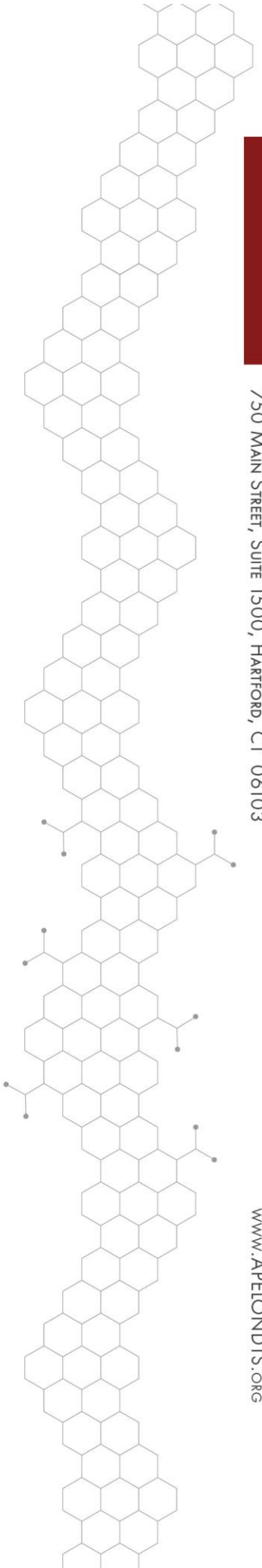
DTS 4: Editor Users Guide



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A. Introduction

The DTS Editor allows you to view terminology content stored in **Ontylog**, **Ontylog Extension** and **Thesaurus** namespaces within your knowledgebase (in DTS each **namespace** represents a separate **source terminology**). Each namespace is either **subscription** (provided by Apelon as part of its Content Subscription Service) or **local**, created by you. All of your namespaces together comprise your **knowledgebase**. You can configure a tree display for a broad view of a selected subscription namespace, then select an individual item (e.g., concept, term) for which to view detailed information.

The edit functions in the DTS Editor allow you to create and maintain new content in one or more local Ontylog Extension and Thesaurus namespaces. Each user-defined local namespace that you create can contain new concepts and/or terms that reside outside of any of your subscription namespaces.
In the local namespace you also can **map** relationships (i.e., create associations) between selected concepts or terms in your local content, and specific concepts or terms in subscription namespace content. For example, you can create a mapping between a single concept in an Ontylog subscription namespace, such as SNOMED CT, and a newly created concept in your local Chief Complaint namespace.

A.1 Namespaces

A.1.1 Subscription Ontylog Namespaces

An Ontylog namespace is one created using the Ontylog language, usually developed using Apelon's Terminology Development Environment (TDE) product. TDE, and Ontylog, allow you to build and maintain knowledgebases through the use of description logic. Concepts and terms in Ontylog are organized into a taxonomy through a process called **classification**. Subscription Ontylog Namespaces are "Read-Only" in the DTS Editor and cannot be modified. Refer to the *Ontylog Namespaces* discussion later in this guide for more on Ontylog namespaces.

A.1.2 Local Ontylog Namespace

A Local Ontylog Namespace is one created locally using the DTS Editor tool. Similar to a Thesaurus namespace, but utilizing the Ontylog language. These namespaces are not inherently "Read-Only", as Subscription Ontylog Namespaces are, and can be edited using the DTS Editor tool locally, before being classified and published.

A.1.3 Ontylog Extension Namespaces

Since you cannot perform edits directly **to** a Subscription Ontylog-type namespace using the DTS Editor. Using the DTS Editor, instead you can (locally) create new concepts and concept relationships for each Subscription Ontylog namespace by creating an **Ontylog Extension** namespace.

You link the Ontylog Extension local namespace to the specific Subscription Ontylog namespace for which you want to add or modify content. Each Extension namespace is comprised of **supplemental** content that you create locally, content that you can **classify** against the linked Subscription Ontylog content.

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Classification of a namespace produces the namespace's **inferred view**, which takes concept and role relationships into account. If necessary, classification positions concepts in the namespace hierarchy based on these relationships.
You may link each Extension namespace to only a **single** Subscription Ontylog namespace. You can, however, create multiple Extension namespaces that link to the same Subscription Ontylog namespace.
Refer to the ***DTS Classification Guide*** for procedures on creating and classifying Ontylog Extension namespaces.

A.1.4 Thesaurus Namespaces

A Thesaurus namespace in DTS is one in which concepts and terms are organized based on relationships (**associations**) with other concepts. The DTS Editor provides view capabilities for subscription namespaces with the type of **Thesaurus**. You can create a new "local" namespace that is a Thesaurus type. In the local namespace you can create new content, and establish mappings to content in subscription namespaces (both Ontylog and Thesaurus) as well as other local namespaces. Refer to the *Thesaurus Namespaces* discussion later in this guide for more on Thesaurus namespaces.

A.1.5 Subsets

A **subset** is an arbitrary collection of concepts. It may represent concepts that share a specific set of attributes, or simply are commonly used in a well-defined context. A subset may include only a few concepts or many concepts. The term **value-set** is an alternate name for subset. The concepts in a subset may be derived from one or more than one namespace, or they can be defined by their participation in other subsets.
Using the **Subset Editor** functions available to you from the *DTS Editor Main* window, you can create and maintain subsets. If the namespace you are viewing in the DTS Editor has one or more subsets created for it, you can highlight each concept in the view that was selected for a subset.
Refer to the *Subsets* discussion later in this guide for procedures on subset creation and maintenance in DTS.

A.2 Purpose of This Guide

This guide includes procedures for using the view capabilities in the DTS Editor to create tree views of subscription content in Ontylog and Thesaurus namespaces. Detail views are available for each selected concept/term in a tree view. Illustrations of different view scenarios are provided.
The guide also includes procedures for adding and maintaining one or more **local** namespaces, as well as the new content within. This content includes new concepts and/or terms, and the attributes related to each (e.g., properties, associations). Procedures for creating new associations between concepts and/or terms within a namespace are provided, as well as procedures for creating associations across namespaces. Illustrated examples are included.

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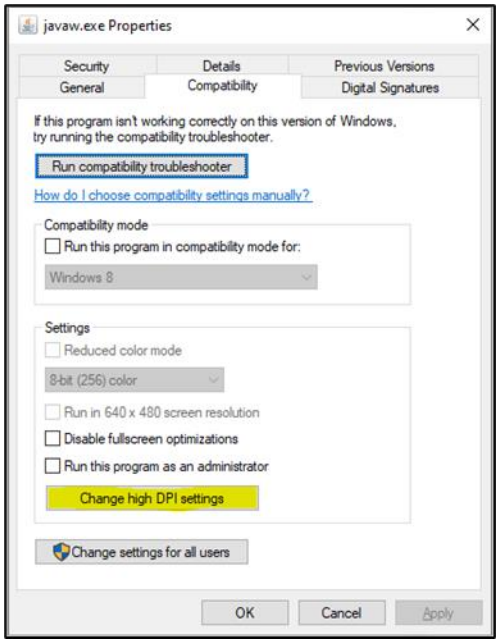
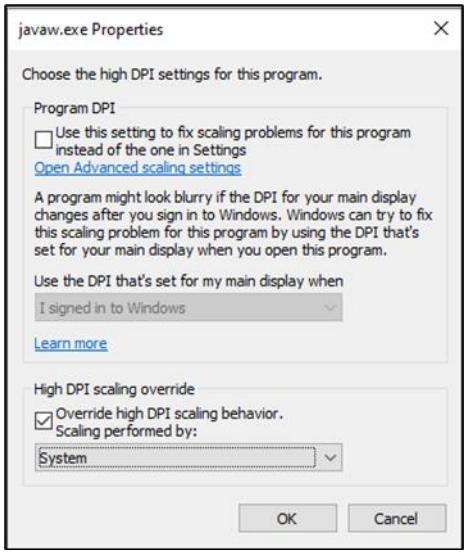
A.3 DTS Editor High Resolution Compatibility

The DTS Editor may experience display issues on high resolution screens. To fix these display issues, follow these steps.

1. Go to <DTS Home>\java\jre\bin and find the java.exe and javaw.exe files. For each file, perform the following.
2. Right-click on the file and select Properties
3. Go to Compatibility tab
4. Click Change high DPI settings



5. Check the Override high DPI scaling behavior checkbox
6. In the Scaling performed by dropdown, select System



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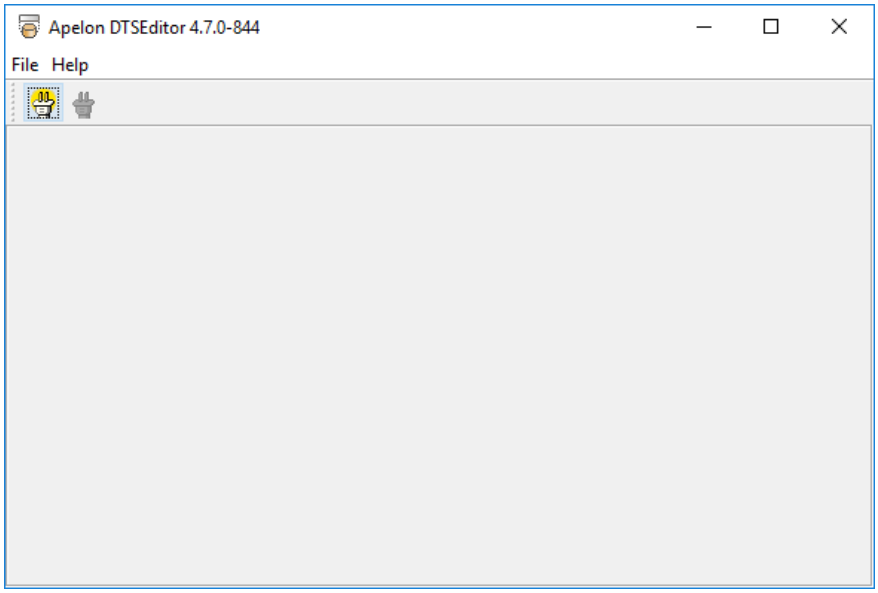
A.4 Start the DTS Editor

Start the DTS Editor from the *Windows* **Start** menu (**Start >Programs > Apelon DTS 4.5 > DTS Editor**) or similar method appropriate for your installation. The DTS Editor start-up window is shown:



This window allows you to establish a connection to the DTS server. Once the connection has been made, your default Editor Layout (configuration) for this server will be loaded and you can begin work on the DTS knowledgebase.

In the sections that follows, we will assume that your default Layout is the standard DTS Editor Layout. The Editor Layout can be customized to meet individual user or organization needs. See the *DTS Editor Module Guide* for information on creating and establishing alternate Editor Layouts.

Note: If you create a new Layout that does not have the **Layout Select** menu item and then set this Layout as your default User Layout, this Layout will be loaded when you connect and you will not be able to access any other Layout. DTS provides an escape for this situation. Follow these steps to force a load of the standard DTS Editor Layout:

1. Close and restart the Editor.
2. Press and hold the **Ctrl** and **Alt** keys on your keyboard.
3. Click **Connect** from the **File** menu.

A.4.1 Connection Parameters

Follow this procedure to establish a connection to the DTS server.

Confirm that an **Apelon DTS Application Server** is running and a User has been created prior to starting the Editor.

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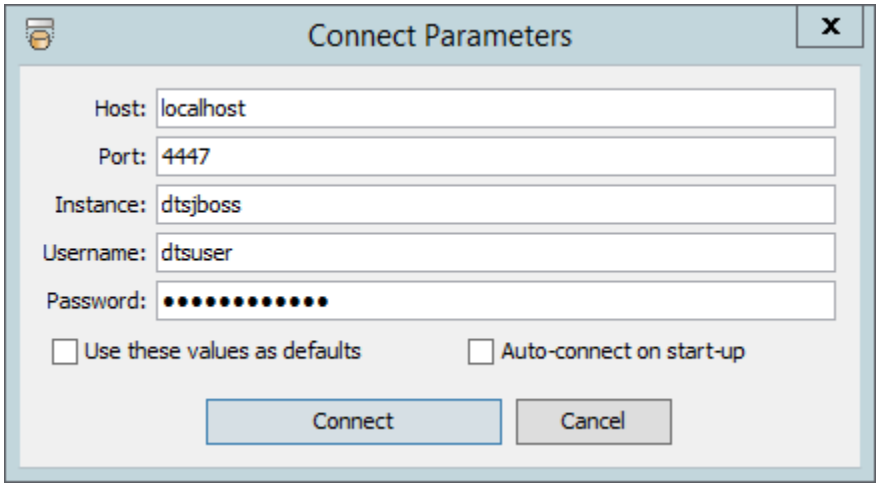
Select **Connect Parameters** from the **File** menu. The *Connect Parameters* window appears.



Host: Enter your *Host* name (for the machine where your Application Server is running) i.e., **localhost**
Port: Enter the *Port* number to access the DTS Server, i.e., **4447**
Instance: Enter the *Instance* name of the DTS Server file on your Application Server, i.e., **dtsjboss**
Username: Enter the *Username* for a created DTS User to access the DTS Server, i.e., **dtsadminuser**
Password: Enter the *Password* for a created DTS User to access the DTS Server, i.e., **dtsadmin**

To recall these values for future sessions, check *Use these values as defaults*.
To automatically connect on start up with the saved credentials, check *Auto-connect on start-up*.

Click **Connect** to establish connection to your DTS Server.
If this is the first time you have logged in to the Editor, the *Content License Agreements* window displays.

A.4.2 Content License Agreements

The first time you log into the DTS Editor, the *Content License Agreement(s)* window displays immediately after you establish your database connection. This window shows the applicable license agreements for any proprietary terminologies in your DTS Knowledgebase.

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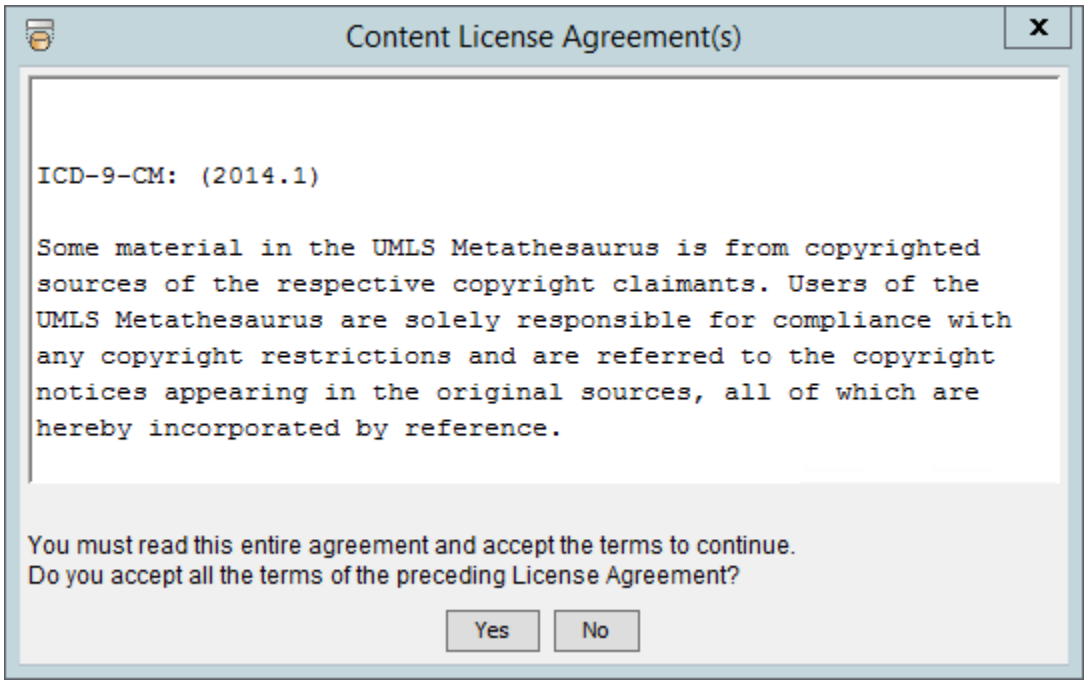

In order to use the DTS Editor, use the **Scroll Bar** to view license terms for all of the vocabularies to which you subscribe. Click **Yes** (which is enabled after you read the entire agreement) to accept the terms; the *DTS Editor Main* window redisplays.
Once you have accepted these agreements, the *Content License Agreement(s)* window will not appear again on login until new proprietary sources (or new versions) are added to your knowledgebase.

A.5 Connect to the DTS Editor

Once the connect parameters have been set up as described above, you can subsequently connect to the DTS Server by simply selecting **Connect** from the **File** menu, or clicking on the toolbar **Connect** icon . These actions will perform an automatic connect using the existing (saved) connection parameters.

A.6 Disconnect From the DTS Editor

Select **Disconnect** from the **File** menu, or click the toolbar **Disconnect** icon . If there is unsaved data (new or modified) in one of the DTS Editor components, the following confirmation window displays.

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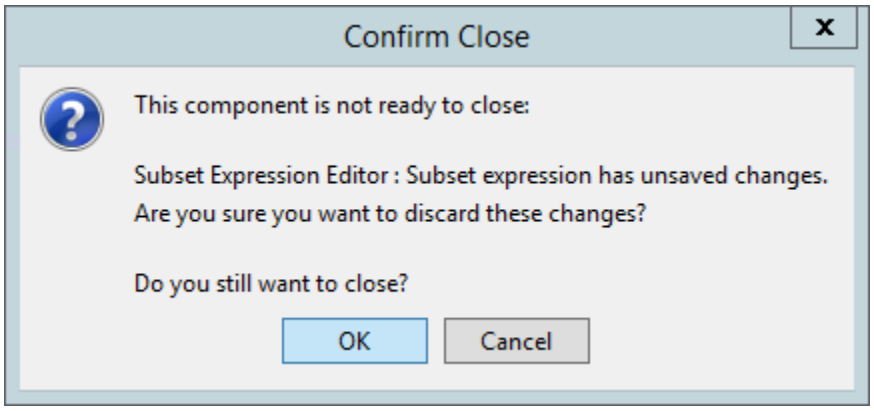

Click **OK** to close the component and disconnect without reviewing or updating unsaved data; displayed floating panels are closed when you disconnect. Click **Cancel** to disregard the disconnect request.

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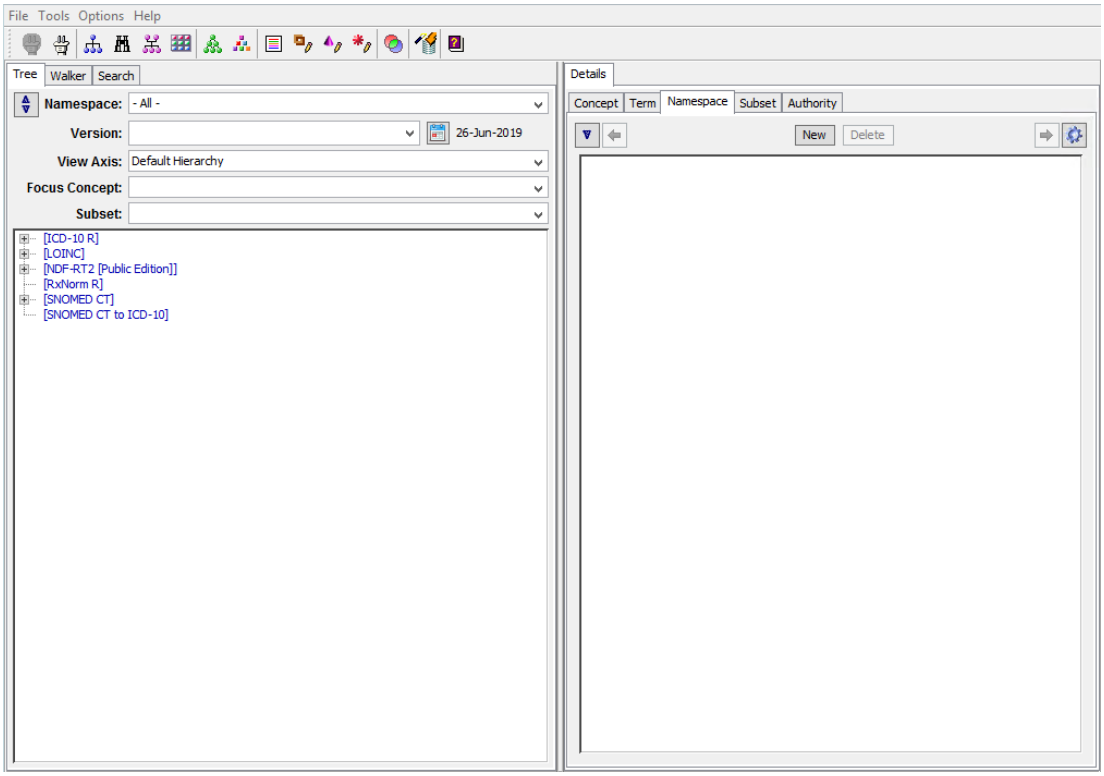
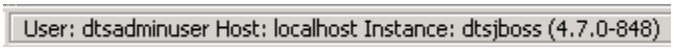
B. The DTS Editor Main Window

As soon as you complete the connection to the DTS server, your default DTS Editor Layout is loaded and the *DTS Editor* main window displays. The DTS Editor version number displays in the window header. The window consists of two main display panels. The panels available in the left pane of the window relate to global navigation and viewing tasks.

When the window first opens, the **Tree** tab is selected and the *Concept Tree* panel displays in the left pane. This panel will contain the "trees" association with all the available namespaces in your knowledgebase. The entry in the *Namespace* dropdown will be "- All -" . If you select a specific namespace from the *Namespace* dropdown field, this tree displays the concept hierarchy for the selected namespace in the knowledgebase.



You can navigate through the concept tree by clicking on the Expand ⊞ icon next to any entry. The *Details* tab panel displays in the right pane. Here, you may view concept details, term details, namespace details, subset details, and authority details by selecting the associated tab. By using this panel, you can also add new concepts, terms, namespaces, subsets, and authorities and edit their attributes locally. Each of these tab panels is discussed in more detail later in the guide. The **Status Bar** located at the bottom of the window indicates whether or not you are connected to the database.



The *Windows* **Text Edit** functions **Cut**, **Copy**, and **Paste** are available in many of the DTS Editor data fields through keyboard shortcuts (**CTRL-X**, **CTRL-C**, and **CTRL V**, respectively).

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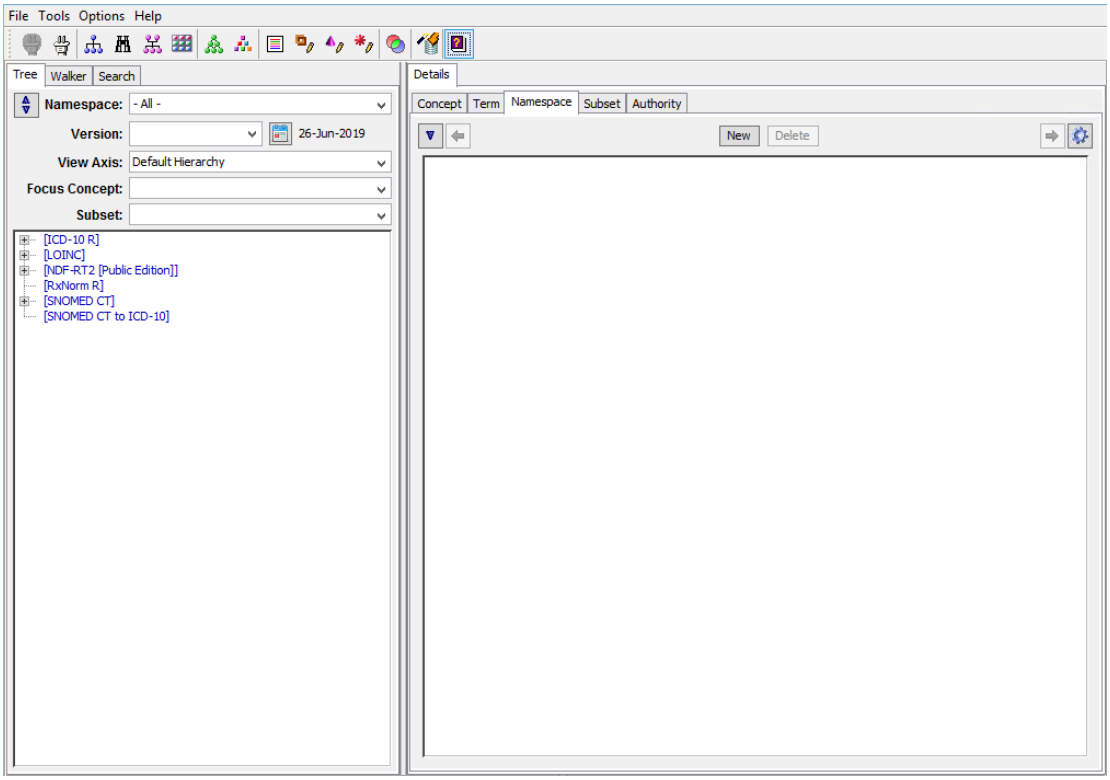
The captured values of Cut can also be customized. See the **Set Clipboard Formats** description below for further information.

B.1 Modify Main Window Panel Sizes

You can modify the display by clicking and dragging the edge of the pane you want to resize. Note the resized panes in the following illustration.



The resized panel settings are retained if you disconnect from the DTS Server, then reconnect.

B.2 DTS Editor Main Window Menu Options

B.2.1 File Menu

Connect - Establishes your connection to the DTS Server and the knowledgebase (you also can click the **Connect** icon in the toolbar).
Connect Parameters - Displays connection parameters on the *Connect Options* window.
Disconnect - Disconnects you from the DTS Server and the knowledgebase (you also can click the **Disconnect** icon in the toolbar).
Exit - Ends this DTS Editor session and exits the program.

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B.2.2 Tools Menu

Concept Tree - Displays the *Concept Tree* panel as a floating window (you also can click the **Open New Tree** icon in the toolbar). Use this window in addition to the *Concept Tree* panel, which you can display by clicking the **Tree** tab in the left pane.

Search - Lets you open the *Search* panel as a separate window (you also can click the **Search** icon in the toolbar). The *Search* panel allows you to search for a concept based on the parameters you specify. Use this window as an alternative to the *Search* panel, which you can display by clicking the **Search** tab in the left pane.

Concept Walker - Displays the *Concept Walker* panel as a floating window (you also can click the toolbar's **Open New Walker** icon). Use this window in addition to the *Concept Walker* panel, which you can display by clicking the **Walker** tab in the left pane.

Concept/Term Details - Displays the *Details* popup window (you also can click the **Open New Details Panel** icon in the toolbar. The *Concept/Term Details* window lists detailed information for any concept, term, namespace, subset or association you drag and drop on the window from anywhere else in the application.

Associations - Displays the *Association Editor* floating window, which allows you to create and maintain associations between concepts or terms within the same namespace, or across namespaces (you also can click the **Open Association Editor** icon in the toolbar). For each association you can specify one or more established **qualifier types** and **values**; these provide additional detail regarding the nature of a concept or term association (e.g., **Usually**).

Properties - Displays the *Property Editor* floating window, which allows you to view, create, and maintain properties for a concept or term (you also can click the toolbar's **Open Property Editor** icon). A property is a piece of user-defined information that can be linked to a concept or term, and can be used for any purpose. For each property you can specify one or more established **qualifier types** and **values**; these provide additional detail regarding the nature of a concept or term property (e.g., **Current**).

Synonyms - Displays the *Synonym Editor* floating window, which allows you to establish a synonymous term for a concept (you also can click the **Open Synonym Editor** icon in the toolbar).

Attribute Types – Displays the *Attribute Types* panel which combines the Association Types, Property Types, Qualifier Types, Kinds and Role Types editors, facilitating management of Types (metadata) for a specific Namespace.

The *Attribute Types* panel provides a "top level" tab structure to accommodate the richer Metadata features available in DTS Version 4.X. The **Namespaces** tab includes all the Namespace-based types*: Association Types, Property Types, Qualifier Types, Kinds* and *Role Types*. **Namespace Property Types** now have *Attaches To* values of *Namespace, Version, Concept,* and *Term*. **Namespace Qualifier Types** have Modifies values of *Concept Property, Concept Association, Term Property* and *Term Association*. The new **Subsets** and **Authorities** tabs includes types supported by these objects: *Property Types* and *Qualifier Types*. These types

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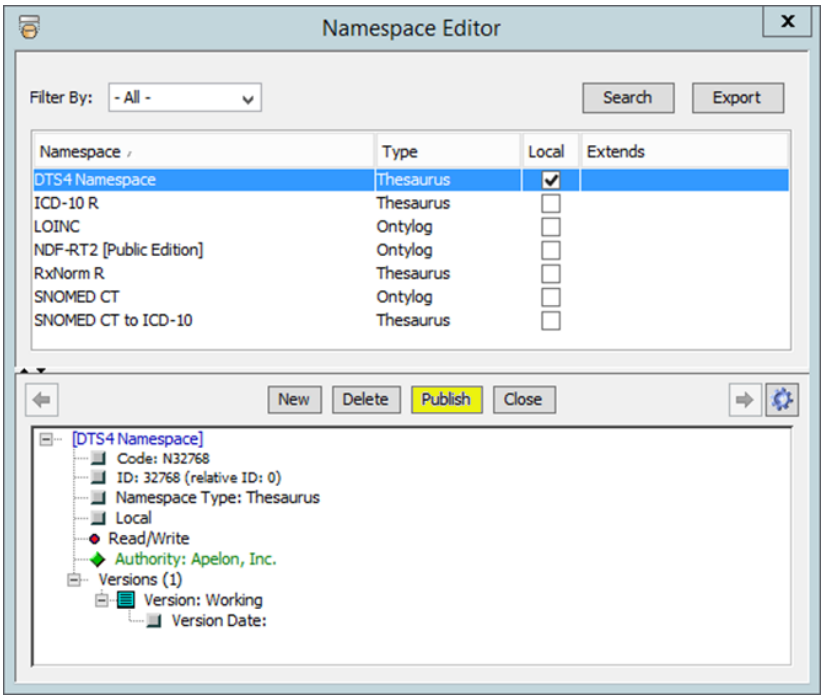
have *Attaches To* and *Modifies* values appropriate for their base object. Click this option to display the panel and manage attribute types.

Namespace Editor - Displays the *Namespace Editor* floating window, which allows you to view, create, publish, and maintain the namespaces in your knowledgebase. The *Namespace Editor* panel supports creating, editing, deleting and viewing of Namespaces and related data, including Version information. It also supports exporting the columns in the upper table view to the clipboard or as a locally saved .csv file. To review the data associated with a specific namespace, select the namespace from the list. The lower panel will fill with the data on the namespace. This panel is identical to the **Namespace** tab in the *Details* panel and provides similar functionality. See the *Detail* panel description for more information.

Specific to the Namespace Editor is the **Publish** option for local namespaces. This option is only enabled if the user has the 'Manage' NAMESPACE_MANAGE permission on the selected namespace. Publish finalizes the content in the Working version of the namespace and creates a new, named version. Pressing **Publish** opens the **Publish Version** dialog. Enter the name of the new version and click Publish to complete the operation. For a description of the Publish operation, see **Publishing** below.



Namespace Profile Editor

A Namespace Profile is a set of Namespace Attribute Types that are automatically added to a Namespace when the Namespace is created. The *Namespace Profile Editor* enables users to create, manage, and delete Namespace Profiles. Both User (specific to individual users) and System (accessible to all users) Profiles are available. The *Namespace Profile Editor* is available from this option, as well as from the *New Namespace* panel. See the **Namespace Profile View and Maintenance** section below for further information.

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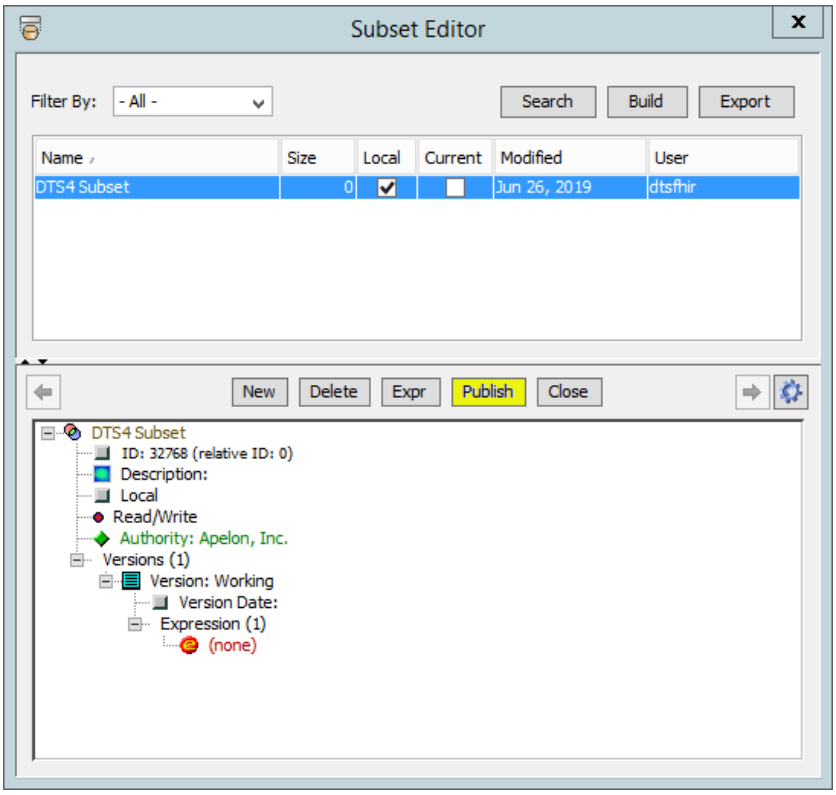
Subset Editor - Opens the DTS Editor *Subset Editor* panel as a floating window (you also can click the **Open Subset Editor** icon in the toolbar). The *Subset Editor* panel allows you to view, create, publish, and maintain the subsets in your knowledgebase. It also supports exporting the columns in the upper table view to the clipboard or as a locally saved .csv file. Refer to the *Subsets* discussion later in this guide for procedures on subset creation and maintenance.

Specific to the Subset Editor is the **Publish** option for subsets. This option is only enabled if the user has the SUBSET_MANAGE permission on the selected subset. Publish finalizes the content in the Working version of the subset and creates a new, named version. Pressing **Publish** opens the **Publish Version** dialog. Enter the name of the new version and click Publish to complete the operation. For a description of the Publish operation, see **Publishing** below.



Subset Profile Editor

Similar to a Namespace Profile, A Subset Profile is a set of Subset Attribute Types that are automatically added to a Subset when the Subset is created. The *Subset Profile Editor* enables users to create, manage, and delete Subset Profiles. Both User (specific to individual users) and System (accessible to all users) Profiles are available. The *Subset Profile Editor* is available from this option, as well as from the *New Subset* panel. See the **Subset Editor Panel** section below for further information.

Publishing - New Versions of both local Namespaces and Subsets can be created via the **Publish** feature of DTS 4.5. Publish is available via the associated button on the *Namespace Editor* and *Subset Editor* panels. After selecting, enter the name of the new Version and confirm the operation. When a Namespace is published, all data since the last published Version is

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"finalized", i.e., intermediate edits are removed and deleted Concepts and deleted Terms are changed to Inactive status. (The exception is Concepts and Terms added since the last Publish that are given a Deleted status will be completely removed, not inactivated.). Subset processing is similar. The new Version is then created and its Release Date set to the current time. Finally, the Published content is now considered Read-Only and a writable "Working" Version is created for further development. See the ***DTS Versioning Guide*** for more information on the publishing process.

Authority Editor – Displays the *Authority Editor* panel which provides creation, editing and deletion capabilities for Namespace Authorities, similar to those provided by the *Namespace Editor*. The *Authority Editor* panel supports creation, editing and deletion capabilities for Authorities. It also supports exporting the columns in the upper table view to the clipboard or as a locally saved .csv file. To review the data associated with a specific authority, select the authority from the list. The lower panel will fill with the data on the authority. This panel is identical to the **Authority** tab in the *Details* panel and provides similar functionality. See the *Detail* panel description for more information

Classify – Click this option to perform classification on an Extension local namespace (you also can click the **Classify** icon in the toolbar). Refer to the "Classify an Ontylog Extension Namespace" discussions in the ***DTS Classification Guide*** document for more on Ontylog and OntylogExtension namespace classification.

Concept Compare - The *Concept Compare* panel is available to show the differences between two versions of a Concept, or differences between two concepts. Drag the desired Concept(s) into the `Concept` combo, and then select the comparison and base Versions as desired. See the ***DTS Versioning Guide*** for further information.

Concept History – A new *Concept History* panel complements the *Concept Compare* panel and shows the history (across all Namespace Versions) of Concept Attributes for a selected Concept. See the ***DTS Versioning Guide*** for further information.

Grid Editor – The Grid editor tool opens a panel which facilitates the viewing and updating of terminology content by providing convenient ways to select concepts, or terms, of interest in a batch grid process. See the ***DTS Grid Editor Guide*** for further information

Subset Compare - Opens the *Subset Compare* panel to compare the Concept membership between two Versions of the same Subset, or between Versions of two different Subsets. The new *Subset Compare* panel is available to compare the Concept membership between two Versions of the same Subset, or between Versions of two different Subsets. For additional information on the *Subset Compare* panel, see the ***DTS Versioning Guide***.
For more information on other Tools items like *Subset Compare*, *Concept Compare*, and *Concept History*, refer to the ***DTS Versioning Guide***.

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B.2.3 Options Menu

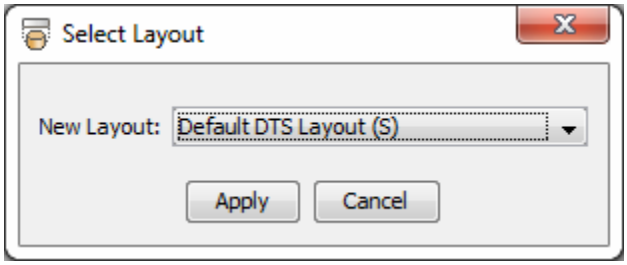
Audit Report – The Audit Report option allows a user to define specifications to run reports to receive an audit history for DTS Editor activity for a given namespace. The reporter can choose to include history for all or specific Users, all or specific Concepts, can choose to include related Terms and Attributes, and define a date range for which to gather the history. Data can also be sorted either by User, or by Date. Settings can be saved in order to rerun a report again in the future. When a report is run, data is exported and saved locally as a .csv file.

Set Clipboard Formats – Displays the *Set Clipboard Formats* panel. The DTS Editor supports system-wide keyboard copy (Ctrl-C) on displayed DTS objects to permit the transfer of information from DTS to other desktop applications. Multi-select copy is supported. The *Clipboard Formats* panel allow users to customize the strings created by the Editor in a copy operation. The **Clipboard Module** allows users to customize the strings created by the Editor in a copy operation. To use this option, select the **Set Clipboard Formats** option in the DTS Editor **Options** menu.

Configuration Options – Displays the *Configuration Options* panel which shows information relating to the configuration of this instance of the DTS Editor. The **Modules** tab of this panel displays the names and versions of all installed DTS Editor Modules. All Modules can be shown or only the System or User Modules by selecting from the Filter dropdown. The **Initializer** tab allows users to associate user-written ConceptTermInitializers with namespaces. Initializers are invoked when a new Concept or Term is being created and allow complete initialization of the object, including specification of Code, Id, Synonyms, Properties, or Associations. The previous Code and Id Generator option has been replaced by a more general ConceptTermInitializer capability in the Configurations option. User-written ConceptTermInitializers are invoked when a new Concept or Term is being created and allow complete initialization of the object, including specification of Code, Id, Synonyms, Properties, or Associations. See Appendix A - Custom Initialization of Concepts and Terms for more information.

Open Layout Editor – This item opens the *Layout Editor* panel. The Layout Editor supports the creation, editing and management of DTS Editor Layout specifications. See the DTS Editor Module Guide for a complete description of Layouts and use of the *Layout Editor*.

Select Layout – Displays the *Select Layout* dialog:



This dialog allows you to select and load a new DTS Editor Layout. Your User Layouts and all System Layouts are available in the dropdown. Select a Layout, press **Apply** and confirm your

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selection in the resulting dialog. The new Layout will be loaded. It will not be necessary to reconnect to your server.

Set Current Local Namespace – Lets you select the default local namespace, which determines the namespace used in dropdowns when adding and updating local content for a subscription namespace. You also can click the **Set Current Local Namespace** icon in the toolbar.

Preferences – This displays the *Preferences* panel which provides three sub-items for managing DTS Editor Panel "preference" settings:

> **AutoLocate Panel:** Enable/disable the AutoLocate configuration item. Checking (enabling) this item results in the Editor remembering the screen location of floating panels and opening new instances of the same panel type at the previous location.
> **AutoSize Panel:** Enable/disable the AutoSize configuration item. Checking (enabling) this item results in the Editor remembering the screen size of floating panels and opening new instances of the same panel type at the previous size.
> **Clear Preferences:** Selecting this item opens a confirmation dialog for clearing all the panel Preferences. If accepted, all saved panel locations and sizes will be reset to their defaults, generally centered in the Editor at their preferred sizes.

Module Manager - This option opens the *Module Manager* panel that enables the loading, updating, and removal of DTS Editor User Modules without direct user intervention. Module information is uploaded from an Internet accessible file. Module version information is available and Module actions (Add, Update, Remove) can be specified. These actions are performed on the next DTS Editor restart. For detailed information on Module Manager operation, see the **Using the Module Manager** section later in this document.

PUB/SUB Notifications – This option opens the *Configure DTS Notifiers* panel of the DTS Publish/Subscribe system. The Publish/Subscribe system supports notification of DTS server events, such as namespace creation and namespace version publishing, to client listeners (subscribers). Event notifications in the form of XML messages are sent to registered subscriber URLs. The *Configure DTS Notifiers* panel allows entry of listener URLs and specification of notification parameters. The PUB/SUB Notifications option is only enabled for users having the *apelondtsadmin* Application Server role. For more information, see the Publish Subscribe Introduction Guide.

User Manager - This module manages Roles and User Profiles. The **User Manager** enables the creation of DTS Roles and their association with Permissions, and the creation of DTS User Profiles and assignment of the Roles to these Users. The User Manager option is only enabled for users having the *apelondtsadmin* Application Server role. For more information, see the User Manager Guide.

B.2.4 Help

Help Topics - Provides online help (you also can click the **Help** icon in the toolbar). To simplify DTS documentation update and release processes, current documentation is hosted online at

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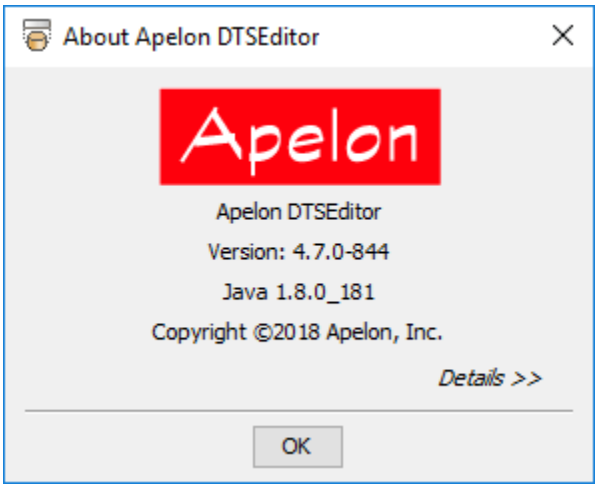
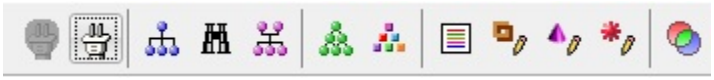
www.ApelonDTS.org.

About DTS Editor – Shows the DTS Editor version, copyright date, etc., for the DTS Editor instance. Additional technical information on the client and server configurations is available by clicking on the *Details* >> label in the popup:



B.3 DTS Editor Main Window Toolbar Options

Most of the options available from the menus on the *DTS Editor Main* window also are available from the window toolbar.



Connect to DTS Server - Establishes your connection to the DTS Server and the knowledgebase (you also can click **Connect** in the **File** menu).

Disconnect - Disconnects you from the DTS Server and the knowledgebase (you also can click **Disconnect** in the **File** menu).

Open New Tree - Displays the *Concept Tree* panel as a floating window (you also can click **New Concept Tree** in the **Tools** menu). Use this window in conjunction with the *Concept Tree* panel that you can display by clicking the **Tree** tab in the left pane. with the *Concept Walker* panel that you can display by clicking the **Walker** tab in the left pane.

Search – Displays the *Search* panel as a separate window (you also can click **New Search** in the **Tools** menu). The *Search* panel allows you to search for a concept based on

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the parameters you specify. Use this window in conjunction with, or as an alternative to, the *Search* panel that you can display by clicking the **Search** tab in the left pane.

Open New Walker - Displays the *Concept Walker* panel as a floating window (you also can click **New Concept Walker** in the **Tools** menu). Use this window in conjunction

Set Current Local Namespace - Allows you to select the default local namespace, to which you can add and maintain local content for a subscription namespace (you also can click **Set Current Local Namespace** in the **Options** menu).

Classify - Click to open the *Ontylog Classification* panel (you also can click **Classify** in the **Tools** menu). Refer to the *Classify an Ontylog Extension Namespace* discussions in the *Ontylog Extension Namespaces and Extension Namespace Classification in DTS* document for more on Ontylog Extension namespace classification.

Open New Details Panel - Displays the *Details* panel as a floating window, which lists detailed information for any concept you drag and drop on the window from anywhere else in the application (you also can click **Concept/Term Details** in the **Tools** menu).

Open Association Editor - Displays the *Association Editor* as a floating window, which allows you to create and maintain associations between concepts or terms within the same namespace, or across namespaces (you also can click **Associations** in the **Tools** menu).

Open Property Editor - Displays the *Property Editor* as a floating window, which allows you to view, create, and maintain properties for selected concepts (you also can click **Properties** in the **Tools** menu).

Open Synonym Editor - Displays the *Synonym Editor* as a floating window, which allows you to establish a synonymous term for a concept (you also can click **Synonyms** in the **Tools** menu).

Open Subset Editor - Displays the *Subset Editor* as a floating window (you also can click **New Subset Editor** in the **Tools** menu). The *Subset Editor* panel allows you to view, create, publish, and maintain the subsets in your knowledgebase. Refer to the *Subsets* discussion later in this guide for procedures on subset creation and maintenance.

Help - Provides online help (you also can click **Help Topics** in the **Help** menu). To

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simplify DTS documentation update and release processes, current documentation is hosted online at www.ApelonDTS.org.

B.4 DTS Editor Main Window Tab View Options

The following tabs are displayed in the left DTS Editor panel (under the icon bar described above) when the *DTS Editor Main* window opens initially. Each brief introduction that follows outlines the view panel displayed when you click the appropriate tab. Detailed procedures and discussions on use of these panels are provided later in the guide.

Tree - The *Concept Tree* view panel displays as the default in the left pane when the main window first opens. When either of the other panels (**Search** or **Concept Walker**) displays in the left pane, click the *Tree* tab to redisplay the concept tree. This tree unfolds the taxonomy to display the concept hierarchy in a selected namespace in the knowledgebase, or an association tree.

Walker - Displays the *Concept Walker* panel, which lists the parents and children of a concept in the selected namespace.

Search - Displays the *Search* panel, which allows you to search for concepts based on the parameters you specify (**Name**, **Property**, **Role**, etc.).

B.4.1 DTS Editor Keyboard Options

Press the **Enter** key to perform the default action (e.g., **Apply**, **Close**, **OK**, etc.) in any panel or popup window. Press the **Esc** key to close any displayed popup window.

B.4.2 View Concept Tree – *Tree* Panel *aka* Tree Tab

The DTS Editor *Concept Tree* panel lists concepts in a "tree" format for easy viewing. As mentioned earlier, the *Concept Tree* panel displays in the left pane when the *DTS Editor Main* window first opens, or when you click the *Tree* tab. Top-level namespaces/concepts ("nodes") in the hierarchy display in a collapsed view. You can expand or collapse segments of the tree to display only those elements you want.

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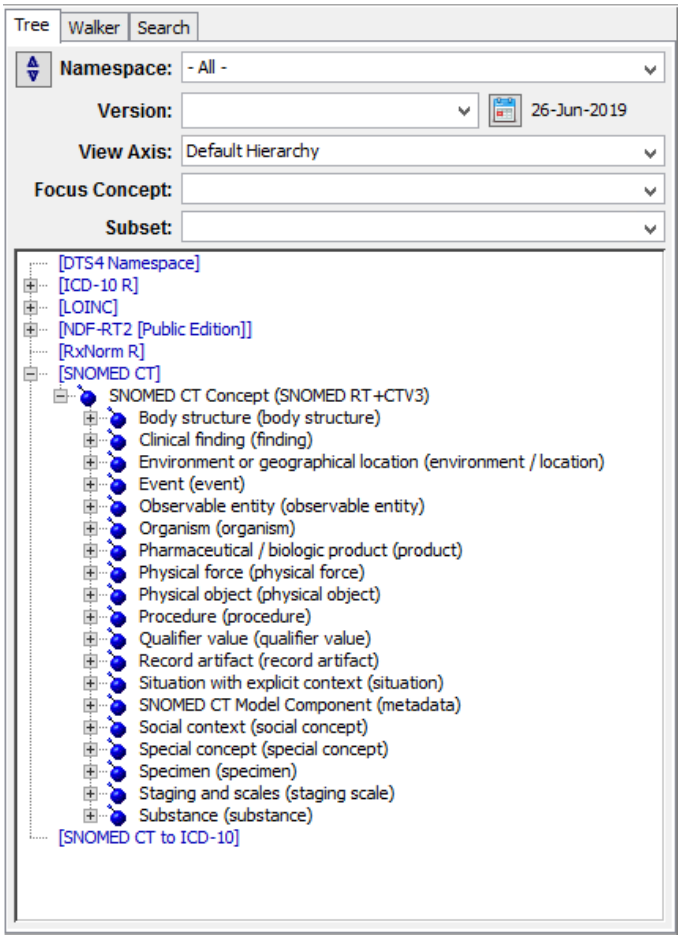
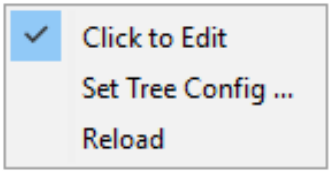


B.5 Concept Tree Panel Display Preferences

Right click in a white-space area of the *Concept Tree* panel to view the *Concept Tree* display preference settings.

B.5.1 Click to Edit (Ontylog or Thesaurus Tree)

The **Click to Edit** option (on by default) is available for either an Ontylog or a Thesaurus tree. If you click **Click to Edit**, any concept you select displays automatically in the *Details* panel. If you unselect this option, you will need to drag the selected concept to the *Details* panel for view.



B.5.2 Set Tree Config...

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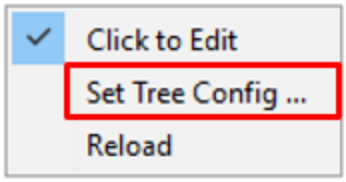
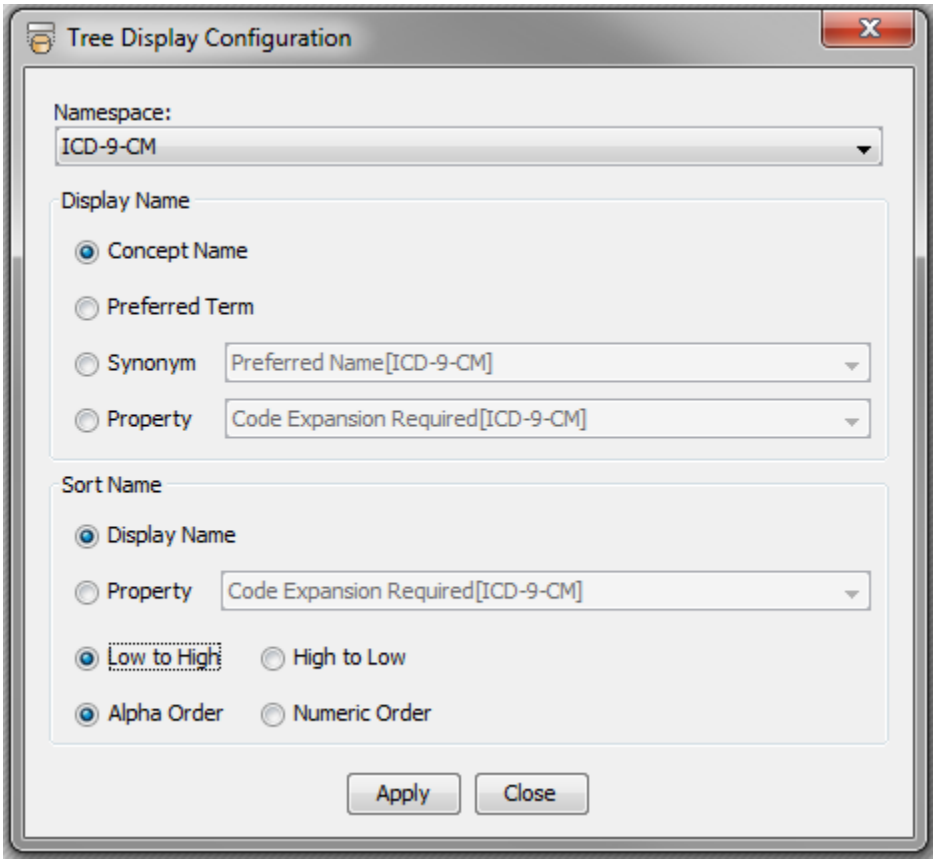


The *Set Tree Config…* panel allows you to configure the *Display Name* and *Sort* parameters for each namespace in your knowledgebase.



Namespace - From the Namespace field you can select the Namespace that you would like to customize.

Display Name - You can change the Display Name to another attribute, *Concept Name, Preferred Term, a specified Synonym,* or a *specified Property*. The default is set to the *Concept Name*.

Sort Name - You can change the **Sort Name** to *Concept Name or a specified Property*. The **Sort Order** can be set from *Low to High* or *High to Low* and *Alpha Order* or *Numeric Order*.
Any changes you make to the *Concept Tree* panel display settings are retained if you disconnect from the current session (**File>Disconnect**) or exit the DTS Editor (**File>Exit**).

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B.5.3 Reload Tree

The **Reload** option allows you to manually refresh the Tree when data has been externally modified.

B.5.4 Icons and Colors

The following icons indicate concept or term attributes in the DTS Editor. These icons and colors are defined in advance for you (you cannot modify them).

Symbol/ color	Description
	Indicates a concept object (used in multiple panels).
	Indicates a term object (used in multiple panels).
	Indicates a concept in the *Concept Tree* panel. In the *Concept/Term Details* panel, indicates a subconcept of the concept displayed in the detailed view.
	In the *Concept/Term Details* panel, indicates a Superconcept of the concept displayed in the detailed view.
	In the *Concept Tree* and *Concept/Term Details* panels, indicates a synonym for a concept.
	In the *Concept Tree* and *Concept/Term Details* panels, indicates a property (such as print name, medical code, etc.) for a concept.
	In the *Concept Tree* and *Concept/Term Details* panels, indicates the role that relates one concept to another.
	In the *Concept Tree* panel, indicates the non-editable values **concept Code**, **concept ID**, and **Namespace**.
	In the *Concept Tree* and *Concept/Term Details* panels, indicates an association between one concept and another.
	In the *Concept Tree* and *Concept/Term Details* panels, indicates an association or property qualifier for a concept.
	In the *Concept Tree* panel, indicates that the concept in the detailed view is included in the subset that is listed.
	In the *Subset Editor* and *Subset* tab of the *Details* panel, indicates the Subset Description. In the *Concept* and *Term* tabs of the *Details* panel, indicates that the object Status is modifiable.
	In the *Namespace Editor*, *Subset Editor* and *Namespace* and *Subset* tabs of the *Details* panel, indicates a Version of the associated DTS object.
	In the *Subset Editor* and *Subset* tab of the *Details* panel, indicates the Subset Expression.
	Indicates that the Read-Only/Read-Write attribute of Namespaces and Subsets is modifiable (used in multiple panels).
	Indicates that the Authority attribute of Namespaces and Subsets is modifiable (used in multiple panels).

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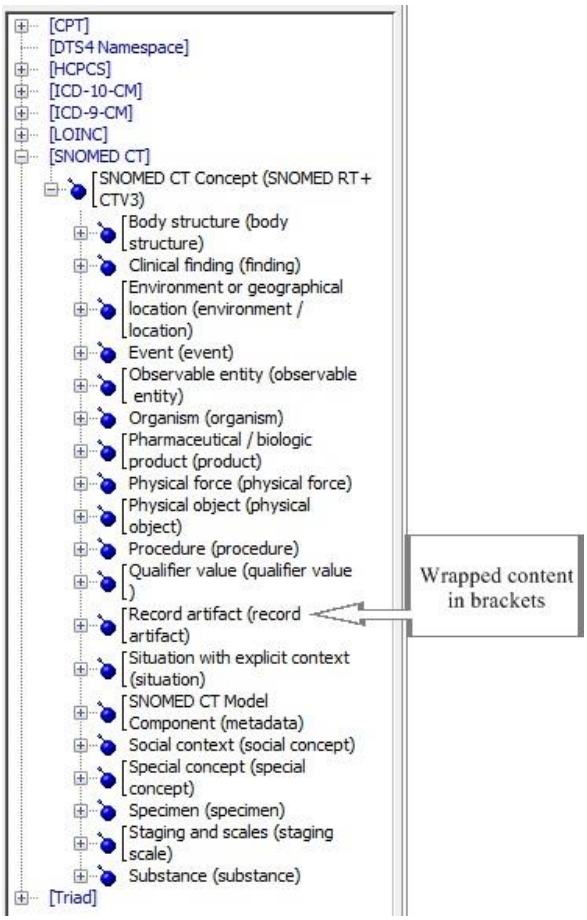
B.5.5 Concept Name and Attribute Text Wrapping

If lengthy concept names and/or attribute text extend beyond the border of the *Concept Tree* panel, the text will wrap around to a new line. The concept name or attribute text also will be enclosed in brackets.



If you enlarge the *Concept Tree* panel, the panel size setting is retained if you disconnect from the DTS Server, then reconnect. During the next session, the text wrapping and brackets will be removed if they are not required in the larger panel.

B.6 Multiple Panel Instances

The DTS Editor allows you to open multiple occurrences of the *Concept Tree*, *Concept Walker*, and *Search* panels by selecting these options from the **Tools** menu, by clicking the appropriate tab, or by clicking the corresponding icon in the toolbar. Each instance of the panel displays as a free-floating, sizable window; the size and location of these floating panels are retained for future sessions.

You can view, compare, and drag information from multiple instances of each window. The data in each instance of the window can be from the same namespace, or can reflect data from different namespaces. Drag and drop capability between the DTS Editor windows and panels lets

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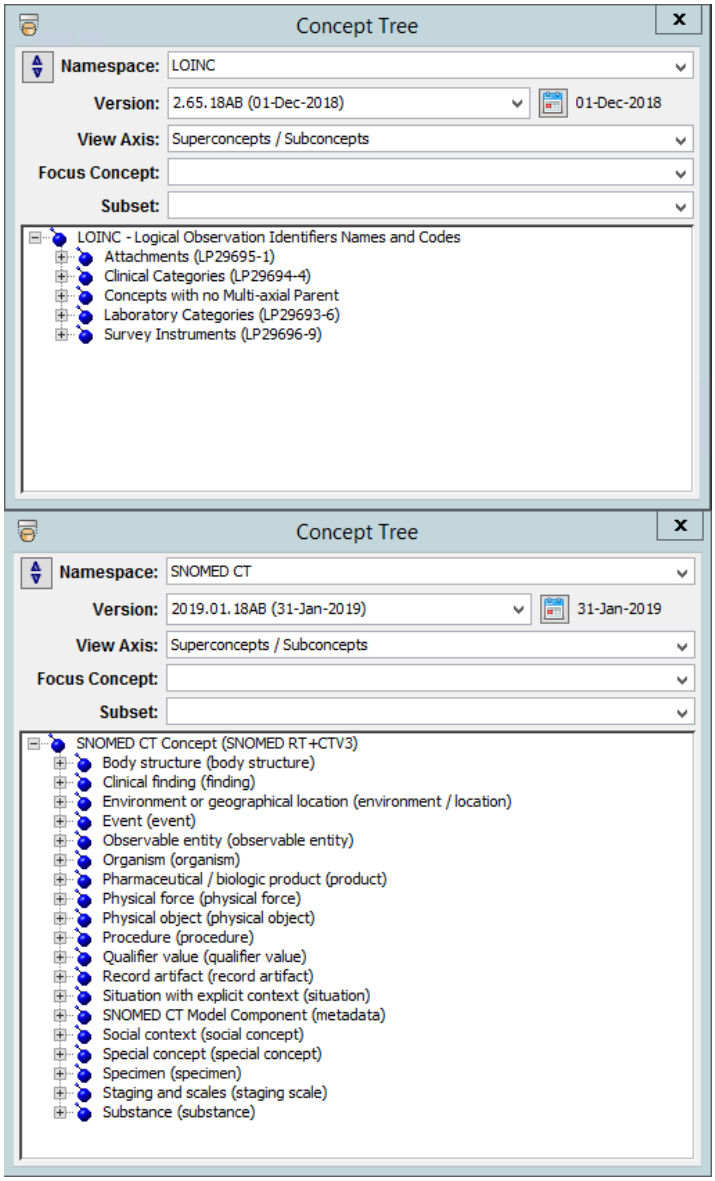
you create associations between namespaces, and view the results immediately on the *Concept Tree* panel.

In the following illustration, two floating instances of the *Concept Tree* panel window (each showing a different namespace) have been opened and placed over the left side of the DTS main window.



In the next illustration, the main *Concept Tree* panel displays in the left pane, and an additional floating *Concept Tree* panel has been placed in the bottom right of the DTS main window.

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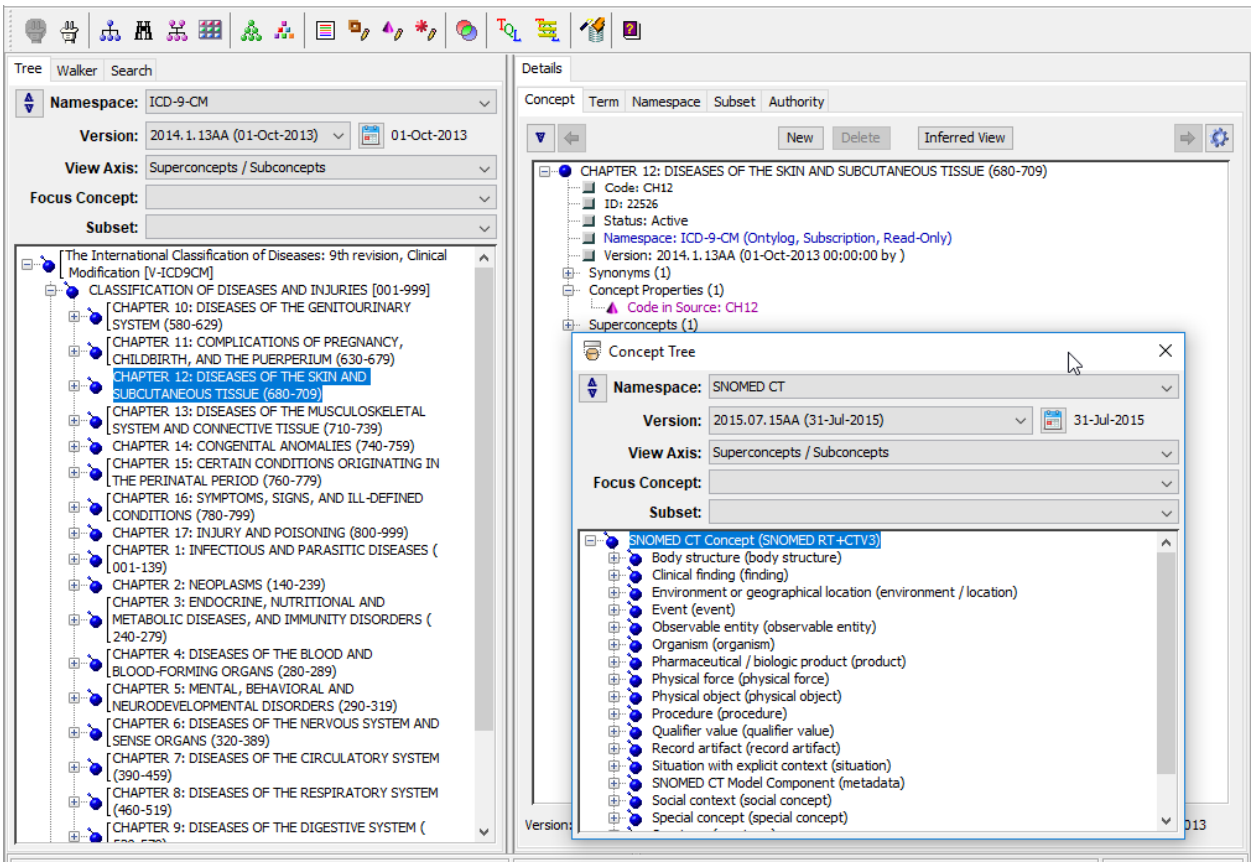

B.7 Customize the Tree View

The *Tree* panel initially displays trees for all namespaces. Follow these procedures to select a specific namespace for which you want to view data. The format of the concept tree display depends in part on the type of namespace you select, **Ontylog** or **Thesaurus**. Based on the view parameters, you configure the tree to display in either a hierarchical format (subconcepts/superconcepts) or an association format that reflects concepts associated with a specific **focus** concept. You can expand and collapse the tree in either format, as needed. Formats that display subset participation are also available.

B.7.1 Hierarchy Tree View

Select the namespace for which the concept tree will display from the *Namespace* dropdown field list. Click the dropdown arrow to display all namespaces available for view options.

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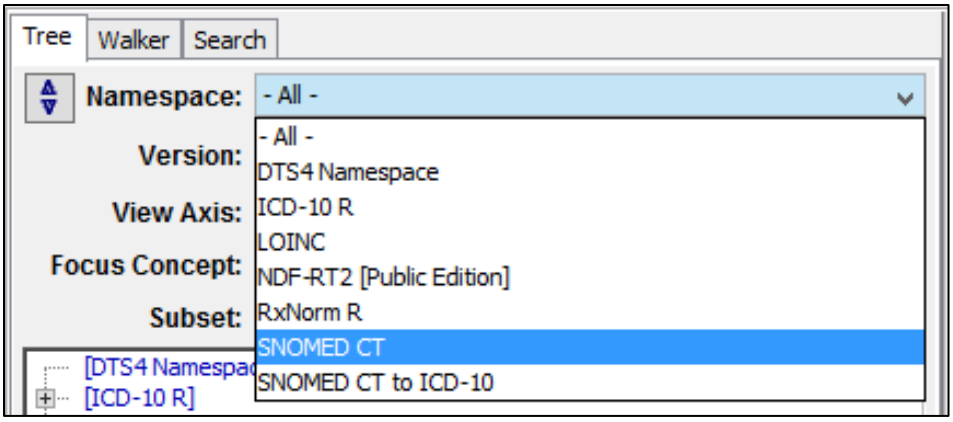
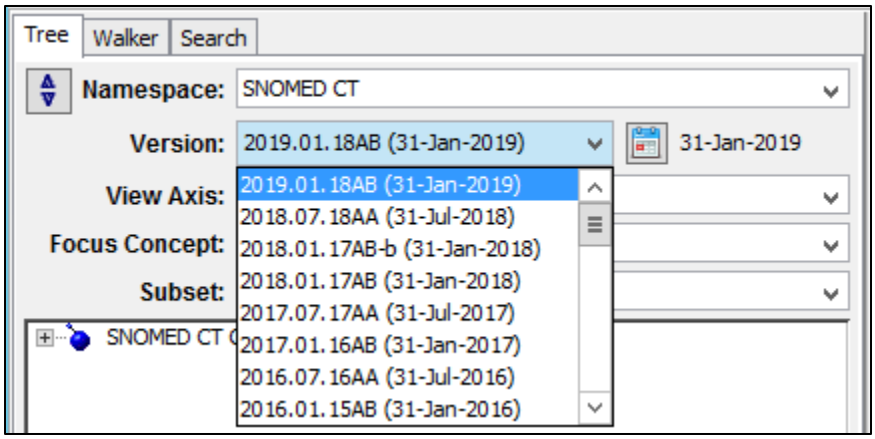
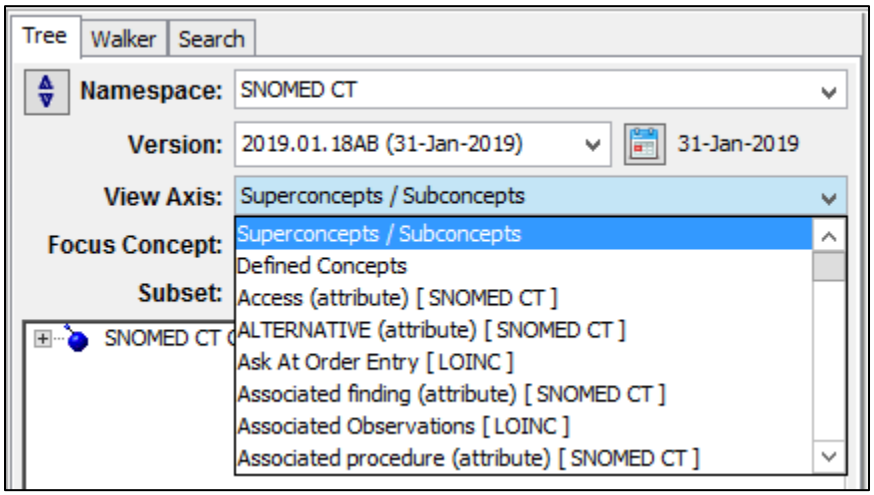


Select the namespace version for which the concept tree will display from the Version field dropdown field list. The default is the most recent version. For more information on the Version selection widget, see the Versioning Guide.



When you select an Ontylog namespace for view, the default in the *View Axis* dropdown field is **Superconcepts/Subconcepts**, which results in a hierarchal view of the namespace concepts.



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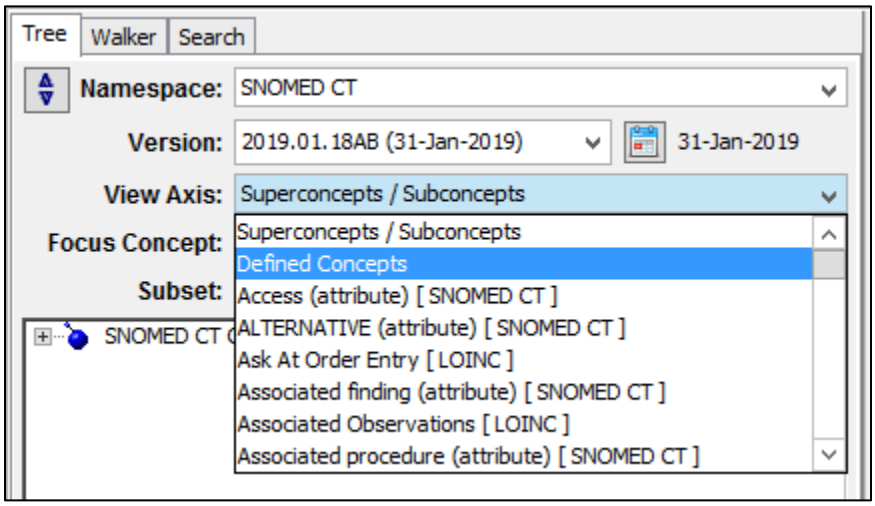
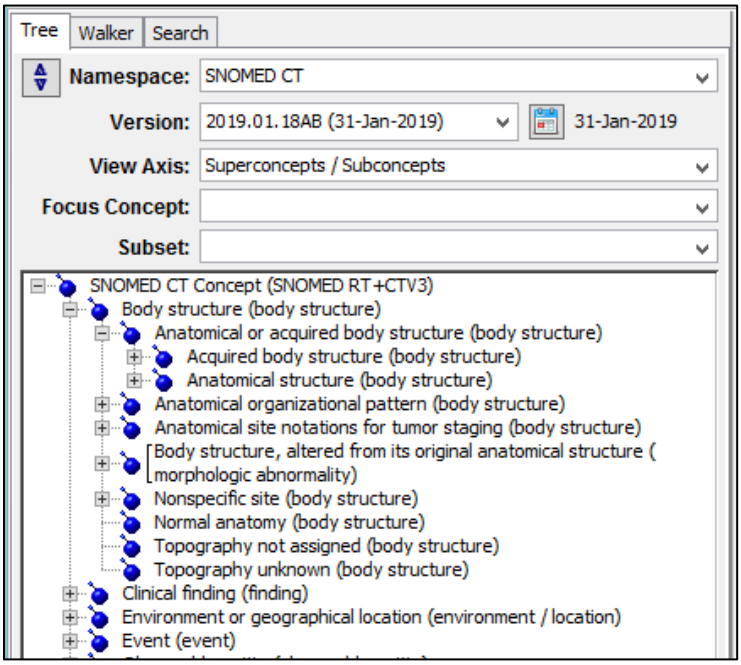
You may also select **Defined Hierarchy** which will display concepts instead of the Super/Sub hierarchy, but by their definition hierarchy.



To expand a selection to view lower-level nodes, click adjacent the **Expand** button ⊞ . When expanded, the concepts are listed in a hierarchical scheme, or "taxonomy."



If there is no **Expand** button adjacent to a concept, it indicates there are no additional subconcepts hidden for the concept. The nodes immediately above a concept are called direct superconcepts (**parents**). Nodes immediately below a concept are called direct subconcepts (**children**).

As you expand the tree, you may want to collapse the tree to view only the higher levels of the hierarchy. Click the **collapse** button ⊟ to hide the subconcepts.

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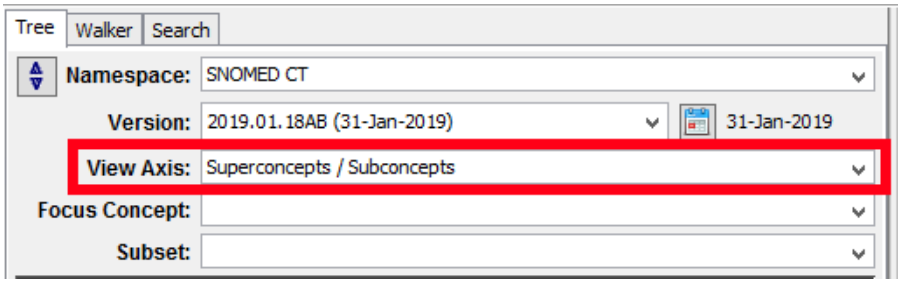
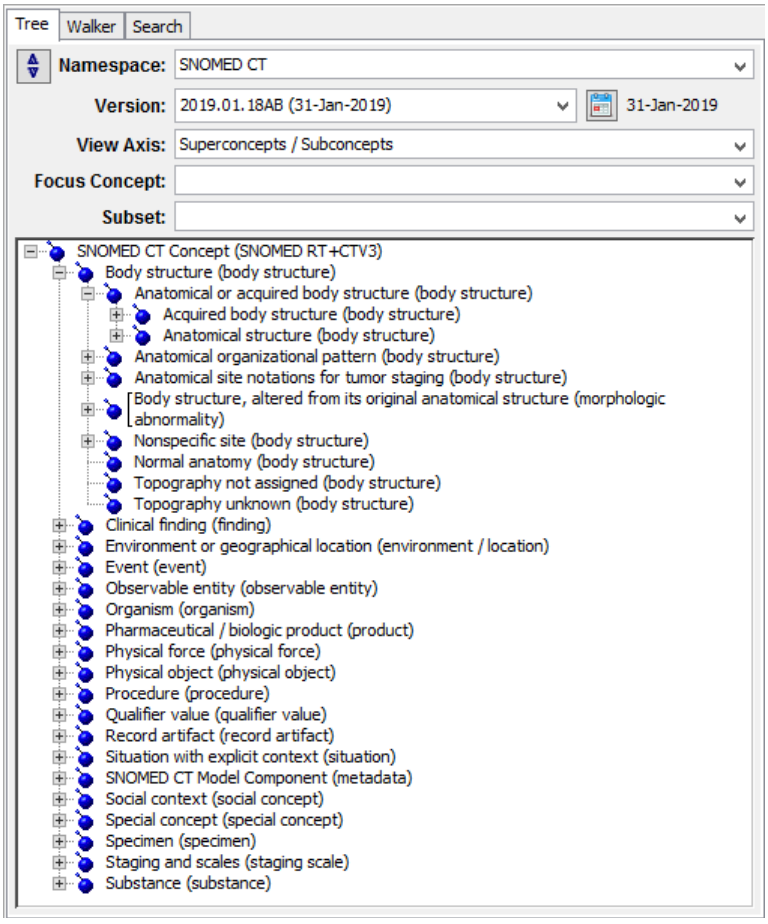
B.7.2 Association Tree View

Select the namespace for which the concept tree will display from the *Namespace* dropdown field list. Click the dropdown arrow to display all namespaces available for view options. When you select an Ontylog namespace for view, the default in the *View Axis* dropdown field is **Superconcepts/Subconcepts**, which results in a hierarchal view of the namespace concepts. If you wish, you can configure a tree view that consists of all concepts for which **associations** are established for a specified concept. An association is a relationship between concepts and/or terms within a namespace, or across namespaces.

The default association type for an association tree configuration is **Parent Of**.



The association tree that displays in the *Concept Tree* panel reflects the default association type.



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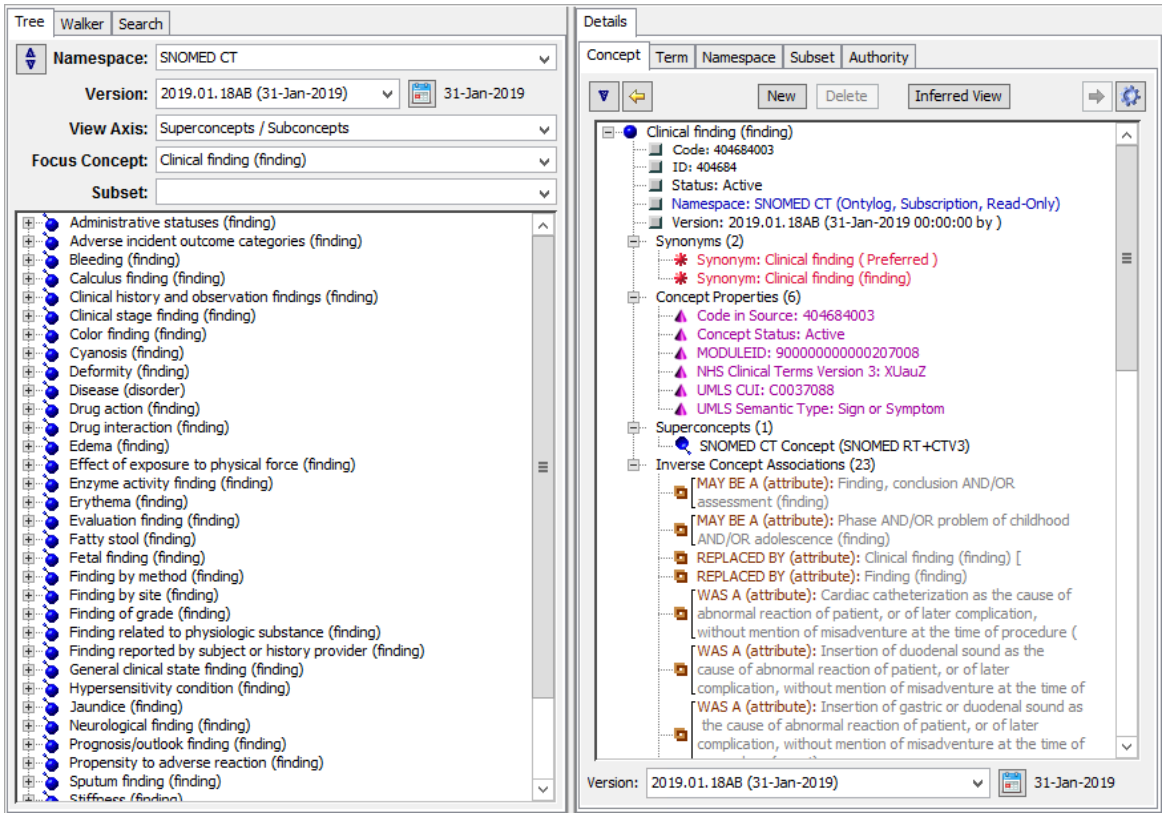
You have the option of selecting another association type on which to base the tree view. Click the arrow on the *View Axis* field to list all existing concept associations in the knowledgebase. Click the desired association to select it; the namespace in which the association was created displays in parentheses.
You also have the option of establishing a **focus concept** in your association tree. The focus concept serves as the **root** concept in your tree view.

Drag a concept from another panel or window (e.g., *Concept /Term Details* panel) and drop it into the *Focus Concept* field. The focus concept sets the starting point (i.e., root, or threshold) for the chain of associations to be displayed.



To view concepts with associations to those listed in the displayed association tree, click the **Expand** button ⊞ next to the desired concept in the tree. Note the illustration.

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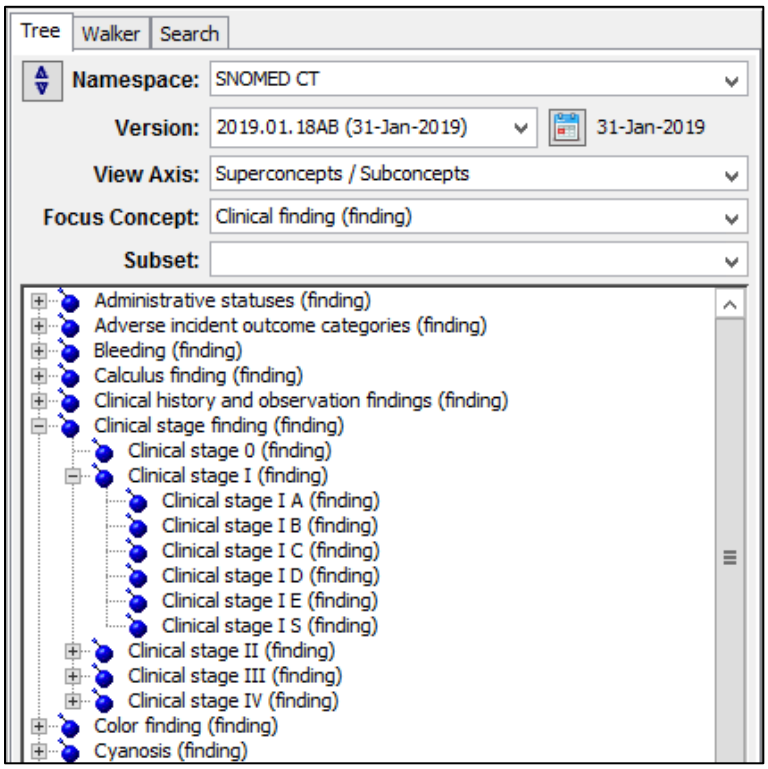

B.7.3 View Concepts in a Selected Namespace Subset

A **subset** is a set of concepts that you can create from namespaces and other subsets, based on selection criteria that you define.

The concepts in each subset can share associated attributes, and each subset may include a few concepts or many concepts. Refer to the *Subsets* discussion later in this guide for procedures on subset creation and maintenance.

If the namespace in the view has one or more subsets created for it, you can choose to highlight each concept in the *Tree* view that was selected for a subset. The *Subset* field dropdown lists all existing subsets for (only) the namespace in the view; the subsets display in gold color.

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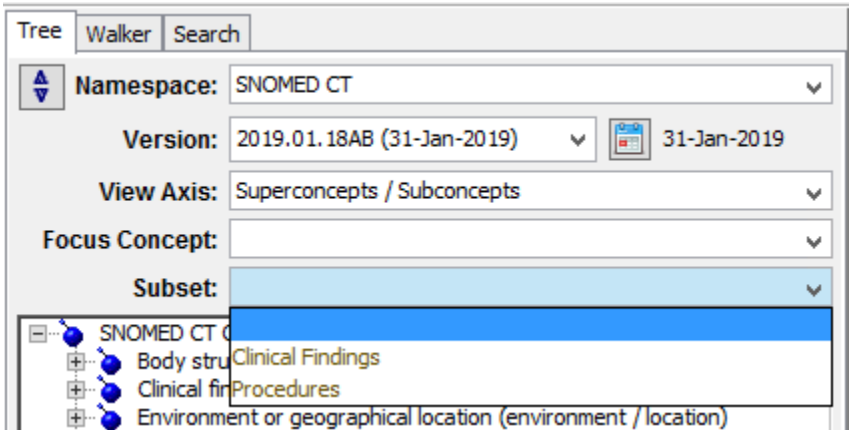
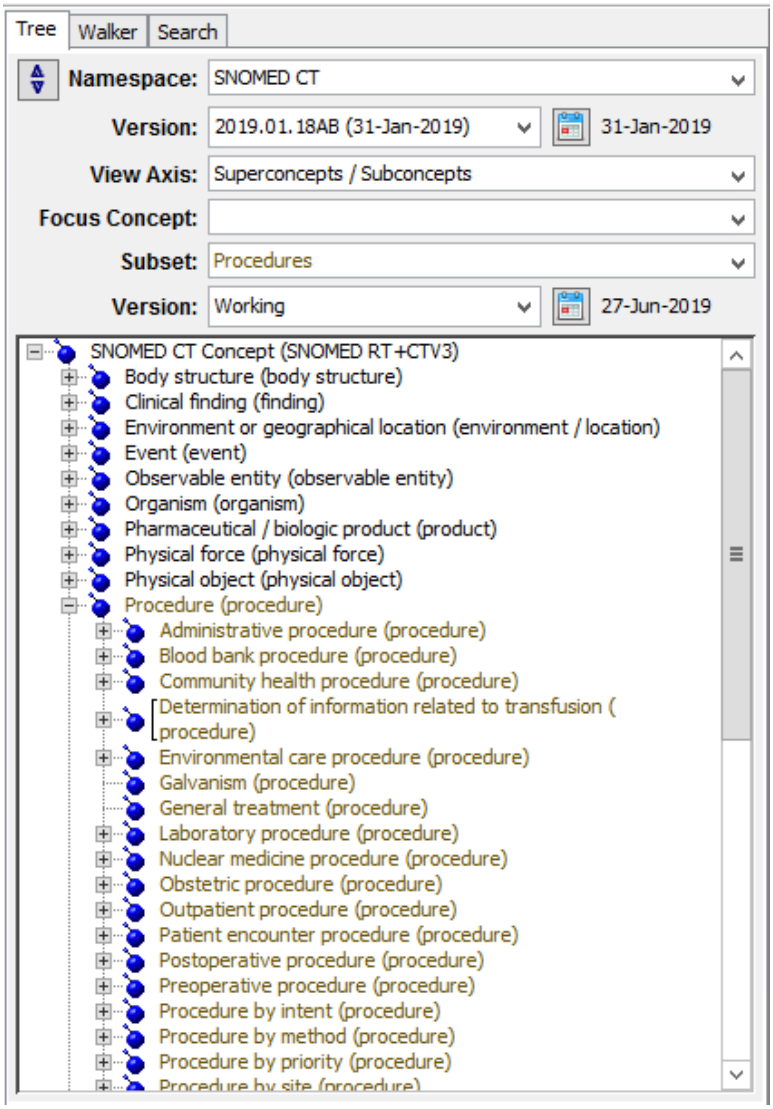


Click the desired subset in the list. Each namespace concept that is included in that subset is highlighted (in gold color) in the hierarchy tree in the *Concept Tree* panel.



