

**[0094]** 6. Relationship

**[0095]** Relationships in the RSD file can represent relationships that are implemented via foreign keys, triggers or logical relationships (by value).

Tag	Card	Comment
<u>Attributes</u>		
Name	Req	Relationship names must be unique within the context of Database. When relationships are referred to from the RelationshipMap they are qualified by the Database/@Name so that they can be uniquely identified within an entire RSD.
From	Req	The name of the parent table for this Relationship.
To	Req	The name of the child table for this Relationship.
CascadeDelete	Opt	Can be "Server", "Explicit", or "None". Default is "None".
CascadeUpdate	Opt	Can be "Server", "Explicit", or "None". Default is "None". Analogous to CascadeDelete.
Cardinality	Opt	Can be "OneToOne" or "OneToMany". "OneToMany" is the default.
IsLogical	Opt	Can be "true" or "false". Default is "true".
<u>Sub-Elements</u>		
ColumnJoin	1+	Each ColumnJoin refers to a pair of columns. One column on the local table and one on the child table (related table).

**[0096]** CascadeDelete and CascadeUpdate

**[0097]** CascadeDelete and CascadeUpdate introduce a new enumeration for how the central processor (CP) and the Domain adapters (XmlAdapter and ObjectSpace) interpret relationships. "None" means there is no Cascade and the parent is deleted. If any children are present, this results in a runtime error, if constraints are enforced in the database. An "Explicit" option is selected when the user does not have triggers on the back-end database, and wants the CP to remove all the children by executing a set-based DML statement explicitly before deleting the parent. A "Server" option is identical to "None" for the CP, but alerts the Domain adapters to update their cache based on the fact that the cascade has taken place on the server, using triggers or a foreign key on the backend.

**[0098]** IsLogical

**[0099]** This annotation is used by the user when creating a relationship that is not enforced via primary keys. "Server" is still valid when IsLogical is TRUE, and the assumption is that the cascade is implemented via triggers. IsLogical is also a signal to the RSD Generator.

**[0100]** RSD Generation Notes

**[0101]** Applications that generate RSD must set IsLogical to FALSE even though the default is true. When foreign keys in the database are surfaced as Relationships, the corresponding Cascade rules must be either Server or None. When the RSD file is generated, only the relationships that are implemented via foreign keys are listed in the file. The

user must add in relationships that are specified via triggers or in the business logic. Applications that generate the RSD do not return "disabled" Foreign Key constraints. RSD generators preserve Relationships marked IsLogical when refreshing from the database.

EXAMPLE

**[0102]**

```

<rsd:Relationships>
  <rsd:Relationship Name="Northwind.FK_Customer_Order"
  From="Northwind.dbo.Customers"
  To="Northwind.dbo.Orders"
  CascadeDelete="false" CascadeUpdate="true"
  ForeignKey="true">
    <ColumnJoin Column="CustomerID"
    RelatedColumn="CustomerID"/>
  </rsd:Relationship>
  <!-- An FK relationship -->
  <rsd:Relationship Name="myProduct_OD"
  From="Northwind.dbo.Products"
  To="Northwind.dbo.[Order Details]"
  CascadeUpdate="true" >
    <ColumnJoin Column="ProductID"
    RelatedColumn="ProductID"/>
  </rsd:Relationship>
  <!-- A logical relationship -->
</rsd:Relationships>
    
```

**[0103]** 7. ColumnJoin

**[0104]** This element is used to refer to a two-column relationship previously defined. These are two columns on two different tables that are matched to represent a foreign key constraint.

<u>Attributes</u>		
Tag	Card	Comment
Column	Req	The name of column on our table.
RelatedColumn	Req	The name of column on the parent table.

**[0105]** 8. Schemas

**[0106]** This element serves as a container for zero or more Schema elements.

**[0107]** 9. Schema

**[0108]** The Schema element serves as a grouping mechanism for the relational structures stored in the RSD.

<u>Attributes</u>		
Tag	Card	Comment
Name	Req	Schema name.

**[0109]** Sub-Elements

**[0110]** The Schema element can also contain any of the following elements that represent relational structures. Each of the elements below is optional.