Eclipse MDT Papyrus Collaborative Work

tristan.faure@atos.net

Agenda

- Collaborative work within Papyrus
- Split your model
- Work with restrictions on the model
- Reassemble your model
- Model loading policies
- Handle UML profiles and stereotypes

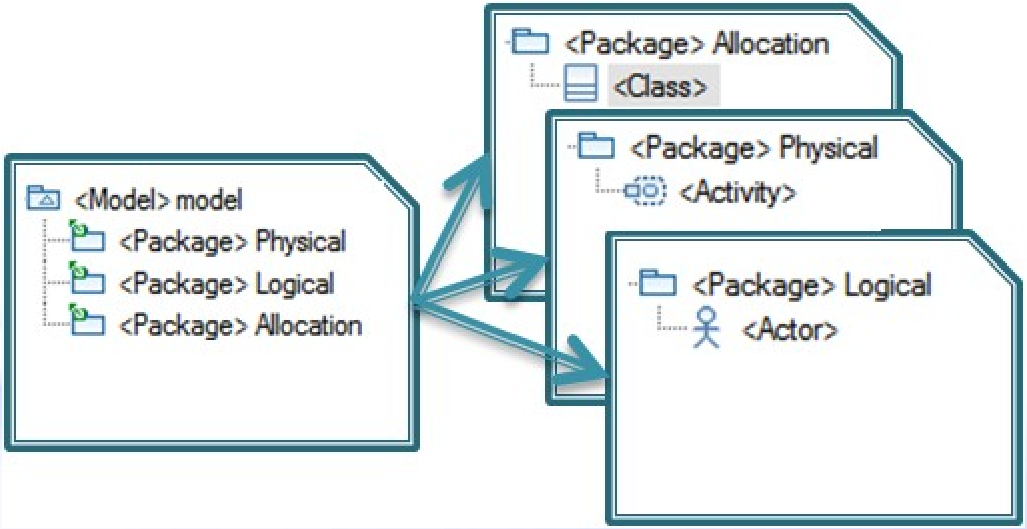
Collaborative work within Papyrus

- MDT Papyrus provides a way to
  - Split a model into multiple parts
  - Manage resources loading

- These points allow users to
  - Make team work possible on a model
  - Work on huge models
  - Adapt model loading according to their context

Split your model

- Control action
  - Comes from EMF
  - Enables exporting a part of the model into a new file
  - Several files for several users, still one model



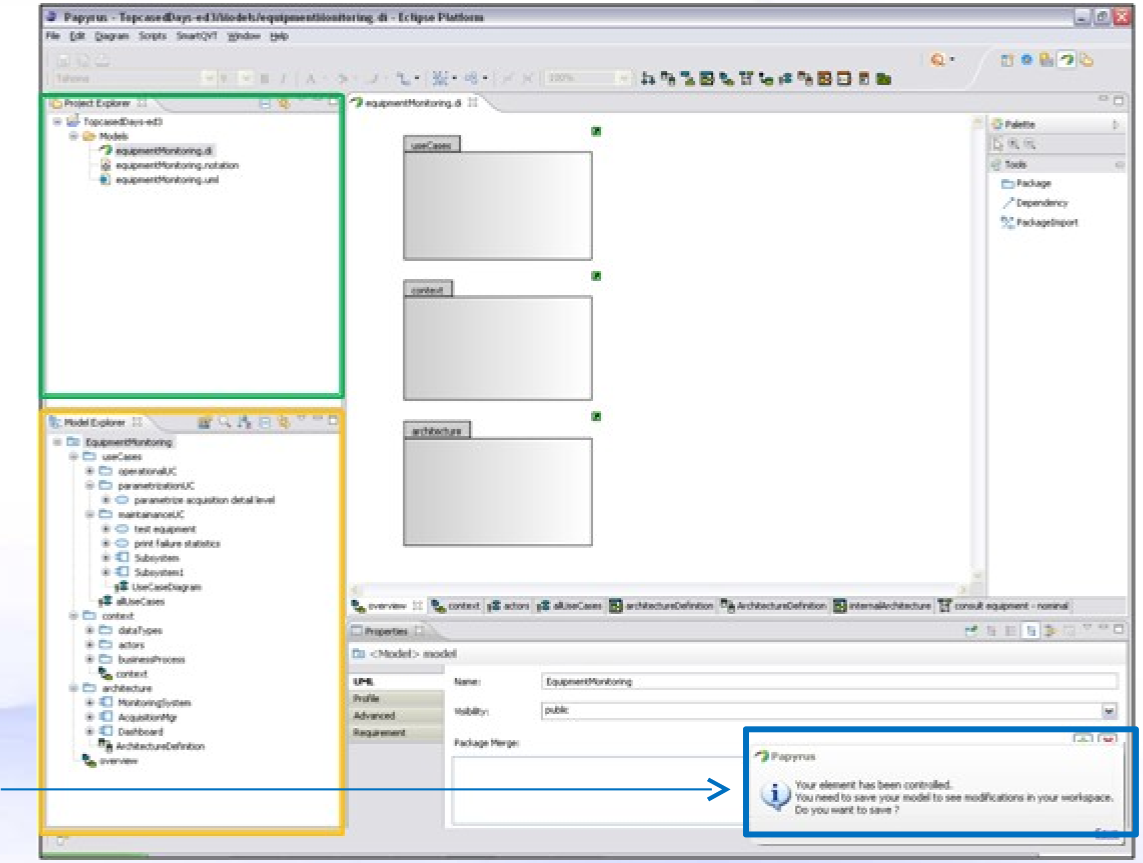
Papyrus environment

- Some relevant views for collaborative work

Project Explorer view:
Physical view of the model

Model Explorer view:
Logical view of the
opened file

Papyrus notification



<Model> model

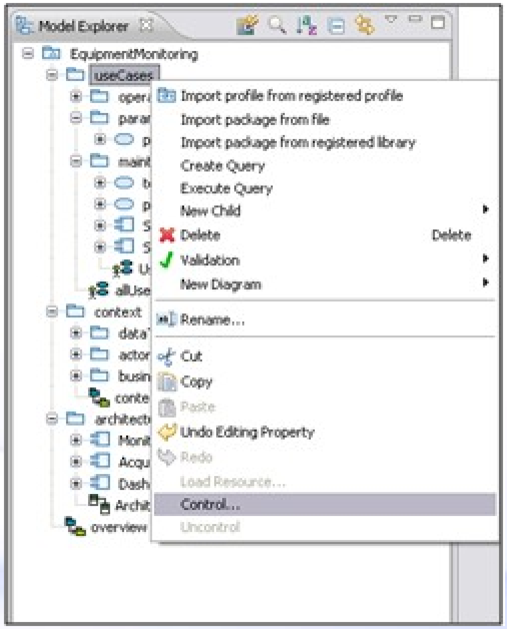
Name: EquipmentMonitoring

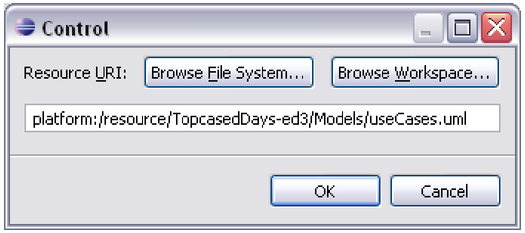
Visibility: public

Your element has been controlled.
You need to save your model to see modifications in your workspace.
Do you want to save ?

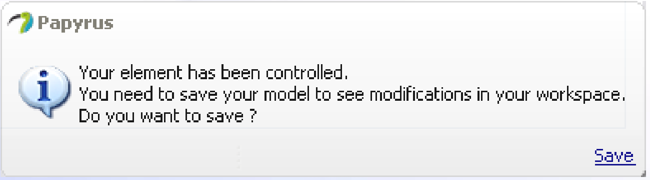
Control action

- Activated on structural element such as Package
- Perform control action to export the model part





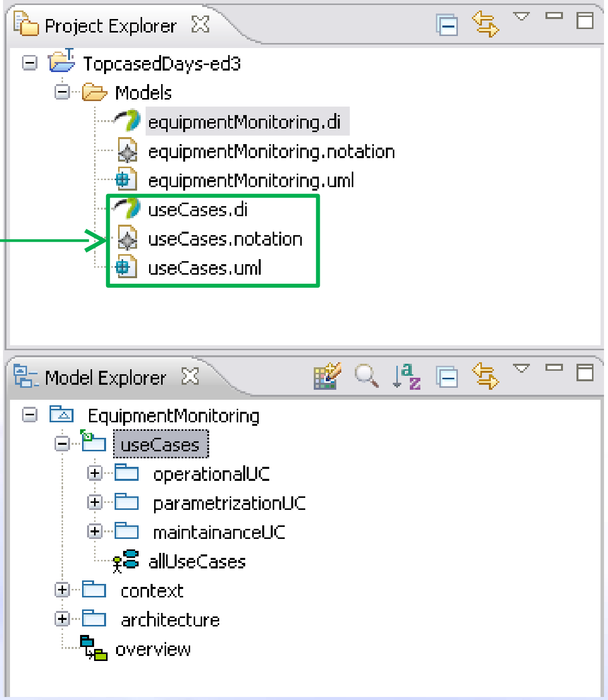
Resource URI: platform:/resource/TopcasedDays-ed3/Models/useCases.uml



Your element has been controlled.
You need to save your model to see modifications in your workspace.
Do you want to save ?

