



Deutsche SQL Server Konferenz 2015

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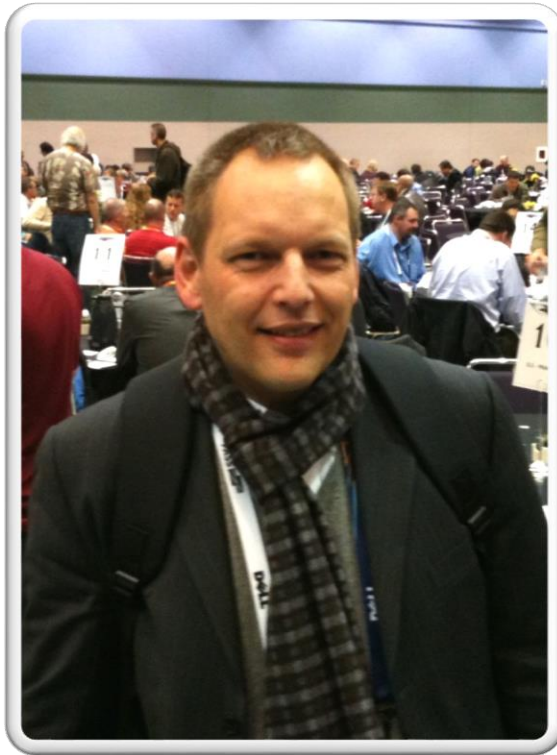


SQL Server goes WinPhone

Alexander Karl



about me



Alexander Karl

.net - CDE



SQL + BI Consultant

Microsoft
CERTIFIED

Trainer

Microsoft
CERTIFIED

IT Professional

Database Administrator 2008
Server Administrator on Windows Server® 2008
Database Administrator on SQL Server® 2005

... und „2012er“ Zertifizierungen



publications

- Schulungs-Video: „SQL Integration Services“
- Kindle ebook: DQS step-by-step DE + EN
- session-ppts: Introduction + code samples



