



# UPDM MIGRATION MANUAL

No Magic, Inc.  
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# UPDM MIGRATION MANUAL

## Basic Concepts and Instructions

The Unified Profile for DoDAF/MODAF (UPDM) is the standard of an Object Management Group (OMG) initiative to develop a modeling standard that supports both the US Department of Defense Architecture Framework (DoDAF) and UK Ministry of Defense Architecture Framework (MODAF).

The purpose of UPDM migration to the latest UPDM specification version is to convert earlier UPDM versions metamodel-based projects into the latest UPDM version metamodel-based projects without losing data.

A migration back to earlier UPDM versions is not possible, so we highly recommend you to back-up your current UPDM projects before proceeding with migration to the latest UPDM version.

## How to Use this Manual

The purpose of this manual is to help you understanding differences between UPDM specifications and guide you along the data mapping process.

This manual includes descriptions of two migrations:

- [UPDM 2.0 Migration to UPDM 2.1](#)
- [UPDM 1.x Migration to UPDM 2.0](#)

The UPDM 2.0 Migration to UPDM 2.1 section includes these major parts:

- Chapter “[How to Migrate](#)” guides you through performing a successful migration of your project.
- Chapter “[Models Migration](#)” that contains the following sections:
  - Section “[Data Mappings](#)” explains how model data is migrated.

The UPDM 1.x Migration to UPDM 2.0 section includes these major parts:

- Chapter “[How to Migrate](#)” guides you through performing a successful migration of your project.
- Chapter “[Models Migration](#)” that contains the following sections:
  - Section “[View Mappings](#)” explains the way of mapping diagrams and other model representation forms, such as matrices and tables.
  - Section “[Data Mappings](#)” explains how model data is migrated.
  - Section “[Mapping Problems and Solutions](#)” explains the major mapping problems, solutions, and provides examples.

## UPDM 2.0 Migration to UPDM 2.1

### How to Migrate

The migration from UPDM 2.0 to UPDM 2.1 will be performed automatically. During the migration, autocheck of the used modules will be performed. You will be warned if there are modules to be converted. You will be able to cancel the migration procedure.

### Models Migration

#### Data Mappings

The following table describes data mapping between UPDM 2.0 and UPDM 2.1.

### Element mappings

UPDM 2.0	UPDM 2.1	Comments
Organization [InstanceSpecification]	ActualOrganization	

### Element property mappings

UPDM 2.0		UPDM 2.1		Comments
UPDM Element	URI/URL	UPDM Element	URI	

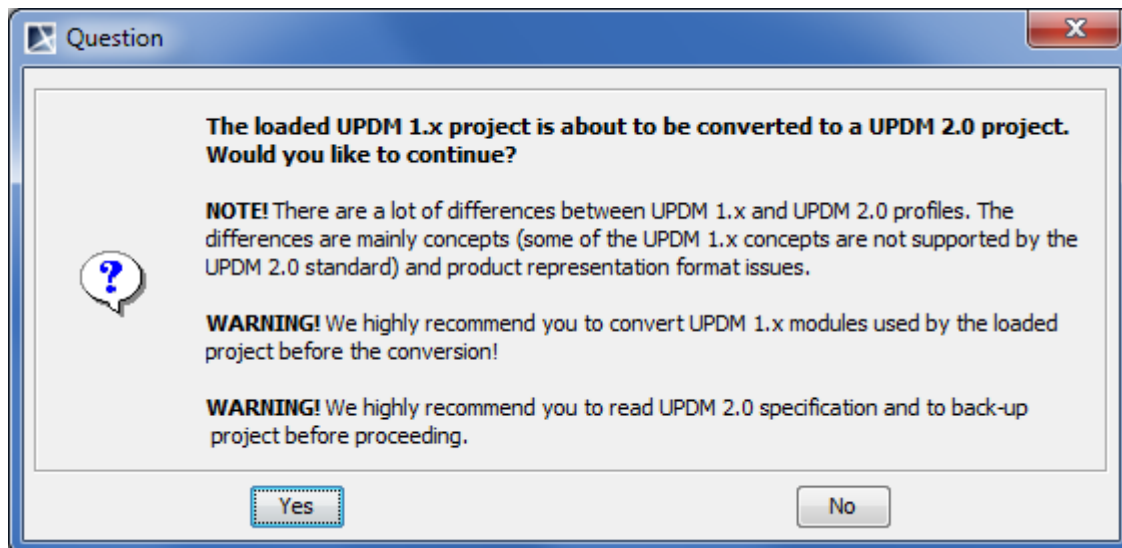
### Element metaclass mappings

UPDM 2.0 [Metaclass]	UPDM 2.1 [Metaclass]
Exchange Element [DataType]	Exchange Element Class

## UPDM 1.x Migration to UPDM 2.0

### How to Migrate

You will be suggested migrating project each time you open the UPDM 1.x version project.



