

5.2.17 MRCM Attribute Domain Reference Set

Purpose

An [723604009 |MRCM attribute domain reference set|](#) allows attributes to be associated with the domains in which they may be applied. It also allows grouping and cardinality constraints to be specified for each attribute and domain combination. For each attribute-domain rule, the strength of the rule (e.g. [723597001 |Mandatory concept model rule|](#) or [723598006 |Optional concept model rule|](#)) and the content type over which this rule applies (e.g. [723596005 |All SNOMED CT content|](#), [723594008 |All precoordinated SNOMED CT content|](#)) is also specified.

Each attribute is identified by its concept id, while each domain is identified by the same concept id used in the `referencedComponentId` of the [723589008 |MRCM domain reference set|](#).

Data Structure

An [723604009 |MRCM attribute domain reference set|](#) is structured as shown in the following table.

Field	Data type	Purpose	Mutable	Part of Primary Key
<code>id</code>	UUID	A 128 bit unsigned Integer , uniquely identifying this reference set member . Different versions of a reference set member share the same <code>id</code> but have different <code>effectiveTime</code> . This allows a reference set member to be modified or made inactive (i.e. removed from the active set) at a specified time.	NO	YES (Full /Snapshot)
<code>effectiveTime</code>	Time	The inclusive date or time at which this version of the identified reference set member became the current version. Note: In distribution files the <code>effectiveTime</code> should follow the short ISO date format (<code>YYYYMMDD</code>) and should not include the hours, minutes, seconds or timezone indicator. The current version of this reference set member at time <code>T</code> is the version with the most recent <code>effectiveTime</code> prior to or equal to time <code>T</code> .	YES	YES (Full) Optional (Snapshot)
<code>active</code>	Boolean	The state of the identified reference set member as at the specified <code>effectiveTime</code> . If <code>active = 1</code> (true) the reference set member is part of the current version of the set, if <code>active = 0</code> (false) the reference set member is not part of the current version of the set.	YES	NO
<code>moduleId</code>	SCT ID	Identifies the SNOMED CT module that contains this reference set member as at the specified <code>effectiveTime</code> . The value must be a subtype of 900000000000443000 Module (core metadata concept) within the metadata hierarchy .	YES	NO
<code>refsetId</code>	SCT ID	Identifies the reference set to which this reference set member belongs. In this case, a subtype descendant of: 723604009 MRCM attribute domain reference set 	NO	NO
<code>referencedComponentId</code>	SCT ID	A reference to the SNOMED CT component to be included in the reference set . A reference to the SNOMED CT attribute concept to which the attribute-domain rule defined by this member applies.	NO	NO
<code>domainId</code>	SCT ID	A reference to the SNOMED CT concept that identifies the relevant concept domain.	NO	NO
<code>grouped</code>	Boolean	Whether or not the given attribute (identified by <code>referencedComponentId</code>) is treated by a Description Logic reasoner as belonging to a relationship group, when applied to a concept in the given domain. If <code>grouped = 1</code> (true) then the given attribute (identified by <code>referencedComponentId</code>) is treated by a Description Logic reasoner as belonging to a relationship group. If <code>grouped = 0</code> (false) then the given attribute (identified by <code>referencedComponentId</code>) is treated by a Description Logic reasoner as not belonging to a relationship group.	YES	NO
<code>attributeCardinality</code>	string	The number of times the given attribute can be assigned a distinct (non-redundant) value within the definition of each concept or expression. This string can be parsed using the following ABNF rule (together with the subrules defined in the Expression Constraint Language): <i>attributeCardinality = minimum to maximum</i>	YES	NO

attributeInGroupCardinality	string	The number of times the given attribute can be assigned a distinct (non-redundant) value within a single relationship group as part of the definition of a concept or expression. This string can be parsed using the following ABNF rule (together with the subrules defined in the Expression Constraint Language): <i>attributeCardinality = minimum to maximum</i>	YES	NO
ruleStrengthId	SCT ID	A subtype of 723573005 Concept model rule strength which specifies whether the given rule is mandatory (resulting in an error) or optional (resulting in a warning).	YES	NO
contentTypeId	SCT ID	A subtype of 723574004 Content type which indicates the type of SNOMED CT content over which this rule applies. In many cases, this will be set to 723596005 All SNOMED CT content .	YES	NO

