

# Tutorials

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# Overview

The [Schema](#) Subset Generation Tool ([SSGT](#)) presents the schema designer with an interface that permits searching through the National Information Exchange Model (NIEM) for desired types and properties by substrings in names, definitions, and other fields of [NIEM](#). When appropriate types or properties are found, the user may select them for inclusion in a schema subset. [SSGT](#) applies the appropriate rules and automatically includes any types and elements that the user selections depend on. The designer does not have to manage subsetting rules or dependencies. After selecting all of the desired types and properties, the designer can generate the schema subset. The result is a **zip** archive file containing the relevant, valid subset schemas derived from the [NIEM](#) reference schemas and any referenced code list schemas. The **[zip]** archive directory structure and file placement is arranged automatically.

The screenshot shows the SSGT interface with a search results page. A red circle highlights a section of the results list, specifically the 'Organization' type and its associated properties. A callout labeled '1' points to the 'nc:OrganizationName' property under the 'Organization' type. Another red circle highlights the 'PersonOrganizationAssociation' element, with a callout labeled '2' pointing to the 'nc:PassportIssuingOrganization' attribute under this element. The interface includes a search bar at the top, a toolbar with buttons for 'Add', 'Search', and 'Generate Documents', and navigation controls at the bottom.

Figure: SSGT Automatic Dependencies

# Search and Discovery

The Schema Subset Generation Tool (SSGT) search function allows you to:

- Enter search terms and view matching results in a data hierarchy format.
- Navigate through the various data types, properties, namespaces, and facets and their relationships.
- Select advanced search options to refine your search results.

## Search Page

- Click the Search link to display the search page.

**Figure:SSGT Search Page**

**⚠ Note:** The search page is displayed by default.

## Basic Search

1. Click the Search for a drop-down and select either *Property*, *Type*, *Namespace*, or *Facet*.
2. Enter a search term in the text box next to the drop-down.
3. Click the Search button.

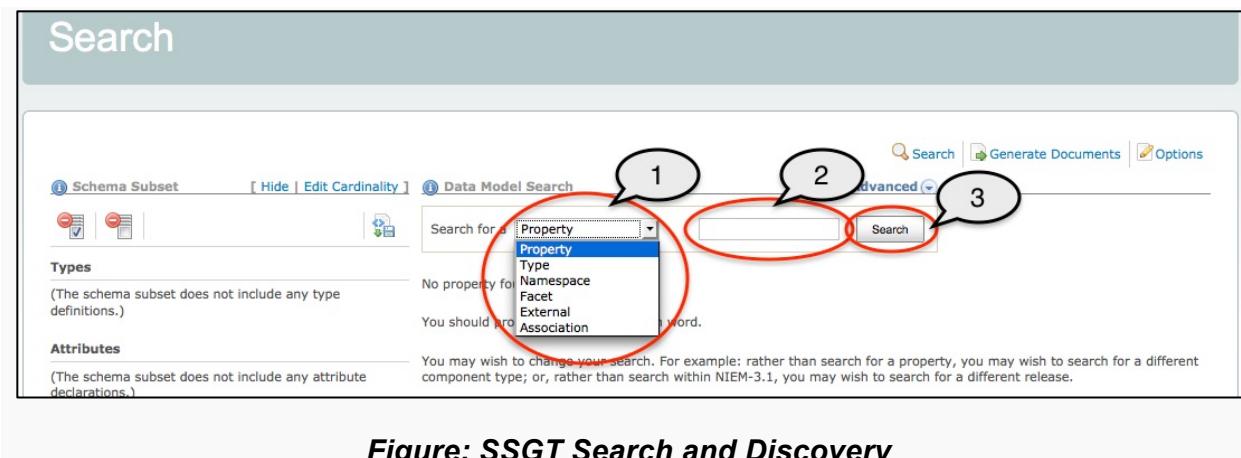
**Property:** A *Property* is a global schema xsd:element.

**Type:** A *Type* is a schema xsd:complexType or xsd:simpleType that contains any number of properties. For example, nc:OrganizationType contains properties, such as

nc:OrganizationLocation, nc:OrganizationStatus, etc. Properties from the namespace xsd-proxy are wrappers for schema simple types such as xsd-proxy:string for xsd:string or xsd-proxy for xsd:integer. Proxy simple types allow for adding metadata to the properties.

**Namespace:** A *Namespace* is a logical grouping of data types, properties, and facets associated with a particular domain. If *Namespace* is selected in the search drop-down, the namespace prefixes, fully qualified namespace URIs, and namespace descriptions will be searched for the matching search term. The namespace or a hyperlinked list of namespaces that contain the matching term will be returned.

**Facet:** A *Facet* is a constraint on the values of eXtensible Markup Language (XML) simple types (such as strings, integers, dates, binaries, etc.). Such constraints can be on data value length, patterns, or specific values. For example, an enumeration facet constrains a string type property to a particular set of values, often referred to as a code list. A code list for an organization category type might constrain valid string values to Business, Charity, Criminal Justice, etc. If set to *Facet*, all code lists (enumeration facets) matching a substring either in a code value or definition will be returned.



**Figure: SSGT Search and Discovery**

## Advanced Search

- Click the toggle link Show Advanced to show advanced search options.
- Click the toggle link Hide Advanced to hide advanced search options (green circle). Enter search terms in the text-box labeled with the exact phrase to search multiple terms.

- Enter search terms in the text-box labeled with at least one of the words to conduct a logical OR search.
- Enter search terms in the text-box labeled without the words to exclude terms from the search results.
- Uncheck the check-boxes Names, Definition, Keywords, Usage, and Example Content to exclude the unchecked item from being searched for the search terms entered above.

**Note:** If all check-boxes are unchecked, **no results will be returned.**

The screenshot shows the SSGT Advanced Search interface. At the top right, there is a yellow warning icon with the text "Note: If all check-boxes are unchecked, no results will be returned." Below the warning, the search interface is displayed.

The search interface includes the following sections:

- Schema Subset:** Buttons for Hide, Edit Cardinality, and Data Model Search.
- Search Bar:** A dropdown menu set to "Property" with a search input field and a "Search" button.
- Advanced Search Options:** A "Hide Advanced" button circled in red.
- Search Criteria:**
  - "with the exact phrase" (empty input field)
  - "with at least one of the words" (empty input field)
  - "without the words" (empty input field)
  - Search Context Definitions** and **Clear Search Terms** buttons.
- Search Within Component Attributes:** A list of checked checkboxes:
  - Names
  - Definitions
  - Keywords
  - Usage
  - Example Content
 Buttons for **Restore Checkbox Defaults** and **Clear Checkboxes**.
- Search Within Domains:** A list of checked checkboxes:
  - Biometrics
  - Chemical, Biological, Radiological, and Nuclear (CBRN)
  - Children, Youth and Family Services
  - Emergency Management
  - Human Services
  - Immigration
  - Infrastructure Protection
  - Intelligence
  - International Trade
  - Justice
  - Maritime
  - MilOps
  - Screening
  - Other
 Buttons for **Restore Checkbox Defaults** and **Clear Checkboxes**.

At the bottom of the search interface, there are two messages:

- No property found.
- You should provide at least one search word.

A note at the very bottom states: You may wish to change your search. For example: rather than search for a property, you may wish to search for a different component type; or, rather than search within NIEM-3.1, you may wish to search for a different release.

**Figure: SSGT Advanced Search**

# Exploring search results

The properties and types displayed in the search results are hyperlinked to display more detailed information about that component. This helps users navigate through the data model to find associated properties and to explore the model hierarchy.

The screenshot shows the SSGT (Semantic Schema Generation Tool) search interface. The title bar says "Search". The top navigation includes "Schema Subset" (with "Hide" and "Edit Cardinality" buttons), "Data Model Search" (with a magnifying glass icon), "Generate Documents" (with a document icon), and "Options" (with a gear icon). A search bar at the top right has dropdowns for "Property" and "unit", and a "Search" button. Below the search bar, there are sections for "Types", "Attributes", and "Elements", each stating "(The schema subset does not include any type/attribute/element declarations.)". To the right of these sections is a large list of model elements, each with an "Add" button and a "details" link. The elements listed include:

- mo:UnitTypeCodeText ( mo : UnitTypeCodeTextType ) details ▾
- mo:speedUnitCode ( unece : VelocityCodeSimpleType ) details ▾
- nc:AddressSecondaryUnitText ( nc : TextType ) details ▾
- nc:DisciplinaryActionCommunityService ( nc : ActivityType ) details ▾
- nc:LengthUnitCode ( unece : LengthCodeType ) details ▾
- nc:LocaleCommunityName ( nc : TextType ) details ▾
- nc:MeasureUnit abstract details ▾
- nc:MeasureUnitText ( nc : TextType ) details ▾
- nc:OrganizationSubUnit ( nc : OrganizationType ) details ▾
- nc:OrganizationSubUnitName ( nc : TextType ) details ▾
- nc:OrganizationUnit ( nc : OrganizationType ) details ▾
- nc:OrganizationUnitAssociationAugmentationPoint abstract details ▾
- nc:OrganizationUnitName ( nc : TextType ) details ▾
- nc:PersonAssignedUnitAssociation ( nc : PersonOrganizationAssociationType ) details ▾
- nc:PersonTemporaryAssignedUnitAssociation ( nc : PersonOrganizationAssociationType ) details ▾
- nc:SpeedUnitCode ( unece : VelocityCodeType ) details ▾
- nc:TemperatureUnitCode ( unece : TemperatureUnitCodeType ) details ▾
- nc:TimeUnitCode ( unece : TimeCodeType ) details ▾
- nc:VehicleGrossLadenUnitWeightMeasure ( nc : MeasureType ) details ▾
- nc:VolumeUnitCode ( unece : VolumeUnitCodeType ) details ▾
- nc:WeightUnitCode ( unece : MassCodeType ) details ▾
- nc:quantityUnitText ( xs : string ) details ▾
- scr:LocationBuildingUnitName ( nc : TextType ) details ▾
- scr:LocationBuildingUnitNumberText ( nc : TextType ) details ▾
- biom:NominalScanningResolutionValue ( niem-xs : decimal ) details ▾

At the bottom, there are navigation links: "First", "Previous", "Next", "Last", and "Displaying 76-100 of 251 results", "Page 4 of 11".

