

# State Machine diagram elements

On this page

- [StateMachine](#)
- [State](#)
- [StateMachine placed on a diagram](#)
- [Object](#)
- [Synch](#)
- [EntryPoint / ExitPoint](#)
- [Object Flow connecting State Machine elements](#)
- [Information Flow connecting State Machine elements](#)
- [Trigger](#)
- [Self Transition](#)
- [Removed element](#)

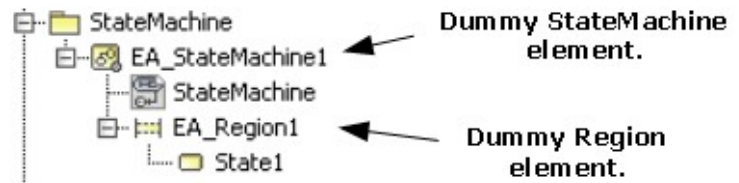
## StateMachine

After conversion, a dummy StateMachine element will be created. The dummy StateMachine is either created by the XML exporter from EA or by EA Import. A [StateMachine diagram](#) will be placed inside the dummy StateMachine and a dummy Region element will be created to contain all of the StateMachine elements.

### EA (Before Conversion)



### MD (After Conversion)



A dummy StateMachine element and a dummy Region element.

## State

### State containing other elements

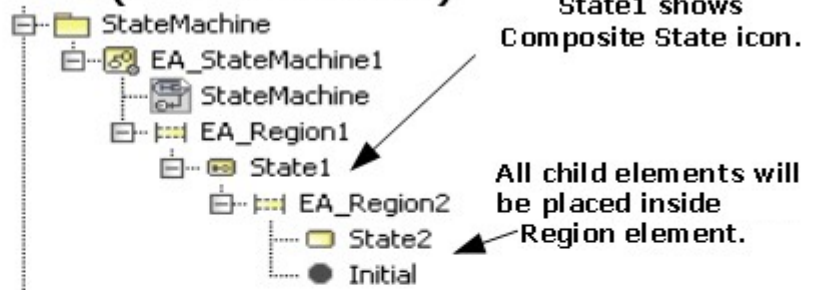
A State element containing other elements will be transformed to a [Composite State](#). All of the contained elements will be placed inside the [Region](#) element of the State element.

## Containment tree

### EA (Before Conversion)

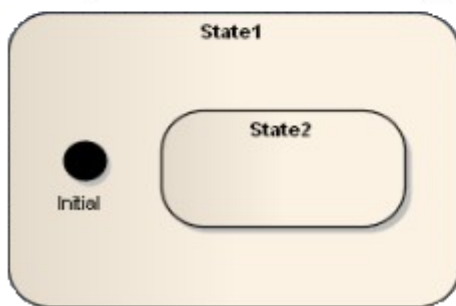


### MD (After Conversion)

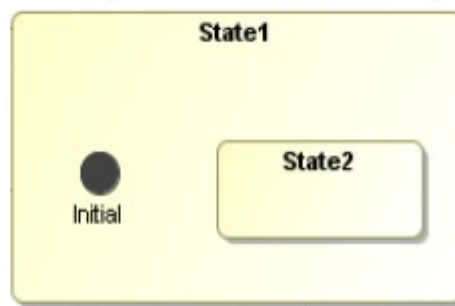


## Diagram View

### EA (Before Conversion)



### MD (After Conversion)



State Containing Other Elements.

### State Containing StateMachine

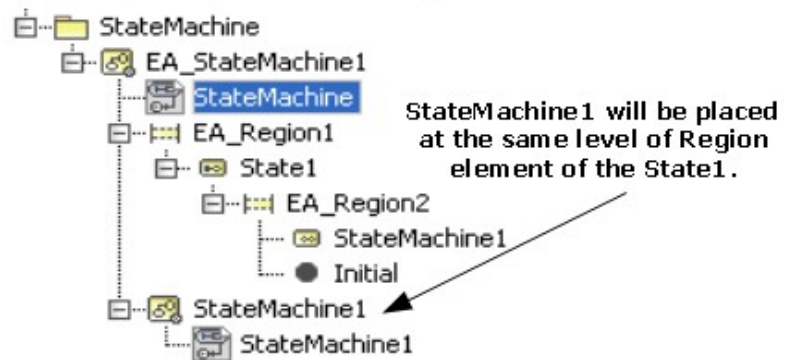
If a State element contains a StateMachine element, the StateMachine element will be brought out and placed at the same level of the Region element of the State element.