Control action

- Once control is done, model part is exported
  - New files are created
  - Icon appears on the exported package



Project Explorer

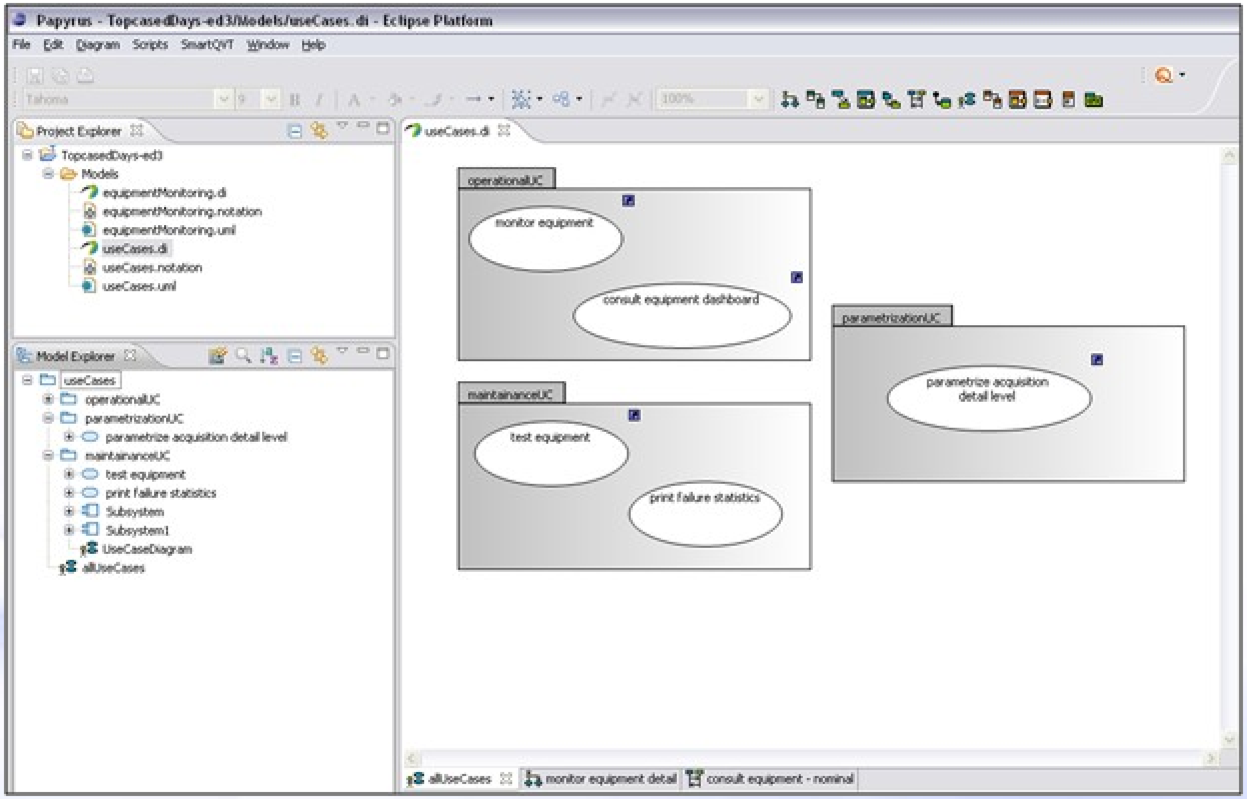
TopcasedDays-ed3
Models
equipmentMonitoring.di
equipmentMonitoring.notation
equipmentMonitoring.uml
useCases.di
useCases.notation
useCases.uml

Model Explorer

EquipmentMonitoring
useCases
operationalUC
parametrizationUC
maintainanceUC
allUseCases
context
architecture
overview

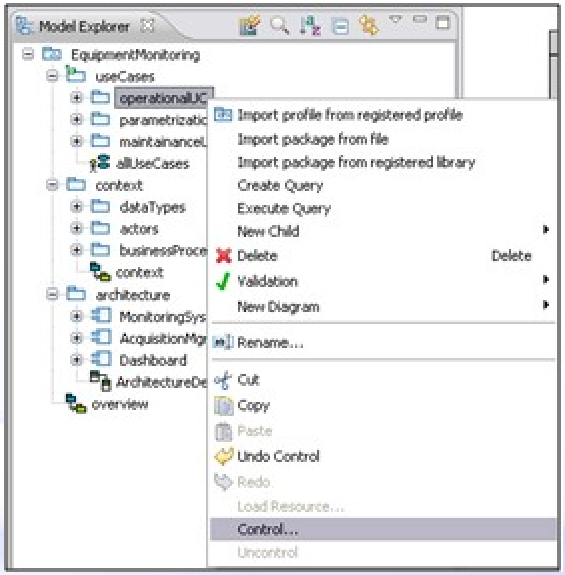
Open part of the model

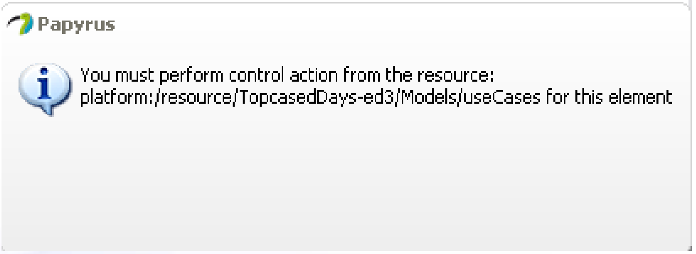
- You can open the model part as a single part
  - Part’s content is visible only



Notification with control

- Notification to be aware of
  - You can’t control a model part from a file that does not contain this part

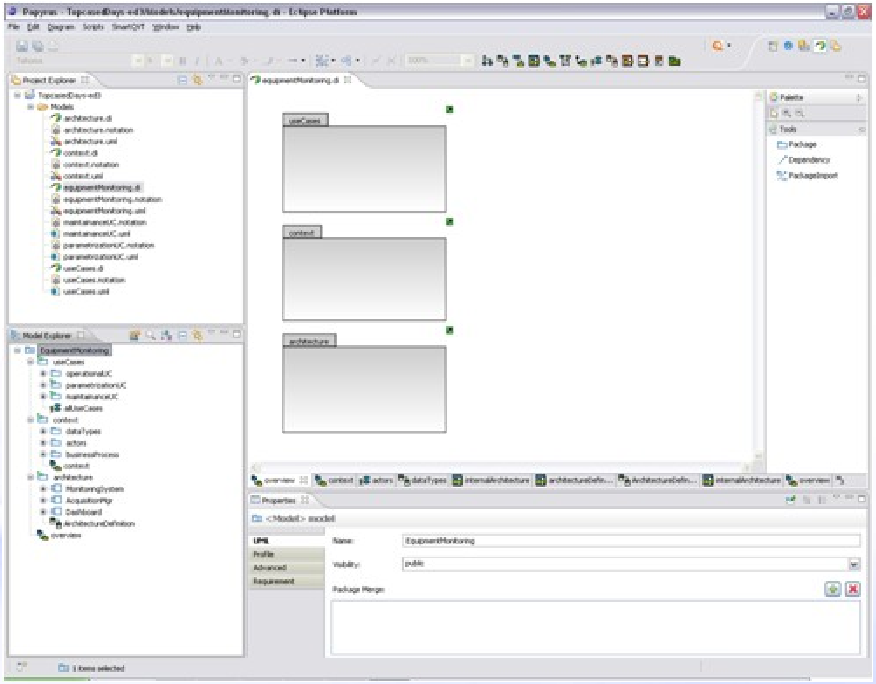




You must perform control action from the resource:
platform:/resource/TopcasedDays-ed3/Models/useCases for this element