**Figure: SSGT Exploring the Model**

# Showing Properties

- Click the plus-sign icon to the left of a component to expand the list of properties for that component.
- Click the minus-sign icon to the left of a component to hide the list of properties for that component.



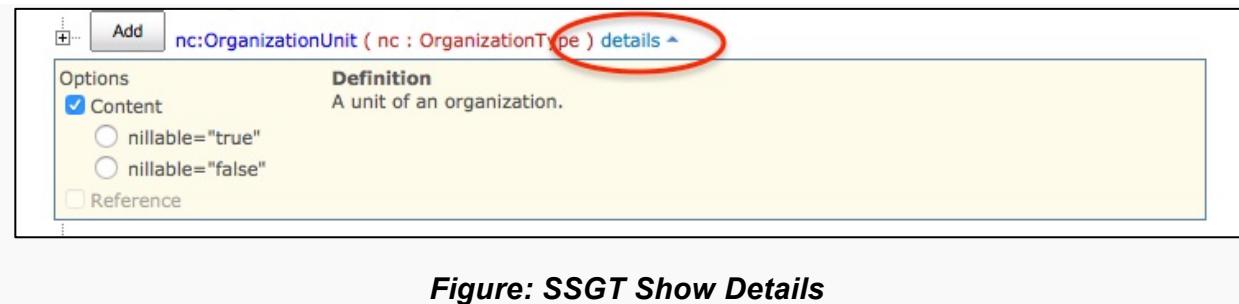
*Figure: SSGT Show Properties*

## Showing Details

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- Click the toggle link details to the right of a component to display the details view for that component.
- Click the toggle link details again to hide the details view.

The details view contains the component definition and two radio buttons that allow selection of whether to make the component nillable = “true” or nillable = “false”.



*Figure: SSGT Show Details*

## Showing a Namespace Page

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- Click a namespace name link before a component name to display that namespace's page.



*Figure: SSGT Show Namespace*

- The namespace page displays the namespace's prefix, Uniform Resource Identifier (URI) and description.

The screenshot shows the SSGT Namespace Page. At the top, there's a search bar with fields for 'Search for a' (set to 'Property'), 'unit', and a 'Search' button. Below the search bar are sections for 'Schema Subset' (with 'Edit Cardinality' and 'Data Model Search' buttons), 'Show Advanced' (with a dropdown menu), and a toolbar with icons for 'Add', 'Edit', and 'Delete'. The main content area is titled 'Types' and contains a message: '(The schema subset does not include any type definitions.)'. It also has sections for 'Attributes' (with a message: '(The schema subset does not include any attribute declarations.)') and 'Elements' (with a message: '(The schema subset does not include any element declarations.)'). On the right side, there's a 'Namespace' section with details: Prefix 'nc', URI 'http://release.niem.gov/niem/niem-core/3.0/', and Description 'NIEM Core.'

Figure: SSGT Namespace Page

## Showing a Type Page

- Click a red type name link to display that type's page.

The screenshot shows the SSGT Show Type page for the type 'nc:OrganizationUnit'. The page has a tree-like structure on the left with 'Add' buttons. The 'nc:OrganizationUnit' node is highlighted with a red oval. The tree structure includes nodes for 'type: (nc:OrganizationType)' and several other properties like 'nc:OrganizationAbbreviationText', 'nc:OrganizationActivityText', and 'nc:OrganizationAugmentationPoint'. Each node has an 'Add' button next to it. The 'nc:OrganizationUnit' node has a dropdown arrow next to its 'Add' button.

Figure: SSGT Show Type

- The type page displays the type's definition, content style (complex content or simple content), parents, possible properties, and a list of other properties (elements) that are of the type being displayed.

The screenshot shows the SSGT Type Page. At the top, there are tabs for Schema Subset, Data Model Search, and Show Advanced. Below the tabs is a search bar with dropdowns for 'Search for a' (set to 'Property') and 'unit' (set to 'Type'). There are also 'Search' and 'Generate Documents' buttons.

**Types**: (The schema subset does not include any type definitions.)

**Attributes**: (The schema subset does not include any attribute declarations.)

**Elements**: (The schema subset does not include any element declarations.)

**Derived Types** (underlined in blue):

- Add All
- Add biom : DNALaboratoryType show inheritance
- Add cys : ChildSupportEnforcementOrganizationType show inheritance
- Add em : HospitalType show inheritance
- Add it : MasterType show inheritance
- Add it : ProcessingEstablishmentType show inheritance
- Add j : CourtType show inheritance
- Add j : EnforcementUnitType show inheritance
- Add j : MotorCarrierType show inheritance
- Add j : PawnBrokerType show inheritance

**Contains** (underlined in blue):

- Add All
- Add nc:OrganizationAbbreviationText ( nc : TextType ) details ▾
- Add nc:OrganizationActivityText ( nc : TextType ) details ▾
- Add nc:OrganizationBranchName ( nc : TextType ) details ▾
- Add nc:OrganizationCategory abstract details ▾
- Add nc:OrganizationDayContactInformation ( nc : ContactInformationType ) details ▾
- Add nc:OrganizationDescriptionText ( nc : TextType ) details ▾

**Figure: SSGT Type Page**

## Showing a Property Page

- Click a blue type name link to display that property's page.

The screenshot shows the SSGT Show Property page for the type nc:OrganizationUnit. The type is highlighted with a red oval. The page displays the following information:

**nc:OrganizationSubUnitName** ( nc : TextType ) details ▾

**nc:OrganizationUnit** ( nc : OrganizationType ) details ▾

**type:** (nc:OrganizationType)

**Add All**

**nc:OrganizationAbbreviationText** ( nc : TextType ) details ▾

**nc:OrganizationActivityText** ( nc : TextType ) details ▾

**nc:OrganizationAugmentationPoint** abstract details ▾

**Figure: SSGT Show Property**

The property page displays a property's definition, nillable options, types the property is contained in, and the type of the property. Check the appropriate nillable option radio

button. The Contained In group box, if present, contains the type that the property is a member of.

The screenshot shows the SSGT Property Page interface. At the top, there is a navigation bar with links for 'Search', 'Generate Documents', and 'Options'. Below the navigation bar, there are sections for 'Schema Subset' (with 'Hide' and 'Edit Cardinality' buttons), 'Data Model Search' (with a search bar for 'Property' and 'unit'), and 'Show Advanced'.

On the left side, there are three collapsed sections: 'Types' (The schema subset does not include any type definitions.), 'Attributes' (The schema subset does not include any attribute declarations.), and 'Elements' (The schema subset does not include any element declarations.).

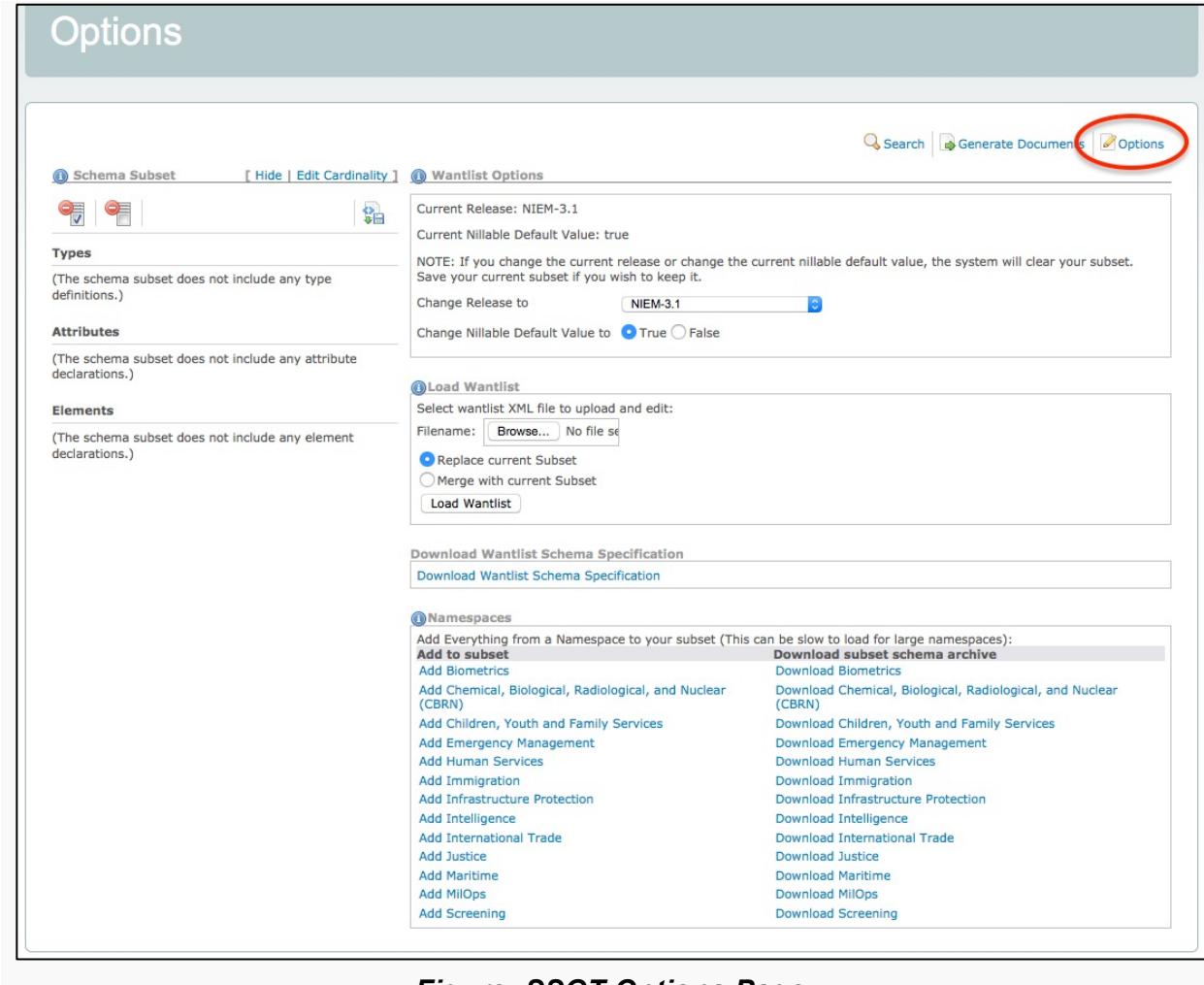
The main content area displays a property definition for 'nc:OrganizationUnit'. It includes a 'Definition' section stating 'A unit of an organization.' and a 'Contained In' section listing 'nc : OrganizationUnitAssociationType show inheritance'. There is also a 'Type of this Property' section listing 'nc : OrganizationType'.