### Containment tree

### EA (Before Conversion)

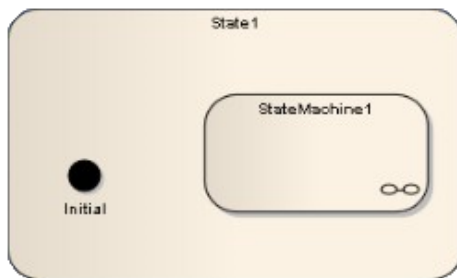


### MD (After Conversion)

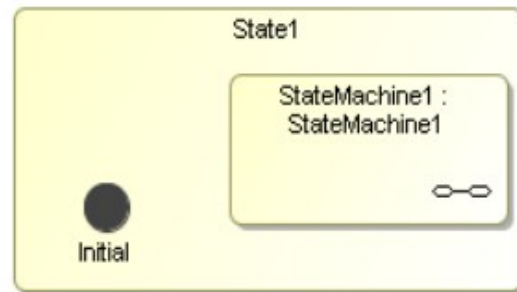


### Diagram View

### EA (Before Conversion)



### MD (After Conversion)



State Containing StateMachine.

### State containing Attribute and Operation

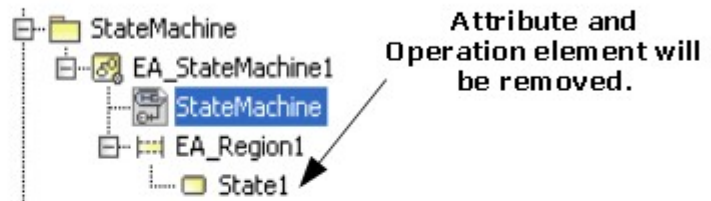
If a State element contains Attribute and Operation elements, the **Attribute** and **Operation** elements will be removed from both the **Diagram pane** and **Containment tree**.

## Containment tree

### EA (Before Conversion)

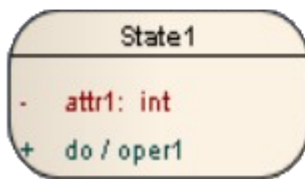


### MD (After Conversion)



## Diagram View

### EA (Before Conversion)



### MD (After Conversion)



Attribute and Operation element will be removed.

State Containing Attribute and Operation.

The following transformation messages will open:

- Removed element <xmi:id>: State cannot contain Attribute.
- Removed element <xmi:id>: State cannot contain Operation.

### State containing Diagram Element

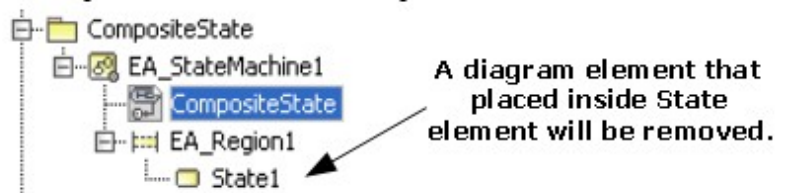
If a diagram element is placed inside a State element, it will be removed.

## Containment tree

### EA (Before Conversion)

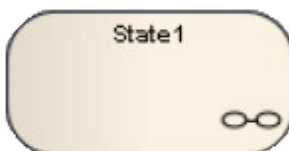


### MD (After Conversion)



## Diagram View

### EA (Before Conversion)



### MD (After Conversion)



State Containing Diagram Element.

The following transformation message will open:

Removed element <xmi:id>: State cannot contain diagram element.

## StateMachine placed on a diagram

If a StateMachine element is drawn in a StateMachine diagram, an additional SubMachineState will be created to represent the StateMachine.

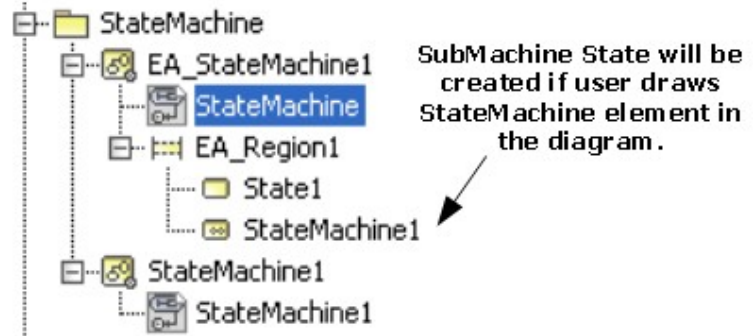
**Note**  
A SubMachine State is a State whose SubMachine property is set to a StateMachine.

