# Ontologies, EVN

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## Overview of Ontologies

Ontologies are general data models that define classes and their properties–attributes, which store literal values and relationships that capture associations between classes.



Although an ontology can also contain *instances* of its classes, it is sometimes beneficial to keep an ontology's instances in a separate model, such as in a Reference Dataset. To keep instances separate from the classes, an ontology can be set to a **No-Instances Mode** (under **Manage**), which blocks the creation and editing of instances. However, because ontologies *can* contain their instances, this section includes descriptions of how to create, edit, and delete ontology instances.

TopBraid EVN supports a modular approach to defining ontologies. You can create a large single ontology model or you can create more granular ontology modules. These modules can include each other as needed. Using modules allows more granular access control. It also allows you to differentiate between entities used across the enterprise and entities used in particular parts of the business and govern them accordingly.

## Licensing

The availability of different collection types, including Ontologies and *customer-defined* types, is determined by what you have licensed and configured. The TopQuadrant website describes the TopBraid products and the *data governance packages* that determine which collection types are available.

## Ontologies Home

Selecting the **Ontologies** link in the left-navigation pane of **TopBraid EVN (Home)** lists all of the Ontology collections currently accessible to the user and, it allows authorized users to create new ones.

## Create New Ontology

The **Ontologies > Create New Ontology** link opens a form with fields used to define the new Ontology. Note that you can also create a Ontology by using a Create link in the Governance Areas page.



      Nobody will have a link for creating any asset collection until an administrator configures EVN's persistence technology as documented in *EVN Administration: Configuring the application data storage* . Additionally, each user will not have a create link unless the user or

their role has a *Create* permission for the EVN *Repositories* project as documented in *EVN Permission Group Management: Configure Permissions* .

## Note: Required and Permitted Includes

Collections often have natural relationships to other collections, e.g., a Reference Dataset references an Ontology class as its *main entity*. In order to do this, collection with resources to be referenced needs to be included. Some inclusions might be required while others might merely be permitted. For example, Taxonomies always include SKOS ontology and can include other taxonomies. A Reference Dataset is always required to include at least one Ontology as it is needed to define the entities in the dataset. Glossaries with always include pre-defined EDG ontology that describes business glossary terms. Catalogs of Data Assets will always include pre-defined EDG ontology describing data assets and are expected to include definitions of relevant physical Datatypes. These requirements can be further configured.

When creating a collection, any required reference to another type of collection will either be handled automatically or be presented for selection. If any required inclusion is omitted at its creation, then the resulting collection will show red warnings about the missing relationship(s). After creation, included collections can be changed using utilities view: **Settings > Includes**. When changing collection's *includes*, selection options are restricted to required and permitted types.

## Creation Form

The Create dialog box asks for the Ontology's **Label** (name), its **Default namespace** and, optionally, a **Description**. The default namespace will be used to construct URIs (unique identifiers) for the resources in the Ontology. EVN will automatically pre-populate the default namespace based on the system-wide, configurable settings. Creator can change it. Recommended practice for all collection types is to use a '/' (slash) at the end of the default namespace. For ontologies, it is typical to use '#' (pound sign). However, '/' can be used as well.

Creator is automatically granted Manager's permission for the new Ontology. When Ontology creation starts from the **Governance Areas** page, new Ontology is automatically associated with the selected area. When Ontology creation starts from the Ontologies home page, new Ontology is not connected to any governance area. To change this after creation, update in utilities: **Settings > Metadata > Edit > subject area**.

# Create New Ontology

This creates a new Ontology with yourself as the manager.

| | |
|---|---|
| **Label** | |
| **Default namespace** | http://example.org/▓▓▓▓▓▓▓▓▓▓/new# |
| **Description** | |
| **Data Platform** | ☐ *Server-installed option to share this graph across all platform servers.* |

## Published Ontologies

EVN has an optional *TopBraid Explorer* add-on that lets managers publish an Ontology, allowing read-only access to an unlimited number of viewers. To publish a version of a Ontology, a manager of the production copy can select Export > Ontology as Explorer Published Version (see that section for details).

## Listing of Ontologies by Manage, Edit, or View

This home view lists all Ontologies that you can access in some way. Which ones you can see and what you can do with them depend on each Ontology's permissions settings for your user identity or security role. The listing groups the Ontologies according to your assigned permissions as either a *manager*, an *editor*, or a *viewer*:

- **Ontologies that you manage**
- **Ontologies that you can edit**
- **Ontologies that you can view**

You will only see relevant categories. For example, if you do not have manager permissions to any Ontologies, you will only see "Ontologies that you can edit" and "Ontologies that you can view" groupings.

This page provides a focused, permission level oriented view on Ontologies. To see a view of all asset collections, irrespective of their type, that you have a governance role for click on your **User Name** in the upper right conner of the page.



If an Ontology is either missing or it is lacking expected features in your views, you or your security role(s) may lack proper permissions for the On tology. A manager of the Ontology can give you the needed permissions via its **Ontology Utilities > User Roles** settings. For background information, see Asset Collection Permissions: Viewer, Editor, and Manager.

Another possible cause of a missing feature is that it requires administrative setup to become active. See EVN Administration for relevant within-application settings and/or see other EVN Administrator Guide documents for relevant external installation and integration setup.

# A Ontology's Operations and Viewer/Editor Views

Each Ontology has two main views:

1. *utilities*, from the **name** link, provides groups of collection-level functions, and
2. *viewer/editor* (depending on user permissions), from the **View**/**Edit** link, provides direct access to the Ontology content items (e.g., instances, properties, classes, etc.).



These views are documented in the corresponding *Ontology Operations* and *Ontology View or Edit* pages.

# Code Status

EVN lets you assign customizable status codes to certain types of data, such as reference data, taxonomy concepts, and, more generally, ontology resources. To facilitate this, the small pre-build status code model included with EVN, **http://topbraid.org/status**, has status values: *can didate*, *approved*, and *deprecated*. You can edit this set of choices in TopBraid Composer. After deploying it to your EVN server and checking it on that vocabulary's Includes list (accessible from a vocabulary's General tab), you can then see the choices available as radio buttons on a data instance's edit form and as a pull-down menu on the search form:

Alternatively, EVN can be configured to automatically include the status code model on the creation of certain collections.