# ASP.NET overview

* 4 minutes to read

ASP.NET is a free web framework for building great websites and web applications using HTML, CSS, and JavaScript. You can also create Web APIs and use real-time technologies like Web Sockets.

[ASP.NET Core](https://docs.microsoft.com/en-us/aspnet/core/) is an alternative to ASP.NET. See the [guidance on how to choose between ASP.NET and ASP.NET Core](https://docs.microsoft.com/en-us/aspnet/core/choose-aspnet-framework).

## Get started

Install [Visual Studio 2019](https://visualstudio.microsoft.com/downloads/?utm_medium=microsoft&utm_source=docs.microsoft.com&utm_campaign=button+cta&utm_content=download+vs2019) Community edition, a free IDE for ASP.NET on Windows.

## Websites and web applications

ASP.NET offers three frameworks for creating web applications: Web Forms, ASP.NET MVC, and ASP.NET Web Pages. All three frameworks are stable and mature, and you can create great web applications with any of them. No matter what framework you choose, you will get all the benefits and features of ASP.NET everywhere.

Each framework targets a different development style. The one you choose depends on a combination of your programming assets (knowledge, skills, and development experience), the type of application you're creating, and the development approach you're comfortable with.

Below is an overview of each of the frameworks and some ideas for how to choose between them. If you prefer a video introduction, see [Making Websites with ASP.NET](https://channel9.msdn.com/Blogs/ASP-NET-Site-Videos/Making-Websites-with-ASPNET) and [What is Web Tools?](https://channel9.msdn.com/Blogs/ASP-NET-Site-Videos/what-is-web-tools)

| **WEBSITES AND WEB APPLICATIONS** | | | |
| --- | --- | --- | --- |
|  | **If you have experience in** | **Development style** | **Expertise** |
| Web Forms | Win Forms, WPF, .NET | Rapid development using a rich library of controls that encapsulate HTML markup | Mid-Level, Advanced RAD |
| MVC | Ruby on Rails, .NET | Full control over HTML markup, code and markup separated, and easy to write tests. The best choice for mobile and single-page applications (SPA). | Mid-Level, Advanced |
| Web Pages | Classic ASP, PHP | HTML markup and your code together in the same file | New, Mid-Level |

### Web Forms

With ASP.NET Web Forms, you can build dynamic websites using a familiar drag-and-drop, event-driven model. A design surface and hundreds of controls and components let you rapidly build sophisticated, powerful UI-driven sites with data access.

[Learn more about Web Forms](https://docs.microsoft.com/en-us/aspnet/web-forms/)

### MVC

ASP.NET MVC gives you a powerful, patterns-based way to build dynamic websites that enables a clean separation of concerns and that gives you full control over markup for enjoyable, agile development. ASP.NET MVC includes many features that enable fast, TDD-friendly development for creating sophisticated applications that use the latest web standards.

[Learn more about MVC](https://docs.microsoft.com/en-us/aspnet/mvc/)

### ASP.NET Web Pages

ASP.NET Web Pages and the Razor syntax provide a fast, approachable, and lightweight way to combine server code with HTML to create dynamic web content. Connect to databases, add video, link to social networking sites, and include many more features that help you create beautiful sites that conform to the latest web standards.

[Learn more about Web Pages](https://docs.microsoft.com/en-us/aspnet/web-pages/)

### Notes about Web Forms, MVC, and Web Pages

All three ASP.NET frameworks are based on the .NET Framework and share core functionality of .NET and of ASP.NET. For example, all three frameworks offer a login security model based around membership, and all three share the same facilities for managing requests, handling sessions, and so on that are part of the core ASP.NET functionality.

In addition, the three frameworks are not entirely independent, and choosing one does not preclude using another. Since the frameworks can coexist in the same web application, it's not uncommon to see individual components of applications written using different frameworks. For example, customer-facing portions of an app might be developed in MVC to optimize the markup, while the data access and administrative portions are developed in Web Forms to take advantage of data controls and simple data access.

## Web APIs

ASP.NET Web API is a framework that makes it easy to build HTTP services that reach a broad range of clients, including browsers and mobile devices. ASP.NET Web API is an ideal platform for building RESTful applications on the .NET Framework.

