

## 5.2.4.1 Reference Set Descriptor

### Purpose

The 900000000000456007 | Reference set descriptor| is a [reference set](#) that is used to specify the format of all [reference sets](#) included in a release. The data type and meaning of the referenced component and each additional field within each [reference set](#) is described by this [reference set](#) .

[Reference set](#) descriptor can be used to define

- The order of appearance of additional attributes (other than those mandatory for all [reference sets](#) );
- The name and purpose of the additional attributes;
- The data types for the additional attributes.

This allows for a [reference set](#) to be validated using the metadata embedded within the [reference set](#) descriptor in the following ways:

- the data type of its attributes may be validated against the data type declared in the [reference set](#) descriptor;
- the column order can be checked against the [reference set](#) descriptor.

### Data structure

The [Reference set descriptor reference set](#) is a [Component - Component - Integer reference set](#) that specifies the structure of reference sets. Its structure is shown in the following table.



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| Field                         | Data type | Purpose                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      | Mandatory | Part of Primary Key                   |
|-------------------------------|-----------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------|---------------------------------------|
| id                            | UID       | A 128 bit unsigned <a href="#">Integer</a> , uniquely identifying this <a href="#">reference set member</a> .<br><br>Different versions of a <a href="#">reference set member</a> share the same <a href="#">id</a> but have different <a href="#">effectiveTime</a> . This allows a <a href="#">reference set member</a> to be modified or made <a href="#">inactive</a> (i.e. removed from the active set) at a specified time.                                                                                            | NO        | YES (Full /Snapshot)                  |
| <a href="#">effectiveTime</a> | Time      | The inclusive date or time at which this version of the identified <a href="#">reference set member</a> became the current version.<br><br><b>Note:</b> In distribution files the effectiveTime should follow the short ISO date format (YYYYMMDD) and should not include the hours, minutes, seconds or timezone indicator.<br><br>The current version of this <a href="#">reference set member</a> at time <i>T</i> is the version with the most recent <a href="#">effectiveTime</a> prior to or equal to time <i>T</i> . | YES       | YES (Full)<br><br>Optional (Snapshot) |
| active                        | Boolean   | The state of the identified <a href="#">reference set member</a> as at the specified <a href="#">effectiveTime</a> .<br><br>If <a href="#">active</a> = 1 (true) the <a href="#">reference set member</a> is part of the current version of the set, if <a href="#">active</a> = 0 (false) the <a href="#">reference set member</a> is not part of the current version of the set.                                                                                                                                           | YES       | NO                                    |
| moduleId                      | SC TID    | Identifies the <a href="#">SNOMED CT module</a> that contains this <a href="#">reference set member</a> as at the specified <a href="#">effectiveTime</a> .<br><br>The value must be a <a href="#">subtype</a> of 900000000000443000   Module (core metadata concept)  within the metadata <a href="#">hierarchy</a> .                                                                                                                                                                                                       | YES       | NO                                    |
| refsetId                      | SC TID    | Identifies the <a href="#">reference set</a> to which this <a href="#">reference set member</a> belongs.<br><br>In this case, the refsetId is always 900000000000456007   Reference set descriptor  as there is only one reference set of this type.                                                                                                                                                                                                                                                                         | NO        | NO                                    |
| referencedComponentId         | SC TID    | A reference to the <a href="#">SNOMED CT component</a> to be included in the <a href="#">reference set</a> .<br><br>Refers to the <a href="#">concept</a> that identifies the reference set (or reference set type) defined by this descriptor.                                                                                                                                                                                                                                                                              | NO        | NO                                    |
| attributeDescription          | SC TID    | Specifies the name of an attribute that is used in the <a href="#">reference set</a> to which this descriptor applies.<br><br>Set to a <a href="#">descendant</a> of 900000000000457003   Reference set attribute (foundation metadata concept)  in the metadata <a href="#">hierarchy</a> , that describes the additional attribute extending the <a href="#">reference set</a> .                                                                                                                                           | NO        | NO                                    |
| attributeType                 | SC TID    | Specifies the data type of this attribute in the <a href="#">reference set</a> to which this descriptor applies.<br><br>Set to a <a href="#">descendant</a> of 900000000000459000   attribute type (foundation metadata concept)  in the metadata <a href="#">hierarchy</a> , that describes the type of the additional attribute extending the <a href="#">reference set</a> .                                                                                                                                              | NO        | NO                                    |

|                |         |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |    |    |
|----------------|---------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----|----|
| attributeOrder | integer | Specifies the position of this attribute in the <a href="#">reference set</a> to which this descriptor applies. A zero value identifies the <a href="#">referencedComponentId</a> within the <a href="#">reference set</a> . Other values specify an additional attributes by its position relative to the <a href="#">referencedComponentId</a> . Within a particular descriptor, <a href="#">attributeOrder</a> values for a particular <a href="#">referencedComponentId</a> must be contiguous.<br><br>An unsigned <a href="#">Integer</a> , providing an ordering for the additional attributes extending the <a href="#">reference set</a> . | NO | NO |
|----------------|---------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----|----|

At least one row must exist for each [reference set](#) included in a release. This row must have an [attributeOrder](#) value of '0' and an [attributeType](#) of 'component type' (or one of its [descendants](#)). The [referencedComponentId](#) identifies the [reference set](#) defined by the descriptor.

