

Global validation rules

Global validation rules check the result of an element set, while validation rules contained in [predefined validation suites](#) or [active validation suites](#) are dedicated to check a separate element. You can create global validation rules in the same way as other validation rules by defining an appropriate condition in the **Specification** property.

- How to create validation rules >
- How to define Constraint expression >>

For example, the *balanced budget* validation rule (Constraint specification is shown in the following figure) is a global validation rule. It is created for the classifier of the *ResearchProject* Class. The *balanced budget* validation rule condition, defined by using OCL2.0 language in the **Specification** property, expresses that the sum of the expenses of all projects must be less than the sum of all *Sponsor* contributions. This validation rule is global because it includes all instances in the model, rather than only the particular instance of *ResearchProject* that violates the rule.

 Sample model

An example of a global validation rule can be found in the **model validation** sample model > *Classifiers Validation Rules* [Class diagram](#). To open this sample do one of the following:

- Download [model validation.mdzip](#).
- Find in the modeling tool <modeling tool installation directory>\samples\product features\model validation.mdzip.

Specification of Constraint balanced budget
✕

Specification of Constraint properties

Specify properties of the selected Constraint in the properties specification table. Choose the Expert or All options from the Properties drop-down list to see more properties.



balanced budget=ResearchProject

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- Traceability

balanced budget

Properties: Standard
▼

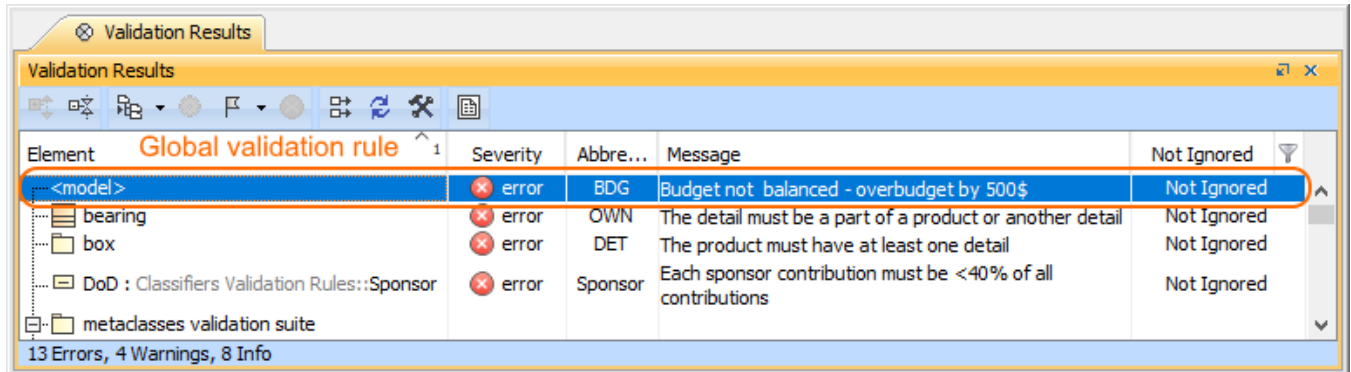
Constraint	
Name	balanced budget
Specification	ResearchProject::allInstances().budget->sum() <= Sponsor::allInstances().contribution->sum()
Constrained Element	 ResearchProject [Classifiers Validation Rules]
Owner	 ResearchProject [Classifiers Validation Rules]
To Do	
Owning Template Parameter	
Implementation	
Parent Object	
Parent Rule	
Validation Rule	
Error Message	Budget not balanced - overbudget by { ResearchProject::allInstances().budget->sum() - Sponsor::allInstances().contribution->sum() }\$
Severity	error
Abbreviation	BDG

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The specification of the global validation rule named balanced budget.

After the validation finishes, the global validation rule is marked as <model> in the [Validation Results panel](#) > **Element** column. This means that the entire model, not the separate element, violates the rule.



Element	Severity	Abbre...	Message	Not Ignored
<model>	error	BDG	Budget not balanced - overbudget by 500\$	Not Ignored
bearing	error	OWN	The detail must be a part of a product or another detail	Not Ignored
box	error	DET	The product must have at least one detail	Not Ignored
DoD : Classifiers Validation Rules::Sponsor	error	Sponsor	Each sponsor contribution must be <40% of all contributions	Not Ignored
metaclasses validation suite				

13 Errors, 4 Warnings, 8 Info

The representation of global validation rule in the Validation Results panel.