ASP
Authorisation and Authentication

With ASP.NET Identity

Definitions

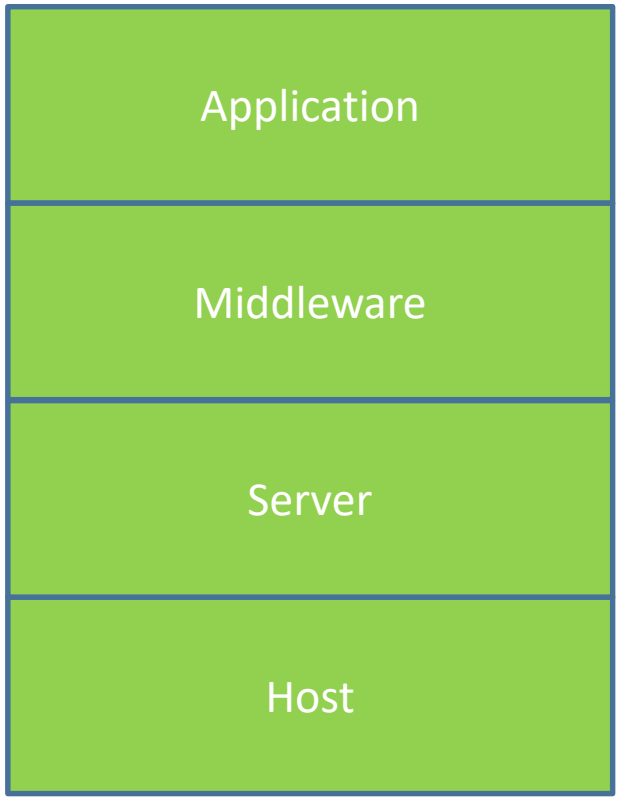
- **Authentication** is the process of verifying that "you are who you say you are“

- **Authorization** is the process of verifying that "you are permitted to do what you are trying to do"

ASP.NET Identity

- Is Microsofts implementation of a authorisation and authentication framework
- Can be used with all of the ASP.NET frameworks, such as ASP.NET MVC, Web Forms, Web Pages, Web API, and SignalR
- Ease of plugging in profile data about the user
- Persistence control
- Unit testability
- Role provider
- Claims Based
- Social Login Providers (OAuth)
- Azure Active Directory
- OWIN Integration
- NuGet package

