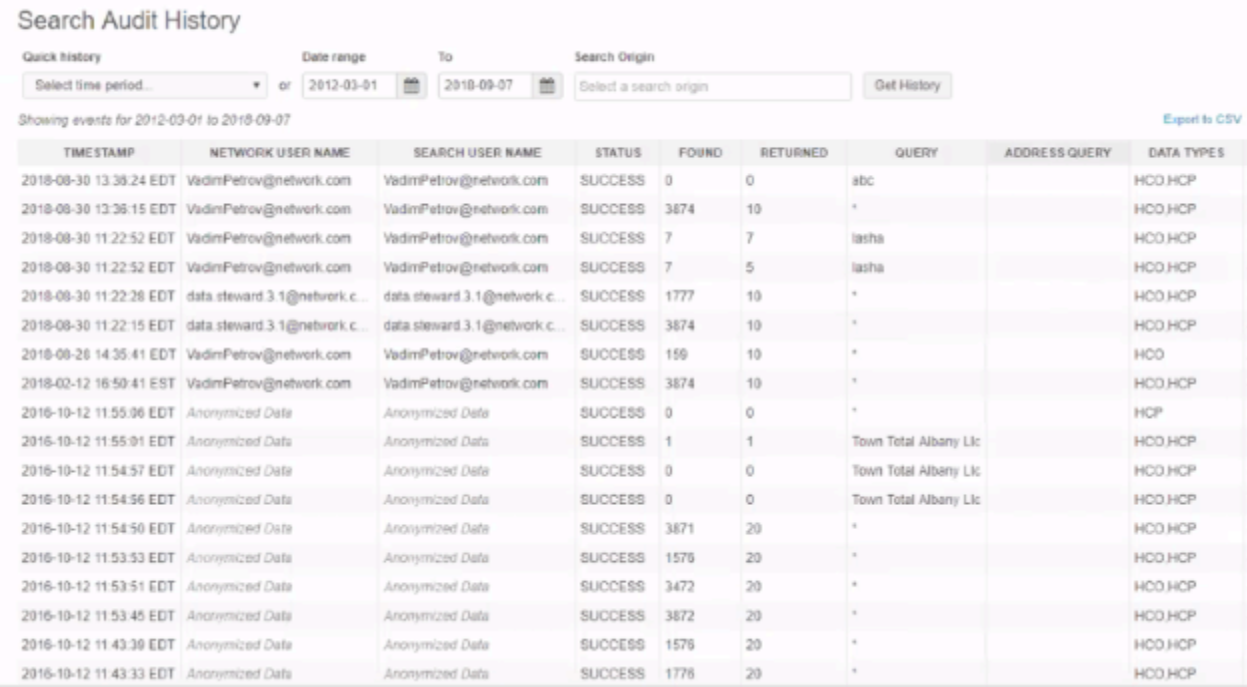
- If you make changes on September 29th, the next anonymization job runs on October 1st.
- If you make changes on September 30th, the next anonymization job runs on November 1st.

Anonymized log data

After an anonymization job runs, the following data is masked in the applicable logs:

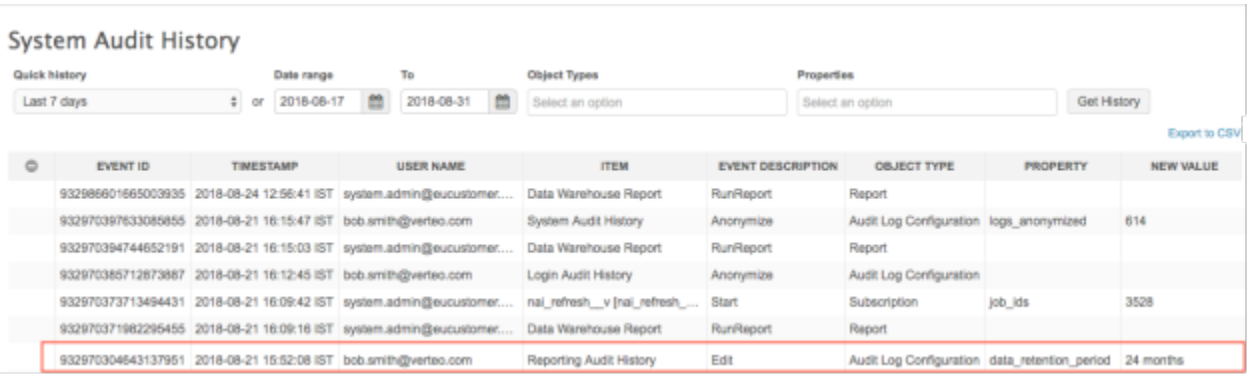
- **User names** (Network and Veeva CRM) - Removed from all logs. However, logs with the user name "System" are not anonymized. These logs are not considered to have personal data because the information cannot be used to profile a user.
- **Source IP address** - Removed from Login Audit Logs.