A modal dialog box titled 'Add Options' is open, showing checkboxes for 'Content' (selected) and 'nilable=true' (selected), and a radio button for 'nilable=false'. There is also an unchecked checkbox for 'Reference'.

**Figure: SSGT Property Page**

# Options Page

- Click the Options link to display the options page.



The screenshot shows the SSGT Options Page. At the top right, there are three buttons: 'Search', 'Generate Document', and 'Options'. The 'Options' button is circled in red. The main content area is divided into several sections:

- Schema Subset**: Includes buttons for 'Add', 'Edit', and 'Delete'.
- Wantlist Options**:
  - Current Release: NIEM-3.1
  - Current Nullable Default Value: true
  - NOTE: If you change the current release or change the current nullable default value, the system will clear your subset. Save your current subset if you wish to keep it.
  - Change Release to:
  - Change Nullable Default Value to:  True  False
- Load Wantlist**:
  - Select wantlist XML file to upload and edit:
  - Filename:  No file selected
  - Replace current Subset
  - Merge with current Subset
  -
- Download Wantlist Schema Specification**:
  - [Download Wantlist Schema Specification](#)
- Namespaces**:
  - Add Everything from a Namespace to your subset (This can be slow to load for large namespaces):
  - Add to subset**:
    - 
    - [Download Biometrics](#)
    - [Download Chemical, Biological, Radiological, and Nuclear \(CBRN\)](#)
    - [Download Children, Youth and Family Services](#)
    - [Download Emergency Management](#)
    - [Download Human Services](#)
    - [Download Immigration](#)
    - [Download Infrastructure Protection](#)
    - [Download Intelligence](#)
    - [Download International Trade](#)
    - [Download Justice](#)
    - [Download Maritime](#)
    - [Download MiOps](#)
    - [Download Screening](#)

Figure: SSGT Options Page

# Change Release Version

- Click the Change Release To: drop-down box to select the version NIEM to use when generating the subset zip-file.

**Options**

The screenshot shows the 'Options' section of the SSGT application. At the top, there are links for 'Search', 'Generate Documents', and 'Options'. Below this, the 'Schema Subset' tab is active, showing 'Wantlist Options'. A note states 'Current Release: NIEM-3.1' and 'Current Nullable Default Value: true'. A note also says: 'NOTE: If you change the current release or change the current nullable default value, the system will clear your subset. Save your current subset if you wish to keep it.' A dropdown menu titled 'Change Release to' is open, showing options: NIEM-3.1 (selected), NIEM-2.1, NIEM-2.0, NIEM-1.0, NIEM-3.0-with-domain-updates, NIEM-2.1-with-domain-updates, and NIEM-3.0. This dropdown is circled in red. Below the dropdown, there's a 'Load Wantlist' section with a file input field ('Select wantlist XML file to upload') containing 'NIEM-3.1', and radio buttons for 'Replace current Subset' (selected) and 'Merge with current Subset', followed by a 'Load Wantlist' button. At the bottom of this section are links for 'Download Wantlist Schema Specification' and 'Download Wantlist Schema Specification'. The 'Namespaces' section below contains a note: 'Add Everything from a Namespace to your subset (This can be slow to load for large namespaces):' and a list of namespaces with download links: Add to subset, Add Biometrics, Download Biometrics; Add Chemical, Biological, Radiological, and Nuclear (CBRN), Download Chemical, Biological, Radiological, and Nuclear (CBRN); Add Children, Youth and Family Services, Download Children, Youth and Family Services; Add Emergency Management, Download Emergency Management; Add Human Services, Download Human Services; Add Immigration, Download Immigration; Add Infrastructure Protection, Download Infrastructure Protection; Add Intelligence, Download Intelligence; Add International Trade, Download International Trade; Add Justice, Download Justice; Add Maritime, Download Maritime; Add MilOps, Download MilOps; Add Screening, Download Screening.

**Figure: SSGT Change Release Version**

**⚠ Note:** Change release before doing a subset.

---

## Add a Property to the Current Subset

1. Click the Add button next to a property to add that property to the current subset.
2. The property added appears in the Elements section.
3. Additionally, the selected type of that property (and all required parent types) will appear in the Types section.

**Note:** Sub-properties of a type (or parent type) will **NOT** be added automatically.

 Sub-properties must be added individually or by using the add all function.

**Note:** In the current subset, properties or types in **BOLD** (#2, below) indicate components directly selected to be added to the subset by the user. Components with normal font weight indicate automatically added dependencies (#3, below), required by at least one **BOLD** component.

Search | Generate Documents | Options

Schema Subset [ Hide | Edit Cardinality ] Data Model Search Show Advanced

Types

The schema subset includes the following type definitions; those requested are shown below.

- nc:OrganizationType
- nc:TextType
- niem-xs:string
- xs:string

3

Attributes

(The schema subset does not include any attribute declarations.)

Elements

The schema subset includes the following element declarations; those requested are shown below.

- nc:OrganizationName
- nc:OrganizationUnit

2

1

Add

scr:OrganizationTaxIdentification ( nc : IdentificationType ) details ▾  
scr:OrganizationTerminationDate ( nc : DateType ) details ▾  
scr:OrganizationUnit ( nc : OrganizationType ) details ▾  
scr:OrganizationUnitAssociationAugmentationPoint abstract details ▾  
scr:OrganizationUnitName ( nc : TextType ) details ▾  
scr:PassportIssuingOrganization ( nc : OrganizationType ) details ▾  
scr:PersonCriminalOrganizationAssociation ( nc : PersonOrganizationAssociationType ) details ▾  
scr:PersonOrganizationAffiliationAssociation ( nc : PersonOrganizationAssociationType ) details ▾  
scr:PersonOrganizationAssociation ( nc : PersonOrganizationAssociationType ) details ▾  
scr:PersonOrganizationAssociationAugmentationPoint abstract details ▾  
scr:ReportingOrganizationText ( nc : TextType ) details ▾  
scr:RoleOfOrganization ( nc : OrganizationType ) details ▾  
scr:DocumentOrganizationAssociation ( scr : DocumentOrganizationAssociationType ) details ▾  
scr:DocumentOrganizationAssociationAugmentationPoint abstract details ▾  
scr:OrganizationAddressAssociation ( scr : OrganizationAddressAssociationType ) details ▾  
scr:OrganizationAddressAssociationAugmentationPoint abstract details ▾  
scr:OrganizationAddressEffectiveDate ( nc : DateType ) details ▾  
scr:OrganizationAddressEndDate ( nc : DateType ) details ▾  
scr:OrganizationAugmentation ( scr : OrganizationAugmentationType ) details ▾  
scr:OrganizationClassificationCategory abstract details ▾  
scr:OrganizationClassificationCategoryCode ( scr : OrganizationCategoryCodeType ) details ▾  
scr:OrganizationEncounterAssociation ( scr : OrganizationEncounterAssociationType ) details ▾  
scr:OrganizationEncounterAssociationAugmentationPoint abstract details ▾  
scr:OrganizationNameEffectiveDate ( nc : DateType ) details ▾  
scr:OrganizationNameIdentification ( nc : IdentificationType ) details ▾

First Previous Next Last  
Displaying 151-175 of 358 results  
Page 7 of 15

**Figure: SSGT Adding a Property to the Current Subset**

## Add a sub-property of a type to the current subset

---



**Note:** Because all properties are global in the NIEM Data Model, sub-properties of a type may be added to the current subset WITHOUT also adding them as sub-properties of their parent type.

1. Click the plus-sign icon next to a property to expand all the sub-properties for the type of that property.
2. Click the Add button next to a sub-property to add that sub-property to the current subset.
3. The property added appears in the Elements section.
4. Additionally, the property also appears as a sub-property of the type in the Types section.

The schema subset includes the following type definitions; those requested are in bold:

- nc:LocationType
- nc:OrganizationType**
- elements:
  - nc:OrganizationLocation (0,∞)**
- nc:TextType
- niem-xs:string
- xs:string

**Attributes**

(The schema subset does not include any attribute declarations.)

