**Web Services Data Access and Integration – The RDF(S) Realization (WS-DAI-RDF(S)) Ontology Specification, Version 0.8**

Status of This Document

This document provides information regarding the specification of service-based interfaces to RDF(S) data resources. Distribution is unlimited.

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# Abstract

Data resources play a significant role in many applications across multiple domains. Web services provide implementation neutral facilities for describing, invoking and orchestrating collections of networked resources. The OGF (Open Grid Forum) Open Grid Services Architecture (OGSA), and its associated specifications, defines consistent interfaces through web services to components of the grid infrastructure. Both the web and grid communities stand to benefit from the provision of consistent and agreed web service interfaces for data resources and the systems that manage them.

This document presents a specification for a collection of data access interfaces for RDF(S) data resources, which extend interfaces defined in the Web Services Data Access and Integration core specification [WS-DAI]. The interfaces defined provide a set of model-based operations for accessing RDF(S) data resources at different granularities. This specification can be used together with the RDF querying access specification for RDF(S) data resources [Querying]. This specification can be applied in regular web services environments or as part of a grid fabric.

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# Introduction

RDF(S) data access can play a central role for many types of semantic grid applications. By data access we mean the ability to retrieve, manipulate or insert data into an RDF(S) data resource.

This document presents a specification for a collection of data access interfaces for RDF(S) data resources, which extend interfaces defined in the Web Services Data Access and Integration core specification [WS-DAI]. The interfaces defined provide a set of model-based operations for accessing RDF(S) data resources at different granularities. RDF(S) data resources are any system that is based on the RDF(S) data model, together with any associated management infrastructure. Examples are RDF triple storages and RDF/XML files.

This document should be read in conjunction with the generic Web Services Data Access and Integration specification [WS-DAI], which defines base interfaces that are extended in this document to cater for RDF(S) data resources. Also, this document should be read in conjunction with the complementary specification for RDF(S) Querying access [Querying]. These specifications have been developed for representing data resources as web services, and form part of a broader activity within the Open Grid Forum to develop the Open Grid Services Architecture (OGSA) [OGSA].

## Specification Scope

The base interfaces and properties for data access services are described in the Web Services Data Access and Integration core specification [WS-DAI]. This specification extends these interfaces to allow access to and provide descriptions of RDF(S) data resources. RDF(S) data resources are assume to contain data defined using the RDF(S) model defined in [RDF Concepts, RDF Schema], and this data is accessed using a set of ontology handling primitives based on that model.

## Specification Organization

The specification is described using the notational conventions and terminology defined in Sections 2 and 3. Sections 4 presents the concepts underlying the specification itself. Sections 5 to 12 present the different interfaces provided by the specification. The functionalities of these interfaces are mapped to WSDL in Section 13 and the appendices. Section 14 dicusses security issues. Section 15 draws the conclusions.

The WSDL and XML Schema include in the document appendices should be taken as the normative interfaces and property descriptions of this DAIS specification.

## Interface Composition

This specification does not mandate how interfaces are composed into services; the proposed interfaces may be used in isolation or in conjunction with others. Viable compositions of interfaces will, initially, follow established patterns for data access.

# Notational Conventions

The key words “MUST,” “MUST NOT,” “REQUIRED,” “SHALL,” “SHALL NOT,” “SHOULD,” “SHOULD NOT,” “RECOMMENDED,” “MAY,” and “OPTIONAL” are to be interpreted as described in RFC-2119 [RFC2119].

When describing concrete XML Schemas and XML instance fragments, this specification uses the notational convention of [WS-Security]. Specifically, each member of an element’s children or attributes property is described using an XPath-like notation (e.g., /x:MyHeader/x:SomeProperty/@value1 indicates that namespace *x* is being used, the root element *MyHeader* and a child element *SomeProperty* with an attribute *value1*). The use of {any} indicates the presence of an element wildcard (<xsd:any/>). The use of @{any} indicates the presence of an attribute wildcard (<xsd:anyAttribute/>).

In the body of the specification, when patterns of messages are described, the layout of the XML of each message is presented, as opposed to the XML Schema. The following notation is used to indicate cardinality of XML elements in the XML fragments:

\* zero or more

+ one or more

? zero or one

Where no notation is added to an element, one instance of the element is expected.

This specification generally adopts the terminology defined in the Open Grid Services Architecture Glossary of Terms [OGSA Glossary]. This terminology is extended in Section 3.

This specification uses namespace prefixes throughout; these are listed in the table below. Note that the choice of any namespace prefix is arbitrary and not semantically significant.

|  |  |
| --- | --- |
| **Prefix** | **Namespace** |
| wsa | http://www.w3.org/2005/08/addressing |
| wsdai | http://www.ggf.org/namespaces/2005/12/WS-DAI |
| wro | http://www.ogf.org/dais/2008/02/ws-dai-rdfs/ontology |
| xs | http://www.w3.org/2001/XMLSchema |

# Terminology

Model-independent terminology, i.e. data resource, data access service, etc., is given in the WS-DAI core specification [WS-DAI]. Further specification dependent terminology is covered in the Glossary of terms of the WS-DAI-RDF(S) realization [Glossary], from which the following definition is taken.

## RDF(S) Data Resource

An RDF(S) data resource is taken to mean any system that can act as a source or sink of RDF data, together with its associated management infrastructure that exhibits capabilities that are characteristic of RDF repositories, e.g. RDF and RDF Schema entailment support.

We assume that RDF data is structured into different types of resources, which have associated values by means of properties – a particular type of resource. The types of resource, properties and values depends on the vocabulary (RDF schema) used for defining the RDF data. These resources, properties, and values, are organized into repositories. Repositories are uniquely identified by a repository name, which happens to be an IRI (see [RFC3987]). Resources are identified by its URI [RDF Concepts] together with the repository name of the repository in which they are held.

# Concepts

## Data Resources

Given the aforementioned notion of RDF(S) data resource, we can further differentiate them in two classes:

1. **Placeholders of actual built-in RDF(S) classes** (*Resource*, *Class*, *Property*, *Statement*, *Container* and *List*): these data resources provide ad-hoc views to a RDF(S) data resource, focusing in concrete parts of the underlying data and providing specialized data access methods according to the concrete nature of the element of the RDF(S) data model through which we are looking at the data resource.

These set of data resources are organized hierarchically: the *Resource* data resource defines the minimum common data that defines this kind of data resources, and the rest of the data resources specialize the view provided by this data resource.

This set of data resources can be also divided in two subsets: one which contains data resources placholders of elements that define the schema of the ontology (*Class* and *Property*), and rest, which are more focused in the data defined according to the schema. The *Resource* data resource lies in the middle of them, it can also be used for modifying the schema, but also for modifying the data defined according to the schema.

1. **Convenience abstractions** (RepositoryCollection and Repository): these data resources allow the provision of additional methods that enable an easy management of the previous data resources, with different granularity levels.

This way, a *repository* is an aggregation of resources, where the key issue is that the *resources* **belong** to the *repository* (this could be understood as if the *resource* data resource was a derived data resource from the *repository*).

Similarly, a *repository collection* data resource is an aggregation of *repositories*, the repositories managed by the implementation. Nevertheless, and opposite to the aggregation of *resources* in *repositories*, the repositories are not owned by the *repository collection*, just managed by it, so that these repositories can also be managed in other way by other realizations.



Fig. WS-DAI-RDF(S) Ontology Data resource model

The diagram depicted in Fig. 1 shows which are the data resources defined in the realization and the relationships existing between them using a UML notation.

## Interfaces

The word interface refers to the collections of messages and XML structures that describe the ways in which a consumer can validly interact, through this and the WS-DAI specifications, with a data access service. It is not intended to refer specifically to the proposed use of the word interface found in the current working draft of the WSDL 2.0 specification, although this may be an appropriate mapping in the future.

In order to interact with the data resources described in the previous section, several interfaces are specified in the WS-DAI-RDF(S) Ontology specification. Fig. 2 depicts the interfaces defined and also presents a possible composition of them into data access services. The dashed blue lines represent the intended navigability from factory interfaces to access interfaces.



Fig. Data access services and interfaces

Direct access to a data access service allows the results of a request to be delivered to the consumer directly in the response message. To cater for this mode of operation the following interfaces are defined for accessing RDF(S) data resources:

* RepositoryCollectionAccess: provides access to repositories of a collection.
* RepositoryAccess: provides access to the inside of repositories, offering functionalities for managing the repository at RDF(S) resource level.
* ResourceAccess: provides access to a particular RDF(S) resource, centered in those aspects common to every resource: property value management, resource description, etc.
* ClassAccess: provides access to particular RDF(S) resources that are RDF(S) class, focusing in the data that is specific to RDF(S) classes: class hierarchy traversal, instance retrieval, etc.
* PropertyAccess: provides access to particular RDF(S) resources that are RDF(S) properties, focusing in the data that is specific to RDF(S) properties: range and domain management, property hierarchy traversal, etc.
* StatementAccess: provides access to particular RDF(S) resources that are RDF(S) statements –reified triples, not the triples themselves – focusing the management of the components that set up the reification.
* ListAccess: provides access to particular RDF(S) resources that are RDF collections (List), focusing in the management of the members of the collection, as well as, the structure of the collection.
* ListIteratorAccess: provides access to RDF collections following the iterator pattern [Gamma et al, 1994], allowing an easy retrieval of the members of the collection without requiring the identification of the position in it.
* ContainerAccess: provides access to particular RDF(S) resources that are RDF(S) containers, focusing in the management of the members of the container, as well as, the structure of the container, regardless the its specific type[[1]](#footnote-2).
* ContainerIteratorAccess: provides access to RDF(S) containers following the iterator pattern [Gamma et al, 1994], allowing an easy retrieval of the members of the container without requiring the identification of the position in it.
* AltAccess: provides access to particular RDF(S) containers that are of the particular *alt* type.

Indirect access is supported through the use of the factory pattern. This allows data, usually a particular view of the whole data set, to be accessed by way of a new service-managed data resource, and thus the data is not returned directly to the consumer. To cater for this mode of operation the following interfaces are defined:

* RepositoryCollectionFactory: provides access to repositories of a collection.
* RepositoryFactory: provides access to the inside of repositories.
* ListFactory: provides access to the contents of an RDF collection.
* ContainerFactory: provides access to the contents of a container.

The usage of the factory patterns provides a basic navigation mechanism that lets the user browse RDF(S) data resources with different granularities and exploiting the particular semantics of the RDF(S) data represented by the RDF(S) data resource.

In addition to these interfaces, multiple description interfaces are provided (RepositoryCollectionDescription, RepositoryDescription, ResourceDescription, ClassDescription, PropertyDescription, StatementDescription, ListDescription, and ContainerDescription), which extend the properties enumerated in the WS-DAI core specification to provide information about the relationships of the RDF(S) data services and resources with the RDF(S) data to which they provide access.

These interfaces, and their corresponding properties, are specified in Sections 5 to 12.

## Profiles

The WS-DAI-RDF(S) Ontology specification is aimed at providing a means for managing RDF(S) data resources in an integral fashion, offering mechanisms for browsing, adding, updating and deleting contents. The specification defines these mechanisms following the RDF(S) model and semantics, providing to the user with different granularity levels in order to use available data resources with the required detail. To achieve all of this, the specification provides multiple different data resources and interfaces. As a result, the full specification is bigger that that of other realizations, such as the relational one [WS-DAIR].

From a user/developer point of view, the uselfulness of the specification will depend on his requirements, and specially on the necessities he has when dealing with the RDF(S) data sources, that is, what he needs to do, and how he expects to do it. Thus, depending on his needs, he shall only use the subset of the specification that completely fulfils them.

Consequently, in order to facilitate the adoption and implementation of the specification from the community, it is necessary to allow using what is needed, without enforcing the adoption of the elements not needed.

To achieve this we divide the specification in three different *profiles*, each one including an increasing number of functionalities that shall enable the user to deal with RDF(S) data resources with finer grain of detail, while ensuring interoperability among implementations:

* **Profile 0: *Basic RDF support*.** This profile includes the minimum set of functionalities needed for dealing with RDF data. The functionalities of these profile are those defined in the following interfaces:
  + RepositoryCollectionAccess
  + RepositoryCollectionFactory
  + RepositoryAccess
  + RepositoryFactory, limited to Resource EPR retrieval.
  + ResourceAccess
* **Profile 1: *RDF Schema support*.** This profile includes the functionalities described in the Profile 0, and extends them with those required for dealing with RDF vocabularies. The new functionalities are defined in the following interfaces:
  + RepositoryFactory, augmented to retrieve Class and Property EPRs.
  + ClassAccess
  + PropertyAccess
* **Profile 2: *Full RDF(S) support*.** This profile includes the functionalities described in Profile 1, and extends them with those required for dealing with the rest of the built-in RDF vocabulary (containers, RDF collections and reifications). These functionalities are defined in the following interfaces:
  + RepositoryFactory, augmented to support the rest of the data resource EPRs.
  + StatementAccess
  + ListAccess
  + ListFactory
  + ListIteratorAccess
  + ContainerAccess
  + ContainerFactory
  + ContainerIteratorAccess
  + ContainerFactory

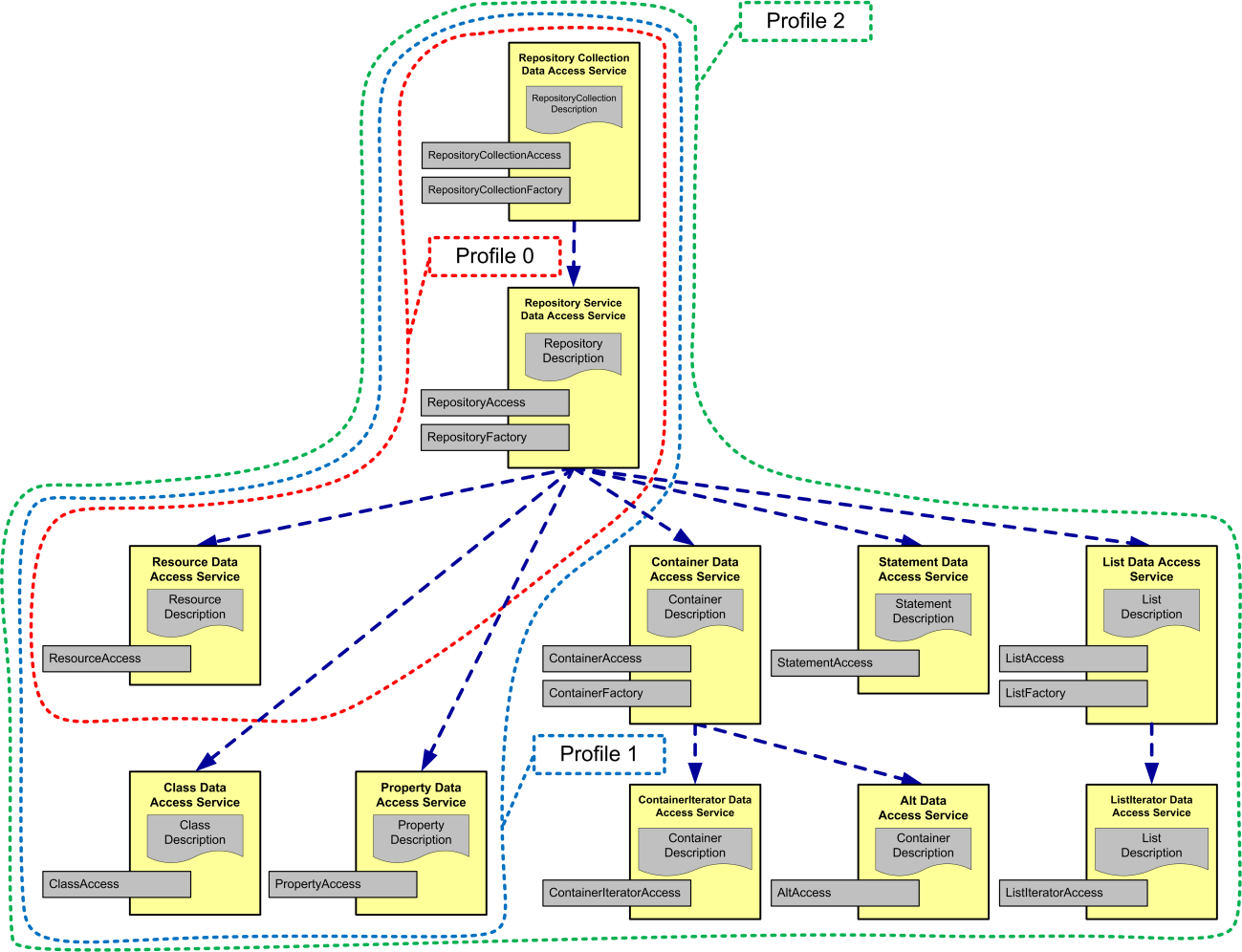


Fig. WS-DAI-RDF(S) Ontology profiles

Fig. 3 shows how these profiles relate to each other.

## Relationships with other specifications

The WS-DAI-RDF(S) Ontology specification is focused on providing access to RDF(S) data resources, by means of a set of ontology handling primitives based on the RDF(S) data model and semantics, which are defined in the W3C specification of the Resource Description Framework. This specification is made up of the following documents:

* RDF Primer [RDF Primer]: this non-normative document is intented to provide an introduction to RDF and how could it be used.
* Resource Description Framework (RDF): Concepts and Abstract Syntax [RDF Concepts]: this document defines the abstract syntax in which RDF is based, which is necessary to understand both its concrete syntax and semantics.
* RDF/XML Syntax Specification (Revised) [RDF Syntax]: this document presents the normative format for serializing RDF using XML.
* RDF Semantics [RDF Semantics]: this document defines the precise semantics (and inference rules) of both RDF and RDF Schema.
* RDF Vocabulary Description Language 1.0: RDF Schema [RDF Schema]: this document presents how to use RDF for describing new RDF vocabularies, defining a vocabulary for this purpose, as well as the other built-in RDF vocabulary presented in [RDF Concepts].
* RDF Test Cases [RDF Tests]: this document present the set of test cases.

The WS-DAI-RDF(S) realization could be extended to encompass any new or emerging RDF(S) standards by employing the patterns defined in this document.

# RepositoryCollection

## Static RepositoryCollection Description

The elements defined in this section live under a RepositoryCollectionPropertyDocument that extends the PropertyDocument defined in the WS-DAI core specification.

### NumberOfRepositories

<xs:element name="NumberOfRepositories" type="xs:unsignedLong"/>

|  |  |
| --- | --- |
| /wro:NumberOfRepositories | |
|  | The total number of repositories of the collection. |

### RepositoryCollection

<xs:element name="RepositoryCollection">

<xs:complexType>

<xs:sequence>

<xs:element name="Repository" minOccurs="0" maxOccurs="unbounded" type="wro:RepositoryDescriptorType"/>

</xs:sequence>

</xs:complexType>

</xs:element>

|  |  |
| --- | --- |
| /wro:RepositoryCollection | |
|  | Describes the set of available repositories. |

### RepositoryCollectionPropertyDocument

<xs:complexType name="RepositoryCollectionPropertyDocumentType">

<xs:complexContent>

<xs:extension base="wsdai:PropertyDocumentType">

<xs:sequence>

<xs:element ref="wro:NumberOfRepositories"/>

<xs:element ref="wro:RepositoryCollection"/>

</xs:sequence>

</xs:extension>

</xs:complexContent>

</xs:complexType>

<xs:element name="RepositoryCollectionPropertyDocument" type="wro:RepositoryCollectionPropertyDocumentType"/>

|  |  |
| --- | --- |
| /wro:RepositoryCollectionPropertyDocument | |
|  | A structure that describes a RepositoryCollection data resource, combining the properties defined in the WS-DAI core specification with those defined earlier in this section. |

## Configurable RepositoryCollection Description

No extra configurable properties are defined for RepositoryCollection.

## RepositoryCollectionAccess Messages

This interface provides the functionalities for managing the repositories that are under control of the RDF(S) storage manager.

### RepositoryCollectionAccess::GetRepositoryCollectionPropertyDocument

Allows a copy of the RepositoryCollectionPropertyDocument document to be retrieved.

Input

* GetRepositoryCollectionPropertyDocumentRequest
  + DataResourceAbstractName – The abstract name of the resource the message is directed to.
  + DatasetFormatURI – The format of the response dataset data.

Output

* GetRepositoryCollectionPropertyDocumentResponse
  + GetRepositoryCollectionPropertyDocumentDataset
    - DatasetFormatURI – The URI of the dataset format being returned as defined in the DatasetMap.
    - GetRepositoryCollectionPropertyDocumentDatasetData – The data returned in response to the request.
      * RepositoryCollectionPropertyDocument\* – The properties described in the data description section.
    - NumberOfRepositories – The number of available repositories.

Faults

* InvalidResourceNameFault - The supplied repository resource name is not known to the service.
* DataResourceUnavailableFault - The specified data resource is unavailable.
* NotAuthorizedFault - The consumer is not authorized to perform this operation at this time.
* ServiceBusyFault - The service is already processing a request and the ConcurrentAccess is false.

### RepositoryCollectionAccess::GetRepositories

Retrieve repositories from the collection, serialized in RDF/XML. An attempt SHOULD be made to retrieve all the specified repositories even if some of them do not exist in the collection.

Input

* GetRepositoriesRequest
  + DataResourceAbstractName – The abstract name of the resource the message is directed to.
  + DatasetFormatURI – The format of the response dataset data.
  + RepositoryName+ – The names of the repositories to be retrieved.

Output

* GetRepositoriesResponse
  + GetRepositoriesDataset
    - DatasetFormatURI – The URI of the dataset format being returned as defined in the DatasetMap.
    - GetRepositoriesDatasetData – The data returned in response to the request.
      * RepositoryResponse+ – For each repository:
        + RepositoryName – The name of the repository.
        + Result – The result of the repository retrieval operation for the specific repository. Possible values for this are: success, repository not retrieved as it does not exist; and repository not retrieved as the consumer is not authorized.
        + Data? – The content of the repository retrieved. This element MUST appear when the retrieval operation succeeds.
    - NumberOfRepositoriesRetrieved – The number of repositories retrieved from the collection.

Faults

* InvalidResourceNameFault - The supplied repository resource is not known to the service.
* DataResourceUnavailableFault - The specified data resource is unavailable.
* ServiceBusyFault - The service is already processing a request and Concurrent Access is false.

### RepositoryCollectionAccess::AddRepositories

Create new repositories in the collection. Any initial data MUST be passed serialized in RDF/XML. An attempt SHOULD be made to add all the specified repositories even if some additions fail. The consumer MAY specify whether the service MUST overwrite repositories or not.

Input

* AddRepositoriesRequest
  + DataResourceAbstractName – The abstract name of the resource the message is directed to.
  + DatasetFormatURI – The format of the response dataset data.
  + Repository+ – For each repository:
    - RepositoryName – The desired name for the repository.
    - Data – The contents of the repository serialized in RDF/XML.
  + OverwriteRepositories? – An OPTIONAL parameter that specifies whether or not the service can overwrite an existing repository with new contents passed in the request. By default, the service SHALL not overwrite repositories. In case of repository overwrite, existing derived data resources MUST be terminated.

Output

* AddRepositoriesResponse
  + AddRepositoriesDataset
    - DatasetFormatURI – The URI of the dataset format being returned as defined in the DatasetMap.
    - AddRepositoriesDatasetData – The data returned in response to the request.
      * RepositoryResponse+ – For each repository that was to be added to the collection:
        + RepositoryName – The name of the repository.
        + Result – The result of the repository addition operation for the specific repository. Possible values for this are: success; existing repository updated; repository not added as a repository with the same name already exists; and repository not added as the consumer is not authorized.
    - OverwriteRepositories – Whether or not repository overwrite was requested.
    - NumberOfRepositoriesAdded – The number of repositories added to the collection. This figure includes repository overwrites, if any takes place.

Faults

* InvalidResourceNameFault - The supplied repository resource is not known to the service.
* DataResourceUnavailableFault - The specified data resource is unavailable.
* ServiceBusyFault - The service is already processing a request and Concurrent Access is false.

### RepositoryCollectionAccess::RemoveRepositories

Remove repositories from the collection. An attempt SHOULD be made to remove all of the specified repositories even if some removals fail. Derived repository data resources SHALL be removed upon repository removal from the collection.

Input

* RemoveRepositoriesRequest
  + DataResourceAbstractName – The abstract name of the resource the message is directed to.
  + DatasetFormatURI – The format of the response dataset data.
  + RepositoryName+ – The names of the repositories that are to be removed from the collection.

Output

* RemoveRepositoriesResponse
  + RemoveRepositoriesDataset
    - DatasetFormatURI – The URI of the dataset format being returned as defined in the DatasetMap.
    - RemoveRepositoriesDatasetData – The data returned in response to the request.
      * RepositoryResponse+ – For each repository that was to be removed from the collection:
        + RepositoryName – The name of the repository.
        + Result – The result of the repository removal operation for the specific repository. Possible values for this are: success; repository not removed as it does not exist; and repository not removed as the consumer is not authorized.
    - NumberOfRepositoriesRemoved – The number of repositories removed from the collection.

Faults

* InvalidResourceNameFault - The supplied repository resource is not known to the service.
* DataResourceUnavailableFault - The specified data resource is unavailable.
* ServiceBusyFault - The service is already processing a request and Concurrent Access is false.

## RepositoryCollectionFactory Messages

This factory interface defines the mechanisms needed for providing specialized access to repositories through data services, which implement the RepositoryAccess and RepositoryFactory interfaces.

### RepositoryCollectionFactory::GetRepositoryFactory

Returns the endpoint reference of a repository data resource that represents an existing repository in the collection. This factory operation can be used if access to a repository through a different port type, such as RepositoryAccess, is required.

Input

* GetRepositoryFactoryRequest
  + DataResourceAbstractName – The abstract name of the resource the message is directed to.
  + PortTypeQName? – An OPTIONAL parameter that specifies the QName of the portType through which the resulting data should be accesed. The QName value here MUST correspond to one that is specified in the ConfigurationMap property.
  + ConfigurationDocument? – An OPTIONAL parameter that includes a document that specifies the properties of the data resource that is to be used to access the resulting data. The properties contained in this document are those defined in the WS-DAI specification.
  + PreferredTargetService? – An OPTIONAL parameter that identifies a EPR of the preferred service that is to act as the host for the new data resource.
  + RepositoryName – The name of the repository which will be accesible through a new repository data resource.

Output

* GetRepositoryFactoryResponse
  + DataResourceAddress\* – A list of data resource addresses.

Faults

* InvalidResourceNameFault - The supplied repository resource name is not known to the service.
* DataResourceUnavailableFault - The specified data resource is unavailable.
* InvalidPortTypeQNameFault - The PortTypeQName is not in the collection defined by the ConfigurationMap property.
* InvalidConfigurationDocumentFault - The ConfigurationDocument specified is not valid according to the ConfigurationDocumentQName when the ConfigurationMap is indexed by the specified PortTypeQName.
* NotAuthorizedFault - The consumer is not authorized to perform this operation at this time.
* ServiceBusyFault - The service is already processing a request and the ConcurrentAccess is false.
* RepositoryDoesNotExistFault - The specified repository does not exist in the collection.

# Repository

## Static Repository Description

The elements defined in this section live under a RepositoryPropertyDocument that extends the PropertyDocument defined in the WS-DAI core specification.

### RepositoryName

<xs:element name="RepositoryName" type="xs:anyURI"/>

|  |  |
| --- | --- |
| /wro:RepositoryName | |
|  | The IRI that uniquely identifies the repository within all the repositories in the collection to which this belongs to. |

### RepositoryPropertyDocument

<xs:complexType name="RepositoryPropertyDocumentType">

<xs:complexContent>

<xs:extension base="wsdai:PropertyDocumentType">

<xs:sequence>

<xs:element ref="wro:RepositoryName"/>

</xs:sequence>

</xs:extension>

</xs:complexContent>

</xs:complexType>

<xs:element name="RepositoryPropertyDocument" type="wro:RepositoryPropertyDocumentType"/>

|  |  |
| --- | --- |
| /wro:RepositoryPropertyDocument | |
|  | A structure that describes a Repository data resource, combining the properties defined in the WS-DAI core specification with those defined earlier in this section. |

## Configurable Repository Description

No extra configurable properties are defined for Repository.

## RepositoryAccess Messages

The interfaces provides the basic messages needed for managing the contents of an specific repository at resource level. The messages defined provide the mechanisms needed for: retrieving resources, creating new resources, updating existing resources, and removing existing resources.

### RepositoryAccess::GetRepositoryPropertyDocument

Allows a copy of the RepositoryPropertyDocument document to be retrieved.

Input

* GetRepositoryPropertyDocumentRequest
  + DataResourceAbstractName – The abstract name of the resource the message is directed to.
  + DatasetFormatURI – The format of the response dataset data.

Output

* GetRepositoryPropertyDocumentResponse
  + GetRepositoryPropertyDocumentDataset
    - DatasetFormatURI – The URI of the dataset format being returned as defined in the DatasetMap.
    - GetRepositoryPropertyDocumentDatasetData – The data returned in response to the request.
      * RepositoryPropertyDocument\* – The properties described in the data description section.
    - NumberOfRepositories – The number of available repositories.

Faults

* InvalidResourceNameFault - The supplied repository resource name is not known to the service.
* DataResourceUnavailableFault - The specified data resource is unavailable.
* NotAuthorizedFault - The consumer is not authorized to perform this operation at this time.
* ServiceBusyFault - The service is already processing a request and the ConcurrentAccess is false.

### RepositoryAccess::GetResources

Retrieve resources from the repository. Property-based filter expressions can be used to determine the specific sets of resources that are to be retrieved. The consumer can specify whether or not associated property values will be retrieved together with the resources URI. An attempt SHOULD be made to retrieve all the specified sets of resources even if some retrievals fail.

Input

* GetResourcesRequest
  + DataResourceAbstractName – The abstract name of the resource the message is directed to.
  + DatasetFormatURI – The format of the response dataset data.
  + ResourceSet+ – For each set of resources that the consumer desires to retrieve:
    - ResourceURI\* – An OPTIONAL set of URIs of candidate resources which SHALL be retrieved if they satisfy the property filters specified below. If no resource is specified, all the matching resources SHALL be retrieved.
    - PropertyFilter\* – An OPTIONAL set of property-based filters. If no filter is specified, all the existing resources SHALL be retrieved. For each filter:
      * PropertyURI – The property that must be defined for the retrieved resources.
      * PropertyValueFilter\* – An OPTIONAL set of property values that must be associated to the retrieved resources through the specified property.
      * ValueFilterSemantics? – An OPTIONAL parameter that determines the way in which the property values shall be interpreted. Possible values for this are: AND, if all the specified values must appear; OR, if one or more of the specified values must appear; XOR, if only one of them must appear; NONE, if none of the specified values must appear. This parameter should only be used when property values are specified. If property values are specified, then the default value for this parameter will be AND.
    - PropertyFilterSemantics? – An OPTIONAL parameter that determines the way in which the property value filters SHALL be interpreted. Possible values for this are: AND, if all the specified filters MUST be satisfied; OR, if one or more of the specified filters MUST be satisfied; XOR, if only one of the filters MUST be satisfied; NONE, if none of the specified filters MUST be satisfied. This OPTIONAL parameter SHOULD only be used when property filters are specified. The default value for this parameter will be AND.
  + RetrieveResourceProperties? – An OPTIONAL parameter that indicates whether or not associated propety values MUST be retrieved together with the resource URI. By default, this parameter is FALSE.

Output

* GetResourcesResponse
  + GetResourcesDataset
    - DatasetFormatURI – The URI of the dataset format being returned as defined in the DatasetMap.
    - GetResourcesDatasetData – The data returned in response to the request.
      * ResourceSetResult+ – For each one of the resource sets requested:
        + Result – The result of the resource retrieval operation for the specified set of resources. Possible values for this are: success; no resources found; and no resources retrieved as the consumer is not authorized.
        + Resource\* – For each one of the resources that satisfied the request filters:

ResourceURI – The resource URI.

DefinedProperty\* – The properties defined for the resource. This elements SHALL only appear if resource property retrieval was requested. For each of the the properties:

PropertyURI – The property URI.

PropertyValue+ – The values defined for the property and resource.

* + - RetrieveResourceProperties – Whether or not the consumer requested retrieving the properties defined for the resources.

Faults

* InvalidResourceNameFault - The supplied repository resource is not known to the service.
* DataResourceUnavailableFault - The specified data resource is unavailable.
* ServiceBusyFault - The service is already processing a request and Concurrent Access is false.

### RepositoryAccess::GetResourceProperties

Retrieve property values for the specified resources. The consumer can determine the set of properties to be retrieved for each one of the desired resources. An attempt SHOULD be made to retrieve all the specified properties of the choosen resources even if some retrievals fail.

Input

* GetResourcePropertiesRequest
  + DataResourceAbstractName – The abstract name of the resource the message is directed to.
  + DatasetFormatURI – The format of the response dataset data.
  + ResourceSet+ – For each set of resources from which the consumer desires to retrieve property values:
    - ResourceURI+ – The URIs of the resources for which the following property values will be retrieved.
    - PropertyURI\* – An OPTIONAL set of URIs of the properties whose values for the specified resources will be retrieved. If no property is specified, all the property values of the specified resources SHALL be retrieved.

Output

* GetResourcePropertiesResponse
  + GetResourcePropertiesDataset
    - DatasetFormatURI – The URI of the dataset format being returned as defined in the DatasetMap.
    - GetResourcePropertiesDatasetData – The data returned in response to the request.
      * ResourceSetResult+ – For each one of the resources requested:
        + Resource+ – For each one of the specified resources:

ResourceURI – The resource URI.

Result – The result of the resource properties retrieval operation for the specified resource. Possible values for this are: success; no property values found; and no property values retrieved as the consumer is not authorized.

DefinedProperty\* – The properties defined for the resource. For each one of them:

PropertyURI – The property URI.

PropertyValue+ – The values defined for the property and resource.

Faults

* InvalidResourceNameFault - The supplied repository resource is not known to the service.
* DataResourceUnavailableFault - The specified data resource is unavailable.
* ServiceBusyFault - The service is already processing a request and Concurrent Access is false.

### RepositoryAccess::AddResources

Add resources to the repository. If the specified resource already exists in the repository, new property values will be added to it. An attempt SHOULD be made to add all the specified resources and property values even if some additions fail.

Input

* AddResourcesRequest
  + DataResourceAbstractName – The abstract name of the resource the message is directed to.
  + DatasetFormatURI – The format of the response dataset data.
  + Resource+ – The resources that will be added to the repository. For each resource:
    - ResourceURI? – An OPTIONAL URI for the resource that is to be added to the repository. If no URI is specified a new blank node will be created.
    - Property+ – The properties defined for the resource. For each one of them:
      * PropertyURI – The property URI.
      * PropertyValue+ – The values defined for the property and resource.

Output

* AddResourcesResponse
  + AddResourcesDataset
    - DatasetFormatURI – The URI of the dataset format being returned as defined in the DatasetMap.
    - AddResourcesDatasetData – The data returned in response to the request.
      * ResourceResult+ – For each one of the resources that were to be added:
        + ResourceURI – The URI of the resource. This field will contain the same URI specified on the request, or the URI of the newly created blank node in case no resource URI was specified in the request.
        + Result – The result of the resource addition operation for the specified resource. Possible values for this are: success; properties added to existing resource; and resource not added/updated as the consumer is not authorized.
    - NumberOfResourcesAdded – The number of resources added to the repository.

Faults

* InvalidResourceNameFault - The supplied repository resource is not known to the service.
* DataResourceUnavailableFault - The specified data resource is unavailable.
* ServiceBusyFault - The service is already processing a request and Concurrent Access is false.

### RepositoryAccess::RemoveResources

Remove resources from the repository. Property-based filter expressions can be used to determine the specific set of resources that are to be removed. An attempt SHOULD be made to remove all the specified sets of resources even if some removals fail. Derived resource data resources SHALL be removed upon resource removal from repository.

Input

* RemoveResourcesRequest
  + DataResourceAbstractName – The abstract name of the resource the message is directed to.
  + DatasetFormatURI – The format of the response dataset data.
  + ResourceSet+ – For each set of resources the consumer desires to remove:
    - ResourceURI\* – An OPTIONAL set of URIs of candidate resources which will be removed if they satisfy the property filters. If no resource is specified, all the matching resources SHALL be removed.
    - PropertyFilter\* – An OPTIONAL set of property-based filters. If no filter is specified, all the existing resources SHALL be removed. For each property filter:
      * PropertyURI – The property that must be defined for the resources to be removed.
      * PropertyValueFilter\* – An OPTIONAL set of property values that must be associated to the resources to be removed, through the specified property.
      * ValueFilterSemantics? – An OPTIONAL parameter that determines the way in which the property values SHALL be interpreted. Possible values for this are: AND, if all the specified values MUST appear; OR, if one or more of the specified values MUST appear; XOR, if only one of them MUST appear; NONE, if none of the specified values MUST appear. This parameter SHOULD only be used when property values are specified. The default value for this parameter will be AND.
    - PropertyFilterSemantics? – An OPTIONAL parameter that determines the way in which the property filters SHALL be interpreted. Possible values for this are: AND, if all the specified filters MUST be satisfied; OR, if one or more of the specified filters MUST be satisfied; XOR, if only one of the filters MUST be satisfied; NONE, if none of the specified filters MUST be satisfied. This parameter SHOULD only be used when property filters are specified. The default value for this parameter will be AND.

Output

* RemoveResourcesResponse
  + RemoveResourcesDataset
    - DatasetFormatURI – The URI of the dataset format being returned as defined in the DatasetMap.
    - RemoveResourcesDatasetData – The data returned in response to the request.
      * ResourceSetResult+ – For each one of the resource sets that were to be removed:
        + Resource\* – For each one of the resources that were to be removed:

ResourceURI – The URI of the resource.

Result – The result of the resource removal operation for the resource. Possible values for this are: success; and resource not removed as the consumer is not authorized.

* + - NumberOfRemovedResources – The number of resources removed from the repository.

Faults

* InvalidResourceNameFault - The supplied repository resource is not known to the service.
* DataResourceUnavailableFault - The specified data resource is unavailable.
* ServiceBusyFault - The service is already processing a request and Concurrent Access is false.

### RepositoryAccess::RemoveResourceProperties

Remove property values for the specified resources. The consumer can determine the set of property values to be removed for each one of the desired resources. An sattempt SHOULD be made to remove all the specified property values of the choosen resources even if some removals fail.

Input

* RemoveResourcePropertiesRequest
  + DataResourceAbstractName – The abstract name of the resource the message is directed to.
  + DatasetFormatURI – The format of the response dataset data.
  + ResourceSet+ – For each set of resources from which the consumer desires to remove property values:
    - ResourceURI+ – The URIs of the resources for which the property values will be retrieved.
    - Property\* – An OPTIONAL set of properties whose values for the specified resources will be removed. If no property is specified, all the property values of the specified resources SHALL be removed. For each property:
      * PropertyURI – The URI of the property.
      * PropertyValue\* – An OPTIONAL set of values of the property for the resource that will be removed. If no values are specified, all of them SHALL be removed.

Output

* RemoveResourcePropertiesResponse
  + RemoveResourcePropertiesDataset
    - DatasetFormatURI – The URI of the dataset format being returned as defined in the DatasetMap.
    - RemoveResourcePropertiesDatasetData – The data returned in response to the request.
      * ResourceSetResult+ – For each one of the resource sets specified:
        + Resource+ – For each one of the resources whose property values were to be removed:

ResourceURI – The resource URI.

Result – The result of the resource properties removal operation for the specified resource. Possible values for this are: success; no matching property values found; all property values removed; and no property values removed as the consumer is not authorized.

Faults

* InvalidResourceNameFault - The supplied repository resource is not known to the service.
* DataResourceUnavailableFault - The specified data resource is unavailable.
* ServiceBusyFault - The service is already processing a request and Concurrent Access is false.

## RepositoryFactory Messages

This factory interface defines the mechanisms needed for providing specialized access to the resources stored in the repository through data services, which implement specific data access interfaces depending on the nature of the particular resource, i.e. ResourceAccess, ClassAccess, PropertyAccess, etc.

### RepositoryFactory::GetResourceFactory

Returns the endpoint reference of a data resource that represents an existing resource in the repository. This factory operation can be used if access to a repository through a different port type, such as ResourceAccess, is required. This operation MUST be supported by every implementation, regardless of the profile they support.

Input

* GetResourceFactoryRequest
  + DataResourceAbstractName – The abstract name of the resource the message is directed to.
  + PortTypeQName? – An OPTIONAL parameter that specifies the QName of the portType through which the resulting data should be accesed. The QName value here MUST correspond to one that is specified in the ConfigurationMap property.
  + ConfigurationDocument? – An OPTIONAL parameter that includes a document that specifies the properties of the data resource that is to be used to access the resulting data. The properties contained in this document are those defined in the WS-DAI specification.
  + PreferredTargetService? – An OPTIONAL parameter that identifies a EPR of the preferred service that is to act as the host for the new data resource.
  + ResourceURI – The URI of the resource for whom a new resource data access service will be created.

Output

* GetResourceFactoryResponse
  + DataResourceAddress\* – A list of data resource addresses.

Faults

* InvalidResourceNameFault - The supplied repository resource name is not known to the service.
* DataResourceUnavailableFault - The specified data resource is unavailable.
* InvalidPortTypeQNameFault - The PortTypeQName is not in the collection defined by the ConfigurationMap property.
* InvalidConfigurationDocumentFault - The ConfigurationDocument specified is not valid according to the ConfigurationDocumentQName when the ConfigurationMap is indexed by the specified PortTypeQName.
* NotAuthorizedFault - The consumer is not authorized to perform this operation at this time.
* ServiceBusyFault - The service is already processing a request and the ConcurrentAccess is false.
* ResourceDoesNotExistFault - The specified resource is not defined in the repository.

### RepositoryFactory::GetClassFactory

Returns the endpoint reference of a data resource that represents an existing resource in the repository. This factory operation can be used if access to a repository through a different port type, such as ClassAccess, is required. This operation MUST be supported by profile 1 and/or 2 compliant implementations.

Input

* GetClassFactoryRequest
  + DataResourceAbstractName – The abstract name of the resource the message is directed to.
  + PortTypeQName? – An OPTIONAL parameter that specifies the QName of the portType through which the resulting data should be accesed. The QName value here MUST correspond to one that is specified in the ConfigurationMap property.
  + ConfigurationDocument? – An OPTIONAL parameter that includes a document that specifies the properties of the data resource that is to be used to access the resulting data. The properties contained in this document are those defined in the WS-DAI specification.
  + PreferredTargetService? – An OPTIONAL parameter that identifies a EPR of the preferred service that is to act as the host for the new data resource.
  + ResourceURI – The URI of the resource for whom a new class data access service will be created.

Output

* GetClassFactoryResponse
  + DataResourceAddress\* – A list of data resource addresses.

Faults

* InvalidResourceNameFault - The supplied repository resource name is not known to the service.
* DataResourceUnavailableFault - The specified data resource is unavailable.
* InvalidPortTypeQNameFault - The PortTypeQName is not in the collection defined by the ConfigurationMap property.
* InvalidConfigurationDocumentFault - The ConfigurationDocument specified is not valid according to the ConfigurationDocumentQName when the ConfigurationMap is indexed by the specified PortTypeQName.
* NotAuthorizedFault - The consumer is not authorized to perform this operation at this time.
* ServiceBusyFault - The service is already processing a request and the ConcurrentAccess is false.
* ResourceDoesNotExistFault - The specified resource is not defined in the repository.

### RepositoryFactory::GetPropertyFactory

Returns the endpoint reference of a data resource that represents an existing resource in the repository. This factory operation can be used if access to a repository through a different port type, such as PropertyAccess, is required. This operation MUST be supported by profile 1 and/or 2 compliant implementations.

Input

* GetPropertyFactoryRequest
  + DataResourceAbstractName – The abstract name of the resource the message is directed to.
  + PortTypeQName? – An OPTIONAL parameter that specifies the QName of the portType through which the resulting data should be accesed. The QName value here MUST correspond to one that is specified in the ConfigurationMap property.
  + ConfigurationDocument? – An OPTIONAL parameter that includes a document that specifies the properties of the data resource that is to be used to access the resulting data. The properties contained in this document are those defined in the WS-DAI specification.
  + PreferredTargetService? – An OPTIONAL parameter that identifies a EPR of the preferred service that is to act as the host for the new data resource.
  + ResourceURI – The URI of the resource for whom a new property data access service will be created.

Output

* GetPropertyFactoryResponse
  + DataResourceAddress\* – A list of data resource addresses.

Faults

* InvalidResourceNameFault - The supplied repository resource name is not known to the service.
* DataResourceUnavailableFault - The specified data resource is unavailable.
* InvalidPortTypeQNameFault - The PortTypeQName is not in the collection defined by the ConfigurationMap property.
* InvalidConfigurationDocumentFault - The ConfigurationDocument specified is not valid according to the ConfigurationDocumentQName when the ConfigurationMap is indexed by the specified PortTypeQName.
* NotAuthorizedFault - The consumer is not authorized to perform this operation at this time.
* ServiceBusyFault - The service is already processing a request and the ConcurrentAccess is false.
* ResourceDoesNotExistFault - The specified resource is not defined in the repository.

### RepositoryFactory::GetStatementFactory

Returns the endpoint reference of a data resource that represents an existing resource in the repository. This factory operation can be used if access to a repository through a different port type, such as StatementAccess, is required. This operation MUST be supported by profile 2 compliant implementations.

Input

* GetStatementFactoryRequest
  + DataResourceAbstractName – The abstract name of the resource the message is directed to.
  + PortTypeQName? – An OPTIONAL parameter that specifies the QName of the portType through which the resulting data should be accesed. The QName value here MUST correspond to one that is specified in the ConfigurationMap property.
  + ConfigurationDocument? – An OPTIONAL parameter that includes a document that specifies the properties of the data resource that is to be used to access the resulting data. The properties contained in this document are those defined in the WS-DAI specification.
  + PreferredTargetService? – An OPTIONAL parameter that identifies a EPR of the preferred service that is to act as the host for the new data resource.
  + ResourceURI – The URI of the resource for whom a new statement data access service will be created.

Output

* GetStatementFactoryResponse
  + DataResourceAddress\* – A list of data resource addresses.

Faults

* InvalidResourceNameFault - The supplied repository resource name is not known to the service.
* DataResourceUnavailableFault - The specified data resource is unavailable.
* InvalidPortTypeQNameFault - The PortTypeQName is not in the collection defined by the ConfigurationMap property.
* InvalidConfigurationDocumentFault - The ConfigurationDocument specified is not valid according to the ConfigurationDocumentQName when the ConfigurationMap is indexed by the specified PortTypeQName.
* NotAuthorizedFault - The consumer is not authorized to perform this operation at this time.
* ServiceBusyFault - The service is already processing a request and the ConcurrentAccess is false.
* ResourceDoesNotExistFault - The specified resource is not defined in the repository.

### RepositoryFactory::GetContainerFactory

Returns the endpoint reference of a data resource that represents an existing resource in the repository. This factory operation can be used if access to a repository through a different port type, such as ContainerAccess, ContainerFactory, ContainerIteratorAccess of AltAccess, is required. This operation MUST be supported by profile 2 compliant implementations.

Input

* GetContainerFactoryRequest
  + DataResourceAbstractName – The abstract name of the resource the message is directed to.
  + PortTypeQName? – An OPTIONAL parameter that specifies the QName of the portType through which the resulting data should be accesed. The QName value here MUST correspond to one that is specified in the ConfigurationMap property.
  + ConfigurationDocument? – An OPTIONAL parameter that includes a document that specifies the properties of the data resource that is to be used to access the resulting data. The properties contained in this document are those defined in the WS-DAI specification.
  + PreferredTargetService? – An OPTIONAL parameter that identifies a EPR of the preferred service that is to act as the host for the new data resource.
  + ResourceURI – The URI of the resource for whom a new container data access service will be created.

Output

* GetContainerFactoryResponse
  + DataResourceAddress\* – A list of data resource addresses.

Faults

* InvalidResourceNameFault - The supplied repository resource name is not known to the service.
* DataResourceUnavailableFault - The specified data resource is unavailable.
* InvalidPortTypeQNameFault - The PortTypeQName is not in the collection defined by the ConfigurationMap property.
* InvalidConfigurationDocumentFault - The ConfigurationDocument specified is not valid according to the ConfigurationDocumentQName when the ConfigurationMap is indexed by the specified PortTypeQName.
* NotAuthorizedFault - The consumer is not authorized to perform this operation at this time.
* ServiceBusyFault - The service is already processing a request and the ConcurrentAccess is false.
* ResourceDoesNotExistFault - The specified resource is not defined in the repository.

### RepositoryFactory::GetListFactory

Returns the endpoint reference of a data resource that represents an existing resource in the repository. This factory operation can be used if access to a repository through a different port type, such as ListAccess, ListFactory or ListIteratorAccess, is required. This operation MUST be supported by profile 2 compliant implementations.

Input

* GetListFactoryRequest
  + DataResourceAbstractName – The abstract name of the resource the message is directed to.
  + PortTypeQName? – An OPTIONAL parameter that specifies the QName of the portType through which the resulting data should be accesed. The QName value here MUST correspond to one that is specified in the ConfigurationMap property.
  + ConfigurationDocument? – An OPTIONAL parameter that includes a document that specifies the properties of the data resource that is to be used to access the resulting data. The properties contained in this document are those defined in the WS-DAI specification.
  + PreferredTargetService? – An OPTIONAL parameter that identifies a EPR of the preferred service that is to act as the host for the new data resource.
  + ResourceURI – The URI of the resource for whom a new list data access service will be created.