Anonymized logs display in the Network UI and can be exported, but personal data in any columns is replaced with "*Anonymized Data*."



Auditing log retention changes

The System Audit History itself logs any times when an anonymization job has run and any changes to data retention settings.

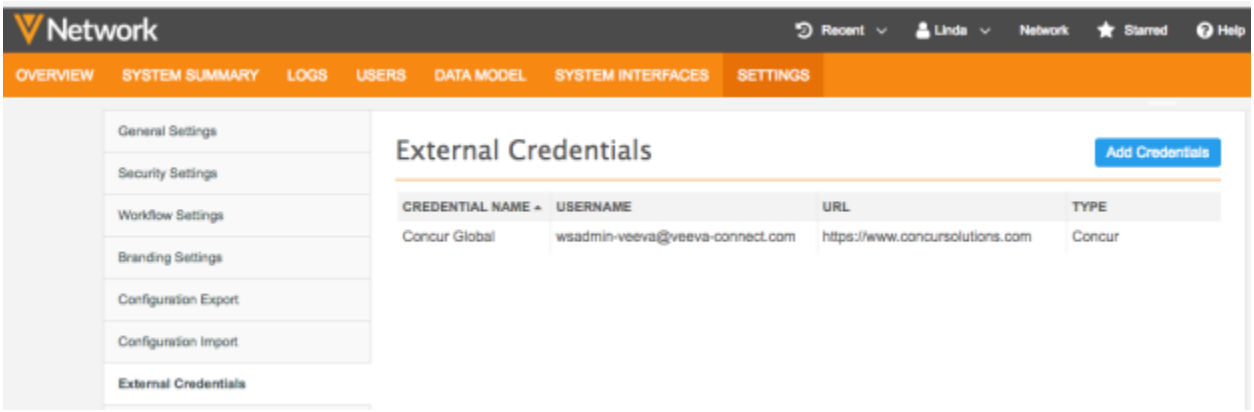


Admin settings

EXTERNAL CREDENTIALS

Administrators can now store credentials for external applications within Network. This enables administrators to easily maintain credentials by adding them to Network one time so they can reference the information whenever it's needed in the Network application. Credentials can be stored for the Concur Connector.

This feature is enabled by default if the Concur Connector is enabled in your Network instance. Network automatically migrates any existing Concur credentials to the External Credentials page.

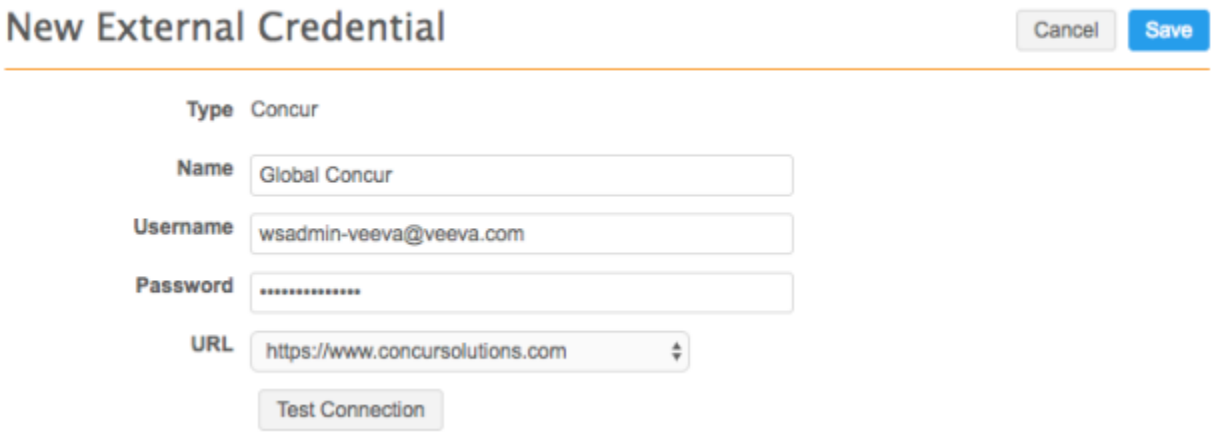


Adding external credentials

Administrators can create multiple Concur environments in their Network instance. In the External Credentials page, you can add the credentials for each Concur environment.

To add a Concur credential:

1. In the Admin console, click **Settings > External Credentials**.
2. On the External Credentials page, click **Add Credentials**.
3. In the **New External Credentials** dialog, select **Concur** from the list. Click **OK**.