**Elements**

The schema subset includes the following element declarations; those requested are in bold:

- nc:OrganizationLocation (niladic="true")
- nc:OrganizationName (niladic="true")**
- nc:OrganizationUnit**

Search for a **Property**: organization

Add nc:OrganizationTaxIdentification ( nc : IdentificationType ) details ▾  
 Add nc:OrganizationTerminationDate ( nc : DateType ) details ▾  
 Add nc:OrganizationUnit ( nc : OrganizationType ) details ▾  
**type: (nc:OrganizationType)**  
 Add Add All  
 Add nc:OrganizationAbbreviationText ( nc : TextType ) details ▾  
 Add nc:OrganizationActivityText ( nc : TextType ) details ▾  
 Add nc:OrganizationAugmentationPoint abstract details ▾  
 Add nc:OrganizationBranchName ( nc : TextType ) details ▾  
 Add nc:OrganizationCategory abstract details ▾  
 Add nc:OrganizationDayContactInformation ( nc : ContactInformationType ) details ▾  
 Add nc:OrganizationDescriptionText ( nc : TextType ) details ▾  
 Add nc:OrganizationDoingBusinessAsName ( nc : TextType ) details ▾  
 Add nc:OrganizationEmergencyContactInformation ( nc : ContactInformationType ) details ▾  
 Add nc:OrganizationEstablishedDate ( nc : DateType ) details ▾  
 Add nc:OrganizationEveningContactInformation ( nc : ContactInformationType ) details ▾  
 Add nc:OrganizationForeignAffiliate ( nc : OrganizationType ) details ▾  
 Add nc:OrganizationIdentification ( nc : IdentificationType ) details ▾  
 Add nc:OrganizationIncorporatedIndicator ( niem-xs : boolean ) details ▾  
 Add nc:OrganizationIncorporationDate ( nc : DateType ) details ▾  
 Add nc:OrganizationIncorporationLocation ( nc : LocationType ) details ▾  
**Add nc:OrganizationLocalIdentification ( nc : IdentificationType ) details ▾**  
 Add nc:OrganizationLocation ( nc : LocationType ) details ▾  
 Add nc:OrganizationName ( nc : TextType ) details ▾  
 Add nc:OrganizationNightContactInformation ( nc : ContactInformationType ) details ▾  
 Add nc:OrganizationOtherIdentification ( nc : IdentificationType ) details ▾  
 Add nc:OrganizationParent abstract details ▾  
 Add nc:OrganizationPrimaryContactInformation ( nc : ContactInformationType ) details ▾

**Figure: SSGT Adding a Sub-Property to the Current Subset**



**WARNING:** Sub-properties of a type added from outside of a hierarchical type are **NOT** added as sub-properties of that type:

In the above example:

5. Property OrganizationUnitName (which is a sub-property of OrganizationType) is added to the subset outside of the type
6. The property OrganizationUnitName appears in the current subset
7. The property OrganizationUnitName is NOT added to the sub-properties of OrganizationType

## Add all sub-properties of a type to the current subset

1. Click the plus-sign icon next to a property to expand all the sub-properties for the type of that property.
2. Click the Add button next to the Add All label to add all properties below the button.
3. All properties are added to the current subset.
4. Additionally, all properties are added as sub-properties of that type.

The screenshot shows the SSGT interface for managing schema subsets. The top navigation bar includes 'Search', 'Generate Documents', and 'Options'. Below it, there are buttons for 'Schema Subset' (with 'Hide' and 'Edit Cardinality'), 'Data Model Search' (with a search bar for 'organization' and a 'Search' button), and 'Show Advanced'.

**Types**: A tree view of type definitions. A blue 'Add' button is highlighted with a callout '1'. A red circle highlights the 'Add All' button in the list of additions, with a callout '2'. A callout '3' points to the 'nc:OrganizationType' node in the tree.

**Attributes**: A section stating '(The schema subset does not include any attribute declarations.)'

**Elements**: A tree view of element declarations. A blue 'Add' button is highlighted with a callout '4'.

The interface also features a search bar at the top right for 'Search for a Property' and a 'Search' button.

**Figure: SSGT Adding All Properties to the Current Subset**

## Add a type to the current subset

1. Click the Add button next to a type to add that type to the current subset.

2. The selected type and all parent types required will appear in the left subset window.

**Note:** Sub-properties of any type added to the current subset will **NOT** be added automatically. Sub-properties must still be added individually or by using the add all function.

The schema subset includes the following type definitions; those requested are in bold:

- nc:EntityType
- nc:OrganizationType

**1**

**2**

**Attributes**  
(The schema subset does not include any attribute declarations.)

**Elements**  
(The schema subset does not include any element declarations.)

cyfs : ChildSupportEnforcementOrganizationType show inheritance  
 cyfs : JuvenileEducationOrganizationAssociationType show inheritance  
 cyfs : OrganizationAugmentationType  
 It : RoleOfOrganizationCategoryType  
 j : ActivityCriminalOrganizationAssociationType show inheritance  
 j : CriminalOrganizationType  
 j : ObligationDueToOrganizationAssociationType show inheritance  
 j : ObligationOrganizationAssociationType show inheritance  
 j : OrganizationAlternateNameType  
 j : OrganizationAugmentationType  
 jc3iedm : MilitaryOrganizationCategoryServiceCodeSimpleType details ▾  
 jc3iedm : MilitaryOrganizationCategoryServiceCodeType details ▾  
 mo : OperationPlanTaskOrganizationType  
 nc : ActivityOrganizationAssociationType show inheritance  
 nc : OrganizationAssociationType show inheritance  
 nc : OrganizationFacilityAssociationType show inheritance  
 nc : OrganizationLocationAssociationType show inheritance  
**Add** nc : OrganizationType  
 nc : OrganizationUnitAssociationType show inheritance  
 nc : PersonOrganizationAssociationType show inheritance  
 ndex : OrganizationCategoryCodeSimpleType details ▾  
 ndex : OrganizationCategoryCodeType details ▾  
 nlets : OrganizationCategoryCodeSimpleType details ▾  
 nlets : OrganizationCategoryCodeType details ▾  
 scr : DocumentOrganizationAssociationType show inheritance

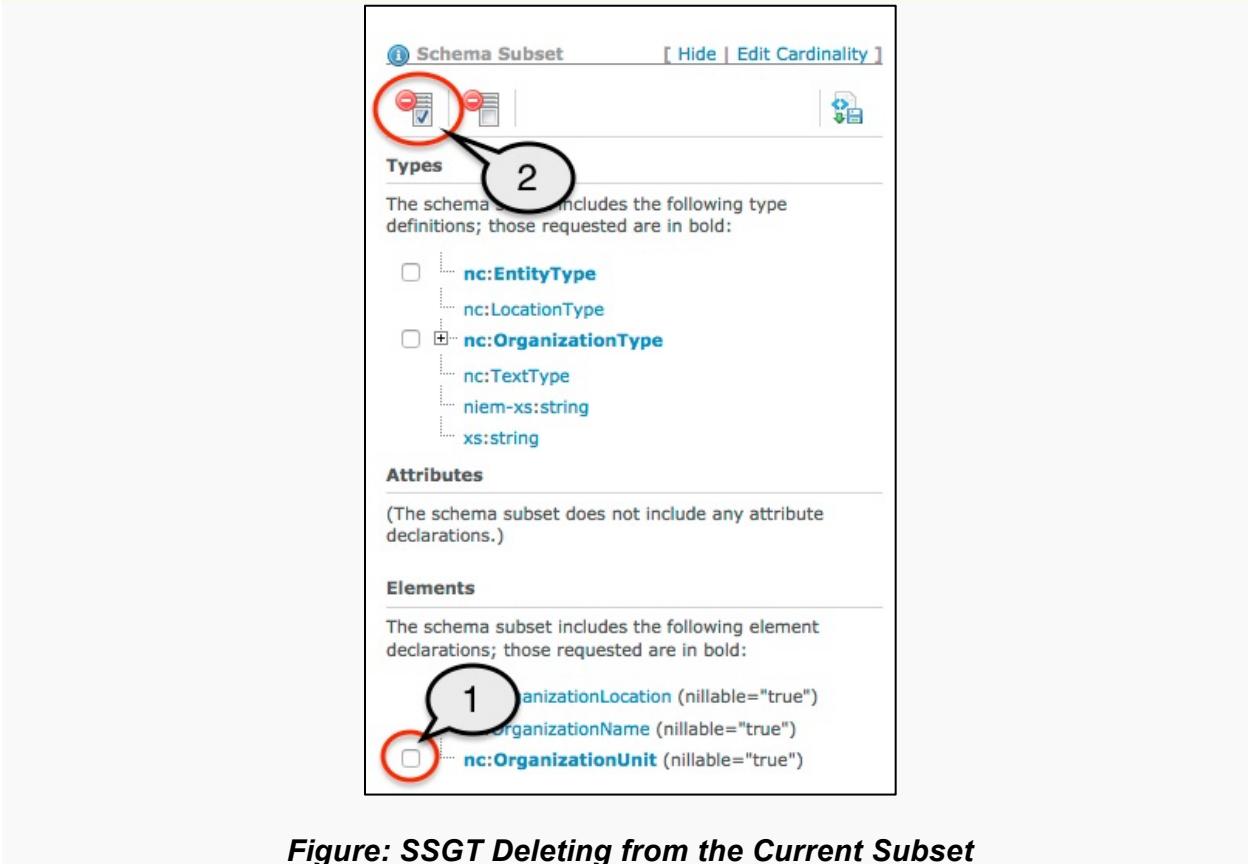
First < Previous > Next Last  
 Displaying 1-25 of 87 results  
 Page 1 of 4

**Figure: SSGT Adding to the Current Subset**

## Delete a type or property from the current subset

1. Check the check-box next to a component to select it for removal from the current subset.
2. Click the Delete button to remove all selected components and dependencies from the current subset.

**Note:** If there is no check-box present to the left of a component, then that component is a required dependency and may not be removed manually. To remove a component without a check-box, delete all components requiring that dependency.