### Containment tree

#### EA (Before Conversion)

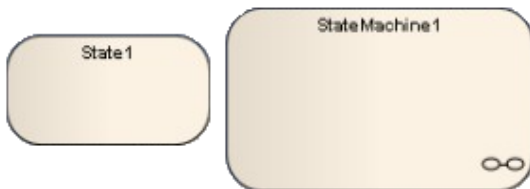


#### MD (After Conversion)

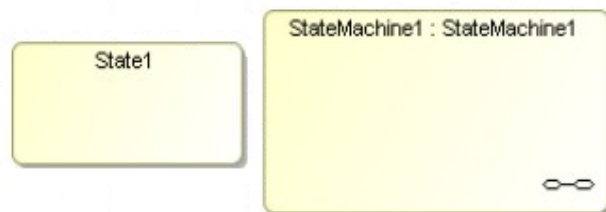


### Diagram View

#### EA (Before Conversion)



#### MD (After Conversion)



StateMachine Represented by a SubMachine State.

## Object

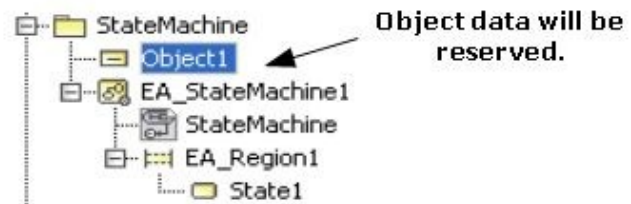
An Object element placed in a State Machine diagram will be removed from the Diagram view. However, its data will be preserved in the Containment tree as an [InstanceSpecification](#).

## Containment tree

### EA (Before Conversion)

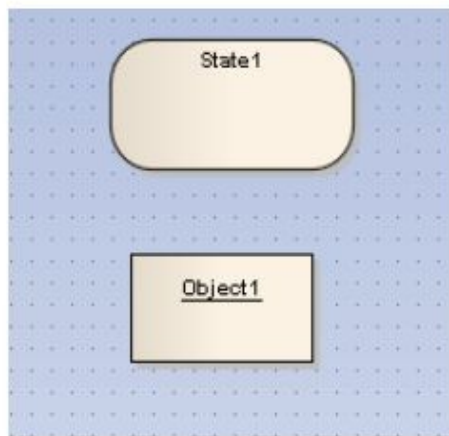


### MD (After Conversion)

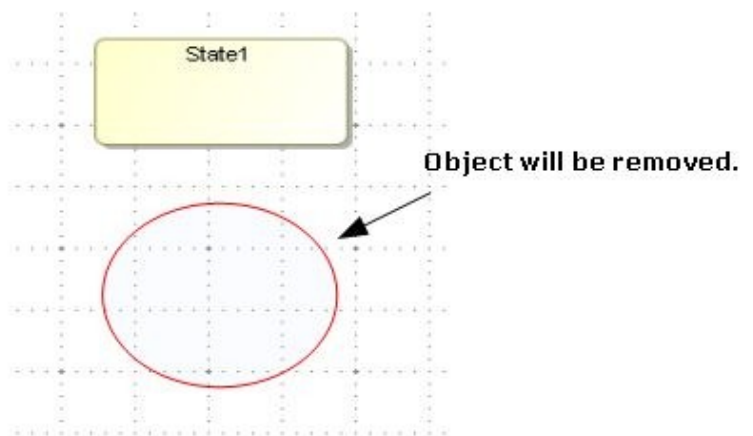


## Diagram View

### EA (Before Conversion)



### MD (After Conversion)



Object.

The following transformation message will open:

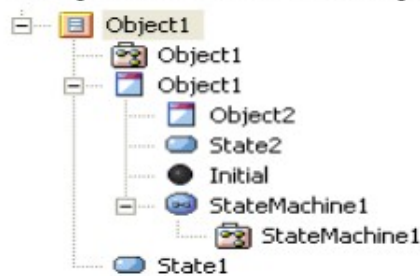
*Removed view <xmi:id>: The view represents element that does not support in State Machine Diagram.*

### Object containing a State Machine element

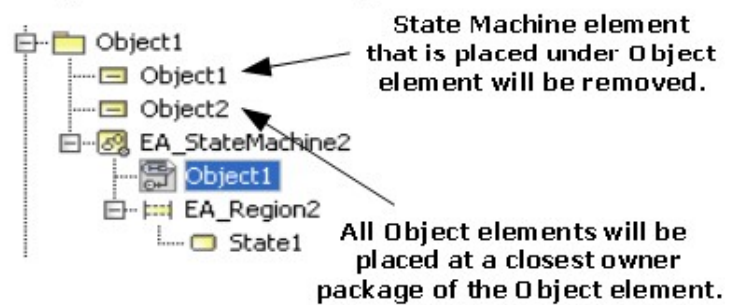
In EA, an Object element can contain a State Machine element. After it has been imported to the modeling tool, the State Machine element placed inside an Object element will be removed both from the Diagram pane and Containment tree. However, the Object element data will be preserved. All of the Object element data will be placed at the closest owner package of the Object element.

