



# Ajax Interaction

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# Topics

- Ajax Interaction
- Using Ajax in Screen Actions
  - Ajax Refresh
  - Refresh Data
- Screen Lifecycle with Ajax
- Additional Ajax features
  - Ajax-enabled Widgets

# Ajax Interaction

**Ajax** allows web pages to change content dynamically

- No need to reload the entire page

## How does it work?

- Sends small asynchronous requests to server
- End user continues to interact with the Screen
  - No need to wait for response
  - Page state is kept

## Why use Ajax?

End-user experience greatly improved

# Using Ajax in Screen Actions

Set the Link / Button's *Method* to **Ajax Submit**

- Set the Destination to a Screen Action

When reaching the  End node of the Screen Action:

- Preparation does not run
- Only the explicitly specified parts of the Screen are rebuilt (or refreshed)

OK Button	
Properties	Styles
Name	
Label	"Save"
Example	
Validation Pa...	
Style Classes	Button
Visible	True
Enabled	True
Is Default	Yes
Width, Margi...	In Styles Editor
On Click	
Method	Ajax Submit
Validation	Server
Confirmation...	

Link	
Properties	Styles
Name	
Title	
Validation Pa...	
Style Classes	
Visible	True
Enabled	True
Is Default	No
Width, Margi...	In Styles Editor
On Click	
Method	Ajax Submit
Validation	(none)
Confirmation...	

# Ajax Refresh

Refreshes part of the Screen, with optional animation effect


Rebuilds the specified Widget on the Screen

- Response contains only the refreshed Screen content
- Available for **named Widgets only**

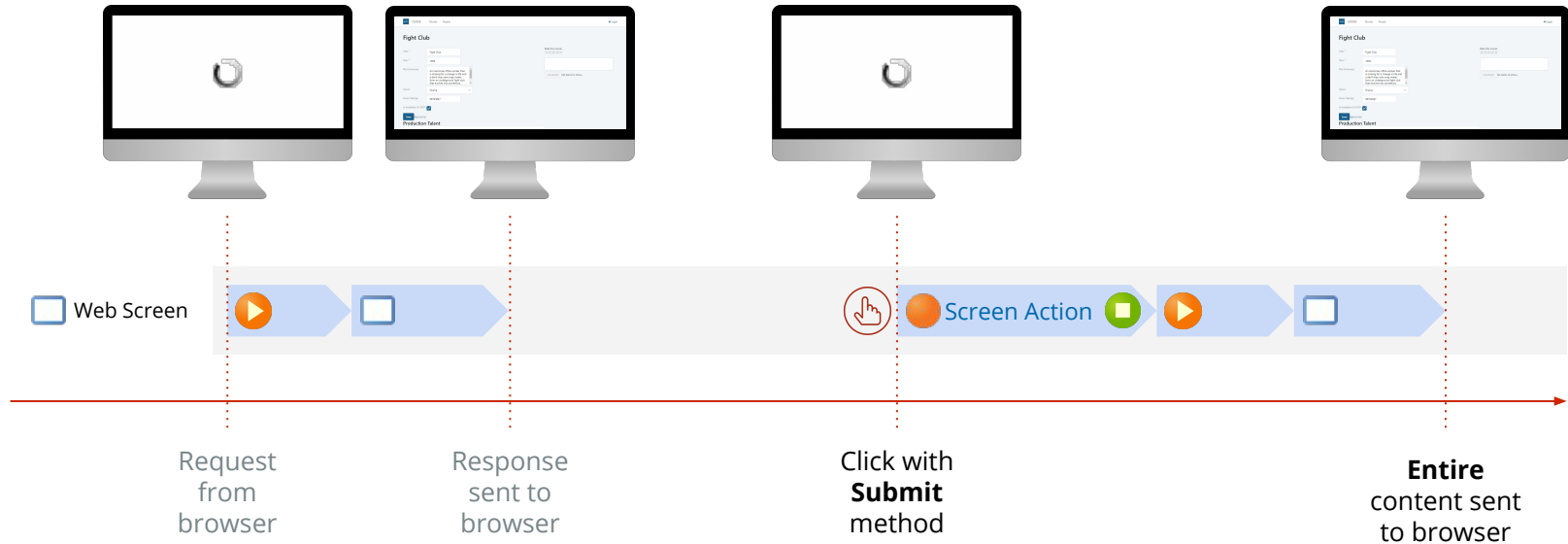
Multiple Ajax Refresh calls in the same Action will be executed in order