4. On the New External Credential page, provide the following information:
   a. **Name** - Type a name for the credential. For example, Verteo Concur US (for a US Concur environment). Names must be unique.
   b. **Username** - The Web Services Admin user ID that you used during the Concur system configuration.
   c. **Password** - The password for the Web Services Admin user.
5. In the **URL** list, select a predefined URL or **Custom**. If you use a custom URL, type the URL in the box below.
6. Click **Test Connection** to ensure that the credentials are correct.

Messages will display at the top of the page to indicate if the credentials are valid or invalid, or if there were issues connecting to the Concur server (not credential-related).

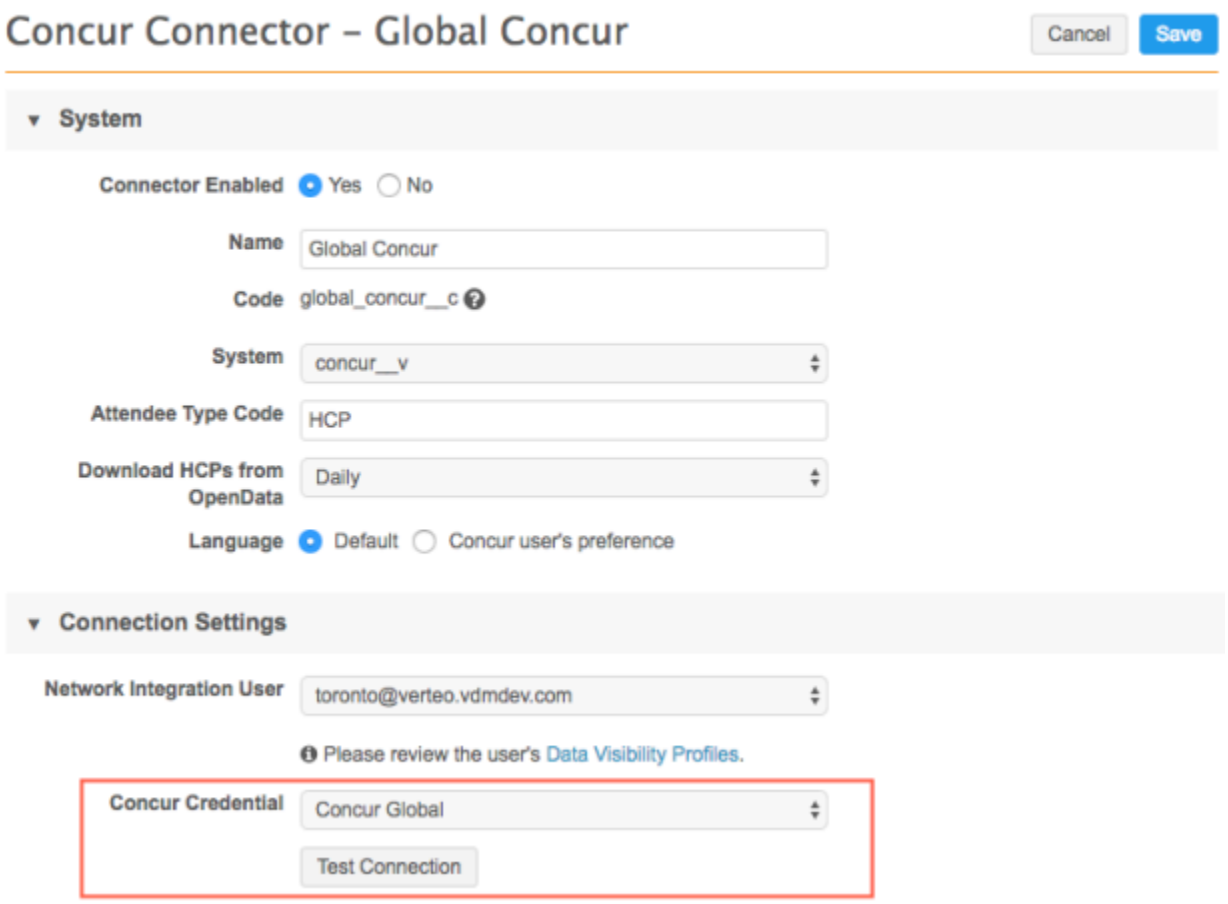
7. **Save** your changes. If you did not test the credentials, they will be tested now. Invalid credentials will not be saved.

The credentials are stored and can be used in the Concur Connector configuration.

Using saved credentials

When administrators edit or add a Concur environment, they can reference the stored credentials.

1. Open a new or existing Concur environment (**System Interfaces > Concur Connector**).



2. In the **Connection Settings** section, expand the list beside **Concur Credential**.
3. Select the appropriate credentials for this environment.
4. Click **Test Connection** to ensure that the credentials are correct.

   Messages will display at the top of the page to indicate if the credentials are valid or invalid, or if there were issues connecting to the Concur server (not credential-related).

API

Version Update

The Network API is updated to version 16.0 in 18R3.0.