[Learn more about Web API](https://docs.microsoft.com/en-us/aspnet/web-api/)

## Real-time technologies

ASP.NET SignalR is a new library for ASP.NET developers that makes developing real-time web functionality easier. SignalR allows bi-directional communication between server and client. Servers can push content to connected clients instantly as it becomes available. SignalR supports Web Sockets, and falls back to other compatible techniques for older browsers. SignalR includes APIs for connection management (for instance, connect and disconnect events), grouping connections, and authorization.

[Learn more about SignalR](https://docs.microsoft.com/en-us/aspnet/signalr/)

## Mobile apps and sites

ASP.NET can power native mobile apps with a Web API back end, as well as mobile web sites using responsive design frameworks like Twitter Bootstrap. If you are building a native mobile app, it's easy to create a JSON-based Web API to handle data access, authentication, and push notifications for your app. If you are building a responsive mobile site, you can use any CSS framework or open grid system you prefer, or select a powerful mobile system like jQuery Mobile or Sencha and great mobile applications with PhoneGap.

[Learn more about mobile app and site development](https://docs.microsoft.com/en-us/aspnet/mobile/overview)

## Single-page applications

ASP.NET Single Page Application (SPA) helps you build applications that include significant client-side interactions using HTML 5, CSS 3 and JavaScript. Visual Studio includes a template for building single page applications using knockout.js and ASP.NET Web API. In addition to the built-in SPA template, community-created SPA templates are also available for download.

[Learn more about single-page app development](https://docs.microsoft.com/en-us/aspnet/single-page-application/)

## WebHooks

WebHooks is a lightweight HTTP pattern providing a simple pub/sub model for wiring together Web APIs and SaaS services. When an event happens in a service, a notification is sent in the form of an HTTP POST request to registered subscribers. The POST request contains information about the event which makes it possible for the receiver to act accordingly.

WebHooks are exposed by a large number of services including Dropbox, GitHub, Instagram, MailChimp, PayPal, Slack, Trello, and many more. For example, a WebHook can indicate that a file has changed in Dropbox, or a code change has been committed in GitHub, or a payment has been initiated in PayPal, or a card has been created in Trello.

[Learn more about WebHooks](https://docs.microsoft.com/en-us/aspnet/webhooks/)

## Recommended content

### [What is Web Forms](https://docs.microsoft.com/en-us/aspnet/web-forms/what-is-web-forms)

### [ASP.NET and Visual Studio 2017](https://docs.microsoft.com/en-us/aspnet/visual-studio/overview/2017/)

Visual Studio 2017

### [ASP.NET Web Forms](https://docs.microsoft.com/en-us/aspnet/web-forms/)

Download Visual Web Developer Express & learn how to quickly build web apps using easy-to-understand controls on ASP.NET Web Forms in a visual design environ...

### [ASP.NET tutorials](https://docs.microsoft.com/en-us/aspnet/tutorials)

A list of step-by-step guides for developing ASP.NET applications.

### [Getting Started with ASP.NET 4.7 Web Forms and Visual Studio 2017](https://docs.microsoft.com/en-us/aspnet/web-forms/overview/getting-started/getting-started-with-aspnet-45-web-forms/introduction-and-overview)

This step-by-step tutorial series will teach you the basics of building an ASP.NET Web Forms application using ASP.NET 4.7 and Microsoft Visual Studio

### [ASP.NET MVC 3](https://docs.microsoft.com/en-us/aspnet/mvc/mvc3)

(includes April 2011 Tools Update) ASP.NET MVC 3 is a framework for building scalable, standards-based web applications using well-established design pattern...

### [Single Page Application: KnockoutJS template](https://docs.microsoft.com/en-us/aspnet/single-page-application/overview/introduction/knockoutjs-template)

Knockout template

### [ASP.NET Web Pages](https://docs.microsoft.com/en-us/aspnet/web-pages/)

Download WebMatrix & learn how to quickly build web pages in a lightweight way to combine server code with HTML.

