



**0208 942 5724**

Email: [Info@aspecttraining.co.uk](mailto:Info@aspecttraining.co.uk)

Web: [www.aspecttraining.co.uk](http://www.aspecttraining.co.uk)

# Silverlight for Developers

**Duration: 3 Days**

## Overview:

Microsoft Silverlight is all about delivering a rich web User Experience (UX), and is a strong contender in the Rich Internet Application battle, whose champions has long been Adobe's Flash and Flex products, along with many implementations of AJAX.

Aspect Training's hands-on Silverlight training course has been developed for real-world, commercial scenarios by our expert instructors. The course contains many Silverlight examples based on real-world scenarios.

Aspect Training's Silverlight course is designed for developers who are looking to produce cross-browser rich internet applications using Microsoft Silverlight

On completion delegates will have learnt:

- Silverlight 3 Architecture
- RIA Services
- XAML
- M-V-VM patterns
- PRISM framework
- Silverlight Controls
- Silverlight with RESTful services, WCF, Duplex, and Sockets
- Silverlight DataBinding
- Storage & Deployment

## Prerequisites:

Some experience of developing AJAX or .NET applications and an understanding of general web technologies is required.

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## Course Topics:

### **Silverlight Introduction**

What is Silverlight?  
Silverlight Architecture  
Project Architecture  
Deployment  
Assembly Caching  
Running Silverlight Apps  
Tools for Creating Silverlight Apps  
Difference in versions

### **Silverlight XAML**

XAML Syntax  
XAML Namespaces  
Silverlight namespace extensions  
Content Models  
Type Converters  
Property Elements  
Mapping Libraries  
Dependency Properties Intro  
Attached properties  
Markup Extensions  
Binding  
StaticResource  
TemplateBinding  
RelativeSource

### **Silverlight Graphics, Media and Animations**

Graphics & Text  
Audio and Video (inc DRM overview)  
Creating & Understanding Animation  
Understanding Controls  
Creating and Using User Controls  
Resources, Style & Templates  
Creating Resources  
Resource Dictionaries  
Loading resources dynamically  
Application Resources  
Creating & Using Styles  
Creating, Modifying & Using Templates

### **Hosting Silverlight in the Browser**

Plugin positioning and Dimensions  
Hosting the control  
Silverlight control  
Object tag & options  
Using a XAML Splash Screen  
Customising the Installation experience  
Creating flexible layouts  
Window Resizing  
Panels  
Full-Screen Support  
Hosting the control  
Object tag & options  
Using a XAML Splash Screen  
Customising the Installation experience

### **UI Interaction**

Keyboard input  
Mouse Input  
Wheel support  
Multitouch support  
Drag and Drop  
Full Screen Mode  
File Open and Save Dialogs  
Isolated Storage  
Background Worker & Threads

### **Interaction with the Environment**

Controlling Html from Silverlight  
Calling managed code from JavaScript  
Using the LocalConnection API to communicate between multiple Silverlight instances  
Maximising SEO  
Out Of Browser Support  
Enabling OOB support  
Using the Network Monitoring API  
Updating an OOB Application

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### **Working with Services**

Creating Services for Silverlight  
Silverlight enabled WCF services  
Binary XML  
ADO.NET Data Services  
RESTful services with POX and JSON  
Consuming Services  
WCF, ASMX  
ADO.NET Data Services  
Other Services (REST, POX)  
Security restrictions  
Sockets and Duplex Services  
Cryptographic Services  
Choosing a O/R mapper to use with Silverlight  
EF  
LINQ to SQL

### **Data Binding**

Understanding DataBinding in Silverlight  
DataBinding Modes  
DataBinding Syntax  
DataContext  
Change Notifcation  
DataTemplates

### **Creating Custom Controls**

The Silverlight Toolkit  
Motivation for creating custom controls  
Creating custom controls  
Understanding Generic XAML  
Using custom controls

### **Silverlight Accessibility**

Making Silverlight accessible  
Achieving DDA Compliance  
UI Automation

### **Silverlight Unit Testing**

Choosing a testing framework  
Installing the framework  
Writing Unit Tests for Silverlight code  
Adopting Test Driven Development (TDD) and Silverlight Integration

### **Silverlight Navigation Applications**

Overview  
Creating Navigation Applications  
Creating clean URLs  
Understanding Deep Linking  
Applying other styles and assets  
Using navigation in standard Silverlight applications

### **Using .NET Rich Internet Application (RIA)**

#### **Services for n-tier**

Understanding .NET RIA Services  
Pros and cons  
Validation model and shared code  
Creating RIA Services applications  
Using the Data Form with RIA Services  
Using RIA services with other data bound controls

### **PRISM (i.e. Composite Application Guidance)**

Understanding PRISM  
Examining the components of PRISM  
Getting and installing PRISM  
Implementing PRISM in your Project  
Pro and Cons

### **Model-View-ViewModel**

Motivation for M-V-VM  
Using M-V-VM in Silverlight  
Available M-V-VM frameworks

### **Using Silverlight with Azure**

Understanding Azure  
Obtaining and Integrating Azure for Visual Studio  
Creating Silverlight applications for Azure

### **Review and Summary**

Review of technologies and approaches  
Summary and a look to the future.