Output

* GetListFactoryResponse
  + DataResourceAddress\* – A list of data resource addresses.

Faults

* InvalidResourceNameFault - The supplied repository resource name is not known to the service.
* DataResourceUnavailableFault - The specified data resource is unavailable.
* InvalidPortTypeQNameFault - The PortTypeQName is not in the collection defined by the ConfigurationMap property.
* InvalidConfigurationDocumentFault - The ConfigurationDocument specified is not valid according to the ConfigurationDocumentQName when the ConfigurationMap is indexed by the specified PortTypeQName.
* NotAuthorizedFault - The consumer is not authorized to perform this operation at this time.
* ServiceBusyFault - The service is already processing a request and the ConcurrentAccess is false.
* ResourceDoesNotExistFault - The specified resource is not defined in the repository.

# Resource

## Static Resource Description

The elements defined in this section live under a ResourcePropertyDocument that extends the PropertyDocument defined in the WS-DAI core specification.

### RepositoryName

<xs:element name="RepositoryName" type="xs:anyURI"/>

|  |  |
| --- | --- |
| /wro:RepositoryName | |
|  | The name of the repository in which the RDF(S) resource represented by this data resource is originally defined. |

### ResourceURI

<xs:element name="ResourceURI" type="xs:anyURI"/>

|  |  |
| --- | --- |
| /wro:ResourceURI | |
|  | The URI of the RDF(S) resource represented by the data resource. |

### ResourcePropertyDocument

<xs:complexType name="ResourcePropertyDocumentType">

<xs:complexContent>

<xs:extension base="wsdai:PropertyDocumentType">

<xs:sequence>

<xs:element ref="wro:RepositoryName"/>

<xs:element ref="wro:ResourceURI"/>

</xs:sequence>

</xs:extension>

</xs:complexContent>

</xs:complexType>

<xs:element name="ResourcePropertyDocument" type="wro:ResourcePropertyDocumentType"/>

|  |  |
| --- | --- |
| /wro:ResourcePropertyDocument | |
|  | A structure that describes a Resource data resource, combining the properties defined in the WS-DAI core specification with those defined earlier in this section. |

## Configurable Resource Description

No extra configurable properties are defined for Resource.

## ResourceAccess Messages

This interface provides access methods centered in a particular RDF resource of a repository. There are two groups of methods. On the one hand there is a set of methods for managing the values associated to the main built-in properties defined for the Resource class in the RDF model (rdf:type, rdfs:label, rdfs:comment, rdfs:seeAlso, and rdfs:isDefinedBy); on the other hand, a set of general purpose methods is defined. These methods provide CRUD/BREAD functionalities for dealing with the RDF model, using the Resource class (specifically the concrete resource represented by the service) as the center of the model.

### ResourceAccess::GetResourcePropertyDocument

Allows a copy of the ResourcePropertyDocument document to be retrieved.

Input

* GetResourcePropertyDocumentRequest
  + DataResourceAbstractName – The abstract name of the resource the message is directed to.
  + DatasetFormatURI – The format of the response dataset data.

Output

* GetResourcePropertyDocumentResponse
  + GetResourcePropertyDocumentDataset
    - DatasetFormatURI – The URI of the dataset format being returned as defined in the DatasetMap.
    - GetResourcePropertyDocumentDatasetData – The data returned in response to the request.
      * ResourcePropertyDocument\* – The properties described in the data description section.
    - NumberOfRepositories – The number of available repositories.

Faults

* InvalidResourceNameFault - The supplied repository resource name is not known to the service.
* DataResourceUnavailableFault - The specified data resource is unavailable.
* NotAuthorizedFault - The consumer is not authorized to perform this operation at this time.
* ServiceBusyFault - The service is already processing a request and the ConcurrentAccess is false.

### ResourceAccess::GetResourceTypes

Retrieve the URIs of the RDF(S) classes that are parents of the resource, traversing the whole class hierarchy if required.

Input

* GetResourceTypesRequest
  + DataResourceAbstractName – The abstract name of the resource the message is directed to.
  + DatasetFormatURI – The format of the response dataset data.
  + InferParents? – This OPTIONAL parameter determines whether or not the service MUST infer the parent classes.

Output

* GetResourceTypesResponse
  + GetResourceTypesDataset
    - DatasetFormatURI – The URI of the dataset format being returned as defined in the DatasetMap.
    - GetResourceTypesDatasetData – The data returned in response to the request.
      * ParentURI\* – The URIs of the parent classes of the resource.
    - InferParents – Whether or not the service took into account inferred parent classes.
    - NumberOfParents – The number of parents of the resource.

Faults

* InvalidResourceNameFault - The supplied resource resource is not known to the service.
* DataResourceUnavailableFault - The specified data resource is unavailable.
* ServiceBusyFault - The service is already processing a request and Concurrent Access is false.

### ResourceAccess::GetResourceDescription

Retrieve the basic description of the resource. The description is made up of the values of the following properties: rdfs:label, rdfs:comment, rdfs:seeAlso, and rdfs:isDefinedBy. An attempt SHOULD be made to retrieve all the specified property values even if some retrievals fail.

Input

* GetResourceDescriptionRequest
  + DataResourceAbstractName – The abstract name of the resource the message is directed to.
  + DatasetFormatURI – The format of the response dataset data.

Output

* GetResourceDescriptionResponse
  + GetResourceDescriptionDataset
    - DatasetFormatURI – The URI of the dataset format being returned as defined in the DatasetMap.
    - GetResourceDescriptionDatasetData – The data returned in response to the request.
      * Description – The basic description of the resource.
        + Label\* – The labels of the resource.
        + Comment\* – The comments of the resource.
        + SeeAlso\* – Further resources that might provide additional information about the resource.
        + IsDefinedBy\* – Further resources that identify RDF vocabularies in which the resource is described.

Faults

* InvalidResourceNameFault - The supplied resource resource is not known to the service.
* DataResourceUnavailableFault - The specified data resource is unavailable.
* ServiceBusyFault - The service is already processing a request and Concurrent Access is false.

### ResourceAccess::GetPropertyValues

Retrieve the property values of the resource. If no properties are specified, the values of all the defined properties SHALL be retrieved. An attempt SHOULD be made to retrieve all the specified property values even if some retrievals fail.

Input

* GetPropertyValuesRequest
  + DataResourceAbstractName – The abstract name of the resource the message is directed to.
  + DatasetFormatURI – The format of the response dataset data.
  + PropertyURI\* – An OPTIONAL set URIs of the properties that are to be retrieved.

Output

* GetPropertyValuesResponse
  + GetPropertyValuesDataset
    - DatasetFormatURI – The URI of the dataset format being returned as defined in the DatasetMap.
    - GetPropertyValuesDatasetData – The data returned in response to the request.
      * PropertyResult\* – For each one of the properties whose values were to be retrieved:
        + PropertyURI – The URI of the property.
        + PropertyValue+ – The concrete values defined for the property.
    - NumberOfPropertyValuesRetrieved – The number of property values that have been retrieved.

Faults

* InvalidResourceNameFault - The supplied resource resource is not known to the service.
* DataResourceUnavailableFault - The specified data resource is unavailable.
* ServiceBusyFault - The service is already processing a request and Concurrent Access is false.

### ResourceAccess::GetDefinedProperties

Retrieve the URIs of the properties which are defined for the resource, that is, those properties which are the predicate of a statement which has the resource as subject.

Input

* GetDefinedPropertiesRequest
  + DataResourceAbstractName – The abstract name of the resource the message is directed to.
  + DatasetFormatURI – The format of the response dataset data.

Output

* GetDefinedPropertiesResponse
  + GetDefinedPropertiesDataset
    - DatasetFormatURI – The URI of the dataset format being returned as defined in the DatasetMap.
    - GetDefinedPropertiesDatasetData – The data returned in response to the request.
      * PropertyURI\* – The URIs of the specific properties defined for the resource.
    - NumberOfDefinedProperties – The number of properties that are defined for the resource.

Faults

* InvalidResourceNameFault - The supplied resource resource is not known to the service.
* DataResourceUnavailableFault - The specified data resource is unavailable.
* ServiceBusyFault - The service is already processing a request and Concurrent Access is false.

### ResourceAccess::GetDefinableProperties

Retrieve the URIs of the properties that might be defined for this resource, that is, those properties which have as domain a class that is a parent of the resource. The resolution mechanism to be used for retrieving the data can be specified by identifying the reasoning capabilities that SHALL be applied by using the request's parameters provided. Both parameters rely on the predefined RDF Schema entailment rules [RDF Semantics], which allow reasoning over taxonomies of both classes and properties, thus widening or narrowing the expected result set.

Input

* GetDefinablePropertiesRequest
  + DataResourceAbstractName – The abstract name of the resource the message is directed to.
  + DatasetFormatURI – The format of the response dataset data.
  + InferInheritedProperties? – This OPTIONAL parameter determines whether or not the service MUST infer the properties that are inherited from parent classes of this resource. By default, this parameter is set to FALSE.
  + InferSubProperties? – This OPTIONAL parameter determines whether or not the service MUST infer the sub properties of the definable properties. By default, this parameter is set to FALSE.

Output

* GetDefinablePropertiesResponse
  + GetDefinablePropertiesDataset
    - DatasetFormatURI – The URI of the dataset format being returned as defined in the DatasetMap.
    - GetDefinablePropertiesDatasetData – The data returned in response to the request.
      * PropertyURI\* – The URIs of the specific properties that are definable for the resource.
    - InferInheritedProperties – Whether or not inherited properties were taken into consideration.
    - InferSubProperties – Whether or not sub properties were taken into consideration.
    - NumberOfDefinableProperties – The number of properties that might be defined for the resource.

Faults

* InvalidResourceNameFault - The supplied resource resource is not known to the service.
* DataResourceUnavailableFault - The specified data resource is unavailable.
* ServiceBusyFault - The service is already processing a request and Concurrent Access is false.

### ResourceAccess::AddResourceTypes

Add type values to the resource. The RDF(S) classes that represent the types to be added are identified by their URI. An attempt SHOULD be made to add all the specified types even if some additions fail.

Input

* AddResourceTypesRequest
  + DataResourceAbstractName – The abstract name of the resource the message is directed to.
  + DatasetFormatURI – The format of the response dataset data.
  + TypeURI+ – The URI of the types that are to be added to the resource.

Output

* AddResourceTypesResponse
  + AddResourceTypesDataset
    - DatasetFormatURI – The URI of the dataset format being returned as defined in the DatasetMap.
    - AddResourceTypesDatasetData – The data returned in response to the request.
      * TypeResult+ – For each one of the types that were to be added:
        + TypeURI – The URI of the type.
        + Result – The result of the resource type addition operation for the specified type. Possible values for this are: success; and type not added as the consumer is not authorized.
    - NumberOfTypesAdded – The number of types that were added to the resource.

Faults

* InvalidResourceNameFault - The supplied resource resource is not known to the service.
* DataResourceUnavailableFault - The specified data resource is unavailable.
* ServiceBusyFault - The service is already processing a request and Concurrent Access is false.

### ResourceAccess::AddResourceDescription

Add a basic description to the resource. The description is made up of the values of the following properties: rdfs:label, rdfs:comment, rdfs:seeAlso, and rdfs:isDefinedBy. The consumer can decide how the addition will be made: append new values; replace previous values; and replace whole description. An attempt SHOULD be made to add all the specified property values even if some additions fail.

Input

* AddResourceDescriptionRequest
  + DataResourceAbstractName – The abstract name of the resource the message is directed to.
  + DatasetFormatURI – The format of the response dataset data.
  + Description – The basic description of the resource.
    - Label\* – The labels of the resource.
    - Comment\* – The comments of the resource.
    - SeeAlso\* – Further resources that might provide additional information about the resource.
    - IsDefinedBy\* – Further resources that identify RDF vocabularies in which the resource is described.
  + SubstituteDescription? – An OPTIONAL parameter that specifies how the service has to add the description. Possible values for this are: append new values to existing ones; update existing values with new ones, that is, if new values are provided for any property, these will replace existing values of this property; replace whole description with the new one, that is, existing description values SHALL be removed, and those new specified SHALL be added. By default, the operation SHALL append values.

Output

* AddResourceDescriptionResponse
  + AddResourceDescriptionDataset
    - DatasetFormatURI – The URI of the dataset format being returned as defined in the DatasetMap.
    - AddResourceDescriptionDatasetData – The data returned in response to the request.
      * Result – The result of the resource description addition operation. Possible values for this are: success; and description not added as the consumer is not authorized.
    - SubstituteDescription – How the service added the resource description.

Faults

* InvalidResourceNameFault - The supplied resource resource is not known to the service.
* DataResourceUnavailableFault - The specified data resource is unavailable.
* ServiceBusyFault - The service is already processing a request and Concurrent Access is false.

### ResourceAccess::AddPropertyValues

Add property values to the resource. An attempt SHOULD be made to add all the specified property values even if some additions fail.

Input

* AddPropertyValuesRequest
  + DataResourceAbstractName – The abstract name of the resource the message is directed to.
  + DatasetFormatURI – The format of the response dataset data.
  + Property+ – For each one of the property whose values will be added to the resource:
    - PropertyURI – The property URI.
    - PropertyValue+ – The values of the property that will be added to the resource.

Output

* AddPropertyValuesResponse
  + AddPropertyValuesDataset
    - DatasetFormatURI – The URI of the dataset format being returned as defined in the DatasetMap.
    - AddPropertyValuesDatasetData – The data returned in response to the request.
      * PropertyResult+ – For each one of the properties whose values were to be added to the resource:
        + PropertyURI – The URI of the property.
        + Result – The result of the property value addition operation for the specified property. Possible values for this are: success; and property values not added as the consumer is not authorized.
    - NumberOfPropertyValuesAdded – The number of property values that were added to the resource.

Faults

* InvalidResourceNameFault - The supplied resource resource is not known to the service.
* DataResourceUnavailableFault - The specified data resource is unavailable.
* ServiceBusyFault - The service is already processing a request and Concurrent Access is false.

### ResourceAccess::RemoveResourceTypes

Remove resource types. If no types are specified, all the types defined for the resource SHALL be removed. Only explicit types will be removed. In no case the class resources that define the specified types are removed from the repository. An attempt SHOULD be made to remove all the specified types even if some removals fail.

Input

* RemoveResourceTypesRequest
  + DataResourceAbstractName – The abstract name of the resource the message is directed to.
  + DatasetFormatURI – The format of the response dataset data.
  + TypeURI\* – An OPTIONAL set of URIs of the types that are to be removed from the resource.

Output

* RemoveResourceTypesResponse
  + RemoveResourceTypesDataset
    - DatasetFormatURI – The URI of the dataset format being returned as defined in the DatasetMap.
    - RemoveResourceTypesDatasetData – The data returned in response to the request.
      * ParentResult\* – For each one of the types that were to be removed:
        + TypeURI – The URI of the type.
        + Result – The result of the resource type removal operation for the specified type. Possible values for this are: success; and type not removed as the consumer is not authorized.
    - NumberOfTypesRemoved – The number of types that were removed from the resource.

Faults

* InvalidResourceNameFault - The supplied resource resource is not known to the service.
* DataResourceUnavailableFault - The specified data resource is unavailable.
* ServiceBusyFault - The service is already processing a request and Concurrent Access is false.

### ResourceAccess::RemovePropertyValues

Remove resource property values. If no values are specified, all the values defined for the resource and property SHALL be removed. If no property is specified, all the specified values associated to the resource regardless of the property SHALL be removed. It is important to mention that the values that are resources themselves will not be removed from the repository. Only the values that are literals will be physically removed from the repository. An attempt SHOULD be made to remove all of the specified property values even if some removals fail.

Input

* RemovePropertyValuesRequest
  + DataResourceAbstractName – The abstract name of the resource the message is directed to.
  + DatasetFormatURI – The format of the response dataset data.
  + Property+ – The properties whose values for the specified resources will be removed. If no property is specified, all the property values of the specified resources will be removed. For each of these properties:
    - PropertyURI – The URI of the property.
    - PropertyValue\* – The values that will be removed. If no values are specified, all of them will be removed.

Output

* RemovePropertyValuesResponse
  + RemovePropertyValuesDataset
    - DatasetFormatURI – The URI of the dataset format being returned as defined in the DatasetMap.
    - RemovePropertyValuesDatasetData – The data returned in response to the request.
      * PropertyResult+ – For each one of the properties whose values were to be removed from the resource:
        + PropertyURI – The resource URI.
        + Result – The result of the resource properties removal operation. Possible values for this are: success; no matching property values found; all property values removed; and no property values removed as the consumer is not authorized.
    - NumberOfValuesRemoved – The number of values removed for the property.

Faults

* InvalidResourceNameFault - The supplied resource resource is not known to the service.
* DataResourceUnavailableFault - The specified data resource is unavailable.
* ServiceBusyFault - The service is already processing a request and Concurrent Access is false.

### ResourceAccess::ArePropertiesDefined

Check if the specified properties are defined for this resource, that is, there exists at least a value associated to the resource by means of the specified properties. The resolution mechanism to be used for providing the response can be specified by identifying the reasoning capabilities that SHALL be applied by using the request's parameter provided. The parameter relies in the predefined RDF Schema entailment rules [RDF Semantics], which allow reasoning over taxonomies of properties, thus widening or narrowing the expected result set. An attempt SHOULD be made to check all of the specified properties even if some checks fail.

Input

* ArePropertiesDefinedRequest
  + DataResourceAbstractName – The abstract name of the resource the message is directed to.
  + DatasetFormatURI – The format of the response dataset data.
  + PropertyURI+ – The URI of the specific properties that are going to be checked.
  + InferSuperProperties? – An OPTIONAL parameter that determines whether or not the service MUST infer the super properties of the defined properties. By default, this parameter is set to false.

Output

* ArePropertiesDefinedResponse
  + ArePropertiesDefinedDataset
    - DatasetFormatURI – The URI of the dataset format being returned as defined in the DatasetMap.
    - ArePropertiesDefinedDatasetData – The data returned in response to the request.
      * PropertyResult+ – For each one of the properties that were to be checked:
        + PropertyURI – The URI of the property.
        + Result – The result of the resource type defined property check operation for the specified property. Possible values for this are: true, false, and property could not be checked as the consumer is not authorized.
    - InferSuperProperties – Whether or not super properties were taken into consideration.

Faults

* InvalidResourceNameFault - The supplied resource resource is not known to the service.
* DataResourceUnavailableFault - The specified data resource is unavailable.
* ServiceBusyFault - The service is already processing a request and Concurrent Access is false.

### ResourceAccess::ArePropertiesDefinable

Check if the specified properties are definable for this resource, that is, if any class in the domain of the properties is parent of the resource. The resolution mechanism to be used for providing the response can be specified by identifying the reasoning capabilities that SHALL be applied by using the request's parameters provided. Both parameters rely in the predefined RDF Schema entailment rules [RDF Semantics], which allow reasoning over taxonomies of both classes and properties, thus widening or narrowing the expected result set. An attempt SHOULD be made to check all of the specified properties even if some checks fail.

Input

* ArePropertiesDefinableRequest
  + DataResourceAbstractName – The abstract name of the resource the message is directed to.
  + DatasetFormatURI – The format of the response dataset data.
  + PropertyURI+ – The URI of the specific properties that are going to be checked.
  + InferInheritedProperties? – An OPTIONAL parameter that determines whether or not the service MUST infer the properties that are inherited from parent classes of the resource. By default this paramter is set to false.
  + InferSubProperties? – An OPTIONAL parameter that determines whether or not the service MUST infer the sub properties of the definable properties. By default this parameter is set to false.

Output

* ArePropertiesDefinableResponse
  + ArePropertiesDefinableDataset
    - DatasetFormatURI – The URI of the dataset format being returned as defined in the DatasetMap.
    - ArePropertiesDefinableDatasetData – The data returned in response to the request.
      * PropertyResult+ – For each one of the properties that were to be checked:
        + PropertyURI – The URI of the property.
        + Result – The result of the resource type defined property check operation for the specified property. Possible values for this are: true, false, and property could not be checked as the consumer is not authorized.
    - InferInheritedProperties – Whether or not inherited properties were taken into consideration.
    - InferSubProperties – Whether or not sub properties were taken into consideration.

Faults

* InvalidResourceNameFault - The supplied resource resource is not known to the service.
* DataResourceUnavailableFault - The specified data resource is unavailable.
* ServiceBusyFault - The service is already processing a request and Concurrent Access is false.

# Class

## Static Class Description

The elements defined in this section live under a ClassPropertyDocument that extends the PropertyDocument defined in the WS-DAI core specification.

### RepositoryName

<xs:element name="RepositoryName" type="xs:anyURI"/>

|  |  |
| --- | --- |
| /wro:RepositoryName | |
|  | The name of the repository in which the RDF(S) class represented by this data resource is originally defined. |

### ResourceURI

<xs:element name="ResourceURI" type="xs:anyURI"/>

|  |  |
| --- | --- |
| /wro:ResourceURI | |
|  | The URI of the RDF(S) class represented by the data resource. |

### ClassPropertyDocument

<xs:complexType name="ClassPropertyDocumentType">

<xs:complexContent>

<xs:extension base="wsdai:PropertyDocumentType">

<xs:sequence>

<xs:element ref="wro:RepositoryName"/>

<xs:element ref="wro:ResourceURI"/>

</xs:sequence>

</xs:extension>

</xs:complexContent>

</xs:complexType>

<xs:element name="ClassPropertyDocument" type="wro:ClassPropertyDocumentType"/>

|  |  |
| --- | --- |
| /wro:ClassPropertyDocument | |
|  | A structure that describes a Class data resource, combining the properties defined in the WS-DAI core specification with those defined earlier in this section. |

## Configurable Class Description

No extra configurable properties are defined for Class.

## ClassAccess Messages

The operations provided by this interface are related to the different kind of things we can do with an RDF(S) model given a fixed class: browsing the class hierarchy, retrieving related properties, retrieveing instances, etc.

### ClassAccess::GetClassPropertyDocument

Allows a copy of the ClassPropertyDocument document to be retrieved.

Input

* GetClassPropertyDocumentRequest
  + DataResourceAbstractName – The abstract name of the resource the message is directed to.
  + DatasetFormatURI – The format of the response dataset data.

Output

* GetClassPropertyDocumentResponse
  + GetClassPropertyDocumentDataset
    - DatasetFormatURI – The URI of the dataset format being returned as defined in the DatasetMap.
    - GetClassPropertyDocumentDatasetData – The data returned in response to the request.
      * ClassPropertyDocument\* – The properties described in the data description section.
    - NumberOfRepositories – The number of available repositories.

Faults

* InvalidResourceNameFault - The supplied repository resource name is not known to the service.
* DataResourceUnavailableFault - The specified data resource is unavailable.
* NotAuthorizedFault - The consumer is not authorized to perform this operation at this time.
* ServiceBusyFault - The service is already processing a request and the ConcurrentAccess is false.

### ClassAccess::GetRelatedClasses

Retrieve the classes related to this class. The operation is concerned with computing the (transitive) closure of the rdfs:subClassOf built-in property for the class resource represented by the data resource, taking into account the class hierarchy if required, relying on the RDF Schema entailment rules [RDF Semantics] as necessary.

Input

* GetRelatedClassesRequest
  + DataResourceAbstractName – The abstract name of the resource the message is directed to.
  + DatasetFormatURI – The format of the response dataset data.
  + RelationshipType – The type of relationship that must hold between the class and the classes that are to be retrieved. Possible values for this are: Subclass, Superclass, DirectSubclass, and DirectSuperclass.

Output

* GetRelatedClassesResponse
  + GetRelatedClassesDataset
    - DatasetFormatURI – The URI of the dataset format being returned as defined in the DatasetMap.
    - GetRelatedClassesDatasetData – The data returned in response to the request.
      * RelatedClassURI\* – The URIs of the classes related to the class.
    - RelationshipType – The type of relationship that holds between this class and the classes retrieved.
    - NumberOfRelatedClasses – The number of classes that are related to the class.

Faults

* InvalidResourceNameFault - The supplied repository resource is not known to the service.
* DataResourceUnavailableFault - The specified data resource is unavailable.
* ServiceBusyFault - The service is already processing a request and Concurrent Access is false.

### ClassAccess::GetRelatedProperties

Retrieve all the properties that are defined for the class, that is, those with domain the class or, if required, any of its super classes. The resolution mechanism to be used for retrieving the related properties can be specified by identifying the reasoning capabilities that SHALL be applied by using the request's parameters provided. Both parameters rely in the predefined RDF Schema entailment rules [REF-SCHEMA], which allow reasoning over taxonomies of both classes and properties, thus widening or narrowing the expected result set.

Input

* GetRelatedPropertiesRequest
  + DataResourceAbstractName – The abstract name of the resource the message is directed to.
  + DatasetFormatURI – The format of the response dataset data.
  + InferInheritedProperties? – This OPTIONAL parameter determines whether or not the service MUST take into account the whole class hierarchy. By default this paramater is set to FALSE.
  + InferSubProperties? – This OPTIONAL parameter determines whether or not the service MUST take into account the whole property hierarchy. By default this parameter is set to FALSE.

Output

* GetRelatedPropertiesResponse
  + GetRelatedPropertiesDataset
    - DatasetFormatURI – The URI of the dataset format being returned as defined in the DatasetMap.
    - GetRelatedPropertiesDatasetData – The data returned in response to the request.
      * RelatedPropertyURI\* – The URIs of the related properties.
    - InferInheritedProperties – Whether or not the inherited properties were taken into consideration.
    - InferSubProperties – Whether or not the sub properties were taken into consideration.
    - NumberOfRelatedProperties – The number of properties related to the class.

Faults

* InvalidResourceNameFault - The supplied repository resource is not known to the service.
* DataResourceUnavailableFault - The specified data resource is unavailable.
* ServiceBusyFault - The service is already processing a request and Concurrent Access is false.

### ClassAccess::GetInstances

Retrieve the resources that are instances of the class, taking into account the class hierarchy if required.

Input

* GetInstancesRequest
  + DataResourceAbstractName – The abstract name of the resource the message is directed to.
  + DatasetFormatURI – The format of the response dataset data.
  + InferInstances? – This OPTIONAL parameter determines whether or not the service has to take into account the whole class hierarchy. By default, the parameter is set to FALSE.

Output

* GetInstancesResponse
  + GetInstancesDataset
    - DatasetFormatURI – The URI of the dataset format being returned as defined in the DatasetMap.
    - GetInstancesDatasetData – The data returned in response to the request.
      * InstanceURI\* – The URIs of the resources that are instances of the class.
    - InferInstances – Whether or not inferred instances were taken into consideration.
    - NumberOfInstances – The number of instances related to the class.

Faults

* InvalidResourceNameFault - The supplied repository resource is not known to the service.
* DataResourceUnavailableFault - The specified data resource is unavailable.
* ServiceBusyFault - The service is already processing a request and Concurrent Access is false.

### ClassAccess::AddRelatedClasses

Relate classes to the class. The consumer can specify the relationship that will hold between the class and the specified classes. An attempt SHOULD be made to relate all the specified classes even if some additions fail.

Input

* AddRelatedClassesRequest
  + DataResourceAbstractName – The abstract name of the resource the message is directed to.
  + DatasetFormatURI – The format of the response dataset data.
  + ClassURI+ – The URI of the classes that will be related to the class.
  + AddAsSubclass – An parameter that determines whether the classes are to be added as direct subclasses or direct superclasses.

Output

* AddRelatedClassesResponse
  + AddRelatedClassesDataset
    - DatasetFormatURI – The URI of the dataset format being returned as defined in the DatasetMap.
    - AddRelatedClassesDatasetData – The data returned in response to the request.
      * ClassResult+ – For each one of the classes that were to be related to the class:
        + ClassURI – The URI of the class.
        + Result – The result of the related class addition operation for the specified class. Possible values for this are: success; and class not related as the consumer is not authorized.
    - AddAsSubclass – Whether the classes were added as direct subclasses or direct superclasses.
    - NumberOfRelatedClassesAdded – The number of classes that were added to the class hierachy of the class.

Faults

* InvalidResourceNameFault - The supplied repository resource is not known to the service.
* DataResourceUnavailableFault - The specified data resource is unavailable.
* ServiceBusyFault - The service is already processing a request and Concurrent Access is false.

### ClassAccess::RemoveRelatedClasses

Remove the relationship property that holds between the specified classes and this class. If no class is specified, all the classes related of the same type SHALL be removed. Otherwise, only the specified related classes SHALL be removed. An attempt SHOULD be made to remove all of the specified relationships even if some removals fail.

Input

* RemoveRelatedClassesRequest
  + DataResourceAbstractName – The abstract name of the resource the message is directed to.
  + DatasetFormatURI – The format of the response dataset data.
  + ClassURI\* – An OPTIONAL set of URIs of the classes that will no longer be related to the class.
  + RelationshipType – The type of relationship that MUST hold between this class and the specified classes. Possible values for this are: Subclass, Superclass, DirectSubclass, and DirectSuperclass.

Output

* RemoveRelatedClassesResponse
  + RemoveRelatedClassesDataset
    - DatasetFormatURI – The URI of the dataset format being returned as defined in the DatasetMap.
    - RemoveRelatedClassesDatasetData – The data returned in response to the request.
      * ClassResult\* – For each one of the classes that were to be unrelated from the class:
        + ClassURI – The URI of the class.
        + Result – The result of the related class removal operation for the specified class. Possible values for this are: success; and class not unrelated as the consumer is not authorized.
    - RelationshipType – The type of relationship that existed between this class and the removed classes.
    - NumberOfRelatedClassesRemoved – The number of related classes that are no longer related to the class.

Faults

* InvalidResourceNameFault - The supplied repository resource is not known to the service.
* DataResourceUnavailableFault - The specified data resource is unavailable.
* ServiceBusyFault - The service is already processing a request and Concurrent Access is false.

### ClassAccess::AreClassesRelated

Check if the specified classes are related to the class in any manner. An attempt SHOULD be made to check all of the specified classes even if some checks fail.

Input

* AreClassesRelatedRequest
  + DataResourceAbstractName – The abstract name of the resource the message is directed to.
  + DatasetFormatURI – The format of the response dataset data.
  + ClassURI+ – The classes that are to be checked.
  + RelationshipType – The type of relationship that is to be checked between this class and the specified classes. Possible values for this are: Subclass, Superclass, DirectSubclass, and DirectSuperclass.

Output

* AreClassesRelatedResponse
  + AreClassesRelatedDataset
    - DatasetFormatURI – The URI of the dataset format being returned as defined in the DatasetMap.
    - AreClassesRelatedDatasetData – The data returned in response to the request.
      * ClassResult+ – For each one of the classes that were to be checked:
        + ClassURI – The URI of the class.
        + Result – The result of the related class check operation for the specified class. Possible values for this are: true, false, and check not performed as the consumer is not authorized.
    - RelationshipType – The type of relationship that was to be checked.

Faults

* InvalidResourceNameFault - The supplied repository resource is not known to the service.
* DataResourceUnavailableFault - The specified data resource is unavailable.
* ServiceBusyFault - The service is already processing a request and Concurrent Access is false.

### ClassAccess::AreInstances

Check if the specified resources are instances of the class, taking into account the class hierarchy of required. An attempt SHOULD be made to check all of the specified resources even if some checks fail.

Input

* AreInstancesRequest
  + DataResourceAbstractName – The abstract name of the resource the message is directed to.
  + DatasetFormatURI – The format of the response dataset data.
  + ResourceURI+ – The resources that are to be checked.
  + InferInstances? – This OPTIONAL parameter determines whether or not the service has to take into account the whole class hierarchy. By default, the parameter is set to FALSE.

Output

* AreInstancesResponse
  + AreInstancesDataset
    - DatasetFormatURI – The URI of the dataset format being returned as defined in the DatasetMap.
    - AreInstancesDatasetData – The data returned in response to the request.
      * ResourceResult+ – For each one of the resources that were to be checked:
        + ResourceURI – The URI of the resource.
        + Result – The result of the instance check operation for the specified class. Possible values for this are: true, false, and check not performed as the consumer is not authorized.
    - InferInstances – Whether or not inferred instances were taken into account.

Faults

* InvalidResourceNameFault - The supplied repository resource is not known to the service.
* DataResourceUnavailableFault - The specified data resource is unavailable.
* ServiceBusyFault - The service is already processing a request and Concurrent Access is false.

# Property

## Static Property Description

The elements defined in this section live under a PropertyPropertyDocument that extends the PropertyDocument defined in the WS-DAI core specification.

### RepositoryName

<xs:element name="RepositoryName" type="xs:anyURI"/>

|  |  |
| --- | --- |
| /wro:RepositoryName | |
|  | The name of the repository in which the RDF(S) property represented by this data resource is originally defined. |

### ResourceURI

<xs:element name="ResourceURI" type="xs:anyURI"/>

|  |  |
| --- | --- |
| /wro:ResourceURI | |
|  | The URI of the RDF(S) property represented by the data resource. |

### PropertyPropertyDocument

<xs:complexType name="PropertyPropertyDocumentType">

<xs:complexContent>

<xs:extension base="wsdai:PropertyDocumentType">

<xs:sequence>

<xs:element ref="wro:RepositoryName"/>

<xs:element ref="wro:ResourceURI"/>

</xs:sequence>

</xs:extension>

</xs:complexContent>

</xs:complexType>

<xs:element name="PropertyPropertyDocument" type="wro:PropertyPropertyDocumentType"/>

|  |  |
| --- | --- |
| /wro:PropertyPropertyDocument | |
|  | A structure that describes a Property data resource, combining the properties defined in the WS-DAI core specification with those defined earlier in this section. |

## Configurable Property Description

No extra configurable properties are defined for Property.

## PropertyAccess Messages

The operations provided by this interface are related to the different kind of things we can do with an RDF(S) model given a fixed property: browsing the property hierarchy, getting the domain and range, etc.

### PropertyAccess::GetPropertyPropertyDocument

Allows a copy of the PropertyPropertyDocument document to be retrieved.

Input

* GetPropertyPropertyDocumentRequest
  + DataResourceAbstractName – The abstract name of the resource the message is directed to.
  + DatasetFormatURI – The format of the response dataset data.

Output

* GetPropertyPropertyDocumentResponse
  + GetPropertyPropertyDocumentDataset
    - DatasetFormatURI – The URI of the dataset format being returned as defined in the DatasetMap.
    - GetPropertyPropertyDocumentDatasetData – The data returned in response to the request.
      * PropertyPropertyDocument\* – The properties described in the data description section.
    - NumberOfRepositories – The number of available repositories.

Faults

* InvalidResourceNameFault - The supplied repository resource name is not known to the service.
* DataResourceUnavailableFault - The specified data resource is unavailable.
* NotAuthorizedFault - The consumer is not authorized to perform this operation at this time.
* ServiceBusyFault - The service is already processing a request and the ConcurrentAccess is false.

### PropertyAccess::GetRelatedProperties

Retrieve the properties that are related to the property, taking into account the property hierarchy if required.

Input

* GetRelatedPropertiesRequest
  + DataResourceAbstractName – The abstract name of the resource the message is directed to.
  + DatasetFormatURI – The format of the response dataset data.
  + RelationshipType – The type of relationship that MUST hold between this property and the properties that are to be retrieved. Possible values for this are: Subproperty, Superproperty, DirectSubproperty, and DirectSuperproperty.

Output

* GetRelatedPropertiesResponse
  + GetRelatedPropertiesDataset
    - DatasetFormatURI – The URI of the dataset format being returned as defined in the DatasetMap.
    - GetRelatedPropertiesDatasetData – The data returned in response to the request.
      * RelatedPropertyURI\* – The URIs of the related properties.
    - RelationshipType – The type of relationship that holds between this property and the related properties retrieved.
    - NumberOfRelatedProperties – The number of properties that are related to the property.

Faults

* InvalidResourceNameFault - The supplied repository resource is not known to the service.
* DataResourceUnavailableFault - The specified data resource is unavailable.
* ServiceBusyFault - The service is already processing a request and Concurrent Access is false.

### PropertyAccess::GetDomainClasses

Retrieve the classes that are defined as part of the domain of the property, taking into account the class hierarchy if required.

Input

* GetDomainClassesRequest
  + DataResourceAbstractName – The abstract name of the resource the message is directed to.
  + DatasetFormatURI – The format of the response dataset data.
  + RetrieveImplicitClasses? – An OPTIONAL parameter that determines whether or not to retrieve implicit classes, that is, those classes that are subclasses of any that is in the domain of the property. By default this parameter is set to FALSE.

Output

* GetDomainClassesResponse
  + GetDomainClassesDataset
    - DatasetFormatURI – The URI of the dataset format being returned as defined in the DatasetMap.
    - GetDomainClassesDatasetData – The data returned in response to the request.
      * DomainClassURI\* – The URIs of the domain classes.
    - RetrieveImplicitClasses – Whether or not implicit classes were taken into consideration.
    - NumberOfDomainClasses – The number of classes that belong to the domain of the property.

Faults

* InvalidResourceNameFault - The supplied repository resource is not known to the service.
* DataResourceUnavailableFault - The specified data resource is unavailable.
* ServiceBusyFault - The service is already processing a request and Concurrent Access is false.

### PropertyAccess::GetRangeClasses

Retrieve the classes that are defined as part of the range of the property, taking into account the class hierarchy if required.

Input

* GetRangeClassesRequest
  + DataResourceAbstractName – The abstract name of the resource the message is directed to.
  + DatasetFormatURI – The format of the response dataset data.
  + RetrieveImplicitClasses? – An OPTIONAL parameter that determines whether or not to retrieve implicit classes, that is, those classes that are subclasses of any that is in the range of the property. By default this parameter is set to FALSE.

Output

* GetRangeClassesResponse
  + GetRangeClassesDataset
    - DatasetFormatURI – The URI of the dataset format being returned as defined in the DatasetMap.
    - GetRangeClassesDatasetData – The data returned in response to the request.
      * RangeClassURI\* – The URIs of the range classes.
    - RetrieveImplicitClasses – Whether or not implicit classes were taken into consideration.
    - NumberOfRangeClasses – The number of classes that belong to the domain of the property.

Faults

* InvalidResourceNameFault - The supplied repository resource is not known to the service.
* DataResourceUnavailableFault - The specified data resource is unavailable.
* ServiceBusyFault - The service is already processing a request and Concurrent Access is false.

### PropertyAccess::AddRelatedProperties

Relate properties to the property. The consumer can specify the relationship that will hold between the property and the specified properties. An attempt SHOULD be made to relate all of the specified properties even if some additions fail.

Input

* AddRelatedPropertiesRequest
  + DataResourceAbstractName – The abstract name of the resource the message is directed to.
  + DatasetFormatURI – The format of the response dataset data.
  + PropertyURI+ – The URI of the properties that will be related to the property.
  + AddAsSubproperty – This parameter determines whether the properties will be added as direct subproperties or direct superproperties.

Output

* AddRelatedPropertiesResponse
  + AddRelatedPropertiesDataset
    - DatasetFormatURI – The URI of the dataset format being returned as defined in the DatasetMap.
    - AddRelatedPropertiesDatasetData – The data returned in response to the request.
      * PropertyResult+ – For each one of the properties that were to be related to the property:
        + PropertyURI – The URI of the property.
        + Result – The result of the related property addition operation for the specified property. Possible values for this are: success; and property not related as the consumer is not authorized.
    - AddAsSubproperty – Whether the properties were added as direct subproperties or direct superproperties.
    - NumberOfRelatedPropertiesAdded – The number of properties that were added to the property hierarchy of the property.

Faults

* InvalidResourceNameFault - The supplied repository resource is not known to the service.
* DataResourceUnavailableFault - The specified data resource is unavailable.
* ServiceBusyFault - The service is already processing a request and Concurrent Access is false.

### PropertyAccess::AddClassesToDomain

Add classes to the domain of the property. An attempt SHOULD be made to add all of the specified classes to the domain even if some additions fail.

Input

* AddClassesToDomainRequest
  + DataResourceAbstractName – The abstract name of the resource the message is directed to.
  + DatasetFormatURI – The format of the response dataset data.
  + ClassURI+ – The URI of the classes that will be added to the domain of the property.

Output

* AddClassesToDomainResponse
  + AddClassesToDomainDataset
    - DatasetFormatURI – The URI of the dataset format being returned as defined in the DatasetMap.
    - AddClassesToDomainDatasetData – The data returned in response to the request.
      * ClassResult+ – For each one of the classes that were to be added to the domain of the property:
        + ClassURI – The URI of the class.
        + Result – The result of the domain class addition operation for the specified class. Possible values for this are: success; and class not added to domain as the consumer is not authorized.
    - NumberOfDomainClassesAdded – The number of classes that were added to the domain of the property.

Faults

* InvalidResourceNameFault - The supplied repository resource is not known to the service.
* DataResourceUnavailableFault - The specified data resource is unavailable.
* ServiceBusyFault - The service is already processing a request and Concurrent Access is false.

### PropertyAccess::AddClassesToRange

Add classes to the range of the property. An attempt SHOULD be made to add all of the specified classes to the range even if some additions fail.

Input

* AddClassesToRangeRequest
  + DataResourceAbstractName – The abstract name of the resource the message is directed to.
  + DatasetFormatURI – The format of the response dataset data.
  + ClassURI+ – The URI of the classes that will be added to the range of the property.

Output

* AddClassesToRangeResponse
  + AddClassesToRangeDataset
    - DatasetFormatURI – The URI of the dataset format being returned as defined in the DatasetMap.
    - AddClassesToRangeDatasetData – The data returned in response to the request.
      * ClassResult+ – For each one of the classes that were to be added to the range of the property:
        + ClassURI – The URI of the class.
        + Result – The result of the range class addition operation for the specified class. Possible values for this are: success; and class not added to range as the consumer is not authorized.
    - NumberOfRangeClassesAdded – The number of classes that were added to the range of the property.

Faults

* InvalidResourceNameFault - The supplied repository resource is not known to the service.
* DataResourceUnavailableFault - The specified data resource is unavailable.
* ServiceBusyFault - The service is already processing a request and Concurrent Access is false.

### PropertyAccess::RemoveRelatedProperties

Removes relationship properties that hold between the specified properties and this property. If no property is specified, all the properties related of the same type SHALL be removed. Otherwise, only the specified related properties SHALL be removed. An attempt SHOULD be made to remove all of the specified relationships even if some removals fail.

Input

* RemoveRelatedPropertiesRequest
  + DataResourceAbstractName – The abstract name of the resource the message is directed to.
  + DatasetFormatURI – The format of the response dataset data.
  + PropertyURI\* – An OPTIONAL set of URIs of the properties that will no longer be related to the property.
  + RelationshipType – The type of relationship that must hold between this property and the specified properties. Possible values for this are: Subproperty, Superproperty, DirectSubproperty, and DirectSuperproperty.

Output

* RemoveRelatedPropertiesResponse
  + RemoveRelatedPropertiesDataset
    - DatasetFormatURI – The URI of the dataset format being returned as defined in the DatasetMap.
    - RemoveRelatedPropertiesDatasetData – The data returned in response to the request.
      * PropertyResult\* – For each one of the properties that were to be unrelated to the property:
        + PropertyURI – The URI of the property.
        + Result – The result of the related property removal operation for the specified property. Possible values for this are: success; and property relationship not removed as the consumer is not authorized.
    - RelationshipType – The type of relationship that existed between this property and the specified properties.
    - NumberOfRelatedPropertiesRemoved – The number of related properties that are no longer related to the property.

Faults

* InvalidResourceNameFault - The supplied repository resource is not known to the service.
* DataResourceUnavailableFault - The specified data resource is unavailable.
* ServiceBusyFault - The service is already processing a request and Concurrent Access is false.

### PropertyAccess::RemoveClassesFromDomain

Remove classes from the domain of the property. If no class is specified, all the classes of the domain of the property SHALL be removed. Otherwise, only the specified classes SHALL be removed from the domain. An attempt SHOULD be made to remove all of the specified classes from the domain of the property even if some removals fail.

Input

* RemoveClassesFromDomainRequest
  + DataResourceAbstractName – The abstract name of the resource the message is directed to.
  + DatasetFormatURI – The format of the response dataset data.
  + ClassURI\* – An OPTIONAL set of URIs of classes that will be removed from the domain of the property.

Output

* RemoveClassesFromDomainResponse
  + RemoveClassesFromDomainDataset
    - DatasetFormatURI – The URI of the dataset format being returned as defined in the DatasetMap.
    - RemoveClassesFromDomainDatasetData – The data returned in response to the request.
      * ClassResult\* – For each one of the classes that were to be removed from the domain of the property:
        + ClassURI – The URI of the class.
        + Result – The result of the domain class removal operation for the specified class. Possible values for this are: success; and class not removed from domain as the consumer is not authorized.
    - NumberOfDomainClassesRemoved – The number of classes that were removed from the domain of the property.

Faults

* InvalidResourceNameFault - The supplied repository resource is not known to the service.
* DataResourceUnavailableFault - The specified data resource is unavailable.
* ServiceBusyFault - The service is already processing a request and Concurrent Access is false.

### PropertyAccess::RemoveClassesFromRange

Remove classes from the range of the property. If no class is specified, all the classes of the range of the property SHALL be removed. Otherwise, only the specified classes SHALL be removed from the range. An attempt SHOULD be made to remove all of the specified classes from the range of the property even if some removals fail.

Input

* RemoveClassesFromRangeRequest
  + DataResourceAbstractName – The abstract name of the resource the message is directed to.
  + DatasetFormatURI – The format of the response dataset data.
  + ClassURI\* – An OPTIONAL set of URIs of classes that will be removed from the range of the property.

Output

* RemoveClassesFromRangeResponse
  + RemoveClassesFromRangeDataset
    - DatasetFormatURI – The URI of the dataset format being returned as defined in the DatasetMap.
    - RemoveClassesFromRangeDatasetData – The data returned in response to the request.
      * ClassResult\* – For each one of the classes that were to be removed from the range the property:
        + ClassURI – The URI of the class.
        + Result – The result of the range class removal operation for the specified class. Possible values for this are: success; and class not removed from range as the consumer is not authorized.
    - NumberOfRangeClassesRemoved – The number of classes that were removed from the range of the property.

Faults

* InvalidResourceNameFault - The supplied repository resource is not known to the service.
* DataResourceUnavailableFault - The specified data resource is unavailable.
* ServiceBusyFault - The service is already processing a request and Concurrent Access is false.

### PropertyAccess::ArePropertiesRelated

Check if the specified properties are related to this property in any manner. An attempt SHOULD be made to check all of the specified properties even if some checks fail.

Input

* ArePropertiesRelatedRequest
  + DataResourceAbstractName – The abstract name of the resource the message is directed to.
  + DatasetFormatURI – The format of the response dataset data.
  + PropertyURI+ – The URI of the properties that are to be checked.
  + RelationshipType – The type of relationship that is to be checked between this property and the specified property. Possible values for this are: Subproperty, Superproperty, DirectSubproperty, and DirectSuperproperty.

Output

* ArePropertiesRelatedResponse
  + ArePropertiesRelatedDataset
    - DatasetFormatURI – The URI of the dataset format being returned as defined in the DatasetMap.
    - ArePropertiesRelatedDatasetData – The data returned in response to the request.
      * PropertyResult+ – For each one of the properties that were to be checked:
        + PropertyURI – The URI of the property.
        + Result – The result of the related property check operation for the specified property. Possible values for this are: true, false, and property relationship could not be checked as the consumer is not authorized.
    - RelationshipType – The type of relationship that existed between this property and the specified properties.

Faults

* InvalidResourceNameFault - The supplied repository resource is not known to the service.
* DataResourceUnavailableFault - The specified data resource is unavailable.
* ServiceBusyFault - The service is already processing a request and Concurrent Access is false.

### PropertyAccess::AreClassesInDomain

Check if the specified classes are in the domain of the property. An attempt SHOULD be made to check all of the specified classes even if some checks fail.

Input

* AreClassesInDomainRequest
  + DataResourceAbstractName – The abstract name of the resource the message is directed to.
  + DatasetFormatURI – The format of the response dataset data.
  + ClassURI+ – The URI of the classes that are to be checked.

Output

* AreClassesInDomainResponse
  + AreClassesInDomainDataset
    - DatasetFormatURI – The URI of the dataset format being returned as defined in the DatasetMap.
    - AreClassesInDomainDatasetData – The data returned in response to the request.
      * ClassResult\* – For each one of the classes that were to be checked:
        + ClassURI – The URI of the class.
        + Result – The result of the domain class check operation for the specified class. Possible values for this are: true, false, and domain membership could not be checked as the consumer is not authorized.

Faults

* InvalidResourceNameFault - The supplied repository resource is not known to the service.
* DataResourceUnavailableFault - The specified data resource is unavailable.
* ServiceBusyFault - The service is already processing a request and Concurrent Access is false.

### PropertyAccess::AreClassesInRange

Check if the specified classes are in the range of the property. An attempt SHOULD be made to check all of the specified classes even if some checks fail.

Input

* AreClassesInRangeRequest
  + DataResourceAbstractName – The abstract name of the resource the message is directed to.
  + DatasetFormatURI – The format of the response dataset data.
  + ClassURI+ – The URI of the classes that are to be checked.

Output

* AreClassesInRangeResponse
  + AreClassesInRangeDataset
    - DatasetFormatURI – The URI of the dataset format being returned as defined in the DatasetMap.
    - AreClassesInRangeDatasetData – The data returned in response to the request.
      * ClassResult\* – For each one of the classes that were to be checked:
        + ClassURI – The URI of the class.
        + Result – The result of the range class check operation for the specified class. Possible values for this are: true, false, and range membership could not be checked as the consumer is not authorized.