Split the model

- You are now able to split your model
  - Each user works on a model part
  - Add restrictions to go beyond on the team work



<<Model>> model

Name: EquipmentMonitoring

Visibility: public

Package Merge:

Restrictions on model parts

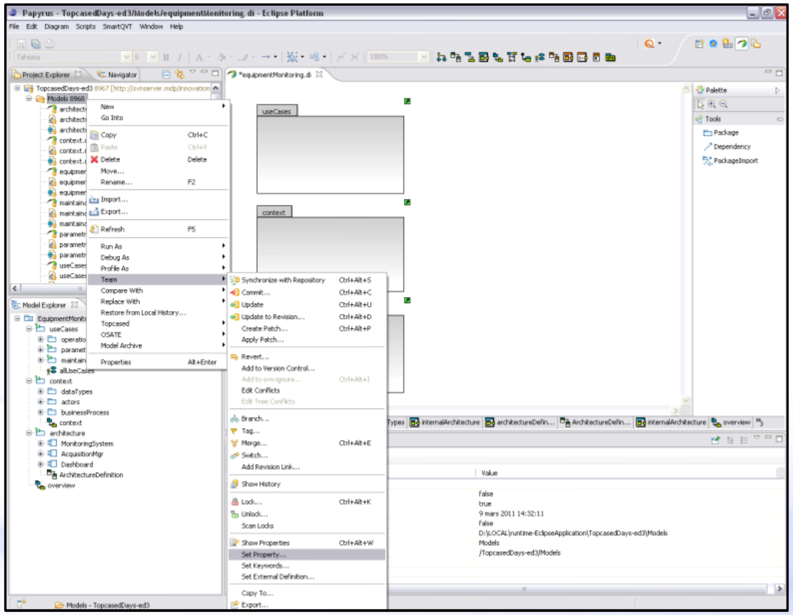
- Adding restrictions enables to
  - Forbid modifications on a wrong model part
  - Avoid conflict situation with model merging
- There are several ways to add restrictions
  - A possible choice is the pessimistic mode with SVN

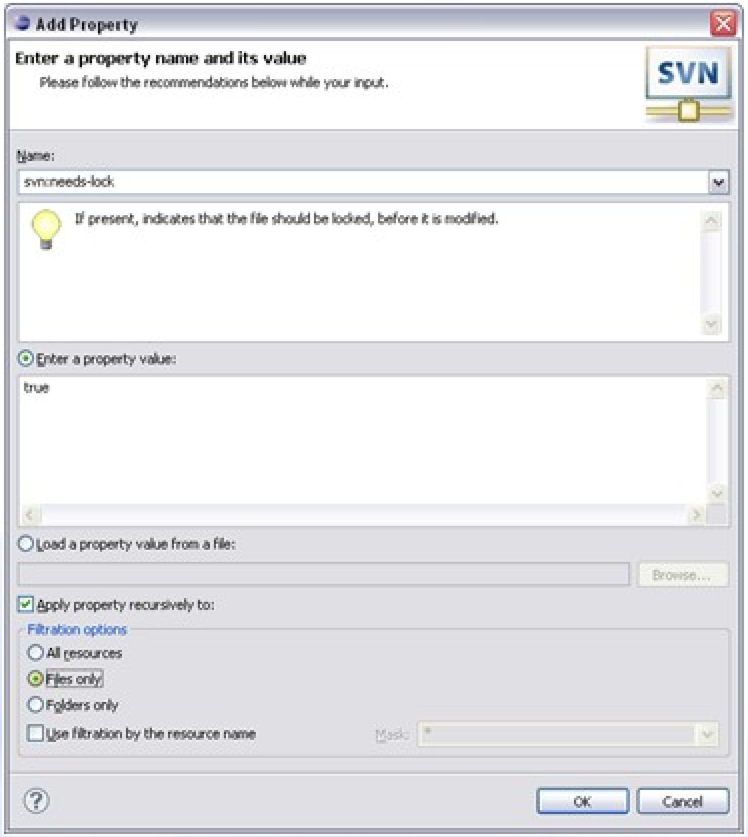
Work in pessimistic mode with SVN

- The aim is to use locks for synchronization
  - A user needs to lock files to work on it
  - Locked files are read-only for other team members

Configure lock on SVN

- Right click on the folder in the Project Explorer view
  - Team menu and Set Property menu item
  - Then commit changes





Add Property

Enter a property name and its value

Please follow the recommendations below while your input.

Name: svn:needs-lock

If present, indicates that the file should be locked, before it is modified.

● Enter a property value:

true

○ Load a property value from a file:

Browse...

☑ Apply property recursively to:

Filtration options

○ All resources

● Files only

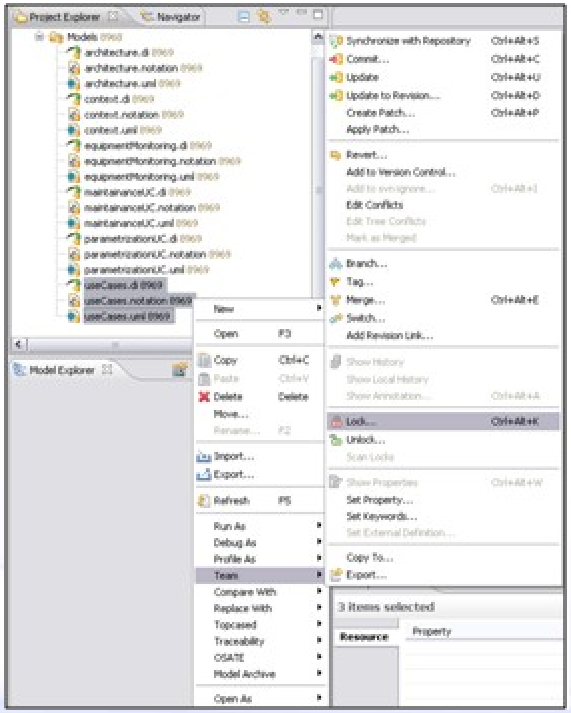
○ Folders only

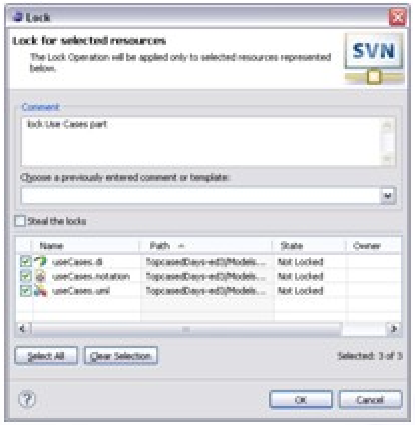
☐ Use filtration by the resource name   Mask: *

OK   Cancel

Work on model part

- You need to lock files you want to work on





Lock for selected resources

The Lock Operation will be applied only to selected resources represented below.

Comment

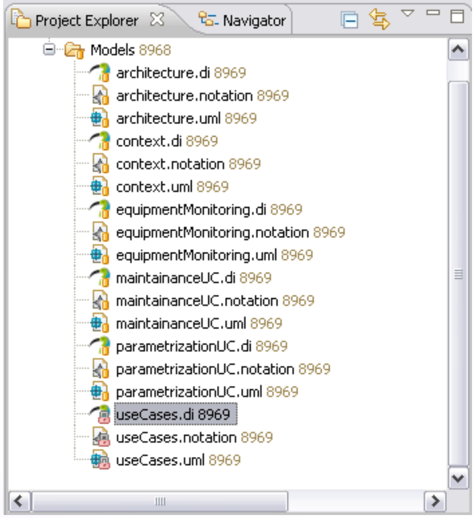
lock Use Cases part

Choose a previously entered comment or template:

□ Steal the locks

	Name	Path	State	Owner
☑	useCases.di	TopcasedDays-ed3/Models...	Not Locked	
☑	useCases.notation	TopcasedDays-ed3/Models...	Not Locked	
☑	useCases.uml	TopcasedDays-ed3/Models...	Not Locked	