Show less

**ASP.NET tutorials**

For new web application development, we recommend Razor Pages. For more information, see [Get started with Razor Pages](https://docs.microsoft.com/en-us/aspnet/core/tutorials/razor-pages/razor-pages-start).

The following step-by-step guides for developing ASP.NET applications are available.

**Note**

Looking for ASP.NET Core tutorials? Find them [**here**](https://docs.microsoft.com/en-us/aspnet/core/tutorials/).

**Web Forms**

* [Code Editing ASP.NET Web Forms in Visual Studio 2013](https://docs.microsoft.com/en-us/aspnet/web-forms/overview/getting-started/code-editing-in-web-forms-pages)
* [Using Page Inspector in Visual Studio 2012](https://docs.microsoft.com/en-us/aspnet/web-forms/overview/getting-started/hands-on-labs/using-page-inspector-in-visual-studio-2012)
* [Model Binding and Web Forms in Visual Studio 2013](https://docs.microsoft.com/en-us/aspnet/web-forms/overview/presenting-and-managing-data/model-binding/)
* [ASP.NET Web Forms Connection Resiliency and Command Interception](https://docs.microsoft.com/en-us/aspnet/web-forms/overview/advanced/aspnet-web-forms-connection-resiliency-and-command-interception)
* [Create a secure ASP.NET Web Forms app with user registration, email confirmation and password reset (C#)](https://docs.microsoft.com/en-us/aspnet/web-forms/overview/security/create-a-secure-aspnet-web-forms-app-with-user-registration-email-confirmation-and-password-reset)
* [Create an ASP.NET Web Forms app with SMS Two-Factor Authentication (C#)](https://docs.microsoft.com/en-us/aspnet/web-forms/overview/security/create-an-aspnet-web-forms-app-with-sms-two-factor-authentication)
* [Using Asynchronous Methods in ASP.NET 4.5](https://docs.microsoft.com/en-us/aspnet/web-forms/overview/performance-and-caching/using-asynchronous-methods-in-aspnet-45)
* [ASP.NET Web Deployment using Visual Studio](https://docs.microsoft.com/en-us/aspnet/web-forms/overview/deployment/visual-studio-web-deployment/)
* [ASP.NET 4 - Enterprise Deployment Introduction](https://docs.microsoft.com/en-us/aspnet/web-forms/overview/deployment/deploying-web-applications-in-enterprise-scenarios/)
* [ASP.NET 4 - Enterprise Deployment Series 1](https://docs.microsoft.com/en-us/aspnet/web-forms/overview/deployment/web-deployment-in-the-enterprise/)
* [ASP.NET 4 - Enterprise Deployment Series 2 Configuring Servers](https://docs.microsoft.com/en-us/aspnet/web-forms/overview/deployment/configuring-server-environments-for-web-deployment/)
* [ASP.NET 4 - Enterprise Deployment Series 3 Configuring TFS](https://docs.microsoft.com/en-us/aspnet/web-forms/overview/deployment/configuring-team-foundation-server-for-web-deployment/)
* [ASP.NET 4 - Enterprise Deployment Series 4 Advanced Topics](https://docs.microsoft.com/en-us/aspnet/web-forms/overview/deployment/advanced-enterprise-web-deployment/)
* [ASP.NET 4 - Tailspin Spyworks](https://docs.microsoft.com/en-us/aspnet/web-forms/overview/older-versions-getting-started/tailspin-spyworks/)
* [ASP.NET 4 - Getting Started with Entity Framework 4 and Web Forms](https://docs.microsoft.com/en-us/aspnet/web-forms/overview/older-versions-getting-started/getting-started-with-ef/)
* [ASP.NET 4 - Continuing with Entity Framework 4 and Web Forms](https://docs.microsoft.com/en-us/aspnet/web-forms/overview/older-versions-getting-started/continuing-with-ef/)
* [ASP.NET 4 - Web Deployment with SQL Server Compact using Visual Studio](https://docs.microsoft.com/en-us/aspnet/web-forms/overview/older-versions-getting-started/deployment-to-a-hosting-provider/)