Faults

* InvalidResourceNameFault - The supplied repository resource is not known to the service.
* DataResourceUnavailableFault - The specified data resource is unavailable.
* ServiceBusyFault - The service is already processing a request and Concurrent Access is false.

# Statement

## Static Statement Description

The elements defined in this section live under a StatementPropertyDocument that extends the PropertyDocument defined in the WS-DAI core specification.

### RepositoryName

<xs:element name="RepositoryName" type="xs:anyURI"/>

|  |  |
| --- | --- |
| /wro:RepositoryName | |
|  | The name of the repository in which the RDF(S) statement represented by this data resource is originally defined. |

### ResourceURI

<xs:element name="ResourceURI" type="xs:anyURI"/>

|  |  |
| --- | --- |
| /wro:ResourceURI | |
|  | The URI of the RDF(S) statement represented by the data resource. |

### StatementPropertyDocument

<xs:complexType name="StatementPropertyDocumentType">

<xs:complexContent>

<xs:extension base="wsdai:PropertyDocumentType">

<xs:sequence>

<xs:element ref="wro:RepositoryName"/>

<xs:element ref="wro:ResourceURI"/>

</xs:sequence>

</xs:extension>

</xs:complexContent>

</xs:complexType>

<xs:element name="StatementPropertyDocument" type="wro:StatementPropertyDocumentType"/>

|  |  |
| --- | --- |
| /wro:StatementPropertyDocument | |
|  | A structure that describes a Statement data resource, combining the properties defined in the WS-DAI core specification with those defined earlier in this section. |

## Configurable Statement Description

No extra configurable properties are defined for Statement.

## StatementAccess Messages

This interface provides the basic operations needed for managing an statement. Operations are provided for retrieving, adding and removing the components of an statement.

### StatementAccess::GetStatementPropertyDocument

Allows a copy of the StatementPropertyDocument document to be retrieved.

Input

* GetStatementPropertyDocumentRequest
  + DataResourceAbstractName – The abstract name of the resource the message is directed to.
  + DatasetFormatURI – The format of the response dataset data.

Output

* GetStatementPropertyDocumentResponse
  + GetStatementPropertyDocumentDataset
    - DatasetFormatURI – The URI of the dataset format being returned as defined in the DatasetMap.
    - GetStatementPropertyDocumentDatasetData – The data returned in response to the request.
      * StatementPropertyDocument\* – The properties described in the data description section.
    - NumberOfRepositories – The number of available repositories.

Faults

* InvalidResourceNameFault - The supplied repository resource name is not known to the service.
* DataResourceUnavailableFault - The specified data resource is unavailable.
* NotAuthorizedFault - The consumer is not authorized to perform this operation at this time.
* ServiceBusyFault - The service is already processing a request and the ConcurrentAccess is false.

### StatementAccess::GetComponents

Retrieve the components of the statement that are of a given type (subject, predicate or object).

Input

* GetComponentsRequest
  + DataResourceAbstractName – The abstract name of the resource the message is directed to.
  + DatasetFormatURI – The format of the response dataset data.
  + ComponentType – The type of components of the statement that are to be retrieved. Possible values for this are: Subject, Predicate and Object.

Output

* GetComponentsResponse
  + GetComponentsDataset
    - DatasetFormatURI – The URI of the dataset format being returned as defined in the DatasetMap.
    - GetComponentsDatasetData – The data returned in response to the request.
      * ComponentURI\* – The URIs of the specific components of the statement that have been retrieved.
    - ComponentType – The type of components of the statement that have been retrieved.
    - NumberOfComponents – The number of components of the statement that have been retrieved.

Faults

* InvalidResourceNameFault - The supplied repository resource is not known to the service.
* DataResourceUnavailableFault - The specified data resource is unavailable.
* ServiceBusyFault - The service is already processing a request and Concurrent Access is false.

### StatementAccess::AddComponents

Add components of the specified type to the statement. An attempt SHOULD be made to add all the specified components even if some additions fail.

Input

* AddComponentsRequest
  + DataResourceAbstractName – The abstract name of the resource the message is directed to.
  + DatasetFormatURI – The format of the response dataset data.
  + ComponentType – The type of components that are to be added to the statement. Possible values for this are: Subject, Predicate and Object.
  + ComponentURI+ – The URIs of the specific components that are to be added to the statement.

Output

* AddComponentsResponse
  + AddComponentsDataset
    - DatasetFormatURI – The URI of the dataset format being returned as defined in the DatasetMap.
    - AddComponentsDatasetData – The data returned in response to the request.
      * ComponentResult+ – For each one of the components that were to be added:
        + ComponentURI – The URI of the component that was to be added to the statement.
        + Result – The result of the related component addition operation for the specified component. Possible values for this are: success; and component not added as the consumer is not authorized.
    - ComponentType – The type of components that were added to the statement.
    - NumberOfComponentsAdded – The number of components that were added to the statement.

Faults

* InvalidResourceNameFault - The supplied repository resource is not known to the service.
* DataResourceUnavailableFault - The specified data resource is unavailable.
* ServiceBusyFault - The service is already processing a request and Concurrent Access is false.

### StatementAccess::RemoveComponents

Remove components of a given type from the statement. If no component type, nor specific components are specified, all the components of the statement SHALL be removed. If no components are specified, all the components of the given type SHALL be removed. If no component type is specified the matching components SHALL be removed, regardless of its type. Otherwise, only the specified components SHALL be removed. An attempt should be made to remove all the components even if some removals fail.

Input

* RemoveComponentsRequest
  + DataResourceAbstractName – The abstract name of the resource the message is directed to.
  + DatasetFormatURI – The format of the response dataset data.
  + ComponentType? – An OPTIONAL parameter that determines the type of components that are to be removed from the statement. Possible values for this are: Subject, Predicate and Object.
  + ComponentURI\* – An OPTIONAL set of URIs of the specific components that are to be removed from the statement.

Output

* RemoveComponentsResponse
  + RemoveComponentsDataset
    - DatasetFormatURI – The URI of the dataset format being returned as defined in the DatasetMap.
    - RemoveComponentsDatasetData – The data returned in response to the request.
      * ComponentResult\* – For each of the components that were to be removed:
        + ComponentURI – The URI of the component that was to be removed.
        + Result – The result of the related component removal operation for the specified component. Possible values for this are: component of the specified type successfully removed; components of different types successfully removed ;and component not removed as the consumer is not authorized.
    - ComponentType? – The type of components that were removed from the statement. This element SHALL only appear if it was specified in the request.
    - NumberOfComponentsRemoved – The number of components that were removed from the statement.

Faults

* InvalidResourceNameFault - The supplied repository resource is not known to the service.
* DataResourceUnavailableFault - The specified data resource is unavailable.
* ServiceBusyFault - The service is already processing a request and Concurrent Access is false.

### StatementAccess::AreComponents

Check if the components are part of the statement. An attempt SHOULD be made to check all of the specified componente even if some checks fail.

Input

* AreComponentsRequest
  + DataResourceAbstractName – The abstract name of the resource the message is directed to.
  + DatasetFormatURI – The format of the response dataset data.
  + ComponentType – The type of components that are to be checked. Possible values for this are: Subject, Predicate and Object.
  + ComponentURI+ – The URIs of the component that are to be checked.

Output

* AreComponentsResponse
  + AreComponentsDataset
    - DatasetFormatURI – The URI of the dataset format being returned as defined in the DatasetMap.
    - AreComponentsDatasetData – The data returned in response to the request.
      * ComponentResult+ – For each one of the components that were to be checked:
        + ComponentURI – The URI of the component that was checked.
        + Result – Whether or not the resource is part of the statement. Possible values for this are: true, false, and checking could not be done as the consumer is not authorized.
    - ComponentType – The type of the component that has been checked.

Faults

* InvalidResourceNameFault - The supplied repository resource is not known to the service.
* DataResourceUnavailableFault - The specified data resource is unavailable.
* ServiceBusyFault - The service is already processing a request and Concurrent Access is false.

# List

## Static List Description

The elements defined in this section live under a ListPropertyDocument that extends the PropertyDocument defined in the WS-DAI core specification.

### RepositoryName

<xs:element name="RepositoryName" type="xs:anyURI"/>

|  |  |
| --- | --- |
| /wro:RepositoryName | |
|  | The name of the repository in which the RDF(S) list node represented by this data resource is originally defined. |

### ResourceURI

<xs:element name="ResourceURI" type="xs:anyURI"/>

|  |  |
| --- | --- |
| /wro:ResourceURI | |
|  | The URI of the RDF(S) list node represented by the data resource. |

### ListPropertyDocument

<xs:complexType name="ListPropertyDocumentType">

<xs:complexContent>

<xs:extension base="wsdai:PropertyDocumentType">

<xs:sequence>

<xs:element ref="wro:RepositoryName"/>

<xs:element ref="wro:ResourceURI"/>

</xs:sequence>

</xs:extension>

</xs:complexContent>

</xs:complexType>

<xs:element name="ListPropertyDocument" type="wro:ListPropertyDocumentType"/>

|  |  |
| --- | --- |
| /wro:ListPropertyDocument | |
|  | A structure that describes a List data resource, combining the properties defined in the WS-DAI core specification with those defined earlier in this section. |

## Configurable List Description

No extra configurable properties are defined for List.

## ListAccess Messages

This interface provides the basic operations needed for managing generic lists. Operations are provided for dealing with a concrete node of a list.

### ListAccess::GetListPropertyDocument

Allows a copy of the ListPropertyDocument document to be retrieved.

Input

* GetListPropertyDocumentRequest
  + DataResourceAbstractName – The abstract name of the resource the message is directed to.
  + DatasetFormatURI – The format of the response dataset data.

Output

* GetListPropertyDocumentResponse
  + GetListPropertyDocumentDataset
    - DatasetFormatURI – The URI of the dataset format being returned as defined in the DatasetMap.
    - GetListPropertyDocumentDatasetData – The data returned in response to the request.
      * ListPropertyDocument\* – The properties described in the data description section.
    - NumberOfRepositories – The number of available repositories.

Faults

* InvalidResourceNameFault - The supplied repository resource name is not known to the service.
* DataResourceUnavailableFault - The specified data resource is unavailable.
* NotAuthorizedFault - The consumer is not authorized to perform this operation at this time.
* ServiceBusyFault - The service is already processing a request and the ConcurrentAccess is false.

### ListAccess::GetMembers

Retrieve the set of members defined for this list node.

Input

* GetMembersRequest
  + DataResourceAbstractName – The abstract name of the resource the message is directed to.
  + DatasetFormatURI – The format of the response dataset data.

Output

* GetMembersResponse
  + GetMembersDataset
    - DatasetFormatURI – The URI of the dataset format being returned as defined in the DatasetMap.
    - GetMembersDatasetData – The data returned in response to the request.
      * MemberURI\* – The URIs of the members of this node of the list.
    - NumberOfMembers – The number of members that were retrieved.

Faults

* InvalidResourceNameFault - The supplied repository resource is not known to the service.
* DataResourceUnavailableFault - The specified data resource is unavailable.
* ServiceBusyFault - The service is already processing a request and Concurrent Access is false.

### ListAccess::GetNodes

Retrieve the URIs of the next nodes defined for the list node.

Input

* GetNodesRequest
  + DataResourceAbstractName – The abstract name of the resource the message is directed to.
  + DatasetFormatURI – The format of the response dataset data.

Output

* GetNodesResponse
  + GetNodesDataset
    - DatasetFormatURI – The URI of the dataset format being returned as defined in the DatasetMap.
    - GetNodesDatasetData – The data returned in response to the request.
      * NodeURI\* – The URIs of the next nodes.
    - NumberOfNodes – The number of next nodes that are defined for this node of the list.

Faults

* InvalidResourceNameFault - The supplied repository resource is not known to the service.
* DataResourceUnavailableFault - The specified data resource is unavailable.
* ServiceBusyFault - The service is already processing a request and Concurrent Access is false.

### ListAccess::AddMembers

Add members to list node. An attempt SHOULD be made to add all of the specified members even if some additions fail.

Input

* AddMembersRequest
  + DataResourceAbstractName – The abstract name of the resource the message is directed to.
  + DatasetFormatURI – The format of the response dataset data.
  + MemberURI+ – The URIs of the members that will be added to the list node.

Output

* AddMembersResponse
  + AddMembersDataset
    - DatasetFormatURI – The URI of the dataset format being returned as defined in the DatasetMap.
    - AddMembersDatasetData – The data returned in response to the request.
      * MemberResult+ – For each one of the members that were to be added:
        + MemberURI – The URI of the member.
        + Result – The result of the member addition operation for the given resource. Possible values for this are: success; member not added as it already exists; and member not added as the consumer is not authorized.
    - NumberOfMembersAdded – The number of members that were added to the list node.

Faults

* InvalidResourceNameFault - The supplied repository resource is not known to the service.
* DataResourceUnavailableFault - The specified data resource is unavailable.
* ServiceBusyFault - The service is already processing a request and Concurrent Access is false.

### ListAccess::AddNodes

Add next nodes to the list node. If no nodes are specified, the list SHOULD be finalized. An attempt SHOULD be made to add all of the specified nodes even if some additions fail.

Input

* AddNodesRequest
  + DataResourceAbstractName – The abstract name of the resource the message is directed to.
  + DatasetFormatURI – The format of the response dataset data.
  + NodeURI\* – An OPTIONAL set of URIs of next nodes that will be added to the list node.

Output

* AddNodesResponse
  + AddNodesDataset
    - DatasetFormatURI – The URI of the dataset format being returned as defined in the DatasetMap.
    - AddNodesDatasetData – The data returned in response to the request.
      * NodeResult+ – For each one of the next nodes that were to be added (rdf:nil if none was specified):
        + NodeURI – The URI of the node.
        + Result – The result of the node addition operation for the given resource. Possible values for this are: success; node not added as it already exists; and node not added as the consumer is not authorized.
    - NumberOfNodesAdded – The number of nodes that were added to the list node.

Faults

* InvalidResourceNameFault - The supplied repository resource is not known to the service.
* DataResourceUnavailableFault - The specified data resource is unavailable.
* ServiceBusyFault - The service is already processing a request and Concurrent Access is false.

### ListAccess::RemoveMembers

Remove members from this list node. If no members are specified, then all the members of the current node of the list SHOULD be removed. An attempt SHOULD be made to remove all the specified members even if some removals fail.

Input

* RemoveMembersRequest
  + DataResourceAbstractName – The abstract name of the resource the message is directed to.
  + DatasetFormatURI – The format of the response dataset data.
  + MemberURI\* – An OPTIONAL set of URIs of members that will be removed from the list node.

Output

* RemoveMembersResponse
  + RemoveMembersDataset
    - DatasetFormatURI – The URI of the dataset format being returned as defined in the DatasetMap.
    - RemoveMembersDatasetData – The data returned in response to the request.
      * MemberResult\* – In case specific members were specified for removal, for each of them:
        + MemberURI – The URI of the member.
        + Result – The result of the member removal operation for the given resource. Possible values for this are: success; member not removed as it does not exist; and member not removed as the consumer is not authorized.
    - NumberOfMembersRemoved – The number of members that were removed from the list node.

Faults

* InvalidResourceNameFault - The supplied repository resource is not known to the service.
* DataResourceUnavailableFault - The specified data resource is unavailable.
* ServiceBusyFault - The service is already processing a request and Concurrent Access is false.

### ListAccess::RemoveNodes

Remove next nodes from this list node. If no nodes are specified, then all the nodes SHOULD be removed. An attempt SHOULD be made to remove all of the specified next nodes even if some removals fail.

Input

* RemoveNodesRequest
  + DataResourceAbstractName – The abstract name of the resource the message is directed to.
  + DatasetFormatURI – The format of the response dataset data.
  + NodeURI\* – An OPTIONAL set of URIs of next nodes that will be removed from the list node.

Output

* RemoveNodesResponse
  + RemoveNodesDataset
    - DatasetFormatURI – The URI of the dataset format being returned as defined in the DatasetMap.
    - RemoveNodesDatasetData – The data returned in response to the request.
      * NodeResult\* – In case specific next nodes were specified for removal, for each of them:
        + NodeURI – The URI of the node.
        + Result – The result of the node removal operation for the given resource. Possible values for this are: success; node not removed as it already exists; and node not removed as the consumer is not authorized.
    - NumberOfNodesRemoved – The number of nodes that were removed from the list node.

Faults

* InvalidResourceNameFault - The supplied repository resource is not known to the service.
* DataResourceUnavailableFault - The specified data resource is unavailable.
* ServiceBusyFault - The service is already processing a request and Concurrent Access is false.

### ListAccess::AreMembers

Check if the specified resources are members of the list node. An attempt SHOULD be made to check all the specified resources even if some checks fail.

Input

* AreMembersRequest
  + DataResourceAbstractName – The abstract name of the resource the message is directed to.
  + DatasetFormatURI – The format of the response dataset data.
  + MemberURI+ – The URIs of the members that will be checked.

Output

* AreMembersResponse
  + AreMembersDataset
    - DatasetFormatURI – The URI of the dataset format being returned as defined in the DatasetMap.
    - AreMembersDatasetData – The data returned in response to the request.
      * MemberResult+ – For each one of the members that were to be checked
        + MemberURI – The URI of the member.
        + Result – The result of the member check operation for the given resource. Possible values for this are: true, false and resource not checked as the consumer is not authorized.

Faults

* InvalidResourceNameFault - The supplied repository resource is not known to the service.
* DataResourceUnavailableFault - The specified data resource is unavailable.
* ServiceBusyFault - The service is already processing a request and Concurrent Access is false.

### ListAccess::AreNodes

Check if the specified resources are next nodes of the list node. An attempt SHOULD be made to check all the specified resources even if some checks fail.

Input

* AreNodesRequest
  + DataResourceAbstractName – The abstract name of the resource the message is directed to.
  + DatasetFormatURI – The format of the response dataset data.
  + NodeURI+ – The URIs of next nodes that will be checked.

Output

* AreNodesResponse
  + AreNodesDataset
    - DatasetFormatURI – The URI of the dataset format being returned as defined in the DatasetMap.
    - AreNodesDatasetData – The data returned in response to the request.
      * NodeResult+ – For each one of the next nodes that were to be checked:
        + NodeURI – The URI of the node.
        + Result – The result of the node check operation for the given resource. Possible values for this are: true, false, and node not checked as the consumer is not authorized.

Faults

* InvalidResourceNameFault - The supplied repository resource is not known to the service.
* DataResourceUnavailableFault - The specified data resource is unavailable.
* ServiceBusyFault - The service is already processing a request and Concurrent Access is false.

## ListFactory Messages

The interface provides operations for creating instances of data services which implement specific interfaces that provide added value operations for dealing with lists.

### ListFactory::GetListIteratorFactory

Returns the endpoint reference of a list data resource that represents this collection, but provides access through the LisIteratorAccess port type.

Input

* GetListIteratorFactoryRequest
  + DataResourceAbstractName – The abstract name of the resource the message is directed to.
  + PortTypeQName? – An OPTIONAL parameter that specifies the QName of the portType through which the resulting data should be accesed. The QName value here MUST correspond to one that is specified in the ConfigurationMap property.
  + ConfigurationDocument? – An OPTIONAL parameter that includes a document that specifies the properties of the data resource that is to be used to access the resulting data. The properties contained in this document are those defined in the WS-DAI specification.
  + PreferredTargetService? – An OPTIONAL parameter that identifies a EPR of the preferred service that is to act as the host for the new data resource.

Output

* GetListIteratorFactoryResponse
  + DataResourceAddress\* – A list of data resource addresses.

Faults

* InvalidResourceNameFault - The supplied repository resource name is not known to the service.
* DataResourceUnavailableFault - The specified data resource is unavailable.
* InvalidPortTypeQNameFault - The PortTypeQName is not in the collection defined by the ConfigurationMap property.
* InvalidConfigurationDocumentFault - The ConfigurationDocument specified is not valid according to the ConfigurationDocumentQName when the ConfigurationMap is indexed by the specified PortTypeQName.
* NotAuthorizedFault - The consumer is not authorized to perform this operation at this time.
* ServiceBusyFault - The service is already processing a request and the ConcurrentAccess is false.

## ListIteratorAccess Messages

The interface provides operations for traversing the members of the container following the Iterator pattern. The interface provides the means for traversing the container in two directions: forwards and backwards. The consumer can also decide whether he wants to traverse the list by node or by member, that is, retrieving sets of members located in the same node or retrieving one member at a time.

### ListIteratorAccess::GetNext

Retrieve the next set of members. The consumer MAY specify the direction in which he is traversing the list.

Input

* GetNextRequest
  + DataResourceAbstractName – The abstract name of the resource the message is directed to.
  + DatasetFormatURI – The format of the response dataset data.
  + Direction? – An OPTIONAL parameter that determines the direction in which the user is traversing the list. Possible values for this are: Forwards and Backwards. The default value for this parameter is Forwards.

Output

* GetNextResponse
  + GetNextDataset
    - DatasetFormatURI – The URI of the dataset format being returned as defined in the DatasetMap.
    - GetNextDatasetData – The data returned in response to the request.
      * MemberURI\* – The URIs of the next members of the list.
    - Direction – The direction in which the user is traversing the list.
    - NumberOfMembers – The number of next members that were retrieved from the list.

Faults

* InvalidResourceNameFault - The supplied repository resource is not known to the service.
* DataResourceUnavailableFault - The specified data resource is unavailable.
* ServiceBusyFault - The service is already processing a request and Concurrent Access is false.
* MemberNotDefinedFault - No more members have been defined for the container.

### ListIteratorAccess::HasNext

Check if more members are available. The consumer MAY specify the direction in which he is traversing the list.

Input

* HasNextRequest
  + DataResourceAbstractName – The abstract name of the resource the message is directed to.
  + DatasetFormatURI – The format of the response dataset data.
  + DirectionType? – An OPTIONAL parameter that determines the direction in which the user is traversing the list. Possible values for this are: Forwards and Backwards. The default value for this parameter is Forwards.

Output

* HasNextResponse
  + HasNextDataset
    - DatasetFormatURI – The URI of the dataset format being returned as defined in the DatasetMap.
    - HasNextDatasetData – The data returned in response to the request.
      * Result – Whether or not a next member set is available. Possible values for this are: true, false and availability could not be checked as the consumer is not authorized.
    - Direction – The direction in which the user is traversing the list.

Faults

* InvalidResourceNameFault - The supplied repository resource is not known to the service.
* DataResourceUnavailableFault - The specified data resource is unavailable.
* ServiceBusyFault - The service is already processing a request and Concurrent Access is false.

# Container

## Static Container Description

The elements defined in this section live under a ContainerPropertyDocument that extends the PropertyDocument defined in the WS-DAI core specification.

### RepositoryName

<xs:element name="RepositoryName" type="xs:anyURI"/>

|  |  |
| --- | --- |
| /wro:RepositoryName | |
|  | The name of the repository in which the RDF(S) container represented by this data resource is originally defined. |

### ResourceURI

<xs:element name="ResourceURI" type="xs:anyURI"/>

|  |  |
| --- | --- |
| /wro:ResourceURI | |
|  | The URI of the RDF(S) container represented by the data resource. |

### ContainerType

<xs:element name="ContainerType" type="xs:anyURI"/>

|  |  |
| --- | --- |
| /wro:ContainerType | |
|  | The type of container. |

### ContainerPropertyDocument

<xs:complexType name="ContainerPropertyDocumentType">

<xs:complexContent>

<xs:extension base="wsdai:PropertyDocumentType">

<xs:sequence>

<xs:element ref="wro:RepositoryName"/>

<xs:element ref="wro:ResourceURI"/>

<xs:element ref="wro:ContainerType"/>

</xs:sequence>

</xs:extension>

</xs:complexContent>

</xs:complexType>

<xs:element name="ContainerPropertyDocument" type="wro:ContainerPropertyDocumentType"/>

|  |  |
| --- | --- |
| /wro:ContainerPropertyDocument | |
|  | A structure that describes a Container data resource, combining the properties defined in the WS-DAI core specification with those defined earlier in this section. |

## Configurable Container Description

No extra configurable properties are defined for Container.

## ContainerAccess Messages

This interface provides the basic operations needed for managing generic containers. The members are linked to the container by position.

### ContainerAccess::GetContainerPropertyDocument

Allows a copy of the ContainerPropertyDocument document to be retrieved.

Input

* GetContainerPropertyDocumentRequest
  + DataResourceAbstractName – The abstract name of the resource the message is directed to.
  + DatasetFormatURI – The format of the response dataset data.

Output

* GetContainerPropertyDocumentResponse
  + GetContainerPropertyDocumentDataset
    - DatasetFormatURI – The URI of the dataset format being returned as defined in the DatasetMap.
    - GetContainerPropertyDocumentDatasetData – The data returned in response to the request.
      * ContainerPropertyDocument\* – The properties described in the data description section.
    - NumberOfRepositories – The number of available repositories.

Faults

* InvalidResourceNameFault - The supplied repository resource name is not known to the service.
* DataResourceUnavailableFault - The specified data resource is unavailable.
* NotAuthorizedFault - The consumer is not authorized to perform this operation at this time.
* ServiceBusyFault - The service is already processing a request and the ConcurrentAccess is false.

### ContainerAccess::GetMembers

Retrieve the members that are defined for the container. If position are specified, only the members located in those positions SHALL be returned, otherwise all the members of the container SHALL be returned. An attempt SHOULD be made to retrieve the members of all the specified positions even if some retrievals fail.

Input

* GetMembersRequest
  + DataResourceAbstractName – The abstract name of the resource the message is directed to.
  + DatasetFormatURI – The format of the response dataset data.
  + Position\* – An OPTIONAL set of positions where the members to be retrieved are located.

Output

* GetMembersResponse
  + GetMembersDataset
    - DatasetFormatURI – The URI of the dataset format being returned as defined in the DatasetMap.
    - GetMembersDatasetData – The data returned in response to the request.
      * PositionResult+ – The members retrieved organized according to the position where they are located. If no positions where specified in the request, an element for each one of the positions where elements exist SHALL be returned. Otherwise, only elements matching the specified positions SHALL be returned. For each position:
        + Position – The position in the container.
        + MemberURI\* – The members retrieved from the container.
        + Result – The result of the member retrieval operation in the given position. Possible value for this are: success; index out of bounds, and members not retrieved as the consumer is not authorized
    - NumberOfMembers – The number of members retrieved from the container.

Faults

* InvalidResourceNameFault - The supplied repository resource is not known to the service.
* DataResourceUnavailableFault - The specified data resource is unavailable.
* ServiceBusyFault - The service is already processing a request and Concurrent Access is false.

### ContainerAccess::GetNumberOfMembers

Retrieve the number of members that are defined for the container. If no position is specified, the total number of members of the container SHALL be retrieved. Otherwise, only the number of elements of the specified positions SHALL be retrieved. An attempt SHOULD be made to retrieve the number of elements of all the specified positions even if some retrievals fail.

Input

* GetNumberOfMembersRequest
  + DataResourceAbstractName – The abstract name of the resource the message is directed to.
  + DatasetFormatURI – The format of the response dataset data.
  + Position\* – An OPTIONAL set of positions of the container whose number of members are to be retrieved.

Output

* GetNumberOfMembersResponse
  + GetNumberOfMembersDataset
    - DatasetFormatURI – The URI of the dataset format being returned as defined in the DatasetMap.
    - GetNumberOfMembersDatasetData – The data returned in response to the request.
      * PositionResult+ – The number of members of the container organized according to the position. If no positions where specified in the request, an element for each one of the positions where elements exist SHALL be returned. Otherwise, only elements matching the specified positions SHALL be returned. For each position:
        + Position – The positions in the container.
        + NumberOfMembers – The number of members that are defined for the container.
        + Result – The result of the number of members retrieval operation in the given position. Possible value for this are: success; index out of bounds, and number of members not retrieved as the consumer is not authorized
    - NumberOfMembers – The total number of members defined in the requested positions of the container.

Faults

* InvalidResourceNameFault - The supplied repository resource is not known to the service.
* DataResourceUnavailableFault - The specified data resource is unavailable.
* ServiceBusyFault - The service is already processing a request and Concurrent Access is false.

### ContainerAccess::AddMembers

Add members to the container, provided the positions that they must occupy. An attempt SHOULD be made to add all of the specified members even if some additions fail.

Input

* AddMembersRequest
  + DataResourceAbstractName – The abstract name of the resource the message is directed to.
  + DatasetFormatURI – The format of the response dataset data.
  + MemberSet+ – A set of members that will be added to the container. For each set:
    - Position – The position in the container where the resources will be added.
    - MemberURI+ – The URIs of the members that are to be added to the container in the specified position.

Output

* AddMembersResponse
  + AddMembersDataset
    - DatasetFormatURI – The URI of the dataset format being returned as defined in the DatasetMap.
    - AddMembersDatasetData – The data returned in response to the request.
      * MemberSetResult+ – For each one of the specified sets of members that were to be added:
        + Position – The position where the members where to be added.
        + Member+ – For each of the members that were to be added in the specified position:

MemberURI – The URI of the member that was to be added.

Result – The result of the member addition operation for the specified member. Possible values for this are: succes; member not added as it already existed; and member not added as the consumer is not authorized.

* + - NumberOfMembersAdded – The number of members that were added to container.

Faults

* InvalidResourceNameFault - The supplied repository resource is not known to the service.
* DataResourceUnavailableFault - The specified data resource is unavailable.
* ServiceBusyFault - The service is already processing a request and Concurrent Access is false.

### ContainerAccess::RemoveMembers

Remove the specified members from the container. If no member set is specified, all the members of the container SHALL be removed. If a member set is defined but no position is defined, all the matching members SHALL be removed regardless its position. If a member set is specified, but no members are identified, then all the members of that position SHALL be removed. Otherwise, only the matching members SHOULD be removed. An attempt SHOULD be made to remove all the specified members even if some removals fail.

Input

* RemoveMembersRequest
  + DataResourceAbstractName – The abstract name of the resource the message is directed to.
  + DatasetFormatURI – The format of the response dataset data.
  + MemberSet\* – OPTIONAL sets of members that will be removed from the container. For each set:
    - Position? – An OPTIONAL position in the container from where the resources will be removed.
    - MemberURI\* – An OPTIONAL set of URIs of members that are to be removed from the container.

Output

* RemoveMembersResponse
  + RemoveMembersDataset
    - DatasetFormatURI – The URI of the dataset format being returned as defined in the DatasetMap.
    - RemoveMembersDatasetData – The data returned in response to the request.
      * MemberSetResult+ – For each one of the specified sets of members that were to be removed:
        + Position – The position from where the members where to be removed.
        + Member+ – For each of the members that were to be removed:

MemberURI – The URI of the member that was to be removed.

Result – The result of the member removal operation for the specified member. Possible values for this are: succes; member not removed as it did not exist; and member not removed as the consumer is not authorized.

* + - NumberOfMembersRemoved – The number of members that were removed from the container.

Faults

* InvalidResourceNameFault - The supplied repository resource is not known to the service.
* DataResourceUnavailableFault - The specified data resource is unavailable.
* ServiceBusyFault - The service is already processing a request and Concurrent Access is false.

### ContainerAccess::AreMembers

Check if the specified resources are members of the container. An attempt SHOULD be made to check all of the specified resources even if some checkings fail.

Input

* AreMembersRequest
  + DataResourceAbstractName – The abstract name of the resource the message is directed to.
  + DatasetFormatURI – The format of the response dataset data.
  + MemberURI+ – The URIs of the resources that are to be checked.

Output

* AreMembersResponse
  + AreMembersDataset
    - DatasetFormatURI – The URI of the dataset format being returned as defined in the DatasetMap.
    - AreMembersDatasetData – The data returned in response to the request.
      * MemberResult+ – For each one of the resources that were to be checked:
        + MemberURI+ – The URI of the resource.
        + Result – Whether or not the specified resource is a member of the container. Possible values for this are: true, false, and resource could not be checked as the consumer is not authorized.

Faults

* InvalidResourceNameFault - The supplied repository resource is not known to the service.
* DataResourceUnavailableFault - The specified data resource is unavailable.
* ServiceBusyFault - The service is already processing a request and Concurrent Access is false.

## ContainerFactory Messages

This factory interface defines the mechanisms needed for providing specialized access to containers through data services, which implement the ContainerIteratorAccess and AltAccess interfaces.

### ContainerFactory::GetContainerIteratorFactory

Returns the endpoint reference of a container data resource that represents this container, but provides access through the ContainerIteratorAccess port type.

Input

* GetContainerIteratorFactoryRequest
  + DataResourceAbstractName – The abstract name of the resource the message is directed to.
  + PortTypeQName? – An OPTIONAL parameter that specifies the QName of the portType through which the resulting data should be accesed. The QName value here MUST correspond to one that is specified in the ConfigurationMap property.
  + ConfigurationDocument? – An OPTIONAL parameter that includes a document that specifies the properties of the data resource that is to be used to access the resulting data. The properties contained in this document are those defined in the WS-DAI specification.
  + PreferredTargetService? – An OPTIONAL parameter that identifies a EPR of the preferred service that is to act as the host for the new data resource.

Output

* GetContainerIteratorFactoryResponse
  + DataResourceAddress\* – A list of data resource addresses.

Faults

* InvalidResourceNameFault - The supplied repository resource name is not known to the service.
* DataResourceUnavailableFault - The specified data resource is unavailable.
* InvalidPortTypeQNameFault - The PortTypeQName is not in the collection defined by the ConfigurationMap property.
* InvalidConfigurationDocumentFault - The ConfigurationDocument specified is not valid according to the ConfigurationDocumentQName when the ConfigurationMap is indexed by the specified PortTypeQName.
* NotAuthorizedFault - The consumer is not authorized to perform this operation at this time.
* ServiceBusyFault - The service is already processing a request and the ConcurrentAccess is false.

### ContainerFactory::GetAltFactory

Returns the endpoint reference of a container data resource that represents this container, but provides access through the AltAccess port type.

Input

* GetAltFactoryRequest
  + DataResourceAbstractName – The abstract name of the resource the message is directed to.
  + PortTypeQName? – An OPTIONAL parameter that specifies the QName of the portType through which the resulting data should be accesed. The QName value here MUST correspond to one that is specified in the ConfigurationMap property.
  + ConfigurationDocument? – An OPTIONAL parameter that includes a document that specifies the properties of the data resource that is to be used to access the resulting data. The properties contained in this document are those defined in the WS-DAI specification.
  + PreferredTargetService? – An OPTIONAL parameter that identifies a EPR of the preferred service that is to act as the host for the new data resource.

Output

* GetAltFactoryResponse
  + DataResourceAddress\* – A list of data resource addresses.

Faults

* InvalidResourceNameFault - The supplied repository resource name is not known to the service.
* DataResourceUnavailableFault - The specified data resource is unavailable.
* InvalidPortTypeQNameFault - The PortTypeQName is not in the collection defined by the ConfigurationMap property.
* InvalidConfigurationDocumentFault - The ConfigurationDocument specified is not valid according to the ConfigurationDocumentQName when the ConfigurationMap is indexed by the specified PortTypeQName.
* NotAuthorizedFault - The consumer is not authorized to perform this operation at this time.
* ServiceBusyFault - The service is already processing a request and the ConcurrentAccess is false.
* IllegalContainerCasting - The container cannot be casted to this specific class of container.

## ContainerIteratorAccess Messages

The interface provides operations for traversing the members of the container following the Iterator pattern. The interface provides the means for traversing the container in two directions: forwards and backwards. The consumer can also decide whether he wants to traverse the container by position or by member, that is, retrieving sets of members located in the same position or retrieving one member at a time.

### ContainerIteratorAccess::GetContainerPropertyDocument

Allows a copy of the ContainerPropertyDocument document to be retrieved.

Input

* GetContainerPropertyDocumentRequest
  + DataResourceAbstractName – The abstract name of the resource the message is directed to.
  + DatasetFormatURI – The format of the response dataset data.

Output

* GetContainerPropertyDocumentResponse
  + GetContainerPropertyDocumentDataset
    - DatasetFormatURI – The URI of the dataset format being returned as defined in the DatasetMap.
    - GetContainerPropertyDocumentDatasetData – The data returned in response to the request.
      * ContainerPropertyDocument\* – The properties described in the data description section.
    - NumberOfRepositories – The number of available repositories.

Faults

* InvalidResourceNameFault - The supplied repository resource name is not known to the service.
* DataResourceUnavailableFault - The specified data resource is unavailable.
* NotAuthorizedFault - The consumer is not authorized to perform this operation at this time.
* ServiceBusyFault - The service is already processing a request and the ConcurrentAccess is false.

### ContainerIteratorAccess::GetNext

Retrieve the next set of members. The consumer MAY specify the direction in which he is traversing the container.

Input

* GetNextRequest
  + DataResourceAbstractName – The abstract name of the resource the message is directed to.
  + DatasetFormatURI – The format of the response dataset data.
  + Direction? – An OPTIONAL parameter that determines the direction in which the user is traversing the container. Possible values for this are: Forwards and Backwards. The default value for this parameter is Forwards.

Output

* GetNextResponse
  + GetNextDataset
    - DatasetFormatURI – The URI of the dataset format being returned as defined in the DatasetMap.
    - GetNextDatasetData – The data returned in response to the request.
      * MemberURI\* – The URIs of the next members of the container.
    - Direction – The direction in which the user is traversing the container.
    - NumberOfMembers – The number of next members that were retrieved from the container.
    - Position – The position from which the next members were retrieved from the container.

Faults

* InvalidResourceNameFault - The supplied repository resource is not known to the service.
* DataResourceUnavailableFault - The specified data resource is unavailable.
* ServiceBusyFault - The service is already processing a request and Concurrent Access is false.
* MemberNotDefinedFault - No more members have been defined for the container.

### ContainerIteratorAccess::HasNext

Check if more members are available. The consumer MAY specify the direction in which he is traversing the container.

Input

* HasNextRequest
  + DataResourceAbstractName – The abstract name of the resource the message is directed to.
  + DatasetFormatURI – The format of the response dataset data.
  + DirectionType? – An OPTIONAL parameter that determines the direction in which the user is traversing the container. Possible values for this are: Forwards and Backwards. The default value for this parameter is Forwards.

Output

* HasNextResponse
  + HasNextDataset
    - DatasetFormatURI – The URI of the dataset format being returned as defined in the DatasetMap.
    - HasNextDatasetData – The data returned in response to the request.
      * Result – Whether or not a next member set is available. Possible values for this are: true, false and availability could not be checked as the consumer is not authorized.
    - Direction – The direction in which the user is traversing the container.

Faults

* InvalidResourceNameFault - The supplied repository resource is not known to the service.
* DataResourceUnavailableFault - The specified data resource is unavailable.
* ServiceBusyFault - The service is already processing a request and Concurrent Access is false.

## AltAccess Messages

The interface provides operations for working with this specific kind of container according to its special intended semantics. The operations provided deal with 'default' members and 'alternative' members, as specified in the RDF specification (see section 5.1.4, RDFS). The 'default' members are those members that are located at the first (rdf:\_1) position of the container. The 'alternative' members are the rest of the elements of the container. Retrieval, addition, removal, and check operations are provided for managing the members associated to this container.

### AltAccess::GetContainerPropertyDocument

Allows a copy of the ContainerPropertyDocument document to be retrieved.

Input

* GetContainerPropertyDocumentRequest
  + DataResourceAbstractName – The abstract name of the resource the message is directed to.
  + DatasetFormatURI – The format of the response dataset data.

Output

* GetContainerPropertyDocumentResponse
  + GetContainerPropertyDocumentDataset
    - DatasetFormatURI – The URI of the dataset format being returned as defined in the DatasetMap.
    - GetContainerPropertyDocumentDatasetData – The data returned in response to the request.
      * ContainerPropertyDocument\* – The properties described in the data description section.
    - NumberOfRepositories – The number of available repositories.

Faults

* InvalidResourceNameFault - The supplied repository resource name is not known to the service.
* DataResourceUnavailableFault - The specified data resource is unavailable.
* NotAuthorizedFault - The consumer is not authorized to perform this operation at this time.
* ServiceBusyFault - The service is already processing a request and the ConcurrentAccess is false.

### AltAccess::GetDefaultMembers

Retrieve the default members of the container, that is, those members that are located at the first (rdf:\_1) position of the container.

Input

* GetDefaultMembersRequest
  + DataResourceAbstractName – The abstract name of the resource the message is directed to.
  + DatasetFormatURI – The format of the response dataset data.

Output

* GetDefaultMembersResponse
  + GetDefaultMembersDataset
    - DatasetFormatURI – The URI of the dataset format being returned as defined in the DatasetMap.
    - GetDefaultMembersDatasetData – The data returned in response to the request.
      * DefaultMemberURI\* – The URIs of the default members of the container.
    - NumberOfDefaultMembers – The number of default members of the container.

Faults

* InvalidResourceNameFault - The supplied repository resource is not known to the service.
* DataResourceUnavailableFault - The specified data resource is unavailable.
* ServiceBusyFault - The service is already processing a request and Concurrent Access is false.

### AltAccess::GetAlternativeMembers

Retrieve alternative members of the container, provided their positions. No members SHALL be returned for the position '1', as the members in this position are not alternative but default members. If no position is provided, all the alternative members SHALL be retrieved. Otherwise, only the alternative members in any of the specified positions SHALL be retrieved. An attempt SHOULD be made to retrieve all the specified alternative members even if some retrievals fail.

Input

* GetAlternativeMembersRequest
  + DataResourceAbstractName – The abstract name of the resource the message is directed to.
  + DatasetFormatURI – The format of the response dataset data.
  + Position\* – An OPTIONAL set of positions of the alternative members that are to be retrieved.

Output

* GetAlternativeMembersResponse
  + GetAlternativeMembersDataset
    - DatasetFormatURI – The URI of the dataset format being returned as defined in the DatasetMap.
    - GetAlternativeMembersDatasetData – The data returned in response to the request.
      * PositionResult+ – The alternative members retrieved organized according to the position where they are located. If no positions where specified in the request, an element for each one of the positions where alternative elements exist SHALL be returned. Otherwise, only elements matching the specified positions SHALL be returned. For each position:
        + Position – The position
        + AlternativeMemberURI\* – The URIs of the alternative members retrieved from the container.
    - NumberOfAlternativeMembers – The number of alternative members retrieved from the container.

Faults

* InvalidResourceNameFault - The supplied repository resource is not known to the service.
* DataResourceUnavailableFault - The specified data resource is unavailable.
* ServiceBusyFault - The service is already processing a request and Concurrent Access is false.

### AltAccess::AddDefaultMembers

Add default members to the container. An attempt SHOULD be made to add all of the specified members even if some additions fail.

Input

* AddDefaultMembersRequest
  + DataResourceAbstractName – The abstract name of the resource the message is directed to.
  + DatasetFormatURI – The format of the response dataset data.
  + MemberURI+ – The URIs of the specific resources that are to be attached to the container as default members.

Output

* AddDefaultMembersResponse
  + AddDefaultMembersDataset
    - DatasetFormatURI – The URI of the dataset format being returned as defined in the DatasetMap.
    - AddDefaultMembersDatasetData – The data returned in response to the request.
      * MemberResult+ – For each one of the members that were to be added as default members:
        + MemberURI – The URI of the member.
        + Result – The result of the default member addition operation for the specified member. Possible values for this are: success; member not added as it already exists; and member not added as the consumer is not authorized.
    - NumberOfDefaultMembersAdded – The number of default members that were added to the container.

Faults

* InvalidResourceNameFault - The supplied repository resource is not known to the service.
* DataResourceUnavailableFault - The specified data resource is unavailable.
* ServiceBusyFault - The service is already processing a request and Concurrent Access is false.

### AltAccess::AddAlternativeMembers

Attach alternative members to the container, provided the positions that they must occupy. the members even if some additions fail.

Input

* AddAlternativeMembersRequest
  + DataResourceAbstractName – The abstract name of the resource the message is directed to.
  + DatasetFormatURI – The format of the response dataset data.
  + MemberSet+ – A set of default members that will be added to the container as alternative members. For each set:
    - Position – The position in the container where the resources will be added. This position must be greater than one, as that position is reserved to default members.
    - MemberURI+ – The URIs of the members that are to be added to the container in the specified position.

Output

* AddAlternativeMembersResponse
  + AddAlternativeMembersDataset
    - DatasetFormatURI – The URI of the dataset format being returned as defined in the DatasetMap.
    - AddAlternativeMembersDatasetData – The data returned in response to the request.
      * MemberSetResult+ – For each one of the specified sets of members that were to be added as alternative members:
        + Position – The position where the members where to be added.
        + Member+ – For each of the members that were to be added in the specified position:

MemberURI – The URI of the alternative member that was to be added.

Result – The result of the alternative member addition operation for the specified member. Possible values for this are: succes; member not added as it already existed; invalid alternative position; and member not added as the consumer is not authorized.

* + - NumberOfAlternativeMembersAdded – The number of alternative members that were added to container.

Faults

* InvalidResourceNameFault - The supplied repository resource is not known to the service.
* DataResourceUnavailableFault - The specified data resource is unavailable.
* ServiceBusyFault - The service is already processing a request and Concurrent Access is false.

### AltAccess::RemoveDefaultMembers

Remove default members from the container. If concrete members are specified, then only those SHALL be removed from the container. Otherwise all the default results SHALL be removed from the container. An attempt SHOULD be made to remove all the specified default members even if some removals fail.

Input

* RemoveDefaultMembersRequest
  + DataResourceAbstractName – The abstract name of the resource the message is directed to.
  + DatasetFormatURI – The format of the response dataset data.
  + MemberURI\* – An OPTIONAL set of URIs of the specific default members that are to be removed.

Output

* RemoveDefaultMembersResponse
  + RemoveDefaultMembersDataset
    - DatasetFormatURI – The URI of the dataset format being returned as defined in the DatasetMap.
    - RemoveDefaultMembersDatasetData – The data returned in response to the request.
      * MemberResult+ – For each one of the default members that were to be removed:
        + MemberURI – The URI of the member.
        + Result – The result of the default member removal operation for the specified member. Possible values for this are: success; member not removed as it does not exist; and member not removed as the consumer is not authorized.
    - NumberOfDefaultMembersRemoved – The number of default members that were removed from the container.

Faults

* InvalidResourceNameFault - The supplied repository resource is not known to the service.
* DataResourceUnavailableFault - The specified data resource is unavailable.
* ServiceBusyFault - The service is already processing a request and Concurrent Access is false.

### AltAccess::RemoveAlternativeMembers

Remove the specified alternative members from the container. If no member set is specified, all the alternative members of the container SHALL be removed. If a member set is defined but no position is defined, all the matching members SHALL be removed regardless its (alternative member) position. If a member set is specified, but no members are identified, then all the members of that (alternative member) position SHALL be removed. Otherwise, only the matching members SHOULD be removed. An attempt SHOULD be made to remove all the specified members even if some removals fail.

Input

* RemoveAlternativeMembersRequest
  + DataResourceAbstractName – The abstract name of the resource the message is directed to.
  + DatasetFormatURI – The format of the response dataset data.
  + MemberSet\* – OPTIONAL sets of alternative members that will be removed from the container. For each set:
    - Position? – An OPTIONAL position in the container from where the resources will be removed.
    - MemberURI\* – An OPTIONAL set of URIs of the members that are to be removed from the container.

Output

* RemoveAlternativeMembersResponse
  + RemoveAlternativeMembersDataset
    - DatasetFormatURI – The URI of the dataset format being returned as defined in the DatasetMap.
    - RemoveAlternativeMembersDatasetData – The data returned in response to the request.
      * MemberSetResult+ – For each one of the specified sets of members that were to be removed:
        + Position – The position from where the members where to be removed.
        + Member+ – For each of the members that were to be removed:

MemberURI – The URI of the alternative member that was to be removed.

Result – The result of the alternative member removal operation for the specified member. Possible values for this are: succes; member not removed as it did not exist; invalid alternative member position; and member not removed as the consumer is not authorized.

* + - NumberOfAlternativeMembersRemoved – The number of alternative members that were removed from the container.

Faults

* InvalidResourceNameFault - The supplied repository resource is not known to the service.
* DataResourceUnavailableFault - The specified data resource is unavailable.
* ServiceBusyFault - The service is already processing a request and Concurrent Access is false.

### AltAccess::AreDefaultMembers

Check if the specified resources are default members of the container. An attempt SHOULD be made to check all of the specified resources even if some checks fail.

Input

* AreDefaultMembersRequest
  + DataResourceAbstractName – The abstract name of the resource the message is directed to.
  + DatasetFormatURI – The format of the response dataset data.
  + MemberURI+ – The URIs of the specific default members that are to be checked.

Output

* AreDefaultMembersResponse
  + AreDefaultMembersDataset
    - DatasetFormatURI – The URI of the dataset format being returned as defined in the DatasetMap.
    - AreDefaultMembersDatasetData – The data returned in response to the request.
      * MemberResult+ – For each one of the members that were to be checked:
        + MemberURI – The URI of the member.
        + Result – The result of the default member checking operation for the specified member. Possible values for this are: true, false and resource could not be checked as the consumer is not authorized.

Faults

* InvalidResourceNameFault - The supplied repository resource is not known to the service.
* DataResourceUnavailableFault - The specified data resource is unavailable.
* ServiceBusyFault - The service is already processing a request and Concurrent Access is false.

### AltAccess::AreAlternativeMembers

Check if the specified resources are alternative members of the container. An attempt SHOULD be made to check all of the specified resources even if some checks fail.