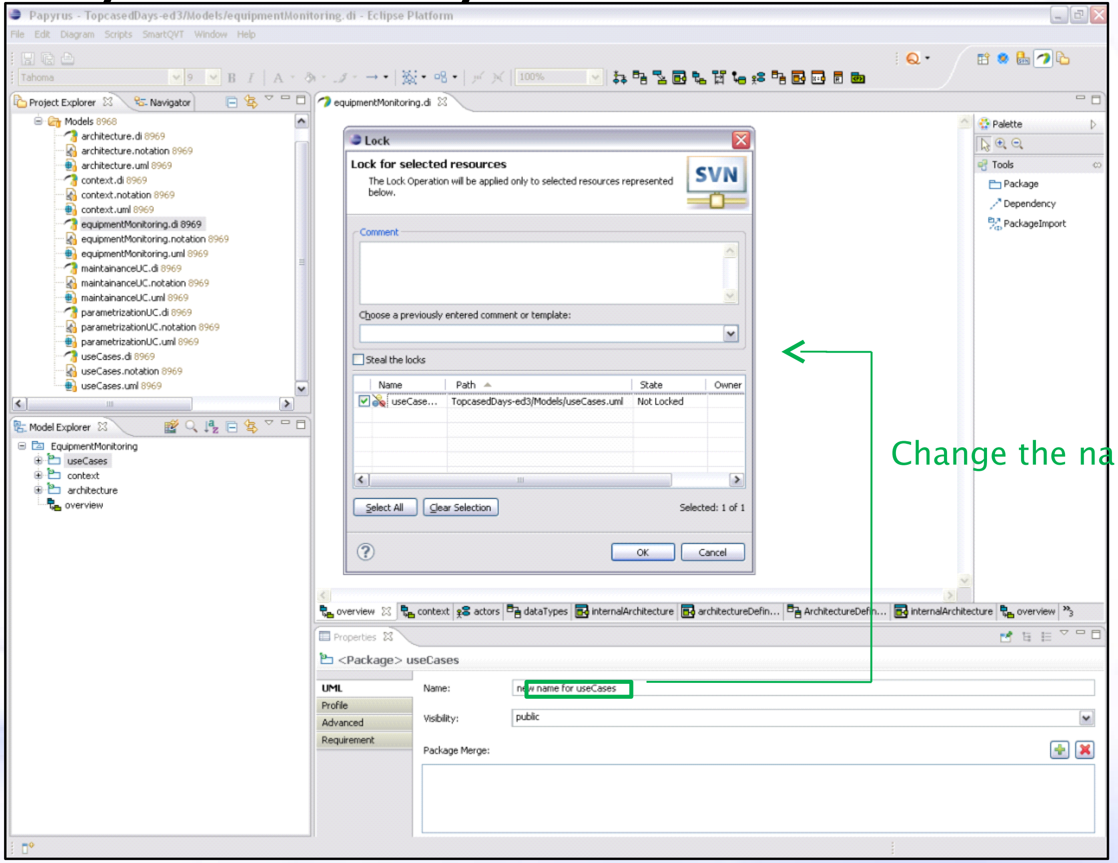
Selected: 3 of 3



Models 8968
architecture.di 8969
architecture.notation 8969
architecture.uml 8969
context.di 8969
context.notation 8969
context.uml 8969
equipmentMonitoring.di 8969
equipmentMonitoring.notation 8969
equipmentMonitoring.uml 8969
maintainanceUC.di 8969
maintainanceUC.notation 8969
maintainanceUC.uml 8969
parametrizationUC.di 8969
parametrizationUC.notation 8969
parametrizationUC.uml 8969
useCases.di 8969
useCases.notation 8969
useCases.uml 8969

Model restrictions

- If you try to modify an unlocked file



Models 8968
- architecture.di 8969
- architecture.notation 8969
- architecture.uml 8969
- context.di 8969
- context.notation 8969
- context.uml 8969
- equipmentMonitoring.di 8969
- equipmentMonitoring.notation 8969
- equipmentMonitoring.uml 8969
- maintainanceUC.di 8969
- maintainanceUC.notation 8969
- maintainanceUC.uml 8969
- parametrizationUC.di 8969
- parametrizationUC.notation 8969
- parametrizationUC.uml 8969
- useCases.di 8969
- useCases.notation 8969
- useCases.uml 8969

EquipmentMonitoring
- useCases
- context
- architecture
- overview

Lock

Lock for selected resources

The Lock Operation will be applied only to selected resources represented below.

SVN

Comment

Choose a previously entered comment or template:

□ Steal the locks

	Name	Path	State	Owner
☑	useCase...	TopcasedDays-ed3/Models/useCases.uml	Not Locked	

Select All | Clear Selection | Selected: 1 of 1

OK | Cancel

<Package> useCases

UML | Profile | Advanced | Requirement

Name: new name for useCases

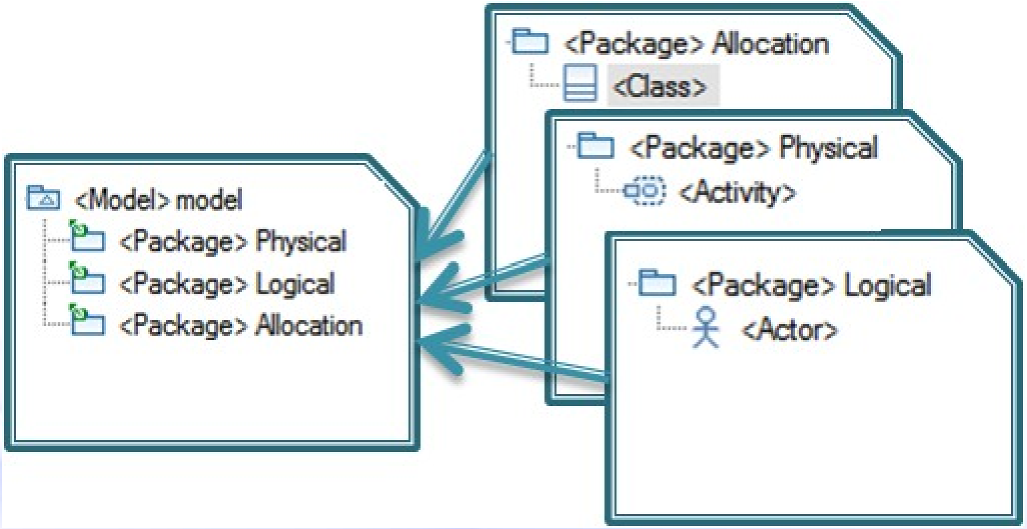
Visibility: public

Package Merge:

Change the name

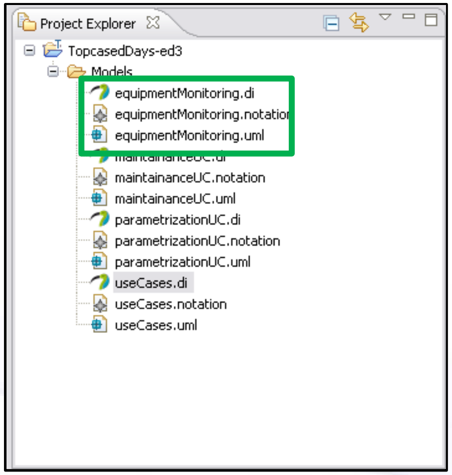
Reassemble your model

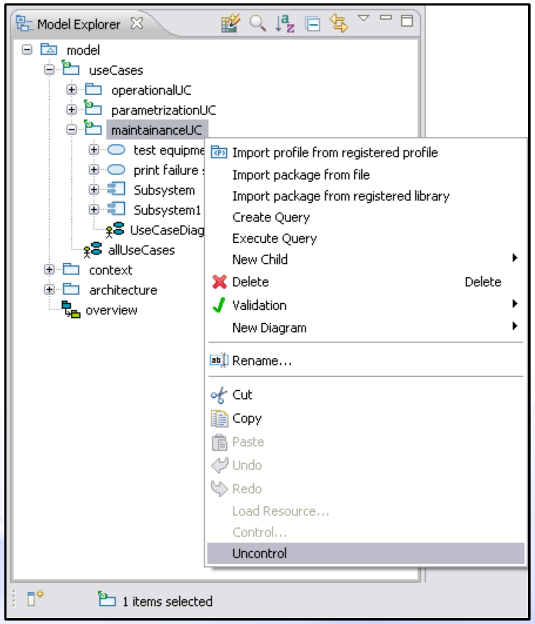
- Uncontrol action
  - Enables to reassemble a part of the model into the initial file
  - One file for one model