**MVC**

* [Using Page Inspector in ASP.NET MVC](https://docs.microsoft.com/en-us/aspnet/mvc/overview/views/using-page-inspector-in-aspnet-mvc)
* [Create an ASP.NET MVC 5 App with Facebook, Twitter, LinkedIn and Google OAuth2 Sign-on (C#)](https://docs.microsoft.com/en-us/aspnet/mvc/overview/security/create-an-aspnet-mvc-5-app-with-facebook-and-google-oauth2-and-openid-sign-on)
* [Create a secure ASP.NET MVC 5 web app with log in, email confirmation and password reset (C#)](https://docs.microsoft.com/en-us/aspnet/mvc/overview/security/create-an-aspnet-mvc-5-web-app-with-email-confirmation-and-password-reset)
* [ASP.NET MVC 5 app with SMS and email Two-Factor Authentication](https://docs.microsoft.com/en-us/aspnet/mvc/overview/security/aspnet-mvc-5-app-with-sms-and-email-two-factor-authentication)
* [XSRF/CSRF Prevention in ASP.NET MVC and Web Pages](https://docs.microsoft.com/en-us/aspnet/mvc/overview/security/xsrfcsrf-prevention-in-aspnet-mvc-and-web-pages)
* [Preventing Open Redirection Attacks (C#)](https://docs.microsoft.com/en-us/aspnet/mvc/overview/security/preventing-open-redirection-attacks)
* [Migrating ASP.NET MVC Applications to Windows Containers](https://docs.microsoft.com/en-us/aspnet/mvc/overview/deployment/docker-aspnetmvc)
* [Profile and debug your ASP.NET MVC app with Glimpse](https://docs.microsoft.com/en-us/aspnet/mvc/overview/performance/profile-and-debug-your-aspnet-mvc-app-with-glimpse)
* [Using Asynchronous Methods in ASP.NET MVC 4](https://docs.microsoft.com/en-us/aspnet/mvc/overview/performance/using-asynchronous-methods-in-aspnet-mvc-4)
* [How to Upgrade an ASP.NET MVC 4 and Web API Project to ASP.NET MVC 5 and Web API 2](https://docs.microsoft.com/en-us/aspnet/mvc/overview/releases/how-to-upgrade-an-aspnet-mvc-4-and-web-api-project-to-aspnet-mvc-5-and-web-api-2)