Input

* AreAlternativeMembersRequest
  + DataResourceAbstractName – The abstract name of the resource the message is directed to.
  + DatasetFormatURI – The format of the response dataset data.
  + MemberURI+ – The URIs of the specific alternative members that are to be checked.

Output

* AreAlternativeMembersResponse
  + AreAlternativeMembersDataset
    - DatasetFormatURI – The URI of the dataset format being returned as defined in the DatasetMap.
    - AreAlternativeMembersDatasetData – The data returned in response to the request.
      * MemberResult+ – For each one of the members that were to be checked:
        + MemberURI – The URI of the member.
        + Result – The result of the alternative member checking operation for the specified member. Possible values for this are: true, false and resource could not be checked as the consumer is not authorized.

Faults

* InvalidResourceNameFault - The supplied repository resource is not known to the service.
* DataResourceUnavailableFault - The specified data resource is unavailable.
* ServiceBusyFault - The service is already processing a request and Concurrent Access is false.

# Mapping to WSDL

For a mapping to the WSDL proposal see the following sections:

* RepositoryCollection
  + XML Schema – Appendix A.1
  + WSDL – Appendix A.2
* Repository
  + XML Schema – Appendix B.1
  + WSDL – Appendix B.2
* Resource
  + XML Schema – Appendix C.1
  + WSDL – Appendix C.2
* Class
  + XML Schema – Appendix D.1
  + WSDL – Appendix D.2
* Property
  + XML Schema – Appendix E.1
  + WSDL – Appendix E.2
* Statement
  + XML Schema – Appendix F.1
  + WSDL – Appendix F.2
* List
  + XML Schema – Appendix G.1
  + WSDL – Appendix G.2
* Container
  + XML Schema – Appendix H.1
  + WSDL – Appendix H.2

# Security Considerations

The realizations of an RDF(S) grid data access service will use standard web service security mechanisms as specified by other standards bodies. The assumption is that these standards will also indicate how to make information related to authentication, authorization security, etc., available.

# Conclusion

This document has discussed a specialization of the interfaces defined in the Web Services Data Access and Integration document [WS-DAI] and the additional capabilities required to properly address RDF(S) data resources by means of a set of ontology handling primitives, based on the RDF(S) model defined in [RDF Concepts, RDF Schema].

To facilitate the adoption of the proposal, the realization is organized as a set of profiles, which provide different granularity degrees for accessing RDF(S) data resources, so that users and developers can decide – according to their requirements – which parts of the specification to use or implement, without compromising interoperability.

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# Glossary

Recommended but not required.

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# RepositoryCollection

# RepositoryCollection XML Schema

xs:schema xmlns:wro="http://www.ogf.org/dais/2008/02/ws-dai-rdfs/ontology"

xmlns:wsdai="http://www.ggf.org/namespaces/2005/12/WS-DAI"

elementFormDefault="qualified"

targetNamespace="http://www.ogf.org/dais/2008/02/ws-dai-rdfs/ontology">

<!--Import the base WS-DAI Schema-->

<xs:import namespace="http://www.ggf.org/namespaces/2005/12/WS-DAI" schemaLocation="..\resources\spec\wsdai\_core\_types.xsd"/>

<!--Include the base WS-DAI-RDFS Core Schema-->

<xs:include schemaLocation="wsdai\_rdfs\_types.xsd"/>

<!-- The static properties that describe a RepositoryCollection data service -->

<xs:element name="NumberOfRepositories" type="xs:unsignedLong"/>

<xs:element name="RepositoryCollection">

<xs:complexType>

<xs:sequence>

<xs:element name="Repository" minOccurs="0" maxOccurs="unbounded" type="wro:RepositoryDescriptorType"/>

</xs:sequence>

</xs:complexType>

</xs:element>

<!-- The configuration properties that describe a RepositoryCollection data service -->

<!-- The property document of a RepositoryCollection data service -->

<xs:complexType name="RepositoryCollectionPropertyDocumentType">

<xs:complexContent>

<xs:extension base="wsdai:PropertyDocumentType">

<xs:sequence>

<xs:element ref="wro:NumberOfRepositories"/>

<xs:element ref="wro:RepositoryCollection"/>

</xs:sequence>

</xs:extension>

</xs:complexContent>

</xs:complexType>

<xs:element name="RepositoryCollectionPropertyDocument" type="wro:RepositoryCollectionPropertyDocumentType"/>

<xs:complexType name="RepositoryDescriptorType">

<xs:attribute name="name" type="xs:anyURI" use="required"/>

</xs:complexType>

<xs:simpleType name="RepositoryRetrievalResultType">

<xs:restriction base="xs:string">

<xs:enumeration value="Success"/>

<xs:enumeration value="RepositoryDoesNotExist"/>

<xs:enumeration value="ConsumerNotAuthorized"/>

</xs:restriction>

</xs:simpleType>

<xs:simpleType name="RepositoryAdditionResultType">

<xs:restriction base="xs:string">

<xs:enumeration value="Success"/>

<xs:enumeration value="RepositoryUpdated"/>

<xs:enumeration value="RepositoryClash"/>

<xs:enumeration value="ConsumerNotAuthorized"/>

</xs:restriction>

</xs:simpleType>

<xs:simpleType name="RepositoryRemovalResultType">

<xs:restriction base="xs:string">

<xs:enumeration value="Success"/>

<xs:enumeration value="RepositoryDoesNotExist"/>

<xs:enumeration value="ConsumerNotAuthorized"/>

</xs:restriction>

</xs:simpleType>

</xs:schema>

# RepositoryCollection WSDL

<wsdl:definitions xmlns:wro="http://www.ogf.org/dais/2008/02/ws-dai-rdfs/ontology"

xmlns:wsdai="http://www.ggf.org/namespaces/2005/12/WS-DAI"

name="wsdai-rdfs-ontology"

targetNamespace="http://www.ogf.org/dais/2008/02/ws-dai-rdfs/ontology">

<!-- WSDL IMPORTS #################################################################### -->

<wsdl:import namespace="http://www.ggf.org/namespaces/2005/12/WS-DAI" location="..\resources\spec\wsdai\_core\_porttypes.wsdl"/>

<!-- WSDL TYPES ###################################################################### -->

<wsdl:types>

<xs:schema xmlns:wro="http://www.ogf.org/dais/2008/02/ws-dai-rdfs/ontology"

xmlns:wsdai="http://www.ggf.org/namespaces/2005/12/WS-DAI"

elementFormDefault="qualified"

targetNamespace="http://www.ogf.org/dais/2008/02/ws-dai-rdfs/ontology">

<!--Import the base WS-DAI Schema-->

<xs:import namespace="http://www.ggf.org/namespaces/2005/12/WS-DAI" schemaLocation="..\resources\spec\wsdai\_core\_types.xsd"/>

<!--Include the base WS-DAI-RDF(S) Core Schema-->

<xs:include schemaLocation="wsdai\_rdfs\_types.xsd"/>

<!--Include the external WS-DAI-RDF(S) Resource Schema-->

<xs:include schemaLocation="wsdai\_rdfs\_repositorycollection\_types.xsd"/>

<!-- ##################################### -->

<!-- ### GetRepositories Message Types ### -->

<!-- ##################################### -->

<xs:element name="GetRepositoriesRequest">

<xs:complexType>

<xs:complexContent>

<xs:extension base="wsdai:RequestType">

<xs:sequence>

<xs:element name="RepositoryName" minOccurs="1" maxOccurs="unbounded" type="xs:anyURI"/>

</xs:sequence>

</xs:extension>

</xs:complexContent>

</xs:complexType>

</xs:element>

<xs:element name="GetRepositoriesDatasetData" substitutionGroup="wsdai:DatasetData">

<xs:complexType mixed="true">

<xs:complexContent>

<xs:restriction base="wsdai:DatasetDataType">

<xs:sequence>

<xs:element name="RepositoryResponse" minOccurs="1" maxOccurs="unbounded">

<xs:complexType>

<xs:sequence>

<xs:element name="RepositoryName" type="xs:anyURI"/>

<xs:element name="Result" type="wro:RepositoryRetrievalResultType"/>

<xs:element name="Data">

<xs:complexType>

<xs:sequence>

<xs:any namespace="##any" maxOccurs="unbounded"/>

</xs:sequence>

</xs:complexType>

</xs:element>

</xs:sequence>

</xs:complexType>

</xs:element>

</xs:sequence>

</xs:restriction>

</xs:complexContent>

</xs:complexType>

</xs:element>

<xs:element name="GetRepositoriesDataset" substitutionGroup="wsdai:Dataset">

<xs:complexType>

<xs:complexContent>

<xs:extension base="wsdai:DatasetType">

<xs:sequence>

<xs:element name="NumberOfRepositoriesRetrieved" type="xs:unisgnedLong"/>

</xs:sequence>

</xs:extension>

</xs:complexContent>

</xs:complexType>

</xs:element>

<xs:element name="GetRepositoriesResponse">

<xs:complexType>

<xs:sequence>

<xs:element ref="wro:GetRepositoriesDataset"/>

</xs:sequence>

</xs:complexType>

</xs:element>

<!-- ##################################### -->

<!-- ### AddRepositories Message Types ### -->

<!-- ##################################### -->

<xs:element name="AddRepositoriesRequest">

<xs:complexType>

<xs:complexContent>

<xs:extension base="wsdai:RequestType">

<xs:sequence>

<xs:element name="Repository" minOccurs="1" maxOccurs="unbounded">

<xs:complexType>

<xs:sequence>

<xs:element name="RepositoryName" type="xs:anyURI"/>

<xs:element name="Data">

<xs:complexType>

<xs:sequence>

<xs:any namespace="##any" maxOccurs="unbounded"/>

</xs:sequence>

</xs:complexType>

</xs:element>

</xs:sequence>

</xs:complexType>

</xs:element>

<xs:element name="OverwriteRepositories" minOccurs="0" maxOccurs="1" type="xs:boolean"/>

</xs:sequence>

</xs:extension>

</xs:complexContent>

</xs:complexType>

</xs:element>

<xs:element name="AddRepositoriesDatasetData" substitutionGroup="wsdai:DatasetData">

<xs:complexType mixed="true">

<xs:complexContent>

<xs:restriction base="wsdai:DatasetDataType">

<xs:sequence>

<xs:element name="RepositoryResponse" minOccurs="1" maxOccurs="unbounded">

<xs:complexType>

<xs:sequence>

<xs:element name="RepositoryName" type="xs:anyURI"/>

<xs:element name="Result" type="wro:RepositoryAdditionResultType"/>

</xs:sequence>

</xs:complexType>

</xs:element>

</xs:sequence>

</xs:restriction>

</xs:complexContent>

</xs:complexType>

</xs:element>

<xs:element name="AddRepositoriesDataset" substitutionGroup="wsdai:Dataset">

<xs:complexType>

<xs:complexContent>

<xs:extension base="wsdai:DatasetType">

<xs:sequence>

<xs:element name="OverwriteRepositories" type="xs:boolean"/>

<xs:element name="NumberOfRepositoriesAdded" type="xs:unsignedLong"/>

</xs:sequence>

</xs:extension>

</xs:complexContent>

</xs:complexType>

</xs:element>

<xs:element name="AddRepositoriesResponse">

<xs:complexType>

<xs:sequence>

<xs:element ref="wro:AddRepositoriesDataset"/>

</xs:sequence>

</xs:complexType>

</xs:element>

<!-- ######################################## -->

<!-- ### RemoveRepositories Message Types ### -->

<!-- ######################################## -->

<xs:element name="RemoveRepositoriesRequest">

<xs:complexType>

<xs:complexContent>

<xs:extension base="wsdai:RequestType">

<xs:sequence>

<xs:element name="RepositoryName" minOccurs="1" maxOccurs="unbounded" type="xs:anyURI"/>

</xs:sequence>

</xs:extension>

</xs:complexContent>

</xs:complexType>

</xs:element>

<xs:element name="RemoveRepositoriesDatasetData" substitutionGroup="wsdai:DatasetData">

<xs:complexType mixed="true">

<xs:complexContent>

<xs:restriction base="wsdai:DatasetDataType">

<xs:sequence>

<xs:element name="RepositoryResponse" minOccurs="1" maxOccurs="unbounded">

<xs:complexType>

<xs:sequence>

<xs:element name="RepositoryName" type="xs:anyURI"/>

<xs:element name="Result" type="wro:RepositoryRemovalResultType"/>

</xs:sequence>

</xs:complexType>

</xs:element>

</xs:sequence>

</xs:restriction>

</xs:complexContent>

</xs:complexType>

</xs:element>

<xs:element name="RemoveRepositoriesDataset" substitutionGroup="wsdai:Dataset">

<xs:complexType>

<xs:complexContent>

<xs:extension base="wsdai:DatasetType">

<xs:sequence>

<xs:element name="NumberOfRepositoriesRemoved" type="xs:unsignedLong"/>

</xs:sequence>

</xs:extension>

</xs:complexContent>

</xs:complexType>

</xs:element>

<xs:element name="RemoveRepositoriesResponse">

<xs:complexType>

<xs:sequence>

<xs:element ref="wro:RemoveRepositoriesDataset"/>

</xs:sequence>

</xs:complexType>

</xs:element>

<!-- ########################################## -->

<!-- ### GetRepositoryFactory Message Types ### -->

<!-- ########################################## -->

<xs:element name="GetRepositoryFactoryRequest">

<xs:complexType>

<xs:complexContent>

<xs:extension base="wsdai:FactoryRequestType">

<xs:sequence>

<xs:element name="RepositoryName" type="xs:anyURI"/>

</xs:sequence>

</xs:extension>

</xs:complexContent>

</xs:complexType>

</xs:element>

<xs:element name="GetRepositoryFactoryResponse" type="wsdai:DataResourceAddressListType"/>

</xs:schema>

</wsdl:types>

<!-- WSDL MESSAGES ################################################################### -->

<wsdl:message name="GetRepositoryCollectionPropertyDocumentRequest">

<wsdl:part name="GetRepositoryCollectionPropertyDocumentRequest" element="wsdai:GetDataResourcePropertyDocumentRequest"/>

</wsdl:message>

<wsdl:message name="GetRepositoryCollectionPropertyDocumentResponse">

<wsdl:part name="GetRepositoryCollectionPropertyDocumentResponse" element="wro:RepositoryCollectionPropertyDocument"/>

</wsdl:message>

<wsdl:message name="GetRepositoriesRequest">

<wsdl:part name="GetRepositoriesRequest" element="wro:GetRepositoriesRequest"/>

</wsdl:message>

<wsdl:message name="GetRepositoriesResponse">

<wsdl:part name="GetRepositoriesResponse" element="wro:GetRepositoriesResponse"/>

</wsdl:message>

<wsdl:message name="AddRepositoriesRequest">

<wsdl:part name="AddRepositoriesRequest" element="wro:AddRepositoriesRequest"/>

</wsdl:message>

<wsdl:message name="AddRepositoriesResponse">

<wsdl:part name="AddRepositoriesResponse" element="wro:AddRepositoriesResponse"/>

</wsdl:message>

<wsdl:message name="RemoveRepositoriesRequest">

<wsdl:part name="RemoveRepositoriesRequest" element="wro:RemoveRepositoriesRequest"/>

</wsdl:message>

<wsdl:message name="RemoveRepositoriesResponse">

<wsdl:part name="RemoveRepositoriesResponse" element="wro:RemoveRepositoriesResponse"/>

</wsdl:message>

<wsdl:message name="GetRepositoryFactoryRequest">

<wsdl:part name="GetRepositoryFactoryRequest" element="wro:GetRepositoryFactoryRequest"/>

</wsdl:message>

<wsdl:message name="GetRepositoryFactoryResponse">

<wsdl:part name="GetRepositoryFactoryResponse" element="wro:GetRepositoryFactoryResponse"/>

</wsdl:message>

<wsdl:message name="RepositoryDoesNotExistFault">

<wsdl:part name="RepositoryDoesNotExistFault" element="wro:RepositoryDoesNotExistFault"/>

</wsdl:message>

<wsdl:message name="InvalidResourceNameFault">

<wsdl:part name="InvalidResourceNameFault" element="wsdai:InvalidResourceNameFault"/>

</wsdl:message>

<wsdl:message name="DataResourceUnavailableFault">

<wsdl:part name="DataResourceUnavailableFault" element="wsdai:DataResourceUnavailableFault"/>

</wsdl:message>

<wsdl:message name="ServiceBusyFault">

<wsdl:part name="ServiceBusyFault" element="wsdai:ServiceBusyFault"/>

</wsdl:message>

<wsdl:message name="InvalidPortTypeQNameFault">

<wsdl:part name="InvalidPortTypeQNameFault" element="wsdai:InvalidPortTypeQNameFault"/>

</wsdl:message>

<wsdl:message name="InvalidConfigurationDocumentFault">

<wsdl:part name="InvalidConfigurationDocumentFault" element="wsdai:InvalidConfigurationDocumentFault"/>

</wsdl:message>

<wsdl:message name="NotAuthorizedFault">

<wsdl:part name="NotAuthorizedFault" element="wsdai:NotAuthorizedFault"/>

</wsdl:message>

<!-- WSDL PORT TYPES ################################################################# -->

<wsdl:portType name="RepositoryCollectionAccessPT">

<wsdl:operation name="GetRepositoryCollectionPropertyDocument">

<wsdl:input name="GetRepositoryCollectionPropertyDocumentRequest" message="wro:GetRepositoryCollectionPropertyDocumentRequest"/>

<wsdl:output name="GetRepositoryCollectionPropertyDocumentResponse" message="wro:GetRepositoryCollectionPropertyDocumentResponse"/>

<wsdl:fault name="InvalidResourceNameFault" message="wsdai:InvalidResourceNameFault"/>

<wsdl:fault name="DataResourceUnavailableFault" message="wsdai:DataResourceUnavailableFault"/>

<wsdl:fault name="NotAuthorizedFault" message="wsdai:NotAuthorizedFault"/>

<wsdl:fault name="ServiceBusyFault" message="wsdai:ServiceBusyFault"/>

</wsdl:operation>

<wsdl:operation name="GetRepositories">

<wsdl:input name="GetRepositoriesRequest" message="wro:GetRepositoriesRequest"/>

<wsdl:output name="GetRepositoriesResponse" message="wro:GetRepositoriesResponse"/>

<wsdl:fault name="InvalidResourceNameFault" message="wsdai:InvalidResourceNameFault"/>

<wsdl:fault name="DataResourceUnavailableFault" message="wsdai:DataResourceUnavailableFault"/>

<wsdl:fault name="ServiceBusyFault" message="wsdai:ServiceBusyFault"/>

</wsdl:operation>

<wsdl:operation name="AddRepositories">

<wsdl:input name="AddRepositoriesRequest" message="wro:AddRepositoriesRequest"/>

<wsdl:output name="AddRepositoriesResponse" message="wro:AddRepositoriesResponse"/>

<wsdl:fault name="InvalidResourceNameFault" message="wsdai:InvalidResourceNameFault"/>

<wsdl:fault name="DataResourceUnavailableFault" message="wsdai:DataResourceUnavailableFault"/>

<wsdl:fault name="ServiceBusyFault" message="wsdai:ServiceBusyFault"/>

</wsdl:operation>

<wsdl:operation name="RemoveRepositories">

<wsdl:input name="RemoveRepositoriesRequest" message="wro:RemoveRepositoriesRequest"/>

<wsdl:output name="RemoveRepositoriesResponse" message="wro:RemoveRepositoriesResponse"/>

<wsdl:fault name="InvalidResourceNameFault" message="wsdai:InvalidResourceNameFault"/>

<wsdl:fault name="DataResourceUnavailableFault" message="wsdai:DataResourceUnavailableFault"/>

<wsdl:fault name="ServiceBusyFault" message="wsdai:ServiceBusyFault"/>

</wsdl:operation>

</wsdl:portType>

<wsdl:portType name="RepositoryCollectionFactoryPT">

<wsdl:operation name="GetRepositoryFactory">

<wsdl:input name="GetRepositoryFactoryRequest" message="wro:GetRepositoryFactoryRequest"/>

<wsdl:output name="GetRepositoryFactoryResponse" message="wro:GetRepositoryFactoryResponse"/>

<wsdl:fault name="InvalidResourceNameFault" message="wsdai:InvalidResourceNameFault"/>

<wsdl:fault name="DataResourceUnavailableFault" message="wsdai:DataResourceUnavailableFault"/>

<wsdl:fault name="InvalidPortTypeQNameFault" message="wsdai:InvalidPortTypeQNameFault"/>

<wsdl:fault name="InvalidConfigurationDocumentFault" message="wsdai:InvalidConfigurationDocumentFault"/>

<wsdl:fault name="NotAuthorizedFault" message="wsdai:NotAuthorizedFault"/>

<wsdl:fault name="ServiceBusyFault" message="wsdai:ServiceBusyFault"/>

<wsdl:fault name="RepositoryDoesNotExistFault" message="wro:RepositoryDoesNotExistFault"/>

</wsdl:operation>

</wsdl:portType>

</wsdl:definitions>

# Repository

# Repository XML Schema

<xs:schema xmlns:wro="http://www.ogf.org/dais/2008/02/ws-dai-rdfs/ontology"

xmlns:wsdai="http://www.ggf.org/namespaces/2005/12/WS-DAI"

elementFormDefault="qualified"

targetNamespace="http://www.ogf.org/dais/2008/02/ws-dai-rdfs/ontology">

<!--Import the base WS-DAI Schema-->

<xs:import namespace="http://www.ggf.org/namespaces/2005/12/WS-DAI" schemaLocation="..\resources\spec\wsdai\_core\_types.xsd"/>

<!--Include the base WS-DAI-RDFS Core Schema-->

<xs:include schemaLocation="wsdai\_rdfs\_types.xsd"/>

<!-- The static properties that describe a Repository data service -->

<xs:element name="RepositoryName" type="xs:anyURI"/>

<!-- The configuration properties that describe a Repository data service -->

<!-- The property document of a Repository data service -->

<xs:complexType name="RepositoryPropertyDocumentType">

<xs:complexContent>

<xs:extension base="wsdai:PropertyDocumentType">

<xs:sequence>

<xs:element ref="wro:RepositoryName"/>

</xs:sequence>

</xs:extension>

</xs:complexContent>

</xs:complexType>

<xs:element name="RepositoryPropertyDocument" type="wro:RepositoryPropertyDocumentType"/>

<xs:simpleType name="ValueFilterSemanticsType">

<xs:restriction base="xs:string">

<xs:enumeration value="OR"/>

<xs:enumeration value="AND"/>

<xs:enumeration value="XOR"/>

<xs:enumeration value="NONE"/>

</xs:restriction>

</xs:simpleType>

<xs:simpleType name="PropertyFilterSemanticsType">

<xs:restriction base="xs:string">

<xs:enumeration value="OR"/>

<xs:enumeration value="AND"/>

<xs:enumeration value="XOR"/>

<xs:enumeration value="NONE"/>

</xs:restriction>

</xs:simpleType>

<xs:simpleType name="ResourceRetrievalResultType">

<xs:restriction base="xs:string">

<xs:enumeration value="Success"/>

<xs:enumeration value="NoMatchingResourcesFound"/>

<xs:enumeration value="ConsumerNotAuthorized"/>

</xs:restriction>

</xs:simpleType>

<xs:simpleType name="ResourcePropertiesRetrievalResultType">

<xs:restriction base="xs:string">

<xs:enumeration value="Success"/>

<xs:enumeration value="NoMatchingResourcePropertiesFound"/>

<xs:enumeration value="ConsumerNotAuthorized"/>

</xs:restriction>

</xs:simpleType>

<xs:simpleType name="ResourceAdditionResultType">

<xs:restriction base="xs:string">

<xs:enumeration value="Success"/>

<xs:enumeration value="ResourceUpdated"/>

<xs:enumeration value="ConsumerNotAuthorized"/>

</xs:restriction>

</xs:simpleType>

<xs:simpleType name="ResourceRemovalResultType">

<xs:restriction base="xs:string">

<xs:enumeration value="Success"/>

<xs:enumeration value="ConsumerNotAuthorized"/>

</xs:restriction>

</xs:simpleType>

<xs:simpleType name="ResourcePropertiesRemovalResultType">

<xs:restriction base="xs:string">

<xs:enumeration value="Success"/>

<xs:enumeration value="NoMatchingResourcePropertiesFound"/>

<xs:enumeration value="AllPropertyValuesRemoved"/>

<xs:enumeration value="ConsumerNotAuthorized"/>

</xs:restriction>

</xs:simpleType>

</xs:schema>

# Repository WSDL

<wsdl:definitions xmlns:wro="http://www.ogf.org/dais/2008/02/ws-dai-rdfs/ontology"

xmlns:wsdai="http://www.ggf.org/namespaces/2005/12/WS-DAI"

name="wsdai-rdfs-ontology"

targetNamespace="http://www.ogf.org/dais/2008/02/ws-dai-rdfs/ontology">

<!-- WSDL IMPORTS #################################################################### -->

<wsdl:import namespace="http://www.ggf.org/namespaces/2005/12/WS-DAI" location="..\resources\spec\wsdai\_core\_porttypes.wsdl"/>

<!-- WSDL TYPES ###################################################################### -->

<wsdl:types>

<xs:schema xmlns:wro="http://www.ogf.org/dais/2008/02/ws-dai-rdfs/ontology"

xmlns:wsdai="http://www.ggf.org/namespaces/2005/12/WS-DAI"

elementFormDefault="qualified"

targetNamespace="http://www.ogf.org/dais/2008/02/ws-dai-rdfs/ontology">

<!--Import the base WS-DAI Schema-->

<xs:import namespace="http://www.ggf.org/namespaces/2005/12/WS-DAI" schemaLocation="..\resources\spec\wsdai\_core\_types.xsd"/>

<!--Include the base WS-DAI-RDF(S) Core Schema-->

<xs:include schemaLocation="wsdai\_rdfs\_types.xsd"/>

<!--Include the external WS-DAI-RDF(S) Resource Schema-->

<xs:include schemaLocation="wsdai\_rdfs\_repository\_types.xsd"/>

<!-- ################################## -->

<!-- ### GetResources Message Types ### -->

<!-- ################################## -->

<xs:element name="GetResourcesRequest">

<xs:complexType>

<xs:complexContent>

<xs:extension base="wsdai:RequestType">

<xs:sequence>

<xs:element name="ResourceSet" minOccurs="1" maxOccurs="unbounded">

<xs:complexType>

<xs:sequence>

<xs:element name="ResourceURI" minOccurs="0" maxOccurs="unbounded" type="xs:anyURI"/>

<xs:element name="PropertyFilter" minOccurs="0" maxOccurs="unbounded">

<xs:complexType>

<xs:sequence>

<xs:element name="PropertyURI" type="xs:anyURI"/>

<xs:element name="PropertyValueFilter" minOccurs="0" maxOccurs="unbounded" type="wro:PropertyValueType"/>

<xs:element name="ValueFilterSemantics" minOccurs="0" maxOccurs="1" type="wro:ValueFilterSemanticsType"/>

</xs:sequence>

</xs:complexType>

</xs:element>

<xs:element name="PropertyFilterSemantics" minOccurs="0" maxOccurs="1" type="wro:PropertyFilterSemanticsType"/>

</xs:sequence>

</xs:complexType>

</xs:element>

<xs:element name="RetrieveResourceProperties" minOccurs="0" maxOccurs="1" type="xs:boolean"/>

</xs:sequence>

</xs:extension>

</xs:complexContent>

</xs:complexType>

</xs:element>

<xs:element name="GetResourcesDatasetData" substitutionGroup="wsdai:DatasetData">

<xs:complexType mixed="true">

<xs:complexContent>

<xs:restriction base="wsdai:DatasetDataType">

<xs:sequence>

<xs:element name="ResourceSetResult" minOccurs="1" maxOccurs="unbounded">

<xs:complexType>

<xs:sequence>

<xs:element name="Result" type="wro:ResourceRetrievalResultType"/>

<xs:element name="Resource" minOccurs="0" maxOccurs="unbounded">

<xs:complexType>

<xs:sequence>

<xs:element name="ResourceURI" type="xs:anyURI"/>

<xs:element name="DefinedProperty" minOccurs="0" maxOccurs="unbounded">

<xs:complexType>

<xs:sequence>

<xs:element name="PropertyURI" type="xs:anyURI"/>

<xs:element name="PropertyValue" minOccurs="1" maxOccurs="unbounded" type="wro:PropertyValueType"/>

</xs:sequence>

</xs:complexType>

</xs:element>

</xs:sequence>

</xs:complexType>

</xs:element>

</xs:sequence>

</xs:complexType>

</xs:element>

</xs:sequence>

</xs:restriction>

</xs:complexContent>

</xs:complexType>

</xs:element>

<xs:element name="GetResourcesDataset" substitutionGroup="wsdai:Dataset">

<xs:complexType>

<xs:complexContent>

<xs:extension base="wsdai:DatasetType">

<xs:sequence>

<xs:element name="RetrieveResourceProperties" type="xs:boolean"/>

</xs:sequence>

</xs:extension>

</xs:complexContent>

</xs:complexType>

</xs:element>

<xs:element name="GetResourcesResponse">

<xs:complexType>

<xs:sequence>

<xs:element ref="wro:GetResourcesDataset"/>

</xs:sequence>

</xs:complexType>

</xs:element>

<!-- ########################################### -->

<!-- ### GetResourceProperties Message Types ### -->

<!-- ########################################### -->

<xs:element name="GetResourcePropertiesRequest">

<xs:complexType>

<xs:complexContent>

<xs:extension base="wsdai:RequestType">

<xs:sequence>

<xs:element name="ResourceSet" minOccurs="1" maxOccurs="unbounded">

<xs:complexType>

<xs:sequence>

<xs:element name="ResourceURI" minOccurs="1" maxOccurs="unbounded" type="xs:anyURI"/>

<xs:element name="PropertyURI" minOccurs="0" maxOccurs="unbounded" type="xs:anyURI"/>

</xs:sequence>

</xs:complexType>

</xs:element>

</xs:sequence>

</xs:extension>

</xs:complexContent>

</xs:complexType>

</xs:element>

<xs:element name="GetResourcePropertiesDatasetData" substitutionGroup="wsdai:DatasetData">

<xs:complexType mixed="true">

<xs:complexContent>

<xs:restriction base="wsdai:DatasetDataType">

<xs:sequence>

<xs:element name="ResourceSetResult" minOccurs="1" maxOccurs="unbounded">

<xs:complexType>

<xs:sequence>

<xs:element name="Resource" minOccurs="1" maxOccurs="unbounded">

<xs:complexType>

<xs:sequence>

<xs:element name="ResourceURI" type="xs:anyURI"/>

<xs:element name="Result" type="wro:ResourcePropertiesRetrievalResultType"/>

<xs:element name="DefinedProperty" minOccurs="0" maxOccurs="unbounded">

<xs:complexType>

<xs:sequence>

<xs:element name="PropertyURI" type="xs:anyURI"/>

<xs:element name="PropertyValue" minOccurs="1" maxOccurs="unbounded" type="wro:PropertyValueType"/>

</xs:sequence>

</xs:complexType>

</xs:element>

</xs:sequence>

</xs:complexType>

</xs:element>

</xs:sequence>

</xs:complexType>

</xs:element>

</xs:sequence>

</xs:restriction>

</xs:complexContent>

</xs:complexType>

</xs:element>

<xs:element name="GetResourcePropertiesDataset" substitutionGroup="wsdai:Dataset">

<xs:complexType>

<xs:complexContent>

<xs:extension base="wsdai:DatasetType">

<xs:sequence/>

</xs:extension>

</xs:complexContent>

</xs:complexType>

</xs:element>

<xs:element name="GetResourcePropertiesResponse">

<xs:complexType>

<xs:sequence>

<xs:element ref="wro:GetResourcePropertiesDataset"/>

</xs:sequence>

</xs:complexType>

</xs:element>

<!-- ################################## -->

<!-- ### AddResources Message Types ### -->

<!-- ################################## -->

<xs:element name="AddResourcesRequest">

<xs:complexType>

<xs:complexContent>

<xs:extension base="wsdai:RequestType">

<xs:sequence>

<xs:element name="Resource" minOccurs="1" maxOccurs="unbounded">

<xs:complexType>

<xs:sequence>

<xs:element name="ResourceURI" minOccurs="0" maxOccurs="1" type="xs:anyURI"/>

<xs:element name="Property" minOccurs="1" maxOccurs="unbounded">

<xs:complexType>

<xs:sequence>

<xs:element name="PropertyURI" type="xs:anyURI"/>

<xs:element name="PropertyValue" minOccurs="1" maxOccurs="unbounded" type="wro:PropertyValueType"/>

</xs:sequence>

</xs:complexType>

</xs:element>

</xs:sequence>

</xs:complexType>

</xs:element>

</xs:sequence>

</xs:extension>

</xs:complexContent>

</xs:complexType>

</xs:element>

<xs:element name="AddResourcesDatasetData" substitutionGroup="wsdai:DatasetData">

<xs:complexType mixed="true">

<xs:complexContent>

<xs:restriction base="wsdai:DatasetDataType">

<xs:sequence>

<xs:element name="ResourceResult" minOccurs="1" maxOccurs="unbounded">

<xs:complexType>

<xs:sequence>

<xs:element name="ResourceURI" type="xs:anyURI"/>

<xs:element name="Result" type="wro:ResourceAdditionResultType"/>

</xs:sequence>

</xs:complexType>

</xs:element>

</xs:sequence>

</xs:restriction>

</xs:complexContent>

</xs:complexType>

</xs:element>

<xs:element name="AddResourcesDataset" substitutionGroup="wsdai:Dataset">

<xs:complexType>

<xs:complexContent>

<xs:extension base="wsdai:DatasetType">

<xs:sequence>

<xs:element name="NumberOfResourcesAdded" type="xs:unsignedLong"/>

</xs:sequence>

</xs:extension>

</xs:complexContent>

</xs:complexType>

</xs:element>

<xs:element name="AddResourcesResponse">

<xs:complexType>

<xs:sequence>

<xs:element ref="wro:AddResourcesDataset"/>

</xs:sequence>

</xs:complexType>

</xs:element>

<!-- ##################################### -->

<!-- ### RemoveResources Message Types ### -->

<!-- ##################################### -->

<xs:element name="RemoveResourcesRequest">

<xs:complexType>

<xs:complexContent>

<xs:extension base="wsdai:RequestType">

<xs:sequence>

<xs:element name="ResourceSet" minOccurs="1" maxOccurs="unbounded">

<xs:complexType>

<xs:sequence>

<xs:element name="ResourceURI" minOccurs="0" maxOccurs="unbounded" type="xs:anyURI"/>

<xs:element name="PropertyFilter" minOccurs="0" maxOccurs="unbounded">

<xs:complexType>

<xs:sequence>

<xs:element name="PropertyURI" type="xs:anyURI"/>

<xs:element name="PropertyValueFilter" minOccurs="0" maxOccurs="unbounded" type="wro:PropertyValueType"/>

<xs:element name="ValueFilterSemantics" minOccurs="0" maxOccurs="1" type="wro:ValueFilterSemanticsType"/>

</xs:sequence>

</xs:complexType>

</xs:element>

<xs:element name="PropertyFilterSemantics" minOccurs="0" maxOccurs="1" type="wro:PropertyFilterSemanticsType"/>

</xs:sequence>

</xs:complexType>

</xs:element>

</xs:sequence>

</xs:extension>

</xs:complexContent>

</xs:complexType>

</xs:element>

<xs:element name="RemoveResourcesDatasetData" substitutionGroup="wsdai:DatasetData">

<xs:complexType mixed="true">

<xs:complexContent>

<xs:restriction base="wsdai:DatasetDataType">

<xs:sequence>

<xs:element name="ResourceSetResult" minOccurs="1" maxOccurs="unbounded">

<xs:complexType>

<xs:sequence>

<xs:element name="Resource" minOccurs="0" maxOccurs="unbounded">

<xs:complexType>

<xs:sequence>

<xs:element name="ResourceURI" type="xs:anyURI"/>

<xs:element name="Result" type="wro:ResourceRemovalResultType"/>

</xs:sequence>

</xs:complexType>

</xs:element>

</xs:sequence>

</xs:complexType>

</xs:element>

</xs:sequence>

</xs:restriction>

</xs:complexContent>

</xs:complexType>

</xs:element>

<xs:element name="RemoveResourcesDataset" substitutionGroup="wsdai:Dataset">

<xs:complexType>

<xs:complexContent>

<xs:extension base="wsdai:DatasetType">

<xs:sequence>

<xs:element name="NumberOfRemovedResources" type="xs:unsignedLong"/>

</xs:sequence>

</xs:extension>

</xs:complexContent>

</xs:complexType>

</xs:element>

<xs:element name="RemoveResourcesResponse">

<xs:complexType>

<xs:sequence>

<xs:element ref="wro:RemoveResourcesDataset"/>

</xs:sequence>

</xs:complexType>

</xs:element>

<!-- ############################################## -->

<!-- ### RemoveResourceProperties Message Types ### -->

<!-- ############################################## -->

<xs:element name="RemoveResourcePropertiesRequest">

<xs:complexType>

<xs:complexContent>

<xs:extension base="wsdai:RequestType">

<xs:sequence>

<xs:element name="ResourceSet" minOccurs="1" maxOccurs="unbounded">

<xs:complexType>

<xs:sequence>

<xs:element name="ResourceURI" minOccurs="1" maxOccurs="unbounded" type="xs:anyURI"/>

<xs:element name="Property" minOccurs="0" maxOccurs="unbounded">

<xs:complexType>

<xs:sequence>

<xs:element name="PropertyURI" type="xs:anyURI"/>

<xs:element name="PropertyValue" minOccurs="0" maxOccurs="unbounded" type="wro:PropertyValueType"/>

</xs:sequence>

</xs:complexType>

</xs:element>

</xs:sequence>

</xs:complexType>

</xs:element>

</xs:sequence>

</xs:extension>

</xs:complexContent>

</xs:complexType>

</xs:element>

<xs:element name="RemoveResourcePropertiesDatasetData" substitutionGroup="wsdai:DatasetData">

<xs:complexType mixed="true">

<xs:complexContent>

<xs:restriction base="wsdai:DatasetDataType">

<xs:sequence>

<xs:element name="ResourceSetResult" minOccurs="1" maxOccurs="unbounded">

<xs:complexType>

<xs:sequence>

<xs:element name="Resource" minOccurs="1" maxOccurs="unbounded">

<xs:complexType>

<xs:sequence>

<xs:element name="ResourceURI" type="xs:anyURI"/>

<xs:element name="Result" type="wro:ResourcePropertiesRemovalResultType"/>

</xs:sequence>

</xs:complexType>

</xs:element>

</xs:sequence>

</xs:complexType>

</xs:element>

</xs:sequence>

</xs:restriction>

</xs:complexContent>

</xs:complexType>

</xs:element>

<xs:element name="RemoveResourcePropertiesDataset" substitutionGroup="wsdai:Dataset">

<xs:complexType>

<xs:complexContent>

<xs:extension base="wsdai:DatasetType">

<xs:sequence/>

</xs:extension>

</xs:complexContent>

</xs:complexType>

</xs:element>

<xs:element name="RemoveResourcePropertiesResponse">

<xs:complexType>

<xs:sequence>

<xs:element ref="wro:RemoveResourcePropertiesDataset"/>

</xs:sequence>

</xs:complexType>

</xs:element>

<!-- ######################################## -->

<!-- ### GetResourceFactory Message Types ### -->

<!-- ######################################## -->

<xs:element name="GetResourceFactoryRequest">

<xs:complexType>

<xs:complexContent>

<xs:extension base="wsdai:FactoryRequestType">

<xs:sequence>

<xs:element name="ResourceURI" type="xs:anyURI"/>

</xs:sequence>

</xs:extension>

</xs:complexContent>

</xs:complexType>

</xs:element>

<xs:element name="GetResourceFactoryResponse" type="wsdai:DataResourceAddressListType"/>

<!-- ##################################### -->

<!-- ### GetClassFactory Message Types ### -->

<!-- ##################################### -->

<xs:element name="GetClassFactoryRequest">

<xs:complexType>

<xs:complexContent>

<xs:extension base="wsdai:FactoryRequestType">

<xs:sequence>

<xs:element name="ResourceURI" type="xs:anyURI"/>

</xs:sequence>

</xs:extension>

</xs:complexContent>

</xs:complexType>

</xs:element>

<xs:element name="GetClassFactoryResponse" type="wsdai:DataResourceAddressListType"/>

<!-- ######################################## -->

<!-- ### GetPropertyFactory Message Types ### -->

<!-- ######################################## -->

<xs:element name="GetPropertyFactoryRequest">

<xs:complexType>

<xs:complexContent>

<xs:extension base="wsdai:FactoryRequestType">

<xs:sequence>

<xs:element name="ResourceURI" type="xs:anyURI"/>

</xs:sequence>

</xs:extension>

</xs:complexContent>

</xs:complexType>

</xs:element>

<xs:element name="GetPropertyFactoryResponse" type="wsdai:DataResourceAddressListType"/>

<!-- ######################################### -->

<!-- ### GetStatementFactory Message Types ### -->

<!-- ######################################### -->

<xs:element name="GetStatementFactoryRequest">

<xs:complexType>

<xs:complexContent>

<xs:extension base="wsdai:FactoryRequestType">

<xs:sequence>

<xs:element name="ResourceURI" type="xs:anyURI"/>

</xs:sequence>

</xs:extension>

</xs:complexContent>

</xs:complexType>

</xs:element>

<xs:element name="GetStatementFactoryResponse" type="wsdai:DataResourceAddressListType"/>

<!-- ######################################### -->

<!-- ### GetContainerFactory Message Types ### -->

<!-- ######################################### -->

<xs:element name="GetContainerFactoryRequest">

<xs:complexType>

<xs:complexContent>

<xs:extension base="wsdai:FactoryRequestType">

<xs:sequence>

<xs:element name="ResourceURI" type="xs:anyURI"/>

</xs:sequence>

</xs:extension>

</xs:complexContent>

</xs:complexType>

</xs:element>

<xs:element name="GetContainerFactoryResponse" type="wsdai:DataResourceAddressListType"/>

<!-- #################################### -->

<!-- ### GetListFactory Message Types ### -->

<!-- #################################### -->

<xs:element name="GetListFactoryRequest">

<xs:complexType>

<xs:complexContent>

<xs:extension base="wsdai:FactoryRequestType">

<xs:sequence>

<xs:element name="ResourceURI" type="xs:anyURI"/>

</xs:sequence>

</xs:extension>

</xs:complexContent>

</xs:complexType>

</xs:element>

<xs:element name="GetListFactoryResponse" type="wsdai:DataResourceAddressListType"/>

</xs:schema>

</wsdl:types>

<!-- WSDL MESSAGES ################################################################### -->

<wsdl:message name="GetRepositoryPropertyDocumentRequest">

<wsdl:part name="GetRepositoryPropertyDocumentRequest" element="wsdai:GetDataResourcePropertyDocumentRequest"/>

</wsdl:message>

<wsdl:message name="GetRepositoryPropertyDocumentResponse">

<wsdl:part name="GetRepositoryPropertyDocumentResponse" element="wro:RepositoryPropertyDocument"/>

</wsdl:message>

<wsdl:message name="GetResourcesRequest">

<wsdl:part name="GetResourcesRequest" element="wro:GetResourcesRequest"/>

</wsdl:message>

<wsdl:message name="GetResourcesResponse">

<wsdl:part name="GetResourcesResponse" element="wro:GetResourcesResponse"/>

</wsdl:message>

<wsdl:message name="GetResourcePropertiesRequest">

<wsdl:part name="GetResourcePropertiesRequest" element="wro:GetResourcePropertiesRequest"/>

</wsdl:message>

<wsdl:message name="GetResourcePropertiesResponse">

<wsdl:part name="GetResourcePropertiesResponse" element="wro:GetResourcePropertiesResponse"/>

</wsdl:message>

<wsdl:message name="AddResourcesRequest">

<wsdl:part name="AddResourcesRequest" element="wro:AddResourcesRequest"/>

</wsdl:message>

<wsdl:message name="AddResourcesResponse">

<wsdl:part name="AddResourcesResponse" element="wro:AddResourcesResponse"/>

</wsdl:message>

<wsdl:message name="RemoveResourcesRequest">

<wsdl:part name="RemoveResourcesRequest" element="wro:RemoveResourcesRequest"/>

</wsdl:message>

<wsdl:message name="RemoveResourcesResponse">

<wsdl:part name="RemoveResourcesResponse" element="wro:RemoveResourcesResponse"/>

</wsdl:message>

<wsdl:message name="RemoveResourcePropertiesRequest">

<wsdl:part name="RemoveResourcePropertiesRequest" element="wro:RemoveResourcePropertiesRequest"/>

</wsdl:message>

<wsdl:message name="RemoveResourcePropertiesResponse">

<wsdl:part name="RemoveResourcePropertiesResponse" element="wro:RemoveResourcePropertiesResponse"/>

</wsdl:message>

<wsdl:message name="GetResourceFactoryRequest">

<wsdl:part name="GetResourceFactoryRequest" element="wro:GetResourceFactoryRequest"/>

</wsdl:message>

<wsdl:message name="GetResourceFactoryResponse">

<wsdl:part name="GetResourceFactoryResponse" element="wro:GetResourceFactoryResponse"/>

</wsdl:message>

<wsdl:message name="GetClassFactoryRequest">

<wsdl:part name="GetClassFactoryRequest" element="wro:GetClassFactoryRequest"/>

</wsdl:message>

<wsdl:message name="GetClassFactoryResponse">

<wsdl:part name="GetClassFactoryResponse" element="wro:GetClassFactoryResponse"/>

</wsdl:message>

<wsdl:message name="GetPropertyFactoryRequest">

<wsdl:part name="GetPropertyFactoryRequest" element="wro:GetPropertyFactoryRequest"/>

</wsdl:message>

<wsdl:message name="GetPropertyFactoryResponse">

<wsdl:part name="GetPropertyFactoryResponse" element="wro:GetPropertyFactoryResponse"/>

</wsdl:message>

<wsdl:message name="GetStatementFactoryRequest">

<wsdl:part name="GetStatementFactoryRequest" element="wro:GetStatementFactoryRequest"/>

</wsdl:message>

<wsdl:message name="GetStatementFactoryResponse">

<wsdl:part name="GetStatementFactoryResponse" element="wro:GetStatementFactoryResponse"/>

</wsdl:message>

<wsdl:message name="GetContainerFactoryRequest">

<wsdl:part name="GetContainerFactoryRequest" element="wro:GetContainerFactoryRequest"/>

</wsdl:message>

<wsdl:message name="GetContainerFactoryResponse">

<wsdl:part name="GetContainerFactoryResponse" element="wro:GetContainerFactoryResponse"/>

</wsdl:message>

<wsdl:message name="GetListFactoryRequest">

<wsdl:part name="GetListFactoryRequest" element="wro:GetListFactoryRequest"/>

</wsdl:message>

<wsdl:message name="GetListFactoryResponse">

<wsdl:part name="GetListFactoryResponse" element="wro:GetListFactoryResponse"/>

</wsdl:message>

<wsdl:message name="ResourceDoesNotExistFault">

<wsdl:part name="ResourceDoesNotExistFault" element="wro:ResourceDoesNotExistFault"/>

</wsdl:message>

<wsdl:message name="InvalidResourceNameFault">

<wsdl:part name="InvalidResourceNameFault" element="wsdai:InvalidResourceNameFault"/>

</wsdl:message>

<wsdl:message name="DataResourceUnavailableFault">

<wsdl:part name="DataResourceUnavailableFault" element="wsdai:DataResourceUnavailableFault"/>

</wsdl:message>

<wsdl:message name="ServiceBusyFault">

<wsdl:part name="ServiceBusyFault" element="wsdai:ServiceBusyFault"/>

</wsdl:message>

<wsdl:message name="InvalidPortTypeQNameFault">

<wsdl:part name="InvalidPortTypeQNameFault" element="wsdai:InvalidPortTypeQNameFault"/>

</wsdl:message>

<wsdl:message name="InvalidConfigurationDocumentFault">

<wsdl:part name="InvalidConfigurationDocumentFault" element="wsdai:InvalidConfigurationDocumentFault"/>

</wsdl:message>

<wsdl:message name="NotAuthorizedFault">

<wsdl:part name="NotAuthorizedFault" element="wsdai:NotAuthorizedFault"/>

</wsdl:message>

<!-- WSDL PORT TYPES ################################################################# -->

<wsdl:portType name="RepositoryAccessPT">

<wsdl:operation name="GetRepositoryPropertyDocument">

<wsdl:input name="GetRepositoryPropertyDocumentRequest" message="wro:GetRepositoryPropertyDocumentRequest"/>

<wsdl:output name="GetRepositoryPropertyDocumentResponse" message="wro:GetRepositoryPropertyDocumentResponse"/>

<wsdl:fault name="InvalidResourceNameFault" message="wsdai:InvalidResourceNameFault"/>

<wsdl:fault name="DataResourceUnavailableFault" message="wsdai:DataResourceUnavailableFault"/>

<wsdl:fault name="NotAuthorizedFault" message="wsdai:NotAuthorizedFault"/>

<wsdl:fault name="ServiceBusyFault" message="wsdai:ServiceBusyFault"/>

</wsdl:operation>

<wsdl:operation name="GetResources">

<wsdl:input name="GetResourcesRequest" message="wro:GetResourcesRequest"/>

<wsdl:output name="GetResourcesResponse" message="wro:GetResourcesResponse"/>

<wsdl:fault name="InvalidResourceNameFault" message="wsdai:InvalidResourceNameFault"/>