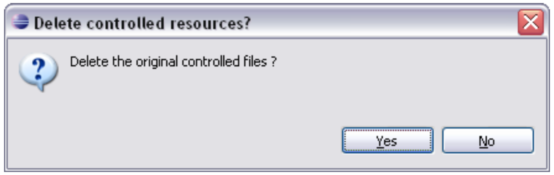


Uncontrol action

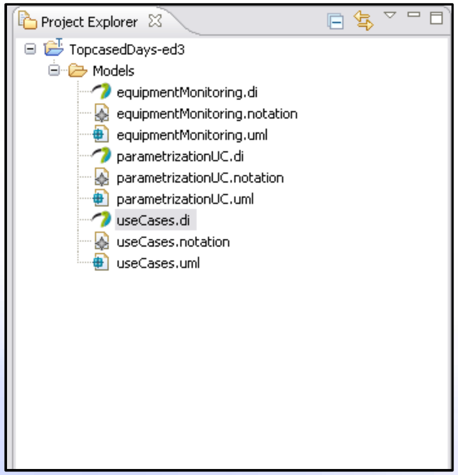
- Available on controlled element only
- Reassemble element content into the initial file





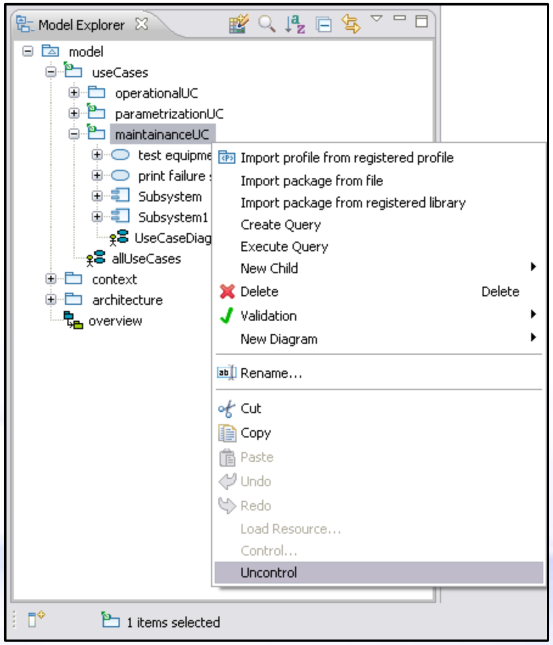

Delete controlled resources?

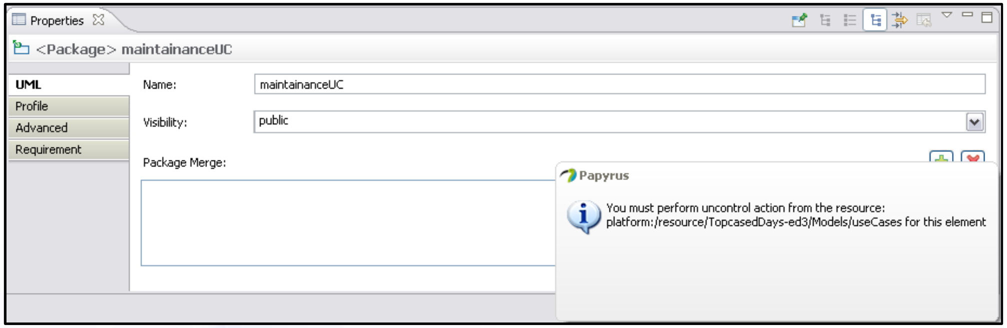
Delete the original controlled files ?



Notification with uncontrol

- Notification to be aware of
  - You can’t uncontrol a model part from a file that did not contain this part





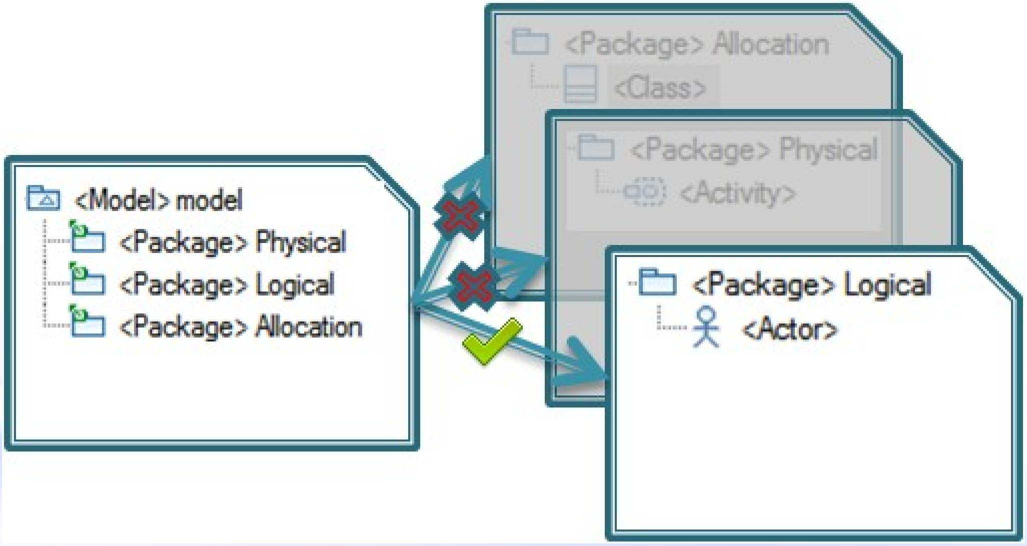
Name: maintainanceUC

Visibility: public

You must perform uncontrol action from the resource: platform:/resource/TopcasedDays-ed3/Models/useCases for this element

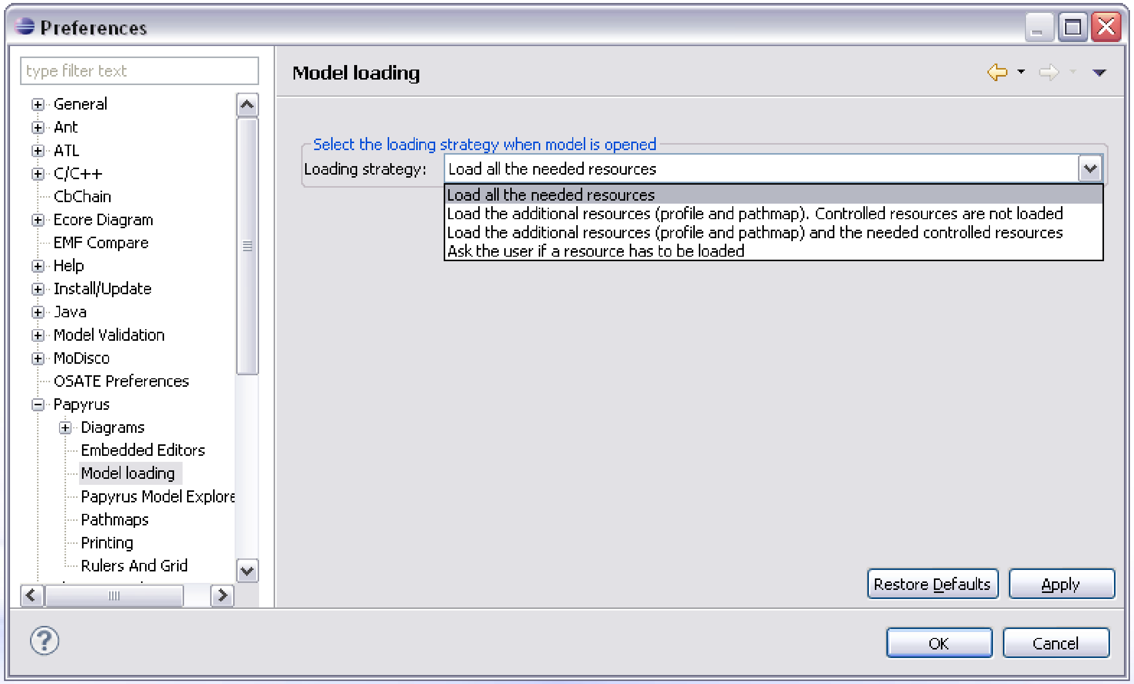
Model loading

- Why change model loading ?
  - Avoid unneeded model part loading
  - Improve model loading performance
  - Quickly open a part of a huge model



Loading policies

- Several model loading policies
  - Available in papyrus preferences (window menu)



