

# OData Version 4.0 Errata 03

## Committee Specification Draft 01

10 March 2016

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#### Additional artifacts:

This prose specification is one component of a Work Product that also includes:

- *OData Version 4.0. Part 1: Protocol Plus Errata 03*. Edited by Michael Pizzo, Ralf Handl, and Martin Zurmuehl. 10 March 2016. OASIS Standard incorporating Draft 01 of Errata 03. <http://docs.oasis-open.org/odata/odata/v4.0/errata03/csd01/complete/part1-protocol/odata-v4.0-errata03-csd01-part1-protocol-complete.html>.
- *OData Version 4.0. Part 2: URL Conventions Plus Errata 03*. Edited by Michael Pizzo, Ralf Handl, and Martin Zurmuehl. 10 March 2016. OASIS Standard incorporating Draft 01 of Errata 03. <http://docs.oasis-open.org/odata/odata/v4.0/errata03/csd01/complete/part2-url-conventions/odata-v4.0-errata03-csd01-part2-url-conventions-complete.html>.
- *OData Version 4.0. Part 3: Common Schema Definition Language (CSDL) Plus Errata 03*. Edited by Michael Pizzo, Ralf Handl, and Martin Zurmuehl. 10 March 2016. OASIS Standard incorporating Draft 01 of Errata 03. <http://docs.oasis-open.org/odata/odata/v4.0/errata03/csd01/complete/part3-csdl/odata-v4.0-errata03-csd01-part3-csdl-complete.html>.
- ABNF components: OData ABNF Construction Rules Version 4.0 and OData ABNF Test Cases. <http://docs.oasis-open.org/odata/odata/v4.0/errata03/csd01/complete/abnf/>.

- Vocabulary components: OData Core Vocabulary, OData Measures Vocabulary and OData Capabilities Vocabulary. <http://docs.oasis-open.org/odata/odata/v4.0/errata03/csd01/complete/vocabularies/>.
- XML schemas: OData EDMX XML Schema and OData EDM XML Schema. <http://docs.oasis-open.org/odata/odata/v4.0/errata03/csd01/complete/schemas/>.
- OData Metadata Service Entity Model: <http://docs.oasis-open.org/odata/odata/v4.0/errata03/csd01/complete/models/>.
- Change-marked (redlined) versions of OData Version 4.0 Part 1, Part 2, and Part 3. OASIS Standard incorporating Draft 01 of Errata 03. <http://docs.oasis-open.org/odata/odata/v4.0/errata03/csd01/redlined/>.

#### Related work:

This specification lists Errata for:

- *OData Version 4.0*, a multi-part Work Product which includes:
  - *OData Version 4.0. Part 1: Protocol*. 24 February 2014. <http://docs.oasis-open.org/odata/odata/v4.0/os/part1-protocol/odata-v4.0-os-part1-protocol.html>.
  - *OData Version 4.0. Part 2: URL Conventions*. 24 February 2014. <http://docs.oasis-open.org/odata/odata/v4.0/os/part2-url-conventions/odata-v4.0-os-part2-url-conventions.html>.
  - *OData Version 4.0. Part 3: Common Schema Definition Language (CSDL)*. 24 February 2014. <http://docs.oasis-open.org/odata/odata/v4.0/os/part3-csdl/odata-v4.0-os-part3-csdl.html>.
  - ABNF components: *OData ABNF Construction Rules Version 4.0* and *OData ABNF Test Cases*. <http://docs.oasis-open.org/odata/odata/v4.0/os/abnf/>.
  - Vocabulary components: *OData Core Vocabulary*, *OData Measures Vocabulary* and *OData Capabilities Vocabulary*. <http://docs.oasis-open.org/odata/odata/v4.0/os/vocabularies/>.
  - Schema components: *edm.xsd* and *edmx.xsd*. <http://docs.oasis-open.org/odata/odata/v4.0/os/schemas/>.
  - Model components: *MetadataService.edmx*. <http://docs.oasis-open.org/odata/odata/v4.0/os/models/>.