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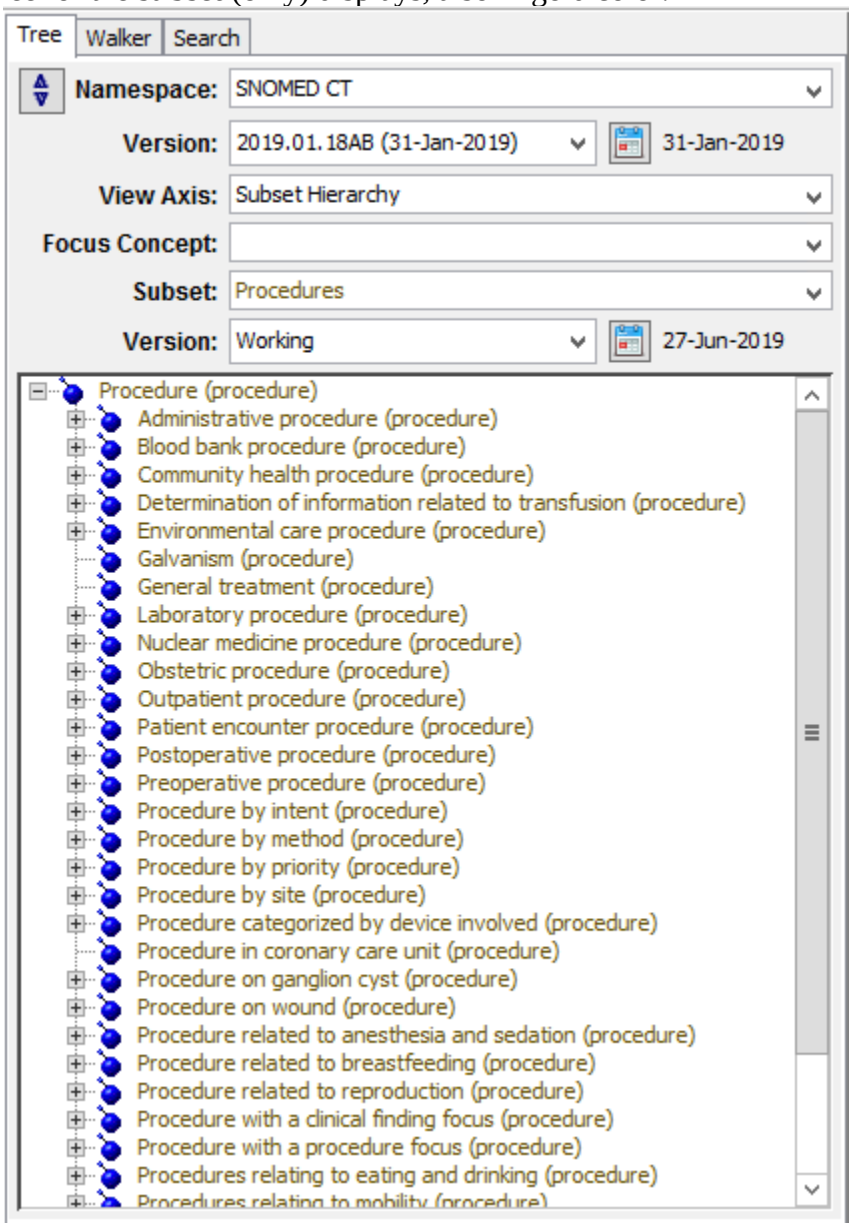
You also can view the concept hierarchy within each subset. From the *View Axis* field dropdown list, select **Subset Hierarchy** (**Subset Hierarchy** is enabled as a selection only when a namespace that has existing subsets is in the view). From the *Subset* field dropdown list, select the subset for which you want to view a concept hierarchy.

The hierarchy tree for the **subset** (only) displays, also in gold color.



Click the Expand ⊞ and collapse ⊟ buttons to view and hide subconcepts, as needed.

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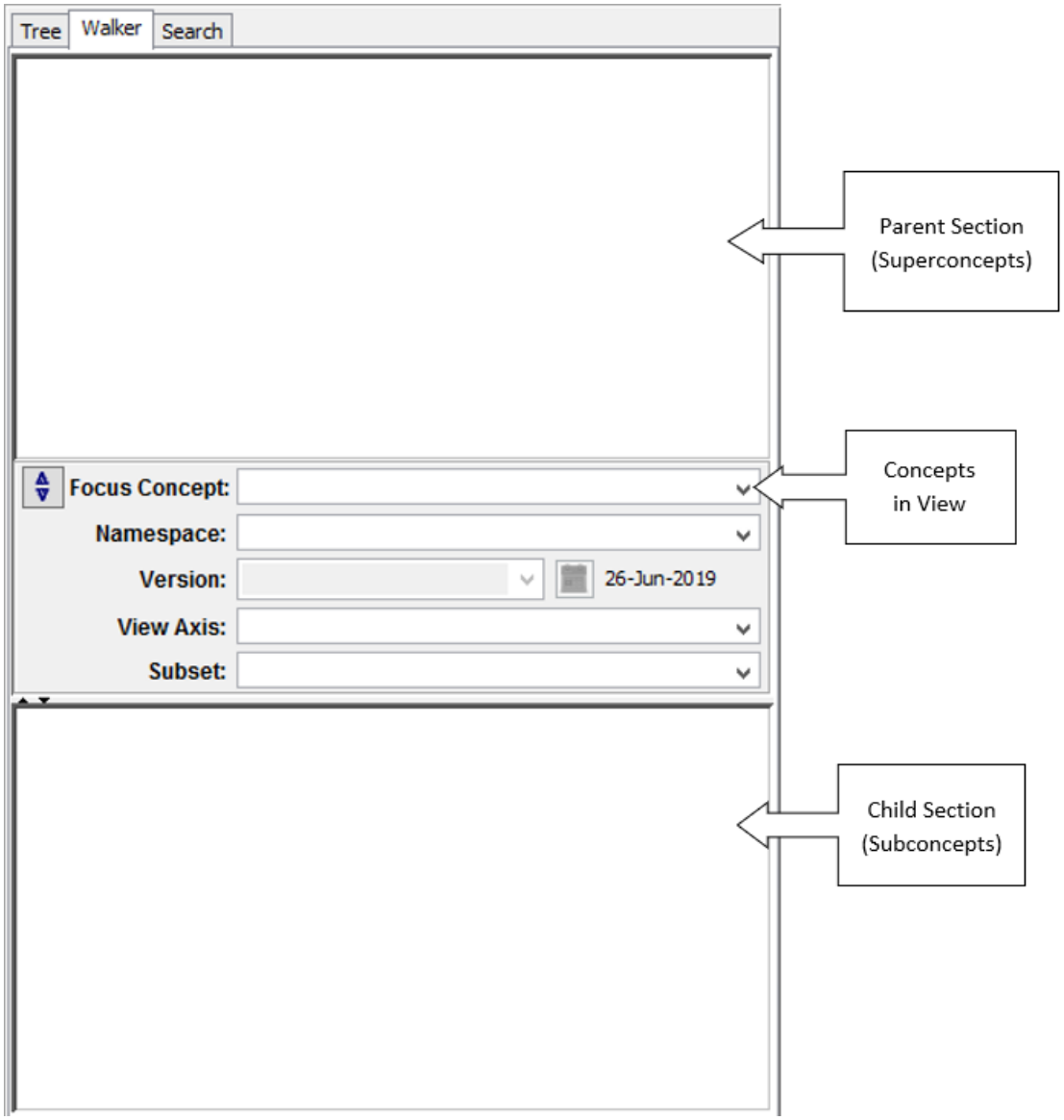
B.8 Concept Walker View

The Concept Walker provides a view of a selected concept's place in the Concept Tree, and its relationships with other concepts. You can configure the view to reflect either a Subconcept/Superconcept hierarchical, Defined Concepts hierarchical, or an association format that reflects concepts associated with a specific **focus** concept. Formats that display subset participation are also available.

B.8.1 Hierarchy View

Follow this procedure to display and use the *Concept Walker* panel to provide a view of the selected concept's relationships (i.e., ancestor and descendant concepts).

1. Click the *Walker* tab in the upper-left portion of the *DTS Editor Main* window. The *Concept Walker* panel displays in the left pane.



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The dropdown field in the center of the panel (*Focus Concept*) is where you select the concept for which relationships will be listed. If you used the Concept Walker earlier in the current session, previous focus concepts are retained in the *Focus Concept* field pull-down list for your selection.

2. You can drag any concept visible on another window or panel (*Search* panel, *Concept/Term Details* panel, etc.) to the *Focus Concept* field on the *Concept Walker* panel. For example, click the *Search* tab to display the *Search* panel, or click the **Search** icon in the toolbar to display the floating *Search* window; you can position the floating window so that it is adjacent to the *Concept Walker* panel.

   Drag a concept to the *Focus Concept* field and release the mouse to drop the concept.

3. When you select a focus concept from an Ontylog namespace for view, the default in the *View Axis* dropdown field is **Superconcepts/Subconcepts**, which results in a hierarchal view of the namespace concepts. You also have the option of the Defined Concept hierarchy for Subscription Ontylog Namespaces.

4. If the focus concept you selected is from an Ontylog namespace, the name of that Ontylog namespace displays in the *Namespace* field. If any **Ontylog Extension** namespaces exist for that namespace, these will be listed in the *Namespace* field dropdown list.

   An Ontylog Extension namespace is an extension of a specifically linked **Ontylog Subscription** namespace. You create an Ontylog Extension namespace to create and maintain new local content for the linked Ontylog subscription namespace. From the list, select the Ontylog Extension namespace for which you want to display a hierarchy view. Refer to the *Concept Walker View and Ontylog Extension Namespaces* discussions in the *Ontylog Extension Namespaces and Extension Namespace Classification in DTS* document for more on using the Concept Walker with Ontylog Extension namespaces.

5. If your *Focus Concept* has one or more parents, these display in the **Parent** section above the *Focus Concept* dropdown field. The section below the *Focus Concept* dropdown field displays the subconcepts, or children, of the concept.

6. In the **Parents** section, you can expand any visible ancestor concept to list its parent concepts. Click the **Expand** button ⊞. Higher-level concepts are listed in inverse order to their place in the hierarchy tree.

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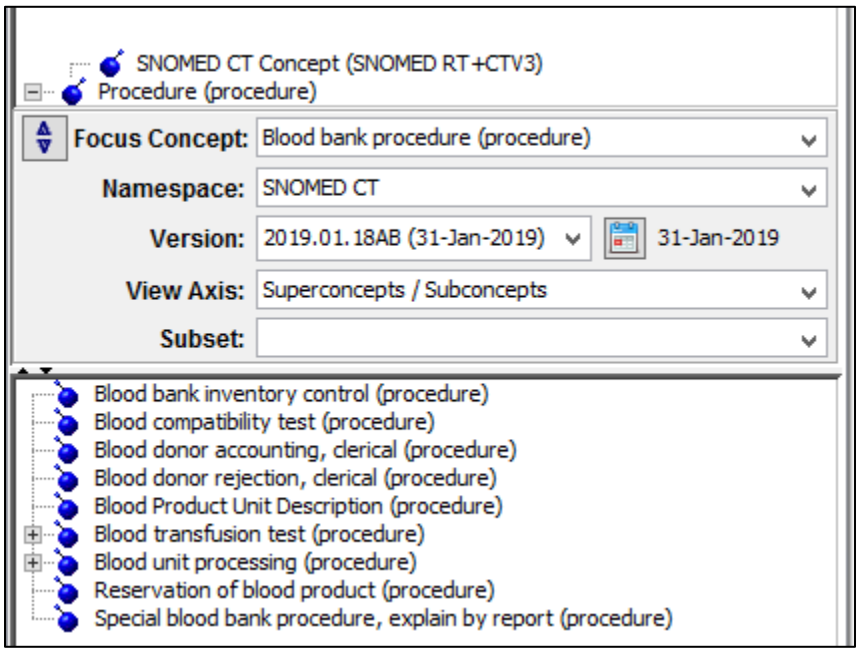

7. In the **Subconcepts** section, click the **Expand** button ⊞ to expand the hierarchy and list children for any visible descendant of the concept you selected. The focus concept is the root for this part of the view.

B.8.2 Association View

You can configure a Concept Walker view that consists of all concepts for which **associations** are established for a specified concept. Each association is a relationship between concepts and/or terms within a namespace, or across namespaces.
Follow this procedure to display and use the *Concept Walker* panel to provide a view of associations for the selected concept.

1. Click the *Walker* tab in the upper-left portion of the *DTS Editor Main* window. The *Concept Walker* panel displays in the left pane.

   The dropdown field in the center of the panel (*Focus Concept*) is where you select the concept for which relationships will be listed. If you used the Concept Walker earlier in the current session, previous focus concepts are retained in the *Focus Concept* field pull-down list for your selection.

2. You can drag any concept visible on another window or panel (*Search* panel, *Concept/Term Details* panel, etc.) to the *Focus Concept* field on the *Concept Walker* panel. For example, click the *Search* tab to display the *Search* panel, or click the **Search** icon in the toolbar to display the floating *Search* window; you can position the floating window so that it is adjacent to the *Concept Walker* panel.

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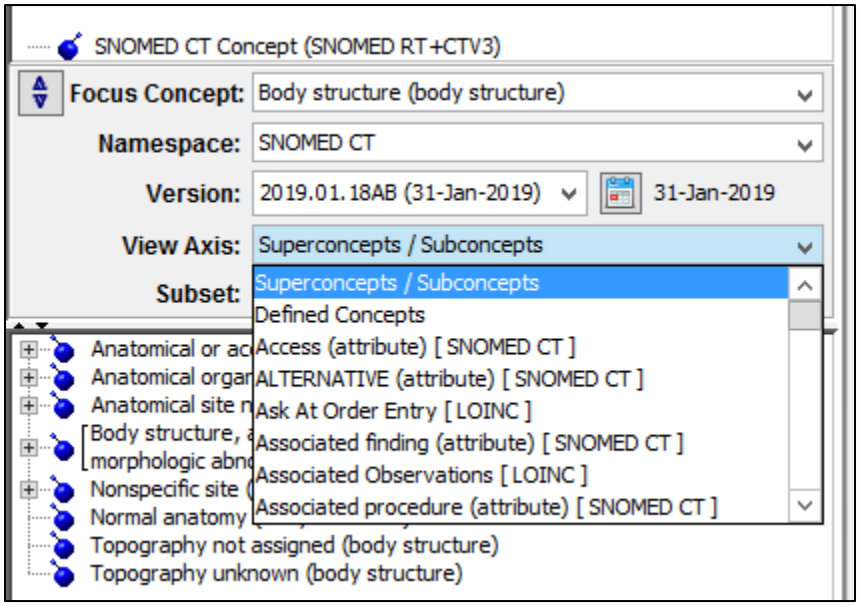
3. Drag a concept to the *Focus Concept* field. When the field changes to yellow, unclick the mouse to drop the concept. The focus concept will serve as the **root** concept in your association view.

4. When you select a focus concept from an Ontylog namespace for view, the default in the *View Axis* dropdown field is **Superconcepts/Subconcepts**, which results in a hierarchal view of namespace concepts. Click the arrow on the *View Axis* field to list all existing concept associations within all the namespaces in your knowledgebase.



Click the desired association to select it (the namespace in which the association was created displays in parentheses). The concept(s) for which there are associations with the *Focus Concept* are listed in the *Concept Walker* panel. In the following illustration for the focus concept **Allergy (LP31625-4)**, the concepts associated through the association **Multiaxial Parent Of** are listed.

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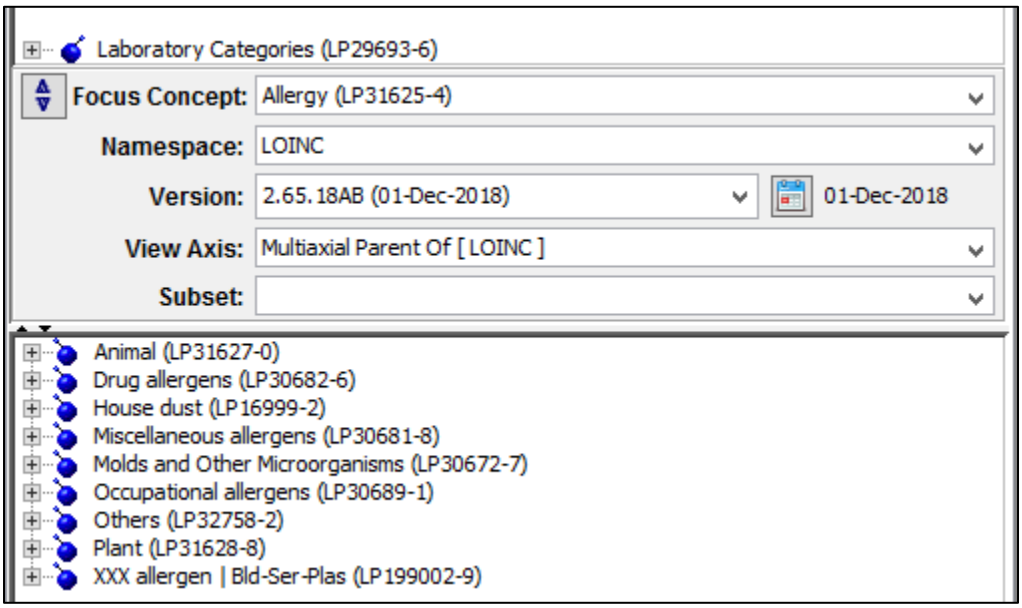

You can drag the returned concept to the *Concept/Term Details* panel to view attribute details.

B.8.3 View Subset Concepts in the Concept Walker

If the *Focus Concept* field concept is from a subscription, local, or (classified) extension namespace for which a subset exists, you can choose to highlight in the displayed hierarchy those concepts within that subset. From the *Subset* field dropdown (which lists all subsets for the *Focus Concept* namespace field, in gold text) select the desired subset.

The *Namespace* field reflects the namespace from which the subset concepts were derived. Each concept from the focus concept *Namespace* that is listed in the **Parents** and **Subconcepts** hierarchies is highlighted (in gold color).

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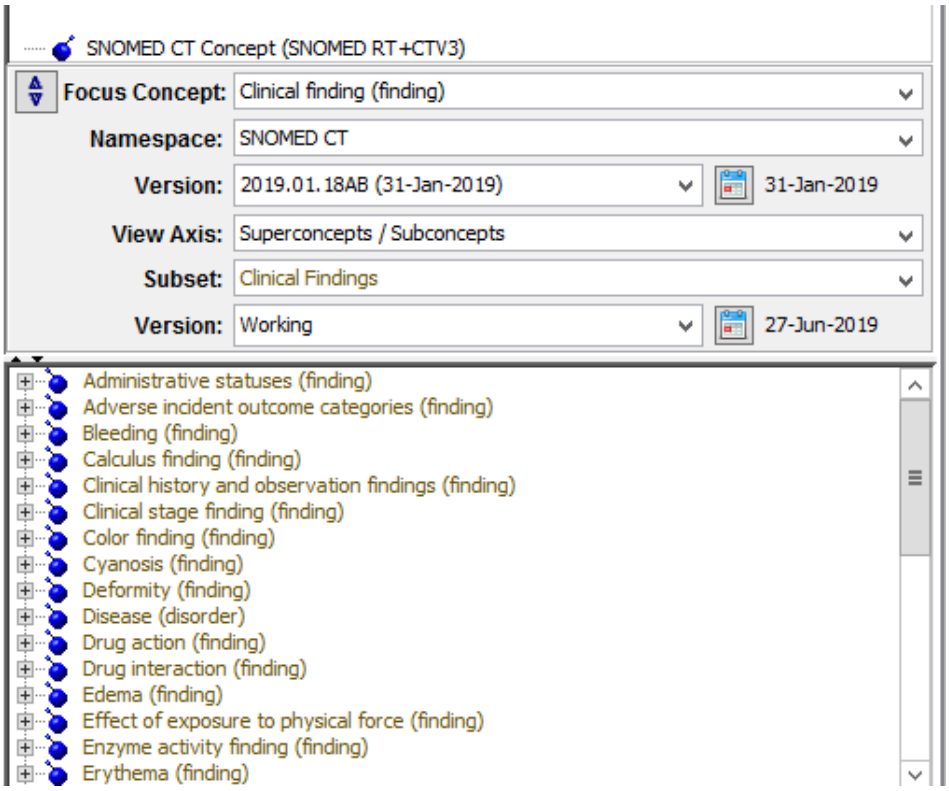

If the focus concept is from an Ontylog namespace, you also can view a select portion of the concept hierarchy for each of the Ontylog namespace's subsets. From the *View Axis* field dropdown list, select **Subset Hierarchy** (**Subset Hierarchy** is enabled as a selection only when the concept in the *Focus Concept* field is from a subset namespace).

From the *Subset* field dropdown list, select the subset for which you want to view a portion of the concept hierarchy.

The hierarchy tree for the **subset** (only) displays, also in gold color.

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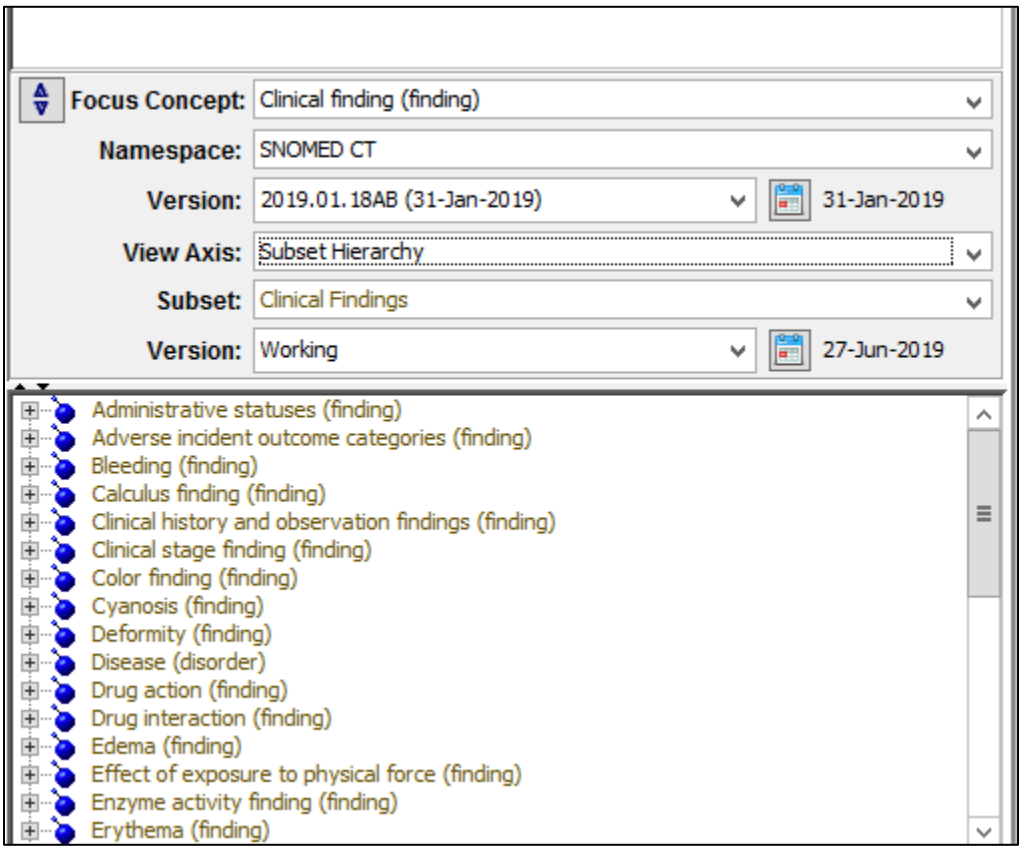

Click the Expand ⊞ and collapse ⊟ buttons to view and hide subconcepts, as needed.

B.9 Concept Walker Panel Display Preferences

Right click in a white-space area of the *Concept Walker* panel to view the *Concept Walker* display preference settings. The *Concept Walker* supports the **Click to Edit** and **Set Tree Config …** options as previously described in the *Concept Tree* display preferences. Note that the values for these preference options are shared with those in the *Concept Tree* panel, i.e., setting **Click to Edit** on the *Concept Walker* panel also sets **Click to Edit** in the *Concept Tree* panel.

The **Parents** (upper) section of the *Concept Walker* panel also supports a **Top Down Tree/Bottom Up Tree** display preference. In the examples above, the **Parents** section has shown hierarchies displayed in the **Bottom Up** view, i.e., the concept trees grow "up" from the bottom of the section. To have the trees grow "down" from the top of the section (as was the case prior to DTS 4.0) select **Top Down Tree** from the preference menu. You can restore the current default behavior by selecting **Bottom Up Tree**.

B.10 Dynamic Click to Edit

The **Dynamic Click to Edit** functionality extends upon the **Click to Edit** functionality in that it allows customization of Concept/Term transfer support. **Dynamic Click to Edit** allows specification of which panels to use as sources and targets when a Concept/Term is clicked. This

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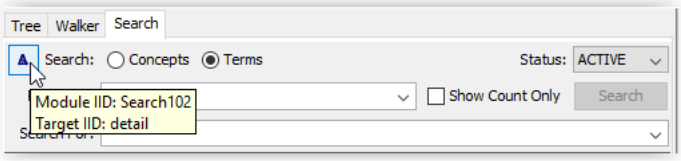
can be especially useful when using floating panels where **Click to Edit** functionality is not available by default. The three panel types include:

Source Panels – These panels act as sources for Click to Edit operations. The Search Panel is a Source Panel.

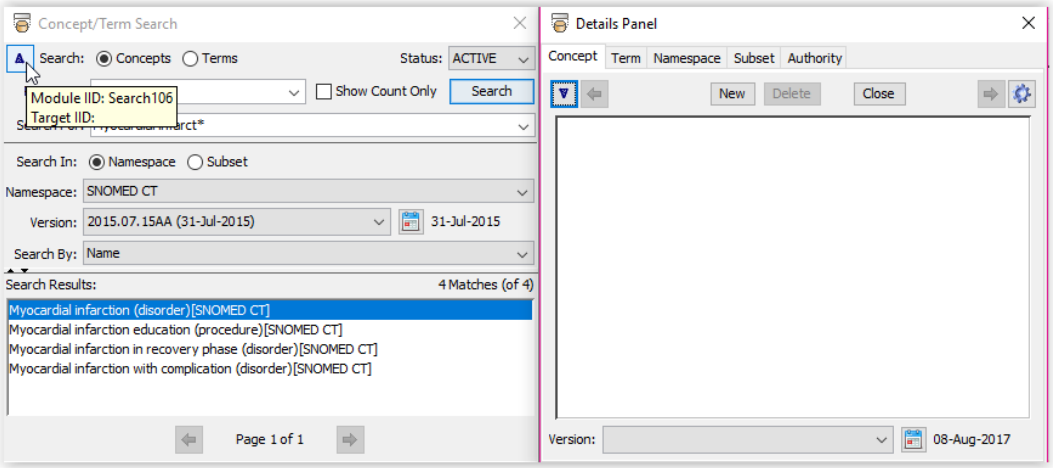
Target Panels – These panels act as receivers for Click to Edit operations. The Details Panel is a Target Panel.

Combination Panels – These panels act as both sources and targets for Click to Edit operations. The Tree and Walker Panels are Combination Panels.

To view the current **Dynamic Click to Edit** assignments for a panel, hover over the icon. The example below indicates that clicking on a search result will transfer that concept/term to the Details Panel.



To set **Dynamic Click to Edit** assignments for a panel, open both panels that you want to use. Note that no Target Panel is currently set for this floating Search Panel.



Set the Target Panel by dragging the arrow of the Target Panel to the arrow of the Source Panel. Dragging the floating Details Panel arrow to the floating Search Panel arrow defines the Details Panel as the target for the Search Panel. The panels are now configured so that clicking on a Search result will transfer the concept/term to the Details Panel.

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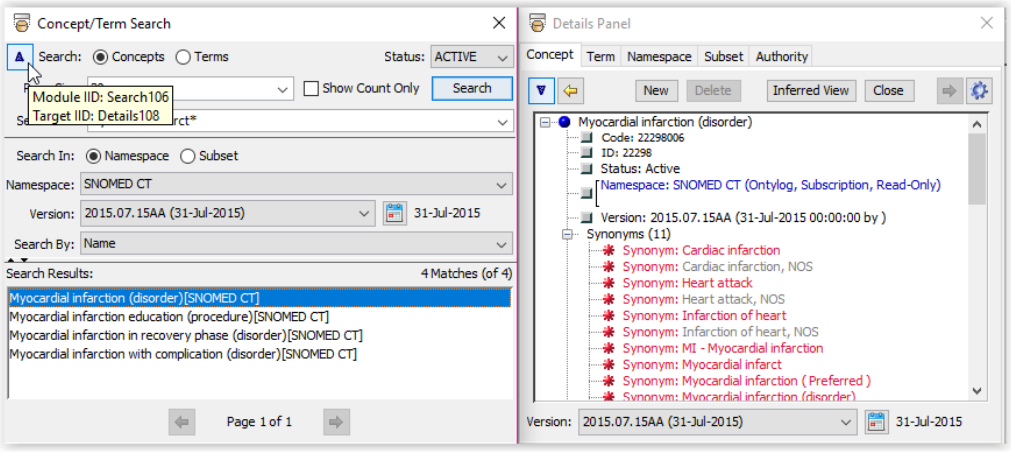
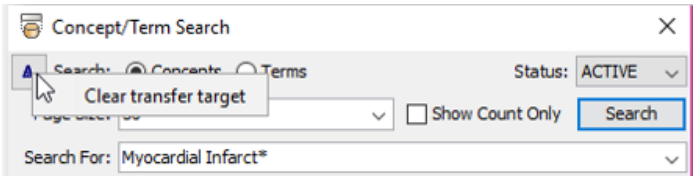


To remove a **Dynamic Click to Edit** assignment, click on the arrow of the Source Panel and select 'Clear transfer target'. You can also turn off **Click to Edit**, but this will affect all panels, not just those configured for **Dynamic Click to Edit**.



C. Concept Search

Use the DTS Editor *Search* tab panel to search a selected namespace, or all namespaces, and retrieve specific concepts, concept terms, or concepts and synonyms that match the search criteria you specify. Search can be performed on any attribute defined in the DTS knowledgebase. You then can drag and drop any retrieved concept/term into another view panel (e.g., *Concept/Term Details*) for further review, or onto one of the Editor windows (e.g., *Synonym Editor*, *Property Editor*). You can display the *Search* panel as a floating window; this option is available from the toolbar on the *DTS Editor Main* window menu bar, as well as from the **Tools** menu (**Tools>Search**).

Search a selected namespace, all namespaces, or a selected namespace subset based on any of the following criteria:

- Name
- Name & Synonyms
- Synonym
- Concept Property
- Concept Property Qualifier
- Role
- Inverse Role

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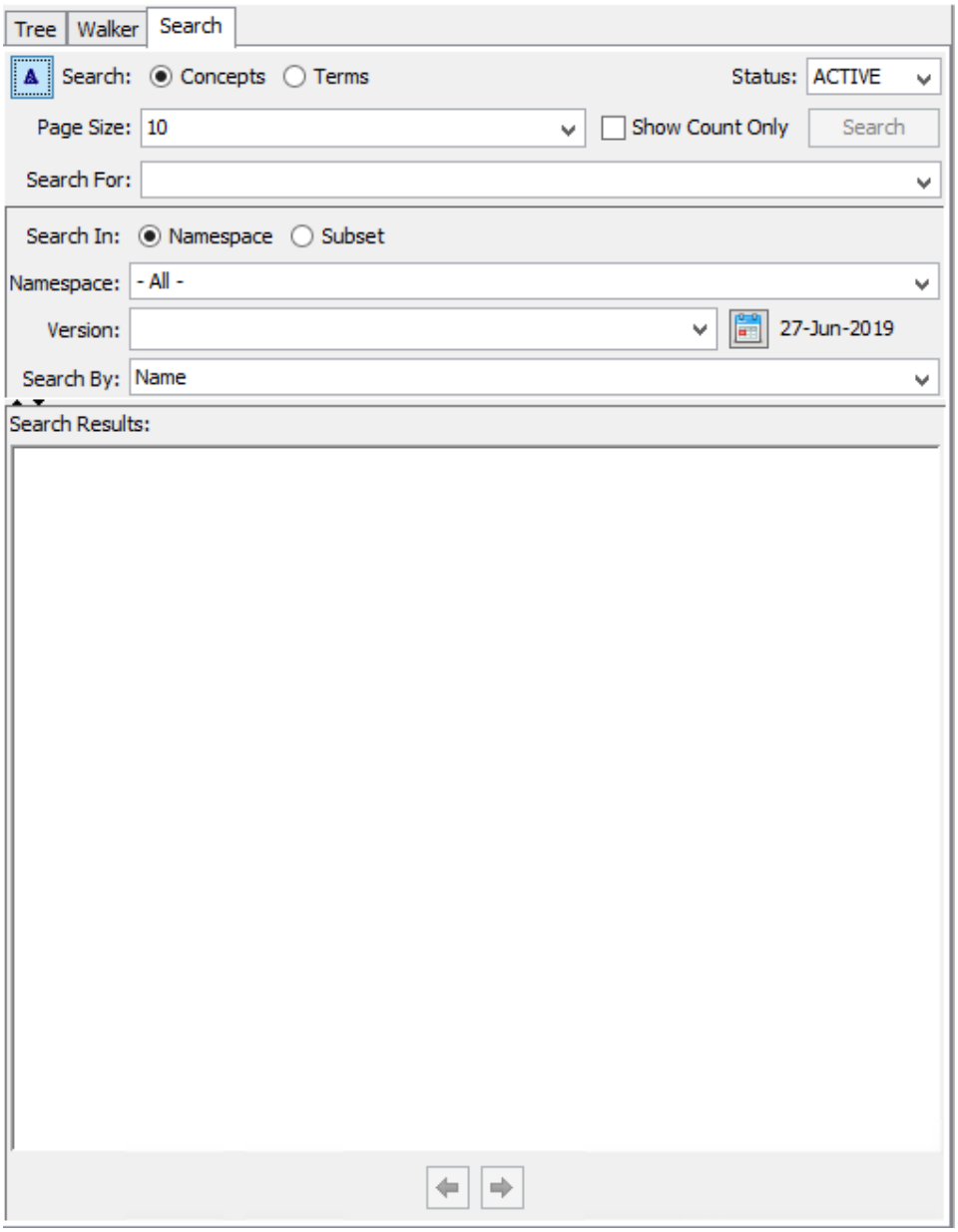
- Concept Association
- Inverse Concept Association
- Concept Association Qualifier
- Id
- Code
- Kind (specific namespace only, not “all”)

To display the *Search* panel, click the *Search* tab on the *DTS Editor Main* window.



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Follow this procedure to search the namespace based on the criteria you specify.

1. Assure that the *Search* tab is selected and the search criteria fields display.
2. To search for matching concepts, click *Concepts*. To search for matching terms, click *Terms*.
3. Select the types of Concepts to be searched from the Status dropdown. When searching for Concepts with Status A11, individual search results are prefixed with an icon if Inactive or Deleted.
4. From the *Page Size* field dropdown list, select the number of concepts and/or terms to be retrieved from each search. From the dropdown, you can specify that the page size search limit be **10**, **50, or 100**. **10** is the default. Another page size can also be explicitly entered, with a maximum value of **999**. Retrieved concepts or terms display in the *Search Results* area in the lower portion of the tab.

   The Search panel also supports retrieving a specific page number for result sets larger than one page. Entering "4", for example, will return the 4th page of search results, preventing the user from having to page over numerous times to find the desired result. If no page is entered, the Search function will return the first page of results by default. If a number larger than the number of pages in the result set is entered, the Search function will return the last page of results.
5. The *Show Count Only* checkbox is an optional feature that will display the total number of search results that meet the specified criteria without actually displaying the results in the *Search Results* area in the lower portion of the tab.
6. In the *Search For* field, specify the value (i.e., search string) for which you want to search the namespace for a match. Specify the search string value in one of these manners:
   - Enter the specific search string in its entirety (e.g., **abdomen endoscopy**).
   - Broaden the search criteria by entering the asterisk (*) wildcard character. Note these examples when **Name** is the *Search By* parameter:
     - To retrieve all concept/term names containing the string **abdomen**, type ***abdomen*** as the search string in the *Search For* field.
     - To retrieve only concept/term names that begin with the string **abdomen**, type **abdomen*** as the search string in the *Search For* field.
     - To retrieve concept/term names that end with the string **abdomen**, type ***abdomen** as the search string in the *Search For* field.
7. In the **Search In** area of the panel, click the option that reflects where you want to perform the search (*Namespace* or *Subset*). If you select *Namespace*, the accompanying dropdown lists all namespaces in your DTS knowledgebase.

   Click the namespace in which you want to perform the search. The default, **All**, applies if you want to search in all existing namespaces. Note that if you select an Ontylog

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Extension namespace to search, the results will be from the Extension namespace only (no concepts from the linked Ontylog subscription namespace will be returned). Refer to the *Ontylog Extension Namespaces and Extension Namespace Classification in DTS* document for more on Extension namespaces.

If you select a *Subset* in which to search, the accompanying dropdown lists all subsets that were created for namespaces in your DTS knowledgebase.

Click the subset in which you want to perform the search.

The version dropdown lists all versions that are available for the specified namespaces or subsets in your DTS knowledgebase. Select the version in which you want the search performed. The latest (most recent) version is the default.

8. In the *Search By* field, select the parameter that will be searched in the namespace(s) or subset for the string you specified in the *Search For* field.

   For concept searches the following options are available:

   - **Name** - This search will retrieve each concept (or each term, if you are performing a term search) with a name that matches the search string parameter you specified in the *Search For* field.
   - **Name & Synonyms** - This search will retrieve each concept with a name that matches the search string parameter you specified and each concept with a synonym that matches the search string parameter you specified in the *Search For* field. Name & Synonym search is not available for Terms.
   - **Synonym** - This search will retrieve each concept with a synonym that matches the search string parameter you specified in the *Search For* field.
   - **Concept Property** - This search will retrieve each concept with a property value that matches the search string parameter you specified in the *Search For* field, for the property or properties you select. If you select **Property** as the search parameter, a list of current knowledgebase properties displays in the *Search On* list area; you select the properties to be searched from this list.
   - **Concept Property Qualifier** - This search will retrieve each concept with a concept property qualifier value that matches the search string parameter you specified in the *Search For* field, for the property qualifier you select. If you select **Concept Property Qualifier** as the search parameter, a list of current knowledgebase properties displays in the *Search On* list area; you select the concept property qualifier to be searched from this list.
   - **Role** - This search will retrieve each concept with a role value (i.e., target concept name) that matches the search string parameter you specified in the *Search For* field, for the role type(s) you select (e.g., **Procedure site**). If you select **Role** as

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the search parameter, a list of current role types displays in the *Search On* list area; you select the role type(s) to be searched from this list.

- **Inverse Role -** This search will retrieve each concept with an inverse role value that matches the search string parameter you specified in the *Search For* field, for the inverse role type(s) you select (e.g., **Procedure site**). If you select **Inverse Role** as the search parameter, a list of current inverse role type(s) displays in the *Search On* list area; you select the inverse roles to be searched from this list.
- **Concept Association -** This search will retrieve each concept that has an association **target** concept with a name that matches the search string parameter you specified in the *Search For* field, for the association(s) you select (e.g., **Is A Parent Of**). If you select **Concept Association** as the search parameter, a list of current association type(s) displays in the *Search On* list area; you select the association type(s) to be searched from this list.
- **Inverse Concept Association -** This search will retrieve each concept that has an inverse association **from** concept with a name that matches the search string parameter you specified in the *Search For* field, for the inverse association(s) you select (e.g., **Is A Parent Of**). If you select **Inverse Concept Association** as the search parameter, a list of current inverse association types displays in the *Search On* list area; you select inverse association type(s) to be searched from this list.
- **Concept Association Qualifier -** This search will retrieve each concept that has an association **qualifier** with a name that matches the search string parameter you specified in the *Search For* field, for the association(s) you select. If you select
- **Concept Association Qualifier** as the search parameter, a list of current association qualifier type(s) displays in the *Search On* list area; you select the association qualifier type(s) to be searched from this list.
- **Id** – This search will retrieve each concept (or term, if you are in a term search) that has an ID that matches the search string parameter you specified in the *Search For* field.
- **Code** – This search will retrieve each concept (or term, if you are in a term search) that has a Code that matches the search string parameter you specified in the *Search For* field.
- **Kind** – This search will retrieve each concept, with a specified namespace, that has a Kind value that matches the search string parameter you specified in the *Search For* field. Note, this search requires that a namespace be selected in the search tool, and cannot be run against an "all namespaces" search.

9. After you specify all search criteria, click **Search**. The retrieved concepts and/or terms are listed in the *Search Results* area in the lower portion of the tab. When you find the desired concept(s), you can drag the concept(s) to the *Concept Walker* or *Concept/Term Details* panel to view details.

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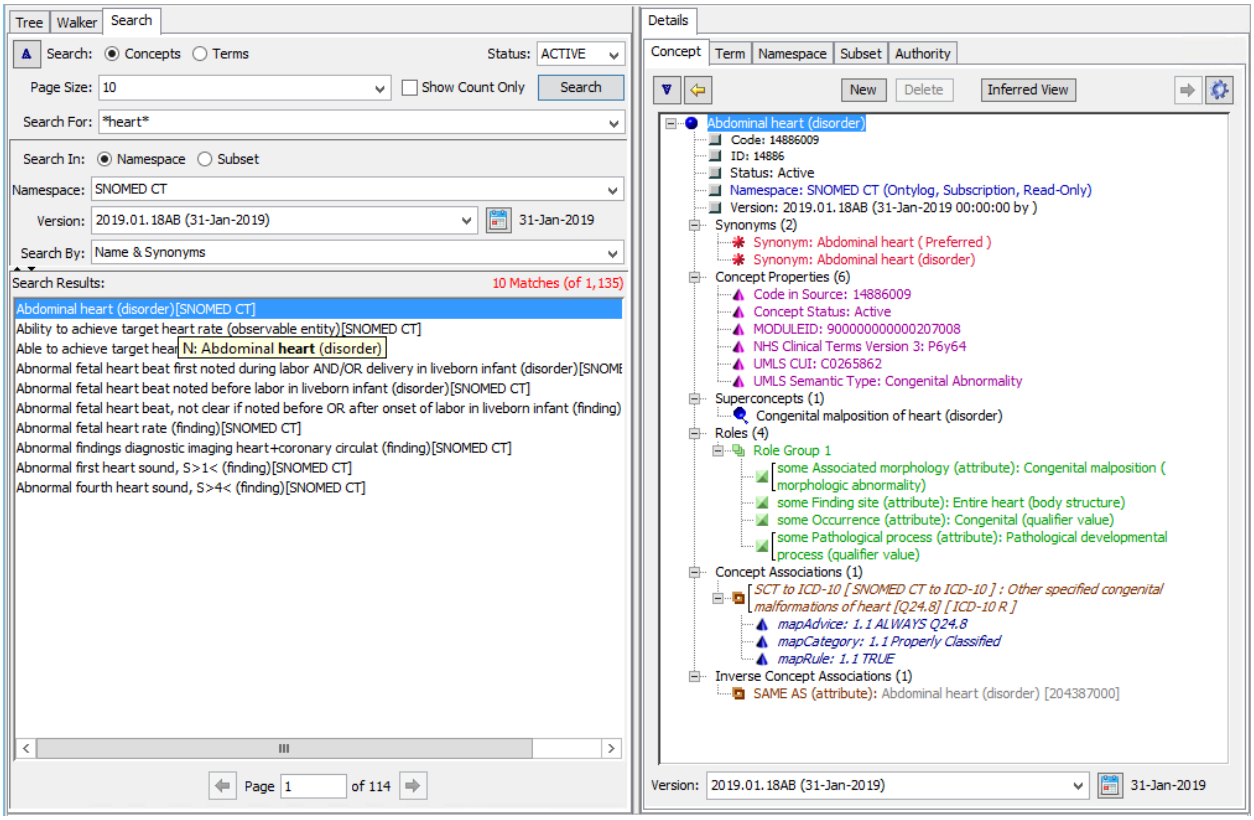
Note that after you click **Search** to begin the search, the button changes to **Cancel**; to terminate a long-running search, click **Cancel** and enter alternate search criteria. The button changes back to **Search** when the search is completed.

The primary search parameters (*Search On*, *Status*, *Page Size*, *Show Count Only*, *Search In, and Namespace*) are saved in the Editor configuration so that the most recently used parameters are automatically populated upon starting DTS or opening a new *Search* panel.

When searching on attributes other than just Name, ToolTips are available on each result line to show where the match string was found. In the screen shot below, the "*heart*" search term has been located in the Name and two of the Synonyms in the **Abdominal heart (disorder)** concept.

To increase performance of *Search*, the use of ToolTips can be disabled. To disable ToolTips, right-click anywhere in the *Search Results* area in the lower portion of the tab and select *Show Search ToolTips*. When this option is disabled, hovering over results will not display the ToolTip indicating where the match string was found, but performance of search will improve.

If more than **Page Size** results are found that match the search criteria, the result count (found on the right immediately above the result list) will display in red and the "next page" icon ( ) will be enabled. Use this icon, and its partner, the previous page icon ( ), to move among the result pages.



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D. Namespace Maintenance

D.1 Overview

Each **namespace** in DTS represents an individual source terminology (e.g., **SNOMED**, **ICD-9-CM**) or independently developed terminology content, e.g., a local namespace containing map (association) information. The DTS Editor provides a set of options that allow you to view data in all namespaces, edit namespaces of certain types, and create new, local namespaces.

A namespace **authority** indicates the organization (e.g., U.S. National Library of Medicine, U.S. Medical Terms Review) that approved and/or certified a specific terminology. A namespace authority must be specified as part of each namespace definition. In addition to namespace maintenance, authority maintenance is discussed in this section.

A namespace's **locality** indicates how the namespace data was acquired. A **Subscription** namespace is one for which content was loaded into DTS through a subscription import. A **Local** namespace is one that was created using the DTS Editor, from DTS import utilities, or from user programs using the DTS API, for the purpose of using and maintaining local terminology content.

In DTS, a namespace is one of four distinct types: **Subscription Ontylog**, **Local Ontylog, Thesaurus**, or **Ontylog Extension**. Each namespace type is described briefly, as well as the level of functionality available in each namespace type using the DTS Editor.

D.1.1 Subscription Ontylog Namespaces

Ontylog is a language used to build and maintain large knowledgebases using description logic. Concepts in Ontylog are organized into a taxonomy by a process called **classification**. A Subscription Ontylog namespace is one provided by Apelon's Subscription Content Distribution process, and is by definition "read-only".

The DTS Editor provides view capabilities for Subscription Ontylog subscription namespaces. In the DTS Editor you can view the concept hierarchy tree in any selected Subscription Ontylog terminology namespace. You also can view attribute details (e.g., properties, roles) for any selected concept in the namespace.

You cannot use the DTS Editor to perform edits directly **to** a Subscription Ontylog-type namespace. However, the DTS Editor allows you to create and maintain new content **for** the Subscription Ontylog namespace through two different approaches.

- You can create a new **local**, editable namespace using the DTS Editor
    - Within this local namespace you can add new properties, synonyms and associations (including qualifiers to properties and associations) to the Subscription Ontylog concepts.

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  - Because the local content is in a separate namespace, this approach prevents inadvertent overwrite of this local data if the Subscription Ontylog namespace is updated at a later time.

- You can create a l**ocal**, editable Ontylog-Extension namespace using the DTS Editor to integrate new concepts and terms (and their relationships) with the Subscription Ontylog namespace. See Ontylog Extension Namespaces below for more information.

D.1.2 Local Ontylog Namespaces

A Local Ontylog Namespace is one created within the DTS Editor, utilizing the Local Ontylog Namespace options newly added to DTS 4.5. With these tools you can now create your own local namespaces with the same Ontylog description logic. Local Ontylog Namespaces also undergo the same process of **classification** to be organized into a taxonomy. Once created, Local Ontylog Namespaces, unlike Subscription Ontylog Namespaces, can remain read-write until published and edits are finalized.

D.1.3 Ontylog Extension Namespaces

You can create an **Ontylog Extension** namespace:

- As its title implies, each Ontylog Extension namespace is an **extension** of a specific Subscription Ontylog namespace, created for the purpose of creating/maintaining new local content for the linked Subscription Ontylog namespace.
- In the Extension namespace you can add new concepts, add or change concept relationships (i.e., superconcept/subconcept relationships) add or change role relationship values, and add new associations for the Subscription Ontylog namespace.
- You can classify the Extension namespace against the linked Subscription Ontylog namespace, then view the new hierarchy for the Ontylog Extension namespace; the displayed Extension namespace hierarchy reflects both the linked Subscription Ontylog namespace concepts, **and** concepts from the Extension namespace.

D.1.4 Thesaurus Namespaces

A Thesaurus namespace is one that is created from locally defined information, e.g., concepts, terms and associated attributes. Data in a thesaurus namespace can reference (via local associations) information in any namespace including an Ontylog namespace. For **Thesaurus** namespaces, concepts are organized based on relationships (associations) with other concepts. Subscription namespaces with the type of **Thesaurus** are not editable in the DTS Editor. However, you can create a new local namespace that is a **Thesaurus** type and create and maintain content locally.

D.2 Current Local Namespace

Since a DTS knowledgebase often contains many local namespaces, each having multiple attribute types, selection of the desired type during the editing process can be awkward. The DTS Editor defines a **Current Local Namespace** for the purpose of shortening the content in dropdowns, etc. used in the editing process. Select **Set Current Local Namespace** from the **Options** menu to set a current local namespace using the *Set Current Local Namespace* window. The namespace you specify here becomes the default local (writable) namespace for the addition

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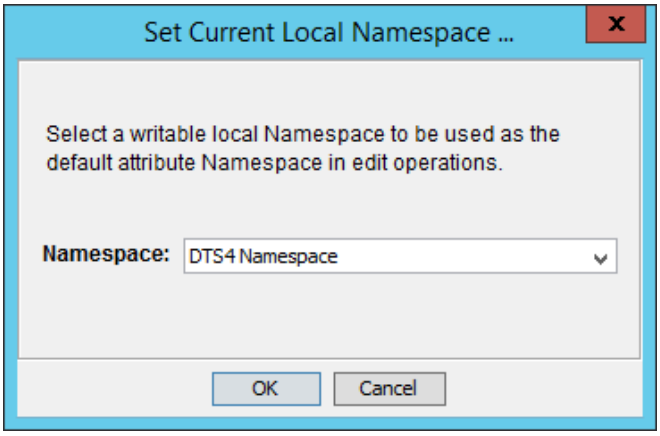
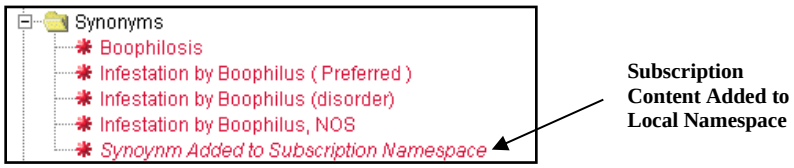
and maintenance of the property types, association types, and qualifier types used during the addition of local content.



1. Thereafter, you can add a new property, synonym, or association to a concept or term in a namespace, by selecting the appropriate attribute type (e.g., **property type**) from the Current Local Namespace. Remember that the Current Local Namespace is simply a convenience to reduce the complexity (length) of selection dropdowns. You can change the Current Local namespace value at any time.
2. Local attributes added in this manner to a concept or term in a subscription namespace are listed in ***italics*** in the *Concept/Term Details* panel view, as well as in the *Concept Tree* panel view (**Container** and **Inline** versions of the Ontylog Tree view). Note the illustration.



3. **The attributes themselves actually are written to the *local namespace*; no changes occur for the *subscription namespace* itself.**
4. The DTS Editor allows you to select or change the current local namespace at any time; it remembers the current local namespace the next time you connect to it. For your reference, the current local namespace always displays in the right-most panel of the **Status Bar** at the bottom of the *DTS Editor Main* window.

   For the purpose of adding local content, you can create property types, concept or term association types, and qualifier types in any local namespace. If you add instances of these types to a concept, the types do not have to reside in the same namespace as the target concept, but can be from any local namespace.

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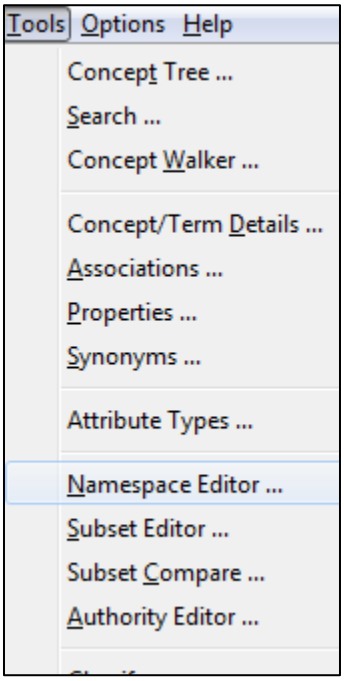
Qualifier types, however, must reside in the same namespace as the property or association types they modify.

5. Since the current local namespace may be changed, it is not necessary for local content for a subscription namespace to be stored in a single local namespace.

6. Since properties, synonyms, and associations are attached directly to concepts in a namespace, you can retrieve these details along with the existing attributes of the concepts. In the DTS Editor, when you add or modify properties, synonyms, associations, or qualifiers of a subscription concept, the list of types (e.g. property types) will be those defined in the current local namespace, rather than those in the subscription namespace.

D.3 Create a Local Namespace

Follow this procedure to add a new local namespace to your knowledgebase. **Note**: To create a local namespace you must have the NAMESPACE_ADMIN permission. From the Menu select **Tools > Namespace Editor**.



1. The Namespace Editor window will open.

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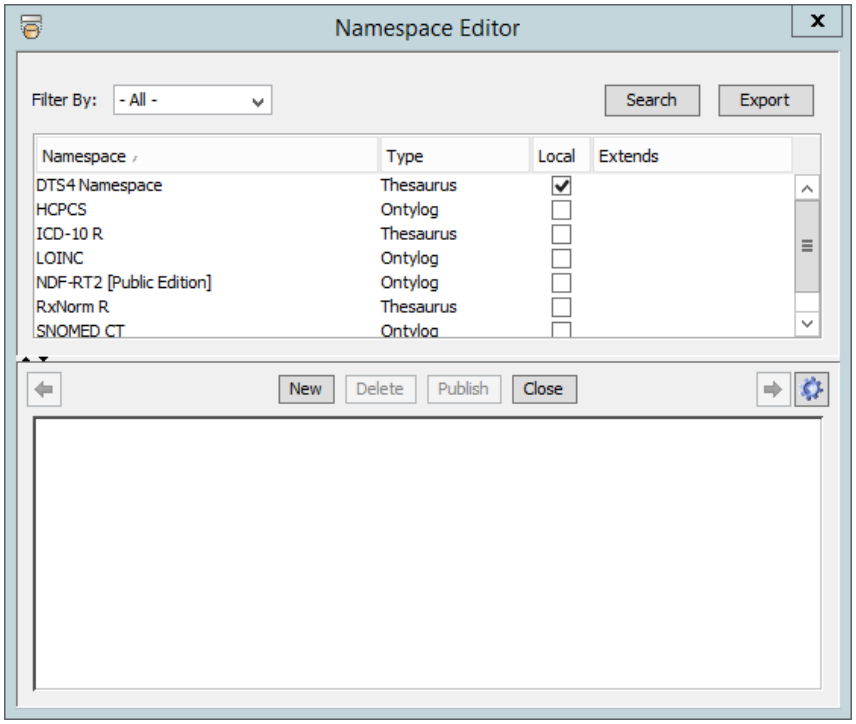
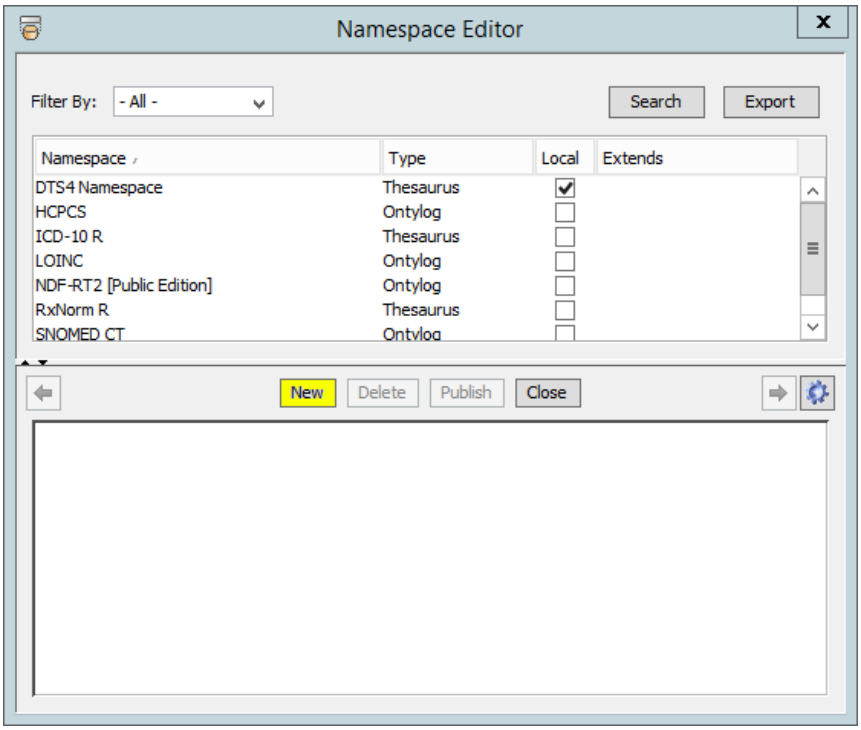


2. To create a namespace click **New**.



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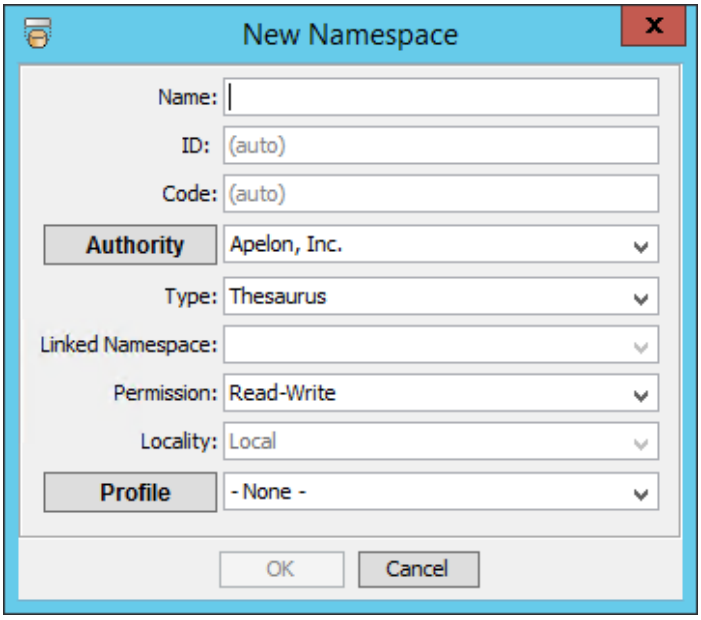
3. The *New Namespace* window will open.



4. In the **Name** field, type the desired name of your local namespace, i.e., **LocalNS**.

5. The ID & Code fields are set to auto generate by default; this is the normal operation. If desired, however, specific values can be entered.

6. The next field is the **Authority** field. Select the desired Authority for the namespace from the dropdown. If you wish to add a new Authority (or review the details of any Authority), click the **Authority button**.

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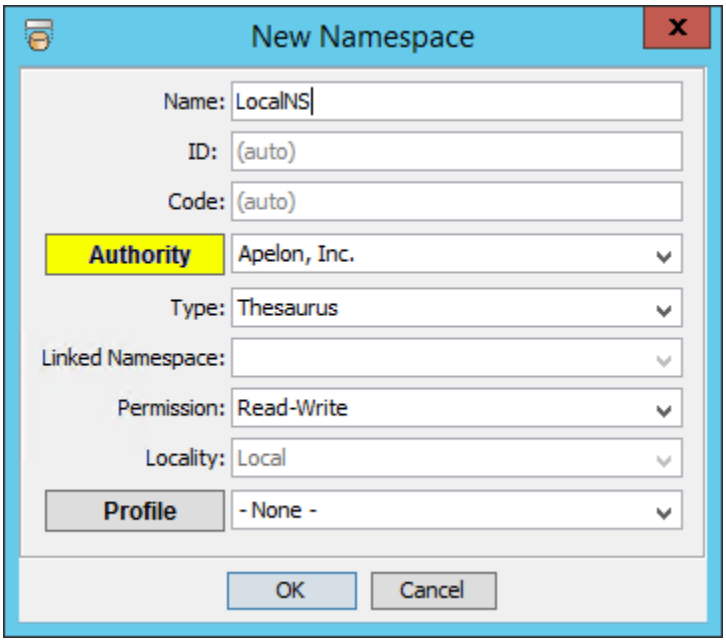
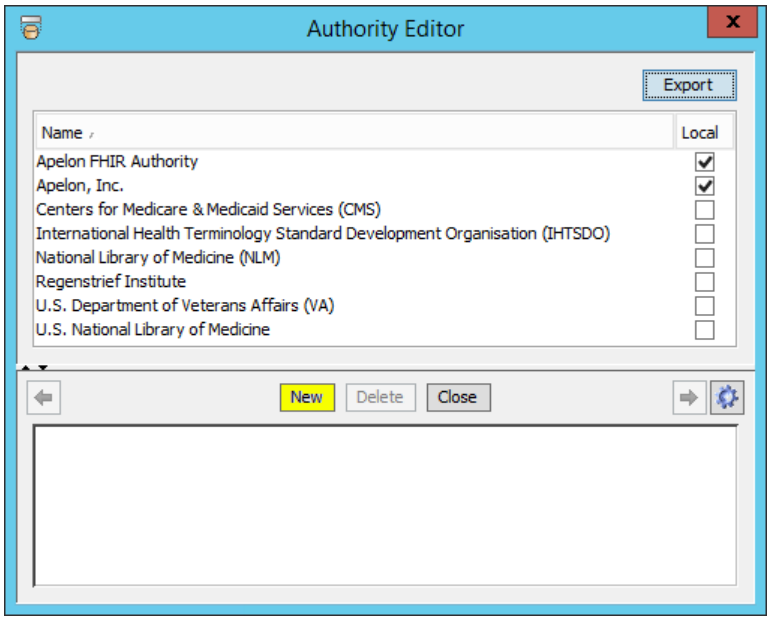


7. The *Authority Editor* window will open. To add your organization as an Authority, click **New**.



8. The *New Authority* window will open. In the **Description** field enter the name of your organization, **i.e., MyOrg**. The ID field will auto generate so leave it as is and click **OK**.

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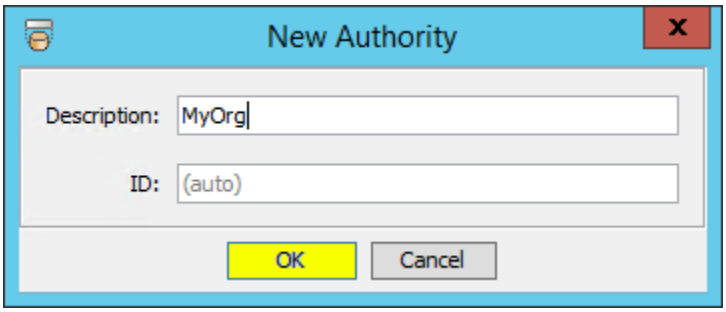
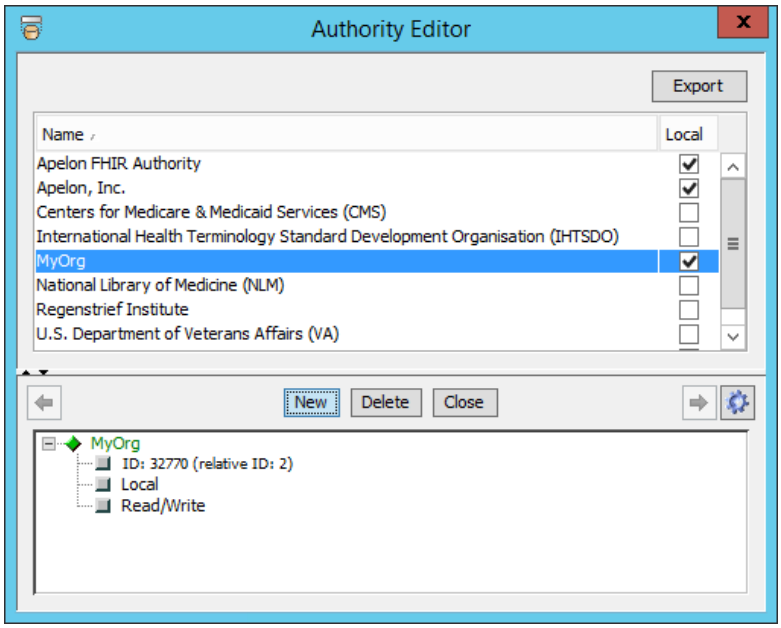


9. The authority you created will now be listed and the Local authority field will be checked, click **Close**.



10. In the *New Namespace* window, click the dropdown next to the **Authority** field and choose your organization, i.e., **MyOrg**.

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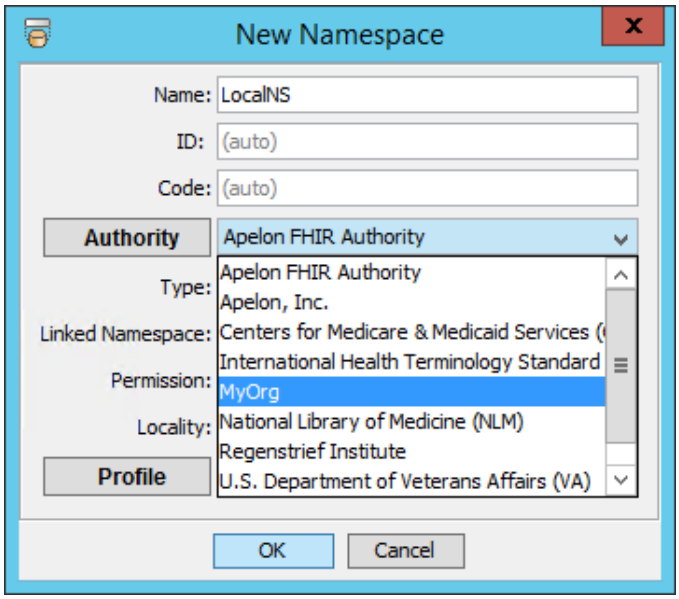
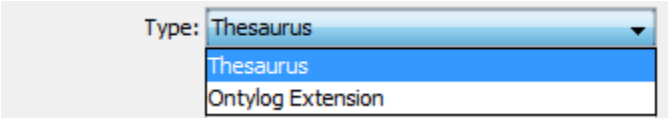


11. The **Type** field has (3) options, ***Ontylog, Thesaurus*** or ***Ontylog Extension*** namespace.
    - An ***Ontylog*** namespace is one that is created locally using the Ontylog language, for purposes of creating a taxonomy through **classification.** This option is new to DTS 4.5. Unlike Subscription Ontylog Namespaces, Local Ontylog Namespaces can be created as read-write and edited through the DTS Editor tools.
    - A ***Thesaurus*** namespace is one that is created from locally-defined data. For Thesaurus namespaces, concepts are organized based on relationships (associations) with other concepts.
    - An ***Ontylog Extension*** namespace is an extension of a specific Ontylog subscription namespace, created for the purpose of creating/maintaining new local content for the linked Ontylog subscription namespace, i.e., SNOMED CT.
12. Based on your organization's needs, choose the desired namespace type.



13. The **Linked Namespace** field will be grayed out if you selected a *Thesaurus* namespace above.

If you selected an *Ontylog Extension* namespace above you will need to choose the linked Subscription Ontylog namespace, e.g., SNOMED CT.

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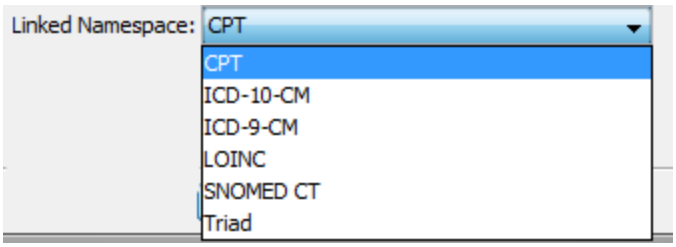
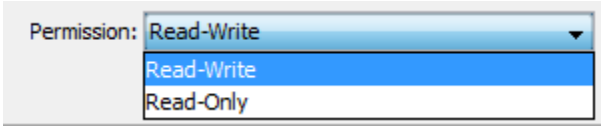
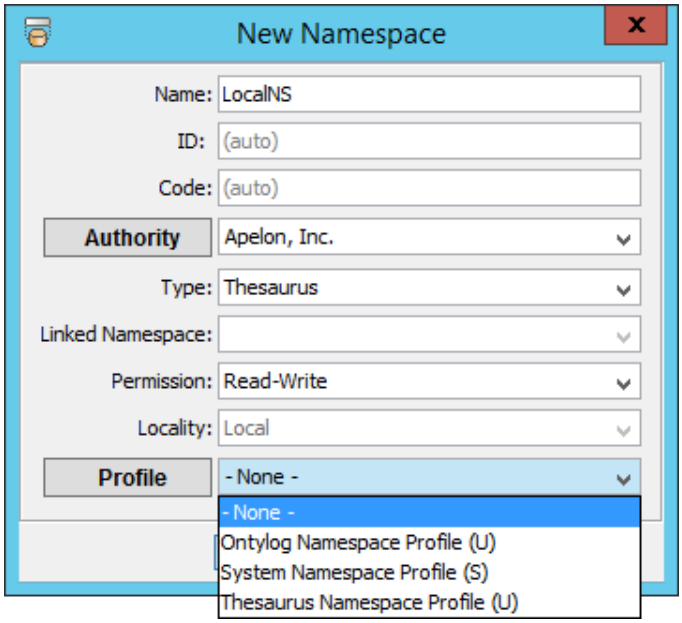


14. In the **Permission** field you have (2) Options ***Read-Write*** or ***Read-Only***. If you want modelers to be able to edit and add information you will need to choose ***Read-Write***.



15. The **Locality** field is set to ***Local*** by default and is not editable.

16. The **Profile** field lets you specify whether you want the Namespace initialized with a pre-defined set of Namespace Attribute Types. These types are defined in a Namespace Profile object. If no Profile is desired, just leave the selection to **- None -**; otherwise, select a Profile name from the dropdown. If you wish to add a new Profile (or review the details of any Profile), click the **Profile** button**.** See the **Namespace Profile View and Maintenance** section for directions on use of the Profile Editor.



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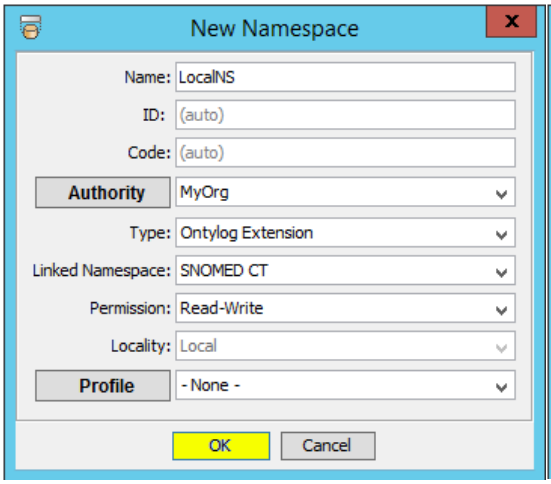
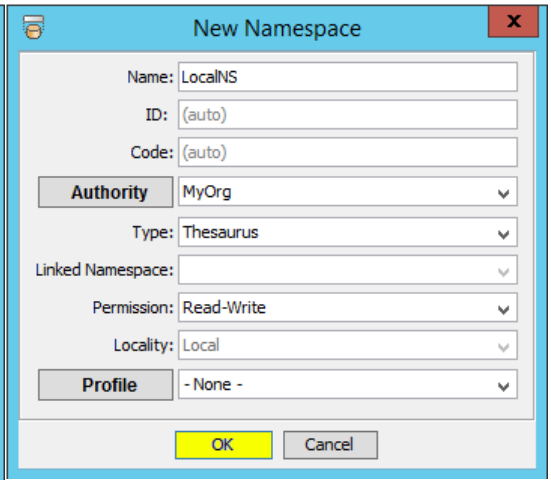
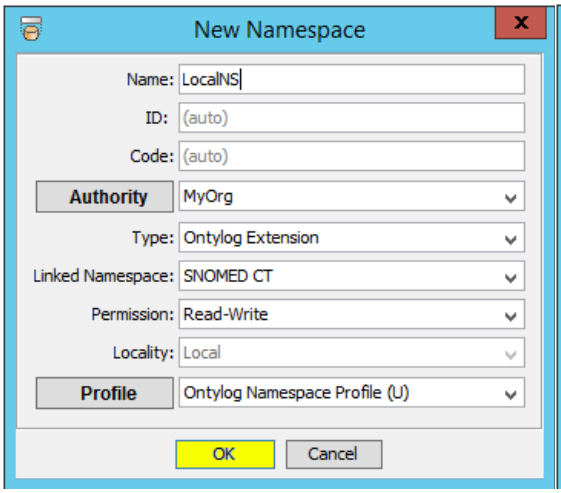
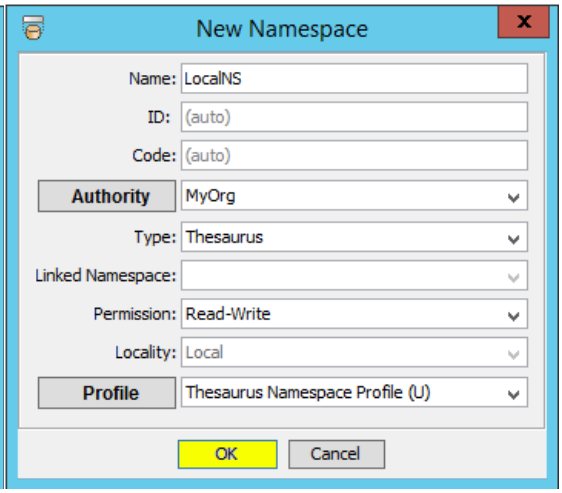
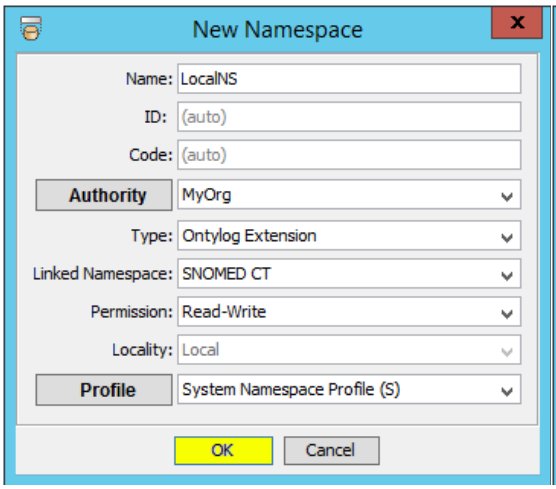
17. Based on your selections above your window should now look similar to the images below. Verify your field parameters and click **OK**.

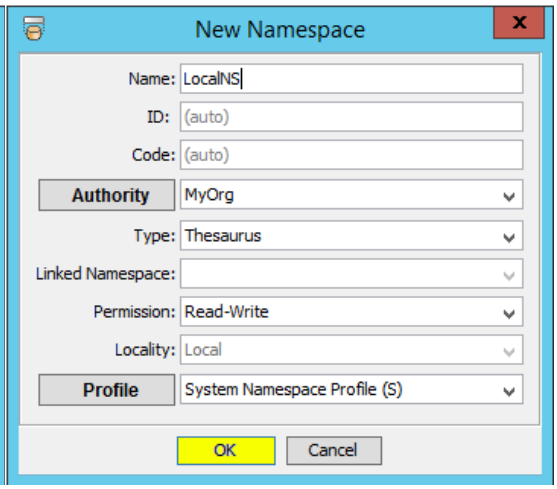












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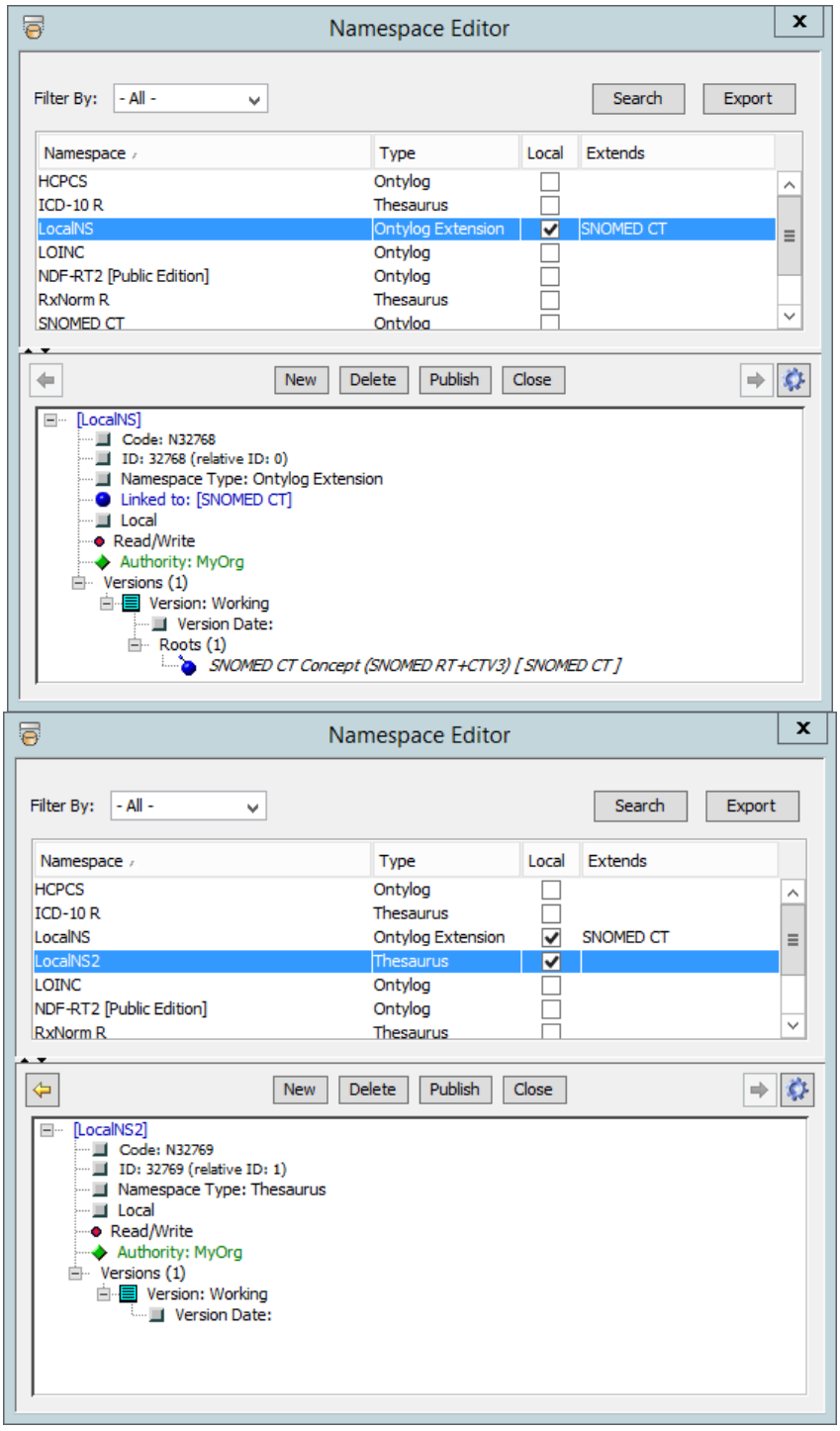
18. The new namespace will be added and listed in the **Namespace Editor** Window, example images below. If desired, repeat this process to create additional namespaces.



When you are done adding namespaces, **Close** the Namespace Editor.

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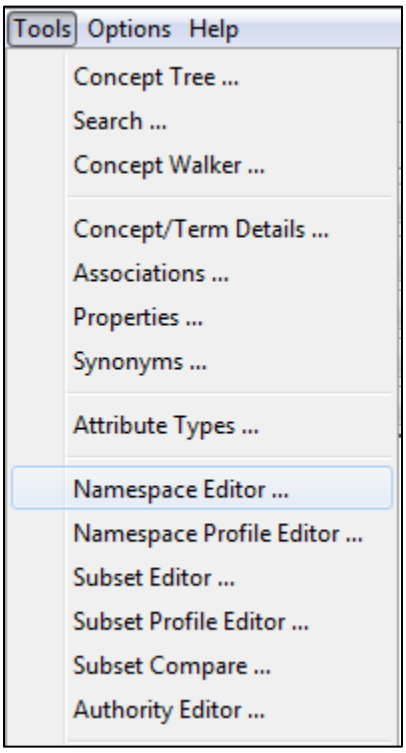
D.4 View an Existing Namespace

Follow this procedure to view information for an existing subscription namespace, or local namespace in your knowledgebase.

1. From the Menu select Tools > Namespace Editor.



2. The *Namespace Editor* window will open.

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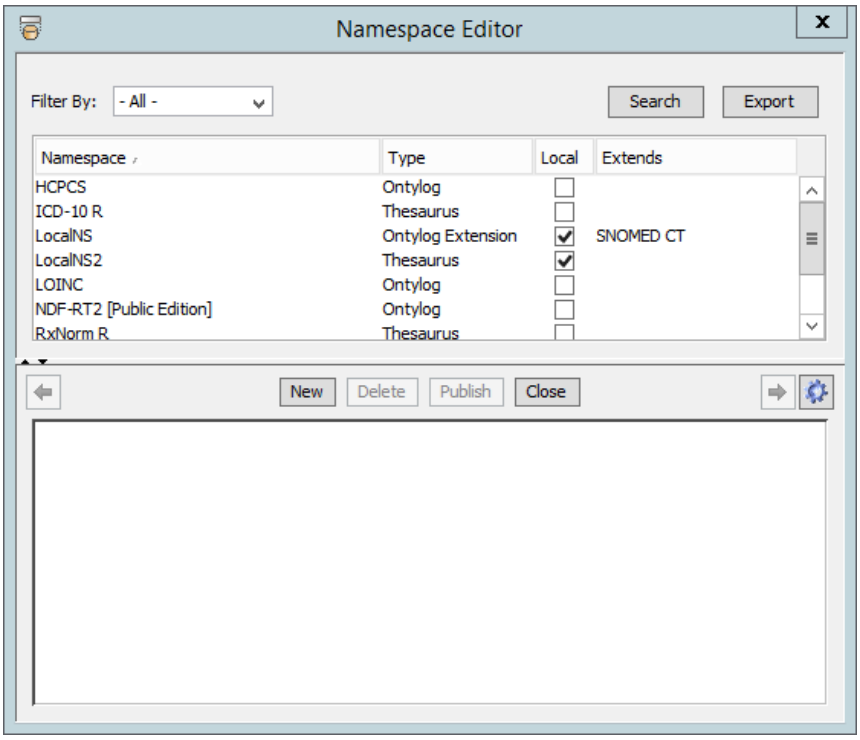

3. Information for each available namespace is listed in a table format. Information includes the namespace name and namespace type (**Ontylog**, **Thesaurus**, **or Ontylog Extension**). An indicator referencing if each namespace is a local namespace is included as well. For each listed Ontylog Extension namespace, the name of the Subscription Ontylog namespace that it **Extends** is referenced.

   The list of namespaces displayed in the Namespace Editor can be filtered based on the following parameters:

   Name Namespaces whose names match the pattern in the entry field will be displayed. Simple wildcards, e.g., "Subset*", are supported..

   Property All namespaces that include Property Filters naming the selected Property will be displayed.

   Version Property All namespaces that include Version Property Filters naming the selected Version Property will be displayed.

   Extends All Ontylog Extension Namespaces that extend the selected base namespace will be displayed

   You can resize the table columns. To change the sort for the namespace list, click the

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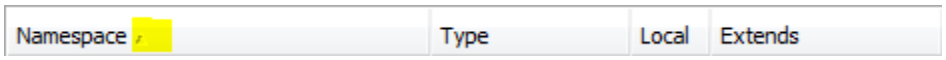
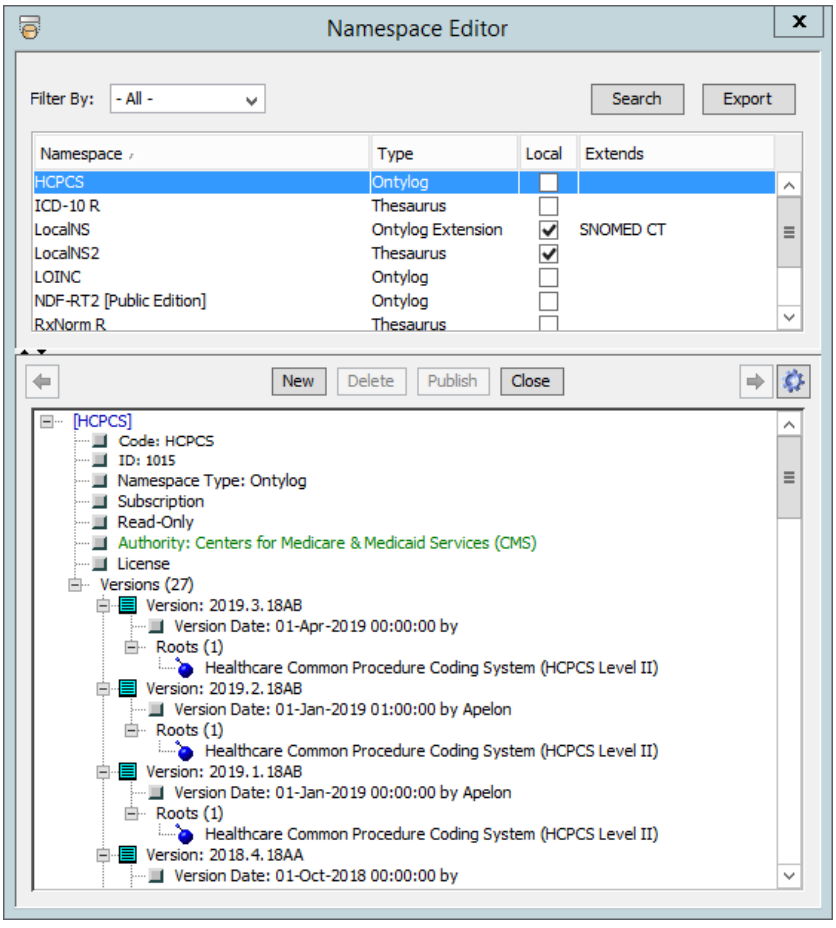
column header for the characteristic (**Namespace**, **Type**, **Local**, or **Extends**) on which you want to base the sort.



The table displaying the Namespace Editor parameters may be also be exported. The export respects any filters currently in use by the Namespace Editor. To export the contents displayed in the upper table view, click the **Export** button. Select **Clipboard** to copy the contents to your clipboard in order to transfer the data to other desktop applications. Select **File** to export the data as a locally saved .csv file.

4. In the table listing, click the namespace you want to view to highlight the row. The data in the bottom portion of the window changes to reflect information from that namespace.



- The *Code* provides additional namespace identification for an existing namespace and is not editable, regardless of whether it is a subscription or local namespace.

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- The *ID* for an existing namespace is not editable, regardless of whether it is a subscription or local namespace.
- A namespace is one of three types: **Ontylog**, **Thesaurus,** or **Ontylog Extension**. Each namespace may be a **subscription** namespace, or a **local** namespace. Refer to the *Overview* discussions under *Namespace Maintenance* for more on namespace types.
- The namespace *Locality* indicates how the namespace data was acquired. **Subscription** indicates a load of namespace content into DTS through a subscription import. **Local** indicates the namespace was created using the DTS Editor, from DTS import utilities, or from user programs using the DTS API, for the purpose of using and maintaining local terminology content. This field is not editable for existing namespaces.
- The namespace *Permission* indicates whether or not the namespace is writable. The value (**Read-Only** or **Read-Write**) is set when the namespace is created. For a local namespace, this value can only be edited by a user with NAMESPACE_MANAGE permission. Subscription namespaces are always **Read-Only**.
- An **authority** indicates the organization (e.g., **U.S. National Library of Medicine**) that approved and/or certified a terminology. Refer to the *Authority View and Maintenance* discussions for procedures on viewing and creating authorities.

