ASP.NET MVC 5 Fundamentals

OWIN & Katana

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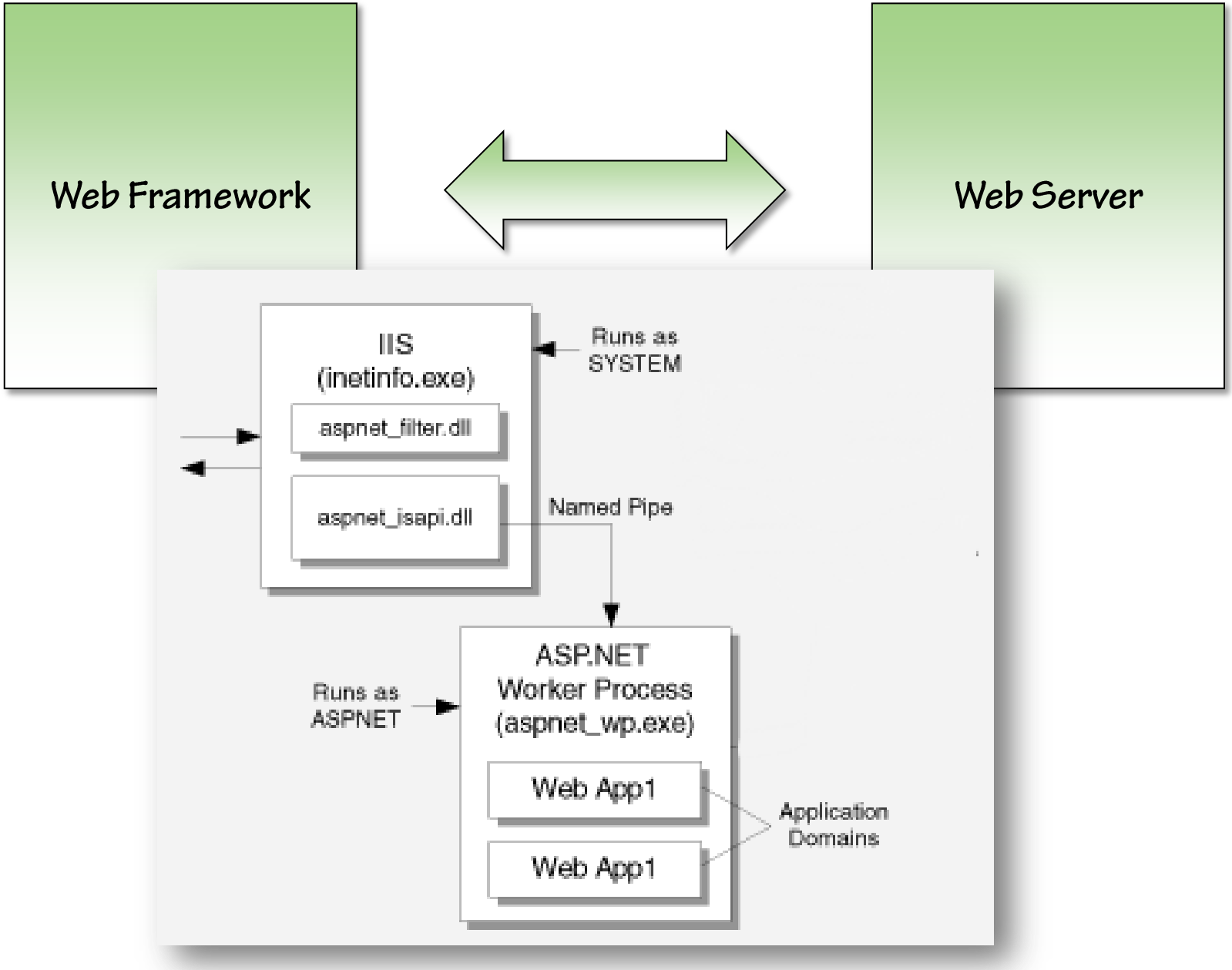
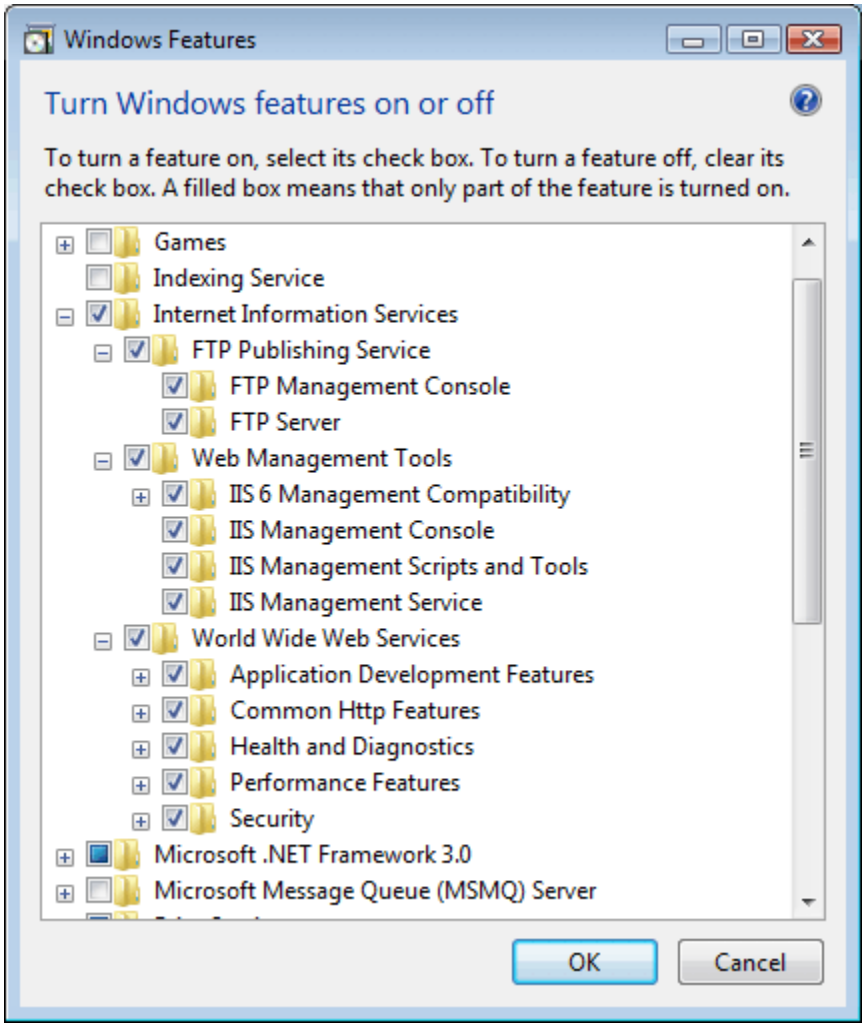
pluralsight
hardcore developer training