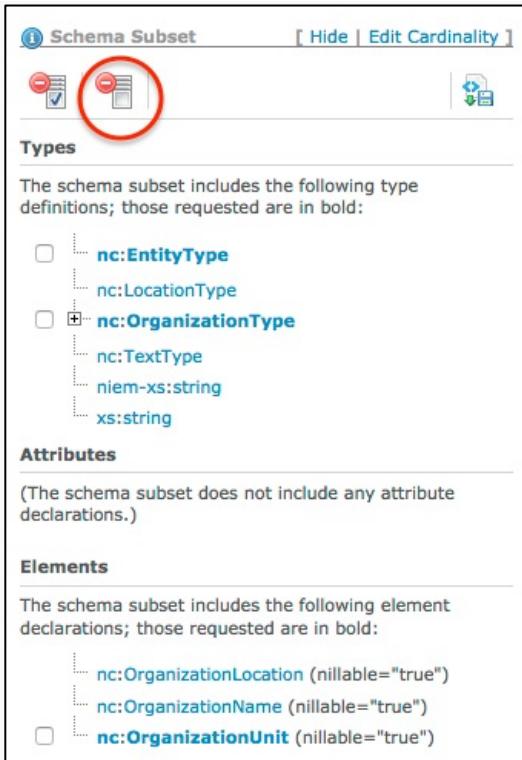


*Figure: SSGT Deleting from the Current Subset*

## Clear the Current Subset

---

- Click the Clear Subset button.



The screenshot shows the 'Schema Subset' interface. At the top, there are buttons for 'Hide' and 'Edit Cardinality'. Below this is a toolbar with icons for 'New', 'Edit', 'Delete', and 'Save'. The main area is divided into sections: 'Types', 'Attributes', and 'Elements'. The 'Types' section contains a tree view of type definitions:

- nc:EntityType
- nc:LocationType
- nc:OrganizationType**
  - nc:TextType
  - niem-xs:string
  - xs:string

The 'Attributes' section states: '(The schema subset does not include any attribute declarations.)'

The 'Elements' section contains a tree view of element declarations:

- nc:OrganizationLocation (nillable="true")
- nc:OrganizationName (nillable="true")
- nc:OrganizationUnit** (nillable="true")

A red circle highlights the 'Delete' icon in the toolbar, which corresponds to the 'Clear Subset' button described in the text.

**Figure: SSGT Clearing the Current Subset**

## Edit cardinalities of all properties in the current subset

**Note:** To provide maximum flexibility to developers, cardinalities of NIEM reference schema sub-properties default to minOccurs="0" and maxOccurs="unbounded". IES Developers should ensure that the appropriate cardinalities are assigned to all sub-properties for their exchange prior to generating the subset.

- Click the Edit Cardinality link.

The screenshot shows the 'Schema Subset' interface. At the top right, there is a red circle highlighting the 'Edit Cardinality' link. Below it, there are sections for 'Types' and 'Elements'. The 'Types' section lists several schema types: nc:EntityType, nc:LocationType, nc:OrganizationType, nc:TextType, niem-xs:string, and xs:string. The 'nc:OrganizationType' entry has a plus sign next to it, indicating it can be expanded. The 'Elements' section lists three element declarations: nc:OrganizationLocation (nillable="true"), nc:OrganizationName (nillable="true"), and nc:OrganizationUnit (nillable="true").

*Figure: Edit Cardinality*

- Enter the minimum cardinality in the minOccurs text-box.
- Enter the maximum cardinality in the maxOccurs text-box.
- Click the Submit for all properties button.

## Edit Cardinality

Schema Subset [\[ Return to Subsets \]](#)

Change the cardinality of every component to ()

Types

The schema subset includes the following type definitions; those requested are in bold:

- nc:OrganizationType
  - elements:
    - nc:OrganizationLocation (  ,  )
    - nc:OrganizationName (  ,  )

[Search](#) | [Generate Documents](#) | [Options](#)

1      2      3

[Save](#)

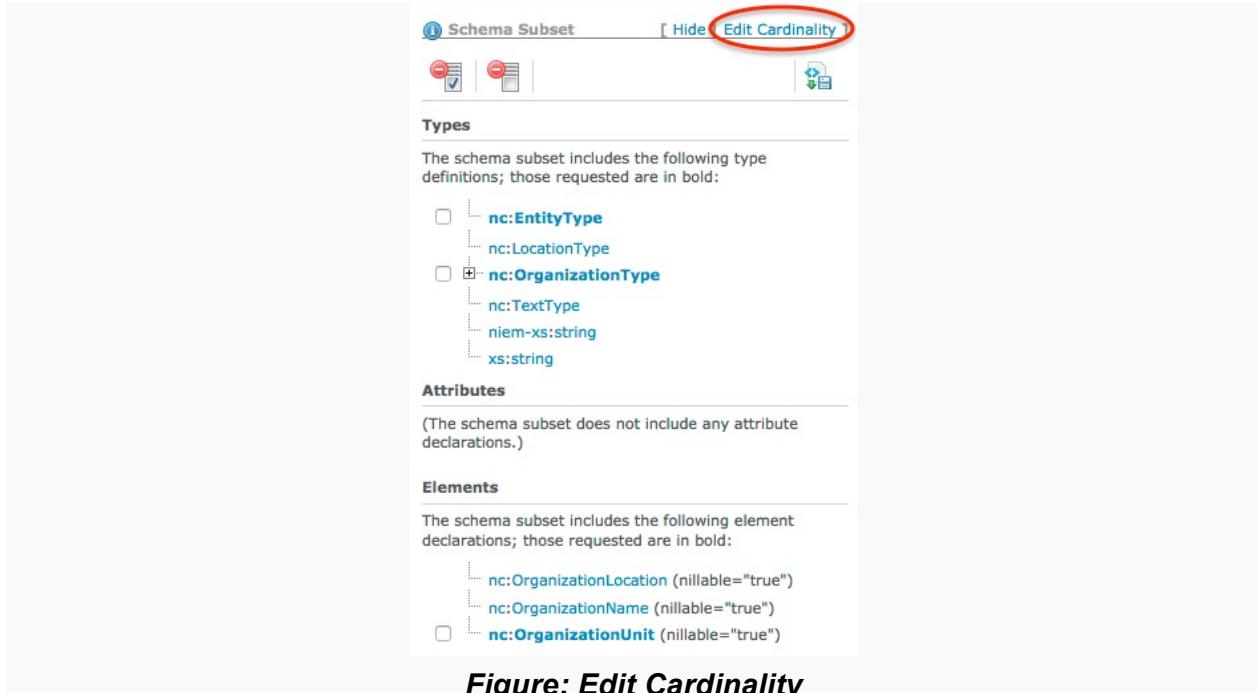
**Figure: Edit Cardinality for All Properties**

# Edit Cardinalities of Properties in the Current Subset

**Note:** To provide maximum flexibility to developers, most cardinalities of NIEM reference schema sub-properties default to

 minOccurs="0" and maxOccurs="unbounded". IEPD Developers should ensure that the appropriate cardinalities are assigned to all sub-properties for their exchange prior to generating the subset.

- Click the Edit Cardinality link.



The screenshot shows the 'Edit Cardinality' dialog box. At the top, there's a toolbar with icons for back, forward, search, and file operations. Below it is a header bar with the title 'Schema Subset' and a 'Hide' button. The main area is divided into three sections: 'Types', 'Attributes', and 'Elements'. The 'Types' section contains a tree view of type definitions. The 'nc:EntityType' node has two children: 'nc:LocationType' and 'nc:OrganizationType'. The 'nc:OrganizationType' node has four children: 'nc:TextType', 'niem-xs:string', and 'xs:string'. The 'Attributes' section states that the schema subset does not include any attribute declarations. The 'Elements' section contains a tree view of element declarations. The 'nc:OrganizationLocation' node has two children: 'nc:OrganizationName' and 'nc:OrganizationUnit'. All elements listed here have 'nilable=true'.

**Figure: Edit Cardinality**

- Click the plus-sign icon next to a type, or the Expand all label to expand all types.
- Select a value from the min: drop-down box to assign the minimum cardinality.
- Select a value from the max: drop-down box to assign the maximum cardinality.
- A message banner at the top of the dialog echoes the new settings.

# Edit Cardinality

Schema Subset [\[ Return to Subset \]](#)

Change the cardinality of every component to (  ,  ) [Save](#)

