Understanding Controller Initialization

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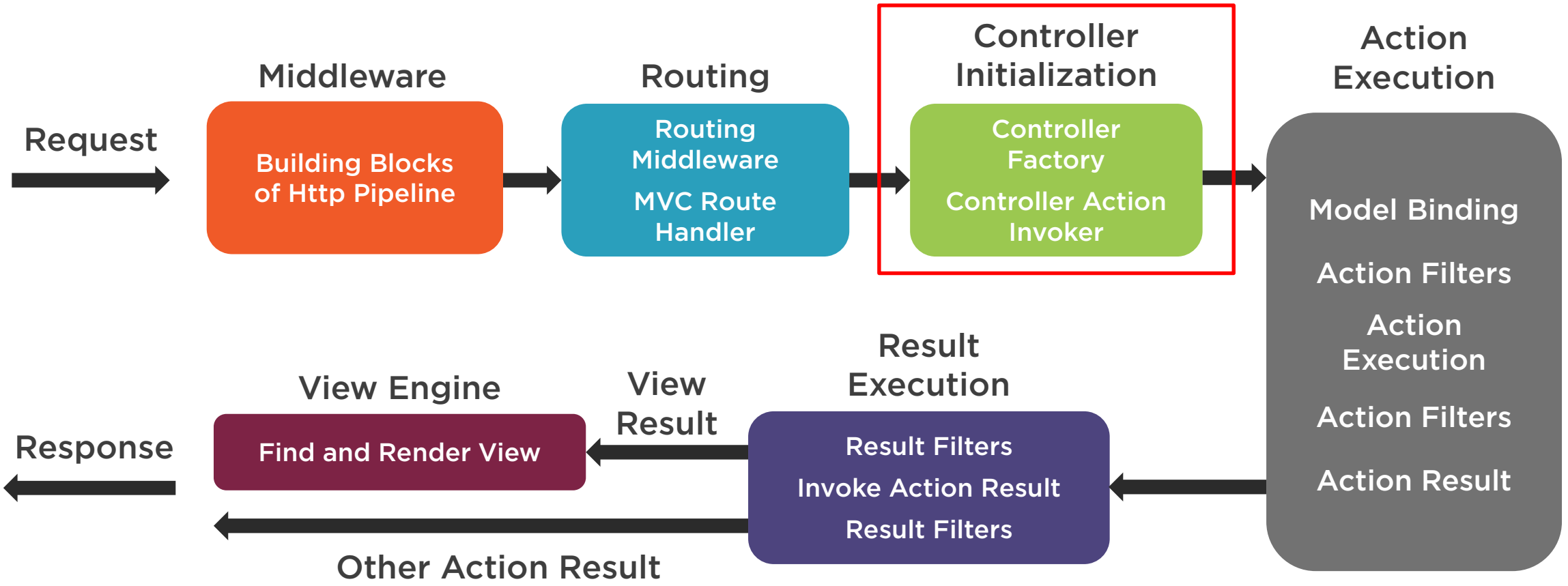
The MVC Request Life Cycle



To-Do List

- Controllers and the Request Life Cycle
- Demo – Action Method Selection Basics
- Demo – Influencing Action Method Selection
- Demo – Building a Custom Action Constraint
- Understanding Controller Initialization
- Demo – The Controller Creation Process

Controllers and the Request Life Cycle

Handling Requests with Controllers

localhost/Home/Index

localhost/Home/About

```
public class HomeController {

    public IActionResult Index()
    {
        return View();
    }

    public IActionResult About()
    {
        return Content("Hello");
    }

}
```

