Inheritance, Aggregation, Composition, and Redefinition of Exchanges

The Operational Exchanges and Resource Interactions can be inherited, aggregated, or composed. You can redefine the inherited flows.

You can see the inherited, aggregated, and composed exchanges in:

- Operational Exchange Manager
- Resource Interaction Manager
- Role-based tables OV-3, NOV-3, SV-6, NSV-6, SvcV-6, L3, and P3.



Case Study

Let's say, we have performers *SearchNode* and *PlaceOfSafety* related with the Operational Exchange *Wa mingOrder*. The performer *Aircraft* specifies performer *SearchNode*. Then we draw an association between *Aircraft* and *PlaceOfSafety*. In this case, the drawn association inherits the Operational Exchange information that can be realized or not and also can be redefined.

Let's realize the Operational Exchange. We can do this in two ways:

- By clicking The association's smart manipulator toolbar.
- By selecting the check box in the Realize column in the Operational Exchange Manager dialog.

Perfor Search Search Airce Airce Perfor Helico Derro Manag To cre Opera specifi	ational Eving pro	Es Wa	Insger anger Es Wanning Geter Es Wanning Geter P P P P P P P P P P P P P	emove existing Op e Items, reaking o	erational Exchange clu	sk Delete button. You can also ed erational Exchanges on selected n	te existing
🗅 Add	1 Dek	ete 🖁 Show	Inherited 🛛 Show Aggregate	d 🖫 Redefne 🛔	\$ Show Full Paths	< Activities Filter: Q	
# Re	alize I	Exchange ID	Operational Exchange Item	Sending Node	Receiving Node	Producing Operational Activity	Consuming Operational Activity
1	false C	Æ1	IE6 Warning Order	용 Search Node	😞 Place Of Safety	🔗 Send Warning Order	🔗 Process Warning Order
2	false C	E15	① IE6 Warning Order	\rm Bearch Node	名 Place Of Safety		
3 📑	false C	0E16	③ IE6 Warning Order	용 Aircraft	名 Place Of Safety		
	Regul	lar 📃	Inherited / Aggregated				
Real	ize Al	Realize	None				Close Help

To hide inherited exchanges in dialogs
 1. Click Options > Project.
 2. In the Project Options dialog, select General > UPDM.
 2. Options of UPDM laft from an Optional Section Flores on Optional Section Se

3. Set the Respect UPDM Information Flows on Generalization property value to false

1

• Note, that the exchange is not created for the drawn association, it is only realized. The realization of the exchange will be removed from the association when Generalization or Exchange is removed.

All the inherited exchanges can also be seen in the role-based tables. The inherited exchange rows are displayed in gray. You can use the Inherited Operational Exchange or Resource Interaction option to see the inherited exchanges.

To see the inherited exchanges

•

1. From the active table's toolbar, select Show Rows and then click Inherited Operational Exchange or Resource Interaction button.



When we have the inherited Operational Exchange, we can redefine it. This means, that the inherited Operational Exchange will be copied together with the information such as Actual Measurements, Conveyed Items, Documentation. The new Operational Exchange will be created in the model.

Hel	eformers icopter operations inage Op	al Exchange M	EB Warning Order Resu	uit	perational Exchange	cick 'Delete' button. You can	also edit existing
T C R	o create n Iperational pecifying p	Exchanges by a roducing and co	dding new Operational Exchar nsuming Operational Activities	ge Items, realizing	or ignoring existing C efine selected	Iperational Exchanges on sel	ected relationship,
T C P	o create n Iperational pecifying p	Exchanges by a roducing and co elete Show	Inherited Show Aggregat	rge Items, realizing Red ted Pa Redefine	or ignoring existing C efine selected B: Show Full Paths	row	ected relationship,
т с я 10 / я	o create n Iperational pecifying p Add	Exchanges by a roducing and co elete R Show Exchange ID	Inherited Show Aggregal Operational Exchange	ted (Pb Redefine) Sending Node	or ignoring existing C efine selected B: Show Full Paths Receiving Node	Portational Exchanges on sel	ected relationship,
	o create n Iperational pecifying p Add	Exchanges by a roducing and co elete Show Exchange ID 0E17	Inherited Exchange Item Inherited E Show Aggregat Operational Exchange Item (i) IE6 Warning Order	Red Red ted the Redefine Sending Node	or ignoring existing C efine selected E: Show Full Paths Receiving Node & Place Of Safety	Perational Exchanges on sel	Aty Consuming Operational Activity Redefined
т с я 1 2	o create n Iperational pecifying p Add D Realize C true false	elete Show Exchange ID Exchange ID OE 17 OE 1	Constructional Construction Co	ed Pb Redefine Sending Node & Helcopter	or ignoring existing C efine selected ## Show Full Paths Receiving Node & Place Of Safety Place Of Safety	perational Exchanges on sel TOW C Activities Filter: Producing Operational Acti C Send Warning Order	Re- Redefined Strikty Process Warning Operational Activity Redefined Strikty Process Warning Offer

To redefine the Operational Exchange

1. In the Operational Exchange Manager dialog, select the inherited Operational Exchange and click the Redefine button. The new Operational Exchange is created.

All the information that comes from the inherited exchange when redefining it can be modified (i) in the model.

Related elements

- Concept Role
- Node
- Performer
- System Resource
- ٠ Operational Exchange
- ٠ Resource Interaction