When you finish viewing/editing namespaces, close the *Namespace Editor* window.

D.5 Delete a Local Namespace

Follow this procedure to delete an existing local namespace from your knowledgebase. **Note**: To delete a local namespace you must be logged into the DTS Editor as a user with the NAMESPACE_ADMIN permission.

1. From the Menu select Tools > Namespace Editor.

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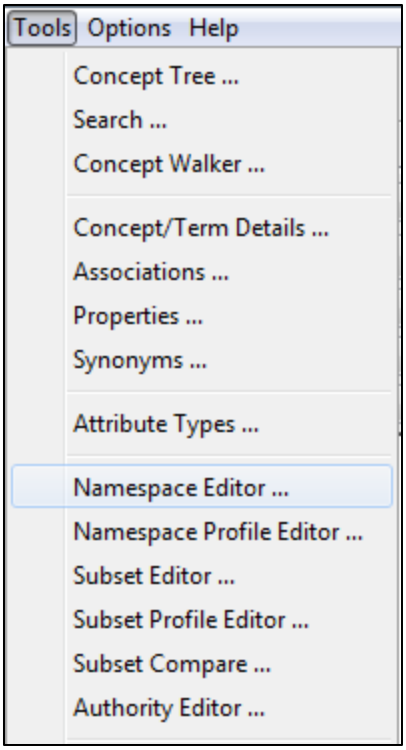
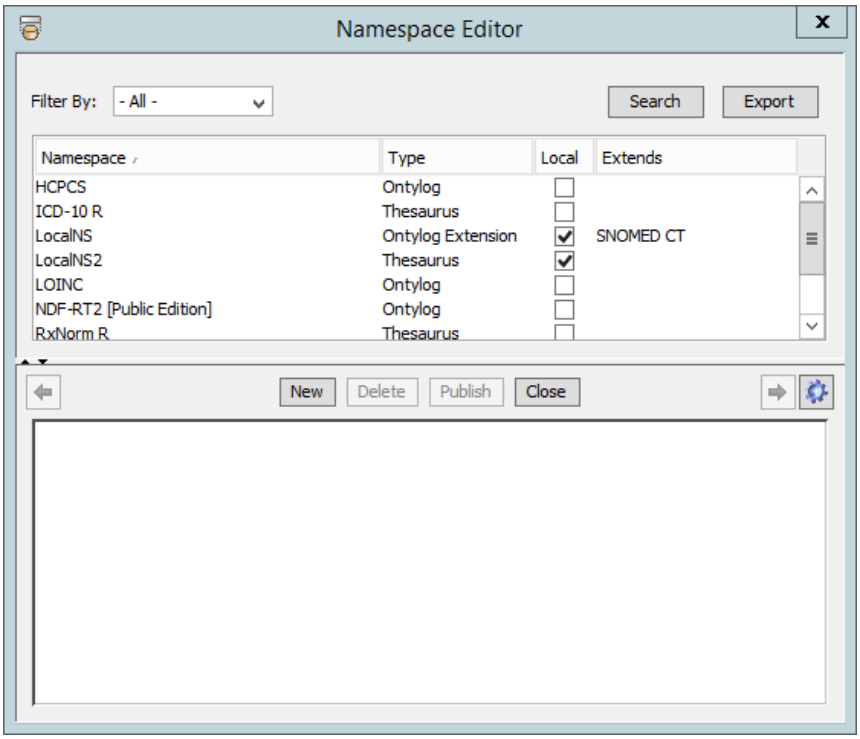


2. The *Namespace Editor* window will open.



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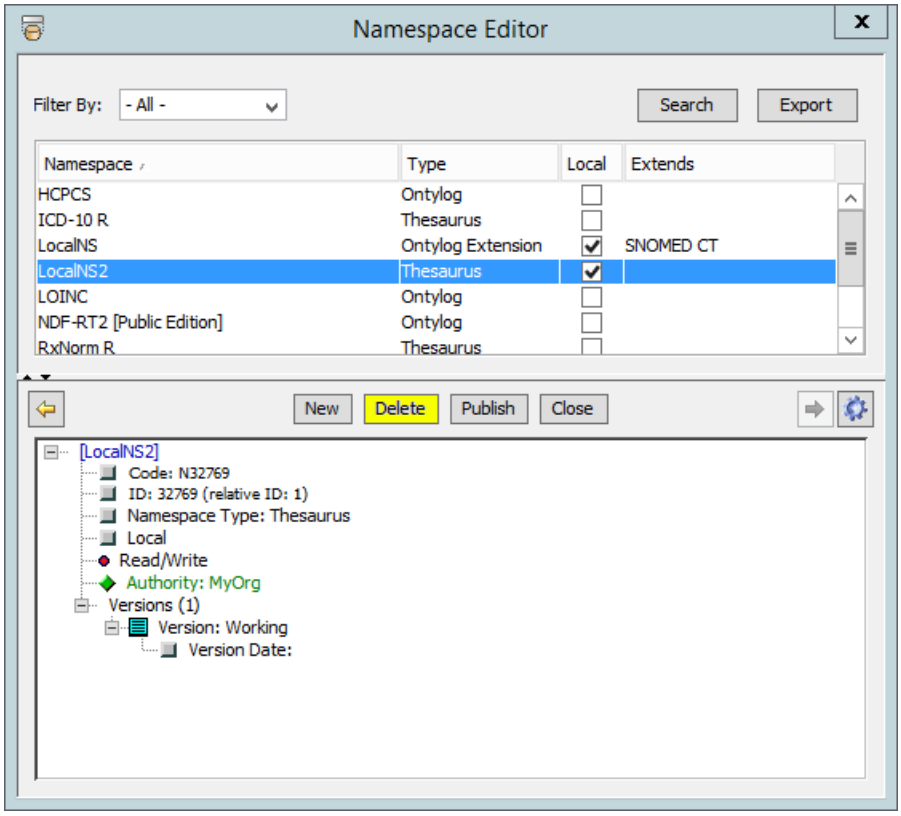
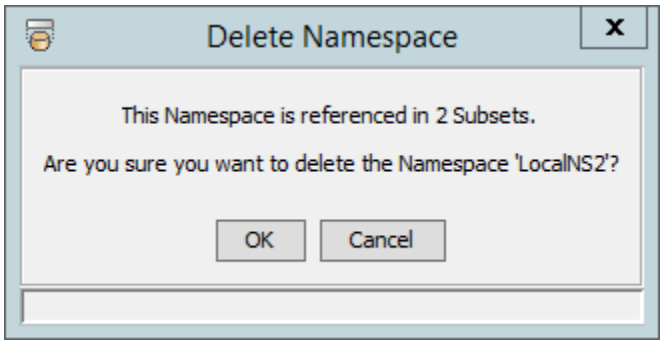
3. In the namespace table listing, click the namespace you want to delete to highlight the row. The data in the bottom portion of the window changes to reflect information from that namespace. The **Delete** option is not available if you selected a subscription namespace. Click the enabled **Delete** button if you selected a local namespace for deletion



4. A confirmation window similar to the following displays. This window will also display if there are Subsets that reference the namespace that is being deleted. If the namespace is deleted, any Subsets that reference the namespace in its expression will become invalid.



5. Click **OK** to delete the namespace from the knowledgebase or click **Cancel** to ignore the deletion.

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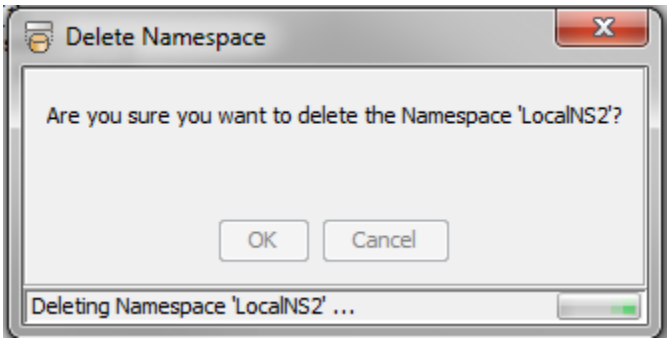
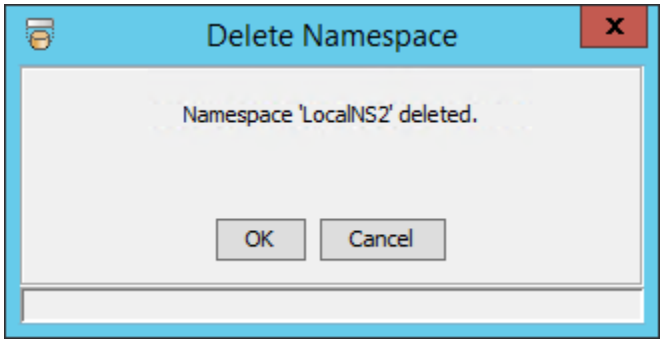


6. If you click **OK**, the namespace is deleted from the table in the *Namespace Editor* along with all concepts, terms, and associations from the namespace. A confirmation window similar to the following displays.



Click **OK** and close the *Namespace Editor* window.

D.6 Authority View and Maintenance

A namespace **authority** indicates the organization (e.g., **U.S. National Library of Medicine**, **U.S. Medical Terms Review**) that approved or certified a terminology. An authority must be specified as part of each namespace (and subset) definition.

Authorities can be viewed and managed within the **Authority Editor**.

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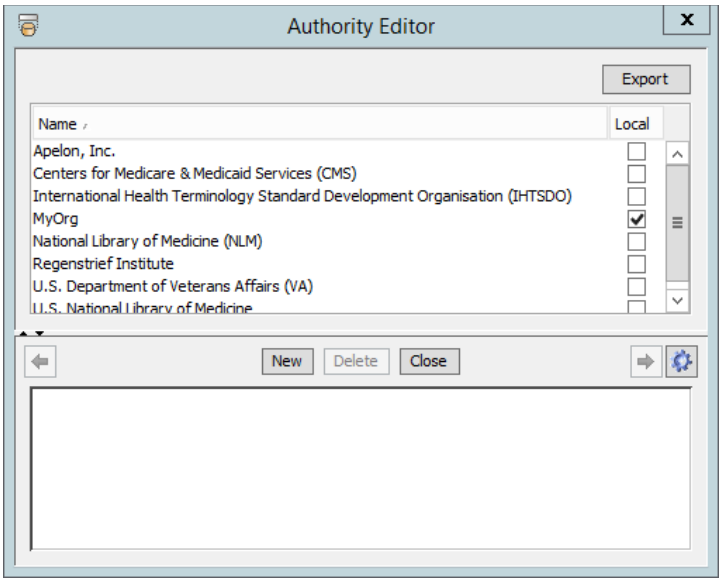

The table displaying the Authority Editor parameters may be also be exported. To export the contents displayed in the upper table view, click the **Export** button. Select **Clipboard** to copy the contents to your clipboard in order to transfer the data to other desktop applications. Select **File** to export the data as a locally saved .csv file.

D.6.1 Create an Authority

Follow this procedure to create an authority that you can assign to a local namespace. **Note**: To create authority you must be logged into the DTS Editor as a user with the AUTHORITY_ADMIN permission.

1. From the Menu select Tools > *Authority Editor*.

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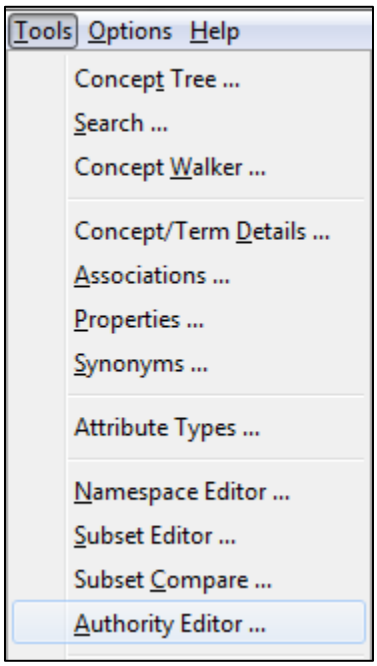
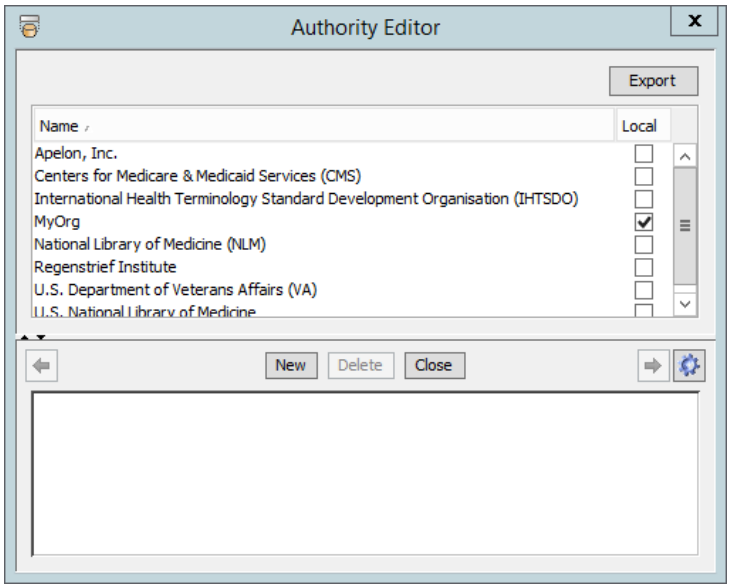


2. The *Authority Editor* window will display.



3. Click the **New** button on the *Authority Editor* floating window.

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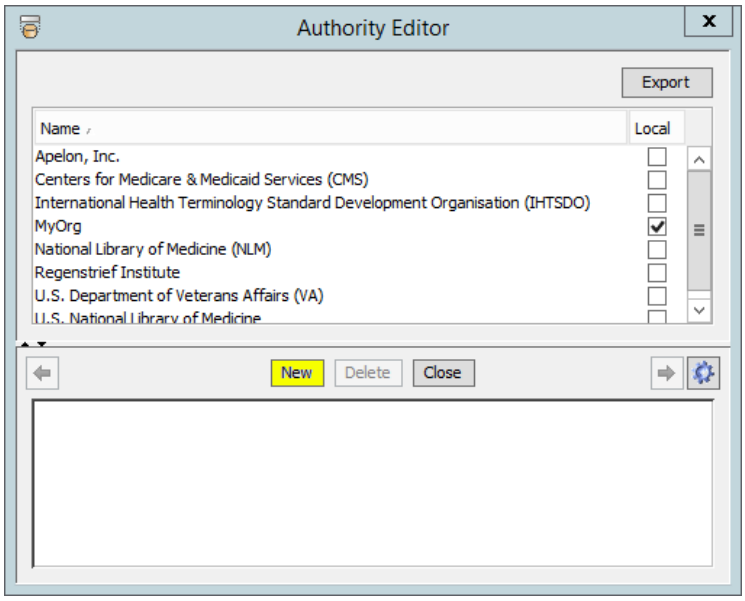
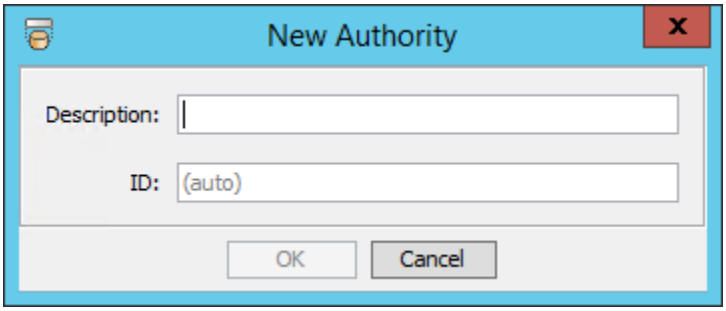
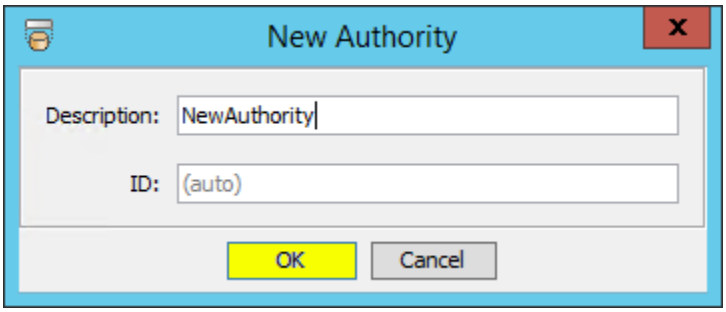


4. The *New Authority* window displays.



5. Specify the name of the authority for a local namespace in the *Description* field.
   In the *ID* field specifies the ID number of the authority for a local namespace. Leave this field blank to accept the auto-generated ID (the usual case), or enter the desired authority ID.



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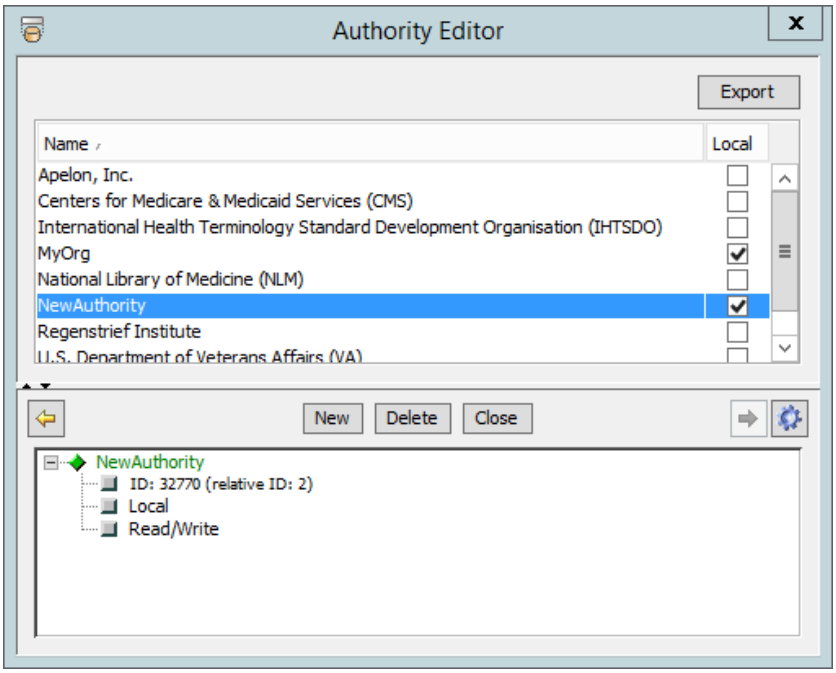
6. Click **OK** to update the knowledgebase with the new authority, or click **Cancel** to ignore the addition. If you click OK the authority will be added to the list.



D.6.2 View an Existing Authority

Follow this procedure to view information for an existing, local namespace authority.

1. From the Menu select Tools > *Authority Editor*.

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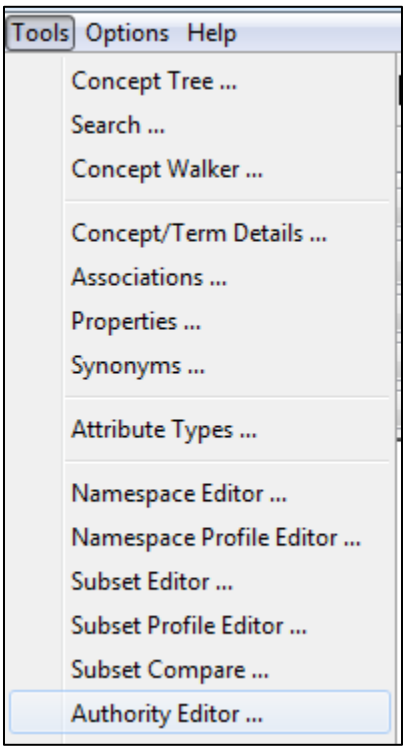
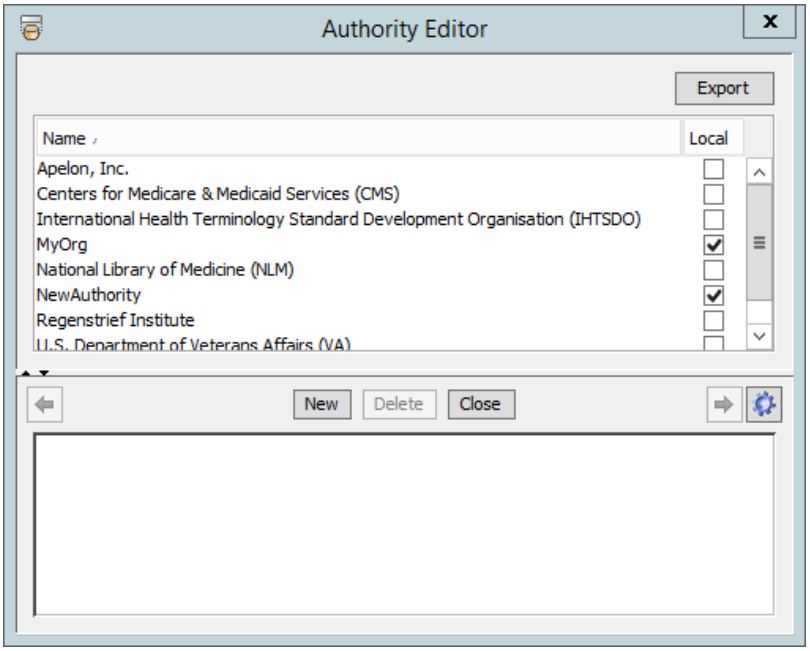


2. The *Authority Editor* window will display.



3. To view the information about a specific Authority, click on the Authority name in the list in the *Authority Editor* floating window.

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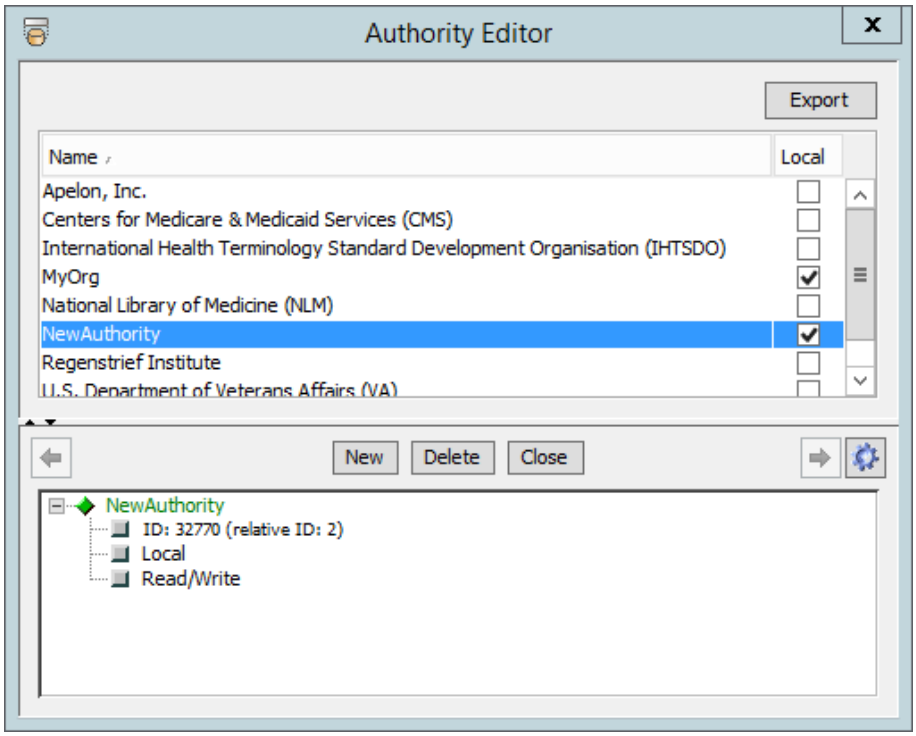

4. The information on each Authority is displayed in the bottom half of the *Authority Editor* window. The data in the window changes to reflect information from that authority.
    - The ID number assigned to this authority displays.
    - The locality of the Authority, **Local** or **Subscription,** displays.
    - The *permission* of the Authority (**Read-Only** or **Read-Write**). Subscription namespaces are **Read-Only**.

5. Click **Close** when you are through viewing authority information, and to close the *Authority Editor* window.

D.6.3 Delete an Authority

Follow this procedure to view information for an existing, local namespace authority. **Note**: To delete an authority you must be logged into the DTS Editor as a user with the AUTHORITY_ADMIN permission.

1. From the Menu select Tools > *Authority Editor*.

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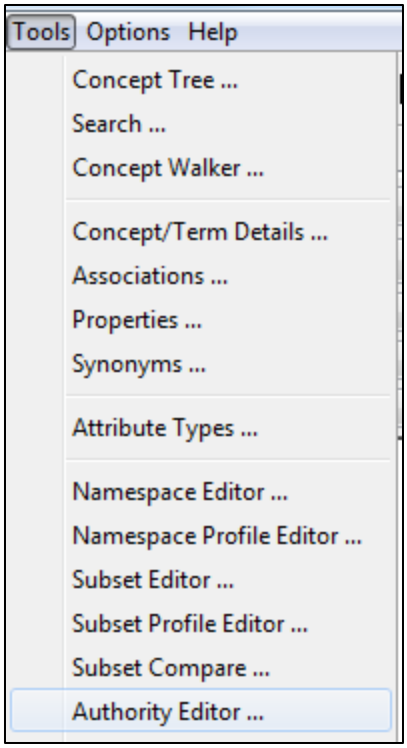
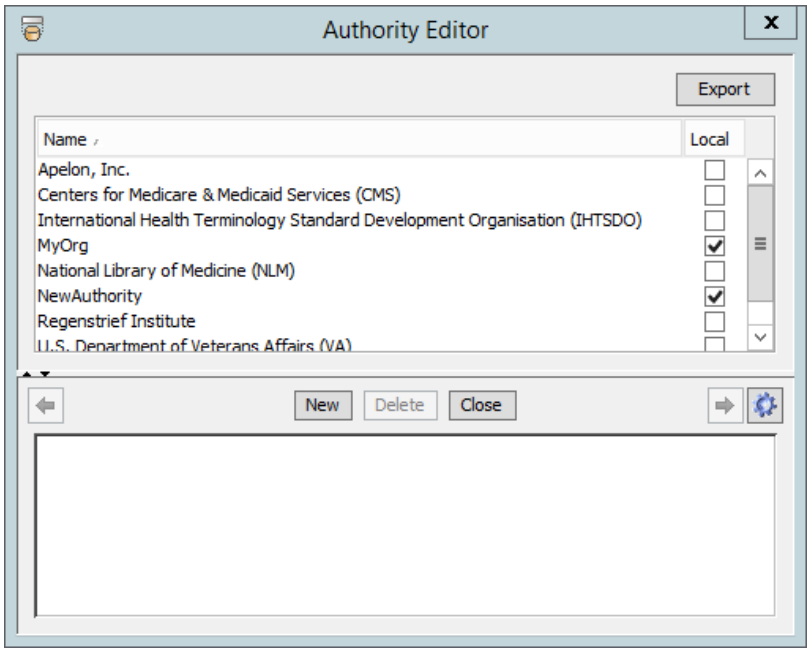


2. The *Authority Editor* window will display.



3. To delete an Authority, click on the Authority name in the list in the *Authority Editor* floating window and click **Delete**.

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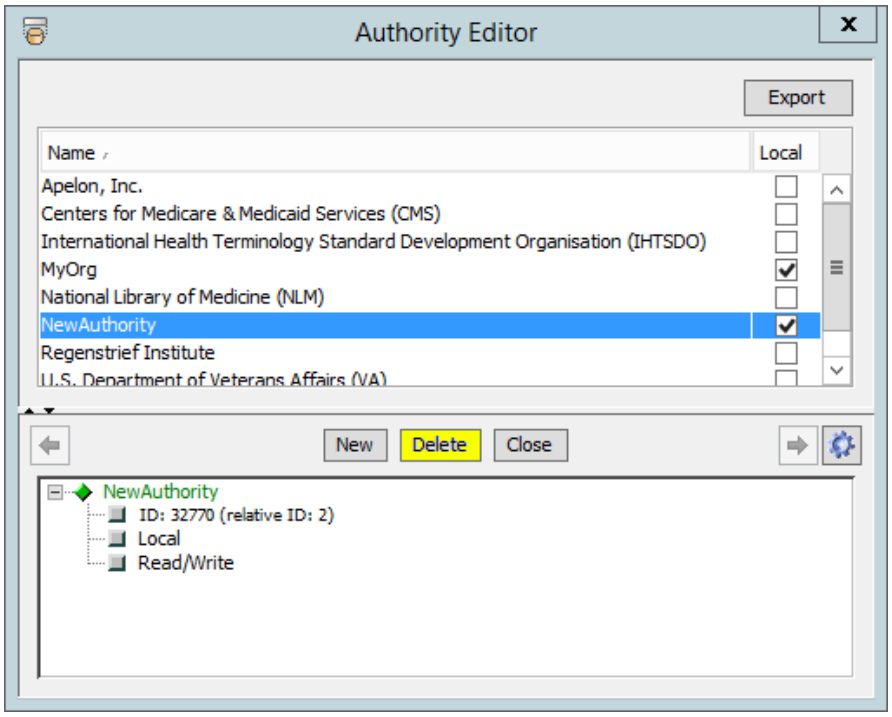
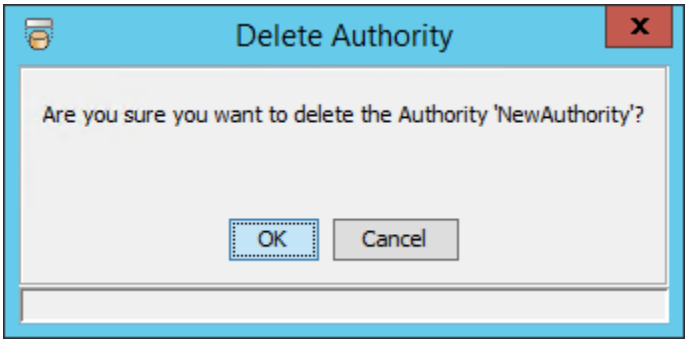
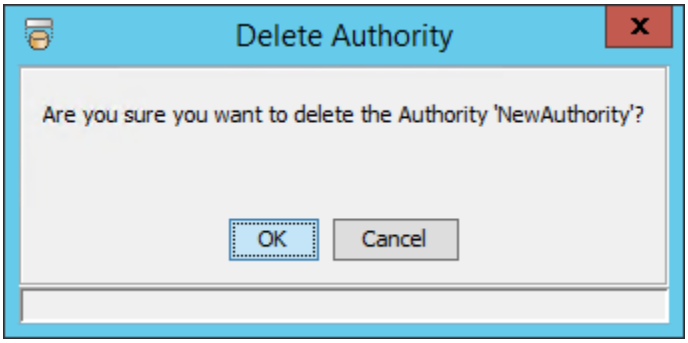


4. A confirmation window similar to the following displays.



5. Click **OK** to delete the authority from the knowledgebase. Click **Cancel** to ignore the deletion. If you click **OK**, a confirmation window similar to the following displays.



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D.7 Namespace Profile View and Maintenance

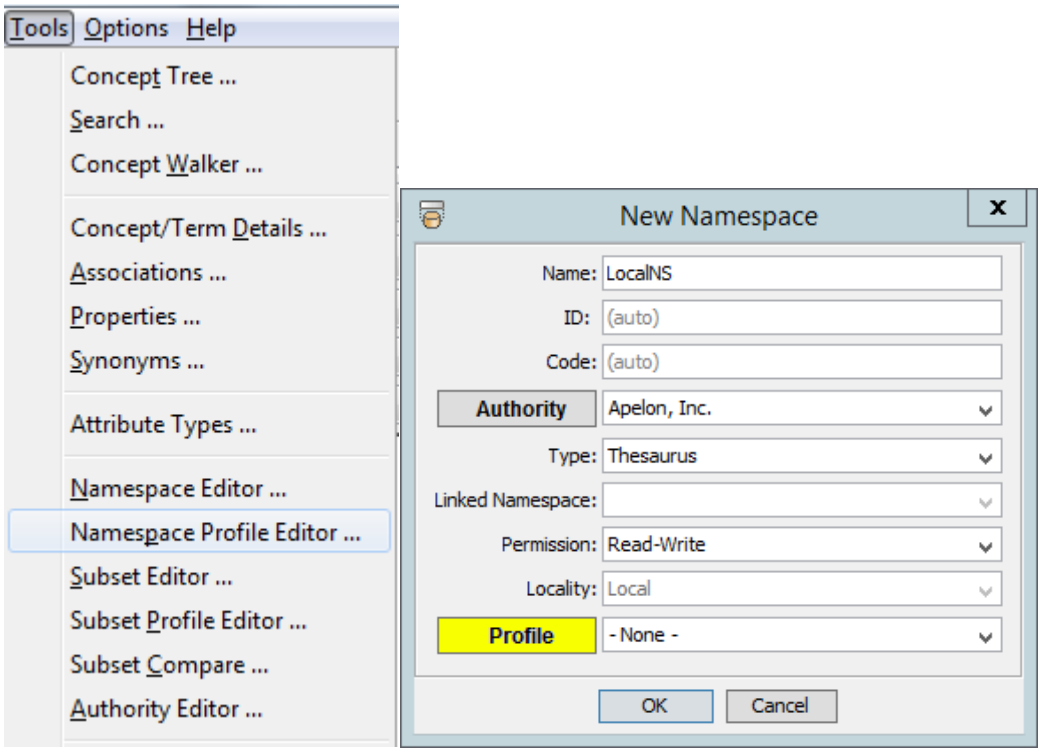
A Namespace Profile is a set of Namespace Attribute Types that are automatically added to a Namespace when the Namespace is created. The *Namespace Profile Editor* enables users to create, manage, and delete Namespace Profiles. Both User (specific to individual users) and System (accessible to all users) Profiles are available. Only users logged in with the "**apelondtsadmin**" role can create or edit system profiles.

The *Namespace Profile Editor* is available from the DTS Editor Tools menu, as well as from the *New Namespace* panel.

D.7.1 Create a Namespace Profile

Follow this procedure to create a new namespace profile:

1. From the Menu select Tools > *Namespace Profile Editor*, or click the **Profile** button in the *New Namespace* panel.



2. After the Namespace profile Editor appears, click on the **New** button opposite the **Profile** field dropdown.

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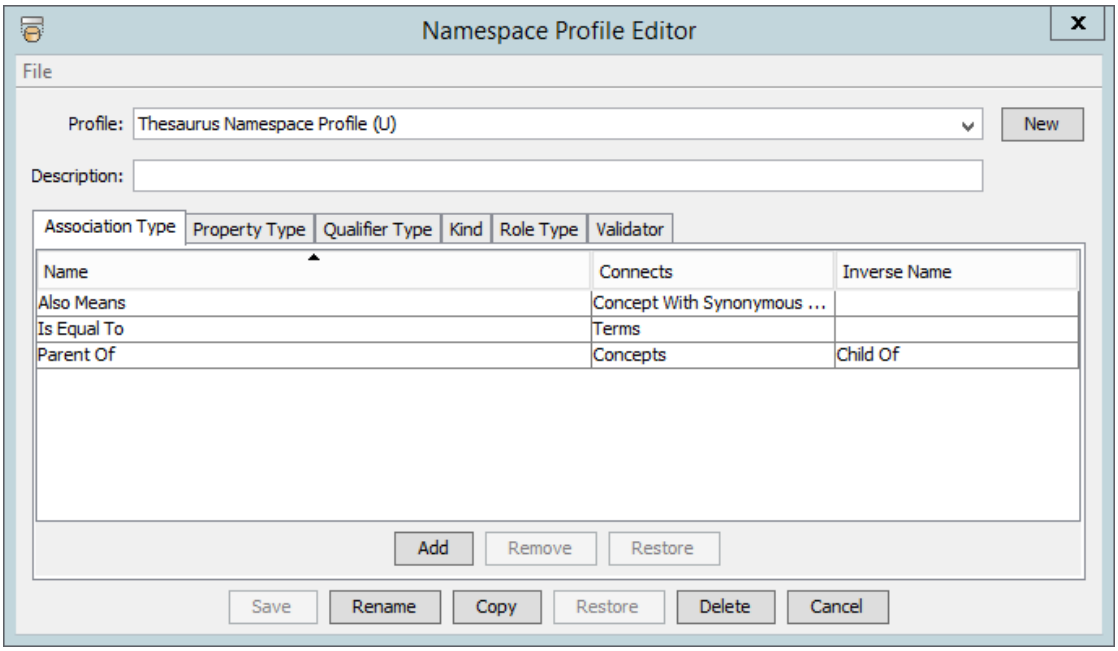
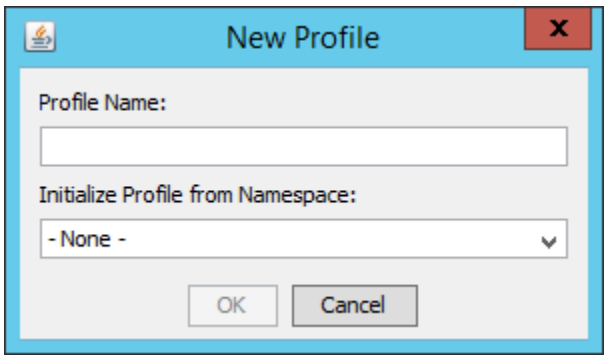


3. The *New Namespace Profile* window displays. Enter the name of new profile. Then select if you wish to create a new profile from scratch, or import the settings of an existing profile (importing all existing attribute types, and allowing you to modify it further from that point), and click **OK** to initialize a new profile, or click **Cancel** to ignore the addition.



4. A new profile will be loaded into the *New Namespace Profile* window. If you chose to initialize your profile from an existing namespace, all the existing Association, Property, Qualifier, and Role Types, and Validators will be present in this new profile. Created profiles are always user profiles, designated by a "(U)" following its name. Follow the steps in the **View and Edit a Namespace Profile** section below to complete the profile. Note that the profile will not be stored in the DTS Knowledgebase until the profile has been explicitly saved.

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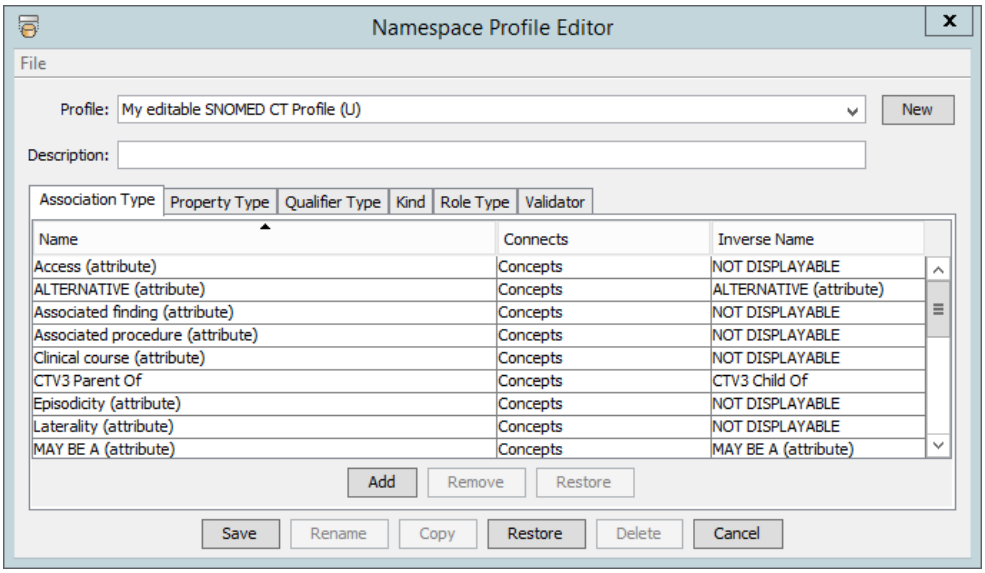
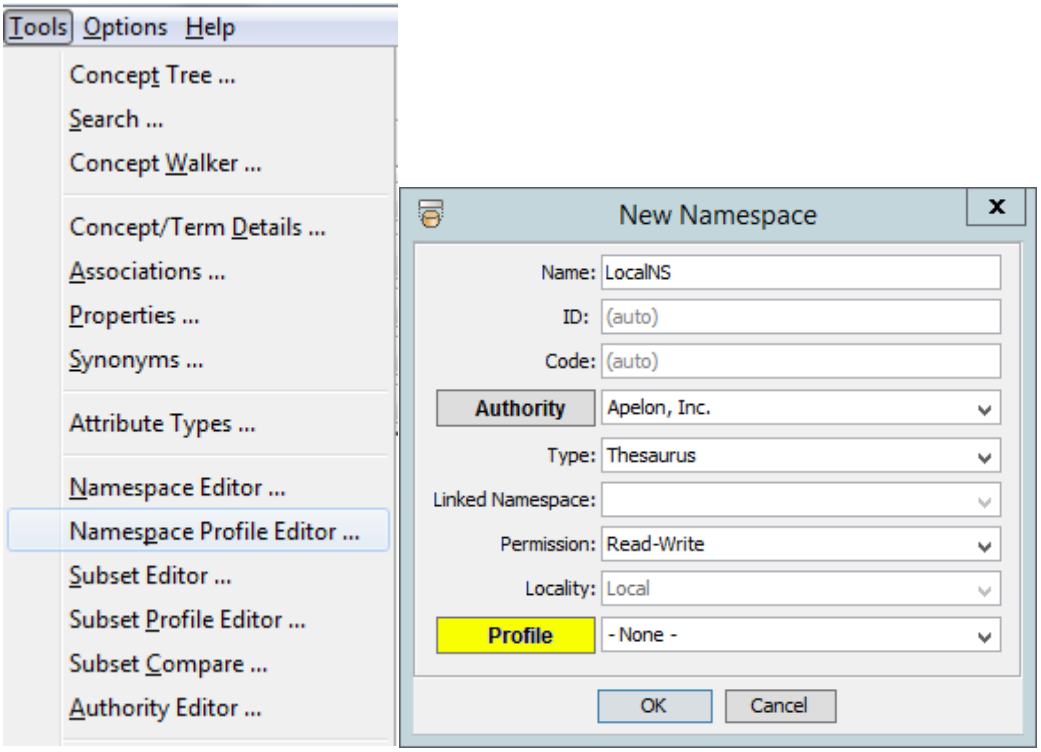


D.7.2 View and Edit a Namespace Profile

Follow this procedure to view an existing namespace profile or edit the profile definition.

1. From the Menu select Tools > *Namespace Profile Editor*, or click the **Profile** button in the *New Namespace* panel.



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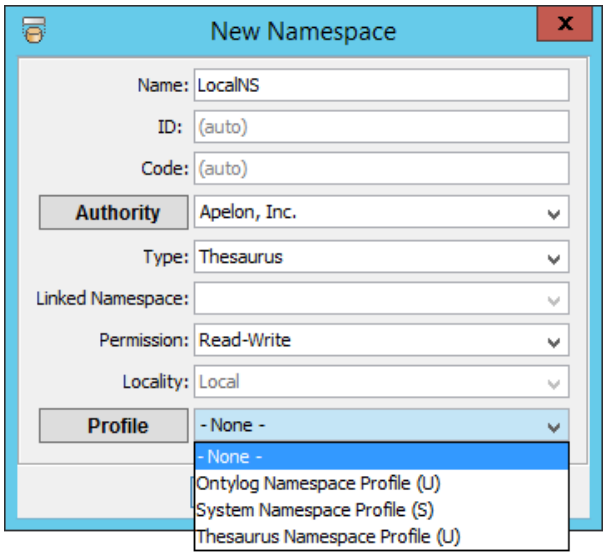
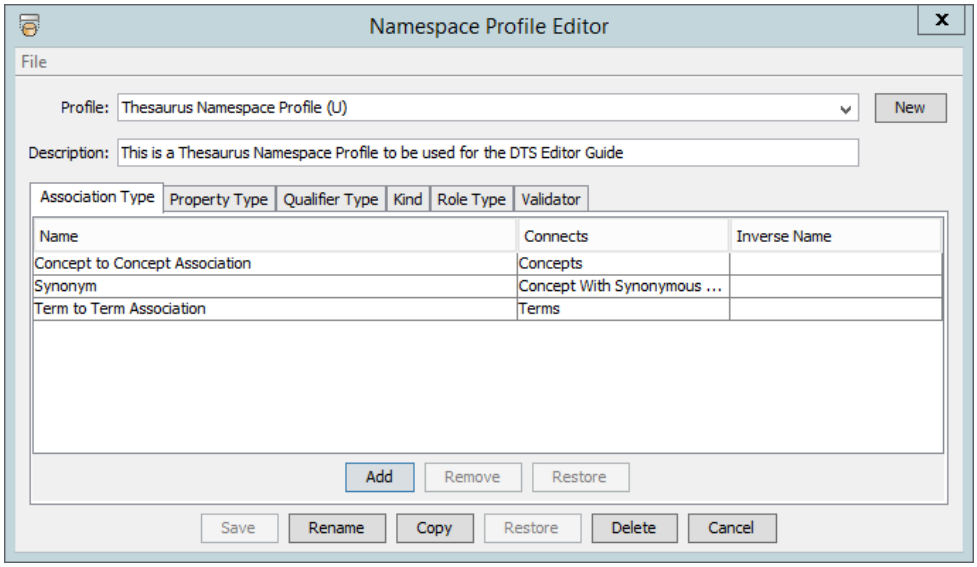
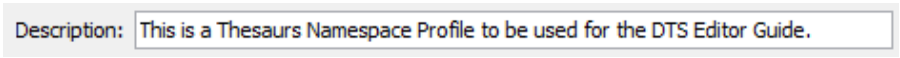
2. To view an existing namespace profile, click on the profile name in the **Profile** field dropdown.



3. The information on the selected profile is displayed below the Profile field of the *Namespace Profile Editor* window. This information consists of:



a. The description of the Profile.



b. A set of tabs panels, each of which shows the attribute types, of the selected class (Association Type, Property Type, Qualifier Type Role Type, and Validator), to

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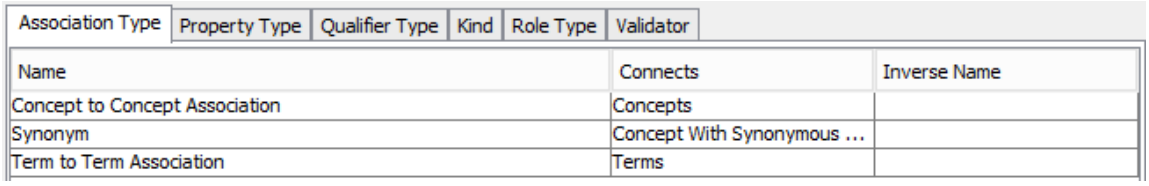
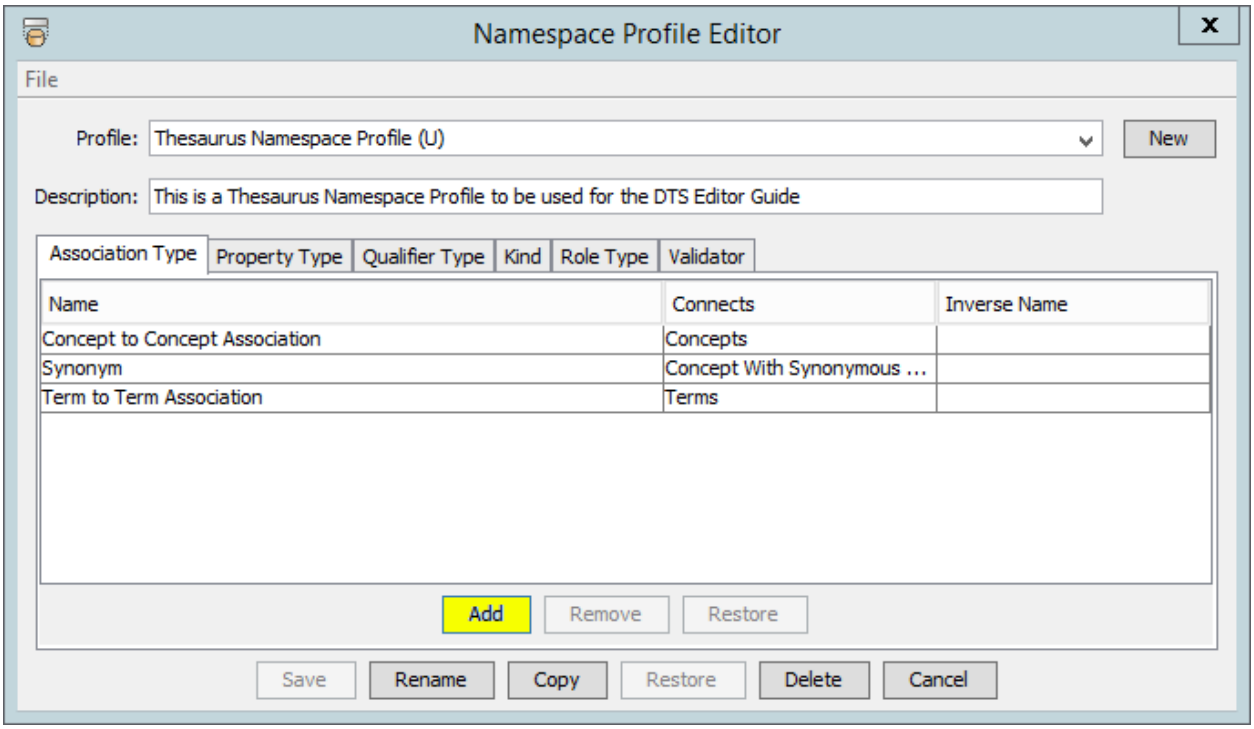
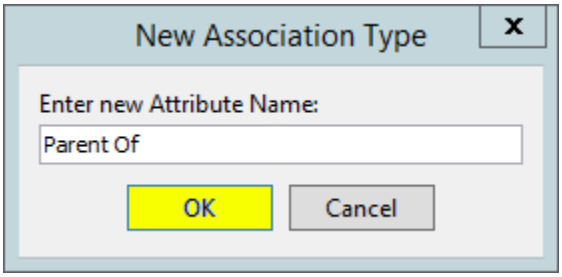
be added to a created namespace. These tab panels, and the panel's elements, are similar to those in the *Attribute Type Editor* described in the next section. See this section for further details on attribute type definitions. The rows in any of these tab panels can be sorted by clicking on the header of the desired sort column.



4. To change the description of a Profile, edit the **Description** text field.
5. To add, modify or remove an association type, select the **Association Type** tab.
    a. To add an association to the profile, click on the **Add** button at the bottom of the tab panel and enter the name of the association type to be created in the popup. Duplicate (case-insensitive) type names are not permitted.





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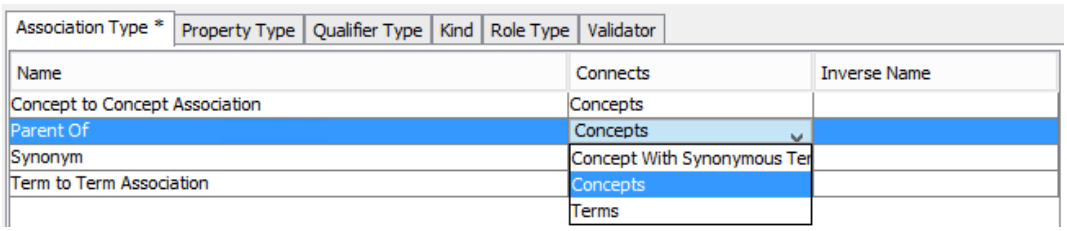
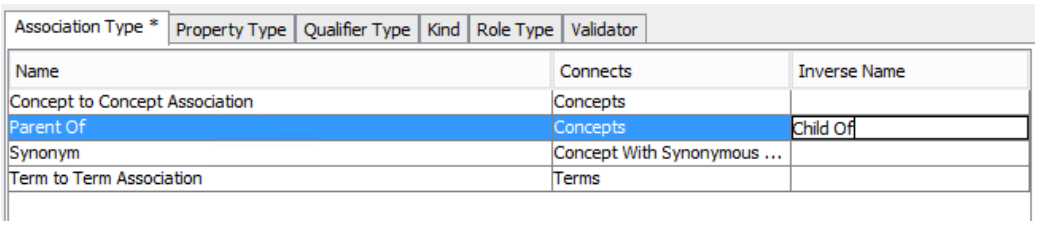
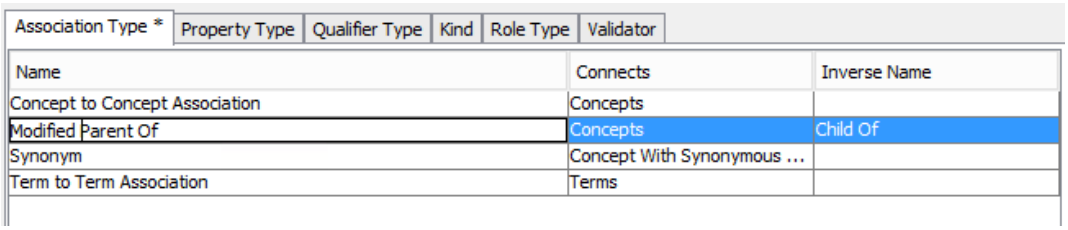
i. As necessary, click in the **Connects** cell to select the Connects value for the new type.



ii. Double click in the **Inverse Name** cell to enter an optional inverse name for the association.



b. To modify an existing profile association, double click in the **Name** cell to edit the association type name, click in the **Connects** cell to change the Connects value for the type, or double click in the **Inverse Name** cell to modify (or remove) an optional inverse name for the type. Duplicate (case-insensitive) type names are not permitted.



c. To remove an association type from the profile, select the association in the table and click on the **Remove** button.

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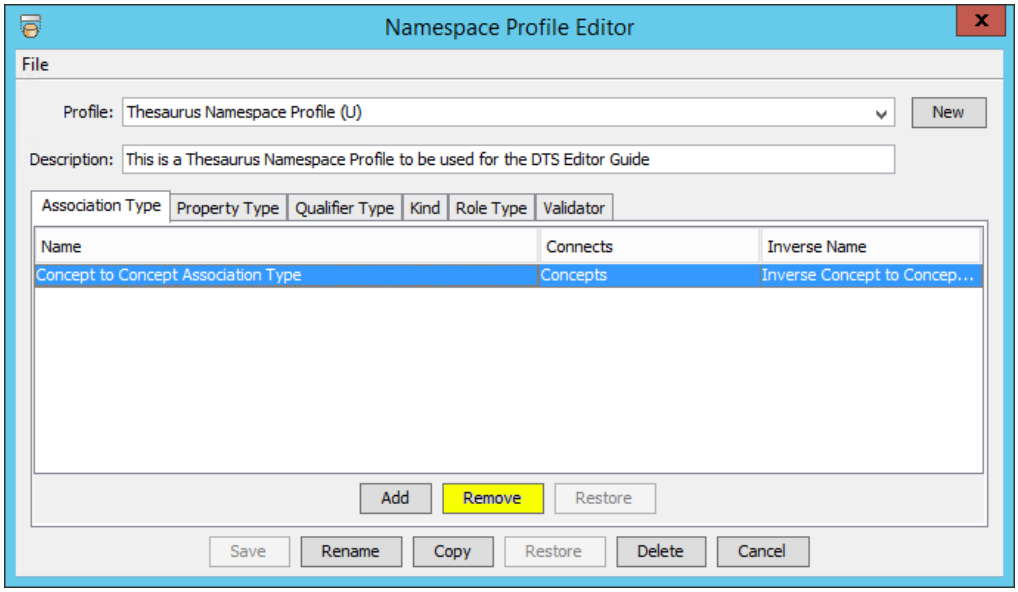
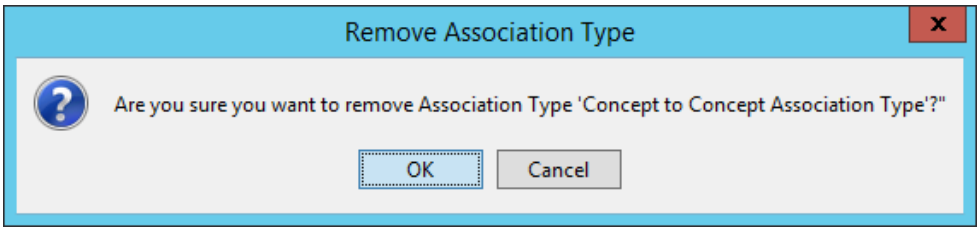
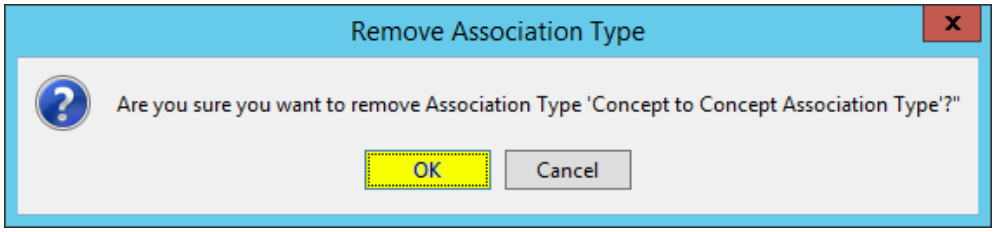


i. A confirmation dialog will be shown.



ii. Click **OK** to remove the association type, or **Cancel** to cancel the operation.



6. To add, modify or remove a property type, select the **Property Type** tab.
   a. To add a property to the profile, click on the **Add** button at the bottom of the tab panel and enter the name of the property type to be created in the popup. Duplicate (case-insensitive) type names are not permitted.

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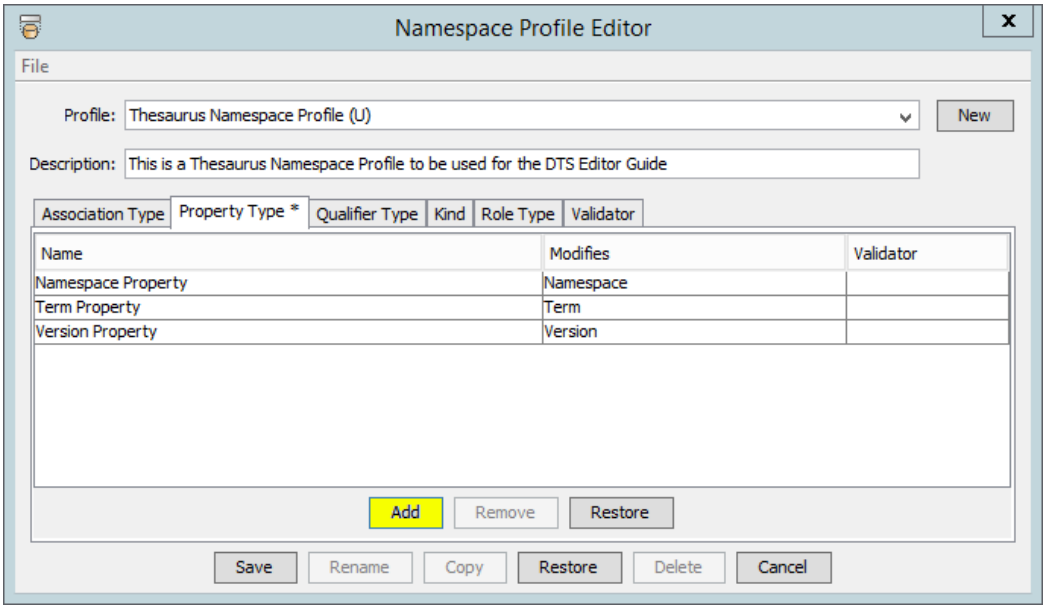
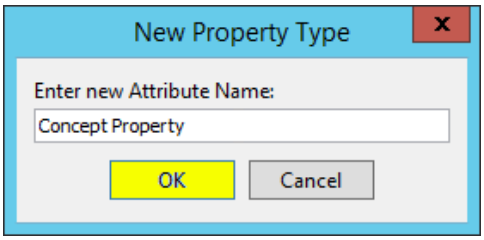
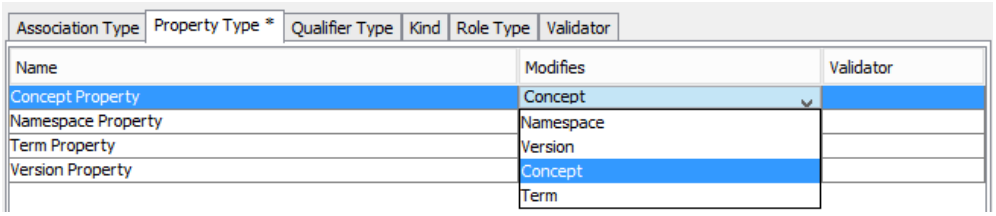
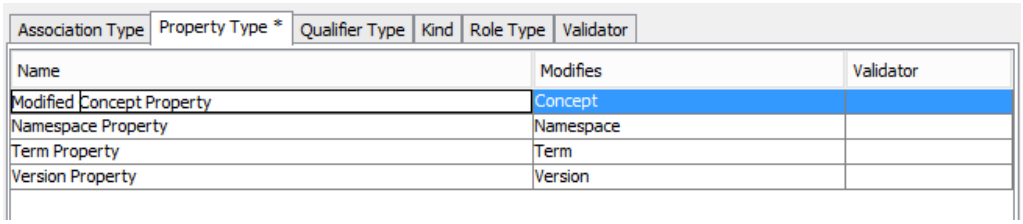




i. As necessary, click in the **Modifies** cell to select the Modifies value for the new type.



b. To modify an existing profile property, double click in the **Name** cell to edit the property type name, click in the **Modifies** cell to change the Modifies value for the type. Duplicate (case-insensitive) type names are not permitted.



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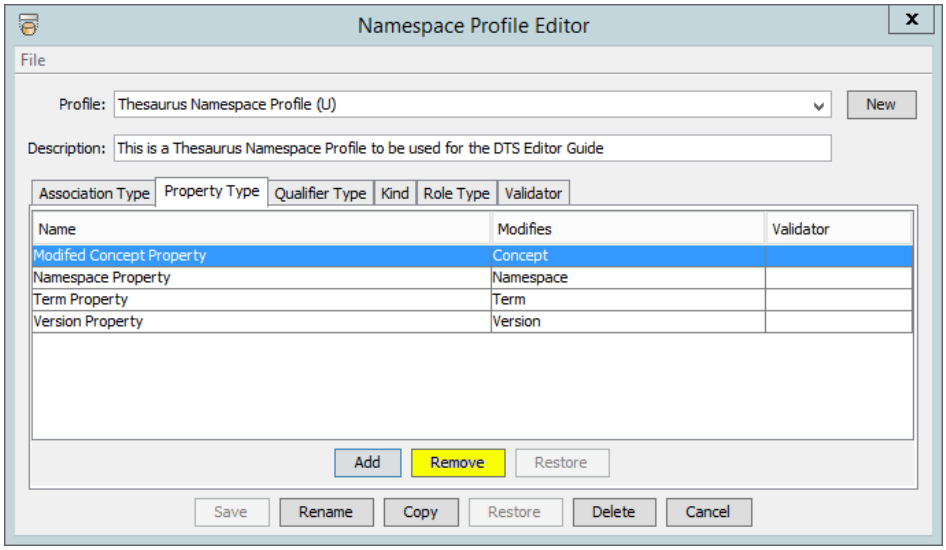
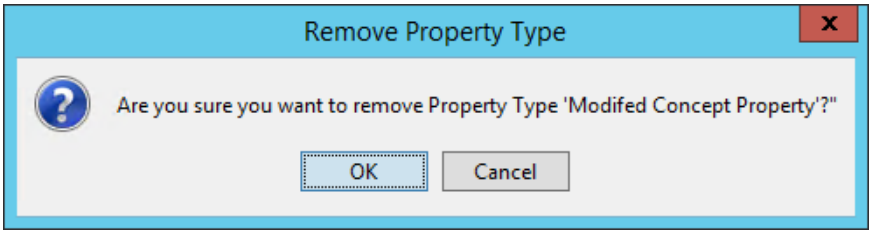
c. To remove a property type from the profile, select the property in the table and click on the **Remove** button.



i. A confirmation dialog will be shown.



ii. Click **OK** to remove the property type, or **Cancel** to cancel the operation.

7. To add, modify or remove a qualifier type, select the **Qualifier Type** tab.
   a. To add a qualifier to the profile, click on the **Add** button at the bottom of the tab panel and enter the name of the qualifier type to be created in the popup. Duplicate (case-insensitive) type names are not permitted.

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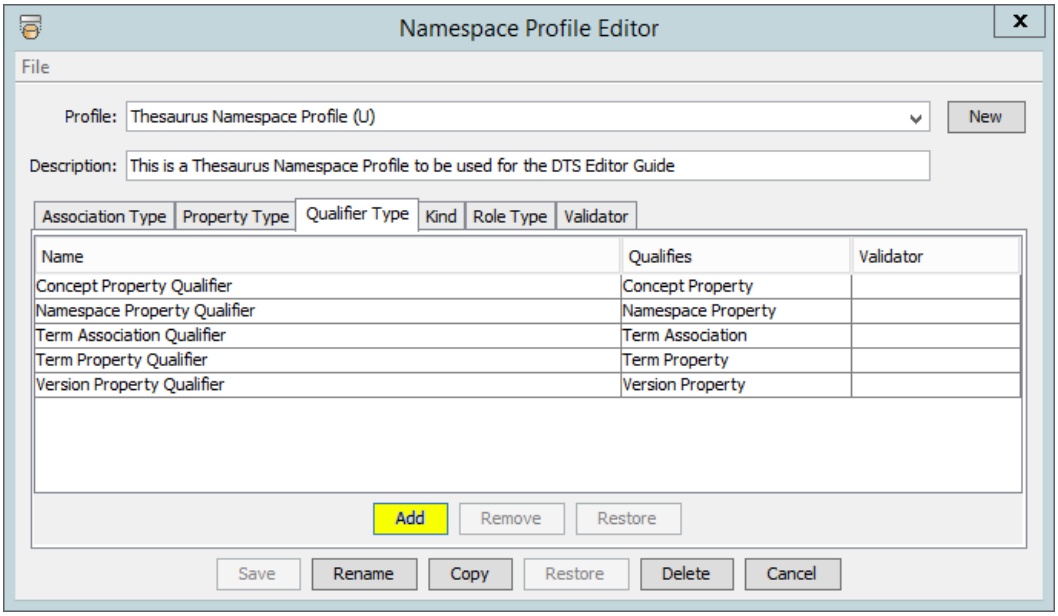
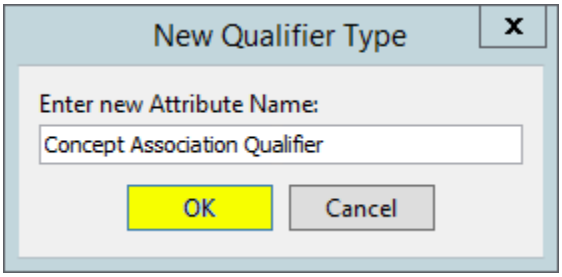
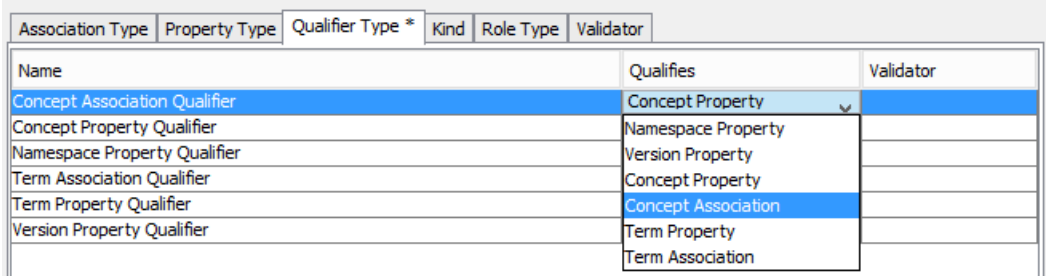
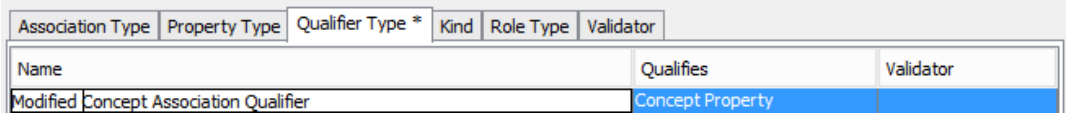




i. As necessary, click in the **Qualifies** cell to select the Qualifies value for the new type.



b. To modify an existing profile qualifier, double click in the **Name** cell to edit the qualifier type name, click in the **Qualifies** cell to change the Qualifies value for the type. Duplicate (case-insensitive) type names are not permitted.



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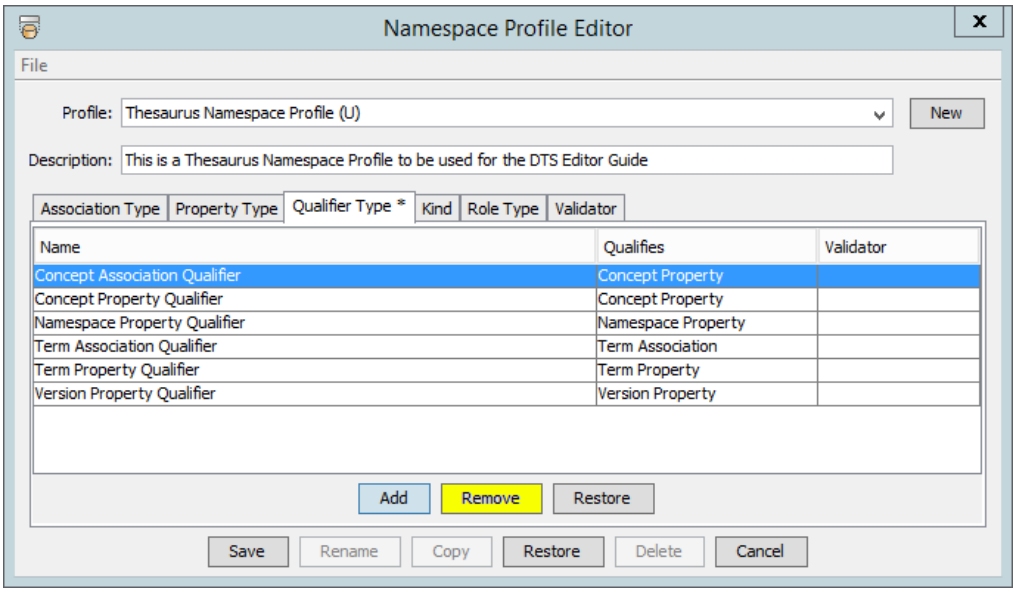
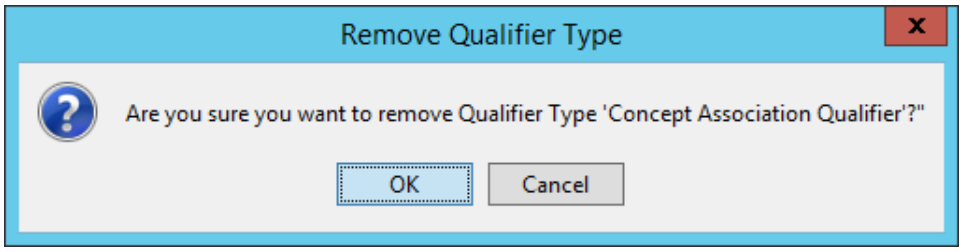
c. To remove a qualifier type from the profile, select the qualifier in the table and click on the **Remove** button.



i. A confirmation dialog will be shown.



ii. Click **OK** to remove the qualifier type, or **Cancel** to cancel the operation.

8. To add, modify, or remove a kind, select the **Kind** tab.
   a. Note that if any Kinds are entered in this tab, the resulting profile can only be applied to a Local Ontylog, or Ontylog Extension namespace.
   b. To add a Kind to the profile, click on the **Add** button at the bottom of the tab panel and enter the name of the Kind to be created in the popup. Duplicate (case-insensitive) kind names are not permitted.

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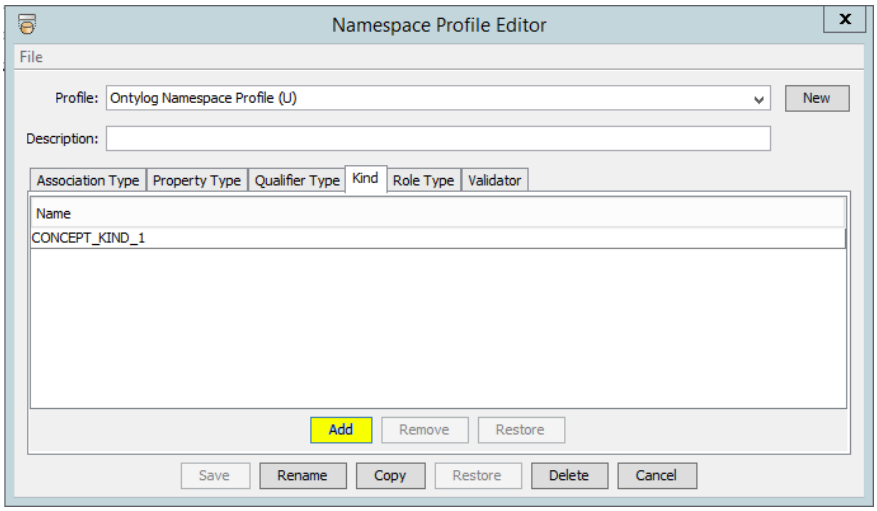
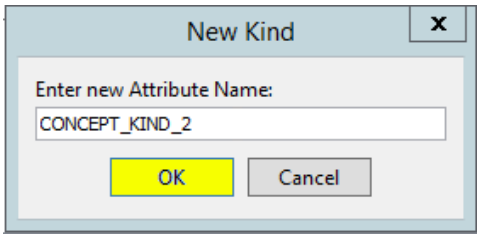
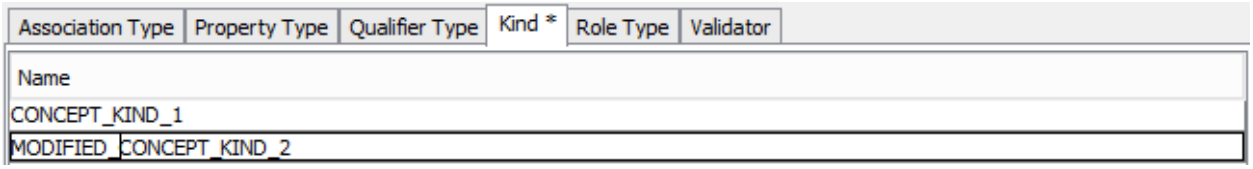




c. To modify an existing profile kind, double click in the **Name** cell to edit the kind name. Duplicate (case-insensitive) type names are not permitted.



d. To remove a kind from the profile, select the kind in the table and click on the **Remove** button.

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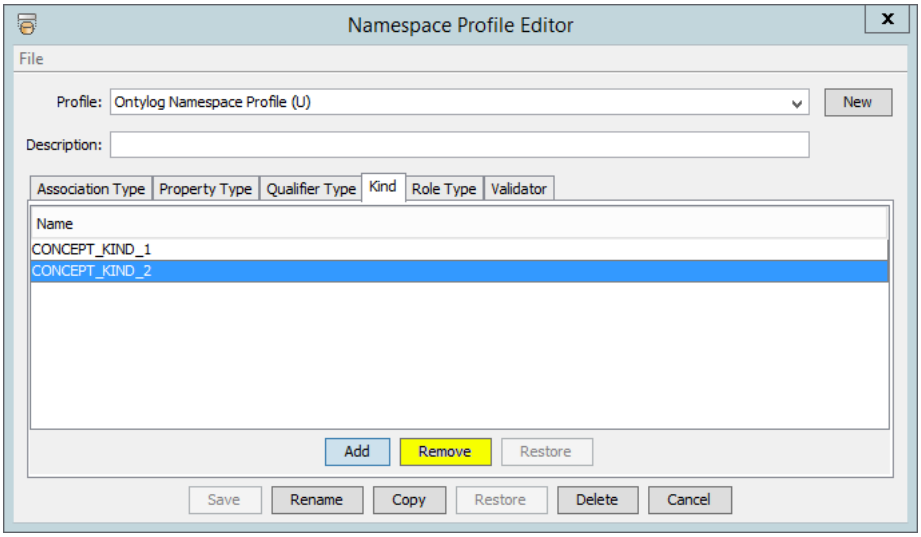

i. A confirmation dialog will be shown.

ii. Click **OK** to remove the kind, or **Cancel** to cancel the operation.

9. To add, modify or remove a role type, select the **Role Type** tab.
    a. Note that if any Role Types are entered in this tab, the resulting profile can only be applied to an Ontylog Extension namespace.
    b. To add a Role Type to the profile, click on the **Add** button at the bottom of the tab panel and enter the name of the Role Type to be created in the popup. Duplicate (case-insensitive) type names are not permitted.

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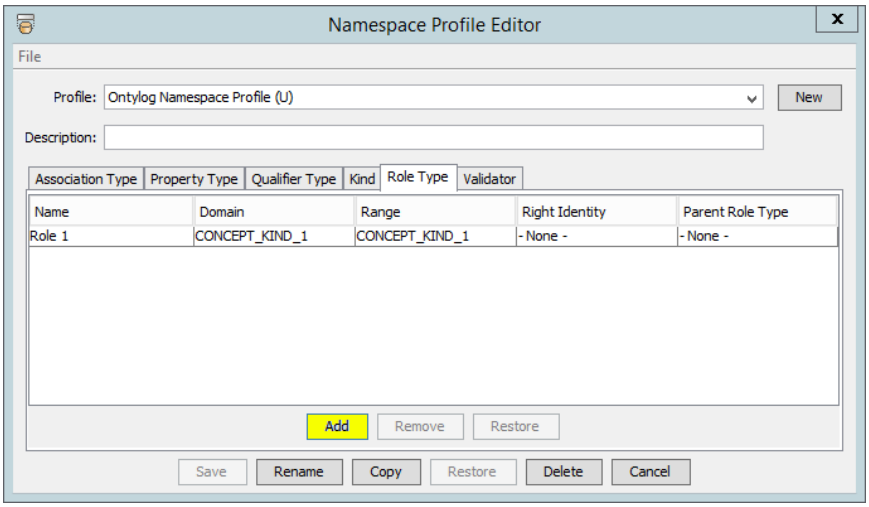
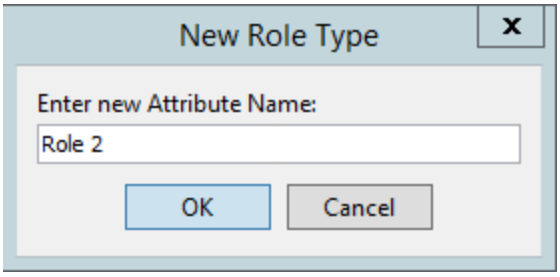
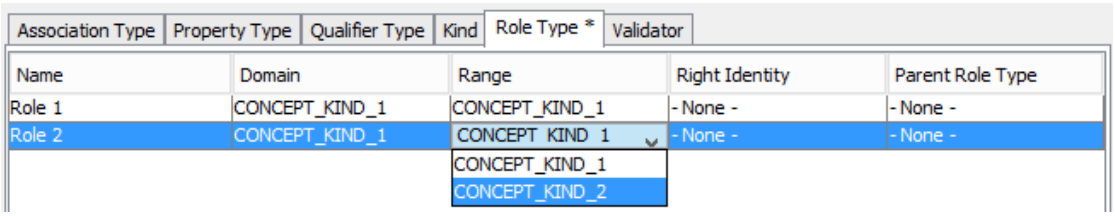
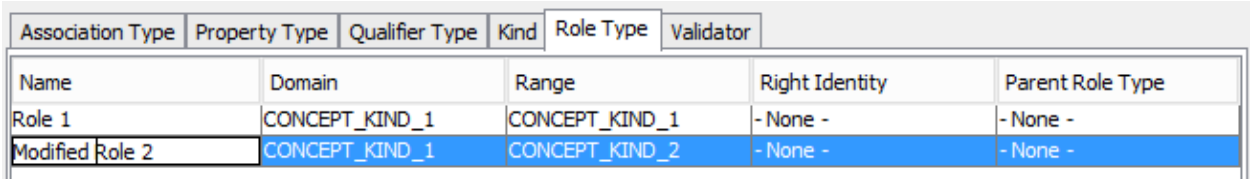




i. As necessary, click in the **Domain**, **Range**, **Right Identity**, and **Parent Role Type** cells to select the desired values for the new type. Domain and Range are required.



c. To modify an existing profile Role, double click in the **Name** cell to edit the Role name. Duplicate (case-insensitive) type names are not permitted.



d. To remove a Role from the profile, select the kind in the table and click on the **Remove** button.

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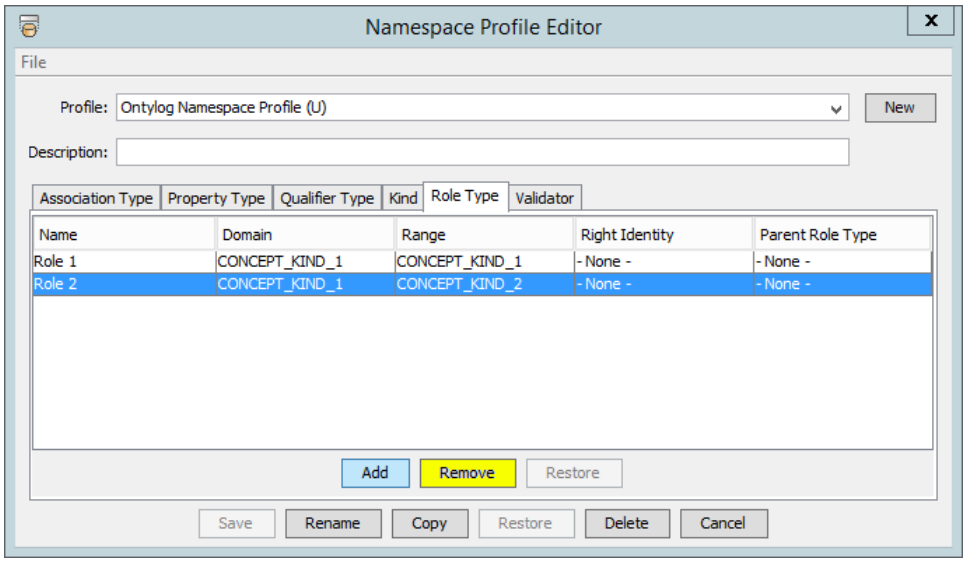
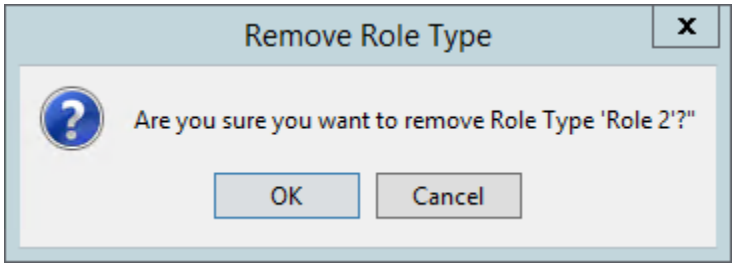


i. A confirmation dialog will be shown.



ii. Click **OK** to remove the kind, or **Cancel** to cancel the operation.

10. To add, modify or remove a validator type, select the **Validator Type** tab.
    a. To add a Validator Type to the profile, click on the **Add** button at the bottom of the tab panel and enter the name of the Validator Type to be created in the popup. Duplicate (case-insensitive) type names are not permitted.

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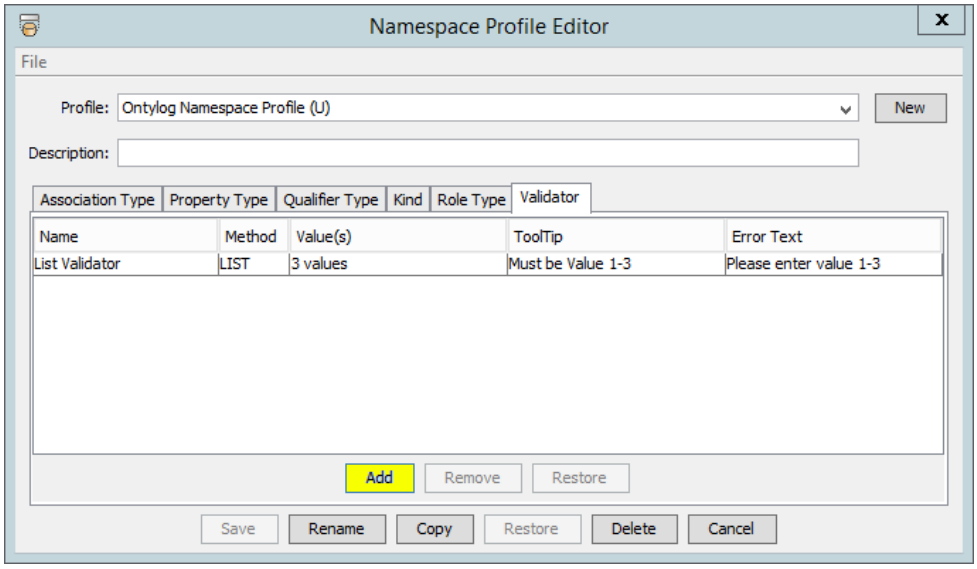
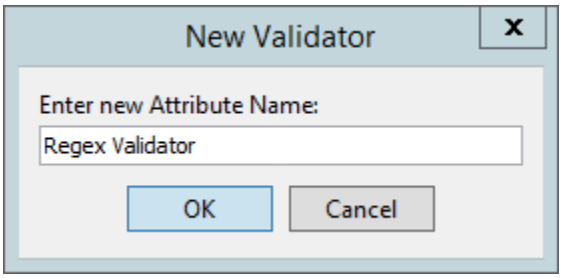
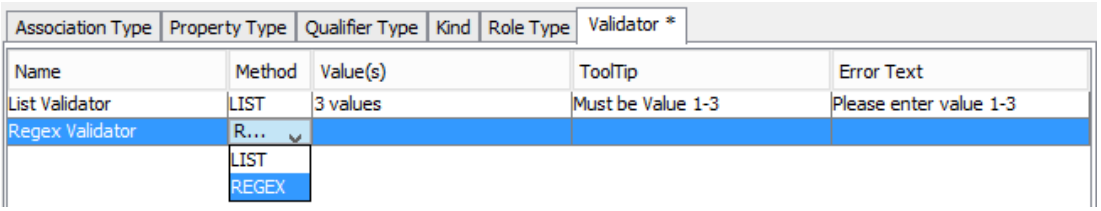
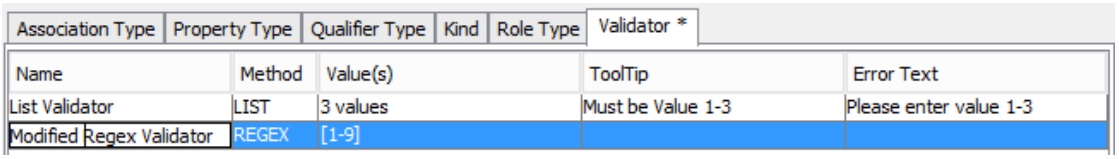




i. As necessary, click in the **Method**, **Value(s)**, **ToolTip**, and **Error Text** cells to select the desired values for the new type. Method and Value(s) are required.



b. To modify an existing profile Validator, double click in the **Name** cell to edit the Role name. Duplicate (case-insensitive) type names are not permitted.



c. To remove a Validator from the profile, select the kind in the table and click on the **Remove** button.