Razor View Response

Text Response

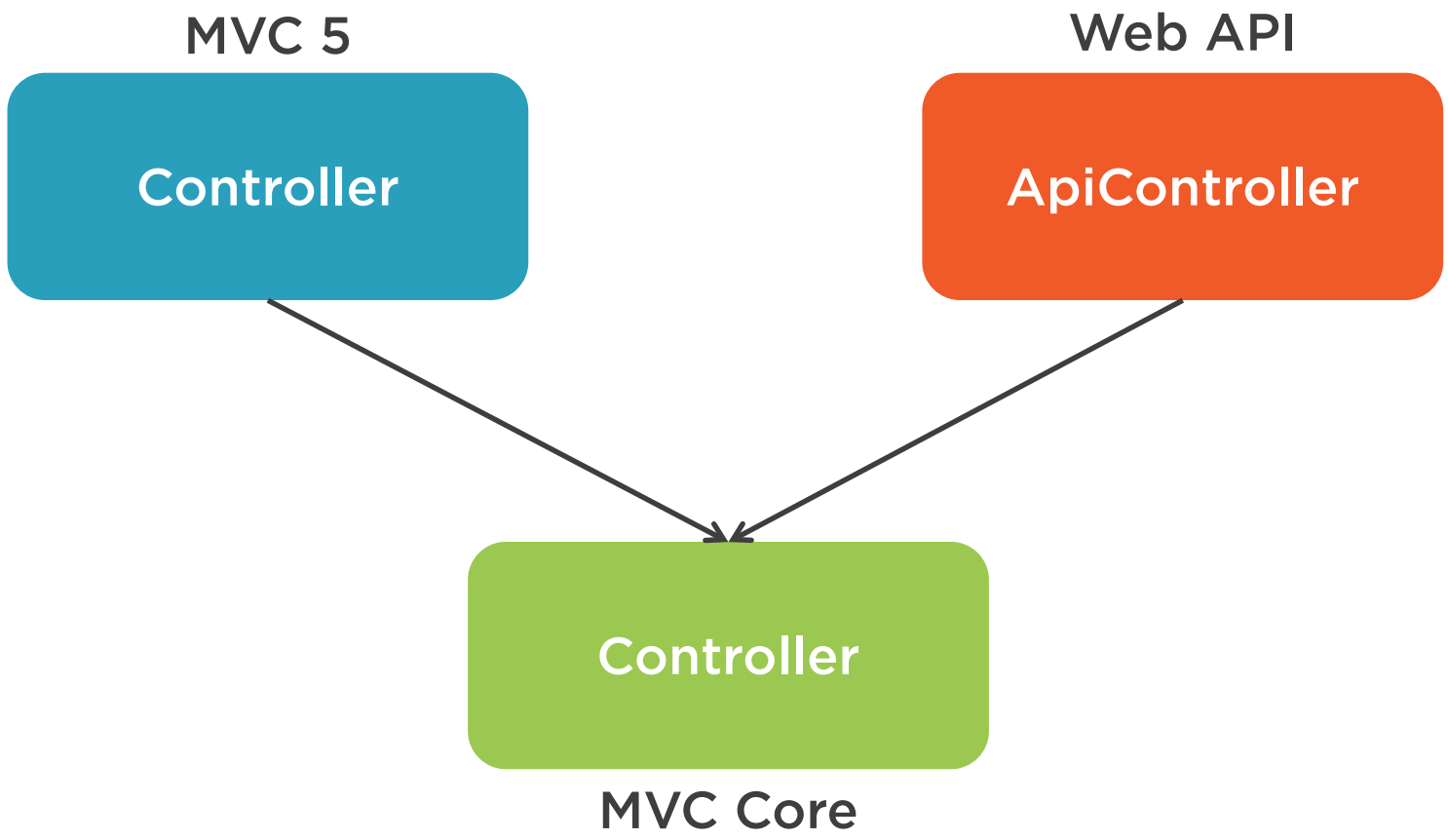
```
public class HomeController : Controller
{
    // Action Methods here
}
```