This specification is related to:

- *OData Atom Format Version 4.0*. Edited by Martin Zurmuehl, Michael Pizzo, and Ralf Handl. Latest version. <http://docs.oasis-open.org/odata/odata-atom-format/v4.0/odata-atom-format-v4.0.html>.
- *OData JSON Format Version 4.0*. Edited by Ralf Handl, Michael Pizzo, and Mark Biamonte. Latest version. <http://docs.oasis-open.org/odata/odata-json-format/v4.0/odata-json-format-v4.0.html>.

#### Abstract:

This document lists Errata for *OData Version 4.0*.

#### Status:

This document was last revised or approved by the OASIS Open Data Protocol (OData) TC on the above date. The level of approval is also listed above. Check the "Latest version" location noted above for possible later revisions of this document. Any other numbered Versions and other technical work produced by the Technical Committee (TC) are listed at [https://www.oasis-open.org/committees/tc\\_home.php?wg\\_abbrev=odata#technical](https://www.oasis-open.org/committees/tc_home.php?wg_abbrev=odata#technical).

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# 1 Introduction

This document lists the approved changes to the OData Version 4.0 specification and contains one chapter per changed part of the specification.

Additional documents containing the final specification text with these changes applied are also available and linked in section "[Additional artifacts](#)" on the title page.

## 1.1 Normative References

- [OData-Protocol]** *OData Version 4.0 Part 1: Protocol.*  
See link in "Related work" section on cover page.

## 2 Part 1: Protocol

Section	Issue	Comment
All sections	<a href="#">668</a>	Replaced "ATOM" with "Atom"
5.2 Model Versioning	<a href="#">769</a>	Term was missing in list of model elements
6.6 Format Extensibility	<a href="#">768</a>	Removed superfluous text that was added by broken bookmark
7 Formats	<a href="#">861, 913</a>	Clarified behavior if no format is explicitly requested
	<a href="#">768</a>	Removed superfluous text that was added by broken bookmark
8.1.1 Header Content-Type	<a href="#">908</a>	Align with RFC7231
	<a href="#">916</a>	Clarify format parameter is significant
8.2.1 Header Accept	<a href="#">916</a>	Service should not add format parameter to response
8.2.4 Header If-Match	<a href="#">766</a>	Reference changed from RFC7230 to RFC7232
8.2.5 Header If-None-Match	<a href="#">766</a>	Reference changed from RFC7230 to RFC7232
8.2.8.4 Preference odata.include-annotations	<a href="#">788</a>	Clarified precedence rules for patterns in the header value
	<a href="#">774</a>	Pattern syntax now covers full annotation syntax
8.3.1 Header ETag	<a href="#">852</a>	Removed leftover fragment from previous edit
8.3.3 Header OData-EntityId	<a href="#">830</a>	Clarified when header is required
	<a href="#">853</a>	Corrected typo
9.1.6 Response Code 304 Not Modified	<a href="#">766</a>	Reference changed from RFC7230 to RFC7231
9.2.4. Response Code 412 Precondition Failed	<a href="#">766</a>	Reference changed from RFC7230 to RFC7232
10.4 Singleton	<a href="#">742</a>	Adapted non-normative example
10.17 Delta Response	<a href="#">837</a>	Adapted non-normative example
11.2 Requesting Data	<a href="#">861, 913</a>	Clarified behavior if no format is explicitly requested
11.2.3 Requesting the Media Stream of a Media Entity	<a href="#">882</a>	Added missing section.
11.2.5.1 System Query Option \$select	<a href="#">847</a>	Clarified use of namespace aliases
11.2.5.2.1.1 Expand Option \$levels	<a href="#">742</a>	Adapted non-normative example