<wsdl:fault name="DataResourceUnavailableFault" message="wsdai:DataResourceUnavailableFault"/>

<wsdl:fault name="ServiceBusyFault" message="wsdai:ServiceBusyFault"/>

</wsdl:operation>

<wsdl:operation name="GetResourceProperties">

<wsdl:input name="GetResourcePropertiesRequest" message="wro:GetResourcePropertiesRequest"/>

<wsdl:output name="GetResourcePropertiesResponse" message="wro:GetResourcePropertiesResponse"/>

<wsdl:fault name="InvalidResourceNameFault" message="wsdai:InvalidResourceNameFault"/>

<wsdl:fault name="DataResourceUnavailableFault" message="wsdai:DataResourceUnavailableFault"/>

<wsdl:fault name="ServiceBusyFault" message="wsdai:ServiceBusyFault"/>

</wsdl:operation>

<wsdl:operation name="AddResources">

<wsdl:input name="AddResourcesRequest" message="wro:AddResourcesRequest"/>

<wsdl:output name="AddResourcesResponse" message="wro:AddResourcesResponse"/>

<wsdl:fault name="InvalidResourceNameFault" message="wsdai:InvalidResourceNameFault"/>

<wsdl:fault name="DataResourceUnavailableFault" message="wsdai:DataResourceUnavailableFault"/>

<wsdl:fault name="ServiceBusyFault" message="wsdai:ServiceBusyFault"/>

</wsdl:operation>

<wsdl:operation name="RemoveResources">

<wsdl:input name="RemoveResourcesRequest" message="wro:RemoveResourcesRequest"/>

<wsdl:output name="RemoveResourcesResponse" message="wro:RemoveResourcesResponse"/>

<wsdl:fault name="InvalidResourceNameFault" message="wsdai:InvalidResourceNameFault"/>

<wsdl:fault name="DataResourceUnavailableFault" message="wsdai:DataResourceUnavailableFault"/>

<wsdl:fault name="ServiceBusyFault" message="wsdai:ServiceBusyFault"/>

</wsdl:operation>

<wsdl:operation name="RemoveResourceProperties">

<wsdl:input name="RemoveResourcePropertiesRequest" message="wro:RemoveResourcePropertiesRequest"/>

<wsdl:output name="RemoveResourcePropertiesResponse" message="wro:RemoveResourcePropertiesResponse"/>

<wsdl:fault name="InvalidResourceNameFault" message="wsdai:InvalidResourceNameFault"/>

<wsdl:fault name="DataResourceUnavailableFault" message="wsdai:DataResourceUnavailableFault"/>

<wsdl:fault name="ServiceBusyFault" message="wsdai:ServiceBusyFault"/>

</wsdl:operation>

</wsdl:portType>

<wsdl:portType name="RepositoryFactoryPT">

<wsdl:operation name="GetResourceFactory">

<wsdl:input name="GetResourceFactoryRequest" message="wro:GetResourceFactoryRequest"/>

<wsdl:output name="GetResourceFactoryResponse" message="wro:GetResourceFactoryResponse"/>

<wsdl:fault name="InvalidResourceNameFault" message="wsdai:InvalidResourceNameFault"/>

<wsdl:fault name="DataResourceUnavailableFault" message="wsdai:DataResourceUnavailableFault"/>

<wsdl:fault name="InvalidPortTypeQNameFault" message="wsdai:InvalidPortTypeQNameFault"/>

<wsdl:fault name="InvalidConfigurationDocumentFault" message="wsdai:InvalidConfigurationDocumentFault"/>

<wsdl:fault name="NotAuthorizedFault" message="wsdai:NotAuthorizedFault"/>

<wsdl:fault name="ServiceBusyFault" message="wsdai:ServiceBusyFault"/>

<wsdl:fault name="ResourceDoesNotExistFault" message="wro:ResourceDoesNotExistFault"/>

</wsdl:operation>

<wsdl:operation name="GetClassFactory">

<wsdl:input name="GetClassFactoryRequest" message="wro:GetClassFactoryRequest"/>

<wsdl:output name="GetClassFactoryResponse" message="wro:GetClassFactoryResponse"/>

<wsdl:fault name="InvalidResourceNameFault" message="wsdai:InvalidResourceNameFault"/>

<wsdl:fault name="DataResourceUnavailableFault" message="wsdai:DataResourceUnavailableFault"/>

<wsdl:fault name="InvalidPortTypeQNameFault" message="wsdai:InvalidPortTypeQNameFault"/>

<wsdl:fault name="InvalidConfigurationDocumentFault" message="wsdai:InvalidConfigurationDocumentFault"/>

<wsdl:fault name="NotAuthorizedFault" message="wsdai:NotAuthorizedFault"/>

<wsdl:fault name="ServiceBusyFault" message="wsdai:ServiceBusyFault"/>

<wsdl:fault name="ResourceDoesNotExistFault" message="wro:ResourceDoesNotExistFault"/>

</wsdl:operation>

<wsdl:operation name="GetPropertyFactory">

<wsdl:input name="GetPropertyFactoryRequest" message="wro:GetPropertyFactoryRequest"/>

<wsdl:output name="GetPropertyFactoryResponse" message="wro:GetPropertyFactoryResponse"/>

<wsdl:fault name="InvalidResourceNameFault" message="wsdai:InvalidResourceNameFault"/>

<wsdl:fault name="DataResourceUnavailableFault" message="wsdai:DataResourceUnavailableFault"/>

<wsdl:fault name="InvalidPortTypeQNameFault" message="wsdai:InvalidPortTypeQNameFault"/>

<wsdl:fault name="InvalidConfigurationDocumentFault" message="wsdai:InvalidConfigurationDocumentFault"/>

<wsdl:fault name="NotAuthorizedFault" message="wsdai:NotAuthorizedFault"/>

<wsdl:fault name="ServiceBusyFault" message="wsdai:ServiceBusyFault"/>

<wsdl:fault name="ResourceDoesNotExistFault" message="wro:ResourceDoesNotExistFault"/>

</wsdl:operation>

<wsdl:operation name="GetStatementFactory">

<wsdl:input name="GetStatementFactoryRequest" message="wro:GetStatementFactoryRequest"/>

<wsdl:output name="GetStatementFactoryResponse" message="wro:GetStatementFactoryResponse"/>

<wsdl:fault name="InvalidResourceNameFault" message="wsdai:InvalidResourceNameFault"/>

<wsdl:fault name="DataResourceUnavailableFault" message="wsdai:DataResourceUnavailableFault"/>

<wsdl:fault name="InvalidPortTypeQNameFault" message="wsdai:InvalidPortTypeQNameFault"/>

<wsdl:fault name="InvalidConfigurationDocumentFault" message="wsdai:InvalidConfigurationDocumentFault"/>

<wsdl:fault name="NotAuthorizedFault" message="wsdai:NotAuthorizedFault"/>

<wsdl:fault name="ServiceBusyFault" message="wsdai:ServiceBusyFault"/>

<wsdl:fault name="ResourceDoesNotExistFault" message="wro:ResourceDoesNotExistFault"/>

</wsdl:operation>

<wsdl:operation name="GetContainerFactory">

<wsdl:input name="GetContainerFactoryRequest" message="wro:GetContainerFactoryRequest"/>

<wsdl:output name="GetContainerFactoryResponse" message="wro:GetContainerFactoryResponse"/>

<wsdl:fault name="InvalidResourceNameFault" message="wsdai:InvalidResourceNameFault"/>

<wsdl:fault name="DataResourceUnavailableFault" message="wsdai:DataResourceUnavailableFault"/>

<wsdl:fault name="InvalidPortTypeQNameFault" message="wsdai:InvalidPortTypeQNameFault"/>

<wsdl:fault name="InvalidConfigurationDocumentFault" message="wsdai:InvalidConfigurationDocumentFault"/>

<wsdl:fault name="NotAuthorizedFault" message="wsdai:NotAuthorizedFault"/>

<wsdl:fault name="ServiceBusyFault" message="wsdai:ServiceBusyFault"/>

<wsdl:fault name="ResourceDoesNotExistFault" message="wro:ResourceDoesNotExistFault"/>

</wsdl:operation>

<wsdl:operation name="GetListFactory">

<wsdl:input name="GetListFactoryRequest" message="wro:GetListFactoryRequest"/>

<wsdl:output name="GetListFactoryResponse" message="wro:GetListFactoryResponse"/>

<wsdl:fault name="InvalidResourceNameFault" message="wsdai:InvalidResourceNameFault"/>

<wsdl:fault name="DataResourceUnavailableFault" message="wsdai:DataResourceUnavailableFault"/>

<wsdl:fault name="InvalidPortTypeQNameFault" message="wsdai:InvalidPortTypeQNameFault"/>

<wsdl:fault name="InvalidConfigurationDocumentFault" message="wsdai:InvalidConfigurationDocumentFault"/>

<wsdl:fault name="NotAuthorizedFault" message="wsdai:NotAuthorizedFault"/>

<wsdl:fault name="ServiceBusyFault" message="wsdai:ServiceBusyFault"/>

<wsdl:fault name="ResourceDoesNotExistFault" message="wro:ResourceDoesNotExistFault"/>

</wsdl:operation>

</wsdl:portType>

</wsdl:definitions>

# Resource

# Resource XML Schema

<xs:schema xmlns:wro="http://www.ogf.org/dais/2008/02/ws-dai-rdfs/ontology"

xmlns:wsdai="http://www.ggf.org/namespaces/2005/12/WS-DAI"

elementFormDefault="qualified"

targetNamespace="http://www.ogf.org/dais/2008/02/ws-dai-rdfs/ontology">

<!--Import the base WS-DAI Schema-->

<xs:import namespace="http://www.ggf.org/namespaces/2005/12/WS-DAI" schemaLocation="..\resources\spec\wsdai\_core\_types.xsd"/>

<!--Include the base WS-DAI-RDFS Core Schema-->

<xs:include schemaLocation="wsdai\_rdfs\_types.xsd"/>

<!-- The static properties that describe a Resource data service -->

<xs:element name="RepositoryName" type="xs:anyURI"/>

<xs:element name="ResourceURI" type="xs:anyURI"/>

<!-- The configuration properties that describe a Resource data service -->

<!-- The property document of a Resource data service -->

<xs:complexType name="ResourcePropertyDocumentType">

<xs:complexContent>

<xs:extension base="wsdai:PropertyDocumentType">

<xs:sequence>

<xs:element ref="wro:RepositoryName"/>

<xs:element ref="wro:ResourceURI"/>

</xs:sequence>

</xs:extension>

</xs:complexContent>

</xs:complexType>

<xs:element name="ResourcePropertyDocument" type="wro:ResourcePropertyDocumentType"/>

<xs:simpleType name="DescriptionModificationOptionsType">

<xs:restriction base="xs:string">

<xs:enumeration value="APPEND\_VALUES"/>

<xs:enumeration value="UPDATE\_VALUES"/>

<xs:enumeration value="REPLACE\_DESCRIPTION"/>

</xs:restriction>

</xs:simpleType>

<xs:simpleType name="ResourceDescriptionAdditionResultType">

<xs:restriction base="xs:string">

<xs:enumeration value="Success"/>

<xs:enumeration value="ConsumerNotAuthorized"/>

</xs:restriction>

</xs:simpleType>

<xs:simpleType name="ResourcePropertyValuesAdditionResultType">

<xs:restriction base="xs:string">

<xs:enumeration value="Success"/>

<xs:enumeration value="ConsumerNotAuthorized"/>

</xs:restriction>

</xs:simpleType>

<xs:simpleType name="ResourceDescriptionAdditionResultType">

<xs:restriction base="xs:string">

<xs:enumeration value="Success"/>

<xs:enumeration value="ConsumerNotAuthorized"/>

</xs:restriction>

</xs:simpleType>

<xs:simpleType name="ResourcePropertyValuesAdditionResultType">

<xs:restriction base="xs:string">

<xs:enumeration value="Success"/>

<xs:enumeration value="NoMatchingPropertyValuesFound"/>

<xs:enumeration value="ConsumerNotAuthorized"/>

</xs:restriction>

</xs:simpleType>

<xs:simpleType name="DefinedPropertyChecklResultType">

<xs:restriction base="xs:string">

<xs:enumeration value="true"/>

<xs:enumeration value="false"/>

<xs:enumeration value="ConsumerNotAuthorized"/>

</xs:restriction>

</xs:simpleType>

<xs:simpleType name="DefinablePropertyChecklResultType">

<xs:restriction base="xs:string">

<xs:enumeration value="true"/>

<xs:enumeration value="false"/>

<xs:enumeration value="ConsumerNotAuthorized"/>

</xs:restriction>

</xs:simpleType>

</xs:schema>

# Resource WSDL

<wsdl:definitions xmlns:wro="http://www.ogf.org/dais/2008/02/ws-dai-rdfs/ontology"

xmlns:wsdai="http://www.ggf.org/namespaces/2005/12/WS-DAI"

name="wsdai-rdfs-ontology"

targetNamespace="http://www.ogf.org/dais/2008/02/ws-dai-rdfs/ontology">

<!-- WSDL IMPORTS #################################################################### -->

<wsdl:import namespace="http://www.ggf.org/namespaces/2005/12/WS-DAI" location="..\resources\spec\wsdai\_core\_porttypes.wsdl"/>

<!-- WSDL TYPES ###################################################################### -->

<wsdl:types>

<xs:schema xmlns:wro="http://www.ogf.org/dais/2008/02/ws-dai-rdfs/ontology"

xmlns:wsdai="http://www.ggf.org/namespaces/2005/12/WS-DAI"

elementFormDefault="qualified"

targetNamespace="http://www.ogf.org/dais/2008/02/ws-dai-rdfs/ontology">

<!--Import the base WS-DAI Schema-->

<xs:import namespace="http://www.ggf.org/namespaces/2005/12/WS-DAI" schemaLocation="..\resources\spec\wsdai\_core\_types.xsd"/>

<!--Include the base WS-DAI-RDF(S) Core Schema-->

<xs:include schemaLocation="wsdai\_rdfs\_types.xsd"/>

<!--Include the external WS-DAI-RDF(S) Resource Schema-->

<xs:include schemaLocation="wsdai\_rdfs\_resource\_types.xsd"/>

<!-- ###################################### -->

<!-- ### GetResourceTypes Message Types ### -->

<!-- ###################################### -->

<xs:element name="GetResourceTypesRequest">

<xs:complexType>

<xs:complexContent>

<xs:extension base="wsdai:RequestType">

<xs:sequence>

<xs:element name="InferParents" minOccurs="0" maxOccurs="1" type="xs:boolean"/>

</xs:sequence>

</xs:extension>

</xs:complexContent>

</xs:complexType>

</xs:element>

<xs:element name="GetResourceTypesDatasetData" substitutionGroup="wsdai:DatasetData">

<xs:complexType mixed="true">

<xs:complexContent>

<xs:restriction base="wsdai:DatasetDataType">

<xs:sequence>

<xs:element name="ParentURI" minOccurs="0" maxOccurs="unbounded" type="xs:anyURI"/>

</xs:sequence>

</xs:restriction>

</xs:complexContent>

</xs:complexType>

</xs:element>

<xs:element name="GetResourceTypesDataset" substitutionGroup="wsdai:Dataset">

<xs:complexType>

<xs:complexContent>

<xs:extension base="wsdai:DatasetType">

<xs:sequence>

<xs:element name="InferParents" type="xs:boolean"/>

<xs:element name="NumberOfParents" type="xs:unsignedLong"/>

</xs:sequence>

</xs:extension>

</xs:complexContent>

</xs:complexType>

</xs:element>

<xs:element name="GetResourceTypesResponse">

<xs:complexType>

<xs:sequence>

<xs:element ref="wro:GetResourceTypesDataset"/>

</xs:sequence>

</xs:complexType>

</xs:element>

<!-- ############################################ -->

<!-- ### GetResourceDescription Message Types ### -->

<!-- ############################################ -->

<xs:element name="GetResourceDescriptionRequest">

<xs:complexType>

<xs:complexContent>

<xs:extension base="wsdai:RequestType">

<xs:sequence/>

</xs:extension>

</xs:complexContent>

</xs:complexType>

</xs:element>

<xs:element name="GetResourceDescriptionDatasetData" substitutionGroup="wsdai:DatasetData">

<xs:complexType mixed="true">

<xs:complexContent>

<xs:restriction base="wsdai:DatasetDataType">

<xs:sequence>

<xs:element name="Description">

<xs:complexType>

<xs:sequence>

<xs:element name="Label" minOccurs="0" maxOccurs="unbounded" type="wro:LiteralType"/>

<xs:element name="Comment" minOccurs="0" maxOccurs="unbounded" type="wro:LiteralType"/>

<xs:element name="SeeAlso" minOccurs="0" maxOccurs="unbounded" type="xs:anyURI"/>

<xs:element name="IsDefinedBy" minOccurs="0" maxOccurs="unbounded" type="xs:anyURI"/>

</xs:sequence>

</xs:complexType>

</xs:element>

</xs:sequence>

</xs:restriction>

</xs:complexContent>

</xs:complexType>

</xs:element>

<xs:element name="GetResourceDescriptionDataset" substitutionGroup="wsdai:Dataset">

<xs:complexType>

<xs:complexContent>

<xs:extension base="wsdai:DatasetType">

<xs:sequence/>

</xs:extension>

</xs:complexContent>

</xs:complexType>

</xs:element>

<xs:element name="GetResourceDescriptionResponse">

<xs:complexType>

<xs:sequence>

<xs:element ref="wro:GetResourceDescriptionDataset"/>

</xs:sequence>

</xs:complexType>

</xs:element>

<!-- ####################################### -->

<!-- ### GetPropertyValues Message Types ### -->

<!-- ####################################### -->

<xs:element name="GetPropertyValuesRequest">

<xs:complexType>

<xs:complexContent>

<xs:extension base="wsdai:RequestType">

<xs:sequence>

<xs:element name="PropertyURI" minOccurs="0" maxOccurs="unbounded" type="xs:anyURI"/>

</xs:sequence>

</xs:extension>

</xs:complexContent>

</xs:complexType>

</xs:element>

<xs:element name="GetPropertyValuesDatasetData" substitutionGroup="wsdai:DatasetData">

<xs:complexType mixed="true">

<xs:complexContent>

<xs:restriction base="wsdai:DatasetDataType">

<xs:sequence>

<xs:element name="PropertyResult" minOccurs="0" maxOccurs="unbounded">

<xs:complexType>

<xs:sequence>

<xs:element name="PropertyURI" type="xs:anyURI"/>

<xs:element name="PropertyValue" minOccurs="1" maxOccurs="unbounded" type="wro:ResourceType"/>

</xs:sequence>

</xs:complexType>

</xs:element>

</xs:sequence>

</xs:restriction>

</xs:complexContent>

</xs:complexType>

</xs:element>

<xs:element name="GetPropertyValuesDataset" substitutionGroup="wsdai:Dataset">

<xs:complexType>

<xs:complexContent>

<xs:extension base="wsdai:DatasetType">

<xs:sequence>

<xs:element name="NumberOfPropertyValuesRetrieved" type="xs:unsgnedLong"/>

</xs:sequence>

</xs:extension>

</xs:complexContent>

</xs:complexType>

</xs:element>

<xs:element name="GetPropertyValuesResponse">

<xs:complexType>

<xs:sequence>

<xs:element ref="wro:GetPropertyValuesDataset"/>

</xs:sequence>

</xs:complexType>

</xs:element>

<!-- ########################################## -->

<!-- ### GetDefinedProperties Message Types ### -->

<!-- ########################################## -->

<xs:element name="GetDefinedPropertiesRequest">

<xs:complexType>

<xs:complexContent>

<xs:extension base="wsdai:RequestType">

<xs:sequence/>

</xs:extension>

</xs:complexContent>

</xs:complexType>

</xs:element>

<xs:element name="GetDefinedPropertiesDatasetData" substitutionGroup="wsdai:DatasetData">

<xs:complexType mixed="true">

<xs:complexContent>

<xs:restriction base="wsdai:DatasetDataType">

<xs:sequence>

<xs:element name="PropertyURI" minOccurs="0" maxOccurs="unbounded" type="xs:anyURI"/>

</xs:sequence>

</xs:restriction>

</xs:complexContent>

</xs:complexType>

</xs:element>

<xs:element name="GetDefinedPropertiesDataset" substitutionGroup="wsdai:Dataset">

<xs:complexType>

<xs:complexContent>

<xs:extension base="wsdai:DatasetType">

<xs:sequence>

<xs:element name="NumberOfDefinedProperties" type="xs:unsignedLong"/>

</xs:sequence>

</xs:extension>

</xs:complexContent>

</xs:complexType>

</xs:element>

<xs:element name="GetDefinedPropertiesResponse">

<xs:complexType>

<xs:sequence>

<xs:element ref="wro:GetDefinedPropertiesDataset"/>

</xs:sequence>

</xs:complexType>

</xs:element>

<!-- ############################################ -->

<!-- ### GetDefinableProperties Message Types ### -->

<!-- ############################################ -->

<xs:element name="GetDefinablePropertiesRequest">

<xs:complexType>

<xs:complexContent>

<xs:extension base="wsdai:RequestType">

<xs:sequence>

<xs:element name="InferInheritedProperties" minOccurs="0" maxOccurs="1" type="xs:boolean"/>

<xs:element name="InferSubProperties" minOccurs="0" maxOccurs="1" type="xs:boolean"/>

</xs:sequence>

</xs:extension>

</xs:complexContent>

</xs:complexType>

</xs:element>

<xs:element name="GetDefinablePropertiesDatasetData" substitutionGroup="wsdai:DatasetData">

<xs:complexType mixed="true">

<xs:complexContent>

<xs:restriction base="wsdai:DatasetDataType">

<xs:sequence>

<xs:element name="PropertyURI" minOccurs="0" maxOccurs="unbounded" type="xs:anyURI"/>

</xs:sequence>

</xs:restriction>

</xs:complexContent>

</xs:complexType>

</xs:element>

<xs:element name="GetDefinablePropertiesDataset" substitutionGroup="wsdai:Dataset">

<xs:complexType>

<xs:complexContent>

<xs:extension base="wsdai:DatasetType">

<xs:sequence>

<xs:element name="InferInheritedProperties" type="xs:boolean"/>

<xs:element name="InferSubProperties" type="xs:boolean"/>

<xs:element name="NumberOfDefinableProperties" type="xs:unsignedLong"/>

</xs:sequence>

</xs:extension>

</xs:complexContent>

</xs:complexType>

</xs:element>

<xs:element name="GetDefinablePropertiesResponse">

<xs:complexType>

<xs:sequence>

<xs:element ref="wro:GetDefinablePropertiesDataset"/>

</xs:sequence>

</xs:complexType>

</xs:element>

<!-- ###################################### -->

<!-- ### AddResourceTypes Message Types ### -->

<!-- ###################################### -->

<xs:element name="AddResourceTypesRequest">

<xs:complexType>

<xs:complexContent>

<xs:extension base="wsdai:RequestType">

<xs:sequence>

<xs:element name="TypeURI" minOccurs="1" maxOccurs="unbounded" type="xs:anyURI"/>

</xs:sequence>

</xs:extension>

</xs:complexContent>

</xs:complexType>

</xs:element>

<xs:element name="AddResourceTypesDatasetData" substitutionGroup="wsdai:DatasetData">

<xs:complexType mixed="true">

<xs:complexContent>

<xs:restriction base="wsdai:DatasetDataType">

<xs:sequence>

<xs:element name="TypeResult" minOccurs="1" maxOccurs="unbounded">

<xs:complexType>

<xs:sequence>

<xs:element name="TypeURI" type="xs:anyURI"/>

<xs:element name="Result" type="wro:ResourceTypeAdditionResultType"/>

</xs:sequence>

</xs:complexType>

</xs:element>

</xs:sequence>

</xs:restriction>

</xs:complexContent>

</xs:complexType>

</xs:element>

<xs:element name="AddResourceTypesDataset" substitutionGroup="wsdai:Dataset">

<xs:complexType>

<xs:complexContent>

<xs:extension base="wsdai:DatasetType">

<xs:sequence>

<xs:element name="NumberOfTypesAdded" type="xs:unsignedLong"/>

</xs:sequence>

</xs:extension>

</xs:complexContent>

</xs:complexType>

</xs:element>

<xs:element name="AddResourceTypesResponse">

<xs:complexType>

<xs:sequence>

<xs:element ref="wro:AddResourceTypesDataset"/>

</xs:sequence>

</xs:complexType>

</xs:element>

<!-- ############################################ -->

<!-- ### AddResourceDescription Message Types ### -->

<!-- ############################################ -->

<xs:element name="AddResourceDescriptionRequest">

<xs:complexType>

<xs:complexContent>

<xs:extension base="wsdai:RequestType">

<xs:sequence>

<xs:element name="Description">

<xs:complexType>

<xs:sequence>

<xs:element name="Label" minOccurs="0" maxOccurs="unbounded" type="wro:LiteralType"/>

<xs:element name="Comment" minOccurs="0" maxOccurs="unbounded" type="wro:LiteralType"/>

<xs:element name="SeeAlso" minOccurs="0" maxOccurs="unbounded" type="xs:anyURI"/>

<xs:element name="IsDefinedBy" minOccurs="0" maxOccurs="unbounded" type="xs:anyURI"/>

</xs:sequence>

</xs:complexType>

</xs:element>

<xs:element name="SubstituteDescription" minOccurs="0" maxOccurs="1" type="wro:DescriptionModificationOptionsType"/>

</xs:sequence>

</xs:extension>

</xs:complexContent>

</xs:complexType>

</xs:element>

<xs:element name="AddResourceDescriptionDatasetData" substitutionGroup="wsdai:DatasetData">

<xs:complexType mixed="true">

<xs:complexContent>

<xs:restriction base="wsdai:DatasetDataType">

<xs:sequence>

<xs:element name="Result" type="wro:ResourceDescriptionAdditionResultType"/>

</xs:sequence>

</xs:restriction>

</xs:complexContent>

</xs:complexType>

</xs:element>

<xs:element name="AddResourceDescriptionDataset" substitutionGroup="wsdai:Dataset">

<xs:complexType>

<xs:complexContent>

<xs:extension base="wsdai:DatasetType">

<xs:sequence>

<xs:element name="SubstituteDescription" type="wro:DescriptionModificationOptionsType"/>

</xs:sequence>

</xs:extension>

</xs:complexContent>

</xs:complexType>

</xs:element>

<xs:element name="AddResourceDescriptionResponse">

<xs:complexType>

<xs:sequence>

<xs:element ref="wro:AddResourceDescriptionDataset"/>

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</xs:complexType>

</xs:element>

<!-- ####################################### -->

<!-- ### AddPropertyValues Message Types ### -->

<!-- ####################################### -->

<xs:element name="AddPropertyValuesRequest">

<xs:complexType>

<xs:complexContent>

<xs:extension base="wsdai:RequestType">

<xs:sequence>

<xs:element name="Property" minOccurs="1" maxOccurs="unbounded">

<xs:complexType>

<xs:sequence>

<xs:element name="PropertyURI" type="xs:anyURI"/>

<xs:element name="PropertyValue" minOccurs="1" maxOccurs="unbounded" type="wro:PropertyValueType"/>

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</xs:complexType>

</xs:element>

</xs:sequence>

</xs:extension>

</xs:complexContent>

</xs:complexType>

</xs:element>

<xs:element name="AddPropertyValuesDatasetData" substitutionGroup="wsdai:DatasetData">

<xs:complexType mixed="true">

<xs:complexContent>

<xs:restriction base="wsdai:DatasetDataType">

<xs:sequence>

<xs:element name="PropertyResult" minOccurs="1" maxOccurs="unbounded">

<xs:complexType>

<xs:sequence>

<xs:element name="PropertyURI" type="xs:anyURI"/>

<xs:element name="Result" type="wro:ResourcePropertyValuesAdditionResultType"/>

</xs:sequence>

</xs:complexType>

</xs:element>

</xs:sequence>

</xs:restriction>

</xs:complexContent>

</xs:complexType>

</xs:element>

<xs:element name="AddPropertyValuesDataset" substitutionGroup="wsdai:Dataset">

<xs:complexType>

<xs:complexContent>

<xs:extension base="wsdai:DatasetType">

<xs:sequence>

<xs:element name="NumberOfPropertyValuesAdded" type="xs:unsignedLong"/>

</xs:sequence>

</xs:extension>

</xs:complexContent>

</xs:complexType>

</xs:element>

<xs:element name="AddPropertyValuesResponse">

<xs:complexType>

<xs:sequence>

<xs:element ref="wro:AddPropertyValuesDataset"/>

</xs:sequence>

</xs:complexType>

</xs:element>

<!-- ######################################### -->

<!-- ### RemoveResourceTypes Message Types ### -->

<!-- ######################################### -->

<xs:element name="RemoveResourceTypesRequest">

<xs:complexType>

<xs:complexContent>

<xs:extension base="wsdai:RequestType">

<xs:sequence>

<xs:element name="TypeURI" minOccurs="0" maxOccurs="unbounded" type="xs:anyURI"/>

</xs:sequence>

</xs:extension>

</xs:complexContent>

</xs:complexType>

</xs:element>

<xs:element name="RemoveResourceTypesDatasetData" substitutionGroup="wsdai:DatasetData">

<xs:complexType mixed="true">

<xs:complexContent>

<xs:restriction base="wsdai:DatasetDataType">

<xs:sequence>

<xs:element name="ParentResult" minOccurs="0" maxOccurs="unbounded">

<xs:complexType>

<xs:sequence>

<xs:element name="TypeURI" type="xs:anyURI"/>

<xs:element name="Result" type="wro:ResourceTypeRemovalResultType"/>

</xs:sequence>

</xs:complexType>

</xs:element>

</xs:sequence>

</xs:restriction>

</xs:complexContent>

</xs:complexType>

</xs:element>

<xs:element name="RemoveResourceTypesDataset" substitutionGroup="wsdai:Dataset">

<xs:complexType>

<xs:complexContent>

<xs:extension base="wsdai:DatasetType">

<xs:sequence>

<xs:element name="NumberOfTypesRemoved" type="xs:unsignedLong"/>

</xs:sequence>

</xs:extension>

</xs:complexContent>

</xs:complexType>

</xs:element>

<xs:element name="RemoveResourceTypesResponse">

<xs:complexType>

<xs:sequence>

<xs:element ref="wro:RemoveResourceTypesDataset"/>

</xs:sequence>

</xs:complexType>

</xs:element>

<!-- ########################################## -->

<!-- ### RemovePropertyValues Message Types ### -->

<!-- ########################################## -->

<xs:element name="RemovePropertyValuesRequest">

<xs:complexType>

<xs:complexContent>

<xs:extension base="wsdai:RequestType">

<xs:sequence>

<xs:element name="Property" minOccurs="1" maxOccurs="unbounded">

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<xs:sequence>

<xs:element name="PropertyURI" type="xs:anyURI"/>

<xs:element name="PropertyValue" minOccurs="0" maxOccurs="unbounded" type="wro:PropertyValueType"/>

</xs:sequence>

</xs:complexType>

</xs:element>

</xs:sequence>

</xs:extension>

</xs:complexContent>

</xs:complexType>

</xs:element>

<xs:element name="RemovePropertyValuesDatasetData" substitutionGroup="wsdai:DatasetData">

<xs:complexType mixed="true">

<xs:complexContent>

<xs:restriction base="wsdai:DatasetDataType">

<xs:sequence>

<xs:element name="PropertyResult" minOccurs="1" maxOccurs="unbounded">

<xs:complexType>

<xs:sequence>

<xs:element name="PropertyURI" type="xs:anyURI"/>

<xs:element name="Result" type="wro:ResourcePropertiesRemovalResultType"/>

</xs:sequence>

</xs:complexType>

</xs:element>

</xs:sequence>

</xs:restriction>

</xs:complexContent>

</xs:complexType>

</xs:element>

<xs:element name="RemovePropertyValuesDataset" substitutionGroup="wsdai:Dataset">

<xs:complexType>

<xs:complexContent>

<xs:extension base="wsdai:DatasetType">

<xs:sequence>

<xs:element name="NumberOfValuesRemoved" type="xs:unsignedLong"/>

</xs:sequence>

</xs:extension>

</xs:complexContent>

</xs:complexType>

</xs:element>

<xs:element name="RemovePropertyValuesResponse">

<xs:complexType>

<xs:sequence>

<xs:element ref="wro:RemovePropertyValuesDataset"/>

</xs:sequence>

</xs:complexType>

</xs:element>

<!-- ########################################## -->

<!-- ### ArePropertiesDefined Message Types ### -->

<!-- ########################################## -->

<xs:element name="ArePropertiesDefinedRequest">

<xs:complexType>

<xs:complexContent>

<xs:extension base="wsdai:RequestType">

<xs:sequence>

<xs:element name="PropertyURI" minOccurs="1" maxOccurs="unbounded" type="xs:anyURI"/>

<xs:element name="InferSuperProperties" minOccurs="0" maxOccurs="1" type="xs:boolean"/>

</xs:sequence>

</xs:extension>

</xs:complexContent>

</xs:complexType>

</xs:element>

<xs:element name="ArePropertiesDefinedDatasetData" substitutionGroup="wsdai:DatasetData">

<xs:complexType mixed="true">

<xs:complexContent>

<xs:restriction base="wsdai:DatasetDataType">

<xs:sequence>

<xs:element name="PropertyResult" minOccurs="1" maxOccurs="unbounded">

<xs:complexType>

<xs:sequence>

<xs:element name="PropertyURI" type="xs:anyURI"/>

<xs:element name="Result" type="wro:DefinedPropertyCheckResultType"/>

</xs:sequence>

</xs:complexType>

</xs:element>

</xs:sequence>

</xs:restriction>

</xs:complexContent>

</xs:complexType>

</xs:element>

<xs:element name="ArePropertiesDefinedDataset" substitutionGroup="wsdai:Dataset">

<xs:complexType>

<xs:complexContent>

<xs:extension base="wsdai:DatasetType">

<xs:sequence>

<xs:element name="InferSuperProperties" type="xs:boolean"/>

</xs:sequence>

</xs:extension>

</xs:complexContent>

</xs:complexType>

</xs:element>

<xs:element name="ArePropertiesDefinedResponse">

<xs:complexType>

<xs:sequence>

<xs:element ref="wro:ArePropertiesDefinedDataset"/>

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</xs:complexType>

</xs:element>

<!-- ############################################ -->

<!-- ### ArePropertiesDefinable Message Types ### -->

<!-- ############################################ -->

<xs:element name="ArePropertiesDefinableRequest">

<xs:complexType>

<xs:complexContent>

<xs:extension base="wsdai:RequestType">

<xs:sequence>

<xs:element name="PropertyURI" minOccurs="1" maxOccurs="unbounded" type="xs:anyURI"/>

<xs:element name="InferInheritedProperties" minOccurs="0" maxOccurs="1" type="xs:boolean"/>

<xs:element name="InferSubProperties" minOccurs="0" maxOccurs="1" type="xs:boolean"/>

</xs:sequence>

</xs:extension>

</xs:complexContent>

</xs:complexType>

</xs:element>

<xs:element name="ArePropertiesDefinableDatasetData" substitutionGroup="wsdai:DatasetData">

<xs:complexType mixed="true">

<xs:complexContent>

<xs:restriction base="wsdai:DatasetDataType">

<xs:sequence>

<xs:element name="PropertyResult" minOccurs="1" maxOccurs="unbounded">

<xs:complexType>

<xs:sequence>

<xs:element name="PropertyURI" type="xs:anyURI"/>

<xs:element name="Result" type="DefinablePropertyCheckResultType"/>

</xs:sequence>

</xs:complexType>

</xs:element>

</xs:sequence>

</xs:restriction>

</xs:complexContent>

</xs:complexType>

</xs:element>

<xs:element name="ArePropertiesDefinableDataset" substitutionGroup="wsdai:Dataset">

<xs:complexType>

<xs:complexContent>

<xs:extension base="wsdai:DatasetType">

<xs:sequence>

<xs:element name="InferInheritedProperties" type="xs:boolean"/>

<xs:element name="InferSubProperties" type="xs:boolean"/>

</xs:sequence>

</xs:extension>

</xs:complexContent>

</xs:complexType>

</xs:element>

<xs:element name="ArePropertiesDefinableResponse">

<xs:complexType>

<xs:sequence>

<xs:element ref="wro:ArePropertiesDefinableDataset"/>

</xs:sequence>

</xs:complexType>

</xs:element>

</xs:schema>

</wsdl:types>

<!-- WSDL MESSAGES ################################################################### -->

<wsdl:message name="GetResourcePropertyDocumentRequest">

<wsdl:part name="GetResourcePropertyDocumentRequest" element="wsdai:GetDataResourcePropertyDocumentRequest"/>

</wsdl:message>

<wsdl:message name="GetResourcePropertyDocumentResponse">

<wsdl:part name="GetResourcePropertyDocumentResponse" element="wro:ResourcePropertyDocument"/>

</wsdl:message>

<wsdl:message name="GetResourceTypesRequest">

<wsdl:part name="GetResourceTypesRequest" element="wro:GetResourceTypesRequest"/>

</wsdl:message>

<wsdl:message name="GetResourceTypesResponse">

<wsdl:part name="GetResourceTypesResponse" element="wro:GetResourceTypesResponse"/>

</wsdl:message>

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</wsdl:message>

<wsdl:message name="GetResourceDescriptionResponse">

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</wsdl:message>

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</wsdl:message>

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</wsdl:message>

<wsdl:message name="GetDefinablePropertiesResponse">

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</wsdl:message>

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<wsdl:part name="AddResourceTypesRequest" element="wro:AddResourceTypesRequest"/>

</wsdl:message>

<wsdl:message name="AddResourceTypesResponse">

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</wsdl:message>

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<wsdl:message name="ArePropertiesDefinedRequest">

<wsdl:part name="ArePropertiesDefinedRequest" element="wro:ArePropertiesDefinedRequest"/>

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<wsdl:message name="ArePropertiesDefinedResponse">

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<wsdl:part name="ArePropertiesDefinableRequest" element="wro:ArePropertiesDefinableRequest"/>

</wsdl:message>

<wsdl:message name="ArePropertiesDefinableResponse">

<wsdl:part name="ArePropertiesDefinableResponse" element="wro:ArePropertiesDefinableResponse"/>

</wsdl:message>

<wsdl:message name="InvalidResourceNameFault">

<wsdl:part name="InvalidResourceNameFault" element="wsdai:InvalidResourceNameFault"/>

</wsdl:message>

<wsdl:message name="DataResourceUnavailableFault">

<wsdl:part name="DataResourceUnavailableFault" element="wsdai:DataResourceUnavailableFault"/>

</wsdl:message>

<wsdl:message name="ServiceBusyFault">

<wsdl:part name="ServiceBusyFault" element="wsdai:ServiceBusyFault"/>

</wsdl:message>

<!-- WSDL PORT TYPES ################################################################# -->

<wsdl:portType name="ResourceAccessPT">

<wsdl:operation name="GetResourcePropertyDocument">

<wsdl:input name="GetResourcePropertyDocumentRequest" message="wro:GetResourcePropertyDocumentRequest"/>

<wsdl:output name="GetResourcePropertyDocumentResponse" message="wro:GetResourcePropertyDocumentResponse"/>

<wsdl:fault name="InvalidResourceNameFault" message="wsdai:InvalidResourceNameFault"/>

<wsdl:fault name="DataResourceUnavailableFault" message="wsdai:DataResourceUnavailableFault"/>

<wsdl:fault name="NotAuthorizedFault" message="wsdai:NotAuthorizedFault"/>

<wsdl:fault name="ServiceBusyFault" message="wsdai:ServiceBusyFault"/>

</wsdl:operation>

<wsdl:operation name="GetResourceTypes">

<wsdl:input name="GetResourceTypesRequest" message="wro:GetResourceTypesRequest"/>

<wsdl:output name="GetResourceTypesResponse" message="wro:GetResourceTypesResponse"/>

<wsdl:fault name="InvalidResourceNameFault" message="wsdai:InvalidResourceNameFault"/>

<wsdl:fault name="DataResourceUnavailableFault" message="wsdai:DataResourceUnavailableFault"/>

<wsdl:fault name="ServiceBusyFault" message="wsdai:ServiceBusyFault"/>

</wsdl:operation>

<wsdl:operation name="GetResourceDescription">

<wsdl:input name="GetResourceDescriptionRequest" message="wro:GetResourceDescriptionRequest"/>

<wsdl:output name="GetResourceDescriptionResponse" message="wro:GetResourceDescriptionResponse"/>

<wsdl:fault name="InvalidResourceNameFault" message="wsdai:InvalidResourceNameFault"/>

<wsdl:fault name="DataResourceUnavailableFault" message="wsdai:DataResourceUnavailableFault"/>

<wsdl:fault name="ServiceBusyFault" message="wsdai:ServiceBusyFault"/>

</wsdl:operation>

<wsdl:operation name="GetPropertyValues">

<wsdl:input name="GetPropertyValuesRequest" message="wro:GetPropertyValuesRequest"/>

<wsdl:output name="GetPropertyValuesResponse" message="wro:GetPropertyValuesResponse"/>

<wsdl:fault name="InvalidResourceNameFault" message="wsdai:InvalidResourceNameFault"/>

<wsdl:fault name="DataResourceUnavailableFault" message="wsdai:DataResourceUnavailableFault"/>

<wsdl:fault name="ServiceBusyFault" message="wsdai:ServiceBusyFault"/>

</wsdl:operation>

<wsdl:operation name="GetDefinedProperties">

<wsdl:input name="GetDefinedPropertiesRequest" message="wro:GetDefinedPropertiesRequest"/>

<wsdl:output name="GetDefinedPropertiesResponse" message="wro:GetDefinedPropertiesResponse"/>

<wsdl:fault name="InvalidResourceNameFault" message="wsdai:InvalidResourceNameFault"/>

<wsdl:fault name="DataResourceUnavailableFault" message="wsdai:DataResourceUnavailableFault"/>

<wsdl:fault name="ServiceBusyFault" message="wsdai:ServiceBusyFault"/>

</wsdl:operation>

<wsdl:operation name="GetDefinableProperties">

<wsdl:input name="GetDefinablePropertiesRequest" message="wro:GetDefinablePropertiesRequest"/>

<wsdl:output name="GetDefinablePropertiesResponse" message="wro:GetDefinablePropertiesResponse"/>

<wsdl:fault name="InvalidResourceNameFault" message="wsdai:InvalidResourceNameFault"/>

<wsdl:fault name="DataResourceUnavailableFault" message="wsdai:DataResourceUnavailableFault"/>

<wsdl:fault name="ServiceBusyFault" message="wsdai:ServiceBusyFault"/>

</wsdl:operation>

<wsdl:operation name="AddResourceTypes">

<wsdl:input name="AddResourceTypesRequest" message="wro:AddResourceTypesRequest"/>

<wsdl:output name="AddResourceTypesResponse" message="wro:AddResourceTypesResponse"/>

<wsdl:fault name="InvalidResourceNameFault" message="wsdai:InvalidResourceNameFault"/>

<wsdl:fault name="DataResourceUnavailableFault" message="wsdai:DataResourceUnavailableFault"/>

<wsdl:fault name="ServiceBusyFault" message="wsdai:ServiceBusyFault"/>

</wsdl:operation>

<wsdl:operation name="AddResourceDescription">

<wsdl:input name="AddResourceDescriptionRequest" message="wro:AddResourceDescriptionRequest"/>

<wsdl:output name="AddResourceDescriptionResponse" message="wro:AddResourceDescriptionResponse"/>

<wsdl:fault name="InvalidResourceNameFault" message="wsdai:InvalidResourceNameFault"/>

<wsdl:fault name="DataResourceUnavailableFault" message="wsdai:DataResourceUnavailableFault"/>

<wsdl:fault name="ServiceBusyFault" message="wsdai:ServiceBusyFault"/>

</wsdl:operation>

<wsdl:operation name="AddPropertyValues">

<wsdl:input name="AddPropertyValuesRequest" message="wro:AddPropertyValuesRequest"/>

<wsdl:output name="AddPropertyValuesResponse" message="wro:AddPropertyValuesResponse"/>

<wsdl:fault name="InvalidResourceNameFault" message="wsdai:InvalidResourceNameFault"/>

<wsdl:fault name="DataResourceUnavailableFault" message="wsdai:DataResourceUnavailableFault"/>

<wsdl:fault name="ServiceBusyFault" message="wsdai:ServiceBusyFault"/>

</wsdl:operation>

<wsdl:operation name="RemoveResourceTypes">

<wsdl:input name="RemoveResourceTypesRequest" message="wro:RemoveResourceTypesRequest"/>

<wsdl:output name="RemoveResourceTypesResponse" message="wro:RemoveResourceTypesResponse"/>

<wsdl:fault name="InvalidResourceNameFault" message="wsdai:InvalidResourceNameFault"/>

<wsdl:fault name="DataResourceUnavailableFault" message="wsdai:DataResourceUnavailableFault"/>

<wsdl:fault name="ServiceBusyFault" message="wsdai:ServiceBusyFault"/>

</wsdl:operation>

<wsdl:operation name="RemovePropertyValues">

<wsdl:input name="RemovePropertyValuesRequest" message="wro:RemovePropertyValuesRequest"/>

<wsdl:output name="RemovePropertyValuesResponse" message="wro:RemovePropertyValuesResponse"/>

<wsdl:fault name="InvalidResourceNameFault" message="wsdai:InvalidResourceNameFault"/>

<wsdl:fault name="DataResourceUnavailableFault" message="wsdai:DataResourceUnavailableFault"/>

<wsdl:fault name="ServiceBusyFault" message="wsdai:ServiceBusyFault"/>

</wsdl:operation>

<wsdl:operation name="ArePropertiesDefined">

<wsdl:input name="ArePropertiesDefinedRequest" message="wro:ArePropertiesDefinedRequest"/>

<wsdl:output name="ArePropertiesDefinedResponse" message="wro:ArePropertiesDefinedResponse"/>

<wsdl:fault name="InvalidResourceNameFault" message="wsdai:InvalidResourceNameFault"/>

<wsdl:fault name="DataResourceUnavailableFault" message="wsdai:DataResourceUnavailableFault"/>

<wsdl:fault name="ServiceBusyFault" message="wsdai:ServiceBusyFault"/>

</wsdl:operation>

<wsdl:operation name="ArePropertiesDefinable">

<wsdl:input name="ArePropertiesDefinableRequest" message="wro:ArePropertiesDefinableRequest"/>

<wsdl:output name="ArePropertiesDefinableResponse" message="wro:ArePropertiesDefinableResponse"/>

<wsdl:fault name="InvalidResourceNameFault" message="wsdai:InvalidResourceNameFault"/>

<wsdl:fault name="DataResourceUnavailableFault" message="wsdai:DataResourceUnavailableFault"/>

<wsdl:fault name="ServiceBusyFault" message="wsdai:ServiceBusyFault"/>

</wsdl:operation>

</wsdl:portType>

</wsdl:definitions>

# Class

# Class XML Schema

<xs:schema xmlns:wro="http://www.ogf.org/dais/2008/02/ws-dai-rdfs/ontology"

xmlns:wsdai="http://www.ggf.org/namespaces/2005/12/WS-DAI"

elementFormDefault="qualified"

targetNamespace="http://www.ogf.org/dais/2008/02/ws-dai-rdfs/ontology">

<!--Import the base WS-DAI Schema-->

<xs:import namespace="http://www.ggf.org/namespaces/2005/12/WS-DAI" schemaLocation="..\resources\spec\wsdai\_core\_types.xsd"/>

<!--Include the base WS-DAI-RDFS Core Schema-->

<xs:include schemaLocation="wsdai\_rdfs\_types.xsd"/>

<!-- The static properties that describe a Class data service -->

<xs:element name="RepositoryName" type="xs:anyURI"/>

<xs:element name="ResourceURI" type="xs:anyURI"/>

<!-- The configuration properties that describe a Class data service -->

<!-- The property document of a Class data service -->

<xs:complexType name="ClassPropertyDocumentType">

<xs:complexContent>

<xs:extension base="wsdai:PropertyDocumentType">

<xs:sequence>

<xs:element ref="wro:RepositoryName"/>

<xs:element ref="wro:ResourceURI"/>

</xs:sequence>

</xs:extension>

</xs:complexContent>

</xs:complexType>

<xs:element name="ClassPropertyDocument" type="wro:ClassPropertyDocumentType"/>

<xs:simpleType name="RelatedClassAdditionResultType">

<xs:restriction base="xs:string">

<xs:enumeration value="Success"/>

<xs:enumeration value="ConsumerNotAuthorized"/>

</xs:restriction>

</xs:simpleType>

<xs:simpleType name="RelatedClassRemovalResultType">

<xs:restriction base="xs:string">

<xs:enumeration value="Success"/>

<xs:enumeration value="ConsumerNotAuthorized"/>

</xs:restriction>

</xs:simpleType>

<xs:simpleType name="RelatedClassCheckResultType">

<xs:restriction base="xs:string">

<xs:enumeration value="true"/>

<xs:enumeration value="false"/>

<xs:enumeration value="ConsumerNotAuthorized"/>

</xs:restriction>

</xs:simpleType>

<xs:simpleType name="InstanceCheckResultType">

<xs:restriction base="xs:string">

<xs:enumeration value="true"/>

<xs:enumeration value="false"/>

<xs:enumeration value="ConsumerNotAuthorized"/>

</xs:restriction>

</xs:simpleType>

</xs:schema>

# Class WSDL

<wsdl:definitions xmlns:wro="http://www.ogf.org/dais/2008/02/ws-dai-rdfs/ontology"

xmlns:wsdai="http://www.ggf.org/namespaces/2005/12/WS-DAI"

name="wsdai-rdfs-ontology"

targetNamespace="http://www.ogf.org/dais/2008/02/ws-dai-rdfs/ontology">

<!-- WSDL IMPORTS #################################################################### -->

<wsdl:import namespace="http://www.ggf.org/namespaces/2005/12/WS-DAI" location="..\resources\spec\wsdai\_core\_porttypes.wsdl"/>

