



# 5-Day Hands-on Microsoft Identity Masterclass with John Craddock

## Identity solutions with Azure Active Directory, on-premises AD FS and AD

Come to this Masterclass written and delivered by John Craddock. Discover how the identity solutions offered by Azure Active Directory, on-premises AD FS and AD will help you build identity systems for the future using protocols that include OpenID Connect and OAuth 2.0. In the Masterclass you will learn how to authenticate and provide authorization factors to applications that can be located on-premises or in the cloud. The source of identity of the users could be from you own corporate network, your Azure AD domain, a partner organization and/or a social identity provider such as Facebook or Google.



The class provides detailed learning through the extensive use of hands-on labs. Attendees will not only learn the fundamentals and principles, but also learn how-to deploy and troubleshoot the solutions. In-depth learning will be gained through the use tools, such as Fiddler, to analyse and understand the protocol flows.

## Who is it for?

The class is primarily aimed at IT professionals. However, application developers who are tasked with integrating authentication and authorisation with Microsoft Azure and/or on-premises AD FS will greatly benefit from the detailed coverage. Code development is not included in the class, but you will learn about all of the configuration requirements.

## What to expect

The Masterclass is a high-energy, action packed event, crammed with solid information and tips. During the 5-days John Craddock will help build your knowledge and consolidate your new skills with over 37 hands-on labs.

## What others are saying

*“I believe this is the most useful course I have ever attended! John is very good at conveying the concepts and it is easy to see that he has solid knowledge and experience. He is also really taking the time to explain, not just rushing through hundreds of slides. Also, very many hands-on labs which was very good.”*

*“Best training class ever!..I'm VERY satisfied.”*

*“Excellent class; fully packed with information that is spot on and very useful hands-on labs. We are amazed! John is easy to listen to and has lots of knowledge on the subject! This is probably the best course I've had. Time well spent!”*

*“John is very knowledgeable and makes the course easy to follow. After completing the class, I really feel I have in-depth knowledge about how these aspects of Azure really work and operate. Having Limited experience working With Azure, I already feel that my knowledge now exceeds what more experienced consultants claim to know.”*

*“Fantastic training, better structure and execution than any training I have attended in years.”*

*“I really appreciate John as a trainee. He really manages the area fully. The course really opened my eyes, and we will make changes in our company environment.”*

*“The best part of the training was the thorough deep-dives in the federation protocols, combined with the fact that you don't need to be an expert in Azure AD to begin with.”*

*“John is very knowledgeable and prepared to answer extra questions beyond the scope of the course.”*

## Day 1

After a comprehensive introduction to today's identity challenges and solutions you will learn the details of the authentication protocols. This in-depth coverage of the protocols will allow you troubleshoot any problems you may encounter when deploying solutions. As we go through the hands-on labs you will be expected to troubleshoot any problems you may encounter.

Day 1 hands-on labs include:

- Creating an Azure Active Directory
- Capturing and analysing HTTP/HTTPS sessions using Fiddler
- Enabling Kerberos on a website
- Troubleshooting Kerberos network traffic using Wireshark
- Tracing the WS-Federation protocol

## Day 2

After completing our investigation of the protocols, you will learn how to configure the Azure Active Directory to meet your requirements. You'll discover how to manage the Azure AD through the Azure Portal, using PowerShell and the GraphAPIs. After adding custom domains and branding to your Azure AD, you will see how to enhance security and the user experience using role based access control, self-service password resets, MFA and Azure AD Identity Protection.

Day 2 hands-on labs include:

- Investigating OpenID Connect
- Adding custom domains to Azure AD
- Branding your portal
- Managing Azure AD with PowerShell
- Using Graph Explorer
- Self-service password resets
- Enabling Multi-Factor Authentication

## Day 3

You will start the day by deploying Azure AD Connect to synchronize on-premises AD users to Azure AD. We will then investigate the new pass-through authentication and SSO capabilities provided by Azure AD Connect. You will learn about the SSO capabilities of Windows 10 when it is joined to Azure AD and how Windows Hello can eliminate the need for passwords.

At this stage, we have a solid identity infrastructure and now it's time to make applications available to our users. You will start by deploying a SaaS app to your users; configuring groups, assignments and self-service application management. You will then deploy your own applications into Azure AD using both WS-Federation and OpenID Connect / OAuth2.0.

Day 3 hands-on labs include:

- Installing and configuring synchronization with Azure AD Connect
- Investigating pass-through authentication
- Working with SaaS applications
- Self-service application management
- Configuring a WS-Federation App with Azure AD
- Configuring an Open ID Connect / OAuth 2.0 app with Azure AD

## Day 4

The day start by diving deeper into the application model and learning about managing permissions, roles, groups, delegation and consent. You will discover how to turn your application into a multi-tenant app and make it available to all users from all Azure AD tenants. You will the go on to work with the Azure AD Application Proxy to publish applications to the Internet. We will end the day by configuring AD FS and the Web Application Proxy on Server 2016.