ASP.Net MVC 5 Architecture



Application using
ASP.Net MVC framework

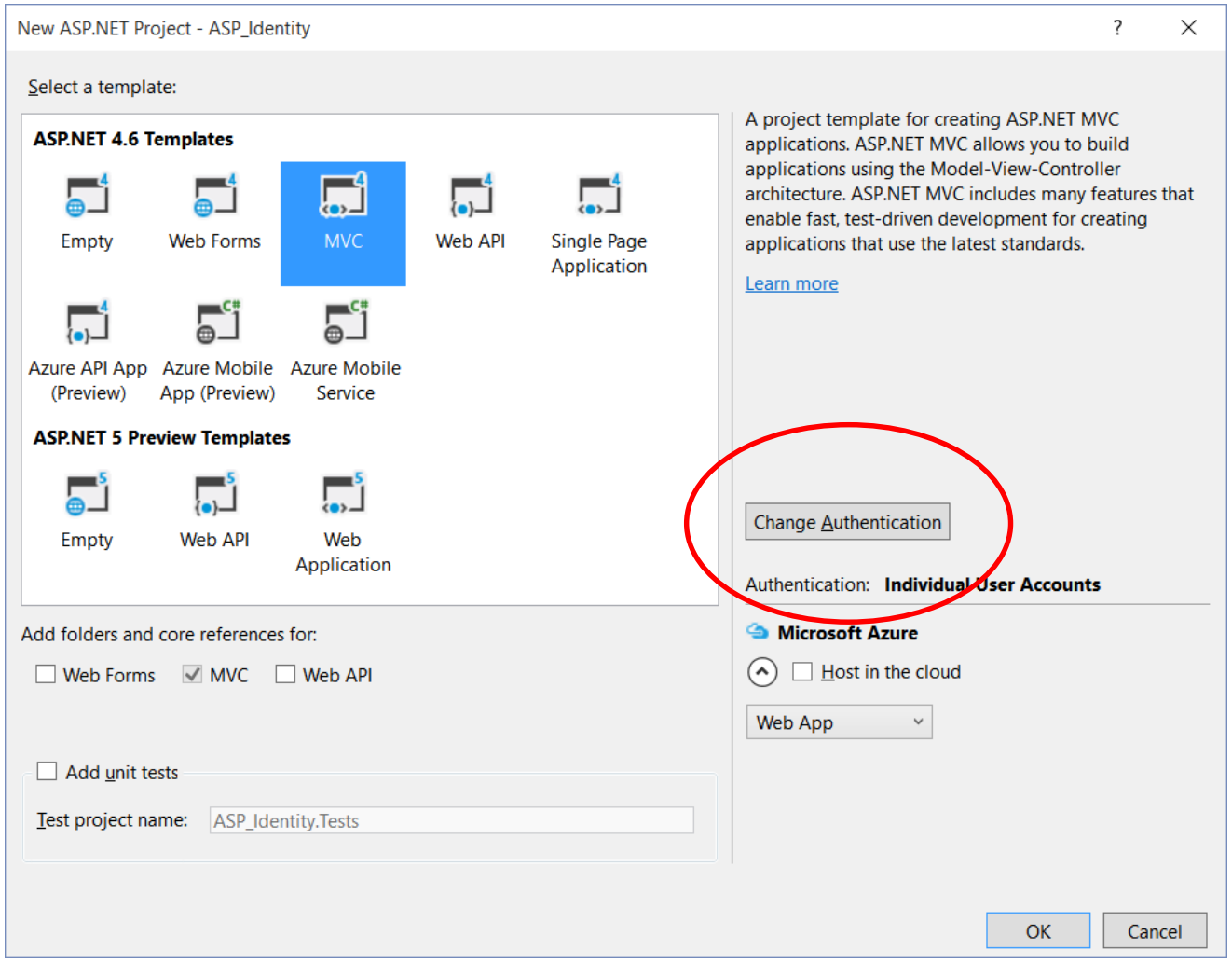
Katana

OWIN specification

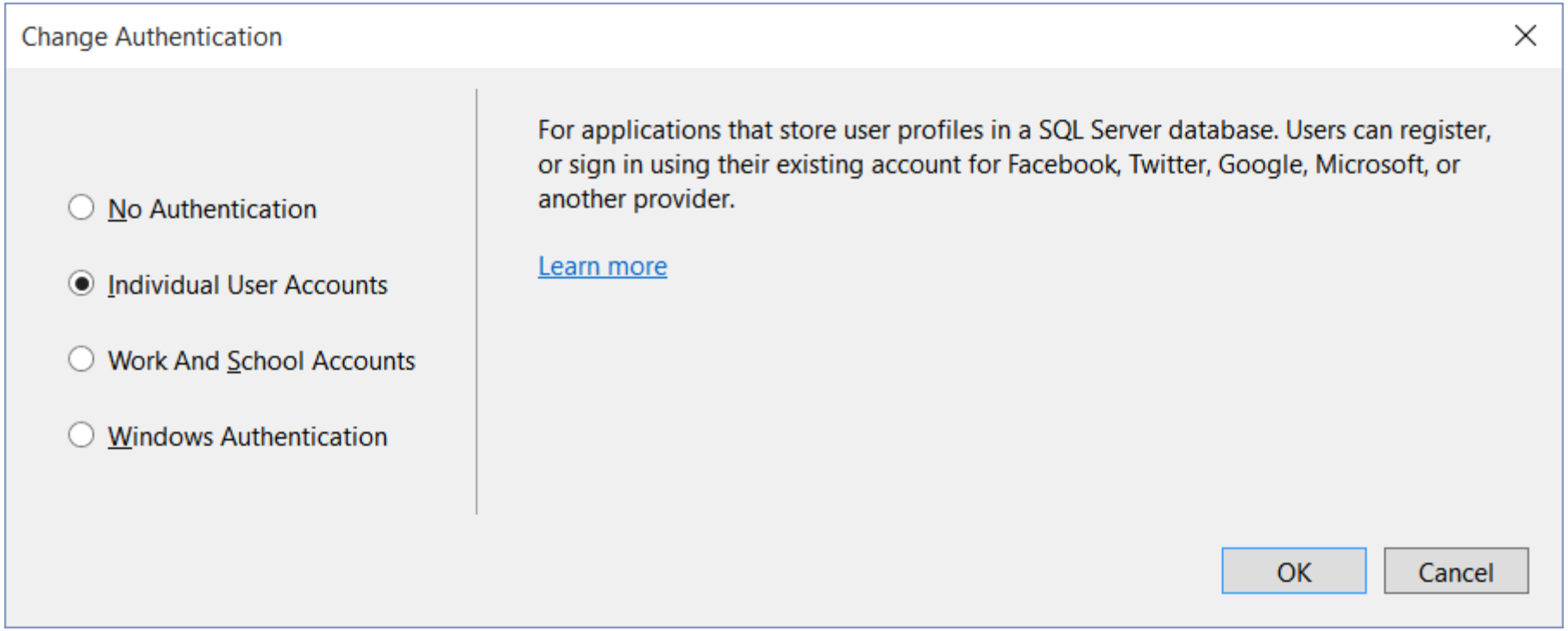
IIS or HttpListener

PC with Windows OS

Crate a New MVC project



Select Authentication Scheme



How to Use?

```
[Authorize]
public class AccountController : Controller
{
  [AllowAnonymous]
  public ActionResult Login(string returnUrl)
  {
    ViewBag.ReturnUrl = returnUrl;
    return View();
  }


        //
        // POST: /Account/Login
        [HttpPost]
        [AllowAnonymous]
        [ValidateAntiForgeryToken]
        public async Task<ActionResult> Login(LoginViewModel
model, string returnUrl)
        {
            ApplicationUser user = null;
            if (!ModelState.IsValid)
```

How to require a Role?

Define your roles

```
public enum Role
{
    Student,
    Staff,
    Admin
}
```

```
[Authorize(Roles = "Admin")]
public class ComponentTypeController : Controller
{
```

When initializing `IdentityDbContext`

```
 //Create Roles if they do not exist
 foreach (var role in roles)
 {
     if (!RoleManager.RoleExists(role))
     {
         RoleManager.Create(new IdentityRole(role));
     }
}
```

Oauth Specification

- Is an open standard for authorization
- It specifies a process for resource owners to authorize third-party access to their server resources without sharing their credentials
- Focuses on client developer simplicity while providing specific authorization flows for web applications, desktop applications, mobile phones, and living room devices
- Is being developed within the IETF OAuth WG
- **OAuth is commonly used as a way for Internet users to log into third party websites using their Microsoft, Google, Facebook or Twitter accounts without exposing their password**
- The OAuth 2.0 framework was published as RFC 6749 in October 2012

References & Links

- Introduction to ASP.NET Identity
  http://www.asp.net/identity/overview/getting-started/introduction-to-aspnet-identity
- **Identity by K. Scott Allen** (must see)
  http://pluralsight.com/training/Player?author=scott-allen&name=aspdotnet-mvc5-fundamentals-m6-ef6&mode=live&clip=0&course=aspdotnet-mvc5-fundamentals
- **OAuth**
  http://oauth.net/2/