Architecture



IIS and ASP.NET



- Session State
- Caching
- Membership
- Dynamic Data
- Modules
- Handlers
- Configuration
- Request Tracing

Exclusive: How LinkedIn used Node.js and HTML5 to build a better, faster app

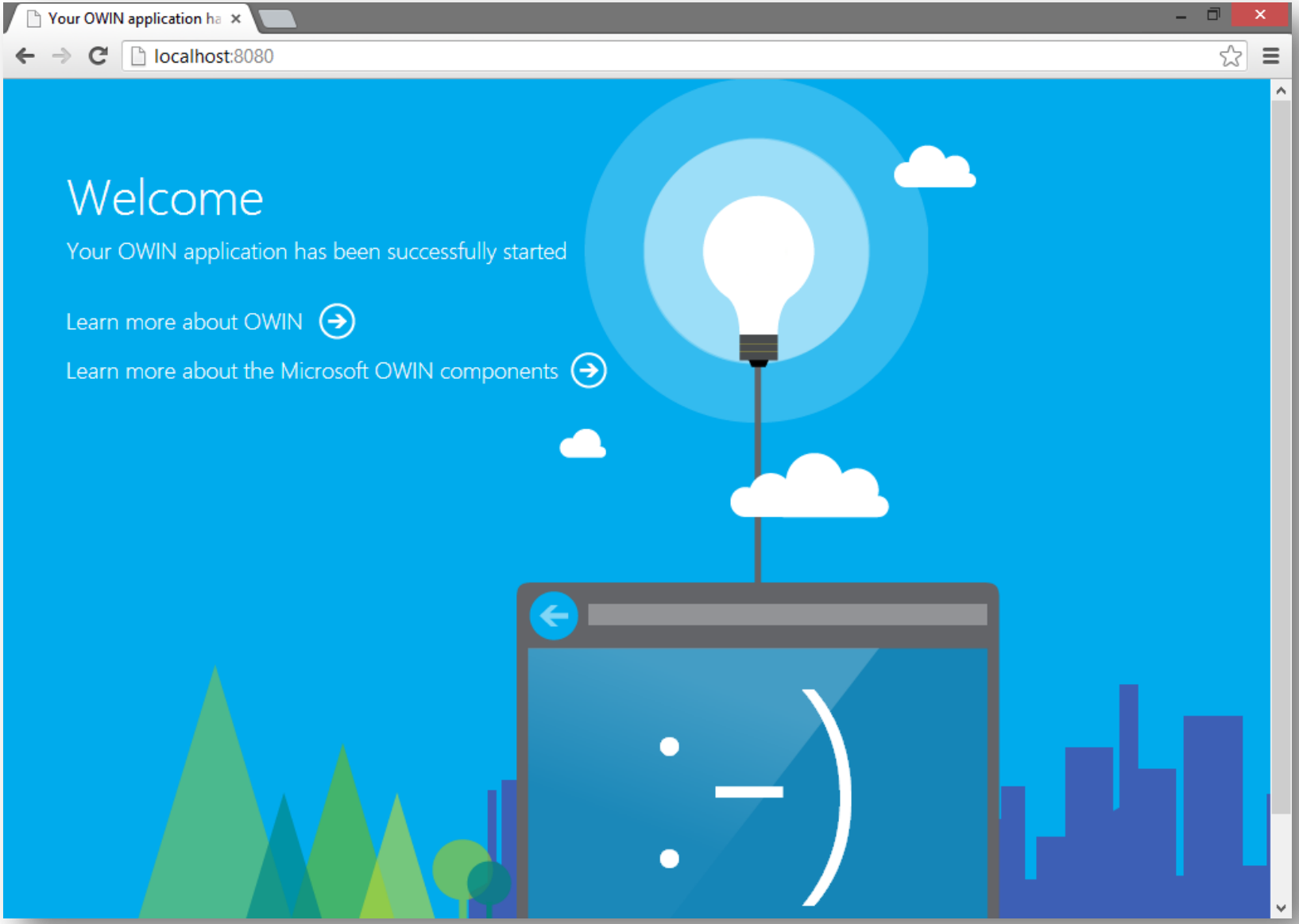
August 16, 2011 6:01 AM

31 Comments

Jolie O'Dell

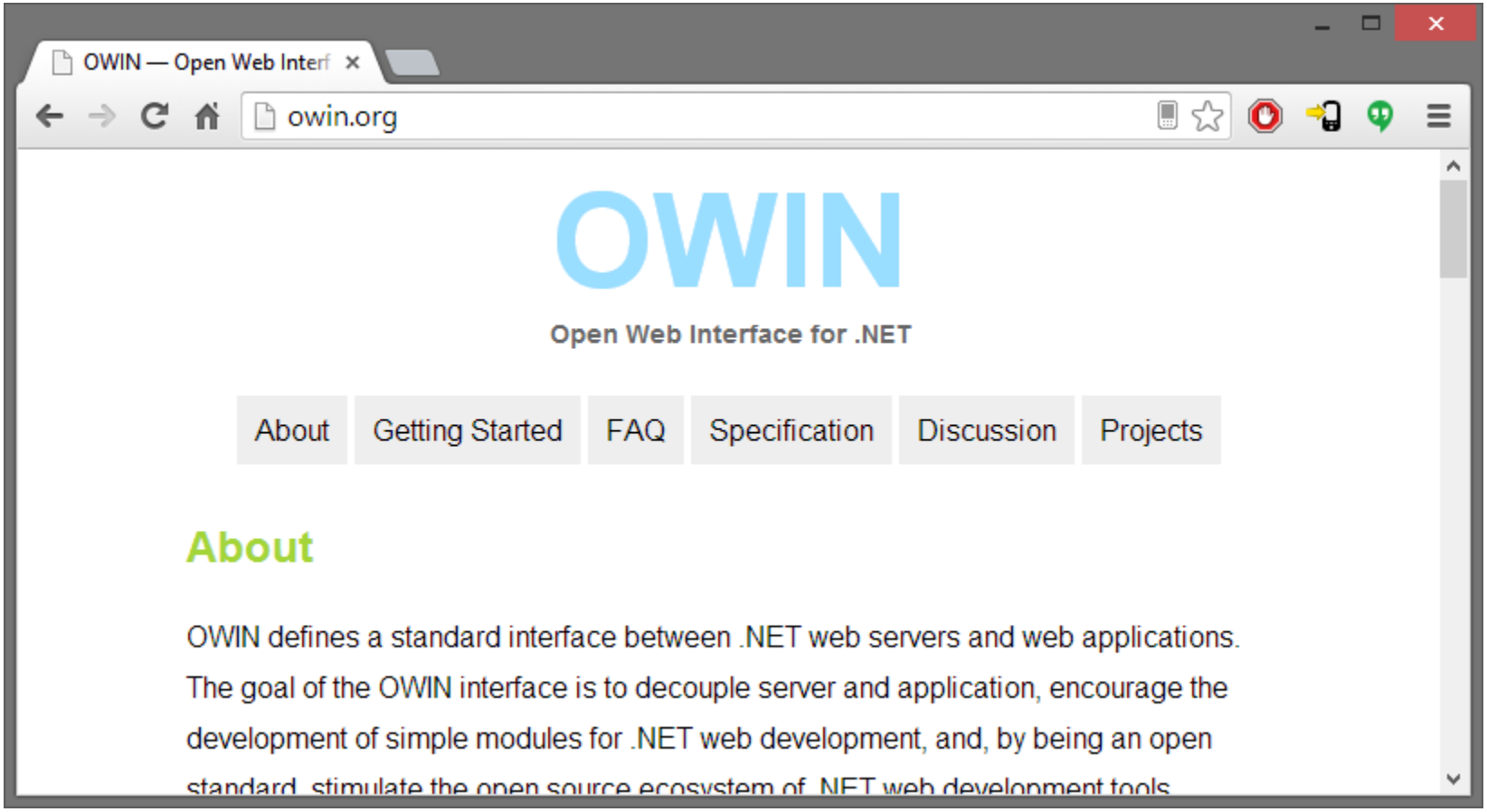
The app is two to 10 times faster on the client side than its predecessor, and on the server side, it's using a fraction of the resources, thanks to a switch from Ruby on Rails to Node.js, a server-side JavaScript development technology that's barely a year old but already rapidly gaining traction.

Katana


Your OWIN application ha
localhost:8080
Welcome
Your OWIN application has been successfully started
Learn more about OWIN
Learn more about the Microsoft OWIN components