<!-- WSDL TYPES ###################################################################### -->

<wsdl:types>

<xs:schema xmlns:wro="http://www.ogf.org/dais/2008/02/ws-dai-rdfs/ontology"

xmlns:wsdai="http://www.ggf.org/namespaces/2005/12/WS-DAI"

elementFormDefault="qualified"

targetNamespace="http://www.ogf.org/dais/2008/02/ws-dai-rdfs/ontology">

<!--Import the base WS-DAI Schema-->

<xs:import namespace="http://www.ggf.org/namespaces/2005/12/WS-DAI" schemaLocation="..\resources\spec\wsdai\_core\_types.xsd"/>

<!--Include the base WS-DAI-RDF(S) Core Schema-->

<xs:include schemaLocation="wsdai\_rdfs\_types.xsd"/>

<!--Include the external WS-DAI-RDF(S) Resource Schema-->

<xs:include schemaLocation="wsdai\_rdfs\_class\_types.xsd"/>

<!-- ####################################### -->

<!-- ### GetRelatedClasses Message Types ### -->

<!-- ####################################### -->

<xs:element name="GetRelatedClassesRequest">

<xs:complexType>

<xs:complexContent>

<xs:extension base="wsdai:RequestType">

<xs:sequence>

<xs:element name="RelationshipType" type="wro:RDFSClassLineageRelationshipType"/>

</xs:sequence>

</xs:extension>

</xs:complexContent>

</xs:complexType>

</xs:element>

<xs:element name="GetRelatedClassesDatasetData" substitutionGroup="wsdai:DatasetData">

<xs:complexType mixed="true">

<xs:complexContent>

<xs:restriction base="wsdai:DatasetDataType">

<xs:sequence>

<xs:element name="RelatedClassURI" minOccurs="0" maxOccurs="unbounded" type="xs:anyURI"/>

</xs:sequence>

</xs:restriction>

</xs:complexContent>

</xs:complexType>

</xs:element>

<xs:element name="GetRelatedClassesDataset" substitutionGroup="wsdai:Dataset">

<xs:complexType>

<xs:complexContent>

<xs:extension base="wsdai:DatasetType">

<xs:sequence>

<xs:element name="RelationshipType" type="wro:RDFSClassLineageRelationshipType"/>

<xs:element name="NumberOfRelatedClasses" type="xs:unsignedLong"/>

</xs:sequence>

</xs:extension>

</xs:complexContent>

</xs:complexType>

</xs:element>

<xs:element name="GetRelatedClassesResponse">

<xs:complexType>

<xs:sequence>

<xs:element ref="wro:GetRelatedClassesDataset"/>

</xs:sequence>

</xs:complexType>

</xs:element>

<!-- ########################################## -->

<!-- ### GetRelatedProperties Message Types ### -->

<!-- ########################################## -->

<xs:element name="GetRelatedPropertiesRequest">

<xs:complexType>

<xs:complexContent>

<xs:extension base="wsdai:RequestType">

<xs:sequence>

<xs:element name="InferInheritedProperties" minOccurs="0" maxOccurs="1" type="xs:boolean"/>

<xs:element name="InferSubProperties" minOccurs="0" maxOccurs="1" type="xs:boolean"/>

</xs:sequence>

</xs:extension>

</xs:complexContent>

</xs:complexType>

</xs:element>

<xs:element name="GetRelatedPropertiesDatasetData" substitutionGroup="wsdai:DatasetData">

<xs:complexType mixed="true">

<xs:complexContent>

<xs:restriction base="wsdai:DatasetDataType">

<xs:sequence>

<xs:element name="RelatedPropertyURI" minOccurs="0" maxOccurs="unbounded" type="xs:anyURI"/>

</xs:sequence>

</xs:restriction>

</xs:complexContent>

</xs:complexType>

</xs:element>

<xs:element name="GetRelatedPropertiesDataset" substitutionGroup="wsdai:Dataset">

<xs:complexType>

<xs:complexContent>

<xs:extension base="wsdai:DatasetType">

<xs:sequence>

<xs:element name="InferInheritedProperties" type="xs:boolean"/>

<xs:element name="InferSubProperties" type="xs:boolean"/>

<xs:element name="NumberOfRelatedProperties" type="xs:unsignedLong"/>

</xs:sequence>

</xs:extension>

</xs:complexContent>

</xs:complexType>

</xs:element>

<xs:element name="GetRelatedPropertiesResponse">

<xs:complexType>

<xs:sequence>

<xs:element ref="wro:GetRelatedPropertiesDataset"/>

</xs:sequence>

</xs:complexType>

</xs:element>

<!-- ################################## -->

<!-- ### GetInstances Message Types ### -->

<!-- ################################## -->

<xs:element name="GetInstancesRequest">

<xs:complexType>

<xs:complexContent>

<xs:extension base="wsdai:RequestType">

<xs:sequence>

<xs:element name="InferInstances" minOccurs="0" maxOccurs="1" type="xs:boolean"/>

</xs:sequence>

</xs:extension>

</xs:complexContent>

</xs:complexType>

</xs:element>

<xs:element name="GetInstancesDatasetData" substitutionGroup="wsdai:DatasetData">

<xs:complexType mixed="true">

<xs:complexContent>

<xs:restriction base="wsdai:DatasetDataType">

<xs:sequence>

<xs:element name="InstanceURI" minOccurs="0" maxOccurs="unbounded" type="xs:anyURI"/>

</xs:sequence>

</xs:restriction>

</xs:complexContent>

</xs:complexType>

</xs:element>

<xs:element name="GetInstancesDataset" substitutionGroup="wsdai:Dataset">

<xs:complexType>

<xs:complexContent>

<xs:extension base="wsdai:DatasetType">

<xs:sequence>

<xs:element name="InferInstances" type="xs:boolean"/>

<xs:element name="NumberOfInstances" type="xs:unsignedLong"/>

</xs:sequence>

</xs:extension>

</xs:complexContent>

</xs:complexType>

</xs:element>

<xs:element name="GetInstancesResponse">

<xs:complexType>

<xs:sequence>

<xs:element ref="wro:GetInstancesDataset"/>

</xs:sequence>

</xs:complexType>

</xs:element>

<!-- ####################################### -->

<!-- ### AddRelatedClasses Message Types ### -->

<!-- ####################################### -->

<xs:element name="AddRelatedClassesRequest">

<xs:complexType>

<xs:complexContent>

<xs:extension base="wsdai:RequestType">

<xs:sequence>

<xs:element name="ClassURI" minOccurs="1" maxOccurs="unbounded" type="xs:anyURI"/>

<xs:element name="AddAsSubclass" type="xs:boolean"/>

</xs:sequence>

</xs:extension>

</xs:complexContent>

</xs:complexType>

</xs:element>

<xs:element name="AddRelatedClassesDatasetData" substitutionGroup="wsdai:DatasetData">

<xs:complexType mixed="true">

<xs:complexContent>

<xs:restriction base="wsdai:DatasetDataType">

<xs:sequence>

<xs:element name="ClassResult" minOccurs="1" maxOccurs="unbounded">

<xs:complexType>

<xs:sequence>

<xs:element name="ClassURI" type="xs:anyURI"/>

<xs:element name="Result" type="wro:RelatedClassAdditionResultType"/>

</xs:sequence>

</xs:complexType>

</xs:element>

</xs:sequence>

</xs:restriction>

</xs:complexContent>

</xs:complexType>

</xs:element>

<xs:element name="AddRelatedClassesDataset" substitutionGroup="wsdai:Dataset">

<xs:complexType>

<xs:complexContent>

<xs:extension base="wsdai:DatasetType">

<xs:sequence>

<xs:element name="AddAsSubclass" type="xs:boolean"/>

<xs:element name="NumberOfRelatedClassesAdded" type="xs:unsignedLong"/>

</xs:sequence>

</xs:extension>

</xs:complexContent>

</xs:complexType>

</xs:element>

<xs:element name="AddRelatedClassesResponse">

<xs:complexType>

<xs:sequence>

<xs:element ref="wro:AddRelatedClassesDataset"/>

</xs:sequence>

</xs:complexType>

</xs:element>

<!-- ########################################## -->

<!-- ### RemoveRelatedClasses Message Types ### -->

<!-- ########################################## -->

<xs:element name="RemoveRelatedClassesRequest">

<xs:complexType>

<xs:complexContent>

<xs:extension base="wsdai:RequestType">

<xs:sequence>

<xs:element name="ClassURI" minOccurs="0" maxOccurs="unbounded" type="xs:anyURI"/>

<xs:element name="RelationshipType" type="wro:RDFSClassLineageRelationshipType"/>

</xs:sequence>

</xs:extension>

</xs:complexContent>

</xs:complexType>

</xs:element>

<xs:element name="RemoveRelatedClassesDatasetData" substitutionGroup="wsdai:DatasetData">

<xs:complexType mixed="true">

<xs:complexContent>

<xs:restriction base="wsdai:DatasetDataType">

<xs:sequence>

<xs:element name="ClassResult" minOccurs="0" maxOccurs="unbounded">

<xs:complexType>

<xs:sequence>

<xs:element name="ClassURI" type="xs:anyURI"/>

<xs:element name="Result" type="wro:RelatedClassRemovalResultType"/>

</xs:sequence>

</xs:complexType>

</xs:element>

</xs:sequence>

</xs:restriction>

</xs:complexContent>

</xs:complexType>

</xs:element>

<xs:element name="RemoveRelatedClassesDataset" substitutionGroup="wsdai:Dataset">

<xs:complexType>

<xs:complexContent>

<xs:extension base="wsdai:DatasetType">

<xs:sequence>

<xs:element name="RelationshipType" type="wro:RDFSClassLineageRelationshipType"/>

<xs:element name="NumberOfRelatedClassesRemoved" type="xs:unsignedLong"/>

</xs:sequence>

</xs:extension>

</xs:complexContent>

</xs:complexType>

</xs:element>

<xs:element name="RemoveRelatedClassesResponse">

<xs:complexType>

<xs:sequence>

<xs:element ref="wro:RemoveRelatedClassesDataset"/>

</xs:sequence>

</xs:complexType>

</xs:element>

<!-- ####################################### -->

<!-- ### AreClassesRelated Message Types ### -->

<!-- ####################################### -->

<xs:element name="AreClassesRelatedRequest">

<xs:complexType>

<xs:complexContent>

<xs:extension base="wsdai:RequestType">

<xs:sequence>

<xs:element name="ClassURI" minOccurs="1" maxOccurs="unbounded" type="xs:anyURI"/>

<xs:element name="RelationshipType" type="wro:RDFSClassLineageRelationshipType"/>

</xs:sequence>

</xs:extension>

</xs:complexContent>

</xs:complexType>

</xs:element>

<xs:element name="AreClassesRelatedDatasetData" substitutionGroup="wsdai:DatasetData">

<xs:complexType mixed="true">

<xs:complexContent>

<xs:restriction base="wsdai:DatasetDataType">

<xs:sequence>

<xs:element name="ClassResult" minOccurs="1" maxOccurs="unbounded">

<xs:complexType>

<xs:sequence>

<xs:element name="ClassURI" type="xs:anyURI"/>

<xs:element name="Result" type="wro:RelatedClassCheckResultType"/>

</xs:sequence>

</xs:complexType>

</xs:element>

</xs:sequence>

</xs:restriction>

</xs:complexContent>

</xs:complexType>

</xs:element>

<xs:element name="AreClassesRelatedDataset" substitutionGroup="wsdai:Dataset">

<xs:complexType>

<xs:complexContent>

<xs:extension base="wsdai:DatasetType">

<xs:sequence>

<xs:element name="RelationshipType" type="wro:RDFSClassLineageRelationshipType"/>

</xs:sequence>

</xs:extension>

</xs:complexContent>

</xs:complexType>

</xs:element>

<xs:element name="AreClassesRelatedResponse">

<xs:complexType>

<xs:sequence>

<xs:element ref="wro:AreClassesRelatedDataset"/>

</xs:sequence>

</xs:complexType>

</xs:element>

<!-- ################################## -->

<!-- ### AreInstances Message Types ### -->

<!-- ################################## -->

<xs:element name="AreInstancesRequest">

<xs:complexType>

<xs:complexContent>

<xs:extension base="wsdai:RequestType">

<xs:sequence>

<xs:element name="ResourceURI" minOccurs="1" maxOccurs="unbounded" type="xs:anyURI"/>

<xs:element name="InferInstances" minOccurs="0" maxOccurs="1" type="xs:boolean"/>

</xs:sequence>

</xs:extension>

</xs:complexContent>

</xs:complexType>

</xs:element>

<xs:element name="AreInstancesDatasetData" substitutionGroup="wsdai:DatasetData">

<xs:complexType mixed="true">

<xs:complexContent>

<xs:restriction base="wsdai:DatasetDataType">

<xs:sequence>

<xs:element name="ResourceResult" minOccurs="1" maxOccurs="unbounded">

<xs:complexType>

<xs:sequence>

<xs:element name="ResourceURI" type="xs:anyURI"/>

<xs:element name="Result" type="wro:InstanceCheckResultType"/>

</xs:sequence>

</xs:complexType>

</xs:element>

</xs:sequence>

</xs:restriction>

</xs:complexContent>

</xs:complexType>

</xs:element>

<xs:element name="AreInstancesDataset" substitutionGroup="wsdai:Dataset">

<xs:complexType>

<xs:complexContent>

<xs:extension base="wsdai:DatasetType">

<xs:sequence>

<xs:element name="InferInstances" type="xs:boolean"/>

</xs:sequence>

</xs:extension>

</xs:complexContent>

</xs:complexType>

</xs:element>

<xs:element name="AreInstancesResponse">

<xs:complexType>

<xs:sequence>

<xs:element ref="wro:AreInstancesDataset"/>

</xs:sequence>

</xs:complexType>

</xs:element>

</xs:schema>

</wsdl:types>

<!-- WSDL MESSAGES ################################################################### -->

<wsdl:message name="GetClassPropertyDocumentRequest">

<wsdl:part name="GetClassPropertyDocumentRequest" element="wsdai:GetDataResourcePropertyDocumentRequest"/>

</wsdl:message>

<wsdl:message name="GetClassPropertyDocumentResponse">

<wsdl:part name="GetClassPropertyDocumentResponse" element="wro:ClassPropertyDocument"/>

</wsdl:message>

<wsdl:message name="GetRelatedClassesRequest">

<wsdl:part name="GetRelatedClassesRequest" element="wro:GetRelatedClassesRequest"/>

</wsdl:message>

<wsdl:message name="GetRelatedClassesResponse">

<wsdl:part name="GetRelatedClassesResponse" element="wro:GetRelatedClassesResponse"/>

</wsdl:message>

<wsdl:message name="GetRelatedPropertiesRequest">

<wsdl:part name="GetRelatedPropertiesRequest" element="wro:GetRelatedPropertiesRequest"/>

</wsdl:message>

<wsdl:message name="GetRelatedPropertiesResponse">

<wsdl:part name="GetRelatedPropertiesResponse" element="wro:GetRelatedPropertiesResponse"/>

</wsdl:message>

<wsdl:message name="GetInstancesRequest">

<wsdl:part name="GetInstancesRequest" element="wro:GetInstancesRequest"/>

</wsdl:message>

<wsdl:message name="GetInstancesResponse">

<wsdl:part name="GetInstancesResponse" element="wro:GetInstancesResponse"/>

</wsdl:message>

<wsdl:message name="AddRelatedClassesRequest">

<wsdl:part name="AddRelatedClassesRequest" element="wro:AddRelatedClassesRequest"/>

</wsdl:message>

<wsdl:message name="AddRelatedClassesResponse">

<wsdl:part name="AddRelatedClassesResponse" element="wro:AddRelatedClassesResponse"/>

</wsdl:message>

<wsdl:message name="RemoveRelatedClassesRequest">

<wsdl:part name="RemoveRelatedClassesRequest" element="wro:RemoveRelatedClassesRequest"/>

</wsdl:message>

<wsdl:message name="RemoveRelatedClassesResponse">

<wsdl:part name="RemoveRelatedClassesResponse" element="wro:RemoveRelatedClassesResponse"/>

</wsdl:message>

<wsdl:message name="AreClassesRelatedRequest">

<wsdl:part name="AreClassesRelatedRequest" element="wro:AreClassesRelatedRequest"/>

</wsdl:message>

<wsdl:message name="AreClassesRelatedResponse">

<wsdl:part name="AreClassesRelatedResponse" element="wro:AreClassesRelatedResponse"/>

</wsdl:message>

<wsdl:message name="AreInstancesRequest">

<wsdl:part name="AreInstancesRequest" element="wro:AreInstancesRequest"/>

</wsdl:message>

<wsdl:message name="AreInstancesResponse">

<wsdl:part name="AreInstancesResponse" element="wro:AreInstancesResponse"/>

</wsdl:message>

<wsdl:message name="InvalidResourceNameFault">

<wsdl:part name="InvalidResourceNameFault" element="wsdai:InvalidResourceNameFault"/>

</wsdl:message>

<wsdl:message name="DataResourceUnavailableFault">

<wsdl:part name="DataResourceUnavailableFault" element="wsdai:DataResourceUnavailableFault"/>

</wsdl:message>

<wsdl:message name="ServiceBusyFault">

<wsdl:part name="ServiceBusyFault" element="wsdai:ServiceBusyFault"/>

</wsdl:message>

<!-- WSDL PORT TYPES ################################################################# -->

<wsdl:portType name="ClassAccessPT">

<wsdl:operation name="GetClassPropertyDocument">

<wsdl:input name="GetClassPropertyDocumentRequest" message="wro:GetClassPropertyDocumentRequest"/>

<wsdl:output name="GetClassPropertyDocumentResponse" message="wro:GetClassPropertyDocumentResponse"/>

<wsdl:fault name="InvalidResourceNameFault" message="wsdai:InvalidResourceNameFault"/>

<wsdl:fault name="DataResourceUnavailableFault" message="wsdai:DataResourceUnavailableFault"/>

<wsdl:fault name="NotAuthorizedFault" message="wsdai:NotAuthorizedFault"/>

<wsdl:fault name="ServiceBusyFault" message="wsdai:ServiceBusyFault"/>

</wsdl:operation>

<wsdl:operation name="GetRelatedClasses">

<wsdl:input name="GetRelatedClassesRequest" message="wro:GetRelatedClassesRequest"/>

<wsdl:output name="GetRelatedClassesResponse" message="wro:GetRelatedClassesResponse"/>

<wsdl:fault name="InvalidResourceNameFault" message="wsdai:InvalidResourceNameFault"/>

<wsdl:fault name="DataResourceUnavailableFault" message="wsdai:DataResourceUnavailableFault"/>

<wsdl:fault name="ServiceBusyFault" message="wsdai:ServiceBusyFault"/>

</wsdl:operation>

<wsdl:operation name="GetRelatedProperties">

<wsdl:input name="GetRelatedPropertiesRequest" message="wro:GetRelatedPropertiesRequest"/>

<wsdl:output name="GetRelatedPropertiesResponse" message="wro:GetRelatedPropertiesResponse"/>

<wsdl:fault name="InvalidResourceNameFault" message="wsdai:InvalidResourceNameFault"/>

<wsdl:fault name="DataResourceUnavailableFault" message="wsdai:DataResourceUnavailableFault"/>

<wsdl:fault name="ServiceBusyFault" message="wsdai:ServiceBusyFault"/>

</wsdl:operation>

<wsdl:operation name="GetInstances">

<wsdl:input name="GetInstancesRequest" message="wro:GetInstancesRequest"/>

<wsdl:output name="GetInstancesResponse" message="wro:GetInstancesResponse"/>

<wsdl:fault name="InvalidResourceNameFault" message="wsdai:InvalidResourceNameFault"/>

<wsdl:fault name="DataResourceUnavailableFault" message="wsdai:DataResourceUnavailableFault"/>

<wsdl:fault name="ServiceBusyFault" message="wsdai:ServiceBusyFault"/>

</wsdl:operation>

<wsdl:operation name="AddRelatedClasses">

<wsdl:input name="AddRelatedClassesRequest" message="wro:AddRelatedClassesRequest"/>

<wsdl:output name="AddRelatedClassesResponse" message="wro:AddRelatedClassesResponse"/>

<wsdl:fault name="InvalidResourceNameFault" message="wsdai:InvalidResourceNameFault"/>

<wsdl:fault name="DataResourceUnavailableFault" message="wsdai:DataResourceUnavailableFault"/>

<wsdl:fault name="ServiceBusyFault" message="wsdai:ServiceBusyFault"/>

</wsdl:operation>

<wsdl:operation name="RemoveRelatedClasses">

<wsdl:input name="RemoveRelatedClassesRequest" message="wro:RemoveRelatedClassesRequest"/>

<wsdl:output name="RemoveRelatedClassesResponse" message="wro:RemoveRelatedClassesResponse"/>

<wsdl:fault name="InvalidResourceNameFault" message="wsdai:InvalidResourceNameFault"/>

<wsdl:fault name="DataResourceUnavailableFault" message="wsdai:DataResourceUnavailableFault"/>

<wsdl:fault name="ServiceBusyFault" message="wsdai:ServiceBusyFault"/>

</wsdl:operation>

<wsdl:operation name="AreClassesRelated">

<wsdl:input name="AreClassesRelatedRequest" message="wro:AreClassesRelatedRequest"/>

<wsdl:output name="AreClassesRelatedResponse" message="wro:AreClassesRelatedResponse"/>

<wsdl:fault name="InvalidResourceNameFault" message="wsdai:InvalidResourceNameFault"/>

<wsdl:fault name="DataResourceUnavailableFault" message="wsdai:DataResourceUnavailableFault"/>

<wsdl:fault name="ServiceBusyFault" message="wsdai:ServiceBusyFault"/>

</wsdl:operation>

<wsdl:operation name="AreInstances">

<wsdl:input name="AreInstancesRequest" message="wro:AreInstancesRequest"/>

<wsdl:output name="AreInstancesResponse" message="wro:AreInstancesResponse"/>

<wsdl:fault name="InvalidResourceNameFault" message="wsdai:InvalidResourceNameFault"/>

<wsdl:fault name="DataResourceUnavailableFault" message="wsdai:DataResourceUnavailableFault"/>

<wsdl:fault name="ServiceBusyFault" message="wsdai:ServiceBusyFault"/>

</wsdl:operation>

</wsdl:portType>

</wsdl:definitions>

# Property

# Property XML Schema

<xs:schema xmlns:wro="http://www.ogf.org/dais/2008/02/ws-dai-rdfs/ontology"

xmlns:wsdai="http://www.ggf.org/namespaces/2005/12/WS-DAI"

elementFormDefault="qualified"

targetNamespace="http://www.ogf.org/dais/2008/02/ws-dai-rdfs/ontology">

<!--Import the base WS-DAI Schema-->

<xs:import namespace="http://www.ggf.org/namespaces/2005/12/WS-DAI" schemaLocation="..\resources\spec\wsdai\_core\_types.xsd"/>

<!--Include the base WS-DAI-RDFS Core Schema-->

<xs:include schemaLocation="wsdai\_rdfs\_types.xsd"/>

<!-- The static properties that describe a Property data service -->

<xs:element name="RepositoryName" type="xs:anyURI"/>

<xs:element name="ResourceURI" type="xs:anyURI"/>

<!-- The configuration properties that describe a Property data service -->

<!-- The property document of a Property data service -->

<xs:complexType name="PropertyPropertyDocumentType">

<xs:complexContent>

<xs:extension base="wsdai:PropertyDocumentType">

<xs:sequence>

<xs:element ref="wro:RepositoryName"/>

<xs:element ref="wro:ResourceURI"/>

</xs:sequence>

</xs:extension>

</xs:complexContent>

</xs:complexType>

<xs:element name="PropertyPropertyDocument" type="wro:PropertyPropertyDocumentType"/>

<xs:simpleType name="RelatedPropertyAdditionResultType">

<xs:restriction base="xs:string">

<xs:enumeration value="Success"/>

<xs:enumeration value="ConsumerNotAuthorized"/>

</xs:restriction>

</xs:simpleType>

<xs:simpleType name="DomainClassAdditionResultType">

<xs:restriction base="xs:string">

<xs:enumeration value="Success"/>

<xs:enumeration value="ConsumerNotAuthorized"/>

</xs:restriction>

</xs:simpleType>

<xs:simpleType name="RangeClassAdditionResultType">

<xs:restriction base="xs:string">

<xs:enumeration value="Success"/>

<xs:enumeration value="ConsumerNotAuthorized"/>

</xs:restriction>

</xs:simpleType>

<xs:simpleType name="RelatedPropertyRemovalResultType">

<xs:restriction base="xs:string">

<xs:enumeration value="Success"/>

<xs:enumeration value="ConsumerNotAuthorized"/>

</xs:restriction>

</xs:simpleType>

<xs:simpleType name="DomainClassRemovalResultType">

<xs:restriction base="xs:string">

<xs:enumeration value="Success"/>

<xs:enumeration value="ConsumerNotAuthorized"/>

</xs:restriction>

</xs:simpleType>

<xs:simpleType name="RangeClassRemovalResultType">

<xs:restriction base="xs:string">

<xs:enumeration value="Success"/>

<xs:enumeration value="ConsumerNotAuthorized"/>

</xs:restriction>

</xs:simpleType>

<xs:simpleType name="RelatedPropertyCheckResultType">

<xs:restriction base="xs:string">

<xs:enumeration value="true"/>

<xs:enumeration value="false"/>

<xs:enumeration value="ConsumerNotAuthorized"/>

</xs:restriction>

</xs:simpleType>

<xs:simpleType name="DomainClassCheckResultType">

<xs:restriction base="xs:string">

<xs:enumeration value="true"/>

<xs:enumeration value="false"/>

<xs:enumeration value="ConsumerNotAuthorized"/>

</xs:restriction>

</xs:simpleType>

<xs:simpleType name="RangeClassCheckResultType">

<xs:restriction base="xs:string">

<xs:enumeration value="true"/>

<xs:enumeration value="false"/>

<xs:enumeration value="ConsumerNotAuthorized"/>

</xs:restriction>

</xs:simpleType>

</xs:schema>

# Property WSDL

<wsdl:definitions xmlns:wro="http://www.ogf.org/dais/2008/02/ws-dai-rdfs/ontology"

xmlns:wsdai="http://www.ggf.org/namespaces/2005/12/WS-DAI"

name="wsdai-rdfs-ontology"

targetNamespace="http://www.ogf.org/dais/2008/02/ws-dai-rdfs/ontology">

<!-- WSDL IMPORTS #################################################################### -->

<wsdl:import namespace="http://www.ggf.org/namespaces/2005/12/WS-DAI" location="..\resources\spec\wsdai\_core\_porttypes.wsdl"/>

<!-- WSDL TYPES ###################################################################### -->

<wsdl:types>

<xs:schema xmlns:wro="http://www.ogf.org/dais/2008/02/ws-dai-rdfs/ontology"

xmlns:wsdai="http://www.ggf.org/namespaces/2005/12/WS-DAI"

elementFormDefault="qualified"

targetNamespace="http://www.ogf.org/dais/2008/02/ws-dai-rdfs/ontology">

<!--Import the base WS-DAI Schema-->

<xs:import namespace="http://www.ggf.org/namespaces/2005/12/WS-DAI" schemaLocation="..\resources\spec\wsdai\_core\_types.xsd"/>

<!--Include the base WS-DAI-RDF(S) Core Schema-->

<xs:include schemaLocation="wsdai\_rdfs\_types.xsd"/>

<!--Include the external WS-DAI-RDF(S) Resource Schema-->

<xs:include schemaLocation="wsdai\_rdfs\_property\_types.xsd"/>

<!-- ########################################## -->

<!-- ### GetRelatedProperties Message Types ### -->

<!-- ########################################## -->

<xs:element name="GetRelatedPropertiesRequest">

<xs:complexType>

<xs:complexContent>

<xs:extension base="wsdai:RequestType">

<xs:sequence>

<xs:element name="RelationshipType" type="wro:RDFSPropertyLineageRelationshipType"/>

</xs:sequence>

</xs:extension>

</xs:complexContent>

</xs:complexType>

</xs:element>

<xs:element name="GetRelatedPropertiesDatasetData" substitutionGroup="wsdai:DatasetData">

<xs:complexType mixed="true">

<xs:complexContent>

<xs:restriction base="wsdai:DatasetDataType">

<xs:sequence>

<xs:element name="RelatedPropertyURI" minOccurs="0" maxOccurs="unbounded" type="xs:anyURI"/>

</xs:sequence>

</xs:restriction>

</xs:complexContent>

</xs:complexType>

</xs:element>

<xs:element name="GetRelatedPropertiesDataset" substitutionGroup="wsdai:Dataset">

<xs:complexType>

<xs:complexContent>

<xs:extension base="wsdai:DatasetType">

<xs:sequence>

<xs:element name="RelationshipType" type="wro:RDFSPropertyLineageRelationshipType"/>

<xs:element name="NumberOfRelatedProperties" type="xs:unsignedLong"/>

</xs:sequence>

</xs:extension>

</xs:complexContent>

</xs:complexType>

</xs:element>

<xs:element name="GetRelatedPropertiesResponse">

<xs:complexType>

<xs:sequence>

<xs:element ref="wro:GetRelatedPropertiesDataset"/>

</xs:sequence>

</xs:complexType>

</xs:element>

<!-- ###################################### -->

<!-- ### GetDomainClasses Message Types ### -->

<!-- ###################################### -->

<xs:element name="GetDomainClassesRequest">

<xs:complexType>

<xs:complexContent>

<xs:extension base="wsdai:RequestType">

<xs:sequence>

<xs:element name="RetrieveImplicitClasses" minOccurs="0" maxOccurs="1" type="xs:boolean"/>

</xs:sequence>

</xs:extension>

</xs:complexContent>

</xs:complexType>

</xs:element>

<xs:element name="GetDomainClassesDatasetData" substitutionGroup="wsdai:DatasetData">

<xs:complexType mixed="true">

<xs:complexContent>

<xs:restriction base="wsdai:DatasetDataType">

<xs:sequence>

<xs:element name="DomainClassURI" minOccurs="0" maxOccurs="unbounded" type="xs:anyURI"/>

</xs:sequence>

</xs:restriction>

</xs:complexContent>

</xs:complexType>

</xs:element>

<xs:element name="GetDomainClassesDataset" substitutionGroup="wsdai:Dataset">

<xs:complexType>

<xs:complexContent>

<xs:extension base="wsdai:DatasetType">

<xs:sequence>

<xs:element name="RetrieveImplicitClasses" type="xs:boolean"/>

<xs:element name="NumberOfDomainClasses" type="xs:unsignedLong"/>

</xs:sequence>

</xs:extension>

</xs:complexContent>

</xs:complexType>

</xs:element>

<xs:element name="GetDomainClassesResponse">

<xs:complexType>

<xs:sequence>

<xs:element ref="wro:GetDomainClassesDataset"/>

</xs:sequence>

</xs:complexType>

</xs:element>

<!-- ##################################### -->

<!-- ### GetRangeClasses Message Types ### -->

<!-- ##################################### -->

<xs:element name="GetRangeClassesRequest">

<xs:complexType>

<xs:complexContent>

<xs:extension base="wsdai:RequestType">

<xs:sequence>

<xs:element name="RetrieveImplicitClasses" minOccurs="0" maxOccurs="1" type="xs:boolean"/>

</xs:sequence>

</xs:extension>

</xs:complexContent>

</xs:complexType>

</xs:element>

<xs:element name="GetRangeClassesDatasetData" substitutionGroup="wsdai:DatasetData">

<xs:complexType mixed="true">

<xs:complexContent>

<xs:restriction base="wsdai:DatasetDataType">

<xs:sequence>

<xs:element name="RangeClassURI" minOccurs="0" maxOccurs="unbounded" type="xs:anyURI"/>

</xs:sequence>

</xs:restriction>

</xs:complexContent>

</xs:complexType>

</xs:element>

<xs:element name="GetRangeClassesDataset" substitutionGroup="wsdai:Dataset">

<xs:complexType>

<xs:complexContent>

<xs:extension base="wsdai:DatasetType">

<xs:sequence>

<xs:element name="RetrieveImplicitClasses" type="xs:boolean"/>

<xs:element name="NumberOfRangeClasses" type="xs:unsignedLong"/>

</xs:sequence>

</xs:extension>

</xs:complexContent>

</xs:complexType>

</xs:element>

<xs:element name="GetRangeClassesResponse">

<xs:complexType>

<xs:sequence>

<xs:element ref="wro:GetRangeClassesDataset"/>

</xs:sequence>

</xs:complexType>

</xs:element>

<!-- ########################################## -->

<!-- ### AddRelatedProperties Message Types ### -->

<!-- ########################################## -->

<xs:element name="AddRelatedPropertiesRequest">

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<xs:complexContent>

<xs:extension base="wsdai:RequestType">

<xs:sequence>

<xs:element name="PropertyURI" minOccurs="1" maxOccurs="unbounded" type="xs:anyURI"/>

<xs:element name="AddAsSubproperty" type="xs:boolean"/>

</xs:sequence>

</xs:extension>

</xs:complexContent>

</xs:complexType>

</xs:element>

<xs:element name="AddRelatedPropertiesDatasetData" substitutionGroup="wsdai:DatasetData">

<xs:complexType mixed="true">

<xs:complexContent>

<xs:restriction base="wsdai:DatasetDataType">

<xs:sequence>

<xs:element name="PropertyResult" minOccurs="1" maxOccurs="unbounded">

<xs:complexType>

<xs:sequence>

<xs:element name="PropertyURI" type="xs:anyURI"/>

<xs:element name="Result" type="wro:RelatedPropertyAdditionResultType"/>

</xs:sequence>

</xs:complexType>

</xs:element>

</xs:sequence>

</xs:restriction>

</xs:complexContent>

</xs:complexType>

</xs:element>

<xs:element name="AddRelatedPropertiesDataset" substitutionGroup="wsdai:Dataset">

<xs:complexType>

<xs:complexContent>

<xs:extension base="wsdai:DatasetType">

<xs:sequence>

<xs:element name="AddAsSubproperty" type="xs:boolean"/>

<xs:element name="NumberOfRelatedPropertiesAdded" type="xs:unsignedLong"/>

</xs:sequence>

</xs:extension>

</xs:complexContent>

</xs:complexType>

</xs:element>

<xs:element name="AddRelatedPropertiesResponse">

<xs:complexType>

<xs:sequence>

<xs:element ref="wro:AddRelatedPropertiesDataset"/>

</xs:sequence>

</xs:complexType>

</xs:element>

<!-- ######################################## -->

<!-- ### AddClassesToDomain Message Types ### -->

<!-- ######################################## -->

<xs:element name="AddClassesToDomainRequest">

<xs:complexType>

<xs:complexContent>

<xs:extension base="wsdai:RequestType">

<xs:sequence>

<xs:element name="ClassURI" minOccurs="1" maxOccurs="unbounded" type="xs:anyURI"/>

</xs:sequence>

</xs:extension>

</xs:complexContent>

</xs:complexType>

</xs:element>

<xs:element name="AddClassesToDomainDatasetData" substitutionGroup="wsdai:DatasetData">

<xs:complexType mixed="true">

<xs:complexContent>

<xs:restriction base="wsdai:DatasetDataType">

<xs:sequence>

<xs:element name="ClassResult" minOccurs="1" maxOccurs="unbounded">

<xs:complexType>

<xs:sequence>

<xs:element name="ClassURI" type="xs:anyURI"/>

<xs:element name="Result" type="wro:DomainClassAdditionResultType"/>

</xs:sequence>

</xs:complexType>

</xs:element>

</xs:sequence>

</xs:restriction>

</xs:complexContent>

</xs:complexType>

</xs:element>

<xs:element name="AddClassesToDomainDataset" substitutionGroup="wsdai:Dataset">

<xs:complexType>

<xs:complexContent>

<xs:extension base="wsdai:DatasetType">

<xs:sequence>

<xs:element name="NumberOfDomainClassesAdded" type="xs:unsignedLong"/>

</xs:sequence>

</xs:extension>

</xs:complexContent>

</xs:complexType>

</xs:element>

<xs:element name="AddClassesToDomainResponse">

<xs:complexType>

<xs:sequence>

<xs:element ref="wro:AddClassesToDomainDataset"/>

</xs:sequence>

</xs:complexType>

</xs:element>

<!-- ####################################### -->

<!-- ### AddClassesToRange Message Types ### -->

<!-- ####################################### -->

<xs:element name="AddClassesToRangeRequest">

<xs:complexType>

<xs:complexContent>

<xs:extension base="wsdai:RequestType">

<xs:sequence>

<xs:element name="ClassURI" minOccurs="1" maxOccurs="unbounded" type="xs:anyURI"/>

</xs:sequence>

</xs:extension>

</xs:complexContent>

</xs:complexType>

</xs:element>

<xs:element name="AddClassesToRangeDatasetData" substitutionGroup="wsdai:DatasetData">

<xs:complexType mixed="true">

<xs:complexContent>

<xs:restriction base="wsdai:DatasetDataType">

<xs:sequence>

<xs:element name="ClassResult" minOccurs="1" maxOccurs="unbounded">

<xs:complexType>

<xs:sequence>

<xs:element name="ClassURI" type="xs:anyURI"/>

<xs:element name="Result" type="wro:RangeClassAdditionResultType"/>

</xs:sequence>

</xs:complexType>

</xs:element>

</xs:sequence>

</xs:restriction>

</xs:complexContent>

</xs:complexType>

</xs:element>

<xs:element name="AddClassesToRangeDataset" substitutionGroup="wsdai:Dataset">

<xs:complexType>

<xs:complexContent>

<xs:extension base="wsdai:DatasetType">

<xs:sequence>

<xs:element name="NumberOfRangeClassesAdded" type="xs:unsignedLong"/>

</xs:sequence>

</xs:extension>

</xs:complexContent>

</xs:complexType>

</xs:element>

<xs:element name="AddClassesToRangeResponse">

<xs:complexType>

<xs:sequence>

<xs:element ref="wro:AddClassesToRangeDataset"/>

</xs:sequence>

</xs:complexType>

</xs:element>

<!-- ############################################# -->

<!-- ### RemoveRelatedProperties Message Types ### -->

<!-- ############################################# -->

<xs:element name="RemoveRelatedPropertiesRequest">

<xs:complexType>

<xs:complexContent>

<xs:extension base="wsdai:RequestType">

<xs:sequence>

<xs:element name="PropertyURI" minOccurs="0" maxOccurs="unbounded" type="xs:anyURI"/>

<xs:element name="RelationshipType" type="wro:RDFSPropertyLineageRelationshipType"/>

</xs:sequence>

</xs:extension>

</xs:complexContent>

</xs:complexType>

</xs:element>

<xs:element name="RemoveRelatedPropertiesDatasetData" substitutionGroup="wsdai:DatasetData">

<xs:complexType mixed="true">

<xs:complexContent>

<xs:restriction base="wsdai:DatasetDataType">

<xs:sequence>

<xs:element name="PropertyResult" minOccurs="0" maxOccurs="unbounded">

<xs:complexType>

<xs:sequence>

<xs:element name="PropertyURI" type="xs:anyURI"/>

<xs:element name="Result" type="wro:RelatedPropertyRemovalResultType"/>

</xs:sequence>

</xs:complexType>

</xs:element>

</xs:sequence>

</xs:restriction>

</xs:complexContent>

</xs:complexType>

</xs:element>

<xs:element name="RemoveRelatedPropertiesDataset" substitutionGroup="wsdai:Dataset">

<xs:complexType>

<xs:complexContent>

<xs:extension base="wsdai:DatasetType">

<xs:sequence>

<xs:element name="RelationshipType" type="wro:RDFSPropertyLineageRelationshipType"/>

<xs:element name="NumberOfRelatedPropertiesRemoved" type="xs:unsignedLong"/>

</xs:sequence>

</xs:extension>

</xs:complexContent>

</xs:complexType>

</xs:element>

<xs:element name="RemoveRelatedPropertiesResponse">

<xs:complexType>

<xs:sequence>

<xs:element ref="wro:RemoveRelatedPropertiesDataset"/>

</xs:sequence>

</xs:complexType>

</xs:element>

<!-- ############################################# -->

<!-- ### RemoveClassesFromDomain Message Types ### -->

<!-- ############################################# -->

<xs:element name="RemoveClassesFromDomainRequest">

<xs:complexType>

<xs:complexContent>

<xs:extension base="wsdai:RequestType">

<xs:sequence>

<xs:element name="ClassURI" minOccurs="0" maxOccurs="unbounded" type="xs:anyURI"/>

</xs:sequence>

</xs:extension>

</xs:complexContent>

</xs:complexType>

</xs:element>

<xs:element name="RemoveClassesFromDomainDatasetData" substitutionGroup="wsdai:DatasetData">

<xs:complexType mixed="true">

<xs:complexContent>

<xs:restriction base="wsdai:DatasetDataType">

<xs:sequence>

<xs:element name="ClassResult" minOccurs="0" maxOccurs="unbounded">

<xs:complexType>

<xs:sequence>

<xs:element name="ClassURI" type="xs:anyURI"/>

<xs:element name="Result" type="wro:DomainClassRemovalResultType"/>

</xs:sequence>

</xs:complexType>

</xs:element>

</xs:sequence>

</xs:restriction>

</xs:complexContent>

</xs:complexType>

</xs:element>

<xs:element name="RemoveClassesFromDomainDataset" substitutionGroup="wsdai:Dataset">

<xs:complexType>

<xs:complexContent>

<xs:extension base="wsdai:DatasetType">

<xs:sequence>

<xs:element name="NumberOfDomainClassesRemoved" type="xs:unsignedLong"/>

</xs:sequence>

</xs:extension>

</xs:complexContent>

</xs:complexType>

</xs:element>

<xs:element name="RemoveClassesFromDomainResponse">

<xs:complexType>

<xs:sequence>

<xs:element ref="wro:RemoveClassesFromDomainDataset"/>

</xs:sequence>

</xs:complexType>

</xs:element>

<!-- ############################################ -->

<!-- ### RemoveClassesFromRange Message Types ### -->

<!-- ############################################ -->

<xs:element name="RemoveClassesFromRangeRequest">

<xs:complexType>

<xs:complexContent>

<xs:extension base="wsdai:RequestType">

<xs:sequence>

<xs:element name="ClassURI" minOccurs="0" maxOccurs="unbounded" type="xs:anyURI"/>

</xs:sequence>

</xs:extension>

</xs:complexContent>

</xs:complexType>

</xs:element>

<xs:element name="RemoveClassesFromRangeDatasetData" substitutionGroup="wsdai:DatasetData">

<xs:complexType mixed="true">

<xs:complexContent>

<xs:restriction base="wsdai:DatasetDataType">

<xs:sequence>

<xs:element name="ClassResult" minOccurs="0" maxOccurs="unbounded">

<xs:complexType>

<xs:sequence>

<xs:element name="ClassURI" type="xs:anyURI"/>

<xs:element name="Result" type="wro:RangeClassRemovalResultType"/>

</xs:sequence>

</xs:complexType>

</xs:element>

</xs:sequence>

</xs:restriction>

</xs:complexContent>

</xs:complexType>

</xs:element>

<xs:element name="RemoveClassesFromRangeDataset" substitutionGroup="wsdai:Dataset">

<xs:complexType>

<xs:complexContent>

<xs:extension base="wsdai:DatasetType">

<xs:sequence>

<xs:element name="NumberOfRangeClassesRemoved" type="xs:unsignedLong"/>

</xs:sequence>

</xs:extension>

</xs:complexContent>

</xs:complexType>

</xs:element>

<xs:element name="RemoveClassesFromRangeResponse">

<xs:complexType>

<xs:sequence>

<xs:element ref="wro:RemoveClassesFromRangeDataset"/>

</xs:sequence>

</xs:complexType>

</xs:element>

<!-- ########################################## -->

<!-- ### ArePropertiesRelated Message Types ### -->

<!-- ########################################## -->

<xs:element name="ArePropertiesRelatedRequest">

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<xs:complexContent>

<xs:extension base="wsdai:RequestType">

<xs:sequence>

<xs:element name="PropertyURI" minOccurs="1" maxOccurs="unbounded" type="xs:anyURI"/>

<xs:element name="RelationshipType" type="wro:RDFSPropertyLineageRelationshipType"/>

</xs:sequence>

</xs:extension>

</xs:complexContent>

</xs:complexType>

</xs:element>

<xs:element name="ArePropertiesRelatedDatasetData" substitutionGroup="wsdai:DatasetData">

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<xs:complexContent>

<xs:restriction base="wsdai:DatasetDataType">

<xs:sequence>

<xs:element name="PropertyResult" minOccurs="1" maxOccurs="unbounded">

<xs:complexType>

<xs:sequence>

<xs:element name="PropertyURI" type="xs:anyURI"/>

<xs:element name="Result" type="wro:RelatedPropertyCheckResultType"/>

</xs:sequence>

</xs:complexType>

</xs:element>

</xs:sequence>

</xs:restriction>

</xs:complexContent>

</xs:complexType>

</xs:element>

<xs:element name="ArePropertiesRelatedDataset" substitutionGroup="wsdai:Dataset">

<xs:complexType>

<xs:complexContent>

<xs:extension base="wsdai:DatasetType">

<xs:sequence>

<xs:element name="RelationshipType" type="wro:RDFSPropertyLineageRelationshipType"/>

</xs:sequence>

</xs:extension>

</xs:complexContent>

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</xs:element>

<xs:element name="ArePropertiesRelatedResponse">

<xs:complexType>

<xs:sequence>

<xs:element ref="wro:ArePropertiesRelatedDataset"/>

</xs:sequence>

</xs:complexType>

</xs:element>

<!-- ######################################## -->

<!-- ### AreClassesInDomain Message Types ### -->

<!-- ######################################## -->

<xs:element name="AreClassesInDomainRequest">

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<xs:complexContent>

<xs:extension base="wsdai:RequestType">

<xs:sequence>

<xs:element name="ClassURI" minOccurs="1" maxOccurs="unbounded" type="xs:anyURI"/>

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</xs:extension>

</xs:complexContent>

</xs:complexType>

</xs:element>

<xs:element name="AreClassesInDomainDatasetData" substitutionGroup="wsdai:DatasetData">

<xs:complexType mixed="true">

<xs:complexContent>

<xs:restriction base="wsdai:DatasetDataType">

<xs:sequence>

<xs:element name="ClassResult" minOccurs="0" maxOccurs="unbounded">

<xs:complexType>

<xs:sequence>

<xs:element name="ClassURI" type="xs:anyURI"/>

<xs:element name="Result" type="wro:DomainClassCheckResultType"/>

</xs:sequence>

</xs:complexType>

</xs:element>

</xs:sequence>

</xs:restriction>

</xs:complexContent>

</xs:complexType>

</xs:element>

<xs:element name="AreClassesInDomainDataset" substitutionGroup="wsdai:Dataset">

<xs:complexType>

<xs:complexContent>

<xs:extension base="wsdai:DatasetType">

<xs:sequence/>

</xs:extension>

</xs:complexContent>

</xs:complexType>

</xs:element>

<xs:element name="AreClassesInDomainResponse">

<xs:complexType>

<xs:sequence>

<xs:element ref="wro:AreClassesInDomainDataset"/>

</xs:sequence>

</xs:complexType>

</xs:element>

<!-- ####################################### -->

<!-- ### AreClassesInRange Message Types ### -->

<!-- ####################################### -->

<xs:element name="AreClassesInRangeRequest">

<xs:complexType>

<xs:complexContent>

<xs:extension base="wsdai:RequestType">

<xs:sequence>

<xs:element name="ClassURI" minOccurs="1" maxOccurs="unbounded" type="xs:anyURI"/>

</xs:sequence>

</xs:extension>

</xs:complexContent>

</xs:complexType>

</xs:element>

<xs:element name="AreClassesInRangeDatasetData" substitutionGroup="wsdai:DatasetData">

<xs:complexType mixed="true">

<xs:complexContent>

<xs:restriction base="wsdai:DatasetDataType">

<xs:sequence>

<xs:element name="ClassResult" minOccurs="0" maxOccurs="unbounded">

<xs:complexType>

<xs:sequence>

<xs:element name="ClassURI" type="xs:anyURI"/>

<xs:element name="Result" type="wro:RangeClassCheckResultType"/>

</xs:sequence>

</xs:complexType>

</xs:element>

</xs:sequence>

</xs:restriction>

</xs:complexContent>

</xs:complexType>

</xs:element>

<xs:element name="AreClassesInRangeDataset" substitutionGroup="wsdai:Dataset">

<xs:complexType>

<xs:complexContent>

<xs:extension base="wsdai:DatasetType">

<xs:sequence/>

</xs:extension>

</xs:complexContent>

</xs:complexType>

</xs:element>

<xs:element name="AreClassesInRangeResponse">

<xs:complexType>

<xs:sequence>

<xs:element ref="wro:AreClassesInRangeDataset"/>

</xs:sequence>

</xs:complexType>

</xs:element>

</xs:schema>

</wsdl:types>

<!-- WSDL MESSAGES ################################################################### -->

<wsdl:message name="GetPropertyPropertyDocumentRequest">

<wsdl:part name="GetPropertyPropertyDocumentRequest" element="wsdai:GetDataResourcePropertyDocumentRequest"/>