Before starting the mapping procedure, please consider the following:

- The project does not use any UPDM 1.x version modules. If it does, please convert modules one by one before migrating the project.
- You have made a copy of your project.
- You have read this manual.

If you agree migrating the project, autocheck of the used modules will be performed. You will be warned if there are modules to be converted. You will be able to cancel the migration procedure.

### Models Migration

#### View Mappings

The following table describes view mapping between UPDM 1.x and UPDM 2.0.

UPDM 1.x	UPDM 2.0	Comments
CV-3	CV-2	CV-3 Capability Phasing diagram is no longer used. An existing diagram will be loaded as the CV-2 Capability Taxonomy diagram. Instead of the diagram, the CV-3 Capability Phasing chart is introduced and recommended to use.
CV-5	CV-2	CV-5 Capability to Organizational Development Mapping diagram is no longer used. An existing diagram will be loaded as the CV-2 Capability Taxonomy diagram. The CV-5 tabular form of the representation is introduced and recommended to use.
StV-3	StV-2	StV-3 Capability Phasing diagram is no longer used. An existing diagram will be loaded as the StV-2 Capability Taxonomy diagram. Instead of the diagram, the StV-3 Capability Taxonomy chart is introduced and recommended to use.
StV-5	StV-2	StV-5 Organization Deployment Mapping diagram is no longer used. An existing diagram will be loaded as the StV-2 Capability Taxonomy diagram. The StV-5 tabular form of representation is introduced and recommended to use.
PV-2	PV-1	PV-2 Project Timelines diagram is no longer used. An existing diagram will be loaded as the PV-1 Project Portfolio Relationships diagram. Instead of the diagram, the PV-2 Project Timelines chart is introduced and recommended to use.
AcV-2	AcV-1	AcV-2 Programme Timelines diagram is no longer used. An existing diagram will be loaded as the AcV-1 Acquisition Clusters diagram. Instead of the diagram, the AcV-2 Acquisition Clusters chart is introduced and recommended to use.
SV-8	SV-1	SV-8 Capability Configuration Management diagram is refactored to meet UPDM 2.0 requirements. An existing diagram will be loaded as the SV-1 Resource Interaction Specification diagram. New form of the SV-8 diagram is introduced and recommended to use.
SvcV-1	SOV-1	
SvcV-2	SOV-2	
SvcV-3a	Service Channels Summary Matrix	Service Channels Summary Matrix is a new type of supportive tool, dedicated for service channels analysis and creation.
SvcV-3b	SV-12	
SvcV-4a	SOV-5 structural	
SvcV-4b	SOV-5 behavioral	
SvcV-5	Dependency Matrix	

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## UPDM 1.x Migration to UPDM 2.0

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<b>UPDM 1.x</b>	<b>UPDM 2.0</b>	<b>Comments</b>
SvcV-6	Service Channels Summary Table	Service Channels Summary Table is a new type of supportive tool, dedicated for service channels analysis, creation, and modification.
SvcV-7	Generic Table	
SvcV-10a	SOV-4a	
SvcV-10b	SOV-4b	
SvcV-10c	SOV-4c	

### **Data Mappings**

The following table describes data mapping between UPDM 1.x and UPDM 2.0.



