

Quick Intro to WCF Security

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Outline

WCF Security
Overview

Windows
Authentication

Using
Alternate
Windows
Credentials

WCF Security Overview

- **Service calls should be secured**
 - Authenticate the caller
 - Authorize what they have access to on the server side
- **Most WCF Bindings are secure by default using Windows Authentication and Authorization**
 - BasicHttpBinding is not secure by default

WCF Authentication Options

- **Can use different kinds of client credentials**
 - Windows
 - Username
 - Certificate
 - Federated tokens

- **Can validate credentials in various ways**
 - Windows
 - Membership provider
 - Federated Security Token Service
 - Custom

WCF Authorization

- Once credentials validated, WCF establishes Thread `IPrincipal` based on client identity
 - `Thread.CurrentPrincipal` static property
- Can programmatically call `IPrincipal.IsInRole()`
- Can use `[PrincipalPermission]` attribute on service method
- Can use `ClaimsPrincipal` to check if caller has certain claims
- Can implement a custom `ServiceAuthorizationManager`

WCF Windows Authentication

- **Client passes Windows identity to the service**
 - Client process identity
 - Alternate credentials set through the client proxy
- **WCF automatically validates client identity at the server using Windows network security protocols**
 - NTLM
 - Kerberos
- **Principal can be used for authorization**
 - Uses Windows Groups by default
 - Can be configured to use other authorization sources
 - i.e. custom database

Summary

- **Services should almost always be secured**
- **Most WCF Bindings are secure by default, using Windows authentication**
- **Windows authentication happens automatically through Windows network protocols**
 - Validate client identity at the service
- **Service can then make authorization decisions based on the client identity established through the `Thread.CurrentPrincipal`**

Course Complete!

Hello WCF!

Defining Services

Hosting Services

Implementing
Clients

Quick Intro
To Security