Ignored if *Method* is not Ajax Submit

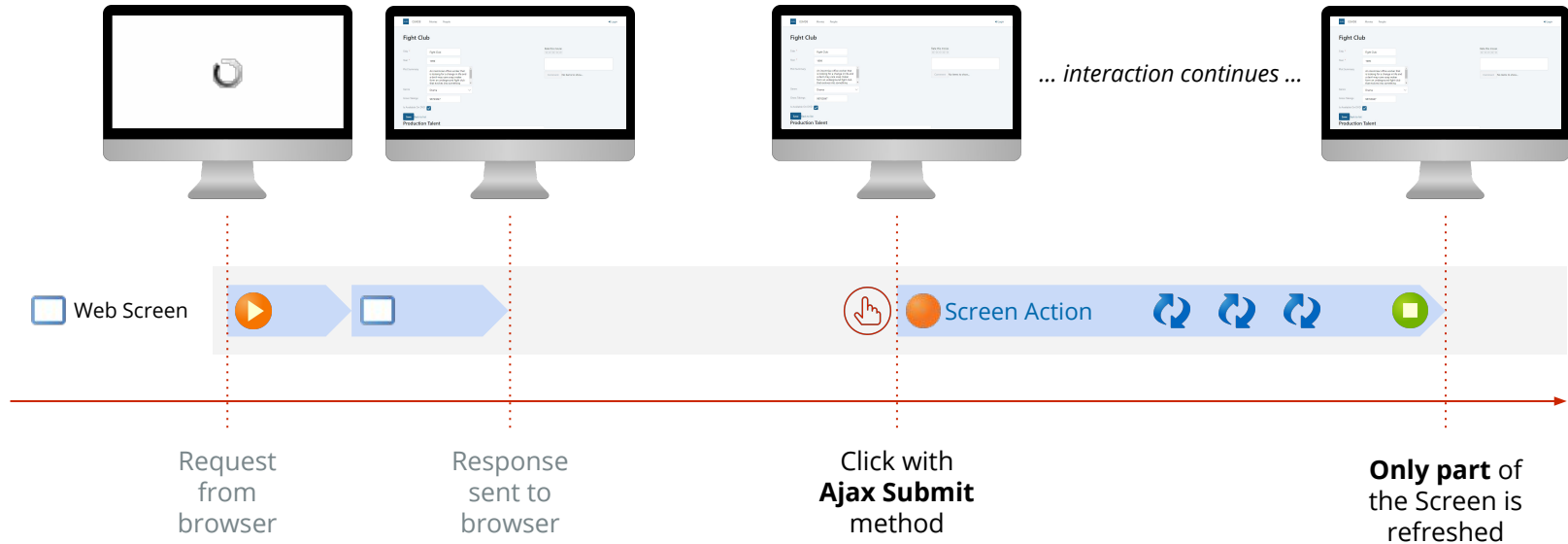


 <b>MovieTable</b> Ajax Refresh	
Widget	MovieTable ▼
Row Number	▼
Animation Effect	None ▼