Section	Issue	Comment
11.2.6.1.3 Parameter Alias	<a href="#">775</a>	Clarified use of parameter aliases
11.2.6.2 System Query Option \$orderby	<a href="#">791</a>	Clarified sorting of Boolean and Geo values
	<a href="#">668</a>	Corrected typo in non-normative example
11.2.8 Requesting Entity References	<a href="#">882</a>	Note that services may return 204 for reference to single valued nav prop whose value is null
11.3.1 Delta Links	<a href="#">837</a>	Clarified use of \$deltatoken
	<a href="#">877</a>	Clarified tracking of orphaned entities
11.4.2.2 Create Related Entities When Creating an Entity	<a href="#">870</a> , <a href="#">794</a>	Referenced to relevant related sections instead of incompletely citing them
11.4.3 Update an Entity	<a href="#">893</a>	Clarified when @odata.id and @odata.type are required
11.4.6.1 Add a Reference to a Collection-Valued Navigation Property	<a href="#">749</a>	Clarified behavior when reference already exists
11.5.1 Binding an Operation to a Resource	<a href="#">790</a>	Corrected typo in non-normative example
11.5.3.1 Invoking a Function	<a href="#">776</a>	Clarified rules for function invocation
11.5.4.1 Invoking an Action	<a href="#">761</a>	Clarified rules for Location header
	<a href="#">765</a>	Extended non-normative example
11.6 Asynchronous Requests	<a href="#">766</a>	Corrected reference to RFC7230
11.7.2 Batch Request Body	<a href="#">823</a>	Clarified use of Content-Transfer-Encoding header
	<a href="#">668</a>	Corrected non-normative example
	<a href="#">778</a>	Changed non-normative example
11.7.3 Change Sets	<a href="#">869</a>	Clarified placement of Content-ID header
11.7.3.1 Referencing New Entities in a Change Set	<a href="#">479</a>	Clarified use of content-id referencing
	<a href="#">668</a>	Adapted non-normative example
11.7.4 Responding to a Batch Request	<a href="#">668</a>	Corrected non-normative example
11.7.5 Asynchronous Batch Requests	<a href="#">822</a>	Corrected non-normative example
13.1 OData Service Conformance Levels	<a href="#">668</a>	Corrected typo
13.1.1 OData Minimal Conformance Level	<a href="#">830</a>	Clarified use of OData-EntityId header
Appendix A. Acknowledgments	<a href="#">767</a>	Completed list of contributors

## 3 Part 2: URL Conventions

Section	Issue	Comment
All sections	<a href="#">668</a>	Replaced “ATOM” with “Atom”
1.2 Normative References	<a href="#">917</a>	Copied reference to XML Schema from Part 3 CSDL
2 URL Components	<a href="#">903</a>	Clarified precedence of prose specification over ABNF
4.3.1 Canonical URL	<a href="#">755</a>	Clarified key representation in canonical URLs
5.1 System Query Options	<a href="#">835</a>	Completed list of HTTP verbs
5.1.1.2.1 Addition	<a href="#">917</a>	Clarified rules for time-related operands
	<a href="#">784</a>	Clarified rules for decimal operands
5.1.1.2.2 Subtraction	<a href="#">917</a>	Clarified rules for time-related operands
	<a href="#">784</a>	Clarified rules for decimal operands
5.1.1.2.4 Multiplication	<a href="#">777</a>	Clarified behavior with duration operand
	<a href="#">784</a>	Clarified rules for decimal operands
5.1.1.2.5 Division	<a href="#">777</a>	Clarified behavior with duration operand
	<a href="#">784</a>	Clarified rules for decimal operands
	<a href="#">785</a>	Clarified rules for integer division
5.1.1.2.6 Modulo	<a href="#">784</a>	Clarified rules for decimal operands
5.1.1.2.7 Arithmetic Operator Examples	<a href="#">785</a>	Add example for integer division
5.1.1.5 String Functions	<a href="#">850</a>	Added section header
5.1.1.5.4 indexof	<a href="#">780</a>	Clarified result if no occurrence is found
5.1.1.5.7 substring	<a href="#">781</a>	Clarified result for edge cases
5.1.1.11.2 Complex and Collection Literals	<a href="#">758</a>	Corrected non-normative example
5.1.1.15 Numeric Promotion	<a href="#">785</a>	Clarified rules for numeric promotion
5.1.2 System Query Option \$expand	<a href="#">793</a>	Clarified use of * for complex properties
	<a href="#">892</a>	Clarified behavior for dynamic properties
	<a href="#">840</a>	Added example
	<a href="#">741</a>	Corrected non-normative example
5.1.3 System Query Option \$select	<a href="#">891</a>	Clarified behavior for dynamic properties