## Containment tree

### EA (Before Conversion)

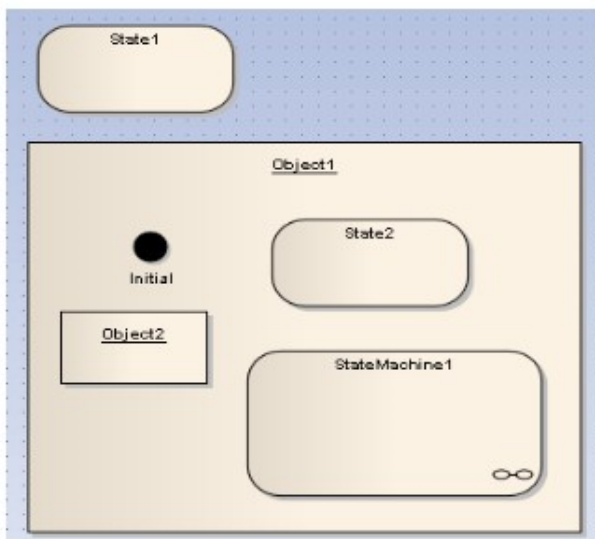


### MD (After Conversion)

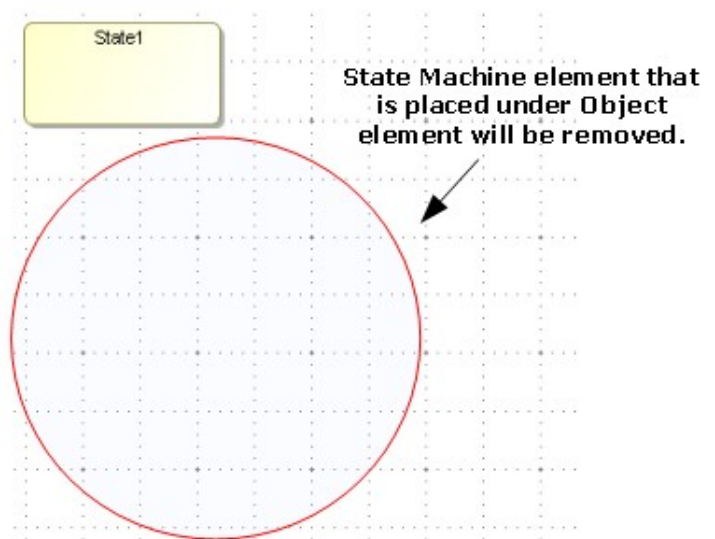


## Diagram View

### EA (Before Conversion)



### MD (After Conversion)



Object Containing State Machine Element.

The following transformation message will open:

```
Removed element <xmi:id>: Invalid element. Instancespecification can not contain element from State Machine.
```

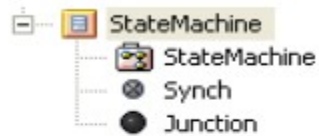
## **Synch**

A Synch element will be transformed to a Junction element.