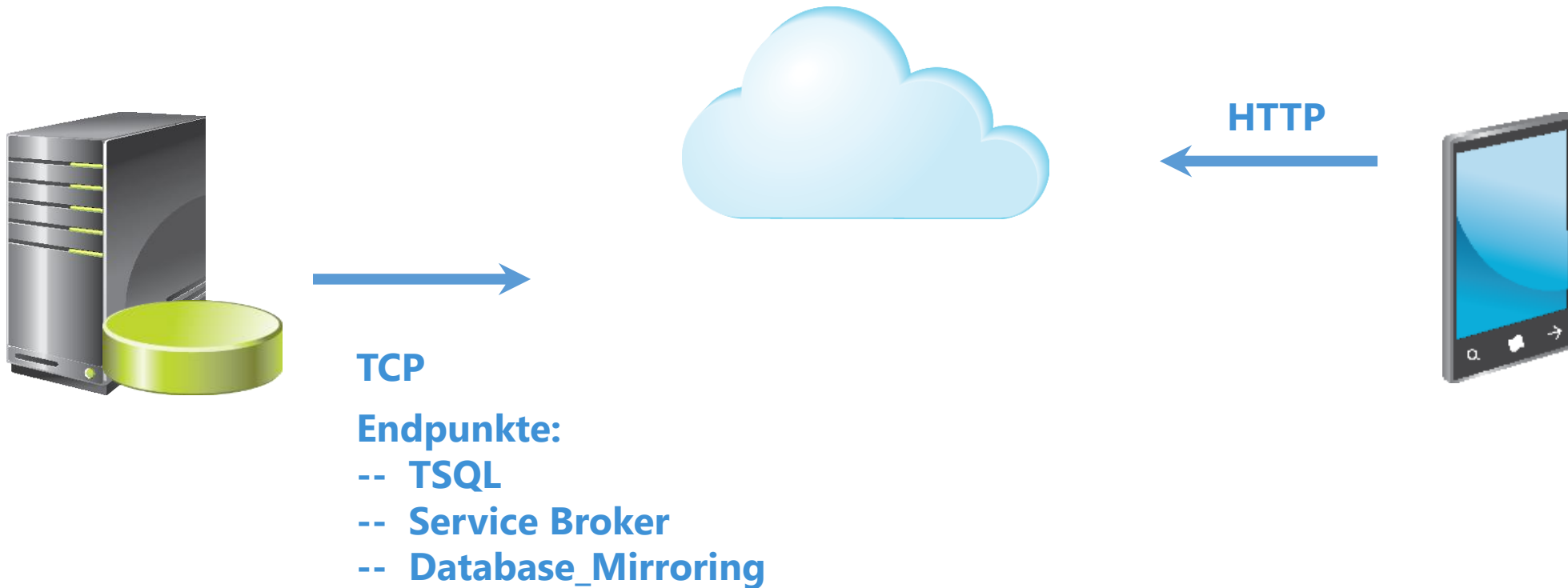
SQL Server goes WinPhone

Diese Session zeigt in zwei steps eine End-to-End Lösung

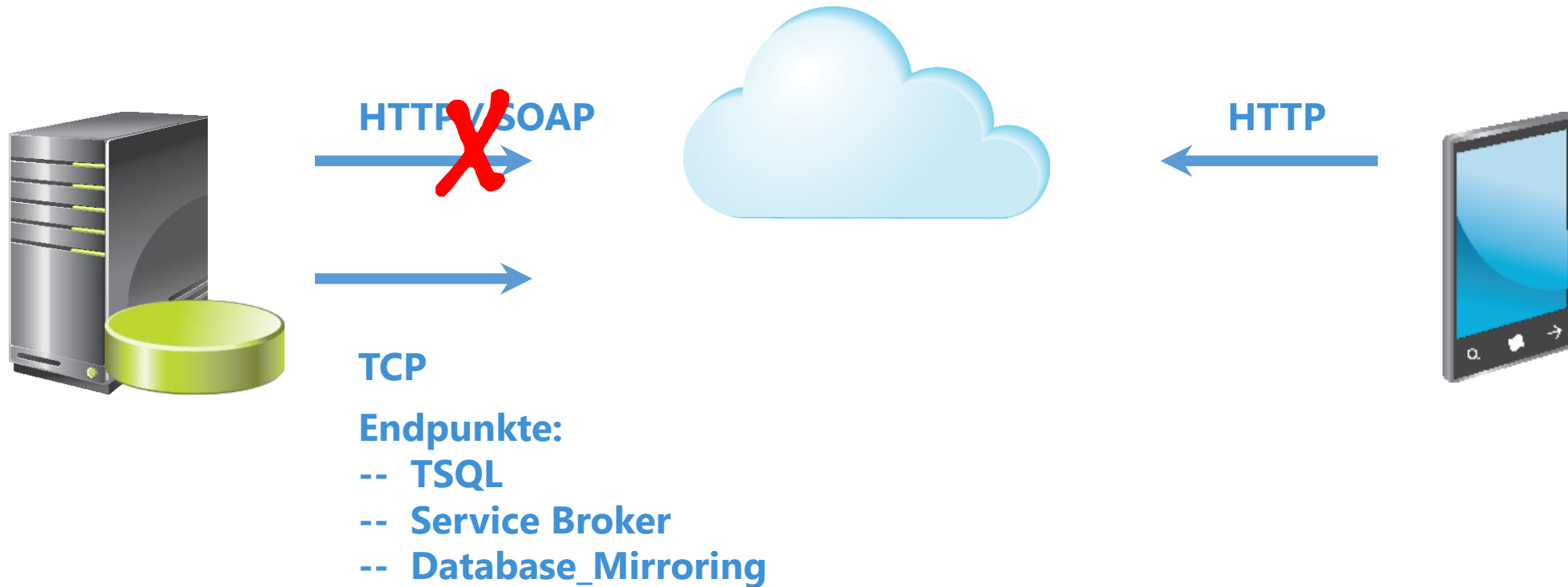
- zunächst die WinPhone Verbindung vom SQL-Server via ASP.net Web API zum WinPhone
- und im Anschluß eine mobile-to-mobile Verbindung mit den Azure mobile-Services und dem Servicebus.



how to connect ??



how to connect ??



how to connect > ASP .NET Web-API

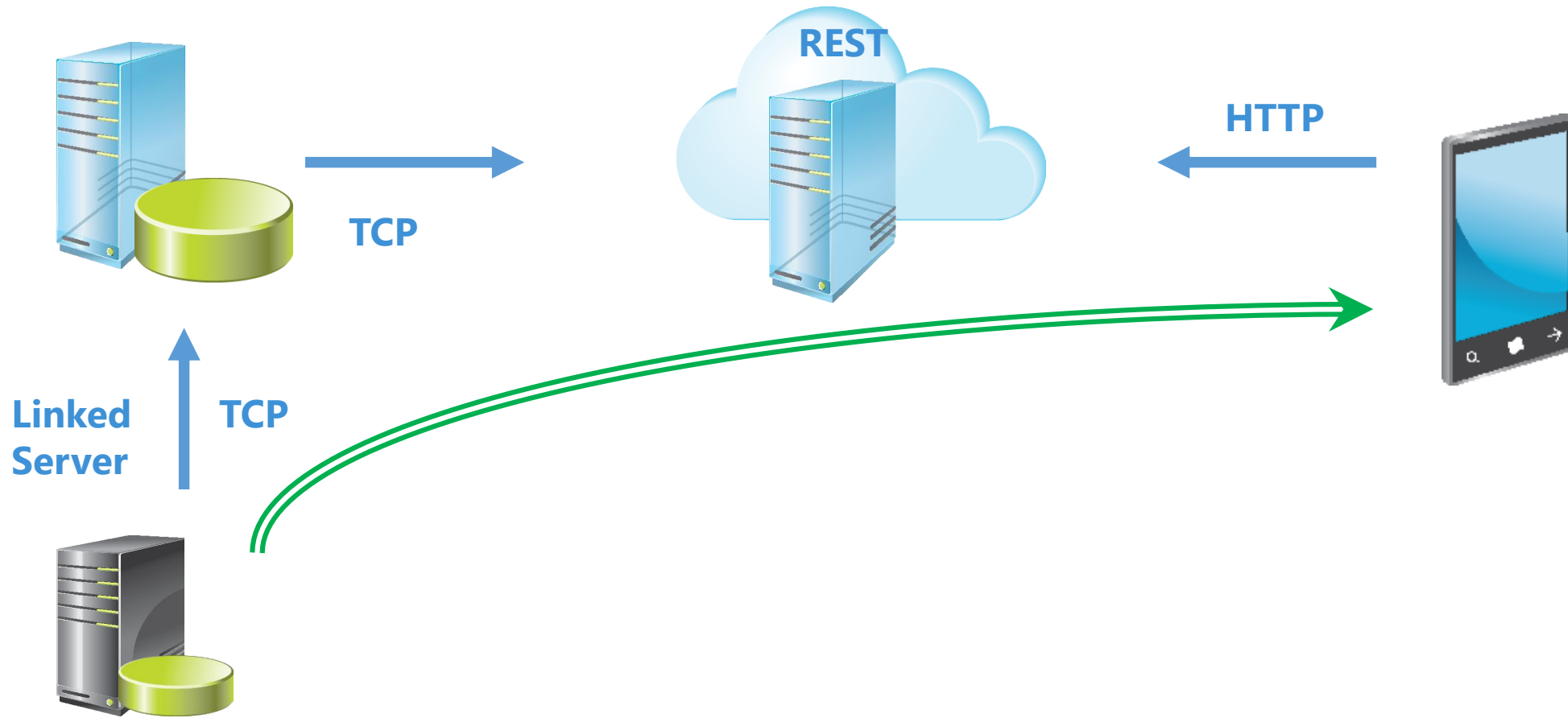


API Documentation

Jobs [POST jobs/{jobName}](#)