**Web API**

* [Getting Started with Web API 2 (C#)](https://docs.microsoft.com/en-us/aspnet/web-api/overview/getting-started-with-aspnet-web-api/tutorial-your-first-web-api)
* [Using Web API with ASP.NET Web Forms](https://docs.microsoft.com/en-us/aspnet/web-api/overview/getting-started-with-aspnet-web-api/using-web-api-with-aspnet-web-forms)
* [Creating Web API Help Pages](https://docs.microsoft.com/en-us/aspnet/web-api/overview/getting-started-with-aspnet-web-api/creating-api-help-pages)
* [Hands On Lab: Build a Single Page Application (SPA) with ASP.NET Web API and Angular.js](https://docs.microsoft.com/en-us/aspnet/web-api/overview/getting-started-with-aspnet-web-api/build-a-single-page-application-spa-with-aspnet-web-api-and-angularjs)
* [Create a REST API with Attribute Routing in Web API 2](https://docs.microsoft.com/en-us/aspnet/web-api/overview/web-api-routing-and-actions/create-a-rest-api-with-attribute-routing)
* [Using Web API 2 with Entity Framework 6](https://docs.microsoft.com/en-us/aspnet/web-api/overview/data/using-web-api-with-entity-framework/)
* [Calling Web API from a Windows Phone 8 Application (C#)](https://docs.microsoft.com/en-us/aspnet/web-api/overview/mobile-clients/calling-web-api-from-a-windows-phone-8-application)
* [OData v4](https://docs.microsoft.com/en-us/aspnet/web-api/overview/odata-support-in-aspnet-web-api/odata-v4/)
* [OData v3](https://docs.microsoft.com/en-us/aspnet/web-api/overview/odata-support-in-aspnet-web-api/odata-v3/)
* [Tracing in Web API 2](https://docs.microsoft.com/en-us/aspnet/web-api/overview/testing-and-debugging/tracing-in-aspnet-web-api)
* [Unit Testing Web API 2](https://docs.microsoft.com/en-us/aspnet/web-api/overview/testing-and-debugging/unit-testing-with-aspnet-web-api)
* [Unit Testing Controllers in ASP.NET Web API 2](https://docs.microsoft.com/en-us/aspnet/web-api/overview/testing-and-debugging/unit-testing-controllers-in-web-api)
* [Mocking Entity Framework when Unit Testing Web API 2](https://docs.microsoft.com/en-us/aspnet/web-api/overview/testing-and-debugging/mocking-entity-framework-when-unit-testing-aspnet-web-api-2)
* [Troubleshooting HTTP 405 Errors after Publishing Web API 2 Applications](https://docs.microsoft.com/en-us/aspnet/web-api/overview/testing-and-debugging/troubleshooting-http-405-errors-after-publishing-web-api-applications)
* [Secure a Web API with Individual Accounts in Web API 2.2](https://docs.microsoft.com/en-us/aspnet/web-api/overview/security/individual-accounts-in-web-api)
* [External Authentication Services with Web API (C#)](https://docs.microsoft.com/en-us/aspnet/web-api/overview/security/external-authentication-services)
* [Enabling Cross-Origin Requests in Web API 2](https://docs.microsoft.com/en-us/aspnet/web-api/overview/security/enabling-cross-origin-requests-in-web-api)
* [Use OWIN to Self-Host Web API 2](https://docs.microsoft.com/en-us/aspnet/web-api/overview/hosting-aspnet-web-api/use-owin-to-self-host-web-api)
* [Host Web API 2 in an Azure Worker Role](https://docs.microsoft.com/en-us/aspnet/web-api/overview/hosting-aspnet-web-api/host-aspnet-web-api-in-an-azure-worker-role)
* [Dependency Injection in Web API 2](https://docs.microsoft.com/en-us/aspnet/web-api/overview/advanced/dependency-injection)
* [Calling a Web API From a .NET Client (C#)](https://docs.microsoft.com/en-us/aspnet/web-api/overview/advanced/calling-a-web-api-from-a-net-client)
* [Sending HTML Form Data in Web API: Form-urlencoded Data](https://docs.microsoft.com/en-us/aspnet/web-api/overview/advanced/sending-html-form-data-part-1)
* [Sending HTML Form Data in Web API: File Upload and Multipart MIME](https://docs.microsoft.com/en-us/aspnet/web-api/overview/advanced/sending-html-form-data-part-2)