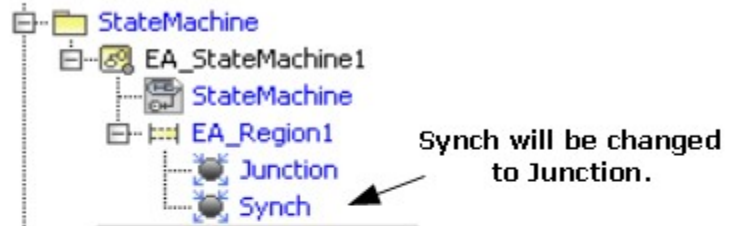


## Containment tree

### EA (Before Conversion)

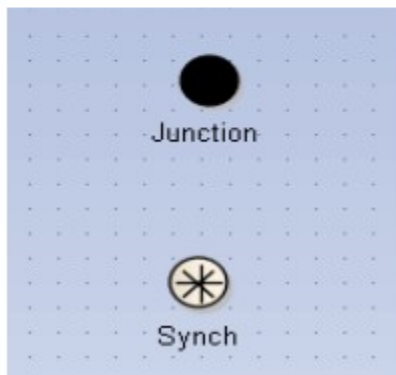


### MD (After Conversion)

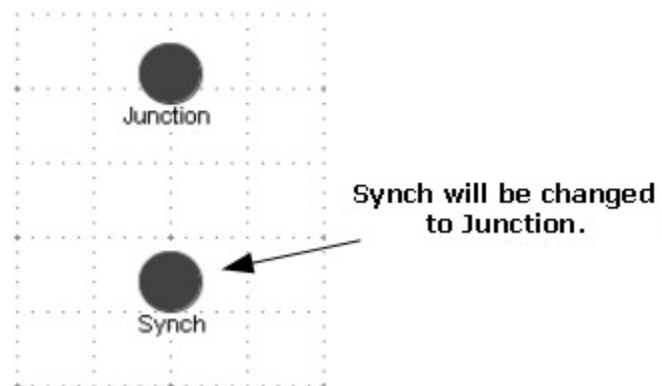


## Diagram View

### EA (Before Conversion)



### MD (After Conversion)



Synch.

The following transformation message will open:

```
Updated element <xmi:id>: Synch updated to Junction.
```

## EntryPoint / ExitPoint

An Entry or Exit point placed inside a State (or StateMachine) element will be placed outside a Region element of its parent element in the Containment tree. It will be relocated to the nearest boundary of its parent element in the Diagram pane.

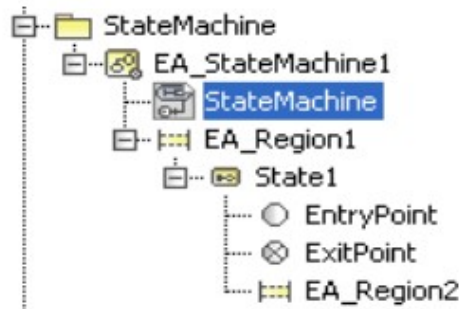


## Containment tree

### EA (Before Conversion)

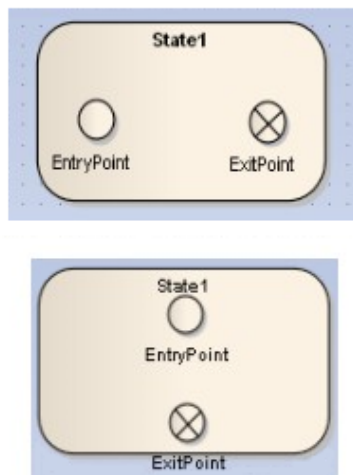


### MD (After Conversion)

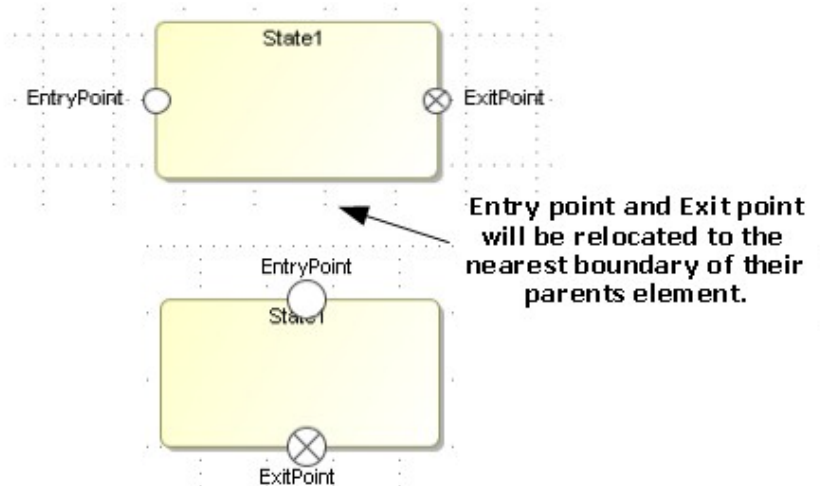


## Diagram View

### EA (Before Conversion)



### MD (After Conversion)



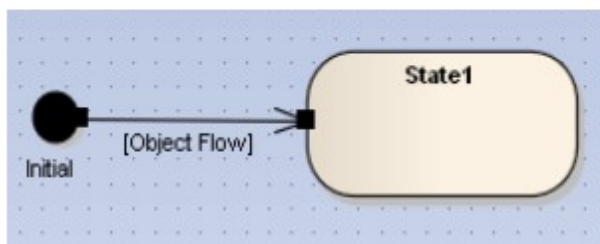
Entry/Exit Point.