Client [GET tables/Client](#)
[GET tables/Client/{id}](#)
[PATCH tables/Client/{id}](#)
[POST tables/Client](#)
[DELETE tables/Client/{id}](#)

how to connect > ASP .NET Web-API



REST service

- REST ist eine Abstraktion der Struktur und des Verhaltens des World Wide Web.
 - Jeder REST-konforme Dienst hat eine eindeutige Adresse, den Uniform Resource Locator (URL)
 - Zusätzlich zum URL verwendet REST auch Uniform Resource Identifier (URI), um einzelne Ressourcen zu bezeichnen.
-
- [http://de.wikipedia.org/wiki/Representational State Transfer](http://de.wikipedia.org/wiki/Representational_State_Transfer)



REST service in der Praxis

- Adresse: `http://testazurewebsites.net/api/books`
- `http://testazurewebsites.net/api/books/2`
- vgl. bisherige parametrische Aufrufe:
`http://aspx?Id=2¶meter=abc`



T-SQL vs. REST und http-Verben

• INSERT	C	POST
• SELECT	R	GET
• UPDATE	U	PUT
• DELETE	D	DELETE



Create ASP .NET Web-API in 5 steps

- Web.config
- Models / class.cs
- Models / Context.cs
- Controllers / classController.cs
- App_Start / WebApiConfig.cs

then „Publish“ to Azure



▸ Installed packages

Include Prerelease ▾

Sort by: Most Downloads ▾

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◀ Online

All

nuget.org

Microsoft and .NET

▸ Updates



EntityFramework

Entity Framework is Microsoft's recommended data access technology for new applications.



Json.NET

Json.NET is a popular high-performance JSON framework for .NET



jQuery

jQuery is a new kind of JavaScript Library.

jQuery is a fast and concise JavaScript Library that simplifies HTML document traversing, event handli...



DataAnnotationsExtensions

Validation attributes that can be used in any .NET 4.0 project to supplement the existing Data Annotations attributes.



Microsoft ASP.NET MVC

This package contains the runtime assemblies for ASP.NET MVC.

Prerelease



Bootstrap

Sleek, intuitive, and powerful mobile first front-end framework for faster and easier web development.



WebGrease

Web Grease is a suite of tools for optimizing javascript, css files and images.

1 2 3 4 5 ▸

Search Online (Ctrl+E)

Created by: Microsoft

Id: [EntityFramework](#)

Version: 6.1.2

Last Published: 22.12.2014

Downloads: 8943857

License

[View License](#)

[Project Information](#)

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Description:

Entity Framework is Microsoft's recommended data access technology for new applications.

Tags: Microsoft EF Database Data O/RM ADO.NET

Dependencies:

No Dependencies

Each package is licensed to you by its owner. Microsoft is not responsible for, nor does it grant any licenses to, third-party packages.

Settings

Close



```
1 <?xml version="1.0" encoding="utf-8"?>
2 <!--
3   For more information on how to configure your ASP.NET application, please visit
4   http://go.microsoft.com/fwlink/?LinkId=301879
5   -->
6 <configuration>
7   <configSections>
8     <!-- For more information on Entity Framework configuration, visit http://go.microsoft.com/fwlink/?LinkId=237468 -->
9     <section name="entityFramework" type="System.Data.Entity.Internal.ConfigFile.EntityFrameworkSection, EntityFramework, Version=6.0
10  </configSections>
11  <connectionStrings>
12    <add name="dbWebAPI" providerName="System.Data.SqlClient"
13      connectionString="Data Source=ra[REDACTED].database.windows.net;
14      Initial Catalog=testfabrik-[REDACTED]_db;
15      User ID=A[REDACTED]09;
16      Password=P[REDACTED];
17      Encrypt=true;
18      Trusted_Connection=false;" />
19  </connectionStrings>
20  <appSettings></appSettings>
21  <system.web>
22    <compilation debug="true" targetFramework="4.5" />
23    <httpRuntime targetFramework="4.5" />
24  <httpModules>
```

```
1 using System;
2 using System.Collections.Generic;
3 using System.Linq;
4 using System.Web;
5
6 namespace testfabrik_webapi.Models
7 {
8     public class book
9     {
10         public int    Id    { get; set; }
11         public string Title { get; set; }
12         public string Autor { get; set; }
13         public string Reihe { get; set; }
14         public string ISBN  { get; set; }
15         public decimal Preis { get; set; }
16     }
17 }
```



```
VerlagContext.cs  Book.cs  Web.config
testfabrik-verlag  testfabrik_webapi.Models.VerlagContext  VerlagContext()

1  using System;
2  using System.Data.Entity;  //--
3  using System.Collections.Generic;
4  using System.Linq;
5  using System.Web;
6  using System.Text;  //--
7
8  namespace testfabrik_webapi.Models
9  {
10     public class VerlagContext : DbContext
11     {
12         public VerlagContext() :base("name=dbWebAPI")
13         {
14             //-----
15         }
16
17         public DbSet<book> books { get; set; }
18     }
19
20 }
```



```
BooksController.cs  x VerlagContext.cs  Book.cs  Web.config
testfabrik-verlag  testfabrik_webapi.Controllers.BooksController  Get()

1  using System;
2  using System.Collections.Generic;
3  using System.Linq;
4  using System.Net;
5  using System.Net.Http;
6  using System.Web.Http;
7  using System.Data.Entity;
8  using testfabrik_webapi.Models;
9
10 namespace testfabrik_webapi.Controllers
11 {
12     public class BooksController : ApiController
13     {
14         // GET api/books
15         public IEnumerable<Models.book> Get()...
22
23         // GET api/books/2
24         public Models.book Get(int Id)
25         {
26             using (var db = new VerlagContext())
27             {
28                 return db.books.SingleOrDefault(t => t.Id == Id);
29             }
30         }
31     }
32 }
33
```



```
BooksController.cs  X  VerlagContext.cs  Book.cs  Web.config
testfabrik-verlag  testfabrik_webapi.Controllers.BooksController  Get()
1  using System;
2  using System.Collections.Generic;
3  using System.Linq;
4  using System.Net;
5  using System.Net.Http;
6  using System.Web.Http;
7  using System.Data.Entity;
8  using testfabrik_webapi.Models;
9
10 namespace testfabrik_webapi.Controllers
11 {
12     public class BooksController : ApiController
13     {
14         // GET api/books
15         public IEnumerable<Models.book> Get()
16         {
17             using (var db = new VerlagContext())
18             {
19                 return db.books.ToList();
20             }
21         }
22
23         // GET api/books/2
24         public Models.book Get(int Id) ...
31     }
32 }
33
```