### Element mappings

UPDM 1.x	UPDM 2.0 DoDAF	UPDM 2.0 MODAF	Comments
Performs	Activity Performed by Performer	Is Capable of Performing	
External Node	Performer	Node	
Operational Node	Performer	Node	
Internal Data Model	Physical Data Model		
Agreement	Operational Constraint		Operational Constraint ruleKind property value will be set to "Agreement".
Guidance	Operational Constraint		Operational Constraint ruleKind property value will be set to "Guidance".
Performer Role	Node Role		
Rule	Operational Constraint		Operational Constraint ruleKind property value will be set to "Constraint".
Measure of Performance	Actual Measurement		
Measure of Performance	Measurement		
Operational Rule	Operational Constraint		Operational Constraint ruleKind property value will be set to "Constraint".
System Function Action	Function Action		
System Function Edge	Function Edge		
Data Exchange	Resource Interaction		
Retirement	Out of Service Milestone		
Communications Link	Resource Connector		
Systems Node	Capability Configuration		
Project Theme Status	Status Indicators		
Commands	Command		
Controls	Control		
Service Operation Action			<b>Element Removed.</b> Plain call operation action will be left in the model.
Supports Operational Activity			<b>Element Removed.</b> Dependency will be left between the elements. The Supports Operational Activity property values and name property will be added to the dependency's toDo property.
Realizes Capability	Capability of Performer	Exhibits	

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## UPDM 1.x Migration to UPDM 2.0

UPDM 1.x	UPDM 2.0 DoDAF	UPDM 2.0 MODAF	Comments
Manifests	Capability of Performer	Exhibits	
System Function	Function		
Information Element	Exchange Element		If the Exchange Element is conveyed by Operational Exchange, its exchangeElementKind property value will be set to "Information Element".
Data Element	Exchange Element		If the Exchange Element is conveyed by Resource Interaction, its exchangeElementKind property value will be set to "Data Element".
Service Point	Service		
Request Point	Request		
Function Edge	Service Function Edge		Only function edges connecting the Service Function Actions will be migrated.
Information Exchange	Operational Exchange		Operational Exchange operationalExchangeKind property value will be derived according to the conveyed element type.
Energy Exchange	Operational Exchange		Operational Exchange operationalExchangeKind property value will be derived according to the conveyed element type.
Organizational Exchange	Operational Exchange		Operational Exchange operationalExchangeKind property value will be derived according to the conveyed element type.
Configuration Exchange	Operational Exchange		Operational Exchange operationalExchangeKind property value will be derived according to the conveyed element type.
Materiel Exchange	Operational Exchange		Operational Exchange operationalExchangeKind property value will be derived according to the conveyed element type.
Needline [Association]	Operational Exchange (if the realized one does not exist)		<b>Element Removed.</b> Needline (association only) property values and name property will be added to the realized Operational Exchange toDo property.
Resource Interface [Association]	Resource Interaction (if the realized one does not exist)		<b>Element Removed.</b> Resource Interface (association only) property values and name property will be added to the realized Resource Interaction toDo property.

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## UPDM 1.x Migration to UPDM 2.0

UPDM 1.x	UPDM 2.0 DoDAF	UPDM 2.0 MODAF	Comments
Service Operation	Node Operation		In case service operation has been owned by Node, it will be converted to the Node Operation and its parameters will be converted to Operational Parameters.
Service Operation	Resource Operation		In case service operation has been owned by Resource, it will be converted to the Resource Operation and its parameters will be converted to Resource Parameters.
Implements Operational	Implements		Relationship is constrained to be used between the Operational Activity and Function, Node and System Resource, Operational Exchange and Resource Interaction, Function and Service Function, and Operational Activity and Service Function.
Operational Constraint	Operational Constraint		Operational Constraint ruleKind property value will be set to "Constraint".
Technology Forecast	Forecast		
Technology Forecast	Location	Actual Location	
Location	Location Type		
Forecast (connecting Capabilities)			<b>Element Removed.</b> Forecast property values and name property will be added to the client Capability ToDo property.
Part	Resource Role		Resource Role MODAFRoleKind property value will be set to "Part".
Sub System Part	Resource Role		Resource Role MODAFRoleKind property value will be set to "Sub System Part".
Resource Component	Resource Role		Resource Role MODAFRoleKind property value will be set to "Component".
Used Configuration	Resource Role		Resource Role MODAFRoleKind property value will be set to "Used Configuration".
Hosted Software	Resource Role		Resource Role MODAFRoleKind property value will be set to "Hosted Software".
Actual Measurement Set	Actual Property Set		