OWIN

- Open Web Interface for .NET




OWIN — Open Web Serve
owin.org/spec/owin-1.0.0.html
OWIN — Open Web Server Interface for .NET, v1.0.0
Author: OWIN working group
Copyright: OWIN contributors
License: Creative Commons Attribution 3.0 Unported License
Last updated: 10 October 2012
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2. Definitions
3. Request Execution
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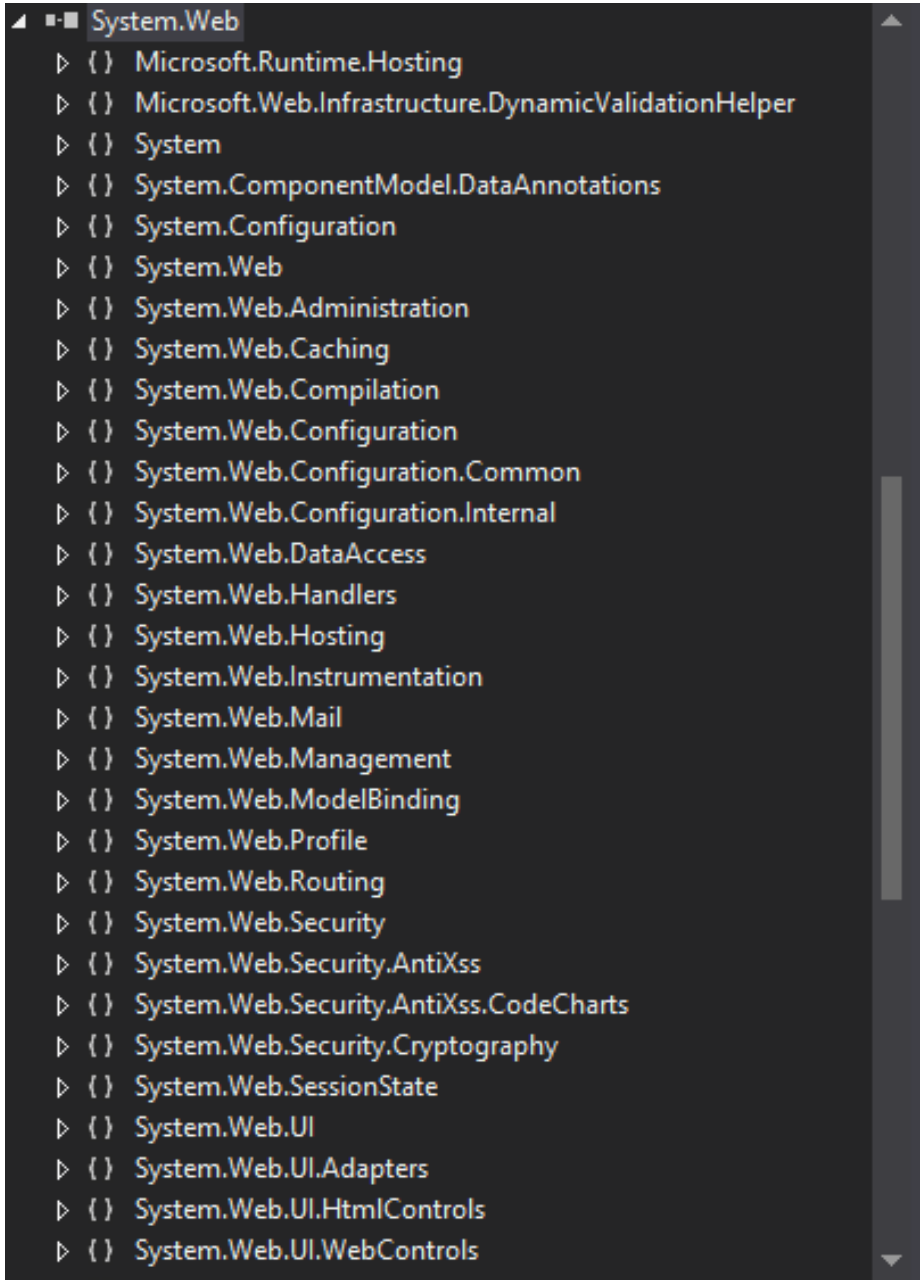
3.2. Environment