## Object Flow connecting State Machine elements

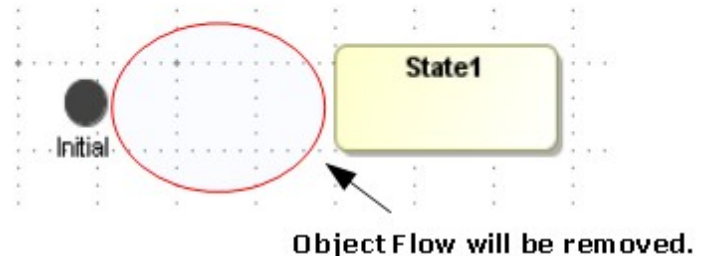
An Object Flow connecting the elements in a State Machine will be removed from both the Diagram view and Containment tree.

## Diagram View

### EA (Before Conversion)



### MD (After Conversion)



ObjectFlow Connecting State Machine Elements.

The following transformation message will open:

Removed element <xmi:id>: Invalid ObjectFlow. Source or Target of theObjectFlow are connected to element from State Machine.

## Information Flow connecting State Machine elements

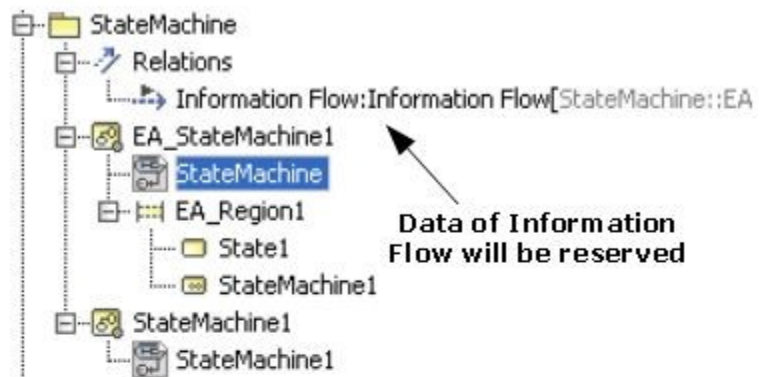
An Information Flow connecting the elements in a State Machine will be removed from the Diagram pane; however, its data will be preserved.

### Containment tree

#### EA (Before Conversion)

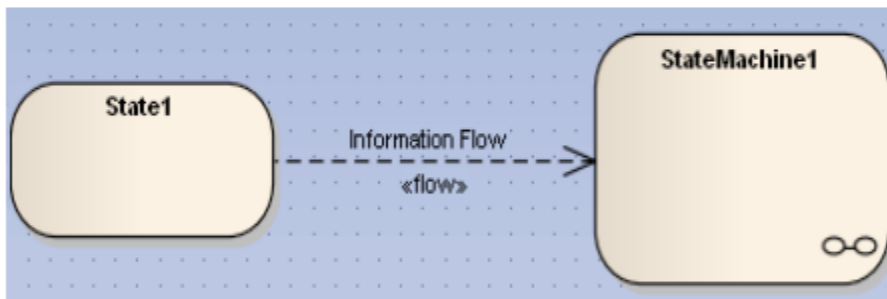


#### MD (After Conversion)

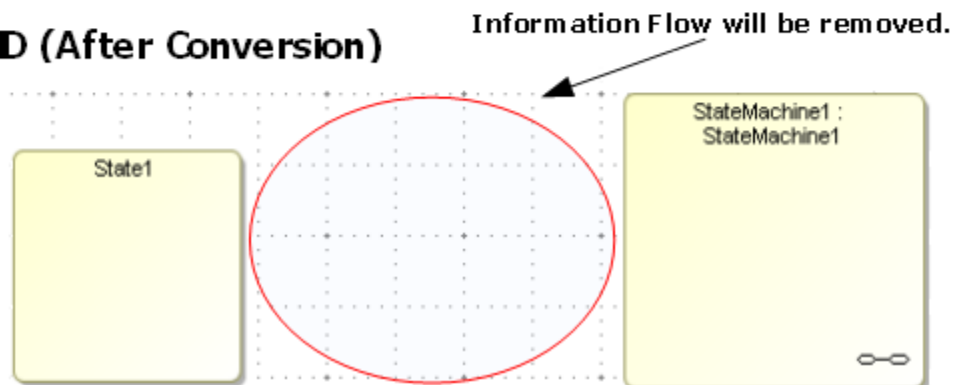


### Diagram View

#### EA (Before Conversion)



#### MD (After Conversion)



Information Flow, Trace, and Dependency.