Controller Implementation

Inherit from the Controller base class

Suffix class name with the Controller key word

Controllers in MVC and Web API



Controller Base Class Features

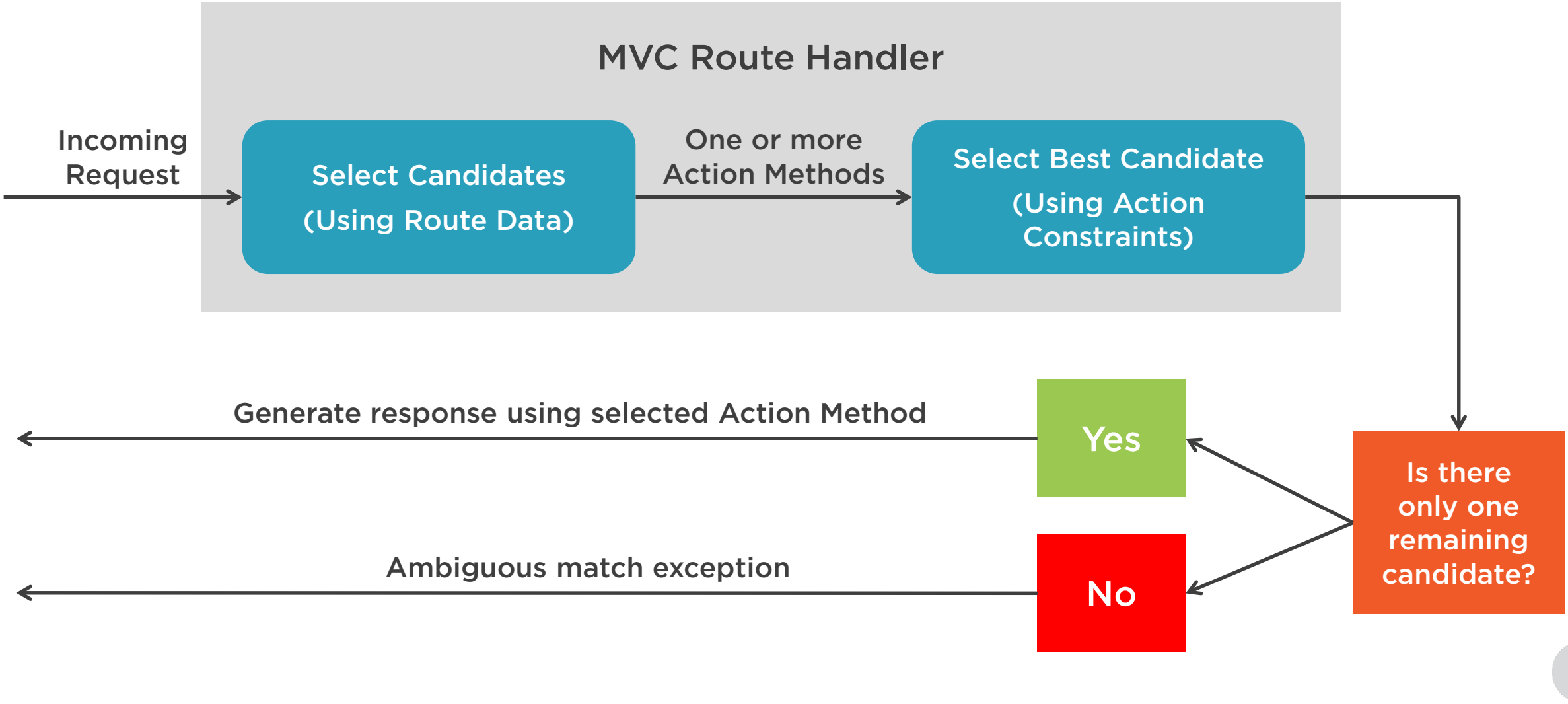
HTTP Context

Model State

Action Result Helpers

Route Data

The Action Method Selection Process

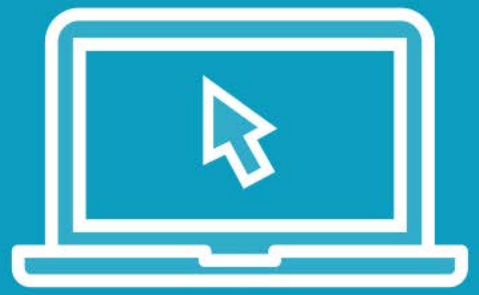


```
public interface IActionConstraint
{
    int Order { get; }
    bool Accept(ActionConstraintContext context);
}
```

The IActionConstraint Interface

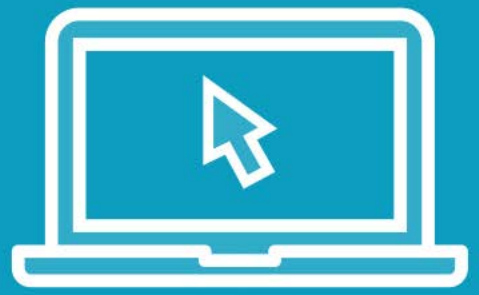
Validates whether an Action Method is a candidate to handle a request

Demo



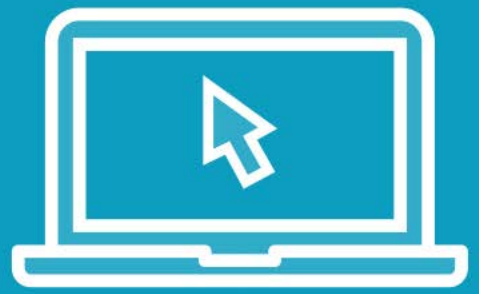
Action Method Selection Basics

Demo



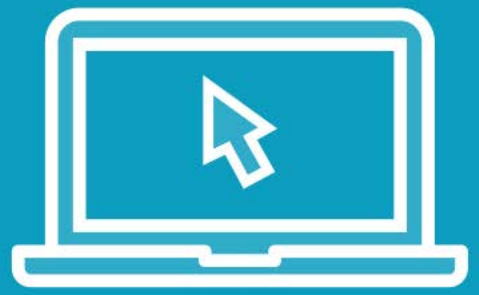
Influencing Action Method Selection

Demo



Building a Custom Action Constraint

Demo



The Controller Creation Process

Summary

Action Method selection determines which Controller will handle the request

Candidates are selected based on Route Data and Action Constraints

Action Constraints can use context data and other logic to evaluate Action Methods

An Action Descriptor object provides necessary data to create a Controller

The Controller Factory and Activator create the actual Controller instance