Metadata

The following metadata hierarchy supports this reference set:

- 900000000000454005 |Foundation metadata concept|
 - 900000000000455006 |Reference set|
 - 723564002 |MRCM reference set|
 - 723604009 |MRCM attribute domain reference set|
 - 723561005 |MRCM attribute domain international reference set|
 - 900000000000457003 |Reference set attribute|
 - 723571007 |Cardinality|
 - 723602008 |Attribute cardinality|
 - 723603003 |Attribute in group cardinality|
 - 723574004 |Content type|¹
 - 723593002 |All new precoordinated SNOMED CT content|
 - 723594008 |All precoordinated SNOMED CT content|
 - 723596005 |All SNOMED CT content|
 - 723595009 |All postcoordinated SNOMED CT content|
 - 723596005 |All SNOMED CT content|
 - 609431004 |Domain|
 - 723572000 |Grouped|
 - 723573005 |Concept model rule strength|
 - 723597001 |Mandatory concept model rule|
 - 723598006 |Optional concept model rule|

¹ Please note that the 723574004 |Content type| hierarchy is designed using 'universal restriction' logic. The hierarchy may therefore appear to be 'upside down'. However, it was designed in this way because if an MRCM rule applies to 723596005 |All SNOMED CT content| then it also applies to the Content Types that are a supertype of this - including 723594008 |All precoordinated SNOMED CT content| and 723595009 |All postcoordinated SNOMED CT content| .

Reference Set Descriptor and Example Data

i 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 reference set descriptor for a reference set that follows the [723604009 |MRCM attribute domain reference set|](#) pattern.

refsetId	referencedComponentId	attributeDescription	attributeType	attribute Order
90000000000456007 Reference set descriptor 	723604009 MRCM attribute domain reference set 	449608002 Referenced component 	90000000000461009 Concept type component 	0
90000000000456007 Reference set descriptor 	723604009 MRCM attribute domain reference set 	609431004 Domain 	90000000000461009 Concept type component 	1
90000000000456007 Reference set descriptor 	723604009 MRCM attribute domain reference set 	723572000 Grouped 	90000000000478000 Unsigned integer 	2
90000000000456007 Reference set descriptor 	723604009 MRCM attribute domain reference set 	723602008 Attribute Cardinality 	707000009 SNOMED CT parsable string 	3
90000000000456007 Reference set descriptor 	723604009 MRCM attribute domain reference set 	723603003 Attribute In Group Cardinality 	707000009 SNOMED CT parsable string 	4
90000000000456007 Reference set descriptor 	723604009 MRCM attribute domain reference set 	723573005 Concept model rule Strength 	90000000000461009 Concept type component 	5
90000000000456007 Reference set descriptor 	723604009 MRCM attribute domain reference set 	723574004 Content type 	90000000000461009 Concept type component 	6

Example Data

The table below shows some example rows from a reference set that follows the format of the [723604009 |MRCM attribute domain reference set|](#) .

refsetId	referencedComponentId	domainId	grouped	attributeCardinality	attributeInGroupCardinality	ruleStrengthId	contentTypeId
723561005 MRCM attribute domain international reference set 	255234002 After 	404684003 Clinical finding (finding) 	1	0..*	0..*	723597001 Mandatory concept model rule 	723596005 All SNOMED CT content
723561005 MRCM attribute domain international reference set 	255234002 After 	272379006 Event (event) 	1	0..*	0..*	723597001 Mandatory concept model rule 	723596005 All SNOMED CT content
723561005 MRCM attribute domain international reference set 	408729009 Finding context 	413350009 Finding with explicit context (situation) 	1	0..*	0..1	723597001 Mandatory concept model rule 	723596005 All SNOMED CT content
723561005 MRCM attribute domain international reference set 	272741003 Laterality 	91723000 Anatomical structure (body structure) 	0	0..1	0..0	723597001 Mandatory concept model rule 	723594008 All precoordinated SNOMED CT content