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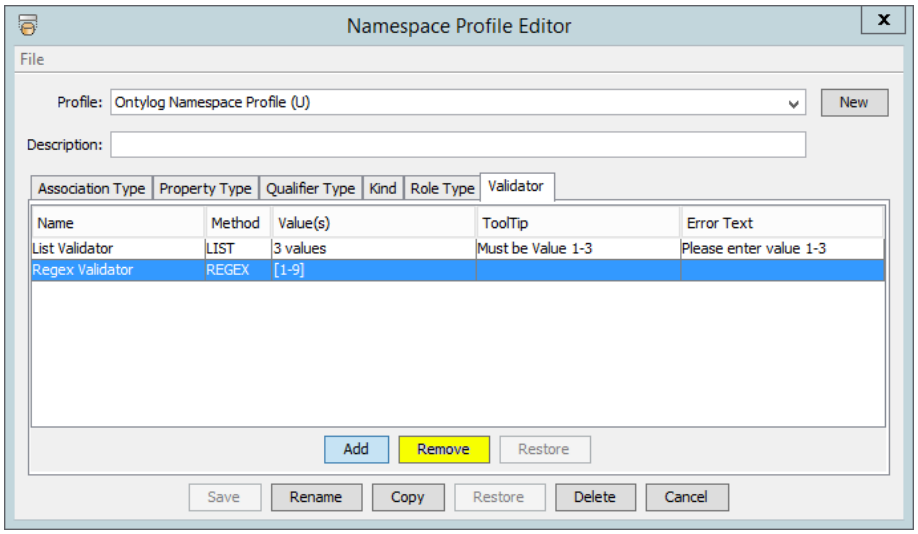
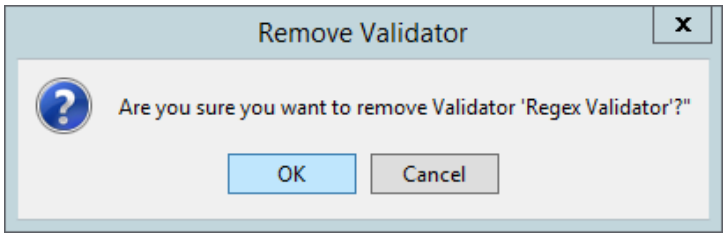
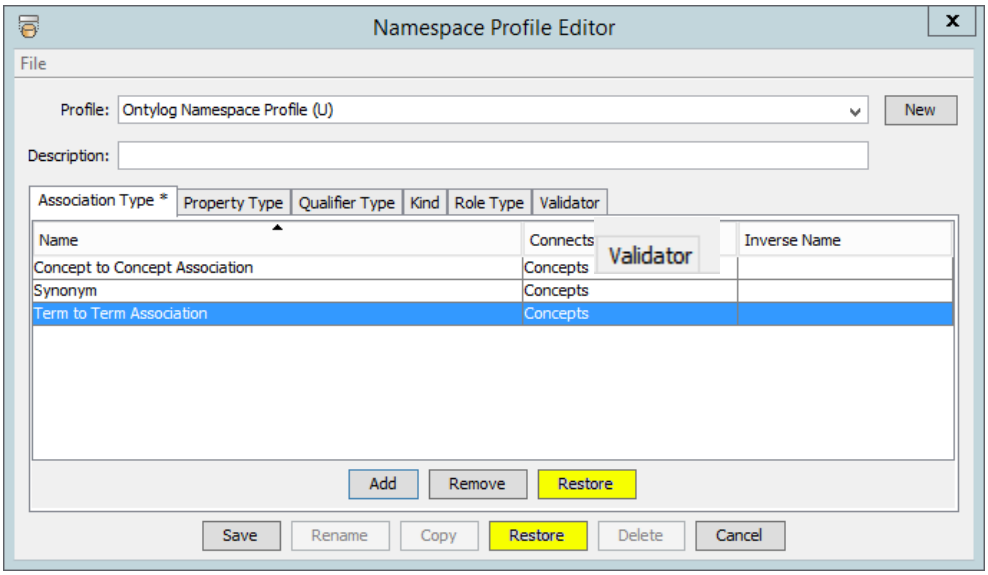


i. A confirmation dialog will be shown.



ii. Click **OK** to remove the validator, or **Cancel** to cancel the operation.

11. To discard any pending changes and return to the last saved version of the profile, click the **Restore** button.



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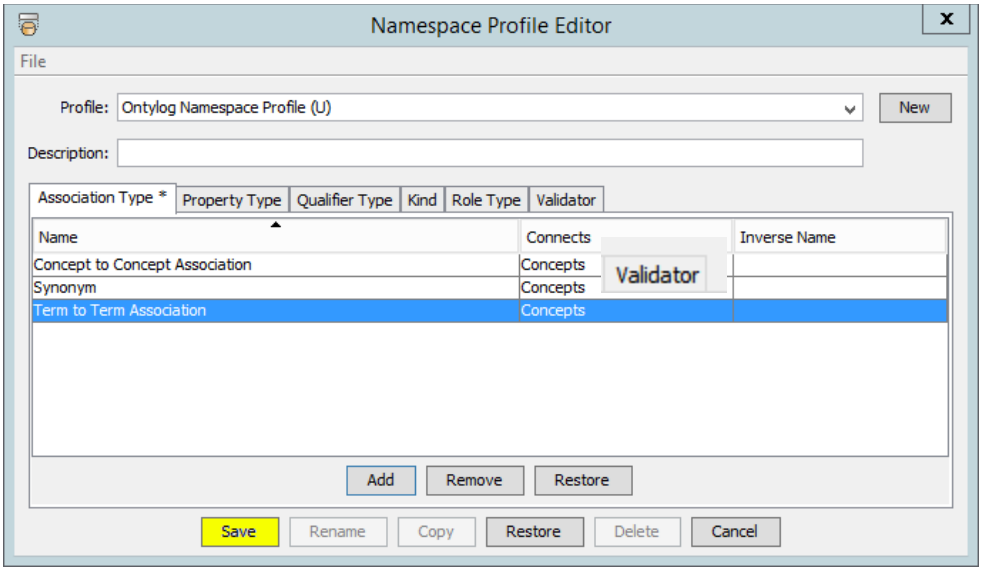
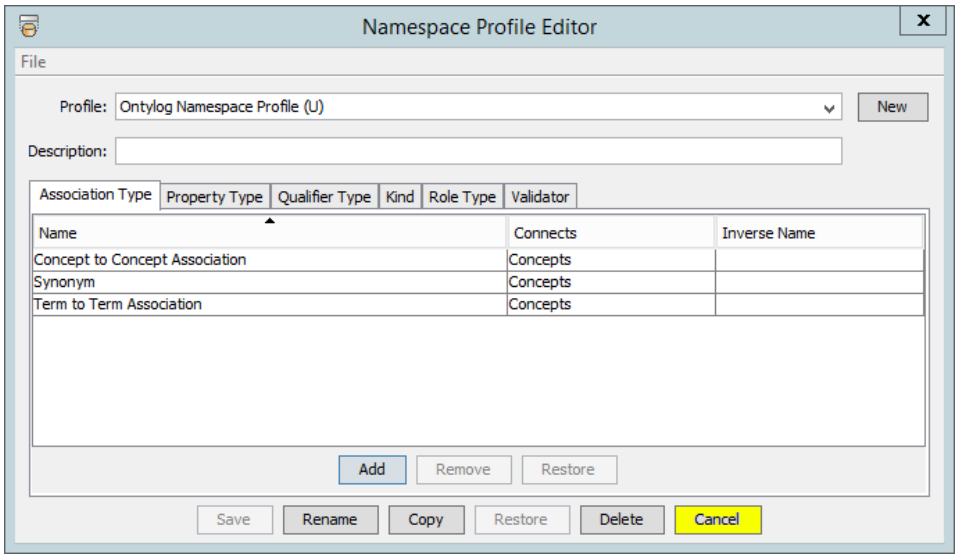
12. Click **Save** (which becomes enabled if you make an edit) to update the selected Namespace profile with the changes.



13. Click **Cancel** to close the *Namespace Profile Editor* window.



D.7.3 Copy a Namespace Profile

Follow this procedure to copy a namespace profile to a new profile. The original profile will be unchanged after the operation.

1. From the Menu select Tools > *Namespace Profile Editor*, or click the **Profile** button in the *New Namespace* panel.

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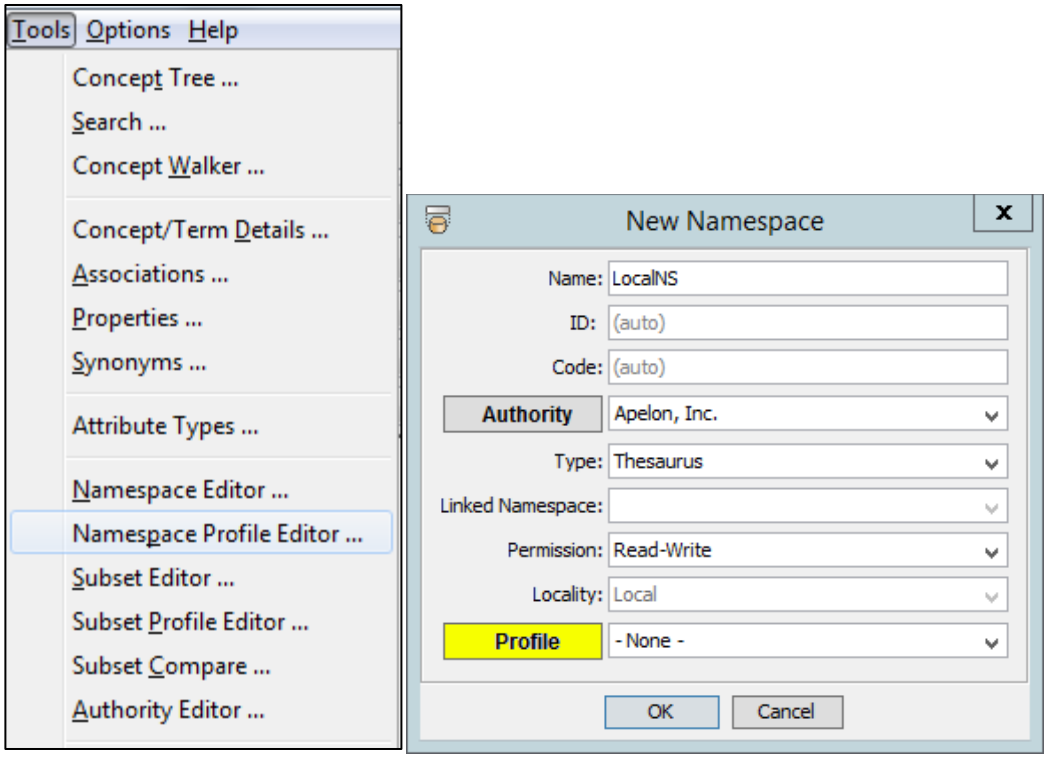
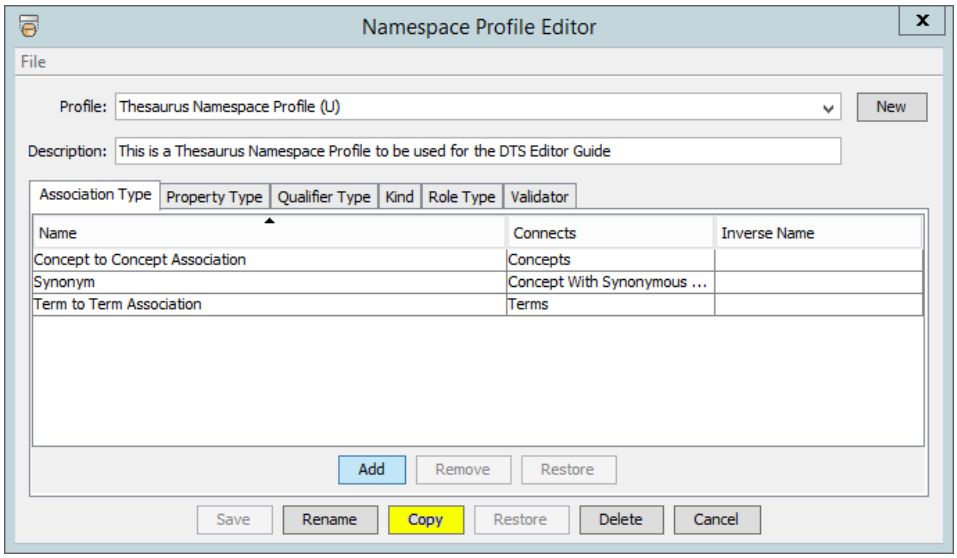


2. Select the namespace profile to be copied from the **Profile** field dropdown and click the **Copy** button at the bottom of the panel.



3. Enter the name of the new profile to be created in the **Profile Name** field of the **Copy Profile** dialog box. Click **OK** to copy the profile or click **Cancel** to cancel the operation. If the entered name is already in use, an error dialog will be shown.
4. If you are logged in with the "**apelondtsadmin**" role, a dialog appears giving you the option to create the Namespace Profile copy as a system profile. Click on the preferred button to save the profile.

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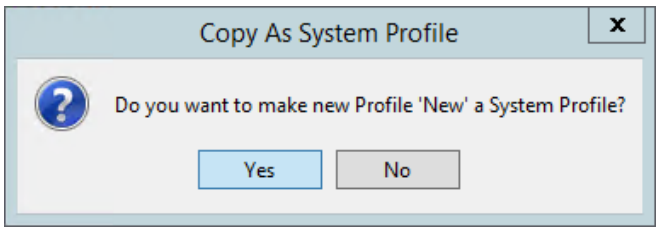
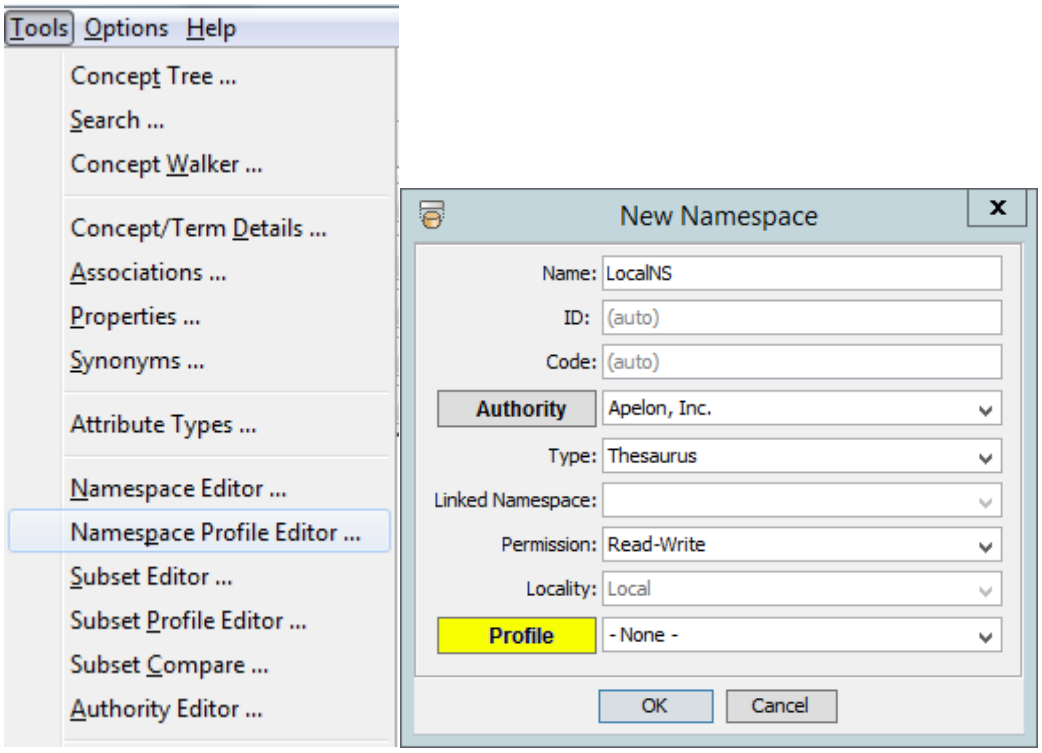


5. Click **Cancel** to close the *Namespace Profile Editor* window.

D.7.4 Rename a Namespace Profile

Follow this procedure to rename a namespace profile.

1. From the Menu select Tools > *Namespace Profile Editor*, or click the **Profile** button in the *New Namespace* panel.



2. Select the namespace profile to be renamed from the **Profile** field dropdown and click the **Rename** button at the bottom of the panel.

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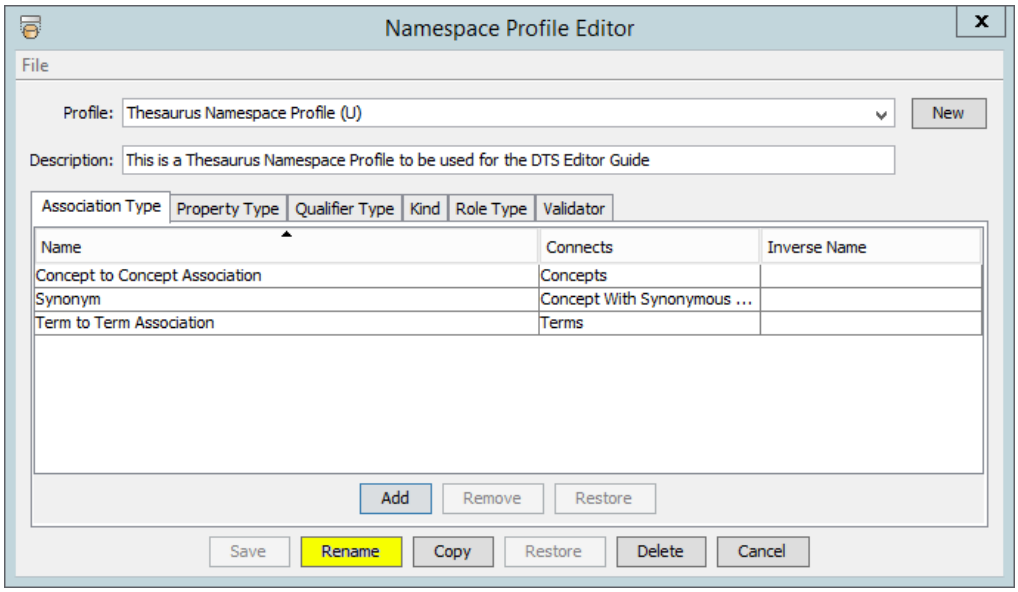
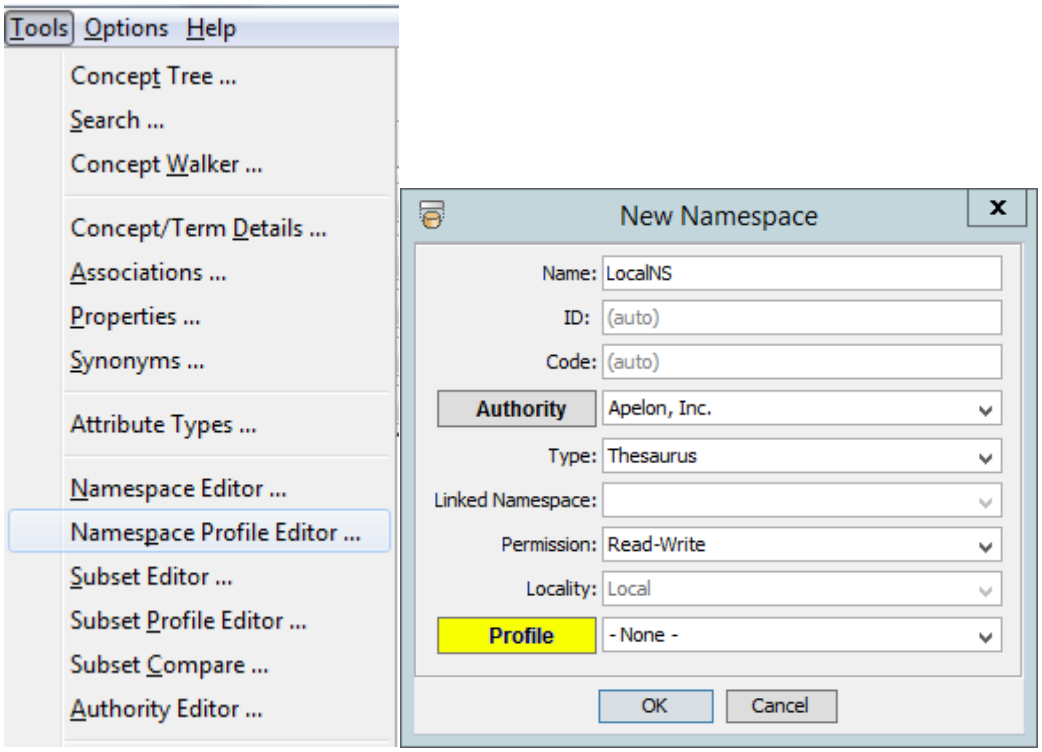


3. Enter the new name of the profile in the **Profile Name** field of the **Rename Profile** dialog box. Click **OK** to rename the profile or click **Cancel** to cancel the operation. If the entered name is already in use, an error dialog will be shown.
4. Click **Cancel** to close the *Namespace Profile Editor* window.

D.7.5 Delete a Namespace Profile

1. From the Menu select Tools > *Namespace Profile Editor*, or click the **Profile** button in the *New Namespace* panel.



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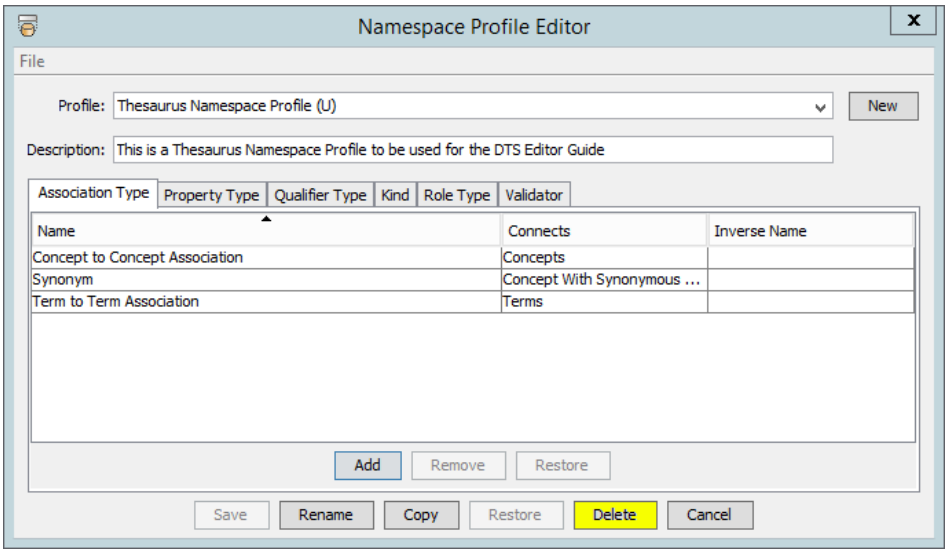
2. Select the namespace profile to be deleted from the **Profile** field dropdown and click the **Delete** button at the bottom of the panel.



3. Click **OK** to delete the namespace profile from the system. Click **Cancel** to cancel the operation.
4. Click **Cancel** to close the *Namespace Profile Editor* window.

D.7.6 Export a Namespace Profile

Namespace user profiles are only visible to the user that created the profile. To exchange one of your profile definitions so that it can be used by other users, the profile can be exported to an xml file in your local file system. The profile can then be sent to other users and imported as one of their profiles (or as a system profile). See **Import a Namespace Profile** below for information on importing.

Follow this procedure to export a namespace profile.

1. From the Menu select Tools > *Namespace Profile Editor*, or click the **Profile** button in the *New Namespace* panel.

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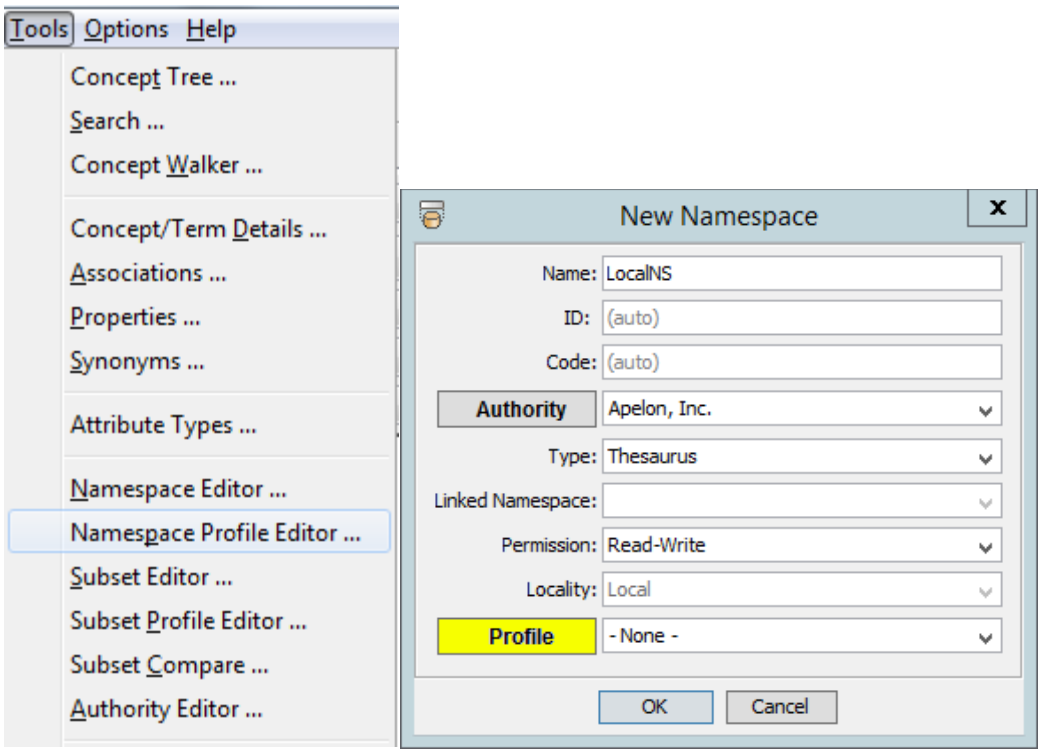
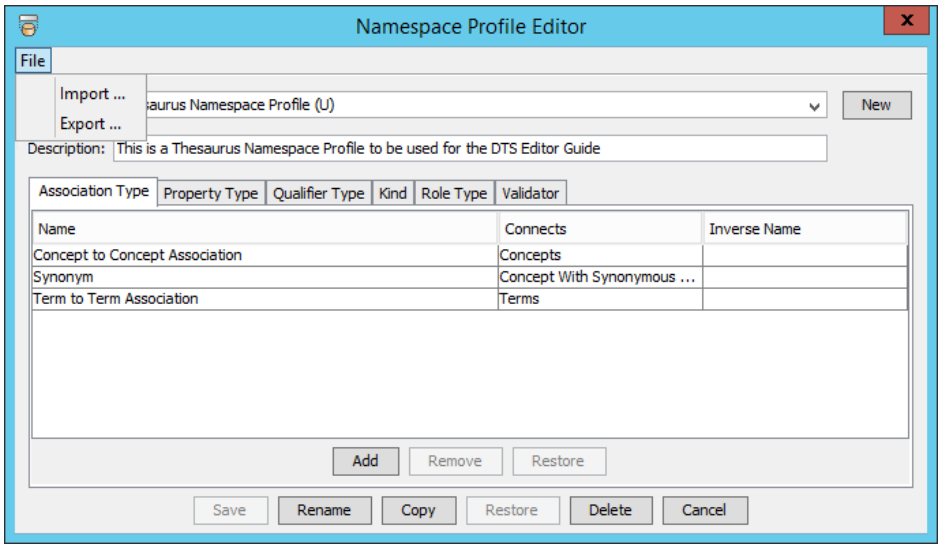


2. Select the namespace profile to be exported from the **Profile** field dropdown and select the **Export** item in the *Namespace Profile Editor's* **File** menu.



3. The *Export Profile* file chooser dialog is shown. Browse to the desired file location and enter the desired file name. The file must have an ".xml" extension.

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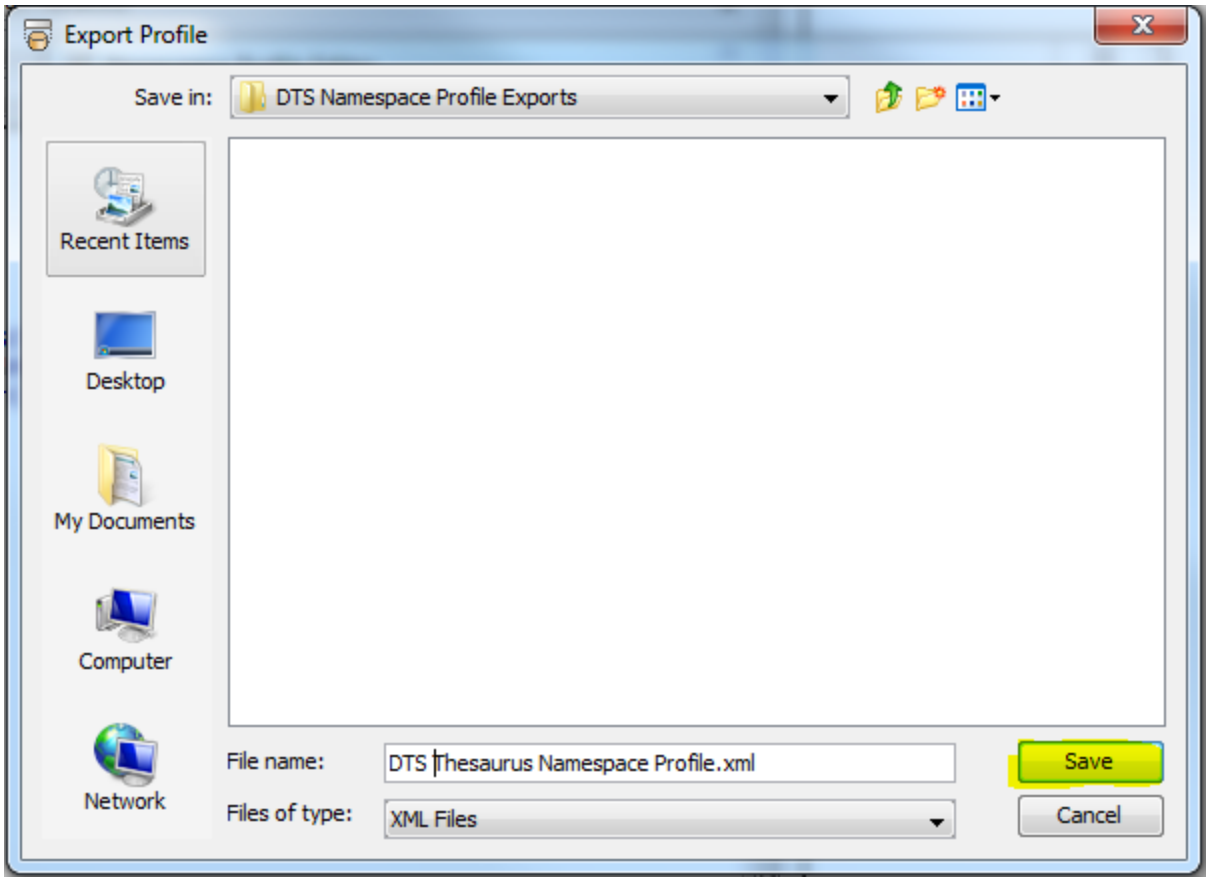

4. Click the **Save** button to export the profile to the selected file or **Cancel** to cancel the operation.
5. Click **Cancel** to close the *Namespace Profile Editor* window.

D.7.7 Import a Namespace Profile

Profile definitions can be imported to the *Namespace Profile Editor* from xml files produced by the above profile export process. Once imported, these profiles can be saved as new user profiles, or, if the user has the "**apelondtsadmin**" role, as new system profile.

Follow this procedure to export a namespace profile.

1. From the Menu select Tools > *Namespace Profile Editor*, or click the **Profile** button in the *New Namespace* panel.

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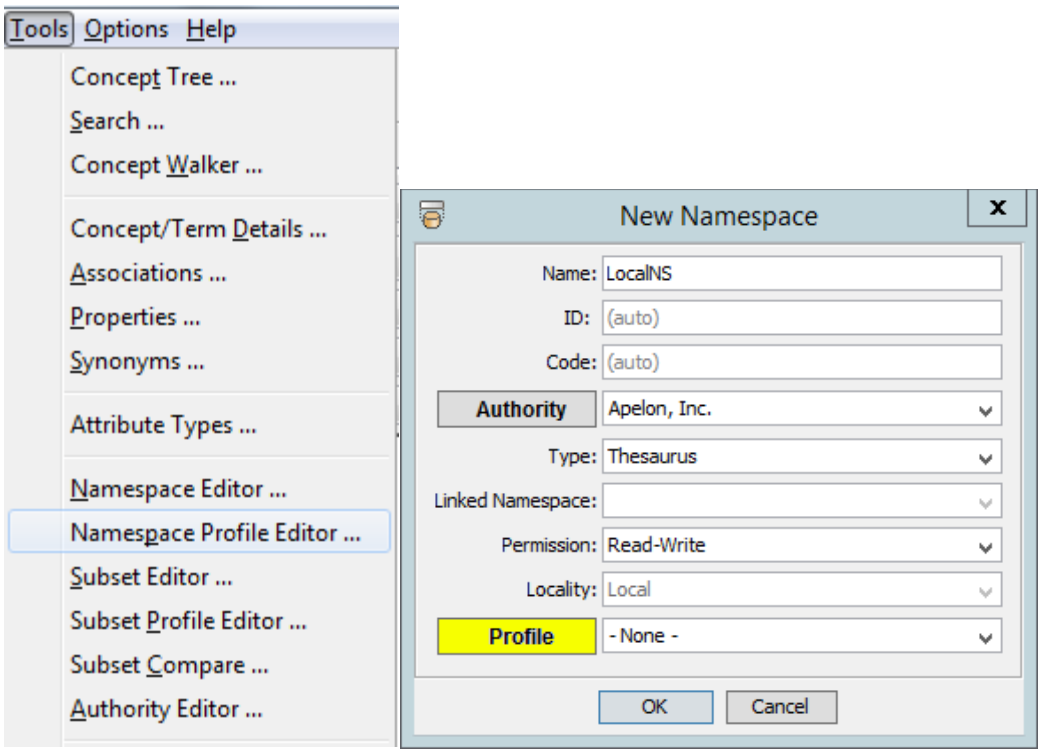
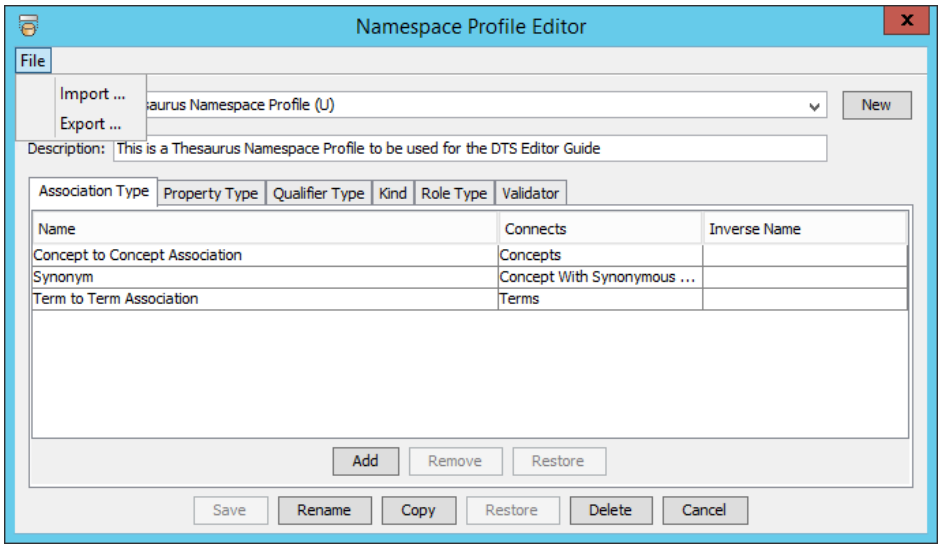


2. Select the namespace profile to be imported from the **Profile** field dropdown and select the **Import** item in the *Namespace Profile Editor's* **File** menu.



3. The *Export Profile* file chooser dialog is shown. Browse to the desired file location and select the desired file. The file must have an ".xml" extension.

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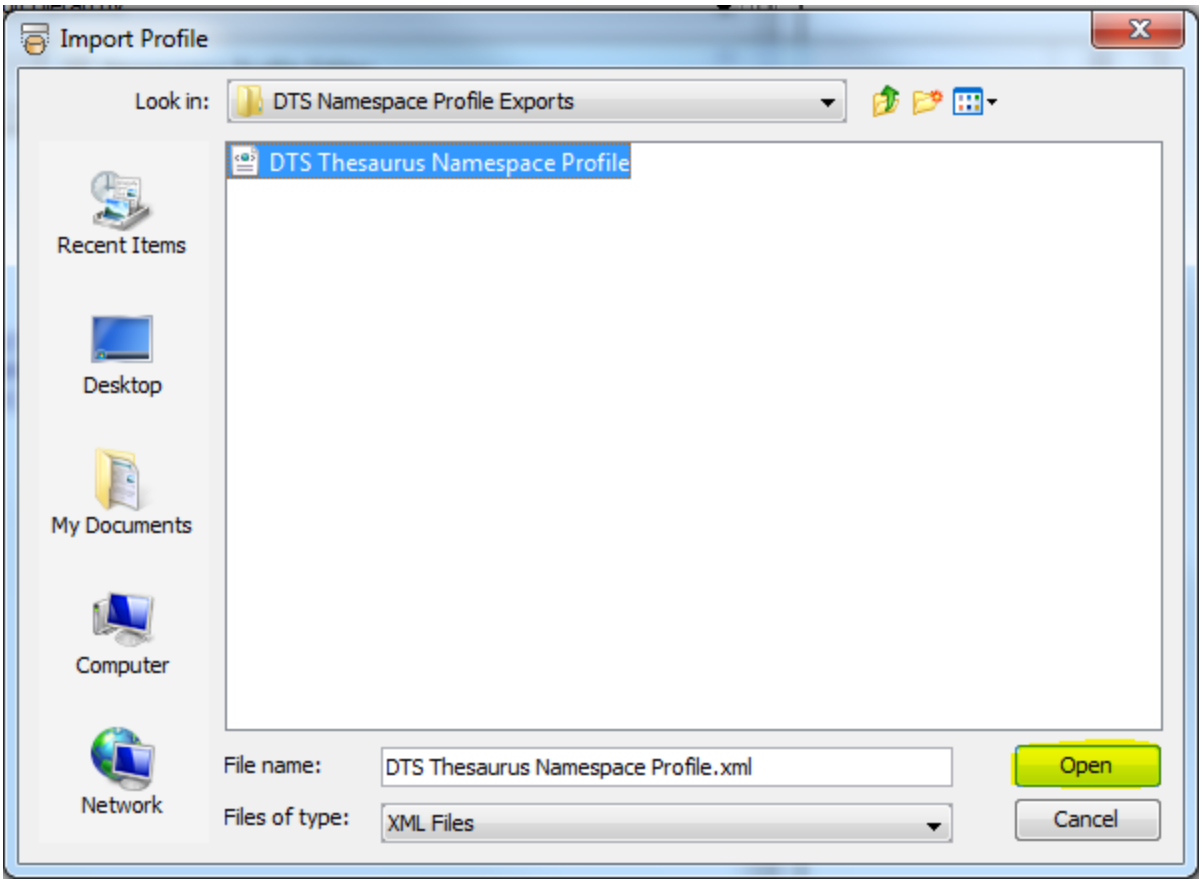
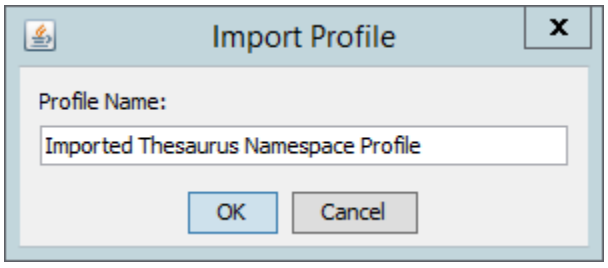


4. Click the **Open** button to import the selected file into a new profile or **Cancel** to cancel the operation.
5. Enter the name of the profile to be created in the **Profile Name** field of the **Import Profile** dialog box. Click **OK** to copy the profile or click **Cancel** to cancel the operation. If the entered name is already in use, an error dialog will be shown.



6. Click **Cancel** to close the *Namespace Profile Editor* window.

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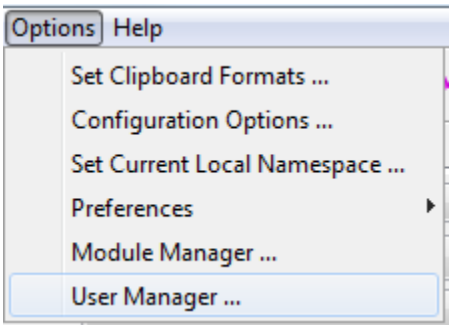
E. Assign Permissions to Newly Created Namespaces

After you create a new namespace you will need to open the **User Manager** module and grant permissions to each user that you want to have ***Write*** or ***Manage*** permissions. By default, all users receive ***Read*** access. **Note**: To open the User Manager you must be logged into the DTS Editor as a user with the "**apelondtsadmin**" role, i.e., **dtsadminuser / dtsadmin**.

1. From the menu select **Options > User Manager**.



2. After selecting the **User Manager**, the *DTS User Manager* window displays. From the *Role Defs* tab, select the Role to which you want to add the new permission. In the example below we have selected the role named **SuperUser**. (See the User Manager Guide for details on creating and managing DTS Roles and Permissions). You can review the current permissions assigned to the new namespaces you created.

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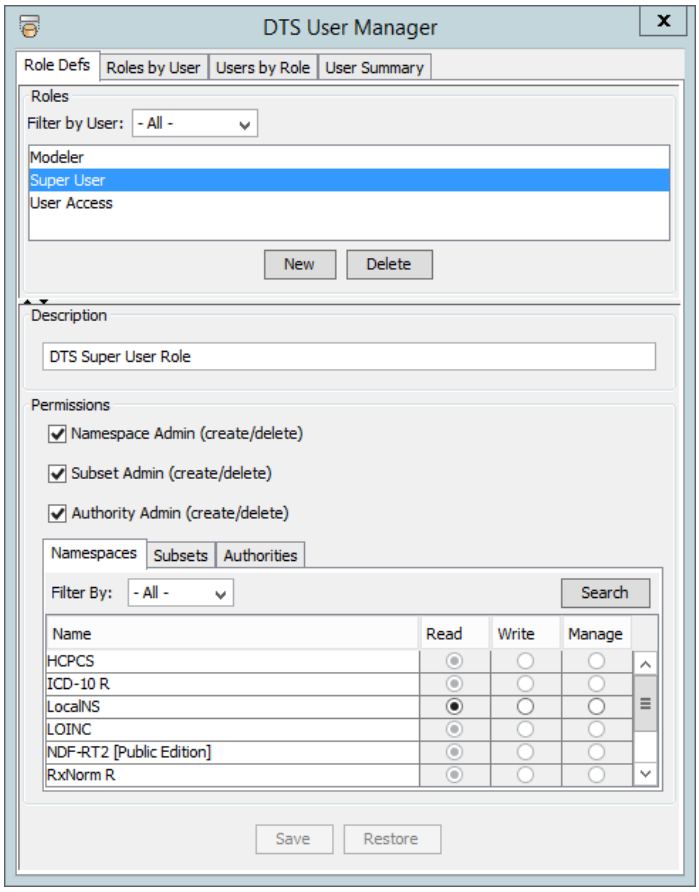

3. With the ***SuperUser*** role selected in the top section, grant **Manage** permissions to each desired local namespace and click **Save**.

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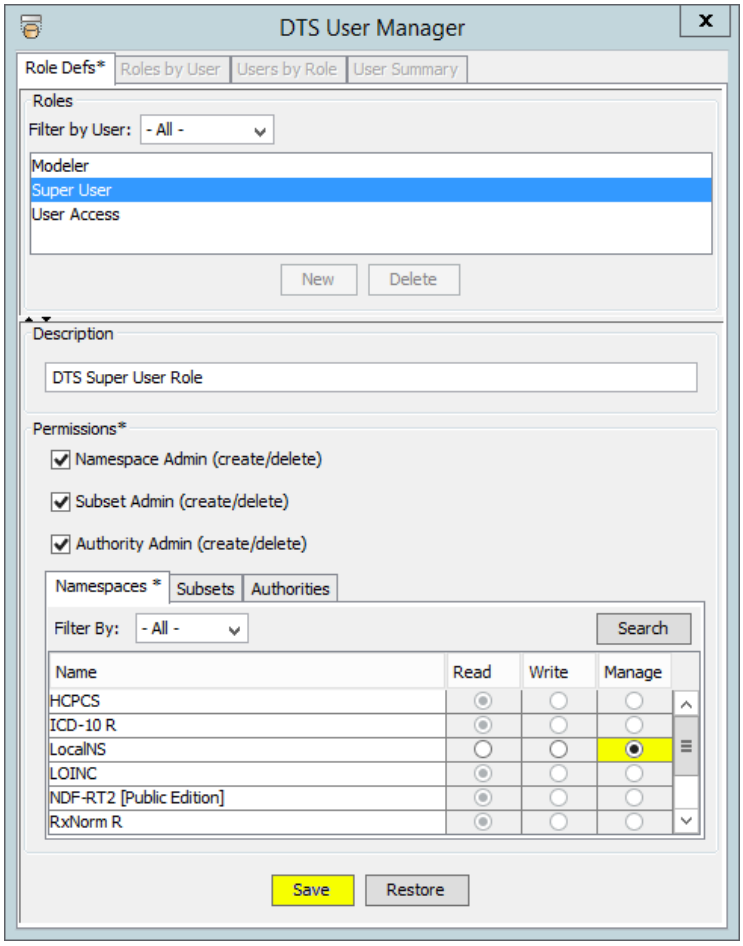

4. Similarly, with the ***Modeler*** role selected in the top section, grant **Write** permissions to each desired local namespace and click **Save**.

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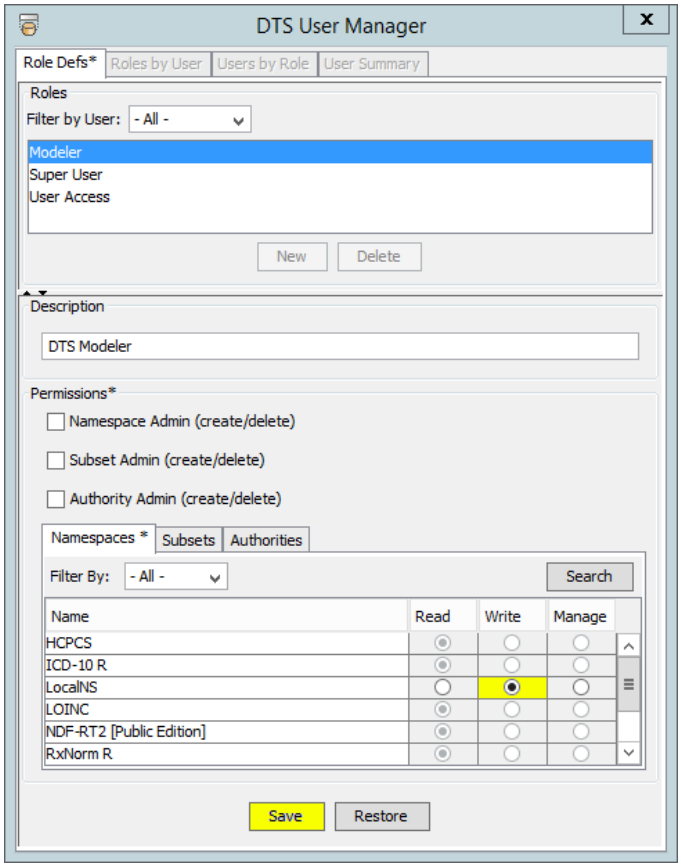

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F. Attribute Type Maintenance

The *Attribute Type Editor* panel consolidates the management of Attribute Types (metadata) for all Namespaces in the knowledgebase. The *Attribute Type Editor* panel provides a two-tier tab structure to accommodate the different kinds of available metadata (see screen shots below). The top level of tabs name the primary DTS object that holds attributes: Namespaces, Subsets and Authorities. Within each of these tabs, the second level tabs are used to select the specific Attribute Types to be created, displayed or modified:

- For Namespaces: Association Types, Property Types, Qualifier Types, Kinds, Role Types and Validators
- For Subsets: Property Types and Qualifier Types
- For Authorities: Property Types and Qualifier Types

The sections below describe the procedures for managing the Attribute Types associated with Namespaces (from the Namespace tab). Procedures for Subset and Authority Attribute Types are similar.

F.1 Association Types

This section includes basic procedures for creating and maintaining associations between concepts (concept associations), between terms (term associations) or between concepts and terms (synonym associations). An association type (e.g., **Related To**) is assigned to each association between concepts or terms to define the nature of the association. An association may also have a **qualifier**, which provides additional detail regarding the nature of the association (e.g., **Usually**). Procedures for creating and maintaining association types and qualifiers are included as well.

In a **writable** namespace you can create associations between concepts and terms that reside in one namespace (writable or not) or create associations between concepts and terms across namespaces.

F.1.1 Create Association Types

Each association you create must be assigned a specific type to indicate the nature of the link (e.g., one concept is **Broader Than** the other, or is a **Parent** of the other). The following procedures pertain to creating and maintaining association types.

Follow this procedure to add one or more new association types to an editable namespace.

1. From the Menu select Tools > Attribute Types.

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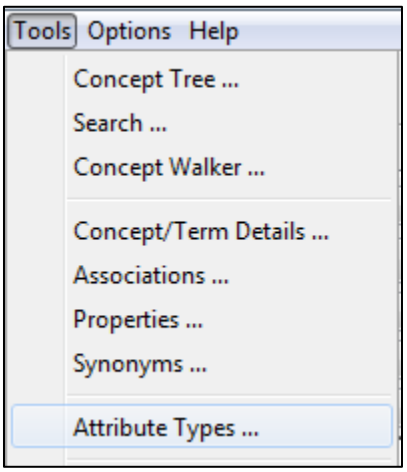
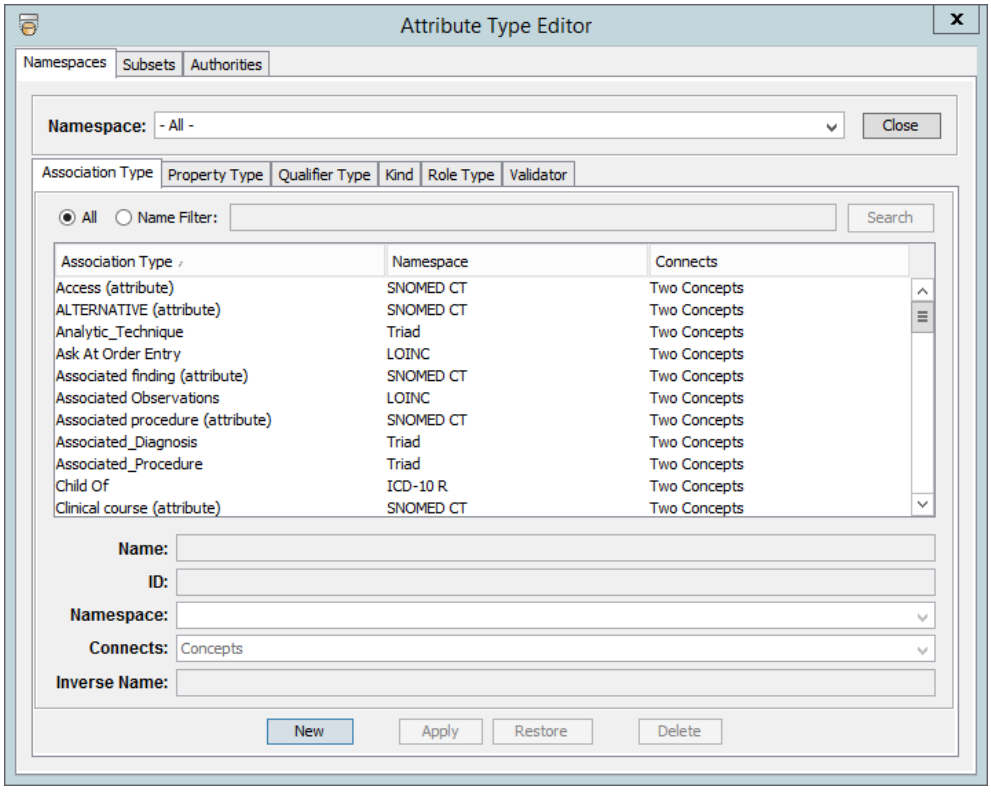


2. The *Attribute Type* window displays. The window initially opens with the Namespace tab selected and *All* selected in the Namespace dropdown. This shows the types from all namespaces in the DTS knowledgebase. To limit the displays to a single namespace, select that namespace from the dropdown. Note that the panel remembers the selected namespace (or subset/authority) between invocations.)



3. To create a new Association Type, select **the Association Type** tab and click **New**.

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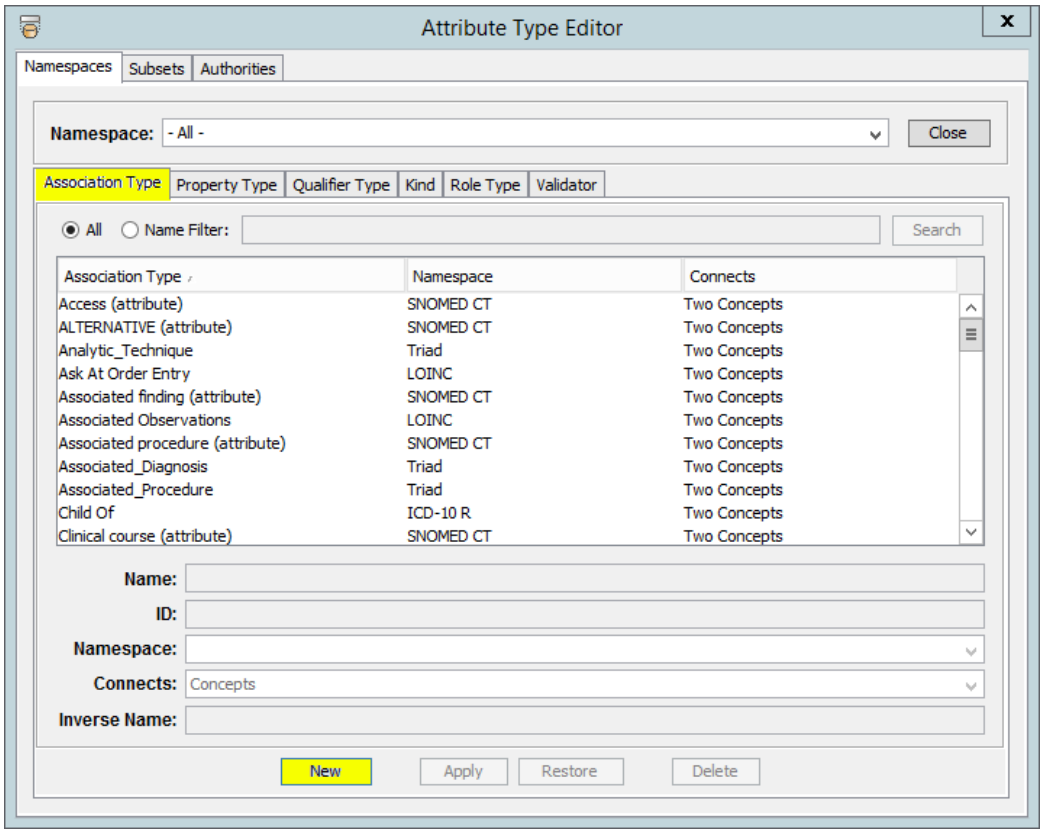

4. The fields at the bottom of the *Attribute Type Editor* are activated.

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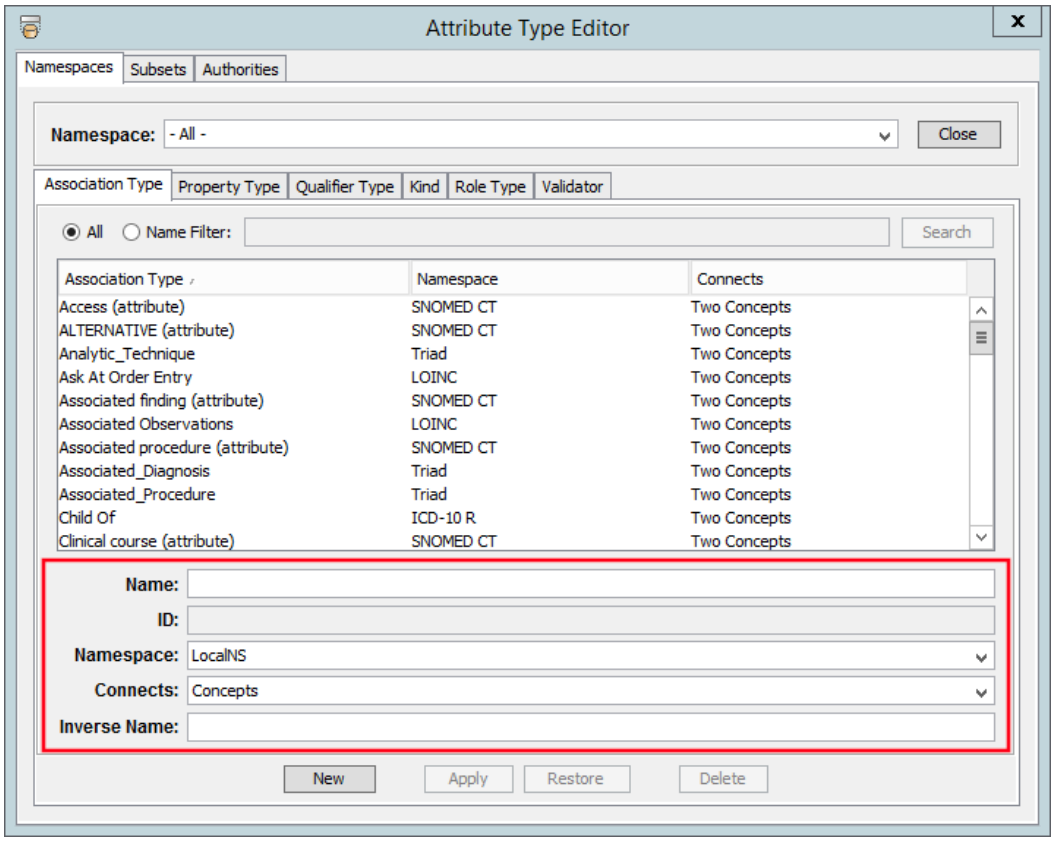
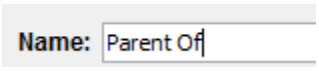
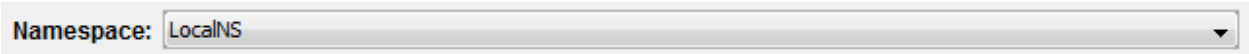


5. In the *Name* field, type the name of the *Association Type*.



6. The association type ID is generated automatically, and displayed in the **ID** field. You cannot modify the generated association type ID.

In the *Namespace* dropdown field, select the local, editable namespace in which you are creating this association type, i.e. **LocalNS**. Only local namespaces are included in the list. If a namespace was selected in the top *Namespace* dropdown, this namespace will be pre-selected.



7. The value in the *Connects* dropdown field indicates if the association type represents a connection between **Two Concepts**, between a concept and a synonym (**Concept With Synonymous Term**) or **Two Terms**. Select the kind of connection this association type represents.

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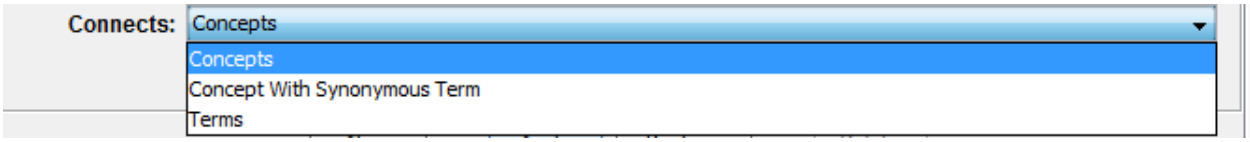

8. The *Inverse Name* describes the inverse relationship of this association, and displays when you view **Inverse Concept Associations** (e.g., when you perform a search). For example, "**Is Narrower Than**" is the inverse of "**Is Broader Than**" or "**Child Of**" is the inverse of "**Parent Of**". Inverse Name is optional.

9. For Property and Qualifier type attributes, you also have the option of assigning a Validator. Validators can be defined in the "Validator" tab, and allow you to restrict the string input to match rules based on a regex or predefined dropdown list. See the "Validators" section below for more information on defining Validators.

10. Click **Apply** to update the selected local namespace with the new association type; the new association type is added to the table on the *Attribute Type Editor* > Association Type window. You can click **New** again and create additional association types in the local namespace.

When you finish creating association types, click **Close** to close the *Attribute Type Editor* window.

F.1.2 View and Edit an Association Type

Follow this procedure to view information for an existing association type that exists in any namespace, and edit the information if the association type was created in a local, writable namespace. You can also filter Attribute Types for easier viewing/editing using the Name Filter tool, or view them all by clicking the "All" radial button.

1. From the Menu select Tools > Attribute Types.

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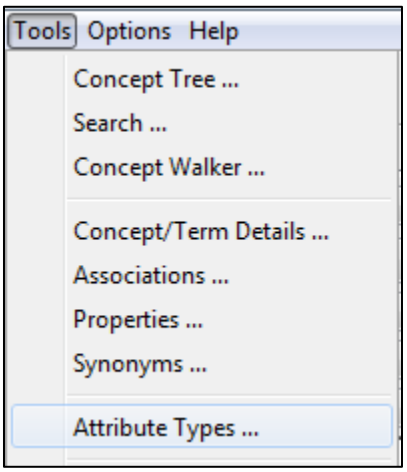
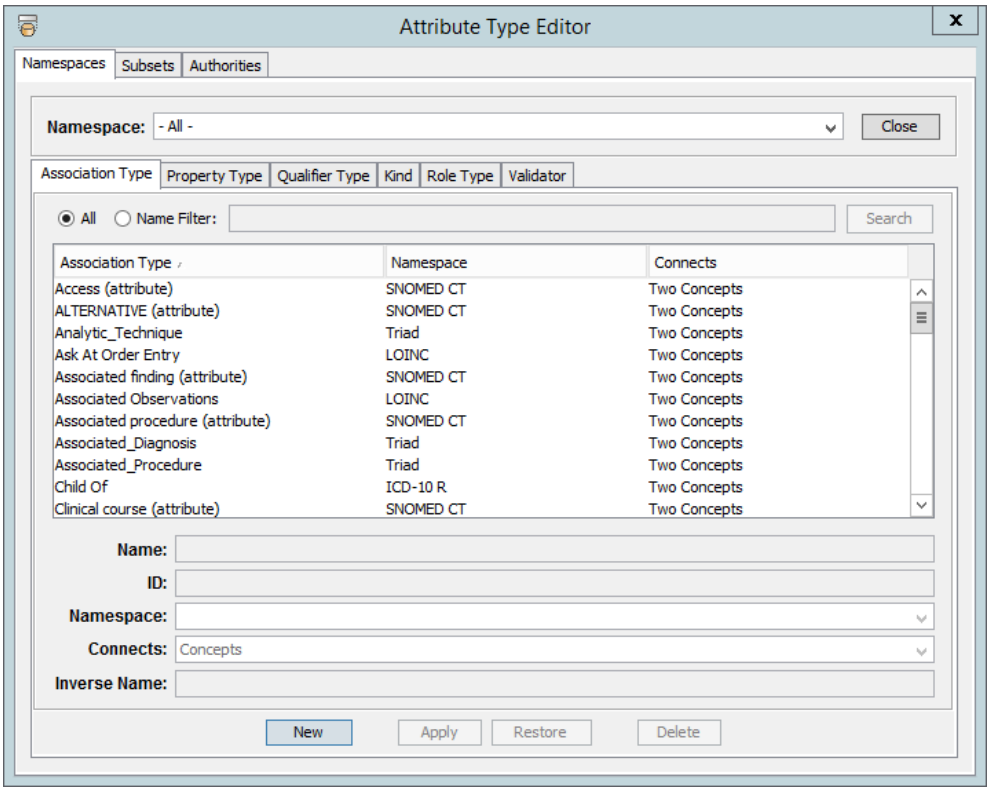


2. The Attribute Type Editor window displays.



Select the *Association Type* tab. To change the sort for the association type list, click the column header for the characteristic (**Association Type**, **Namespace**, or **Connects**) on which you want to base the sort.

3. In the association type table listing, click the association type you want to view or modify to highlight the row. The lower portion of the window changes to reflect information from that association type. If the association type you selected was created in a

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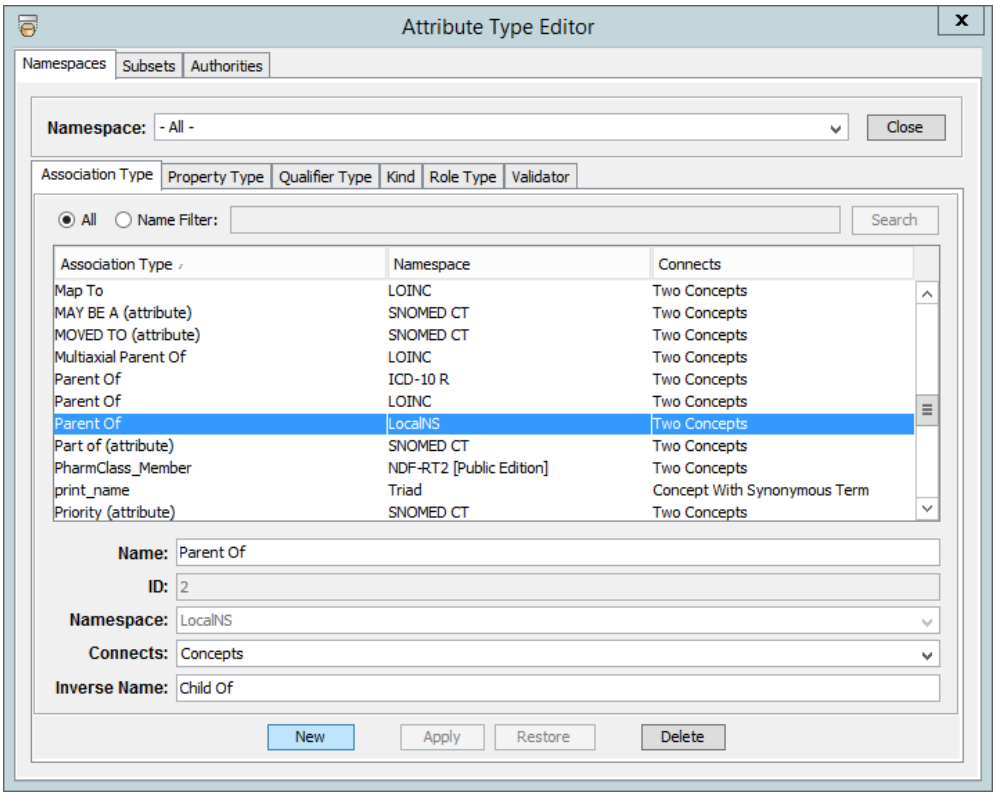
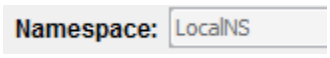
subscription namespace, none of the fields are editable. If the association type was created in a local, writable namespace, the editable fields are enabled.



4. In the *Name* field, modify the association type name, as necessary.

5. The *ID* that was generated when the association type was created displays; the ID is not editable, for any type of namespace.

6. The *Namespace* in which the association type was created is not editable, for any type of namespace.



7. The value in the *Connects* dropdown field indicates if the association type represents a connection between **Two Concepts**, between a concept and a synonym (**Concept With Synonymous Term**), or **Two Terms**. The value in the *Connects* field is editable as long as this is an association type that was created in a writable namespace, and no instances of this association type exist.

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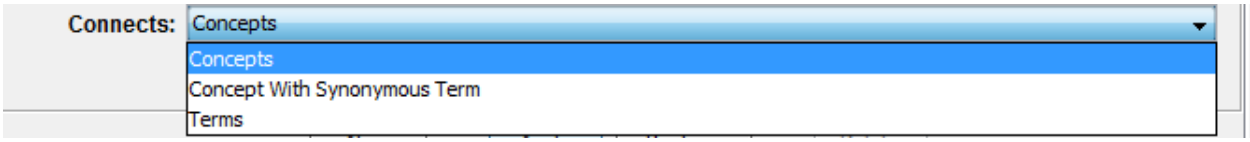
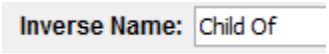


8. The *Inverse Name* describes the inverse relationship of this association, and displays when you view **Inverse Concept Associations** (e.g., when you perform a search). For example, "**Is Narrower Than**" is the inverse of "**Is Broader Than**" or "**Child Of**" is the inverse of "**Parent Of**".



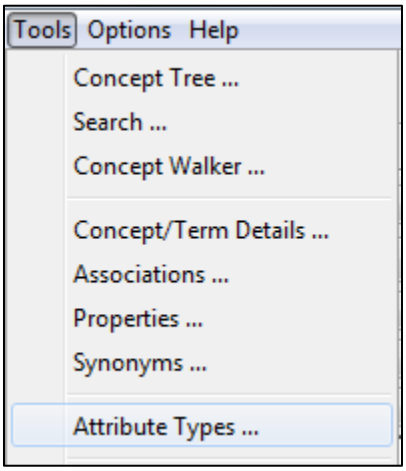
9. Click **Apply** (which becomes enabled if you make an edit) to update the selected local namespace with the association type edits; the *Attribute Type Editor* window remains displayed for additional edits and/or additions.
10. Click **Close** to close the *Attribute Type Editor* window.

F.1.3 Delete an Association Type

Follow this procedure to delete an existing association type that was created in a local, writable namespace. If there are associations that exist with this association type, you will not be permitted to delete the association type.

Follow this procedure to view information for an existing association type that exists in any namespace, and edit the information if the association type was created in a local, writable namespace.

1. From the Menu select **Tools > Attribute Types**.



2. The *Attribute Type Editor* window displays.

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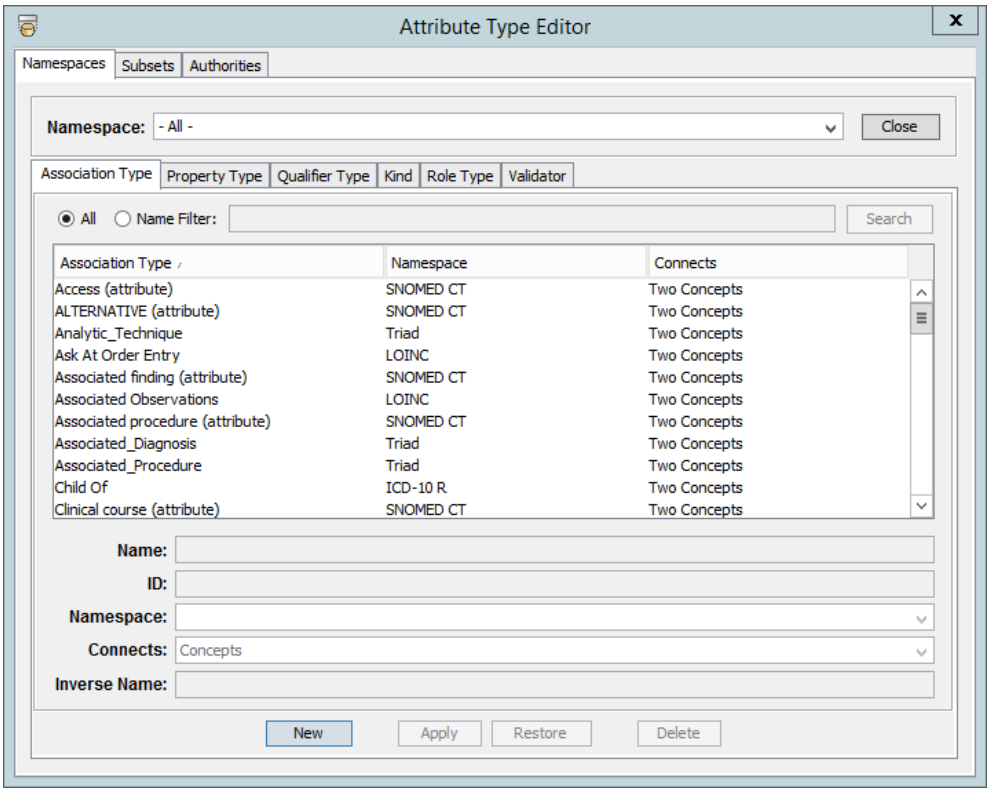

Select the *Association Type* tab. To change the sort for the association type list, click the column header for the characteristic (**Association Type**, **Namespace**, or **Connects**) on which you want to base the sort.

3. In the association type table listing, click the association type you want to delete and click **Delete.**

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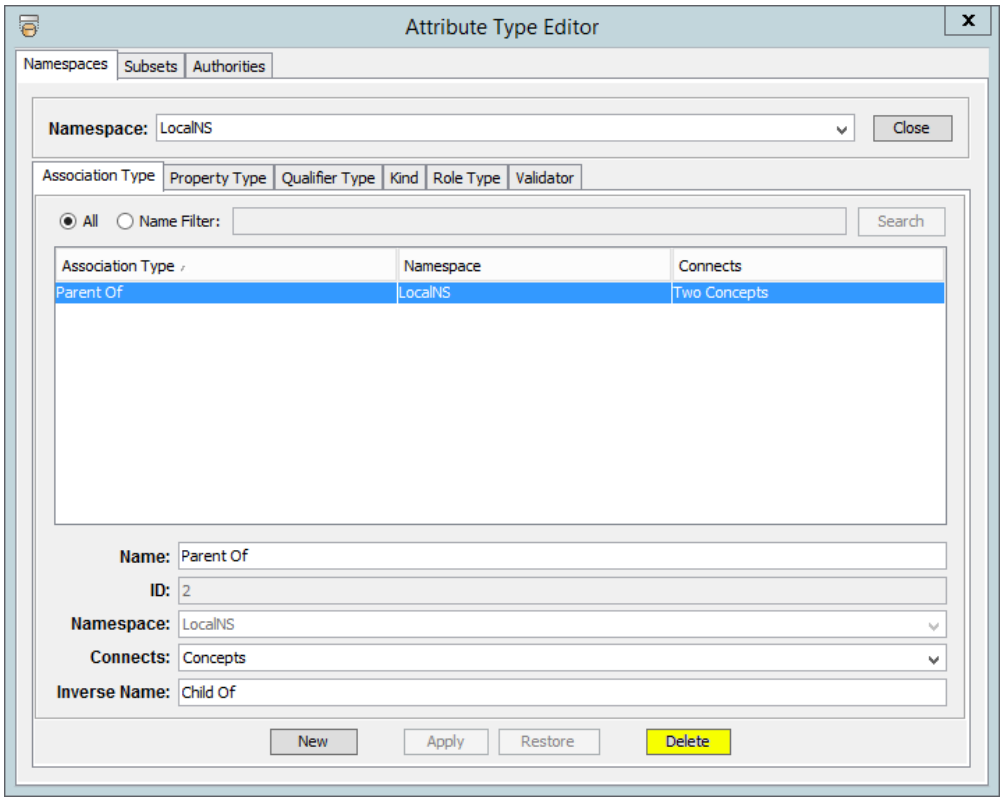
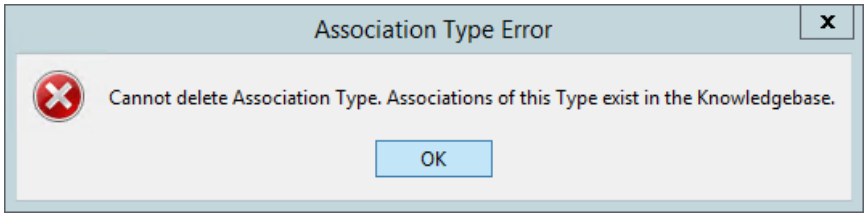
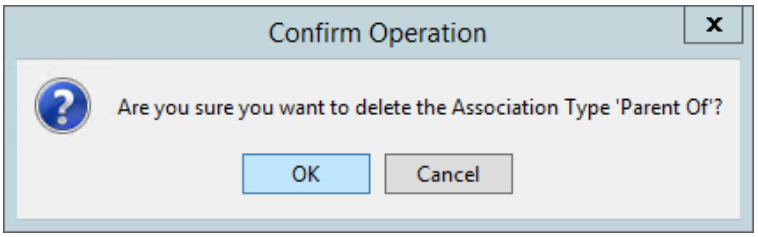


4. A window similar to the following displays if associations with this type exist in a local namespace.



5. As long as associations of this type exist, you will not be permitted to delete the association type. If no associations with this type exist, a delete confirmation window similar to the following displays.



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6. Click **OK** to delete the association type from the namespace in which it was created; the association type is removed from the table on the *Attribute Type Editor* window in the *Association Type* tab. Click **Cancel** to ignore the deletion.
7. Click **Close** to close the *Attribute Type Editor* window.

F.2 Property Types

A property is user-definable metadata that can be used for any purpose and can be added to Concepts, Terms, Namespaces, Versions, and Authorities. Properties are available for both Subscription and Local DTS Objects. Properties allow for the creation of more expressive objects including definitions, provenance, OIDs, URIs, etc. For example, a property can be a textual definition for a concept, or can identify the source terminology where a term originated. A property type (i.e., definition) is assigned to each property to define the nature of the property. One or more qualifier types and values can be assigned to each property as well.

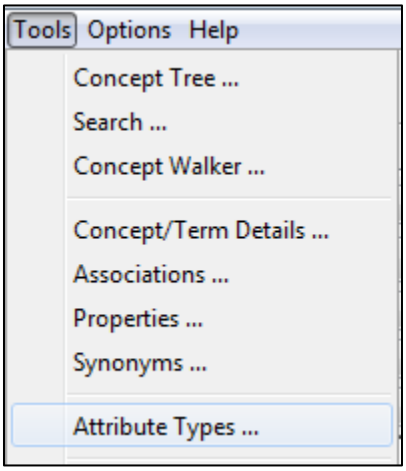
All Property values may contain up to 4,000 characters, the first 255 characters of which are automatically indexed.

F.2.1 Create Property Types

Follow this procedure to add a new property type to a local namespace. You then can assign the property type to a concept in any local namespace, or add the property type (as local content) for a concept in a subscription namespace.

Follow this procedure to add one or more new property types to an editable namespace.

1. From the Menu select **Tools > Attribute Types**.



2. The *Attribute Type* window displays.

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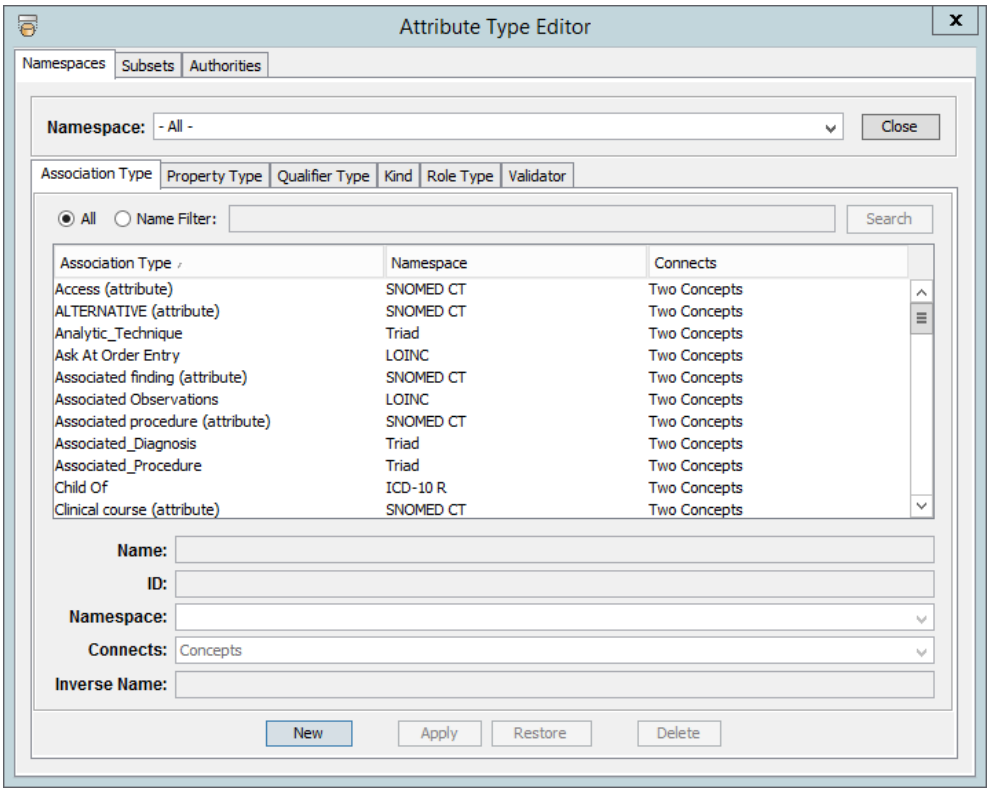
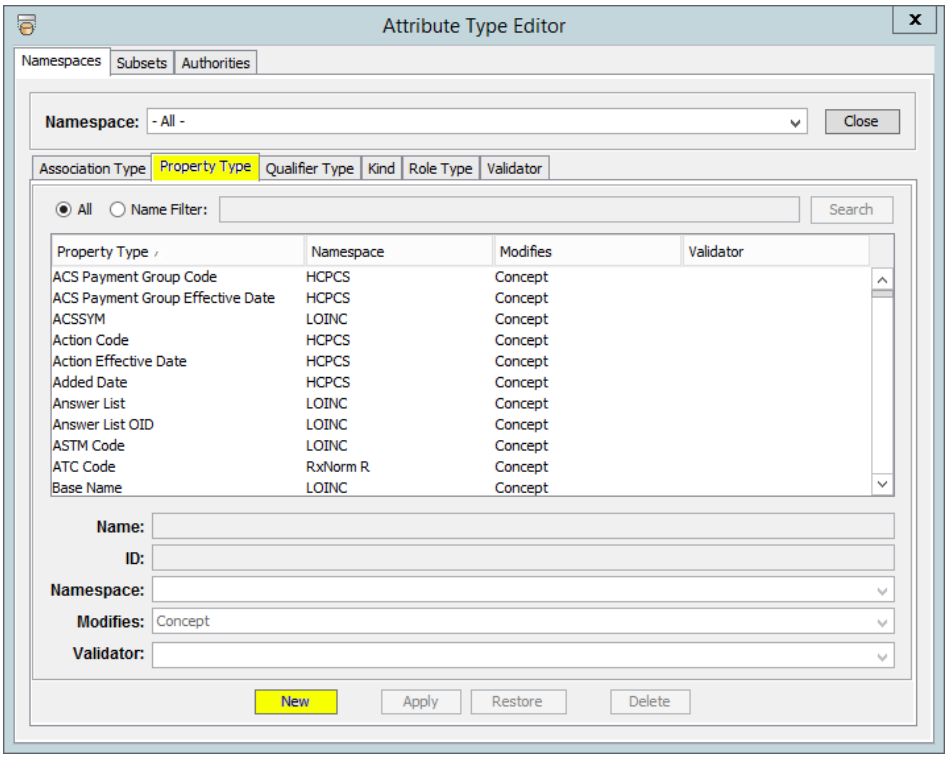


3. To create a new Property Type, select the **Property Type** tab and click **New**.



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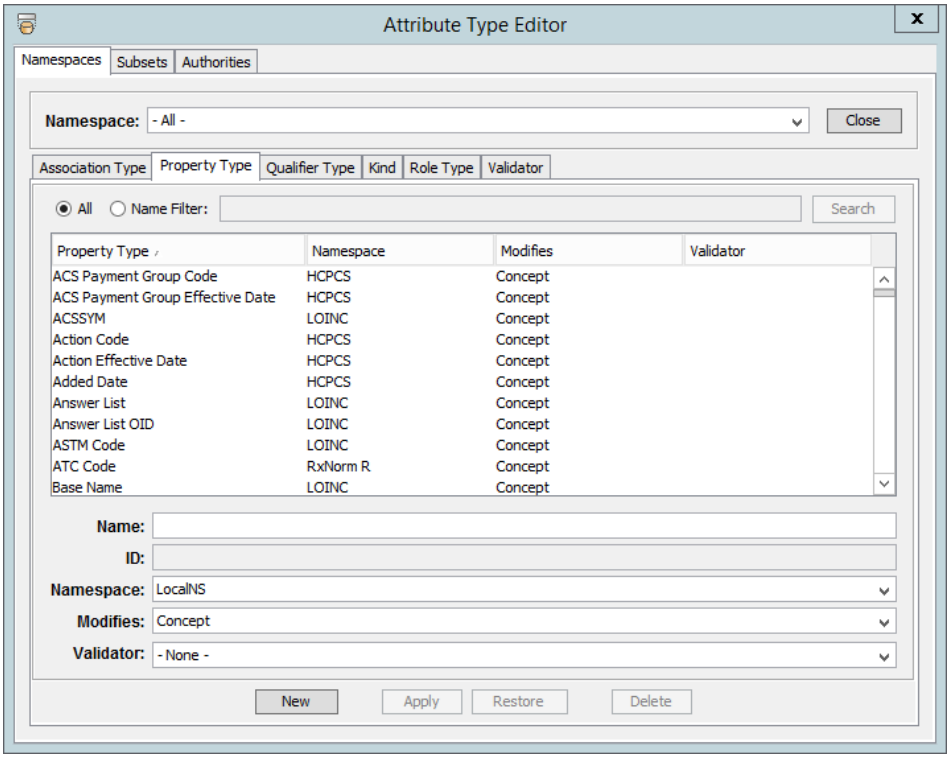
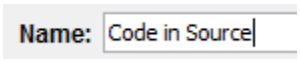
4. The fields at the bottom of the *Attribute Type Editor* are activated.



5. In the *Name* field, type the name of the *Property*, i.e., **Code in Source**.



6. The property type ID is generated automatically, and displayed in the **ID** field. You cannot modify the generated property type ID.

In the *Namespace* dropdown field, select the local, editable namespace in which you are creating this property type, i.e. **LocalNS**. Only local namespaces are included in the list. If a namespace was selected in the top *Namespace* dropdown, this namespace will be pre-selected.

7. From the *Modifies* field dropdown list, indicate what the property type will be assigned to, either a **Concept, Namespace, Term,** or a **Version**.

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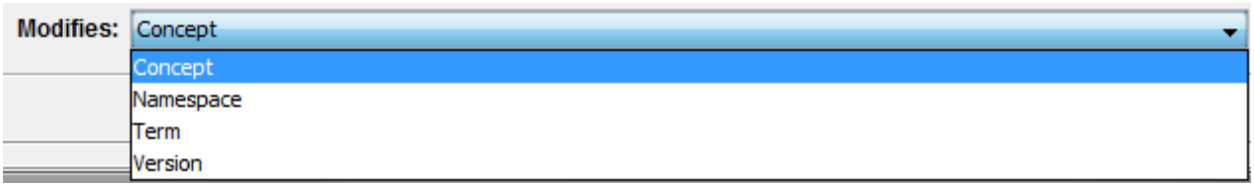


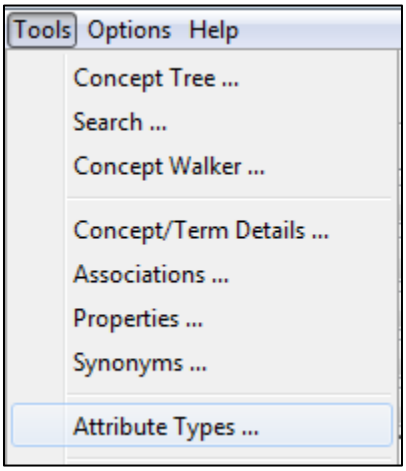
8. Click **Apply** to update the selected local namespace with the new property type; the new property type is added to the table on the *Attribute Type Editor* > Property Type window. You can click **New** again and create additional property types in the local namespace.