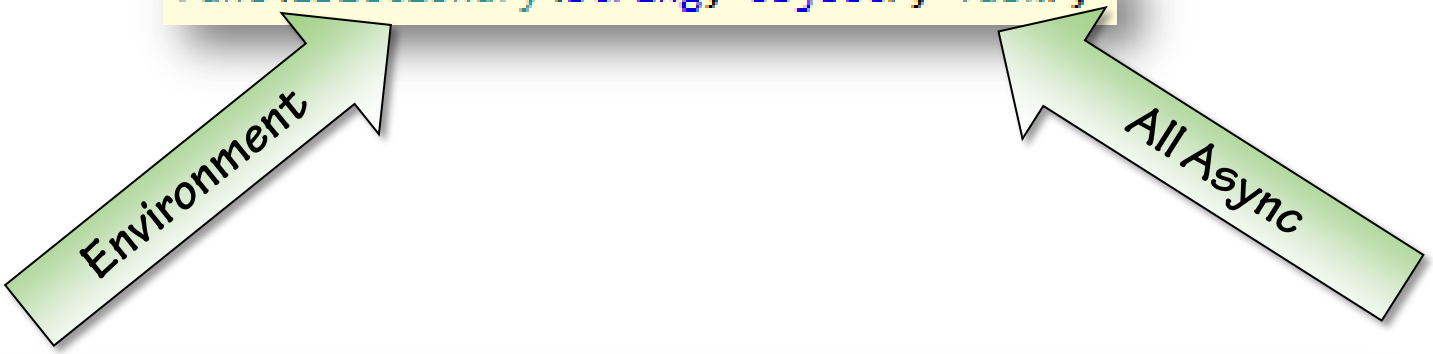


versus

OWIN + Katana
Portable
Modular
Lightweight

The AppFunc

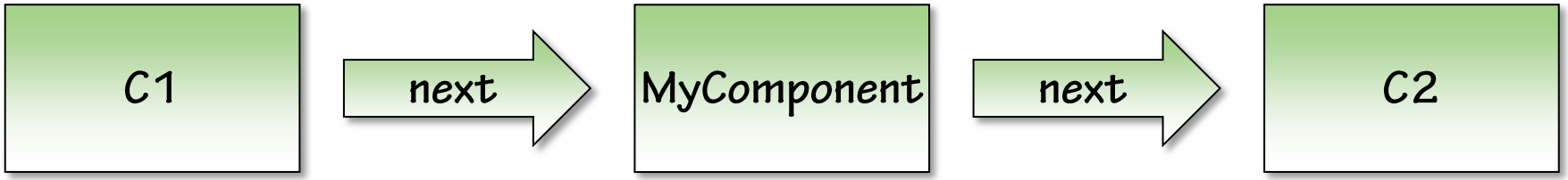
```
Func<IDictionary<string, object>, Task>;
```




```
public async Task Invoke(IDictionary<string, object> environment)
{
    // processing

    await _nextComponent(environment);

    // processing
}
```



OWIN Components

- Also Known As Middleware

```
public class HelloWorldComponent
{
    AppFunc _next;
    public HelloWorldComponent(AppFunc next)
    {
        _next = next;
    }

    public Task Invoke(IDictionary<string, object> environment)
    {
        var response = environment["owin.ResponseBody"] as Stream;
        using (var writer = new StreamWriter(response))
        {
            return writer.WriteAsync("Hello!!");
        }

    }
}
```

```
app.Run(environment =>
    {
        return environment.Response.WriteAsync("Hello!!");
    });
```