### Element property mappings

UPDM 1.x		UPDM 2.0		Comments
Actual Organizational Resource	responsibleFor	Organizational Project Relationship		Relations will be created between the Actual Organizational Resource and the Actual Projects, that were set as the responsibleFor property values.
Actual Measurement Set	intention	Actual Measurement	intension	Intention property value will be set for all the Actual Measurements owned by Actual Property Set. The value will be taken from the Actual Measurement Set intention property.
Actual Measurement Set	time	Actual Measurement	startDate	StartDate property value will be set for all the Actual Measurements owned by Actual Property Set. The value will be taken from the Actual Measurement Set time property value.
Enterprise Phase	exhibits	Exhibits		Relations will be created between the Enterprise Phase and Capabilities, that were set as exhibits property values.
Enterprise Phase	inhabits	Exhibits	environmental Conditions	For all the Exhibits relationships between the Enterprise Phase and capability environmentalConditions property values will be supplemented with the inhabits property value of Enterprise Phase.
Capability	environmental Conditions	Exhibits	environmentalCo nditions	For all the Exhibits relationships between capability and resources, and between capability and Nodes environmentalConditions, property values will be supplemented with environmentalConditions property value of the Capability.
Entity Item	representedBy	Details		Relations will be created between the Entity Item and Exchange Elements, that were set as the representedBy property values.

Compatible With		Location Holder	physicalLocation	In case the supplier of the Compatible With relationship was Physical Location, the physicalLocation property will be filled with the client of the relationship. Otherwise Compatible With target will be added to the toDo property of the source.
Defines Architecture		Enterprise Phase	representedBy	Enterprise Phase representedBy property will be filled with the Architectural Description element.
UPDM Element	measurementTypes	UPDM Element	propertySet	
UPDM Element	actualMeasurements	UPDM Element	actualPropertySet	

All cases, if the element property is migrated to relationship, add additional information into the element's toDo property about the removed property and its value.

### Element metaclass mappings

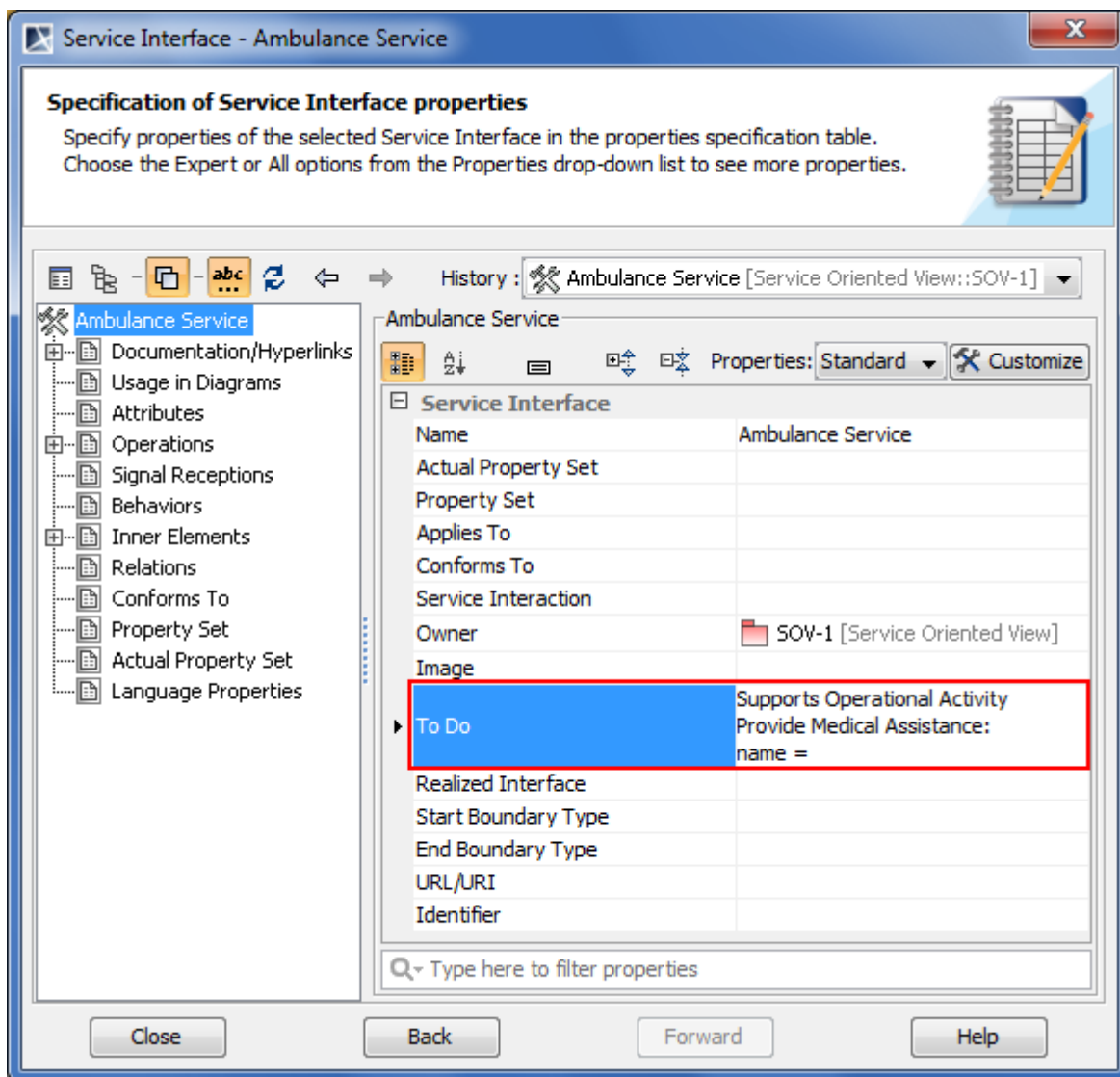
UPDM 1.x [Metaclass]	UPDM 2.0 [Metaclass]
Mission [Use Case]	Mission [Activity]
Information Element [Class]	Exchange Element [DataType]
Data Element [Class]	Exchange Element [DataType]
Data Element [Class]	Desired Effect [Dependency]