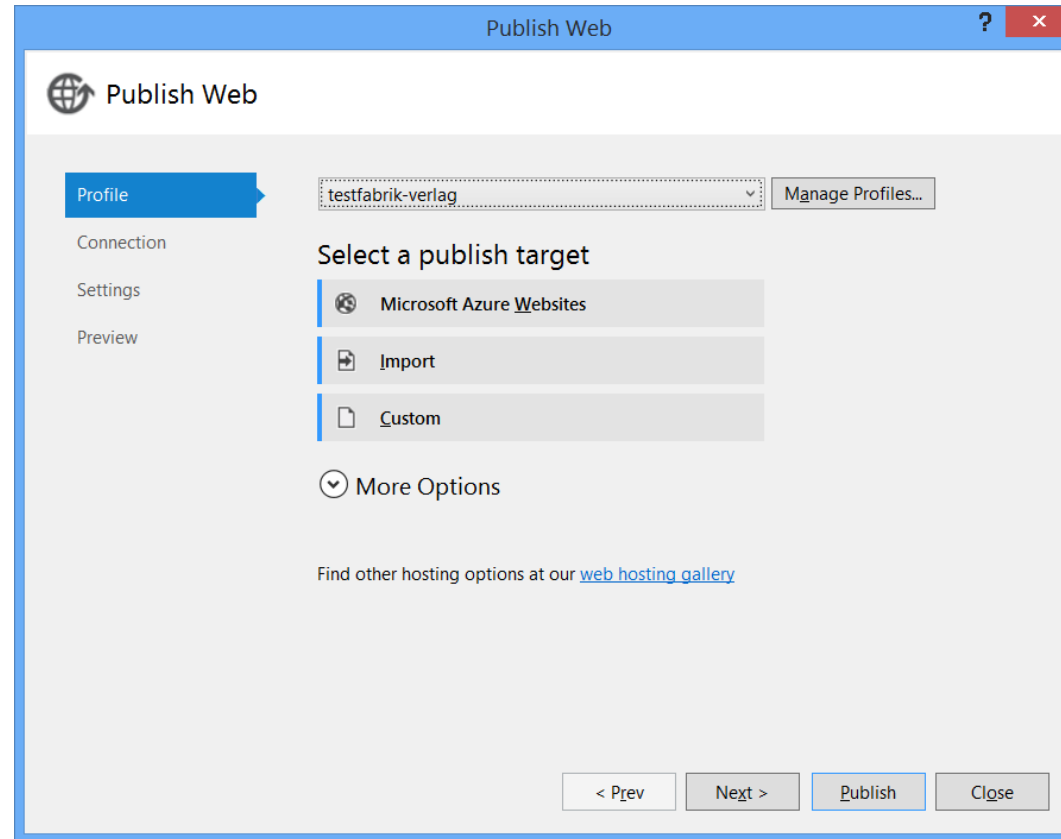


```
WebApiConfig.cs  BooksController.cs  VerlagContext.cs  Book.cs  Web.config
testfabrik-verlag  testfabrik_webapi.WebApiConfig  Register(HttpConfiguration config)

1  using System;
2  using System.Collections.Generic;
3  using System.Linq;
4  using System.Web.Http;
5
6  namespace testfabrik_webapi
7  {
8      public static class WebApiConfig
9      {
10         public static void Register(HttpConfiguration config)
11         {
12             // Web API configuration and services
13
14             // Web API routes
15             config.MapHttpAttributeRoutes();
16
17             config.Routes.MapHttpRoute(
18                 name: "DefaultApi",
19                 routeTemplate: "api/{controller}/{id}",
20                 defaults: new { id = RouteParameter.Optional }
21             );
22         }
23     }
24 }
25
```



Publish Web to Azure



Publish Web to Azure

Publish Web

Profile

testfabrik-verlag

Connection

Settings

Preview

Publish method: Web Deploy

Server: testfabrik- scm.azurewebsites.net:443

Site name: testfabrik-

User name: \$testfabrik-

Password:

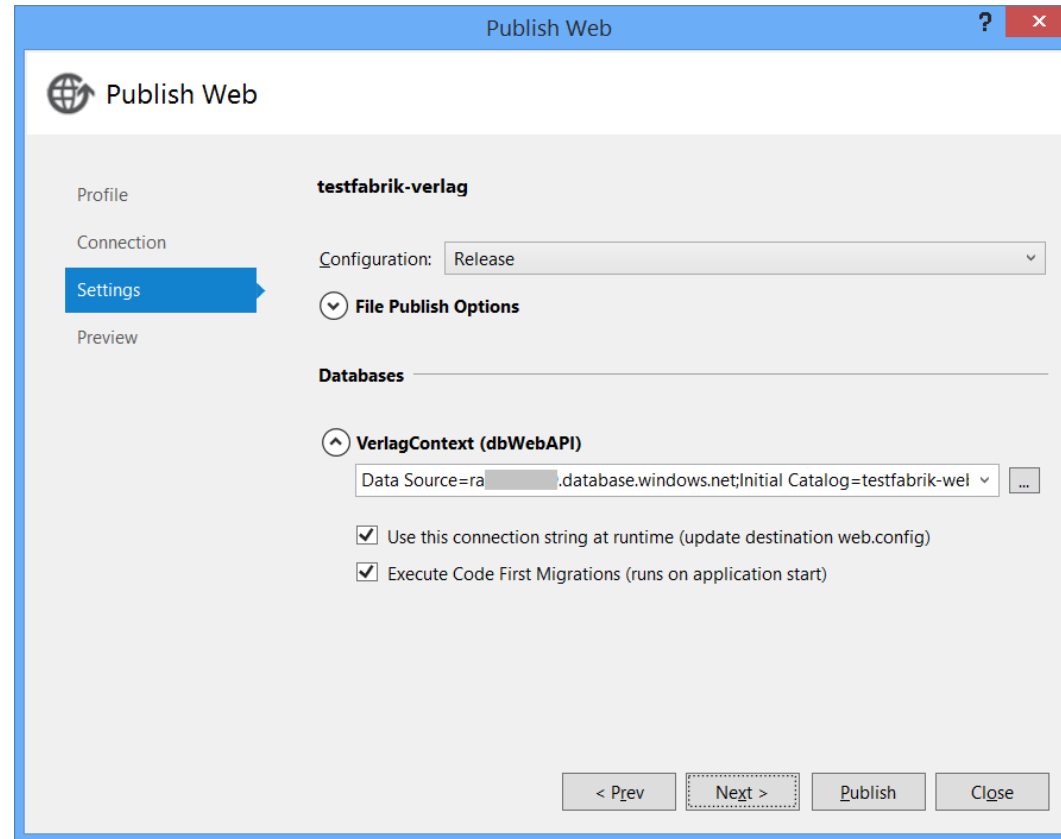
Save password

Destination URL: http://testfabrik- .azurewebsites.net

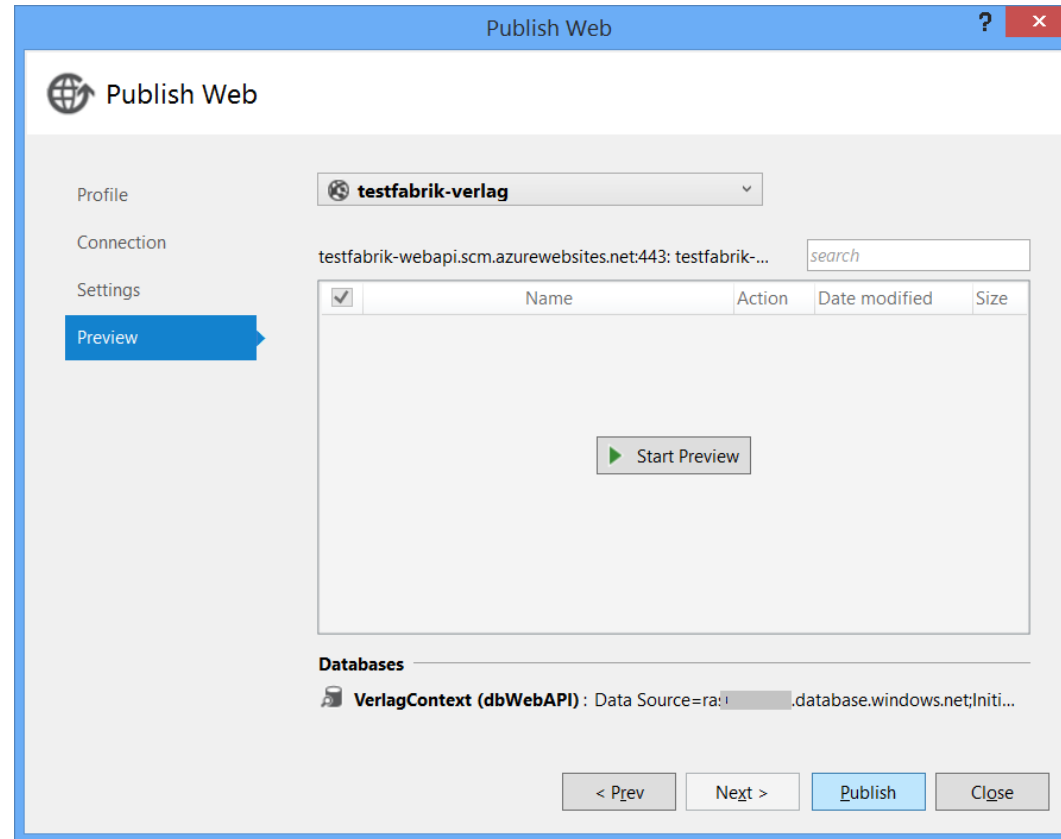
Validate Connection

< Prev Next > Publish Close

Publish Web to Azure

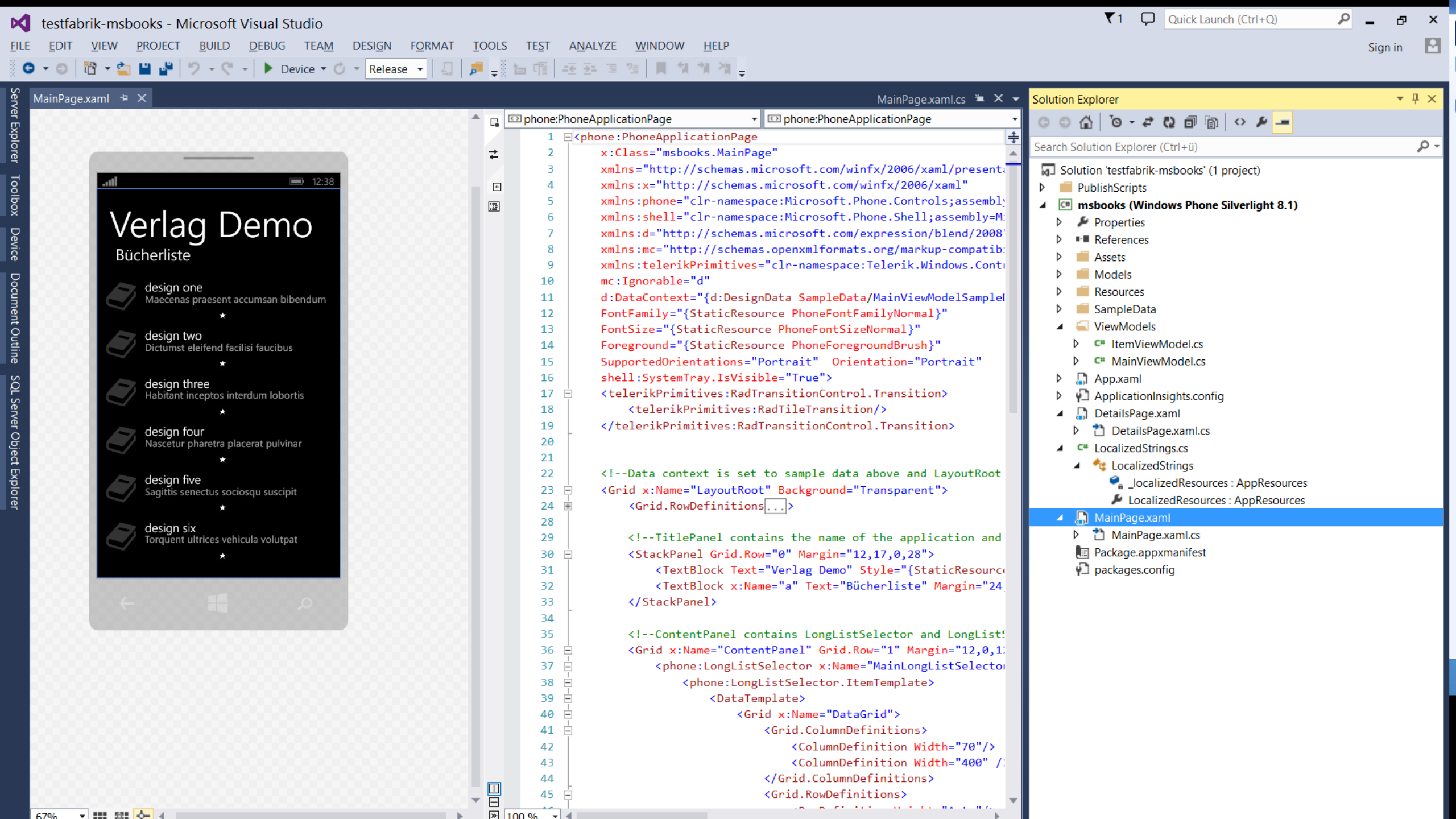


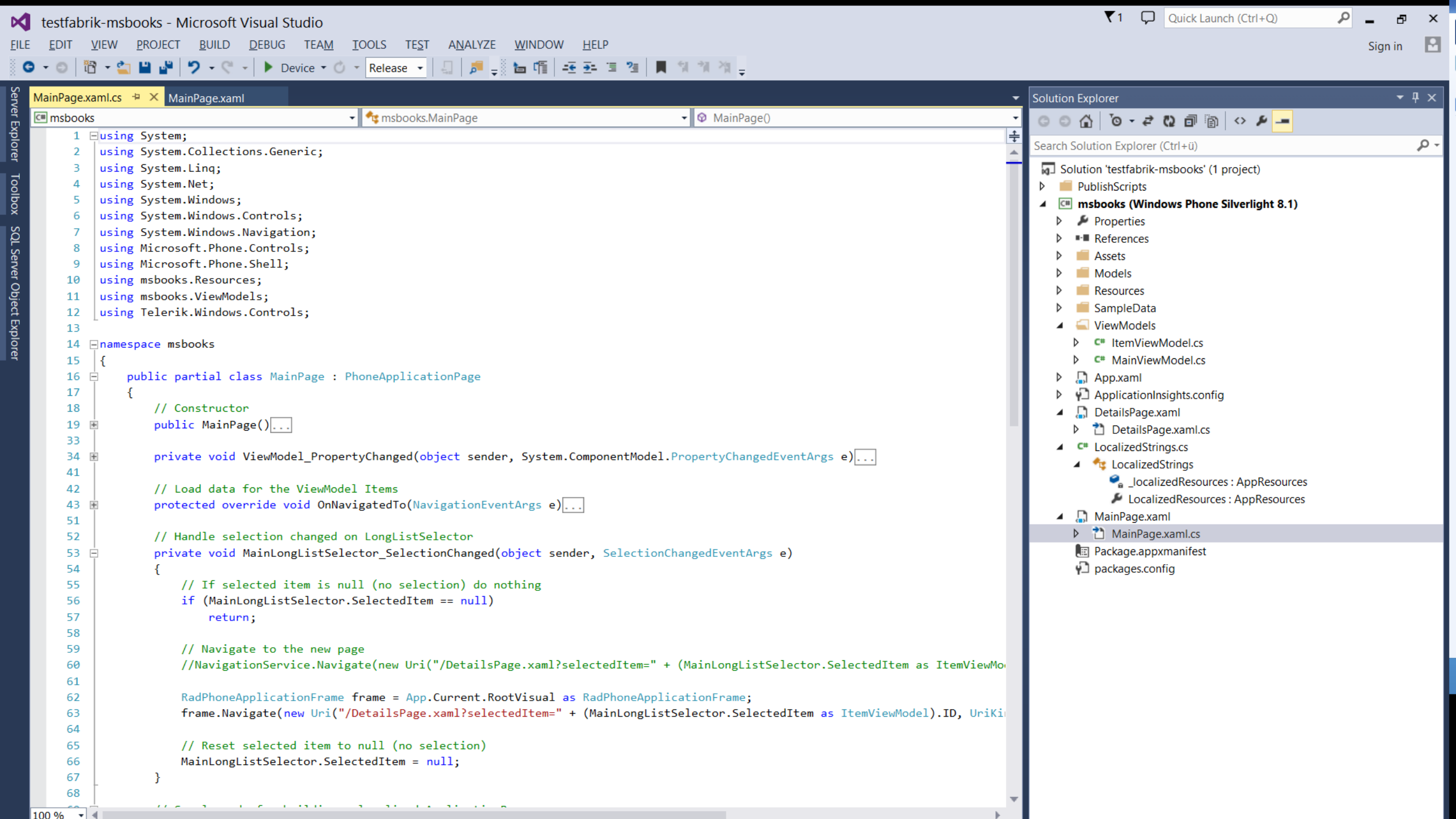
Publish Web to Azure

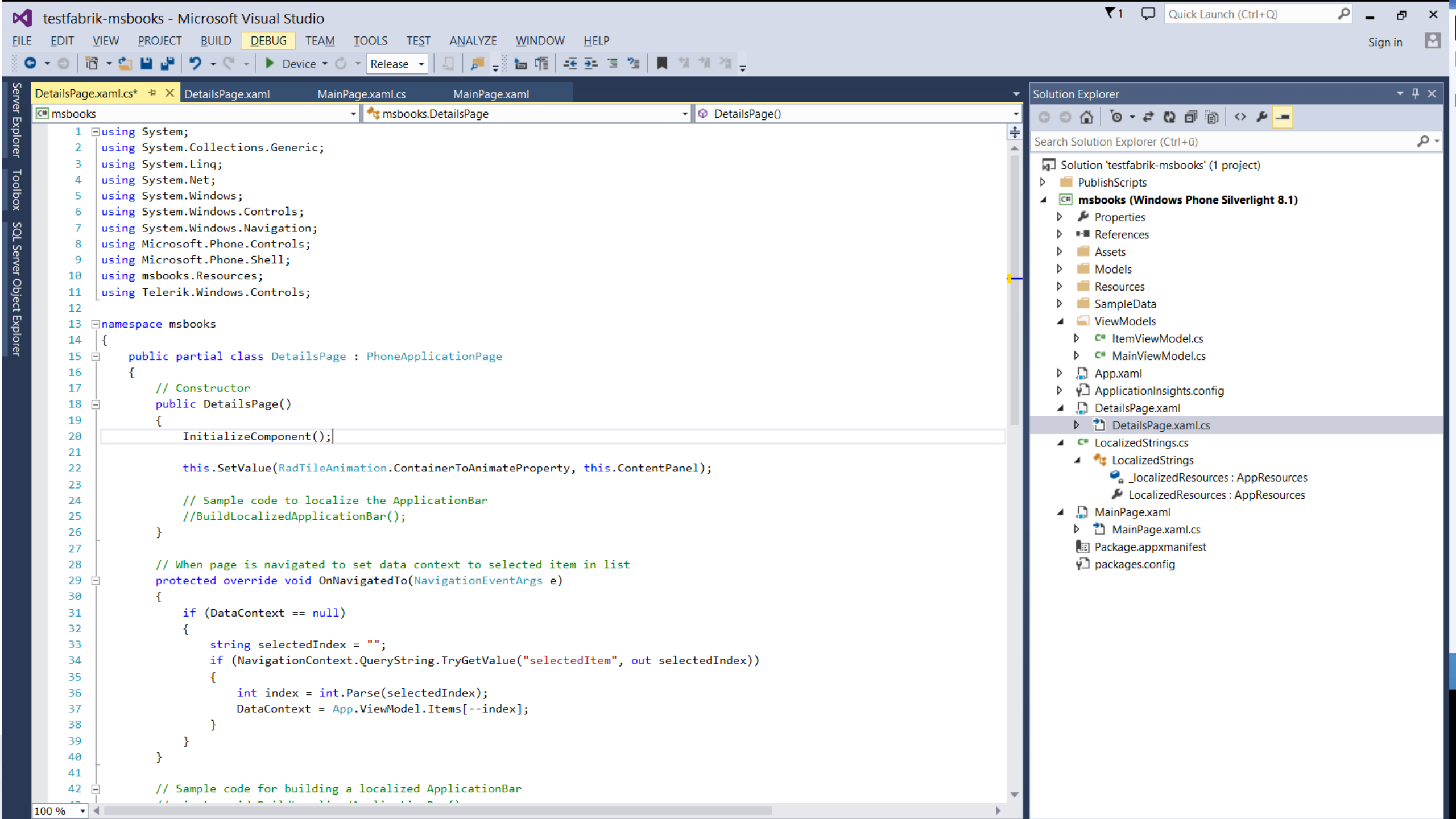


Demo









DetailsPage.xaml.cs* DetailsPage.xaml MainPage.xaml.cs MainPage.xaml

```
1 using System;
2 using System.Collections.Generic;
3 using System.Linq;
4 using System.Net;
5 using System.Windows;
6 using System.Windows.Controls;
7 using System.Windows.Navigation;
8 using Microsoft.Phone.Controls;
9 using Microsoft.Phone.Shell;
10 using msbooks.Resources;
11 using Telerik.Windows.Controls;
12
13 namespace msbooks
14 {
15     public partial class DetailsPage : PhoneApplicationPage
16     {
17         // Constructor
18         public DetailsPage()
19         {
20             InitializeComponent();
21
22             this.SetValue(RadTileAnimation.ContainerToAnimateProperty, this.ContentPanel);
23
24             // Sample code to localize the ApplicationBar
25             //BuildLocalizedApplicationBar();
26         }
27
28         // When page is navigated to set data context to selected item in list
29         protected override void OnNavigatedTo(NavigationEventArgs e)
30         {
31             if (DataContext == null)
32             {
33                 string selectedIndex = "";
34                 if (NavigationContext.QueryString.TryGetValue("selectedItem", out selectedIndex))
35                 {
36                     int index = int.Parse(selectedIndex);
37                     DataContext = App.ViewModel.Items[--index];
38                 }
39             }
40         }
41
42         // Sample code for building a localized ApplicationBar
```