When you finish creating property types, click **Close** to close the *Attribute Type Editor* window.

F.2.2 View and Edit a Property Type

Follow this procedure to view information for an existing association type that exists in any namespace, and edit the information if the property type was created in a local, writable namespace.

1. From the Menu select **Tools > Attribute Types**.



2. The *Attribute Type Editor* window displays.

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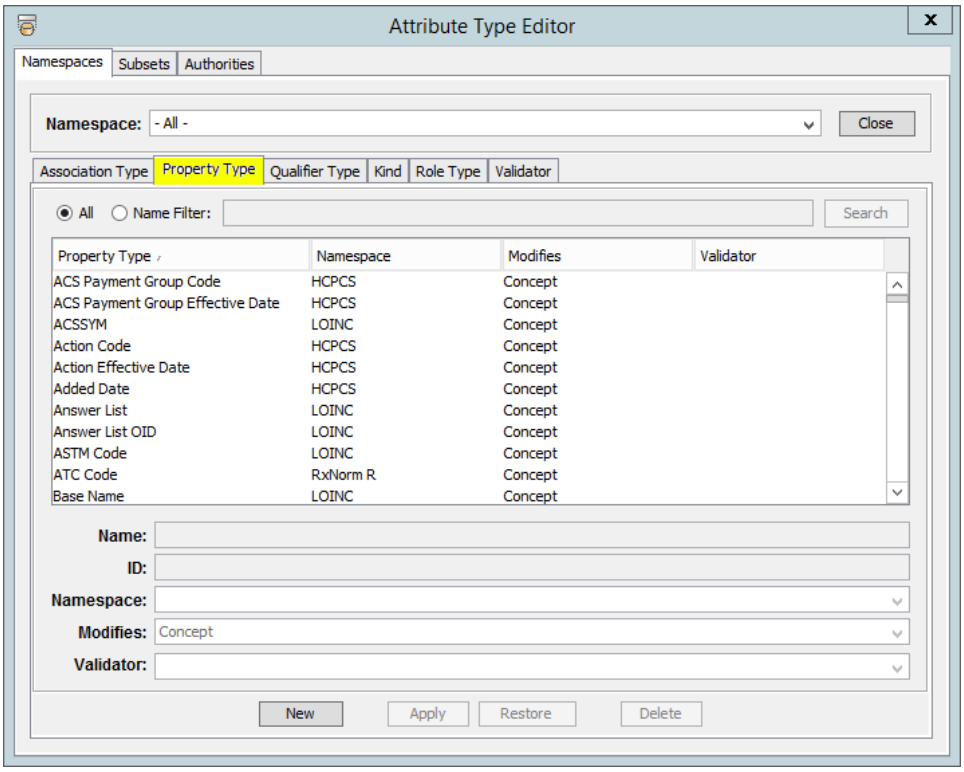

Select the *Property Type* tab. To change the sort for the property type list, click the column header for the characteristic (**Property Type**, **Namespace**, or **Modifies**) on which you want to base the sort.

3. In the property type table listing, click the property type you want to view or modify to highlight the row. The lower portion of the window changes to reflect information from that property type. If the property type you selected was created in a subscription namespace, none of the fields are editable. If the association type was created in a local, writable namespace, the editable fields are enabled.

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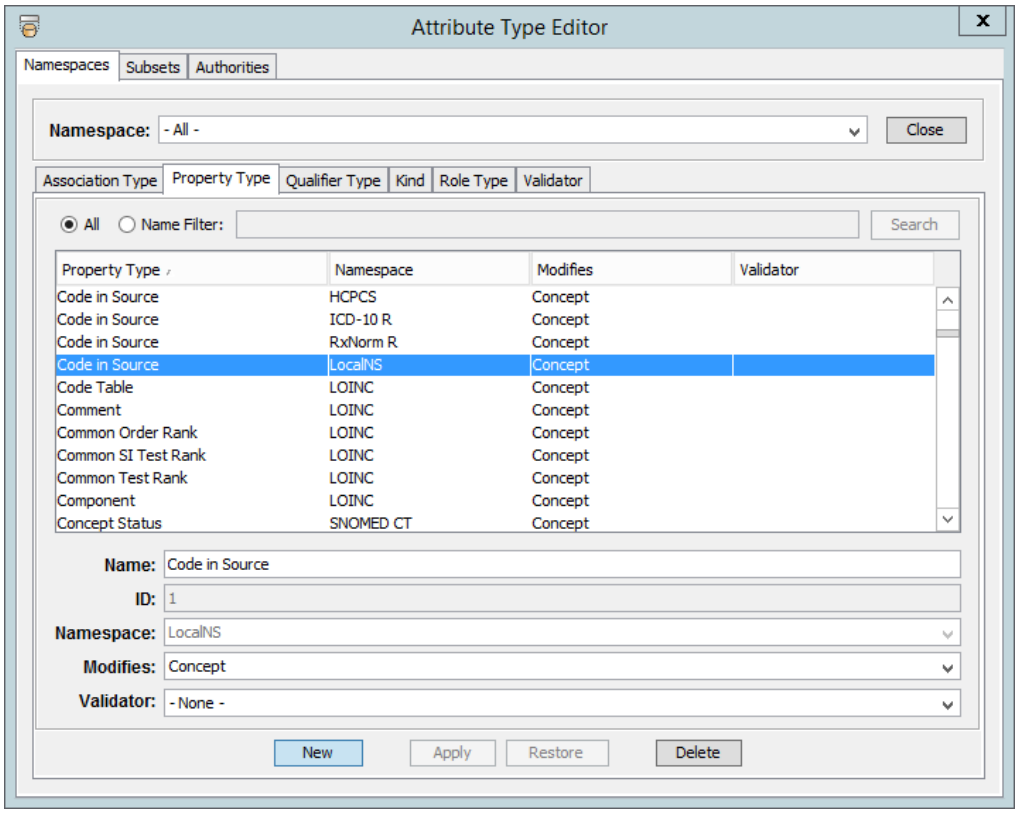
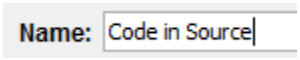


4. In the *Name* field, modify the property type name, as necessary.



5. The *ID* that was generated when the association type was created displays; the ID is not editable, for any type of namespace.

6. The *Namespace* in which the association type was created is not editable, for any type of namespace.

7. From the *Modifies* field dropdown list, indicate what the property type will be assign to, either a **Concept, Namespace, Term,** or a **Version**. Change the *Modifies* field, as necessary. The *Modifies* field will only be editable if instances of the property type do not already exist in the knowledgebase.

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8. Click **Apply** (which becomes enabled if you make an edit) to update the selected local namespace with the association type edits; the *Attribute Type Editor* window remains displayed for additional edits and/or additions.

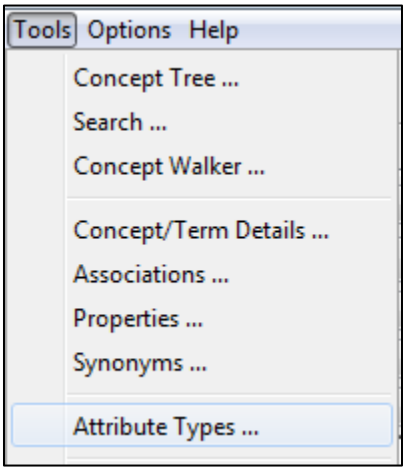
9. Click **Close** to close the *Attribute Type Editor* window.

F.2.3 Delete an Property Type

Follow this procedure to delete an existing property type that was created in a local, writable namespace. If there are properties that exist with this property type, you will not be permitted to delete the property type.

Follow this procedure to delete a property type that exists in a local, writable namespace.

1. From the Menu select **Tools > Attribute Types**.



2. The *Attribute Type Editor* window displays.

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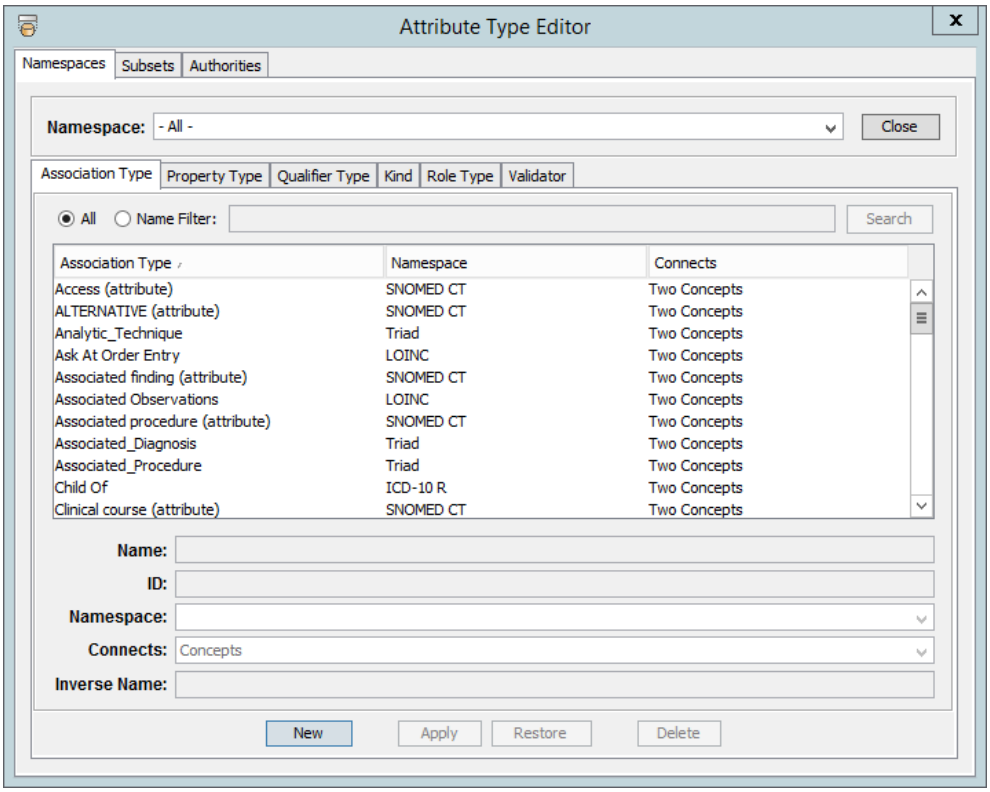

Select the *Property Type* tab. To change the sort for the property type list, click the column header for the characteristic (**Property Type**, **Namespace**, or **Modifies**) on which you want to base the sort.

3. In the Property Type table listing, click the property type you want to delete and click **Delete.**

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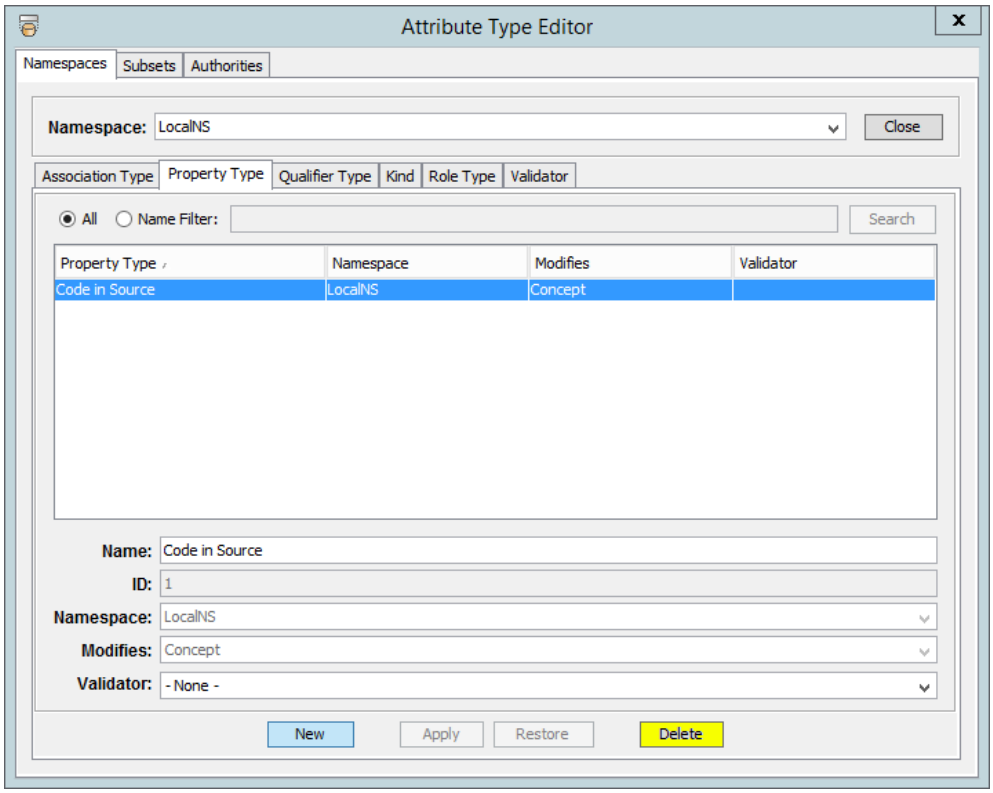
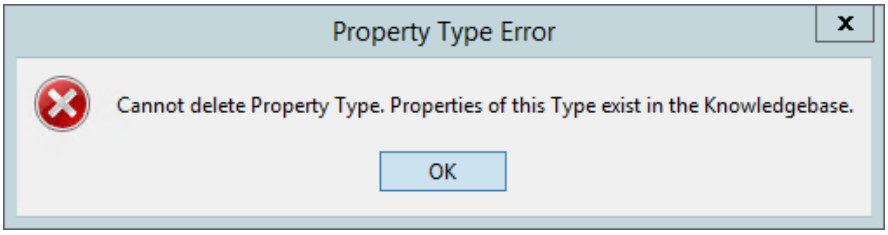
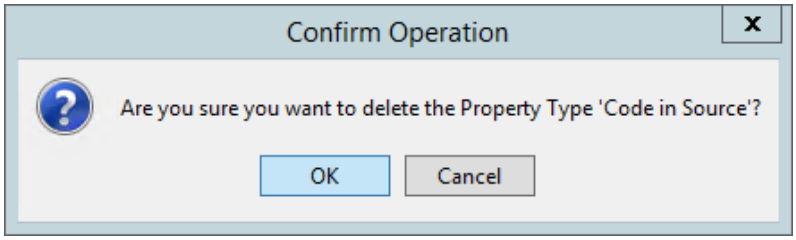


4. A window similar to the following displays if properties with this type exist in a local namespace.



5. As long as properties of this type exist, you will not be permitted to delete the property type. If no properties with this type exist, a delete confirmation window similar to the following displays.



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6. Click **OK** to delete the property type from the namespace in which it was created; the property type is removed from the table on the *Attribute Type Editor* window in the *Property Type* tab. Click **Cancel** to ignore the deletion.

Click **Close** to close the *Attribute Type Editor* window.

F.3 Qualifier Types

For each association or property you can specify (optionally) an established **qualifier type** and **value**.

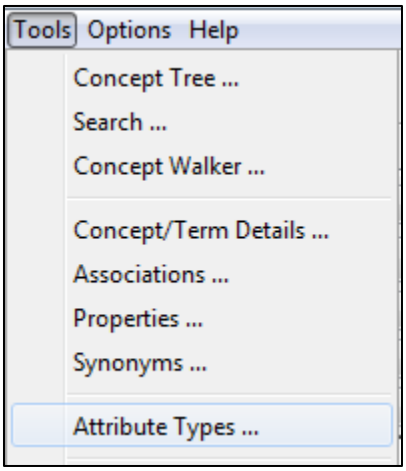
For an association type, a qualifier provides additional detail regarding the nature of a concept or term association (for example, the origin of an association, or the degree of accuracy of a mapping between concepts, such as **Usually**). You can assign a qualifier type and value to each association between concepts or terms.

For a property type, a qualifier provides additional detail regarding the nature of a concept or term property (e.g., a property **effective date**, or an indicator reflecting that the property is **Current**). You can assign a type and value to each concept or term property qualifier.
The following procedures pertain to creating and maintaining qualifier types.

F.3.1 Create Association Qualifier Types

Follow this procedure to add one or more new qualifier types to a local, editable namespace.

1. From the Menu select **Tools > Attribute Types**.



2. The *Attribute Type Editor* window displays. Select the *Qualifier Type* tab.

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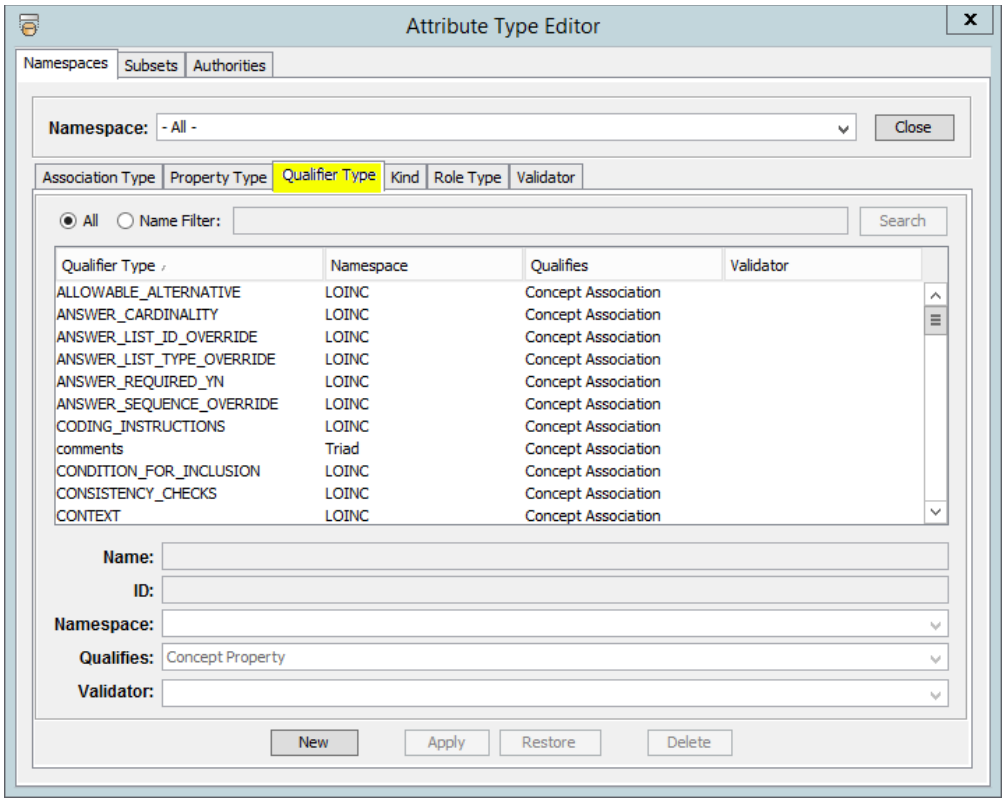

Information for existing qualifier types (for both associations and properties) is listed in a table format in columns you can resize. Qualifier types from both writable and non-writable namespaces are listed.

Table information includes the qualifier type name, the namespace in which the qualifier was created, and an indicator that references the kind of association it qualifies, either **Concept Association** or **Term Association** (the **Concept Property** and **Term Property** values relate to qualifier types for concept and term **properties**). To change the sort for the qualifier type list, click the column header for the characteristic (**Qualifier Type**, **Namespace**, or **Qualifies**) on which you want to base the sort.

3. Click **New**. The fields in the lower portion of the window are enabled.

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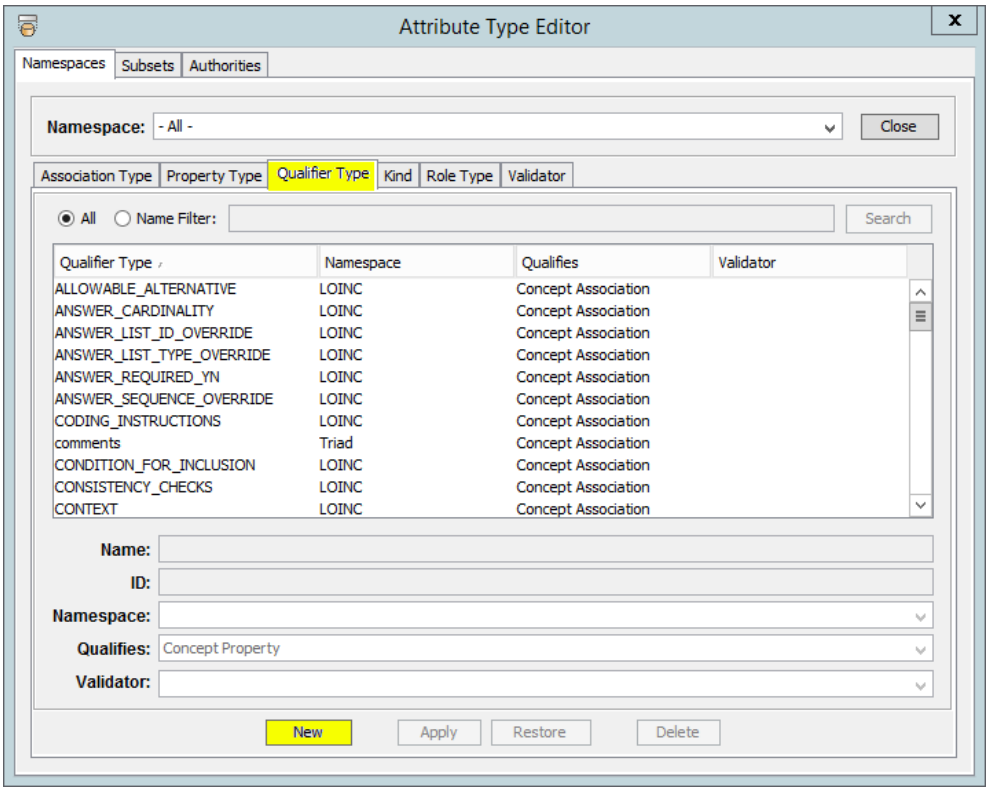
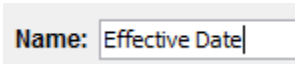
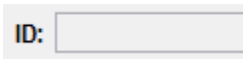


4. Specify a name for the new association qualifier type in the *Name* field, i.e., **Effective Date**.



5. The qualifier type ID is generated automatically, and displayed in the *ID* field. You cannot modify the generated qualifier type ID.



6. From the *Namespace* field dropdown list, select the local namespace to which this association or property qualifier type should be written. Since a qualifier type can be written to editable namespaces only, only these namespaces are included in the list, i.e., **LocalNS**. If a namespace was selected in top *Namespace* dropdown, this namespace will be preselected.

7. The value you select in the *Qualifies* field dropdown list indicates the kind of association this qualifier type will qualify. The *Qualifies* field will only be editable if instances of the association type do not already exist in the knowledgebase.

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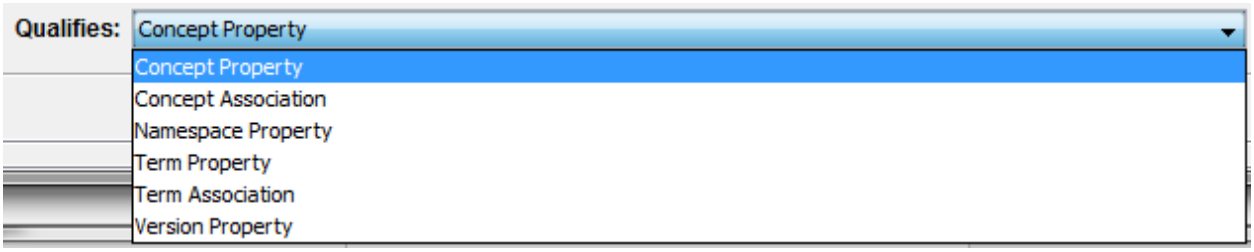
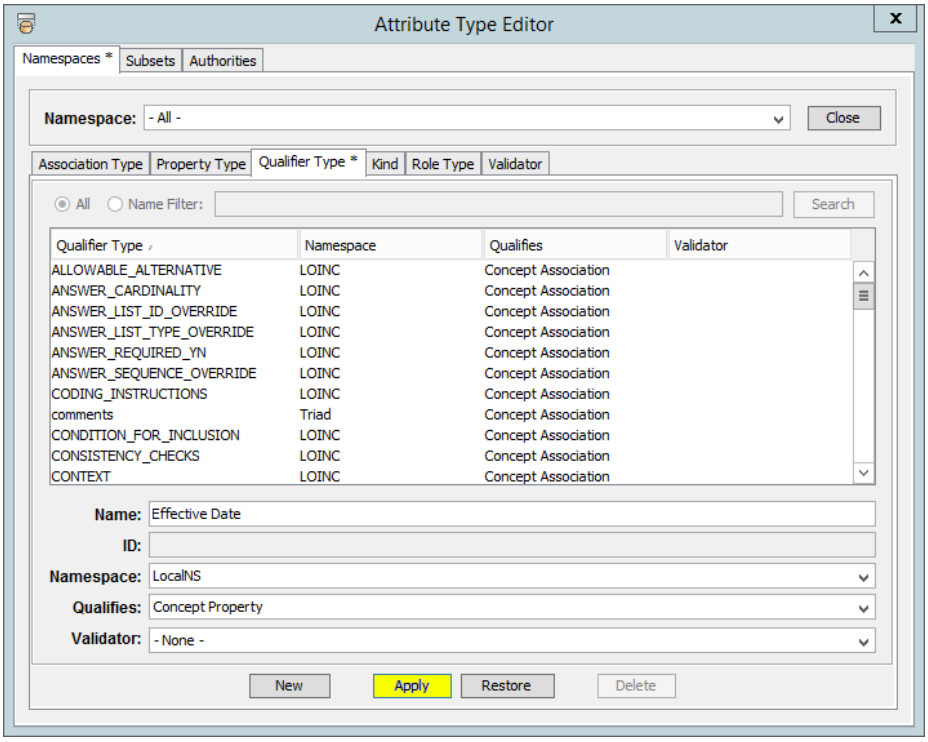


- Select **Concept Property** for a qualifier of a property on a concept.
- Select **Concept Association** for a qualifier of an association between two concepts.
- Select **Namespace Property** for a qualifier of a property on a Namespace.
- Select **Term Property** for a qualifier of a property on a term.
- Select **Term Association** for a qualifier of an association between two terms.
- Select **Version Property** for a qualifier of a property on a Namespace Version.

8. Click **Apply** to update the selected local namespace with the new qualifier type.



9. The new qualifier type is added to the table on the *Attribute Type Editor* window > *Qualifier Type* tab. The *Attribute Type Editor* window remains displayed; click **New** again to create additional qualifier types in the local namespace.

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10. Click **Close** to close the *Attribute Type Editor* window.

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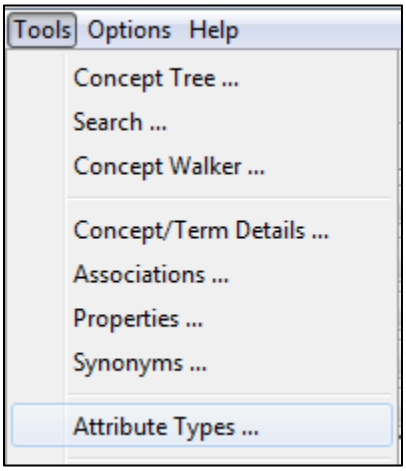
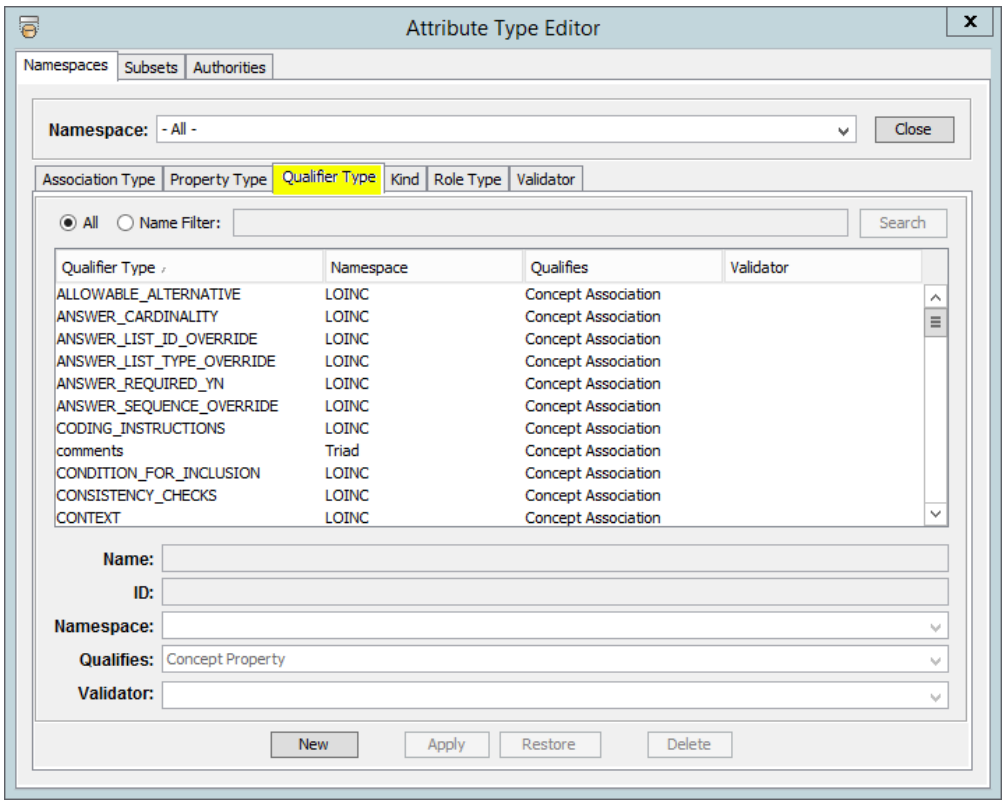
F.3.2 View and Edit a Qualifier Type

Follow this procedure to view information for an existing qualifier type, and to perform any required edits.

1. From the Menu select **Tools > Attribute Types**.



2. The *Attribute Type Editor* window displays. Select the *Qualifier Type* tab.



Information for existing qualifier types (for both associations and properties) is listed in a table format in columns you can resize. Qualifier types from both writable and non-

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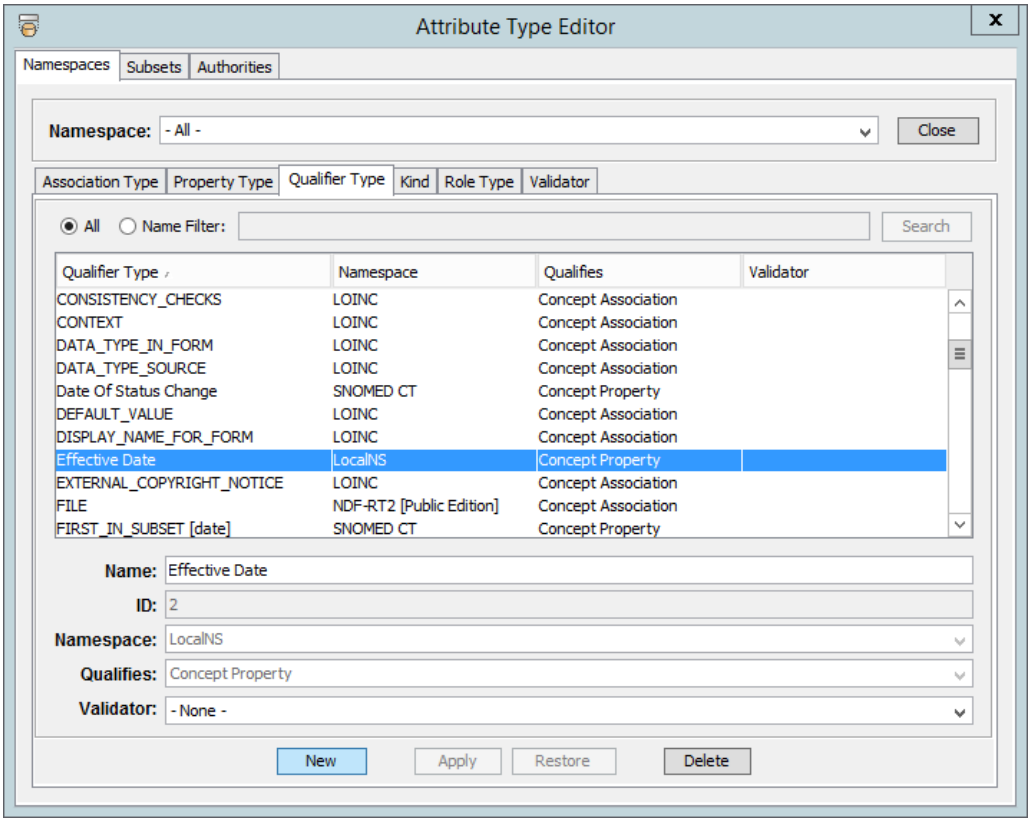
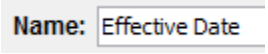
writable namespaces are listed.

Table information includes the qualifier type name, the namespace in which the qualifier was created, and an indicator that references the kind of association it qualifies, either **Concept Association** or **Term Association** (the **Concept Property** and **Term Property** values relate to qualifier types for concept and term **properties**). To change the sort for the qualifier type list, click the column header for the characteristic (**Qualifier Type**, **Namespace**, or **Qualifies**) on which you want to base the sort.

3. In the qualifier type table listing, click the qualifier type you want to view or modify to highlight the row. The data in the bottom portion of the window changes to reflect information for that qualifier.



4. If the qualifier type was created in a local (writable) namespace, you can modify the qualifier type *Name*, as needed. The *Name* is not editable if the qualifier type is from a subscription namespace.



5. The *ID* generated for the qualifier type when it was created displays. The field is not editable.

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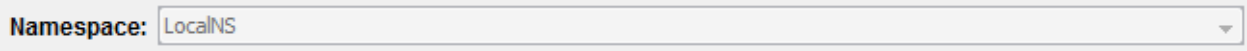
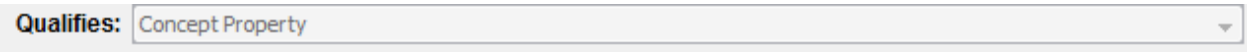
6. The *Namespace* in which this qualifier type was created displays. The field is not editable.



7. The value in the *Qualifies* field indicates what this qualifier type will qualify (the field is not editable, regardless of the namespace in which the qualifier type was created). The *Qualifies* field will only be editable if instances of the qualifier type do not already exist in the knowledgebase.



- A **Concept Property** for a qualifier of a property on a concept.
- A **Concept Association** for a qualifier of an association between two concepts.
- A **Namespace Property** for a qualifier of a property on a Namespace.
- A **Term Property** for a qualifier of a property on a term.
- A **Term Association** for a qualifier of an association between two terms.
- A **Version Property** for a qualifier of a property on a Namespace Version.

8. Click **Apply** (which becomes enabled if you make an edit) to update the selected local namespace with the qualifier type edits; the *Attribute Type Editor* window > *Qualifier Type tab* remains displayed if you want to view or edit other qualifier types.
9. Click **Close** to close the *Attribute Type Editor* window

F.3.3 Delete an Association Qualifier Type

Follow this procedure to delete an existing qualifier type from a local namespace. The qualifier type must have been created in a local (i.e., writable) namespace in order for you to delete it.

1. From the Menu select **Tools > Attribute Types**.

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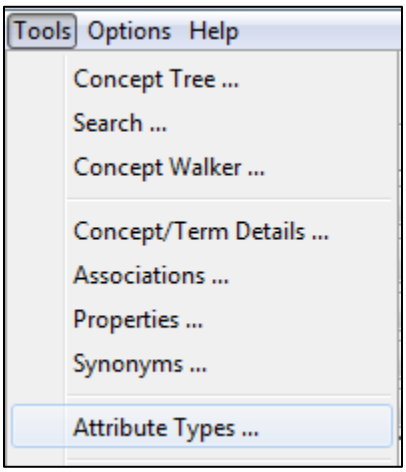
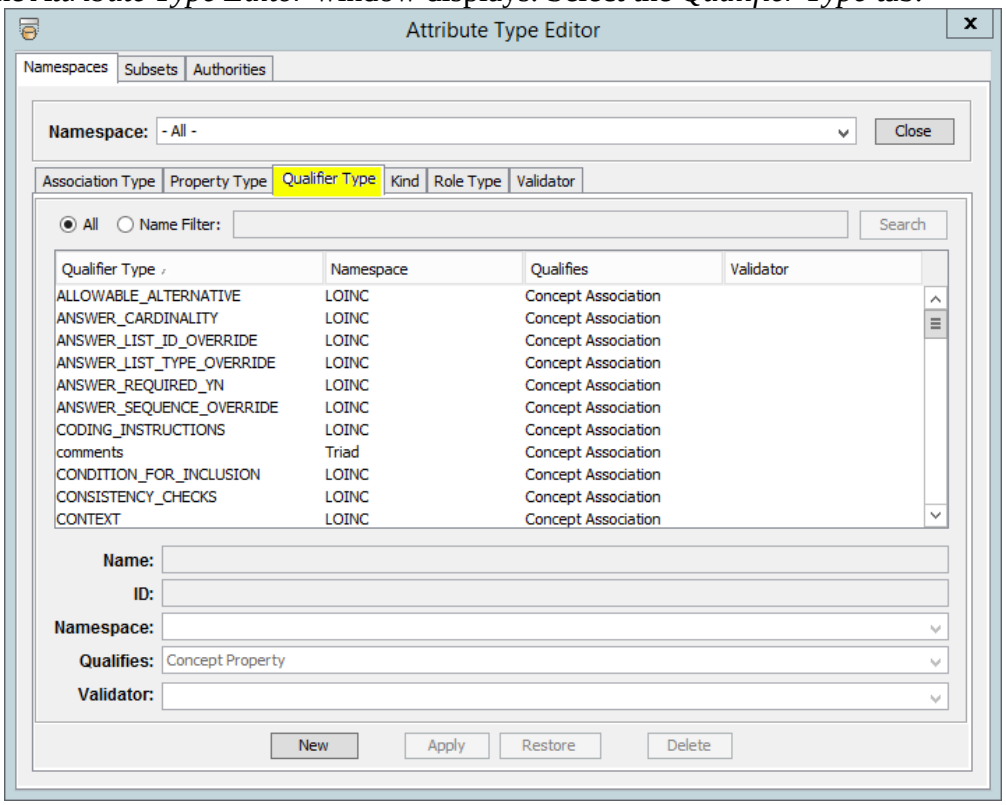


2. The *Attribute Type Editor* window displays. Select the *Qualifier Type* tab.



Information for existing qualifier types (for both associations and properties) is listed in a table format in columns you can resize. Qualifier types from both writable and non-writable namespaces are listed.

Table information includes the qualifier type name, the namespace in which the qualifier was created, and an indicator that references the kind of association it qualifies, either **Concept Association** or **Term Association** (the **Concept Property** and **Term Property** values relate to qualifier types for concept and term **properties**). To change the sort for

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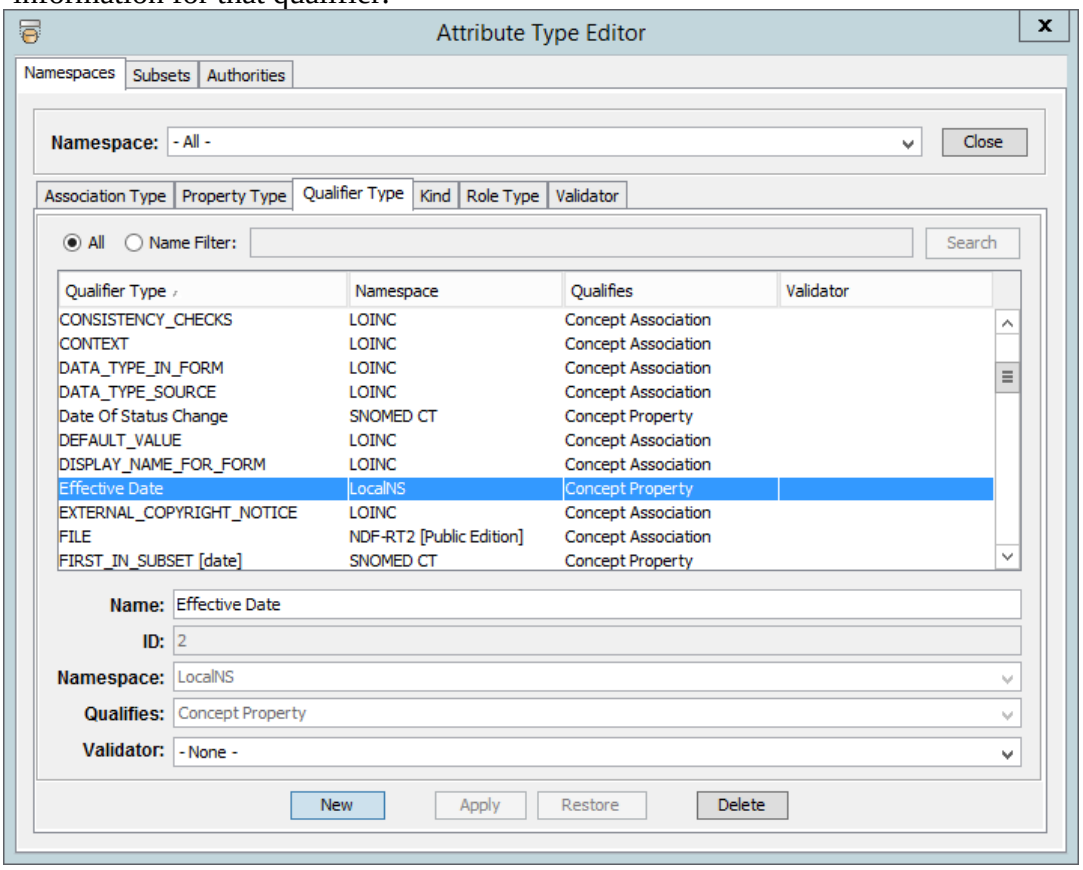
the qualifier type list, click the column header for the characteristic (**Qualifier Type**, **Namespace**, or **Qualifies**) on which you want to base the sort.

3. In the qualifier type table listing, click the qualifier type you want to view or modify to highlight the row. The data in the bottom portion of the window changes to reflect information for that qualifier.



4. In the Qualifier Type table listing, click the qualifier type you want to delete and click **Delete.**

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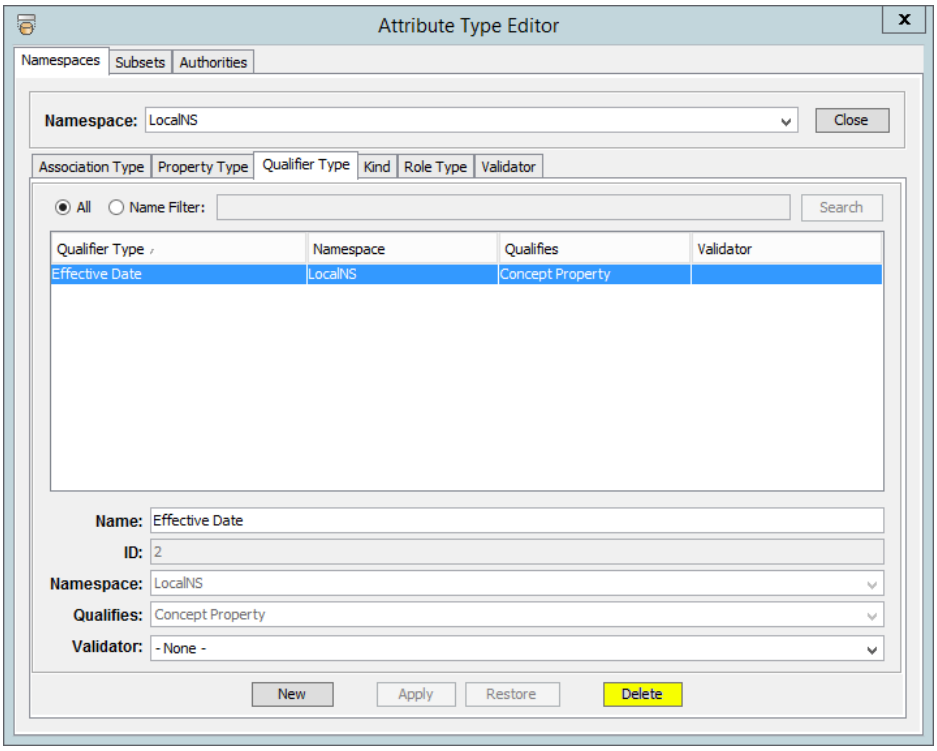
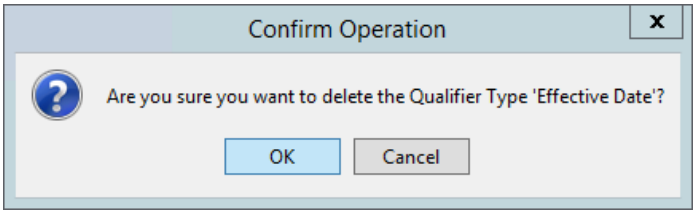


5. If an instance of this qualifier with this type already exists in the local namespace, the qualifier type cannot be deleted. An informational dialog will be shown.

6. As long as qualifiers of this type exist, you will not be permitted to delete the qualifier type. If no qualifiers with this type exist, a delete confirmation window similar to the following displays.



7. Click **OK** to delete the association type from the namespace in which it was created; the association type is removed from the table on the *Attribute Type Editor* window in the *Association Type* tab. Click **Cancel** to ignore the deletion.

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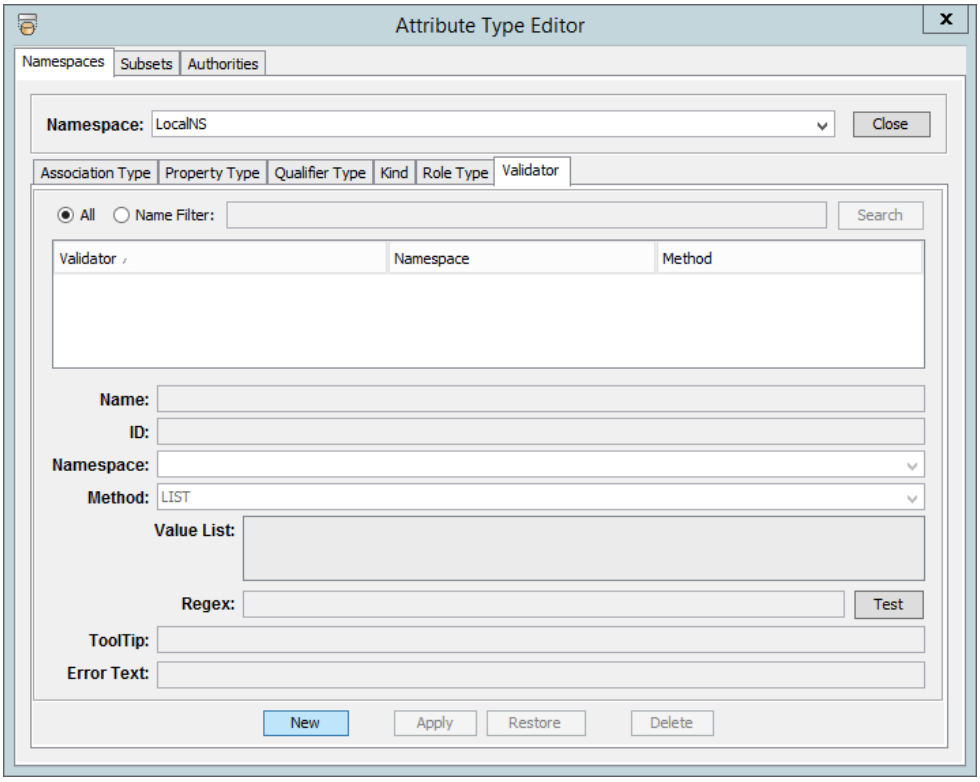
8. Click **Close** to close the *Attribute Type Editor* window.

F.3.4 Validators

Using the new Validators tool, you can define a set of parameters to restrict the string input for Property and Qualifier type attributes. Validators can be defined one of two ways: LIST, or REGEX. To create a validator, first click the Validator tab button in the Attribute Type Editor.



Validators are Namespace-specific, and cannot be created for "all" namespaces. Be sure a namespace is selected in the "Namespace" field.

Click "New" to begin defining your Validator. Next assign your Validator a name, e.g. "Date" or "My List". In the "Method" field, select the type of Validator you wish to create. You can choose either LIST, if you wish to define a pick list of options for the validator, or REGEX to use a regular expression to define the restriction on the string input, like a date field, or alpha-numeric characters only. Depending on your Method selection, the corresponding fields below will activate or deactivate.

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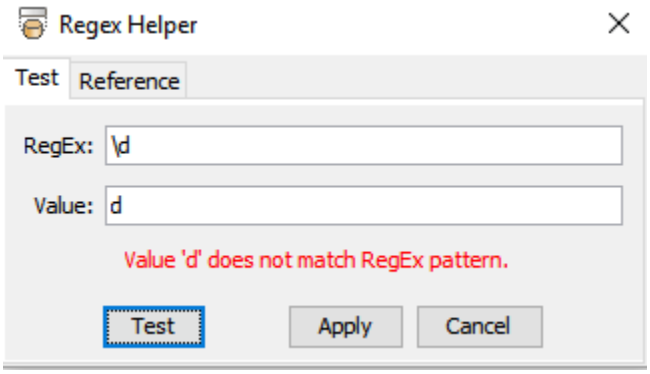
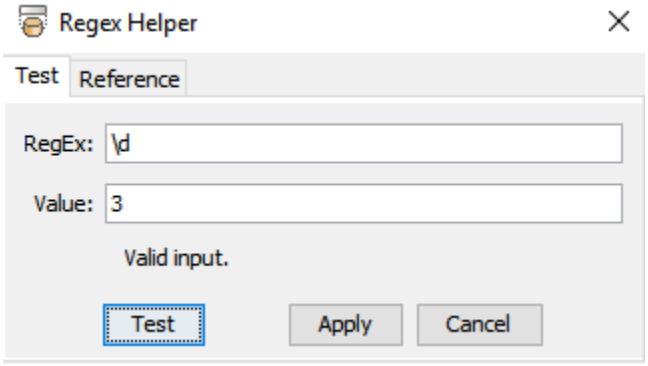
If you selected LIST, you can then manually enter, or copy paste, your list of values in the “Value List” field. Entries are separated in this field with a carriage return, with each option simply on its own line in the text box.

If you selected REGEX, you can then define the regular expression to control the string input. If you need assistance with your regex definition, the “Test” button will launch a small RegEx Helper dialog box. You can enter a regex here, and a test value, and click “test” to see if the value meets the RegEx definition.

For Example, below we have defined a numeric digits-only format in the helper, but typed a character value in the “value” field. Clicking Test displays a message that ‘s’ does not match the RexEx pattern, as it is not numeric digits.



If we instead enter valid data and click “test” a message of ‘valid input’ is displayed instead.



In the RegEx Helper, there is also a Reference tab with helpful hints and examples of commonly used RexEx patterns.

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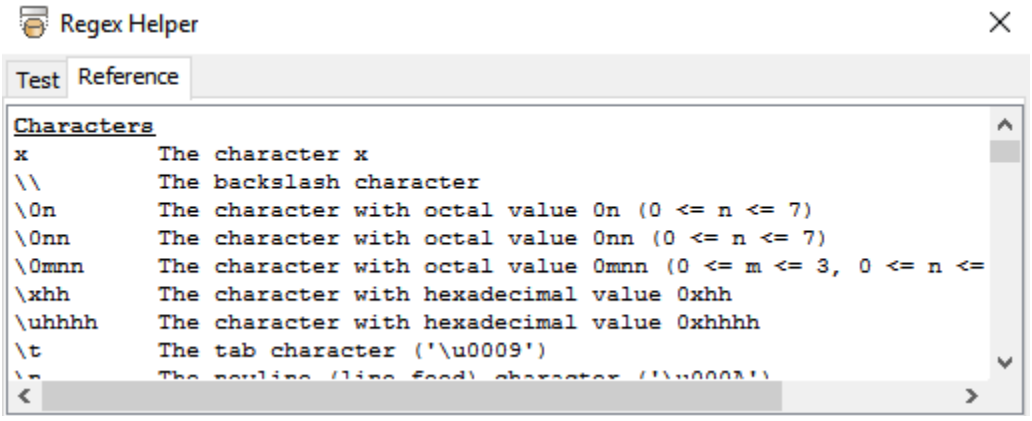
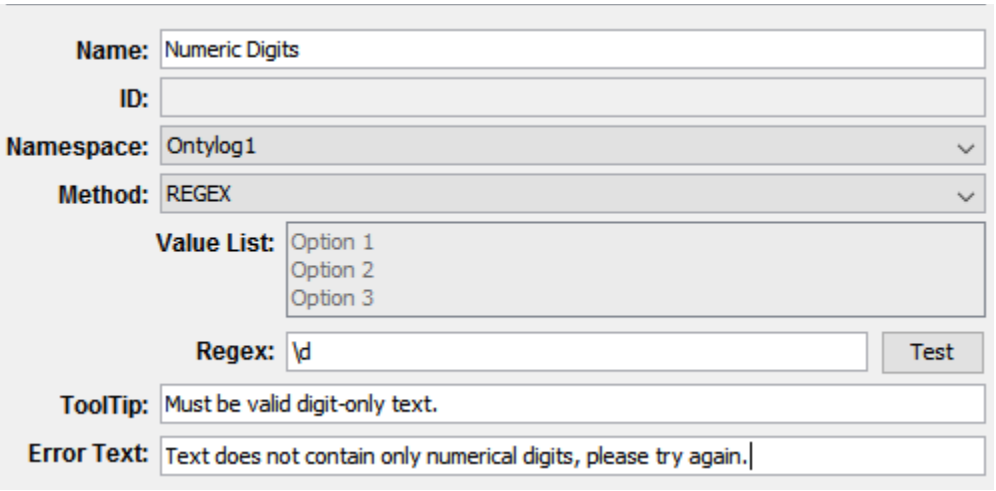


Once you have defined your RegEx in the RegEx Helper, you can click "Apply" to copy the value into the Regex field on the Validator screen.

Back on the Validator Screen you can also define a ToolTip, which will display text on mouseover of the field to hint to the user what the field expects.

You can also define a custom error message to display in the event the user does not match the pattern, to prompt the user to edit their entry accordingly. (see below for a sample validator definition. Note in the REGEX example the "Value List" field is greyed out, and in the LIST example the "Regex" field is greyed out. The historical data present in each of these fields will have no effect on the functions of the validator of the opposite Method).

RegEx Example:



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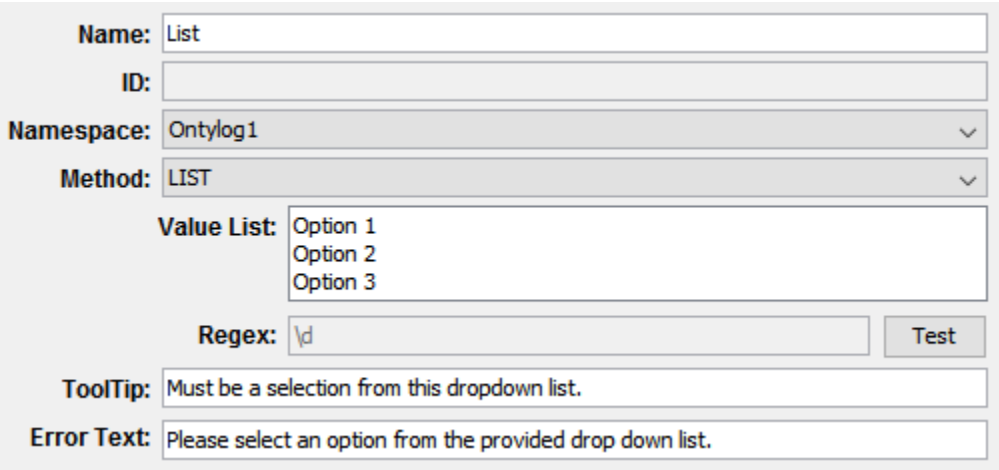
List Example:



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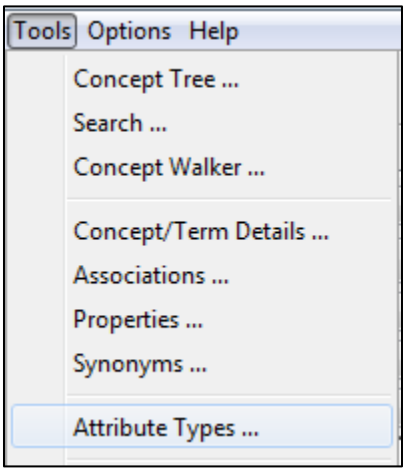
F.4 Kinds

For and Ontylog Namespace, a Kind is used in the definition of the concepts within the namespace. With the support for Local Ontylog Namespaces, the Attribute Types editor now supports creating and editing Kinds for these namespaces.

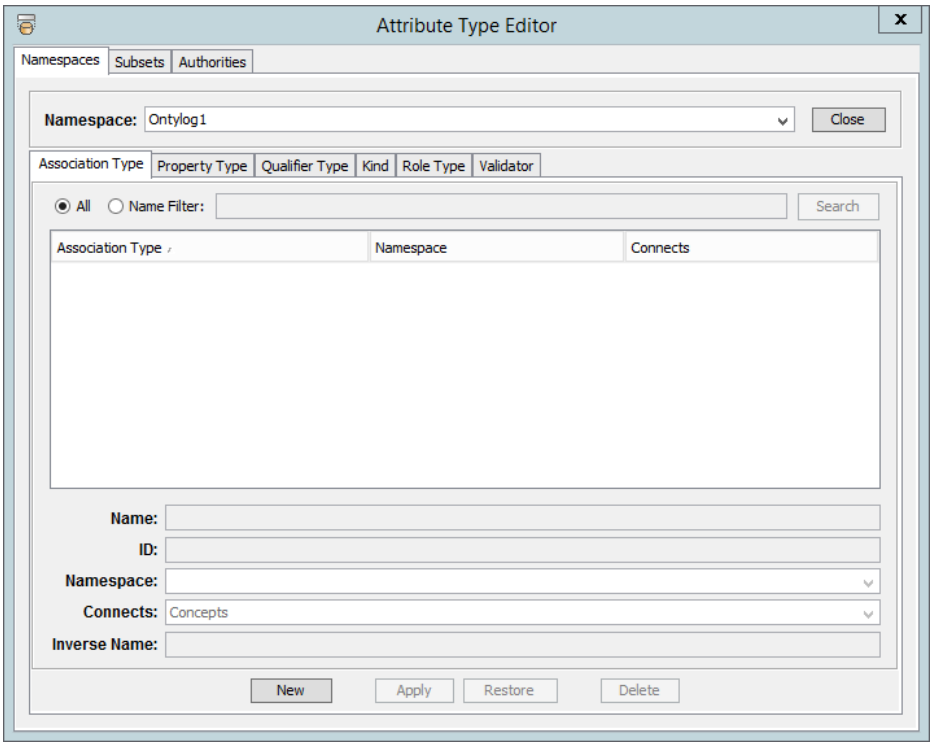
F.4.1 Create Kinds

Follow this procedure to add one or more new kinds to an editable Ontylog Namespace.

11. From the Menu select **Tools > Attribute Types**.



12. The *Attribute Type Editor* window displays. Select the *Kind* tab.



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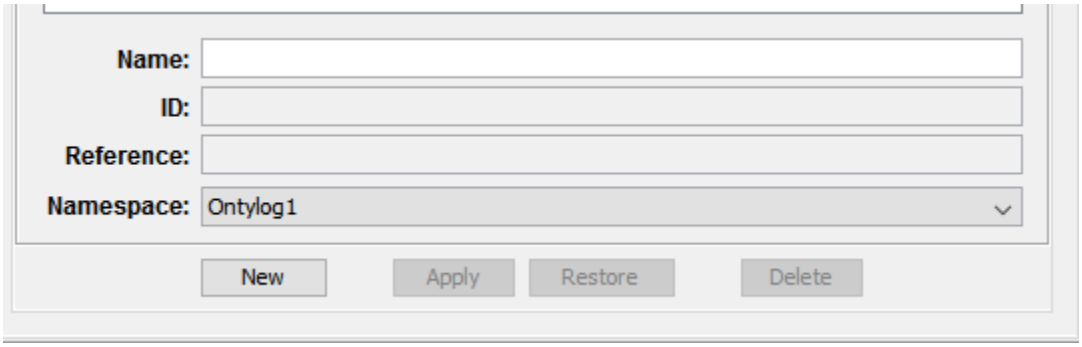
Information for existing kinds, if any (for both associations and properties) is listed in a table format in columns you can resize. Kinds are namespace-specific, and you must select a namespace in the dropdown before you can make changes. You cannot create kinds for "all" namespaces.

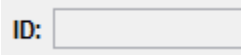
Table information includes the kind name and the namespace in which the kind was created. To change the sort for the kind list, click the column header for the characteristic on which you want to base the sort.

13. Click **New**. The fields in the lower portion of the window are enabled.

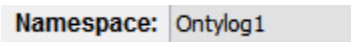


14. Specify a name for the new kind in the *Name* field, i.e., **Procedure Kind**.

15. The kind ID is generated automatically, and displayed in the *ID* field. You cannot modify the generated kind ID.



16. The Namespace dropdown field is auto-populated with the selected Namespace from above, and cannot be edited.



17. Click **Apply** to update the selected local Ontylog Namespace with the new Kind.

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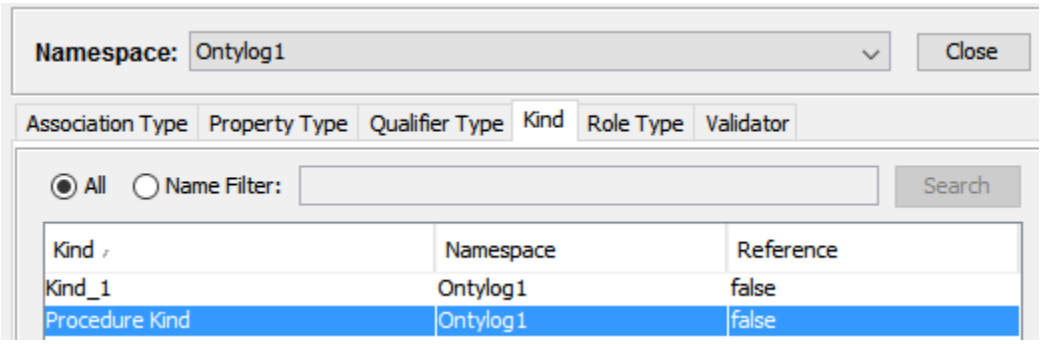

18. The new Kind is added to the table on the *Attribute Type Editor* window > *Kind* tab. The *Attribute Type Editor* window remains displayed; click **New** again to create additional qualifier types in the local namespace.

19. Click **Close** to close the *Attribute Type Editor* window.

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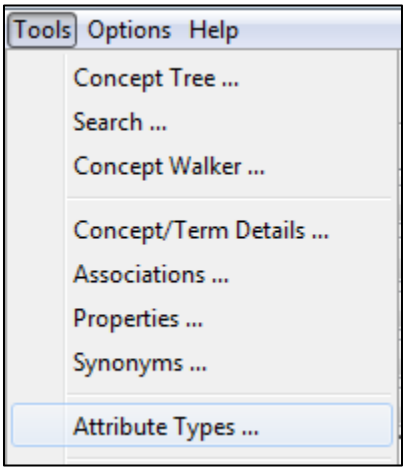
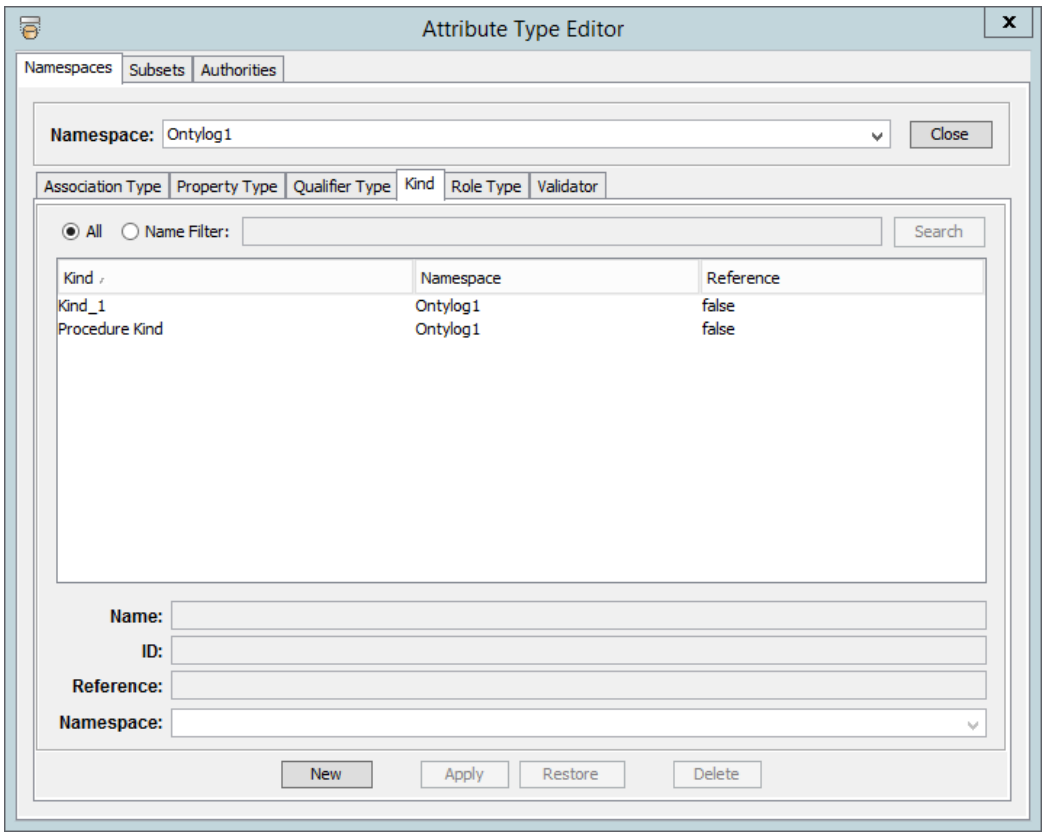
F.4.2 View and Edit a Kind

Follow this procedure to view information for an existing Kind, and to perform any required edits.

10. From the Menu select **Tools > Attribute Types**.



11. The *Attribute Type Editor* window displays. Select the *Kind* tab.



Information for existing kinds, if any (for both associations and properties) is listed in a

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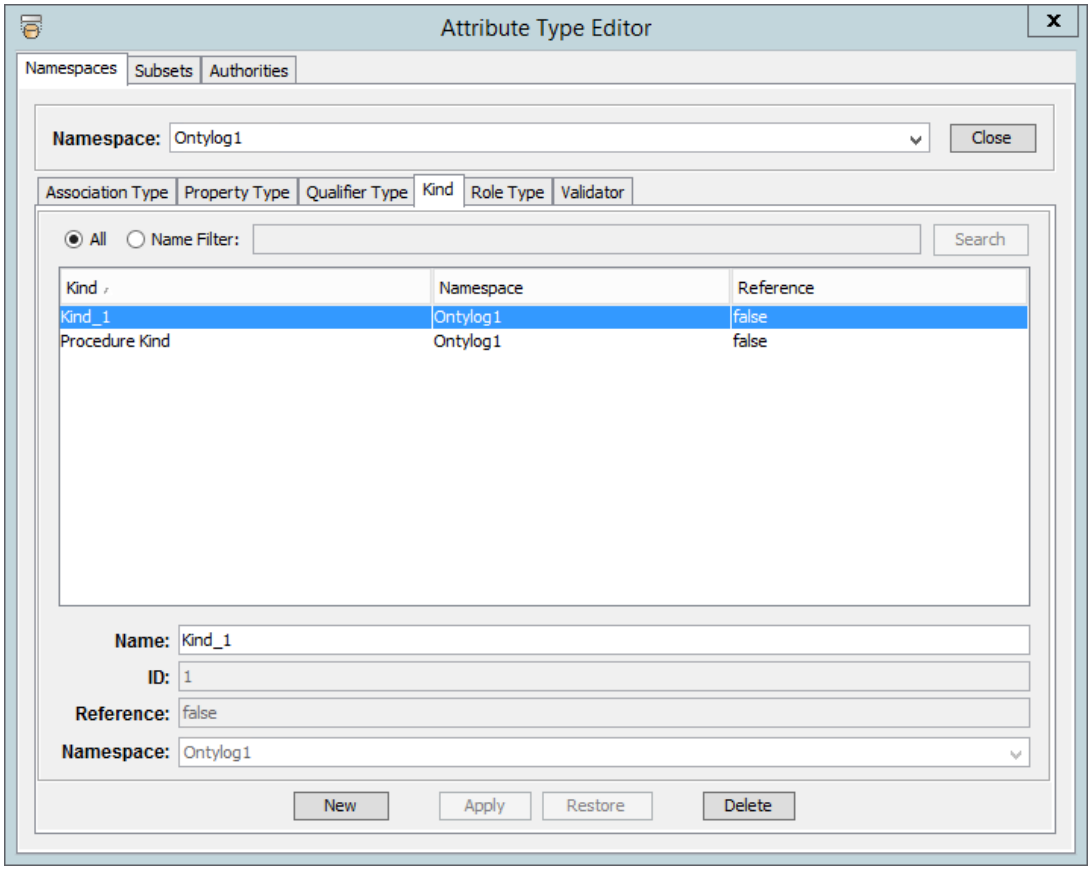
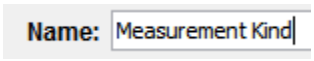
table format in columns you can resize. Kinds are namespace-specific, and you must select a namespace in the dropdown before you can make changes. You cannot create kinds for “all” namespaces.

Table information includes the kind name and the namespace in which the kind was created. To change the sort for the kind list, click the column header for the characteristic on which you want to base the sort.

12. In the kind table listing, click the kind you want to view or modify to highlight the row. The data in the bottom portion of the window changes to reflect information for that kind.



13. If the kind was created in a local ontylog namespace, you can modify the qualifier type *Name*, as needed. The *Name* is not editable if the kind is from a subscription ontylog namespace.



14. The *ID* generated for the kind when it was created displays. The field is not editable.

15. The *Namespace* in which this kind was created displays. The field is not editable.

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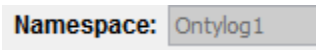
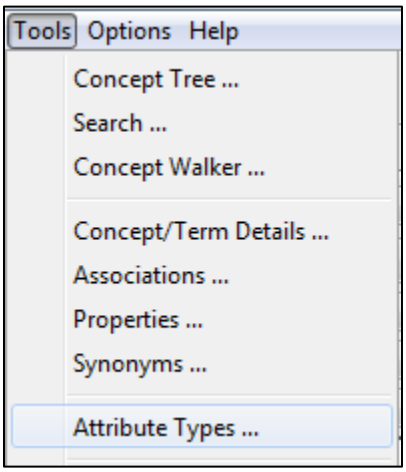


16. Click **Apply** (which becomes enabled if you make an edit) to update the selected local ontylog namespace with the kind edits; the *Attribute Type Editor* window > *Kind* tab remains displayed if you want to view or edit other kinds.
17. Click **Close** to close the *Attribute Type Editor* window

F.4.3 Delete a Kind

Follow this procedure to delete an existing kind from a local ontylog namespace. The kind must have been created in a local ontylog namespace in order for you to delete it.

9. From the Menu select **Tools > Attribute Types**.



10. The *Attribute Type Editor* window displays. Select the *Kind* tab.

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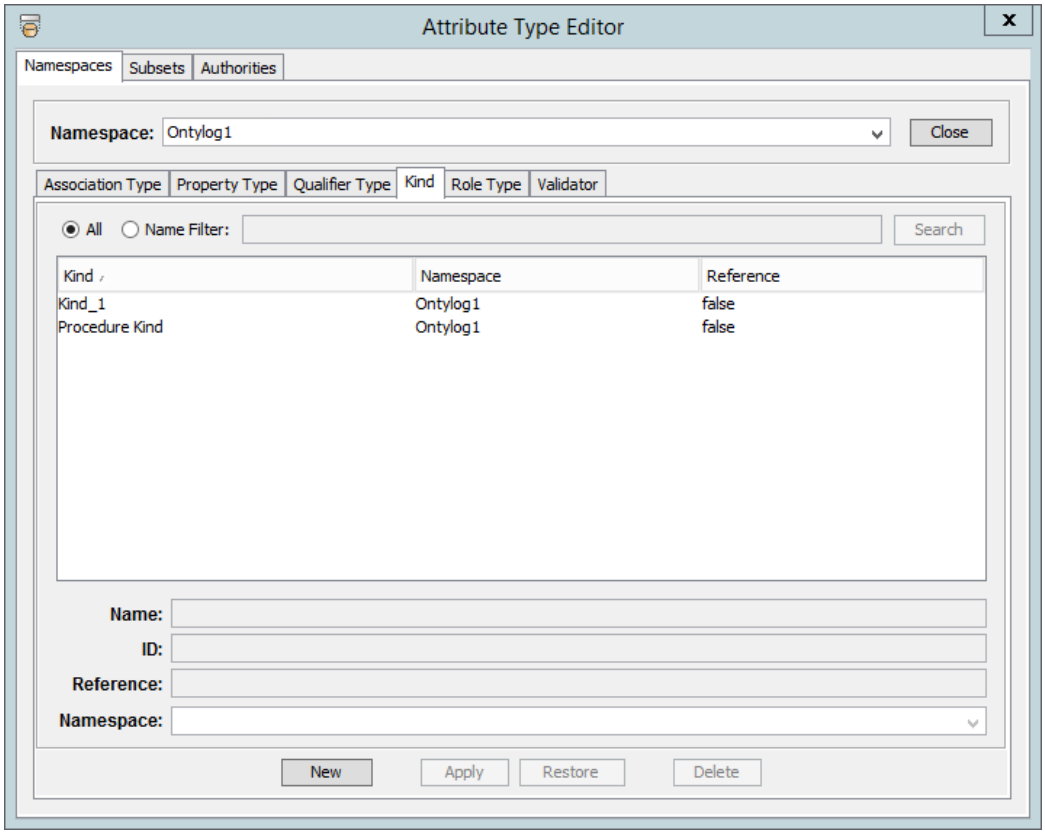

Information for existing kinds, if any (for both associations and properties) is listed in a table format in columns you can resize. Kinds are namespace-specific, and you must select a namespace in the dropdown before you can make changes. You cannot create kinds for "all" namespaces.

Table information includes the kind name and the namespace in which the kind was created. To change the sort for the kind list, click the column header for the characteristic on which you want to base the sort.

11. In the kind table listing, click the kind you want to view or modify to highlight the row. The data in the bottom portion of the window changes to reflect information for that kind.

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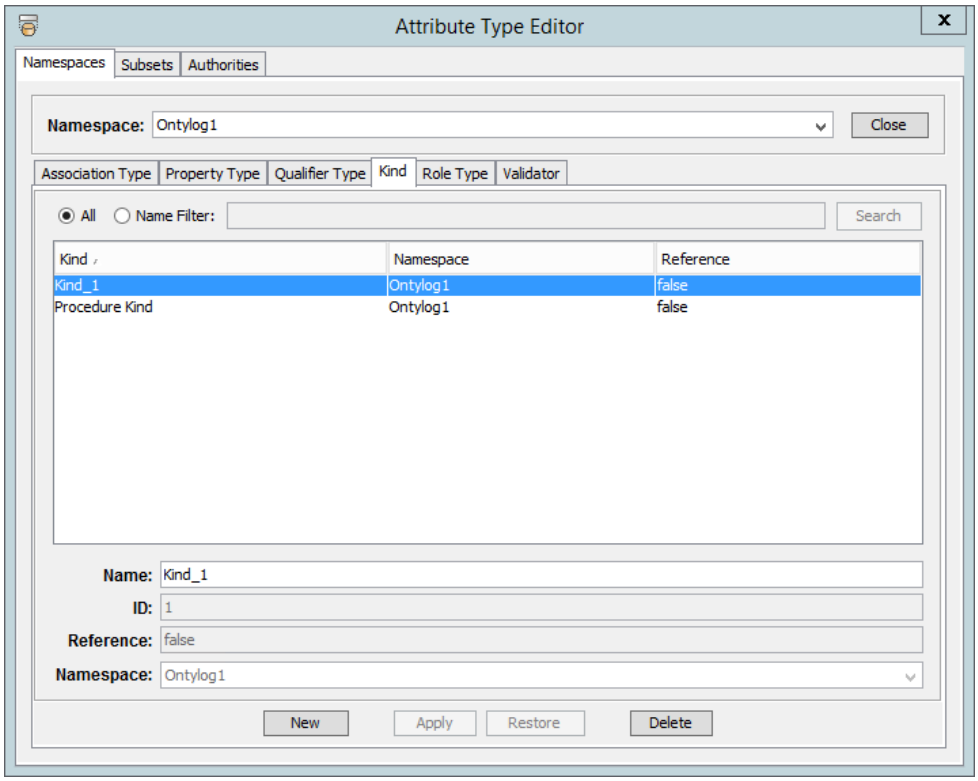
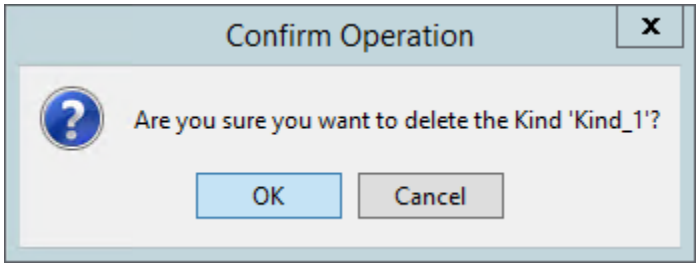


12. In the Kind table listing, click the kind type you want to delete and click **Delete.** A confirmation window will pop up allowing you to confirm deletion.



13. If an instance of this qualifier with this type already exists in the local namespace, the qualifier type cannot be deleted. An informational dialog will be shown. As long as concepts in the Local Ontylog Namespace exist with this kind, you will not be permitted to delete the kind.

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14. Click **OK** to delete the kind from the namespace in which it was created; the kind is removed from the table on the *Attribute Type Editor* window in the *Association Type* tab. Click **Cancel** to ignore the deletion.

15. Click **Close** to close the *Attribute Type Editor* window.

G. Details Panel

The *Details* panel centralizes edit functionality via independent tabs for *Concepts, Terms, Namespaces, Subsets,* and *Authorities*. Each tab supports the addition, modification, and deletion of Properties and other Attributes for these objects. The visibility of the tabs and their modifiability can be customized in the *DTS Editor Layout file* (refer to the ***DTS Editor Module Guide*** for additional information). In the *Details* panels, double clicking on a container node—a node that contains additional concepts—toggles expansion, similar to clicking on the little + icon. Double clicking on a leaf node—a node that does not contain additional concepts—opens the editor for the leaf, provided that the node is editable.

In addition to the right-click context menu functions in the Details Panel, DTS also supports Windows standard keyboard shortcuts for Cut (Ctrl+X), Copy (Ctrl+C) and Paste (Ctrl+V) to facilitate the ease of editing all attributes.

New to the *Details* panel in Version 4 is a Version Select widget to move between Concept "snapshots" in Namespace Versions. This is similar to the Version Select widget in the *Tree* and *Search* panels. The Concepts and Term "trees" also now include an Active/Inactive/Deleted status attribute. This attribute is read-write on Concepts/Terms in Thesaurus and Ontylog Extension Namespaces. Right click on the Status line to edit this value. The configuration menu now includes Status and History ToolTip items. If selected, the latter shows Concept/Term and Attribute Created/Retired dates and associated username in ToolTips. Inverse Synonyms (the Concepts associated with a Term via a Synonymous relationship) are now displayed on Terms. Drag and Drop is supported on all objects.

The Namespaces, Subsets and Authorities panels incorporate an editable "details" panel. This panel replicates all display and editing features of the equivalent *Namespace, Subset* and *Authority Editor* Panels. There are a few functionality differences, however, in particular the Publish operation is only available in the Namespace and Edit Panels.

A new "print" option is available to produce hard copy of the information in a *Details* panel (including those panels embedded in the *Namespace Editor, Subset Editor,* and *Authority Editor*). The Print Details … option is available from the right-click context menu associated with the panel's "name" element, e.g. Concept name, or Namespace Name. Selecting this option shows the preliminary print dialog:

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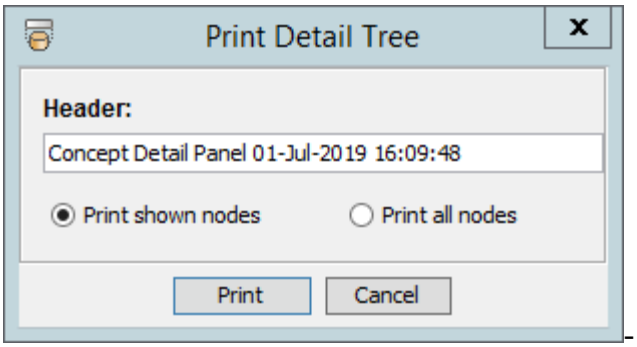


Enter a descriptive header string, then select one of the radio buttons to print either just the currently shown (expanded) nodes, or all nodes in the tree. Then click Print to open your operating system's print dialog to complete the print process.

The discussions in this section relate to viewing details of existing concepts, terms, and the creation of a new concept or term in a local namespace.

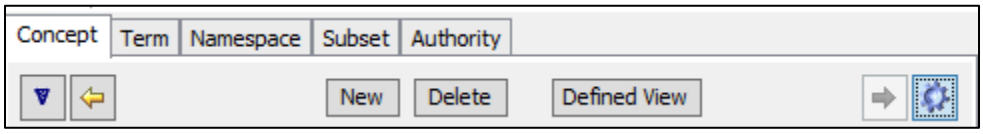
G.1 View Details

The *Details* panel displays as the default in the right pane of the *DTS Editor Main* window when it first opens. This panel consists of five subordinate "tab" panels, one each for viewing the details of concepts, terms, namespaces, subsets and authorities. You can display detailed attribute information for each concept, term, namespace, subset or authority that you drag from any other display window or panel on the *Main* window. The *Details* panel automatically selects the appropriate tab based on the dropped object type.

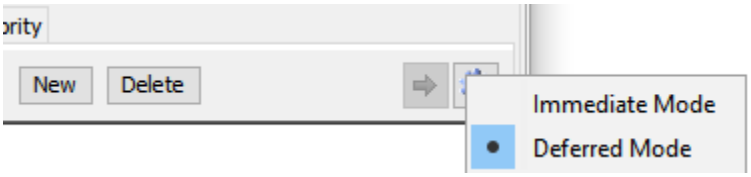
The sections below describe the operation of the individual object tab panels.

G.1.1 Batch Commit

You will notice a small gear icon to the right of the Details Panel.



This gear controls the Batch Commit function of DTS. By default, DTS does not save changes you make to any concept, term, subset, namespace, or authority in the Details panel, but is in "Deferred Mode", allowing you to commit several changes at once. If you wish for changes to take effect immediately, you can toggle this setting to "Immediate Mode".



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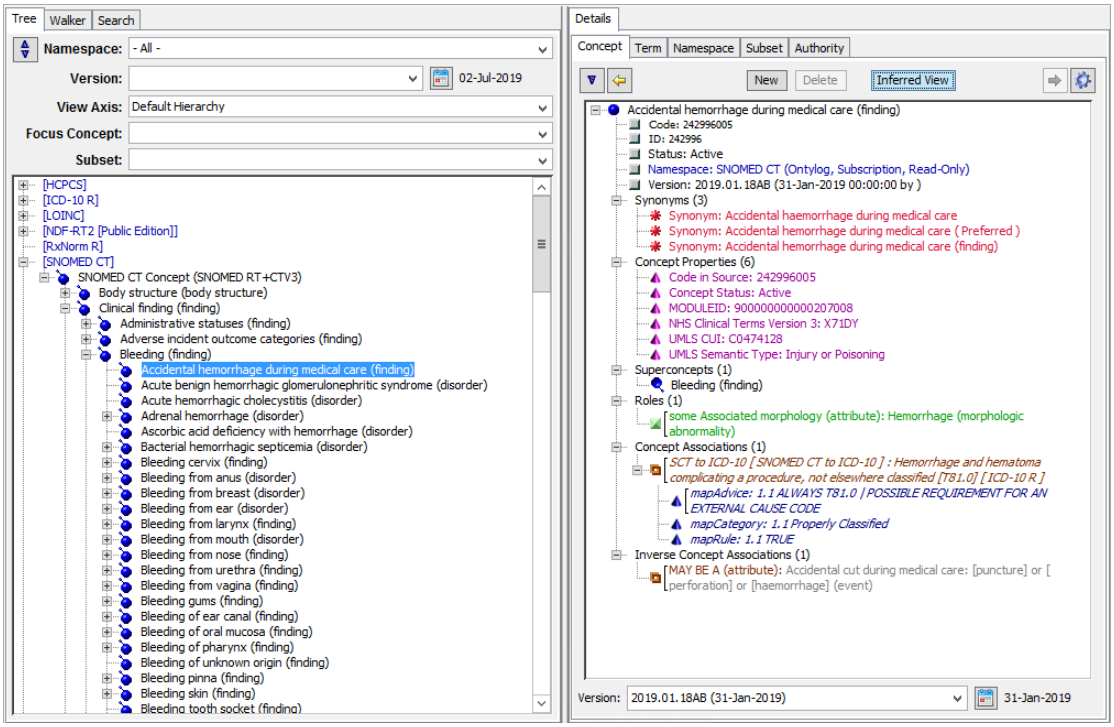
While in Deferred Mode, changes made to items in the Details panel must be saved or discarded before you can leave that objects view.

G.2 View Concept Details

Concepts are normally loaded into the Concept tab by dragging and dropping from other DTS Editor panels. Concepts can be automatically loaded into the Details panel from the *Concept Tree* and *Walker Tree* panels, however, if the panel's **Click to Edit** option is enabled,. See the descriptions of these panels for more information on **Click to Edit**.

In the following illustration, the concept **Accidental hemorrhage during medical care (finding)**, from a SNOMED CT Ontylog namespace, was clicked or dragged from the *Concept Tree* tab into the *Details* > *Concept* panel. The attributes are expanded for view.



When you expand all, or selected attributes for view, the *Concept/Term Details* panel retains those tree settings for the next concept displayed in the view. Only those attributes that were expanded for the previous concept are "**auto-expanded**" for the new concept in the view.

G.2.1 Configure Concept/Terms Details Panel View

To select which attributes will display if there is a **concept** in the *Details* > *Concept* panel, right click the name of the concept you dragged into the panel, then click **Configure View**.