The AppFunc Request Environment

3.2.1 Request Data

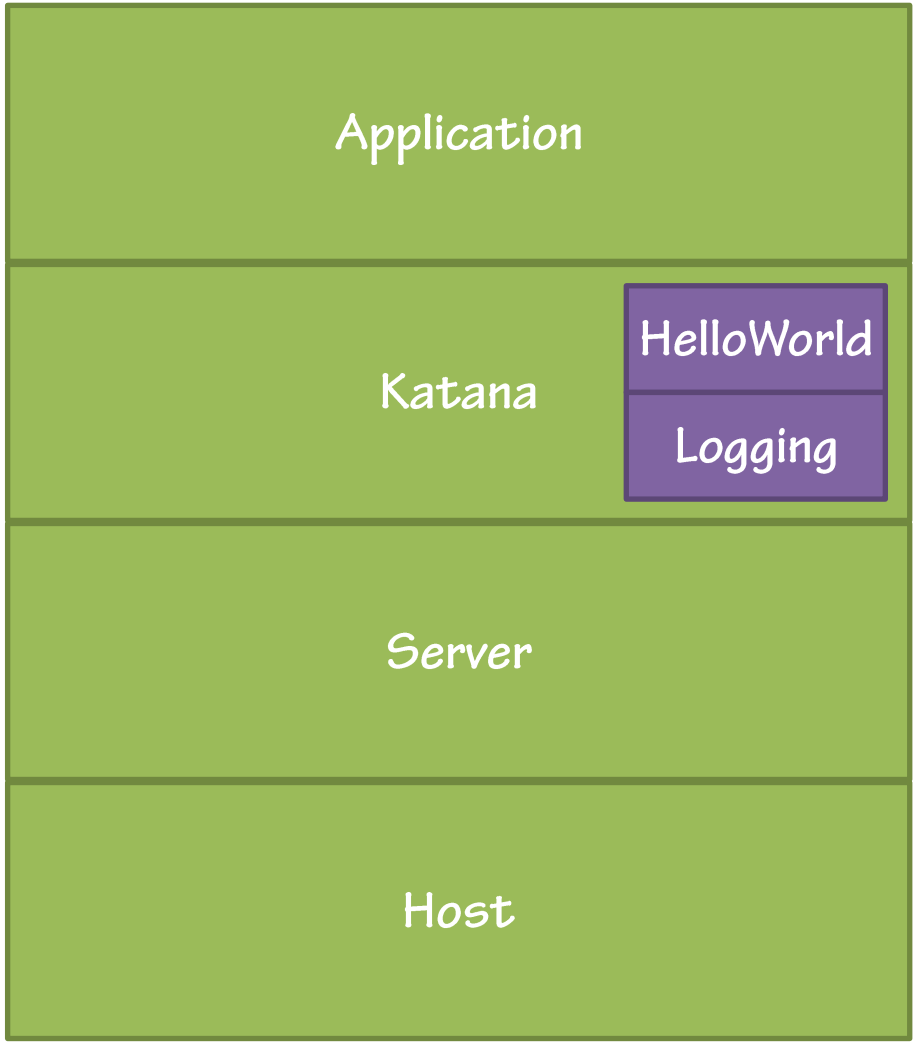
Required	Key Name	Value Description
Yes	`"owin.RequestBody"`	A `Stream` with the request body, if any. `Stream.Null` MAY be used as a placeholder if there is no request body. See Request Body.
Yes	`"owin.RequestHeaders"`	An `IDictionary<string, string[]>` of request headers. See Headers.
Yes	`"owin.RequestMethod"`	A `string` containing the HTTP request method of the request (e.g., `"GET"`, `"POST"`).
Yes	`"owin.RequestPath"`	A `string` containing the request path. The path MUST be relative to the "root" of the application delegate; see Paths.
Yes	`"owin.RequestPathBase"`	A `string` containing the portion of the request path corresponding to the "root" of the application delegate; see Paths.
Yes	`"owin.RequestProtocol"`	A `string` containing the protocol name and version (e.g. `"HTTP/1.0"` or `"HTTP/1.1"`).
Yes	`"owin.RequestQueryString"`	A `string` containing the query string component of the HTTP request URI, without the leading "?" (e.g., `"foo=bar&baz=quux"`). The value may be an empty string.
Yes	`"owin.RequestScheme"`	A `string` containing the URI scheme used for the request (e.g., `"http"`, `"https"`); see URI Scheme.

AppFunc Response Environment

3.2.2 Response Data

Required	Key Name	Value Description
Yes	`"owin.ResponseBody"`	A `Stream` used to write out the response body, if any. See Response Body.
Yes	`"owin.ResponseHeaders"`	An IDictionary<string, string[]> of response headers. See Headers.
No	`"owin.ResponseStatusCode"`	An optional `int` containing the HTTP response status code as defined in RFC 2616 section 6.1.1. The default is 200.
No	`"owin.ResponseReasonPhrase"`	An optional `string` containing the reason phrase associated the given status code. If none is provided then the server SHOULD provide a default as described in RFC 2616 section 6.1.1
No	`"owin.ResponseProtocol"`	An optional `string` containing the protocol name and version (e.g. `"HTTP/1.0"` or `"HTTP/1.1"`). If none is provided then the `"owin.RequestProtocol"` key's value is the default.

Architecture



Summary

```
Func<IDictionary<string, object>, Task>;
```