The following transformation message will open:

Removed element <xmi:id>: The view represents element that does not support in State Machine Diagram.

## Trigger

If there is a Trigger element unrelated to any Transition line, a dummy StateMachine will be created to hold the Trigger element. The dummy StateMachine will be named after the parent package name concatenating with 'trigger'.

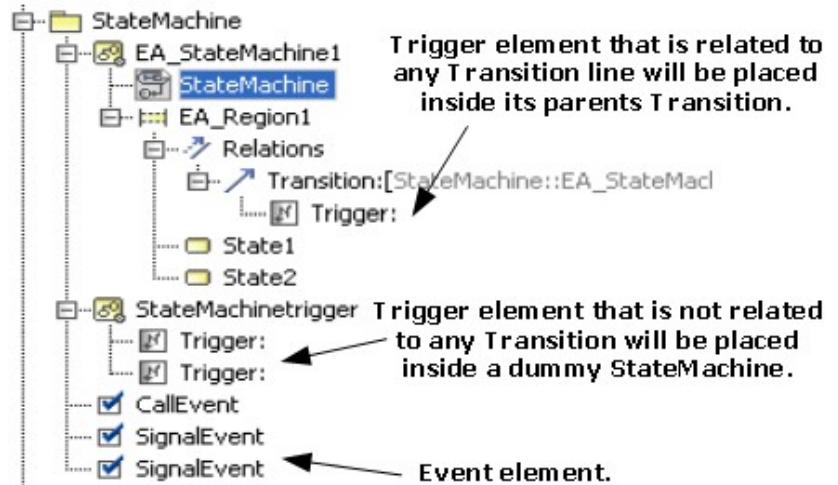
In the case of a Trigger element related to Transition, the data of the Trigger element will be placed inside its parent [Transition](#). Each Trigger element will be given an event type, represented by an Event element. After conversion, the Event will be placed at the closest owner package of the [Event](#).

### Containment tree

#### EA (Before Conversion)

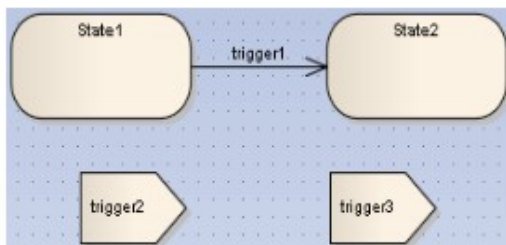


#### MD (After Conversion)

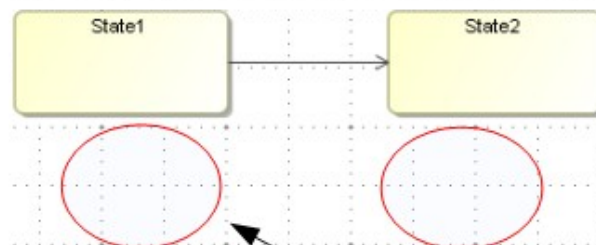


### Diagram View

#### EA (Before Conversion)



#### MD (After Conversion)



Trigger will be removed from Diagram view.

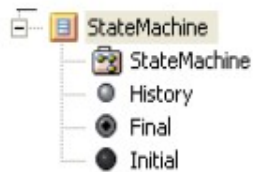
Trigger.

## Self Transition

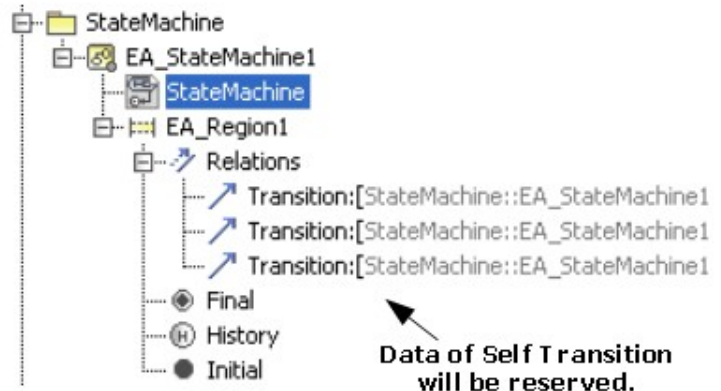
Most of the elements in a StateMachine diagram can have a self transition, except the Initial, Final, and History elements. The self transition in these three elements will be removed from the Diagram pane, but the data of the self transition will be preserved in the Containment tree.