Section	Issue	Comment
5.3 Parameter Aliases	<a href="#">775</a>	Clarified use of parameter aliases

## 4 Part 3: Common Schema Definition Language

Section	Issue	Comment
All sections	<a href="#">668</a>	Replaced “ATOM” with “Atom”
3.5 Element edmx:IncludeAnnotations	<a href="#">742</a>	Adapted non-normative example
6.2.1 Attribute Nullable	<a href="#">803</a>	Clarified default and use of Nullable for collections
6.2.2 Attribute MaxLength	<a href="#">858</a>	Clarified meaning of MaxLength for Binary values
6.2.3 Attribute Precision	<a href="#">668</a>	Replaced “allowed” with “significant”
6.2.4 Attribute Scale	<a href="#">789</a>	Clarified behavior for Precision equal to Scale
	<a href="#">801</a>	Clarified behavior for of negative Scale
6.2.5 Attribute Unicode	<a href="#">734</a>	Clarified behavior for Unicode=false
10.2.2 Attribute Value	<a href="#">819</a>	Clarified behavior for multiple enumeration members with same value
12.2.3 Attribute IsComposable	<a href="#">746</a>	Clarified allowed subsequent path segments and query options
13 Entity Container	<a href="#">742</a>	Adapted non-normative example
13.1.2 Attribute Extends	<a href="#">733</a>	Clarified treatment of cycles introduced by Extends
14 Vocabulary and Annotation	<a href="#">912</a>	Clarified treatment of unknown and invalid annotations
14.1.5 Attribute AppliesTo	<a href="#">810</a>	Corrected non-normative example
14.2.1 Attribute Target	<a href="#">865</a>	Completed list of possible targets
	<a href="#">821</a>	Clarified targeting of nested properties
14.4.6 Expression edm:Duration	<a href="#">752</a>	Corrected non-normative example
14.5.2 Expression edm:AnnotationPath	<a href="#">825</a>	Clarified traversal of multi-valued properties
14.5.3.1.2 Function odata.fillUriTemplate	<a href="#">782</a>	Changed non-normative example
14.5.10 Expression edm:Null	<a href="#">880</a>	Clarified that edm:Null can be annotated
14.5.11 Expression edm:NavigationPropertyPath	<a href="#">751</a>	Clarified meaning of edm:NavigationPropertyPath and edm:PropertyPath
14.5.13 Expression edm:PropertyPath	<a href="#">751</a>	Clarified meaning of edm:NavigationPropertyPath and edm:PropertyPath
15.6 Entity Container	<a href="#">832</a>	Corrected typo in diagram
	<a href="#">878</a>	Adapted non-normative example
16.1 Products and Categories	<a href="#">742</a>	Adapted non-normative example

Section	Issue	Comment
Example		

## 5 ABNF Construction Rules

Note: line numbers are for the new Errata03 revision of the document.