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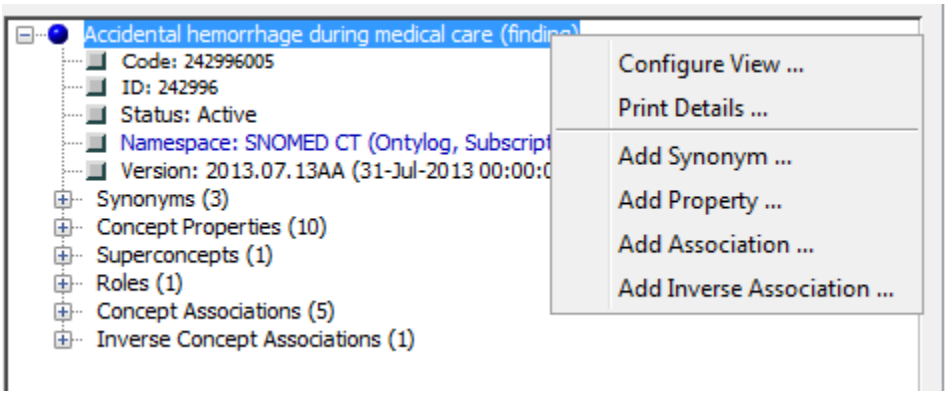
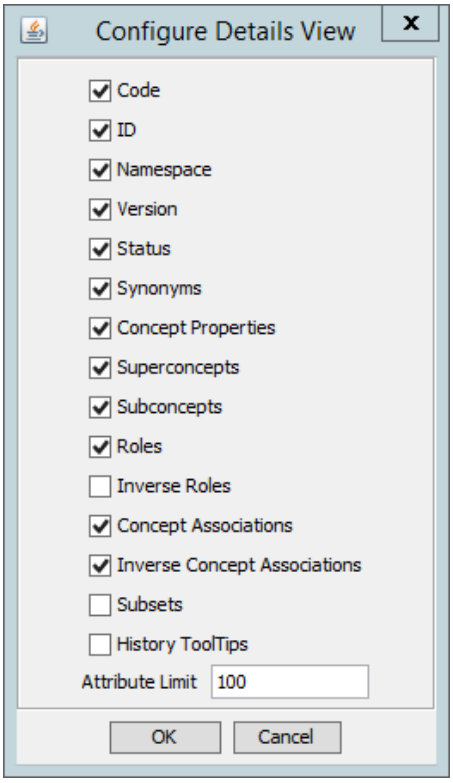


The *Configure Details View* window displays, listing the attribute view options available when a concept is displayed in the panel.



To add / remove an attribute from the detail display, select the checkbox adjacent to that attribute to add / remove the check mark. If you are dealing with namespaces which have a large attribute limit, increase the default *Attribute Limit* of **100** to a higher setting, i.e., **1000**. If you do not want to see any attribute you can decrease the default *Attribute Limit* of **100** to **0**.

Click **OK** when finished. Your display configuration is retained for later DTS sessions.

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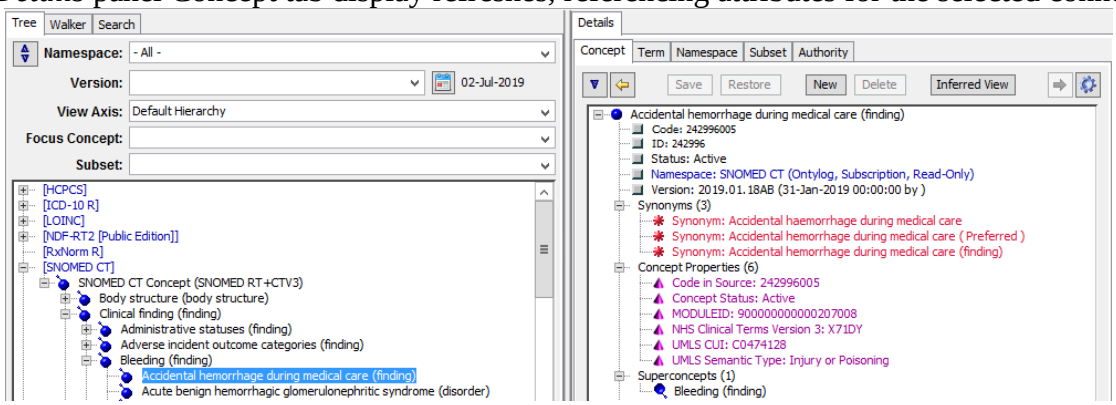
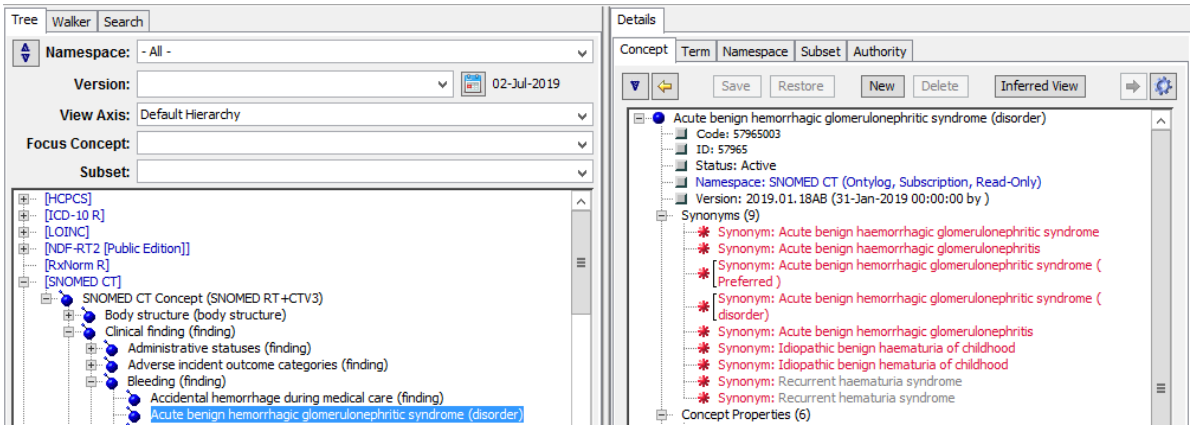
G.2.2 Navigate to Other Concepts or Terms from Displayed Detail

On the *Details* panel Concept tab you can navigate to (and display attribute details for) another concept or term from the current attribute detail view. [or drag the namespace object]

To display detail attributes for a concept, click or drag a concept and *Details* panel Concept tab. The *Details* panel Concept tab display refreshes, referencing attributes for the selected connect.



Drag and drop other concepts linked to the main concept to the white portion of the *Details* panel Concept tab to easily navigate to, and display details for, a concept or term within the same or another namespace.



For any displayed concept or term, you can navigate to those concepts or terms referenced in the displayed details (associations, inverse associations, roles, inverse roles, concepts or terms referenced as superconcepts, subconcepts, synonyms).

G.2.3 View Subsets in Which a Concept Resides

In addition to listing a concept's attributes in the *Details* panel Concept tab, you have the option to list all subsets in which the concept in the view is included. Confirm that the **Subsets** option is checked in the *Configure Details View* window.

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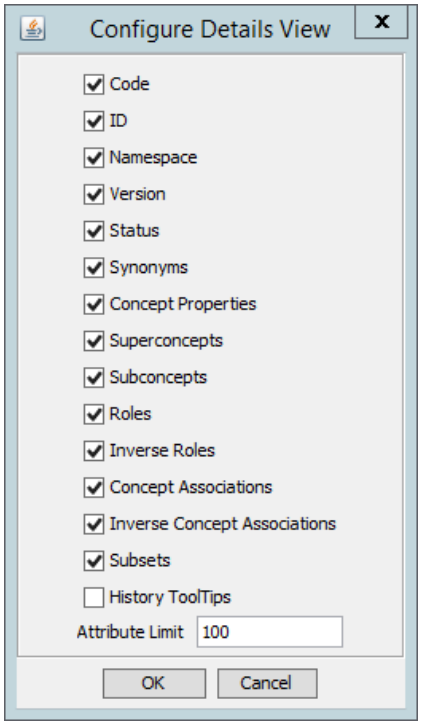
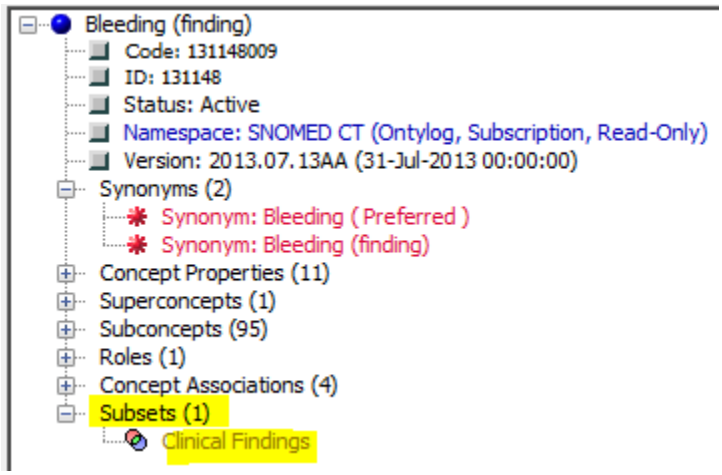


If the concept is included in one or more subsets, a **Subsets** heading is added to the *Details* panel Concept tab view and each subset in which the concept is included is listed.



If a subset is modified so that the concept in the view no longer is included in the subset, that subset is removed from the listing.

G.2.4 View Details Panel History Using Forward and Back Buttons

For your reference, a **history** is provided of the concepts and/or terms that were displayed previously in the same instance of the *Details* panel. Each of the panel tabs – Concept, Term, Namespace, Subset and Authority maintain their own history. Use the **Forward** and **Back** buttons to navigate through concepts and terms that you viewed or edited earlier.

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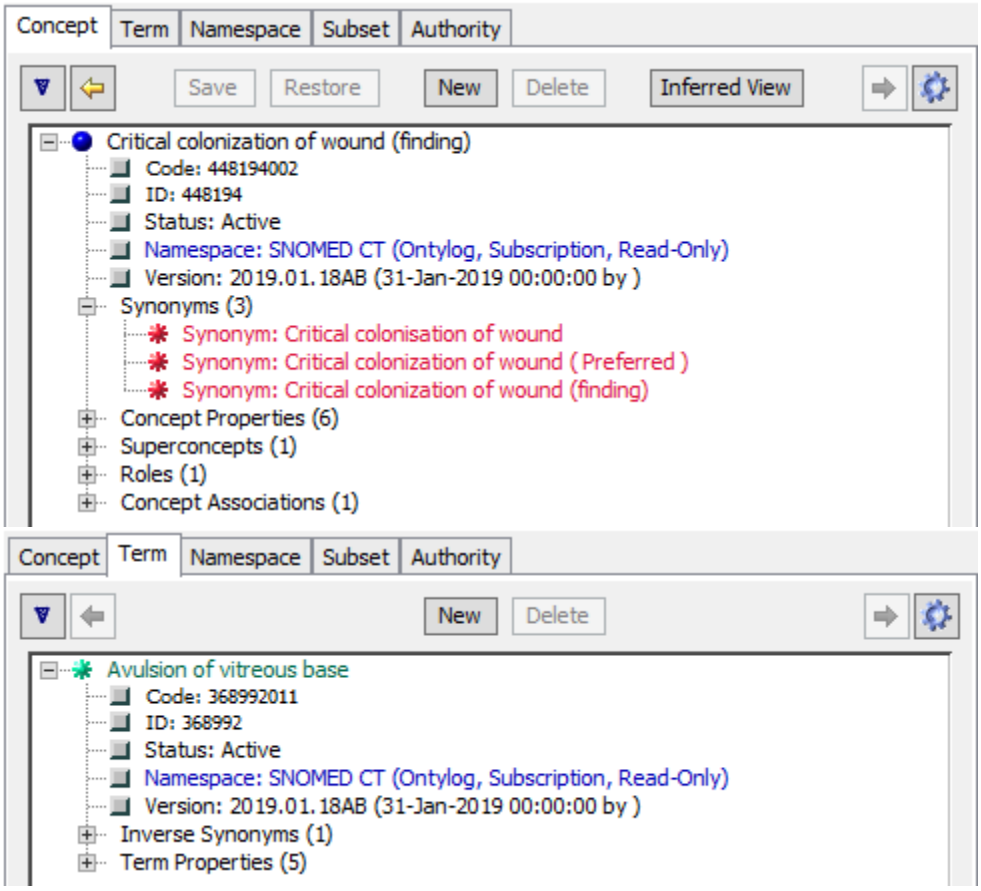
For example, if you are viewing a concept or term in the *Details* panel, then subsequently drag a different concept or term into the panel for view or edit, the **Back** button becomes enabled. Note the illustration.



Click the **Back** button to review the concept that displayed in the panel previously (i.e., the concept in the *Details* panel's concept or term history). The view always reflects the current *Configure Details View* settings.

As soon as you click the **Back** button, the **Forward** button becomes enabled.

Click the **Forward** button repeatedly to redisplay the concept or term you dragged into the *Details* panel most recently. The button becomes disabled (grayed out) when the most recent concept is displayed.

The displayed history reflects the latest version of a concept or term. If a concept or term is updated after it was put in the history, the latest version of the concept or term is displayed when you click the **Forward** and **Back** buttons.

The *Details* panel history is available only for the current connection instance. The *Details* panel history will be reset when you disconnect from the DTS Editor.

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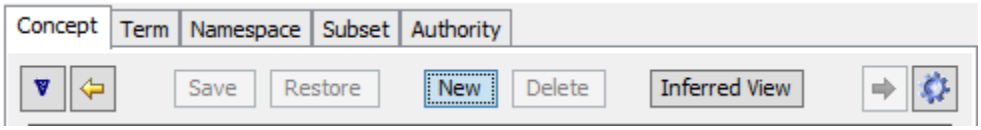
G.3 Add a New Concept/Term to a Local Namespace

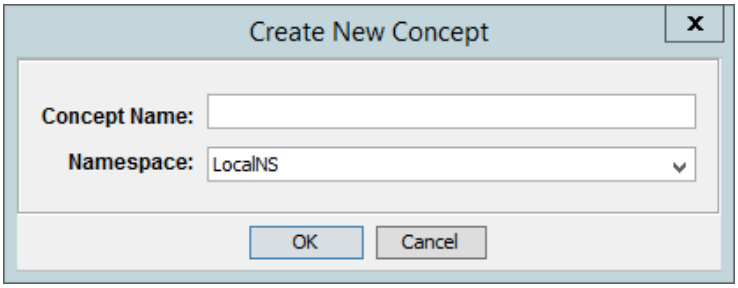
G.3.1 Create the New Concept

Follow this procedure to add a new concept or term to an established local namespace.

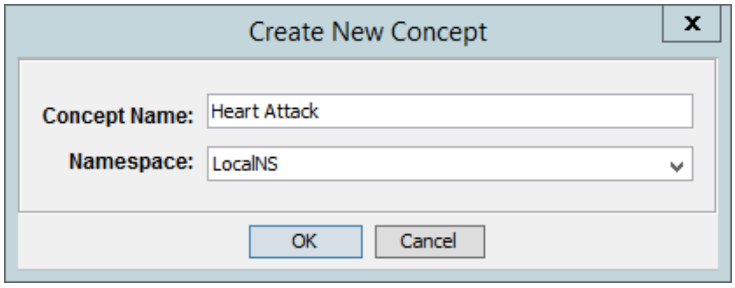
1. To create a new concept in a namespace, click **New** in the *Details* panel Concept tab in the right panel of the *DTS Main* window.



2. The *Create New Concept* window displays.



3. Enter the name of the new concept in the *Name* field.
4. From the *Namespace* field dropdown list, select the local namespace to which the new concept will be added (only local, writable namespaces are listed).
5. Click **OK** to add the concept or term to the selected namespace. The new concept name displays in the *Details* panel Concept tab, and references the namespace in which you created it. To cancel the addition of the concept or term to the namespace, click **Cancel**.



6. The *Create New Concept* window closes.
7. Normally, the Concept **Code** and **ID** are assigned to the new concept automatically by the DTS Server. Users can, on the other hand, associate a custom-written **ConceptTermInitializer** to a Namespace to have explicit control over these assignments. See the discussion of the Configuration Options panel for more information. Note that each concept name, code and ID is tracked so that if the concept is deleted at a later time,

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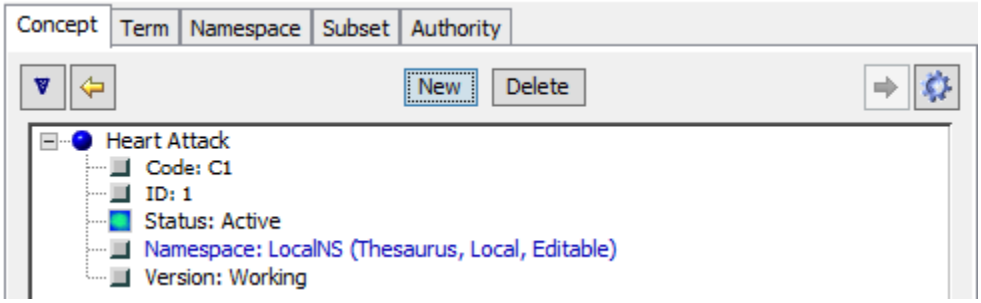
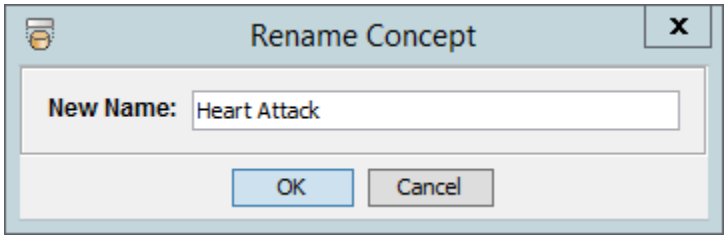
that concept name, code or ID is prevented from being reassigned to another new concept.



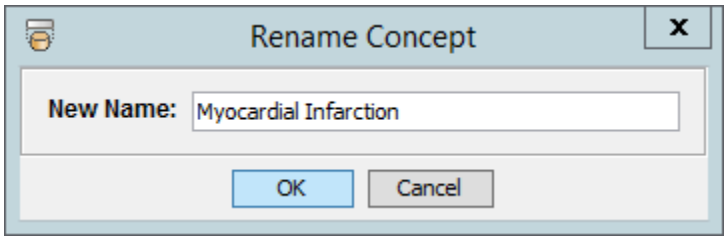
G.3.2 Change the Name of a Concept

You can change the name of an existing concept only if the namespace is writable.

1. Make sure the concept you want to modify displays in the *Details* panel Concept tab. Right-click on the concept name.
2. On the displayed option list, click **Rename**. The *Rename Concept* window displays, referencing the existing concept name.



3. Enter a *New Name* for the concept, and click **OK**. This name must not be used by any other concept in the namespace.



4. If the concept you want to rename is in a writable namespace, the new name displays immediately in the *Details* panel Concept tab. The namespace is updated with the new concept name.

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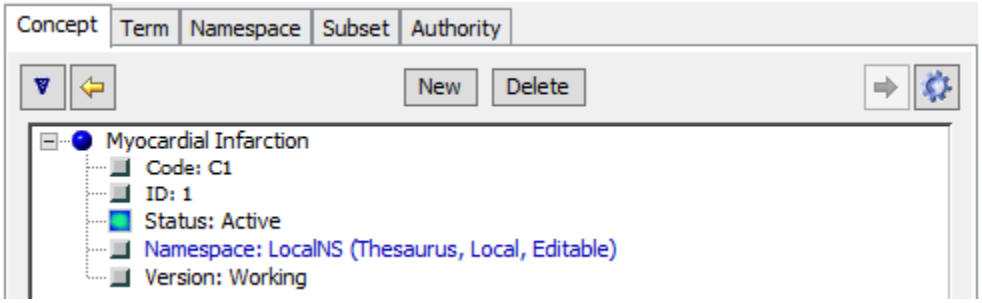
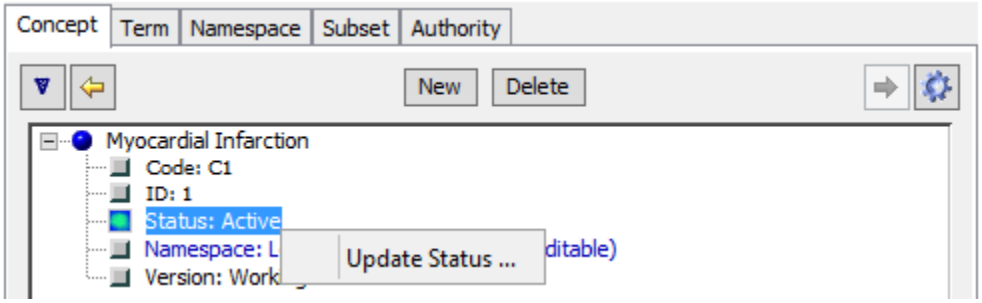


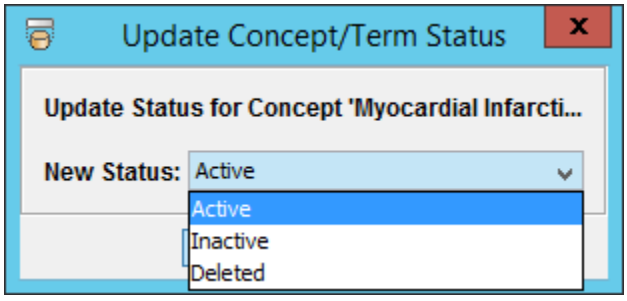
G.3.3 Change the Status of a Concept

You can change the status of an existing concept only if the namespace is writable.

1. Make sure the concept you want to modify displays in the *Details* panel Concept tab. Right click on the Status line and then click **Update Status…**.



2. The *Update Concept/Term Status* window displays.



3. Select the desired new Status: **Active**, **Inactive**, or **Deleted,** from the dropdown and click **OK**.
4. The concept will redisplay with the updated Status.

G.3.4 Copy a Concept

You also have the option of copying, or cloning a concept in a Local read-write Namespace. All updates or modifications you've made to the concept must be saved before this can be done.

To copy a concept, right click on the Concept Name and select "Copy".

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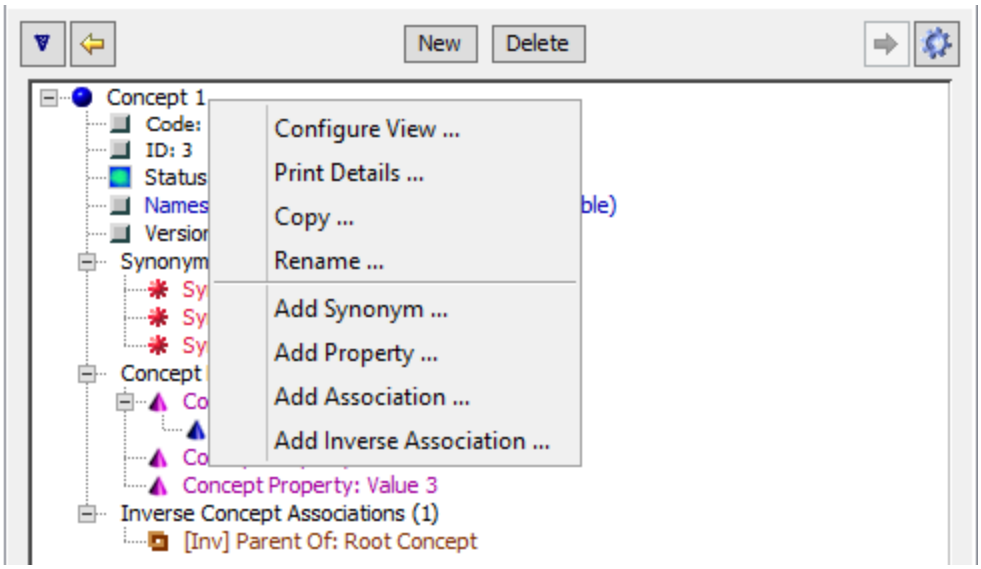
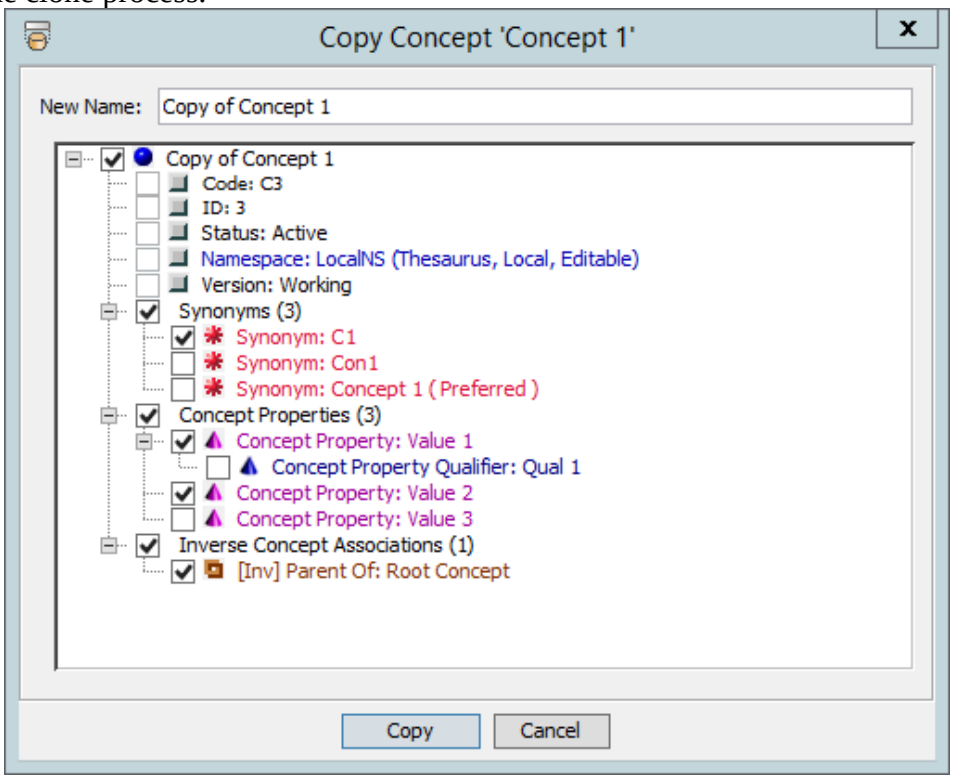


Next, give the new copy of the concept a name. You'll notice that as you type the name, the Name value in the display below is automatically updated. You can then select any and all attributes from the source concept to be included in the copy. This allows the user to customize how much of the concept's details to copy. If you check the Concept Name, all attributes underneath the tree will be selected as well. Once you've made your selections, click "Copy" to complete the clone process.



After you click "Copy", the new concept will appear in the details panel, with highlights to indicate which properties were copied from the source concept. You must then Save the concept to finalize the modifications.

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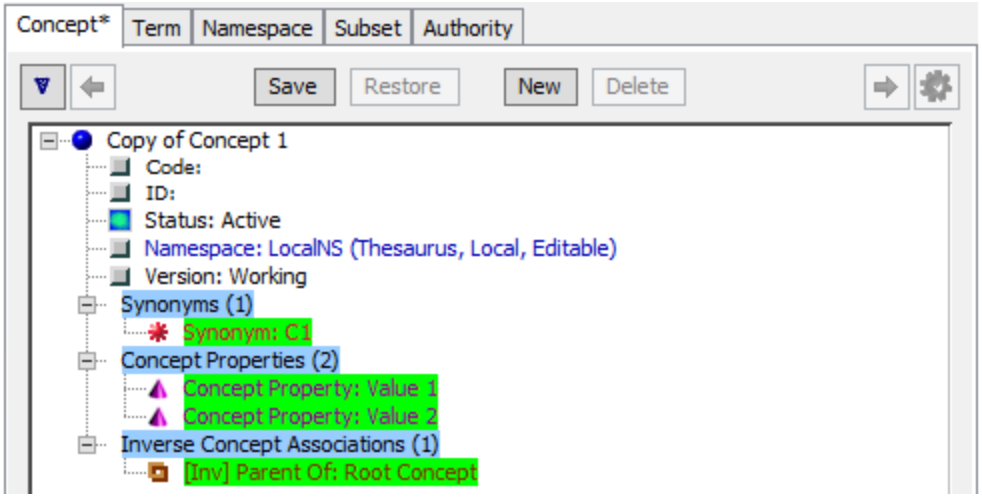
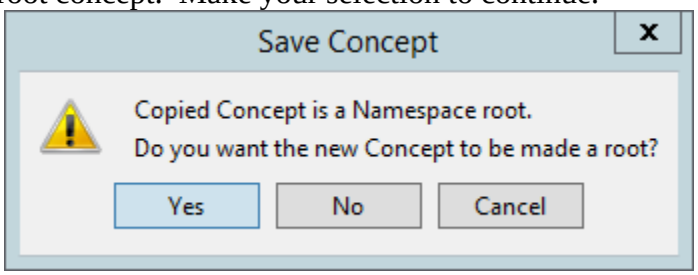
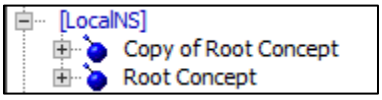


If the original concept was a Root concept, you will then receive a message asking if you wish the copy to also be a root concept. Make your selection to continue.



Selecting "Yes" will add the concept to the root of the Tree View, and will be visible one the Tree View is refreshed.



G.4 Permanently Delete a Concept/Term from a Local Namespace

For most modeling projects, concepts (and terms) are never truly deleted. They are given a **Deleted** Status (as described above) in the Working namespace version in order to maintain full history of the modeling activity. Sometimes, however, usually for testing or demonstration purposes, it is help to be able to permanently delete a concept or term. Permanent delete is only permitted on unpublished concepts and terms.

Note: Permanently deleted concept and terms are completely removed from the DTS Knowledgebase and cannot be recovered.

Follow this procedure to permanently delete a concept from an established local namespace.

1. Make sure the concept you want to permanently delete is displayed in the *Details* panel Concept tab. Right-click on the concept name.

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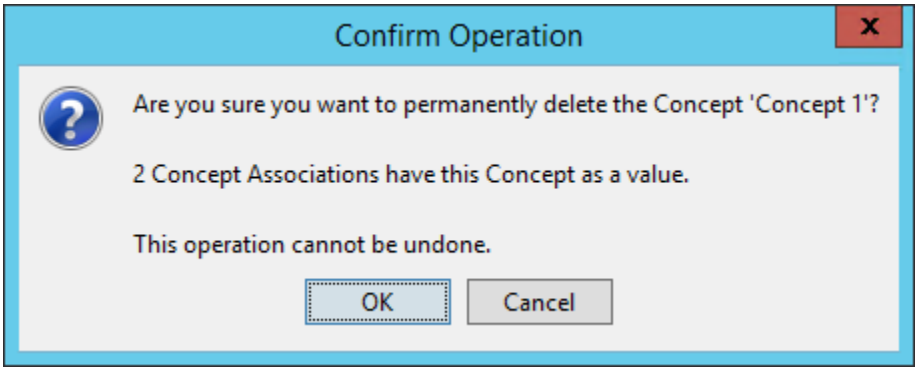
2. On the displayed option list, click **Delete ….** The *Confirm Operation* window displays, referencing the existing concept name. The window will also display any attributes that would be affected by the deleting the concept.



3. Click **OK** to permanently delete the concept or **Cancel** to terminate the operation.

G.5 Add a Synonym to a Concept

Use one of the following methods to add a synonym (with an association type established as local content in a local namespace) between concepts or terms in a subscription namespace. The synonymous term can exist in the same namespace as the concept, or in a different namespace. A synonym always pairs a concept with a synonymous term (never a concept with a concept, or a term with a term).

If you are creating a synonymous term as local content for a concept in a subscription namespace, the association type you select must be created already in the current local namespace; the resulting new synonym will be written to the current local namespace as well.

You have the option of defining a new character string as the synonymous term, and linking that term to a concept.

G.5.1 Create a Synonym

Follow this procedure to link a synonymous term to a concept by right clicking on the new concept name in the *Details* panel Concept tab.

1. If the new concept is displayed in the *Details* panel Concept tab, either right-click on the concept name. Select **Add Synonym** from the displayed options. If the concept already has Synonyms, you can also right-click on the *Synonyms* folder name and Select **Add Synonym.** If you have two windows up, displaying concepts and terms, you can also Ctrl+drag one term to the target concept to bring up the same “Add Synonym” window.

   Note: To add a synonym to an existing concept, drag the concept from another displayed window or panel and drop it on the *Details* panel Concept tab. Right-click on the concept name, then select **Add Synonym** from the displayed options.

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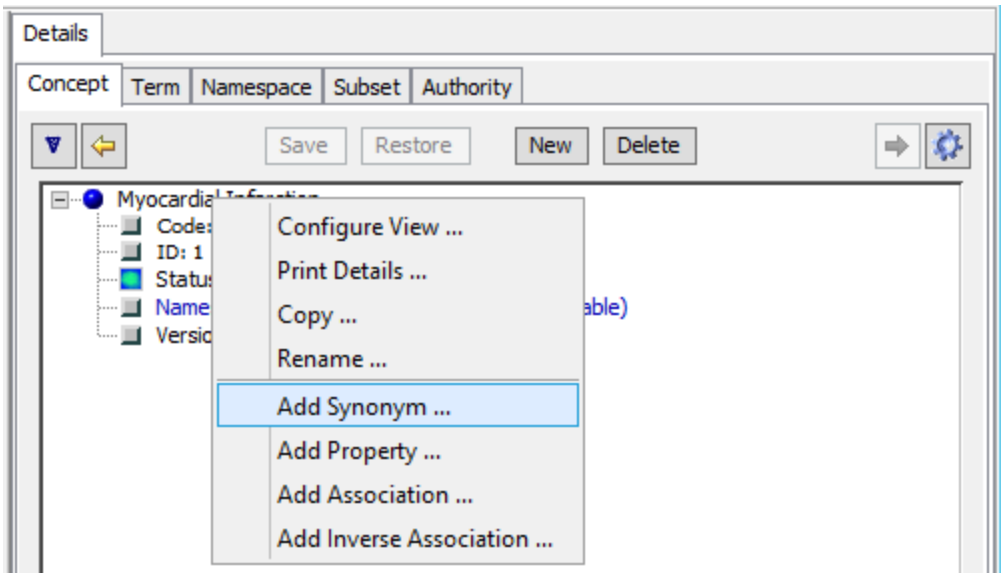
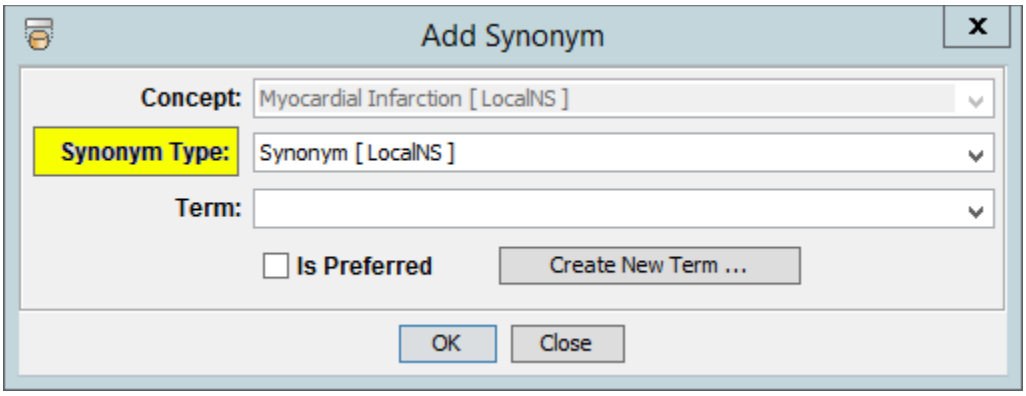


1. The *New Synonym* window displays. The concept from the *Details* panel Concept tab displays automatically in the *Concept* field.

2. If you click the Synonym Type button, you have the option of **filtering** the association types that are available from the *Synonym Type* field dropdown list by creating a pre-defined, filtered list of types.



3. You can Add / Remove associations from the *Synonym Type* field dropdown list. When you attempt to select an association type from the *Synonym Type* field dropdown list, or select an alternate association type, only the pre-selected association types will be included in the list.

   Click **Cancel** to exit without filtering the list.

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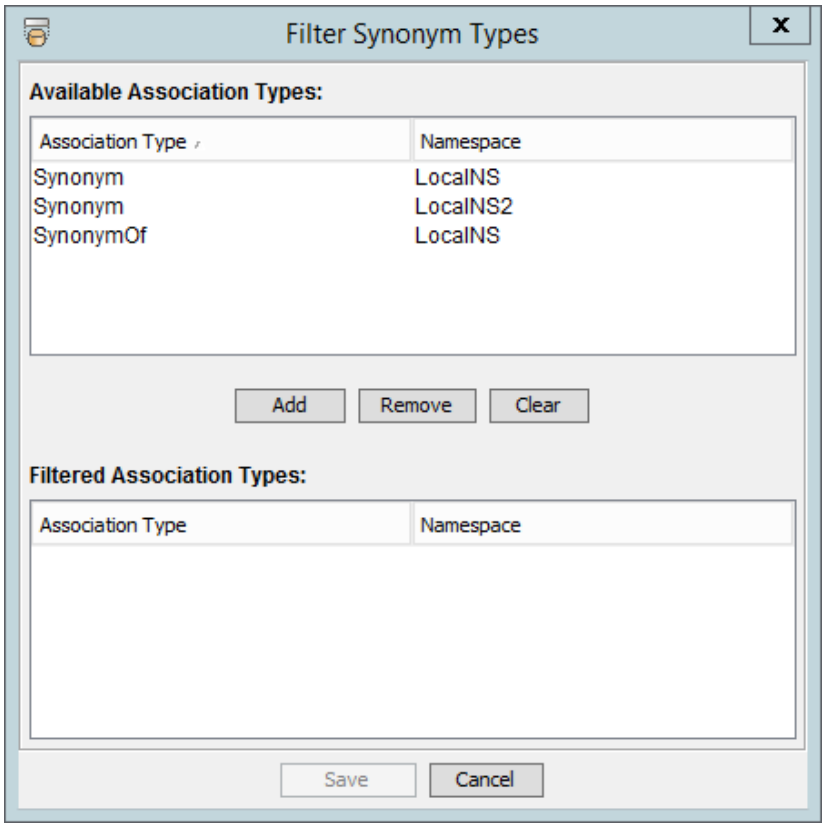
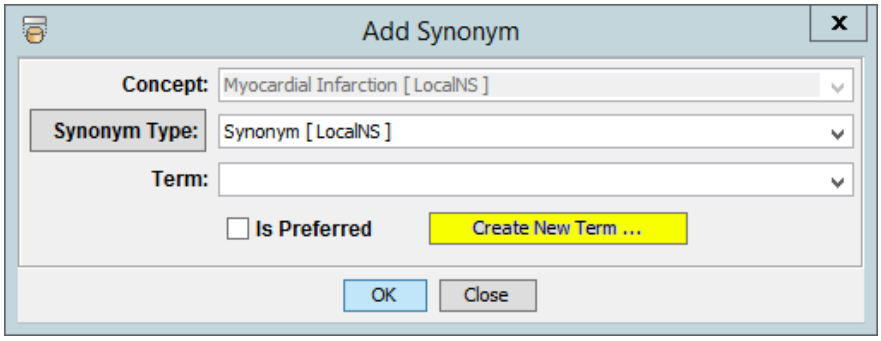


4. If you are creating a synonymous term for a concept in a subscription or local namespace, only association types from the **current local namespace** are listed (alphabetically) in the *Synonym Type* dropdown field, and only those association types that represent connections between concepts and synonymous terms (**Concept to Term Association**); select the appropriate association type. A new (synonymous) association between the concept and the term you select will be written to the local namespace where the association type was created. Refer to the *Association Types* discussions.

5. You can drag and drop a term from another window or click the *Create New Term* button to create a new synonymous term to associate to the concept.



6. The *Create New Term* windows displays. Enter the *Term Name* and select the *Namespace*. Click **OK**.

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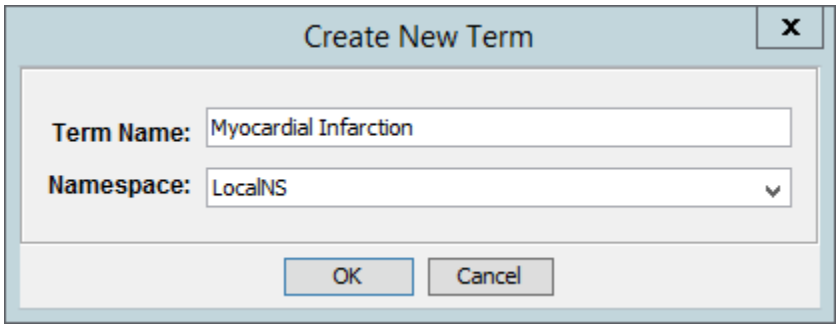
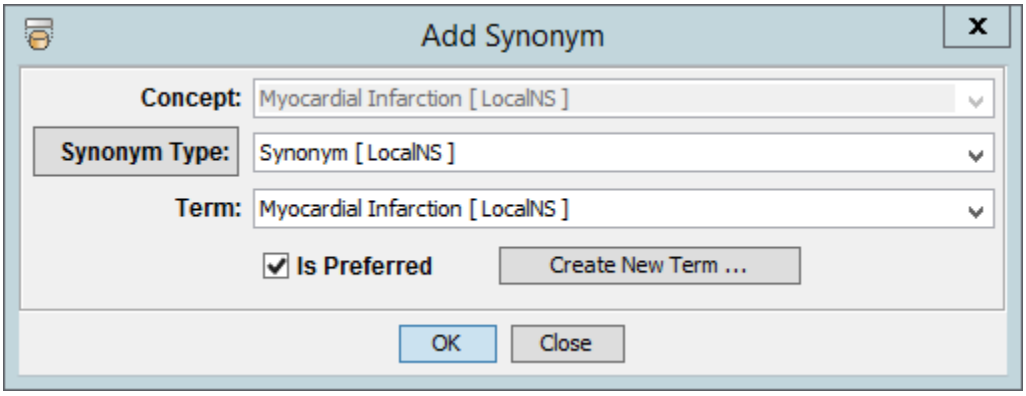
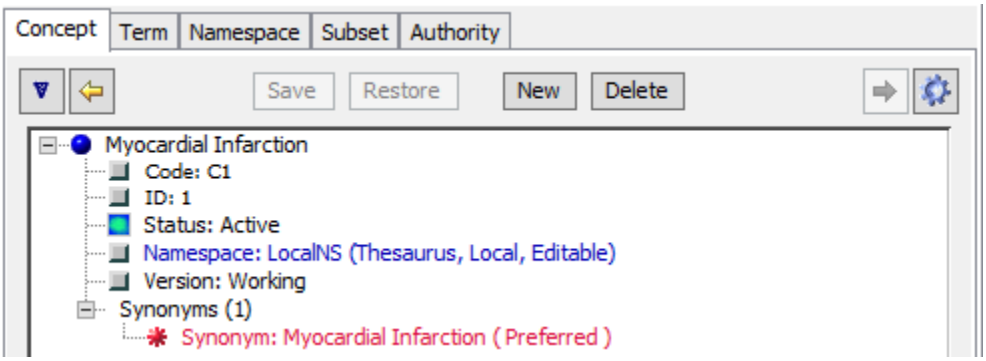


7. In the event multiple synonyms exist for a specific concept, you can designate that one of the synonyms *Is Preferred*. On the *New Synonym* window, click the *Is Preferred* field checkbox to designate this synonym as the **preferred** synonym. This synonym will be referenced as **Preferred** when you expand the **Synonyms** folder on the *Details* panel Concept tab panel.



8. Click **OK** on the *New Synonym* window to add the synonym to the current local namespace. If the synonym were added to a concept in a subscription namespace, in the *Details* panel Concept tab, the synonym displays in italics (to indicate that it is subscription content that was written to a local namespace).



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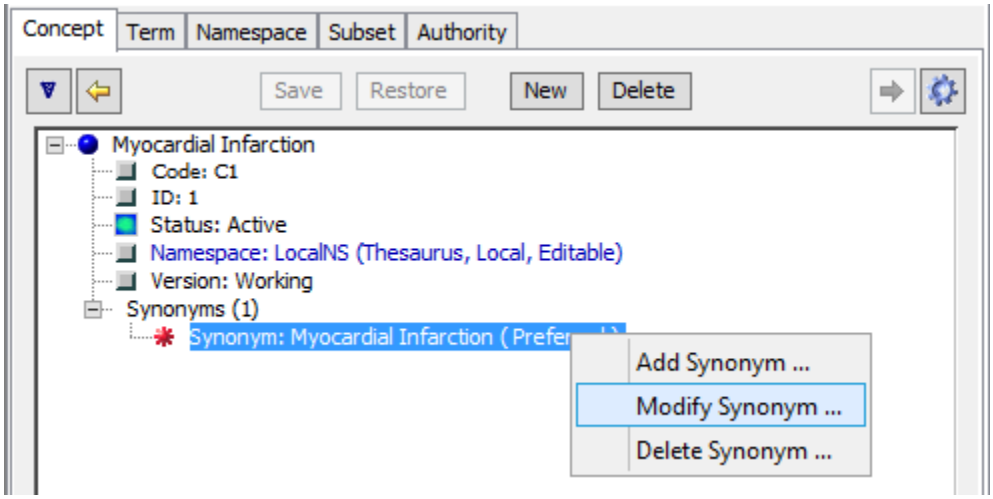
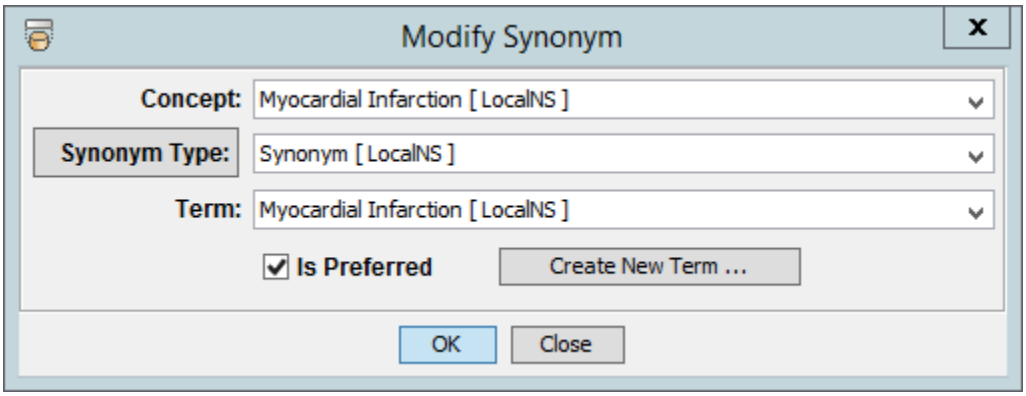
G.5.2 Edit a Synonym

Follow this procedure to modify an existing synonym for a concept. You can modify an existing synonym for a concept in a subscription namespace, but only if the association type exists in a local namespace (i.e., the synonym is content in a local namespace, and is listed in italics).

1. To edit a synonym for an existing concept, drag the concept from another displayed window or panel and drop it on the *Details* panel Concept tab. If the new concept is displayed in the *Details* panel Concept tab, right-click on the concept name and select **Modify Synonym** from the displayed options. You can also double-click on the Synonym name to open the *Modify Synonym* window.



2. The *Modify Synonym* floating window displays, referencing the concept and the synonymous term, as well as the namespace in which each resides.



3. Make the desired edits, then click **OK** to update the appropriate namespace(s).

G.5.3 Delete a Synonym

Follow this procedure to delete an existing synonym for a concept that was created as content in a local namespace.

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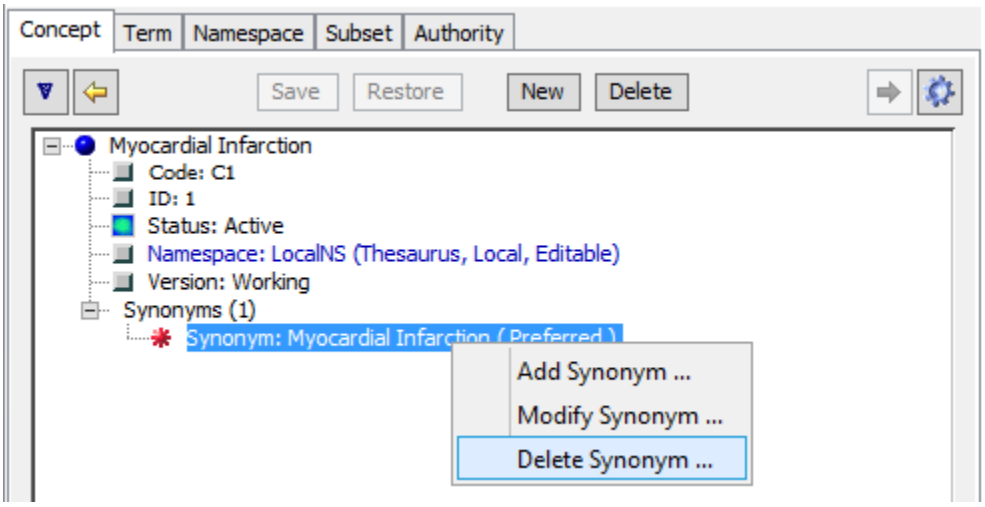
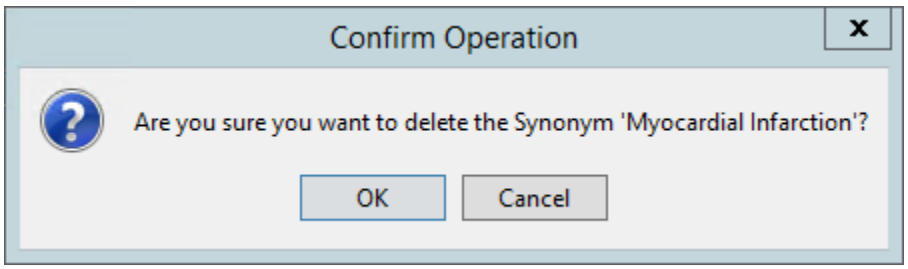
1. To delete a synonym for an existing concept, drag the concept from another displayed window or panel and drop it on the *Details* panel Concept tab. If the new concept is displayed in the *Details* panel Concept tab, right-click on the concept name. Select **Delete Synonym** from the displayed options.



2. The *Confirm Operation* floating window displays, referencing the concept and the synonymous term, as well as the namespace in which each resides.



3. Click **OK** to delete the synonym from the local namespace where it resides. Click **Cancel** to ignore the deletion and close the window.

G.6 Add a Property to a Concept or Term

Follow this procedure to create a new property (as local content in the current local namespace) for a concept or term that resides in a subscription namespace.

1. Drag the concept/term for which you want to add a property into the *Concept/Term Details* panel. Right-click on the concept/term name on the *Concept/Term Details* panel, or the Properties fodder name if it is visible, then select **Add Property** from the displayed options.

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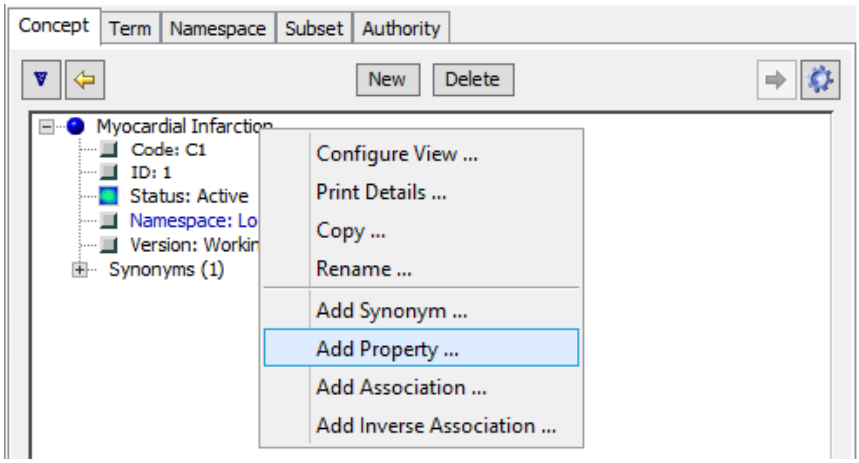
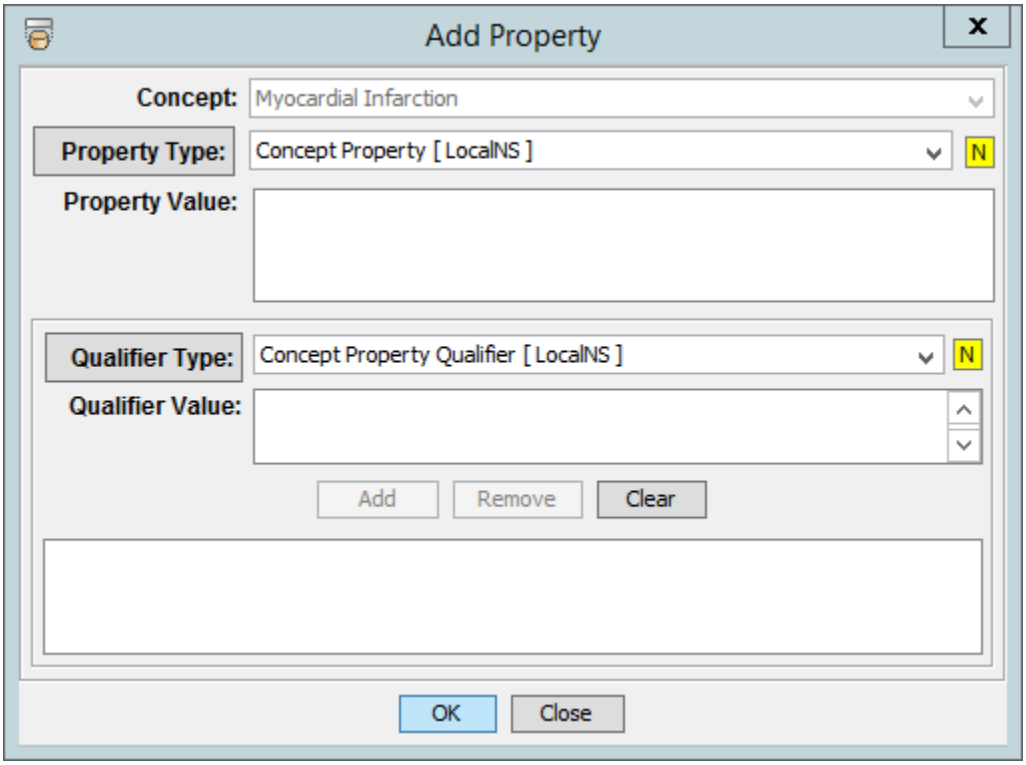


2. The *Add Property* window displays.



The concept/term from the *Details* panel displays automatically in the *Source* field.

3. A property type is a pre-established identifier that defines the property. From the *Property Type* field dropdown list, select a property definition to be assigned to the concept or term. If the *Concept/Term* is from a subscription namespace, the *Property Type* dropdown list includes only property types created in the current local namespace, listed alphabetically.

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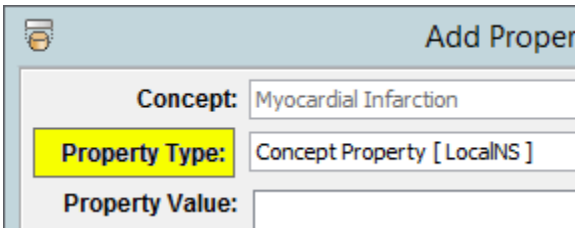
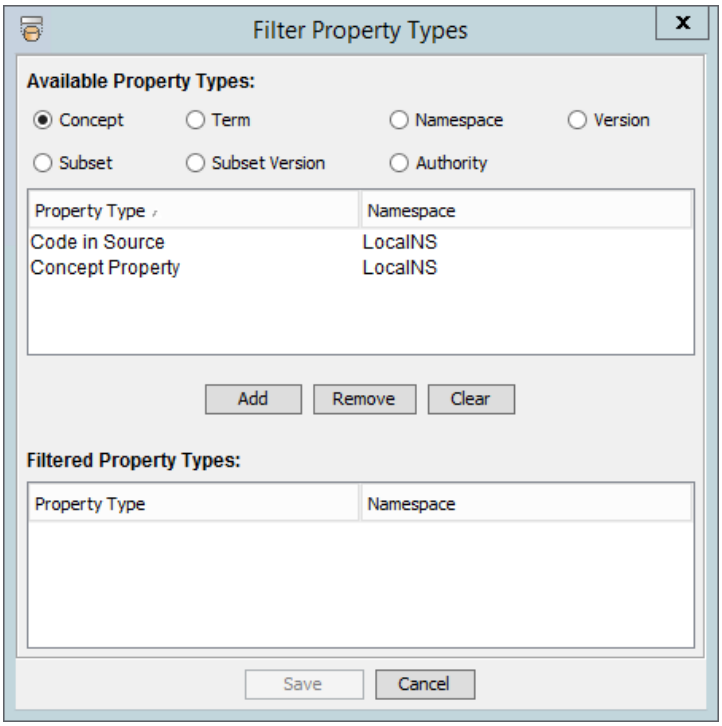
If the *Concept/Term* was created in a local namespace, the *Property Type* list includes property types created in the current local namespace, but **only** if the *Concept/Term* also was created in the current local namespace. If the concept/term was not created in the current local namespace, the *Property Type* field dropdown list will be empty.

4. You have the option of **filtering** the property types and qualifier types that are available from the *Property Type* field dropdown list by creating a pre-defined, filtered list of property types. When you attempt to select a property type from the *Property Type* field dropdown list, or select an alternate property type, only the pre-selected types will be included in the list.



5. You can Add / Remove property types from the available *Property Type* field dropdown lists. When you attempt to select a property type from the *Property Type* field dropdown list, only the pre-selected property types will be included in the list.
Click **Cancel** to exit without filtering the list.



6. For the property definition (type) assigned to this concept or term, specify the property value in the *Property Value* text area. This area accommodates the entry of large amounts of text, as well as formatted text (e.g., paragraphs, bulleted items, etc.). A single concept

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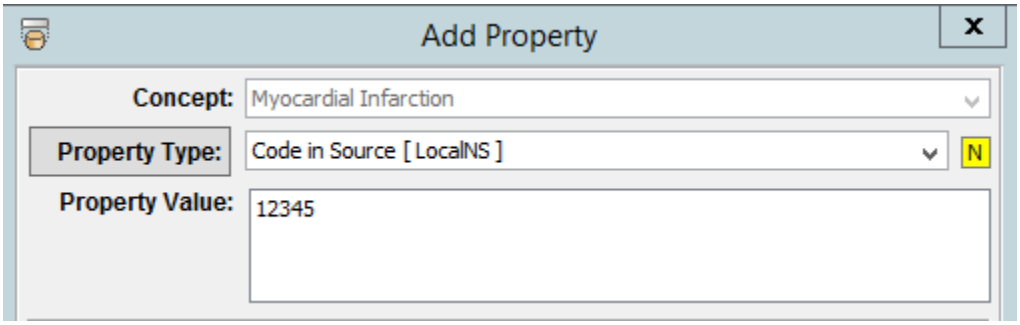
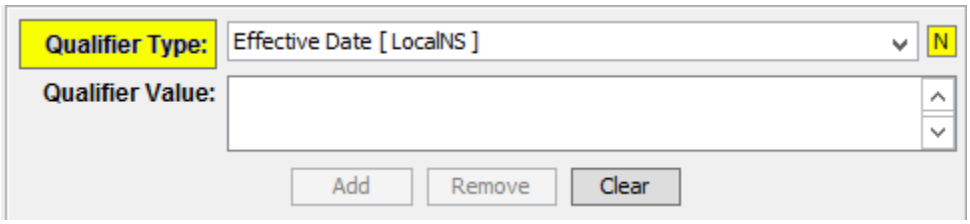
or term can have multiple occurrences of the same property type, each with a separate, unique value. All Property values may contain up to 4,000 characters and the first 255 characters are automatically indexed



7. For each property you may specify an established **qualifier type** and **value**; these provide additional detail regarding the nature of a concept or term property (e.g., **Current**). From the *Qualifier Type* field dropdown list, select the qualifier to assign to this property. The list includes only those **property** qualifier types that were created in the same local namespace where the selected property type was created.

8. You have the option of **filtering** the qualifier types that are available from the *Qualifier Type* field dropdown list by creating a pre-defined, filtered list of types. When you attempt to select a qualifier type from the *Qualifier Type* field dropdown list, or select an alternate *Qualifier* type, only the pre-selected qualifier types will be included in the list.



9. You can Add / Remove property types from the available *Property Type* field dropdown lists. When you attempt to select a property type from the *Property Type* field dropdown list, only the pre-selected property types will be included in the list.
   Click **Cancel** to exit without filtering the list.

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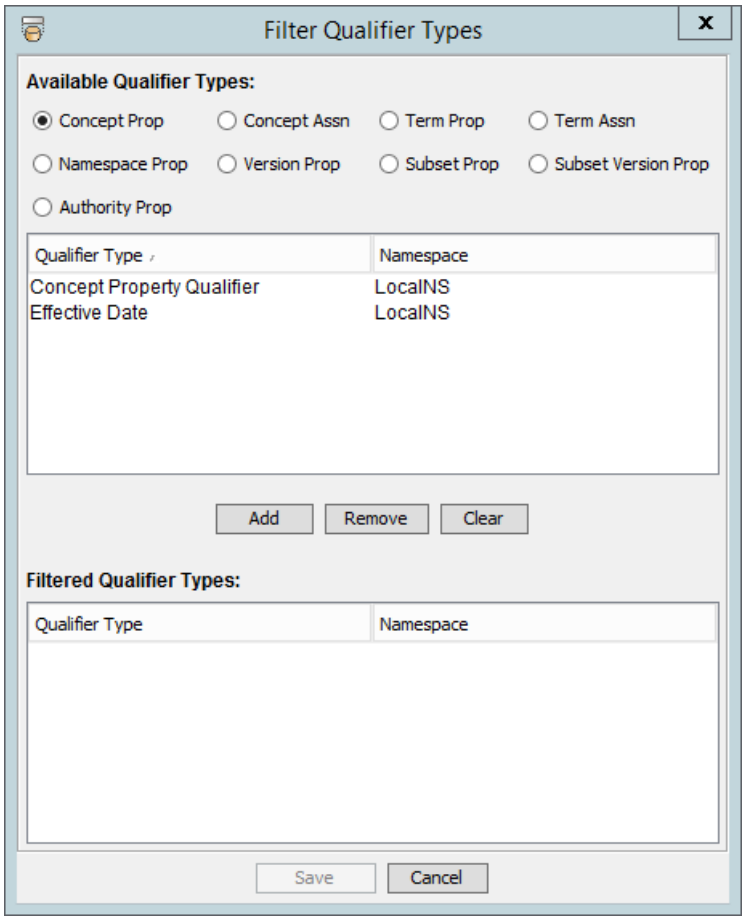
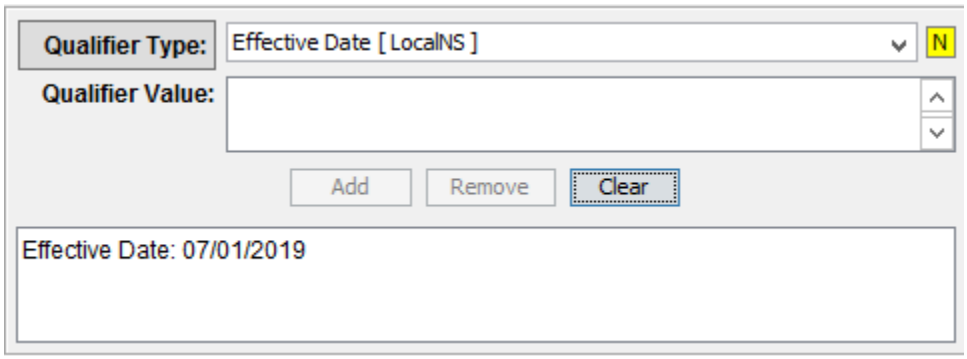


10. For the property qualifier (type) you selected for this concept or term, specify the qualifier value in the *Qualifier Value* field. For each property you can create multiple occurrences of the same qualifier type, each with a separate, unique value.

    Click **Add** after you specify the *Qualifier Type* and *Qualifier Value*; both are added to the area in the lower portion of the window. Note the illustration.



To remove an individual qualifier type/value combination from the property, highlight the appropriate line in the display area and click **Remove**. To clear all displayed qualifier

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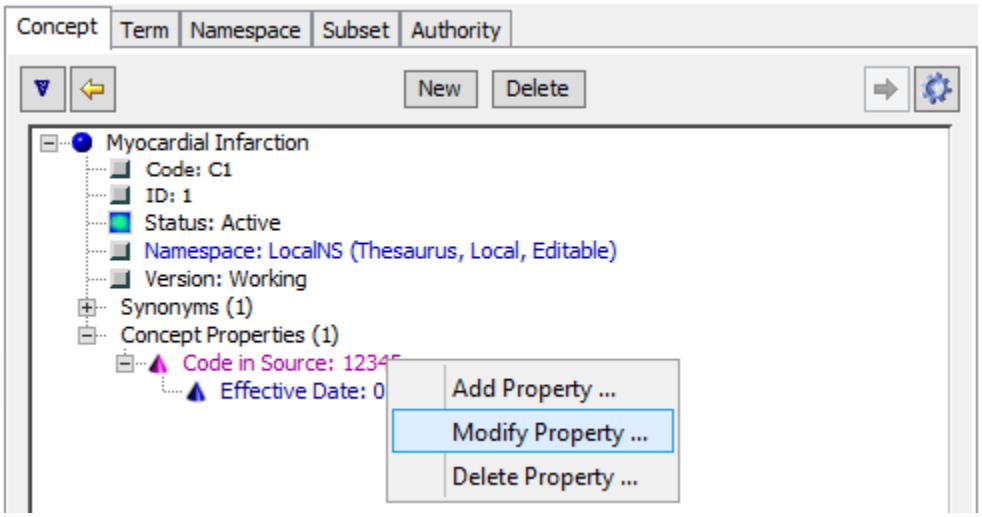
type/value combinations, click **Clear**. Click **OK** on the *Add Property* window to add the property to the current local namespace. When you expand the **Properties** folder for the concept on the *Concept/Term Details* panel, the property displays in italics (to indicate that it is subscription content that was written to a local namespace). Click **Cancel** to ignore the new property.

G.6.1 Edit a Property

Follow this procedure to view and/or edit a property that was created in a local namespace for a concept or term in a subscription namespace.

1. Drag the concept/term containing the property you want to view or edit from another panel and drop it on into the *Concept/Term Details* panel. Right-click on the property for which you want to view or edit details, then select **Modify Property** from the displayed options. You can also double-click on the property name to open the *Modify Property* window. (Properties created as local content display in italics; the **Modify Property** option is available for **these properties only**.)



2. The *Modify Property* window displays.

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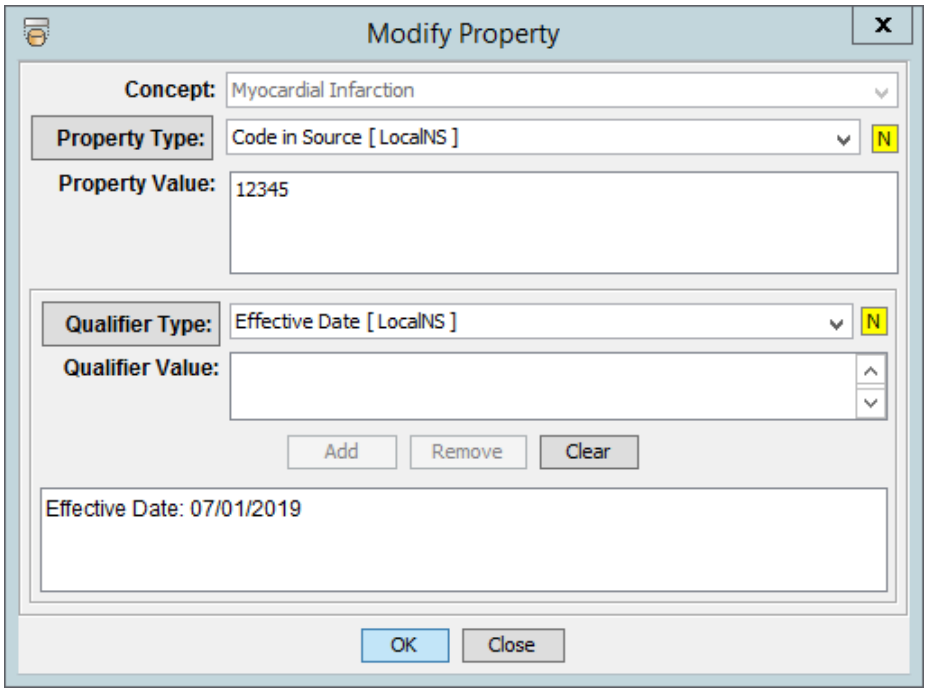

3. Make the desired edits, then click **OK** to update the appropriate namespace(s).

G.6.2 Delete a Property

Follow this procedure to delete an existing property from a concept, if the property was written to a local, writable namespace.

1. Drag the concept/term containing the property you want to delete into the *Details* panel *Concept* tab and expand the **Properties** to display existing properties for the concept/term.

2. Right-click on the property you want to delete, then select **Delete Property** from the displayed options. Note that the **Delete Property** option is not available if the displayed concept exists in a namespace that is not writable.

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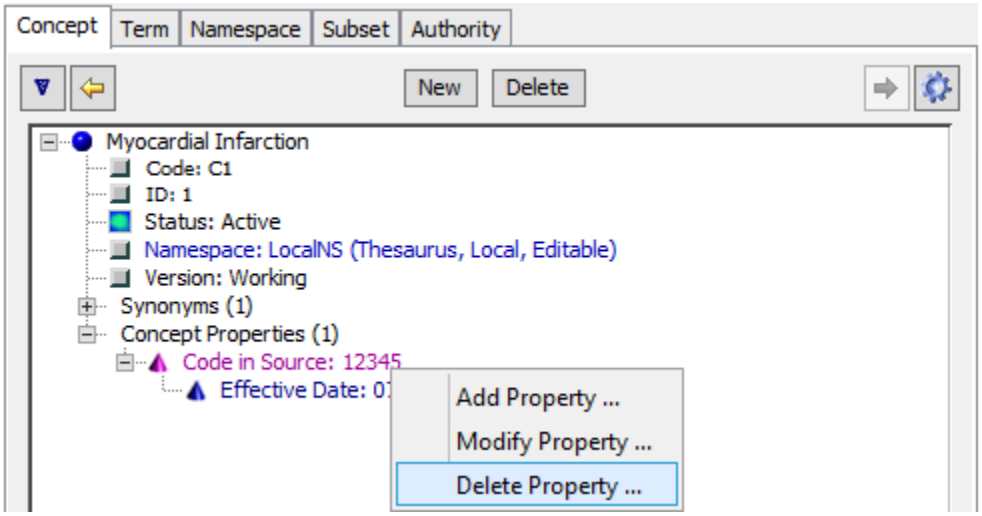
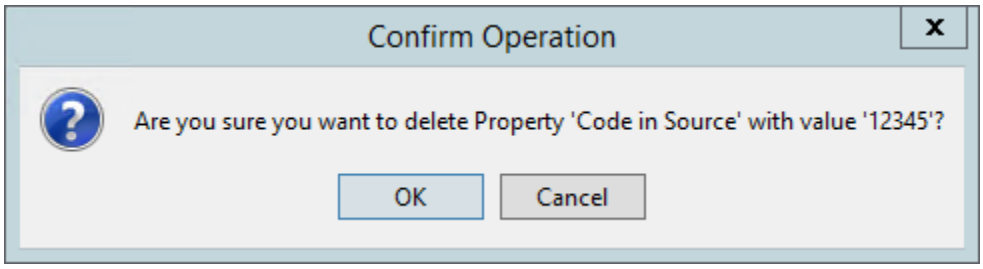


3. A delete confirmation window similar to the following displays.



4. Click **OK** to delete the concept/term property from the concept in the local namespace. Click **Cancel** to ignore the deletion

G.6.3 Use a URL as a Property Value

The DTS Editor provides special handling of a property whose value is a URL (Universal Resource Locator). If a property value begins with “http://” or “https://”, the property’s right-click menu includes an **Open URL Target** item (see below). Selecting this item opens the URL in the client’s default browser.

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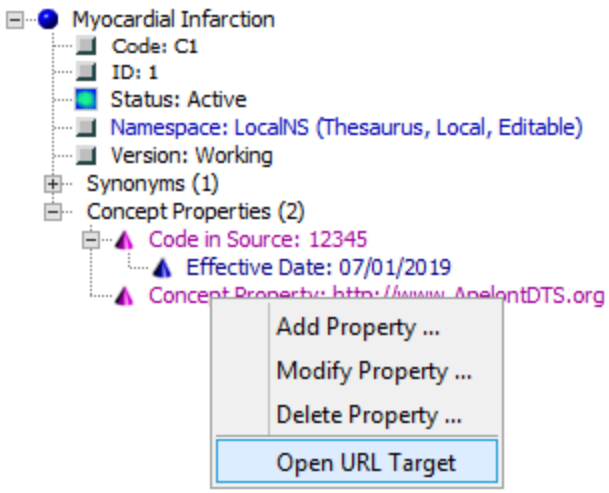


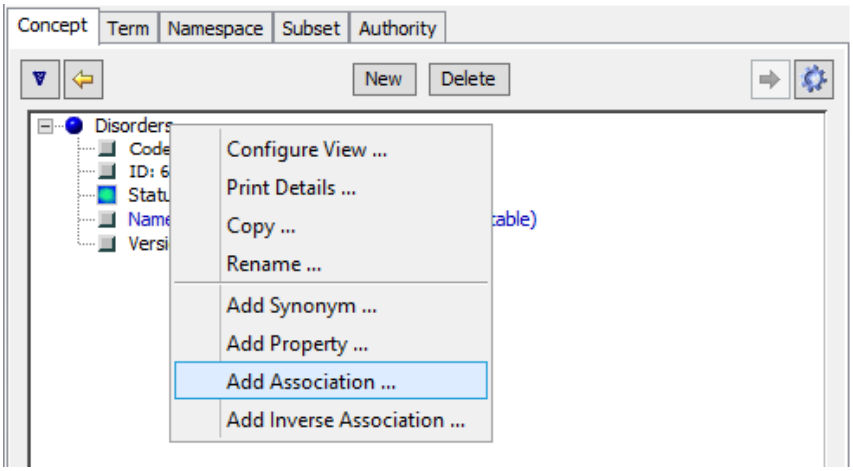
G.7 Add an Association to a Concept or Term

Use the following method to add an association (with an association type established as local content in a local namespace) between concepts or terms in a local or subscription namespace. The association can be between concepts or terms within one namespace, or across different namespaces.

G.7.1 Create an Association

Follow this procedure to add an association definition and target concept value to the new concept by right clicking on the new concept name in the *Details* panel Concept tab.

2. Either right-click on the concept/term name on the *Concept/Term Details* panel, or the *Associations* folder name if it is visible, then select **Add Association** from the displayed options. If you have two windows up, displaying concepts, you can also Ctrl+drag one concept to the other to bring up the same "Add Association" window.



3. The *Add Association* window displays.

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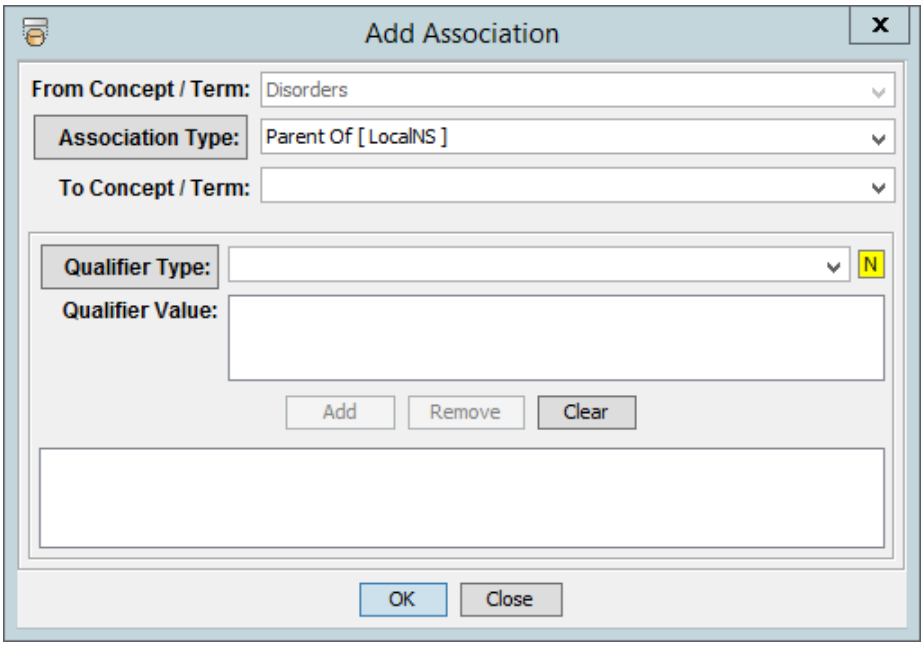
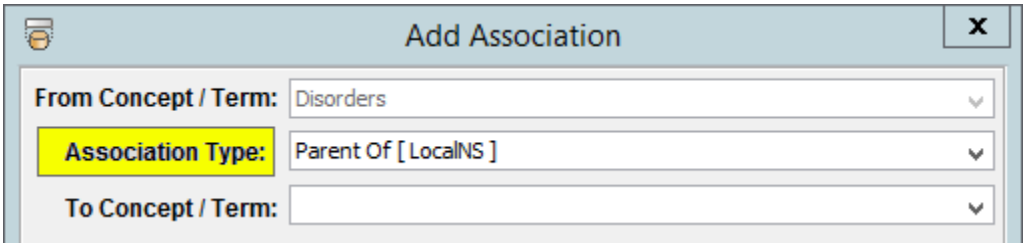


4. The **From** concept/term from the *Details* panel displays automatically in the *From Concept/Term* field, establishing the **From** portion of the **From/To** association between concepts or terms. The namespace in which the **From** concept resides displays in brackets.

5. From the *Association Type* field dropdown list, select the type of association (e.g., **Related To**, **Parent Of**) you are creating between the concepts or terms. Association types from the current local namespace are listed alphabetically. Refer to the *Association Types* discussions.

   If you click the **Association Type** button, you have the option of **filtering** the association types that are available from the *Association Type* field dropdown list by creating a pre-defined, filtered list of types.



6. You can Add / Remove associations from the *Association Type* field dropdown list. When you attempt to select an association type from the *Association Type* field dropdown list, or select an alternate association type, only the pre-selected association types will be included in the list.

   Click **Cancel** to exit without filtering the list.

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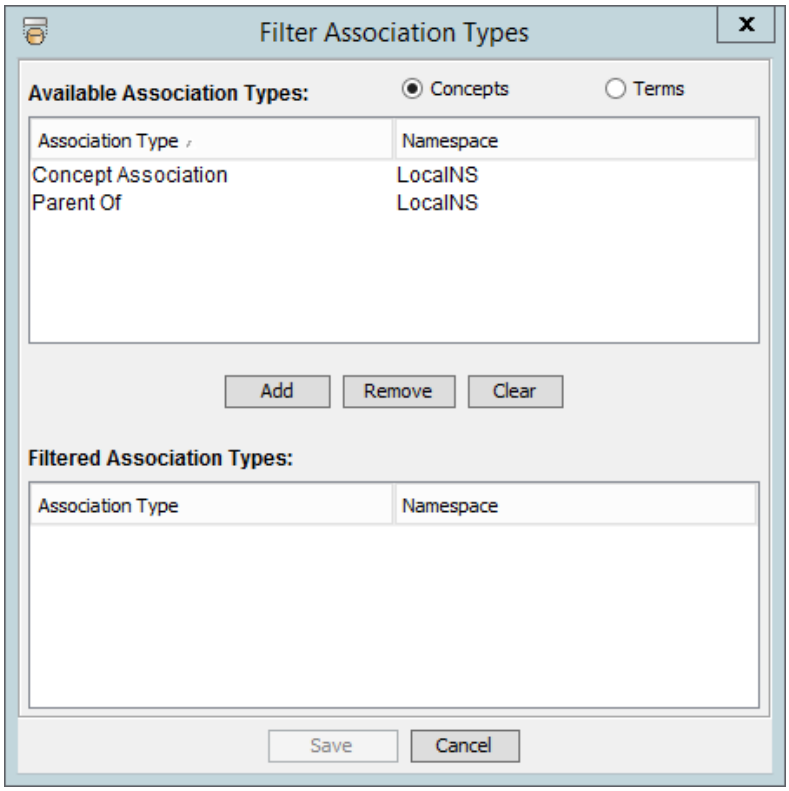
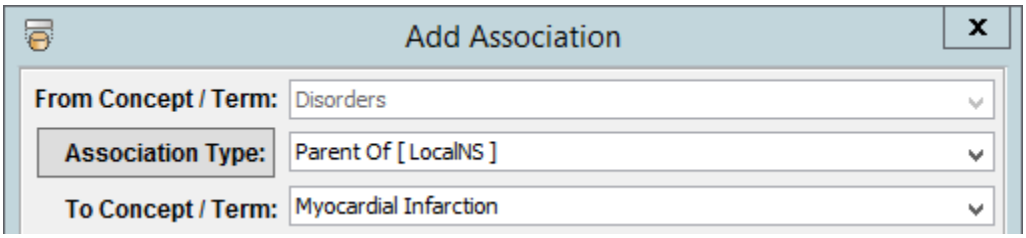


7. From another displayed panel or window, drag the **target** concept/term in the association in the *To Concept/Term* dropdown field. The namespace in which the **To** concept resides displays in brackets to the right of the field.



8. For each association you can add one or more qualifiers, each of which consists of an established qualifier type and value. Qualifiers provide additional detail regarding the nature of a concept or term association (e.g., **Usually**).

   You have the option of **filtering** the qualifier types that are available from the *Qualifier Type* field dropdown list by creating a pre-defined, filtered list of types. When you attempt to select a qualifier type from the *Qualifier Type* field dropdown list, or select an alternate *Qualifier* type, only the pre-selected qualifier types will be included in the list.

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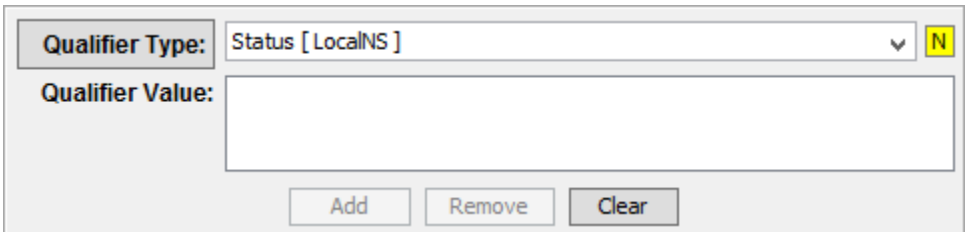
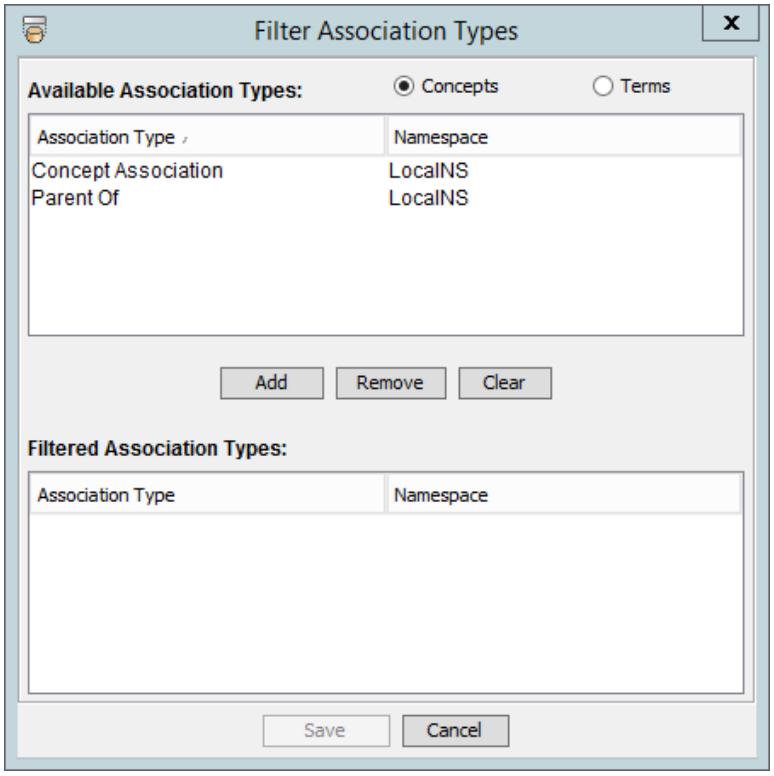


9. You can Add / Remove *Association* types from the available *Association Type* field dropdown lists. When you attempt to select an association type from the *Association Type* field dropdown list, only the pre-selected property types will be included in the list. Click **Cancel** to exit without filtering the list.



10. From the *Qualifier Type* field dropdown list, select a qualifier type to assign to this association, if available. The list includes only those **association** qualifier types that were created in the same local namespace where the selected *Association Type* was created. The namespace in which the qualifier type was created displays in brackets.

11. For the qualifier (type) you selected for this association, specify the qualifier value in the *Qualifier Value* field. For each association you can create multiple qualifiers of different types, or create occurrences of the same qualifier type, each with a separate value.

12. Click **Add** after you specify the *Qualifier Type* and *Qualifier Value*; both are added to the display area in the lower portion of the window (see the illustration).

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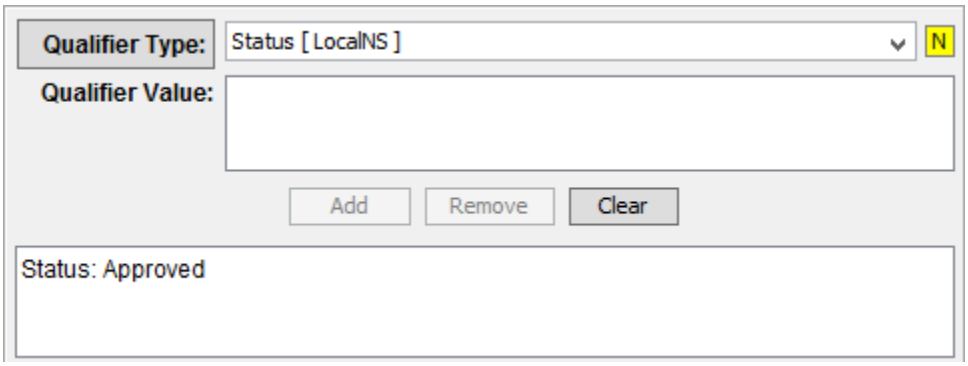


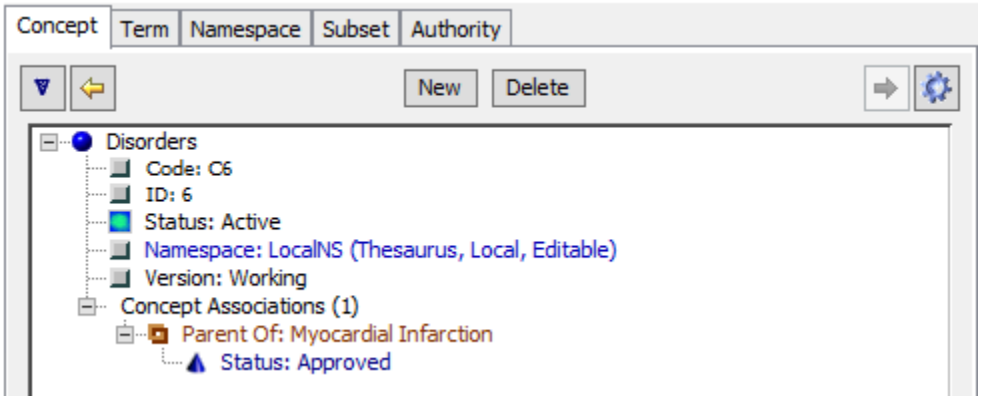
To remove an individual qualifier type/value combination from the association, highlight the appropriate line in the display area and click **Remove**. To clear all displayed qualifier type/value combinations, click **Clear**.

13. Click **OK** on the *Add Association* window to add the association.

G.7.2 View and Edit an Existing Association

Follow this procedure to view or edit an association definition and target concept value for a concept by right clicking on the concept name in the *Concept/Term Details* panel.

1. Drag the **from** concept/term in the from/to relationship you want to view into the *Details* panel *Concept* tab and expand the **Associations** to display existing associations for the concept.



2. Right-click on the association for which you want to view or edit details, then select **Modify Association** from the displayed options. The *Modify Association* window displays. You can also double-click on the desired association name to open the *Modify Association* window.