Model loading

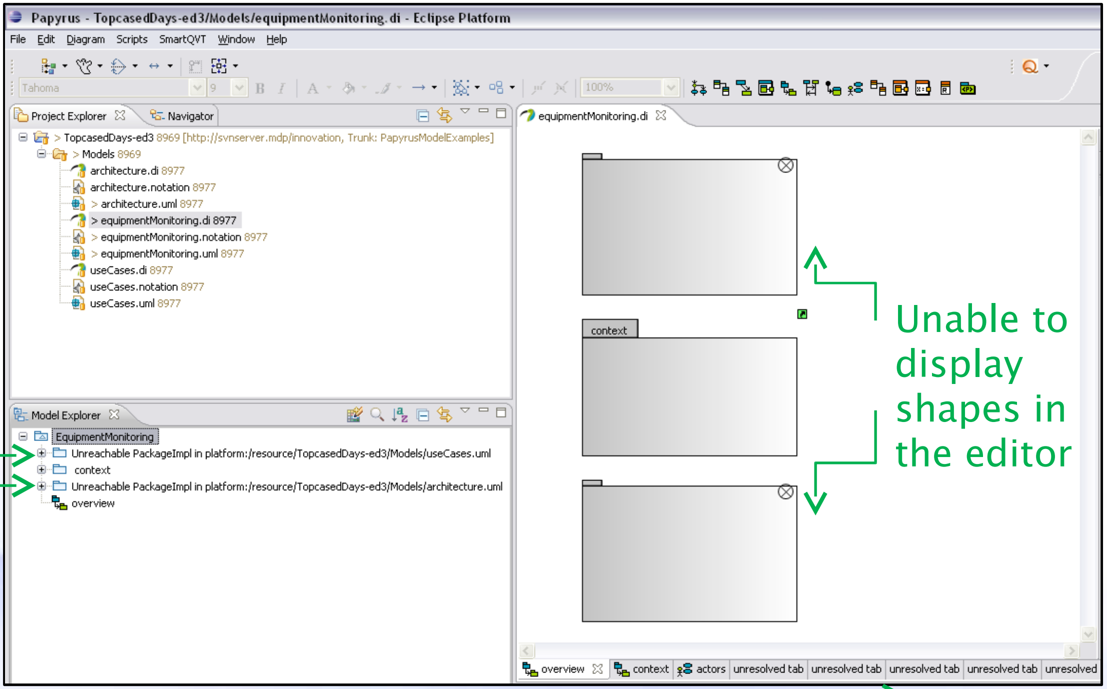
Select the loading strategy when model is opened

Loading strategy: Load all the needed resources

- Load all the needed resources
- Load the additional resources (profile and pathmap). Controlled resources are not loaded
- Load the additional resources (profile and pathmap) and the needed controlled resources
- Ask the user if a resource has to be loaded

Loading policies: example 1

- A sneak peek at loading policies
  - Try with a relevant case:
    - Load the additional resources. Controlled resources are not loaded



> TopcasedDays-ed3 8969 [http://svnserver.mdp/innovation, Trunk: PapyrusModelExamples]
> Models 8969
architecture.di 8977
architecture.notation 8977
> architecture.uml 8977
> equipmentMonitoring.di 8977
> equipmentMonitoring.notation 8977
> equipmentMonitoring.uml 8977
useCases.di 8977
useCases.notation 8977
useCases.uml 8977

EquipmentMonitoring
Unreachable PackageImpl in platform:/resource/TopcasedDays-ed3/Models/useCases.uml
context
Unreachable PackageImpl in platform:/resource/TopcasedDays-ed3/Models/architecture.uml
overview

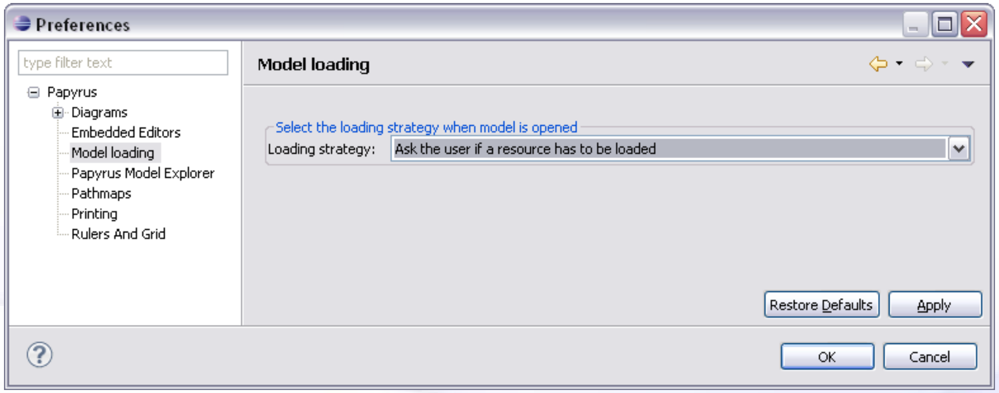
Unable to display shapes in the editor

Unreachable elements in Model Explorer view

Unresolved tabs for unloaded diagrams

Loading policies: example 2

- Another relevant case
  - Ask the user if a resource has to be loaded
    - First set this policy in preferences
    - Then open the notification view: Window > Show View > Other



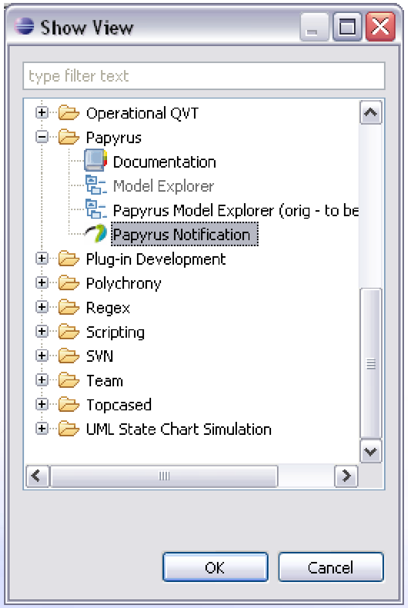
Preferences

Papyrus > Model loading

Model loading

Select the loading strategy when model is opened

Loading strategy: Ask the user if a resource has to be loaded

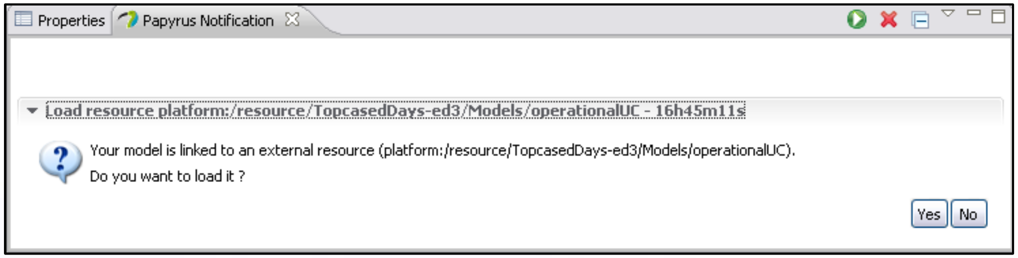


Show View

Papyrus > Papyrus Notification

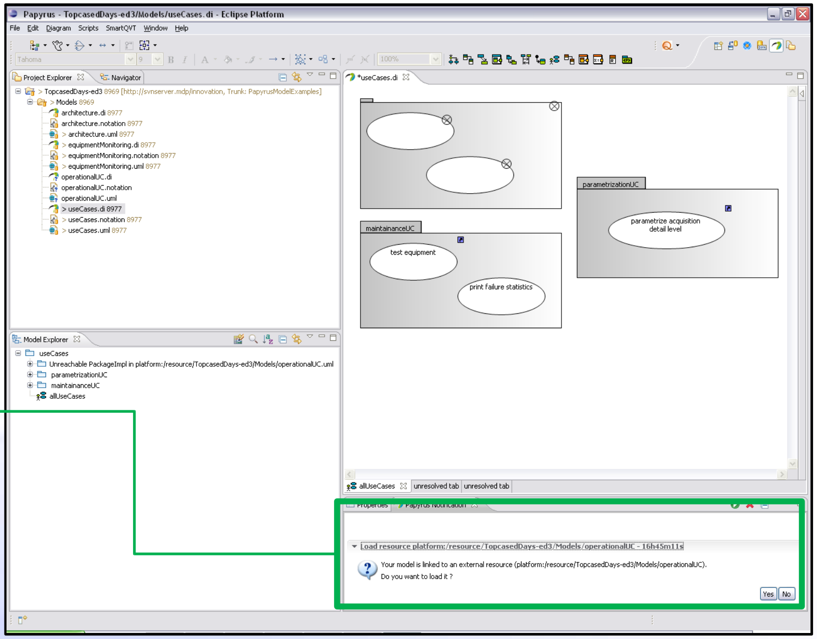
Loading policies: example 2

- Open the model
  - All the referenced resources are listed in notification view
  - Choose “Yes” to load the resource you want