**Web Pages**

* [Program ASP.NET Web Pages in Visual Studio](https://docs.microsoft.com/en-us/aspnet/web-pages/overview/getting-started/program-asp-net-web-pages-in-visual-studio)
* [Sending Email from Your Site](https://docs.microsoft.com/en-us/aspnet/web-pages/overview/getting-started/11-adding-email-to-your-web-site)
* [Adding Social Networking to Your Website](https://docs.microsoft.com/en-us/aspnet/web-pages/overview/getting-started/13-adding-social-networking-to-your-web-site)
* [Introducing ASP.NET Web Pages](https://docs.microsoft.com/en-us/aspnet/web-pages/overview/getting-started/introducing-aspnet-web-pages-2/)
* [Creating Readable URLs in ASP.NET Web Pages Sites](https://docs.microsoft.com/en-us/aspnet/web-pages/overview/routing/creating-readable-urls-in-aspnet-web-pages-sites)
* [Working with Forms](https://docs.microsoft.com/en-us/aspnet/web-pages/overview/ui-layouts-and-themes/4-working-with-forms)
* [Validating User Input in ASP.NET Web Pages Sites](https://docs.microsoft.com/en-us/aspnet/web-pages/overview/ui-layouts-and-themes/validating-user-input-in-aspnet-web-pages-sites)
* [Creating a Consistent Look](https://docs.microsoft.com/en-us/aspnet/web-pages/overview/ui-layouts-and-themes/3-creating-a-consistent-look)
* [Customizing Site-Wide Behavior](https://docs.microsoft.com/en-us/aspnet/web-pages/overview/ui-layouts-and-themes/18-customizing-site-wide-behavior)
* [Working with Images](https://docs.microsoft.com/en-us/aspnet/web-pages/overview/ui-layouts-and-themes/9-working-with-images)
* [Working with Video](https://docs.microsoft.com/en-us/aspnet/web-pages/overview/ui-layouts-and-themes/10-working-with-video)
* [Creating and Using a Helper in an ASP.NET Web Pages Site](https://docs.microsoft.com/en-us/aspnet/web-pages/overview/ui-layouts-and-themes/creating-and-using-a-helper-in-an-aspnet-web-pages-site)
* [Installing a Helper](https://docs.microsoft.com/en-us/aspnet/web-pages/overview/ui-layouts-and-themes/installing-helpers)
* [Twitter Helper with ASP.NET Web Pages](https://docs.microsoft.com/en-us/aspnet/web-pages/overview/ui-layouts-and-themes/twitter-helper)
* [Displaying Maps in an ASP.NET Web Pages Site](https://docs.microsoft.com/en-us/aspnet/web-pages/overview/ui-layouts-and-themes/displaying-maps-in-an-aspnet-web-pages-site)
* [Rendering ASP.NET Web Pages Sites for Mobile Devices](https://docs.microsoft.com/en-us/aspnet/web-pages/overview/mobile/rendering-aspnet-web-pages-sites-for-mobile-devices)
* [Working with Data](https://docs.microsoft.com/en-us/aspnet/web-pages/overview/data/5-working-with-data)
* [Displaying Data in a Chart](https://docs.microsoft.com/en-us/aspnet/web-pages/overview/data/7-displaying-data-in-a-chart)
* [Working with Files](https://docs.microsoft.com/en-us/aspnet/web-pages/overview/data/working-with-files)
* [Intro to Debugging](https://docs.microsoft.com/en-us/aspnet/web-pages/overview/testing-and-debugging/introduction-to-debugging)
* [Adding Security and Membership](https://docs.microsoft.com/en-us/aspnet/web-pages/overview/security/16-adding-security-and-membership)
* [Enabling Login from External Sites in an ASP.NET Web Pages Site](https://docs.microsoft.com/en-us/aspnet/web-pages/overview/security/enabling-login-from-external-sites-in-an-aspnet-web-pages-site)
* [Using a CAPTCHA to Prevent Automated Programs (Bots) from Using Your ASP.NET Web Site](https://docs.microsoft.com/en-us/aspnet/web-pages/overview/security/using-a-catpcha-to-prevent-automated-programs-bots-from-using-your-aspnet-web-site)
* [Caching to Improve the Performance of Your Website](https://docs.microsoft.com/en-us/aspnet/web-pages/overview/performance-and-traffic/15-caching-to-improve-the-performance-of-your-website)
* [Analyzing Traffic](https://docs.microsoft.com/en-us/aspnet/web-pages/overview/performance-and-traffic/14-analyzing-traffic)
* [Bundling and Minifying Assets in an ASP.NET Web Pages (Razor) Site](https://docs.microsoft.com/en-us/aspnet/web-pages/overview/performance-and-traffic/bundling-and-minifying-assets-in-an-aspnet-web-pages-razor-site)