# Recap: Submit Lifecycle



# Ajax Submit Lifecycle



# Refreshing Data

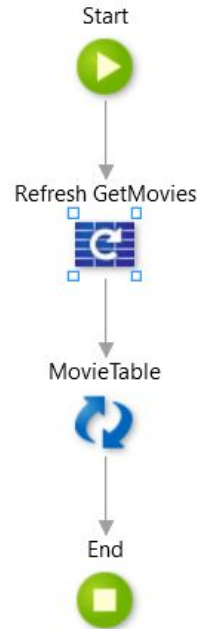
Re-executes an Aggregate or SQL Query



Refreshes data from any query in the Preparation







- Only the explicitly refreshed queries will be executed

Needed before **Ajax Refresh** over Widgets that depend on Preparation queries

- Guarantees that the source data is up to date



GetMovies Aggregate		Movies Preparation ScreenAction	
Name	GetMovies	...	
Description		...	
Timeout			
Cache in Minutes			
Max. Records		▼	
Sources			
 Movie		...	
Sorting			
 Movie.Title (ASC)		...	

 <b>Refresh GetMovies</b> Refresh Data		 Movies  Preparation  <b>ScreenAction</b>
Data Source	GetMovies	
Max. Records		
Sources		
 Movie		
Sorting		
 Movie.Title (ASC)		



# Additional Ajax Features

## Row Number in Ajax Refresh

- Only available in Table / List Records
- Refreshes a single row of the Widget

## System Actions with Ajax

- ListRemove, ListAppend, ListInsert
- Only when used on Table / List Records
- Applies the Action to the **List** and refreshes the Widget afterwards



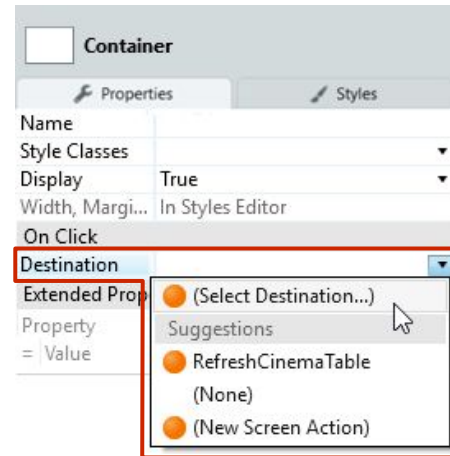
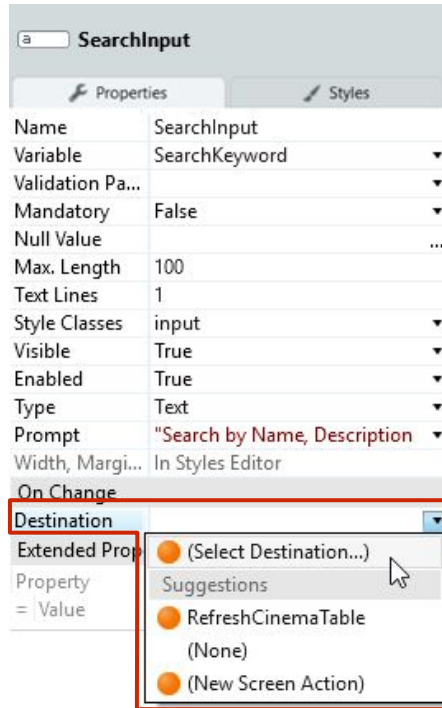
MovieTable Ajax Refresh	
Widget	MovieTable ▼
Row Number	▼
Animation Effect	None ▼

ListRemove Run Server Action	
Name	ListRemove
Action	ListRemove ▼
Animation Effect	Fade ▼
List	MovieTable.List ▼
Position	MovieTable.List.CurrentRowNumber ▼

# Ajax-enabled Widgets

## Widgets that trigger Actions with Ajax

- When the user clicks on them
  - Container
- When the user changes their value
  - Input / Input Password
  - Combo / List Box
  - Check Box
  - Radio Button



# Summary

- Ajax Interaction
- Using Ajax in Screen Actions
  - Ajax Refresh
  - Refresh Data
- Screen Lifecycle with Ajax
- Additional Ajax features
  - Ajax-enabled Widgets



**Ajax Interaction**  
**Thank You!**