Load resource platform:/resource/TopcasedDays-ed3/Models/operationalUC - 16h45m11s

Your model is linked to an external resource (platform:/resource/TopcasedDays-ed3/Models/operationalUC).
Do you want to load it ?



```
> TopcasedDays-ed3 8969 [http://svnserver.mdp/innovation, Trunk: PapyrusModelExamples]
  > Models 8969
    architecture.di 8977
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    > architecture.uml 8977
    > equipmentMonitoring.di 8977
    > equipmentMonitoring.notation 8977
    > equipmentMonitoring.uml 8977
    operationalUC.di
    operationalUC.notation
    operationalUC.uml
    > useCases.di 8977
    > useCases.notation 8977
    > useCases.uml 8977
```

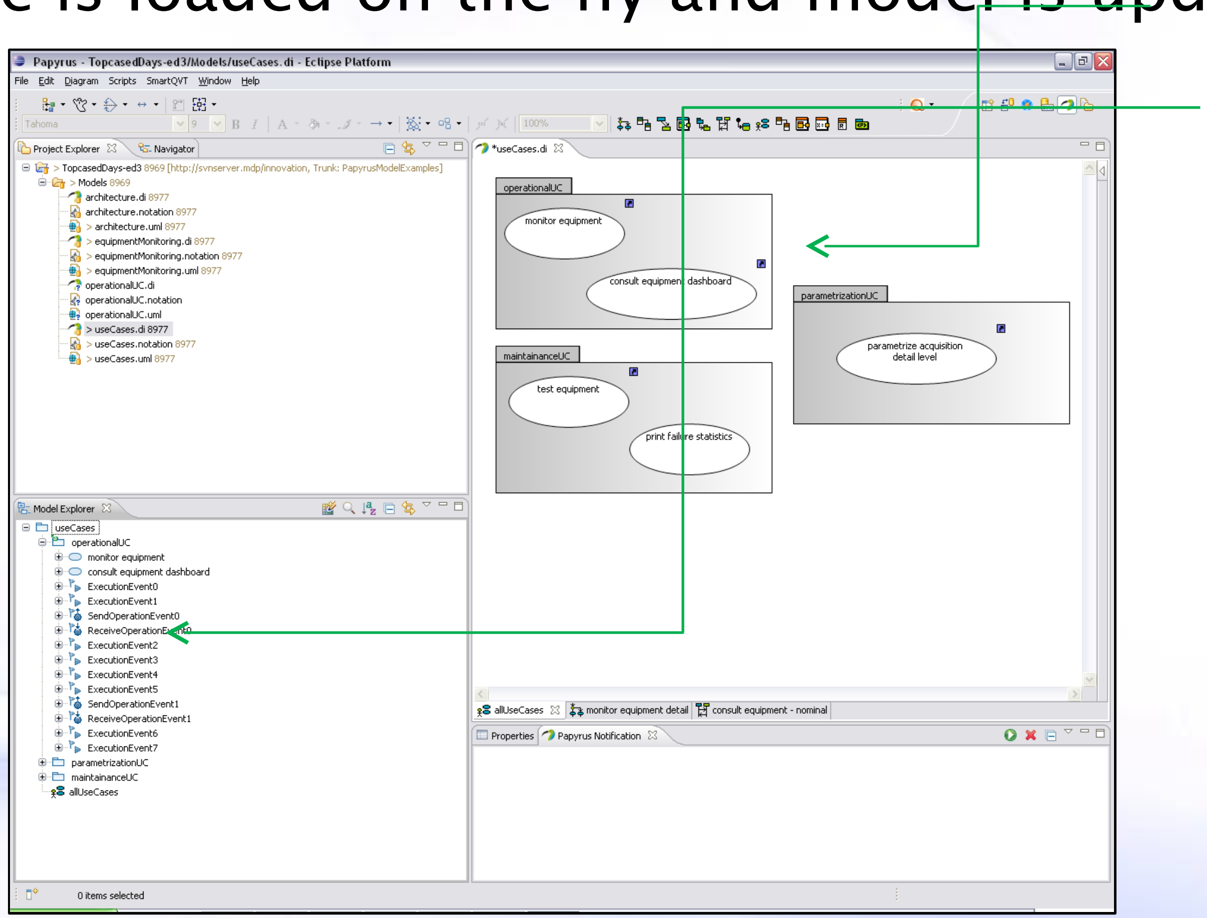
```
useCases
  Unreachable PackageImpl in platform:/resource/TopcasedDays-ed3/Models/operationalUC.uml
  parametrizationUC
  maintainanceUC
  allUseCases
```

Load resource platform:/resource/TopcasedDays-ed3/Models/operationalUC - 16h45m11s

Your model is linked to an external resource (platform:/resource/TopcasedDays-ed3/Models/operationalUC).
Do you want to load it ?

Loading policies: example 2

- Resource is loaded on the fly and model is updated

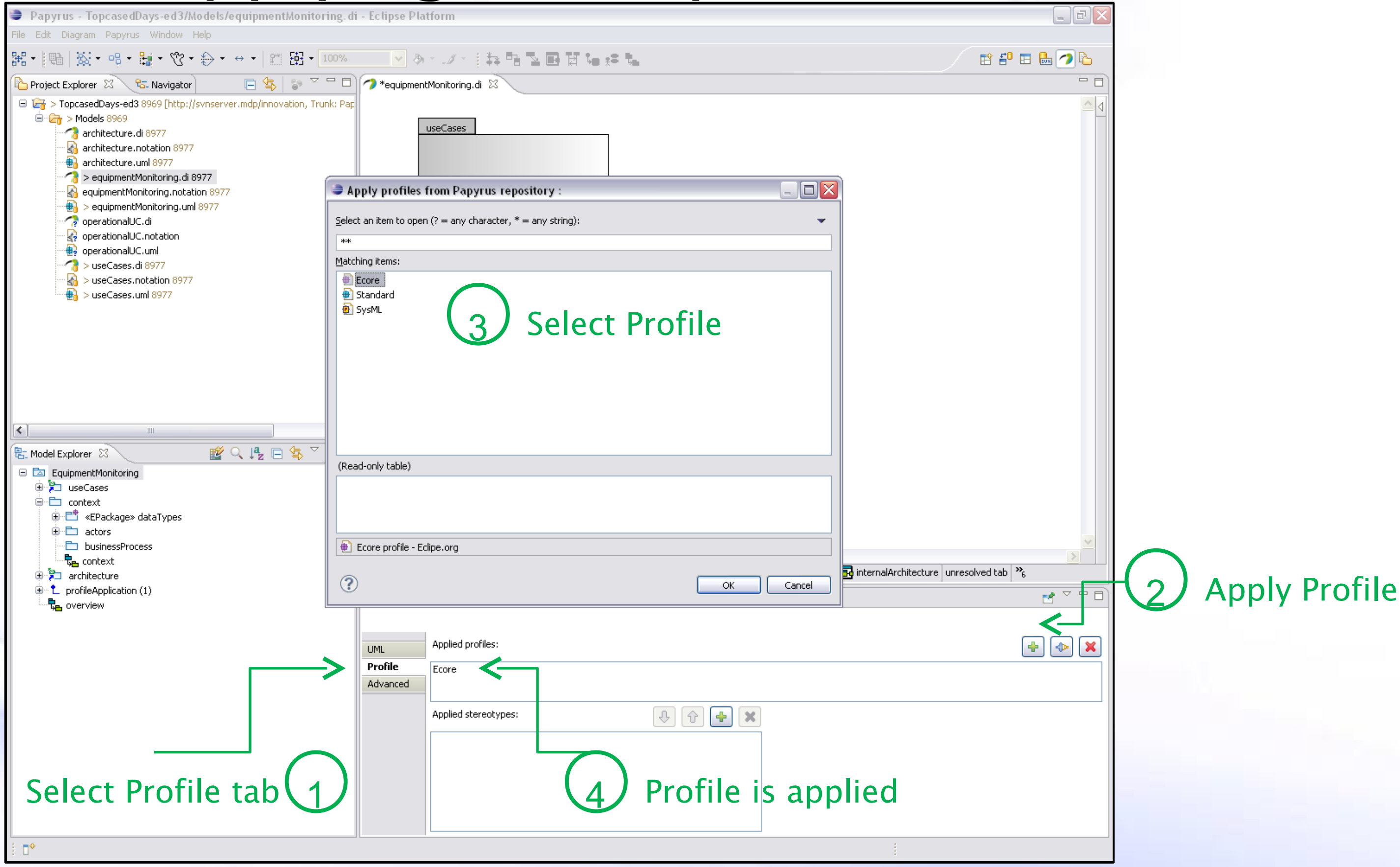


Manage UML profiles

- Some constraints exist on UML profiles
  - Profile application must be visible from stereotype elements
  - Profile application on a model is not visible from a model part
  - Profile application is duplicated on controlled element to handle this constraint