API Updates for Custom Objects

Custom objects are supported for the following API calls in version 16.0 and higher:

- Associating Custom Keys API
- Suspect Match API
- Retrieve Entity API
- Metadata API
- Merge API
- Managing Subscriptions API
- Search API

Note: Change request API is not supported for custom objects in this release.

vid_key

Integration users can use the `vid_key` for custom objects in the supported Network API. The `vid_key` enables users to specify a record in Network using any of the key identifiers that were used to create that record.

Format

The `vid_key` for a custom object can be defined using one of the following methods:

- Use the custom key:
  <custom_key_source_type__v>:<custom_key_item_type__v>:<custom_key_value__v>

  Example: `vcrm:Publications__C:a29Q0000002dr8ylAA`

- Use the Network entity ID (VID): `Network:Entity:919156929878115328`

Metadata API

The following API calls include updates to support custom objects.

Retrieve Object Types Metadata API

This API call is updated to include the following values in the Response to support custom objects:

- `customerDefined` - Values: *true* for custom objects, *false* otherwise
- `type` - Possible values: *object*, *sub-object*, or *relationship*

Example response


```
{
    "responseStatus": "SUCCESS",
    "objectTypes": [
        {
            "name": "HCP",
            "description": "Health Care Professional",
            "status": "ACTIVE",
                "customerDefined": false,
            "type": "object"
        },
        {
            "name": "HCO",
            "description": "Health Care Organization",
            "status": "ACTIVE",
              "customerDefined": false,
            "type": "object"
        },
        {
            "name": "ADDRESS",
            "description": "Address",
            "status": "ACTIVE",
              "customerDefined": false,
            "type": "sub-object"
        },
        {
            "name": "LICENSE",
            "description": "License",
            "status": "ACTIVE",
              "customerDefined": false,
            "type": "sub-object"
        },
        {
            "name": "PARENTHCO",
            "description": "Parent HCO",
            "status": "ACTIVE",
              "customerDefined": false,
            "type": "relationship"
        },
        {
            "name": "CUSTOMKEY",
            "description": "Custom Key ",
            "status": "ACTIVE",
              "customerDefined": false,
            "type": "sub-object"
            ]
        },
        {
            "name": "STUDY__C",
            "description": "Study",
            "status": "ACTIVE",
              "customerDefined": true,
            "type": "object"
        },
             {
            "name": "CONDITION__C",
            "description": "Condition",
            "customerDefined": true,
            "type": "sub-object"
        },
```

```
        {
            "name": "STUDY_FACILITY_REL__C",
            "description": "Study Facility",
            "customerDefined": true,
            "type": "relationship"
        },
        {
            "name": "STUDY_INVESTIGATOR_REL__C",
            "description": "Study Investigator",
            "customerDefined": true,
            "type": "relationship"
        }
    ]
}
```


Object Types Metadata API

This API call is updated to include the following parameter to retrieve a list of all custom objects in the Network instance.

Name	Required?	Description
owner	False	Filters objects if a value is defined. • Default - do not filter by owner • Possible values: "veeva" or "customer"

Sample request

```
GET
https://my.network.com/api/v16.0/metadata/objectTypes?owner=customer
```

Example response


```
{
    "responseStatus": "SUCCESS",
    "objectTypes": [
        {
            "name": "STUDY__C",
            "description": "Study",
            "status": "ACTIVE",
            "customerDefined": true,
            "type": "object"
        },
          {
            "name": "CONDITION__C",
            "description": "Condition",
            "customerDefined": true,
            "type": "sub-object"
        },
        {
            "name": "STUDY_FACILITY_REL__C",
            "description": "Study Facility",
            "customerDefined": true,
            "type": "relationship"
        },
        {
```

```
            "name": "STUDY_INVESTIGATOR_REL__C",
            "description": "Study Investigator",
            "customerDefined": true,
            "type": "relationship"
        }
    ]
}
```

Search API

The Search API is updated to include the following parameter to search all or specific objects in the Network instance.

Name	Required?	Description
types	False	Filters objects if a value is defined. • "ALL"- all objects are included in the API call • Specific object value; for example: "HCP" or "STUDY__C"

Note: To include custom objects in the search response, the custom object must be included in the `types` parameter. Previously, not including the `types` parameter returned results for all objects.

Sample requests

```
GET
https://my.veevanetwork.com/api/v16.0/search?q=oncology&filters=primary_country_v:US&types=ALL
```

```
GET
https://my.veevanetwork.com/api/v16.0/search?q=oncology&filters=primary_country_v:US&types=HCP,PUBLICATIONS__C
```

All search parameters are supported for custom objects except for the following parameters for Veeva OpenData and parent HCOs: `includeMasterResults`, `searchOnlyMaster`, `supplemental`, `parenthcofilters`.

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