</wsdl:message>

<wsdl:message name="GetPropertyPropertyDocumentResponse">

<wsdl:part name="GetPropertyPropertyDocumentResponse" element="wro:PropertyPropertyDocument"/>

</wsdl:message>

<wsdl:message name="GetRelatedPropertiesRequest">

<wsdl:part name="GetRelatedPropertiesRequest" element="wro:GetRelatedPropertiesRequest"/>

</wsdl:message>

<wsdl:message name="GetRelatedPropertiesResponse">

<wsdl:part name="GetRelatedPropertiesResponse" element="wro:GetRelatedPropertiesResponse"/>

</wsdl:message>

<wsdl:message name="GetDomainClassesRequest">

<wsdl:part name="GetDomainClassesRequest" element="wro:GetDomainClassesRequest"/>

</wsdl:message>

<wsdl:message name="GetDomainClassesResponse">

<wsdl:part name="GetDomainClassesResponse" element="wro:GetDomainClassesResponse"/>

</wsdl:message>

<wsdl:message name="GetRangeClassesRequest">

<wsdl:part name="GetRangeClassesRequest" element="wro:GetRangeClassesRequest"/>

</wsdl:message>

<wsdl:message name="GetRangeClassesResponse">

<wsdl:part name="GetRangeClassesResponse" element="wro:GetRangeClassesResponse"/>

</wsdl:message>

<wsdl:message name="AddRelatedPropertiesRequest">

<wsdl:part name="AddRelatedPropertiesRequest" element="wro:AddRelatedPropertiesRequest"/>

</wsdl:message>

<wsdl:message name="AddRelatedPropertiesResponse">

<wsdl:part name="AddRelatedPropertiesResponse" element="wro:AddRelatedPropertiesResponse"/>

</wsdl:message>

<wsdl:message name="AddClassesToDomainRequest">

<wsdl:part name="AddClassesToDomainRequest" element="wro:AddClassesToDomainRequest"/>

</wsdl:message>

<wsdl:message name="AddClassesToDomainResponse">

<wsdl:part name="AddClassesToDomainResponse" element="wro:AddClassesToDomainResponse"/>

</wsdl:message>

<wsdl:message name="AddClassesToRangeRequest">

<wsdl:part name="AddClassesToRangeRequest" element="wro:AddClassesToRangeRequest"/>

</wsdl:message>

<wsdl:message name="AddClassesToRangeResponse">

<wsdl:part name="AddClassesToRangeResponse" element="wro:AddClassesToRangeResponse"/>

</wsdl:message>

<wsdl:message name="RemoveRelatedPropertiesRequest">

<wsdl:part name="RemoveRelatedPropertiesRequest" element="wro:RemoveRelatedPropertiesRequest"/>

</wsdl:message>

<wsdl:message name="RemoveRelatedPropertiesResponse">

<wsdl:part name="RemoveRelatedPropertiesResponse" element="wro:RemoveRelatedPropertiesResponse"/>

</wsdl:message>

<wsdl:message name="RemoveClassesFromDomainRequest">

<wsdl:part name="RemoveClassesFromDomainRequest" element="wro:RemoveClassesFromDomainRequest"/>

</wsdl:message>

<wsdl:message name="RemoveClassesFromDomainResponse">

<wsdl:part name="RemoveClassesFromDomainResponse" element="wro:RemoveClassesFromDomainResponse"/>

</wsdl:message>

<wsdl:message name="RemoveClassesFromRangeRequest">

<wsdl:part name="RemoveClassesFromRangeRequest" element="wro:RemoveClassesFromRangeRequest"/>

</wsdl:message>

<wsdl:message name="RemoveClassesFromRangeResponse">

<wsdl:part name="RemoveClassesFromRangeResponse" element="wro:RemoveClassesFromRangeResponse"/>

</wsdl:message>

<wsdl:message name="ArePropertiesRelatedRequest">

<wsdl:part name="ArePropertiesRelatedRequest" element="wro:ArePropertiesRelatedRequest"/>

</wsdl:message>

<wsdl:message name="ArePropertiesRelatedResponse">

<wsdl:part name="ArePropertiesRelatedResponse" element="wro:ArePropertiesRelatedResponse"/>

</wsdl:message>

<wsdl:message name="AreClassesInDomainRequest">

<wsdl:part name="AreClassesInDomainRequest" element="wro:AreClassesInDomainRequest"/>

</wsdl:message>

<wsdl:message name="AreClassesInDomainResponse">

<wsdl:part name="AreClassesInDomainResponse" element="wro:AreClassesInDomainResponse"/>

</wsdl:message>

<wsdl:message name="AreClassesInRangeRequest">

<wsdl:part name="AreClassesInRangeRequest" element="wro:AreClassesInRangeRequest"/>

</wsdl:message>

<wsdl:message name="AreClassesInRangeResponse">

<wsdl:part name="AreClassesInRangeResponse" element="wro:AreClassesInRangeResponse"/>

</wsdl:message>

<wsdl:message name="InvalidResourceNameFault">

<wsdl:part name="InvalidResourceNameFault" element="wsdai:InvalidResourceNameFault"/>

</wsdl:message>

<wsdl:message name="DataResourceUnavailableFault">

<wsdl:part name="DataResourceUnavailableFault" element="wsdai:DataResourceUnavailableFault"/>

</wsdl:message>

<wsdl:message name="ServiceBusyFault">

<wsdl:part name="ServiceBusyFault" element="wsdai:ServiceBusyFault"/>

</wsdl:message>

<!-- WSDL PORT TYPES ################################################################# -->

<wsdl:portType name="PropertyAccessPT">

<wsdl:operation name="GetPropertyPropertyDocument">

<wsdl:input name="GetPropertyPropertyDocumentRequest" message="wro:GetPropertyPropertyDocumentRequest"/>

<wsdl:output name="GetPropertyPropertyDocumentResponse" message="wro:GetPropertyPropertyDocumentResponse"/>

<wsdl:fault name="InvalidResourceNameFault" message="wsdai:InvalidResourceNameFault"/>

<wsdl:fault name="DataResourceUnavailableFault" message="wsdai:DataResourceUnavailableFault"/>

<wsdl:fault name="NotAuthorizedFault" message="wsdai:NotAuthorizedFault"/>

<wsdl:fault name="ServiceBusyFault" message="wsdai:ServiceBusyFault"/>

</wsdl:operation>

<wsdl:operation name="GetRelatedProperties">

<wsdl:input name="GetRelatedPropertiesRequest" message="wro:GetRelatedPropertiesRequest"/>

<wsdl:output name="GetRelatedPropertiesResponse" message="wro:GetRelatedPropertiesResponse"/>

<wsdl:fault name="InvalidResourceNameFault" message="wsdai:InvalidResourceNameFault"/>

<wsdl:fault name="DataResourceUnavailableFault" message="wsdai:DataResourceUnavailableFault"/>

<wsdl:fault name="ServiceBusyFault" message="wsdai:ServiceBusyFault"/>

</wsdl:operation>

<wsdl:operation name="GetDomainClasses">

<wsdl:input name="GetDomainClassesRequest" message="wro:GetDomainClassesRequest"/>

<wsdl:output name="GetDomainClassesResponse" message="wro:GetDomainClassesResponse"/>

<wsdl:fault name="InvalidResourceNameFault" message="wsdai:InvalidResourceNameFault"/>

<wsdl:fault name="DataResourceUnavailableFault" message="wsdai:DataResourceUnavailableFault"/>

<wsdl:fault name="ServiceBusyFault" message="wsdai:ServiceBusyFault"/>

</wsdl:operation>

<wsdl:operation name="GetRangeClasses">

<wsdl:input name="GetRangeClassesRequest" message="wro:GetRangeClassesRequest"/>

<wsdl:output name="GetRangeClassesResponse" message="wro:GetRangeClassesResponse"/>

<wsdl:fault name="InvalidResourceNameFault" message="wsdai:InvalidResourceNameFault"/>

<wsdl:fault name="DataResourceUnavailableFault" message="wsdai:DataResourceUnavailableFault"/>

<wsdl:fault name="ServiceBusyFault" message="wsdai:ServiceBusyFault"/>

</wsdl:operation>

<wsdl:operation name="AddRelatedProperties">

<wsdl:input name="AddRelatedPropertiesRequest" message="wro:AddRelatedPropertiesRequest"/>

<wsdl:output name="AddRelatedPropertiesResponse" message="wro:AddRelatedPropertiesResponse"/>

<wsdl:fault name="InvalidResourceNameFault" message="wsdai:InvalidResourceNameFault"/>

<wsdl:fault name="DataResourceUnavailableFault" message="wsdai:DataResourceUnavailableFault"/>

<wsdl:fault name="ServiceBusyFault" message="wsdai:ServiceBusyFault"/>

</wsdl:operation>

<wsdl:operation name="AddClassesToDomain">

<wsdl:input name="AddClassesToDomainRequest" message="wro:AddClassesToDomainRequest"/>

<wsdl:output name="AddClassesToDomainResponse" message="wro:AddClassesToDomainResponse"/>

<wsdl:fault name="InvalidResourceNameFault" message="wsdai:InvalidResourceNameFault"/>

<wsdl:fault name="DataResourceUnavailableFault" message="wsdai:DataResourceUnavailableFault"/>

<wsdl:fault name="ServiceBusyFault" message="wsdai:ServiceBusyFault"/>

</wsdl:operation>

<wsdl:operation name="AddClassesToRange">

<wsdl:input name="AddClassesToRangeRequest" message="wro:AddClassesToRangeRequest"/>

<wsdl:output name="AddClassesToRangeResponse" message="wro:AddClassesToRangeResponse"/>

<wsdl:fault name="InvalidResourceNameFault" message="wsdai:InvalidResourceNameFault"/>

<wsdl:fault name="DataResourceUnavailableFault" message="wsdai:DataResourceUnavailableFault"/>

<wsdl:fault name="ServiceBusyFault" message="wsdai:ServiceBusyFault"/>

</wsdl:operation>

<wsdl:operation name="RemoveRelatedProperties">

<wsdl:input name="RemoveRelatedPropertiesRequest" message="wro:RemoveRelatedPropertiesRequest"/>

<wsdl:output name="RemoveRelatedPropertiesResponse" message="wro:RemoveRelatedPropertiesResponse"/>

<wsdl:fault name="InvalidResourceNameFault" message="wsdai:InvalidResourceNameFault"/>

<wsdl:fault name="DataResourceUnavailableFault" message="wsdai:DataResourceUnavailableFault"/>

<wsdl:fault name="ServiceBusyFault" message="wsdai:ServiceBusyFault"/>

</wsdl:operation>

<wsdl:operation name="RemoveClassesFromDomain">

<wsdl:input name="RemoveClassesFromDomainRequest" message="wro:RemoveClassesFromDomainRequest"/>

<wsdl:output name="RemoveClassesFromDomainResponse" message="wro:RemoveClassesFromDomainResponse"/>

<wsdl:fault name="InvalidResourceNameFault" message="wsdai:InvalidResourceNameFault"/>

<wsdl:fault name="DataResourceUnavailableFault" message="wsdai:DataResourceUnavailableFault"/>

<wsdl:fault name="ServiceBusyFault" message="wsdai:ServiceBusyFault"/>

</wsdl:operation>

<wsdl:operation name="RemoveClassesFromRange">

<wsdl:input name="RemoveClassesFromRangeRequest" message="wro:RemoveClassesFromRangeRequest"/>

<wsdl:output name="RemoveClassesFromRangeResponse" message="wro:RemoveClassesFromRangeResponse"/>

<wsdl:fault name="InvalidResourceNameFault" message="wsdai:InvalidResourceNameFault"/>

<wsdl:fault name="DataResourceUnavailableFault" message="wsdai:DataResourceUnavailableFault"/>

<wsdl:fault name="ServiceBusyFault" message="wsdai:ServiceBusyFault"/>

</wsdl:operation>

<wsdl:operation name="ArePropertiesRelated">

<wsdl:input name="ArePropertiesRelatedRequest" message="wro:ArePropertiesRelatedRequest"/>

<wsdl:output name="ArePropertiesRelatedResponse" message="wro:ArePropertiesRelatedResponse"/>

<wsdl:fault name="InvalidResourceNameFault" message="wsdai:InvalidResourceNameFault"/>

<wsdl:fault name="DataResourceUnavailableFault" message="wsdai:DataResourceUnavailableFault"/>

<wsdl:fault name="ServiceBusyFault" message="wsdai:ServiceBusyFault"/>

</wsdl:operation>

<wsdl:operation name="AreClassesInDomain">

<wsdl:input name="AreClassesInDomainRequest" message="wro:AreClassesInDomainRequest"/>

<wsdl:output name="AreClassesInDomainResponse" message="wro:AreClassesInDomainResponse"/>

<wsdl:fault name="InvalidResourceNameFault" message="wsdai:InvalidResourceNameFault"/>

<wsdl:fault name="DataResourceUnavailableFault" message="wsdai:DataResourceUnavailableFault"/>

<wsdl:fault name="ServiceBusyFault" message="wsdai:ServiceBusyFault"/>

</wsdl:operation>

<wsdl:operation name="AreClassesInRange">

<wsdl:input name="AreClassesInRangeRequest" message="wro:AreClassesInRangeRequest"/>

<wsdl:output name="AreClassesInRangeResponse" message="wro:AreClassesInRangeResponse"/>

<wsdl:fault name="InvalidResourceNameFault" message="wsdai:InvalidResourceNameFault"/>

<wsdl:fault name="DataResourceUnavailableFault" message="wsdai:DataResourceUnavailableFault"/>

<wsdl:fault name="ServiceBusyFault" message="wsdai:ServiceBusyFault"/>

</wsdl:operation>

</wsdl:portType>

</wsdl:definitions>

# Statement

# Statement XML Schema

<xs:schema xmlns:wro="http://www.ogf.org/dais/2008/02/ws-dai-rdfs/ontology"

xmlns:wsdai="http://www.ggf.org/namespaces/2005/12/WS-DAI"

elementFormDefault="qualified"

targetNamespace="http://www.ogf.org/dais/2008/02/ws-dai-rdfs/ontology">

<!--Import the base WS-DAI Schema-->

<xs:import namespace="http://www.ggf.org/namespaces/2005/12/WS-DAI" schemaLocation="..\resources\spec\wsdai\_core\_types.xsd"/>

<!--Include the base WS-DAI-RDFS Core Schema-->

<xs:include schemaLocation="wsdai\_rdfs\_types.xsd"/>

<!-- The static properties that describe a Statement data service -->

<xs:element name="RepositoryName" type="xs:anyURI"/>

<xs:element name="ResourceURI" type="xs:anyURI"/>

<!-- The configuration properties that describe a Statement data service -->

<!-- The property document of a Statement data service -->

<xs:complexType name="StatementPropertyDocumentType">

<xs:complexContent>

<xs:extension base="wsdai:PropertyDocumentType">

<xs:sequence>

<xs:element ref="wro:RepositoryName"/>

<xs:element ref="wro:ResourceURI"/>

</xs:sequence>

</xs:extension>

</xs:complexContent>

</xs:complexType>

<xs:element name="StatementPropertyDocument" type="wro:StatementPropertyDocumentType"/>

<xs:simpleType name="StatementComponentType">

<xs:restriction base="xs:string">

<xs:enumeration value="Subject"/>

<xs:enumeration value="Predicate"/>

<xs:enumeration value="Object"/>

</xs:restriction>

</xs:simpleType>

<xs:simpleType name="ComponentAdditionResultType">

<xs:restriction base="xs:string">

<xs:enumeration value="Success"/>

<xs:enumeration value="ConsumerNotAuthorized"/>

</xs:restriction>

</xs:simpleType>

<xs:simpleType name="ComponentRemovalResultType">

<xs:restriction base="xs:string">

<xs:enumeration value="SingleComponentRemoved"/>

<xs:enumeration value="MultipleComponentsRemoved"/>

<xs:enumeration value="ConsumerNotAuthorized"/>

</xs:restriction>

</xs:simpleType>

<xs:simpleType name="ComponentCheckingResultType">

<xs:restriction base="xs:string">

<xs:enumeration value="True"/>

<xs:enumeration value="False"/>

<xs:enumeration value="ConsumerNotAuthorized"/>

</xs:restriction>

</xs:simpleType>

</xs:schema>

# Statement WSDL

<wsdl:definitions xmlns:wro="http://www.ogf.org/dais/2008/02/ws-dai-rdfs/ontology"

xmlns:wsdai="http://www.ggf.org/namespaces/2005/12/WS-DAI"

name="wsdai-rdfs-ontology"

targetNamespace="http://www.ogf.org/dais/2008/02/ws-dai-rdfs/ontology">

<!-- WSDL IMPORTS #################################################################### -->

<wsdl:import namespace="http://www.ggf.org/namespaces/2005/12/WS-DAI" location="..\resources\spec\wsdai\_core\_porttypes.wsdl"/>

<!-- WSDL TYPES ###################################################################### -->

<wsdl:types>

<xs:schema xmlns:wro="http://www.ogf.org/dais/2008/02/ws-dai-rdfs/ontology"

xmlns:wsdai="http://www.ggf.org/namespaces/2005/12/WS-DAI"

elementFormDefault="qualified"

targetNamespace="http://www.ogf.org/dais/2008/02/ws-dai-rdfs/ontology">

<!--Import the base WS-DAI Schema-->

<xs:import namespace="http://www.ggf.org/namespaces/2005/12/WS-DAI" schemaLocation="..\resources\spec\wsdai\_core\_types.xsd"/>

<!--Include the base WS-DAI-RDF(S) Core Schema-->

<xs:include schemaLocation="wsdai\_rdfs\_types.xsd"/>

<!--Include the external WS-DAI-RDF(S) Resource Schema-->

<xs:include schemaLocation="wsdai\_rdfs\_statement\_types.xsd"/>

<!-- ################################### -->

<!-- ### GetComponents Message Types ### -->

<!-- ################################### -->

<xs:element name="GetComponentsRequest">

<xs:complexType>

<xs:complexContent>

<xs:extension base="wsdai:RequestType">

<xs:sequence>

<xs:element name="ComponentType" type="wro:StatementComponentType"/>

</xs:sequence>

</xs:extension>

</xs:complexContent>

</xs:complexType>

</xs:element>

<xs:element name="GetComponentsDatasetData" substitutionGroup="wsdai:DatasetData">

<xs:complexType mixed="true">

<xs:complexContent>

<xs:restriction base="wsdai:DatasetDataType">

<xs:sequence>

<xs:element name="ComponentURI" minOccurs="0" maxOccurs="unbounded" type="xs:anyURI"/>

</xs:sequence>

</xs:restriction>

</xs:complexContent>

</xs:complexType>

</xs:element>

<xs:element name="GetComponentsDataset" substitutionGroup="wsdai:Dataset">

<xs:complexType>

<xs:complexContent>

<xs:extension base="wsdai:DatasetType">

<xs:sequence>

<xs:element name="ComponentType" type="wro:StatementComponentType"/>

<xs:element name="NumberOfComponents" type="xs:unsignedLong"/>

</xs:sequence>

</xs:extension>

</xs:complexContent>

</xs:complexType>

</xs:element>

<xs:element name="GetComponentsResponse">

<xs:complexType>

<xs:sequence>

<xs:element ref="wro:GetComponentsDataset"/>

</xs:sequence>

</xs:complexType>

</xs:element>

<!-- ################################### -->

<!-- ### AddComponents Message Types ### -->

<!-- ################################### -->

<xs:element name="AddComponentsRequest">

<xs:complexType>

<xs:complexContent>

<xs:extension base="wsdai:RequestType">

<xs:sequence>

<xs:element name="ComponentType" type="wro:StatementComponentType"/>

<xs:element name="ComponentURI" minOccurs="1" maxOccurs="unbounded" type="xs:anyURI"/>

</xs:sequence>

</xs:extension>

</xs:complexContent>

</xs:complexType>

</xs:element>

<xs:element name="AddComponentsDatasetData" substitutionGroup="wsdai:DatasetData">

<xs:complexType mixed="true">

<xs:complexContent>

<xs:restriction base="wsdai:DatasetDataType">

<xs:sequence>

<xs:element name="ComponentResult" minOccurs="1" maxOccurs="unbounded">

<xs:complexType>

<xs:sequence>

<xs:element name="ComponentURI" type="xs:anyURI"/>

<xs:element name="Result" type="wro:ComponentAdditionResultType"/>

</xs:sequence>

</xs:complexType>

</xs:element>

</xs:sequence>

</xs:restriction>

</xs:complexContent>

</xs:complexType>

</xs:element>

<xs:element name="AddComponentsDataset" substitutionGroup="wsdai:Dataset">

<xs:complexType>

<xs:complexContent>

<xs:extension base="wsdai:DatasetType">

<xs:sequence>

<xs:element name="ComponentType" type="wro:StatementComponentType"/>

<xs:element name="NumberOfComponentsAdded" type="xs:unsignedLong"/>

</xs:sequence>

</xs:extension>

</xs:complexContent>

</xs:complexType>

</xs:element>

<xs:element name="AddComponentsResponse">

<xs:complexType>

<xs:sequence>

<xs:element ref="wro:AddComponentsDataset"/>

</xs:sequence>

</xs:complexType>

</xs:element>

<!-- ###################################### -->

<!-- ### RemoveComponents Message Types ### -->

<!-- ###################################### -->

<xs:element name="RemoveComponentsRequest">

<xs:complexType>

<xs:complexContent>

<xs:extension base="wsdai:RequestType">

<xs:sequence>

<xs:element name="ComponentType" minOccurs="0" maxOccurs="1" type="wro:StatementComponentType"/>

<xs:element name="ComponentURI" minOccurs="0" maxOccurs="unbounded" type="xs:anyURI"/>

</xs:sequence>

</xs:extension>

</xs:complexContent>

</xs:complexType>

</xs:element>

<xs:element name="RemoveComponentsDatasetData" substitutionGroup="wsdai:DatasetData">

<xs:complexType mixed="true">

<xs:complexContent>

<xs:restriction base="wsdai:DatasetDataType">

<xs:sequence>

<xs:element name="ComponentResult" minOccurs="0" maxOccurs="unbounded">

<xs:complexType>

<xs:sequence>

<xs:element name="ComponentURI" type="xs:anyURI"/>

<xs:element name="Result" type="wro:ComponentRemovalResultType"/>

</xs:sequence>

</xs:complexType>

</xs:element>

</xs:sequence>

</xs:restriction>

</xs:complexContent>

</xs:complexType>

</xs:element>

<xs:element name="RemoveComponentsDataset" substitutionGroup="wsdai:Dataset">

<xs:complexType>

<xs:complexContent>

<xs:extension base="wsdai:DatasetType">

<xs:sequence>

<xs:element name="ComponentType" minOccurs="0" maxOccurs="1" type="wro:StatementComponentType"/>

<xs:element name="NumberOfComponentsRemoved" type="xs:unsignedLong"/>

</xs:sequence>

</xs:extension>

</xs:complexContent>

</xs:complexType>

</xs:element>

<xs:element name="RemoveComponentsResponse">

<xs:complexType>

<xs:sequence>

<xs:element ref="wro:RemoveComponentsDataset"/>

</xs:sequence>

</xs:complexType>

</xs:element>

<!-- ################################### -->

<!-- ### AreComponents Message Types ### -->

<!-- ################################### -->

<xs:element name="AreComponentsRequest">

<xs:complexType>

<xs:complexContent>

<xs:extension base="wsdai:RequestType">

<xs:sequence>

<xs:element name="ComponentType" type="wro:StatementComponentType"/>

<xs:element name="ComponentURI" minOccurs="1" maxOccurs="unbounded" type="xs:anyURI"/>

</xs:sequence>

</xs:extension>

</xs:complexContent>

</xs:complexType>

</xs:element>

<xs:element name="AreComponentsDatasetData" substitutionGroup="wsdai:DatasetData">

<xs:complexType mixed="true">

<xs:complexContent>

<xs:restriction base="wsdai:DatasetDataType">

<xs:sequence>

<xs:element name="ComponentResult" minOccurs="1" maxOccurs="unbounded">

<xs:complexType>

<xs:sequence>

<xs:element name="ComponentURI" type="xs:anyURI"/>

<xs:element name="Result" type="wro:ComponentCheckingResultType"/>

</xs:sequence>

</xs:complexType>

</xs:element>

</xs:sequence>

</xs:restriction>

</xs:complexContent>

</xs:complexType>

</xs:element>

<xs:element name="AreComponentsDataset" substitutionGroup="wsdai:Dataset">

<xs:complexType>

<xs:complexContent>

<xs:extension base="wsdai:DatasetType">

<xs:sequence>

<xs:element name="ComponentType" type="wro:RDFSStatemenComponentsType"/>

</xs:sequence>

</xs:extension>

</xs:complexContent>

</xs:complexType>

</xs:element>

<xs:element name="AreComponentsResponse">

<xs:complexType>

<xs:sequence>

<xs:element ref="wro:AreComponentsDataset"/>

</xs:sequence>

</xs:complexType>

</xs:element>

</xs:schema>

</wsdl:types>

<!-- WSDL MESSAGES ################################################################### -->

<wsdl:message name="GetStatementPropertyDocumentRequest">

<wsdl:part name="GetStatementPropertyDocumentRequest" element="wsdai:GetDataResourcePropertyDocumentRequest"/>

</wsdl:message>

<wsdl:message name="GetStatementPropertyDocumentResponse">

<wsdl:part name="GetStatementPropertyDocumentResponse" element="wro:StatementPropertyDocument"/>

</wsdl:message>

<wsdl:message name="GetComponentsRequest">

<wsdl:part name="GetComponentsRequest" element="wro:GetComponentsRequest"/>

</wsdl:message>

<wsdl:message name="GetComponentsResponse">

<wsdl:part name="GetComponentsResponse" element="wro:GetComponentsResponse"/>

</wsdl:message>

<wsdl:message name="AddComponentsRequest">

<wsdl:part name="AddComponentsRequest" element="wro:AddComponentsRequest"/>

</wsdl:message>

<wsdl:message name="AddComponentsResponse">

<wsdl:part name="AddComponentsResponse" element="wro:AddComponentsResponse"/>

</wsdl:message>

<wsdl:message name="RemoveComponentsRequest">

<wsdl:part name="RemoveComponentsRequest" element="wro:RemoveComponentsRequest"/>

</wsdl:message>

<wsdl:message name="RemoveComponentsResponse">

<wsdl:part name="RemoveComponentsResponse" element="wro:RemoveComponentsResponse"/>

</wsdl:message>

<wsdl:message name="AreComponentsRequest">

<wsdl:part name="AreComponentsRequest" element="wro:AreComponentsRequest"/>

</wsdl:message>

<wsdl:message name="AreComponentsResponse">

<wsdl:part name="AreComponentsResponse" element="wro:AreComponentsResponse"/>

</wsdl:message>

<wsdl:message name="InvalidResourceNameFault">

<wsdl:part name="InvalidResourceNameFault" element="wsdai:InvalidResourceNameFault"/>

</wsdl:message>

<wsdl:message name="DataResourceUnavailableFault">

<wsdl:part name="DataResourceUnavailableFault" element="wsdai:DataResourceUnavailableFault"/>

</wsdl:message>

<wsdl:message name="ServiceBusyFault">

<wsdl:part name="ServiceBusyFault" element="wsdai:ServiceBusyFault"/>

</wsdl:message>

<!-- WSDL PORT TYPES ################################################################# -->

<wsdl:portType name="StatementAccessPT">

<wsdl:operation name="GetStatementPropertyDocument">

<wsdl:input name="GetStatementPropertyDocumentRequest" message="wro:GetStatementPropertyDocumentRequest"/>

<wsdl:output name="GetStatementPropertyDocumentResponse" message="wro:GetStatementPropertyDocumentResponse"/>

<wsdl:fault name="InvalidResourceNameFault" message="wsdai:InvalidResourceNameFault"/>

<wsdl:fault name="DataResourceUnavailableFault" message="wsdai:DataResourceUnavailableFault"/>

<wsdl:fault name="NotAuthorizedFault" message="wsdai:NotAuthorizedFault"/>

<wsdl:fault name="ServiceBusyFault" message="wsdai:ServiceBusyFault"/>

</wsdl:operation>

<wsdl:operation name="GetComponents">

<wsdl:input name="GetComponentsRequest" message="wro:GetComponentsRequest"/>

<wsdl:output name="GetComponentsResponse" message="wro:GetComponentsResponse"/>

<wsdl:fault name="InvalidResourceNameFault" message="wsdai:InvalidResourceNameFault"/>

<wsdl:fault name="DataResourceUnavailableFault" message="wsdai:DataResourceUnavailableFault"/>

<wsdl:fault name="ServiceBusyFault" message="wsdai:ServiceBusyFault"/>

</wsdl:operation>

<wsdl:operation name="AddComponents">

<wsdl:input name="AddComponentsRequest" message="wro:AddComponentsRequest"/>

<wsdl:output name="AddComponentsResponse" message="wro:AddComponentsResponse"/>

<wsdl:fault name="InvalidResourceNameFault" message="wsdai:InvalidResourceNameFault"/>

<wsdl:fault name="DataResourceUnavailableFault" message="wsdai:DataResourceUnavailableFault"/>

<wsdl:fault name="ServiceBusyFault" message="wsdai:ServiceBusyFault"/>

</wsdl:operation>

<wsdl:operation name="RemoveComponents">

<wsdl:input name="RemoveComponentsRequest" message="wro:RemoveComponentsRequest"/>

<wsdl:output name="RemoveComponentsResponse" message="wro:RemoveComponentsResponse"/>

<wsdl:fault name="InvalidResourceNameFault" message="wsdai:InvalidResourceNameFault"/>

<wsdl:fault name="DataResourceUnavailableFault" message="wsdai:DataResourceUnavailableFault"/>

<wsdl:fault name="ServiceBusyFault" message="wsdai:ServiceBusyFault"/>

</wsdl:operation>

<wsdl:operation name="AreComponents">

<wsdl:input name="AreComponentsRequest" message="wro:AreComponentsRequest"/>

<wsdl:output name="AreComponentsResponse" message="wro:AreComponentsResponse"/>

<wsdl:fault name="InvalidResourceNameFault" message="wsdai:InvalidResourceNameFault"/>

<wsdl:fault name="DataResourceUnavailableFault" message="wsdai:DataResourceUnavailableFault"/>

<wsdl:fault name="ServiceBusyFault" message="wsdai:ServiceBusyFault"/>

</wsdl:operation>

</wsdl:portType>

</wsdl:definitions>

# List

# List XML Schema

<xs:schema xmlns:wro="http://www.ogf.org/dais/2008/02/ws-dai-rdfs/ontology"

xmlns:wsdai="http://www.ggf.org/namespaces/2005/12/WS-DAI"

elementFormDefault="qualified"

targetNamespace="http://www.ogf.org/dais/2008/02/ws-dai-rdfs/ontology">

<!--Import the base WS-DAI Schema-->

<xs:import namespace="http://www.ggf.org/namespaces/2005/12/WS-DAI" schemaLocation="..\resources\spec\wsdai\_core\_types.xsd"/>

<!--Include the base WS-DAI-RDFS Core Schema-->

<xs:include schemaLocation="wsdai\_rdfs\_types.xsd"/>

<!-- The static properties that describe a List data service -->

<xs:element name="RepositoryName" type="xs:anyURI"/>

<xs:element name="ResourceURI" type="xs:anyURI"/>

<!-- The configuration properties that describe a List data service -->

<!-- The property document of a List data service -->

<xs:complexType name="ListPropertyDocumentType">

<xs:complexContent>

<xs:extension base="wsdai:PropertyDocumentType">

<xs:sequence>

<xs:element ref="wro:RepositoryName"/>

<xs:element ref="wro:ResourceURI"/>

</xs:sequence>

</xs:extension>

</xs:complexContent>

</xs:complexType>

<xs:element name="ListPropertyDocument" type="wro:ListPropertyDocumentType"/>

<xs:simpleType name="MemberAdditionResultType">

<xs:restriction base="xs:string">

<xs:enumeration value="Success"/>

<xs:enumeration value="MemberAlreadyExists"/>

<xs:enumeration value="ConsumerNotAuthorized"/>

</xs:restriction>

</xs:simpleType>

<xs:simpleType name="NodeAdditionResultType">

<xs:restriction base="xs:string">

<xs:enumeration value="Success"/>

<xs:enumeration value="NodeAlreadyExists"/>

<xs:enumeration value="ConsumerNotAuthorized"/>

</xs:restriction>

</xs:simpleType>

<xs:simpleType name="MemberRemovalResultType">

<xs:restriction base="xs:string">

<xs:enumeration value="Success"/>

<xs:enumeration value="MemberDoesNotExist"/>

<xs:enumeration value="ConsumerNotAuthorized"/>

</xs:restriction>

</xs:simpleType>

<xs:simpleType name="NodeRemovalResultType">

<xs:restriction base="xs:string">

<xs:enumeration value="Success"/>

<xs:enumeration value="NodeDoesNotExist"/>

<xs:enumeration value="ConsumerNotAuthorized"/>

</xs:restriction>

</xs:simpleType>

<xs:simpleType name="MemberCheckingResultType">

<xs:restriction base="xs:string">

<xs:enumeration value="True"/>

<xs:enumeration value="False"/>

<xs:enumeration value="ConsumerNotAuthorized"/>

</xs:restriction>

</xs:simpleType>

<xs:simpleType name="NodeCheckingResultType">

<xs:restriction base="xs:string">

<xs:enumeration value="True"/>

<xs:enumeration value="False"/>

<xs:enumeration value="ConsumerNotAuthorized"/>

</xs:restriction>

</xs:simpleType>

</xs:schema>

# List WSDL

<wsdl:definitions xmlns:wro="http://www.ogf.org/dais/2008/02/ws-dai-rdfs/ontology"

xmlns:wsdai="http://www.ggf.org/namespaces/2005/12/WS-DAI"

name="wsdai-rdfs-ontology"

targetNamespace="http://www.ogf.org/dais/2008/02/ws-dai-rdfs/ontology">

<!-- WSDL IMPORTS #################################################################### -->

<wsdl:import namespace="http://www.ggf.org/namespaces/2005/12/WS-DAI" location="..\resources\spec\wsdai\_core\_porttypes.wsdl"/>

<!-- WSDL TYPES ###################################################################### -->

<wsdl:types>

<xs:schema xmlns:wro="http://www.ogf.org/dais/2008/02/ws-dai-rdfs/ontology"

xmlns:wsdai="http://www.ggf.org/namespaces/2005/12/WS-DAI"

elementFormDefault="qualified"

targetNamespace="http://www.ogf.org/dais/2008/02/ws-dai-rdfs/ontology">

<!--Import the base WS-DAI Schema-->

<xs:import namespace="http://www.ggf.org/namespaces/2005/12/WS-DAI" schemaLocation="..\resources\spec\wsdai\_core\_types.xsd"/>

<!--Include the base WS-DAI-RDF(S) Core Schema-->

<xs:include schemaLocation="wsdai\_rdfs\_types.xsd"/>

<!--Include the external WS-DAI-RDF(S) Resource Schema-->

<xs:include schemaLocation="wsdai\_rdfs\_list\_types.xsd"/>

<!-- ################################ -->

<!-- ### GetMembers Message Types ### -->

<!-- ################################ -->

<xs:element name="GetMembersRequest">

<xs:complexType>

<xs:complexContent>

<xs:extension base="wsdai:RequestType">

<xs:sequence/>

</xs:extension>

</xs:complexContent>

</xs:complexType>

</xs:element>

<xs:element name="GetMembersDatasetData" substitutionGroup="wsdai:DatasetData">

<xs:complexType mixed="true">

<xs:complexContent>

<xs:restriction base="wsdai:DatasetDataType">

<xs:sequence>

<xs:element name="MemberURI" minOccurs="0" maxOccurs="unbounded" type="xs:anyURI"/>

</xs:sequence>

</xs:restriction>

</xs:complexContent>

</xs:complexType>

</xs:element>

<xs:element name="GetMembersDataset" substitutionGroup="wsdai:Dataset">

<xs:complexType>

<xs:complexContent>

<xs:extension base="wsdai:DatasetType">

<xs:sequence>

<xs:element name="NumberOfMembers" type="xs:unsignedLong"/>

</xs:sequence>

</xs:extension>

</xs:complexContent>

</xs:complexType>

</xs:element>

<xs:element name="GetMembersResponse">

<xs:complexType>

<xs:sequence>

<xs:element ref="wro:GetMembersDataset"/>

</xs:sequence>

</xs:complexType>

</xs:element>

<!-- ############################## -->

<!-- ### GetNodes Message Types ### -->

<!-- ############################## -->

<xs:element name="GetNodesRequest">

<xs:complexType>

<xs:complexContent>

<xs:extension base="wsdai:RequestType">

<xs:sequence/>

</xs:extension>

</xs:complexContent>

</xs:complexType>

</xs:element>

<xs:element name="GetNodesDatasetData" substitutionGroup="wsdai:DatasetData">

<xs:complexType mixed="true">

<xs:complexContent>

<xs:restriction base="wsdai:DatasetDataType">

<xs:sequence>

<xs:element name="NodeURI" minOccurs="0" maxOccurs="unbounded" type="xs:anyURI"/>

</xs:sequence>

</xs:restriction>

</xs:complexContent>

</xs:complexType>

</xs:element>

<xs:element name="GetNodesDataset" substitutionGroup="wsdai:Dataset">

<xs:complexType>

<xs:complexContent>

<xs:extension base="wsdai:DatasetType">

<xs:sequence>

<xs:element name="NumberOfNodes" type="xs:unsignedLong"/>

</xs:sequence>

</xs:extension>

</xs:complexContent>

</xs:complexType>

</xs:element>

<xs:element name="GetNodesResponse">

<xs:complexType>

<xs:sequence>

<xs:element ref="wro:GetNodesDataset"/>

</xs:sequence>

</xs:complexType>

</xs:element>

<!-- ################################ -->

<!-- ### AddMembers Message Types ### -->

<!-- ################################ -->

<xs:element name="AddMembersRequest">

<xs:complexType>

<xs:complexContent>

<xs:extension base="wsdai:RequestType">

<xs:sequence>

<xs:element name="MemberURI" minOccurs="1" maxOccurs="unbounded" type="xs:anyURI"/>

</xs:sequence>

</xs:extension>

</xs:complexContent>

</xs:complexType>

</xs:element>

<xs:element name="AddMembersDatasetData" substitutionGroup="wsdai:DatasetData">

<xs:complexType mixed="true">

<xs:complexContent>

<xs:restriction base="wsdai:DatasetDataType">

<xs:sequence>

<xs:element name="MemberResult" minOccurs="1" maxOccurs="unbounded">

<xs:complexType>

<xs:sequence>

<xs:element name="MemberURI" type="xs:anyURI"/>

<xs:element name="Result" type="wro:MemberAdditionResultType"/>

</xs:sequence>

</xs:complexType>

</xs:element>

</xs:sequence>

</xs:restriction>

</xs:complexContent>

</xs:complexType>

</xs:element>

<xs:element name="AddMembersDataset" substitutionGroup="wsdai:Dataset">

<xs:complexType>

<xs:complexContent>

<xs:extension base="wsdai:DatasetType">

<xs:sequence>

<xs:element name="NumberOfMembersAdded" type="xs:boolean"/>

</xs:sequence>

</xs:extension>

</xs:complexContent>

</xs:complexType>

</xs:element>

<xs:element name="AddMembersResponse">

<xs:complexType>

<xs:sequence>

<xs:element ref="wro:AddMembersDataset"/>

</xs:sequence>

</xs:complexType>

</xs:element>

<!-- ############################## -->

<!-- ### AddNodes Message Types ### -->

<!-- ############################## -->

<xs:element name="AddNodesRequest">

<xs:complexType>

<xs:complexContent>

<xs:extension base="wsdai:RequestType">

<xs:sequence>

<xs:element name="NodeURI" minOccurs="0" maxOccurs="unbounded" type="xs:anyURI"/>

</xs:sequence>

</xs:extension>

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</xs:complexType>

</xs:element>

<xs:element name="AddNodesDatasetData" substitutionGroup="wsdai:DatasetData">

<xs:complexType mixed="true">

<xs:complexContent>

<xs:restriction base="wsdai:DatasetDataType">

<xs:sequence>

<xs:element name="NodeResult" minOccurs="1" maxOccurs="unbounded">

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<xs:sequence>

<xs:element name="NodeURI" type="xs:anyURI"/>

<xs:element name="Result" type="wro:NodeAdditionResultType"/>

</xs:sequence>

</xs:complexType>

</xs:element>

</xs:sequence>

</xs:restriction>

</xs:complexContent>

</xs:complexType>

</xs:element>

<xs:element name="AddNodesDataset" substitutionGroup="wsdai:Dataset">

<xs:complexType>

<xs:complexContent>

<xs:extension base="wsdai:DatasetType">

<xs:sequence>

<xs:element name="NumberOfNodesAdded" type="xs:boolean"/>

</xs:sequence>

</xs:extension>

</xs:complexContent>

</xs:complexType>

</xs:element>

<xs:element name="AddNodesResponse">

<xs:complexType>

<xs:sequence>

<xs:element ref="wro:AddNodesDataset"/>

</xs:sequence>

</xs:complexType>

</xs:element>

<!-- ################################### -->

<!-- ### RemoveMembers Message Types ### -->

<!-- ################################### -->

<xs:element name="RemoveMembersRequest">

<xs:complexType>

<xs:complexContent>

<xs:extension base="wsdai:RequestType">

<xs:sequence>

<xs:element name="MemberURI" minOccurs="0" maxOccurs="unbounded" type="xs:anyURI"/>

</xs:sequence>

</xs:extension>

</xs:complexContent>

</xs:complexType>

</xs:element>

<xs:element name="RemoveMembersDatasetData" substitutionGroup="wsdai:DatasetData">

<xs:complexType mixed="true">

<xs:complexContent>

<xs:restriction base="wsdai:DatasetDataType">

<xs:sequence>

<xs:element name="MemberResult" minOccurs="0" maxOccurs="unbounded">

<xs:complexType>

<xs:sequence>

<xs:element name="MemberURI" type="xs:anyURI"/>

<xs:element name="Result" type="wro:MemberRemovalResultType"/>

</xs:sequence>

</xs:complexType>

</xs:element>

</xs:sequence>

</xs:restriction>

</xs:complexContent>

</xs:complexType>

</xs:element>

<xs:element name="RemoveMembersDataset" substitutionGroup="wsdai:Dataset">

<xs:complexType>

<xs:complexContent>

<xs:extension base="wsdai:DatasetType">

<xs:sequence>

<xs:element name="NumberOfMembersRemoved" type="xs:boolean"/>

</xs:sequence>

</xs:extension>

</xs:complexContent>

</xs:complexType>

</xs:element>

<xs:element name="RemoveMembersResponse">

<xs:complexType>

<xs:sequence>

<xs:element ref="wro:RemoveMembersDataset"/>

</xs:sequence>

</xs:complexType>

</xs:element>

<!-- ################################# -->

<!-- ### RemoveNodes Message Types ### -->

<!-- ################################# -->

<xs:element name="RemoveNodesRequest">

<xs:complexType>

<xs:complexContent>

<xs:extension base="wsdai:RequestType">

<xs:sequence>

<xs:element name="NodeURI" minOccurs="0" maxOccurs="unbounded" type="xs:anyURI"/>

</xs:sequence>

</xs:extension>

</xs:complexContent>

</xs:complexType>

</xs:element>

<xs:element name="RemoveNodesDatasetData" substitutionGroup="wsdai:DatasetData">

<xs:complexType mixed="true">

<xs:complexContent>

<xs:restriction base="wsdai:DatasetDataType">

<xs:sequence>

<xs:element name="NodeResult" minOccurs="0" maxOccurs="unbounded">

<xs:complexType>

<xs:sequence>

<xs:element name="NodeURI" type="xs:anyURI"/>

<xs:element name="Result" type="wro:NodeRemovalResultType"/>

</xs:sequence>

</xs:complexType>

</xs:element>

</xs:sequence>

</xs:restriction>

</xs:complexContent>

</xs:complexType>

</xs:element>

<xs:element name="RemoveNodesDataset" substitutionGroup="wsdai:Dataset">

<xs:complexType>

<xs:complexContent>

<xs:extension base="wsdai:DatasetType">

<xs:sequence>

<xs:element name="NumberOfNodesRemoved" type="xs:boolean"/>

</xs:sequence>

</xs:extension>

</xs:complexContent>

</xs:complexType>

</xs:element>

<xs:element name="RemoveNodesResponse">

<xs:complexType>

<xs:sequence>

<xs:element ref="wro:RemoveNodesDataset"/>

</xs:sequence>

</xs:complexType>

</xs:element>

<!-- ################################ -->

<!-- ### AreMembers Message Types ### -->

<!-- ################################ -->

<xs:element name="AreMembersRequest">

<xs:complexType>

<xs:complexContent>

<xs:extension base="wsdai:RequestType">

<xs:sequence>

<xs:element name="MemberURI" minOccurs="1" maxOccurs="unbounded" type="xs:anyURI"/>

</xs:sequence>

</xs:extension>

</xs:complexContent>

</xs:complexType>

</xs:element>

<xs:element name="AreMembersDatasetData" substitutionGroup="wsdai:DatasetData">

<xs:complexType mixed="true">

<xs:complexContent>

<xs:restriction base="wsdai:DatasetDataType">

<xs:sequence>

<xs:element name="MemberResult" minOccurs="1" maxOccurs="unbounded">

<xs:complexType>

<xs:sequence>

<xs:element name="MemberURI" type="xs:anyURI"/>

<xs:element name="Result" type="wro:MemberCheckingResultType"/>

</xs:sequence>

</xs:complexType>

</xs:element>

</xs:sequence>

</xs:restriction>

</xs:complexContent>

</xs:complexType>

</xs:element>

<xs:element name="AreMembersDataset" substitutionGroup="wsdai:Dataset">

<xs:complexType>

<xs:complexContent>

<xs:extension base="wsdai:DatasetType">

<xs:sequence/>

</xs:extension>

</xs:complexContent>

</xs:complexType>

</xs:element>

<xs:element name="AreMembersResponse">

<xs:complexType>

<xs:sequence>

<xs:element ref="wro:AreMembersDataset"/>

</xs:sequence>

</xs:complexType>

</xs:element>

<!-- ############################## -->

<!-- ### AreNodes Message Types ### -->

<!-- ############################## -->

<xs:element name="AreNodesRequest">

<xs:complexType>

<xs:complexContent>

<xs:extension base="wsdai:RequestType">

<xs:sequence>

<xs:element name="NodeURI" minOccurs="1" maxOccurs="unbounded" type="xs:anyURI"/>

</xs:sequence>

</xs:extension>

</xs:complexContent>

</xs:complexType>

</xs:element>

<xs:element name="AreNodesDatasetData" substitutionGroup="wsdai:DatasetData">

<xs:complexType mixed="true">

<xs:complexContent>

<xs:restriction base="wsdai:DatasetDataType">

<xs:sequence>

<xs:element name="NodeResult" minOccurs="1" maxOccurs="unbounded">

<xs:complexType>

<xs:sequence>

<xs:element name="NodeURI" type="xs:anyURI"/>

<xs:element name="Result" type="wro:NodeCheckingResultType"/>

</xs:sequence>

</xs:complexType>

</xs:element>

</xs:sequence>

</xs:restriction>

</xs:complexContent>

</xs:complexType>

</xs:element>

<xs:element name="AreNodesDataset" substitutionGroup="wsdai:Dataset">

<xs:complexType>

<xs:complexContent>

<xs:extension base="wsdai:DatasetType">

<xs:sequence/>

</xs:extension>

</xs:complexContent>

</xs:complexType>

</xs:element>

<xs:element name="AreNodesResponse">

<xs:complexType>

<xs:sequence>

<xs:element ref="wro:AreNodesDataset"/>

</xs:sequence>

</xs:complexType>

</xs:element>

<!-- ############################################ -->

<!-- ### GetListIteratorFactory Message Types ### -->

<!-- ############################################ -->

<xs:element name="GetListIteratorFactoryRequest">

<xs:complexType>

<xs:complexContent>

<xs:extension base="wsdai:FactoryRequestType">

<xs:sequence/>

</xs:extension>

</xs:complexContent>

</xs:complexType>

</xs:element>

<xs:element name="GetListIteratorFactoryResponse" type="wsdai:DataResourceAddressListType"/>

<!-- ############################# -->

<!-- ### GetNext Message Types ### -->

<!-- ############################# -->

<xs:element name="GetNextRequest">

<xs:complexType>

<xs:complexContent>

<xs:extension base="wsdai:RequestType">

<xs:sequence>

<xs:element name="Direction" minOccurs="0" maxOccurs="1" type="wro:ListIterationDirectionType"/>

</xs:sequence>

</xs:extension>

</xs:complexContent>

</xs:complexType>

</xs:element>

<xs:element name="GetNextDatasetData" substitutionGroup="wsdai:DatasetData">

<xs:complexType mixed="true">

<xs:complexContent>

<xs:restriction base="wsdai:DatasetDataType">

<xs:sequence>

<xs:element name="MemberURI" minOccurs="0" maxOccurs="unbounded" type="xs:anyURI"/>