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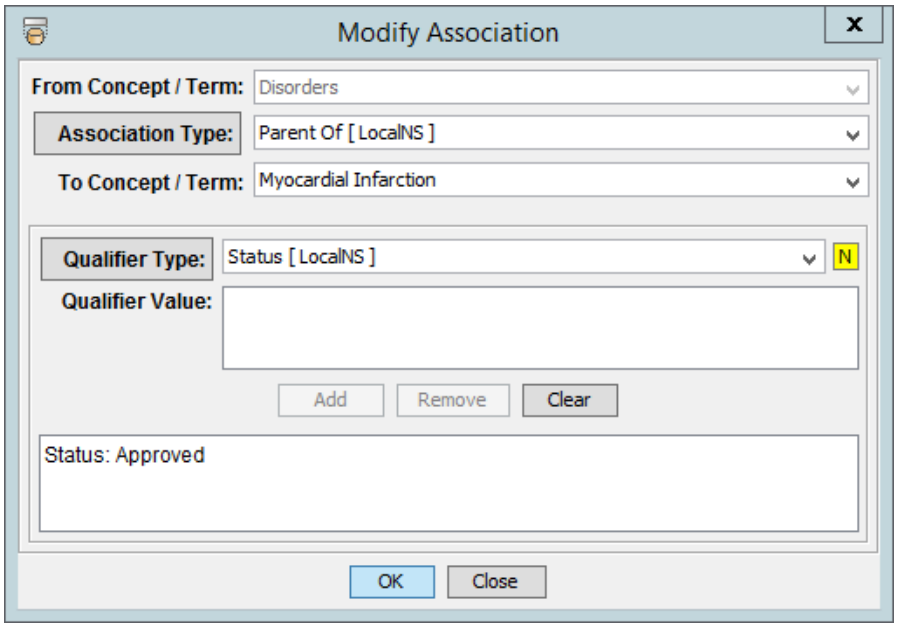

3. Make the desired edits, then click **OK** to update the appropriate namespace(s).

G.7.3 Delete an Association

Follow this procedure to delete an association that exists between concepts or terms within a namespace, or across namespaces. The association type for the association you want to delete must exist in a local namespace in order for you to delete the association.

1. Drag the **from** concept/term in the from/to relationship you want to view into the *Details* panel Concept tab and expand the **Associations** to display existing associations for the concept.
2. Right-click on the association you want to delete (in a subscription namespace, the association should be in italics) then select **Delete Association** from the displayed options.

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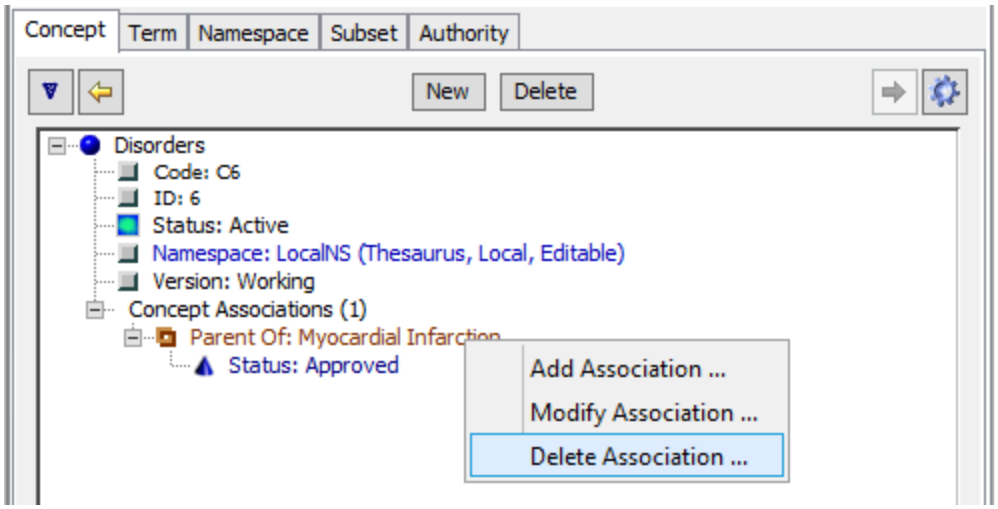
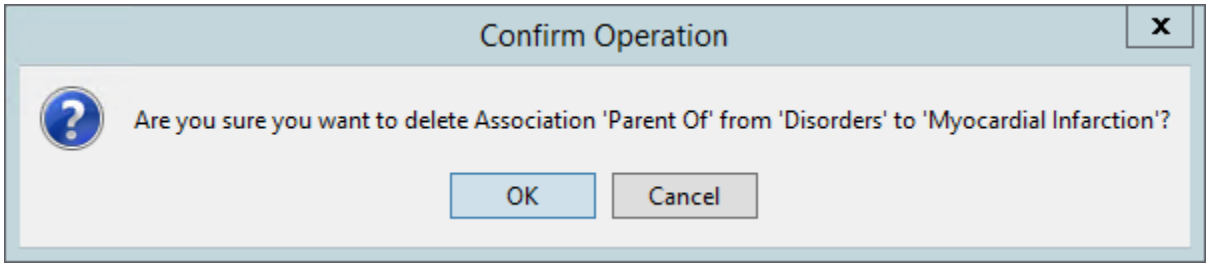


3. A delete confirmation window displays.



4. Click **OK** to delete the concept/term association from the local namespace to which it was written originally. Click **Cancel** to ignore the deletion.

G.8 View Term Details

The Term tab (see example below) shows the name and attributes associated with a Term. Terms can be viewed by dragging a term node from other panels such as the *Search* panel or from a **Synonym** node from the *Details* Concept tab panel and dropping it into the *Details* panel. Creation and edit actions for Terms are very similar to those for Concepts. See the *View Concepts Details* section above for information on these options.

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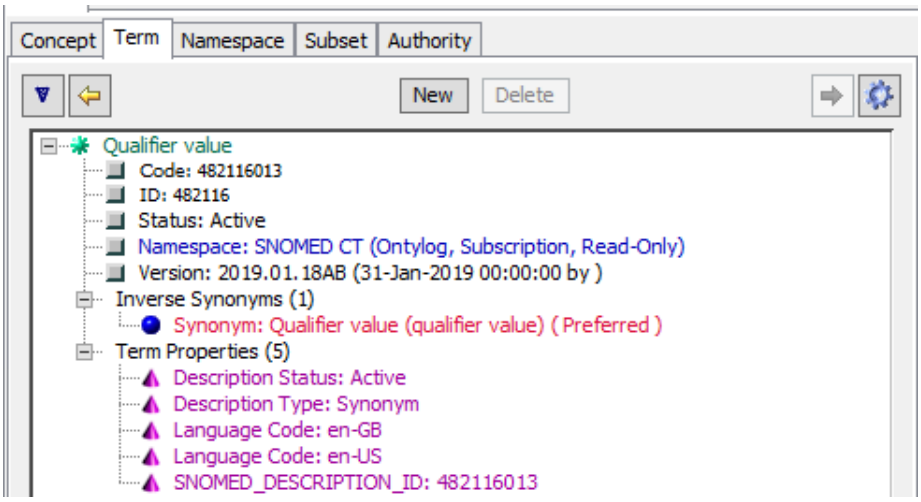

G.9 View Namespace Details

The Namespace tab (see example below) shows the name and attributes associated with a Namespace. Namespaces can be viewed by dragging a namespace node from other panels such as the *Tree* panel or *Concept Walker* panel dropping it into the *Details* panel. **Click to Edit** also supports automatic namespace loading from the *Tree* panel. Right click on the namespace name to select from the **Configure View and Print Details** menu options. For Subscription Namespaces, the content license can be viewed at any time via the Namespace tab. Right-click on the License node and select the **Show License** menu option. If the namespace is writable, the **Rename** and **Add Property** options are available from the namespace name popup, and the **Read-Only/Read/Write** and **Authority** nodes are editable. **Namespace** and **Version Properties** can also be added for writable namespaces. See the *View Concepts Details* section above for information on these options.

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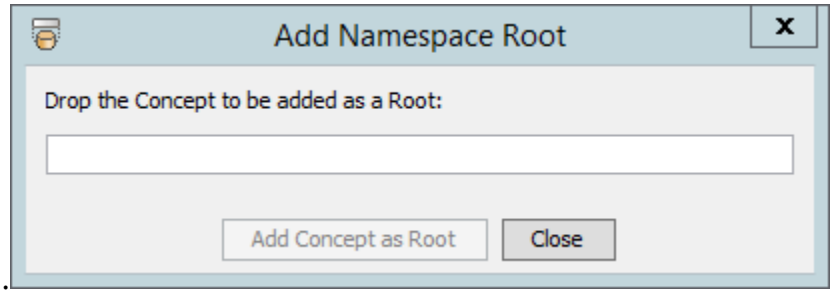
One unique feature of the *Namespace* tab (also available in the *Namespace Editor* panel) is the ability to add root concepts to a Thesaurus namespace. A root is a concept that has no parents and appears at the "top" of the namespace hierarchy in the *Tree* and *Concept Walker* panels. Previous to DTS V4.0, namespace roots were identified by the presence of specific Term attributes. While this previous specification process is still supported, the new method is highly recommended as it does not require the creation of separate attributes. To create a root, first be sure that the namespace has a concept association type named "Parent Of". This association type **must be present** in order to create a root. Then, right click on the **Roots** node (see example above) for the desired namespace in the *Details* Namespace tab panel (or the *Namespace Editor*) and select **Add Root**. Note that roots are versioned (are under a **Version** node) and only those in the Working version of a namespace are editable. The *Add Namespace Root* panel is shown.



Drop the desired root concept (from any other Editor panel such as the *Search* panel) into the panel and click **Add Concept as Root**.

A root can be removed by right clicking on the root's node and selecting Delete Root. A confirmation dialog is shown.

G.10 View Subset Details

The Subset tab (see example below) shows the name and attributes associated with a Subset. Subsets can be viewed by dragging a subset node from the *Subset Editor* panel and dropping it into the *Details* panel. Right click on the subset name to select from the **Configure View**, **Print Details, Rename** and **Add Property** menu options. Properties can be added to the Subset itself or to Subset Versions. See the *View Concepts Details* section above for information on these options.

This panel is replicated in the standalone *Subset Editor* panel. For information on creating and modifying the subset expression, see the *Subset Editor* section below.

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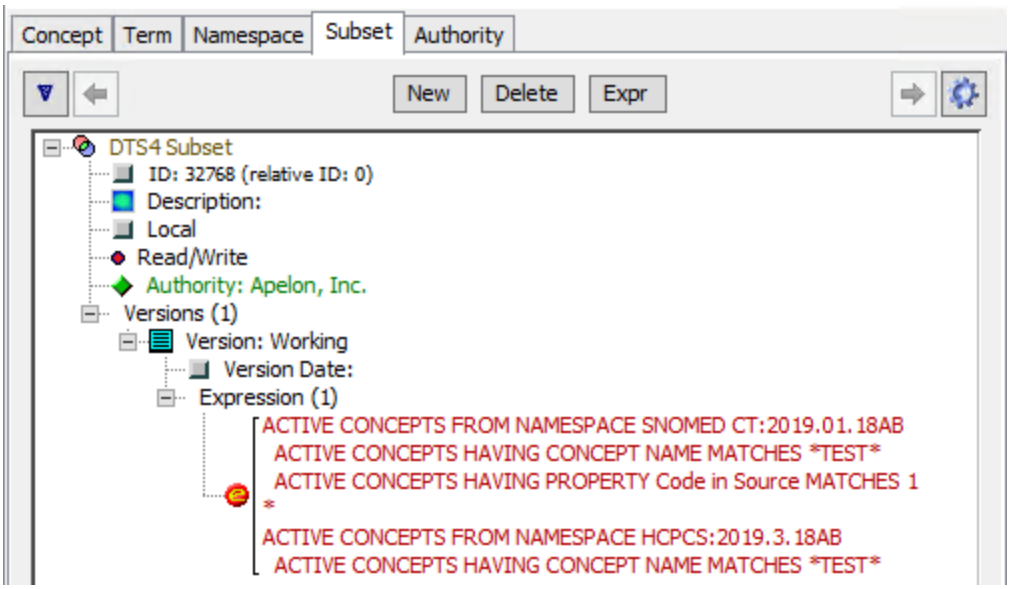
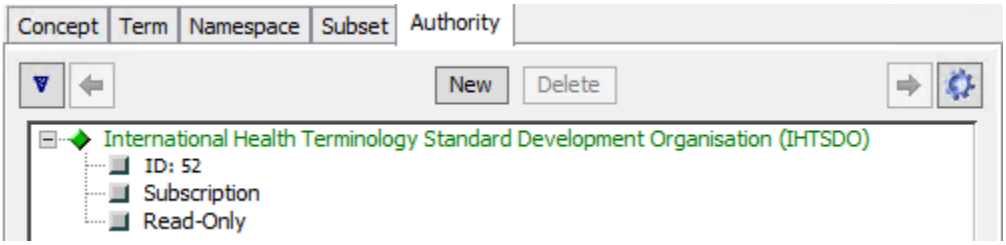


G.11 View Authority Details

The Authority tab (see example below) shows the description and attributes associated with an Authority. Authorities can be viewed by dragging an authority node from the *Namespace Editor* Panel or *Details* Namespace tab panel and dropping it into the *Details* panel. Right click on the authority description to select from the **Configure View**, **Print Details** and **Add Property** menu options. See the *View Concepts Details* section above for information on these options.



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H. Subset Editor

The DTS Subset Editor allows you to create and maintain custom **subsets** of concepts in DTS namespaces. The Subset Editor is available from the *DTS Editor* Tools menu or the toolbar.

Click **Subset Editor** in the **Tools** menu, or the **Open Subset Editor** icon in the *DTS Editor Main* window toolbar. The *Subset Editor* floating window displays.

A **subset** is an arbitrary collection of concepts. A subset may represent concepts that share a specific set of attributes, have a specific status, or simply are commonly used in a well-defined context. A subset may include only a few concepts or many concepts. The term **value-set** is an alternate name for subset. The concepts in a subset may be derived from one or more than one namespace, or they can be defined by their participation in other subsets. In a subset of an Ontylog Extension namespace, for example, subset concepts can include those from both the local (i.e., extension) namespace and the linked Ontylog subscription namespace.
A very common use case for a subset is to restrict concept searches to a specific clinical domain or context. You also may create a subset for **export** to external applications (e.g., for import and use in **spreadsheets** or **pick lists**, or in an underlying terminology database for an EMR system).
The following discussion provides an introduction to Subset Editor and Subset Expression Editor functionalities.

H.1 Subset Editor Panel

To create, edit or delete a subset, you must open the Subset Editor panel. Here, you can search for and select existing subsets. You then can view and, if permitted, edit, the contents of the selected subset, create new subsets, and select subsets for deletion. The configuration menu now includes History ToolTip items. If selected, the Subset Created/Modified dates and associated username are displayed in ToolTips.

H.1.1 Search For and View Subsets Using *Subset List* Window

Using the *Subset Editor* panel, you can search for all existing subsets, or for subsets that incorporate a selected namespace or selected subset. You also can enter criteria to search for subsets whose names match a specified text string.
The results of your search will be shown in the *Subset List* panel. The name of each subset is shown, along with its *Size* (number of concepts), its *Locality* (Local or Subscription), and whether the subset is *Current* (has recently been built). Note that the subset *Size* reflects the concept count **at the time of the last subset Build**. When the subset expression (see below) is changed (and saved), the subset will no longer be marked as *Current*. The *Size*, however, will not be updated until the subset is rebuilt.
To search for subsets, select one of the **Filter By** options, complete any associated field, and press **Search**:

All	All Subsets will be shown in the list
Name	Subsets whose names match the pattern in the entry field will be displayed. Simple wildcards, e.g., “Subset*”, are supported.

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Namespace	All subsets that include Namespace Filters naming the selected namespace will be displayed.
Subset	All subsets that include Subset Filters naming the selected subset will be displayed.
Property	All subsets that include Property Filters naming the selected Property will be displayed.
Version Property	All subsets that include Version Property Filters naming the selected Version Property will be displayed.

The table displaying the Subset Editor parameters may be also be exported. The export respects any filters currently in use by the Subset Editor. To export the contents displayed in the upper table view, click the **Export** button. Select **Clipboard** to copy the contents to your clipboard in order to transfer the data to other desktop applications. Select **File** to export the data as a locally saved .csv file.

Click on any line in the *Subset List* to fill the *Subset Details* panel. From this panel, you can view all the details of the subset, including the subset expression, modify subset attributes including the expression (if permitted), or delete the subset.

Note: Subset export can be performed by the Export Module and/or Terminology Query Language (TQL) plug-ins.

H.1.2 Create a Subset

To create a Subset using the *Subset Editor* panel, click on the **New** button.

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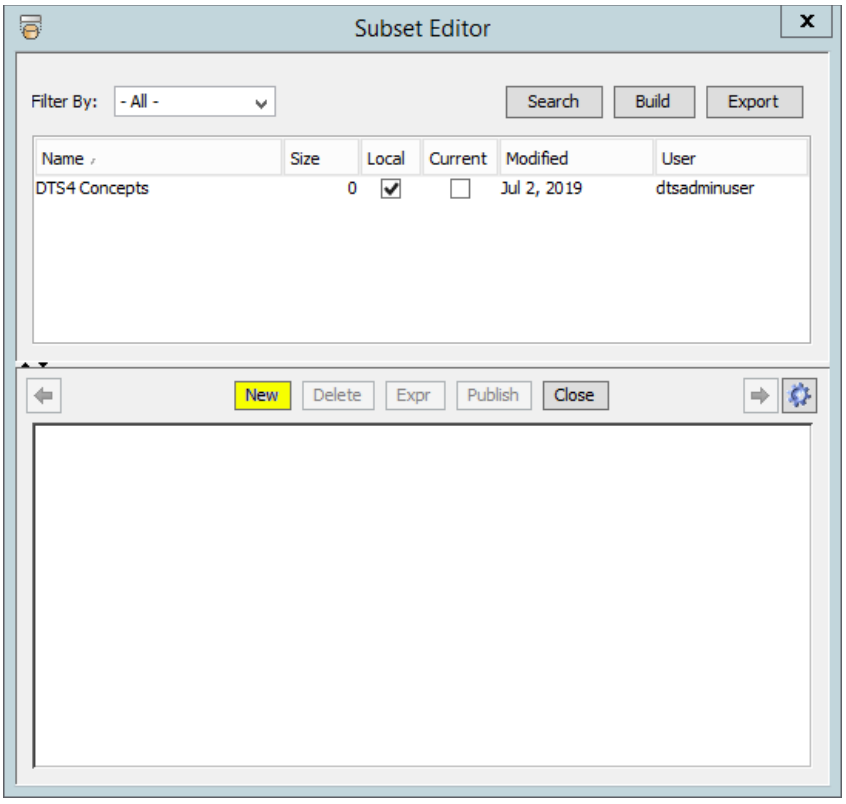
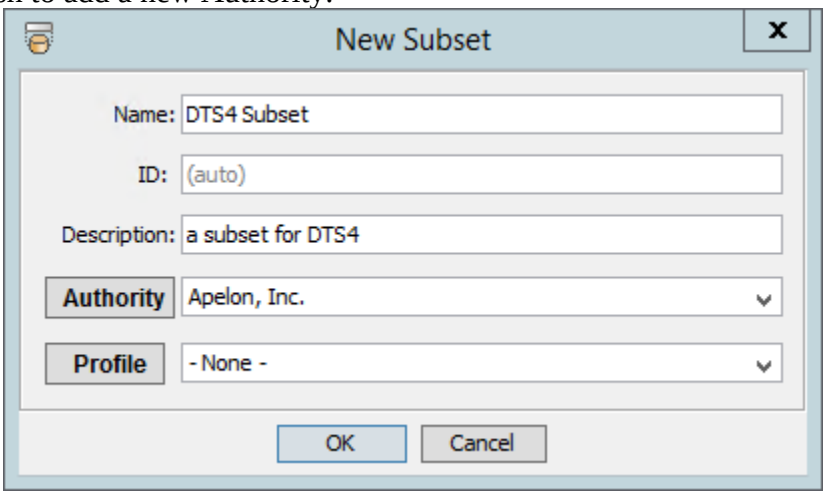


This will bring up the New Subset area where you can enter the name, ID, description, Authority and Profile for your subset. Clicking the **Authority** button will open an instance of the *Authority Editor* if you wish to add a new Authority.



Clicking on the **Profile** field lets you specify whether you want the Subset initialized with a pre-defined set of Subset Attribute Types. These types are defined in a subset Profile object. If no Profile is desired, just leave the selection to **- None -**; otherwise, select a Profile name from the dropdown. If you wish to add a new Profile (or review the details of any Profile), click the **Profile** button**.**

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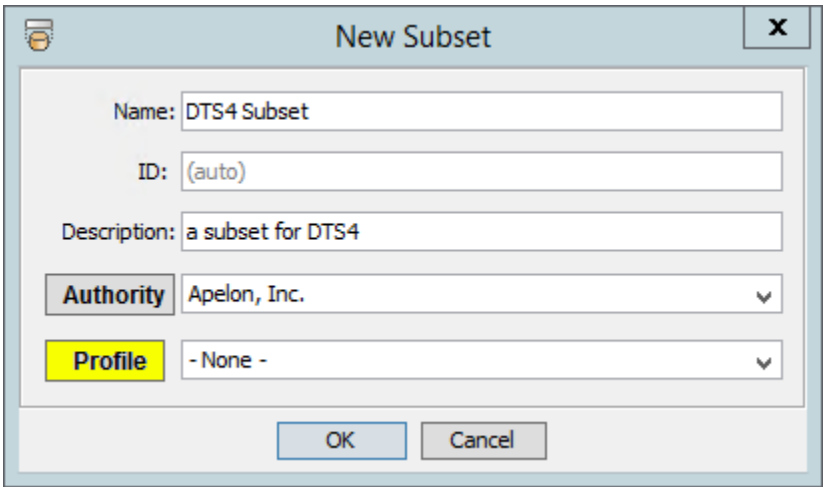

Subset Profiles are very similar to Namespace Profiles; in the *Subset Profile Editor* defining attribute types are simply limited to those appropriate to subsets rather than namespaces. See the **Namespace Profile View and Maintenance** section above for complete information on creating and managing profiles.

H.1.3 Publish a Subset

To publish a Subset using the *Subset Editor* panel, select the desired Subset then click on the **Publish** button.

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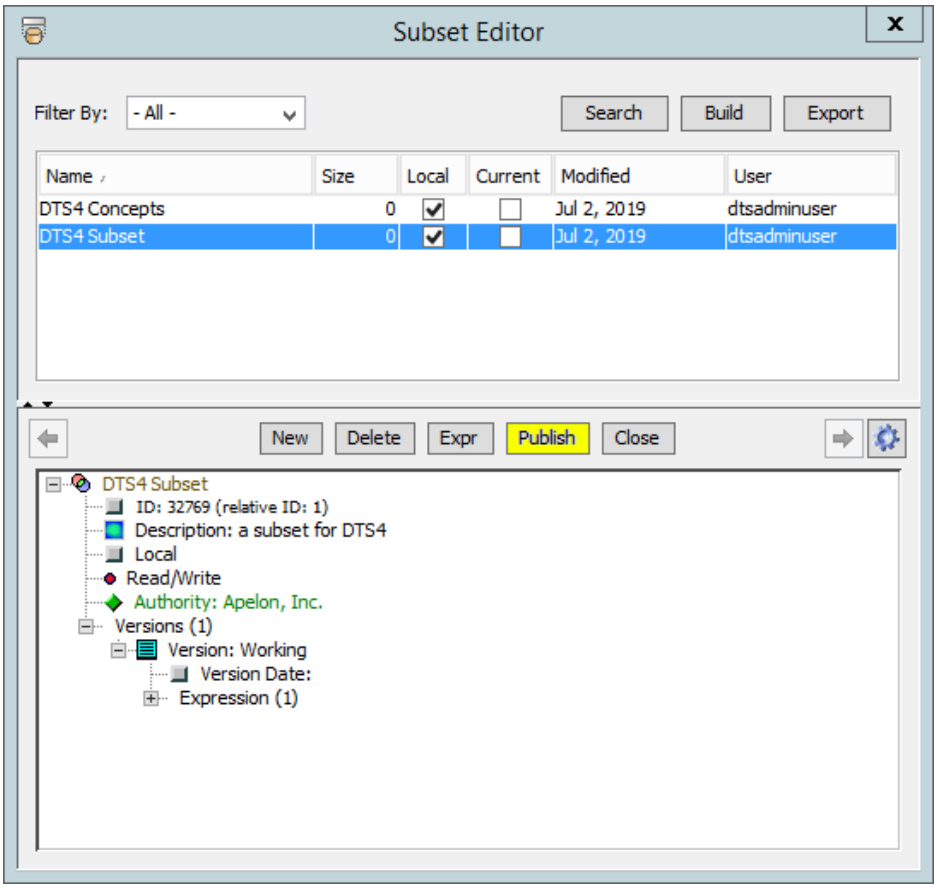
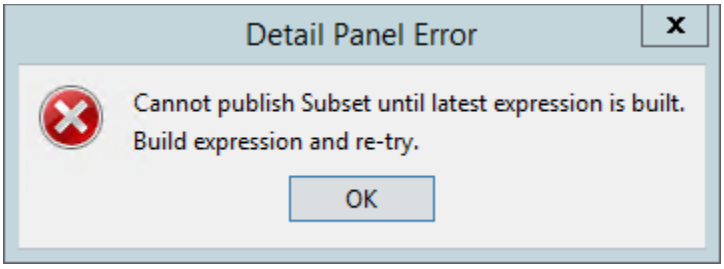


In order to publish your subset, the subset must have been built with the current subset expression. If you have not built your subset expression before publishing, an error message will remind you to do so.



For more information on subset expressions, see Save to an Existing Subset Expression and Build a Subset Concept Hierarchy.

Once you have built the subset expression, you are ready to publish! When you click on the **Publish** button, the *Publish Version* window will pop up which allows you to give the subset version a name.

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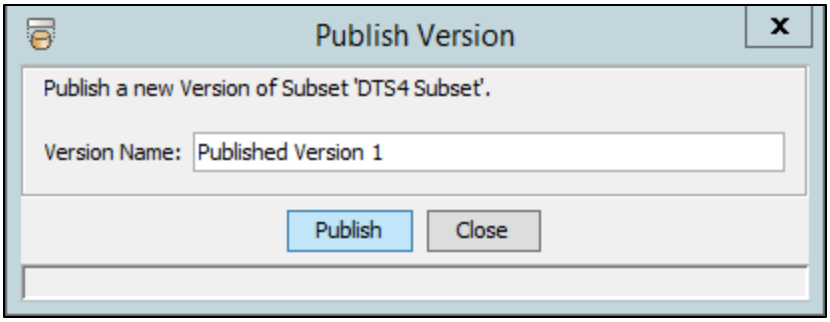
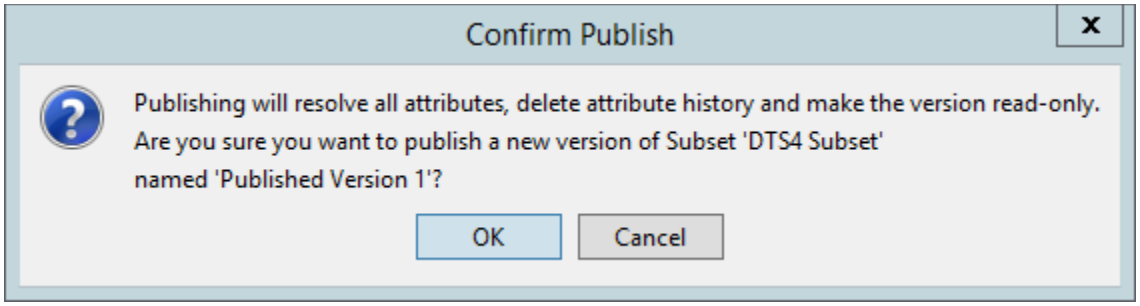
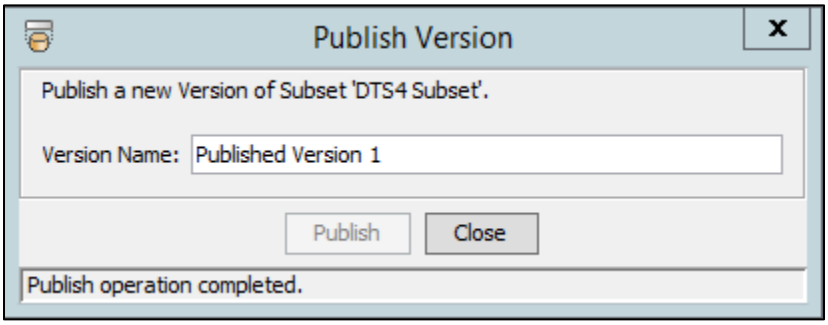


After you click the Publish button, accepting the version name you have entered, a confirmation window will pop up. This pop up notifies you that once you publish the version, it will become read-only; you will only be able to make changes to the new working version of the subset.



By confirming this, the subset version will be created.



When you return to the *Subset Editor* panel, subset version information will be viewable. Along with subset version name and the published date, you also have the option to expand the **Expression.**

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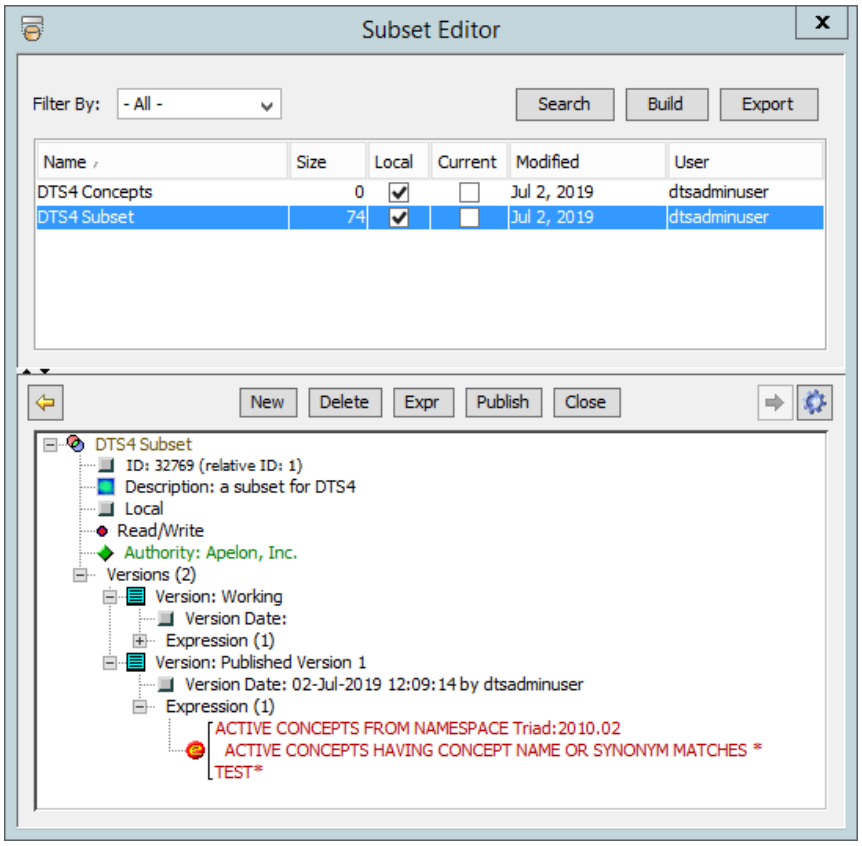

H.1.4 Delete a Subset

Follow this procedure to delete an existing subset.

1. When the results of your subset search display in the **Subsets** list, click the subset you want to delete. The option buttons (**New**, **Delete**, **Expr**, **Publish**, and **Close**) become enabled as appropriate for the Permissions in your User Profile.

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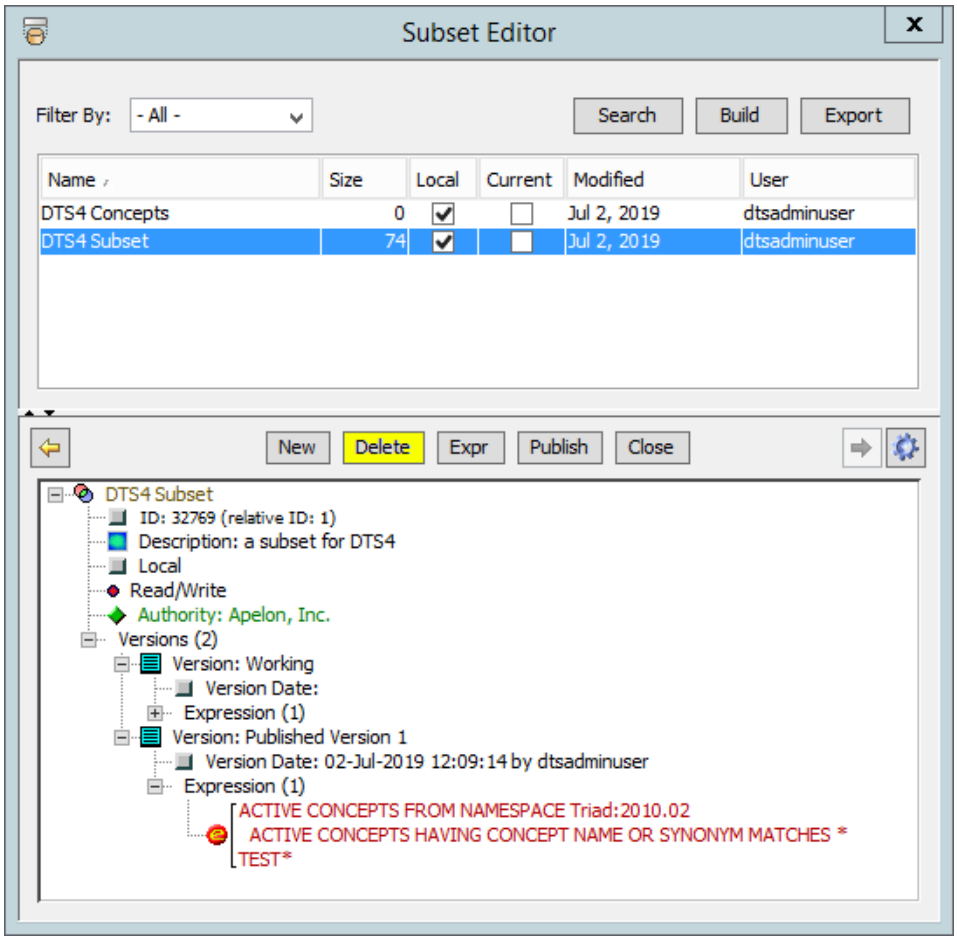
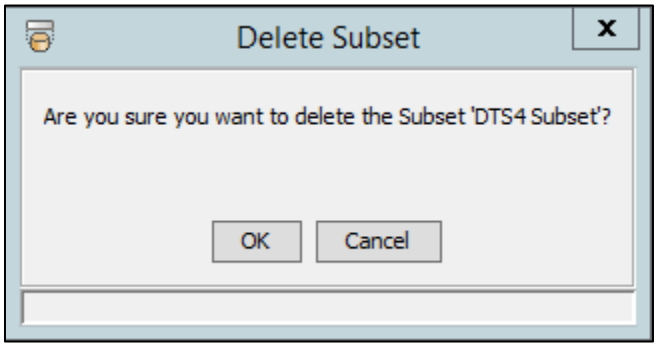


2. Click **Delete**. The *Delete Subset* confirmation window displays.



3. Click **OK** to confirm deletion of the subset. Click **Cancel** to ignore the deletion. The **Status Bar** indicates deletion progress, and when deletion is completed.

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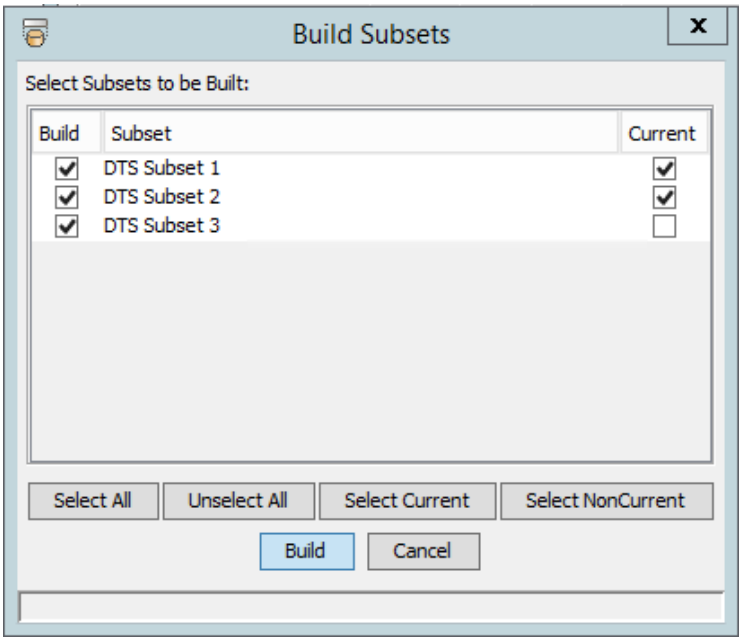
H.1.5 Building Subsets

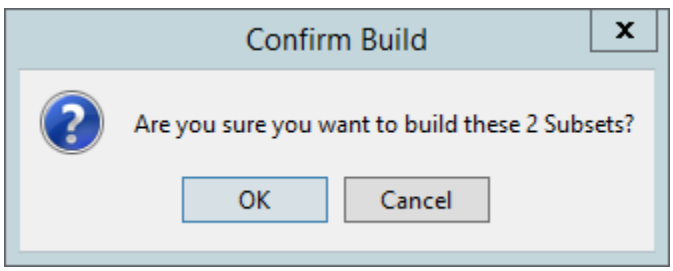
To build Subsets using the *Subset Editor* panel, click on the **Build** button. This will open the *Build Subsets* panel.



To select subsets to build, click in the **Build** column to the left of the Subset Name. Subsets can also be selected or unselected in batch using the following buttons:

Select All	All Subsets in the list will be selected.
Unselect All	All Subsets in the list will be unselected.
Select Current	All Current Subsets in the list will be selected. Current Subsets are Subsets that have not had any modifications since it was last built.
Select NonCurrent	All NonCurrent Subsets in the list will be selected. NonCurrent Subsets are Subsets that have been modified since it was last built.

Once the desired Subsets have been selected, click on the **Build** button. A popup will appear asking to confirm the number of Subsets being built. Click **OK** to continue and build all selected Subsets. Click **Cancel** to return to the Build Subsets Panel without building any subsets.



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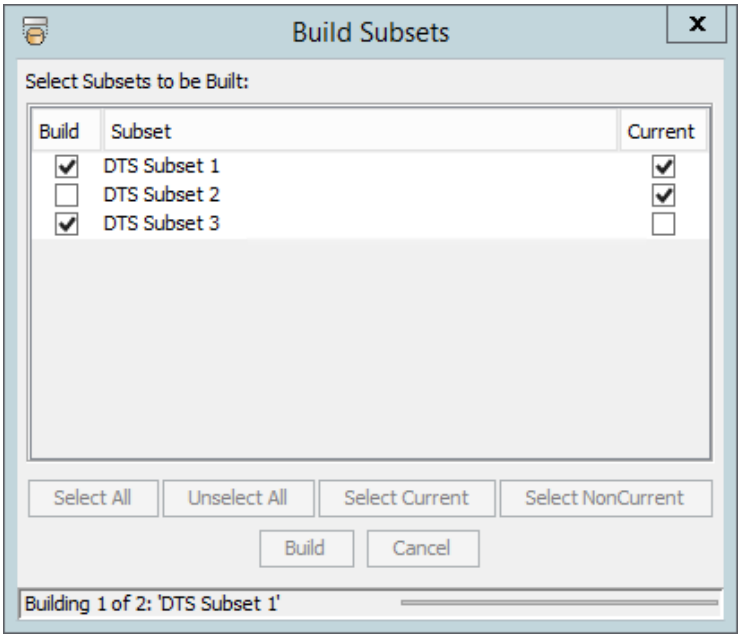
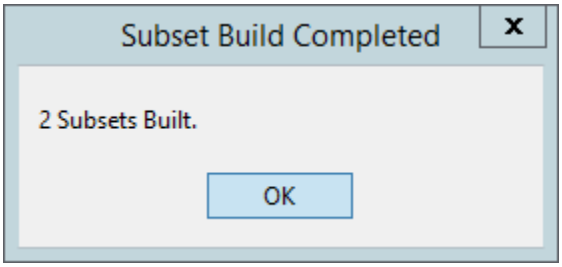
After selecting Build, a status bar will indicate the progress.



A popup will appear when all subsets have been built. Click **OK** to confirm.



H.2 Editing the Subset Expression – the Subset Expression Editor Panel

A **subset expression** defines the hierarchy of criteria by which concepts will be selected for the subset from existing namespaces and/or subsets. You use the *Subset Expression Editor* panel to create and maintain subset expressions.

The subset expression consists of **filters** that establish the criteria for concept selection. These filters specify the namespaces, subsets, individual concepts, or groups of concepts based on concept attributes, that will be included in the subset. The filters can work in association with specified **exclude** conditions that will either exclude specific concepts from being selected, or all concepts that meet your exclusion criteria. For more information on subset filters, see Adding Subset Filters.

To open your *Subset Expression Editor* panel, click on the **Expr** button in the Subset Editor panel, or double click on the expression value (see below).

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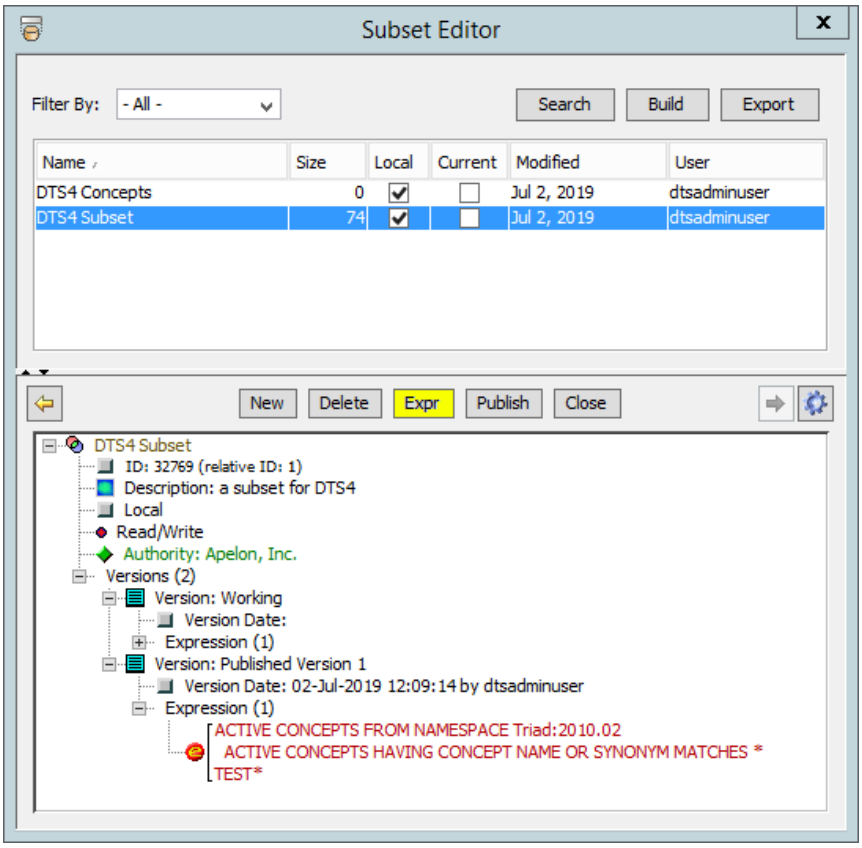
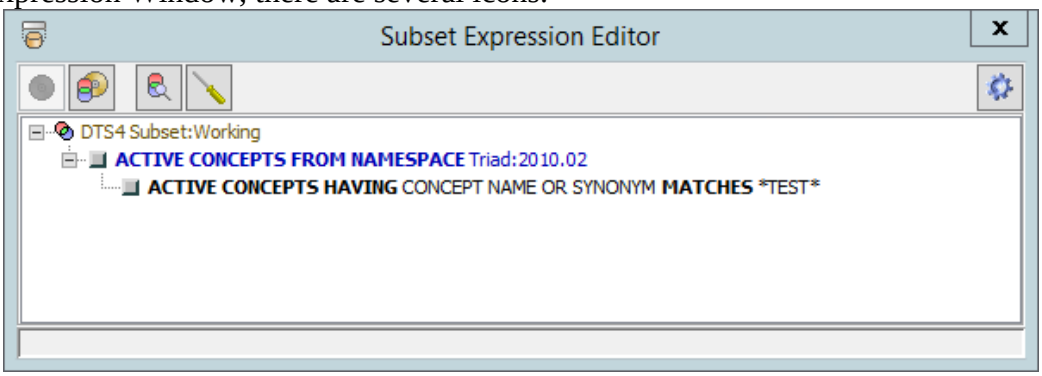


In the Expression Window, there are several icons.



Save - use to save changes made to your Subset expression.

Save Subset Expression to Subset – use to save changes made to your Subset expression to **another** Subset.

Preview Subset – use to view results before building Subset. After previewing, you can modify your filters.

Build Subset – use to evaluate the expression and identify the subset's constituent concepts

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H.2.1 Modify a Saved Subset Expression

Follow this procedure to modify the content in an existing subset by editing the subset's expression.

1. Open the desired Subset in the Subset Expression Editor Window (for instructions, see Subset Expression Editor Window).
2. Make the desired modifications to the subset expression. For procedures on adding, deleting, and/or modifying expression filters, see Adding Subset Filters, Modify a Subset Expression Filter, and Remove a Filter from the Subset Expression.
3. Once you have made your desired changes, you can either save the expression to the existing Subset, using the (Save) button, or you can save it to another subset using the (Save to Subset) button. For more information on saving, see Save to an Existing Subset Expression and Build a Subset Concept Hierarchy.

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I. Subset Expression Filters

A subset expression consists of hierarchy of subset filters. Each filter represents a criteria by which DTS concepts are added to, or deleted from, subset participation. Eight filters are available:

- Namespace filter – specifies that concepts from a single namespace (or all namespaces) are to be included
- Subset filter – specifies that concepts from another subset are to be included
- Concept filter – specifies that a concept, and/or its children or descendants, are to be included
- Concept name filter – specifies that concepts having a given name format are to be included
- Property filter – specifies that concepts having a given property type/property value are to be included
- Synonym filter - specifies that concepts having a given synonym type/synonym target value are to be included
- Association filter - specifies that concepts having a given association type/association target value are to be included
- Exclude filter – specifies that subordinate filters are to be interpreted as exclusions not inclusions.
- Kind filter – specifies that concepts having a given kind target value are to be included.

All filters include a Status parameter which provides additional filtering of selected Concepts based on their Status. An “ALL” Status value is supported to accept Concepts having any Status. Subset concept participation is the result of “evaluating” each filter criteria and combining the results of this filter with the other filters in the expression. Filters at the same hierarchy level represent OR (union) conditions: the results of the filters are added together. Filters subordinate to another filter represent AND (intersection) conditions. The subordinate filters limit subset participation.

In the expression shown below, the subset consists of all Active concepts in SNOMED CT whose names contain “TEST” plus all Active concepts in SNOMED CT that have a Code in Source value that starts with “1”, plus all Active concepts in Triad whose names contain “TEST”.

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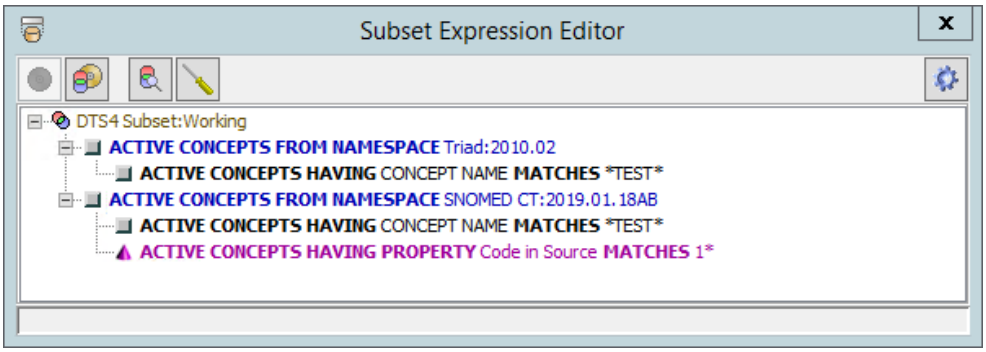
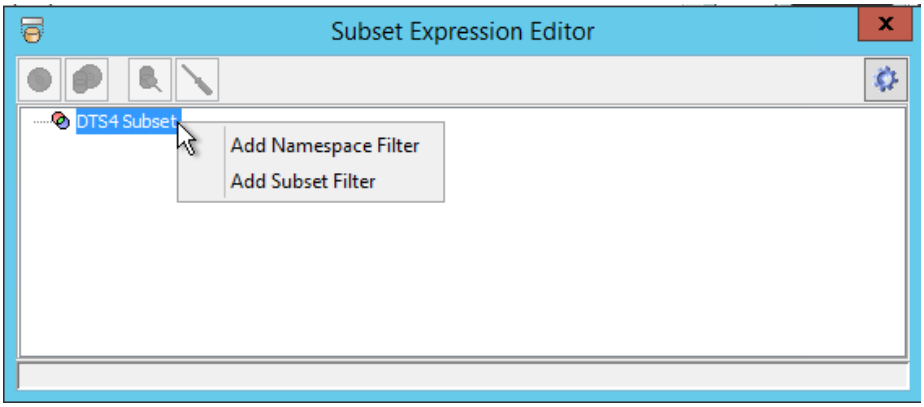


The sections below describe the details of each filter.

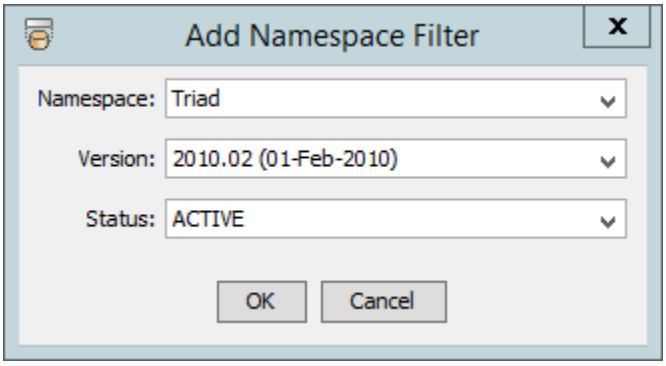
I.1 Add a Namespace Filter

Follow this procedure to designate a namespace from which subset concepts will be selected.

1. To add a Namespace Filter to the subset, right click on the subset root node. Click the **Add Namespace Filter** option when it displays.



The *Add Namespace Filter* window displays.



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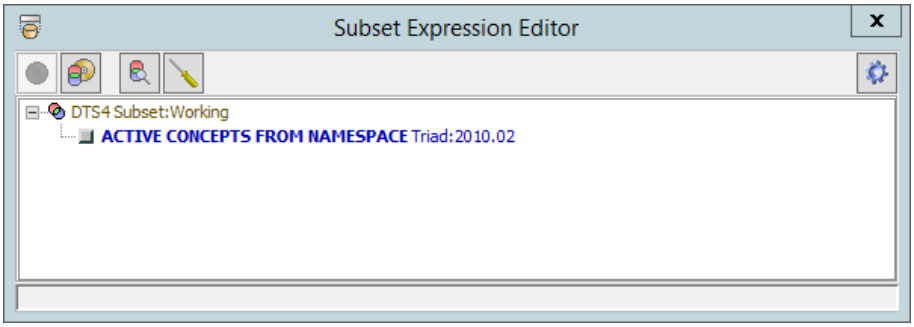
Using this window you choose the specific namespace and version from which concepts will be selected to populate the new subset. You can also filter the selected concept set by concept Status.

2. From the *Namespace* field dropdown list, select the namespace (**Triad** in the example) from which to select concepts for the subset. Note that if an **Ontylog Extension** namespace is listed, it is paired with the linked Ontylog Subscription namespace (e.g., **SNOMED CT / SNOMED CT EXT**). To incorporate concepts from all namespaces, select the **– All -** option in the dropdown list. **All** namespace filters have additional restrictions on subordinate filters, e.g., Concept filters are not permitted under an **All** namespace filter. See the individual filter descriptions below for further information.
3. Next select the appropriate version of the namespace from the *Version* dropdown. Unless the Namespace Filter has specified **All** Namespaces, Namespace filters must be associated with a version. Selecting **Current** as the version will always result in the Subset being built against the most recent version of a Namespace. This field is disabled for **All** namespace filters.
4. Finally select the desired filter Status from the *Status* dropdown: pick **ALL**, **ACTIVE**, **INACTIVE** or **DELETED**.
5. Click **OK** to add the namespace filter node to the tree. The display format is <status> ***CONCEPTS FROM NAMESPACE*** *<namespace Name:version Name>*. Note that the namespace filter, and all of the filters that you add subsequently, display in italics until you save the subset expression.



Add additional namespace filters to the expression in a similar manner. A subset expression can include multiple namespace filters, but namespace filters can only be added to the subset root node and only one namespace filter for each namespace and version combination (including **All**), is permitted in a subset expression. It is permitted to have multiple namespace filters for a namespace as long as different versions are selected.

I.2 Add Concept Filters to the Subset Expression

A concept filter specifies that a specific concept, and/or its children or descendants, are to be included in a subset. A concept filter can be added to any filter except an **All** namespace filter.

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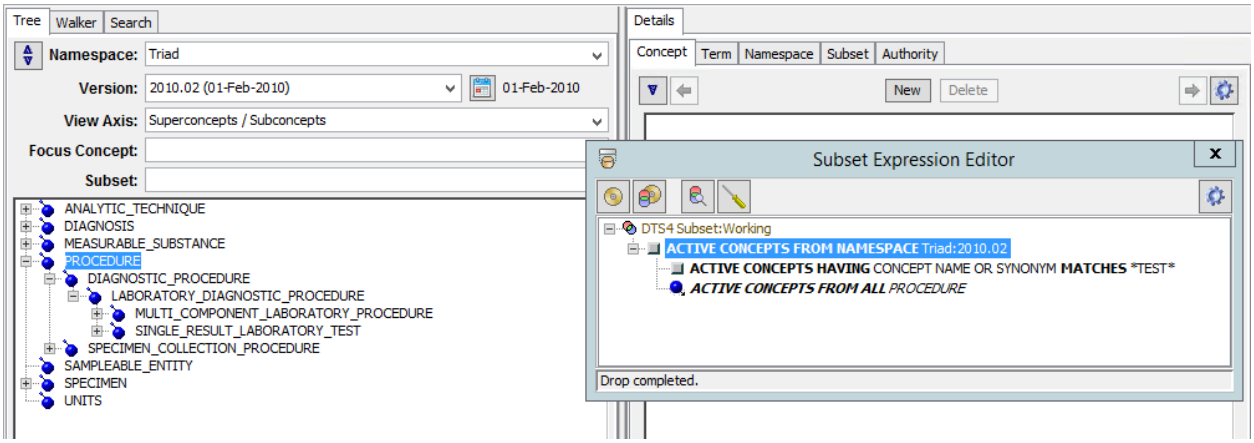
I.2.1 Add Concept Filters Using Drag/Drop

Follow this procedure to add a Concept Filter by dragging a concept (that resides in the selected namespace) from another displayed window or panel and dropping it into the new subset expression. Based on your selection from the available options, this adds the following concepts(s) to the new subset expression.

- The selected concept (only), or
- The selected concept's children, or
- The selected concept's descendants, or
- The selected concept **and** all of its descendant concepts

The Concept Filter also has a Status parameter that can further filter the returned set of concepts.

1. Drag the desired concept from another displayed panel or window (e.g., *Tree* panel, *Search* window, etc.) and drop it into the *Subset Expression Editor* window. The concept should be dropped onto the node that will be its filter's parent. In the illustration, the concept **PROCEDURE** was dragged from the *Tree* panel and dropped onto the namespace filter node in the *Subset Expression Editor* window.



Drop Completed displays in the *Subset Expression Editor* window **Status Bar** to indicate successful copy of the concept you selected.

For a subset of an Ontylog Extension namespace, the concept you select for drag/drop can be from the linked Ontylog Subscription namespace, or from the extension namespace itself. For all other namespaces, the concept you select for drag/drop must be from the same namespace specified in the namespace filter node (**Triad** in this example). If you attempt to drag and drop a concept from a different namespace, the following message window displays.

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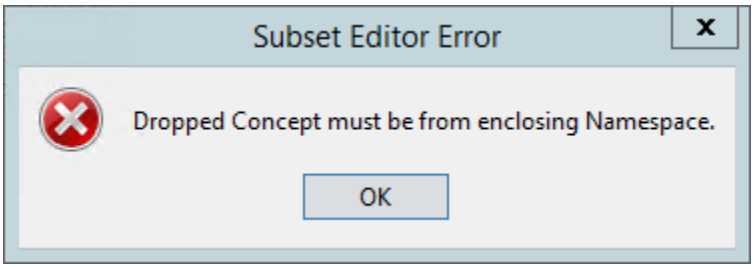
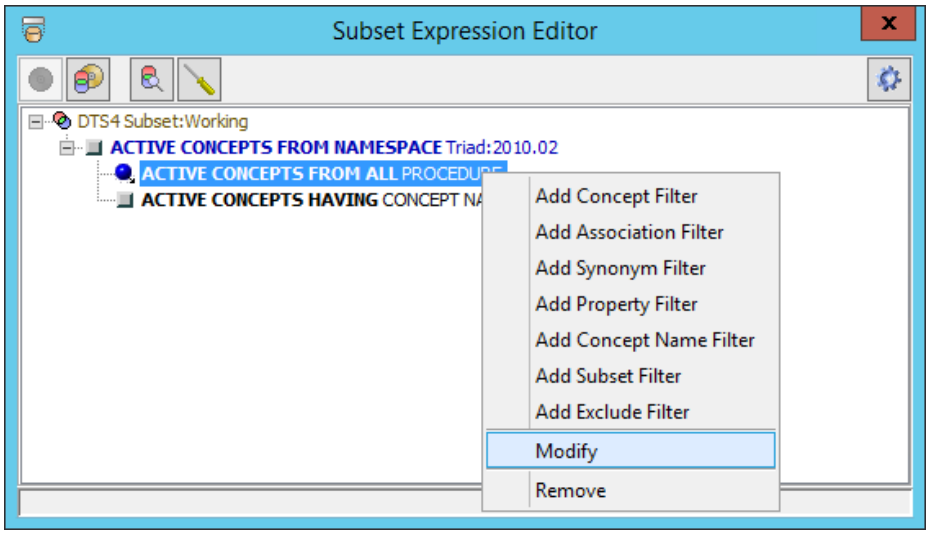


Click **OK**, then drag and drop a concept from the correct namespace.

Note: *It is also possible to drag a concept directly onto the subset root node. In this case, a concept filter will be created under the associated namespace node. If there is no existing namespace node, a new namespace node will be created under the root and the concept filter added to this node.*

2. The default filter behavior is to include the selected concept **and** all of its descendant concepts in the subset (i.e., the default modifier is *FROM **ALL***), and set the filter Status to the status of the dropped concepts. You have the option to include in the subset only the selected concept (without its **descendants**) or only the selected concept's descendants (without the **selected concept**), or only the selected concept's children (without the selected concept), and include concepts having a different Status (subject to constraints of the parent filter's Status value).

To change the concept filter criteria, right-click the concept you dropped into the *Subset Expression Editor* window (***ACTIVE CONCEPTS FROM ALL** PROCEDURE*). Click **Modify** in the displayed option list.



Clicking on the Modify option will open the Edit Concept Filter dialogue box. Here, you will be able to change the Concept you're applying the filter against, as well as the Modifier.

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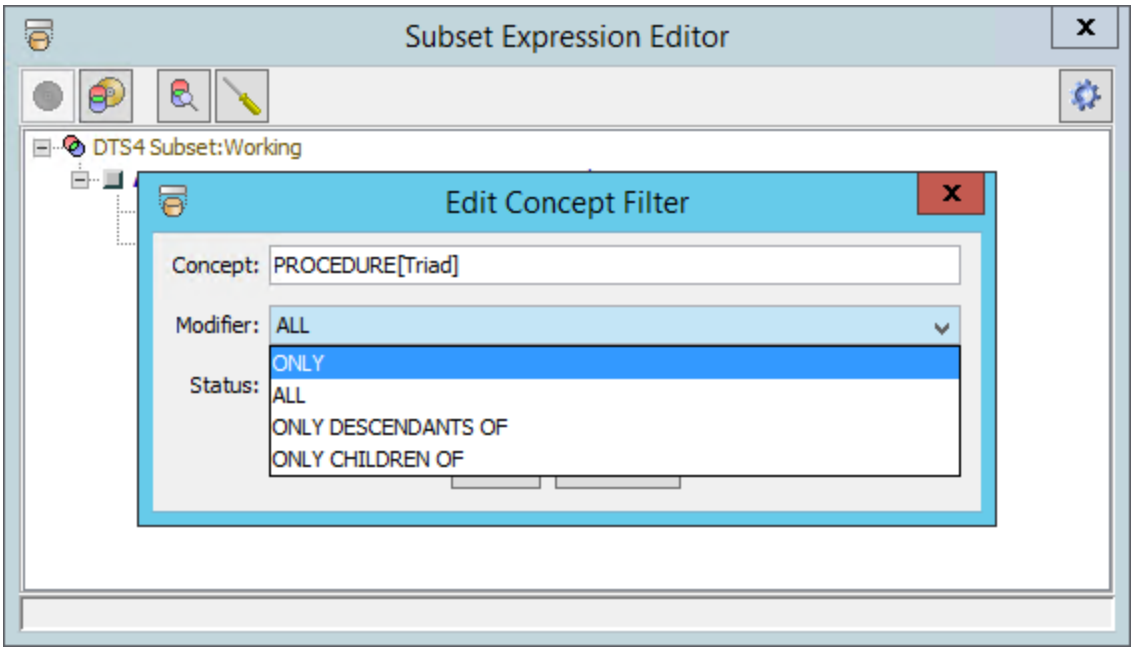
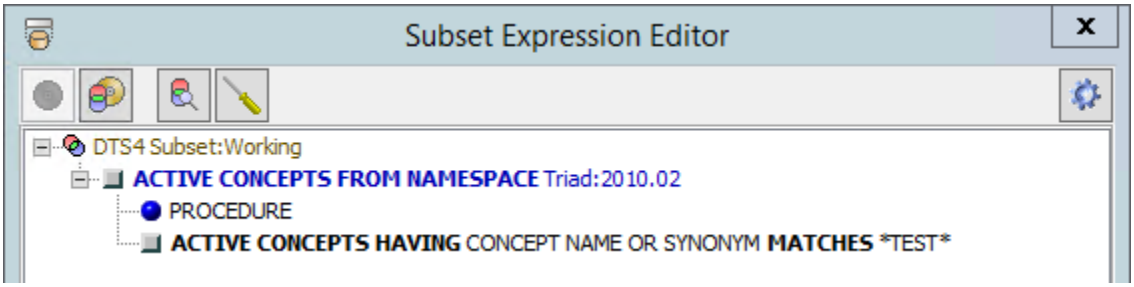
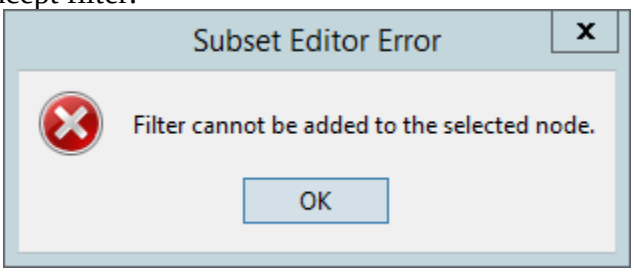


3. Click the modifier **ONLY** to include only the selected concept in the subset. The concept node in the *Subset Expression Editor* window changes (the modifier ***ALL*** is removed) to reflect that only the single concept will be selected for the subset. Note the illustration.



You cannot add subordinate concept filter nodes to an existing concept filter node for which you selected the modifier **ONLY**. The following message displays if you attempt to add a new concept filter.



4. Click the modifier **ONLY DESCENDANTS OF** to include only the selected concept's descendants in the subset. The concept node displayed in the *Subset Expression Editor* Panel changes to reflect that only descendants of the concept you chose will be selected

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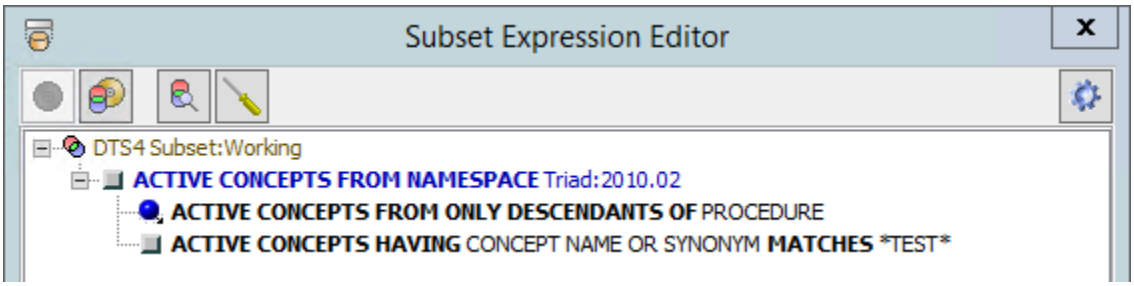
for the subset (***ACTIVE CONCEPTS FROM ONLY DESCENDANTS OF*** *PROCEDURE* is shown in the illustration).



If you want to add subordinate concepts to this concept name filter node, the additional concepts should be descendants of the concept established in that node.

Finally, note that the *Status* dropdown in a filter editor may not be editable. Because each filter selects (filters) concepts from those resulting from its parent filter, it is not possible for a filter to select **INACTIVE** concepts when its parent filter specified **ACTIVE** concepts. Only if a parent filter has the **ALL** Status, does the child filter have the option to select its Status. The filter editors are aware of this dependency and set the correct Status according.

It is possible for an existing filter's status to be inconsistent, for example when a parent filter's status is changed from **ALL** to **ACTIVE** and a child filter is already set to **INACTIVE**. In this case, the editor displays an **[INCONSISTENT]** marker at the end of the child filter description. This is simply a reminder to the user; it is not fatal. The subset expression can still be saved, but the child filter is essentially meaningless since no concepts can result from its interpretation.

I.2.2 Create Concept Filters from Roles and Associations

Follow this procedure to drag a role or association from another displayed window or panel (e.g., *Concept/Term Details* panel) and use the role or association value to create a concept filter in the subset expression.

1. Drag the desired role or association from another displayed panel or window (e.g., *Concept/Term Details* panel) and drop it into the *Subset Expression Editor* window. You can add the new concept filter (based on the target concept value of the role or association) to the namespace node, or add it to an existing node as an additional filter.

   In the following illustration, the role **all HAS_SUBSTANCE_MEASURED: CHEMICAL** was dragged from the *Concept/Term Details* panel to the namespace filter node, so an ***ACTIVE CONCEPTS FROM ALL*** *Chemistry Test* filter was added with an ACTIVE Status filter. Notice that there are two "sibling" filters under the namespace node; concepts from that namespace which pass either of the filters are included in the subset.

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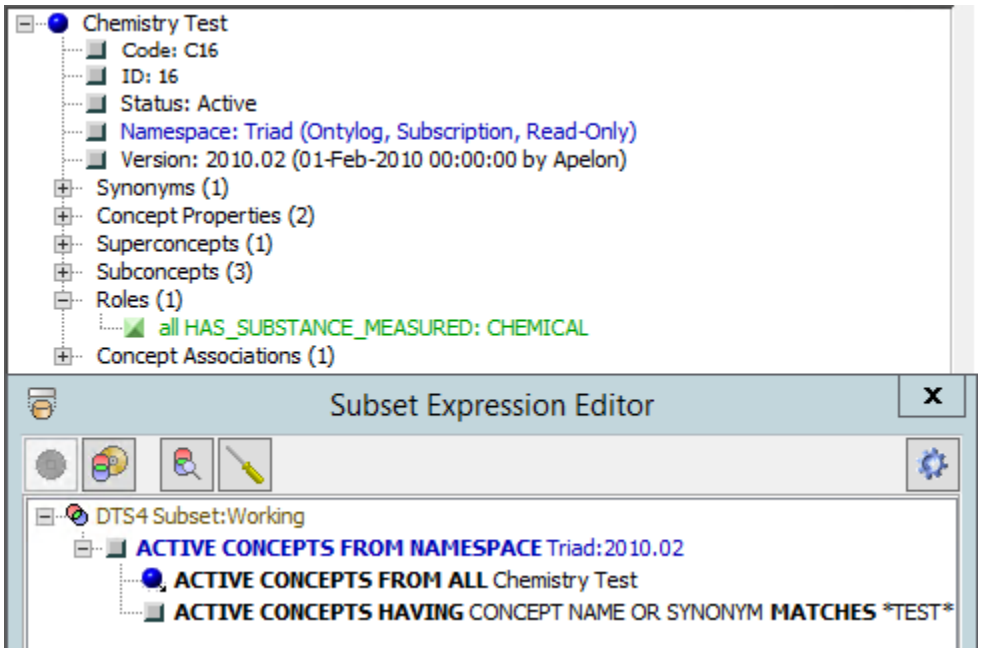
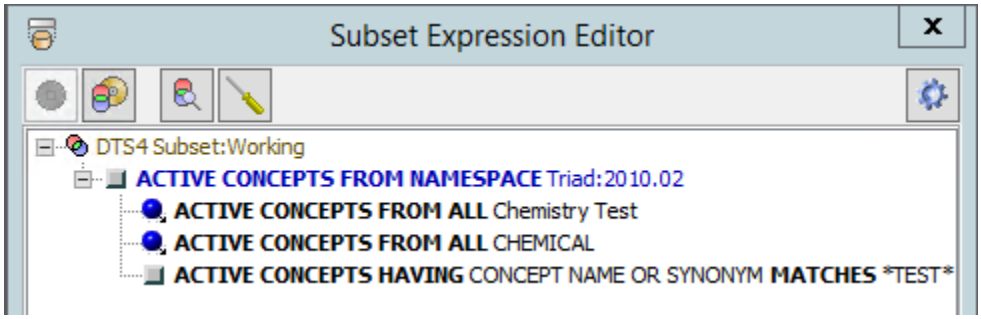


In the next illustration, the role **all HAS_SUBSTANCE_ MEASURED: CHEMICAL** was dragged from the *Concept/Term .Details* panel to a concept filter node, so an ***ACTIVE CONCEPTS FROM ALL*** *CHEMICAL* filter was added.



In the following illustration, the association **Analytic_Technique: QUANTITATIVE ANALYSIS** was dragged from the *Concept/Term Details* panel to the namespace filter node, so an ***ACTIVE CONCEPTS FROM ALL*** *QUANTITATIVE_ANALYSIS* filter was added.

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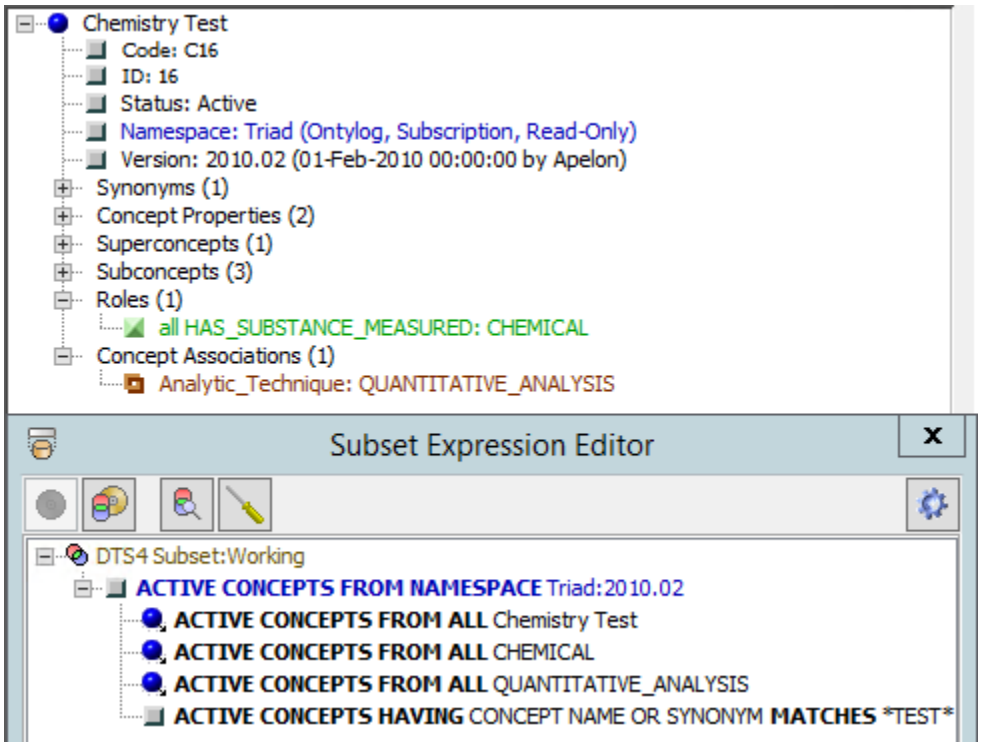

Drop Completed displays in the *Subset Expression Editor* window **Status Bar** to indicate a successful copy.

2. For each role or association you copy to the subset expression, the default is to create a concept filter that includes the associated concept **and** all of its descendant concepts in the subset expression (i.e., the default modifier is ***ALL***). You have the option to include the concept (without its **descendants**) or only the concept's descendants (without the **selected concept**), and to select a different Status.

   Right-click the role or association you dropped into the *Subset Expression Editor* window (the role ***ACTIVE CONCEPTS FROM ALL*** *CHEMICAL* is used in this example). Click **Modify** in the displayed option list.

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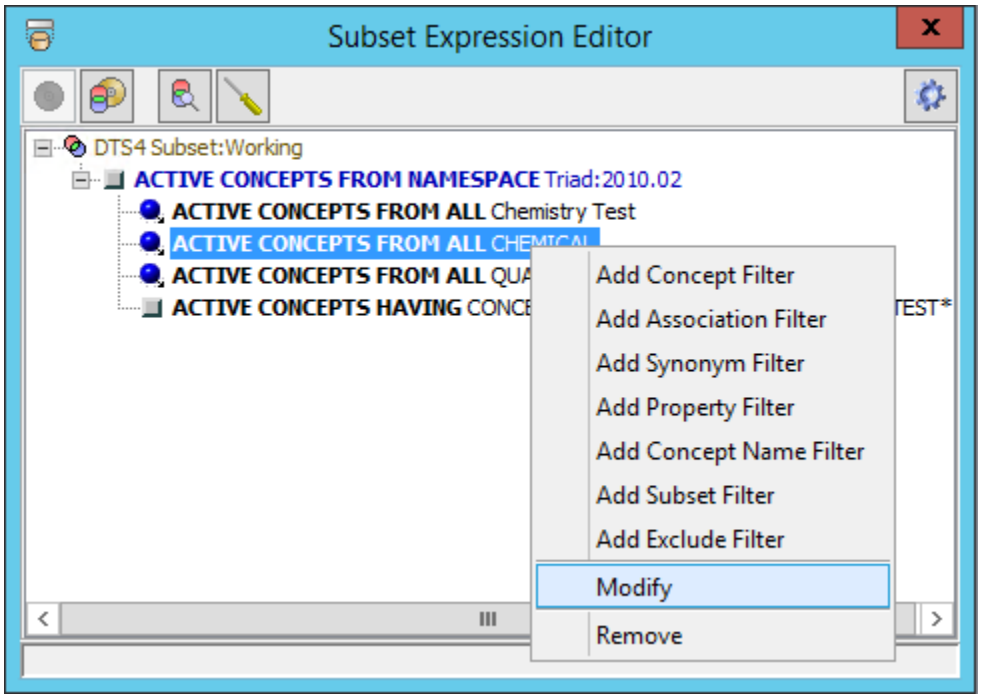
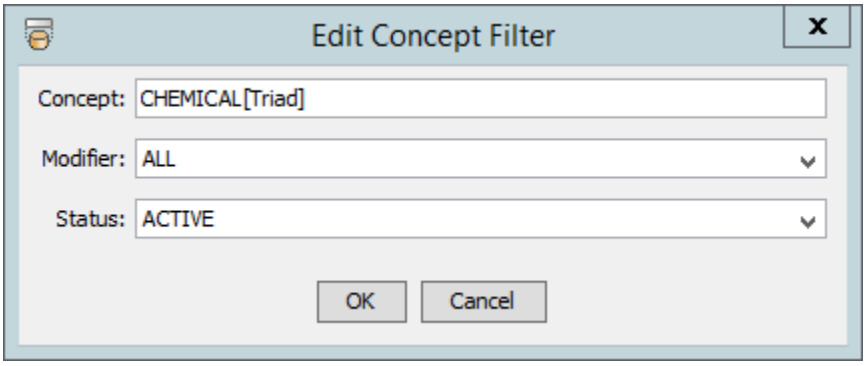


When you select the Modify option, an Edit Concept Filter dialogue box will open. This dialogue will let you change the Concept you are filtering against, as well as the Modifier.



Click the modifier **ONLY** to include only the associated concept in the filter. The filter node displayed in the *Subset Expression Editor* Panel changes (the modifier ***ALL*** is removed) to reflect that only the single associated concept will be selected for the subset.

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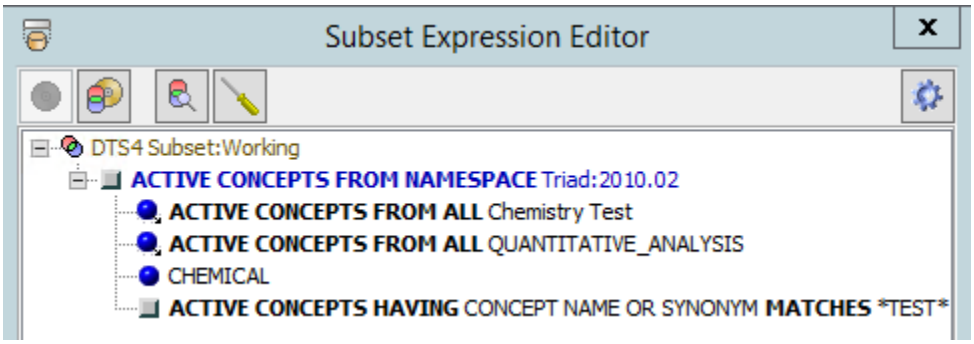
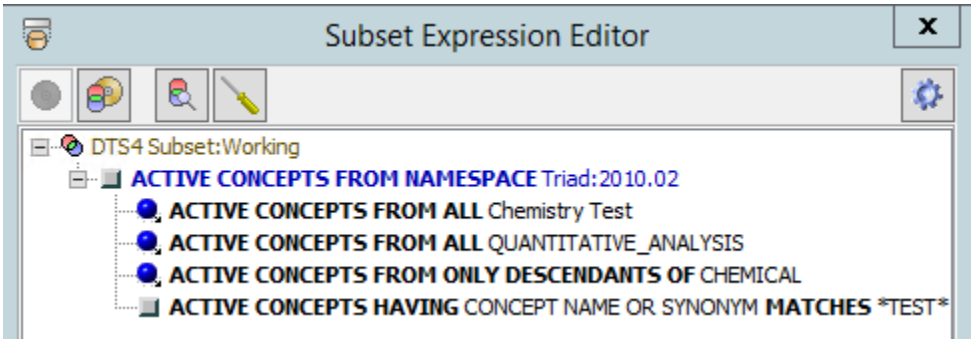


Click the modifier **ONLY DESCENDANTS OF** to include only the associated concept's descendants in the subset. The filter node changes to reflect that only descendants of the associated concept will be included in the subset (***ACTIVE CONCEPTS FROM ONLY DESCENDANTS OF*** *CHEMICAL* is shown in the illustration).



I.3 Add Concept Name Filters to the Subset Expression

I.3.1 Create a New Concept Name Filter

Follow this procedure to create a concept name filter for the subset expression. This filter defines the concept name criteria by which concepts will be selected (from the specified namespace) to populate the subset.

1. To filter concepts selected for the subset based on matching the concepts' names, right-click on the desired filter node, then click **Add Concept Name Filter** when the option list displays. You can add the concept filter directly to the namespace node, as in this example, or add it as a subordinate filter to another existing filter node.

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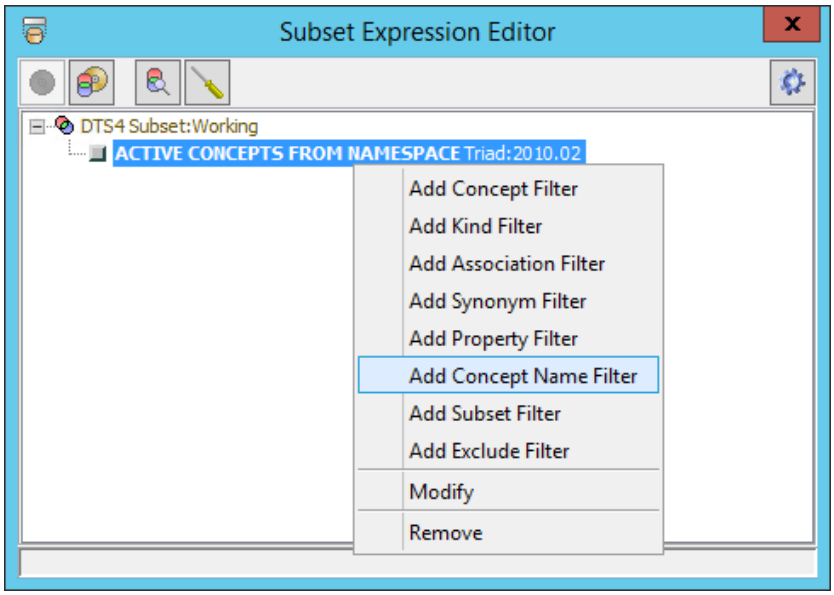
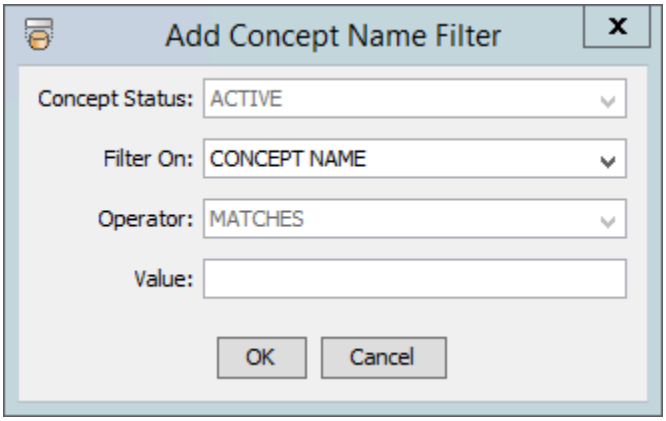


The *Add Concept Name Filter* window displays.



2. A concept filter is comprised of the ***Concept Status***, *Filter On* and *Value* fields (the criterion *Operator* is set to **MATCHES**, and is not editable). The *Concept Status* dropdown is only editable if the concept filter's parent filter's Status is ALL. From the *Filter On* field dropdown list, select either the **CONCEPT NAME or CONCEPT NAME OR SYNONYM** option for the filter.

   If you select the **CONCEPT NAME** option, your search term will be matched against only concept names in the selected namespace. If you select **CONCEPT NAME OR SYNONYM**, your search term will be matched against concept names as well as their synonyms in the selected namespace.

3. In the *Value* field, enter the text string that will be matched against concept names (or concept names and synonyms) in the namespace you selected. Text string matching is case insensitive, and you may use **wild cards** (asterisk characters), as needed.

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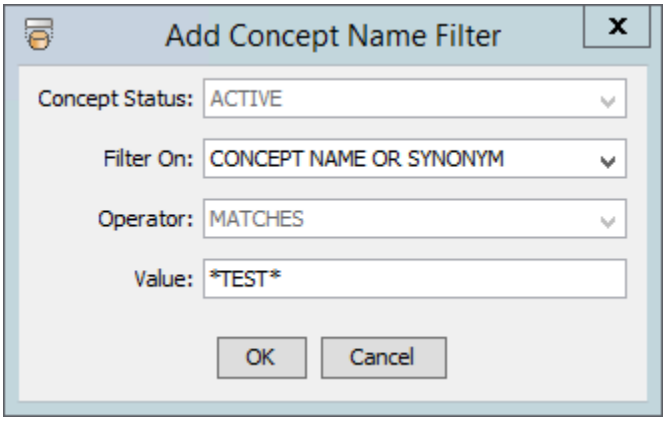
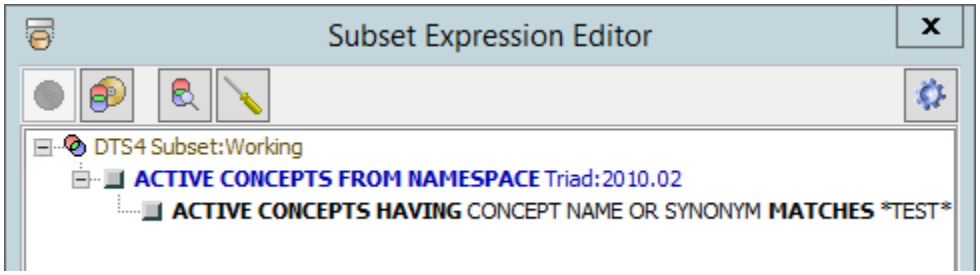
In the illustration, matches in the namespace will be found for any concept name or synonym that contains the text string **TEST** (in upper or lower case).



4. Click **OK** to add the concept name filter node to the subset expression tree (the display format is ***ACTIVE CONCEPTS HAVING*** *CONCEPT NAME OR SYNONYM* ***MATCHES*** *<concept Name>*).



I.4 Add a Property Filter to the Subset Expression

I.4.1 Create a New Property Filter

Follow this procedure to create a property filter for the subset expression. This filter defines the property criteria by which concepts will be selected (from the specified namespace) to populate the subset.

1. To filter concepts selected for the subset based on matching property criteria, right-click on the desired filter node, then click **Add Property Filter** when the option list displays. You can add the property filter directly to the namespace node, or add it as a subordinate filter to another existing filter node.

   In the following example, the property filter is being added to the **concept name** filter node (***ACTIVE CONCEPTS HAVING*** *CONCEPT NAME OR SYNONYM* ***MATCHING*** **TEST**).