**Types**

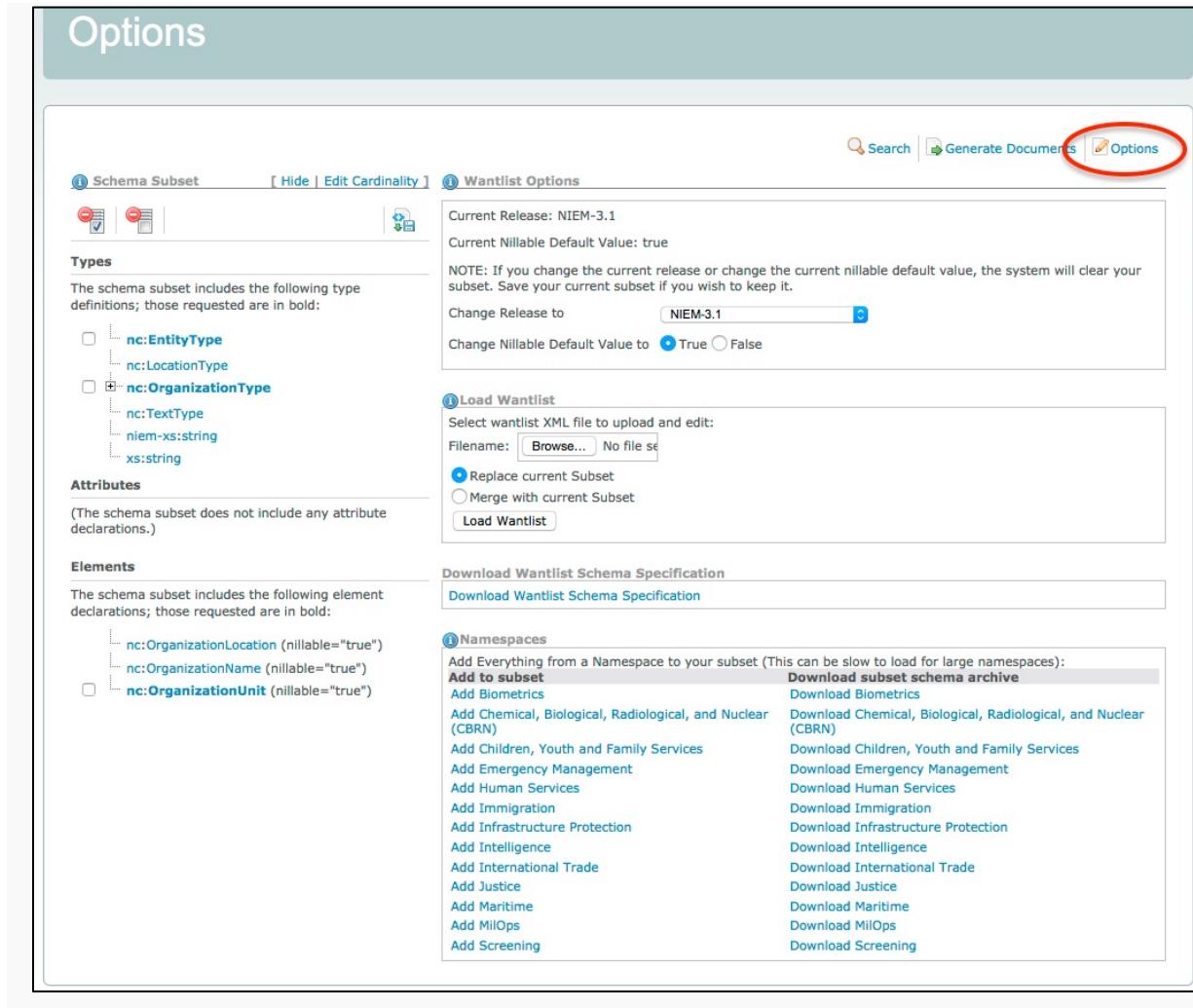
The schema subset includes the following type definition(s) requested are in bold:

1 **nc:OrganizationType**  
elements:  
2 nc:OrganizationLocation ( 2   **∞** )  
3 nc:OrganizationName ( 0   ∞ )

**Figure: Edit Cardinality for a Property**

# Options Page

- Click the Options link to display the options page.



The screenshot shows the SSGT Options Page. At the top right, there are three buttons: 'Search', 'Generate Document', and 'Options' (which is circled in red). Below these are sections for 'Schema Subset' (with buttons for 'Add', 'Edit', and 'Delete'), 'Wantlist Options' (with a search bar), and 'Current Release: NIEM-3.1'. A note says 'NOTE: If you change the current release or change the current nullable default value, the system will clear your subset. Save your current subset if you wish to keep it.' There are dropdowns for 'Change Release to' (set to NIEM-3.1) and 'Change Nullable Default Value to' (set to True). The 'Types' section lists nc:EntityType, nc:LocationType, nc:OrganizationType, nc:TextType, niem-xs:string, and xs:string. The 'Attributes' section notes that the schema subset does not include any attribute declarations. The 'Elements' section lists nc:OrganizationLocation, nc:OrganizationName, and nc:OrganizationUnit. The 'Namespaces' section lists various categories like Add Everything from a Namespace to your subset, Add to subset, Add Biometrics, etc., with download links for each.

Figure: SSGT Options Page

## Add all NIEM components to current subset

- Click the Add NIEM link to add ALL NIEM components to the current subset.

**Note:** Due to the large number of components, this option may time-out before the operation completes. All NIEM content may be downloaded as either a Microsoft Excel spreadsheet (XLS) from the NIEM web page.

**Options**

[Schema Subset](#) [Hide](#) | [Edit Cardinality](#) | [Wantlist Options](#)

Current Release: NIEM-3.1  
Current Nullable Default Value: true  
NOTE: If you change the current release or change the current nullable default value, the system will clear your subset. Save your current subset if you wish to keep it.

Change Release to  [Change](#)  
Change Nullable Default Value to  True  False

[Load Wantlist](#)  
Select wantlist XML file to upload and edit:  
Filename: [Browse...](#) No file selected  
 Replace current Subset  
 Merge with current Subset  
[Load Wantlist](#)

[Download Wantlist Schema Specification](#)  
[Download Wantlist Schema Specification](#)

[Namespaces](#)  
Add Everything from a Namespace to your subset (This can be slow to load for large namespaces):  
[Add to subset](#) [Download subset schema archive](#)  
[Add Biometrics](#) [Download Biometrics](#)  
[Add Chemical, Biological, Radiological, and Nuclear \(CBRN\)](#) [Download Chemical, Biological, Radiological, and Nuclear \(CBRN\)](#)  
**Add Children, Youth and Family Services** [Download Children, Youth and Family Services](#)  
[Add Emergency Management](#) [Download Emergency Management](#)  
[Add Human Services](#) [Download Human Services](#)  
[Add Immigration](#) [Download Immigration](#)  
[Add Infrastructure Protection](#) [Download Infrastructure Protection](#)  
[Add Intelligence](#) [Download Intelligence](#)  
[Add International Trade](#) [Download International Trade](#)  
[Add Justice](#) [Download Justice](#)  
[Add Maritime](#) [Download Maritime](#)  
[Add MilOps](#) [Download MilOps](#)  
[Add Screening](#) [Download Screening](#)

**Figure: SSGT Add All NIEM**

# Generate Documents

1. Click the Generate Documents link to display the generate documents page.
2. Click the Save current wantlist to a file link to save the current subset to an eXtensible Markup Language (XML) wantlist file (allowing for later recall).

The screenshot shows the 'Generate Documents' page with several sections and options:

- Schema Subset:** Includes buttons for 'Hide' and 'Edit Cardinality'. A 'Generate Subset Schema' button is also present.
- Types:** A list of type definitions:
  - nc:EntityType
  - nc:LocationType
  - nc:OrganizationType
    - nc:TextType
    - niem-xs:string
    - xs:string
- Attributes:** A note stating '(The schema subset does not include any attribute declarations.)'
- Elements:** A list of element declarations:
  - nc:OrganizationLocation (nilable="true")
  - nc:OrganizationName (nilable="true")
  - nc:OrganizationUnit (nilable="true")
- Generate Wantlist:** Includes a 'Generate To:' section with a 'Save current wantlist to a file' option.
- Generate Spreadsheet from subset:** Includes a 'Generate To:' section with a 'Save current subset to a spreadsheet file' option.

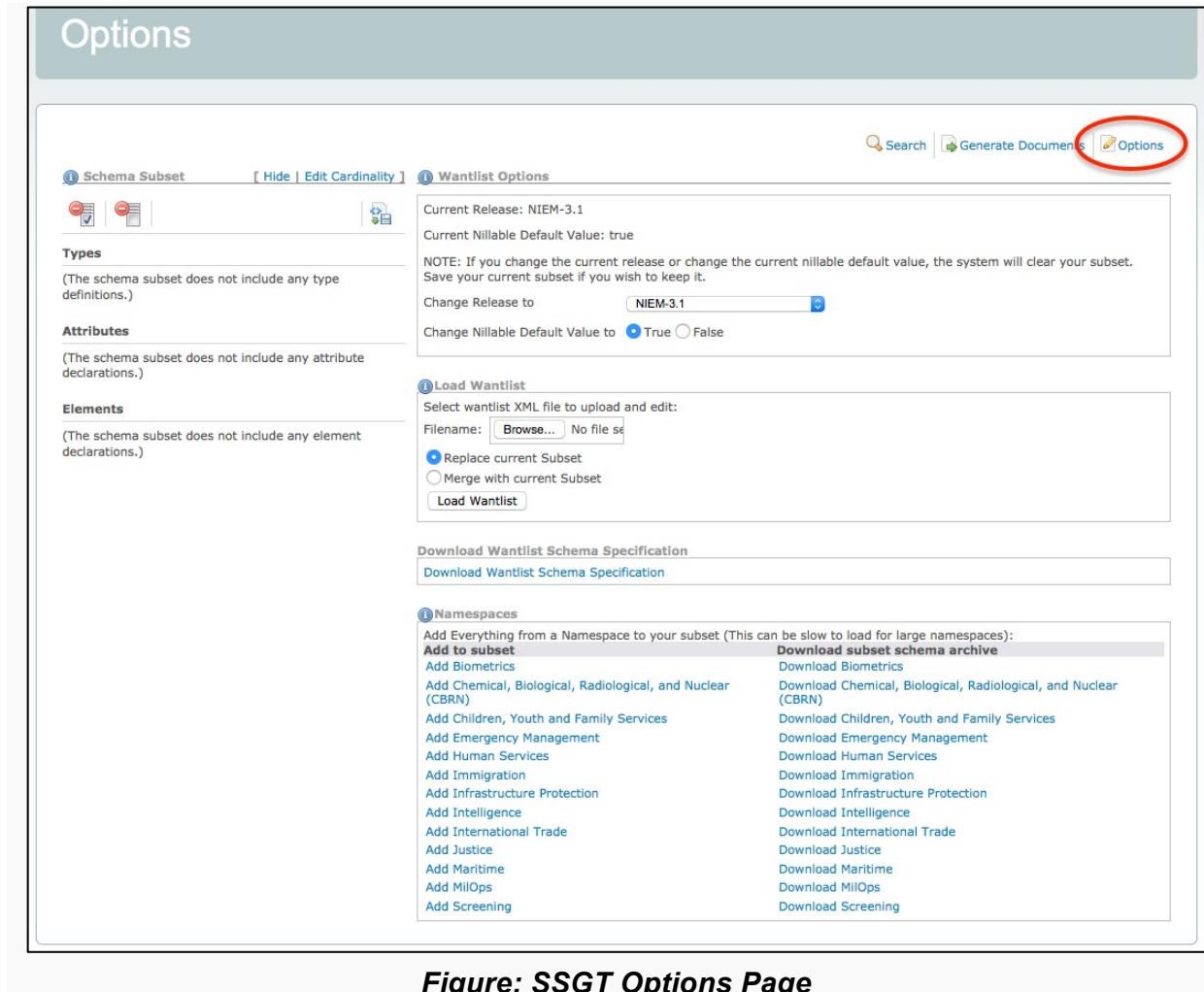
Three numbered callouts highlight specific features:

1. A red circle highlights the 'Generate Documents' button at the top right.
2. A red circle highlights the 'Save current wantlist to a file' link under the 'Generate Wantlist' section.
3. A red circle highlights the 'Save current subset to a spreadsheet file' link under the 'Generate Spreadsheet from subset' section.