</xs:sequence>

</xs:restriction>

</xs:complexContent>

</xs:complexType>

</xs:element>

<xs:element name="GetNextDataset" substitutionGroup="wsdai:Dataset">

<xs:complexType>

<xs:complexContent>

<xs:extension base="wsdai:DatasetType">

<xs:sequence>

<xs:element name="Direction" type="wro:ListIterationDirectionType"/>

<xs:element name="NumberOfMembers" type="xs:unsignedLong"/>

</xs:sequence>

</xs:extension>

</xs:complexContent>

</xs:complexType>

</xs:element>

<xs:element name="GetNextResponse">

<xs:complexType>

<xs:sequence>

<xs:element ref="wro:GetNextDataset"/>

</xs:sequence>

</xs:complexType>

</xs:element>

<!-- ############################# -->

<!-- ### HasNext Message Types ### -->

<!-- ############################# -->

<xs:element name="HasNextRequest">

<xs:complexType>

<xs:complexContent>

<xs:extension base="wsdai:RequestType">

<xs:sequence>

<xs:element name="DirectionType" minOccurs="0" maxOccurs="1" type="wro:ListIterationDirectionType"/>

</xs:sequence>

</xs:extension>

</xs:complexContent>

</xs:complexType>

</xs:element>

<xs:element name="HasNextDatasetData" substitutionGroup="wsdai:DatasetData">

<xs:complexType mixed="true">

<xs:complexContent>

<xs:restriction base="wsdai:DatasetDataType">

<xs:sequence>

<xs:element name="Result" type="wro:MemberAvailabilityCheckResultType"/>

</xs:sequence>

</xs:restriction>

</xs:complexContent>

</xs:complexType>

</xs:element>

<xs:element name="HasNextDataset" substitutionGroup="wsdai:Dataset">

<xs:complexType>

<xs:complexContent>

<xs:extension base="wsdai:DatasetType">

<xs:sequence>

<xs:element name="Direction" type="wro:ListIterationDirectionType"/>

</xs:sequence>

</xs:extension>

</xs:complexContent>

</xs:complexType>

</xs:element>

<xs:element name="HasNextResponse">

<xs:complexType>

<xs:sequence>

<xs:element ref="wro:HasNextDataset"/>

</xs:sequence>

</xs:complexType>

</xs:element>

</xs:schema>

</wsdl:types>

<!-- WSDL MESSAGES ################################################################### -->

<wsdl:message name="GetListPropertyDocumentRequest">

<wsdl:part name="GetListPropertyDocumentRequest" element="wsdai:GetDataResourcePropertyDocumentRequest"/>

</wsdl:message>

<wsdl:message name="GetListPropertyDocumentResponse">

<wsdl:part name="GetListPropertyDocumentResponse" element="wro:ListPropertyDocument"/>

</wsdl:message>

<wsdl:message name="GetMembersRequest">

<wsdl:part name="GetMembersRequest" element="wro:GetMembersRequest"/>

</wsdl:message>

<wsdl:message name="GetMembersResponse">

<wsdl:part name="GetMembersResponse" element="wro:GetMembersResponse"/>

</wsdl:message>

<wsdl:message name="GetNodesRequest">

<wsdl:part name="GetNodesRequest" element="wro:GetNodesRequest"/>

</wsdl:message>

<wsdl:message name="GetNodesResponse">

<wsdl:part name="GetNodesResponse" element="wro:GetNodesResponse"/>

</wsdl:message>

<wsdl:message name="AddMembersRequest">

<wsdl:part name="AddMembersRequest" element="wro:AddMembersRequest"/>

</wsdl:message>

<wsdl:message name="AddMembersResponse">

<wsdl:part name="AddMembersResponse" element="wro:AddMembersResponse"/>

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<wsdl:part name="AddNodesRequest" element="wro:AddNodesRequest"/>

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<wsdl:message name="AreNodesResponse">

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<wsdl:part name="GetListIteratorFactoryRequest" element="wro:GetListIteratorFactoryRequest"/>

</wsdl:message>

<wsdl:message name="GetListIteratorFactoryResponse">

<wsdl:part name="GetListIteratorFactoryResponse" element="wro:GetListIteratorFactoryResponse"/>

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</wsdl:message>

<wsdl:message name="HasNextResponse">

<wsdl:part name="HasNextResponse" element="wro:HasNextResponse"/>

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<wsdl:message name="MemberNotDefinedFault">

<wsdl:part name="MemberNotDefinedFault" element="wro:MemberNotDefinedFault"/>

</wsdl:message>

<wsdl:message name="InvalidResourceNameFault">

<wsdl:part name="InvalidResourceNameFault" element="wsdai:InvalidResourceNameFault"/>

</wsdl:message>

<wsdl:message name="DataResourceUnavailableFault">

<wsdl:part name="DataResourceUnavailableFault" element="wsdai:DataResourceUnavailableFault"/>

</wsdl:message>

<wsdl:message name="ServiceBusyFault">

<wsdl:part name="ServiceBusyFault" element="wsdai:ServiceBusyFault"/>

</wsdl:message>

<wsdl:message name="InvalidPortTypeQNameFault">

<wsdl:part name="InvalidPortTypeQNameFault" element="wsdai:InvalidPortTypeQNameFault"/>

</wsdl:message>

<wsdl:message name="InvalidConfigurationDocumentFault">

<wsdl:part name="InvalidConfigurationDocumentFault" element="wsdai:InvalidConfigurationDocumentFault"/>

</wsdl:message>

<wsdl:message name="NotAuthorizedFault">

<wsdl:part name="NotAuthorizedFault" element="wsdai:NotAuthorizedFault"/>

</wsdl:message>

<!-- WSDL PORT TYPES ################################################################# -->

<wsdl:portType name="ListAccessPT">

<wsdl:operation name="GetListPropertyDocument">

<wsdl:input name="GetListPropertyDocumentRequest" message="wro:GetListPropertyDocumentRequest"/>

<wsdl:output name="GetListPropertyDocumentResponse" message="wro:GetListPropertyDocumentResponse"/>

<wsdl:fault name="InvalidResourceNameFault" message="wsdai:InvalidResourceNameFault"/>

<wsdl:fault name="DataResourceUnavailableFault" message="wsdai:DataResourceUnavailableFault"/>

<wsdl:fault name="NotAuthorizedFault" message="wsdai:NotAuthorizedFault"/>

<wsdl:fault name="ServiceBusyFault" message="wsdai:ServiceBusyFault"/>

</wsdl:operation>

<wsdl:operation name="GetMembers">

<wsdl:input name="GetMembersRequest" message="wro:GetMembersRequest"/>

<wsdl:output name="GetMembersResponse" message="wro:GetMembersResponse"/>

<wsdl:fault name="InvalidResourceNameFault" message="wsdai:InvalidResourceNameFault"/>

<wsdl:fault name="DataResourceUnavailableFault" message="wsdai:DataResourceUnavailableFault"/>

<wsdl:fault name="ServiceBusyFault" message="wsdai:ServiceBusyFault"/>

</wsdl:operation>

<wsdl:operation name="GetNodes">

<wsdl:input name="GetNodesRequest" message="wro:GetNodesRequest"/>

<wsdl:output name="GetNodesResponse" message="wro:GetNodesResponse"/>

<wsdl:fault name="InvalidResourceNameFault" message="wsdai:InvalidResourceNameFault"/>

<wsdl:fault name="DataResourceUnavailableFault" message="wsdai:DataResourceUnavailableFault"/>

<wsdl:fault name="ServiceBusyFault" message="wsdai:ServiceBusyFault"/>

</wsdl:operation>

<wsdl:operation name="AddMembers">

<wsdl:input name="AddMembersRequest" message="wro:AddMembersRequest"/>

<wsdl:output name="AddMembersResponse" message="wro:AddMembersResponse"/>

<wsdl:fault name="InvalidResourceNameFault" message="wsdai:InvalidResourceNameFault"/>

<wsdl:fault name="DataResourceUnavailableFault" message="wsdai:DataResourceUnavailableFault"/>

<wsdl:fault name="ServiceBusyFault" message="wsdai:ServiceBusyFault"/>

</wsdl:operation>

<wsdl:operation name="AddNodes">

<wsdl:input name="AddNodesRequest" message="wro:AddNodesRequest"/>

<wsdl:output name="AddNodesResponse" message="wro:AddNodesResponse"/>

<wsdl:fault name="InvalidResourceNameFault" message="wsdai:InvalidResourceNameFault"/>

<wsdl:fault name="DataResourceUnavailableFault" message="wsdai:DataResourceUnavailableFault"/>

<wsdl:fault name="ServiceBusyFault" message="wsdai:ServiceBusyFault"/>

</wsdl:operation>

<wsdl:operation name="RemoveMembers">

<wsdl:input name="RemoveMembersRequest" message="wro:RemoveMembersRequest"/>

<wsdl:output name="RemoveMembersResponse" message="wro:RemoveMembersResponse"/>

<wsdl:fault name="InvalidResourceNameFault" message="wsdai:InvalidResourceNameFault"/>

<wsdl:fault name="DataResourceUnavailableFault" message="wsdai:DataResourceUnavailableFault"/>

<wsdl:fault name="ServiceBusyFault" message="wsdai:ServiceBusyFault"/>

</wsdl:operation>

<wsdl:operation name="RemoveNodes">

<wsdl:input name="RemoveNodesRequest" message="wro:RemoveNodesRequest"/>

<wsdl:output name="RemoveNodesResponse" message="wro:RemoveNodesResponse"/>

<wsdl:fault name="InvalidResourceNameFault" message="wsdai:InvalidResourceNameFault"/>

<wsdl:fault name="DataResourceUnavailableFault" message="wsdai:DataResourceUnavailableFault"/>

<wsdl:fault name="ServiceBusyFault" message="wsdai:ServiceBusyFault"/>

</wsdl:operation>

<wsdl:operation name="AreMembers">

<wsdl:input name="AreMembersRequest" message="wro:AreMembersRequest"/>

<wsdl:output name="AreMembersResponse" message="wro:AreMembersResponse"/>

<wsdl:fault name="InvalidResourceNameFault" message="wsdai:InvalidResourceNameFault"/>

<wsdl:fault name="DataResourceUnavailableFault" message="wsdai:DataResourceUnavailableFault"/>

<wsdl:fault name="ServiceBusyFault" message="wsdai:ServiceBusyFault"/>

</wsdl:operation>

<wsdl:operation name="AreNodes">

<wsdl:input name="AreNodesRequest" message="wro:AreNodesRequest"/>

<wsdl:output name="AreNodesResponse" message="wro:AreNodesResponse"/>

<wsdl:fault name="InvalidResourceNameFault" message="wsdai:InvalidResourceNameFault"/>

<wsdl:fault name="DataResourceUnavailableFault" message="wsdai:DataResourceUnavailableFault"/>

<wsdl:fault name="ServiceBusyFault" message="wsdai:ServiceBusyFault"/>

</wsdl:operation>

</wsdl:portType>

<wsdl:portType name="ListFactoryPT">

<wsdl:operation name="GetListIteratorFactory">

<wsdl:input name="GetListIteratorFactoryRequest" message="wro:GetListIteratorFactoryRequest"/>

<wsdl:output name="GetListIteratorFactoryResponse" message="wro:GetListIteratorFactoryResponse"/>

<wsdl:fault name="InvalidResourceNameFault" message="wsdai:InvalidResourceNameFault"/>

<wsdl:fault name="DataResourceUnavailableFault" message="wsdai:DataResourceUnavailableFault"/>

<wsdl:fault name="InvalidPortTypeQNameFault" message="wsdai:InvalidPortTypeQNameFault"/>

<wsdl:fault name="InvalidConfigurationDocumentFault" message="wsdai:InvalidConfigurationDocumentFault"/>

<wsdl:fault name="NotAuthorizedFault" message="wsdai:NotAuthorizedFault"/>

<wsdl:fault name="ServiceBusyFault" message="wsdai:ServiceBusyFault"/>

</wsdl:operation>

</wsdl:portType>

<wsdl:portType name="ListIteratorAccessPT">

<wsdl:operation name="GetListPropertyDocument">

<wsdl:input name="GetListPropertyDocumentRequest" message="wro:GetListPropertyDocumentRequest"/>

<wsdl:output name="GetListPropertyDocumentResponse" message="wro:GetListPropertyDocumentResponse"/>

<wsdl:fault name="InvalidResourceNameFault" message="wsdai:InvalidResourceNameFault"/>

<wsdl:fault name="DataResourceUnavailableFault" message="wsdai:DataResourceUnavailableFault"/>

<wsdl:fault name="NotAuthorizedFault" message="wsdai:NotAuthorizedFault"/>

<wsdl:fault name="ServiceBusyFault" message="wsdai:ServiceBusyFault"/>

</wsdl:operation>

<wsdl:operation name="GetNext">

<wsdl:input name="GetNextRequest" message="wro:GetNextRequest"/>

<wsdl:output name="GetNextResponse" message="wro:GetNextResponse"/>

<wsdl:fault name="InvalidResourceNameFault" message="wsdai:InvalidResourceNameFault"/>

<wsdl:fault name="DataResourceUnavailableFault" message="wsdai:DataResourceUnavailableFault"/>

<wsdl:fault name="ServiceBusyFault" message="wsdai:ServiceBusyFault"/>

<wsdl:fault name="MemberNotDefinedFault" message="wro:MemberNotDefinedFault"/>

</wsdl:operation>

<wsdl:operation name="HasNext">

<wsdl:input name="HasNextRequest" message="wro:HasNextRequest"/>

<wsdl:output name="HasNextResponse" message="wro:HasNextResponse"/>

<wsdl:fault name="InvalidResourceNameFault" message="wsdai:InvalidResourceNameFault"/>

<wsdl:fault name="DataResourceUnavailableFault" message="wsdai:DataResourceUnavailableFault"/>

<wsdl:fault name="ServiceBusyFault" message="wsdai:ServiceBusyFault"/>

</wsdl:operation>

</wsdl:portType>

</wsdl:definitions>

# Container

# Container XML Schema

<xs:schema xmlns:wro="http://www.ogf.org/dais/2008/02/ws-dai-rdfs/ontology"

xmlns:wsdai="http://www.ggf.org/namespaces/2005/12/WS-DAI"

elementFormDefault="qualified"

targetNamespace="http://www.ogf.org/dais/2008/02/ws-dai-rdfs/ontology">

<!--Import the base WS-DAI Schema-->

<xs:import namespace="http://www.ggf.org/namespaces/2005/12/WS-DAI" schemaLocation="..\resources\spec\wsdai\_core\_types.xsd"/>

<!--Include the base WS-DAI-RDFS Core Schema-->

<xs:include schemaLocation="wsdai\_rdfs\_types.xsd"/>

<!-- The static properties that describe a Container data service -->

<xs:element name="RepositoryName" type="xs:anyURI"/>

<xs:element name="ResourceURI" type="xs:anyURI"/>

<xs:element name="ContainerType" type="xs:anyURI"/>

<!-- The configuration properties that describe a Container data service -->

<!-- The property document of a Container data service -->

<xs:complexType name="ContainerPropertyDocumentType">

<xs:complexContent>

<xs:extension base="wsdai:PropertyDocumentType">

<xs:sequence>

<xs:element ref="wro:RepositoryName"/>

<xs:element ref="wro:ResourceURI"/>

<xs:element ref="wro:ContainerType"/>

</xs:sequence>

</xs:extension>

</xs:complexContent>

</xs:complexType>

<xs:element name="ContainerPropertyDocument" type="wro:ContainerPropertyDocumentType"/>

<xs:simpleType name="MemberRetrievalResultType">

<xs:restriction base="xs:string">

<xs:enumeration value="Success"/>

<xs:enumeration value="IndexOutOfBounds"/>

<xs:enumeration value="ConsumerNotAuthorized"/>

</xs:restriction>

</xs:simpleType>

<xs:simpleType name="MemberAdditionResultType">

<xs:restriction base="xs:string">

<xs:enumeration value="Success"/>

<xs:enumeration value="MemberAlreadyExists"/>

<xs:enumeration value="ConsumerNotAuthorized"/>

</xs:restriction>

</xs:simpleType>

<xs:simpleType name="MemberRemovalResultType">

<xs:restriction base="xs:string">

<xs:enumeration value="Success"/>

<xs:enumeration value="MemberDoesNotExist"/>

<xs:enumeration value="ConsumerNotAuthorized"/>

</xs:restriction>

</xs:simpleType>

<xs:simpleType name="MemberCheckingResultType">

<xs:restriction base="xs:string">

<xs:enumeration value="True"/>

<xs:enumeration value="False"/>

<xs:enumeration value="ConsumerNotAuthorized"/>

</xs:restriction>

</xs:simpleType>

<xs:simpleType name="AlternativeMemberAdditionResultType">

<xs:restriction base="xs:string">

<xs:enumeration value="Success"/>

<xs:enumeration value="MemberAlreadyExists"/>

<xs:enumeration value="ConsumerNotAuthorized"/>

</xs:restriction>

</xs:simpleType>

<xs:simpleType name="AlternativeMemberRemovalResultType">

<xs:restriction base="xs:string">

<xs:enumeration value="Success"/>

<xs:enumeration value="MemberDoesNotExist"/>

<xs:enumeration value="ConsumerNotAuthorized"/>

</xs:restriction>

</xs:simpleType>

<xs:simpleType name="DefaultMemberCheckingResultType">

<xs:restriction base="xs:string">

<xs:enumeration value="True"/>

<xs:enumeration value="False"/>

<xs:enumeration value="ConsumerNotAuthorized"/>

</xs:restriction>

</xs:simpleType>

<xs:simpleType name="AlternativeMemberAdditionResultType">

<xs:restriction base="xs:string">

<xs:enumeration value="Success"/>

<xs:enumeration value="MemberAlreadyExists"/>

<xs:enumeration value="InvalidAlternativePosition"/>

<xs:enumeration value="ConsumerNotAuthorized"/>

</xs:restriction>

</xs:simpleType>

<xs:simpleType name="AlternativeMemberRemovalResultType">

<xs:restriction base="xs:string">

<xs:enumeration value="Success"/>

<xs:enumeration value="MemberDoesNotExist"/>

<xs:enumeration value="InvalidAlternativePosition"/>

<xs:enumeration value="ConsumerNotAuthorized"/>

</xs:restriction>

</xs:simpleType>

<xs:simpleType name="AlternativeMemberCheckingResultType">

<xs:restriction base="xs:string">

<xs:enumeration value="True"/>

<xs:enumeration value="False"/>

<xs:enumeration value="ConsumerNotAuthorized"/>

</xs:restriction>

</xs:simpleType>

</xs:schema>

# Container WSDL

<wsdl:definitions xmlns:wro="http://www.ogf.org/dais/2008/02/ws-dai-rdfs/ontology"

xmlns:wsdai="http://www.ggf.org/namespaces/2005/12/WS-DAI"

name="wsdai-rdfs-ontology"

targetNamespace="http://www.ogf.org/dais/2008/02/ws-dai-rdfs/ontology">

<!-- WSDL IMPORTS #################################################################### -->

<wsdl:import namespace="http://www.ggf.org/namespaces/2005/12/WS-DAI" location="..\resources\spec\wsdai\_core\_porttypes.wsdl"/>

<!-- WSDL TYPES ###################################################################### -->

<wsdl:types>

<xs:schema xmlns:wro="http://www.ogf.org/dais/2008/02/ws-dai-rdfs/ontology"

xmlns:wsdai="http://www.ggf.org/namespaces/2005/12/WS-DAI"

elementFormDefault="qualified"

targetNamespace="http://www.ogf.org/dais/2008/02/ws-dai-rdfs/ontology">

<!--Import the base WS-DAI Schema-->

<xs:import namespace="http://www.ggf.org/namespaces/2005/12/WS-DAI" schemaLocation="..\resources\spec\wsdai\_core\_types.xsd"/>

<!--Include the base WS-DAI-RDF(S) Core Schema-->

<xs:include schemaLocation="wsdai\_rdfs\_types.xsd"/>

<!--Include the external WS-DAI-RDF(S) Resource Schema-->

<xs:include schemaLocation="wsdai\_rdfs\_container\_types.xsd"/>

<!-- ################################ -->

<!-- ### GetMembers Message Types ### -->

<!-- ################################ -->

<xs:element name="GetMembersRequest">

<xs:complexType>

<xs:complexContent>

<xs:extension base="wsdai:RequestType">

<xs:sequence>

<xs:element name="Position" minOccurs="0" maxOccurs="unbounded" type="xs:integer"/>

</xs:sequence>

</xs:extension>

</xs:complexContent>

</xs:complexType>

</xs:element>

<xs:element name="GetMembersDatasetData" substitutionGroup="wsdai:DatasetData">

<xs:complexType mixed="true">

<xs:complexContent>

<xs:restriction base="wsdai:DatasetDataType">

<xs:sequence>

<xs:element name="PositionResult" minOccurs="1" maxOccurs="unbounded" type=""/>

</xs:sequence>

</xs:restriction>

</xs:complexContent>

</xs:complexType>

</xs:element>

<xs:element name="GetMembersDataset" substitutionGroup="wsdai:Dataset">

<xs:complexType>

<xs:complexContent>

<xs:extension base="wsdai:DatasetType">

<xs:sequence>

<xs:element name="NumberOfMembers" type="xs:unsignedLong"/>

</xs:sequence>

</xs:extension>

</xs:complexContent>

</xs:complexType>

</xs:element>

<xs:element name="GetMembersResponse">

<xs:complexType>

<xs:sequence>

<xs:element ref="wro:GetMembersDataset"/>

</xs:sequence>

</xs:complexType>

</xs:element>

<!-- ######################################## -->

<!-- ### GetNumberOfMembers Message Types ### -->

<!-- ######################################## -->

<xs:element name="GetNumberOfMembersRequest">

<xs:complexType>

<xs:complexContent>

<xs:extension base="wsdai:RequestType">

<xs:sequence>

<xs:element name="Position" minOccurs="0" maxOccurs="unbounded" type="xs:unsignedLong"/>

</xs:sequence>

</xs:extension>

</xs:complexContent>

</xs:complexType>

</xs:element>

<xs:element name="GetNumberOfMembersDatasetData" substitutionGroup="wsdai:DatasetData">

<xs:complexType mixed="true">

<xs:complexContent>

<xs:restriction base="wsdai:DatasetDataType">

<xs:sequence>

<xs:element name="PositionResult" minOccurs="1" maxOccurs="unbounded">

<xs:complexType>

<xs:sequence>

<xs:element name="Position" type="xs:unsignedLong"/>

<xs:element name="NumberOfMembers" type="xs:unsignedLong"/>

<xs:element name="Result" type="wro:NumberOfMembersRetrievalResultType"/>

</xs:sequence>

</xs:complexType>

</xs:element>

</xs:sequence>

</xs:restriction>

</xs:complexContent>

</xs:complexType>

</xs:element>

<xs:element name="GetNumberOfMembersDataset" substitutionGroup="wsdai:Dataset">

<xs:complexType>

<xs:complexContent>

<xs:extension base="wsdai:DatasetType">

<xs:sequence>

<xs:element name="NumberOfMembers" type="xs:unsignedLong"/>

</xs:sequence>

</xs:extension>

</xs:complexContent>

</xs:complexType>

</xs:element>

<xs:element name="GetNumberOfMembersResponse">

<xs:complexType>

<xs:sequence>

<xs:element ref="wro:GetNumberOfMembersDataset"/>

</xs:sequence>

</xs:complexType>

</xs:element>

<!-- ################################ -->

<!-- ### AddMembers Message Types ### -->

<!-- ################################ -->

<xs:element name="AddMembersRequest">

<xs:complexType>

<xs:complexContent>

<xs:extension base="wsdai:RequestType">

<xs:sequence>

<xs:element name="MemberSet" minOccurs="1" maxOccurs="unbounded">

<xs:complexType>

<xs:sequence>

<xs:element name="Position" type="xs:unsignedLong"/>

<xs:element name="MemberURI" minOccurs="1" maxOccurs="unbounded" type="xs:anyURI"/>

</xs:sequence>

</xs:complexType>

</xs:element>

</xs:sequence>

</xs:extension>

</xs:complexContent>

</xs:complexType>

</xs:element>

<xs:element name="AddMembersDatasetData" substitutionGroup="wsdai:DatasetData">

<xs:complexType mixed="true">

<xs:complexContent>

<xs:restriction base="wsdai:DatasetDataType">

<xs:sequence>

<xs:element name="MemberSetResult" minOccurs="1" maxOccurs="unbounded">

<xs:complexType>

<xs:sequence>

<xs:element name="Position" type="xs:unsignedLong"/>

<xs:element name="Member" minOccurs="1" maxOccurs="unbounded">

<xs:complexType>

<xs:sequence>

<xs:element name="MemberURI" type="xs:anyURI"/>

<xs:element name="Result" type="wro:MemberAdditionResultType"/>

</xs:sequence>

</xs:complexType>

</xs:element>

</xs:sequence>

</xs:complexType>

</xs:element>

</xs:sequence>

</xs:restriction>

</xs:complexContent>

</xs:complexType>

</xs:element>

<xs:element name="AddMembersDataset" substitutionGroup="wsdai:Dataset">

<xs:complexType>

<xs:complexContent>

<xs:extension base="wsdai:DatasetType">

<xs:sequence>

<xs:element name="NumberOfMembersAdded" type="xs:unsignedLong"/>

</xs:sequence>

</xs:extension>

</xs:complexContent>

</xs:complexType>

</xs:element>

<xs:element name="AddMembersResponse">

<xs:complexType>

<xs:sequence>

<xs:element ref="wro:AddMembersDataset"/>

</xs:sequence>

</xs:complexType>

</xs:element>

<!-- ################################### -->

<!-- ### RemoveMembers Message Types ### -->

<!-- ################################### -->

<xs:element name="RemoveMembersRequest">

<xs:complexType>

<xs:complexContent>

<xs:extension base="wsdai:RequestType">

<xs:sequence>

<xs:element name="MemberSet" minOccurs="0" maxOccurs="unbounded">

<xs:complexType>

<xs:sequence>

<xs:element name="Position" minOccurs="0" maxOccurs="1" type="xs:unsignedLong"/>

<xs:element name="MemberURI" minOccurs="0" maxOccurs="unbounded" type="xs:anyURI"/>

</xs:sequence>

</xs:complexType>

</xs:element>

</xs:sequence>

</xs:extension>

</xs:complexContent>

</xs:complexType>

</xs:element>

<xs:element name="RemoveMembersDatasetData" substitutionGroup="wsdai:DatasetData">

<xs:complexType mixed="true">

<xs:complexContent>

<xs:restriction base="wsdai:DatasetDataType">

<xs:sequence>

<xs:element name="MemberSetResult" minOccurs="1" maxOccurs="unbounded">

<xs:complexType>

<xs:sequence>

<xs:element name="Position" type="xs:unsignedLong"/>

<xs:element name="Member" minOccurs="1" maxOccurs="unbounded">

<xs:complexType>

<xs:sequence>

<xs:element name="MemberURI" type="xs:anyURI"/>

<xs:element name="Result" type="wro:MemberRemovalResultType"/>

</xs:sequence>

</xs:complexType>

</xs:element>

</xs:sequence>

</xs:complexType>

</xs:element>

</xs:sequence>

</xs:restriction>

</xs:complexContent>

</xs:complexType>

</xs:element>

<xs:element name="RemoveMembersDataset" substitutionGroup="wsdai:Dataset">

<xs:complexType>

<xs:complexContent>

<xs:extension base="wsdai:DatasetType">

<xs:sequence>

<xs:element name="NumberOfMembersRemoved" type="xs:unsignedLong"/>

</xs:sequence>

</xs:extension>

</xs:complexContent>

</xs:complexType>

</xs:element>

<xs:element name="RemoveMembersResponse">

<xs:complexType>

<xs:sequence>

<xs:element ref="wro:RemoveMembersDataset"/>

</xs:sequence>

</xs:complexType>

</xs:element>

<!-- ################################ -->

<!-- ### AreMembers Message Types ### -->

<!-- ################################ -->

<xs:element name="AreMembersRequest">

<xs:complexType>

<xs:complexContent>

<xs:extension base="wsdai:RequestType">

<xs:sequence>

<xs:element name="MemberURI" minOccurs="1" maxOccurs="unbounded" type="xs:anyURI"/>

</xs:sequence>

</xs:extension>

</xs:complexContent>

</xs:complexType>

</xs:element>

<xs:element name="AreMembersDatasetData" substitutionGroup="wsdai:DatasetData">

<xs:complexType mixed="true">

<xs:complexContent>

<xs:restriction base="wsdai:DatasetDataType">

<xs:sequence>

<xs:element name="MemberResult" minOccurs="1" maxOccurs="unbounded">

<xs:complexType>

<xs:sequence>

<xs:element name="MemberURI" minOccurs="1" maxOccurs="unbounded" type="xs:anyURI"/>

<xs:element name="Result" type="wro:MemberCheckingResultType"/>

</xs:sequence>

</xs:complexType>

</xs:element>

</xs:sequence>

</xs:restriction>

</xs:complexContent>

</xs:complexType>

</xs:element>

<xs:element name="AreMembersDataset" substitutionGroup="wsdai:Dataset">

<xs:complexType>

<xs:complexContent>

<xs:extension base="wsdai:DatasetType">

<xs:sequence/>

</xs:extension>

</xs:complexContent>

</xs:complexType>

</xs:element>

<xs:element name="AreMembersResponse">

<xs:complexType>

<xs:sequence>

<xs:element ref="wro:AreMembersDataset"/>

</xs:sequence>

</xs:complexType>

</xs:element>

<!-- ################################################# -->

<!-- ### GetContainerIteratorFactory Message Types ### -->

<!-- ################################################# -->

<xs:element name="GetContainerIteratorFactoryRequest">

<xs:complexType>

<xs:complexContent>

<xs:extension base="wsdai:FactoryRequestType">

<xs:sequence/>

</xs:extension>

</xs:complexContent>

</xs:complexType>

</xs:element>

<xs:element name="GetContainerIteratorFactoryResponse" type="wsdai:DataResourceAddressListType"/>

<!-- ################################### -->

<!-- ### GetAltFactory Message Types ### -->

<!-- ################################### -->

<xs:element name="GetAltFactoryRequest">

<xs:complexType>

<xs:complexContent>

<xs:extension base="wsdai:FactoryRequestType">

<xs:sequence/>

</xs:extension>

</xs:complexContent>

</xs:complexType>

</xs:element>

<xs:element name="GetAltFactoryResponse" type="wsdai:DataResourceAddressListType"/>

<!-- ############################# -->

<!-- ### GetNext Message Types ### -->

<!-- ############################# -->

<xs:element name="GetNextRequest">

<xs:complexType>

<xs:complexContent>

<xs:extension base="wsdai:RequestType">

<xs:sequence>

<xs:element name="Direction" minOccurs="0" maxOccurs="1" type="wro:ContainerIterationDirectionType"/>

</xs:sequence>

</xs:extension>

</xs:complexContent>

</xs:complexType>

</xs:element>

<xs:element name="GetNextDatasetData" substitutionGroup="wsdai:DatasetData">

<xs:complexType mixed="true">

<xs:complexContent>

<xs:restriction base="wsdai:DatasetDataType">

<xs:sequence>

<xs:element name="MemberURI" minOccurs="0" maxOccurs="unbounded" type="xs:anyURI"/>

</xs:sequence>

</xs:restriction>

</xs:complexContent>

</xs:complexType>

</xs:element>

<xs:element name="GetNextDataset" substitutionGroup="wsdai:Dataset">

<xs:complexType>

<xs:complexContent>

<xs:extension base="wsdai:DatasetType">

<xs:sequence>

<xs:element name="Direction" type="wro:ContainerIterationDirectionType"/>

<xs:element name="NumberOfMembers" type="xs:unsignedLong"/>

<xs:element name="Position" type="xs:unsignedLong"/>

</xs:sequence>

</xs:extension>

</xs:complexContent>

</xs:complexType>

</xs:element>

<xs:element name="GetNextResponse">

<xs:complexType>

<xs:sequence>

<xs:element ref="wro:GetNextDataset"/>

</xs:sequence>

</xs:complexType>

</xs:element>

<!-- ############################# -->

<!-- ### HasNext Message Types ### -->

<!-- ############################# -->

<xs:element name="HasNextRequest">

<xs:complexType>

<xs:complexContent>

<xs:extension base="wsdai:RequestType">

<xs:sequence>

<xs:element name="DirectionType" minOccurs="0" maxOccurs="1" type="wro:ContainerIterationDirectionType"/>

</xs:sequence>

</xs:extension>

</xs:complexContent>

</xs:complexType>

</xs:element>

<xs:element name="HasNextDatasetData" substitutionGroup="wsdai:DatasetData">

<xs:complexType mixed="true">

<xs:complexContent>

<xs:restriction base="wsdai:DatasetDataType">

<xs:sequence>

<xs:element name="Result" type="wro:MemberAvailabilityCheckResultType"/>

</xs:sequence>

</xs:restriction>

</xs:complexContent>

</xs:complexType>

</xs:element>

<xs:element name="HasNextDataset" substitutionGroup="wsdai:Dataset">

<xs:complexType>

<xs:complexContent>

<xs:extension base="wsdai:DatasetType">

<xs:sequence>

<xs:element name="Direction" type="wro:ContainerIterationDirectionType"/>

</xs:sequence>

</xs:extension>

</xs:complexContent>

</xs:complexType>

</xs:element>

<xs:element name="HasNextResponse">

<xs:complexType>

<xs:sequence>

<xs:element ref="wro:HasNextDataset"/>

</xs:sequence>

</xs:complexType>

</xs:element>

<!-- ####################################### -->

<!-- ### GetDefaultMembers Message Types ### -->

<!-- ####################################### -->

<xs:element name="GetDefaultMembersRequest">

<xs:complexType>

<xs:complexContent>

<xs:extension base="wsdai:RequestType">

<xs:sequence/>

</xs:extension>

</xs:complexContent>

</xs:complexType>

</xs:element>

<xs:element name="GetDefaultMembersDatasetData" substitutionGroup="wsdai:DatasetData">

<xs:complexType mixed="true">

<xs:complexContent>

<xs:restriction base="wsdai:DatasetDataType">

<xs:sequence>

<xs:element name="DefaultMemberURI" minOccurs="0" maxOccurs="unbounded" type="xs:anyURI"/>

</xs:sequence>

</xs:restriction>

</xs:complexContent>

</xs:complexType>

</xs:element>

<xs:element name="GetDefaultMembersDataset" substitutionGroup="wsdai:Dataset">

<xs:complexType>

<xs:complexContent>

<xs:extension base="wsdai:DatasetType">

<xs:sequence>

<xs:element name="NumberOfDefaultMembers" type="xs:unsignedInt"/>

</xs:sequence>

</xs:extension>

</xs:complexContent>

</xs:complexType>

</xs:element>

<xs:element name="GetDefaultMembersResponse">

<xs:complexType>

<xs:sequence>

<xs:element ref="wro:GetDefaultMembersDataset"/>

</xs:sequence>

</xs:complexType>

</xs:element>

<!-- ########################################### -->

<!-- ### GetAlternativeMembers Message Types ### -->

<!-- ########################################### -->

<xs:element name="GetAlternativeMembersRequest">

<xs:complexType>

<xs:complexContent>

<xs:extension base="wsdai:RequestType">

<xs:sequence>

<xs:element name="Position" minOccurs="0" maxOccurs="unbounded" type="xs:unsignedLong"/>

</xs:sequence>

</xs:extension>

</xs:complexContent>

</xs:complexType>

</xs:element>

<xs:element name="GetAlternativeMembersDatasetData" substitutionGroup="wsdai:DatasetData">

<xs:complexType mixed="true">

<xs:complexContent>

<xs:restriction base="wsdai:DatasetDataType">

<xs:sequence>

<xs:element name="PositionResult" minOccurs="1" maxOccurs="unbounded" type=""/>

</xs:sequence>

</xs:restriction>

</xs:complexContent>

</xs:complexType>

</xs:element>

<xs:element name="GetAlternativeMembersDataset" substitutionGroup="wsdai:Dataset">

<xs:complexType>

<xs:complexContent>

<xs:extension base="wsdai:DatasetType">

<xs:sequence>

<xs:element name="NumberOfAlternativeMembers" type="xs:unsignedLong"/>

</xs:sequence>

</xs:extension>

</xs:complexContent>

</xs:complexType>

</xs:element>

<xs:element name="GetAlternativeMembersResponse">

<xs:complexType>

<xs:sequence>

<xs:element ref="wro:GetAlternativeMembersDataset"/>

</xs:sequence>

</xs:complexType>

</xs:element>

<!-- ####################################### -->

<!-- ### AddDefaultMembers Message Types ### -->

<!-- ####################################### -->

<xs:element name="AddDefaultMembersRequest">

<xs:complexType>

<xs:complexContent>

<xs:extension base="wsdai:RequestType">

<xs:sequence>

<xs:element name="MemberURI" minOccurs="1" maxOccurs="unbounded" type="xs:anyURI"/>

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<xs:element name="NumberOfDefaultMembersAdded" type="xs:unsignedLong"/>

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</xs:extension>

</xs:complexContent>

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</xs:element>

<xs:element name="AddDefaultMembersResponse">

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<!-- ########################################### -->

<!-- ### AddAlternativeMembers Message Types ### -->

<!-- ########################################### -->

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<xs:element name="Result" type="wro:AlternativeMemberAdditionResultType"/>

</xs:sequence>

</xs:complexType>

</xs:element>

</xs:sequence>

</xs:complexType>

</xs:element>

</xs:sequence>

</xs:restriction>

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<xs:complexType>

<xs:complexContent>

<xs:extension base="wsdai:DatasetType">

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<xs:element name="NumberOfAlternativeMembersAdded" type="xs:unsignedLong"/>

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</xs:extension>

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</xs:complexType>

</xs:element>

<xs:element name="AddAlternativeMembersResponse">

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<!-- ########################################## -->

<!-- ### RemoveDefaultMembers Message Types ### -->

<!-- ########################################## -->

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<xs:complexType>

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<xs:extension base="wsdai:DatasetType">

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<xs:element name="NumberOfDefaultMembersRemoved" type="xs:unsignedLong"/>

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</xs:element>

<xs:element name="RemoveDefaultMembersResponse">

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<!-- ############################################## -->

<!-- ### RemoveAlternativeMembers Message Types ### -->

<!-- ############################################## -->

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<xs:element name="MemberURI" type="xs:anyURI"/>

<xs:element name="Result" type="wro:AlternativeMemberRemovalResultType"/>

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</xs:complexType>

</xs:element>

</xs:sequence>

</xs:complexType>

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</xs:sequence>

</xs:restriction>

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<!-- ####################################### -->

<!-- ### AreDefaultMembers Message Types ### -->

<!-- ####################################### -->

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</xs:sequence>

</xs:restriction>

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<!-- ########################################### -->

<!-- ### AreAlternativeMembers Message Types ### -->

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<xs:element name="AreAlternativeMembersDatasetData" substitutionGroup="wsdai:DatasetData">

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<xs:element name="Result" type="wro:AlternativeMemberCheckingResultType"/>

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<xs:element name="AreAlternativeMembersDataset" substitutionGroup="wsdai:Dataset">

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<xs:extension base="wsdai:DatasetType">

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</xs:extension>

</xs:complexContent>

</xs:complexType>

</xs:element>

<xs:element name="AreAlternativeMembersResponse">

<xs:complexType>

<xs:sequence>

<xs:element ref="wro:AreAlternativeMembersDataset"/>

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</wsdl:types>

<!-- WSDL MESSAGES ################################################################### -->

<wsdl:message name="GetContainerPropertyDocumentRequest">

<wsdl:part name="GetContainerPropertyDocumentRequest" element="wsdai:GetDataResourcePropertyDocumentRequest"/>

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<wsdl:message name="GetContainerPropertyDocumentResponse">

<wsdl:part name="GetContainerPropertyDocumentResponse" element="wro:ContainerPropertyDocument"/>

</wsdl:message>

<wsdl:message name="GetMembersRequest">

<wsdl:part name="GetMembersRequest" element="wro:GetMembersRequest"/>

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<wsdl:message name="DataResourceUnavailableFault">

<wsdl:part name="DataResourceUnavailableFault" element="wsdai:DataResourceUnavailableFault"/>

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<wsdl:message name="ServiceBusyFault">

<wsdl:part name="ServiceBusyFault" element="wsdai:ServiceBusyFault"/>

</wsdl:message>

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<wsdl:part name="InvalidPortTypeQNameFault" element="wsdai:InvalidPortTypeQNameFault"/>

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<wsdl:message name="InvalidConfigurationDocumentFault">

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<wsdl:operation name="GetContainerPropertyDocument">

<wsdl:input name="GetContainerPropertyDocumentRequest" message="wro:GetContainerPropertyDocumentRequest"/>

<wsdl:output name="GetContainerPropertyDocumentResponse" message="wro:GetContainerPropertyDocumentResponse"/>

<wsdl:fault name="InvalidResourceNameFault" message="wsdai:InvalidResourceNameFault"/>

<wsdl:fault name="DataResourceUnavailableFault" message="wsdai:DataResourceUnavailableFault"/>

<wsdl:fault name="NotAuthorizedFault" message="wsdai:NotAuthorizedFault"/>

<wsdl:fault name="ServiceBusyFault" message="wsdai:ServiceBusyFault"/>

</wsdl:operation>

<wsdl:operation name="GetMembers">

<wsdl:input name="GetMembersRequest" message="wro:GetMembersRequest"/>

<wsdl:output name="GetMembersResponse" message="wro:GetMembersResponse"/>

<wsdl:fault name="InvalidResourceNameFault" message="wsdai:InvalidResourceNameFault"/>

<wsdl:fault name="DataResourceUnavailableFault" message="wsdai:DataResourceUnavailableFault"/>

<wsdl:fault name="ServiceBusyFault" message="wsdai:ServiceBusyFault"/>

</wsdl:operation>

<wsdl:operation name="GetNumberOfMembers">

<wsdl:input name="GetNumberOfMembersRequest" message="wro:GetNumberOfMembersRequest"/>

<wsdl:output name="GetNumberOfMembersResponse" message="wro:GetNumberOfMembersResponse"/>

<wsdl:fault name="InvalidResourceNameFault" message="wsdai:InvalidResourceNameFault"/>

<wsdl:fault name="DataResourceUnavailableFault" message="wsdai:DataResourceUnavailableFault"/>

<wsdl:fault name="ServiceBusyFault" message="wsdai:ServiceBusyFault"/>

</wsdl:operation>

<wsdl:operation name="AddMembers">

<wsdl:input name="AddMembersRequest" message="wro:AddMembersRequest"/>

<wsdl:output name="AddMembersResponse" message="wro:AddMembersResponse"/>

<wsdl:fault name="InvalidResourceNameFault" message="wsdai:InvalidResourceNameFault"/>

<wsdl:fault name="DataResourceUnavailableFault" message="wsdai:DataResourceUnavailableFault"/>

<wsdl:fault name="ServiceBusyFault" message="wsdai:ServiceBusyFault"/>

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<wsdl:output name="RemoveMembersResponse" message="wro:RemoveMembersResponse"/>

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</wsdl:operation>

<wsdl:operation name="AreMembers">

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<wsdl:output name="AreMembersResponse" message="wro:AreMembersResponse"/>

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<wsdl:fault name="DataResourceUnavailableFault" message="wsdai:DataResourceUnavailableFault"/>

<wsdl:fault name="ServiceBusyFault" message="wsdai:ServiceBusyFault"/>

</wsdl:operation>

</wsdl:portType>

<wsdl:portType name="ContainerFactoryPT">

<wsdl:operation name="GetContainerIteratorFactory">

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</wsdl:operation>

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<wsdl:operation name="GetContainerPropertyDocument">

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<wsdl:fault name="ServiceBusyFault" message="wsdai:ServiceBusyFault"/>

<wsdl:fault name="MemberNotDefinedFault" message="wro:MemberNotDefinedFault"/>

</wsdl:operation>

<wsdl:operation name="HasNext">

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<wsdl:output name="HasNextResponse" message="wro:HasNextResponse"/>

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<wsdl:fault name="ServiceBusyFault" message="wsdai:ServiceBusyFault"/>

</wsdl:operation>

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<wsdl:operation name="GetContainerPropertyDocument">

<wsdl:input name="GetContainerPropertyDocumentRequest" message="wro:GetContainerPropertyDocumentRequest"/>

<wsdl:output name="GetContainerPropertyDocumentResponse" message="wro:GetContainerPropertyDocumentResponse"/>

<wsdl:fault name="InvalidResourceNameFault" message="wsdai:InvalidResourceNameFault"/>

<wsdl:fault name="DataResourceUnavailableFault" message="wsdai:DataResourceUnavailableFault"/>

<wsdl:fault name="NotAuthorizedFault" message="wsdai:NotAuthorizedFault"/>

<wsdl:fault name="ServiceBusyFault" message="wsdai:ServiceBusyFault"/>

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<wsdl:output name="GetDefaultMembersResponse" message="wro:GetDefaultMembersResponse"/>

<wsdl:fault name="InvalidResourceNameFault" message="wsdai:InvalidResourceNameFault"/>

<wsdl:fault name="DataResourceUnavailableFault" message="wsdai:DataResourceUnavailableFault"/>

<wsdl:fault name="ServiceBusyFault" message="wsdai:ServiceBusyFault"/>

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<wsdl:output name="GetAlternativeMembersResponse" message="wro:GetAlternativeMembersResponse"/>

<wsdl:fault name="InvalidResourceNameFault" message="wsdai:InvalidResourceNameFault"/>

<wsdl:fault name="DataResourceUnavailableFault" message="wsdai:DataResourceUnavailableFault"/>

<wsdl:fault name="ServiceBusyFault" message="wsdai:ServiceBusyFault"/>

</wsdl:operation>

<wsdl:operation name="AddDefaultMembers">

<wsdl:input name="AddDefaultMembersRequest" message="wro:AddDefaultMembersRequest"/>

<wsdl:output name="AddDefaultMembersResponse" message="wro:AddDefaultMembersResponse"/>

<wsdl:fault name="InvalidResourceNameFault" message="wsdai:InvalidResourceNameFault"/>

<wsdl:fault name="DataResourceUnavailableFault" message="wsdai:DataResourceUnavailableFault"/>

<wsdl:fault name="ServiceBusyFault" message="wsdai:ServiceBusyFault"/>

</wsdl:operation>

<wsdl:operation name="AddAlternativeMembers">

<wsdl:input name="AddAlternativeMembersRequest" message="wro:AddAlternativeMembersRequest"/>

<wsdl:output name="AddAlternativeMembersResponse" message="wro:AddAlternativeMembersResponse"/>

<wsdl:fault name="InvalidResourceNameFault" message="wsdai:InvalidResourceNameFault"/>

<wsdl:fault name="DataResourceUnavailableFault" message="wsdai:DataResourceUnavailableFault"/>

<wsdl:fault name="ServiceBusyFault" message="wsdai:ServiceBusyFault"/>

</wsdl:operation>

<wsdl:operation name="RemoveDefaultMembers">

<wsdl:input name="RemoveDefaultMembersRequest" message="wro:RemoveDefaultMembersRequest"/>

<wsdl:output name="RemoveDefaultMembersResponse" message="wro:RemoveDefaultMembersResponse"/>

<wsdl:fault name="InvalidResourceNameFault" message="wsdai:InvalidResourceNameFault"/>

<wsdl:fault name="DataResourceUnavailableFault" message="wsdai:DataResourceUnavailableFault"/>

<wsdl:fault name="ServiceBusyFault" message="wsdai:ServiceBusyFault"/>

</wsdl:operation>

<wsdl:operation name="RemoveAlternativeMembers">

<wsdl:input name="RemoveAlternativeMembersRequest" message="wro:RemoveAlternativeMembersRequest"/>

<wsdl:output name="RemoveAlternativeMembersResponse" message="wro:RemoveAlternativeMembersResponse"/>

<wsdl:fault name="InvalidResourceNameFault" message="wsdai:InvalidResourceNameFault"/>

<wsdl:fault name="DataResourceUnavailableFault" message="wsdai:DataResourceUnavailableFault"/>

<wsdl:fault name="ServiceBusyFault" message="wsdai:ServiceBusyFault"/>

</wsdl:operation>

<wsdl:operation name="AreDefaultMembers">

<wsdl:input name="AreDefaultMembersRequest" message="wro:AreDefaultMembersRequest"/>

<wsdl:output name="AreDefaultMembersResponse" message="wro:AreDefaultMembersResponse"/>

<wsdl:fault name="InvalidResourceNameFault" message="wsdai:InvalidResourceNameFault"/>

<wsdl:fault name="DataResourceUnavailableFault" message="wsdai:DataResourceUnavailableFault"/>

<wsdl:fault name="ServiceBusyFault" message="wsdai:ServiceBusyFault"/>

</wsdl:operation>

<wsdl:operation name="AreAlternativeMembers">

<wsdl:input name="AreAlternativeMembersRequest" message="wro:AreAlternativeMembersRequest"/>

<wsdl:output name="AreAlternativeMembersResponse" message="wro:AreAlternativeMembersResponse"/>

<wsdl:fault name="InvalidResourceNameFault" message="wsdai:InvalidResourceNameFault"/>

<wsdl:fault name="DataResourceUnavailableFault" message="wsdai:DataResourceUnavailableFault"/>

<wsdl:fault name="ServiceBusyFault" message="wsdai:ServiceBusyFault"/>

</wsdl:operation>

</wsdl:portType>

</wsdl:definitions>

1. RDF(S) defines 3 types of predefined containers: *seq*, *bag*, and *alt*. [↑](#footnote-ref-2)
2. http://www.ontogrid.eu [↑](#footnote-ref-3)