Day 4 hands-on labs include:

- Managing permission roles and groups
- Defining WebAPI permissions
- Investigating consent
- Multi-tenant applications
- Publishing a claims-aware application with the Azure AD application proxy
- Publishing an application using Windows Authentication via Kerberos Constrained Delegation
- Configuring AD FS and the WAP

## Day 5

As we now have AD FS operational, the day starts by using Azure AD Connect to establish federated SSO for our on-premises AD users. You will then learn about managing AD FS claims and how to configure an OpenID Connect /OAuth 2.0 application to work with Azure AD. We will then stretch our boundaries and see how Azure AD can open access to consumers (B2C) and businesses (B2B).

Day 5 hands-on labs include:

- Enabling Federated SSO
- Installing and configuring an OpenID Connect app on AD FS
- Managing claims AD FS claims rules
- Creating a B2C directory
- Multi-tenant versus federated applications
- Managing B2B invitations and guest users
- Taking over an unmanaged tenant

## Masterclass materials

You will receive a hard copy of the hands-on manual. Both the hands-on manual and slides will be available in pdf format. You will also receive a link to a build guide, which details how to setup the hands-on virtual environments, and copies of all the scripts and demo websites.

## Masterclass lab environment

The hands-on labs are all run in a cloud based virtual environment that will be available to you for 60-days after the course is completed. This will allow you to do the labs again and test out other ideas.

### Why do I need this Masterclass?

This class is for you, if:

- You are challenged with building identity solutions, authentication and authorization, for environments where data resources are highly distributed, users are using different device types, and user identities are brokered by different identity providers.
- You want to know how to implement identity solutions with Azure AD and AD FS?
- You have a thirst for knowledge and want to know how Azure AD really works?

### What will Azure AD do for my organisation's users?

Azure AD provides services that allow an organisation to rapidly adopt the Cloud and provide an SSO user-experience to many SaaS apps. If you are running on-premises AD and want your users to expand their reach to SaaS apps in the Cloud, Azure AD is for you. Azure AD can provide shared access to corporate social media accounts, multifactor authentication where required and self-service management.

### What will Azure AD do for my organisation's applications?

Traditionally applications have been contained within the boundaries of our own organisation. The current industry trend is to take applications that we own and run them on on-premises servers, servers that reside in public and/or private clouds. We also need to make sure the data that the servers' broker is available in a secure way to our own users, partner users and users who are authenticated via social identity providers. And of course, we need to allow users to use any type of device.

To meet these compelling requirements, we need support for new authentication protocols and access control management. Azure AD provides these services.

### We are looking at building claims-aware applications in the future, but have some legacy applications that use Windows authentication. Is there a migration path?

Applications need to support the modern authentication protocols such as OpenID Connect and OAuth 2.0 to reap the full benefits. Applications that use Windows Authentication can be supported via the Azure AD Application Proxy, and the course covers the full details of this service.

We have applications that use WS-Federation will the course cover that?

Although WS-Federation as a protocol will probably no longer be enhanced it will be around for years. The class will show you how to support applications using WS-Federation. It will also go into great details on the support for the modern authentication protocols OpenID Connect and OAuth 2.0.

### We have Office365 do I also need an Azure AD?

If you have implemented Office 365 you already have Azure AD, it underpins authentication and access in O365. Come to the Masterclass and discover how you can unlock its true potential.



## I'm already working with Azure AD, what will the Masterclass do for me?

If you are already an Azure AD guru, then probably you will not gain very much. But if you would like to gain a detailed understanding of the authentication protocols, configuring users and applications, the application model, the inner working of the Azure AD Application Proxy, troubleshooting and more; this course is for you.

## I not currently using Azure AD will this class be too detailed for me?

If you are an on-premises AD administrator and have a thirst for knowledge, the class is for you and will take you from zero to a deep understanding of Azure AD. Occasionally you may have to hold onto your hat when we dive-deep.

## What do you expect me to know before coming on this masterclass?

Even if you are a complete novice to Azure AD, this class is for you, but we will go quickly with the basics and dive-deep into the details. To gain from the class and be able to manage the hands-on you will need basic computer administrator's skills.

The hands-on manual is written assuming you have the basic skills. Examples of those skills are:

- Create a group in on-premises Active Directory
- Create and OU and group policy
- Check if a service account is running
- Add a DNS record
- Add an URL to the browsers Intranet zone
- Read instructions mindfully
- Have a desire to learn and investigate topics

## How much time is dedicated to hands-on?

Our design aim for the class was to have 60% hands-on, and we have matched that. We have created 38 hands-on exercises to help consolidate your learning. All the hands-on are detailed and structured. The feedback on the hands-on from attendees that have come on the masterclass has been overwhelmingly positive.

## I am a developer, is this class suitable for me?

To develop applications that leverage all the benefits of Azure AD requires an in-depth knowledge. While we will not be covering code development in the class, detailed coverage of the authentication protocols, configuring users and applications, the application model, the inner working of the Azure AD Application Proxy, troubleshooting is provided. This will provide you with a solid foundation for developing applications that leverage the Azure AD for authentication and authorization.

## How much time is spent on AD FS?

We don't go into great depth on installing and configuring AD FS. However, we cover it in sufficient detail to be able to create hybrid solutions between on-premises AD and Azure AD. We will be using AD FS running on Server 2016 for the class hands-on.

## Does the class cover B2C and B2B scenarios?

We go into all the details of managing identity to published applications for customers and business partners. You will do hands-on for both the B2C and B2B scenarios, and you will see how applications can be configured as multi-tenant.