Line	Issue	Comment
121-124	903	Type-cast segment after collection of complex type <pre> / complexColFunctionImportCall [ <del>collection</del><u>complexColPath</u> ] / complexFunctionImportCall [ complexPath ] / primitiveColFunctionImportCall [ <del>collection</del><u>primitiveColPath</u> ] / primitiveFunctionImportCall [ <del>single</del><u>primitivePath</u> ] </pre>
126	899	Type-cast segment after \$all <pre> / '\$all' [ "/" <u>qualifiedEntityType</u> ] </pre>
129-132	903	Type-cast segment after collection of complex type <pre> collectionNavPath = keyPredicate [ singleNavigation ] / <del>collectionPath</del><u>boundOperation</u> / <u>count</u> / ref </pre>
134-137	775	Parameter aliases in key segment <pre> simpleKey = OPEN ( <u>parameterAlias</u> / keyPropertyValue ) CLOSE compoundKey = OPEN keyValuePair *( COMMA keyValuePair ) CLOSE keyValuePair = ( primitiveKeyProperty / keyPropertyAlias ) EQ ( <u>parameterAlias</u> / keyPropertyValue ) </pre>
150-168	903	Type-cast segment after collection of complex type <pre> propertyPath = entityColNavigationProperty [ collectionNavigation ] / entityNavigationProperty [ singleNavigation ] / complexColProperty [ <del>collection</del><u>complexColPath</u> ] / complexProperty [ complexPath ] / primitiveColProperty [ <del>collection</del><u>primitiveColPath</u> ] / primitiveProperty [ <del>single</del><u>primitivePath</u> ] / streamProperty [ boundOperation ]  <del>collection</del><u>primitiveColPath</u> = count / boundOperation  <del>single</del><u>primitivePath</u> = value / boundOperation  <u>complexColPath = [ "/" <u>qualifiedComplexType</u> ]</u> <u>[ count / boundOperation ]</u>  complexPath = [ "/" <u>qualifiedComplexType</u> ] + [ "/" <u>propertyPath</u> / boundOperation + ] </pre>

Line	Issue	Comment
177-184	753 903	<p>Replaced “Func” with “Function in rule names</p> <p>Type-cast segment after collection of complex type</p> <pre> boundOperation = "/" ( boundActionCall     / boundEntityColFunc<u>tion</u>Call    [ collectionNavigation ]     / boundEntityFunc<u>tion</u>Call      [ singleNavigation ]     / boundComplexColFunc<u>tion</u>Call  [ <del>collection</del><u>complexCol</u>Path ]     / boundComplexFunc<u>tion</u>Call      [ complexPath ]     / boundPrimitiveColFunc<u>tion</u>Call [ <del>collection</del><u>primitiveCol</u>Path ]     / boundPrimitiveFunc<u>tion</u>Call    [ <del>single</del><u>primitive</u>Path ] ) </pre>
191-201	753	<p>Replaced “Func” with “Function in rule names</p> <p>; The following boundXxxFunc<u>tion</u>Call rules have the added restrictions that</p> <p>; - the function MUST support binding, and</p> <p>; - the binding parameter type MUST match the type of resource identified by the</p> <p>; URI immediately preceding (to the left) of the boundXxxFunc<u>tion</u>Call, and</p> <p>; - the functionParameters MUST NOT include the bindingParameter.</p> <pre> boundEntityFunc<u>tion</u>Call      = namespace "." entityFunction      functionParameters boundEntityColFunc<u>tion</u>Call   = namespace "." entityColFunction   functionParameters boundComplexFunc<u>tion</u>Call     = namespace "." complexFunction     functionParameters boundComplexColFunc<u>tion</u>Call  = namespace "." complexColFunction  functionParameters boundPrimitiveFunc<u>tion</u>Call   = namespace "." primitiveFunction   functionParameters boundPrimitiveColFunc<u>tion</u>Call = namespace "." primitiveColFunction functionParameters </pre>
239-241	793	<p>Reserve \$deltatoken</p> <pre> systemQueryOption = <u>deltatoken</u> <u>                  </u> / expand <u>                  </u> / filter </pre>
259-261	793	<p>Expand * on complex type</p> <pre> expandPath      = [ ( qualifiedEntityTypename / qualifiedComplexTypeName ) "/" ]                 *( ( complexProperty / complexColProperty ) "/" [ qualifiedComplexTypeName "/" ] )                 ( <u>STAR</u> / navigationProperty [ "/" qualifiedEntityTypename ] <u>  </u> ) </pre>
334-335	793	<p>Reserve \$deltatoken</p> <pre> <u>deltatoken = '\$deltatoken' EQ 1*( qchar-no-AMP )</u> </pre>