Apply UML profile

- Let’s start applying Ecore profile on a model



Apply profiles from Papyrus repository :

Select an item to open (? = any character, * = any string):

**

Matching items:

- Ecore
- Standard
- SysML

(Read-only table)

Ecore profile - Eclipe.org

OK Cancel

Applied profiles:

Ecore

Applied stereotypes:

1 Select Profile tab

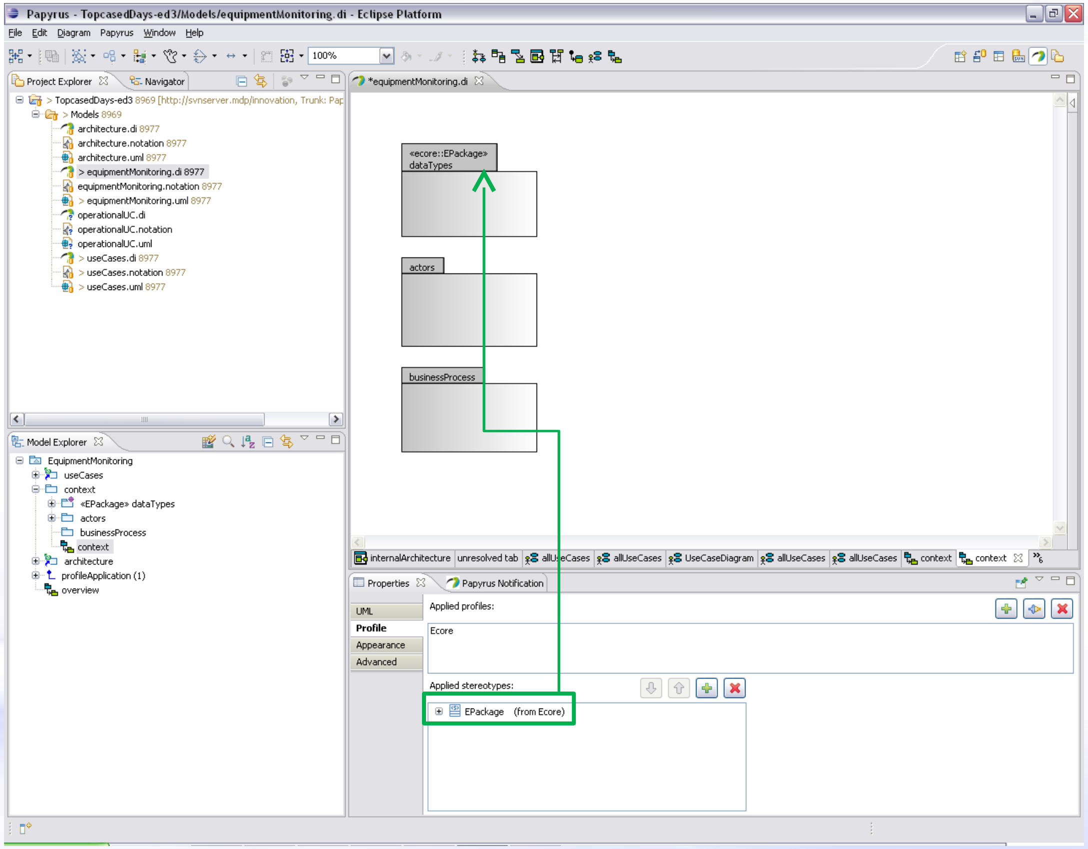
2 Apply Profile

3 Select Profile

4 Profile is applied

Apply stereotype

- Then apply stereotype on the element



Papyrus - TopcasedDays-ed3/Models/equipmentMonitoring.di - Eclipse Platform

Applied profiles:

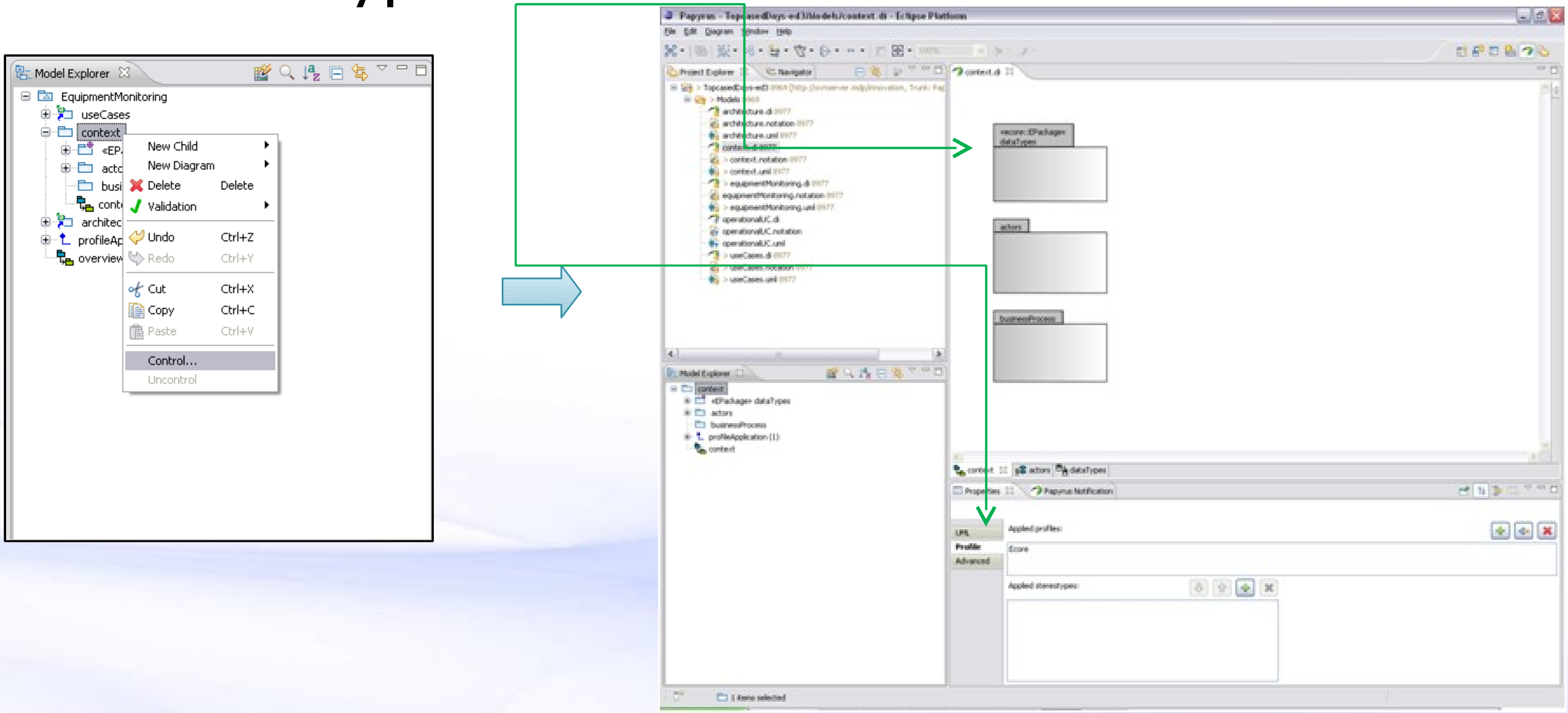
Ecore

Applied stereotypes:

EPackage (from Ecore)

Control model part with stereotypes

- Controlled model part now has profile applied
- Stereotype is still visible on the element



Manage UML profiles

- Duplicated profiles are unapplied when uncontrol action is performed
- The tool asks the user to load all the needed resources if policy is not suitable for profile duplication

Additional information

- All these features are coming with papyrus 0.8.0 release

- Have a look at the other tutorials
  - Papyrus tutorials page

- Visit MDT Papyrus home page
  - Papyrus home page