## Containment tree

### EA (Before Conversion)

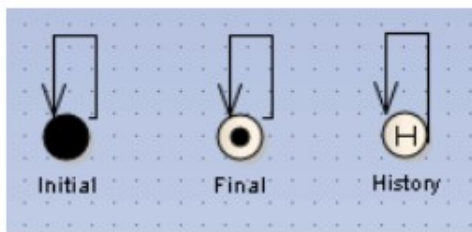


### MD (After Conversion)

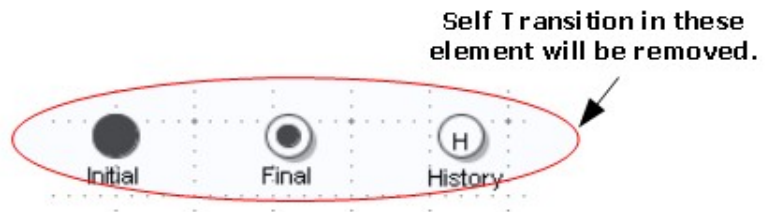


## Diagram View

### EA (Before Conversion)



### MD (After Conversion)



Self Transition.

The following transformation messages will open:

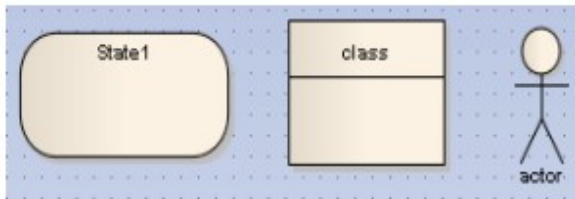
- Removed view <xmi:id>: Self Transition does not support forInitial.
- Removed view <xmi:id>: Self Transition does not support forFinal.
- Removed view <xmi:id>: Self Transition does not support forHistory.

## Removed element

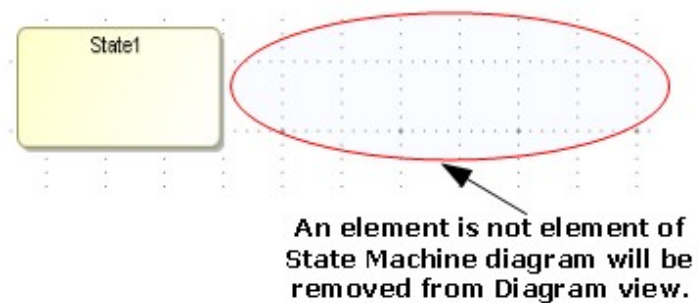
Any element which is not the element of a State Machine diagram (such as Class, Actor, Use-case, or Action) drawn in the State Machine diagram will be removed from the Diagram pane. However, its data will be preserved in the Containment tree.

## Diagram View

### EA (Before Conversion)



### MD (After Conversion)

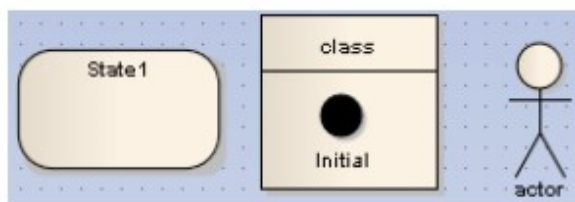


Removed element.

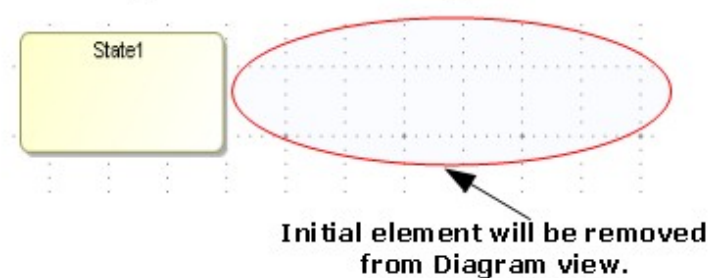
If an element which is not the element of a State Machine diagram has a child element and is drawn in the State Machine diagram, the element will be removed from the Diagram pane. However, its data will be preserved in the Containment tree.

## Diagram View

### EA (Before Conversion)



### MD (After Conversion)



Removed Element with a Child Element

The following transformation message will open:

*Removed view <xmi:id>:The view represents element that does not support in State Machine Diagram.*

### Related pages

- [State Machine diagram](#)