Line	Issue	Comment
435-442	903	<p>Type-cast segment after collection of complex type</p> <pre> propertyPathExpr = ( entityColNavigationProperty [ collectionNavigationExpr ]                         / entityNavigationProperty      [ singleNavigationExpr ]                         / complexColProperty              [ collectioncomplexColPathExpr ]                         / complexProperty                [ complexPathExpr ]                         / primitiveColProperty            [ collectionPathExpr ]                         / primitiveProperty              [ singleprimitivePathExpr ]                         / streamProperty                  [ singleprimitivePathExpr ]                         ) </pre>
449-469	903	<p>Type-cast segment after collection of complex type</p> <pre> collectionNavigationExpr = [ "/" qualifiedEntityTypeName ]                         +[ keyPredicate [ singleNavigationExpr ]                         / collectionPathExpr                         +]  singleNavigationExpr = "/" memberExpr  complexColPathExpr = [ "/" qualifiedComplexTypeName ]                     [ collectionPathExpr ]  collectionPathExpr = count                     / "/" boundFunctionExpr                     / "/" anyExpr                     / "/" allExpr  complexPathExpr = [ "/" + qualifiedComplexTypeName ]                 +[ "/" propertyPathExpr                 / "/" boundFunctionExpr                 +]  singleprimitivePathExpr = "/" boundFunctionExpr </pre>

Line	Issue	Comment
474-481	903	<p>Type-cast segment after collection of complex type</p> <pre> functionExpr = namespace "."                 ( entityColFunction      functionExprParameters [ collectionNavigationExpr ]                 / entityFunction      functionExprParameters [ singleNavigationExpr ]                 / complexColFunction  functionExprParameters [ <del>collection</del>complexColPathExpr ]                 / complexFunction     functionExprParameters [ complexPathExpr ]                 / primitiveColFunction functionExprParameters [ collectionPathExpr ]                 / primitiveFunction    functionExprParameters [ <del>single</del>primitiveExpr ]                 ) </pre>
545-547	783	<p>Allow percent-encoded parentheses</p> <pre> minDateTimeMethodCallExpr = 'mindatetime' OPEN BWS CLOSE<del>)+</del> maxDateTimeMethodCallExpr = 'maxdatetime' OPEN BWS CLOSE<del>)+</del> nowMethodCallExpr         = 'now' OPEN BWS CLOSE<del>)+</del> </pre>
1020-1025	774	<p>Qualifier for annotations missing:</p> <pre> annotationIdentifier = [ excludeOperator ]                     ( STAR                     / namespace "." ( termName / STAR )                     )                     [ "#" odataIdentifier ] excludeOperator      = "-" </pre>

## 6 ABNF Test Cases

Note: line numbers are for the new Errata03 revision of the document.

Line	Issue	Comment
234-243	668	Additional constraints for rule checking <u>&lt;Constraint Rule="parameterAlias"&gt;</u> <u>&lt;Match&gt;@c&lt;/Match&gt;</u> <u>&lt;Match&gt;@cat&lt;/Match&gt;</u> <u>&lt;Match&gt;@color&lt;/Match&gt;</u> <u>&lt;Match&gt;@expression&lt;/Match&gt;</u> <u>&lt;Match&gt;@key&lt;/Match&gt;</u> <u>&lt;Match&gt;@ref&lt;/Match&gt;</u> <u>&lt;Match&gt;@title&lt;/Match&gt;</u> <u>&lt;Match&gt;@word&lt;/Match&gt;</u> <u>&lt;/Constraint&gt;</u>
580	668	<TestCase Name="2 URL Components - key with <u>key property</u> alias" Rule="resourcePath">
583-588	775	Key with parameter alias <u>&lt;TestCase Name="2 URL Components - key with parameter alias - short form" Rule="odataRelativeUri"&gt;</u> <u>&lt;Input&gt;Categories (@key) ?@key=1&lt;/Input&gt;</u> <u>&lt;/TestCase&gt;</u> <u>&lt;TestCase Name="2 URL Components - key with parameter alias - long form" Rule="odataRelativeUri"&gt;</u> <u>&lt;Input&gt;Categories (ID=@key) ?@key=1&lt;/Input&gt;</u> <u>&lt;/TestCase&gt;</u>

