

dataModelTranslatorFactoryControl

Service Description

Abstract

This document provides service description for the **dataModelTranslatorFactoryControl** service.

Contents

1 Overview	3
1.1 How This Service Is Meant to Be Used	3
1.2 Important Delimitations	3
1.3 Access policy	3
2 Service Operations	4
2.1 operation check	4
2.2 operation initialize	4
3 Information Model	5
3.1 struct DataModelTranslationFactoryRequest	5
3.2 struct DataModelTranslationFactoryCheckResult	5
3.3 struct Map	5
3.4 struct DataModelTranslatorResult	5
3.5 struct ErrorResponse	6
3.6 Primitives	7
4 References	8
5 Revision History	9
5.1 Amendments	9
5.2 Quality Assurance	9

1 Overview

This document describes the **dataModelTranslatorFactoryControl** service, which provides functionality for create, initiate or emulate data model translation providers on demand. To enable other systems (especially the TranslationManager Support System) to consume this service, it needs to be offered through the ServiceRegistry.

The **dataModelTranslatorFactoryControl** service contains the following operations:

- *check* determines whether the factory can provide a data model translator from dataModelA to dataModelB;
- *initialize* creates, initializes or emulates a data model translator provider and returns its access information;

The rest of this document is organized as follows. In Section 2, we describe the abstract message operations provided by the service. In Section 3, we end the document by presenting the data types used by the mentioned operations.

1.1 How This Service Is Meant to Be Used

Service consumers should first call the *check* operation in order to make sure that the desired data model translation is feasible. For that, the related data model identifiers have to be provided. The same input parameters can then be used to call the *initialize* operation, which creates, initializes, or emulates a data model translation provider. The resulting provider implements the **dataModelTranslation** service and can be used to perform the actual translation.

1.2 Important Delimitations

Data model translator provider creation is only possible for data models and directions that are supported by the actual service instance.

1.3 Access policy

Available for anyone within the Local Cloud with proper permissions.

2 Service Operations

This section describes the abstract signatures of each operations of the service. The **dataModelTranslatorFactoryControl** service is used to check and initialize data model translation providers. In particular, each subsection names an operation, an input type and one or two output types (unsuccessful operations can return different structure), in that order. The input type is named inside parentheses, while the output type is preceded by a colon. If the operation has two output types, they are separated by a slash. Input and output types are only denoted when accepted or returned, respectively, by the operation in question. All abstract data types named in this section are defined in Section 3.

2.1 operation **check** (**DataModelTranslationFactoryRequest**) : **DataModelTranslationFactoryCheckResult** / **ErrorResponse**

Operation *check* returns whether an actual data model translator provider creation is feasible or not.

2.2 operation **initialize** (**DataModelTranslationFactoryRequest**) : **DataModelTranslatorResult** / **ErrorResponse**

Operation *initialize* creates, initializes or emulates a proper data model translator and returns its access information.

3 Information Model

Here, all data objects that can be part of the **dataModelTranslatorFactoryControl** service are listed and must be respected by the hosting system. Note that each subsection, which describes one type of object, begins with the *struct* keyword, which is used to denote a collection of named fields, each with its own data type. As a complement to the explicitly defined types in this section, there is also a list of implicit primitive types in Section 3.6, which are used to represent things like hashes and identifiers.

3.1 struct DataModelTranslationFactoryRequest

Field	Type	Mandatory	Description
fromModelId	DataModelID	yes	The identifier of the source data model.
toModelId	DataModelID	yes	The identifier of the target data model.

3.2 struct DataModelTranslationFactoryCheckResult

Field	Type	Description
status	OperationStatus	Status of the operation.
result	Boolean	True if the data models are supported, otherwise false.

3.3 struct Map

An Object which maps String keys to primitive, Object or list values.

3.4 struct DataModelTranslatorResult

Field	Type	Description
status	OperationStatus	Status of the operation.
dataModelTranslatorName	String	Identifier of the created data model translator.
interfaceProperties	Map	Interface template-specific access data.

3.5 struct **ErrorResponse**

Field	Type	Description
status	OperationStatus	Status of the operation.
errorMessage	String	Description of the error.
errorCode	Number	Numerical code of the error.
type	ErrorType	Type of the error.
origin	String	Origin of the error.

3.6 Primitives

Types and structures mentioned throughout this document that are assumed to be available to implementations of this service. The concrete interpretations of each of these types and structures must be provided by any IDD document claiming to implement this service.

Type	Description
Boolean	One out of true or false.
DataModelID	A string identifier that is intended to be both human and machine-readable. It also defines the specific format and the associated semantics. Must follow camelCase naming convention.
ErrorType	Any suitable type chosen by the implementor of service.
Number	Decimal number.
Object	Set of primitives and possible further objects.
OperationStatus	Logical, textual or numerical value that indicates whether an operation is a success or a failure. Multiple values can be used for success and error cases to give additional information about the nature of the result.
String	A chain of characters.



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4 References



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Page
9 (9)

5 Revision History

5.1 Amendments

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1	YYYY-MM-DD	5.2.1		Xxx Yyy

5.2 Quality Assurance

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