## Mapping Problems and Solutions

### Using To Do Property

Going through the above sections of the manual, you have probably noticed that a large number of element properties were marked "added to the toDo property". It indicates that data which cannot be directly mapped or has been removed during migration will be placed in the element's To Do property.

For instance, if you had Supports Operational Activity before the migration, the information about it will be stored in the ToDo property of Service Interface (source of the relationship).



Additionally to the fact that the Service Interface supported Operational Activity, Supports Operational Activity relationship name and other UPDM properties that had values assigned will be added to the toDo property.



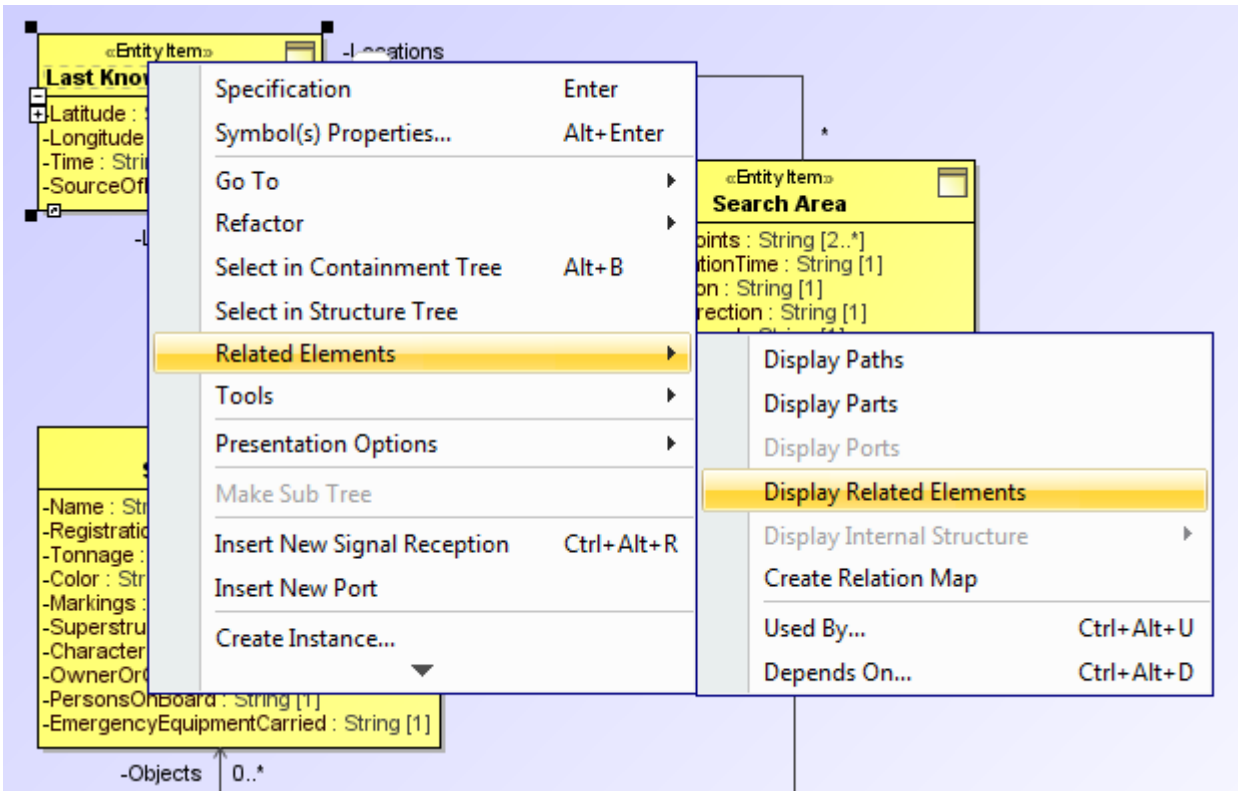
Use the **Find ToDo** command to search for elements containing **ToDo** information. From the **Edit** main menu, choose **Find ToDo**.