Line	Issue	Comment
914-931	903	<p>Type-cast with complex type</p> <pre> &lt;TestCase Name="4.9 Inheritance - complex type" Rule="odataRelativeUri"&gt;  &lt;Input&gt;Products (1) /Address/Model.AddressWithLocation&lt;/Input&gt; &lt;/TestCase&gt;  &lt;TestCase Name="4.9 Inheritance - complex type with property" Rule="odataRelativeUri"&gt;  &lt;Input&gt;Products (1) /Address/Model.AddressWithLocation/Street&lt; /Input&gt; &lt;/TestCase&gt;  &lt;TestCase Name="4.9 Inheritance - collection of complex type" Rule="odataRelativeUri"&gt;  &lt;Input&gt;Products (1) /Addresses/Model.AddressWithLocation&lt;/Inpu t&gt; &lt;/TestCase&gt;  &lt;TestCase Name="4.9 Inheritance - expressions: complex type" Rule="propertyPathExpr"&gt;  &lt;Input&gt;Address/Model.AddressWithLocation&lt;/Input&gt; &lt;/TestCase&gt;  &lt;TestCase Name="4.9 Inheritance - expressions: complex type with path" Rule="propertyPathExpr"&gt;  &lt;Input&gt;Address/Model.AddressWithLocation/Street&lt;/Input&gt; &lt;/TestCase&gt;  &lt;TestCase Name="4.9 Inheritance - expressions: collection of complex type" Rule="propertyPathExpr"&gt;  &lt;Input&gt;Addresses/Model.AddressWithLocation&lt;/Input&gt; &lt;/TestCase&gt; </pre>
950-955	899	<p>\$all with type-cast</p> <pre> &lt;TestCase Name="4.12 Addressing All Entities in a Service" Rule="odataRelativeUri"&gt;  &lt;Input&gt;\$all?\$search=red&lt;/Input&gt; &lt;/TestCase&gt;  &lt;TestCase Name="4.12 Addressing All Entities in a Service - with type cast" Rule="odataRelativeUri"&gt;  &lt;Input&gt;\$all/Model.Customer?\$filter=contains (Name, 'red')&lt;/Inp ut&gt; &lt;/TestCase&gt; </pre>