There is one additional row for each additional column present in the specified [reference set](#) .

Creation of [Reference set](#) descriptor data is mandatory when creating a new [reference set](#) in the [International Release](#) or in a [National Extension](#) .

Creation of a [Reference set](#) descriptor is optional when creating a [reference set](#) in another [Extension](#). If a descriptor is not created, the descriptor of the closest [ancestor](#) of the [reference set](#) is used when validating [reference set](#) member records.

## Metadata

The following metadata in the [Foundation metadata concept | hierarchy](#) supports the [reference set](#) descriptor [reference set](#) .

The [Reference Set](#) Descriptor [Reference Set](#) is specified by the [900000000000456007 | Reference set descriptor | concept](#) in the metadata hierarchy.

- 900000000000441003 | [SNOMED CT Model Component](#)
  - 900000000000454005 | [Foundation metadata concept](#)
    - 900000000000455006 | [Reference set](#)
      - 900000000000456007 | [Reference set descriptor](#)



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Values in the [Reference Set](#) are populated from:

- 900000000000454005 | [Foundation metadata concept](#)
  - 900000000000457003 | [Reference set attribute](#)
    - 900000000000458008 | [Attribute description](#)
    - 900000000000459000 | [Attribute type](#)
      - 900000000000460005 | [Component type](#)
        - 900000000000461009 | [Concept type component](#)
        - 900000000000462002 | [Description type component](#)
        - 900000000000463007 | [Relationship type component](#)
        - 900000000000464001 | [Reference set member type component](#)
      - 900000000000465000 | [String](#)
        - 900000000000466004 | [Text](#)
          - 900000000000467008 | [Single character](#)
          - 900000000000468003 | [Text &lt; 256 bytes](#)
        - 900000000000469006 | [URL](#)
          - 900000000000470007 | [HTML reference](#)
          - 900000000000471006 | [Image reference](#) ...
        - 900000000000474003 | [UUID](#)
        - 900000000000475002 | [Time](#)
      - 900000000000476001 | [Integer](#)
        - 900000000000477005 | [Signed integer](#)
        - 900000000000478000 | [Unsigned integer](#)
      - 900000000000460005 | [Component type](#) ...
      - 900000000000465000 | [String](#) ...
      - 900000000000476001 | [Integer](#) ...
      - 900000000000479008 | [Attribute order](#)
      - 900000000000491004 | [Attribute value](#) ...



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## Reference Set Descriptor and Example Data

### Notes on the tables used to show descriptors and examples

The reference set example tables on this page have been revised as follows to aid clarity and understanding:

- The first four columns which are present in all release files are not shown. The omitted columns ([id](#), [effectiveTime](#), [active](#), [moduleId](#)) are used in the same way in all referenced sets to support identification, versioning and packaging. They do not directly affect the specific features of a particular reference set or reference set type.
- Reference set columns that contain SNOMED CT identifiers are expanded to show details of the concept or description referenced by that identifier. In some cases, the term is shown in the same column using the expression syntax, in other cases an additional column with a name suffix '\_term' has been added. In the standard reference set files only the identifier is present in the column and there is no added column for the term. When using reference sets, the term and other details of the component are looked up from the relevant component release files.

## Descriptor Template

The table below shows the descriptor that defines the structure of the [900000000000456007 | Reference set descriptor](#). Note that this descriptor is itself part of the [900000000000456007 | Reference set descriptor](#) that it describes!

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| refsetId                                                      | referencedComponentId<br>(Referenced component)               | attributeDescription<br>(Attribute description)            | attributeType (Attribute<br>type)                           | attributeOrder<br>(Attribute order) |
|---------------------------------------------------------------|---------------------------------------------------------------|------------------------------------------------------------|-------------------------------------------------------------|-------------------------------------|
| <a href="#">900000000000456007   Reference set descriptor</a> | <a href="#">900000000000456007   Reference set descriptor</a> | <a href="#">449608002   Referenced component</a>           | <a href="#">900000000000461009   Concept type component</a> | 0                                   |
| <a href="#">900000000000456007   Reference set descriptor</a> | <a href="#">900000000000456007   Reference set descriptor</a> | <a href="#">900000000000458008   Attribute description</a> | <a href="#">900000000000461009   Concept type component</a> | 1                                   |
| <a href="#">900000000000456007   Reference set descriptor</a> | <a href="#">900000000000456007   Reference set descriptor</a> | <a href="#">900000000000459000   Attribute type</a>        | <a href="#">900000000000461009   Concept type component</a> | 2                                   |
| <a href="#">900000000000456007   Reference set descriptor</a> | <a href="#">900000000000456007   Reference set descriptor</a> | <a href="#">900000000000479008   Attribute order</a>       | <a href="#">900000000000478000   Unsigned integer</a>       | 3                                   |