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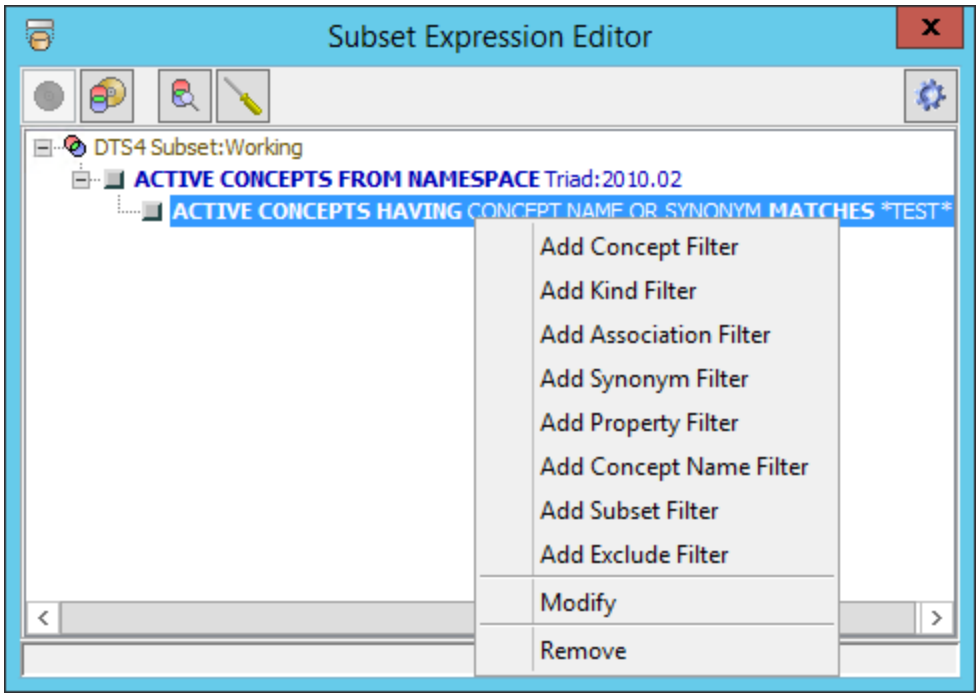
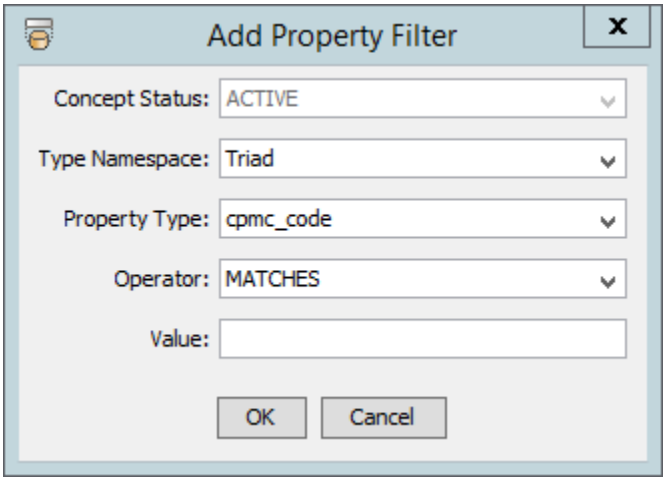


The *Add Property Filter* window displays.



2. A property filter is comprised of the *Concept Status*, *Type Namespace*, *Property Type*, *Operator*, and *Value* fields. The *Concept Status* dropdown is only editable if the property filter's parent filter's Status is ALL.

3. From the *Type Namespace* field dropdown list, select the namespace in which the property type for this filter resides. Only concepts from the namespace that is designated in the ancestor namespace (or subset) filter, that also have the property type that was created in the namespace selected in the *Type Namespace* field, will be retrieved. If the ancestor namespace filter is an **All** namespace filter, an **– All -** option is available in the *Type Namespace* dropdown. Selection of this value means that any Property Type having the name given in the *Property Type* field, from any namespace, will be used to select

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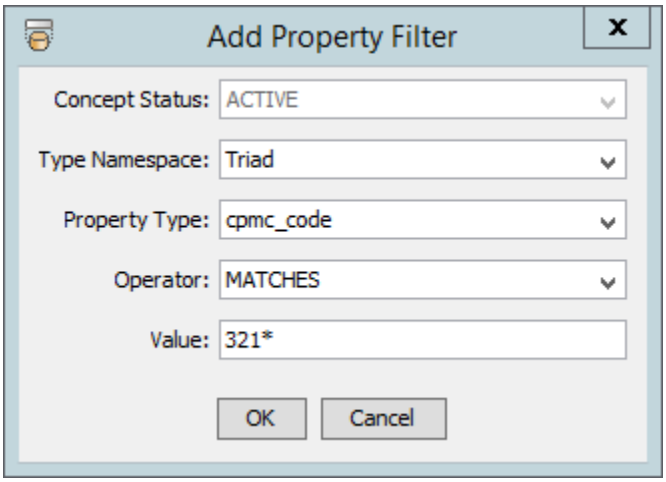
subset concepts. This option can be used to filter on common Property Type names such as **Code in Source**. The values in the *Property Type* dropdown will be the set of all (unique) Property Type names in the DTS Knowledgebase.

4. From the *Property Type* field dropdown list, select the property type for this property filter (**cpmc_code** in this example). Only concepts in the ancestor namespace that have this property type will be retrieved for the subset.
5. In addition to filtering the concepts' property type in the namespace, you can establish a more specific filter that returns only concepts with property **values** that contain the text string you specify. From the *Operator* field dropdown list, select **MATCHES** to further filter retrieved namespace concepts based on the property value text you enter in the *Value* field.

   Select **NONE** from the dropdown list if you will not filter properties based on property value. Concepts having any instance of the property type will be added to the subset.
6. The *Value* field is enabled only if you selected **MATCHES** in the *Operator* field to indicate you want to match a property value as well as type. Property value text string matching is case insensitive; you may use **wild cards**, as needed.

   Enter the text string (e.g., **321***) for the property value to be matched. The concepts retrieved from the namespace designated in the namespace filter must have both the designated property type (i.e., the property type that resides in the namespace specified in the *Namespace* field) **and** this property value text (in upper or lower case).



7. Click OK to add the property filter node to the tree (the display format is ***ACTIVE CONCEPTS HAVING PROPERTY*** *cpmc_code* **MATCHES ACTIVE** <*property Value*>). Note that the color and icon of the property filter match those that represent properties on other displayed panels (e.g., *Concept/Term Details*, *Concept Tree*, etc.).

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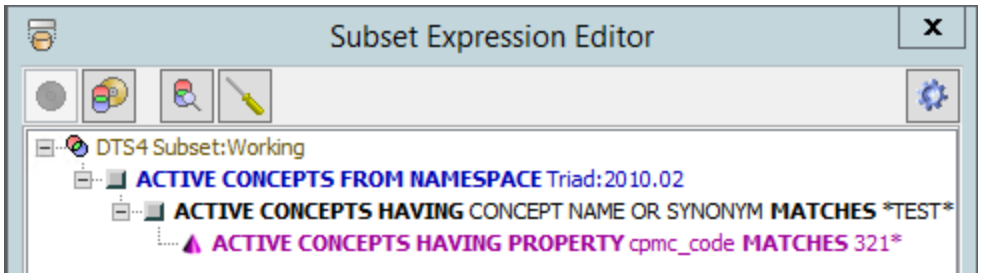


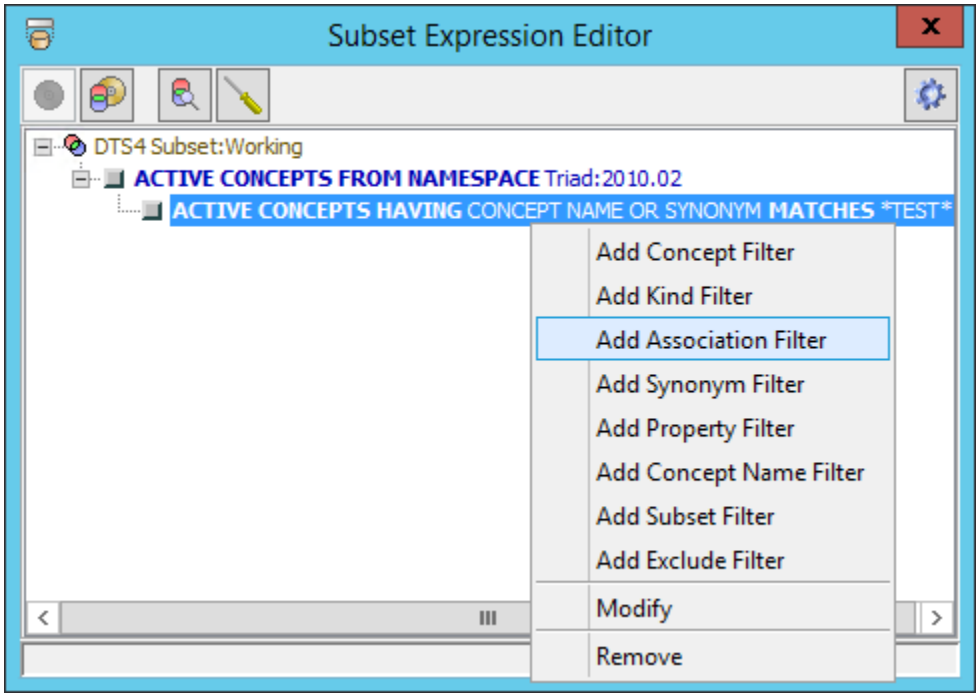
I.5 Add an Association Filter to the Subset Expression

I.5.1 Create a New Association Filter

Follow this procedure to create an association filter for the subset expression. This filter defines the association criteria by which concepts will be selected from the specified namespace(s) to populate the subset.

1. To filter concepts selected for the subset based on matching association criteria, right-click on the desired filter node, then click **Add Association Filter** when the option list displays. You can add the association filter directly to the namespace node, or add it as an additional filter to another existing filter node.

   In the following example, the association filter is being added to the **concept name** filter node (***ACTIVE CONCEPTS HAVING*** *CONCEPT NAME OR SYNONYM* ***MATCHES*** **TEST**).



   The *Add Association Filter* window displays.

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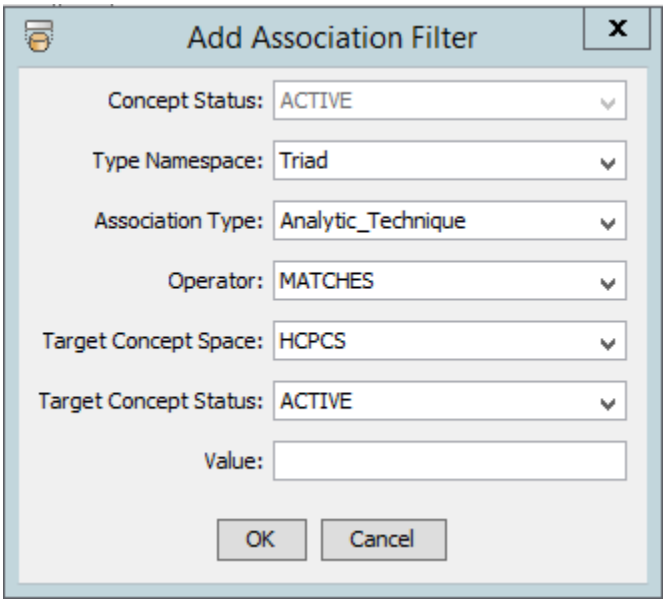

2. An association filter is comprised of the *Concept Status*, *Type Namespace*, *Association Type*, *Operator***,** *Concept Space* and *Value* fields**.** The *Concept Status* dropdown is only editable if the association filter's parent filter's Status is ALL.

3. From the *Type Namespace* field dropdown list, select the namespace in which the association type for this filter resides. Only concepts from the namespace that is designated in the ancestor namespace (or subset) filter, that also have the association type that was created in the namespace selected in the *Type Namespace* field, will be retrieved. If the ancestor namespace filter is an **All** namespace filter, an **– All -** option is available in the *Type Namespace* dropdown. Selection of this value means that any Association Type having the name given in the *Association Type* field, from any namespace, will be used to select subset concepts. This option can be used to filter on common Association Type names such as **Maps To**. The values in the *Association Type* dropdown will be the set of all (unique) Association Type names in the DTS Knowledgebase.

4. From the *Association Type* field dropdown list, select the association type for this association filter (**Analytic_Technique** in this example). Only association types from the namespace selected in the *Namespace* field are listed and only concepts in the ancestor namespace that have this association type will be retrieved for the subset.

5. In addition to filtering the concepts' association type in the namespace, you can establish a more specific filter that returns only concepts with association **values** that match the target concept you specify. From the *Operator* field dropdown list, select **MATCHES** to further filter retrieved namespace concepts based on the association target you enter in the *Concept Space* and *Value* field. Select **NONE** from the dropdown list if you will not filter concept associations based on an association value.

6. The *Concept Space* field (and the following *Value* field) are enabled only if you selected **MATCHES** in the *Operator* field to indicate you want to match an association value as

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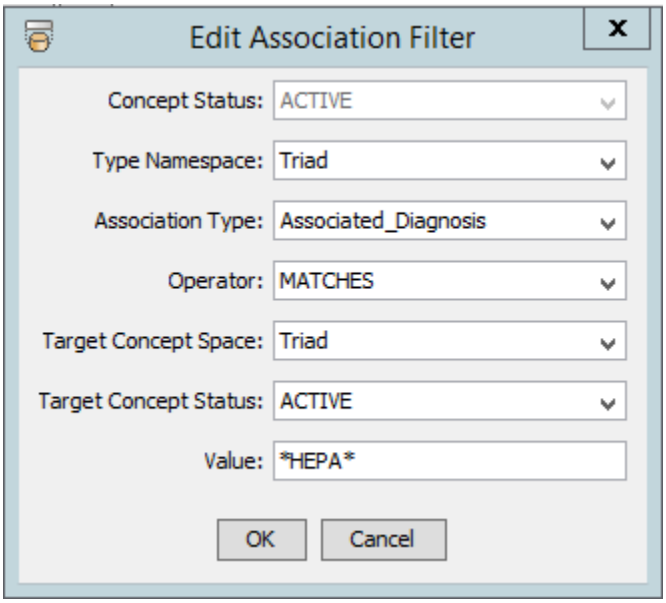
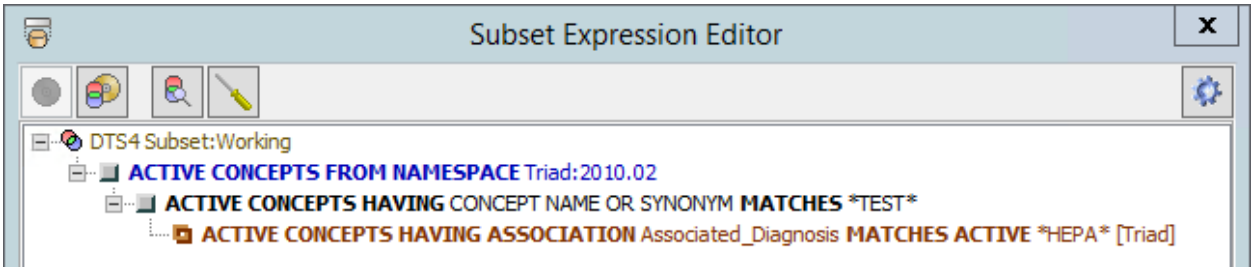
well as the designated association type. From the *Concept Space* field dropdown list, select the target (i.e., to) namespace in the association for this filter.

7. The *Value* field is enabled only if you selected **MATCHES** in the *Operator* field to indicate you want to match an association target concept name as well as the designated association type. The text string matching for the association value is case insensitive; you may use **wild cards**, as needed.

   Enter the text string (e.g., ***HEPA***) for the association value to be matched. The resulting subset will include concepts on which the selected association type exists, the namespace of the association's target concept is from the *Concept Space* namespace, and the name of the association's target concept matches the Value text (in either upper or lower case).



8. Click **OK** to add the association filter node to the tree (the display format is ***ACTIVE CONCEPTS HAVING ASSOCIATION*** *Associated_Diagnosis* ***MATCHES ACTIVE*** *<association Value>[Target Concept Space]*). Note that the color and icon of the association filter match those that represent associations on other displayed panels (e.g., *Concept/Term Details*, *Concept Tree*, etc.).



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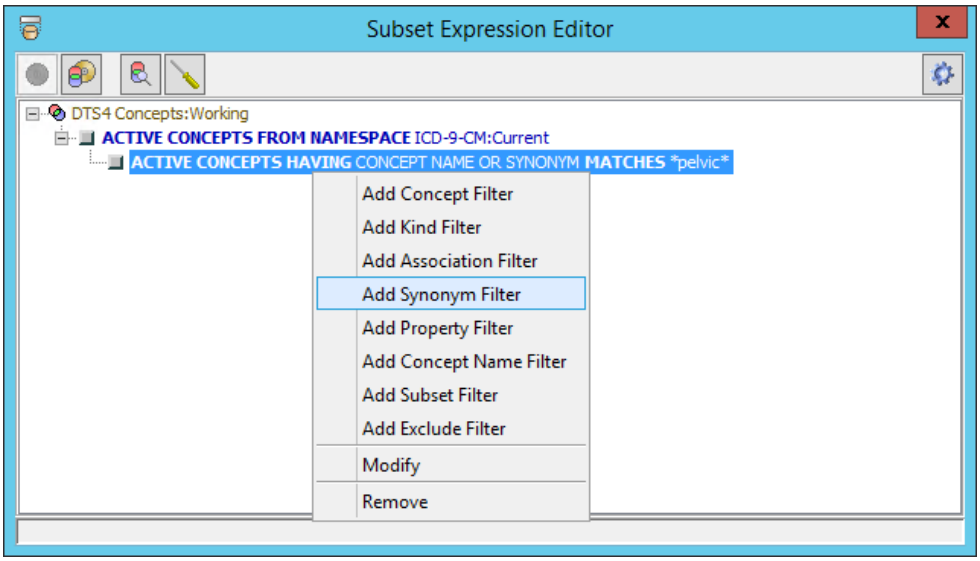
I.6 Add a Synonym Filter to the Subset Expression

I.6.1 Create a New Synonym Filter

Follow this procedure to create a synonym filter for the subset expression; the procedure is similar to the one you follow to create an association filter. The synonym filter defines the criteria by which concepts or synonyms will be selected from the specified namespace(s) to populate the subset.

1. To filter concepts selected for the subset based on matching synonym criteria, right-click on the desired filter node, then click **Add Synonym Filter** when the option list displays. You can add the synonym filter directly to the namespace node, or add it as an additional filter to another existing filter node.

   In the following example, the synonym filter is being added to the **concept name** filter node (***ACTIVE CONCEPTS HAVING*** *CONCEPT NAME OR SYNONYM* ***MATCHES*** **pelvic**).



The *Add Synonym Filter* window displays.

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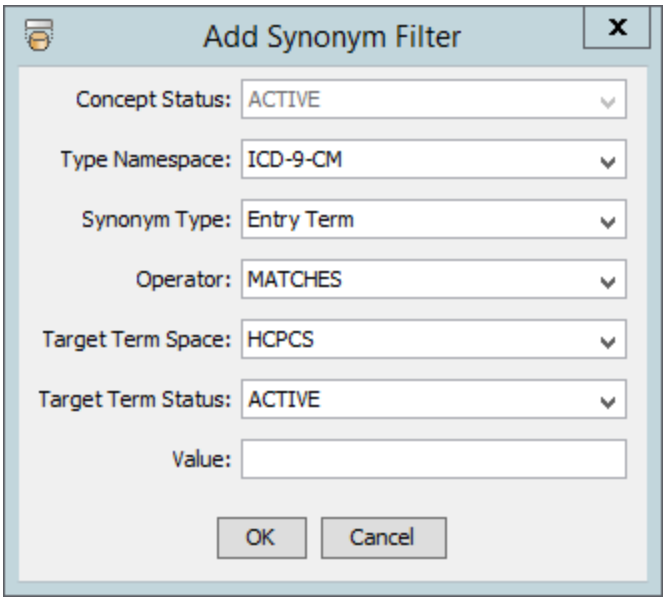

2. A synonym filter is comprised of the *Concept Status*, *Type Namespace*, *Synonym Type*, *Operator***,** *Term Space* and *Value* fields**.** The *Concept Status* dropdown is only editable if the association filter's parent filter's Status is ALL.

3. From the *Type Namespace* field dropdown list, select the namespace in which the synonym's association type resides. Only concepts from the namespace that is designated in the ancestor namespace (or subset) filter, that also have the synonym association type that was created in the namespace selected in the *Type Namespace* field, will be retrieved. If the ancestor namespace filter is an **All** namespace filter, an **- All -** option is available in the *Type Namespace* dropdown. Selection of this value means that any Synonym Type having the name given in the *Synonym Type* field, from any namespace, will be used to select subset concepts. This option can be used to filter on common Synonym Type names such as **Synonym**. The values in the *Synonym Type* dropdown will be the set of all (unique) Synonym Type names in the DTS Knowledgebase.

4. From the *Synonym Type* field dropdown list, select the association type for the synonym for which you are creating a filter (**Entry Term** in the illustration above). Only association types from the namespace in the *Namespace* field are listed, and only those that represent a connection between concepts and synonymous terms. Only concepts in the ancestor namespace that have this synonym association type will be retrieved for the subset.

5. In addition to filtering the concepts' association type in the namespace, you can establish a more specific filter that returns only concepts that have synonym associations of the selected type and also have the target term you specify. From the *Operator* field dropdown list, select **MATCHING** to further filter retrieved namespace concepts based on the synonym target you enter in the *Term Space* and *Value* field. Select **NONE** from the dropdown list if you will not filter synonymous associations based on the synonyms' value.

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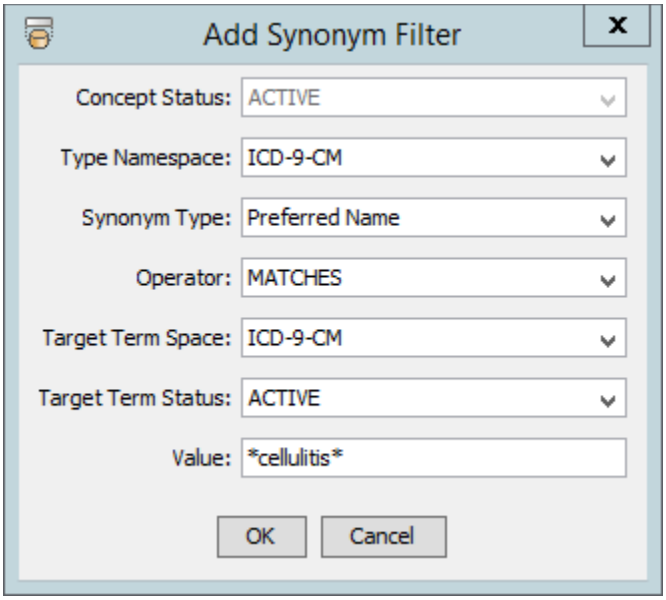
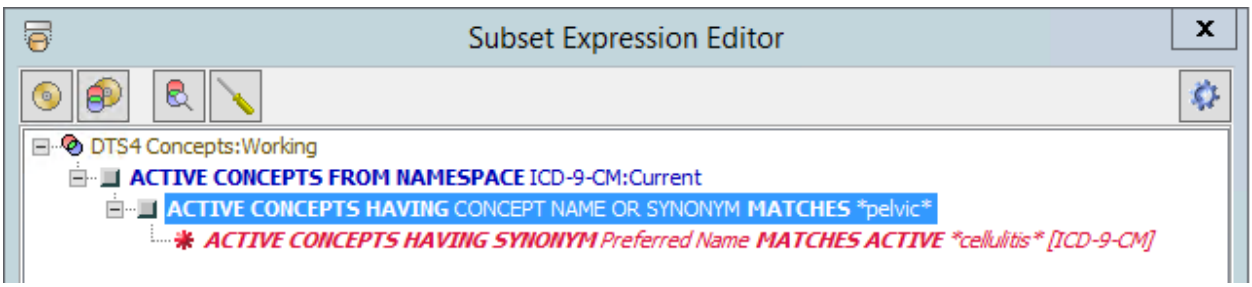
6. The *Term Space* field (and the following *Value* field) are enabled only if you selected **MATCHES** in the *Operator* field to indicate you want to match an association value as well as the designated association type. From the *Term Space* field dropdown list, select the target (i.e., to) namespace in the synonym association for this filter. The *Value* field is enabled only if you selected **MATCHING** in the *Operator* field to indicate you want to match a synonym target Term name as well as the designated synonym association type for the synonym. The text string matching for the synonym value is case insensitive; you may use **wild cards**, as needed.

   Enter the text string (e.g., ***cellulitis***) for the synonym value to be matched. The resulting subset will include concepts on which the selected synonym association type exists, the namespace of the synonym's target term is from the *Term Space* namespace, and the name of the synonym's target term matches the Value text (in either upper or lower case).



7. Click **OK** to add the synonym filter node to the tree (the display format is <status>***CONCEPTS HAVING SYNONYM*** *Preferred Name* ***MATCHES ACTIVE*** *<association Value> [Target Term Space]*). Note that the color and icon of the synonym filter match those that represent synonyms on other displayed panels (e.g., *Concept/Term Details*, *Concept Tree*).



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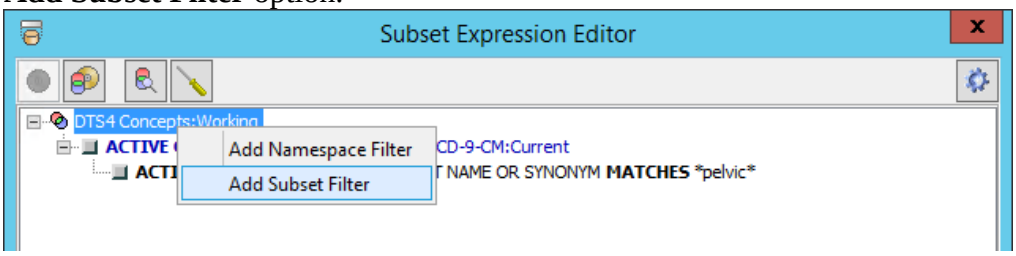
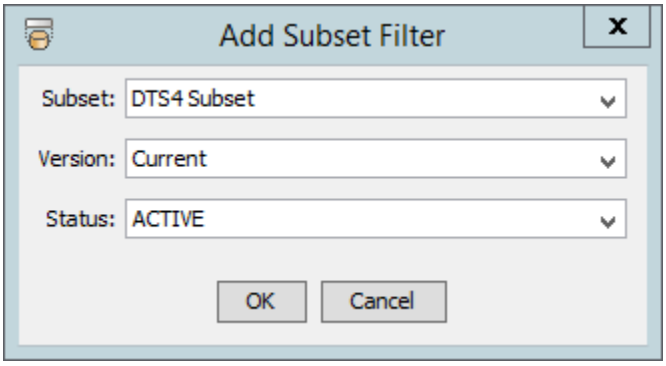
I.7 Add a Subset Filter to a Namespace Filter

A Subset Filter adds another subset's concepts to the subset being defined. For this example, we will add a DTS4 Subset as a Subset Filter to **DTS4 Concepts**.

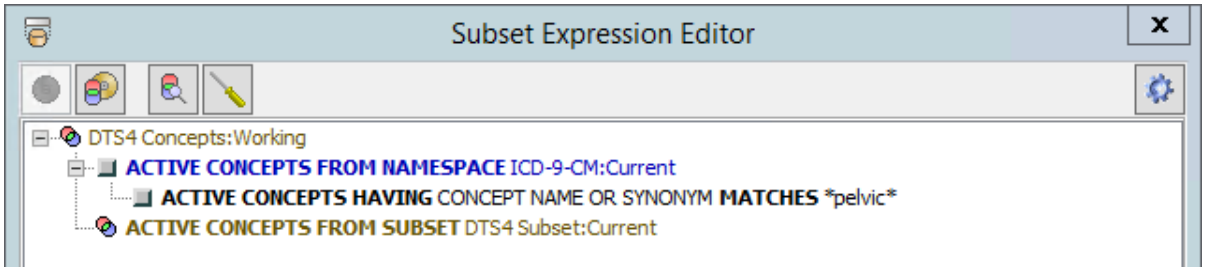
1. With the subset root highlighted, right click to view the additional options. Click on the **Add Subset Filter** option.



2. This will open the *Add Subset Filter* window where you will be able to choose which Subset you want to add as the filter, which version of the Subset should be used, and the desired status of included concepts.



3. For this example, we will choose the **DTS4 Subset** for our Subset Filter, use the Working Version and select ACTIVE for Status.



While Subset Filters are typically added to the subset root node, they can be added as subordinate filters on any other filter.

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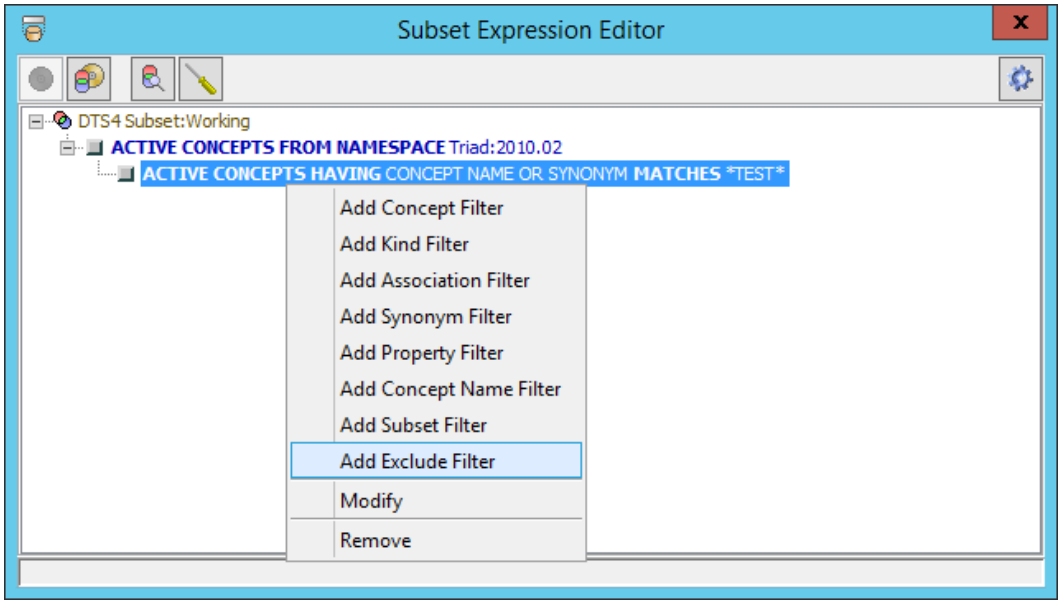
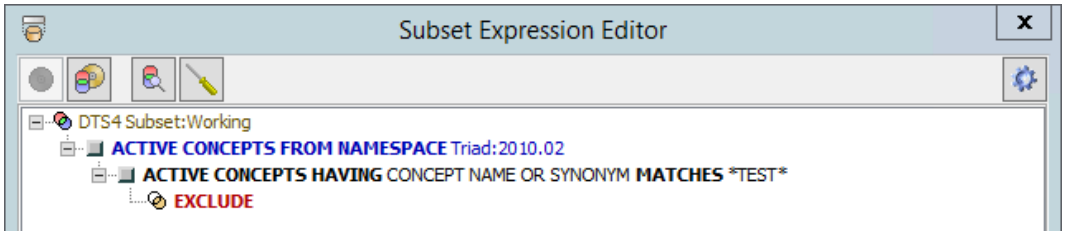
I.8 Add an Exclude Condition Filter to a Subset Expression Filter

You can define an **exclude** condition node on any node in the expression tree (except for the root node, e.g., **DTS4 Subset**). Note that you can add an exclude condition to a concept filter only if the concept has a modifier other than ONLY.

1. To add an exclude condition to a node, right-click on the specific node (***ACTIVE CONCEPTS HAVING*** *CONCEPT NAME OR SYNONYM* ***MATCHES*** **TEST** in the example), then click **Add Exclude Condition** when the option list displays.



The ***EXCLUDE*** condition displays for the node you selected. Note that it is not necessary to specify a status for an exclude filter. An exclude condition itself does not perform any filtering of selected concepts.



2. You can exclude individual concepts by dragging one or more concepts from other displayed windows or panels and dropping the concept(s) onto the ***EXCLUDE*** condition for the appropriate node. See **Add Concept Filters Using Drag and Drop** above.
   In the following illustration, three concepts were dragged from the *Tree* panel and dropped onto the ***EXCLUDE*** condition.

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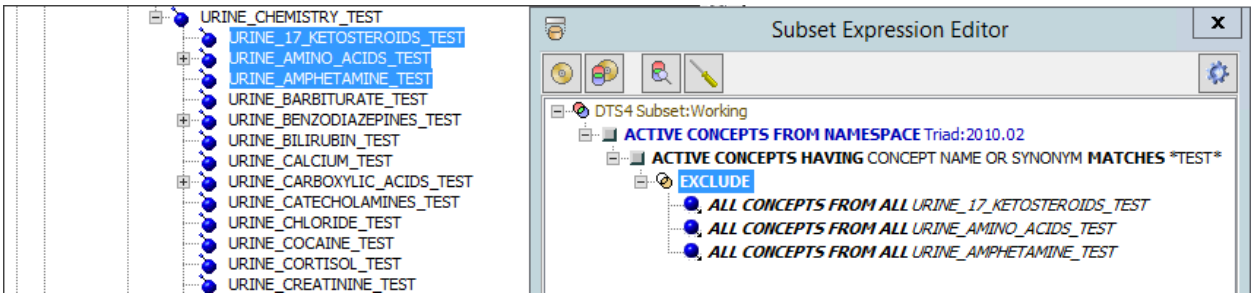

Based on this illustration, all concepts with names or synonymous terms that include **TEST** (i.e., all concepts selected based on the concept filter ***ACTIVE CONCEPTS HAVING*** *CONCEPT NAME OR SYNONYM* ***MATCHES*** **TEST**) will be selected for the subset **except for** the three concepts dropped onto the ***EXCLUDE*** condition (as well as the descendants of the three concepts).

The default behavior of the drop is to specify each selected concept **and** all of its descendant concepts (i.e., the default modifier is ***ALL***). For concept filters subordinate to an exclude filter, this would **exclude** from the subset the selected concept **and** its descendants.

You have the option to specify in the concept filter only the selected concept (without its **descendants**), only the selected concept's children (without the **selected concept**) or only each selected concept's descendants (without the **selected concept**). Right-click the concept you dropped into the *Subset Expression Editor* window, then click **Change Modifier to** in the displayed option list to change the modifier. These changes determine which set of concepts will be excluded from the subset.

To add other filters to the ***EXCLUDE*** condition, right-click on the displayed ***EXCLUDE*** condition. When the option list displays, select the filter you want to add).

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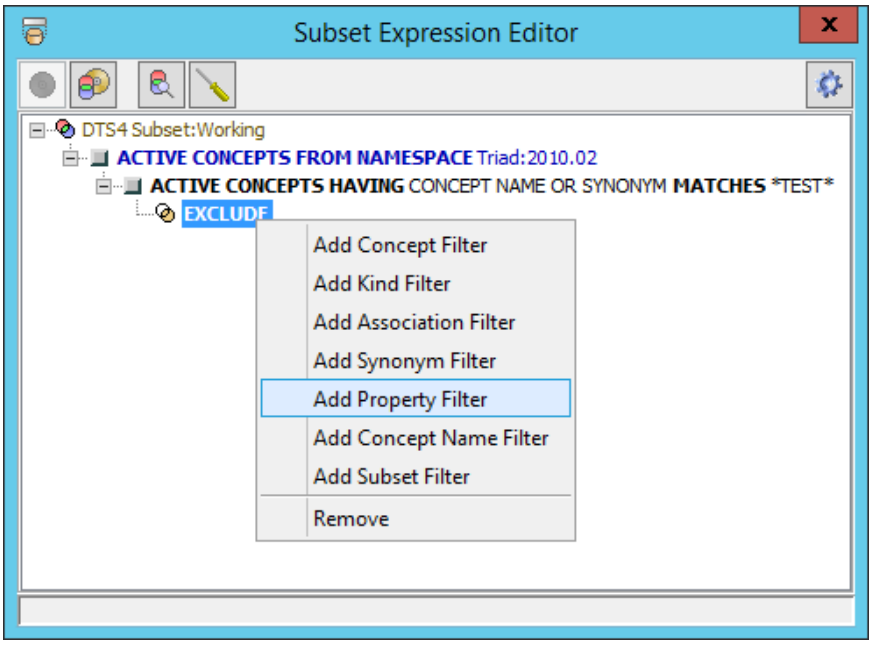
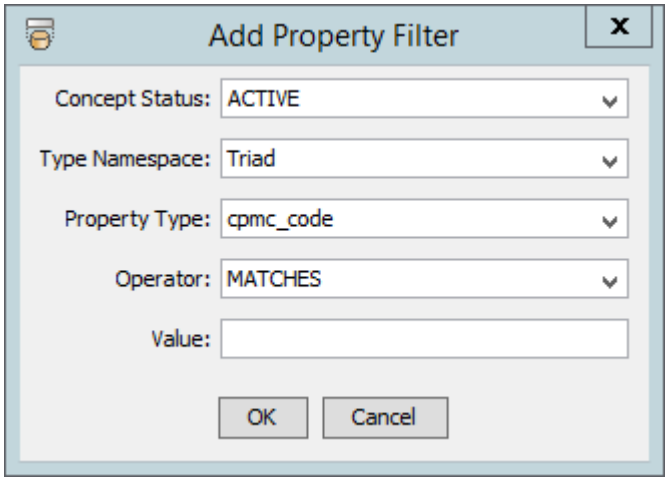


In the example, a property filter is being added for the ***EXCLUDE*** condition. The *Add Property Filter* window displays.



Follow the steps described in the Add Property Filter section above to adjust the filter parameters to your needs.

I.9 Modify a Subset Expression Filter

Follow this procedure if you want to modify an existing subset expression filter. The modify option is available on all filters, including Namespace and Subset filters, however, only the version may be modified on the latter two.

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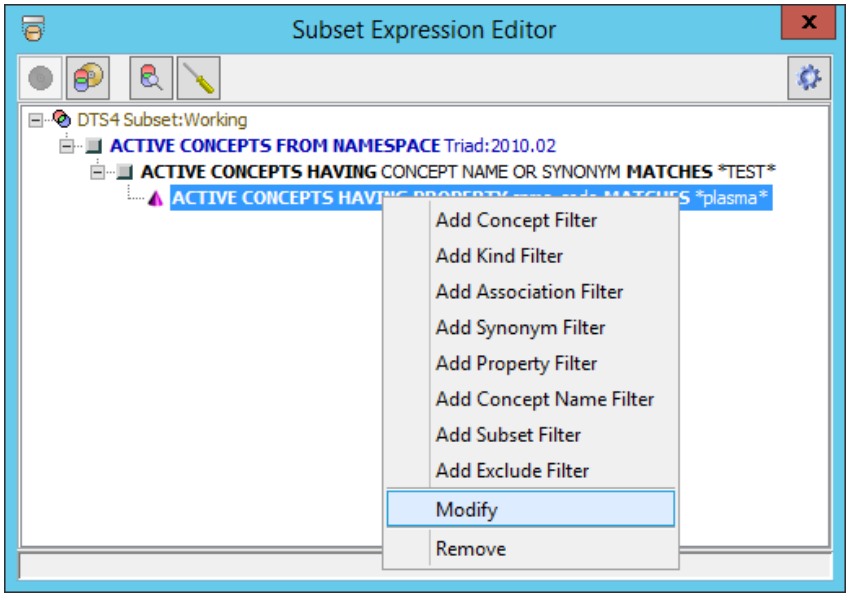
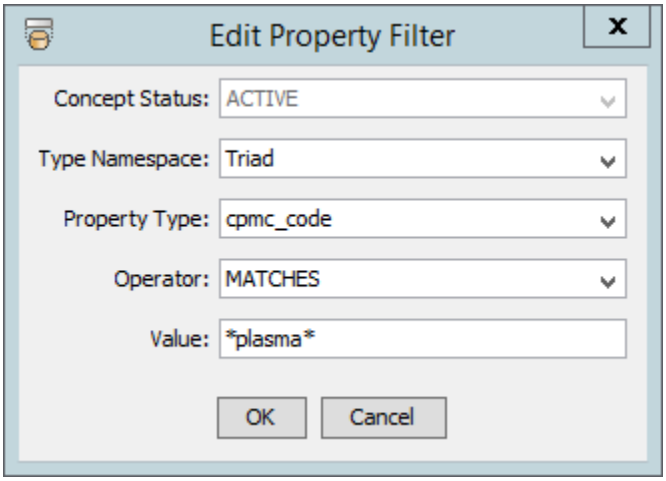
1. To modify a filter, right-click on the existing filter node that you want to edit (a property filter is selected for edit in the example below; modification of other filters is similar). Click **Modify** when the option list displays.



The *Modify Property Filter* window displays. Adjust the filter parameters as desired and click **OK** to save.



I.10 Remove a Filter from the Subset Expression

You can remove an individual unwanted filter by right clicking it, then clicking **Remove** in the displayed option list.

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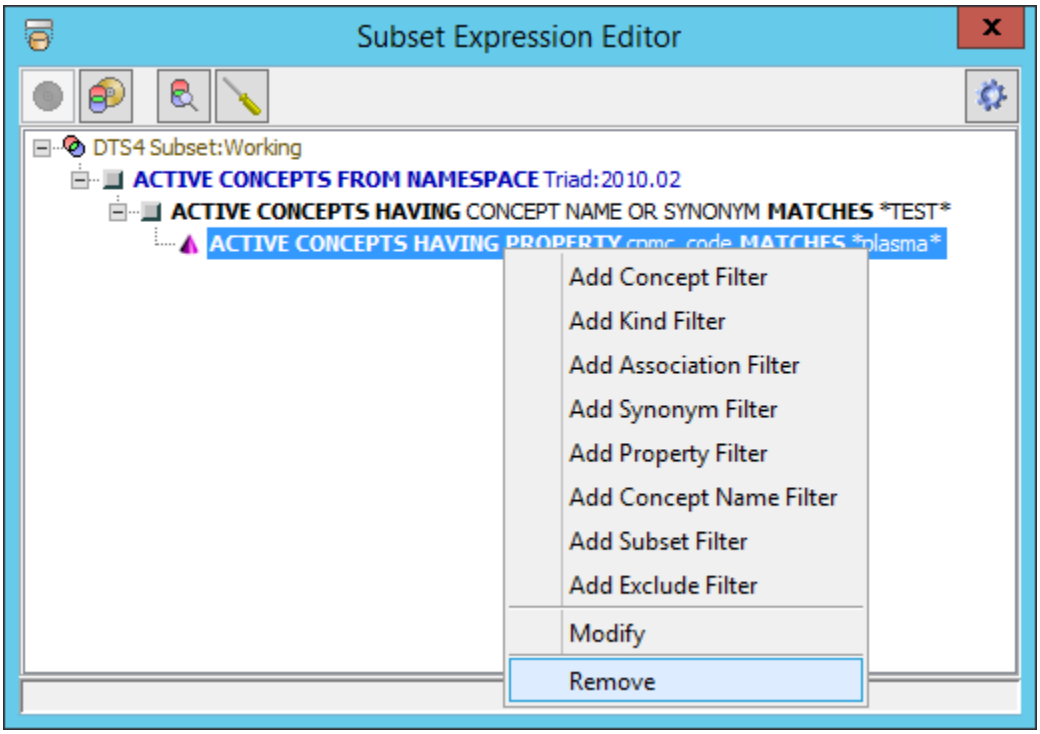
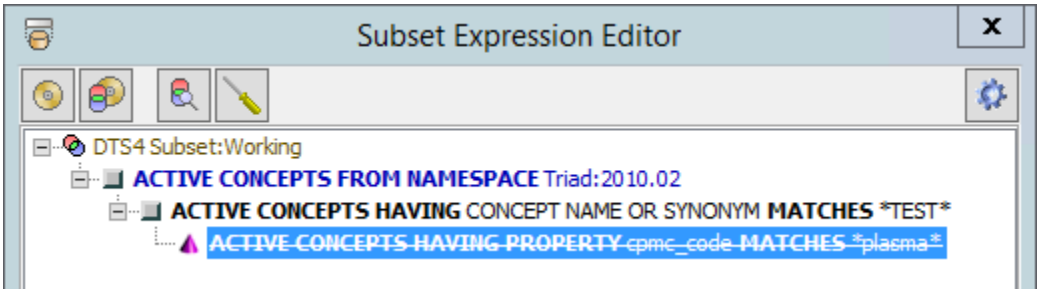


The unwanted filter is removed from the expression, as shown by the strikethrough. Before you save or build your subset, you have the opportunity to Restore Expression Filter Additions.



I.11 Restore Expression Filter Additions

If you have removed a filter by accident, you can right click on the deleted filter, indicated by the strikethrough font, and click Restore.

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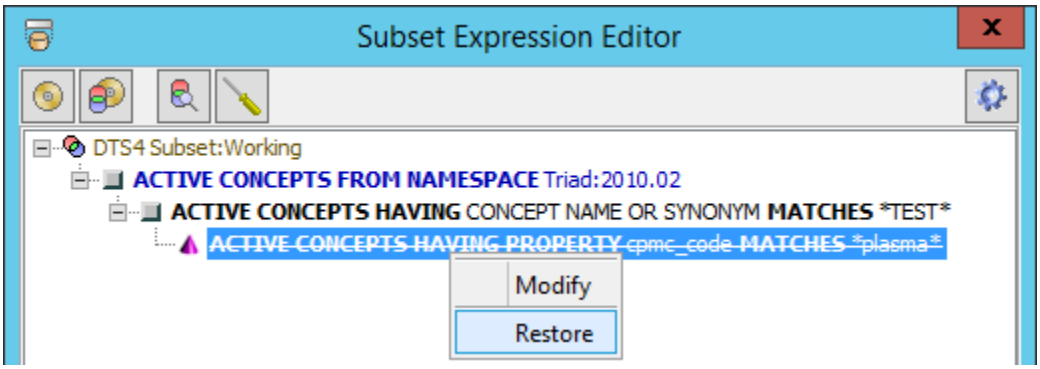

You can only restore a filter that has been created or modified in the current *Subset Expression Editor* session before the expression is saved or built. The save and build operations permanently delete removed filters.

I.12 Preview Subset Expression Results

Before you save the new expression, you can preview which concepts will be chosen from the selected namespace based on the expression criteria you have entered so far.

1. Click the **Preview Subset** icon on the *Subset Expression Editor* window to list concepts that will be included in the subset. Note that you cannot preview a subset expression that includes only a namespace filter; the **Preview Subset** icon is enabled only if at least one additional filter is included in the expression.

   The **Status Bar** indicates subset preview creation progress.

   The *Preview of Subset* window then displays the concepts selected based on the expression criteria.

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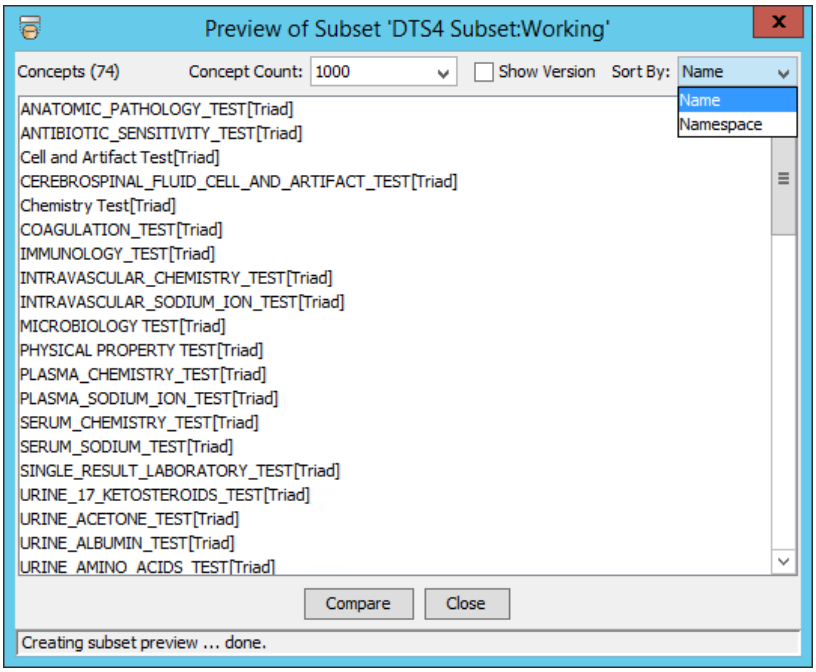
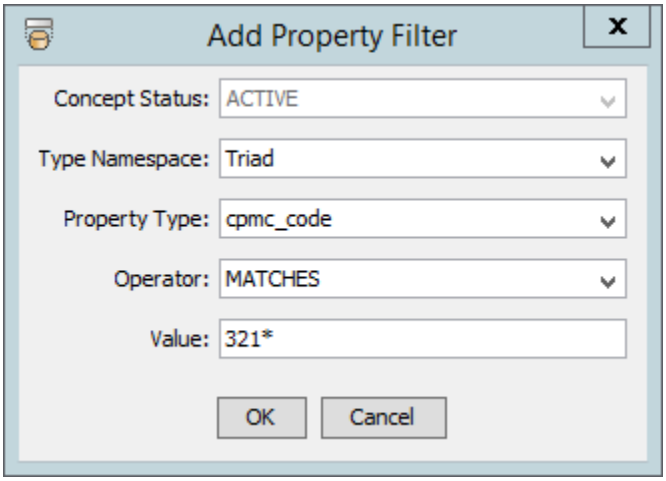


The number of concepts selected based on the current expression criteria is indicated (74 in the illustration); up to 1,000 concepts are displayed in the *Preview* window. The display order of the preview concepts is determined by the value of the **Sort By** field dropdown. If this value is **Name**, the list is sorted first by concept name, then by namespace name. If the value is **Namespace**, then the primary sort is by namespace name, then by concept name. The **Sort By** value is saved in the DTS Editor configuration file and applies across all *Preview of Subset* instances. You can resize the *Preview of Subset* window, as desired (this size setting is retained for future sessions).

2. Click **Close** after viewing the preview results. Based on the preview results, you may want to modify one or more expression filters, delete filters, or add additional filters. Note the additional filter being added to the illustrated expression.



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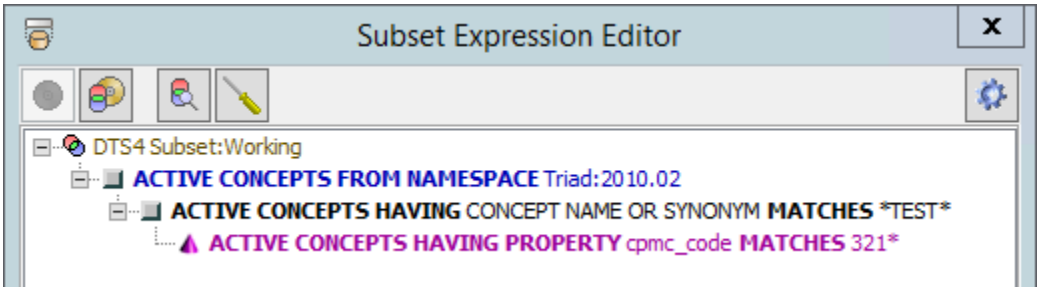
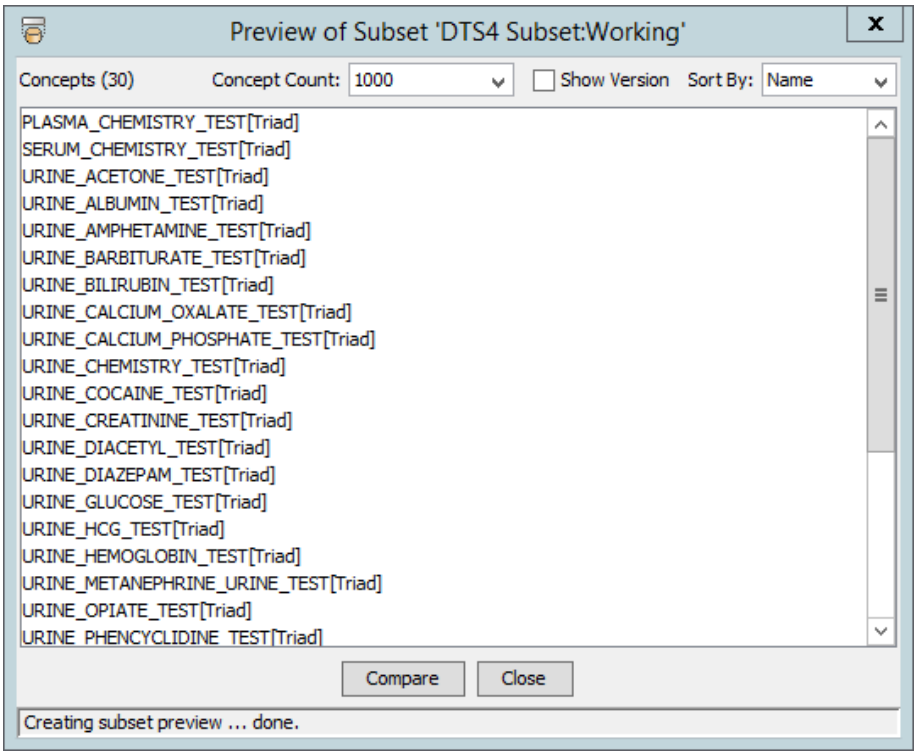
The new filter is added to the expression in the *Subset Expression Editor* window.



3. Click the **Preview Subset** icon again to view the revised concept selection. Note that as a result of the additional filter that was added, a more select set of concepts was returned for the subset.



4. If your expression includes a concept filter stating that all descendants of the concept be selected for the subset, the descendant concepts are reflected in the *Preview of Subset* window.

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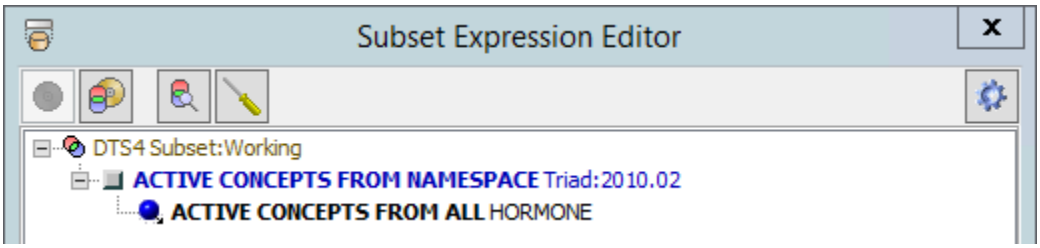
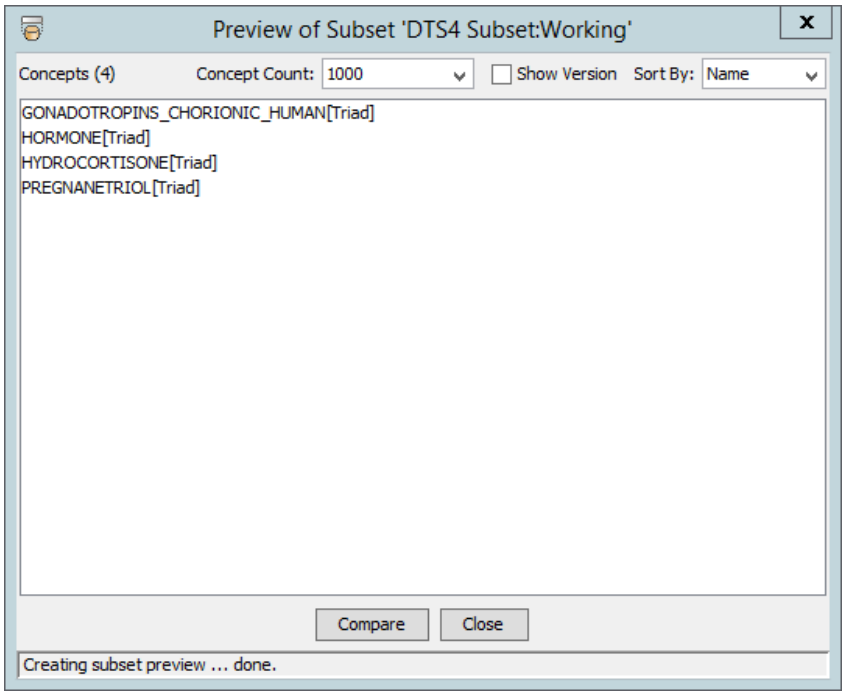


In the illustration, the concept **HORMONE** and all of its descendants are included in the *Preview of Subset* window list.



5. The *Preview Subset* window includes a **Compare** button which can display the differences between the preview results from the current (unsaved) modified expression, and the results of the current, saved, version of the expression. Click **Compare** to indicate the differences between the two versions.

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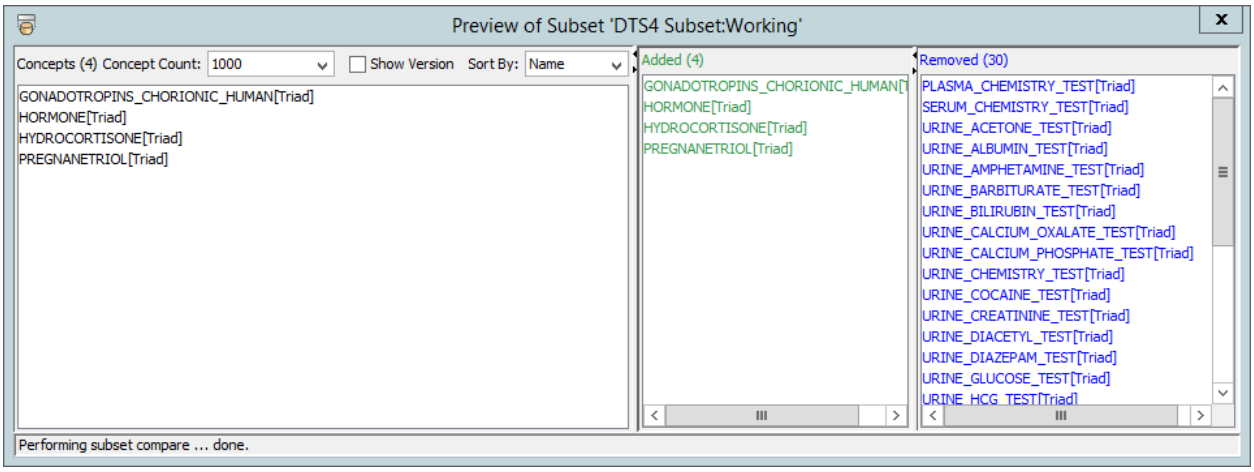


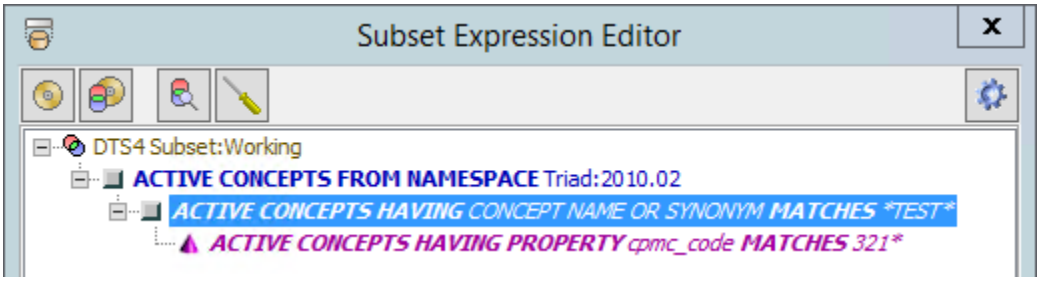
The left pane of the *Comparison* window reflects the version of the subset based on the (unsaved) expression criteria modifications you just made. The center pane lists all concepts (in green) that will be added to the subset if you save the expression modifications. The right pane lists the concepts (in blue) that will be deleted from the subset if you save the expression modifications.

The number of concepts in each list (**Concepts**, **Added**, **Removed**) is indicated in the header for the pane; up to **1000** concepts can be listed in each pane. You can resize the *Comparison* window, as well as the panes within, as needed.

Click **Close** when you finish viewing. When the *Subset Expression Editor* window redisplays, you can make the desired expression criteria edits based on your views of the *Preview of Subset* window and *Comparison* window.

I.13 Save to an Existing Subset Expression and Build a Subset Concept Hierarchy

After you preview, and are satisfied with, the results of the new subset expression, you have two options. If you **Save** the expression, the Subset is updated with the new expression.



The **Status Bar** indicates the progress of the update, and also indicates when the update is completed. After the expression is updated all edits are finalized; modified expression filters no

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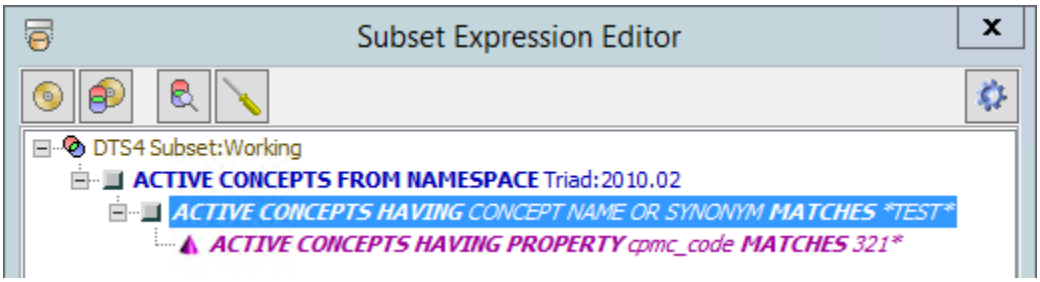
longer display in italics and removed filters are permanently deleted, indicating that this is a saved expression.

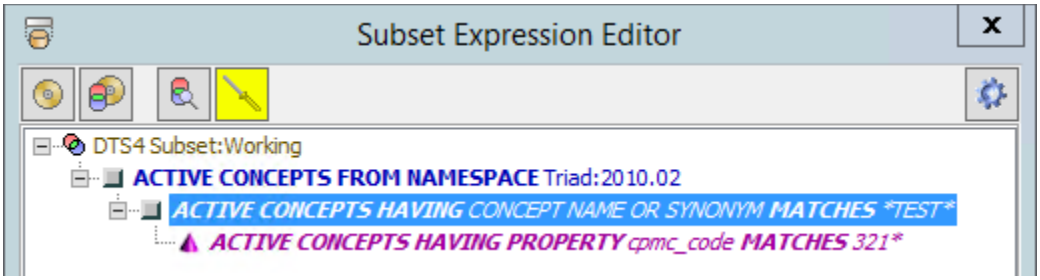


While the **Save Subset** function updates the database with the modified expression, it does **not** update the concept contents and build the subset concept hierarchy (based on the expression selection criteria). Creation of the subset concepts and hierarchy may require considerably more time than the save of the expression.

A separate **Build Subset** option is provided that allows you to populate (**Build**) the subset concepts at a later time. The **Subset Build** function is discussed next.

I.13.1 Build a New Subset Based on Expression Criteria

Click the *Subset Expression Editor* Window **Build Subset** icon to create the subset – and for subsets of Ontylog namespaces, build the subset concept hierarchy – based on the expression criteria. For a new (i.e., unsaved) subset expression, or an existing expression that has been modified, you can click **Build Subset** to save the new/modified subset expression, create/update the subset contents, and build the subset hierarchy (there is no need to select **Save Subset** first).



Note that you cannot build a subset for an expression that includes only a namespace or subset filter. The **Build Subset** icon is enabled only if at least one additional filter in addition to the namespace or subset filter is included in the expression.

The **Status Bar** indicates build progress, and also indicates when the subset build is completed. When the build process is finished, the filters in the expression no longer display edit decoration (italics and strikethrough), indicating that this is a saved expression.

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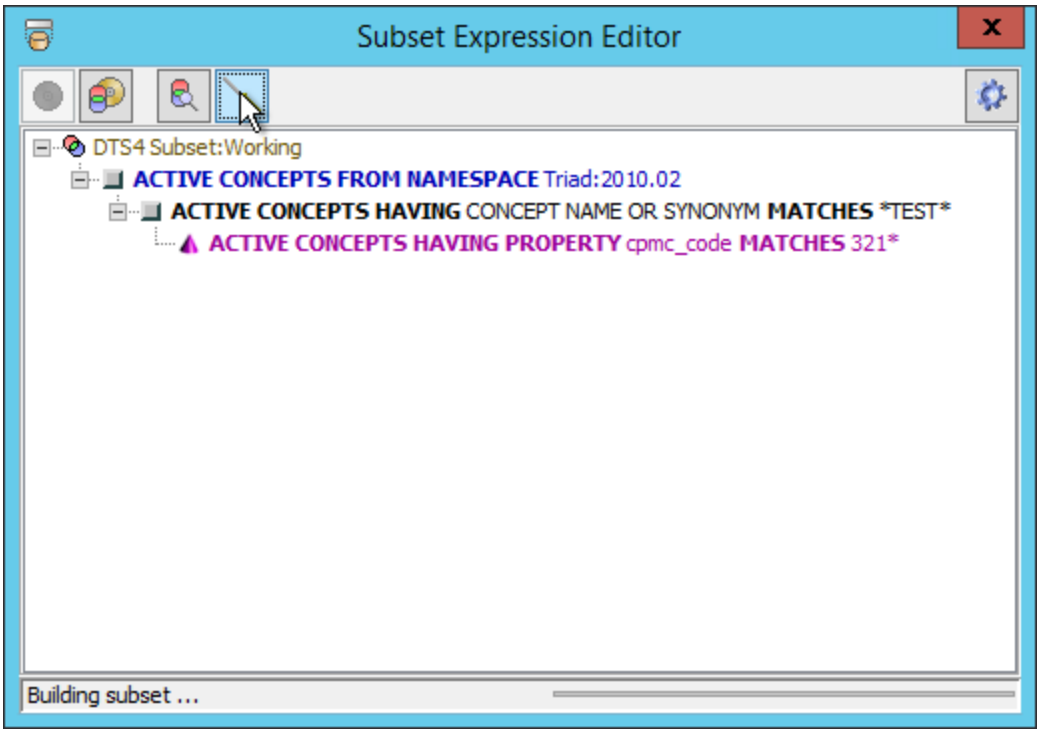
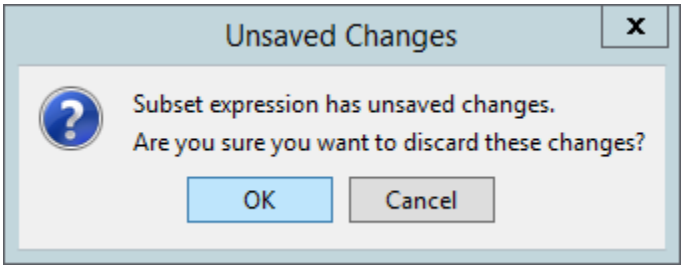


If you attempt to close the *Subset Expression Editor* window without either saving the expression criteria or building the subset based on that criteria, the following window displays.



If you click **OK**, the *Subset Expression Editor* Window closes, no subset is created, no hierarchy is built, and the new subset expression criteria is not saved.

Click **Cancel**, then click the **Build Subset** icon on the *Subset Expression Editor* window to initiate the new concept hierarchy build.

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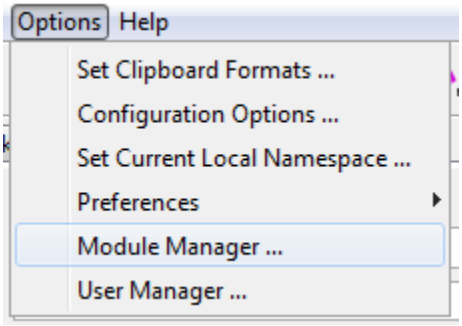
J. The Module Manager

The DTS Module Manager enables the loading, updating, and removal of DTS Editor User Modules with minimal user intervention. Direct file manipulation is not required.

The Module Manager accesses current User Module information from an Internet-accessible Module Folder. The folder also contains installation kits for all available User Modules. Module information is displayed in the *Module Manager* panel, and Module actions (**Add**, **Update**, and **Remove**) can be specified. These actions are performed on the next DTS Editor restart.

This Module Folder is typically maintained by Apelon on behalf of all DTS installations, but organizations can create and maintain their own Module folder in order to limit Module availability or add organization-specific Modules. See the **Maintaining a Module Manager Facility** guide for further information.

The Module Manager is available from the *DTS Editor* **Options** menu. The following sections describe operation of the Module Manager and Module Update panels.



J.1 Module Manager Panel

Selecting the **Module Manager** item in the **Options** menu opens the *Module Manager* floating panel. The panel combines information from the Internet Module Information File, which contains descriptions of all available Modules, with installed Module data, to produce the **Module Configuration** area on the left of the panel. This area shows each known Module in the **Module** column, the installed version of the Module, if any, in the **Current Version** column, and the most recent version of the Module in the **Latest Version** column.

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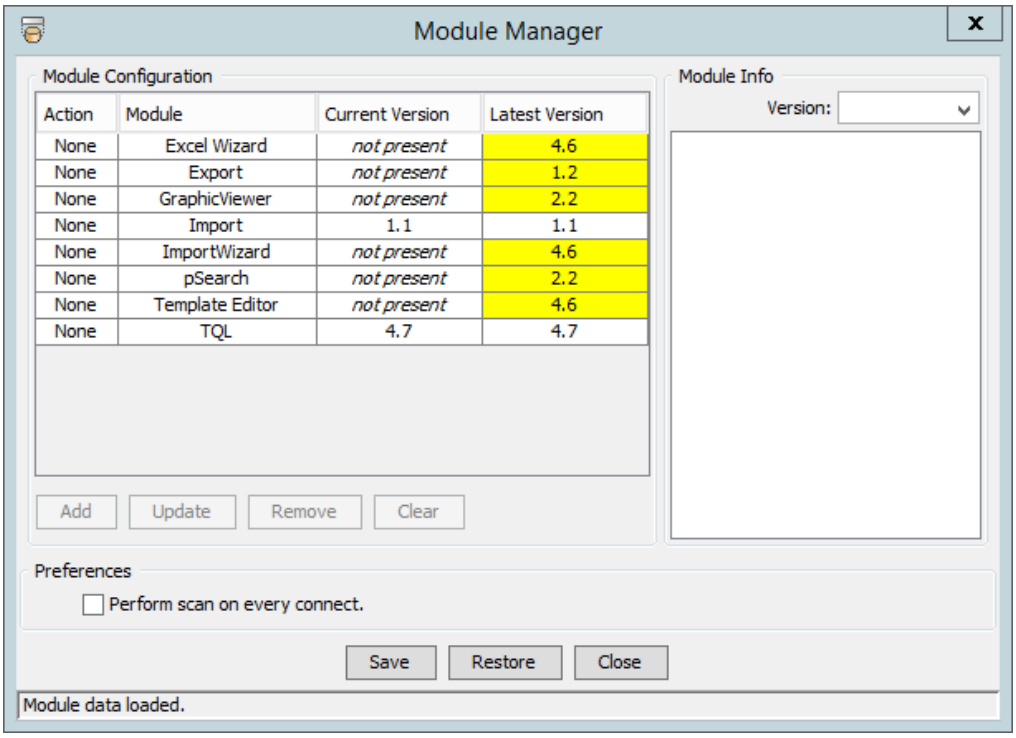
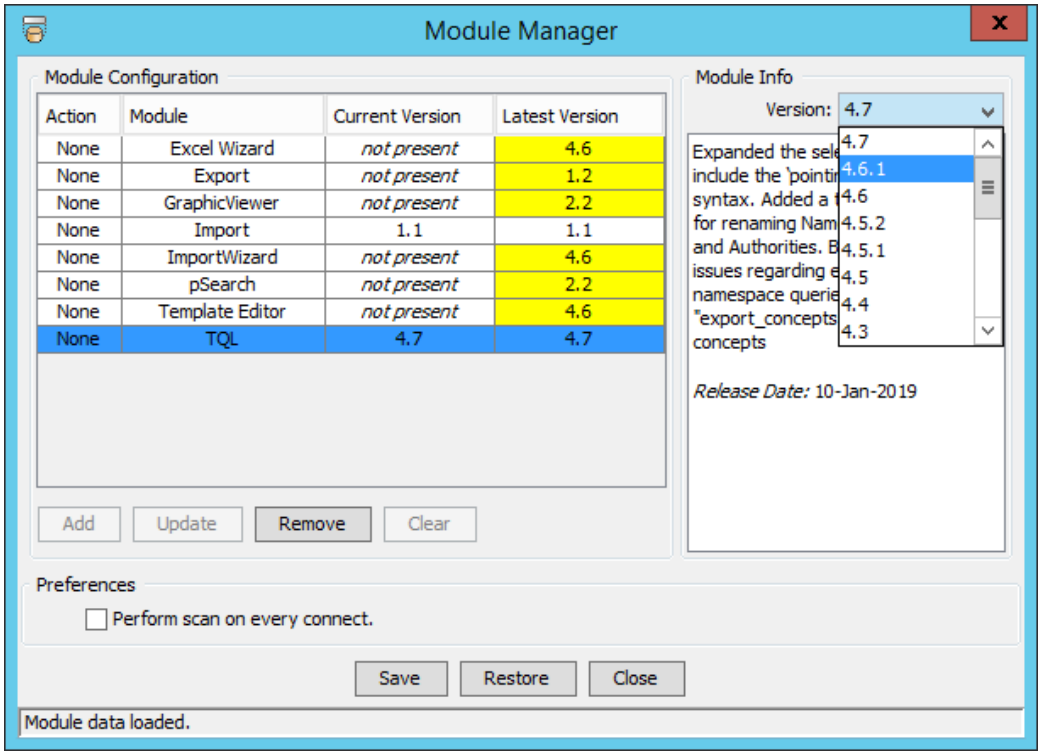


Selecting a Module line in the **Module Configuration** area fills the **Module Info** area on the right. This area gives summary descriptions of all versions of the selected Module. Information on previous versions can be shown by selecting the version name from the **Version** dropdown, but only the most recent version is available for download.



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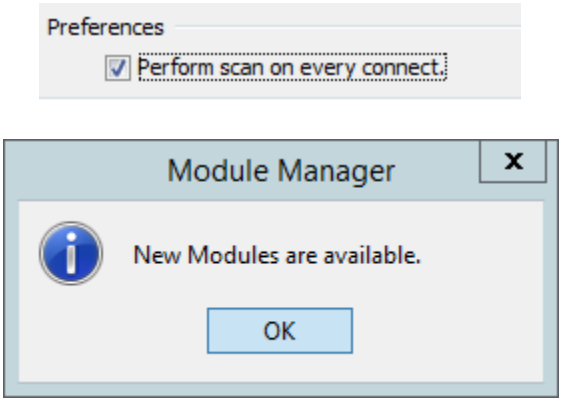
Selecting a Module line also enables the Module Action buttons. Pressing one of these buttons specifies an action to be performed on the Module. Only actions available on the selected Module are enabled.

- Press **Add** to add a new Module to the DTS Editor.
- Press **Update** to update an existing Module to its latest version.
- Press **Remove** to remove the Module from the DTS Editor.
- Press **Clear** to clear any pending Module actions and return the panel to its original state.

Any selected action is shown in the **Action** cell of the Module line.

The final feature of the *Module Manager* panel is the **Preference**s area at the bottom of the panel. Checking the **Perform scan on every Connect** box causes a load and analysis of the Module Information File on every Editor Knowledgebase Connect operation. If any new Modules or Module updates are available, an information dialog is shown after a successful connection:



After all desired Module actions have been selected, press **Save** to persist the requests in the Editor configuration file. The requested Module actions are NOT performed at this time, however. For technical reasons, Module changes can only be made on Editor restart. The selected actions are saved in the DTS Editor configuration file for execution at the next start-up. When the Editor is restarted, the *Module Update* panel (see below) is displayed that lists the actions and shows their progress of the actions. Before a restart, the *Module Manager* panel can be re-opened and the actions adjusted as desired.

J.2 Module Update Panel

The *Module Update* panel is shown when the DTS Editor is started, and Module actions are pending. The panel lists the saved Module actions to be taken.

As each action is performed, the panel shows the steps being taken For an Add or Update action, for example, the steps are downloading and installing.

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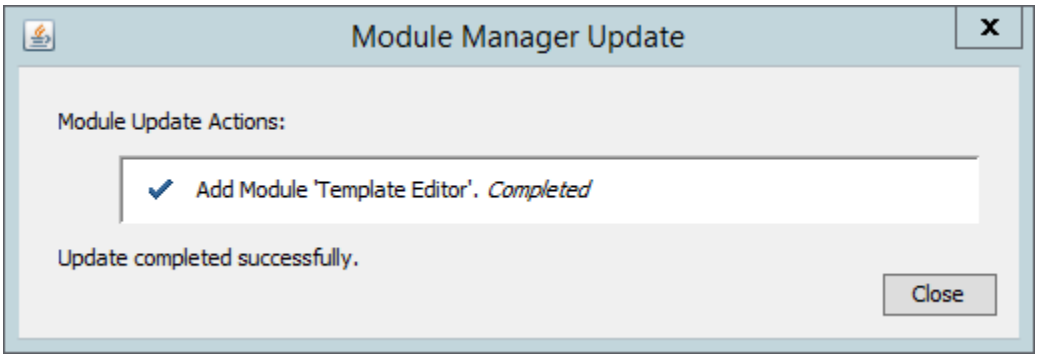
After all actions have been performed, a summary message, including any errors encountered, is shown. Successful actions are removed from the Module Update property in the DTS Editor configuration file, while any actions resulting in errors are maintained. Subsequent to the update, the *Module Manager* panel can be reopened and the actions revised.



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K. Appendix A: Custom Initialization of Concepts and Terms

K.1 Introduction

When Concepts and Terms are created in the DTS Editor, only the Concept Name (prompted by the New Concept/Term Dialog) and the Concept Code and Concept Id (generated by the DTS Server) are populated. The value of the Concept Id is the next integer in the Namespace's Concept sequence (this sequence generator can be accessed programmatically, see **DTS Sequence APIs** below). The Concept Code is the same integer, prefixed by "C" for Concepts or "T" for Terms, e.g. "C12", T13".

It is possible to modify these default assignments, and add additional Concept/Term attributes, by registering a **DTSConceptTermInitializer** on the Namespace. A **DTSConceptTermInitialzer** is a Java class that is called whenever a new Concept or Term is about to be added to the DTS Knowledgebase by the DTS Editor. The specific sequence of events is:

1. User requests a new Concept/Term from a *Details* Panel.
2. The Concept/Term name is received from the New Concept/Term Dialog.
3. A **DTSConceptTermInitializer** is called if registered on the new object's Namespace. The initializer can populate any attribute on the Concept/Term.
4. The new Concept/Term object is sent to the server for addition to the Knowledgebase.

To create a **DTSConceptTermInitializer**, you must write and compile a Java class that extends **DTSConceptTermInitializer** and place it in the DTS classpath; the `lib\modules` folder is recommended. The class can also be bundled in a jar if desired. Then register the class in the *DTS Editor Configuration* panel available from `Options| Configuration Options` in the Editor menu bar. The sections below describe details for each of these steps.

K.2 Preparing a DTSConceptTermInitializer

A DTSConceptTermInitializer is a class that extends the base class `com.apelon.apps.dts.editor.modules.DTSConceptTermInitializer`. The user initializer class must reside in the `com.apelon.modules.dts.editor.config` package, have an argumentless constructor and implement four methods:

- `void register(int nsid)` Called when the initializer is registered on a Namespace. The argument is the Id of the Namespace. Although a given initializer class can be registered on multiple Namespaces, a new class instance is created for each registration. The `register` method is called immediately after the Namespace's initializer instance is constructed and may be used to setup any required instance variables.
- `DTSConcept initializeConcept(DTSConcept con)` called with a new (empty) Concept object. Only the Concept Name and Namespace Id will be populated. Returns a Concept object (usually the same object as provided) populated with the

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desired attributes. Any writable attribute (Code, Id, Primitive/Defined, Synonym, Property, Association, Defined Concept, Role, etc.) can be added. The DTS API can be used to manage Code and Id uniqueness. If the Concept Code and/or Concept id is not updated, the server will provide default values.

- `Term initializeTerm(Term term)` called with a new (empty) Term object. Only the Term Name and Namespace Id will be populated. Returns a populated Term as described above.
- `String getDescription()` called by the *Configuration* panel to display a description of the initializer (see **Registering an Initializer** below). This method should NOT depend on `register` previously being called.

An example ConceptTermInitializer class is shown below. This class assigns a random Concept Id and sets the Concept Code and the Code in Source Property to the same value. Note that uniqueness of the randomized Id is checked.

```
package com.apelon.modules.dts.editor.config;


import
com.apelon.apps.dts.editor.modules.DTSConceptTermInitializer;

import com.apelon.beans.dts.plugin.DTSAppManager;

import com.apelon.dts.client.attribute.DTSProperty;

import com.apelon.dts.client.attribute.DTSPropertyType;

import
com.apelon.dts.client.concept.ConceptAttributeSetDescriptor;

import com.apelon.dts.client.concept.DTSConcept;

import com.apelon.dts.client.term.Term;


public class CodeInSourceInitializer extends
DTSConceptTermInitializer {

     private final static String CIS_NAME = "Code in Source";

     private DTSPropertyType cisType = null;

     public CodeInSourceInitializer() {

          super();

     }


//register (and verify) this namespace
```

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```
     public void register (int nsid) throws Exception {
          cisType = getPropertyType(CIS_NAME, nsid);
          if (cisType==null) throw new Exception("No Property
Type '"+CIS_NAME+"' present in Namespace.");
     }


//initialize a DTSConcept
     public DTSConcept initializeConcept(DTSConcept con) throws
Exception {
          if (cisType==null) throw new Exception("No Property
Type '"+CIS_NAME+"' present.");
          //get the Code
          int random;
          while (true) {
               random = (int)(Math.random()*100000);
               if
(DTSAppManager.getQuery().getDTSConceptQuery().
                         findConceptByCode("C"+random,
con.getNamespaceId(),
ConceptAttributeSetDescriptor.NO_ATTRIBUTES)==null) break;
          }
          con.setCode("C"+random);
          DTSProperty prop = new DTSProperty(cisType,
""+random);
          con.addProperty(prop);
          return con;
     }


     //initialize a Term
     public Term initializeTerm(Term term) throws Exception {
          return term;
     }
```

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```
     //return a description of this initializer
     public String getDescription() {
          return "This initializer adds a Code in Source
property.";
     }


     private DTSPropertyType getPropertyType(String name, int
nsid) throws Exception {
          return
DTSAppManager.getQuery().getDTSConceptQuery().findPropertyTypeBy
Name(name, nsid);
     }
}
```

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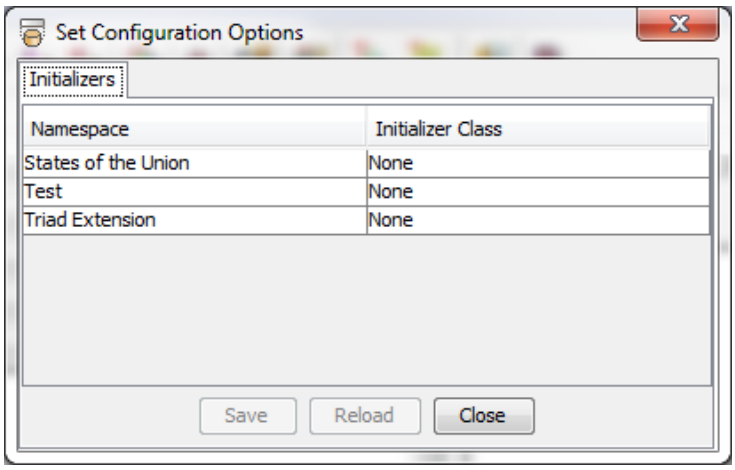
K.3 Registering an Initializer

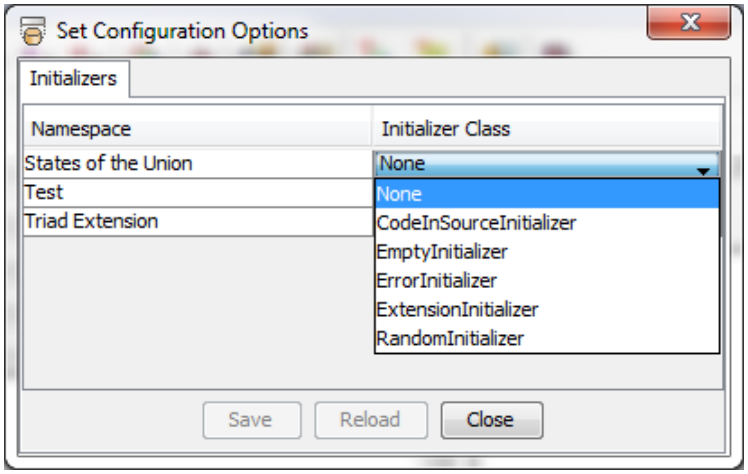
Follow the steps below to register a loaded DTSConceptTermInitializer on a Namespace.

1. Select `Options|Configuration Options` from the Editor menu bar. The *Configuration* panel is shown:



The Initializers tab lists each writable Namespace and its associated Initializer Class.

2. To register an initializer on a Namespace, double click in the `Initializer Class` cell opposite the Namespace. The available initializers will be shown in the dropdown list. Select an initializer to be associated with the Namespace. Note that the initializer is not registered until the `Save` button is pressed. Mouse over any initializer name to see its description in a ToolTip.



3. Commit the initializer changes by pressing the `Save` button, or exit the panel by clicking `Close`. Cancel any pending changes and return to the base assignments by pressing `Reload`.

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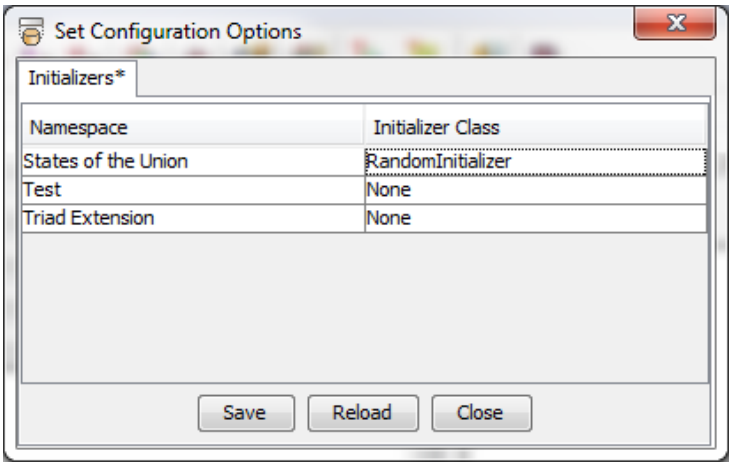

K.4 DTS Sequence APIs

In order to avoid having to test the uniqueness of id values as required in `CodeinSourceInitializer` above, the DTS API provides access to the server's namespace sequence generators. These APIs enable user applications to independently retrieve, and/or reset, the server's internal sequence generator values.

```
int BaseLocalConceptQuery.generateNextConceptId(namespaceId,
idCount)
```

Returns the next ID in the designated namespace's Concept sequence. This is method is synchronized on the server, so that the operation is "atomic" across invocations. `idCount` is the number by which the sequence is incremented after the return (usually 1).

```
int BaseLocalConceptQuery.generateNextTermId(namespaceId,
idCount)
```

Returns the next ID in the designated namespace's Term sequence. This is method is synchronized on the server, so that the operation is "atomic" across invocations. `idCount` is the number by which the sequence is incremented after the return (usually 1).

For further information on the DTS sequence APIs, see the DTS API Javadoc.

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L. Appendix B: Length Limitations for DTS 4 Attribute Values

L.1 Overview

The values users create in the DTS 4 Editor have length (character) limitations. Attributes such as Concepts, Terms, Properties, etc. all have value length limitations. Below is a table illustrating these DTS 4 value length limitations for each attribute.

Attribute	**Value Length Limitation***
Concept Name	749 characters
Term Name	749 characters
Namespace Name	255 characters
Authority Name	255 characters
Subset Name	255 characters
Validator Name	255 characters
Property Types[2]	4000 characters
Qualifier Types[3]	255 characters
Namespace Code	32 characters
IDs[1]	Positive integer range from 0 to 65535
Type Names[2,3,4,5]	255 characters

[1]IDs include: [Namespace] ID, [Subset] ID, [Authority] ID

[2]Property Type Names include: Concept [Property], Term [Property], Namespace [Property], [Namespace] Version [Property], Subset [Property], [Subset] Version [Property], Authority [Property]

[3]Qualifier Type Names include: Concept Property [Qualifier], Term Property [Qualifier], Concept Association [Qualifier], Term Association [Qualifier], Namespace Property [Qualifier], [Namespace] Version Property [Qualifier], Subset Property [Qualifier], [Subset] Version Property [Qualifier], Authority Property [Qualifier]

[4]Association Type Names include: Concepts [Association], Concept with Synonymous Term (Synonym) [Association], Terms [Association]

[5]Other Type Names include: Kind, Role Type

*** NOTE:** Character length limit may be less if one or more UTF-8 character is larger than the typical 1 byte.

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