Line	Issue	Comment
1226-1228	783	Percent-encoded parentheses <u>&lt;TestCase Name="5.1.1.4.22 - non-canonical percent-encoding" Rule="commonExpr"&gt;</u> <u>&lt;Input&gt;now%28%20%29&lt;/Input&gt;</u> <u>&lt;/TestCase&gt;</u>
1232-1234	783	Percent-encoded parentheses <u>&lt;TestCase Name="5.1.1.4.23 - non-canonical percent-encoding" Rule="commonExpr"&gt;</u> <u>&lt;Input&gt;maxdatetime%28%20%29&lt;/Input&gt;</u> <u>&lt;/TestCase&gt;</u>
1238-1240	783	Percent-encoded parentheses <u>&lt;TestCase Name="5.1.1.4.24 - non-canonical percent-encoding" Rule="commonExpr"&gt;</u> <u>&lt;Input&gt;mindatetime%28%20%29&lt;/Input&gt;</u> <u>&lt;/TestCase&gt;</u>
1421-1426	793	\$expand=* on complex path <u>&lt;TestCase Name="5.1.2 Expand - star on complex path" Rule="expand"&gt;</u> <u>&lt;Input&gt;\$expand=Address/*,Address/Address/*,Addresses/*,Address/Model.AddressWithLocation/*,Model.VipCustomer/Address/*&lt;/Input&gt;</u> <u>&lt;/TestCase&gt;</u> <u>&lt;TestCase Name="5.1.2 Expand - star on complex path with \$ref and \$levels" Rule="expand"&gt;</u> <u>&lt;Input&gt;\$expand=Address/*/\$ref,Address/*(\$levels=max)&lt;/Input&gt;</u> <u>&lt;/TestCase&gt;</u>
1508-1510	783	Percent-encoding <u>&lt;TestCase Name="5.1.7 Search - implicit AND, encoded" Rule="queryOptions"&gt;</u> <u>&lt;Input&gt;\$search=blue%20green&lt;/Input&gt;</u> <u>&lt;/TestCase&gt;</u>
1559-1561	837	Delta-token <u>&lt;TestCase Name="Delta Link" Rule="deltatoken"&gt;</u> <u>&lt;Input&gt;\$deltatoken=A@Lot_Has:Changed?=Here!&lt;/Input&gt;</u> <u>&lt;/TestCase&gt;</u>
1987-1989	774	Include-annotations with qualifier <u>&lt;TestCase Name="Preferences - include annotations - all with a given qualifier" Rule="preference"&gt;</u> <u>&lt;Input&gt;odata.include-annotations="*#qualified"&lt;/Input&gt;</u> <u>&lt;/TestCase&gt;</u>

Line	Issue	Comment
1993-1995	774	<u>&lt;TestCase Name="Preferences - include annotations - none with a given qualifier" Rule="preference"&gt;</u> <u>&lt;Input&gt;odata.include-annotations="-*#qualified"&lt;/Input&gt;</u> <u>&lt;/TestCase&gt;</u>
1999-2001	774	<u>&lt;TestCase Name="Preferences - include annotations - all in namespace with given qualifier" Rule="preference"&gt;</u> <u>&lt;Input&gt;odata.include-annotations="Namespace.*#quali"&lt;/Input&gt;</u> <u>&lt;/TestCase&gt;</u>
2015-2017	774	<u>&lt;TestCase Name="Preferences - include annotations - nothing from namespace" Rule="preference"&gt;</u> <u>&lt;Input&gt;odata.include-annotations="-Namespace.*#quali"&lt;/Input&gt;</u> <u>&lt;/TestCase&gt;</u>
2021-2023	774	<u>&lt;TestCase Name="Preferences - include annotations - only a special term" Rule="preference"&gt;</u> <u>&lt;Input&gt;odata.include-annotations="Namespace.SomeTerm#qual"&lt;/Input&gt;</u> <u>&lt;/TestCase&gt;</u>
2027-2029	774	<u>&lt;TestCase Name="Preferences - include annotations - only a special term" Rule="preference"&gt;</u> <u>&lt;Input&gt;odata.include-annotations="-Namespace.SomeTerm#qual"&lt;/Input&gt;</u> <u>&lt;/TestCase&gt;</u>

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## 7 MetadataService.edmx

Line	Issue	Comment
102	831	OpenType property is Boolean <Property Name="OpenType" Type="Edm. <del>String</del> <u>Boolean</u> " Nullable="false" />
356	826	Wrong Target attribute value <NavigationProperty Name="Target" Type="Edm.EntityType" Nullable="false" Partner="Annotation <u>s</u> " />

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## Appendix A. Acknowledgments

The contributions of the OASIS OData Technical Committee members, enumerated in **[OData-Protocol]**, are gratefully acknowledged.

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## Appendix B. Revision History

Revision	Date	Editor	Changes Made
WD01	2016-03-03	Ralf Handl	Final version