**Figure: Generate Documents Page**

# Options Page

- Click the Options link to display the options page.



The screenshot shows the SSGT Options Page. At the top right, there are three buttons: 'Search', 'Generate Documents', and 'Options' (which is circled in red). Below these are sections for 'Schema Subset' (with 'Hide' and 'Edit Cardinality' links), 'Wantlist Options' (showing 'Current Release: NIEM-3.1' and 'Current Nullable Default Value: true'), and 'Load Wantlist' (with a 'Browse...' button, 'Replace current Subset' radio button (selected), and 'Merge with current Subset' radio button). There are also download links for 'Wantlist Schema Specification' and 'Subset schema archive'. The bottom section is for 'Namespaces' with a 'Add to subset' dropdown and a list of categories like Biometrics, CBRN, Children, Youth and Family Services, etc., each with a corresponding 'Download' link.

Figure: SSGT Options Page

## Load Wantlist

- Click Choose File button.
  - Select a wantlist file previously saved from Schema Subset Generation Tool (SSGT) from local machine using browser dialog.
- Select EITHER:
  - Replace current Subset radio-button to replace the current subset with the wantlist file.

2. Merge with current Subset radio-button to merge the current subset with the wantlist file.
3. Click Load Want List button.

**Options**

[Schema Subset](#) [Hide](#) | [Edit Cardinality](#) [Wantlist Options](#)

Current Release: NIEM-3.1  
Current Nillable Default Value: true  
NOTE: If you change the current release or change the current nillable default value, the system will clear your subset. Save your current subset if you wish to keep it.  
Change Release to  Change Nillable Default Value to  True  False

**Types**  
The schema subset includes the following type definitions; those requested are in bold:

- nc:EntityType
- nc:LocationType
- nc:OrganizationType
  - nc:TextType
  - niem-xs:string
  - xs:string

**Attributes**  
(The schema subset does not include any attribute declarations.)

**Elements**  
The schema subset includes the following element declarations; those requested are in bold:

- nc:OrganizationLocation (nillable="true")
- nc:OrganizationName (nillable="true")
- nc:OrganizationUnit (nillable="true")

**Wantlist Options**

1. [Load Wantlist](#)  
Select wantlist XML file, click and edit:  
Filename:  [Browse...](#) No file selected  
 Replace current Subset  
 Merge with current Subset  
[Load Wantlist](#)

2. [Download Wantlist](#) [Specification](#)  
[Download Wantlist Schema Specification](#)

3. [Namespaces](#)  
Add Everything from a Namespace to your subset (This can be slow to load for large namespaces):  
[Add to subset](#) [Download subset schema archive](#)  
[Add Biometrics](#) [Download Biometrics](#)  
[Add Chemical, Biological, Radiological, and Nuclear \(CBRN\)](#) [Download Chemical, Biological, Radiological, and Nuclear \(CBRN\)](#)  
[Add Children, Youth and Family Services](#) [Download Children, Youth and Family Services](#)  
[Add Emergency Management](#) [Download Emergency Management](#)  
[Add Human Services](#) [Download Human Services](#)  
[Add Immigration](#) [Download Immigration](#)  
[Add Infrastructure Protection](#) [Download Infrastructure Protection](#)  
[Add Intelligence](#) [Download Intelligence](#)  
[Add International Trade](#) [Download International Trade](#)  
[Add Justice](#) [Download Justice](#)  
[Add Maritime](#) [Download Maritime](#)  
[Add MiOps](#) [Download MiOps](#)  
[Add Screening](#) [Download Screening](#)

**Figure: SSGT Load Wantlist**

# Options Page

- Click the Options link to display the options page.

The screenshot shows the 'Options' page of the Schema Subset Generation Tool (SSGT). At the top right, there are links for 'Search', 'Generate Documents', and 'Options' (which is circled in red). Below these are sections for 'Schema Subset' (with 'Hide' and 'Edit Cardinality' links) and 'Wantlist Options'. The 'Wantlist Options' section displays the 'Current Release' as 'NIEM-3.1' and 'Current Nullable Default Value' as 'true'. A note states that changing the release or nullable value will clear the subset. There are buttons to 'Change Release to' (set to 'NIEM-3.1') and 'Change Nullable Default Value to' (set to 'True'). Below this is a 'Load Wantlist' section with a 'Browse...' button and radio buttons for 'Replace current Subset' (selected) and 'Merge with current Subset', followed by a 'Load Wantlist' button. At the bottom, there are two download links: 'Download Wantlist Schema Specification' and 'Download Wantlist Schema Specification'. The final section is 'Namespaces' with a 'Add to subset' button and a list of categories: Biometrics, Chemical, Biological, Radiological, and Nuclear (CBRN), Children, Youth and Family Services, Emergency Management, Human Services, Immigration, Infrastructure Protection, Intelligence, International Trade, Justice, Maritime, MilOps, and Screening. To the right of this list are download links for each category.

Figure: SSGT Options Page

## Download Wantlist Schema Specification

- Click the Download Wantlist Schema Specification link to download a XSD Schema file for Schema Subset Generation Tool (SSGT) wantlist files.

**Options**

[Schema Subset](#) [Hide](#) | [Edit Cardinality](#) | [Wantlist Options](#)

Types

The schema subset includes the following type definitions; those requested are in bold:

- nc:EntityType**
- nc:LocationType
- nc:OrganizationType**
- nc:TextType
- niem-xs:string
- xs:string

Attributes

(The schema subset does not include any attribute declarations.)

Elements

The schema subset includes the following element declarations; those requested are in bold:

- nc:OrganizationLocation (nillable="true")
- nc:OrganizationName (nillable="true")
- nc:OrganizationUnit** (nillable="true")

Current Release: NIEM-3.1  
Current Nillable Default Value: true  
NOTE: If you change the current release or change the current nillable default value, the system will clear your subset. Save your current subset if you wish to keep it.

Change Release to

Change Nillable Default Value to  True  False

[Load Wantlist](#)  
Select wantlist XML file to upload and edit:  
Filename:  No file selected  
 Replace current Subset  
 Merge with current Subset

[Download Wantlist Schema Specification](#)

[Download Wantlist Schema Specification](#)

[Namespaces](#)  
Add Everything from a Namespace to your subset (This can be slow to load for large namespaces):  
 [Download subset schema archive](#)  
 [Download Biometrics](#)  
 [Download Chemical, Biological, Radiological, and Nuclear \(CBRN\)](#)  
 [Download Children, Youth and Family Services](#)  
 [Download Emergency Management](#)  
 [Download Human Services](#)  
 [Download Immigration](#)  
 [Download Infrastructure Protection](#)  
 [Download Intelligence](#)  
 [Download International Trade](#)  
 [Download Justice](#)  
 [Download Maritime](#)  
 [Download MilOps](#)  
 [Download Screening](#)

**Figure: SSGT Download Wantlist XSD**

# Generate Documents

1. Click the Generate Documents link to display the generate documents page.
2. Click the Save current subset to a spreadsheet file to save comprehensive type information about the current subset to an Excel XLS file.

The screenshot shows the 'Generate Documents' page with several sections and options:

- Schema Subset:** Includes buttons for 'Hide' and 'Edit Cardinality'. A 'Generate Subset Schema' button is also present.
- Types:** A tree view showing type definitions:
  - nc:EntityType** (unchecked)
  - nc:LocationType** (unchecked)
  - nc:OrganizationType** (unchecked)
  - nc:TextType** (unchecked)
  - niem-xs:string** (unchecked)
  - xs:string** (unchecked)
- Attributes:** A note stating '(The schema subset does not include any attribute declarations.)'
- Elements:** A tree view showing element declarations:
  - nc:OrganizationLocation** (nilable="true")
  - nc:OrganizationName** (nilable="true")
  - nc:OrganizationUnit** (nilable="true")
- Include Documentation?**: Radio buttons for 'yes' (checked) and 'no'.
- Generate To:** A section for generating a subset schema to a file.
- Generate Wantlist:** A section for generating a wantlist to a file. A red circle with '2' highlights the 'Save current wantlist to a file' button.
- Generate Spreadsheet from subset:** A section for generating a spreadsheet from the subset. A red circle with '3' highlights the 'Save current subset to a spreadsheet file' button.

Three numbered callouts point to specific buttons:

1. Points to the 'Generate Documents' button at the top right.
2. Points to the 'Save current wantlist to a file' button under 'Generate Wantlist'.
3. Points to the 'Save current subset to a spreadsheet file' button under 'Generate Spreadsheet from subset'.