**ASP.NET SignalR**

* [Tutorial: Getting Started with SignalR 2](https://docs.microsoft.com/en-us/aspnet/signalr/overview/getting-started/tutorial-getting-started-with-signalr)
* [Tutorial: Getting Started with SignalR 2 and MVC 5](https://docs.microsoft.com/en-us/aspnet/signalr/overview/getting-started/tutorial-getting-started-with-signalr-and-mvc)
* [Tutorial: High-Frequency Realtime with SignalR 2](https://docs.microsoft.com/en-us/aspnet/signalr/overview/getting-started/tutorial-high-frequency-realtime-with-signalr)
* [Tutorial: Server Broadcast with SignalR 2](https://docs.microsoft.com/en-us/aspnet/signalr/overview/getting-started/tutorial-server-broadcast-with-signalr)
* [Hands On Lab: Real-Time Web Applications with SignalR](https://docs.microsoft.com/en-us/aspnet/signalr/overview/getting-started/real-time-web-applications-with-signalr)
* [Unit Testing SignalR Applications](https://docs.microsoft.com/en-us/aspnet/signalr/overview/testing-and-debugging/unit-testing-signalr-applications)
* [Enabling SignalR Tracing](https://docs.microsoft.com/en-us/aspnet/signalr/overview/testing-and-debugging/enabling-signalr-tracing)
* [SignalR Scaleout with Azure Service Bus](https://docs.microsoft.com/en-us/aspnet/signalr/overview/performance/scaleout-with-windows-azure-service-bus)
* [SignalR Scaleout with Redis](https://docs.microsoft.com/en-us/aspnet/signalr/overview/performance/scaleout-with-redis)
* [SignalR Scaleout with SQL Server](https://docs.microsoft.com/en-us/aspnet/signalr/overview/performance/scaleout-with-sql-server)
* [SignalR Connection Density Testing with Crank](https://docs.microsoft.com/en-us/aspnet/signalr/overview/performance/signalr-connection-density-testing-with-crank)
* [Using SignalR Performance Counters in an Azure Web Role](https://docs.microsoft.com/en-us/aspnet/signalr/overview/performance/using-signalr-performance-counters-in-an-azure-web-role)
* [Tutorial: SignalR Self-Host](https://docs.microsoft.com/en-us/aspnet/signalr/overview/deployment/tutorial-signalr-self-host)
* [Using SignalR with Web Apps in Azure App Service](https://docs.microsoft.com/en-us/aspnet/signalr/overview/deployment/using-signalr-with-azure-web-sites)

**ASP.NET Identity**

* [Adding ASP.NET Identity to an Empty or Existing Web Forms Project](https://docs.microsoft.com/en-us/aspnet/identity/overview/getting-started/adding-aspnet-identity-to-an-empty-or-existing-web-forms-project)
* [Developing ASP.NET Apps with Azure Active Directory](https://docs.microsoft.com/en-us/aspnet/identity/overview/getting-started/developing-aspnet-apps-with-windows-azure-active-directory)
* [ASP.NET Identity: Using MySQL Storage with an EntityFramework MySQL Provider (C#)](https://docs.microsoft.com/en-us/aspnet/identity/overview/getting-started/aspnet-identity-using-mysql-storage-with-an-entityframework-mysql-provider)
* [Account Confirmation and Password Recovery with ASP.NET Identity (C#)](https://docs.microsoft.com/en-us/aspnet/identity/overview/features-api/account-confirmation-and-password-recovery-with-aspnet-identity)
* [Two-factor authentication using SMS and email with ASP.NET Identity](https://docs.microsoft.com/en-us/aspnet/identity/overview/features-api/two-factor-authentication-using-sms-and-email-with-aspnet-identity)
* [Implementing a Custom MySQL ASP.NET Identity Storage Provider](https://docs.microsoft.com/en-us/aspnet/identity/overview/extensibility/implementing-a-custom-mysql-aspnet-identity-storage-provider)
* [Change Primary Key for Users in ASP.NET Identity](https://docs.microsoft.com/en-us/aspnet/identity/overview/extensibility/change-primary-key-for-users-in-aspnet-identity)
* [Migrating an Existing Website from SQL Membership to ASP.NET Identity](https://docs.microsoft.com/en-us/aspnet/identity/overview/migrations/migrating-an-existing-website-from-sql-membership-to-aspnet-identity)
* [Migrating Universal Provider Data for Membership and User Profiles to ASP.NET Identity (C#)](https://docs.microsoft.com/en-us/aspnet/identity/overview/migrations/migrating-universal-provider-data-for-membership-and-user-profiles-to-aspnet-identity)

**OWIN and Katana**

* [Getting Started with OWIN and Katana](https://docs.microsoft.com/en-us/aspnet/aspnet/overview/owin-and-katana/getting-started-with-owin-and-katana)
* [Host OWIN in an Azure Worker Role](https://docs.microsoft.com/en-us/aspnet/aspnet/overview/owin-and-katana/host-owin-in-an-azure-worker-role)