### Displaying Related Elements

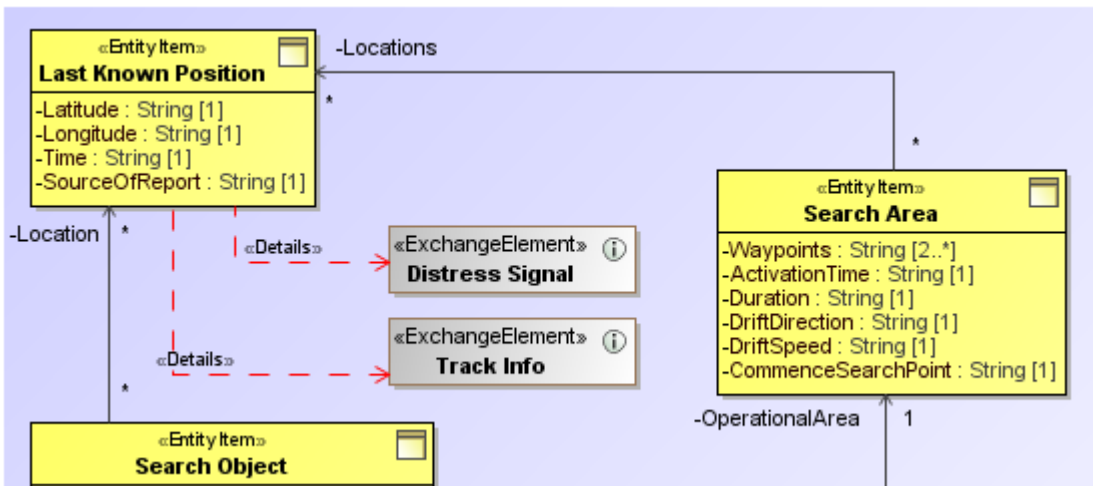
Newly created relationships are not displayed in the diagrams by default. The reason for this is to prevent the damage on the diagrams. However, you can easily visualize the information, existing in the model, on the diagram of your choice.

To easily display newly created relationships, select the element that is the source or the target of the relationship and from the shortcut menu select **Related Elements > Display Related Elements**.

For instance, relationship between Entity Item and Information Element has been realized through a representedBy property of the Entity Item. It is now changed to the relationship Details. However in diagram relationships are not displayed by default. In order to display the relationships, right-click one Entity Item at a time and from the shortcut menu select **Related Elements > Display Related Elements**.



Make sure the Dependency «Details» entry is checked in the **Display Related Elements** dialog and click **OK**.



Related elements and relationships appear on the diagram.

### Preserving Needline and Resource Interface Data

According to UPDM 2.0, specification Needlines and Resource Interfaces can only be used in a particular context such as Logical or Physical Architecture or simply inside the another Performer/Node. In other words, these relationships can only be used to model internal structures.

To preserve the data of the Needlines and Resource Interfaces, Needlines are changed to Node Associations and Resource Interfaces to Resource Associations. From the first sight, differences on the diagram are barely visible.



Node Association and Resource Association both are not a part of UPDM standard.