**Figure: Generate Documents Page**

# Generate a subset from the current subset

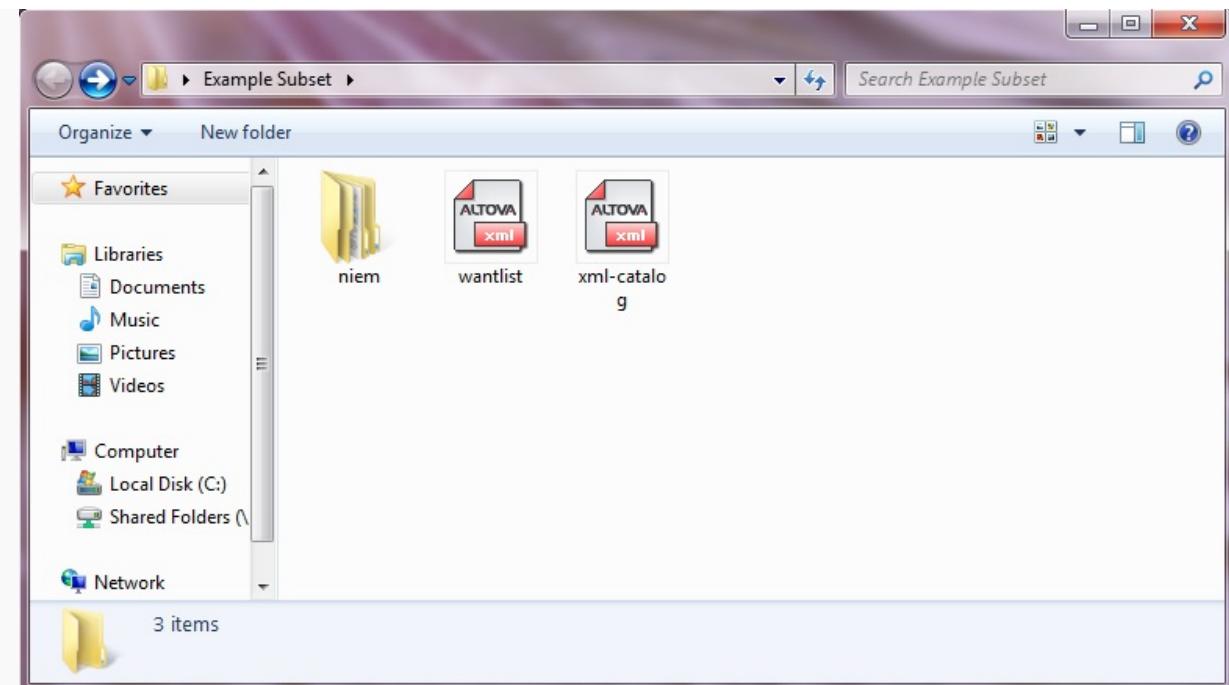
1. Click Generate Documents link to display the generate documents page.
2. Click the Include documentation? yes/no radio-button to toggle inclusion data definitions (xsd:documentation) in the generated subset **[Zip]** file.
3. Click the link Save Subset Schema to a file to generate a subset **[Zip]** file from the currently selected subset.

The screenshot shows the 'Generate Documents' page of the SSGT tool. At the top right, there are three numbered callouts: 1 points to the 'Generate Documents' button; 2 points to the 'Include Documentation?' radio buttons ('yes' is selected); and 3 points to the 'Save Subset Schema to a file' link under the 'Generate To:' section. The main area displays schema subset details, including sections for Types, Attributes, and Elements, with various schema components listed.

Figure: SSGT Generate Subset

# Browsing the Subset

- After download the subset and extracting the zip file, the subset contents may be browsed:

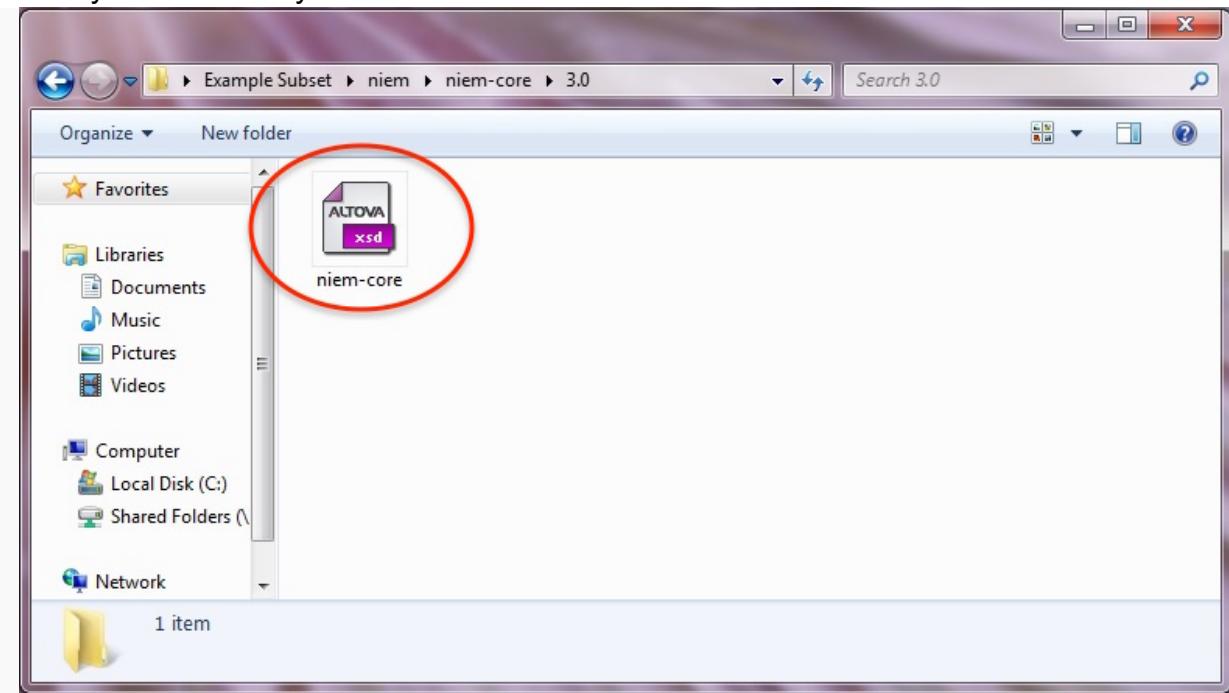


**Figure: SSGT Browsing the Subset**

## Editing Contents

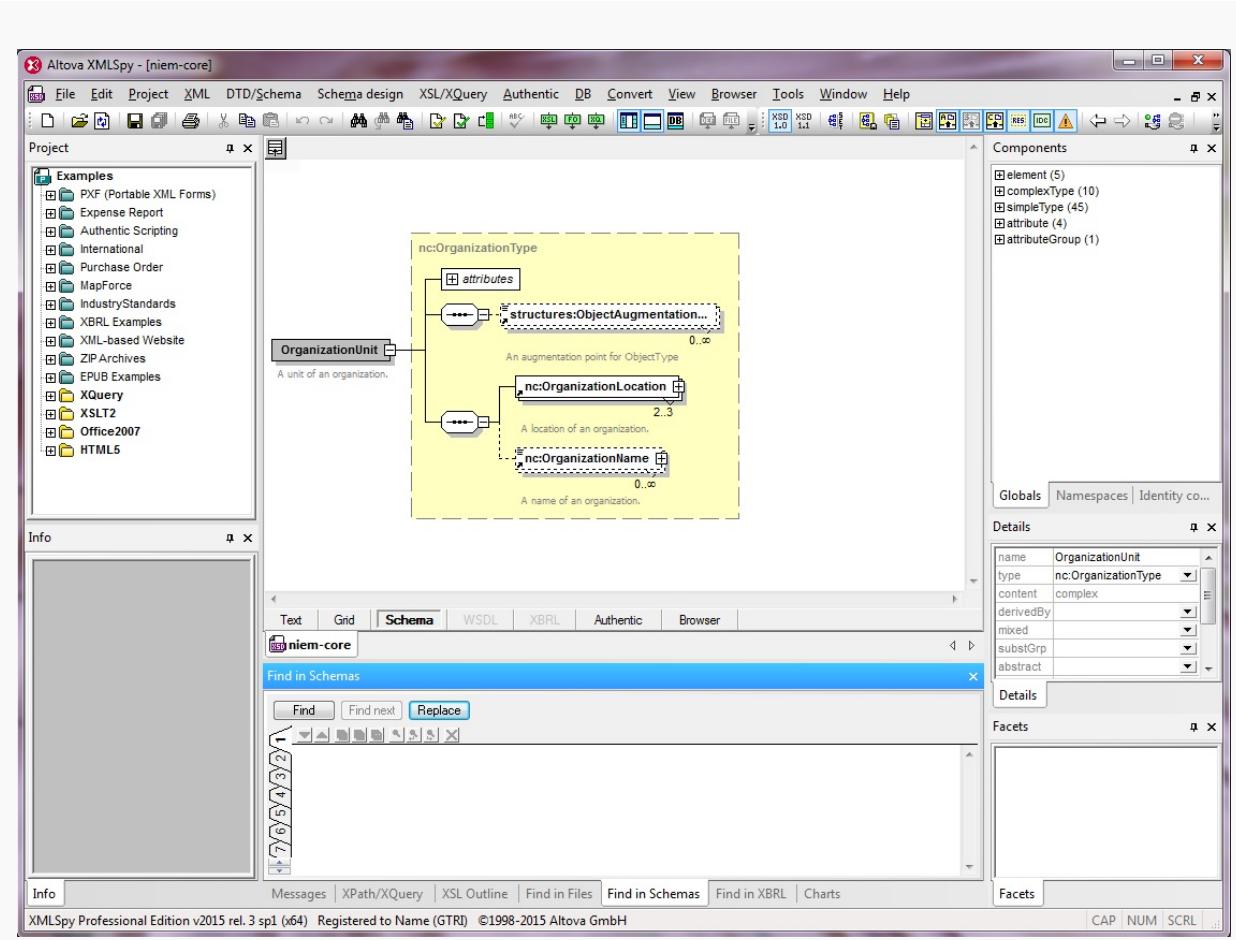
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- Any XML tool may be used to browse the Schema files:



**Figure: SSGT Browsing the Subset**

- In this example, Altova XMLSpy is used to display niem-core.xsd:



**Figure: SSGT Display Schema File Using Altova XML Spy**