Solution Explorer

- Search Solution Explorer (Ctrl+U)
- Solution 'testfabrik-msbooks' (1 project)
- PublishScripts
- msbooks (Windows Phone Silverlight 8.1)
- Properties
- References
- Assets
- Models
- Resources
- SampleData
- ViewModels
- ItemViewModel.cs
- MainViewModel.cs
- App.xaml
- ApplicationInsights.config
- DetailsPage.xaml
- DetailsPage.xaml.cs
- LocalizedStrings.cs
- LocalizedStrings
- _localizedResources : AppResources
- LocalizedResources : AppResources
- MainPage.xaml
- MainPage.xaml.cs
- Package.appxmanifest
- packages.config

testfabrik-msbooks - Microsoft Visual Studio

FILE EDIT VIEW PROJECT BUILD DEBUG TEAM TOOLS TEST ANALYZE WINDOW HELP

Device Release

msbooks msbooks.Models.BookDetails Preis

```
1 using System;
2 using System.Collections.Generic;
3 using System.Linq;
4 using System.Text;
5 using System.Threading.Tasks;
6
7 namespace msbooks.Models
8 {
9     /// <summary>
10    /// Define a class that will hold the detailed information for a book.
11    /// </summary>
12    class BookDetails
13    {
14        public String Id { get; set; }
15        public String ISBN { get; set; }
16        public String Title { get; set; }
17        public String Autor { get; set; }
18        public String Reihe { get; set; }
19        public Decimal Preis { get; set; }
20    }
21 }
22
23
```

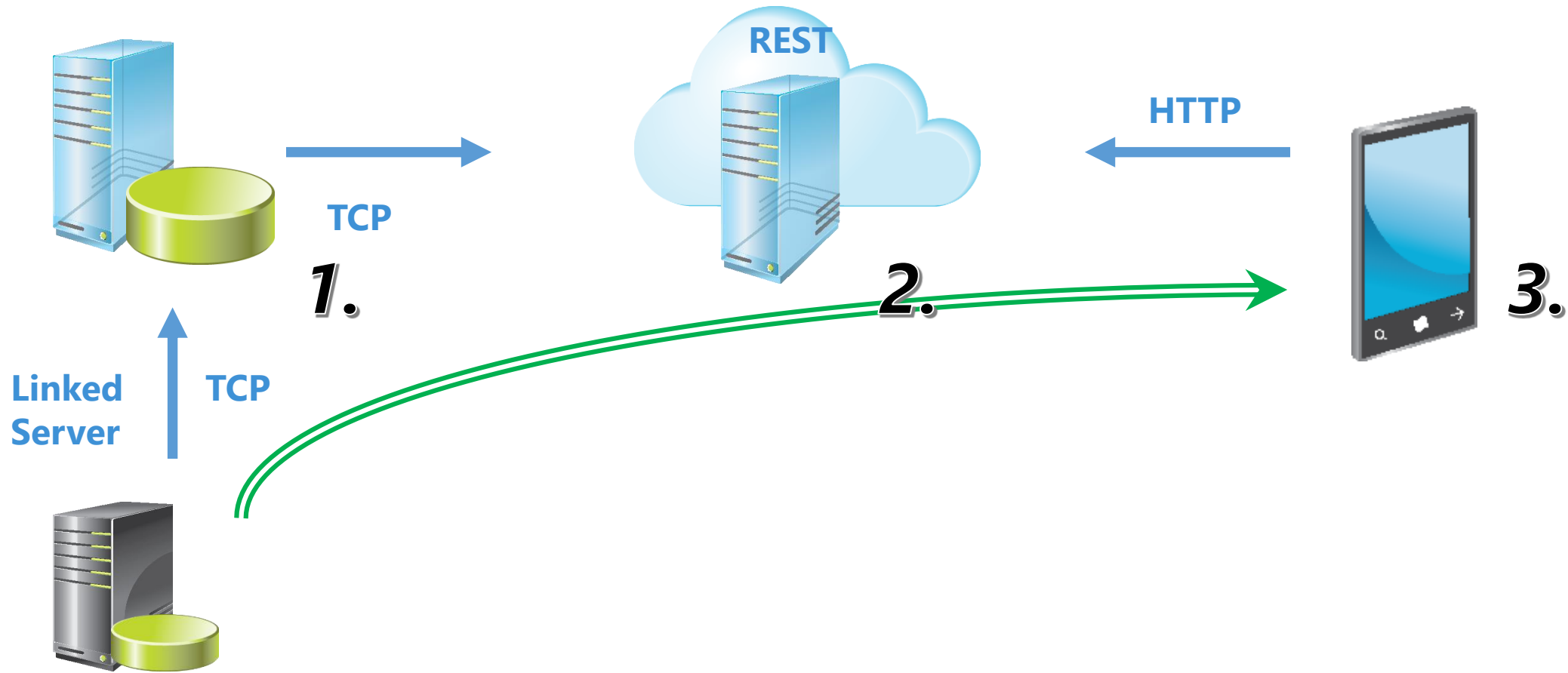
Solution Explorer

Search Solution Explorer (Ctrl+u)

- Solution 'testfabrik-msbooks' (1 project)
 - PublishScripts
 - msbooks (Windows Phone Silverlight 8.1)
 - Properties
 - References
 - Assets
 - Models
 - BookDetails.cs
 - Resources
 - AppResources.resx
 - SampleData
 - ViewModels
 - ItemViewModel.cs
 - MainViewModel.cs
 - App.xaml
 - ApplicationInsights.config
 - DetailsPage.xaml
 - DetailsPage.xaml.cs
 - LocalizedStrings.cs
 - LocalizedStrings
 - _localizedResources : AppResources
 - LocalizedResources : AppResources
 - MainPage.xaml
 - MainPage.xaml.cs
 - Package.appxmanifest
 - packages.config



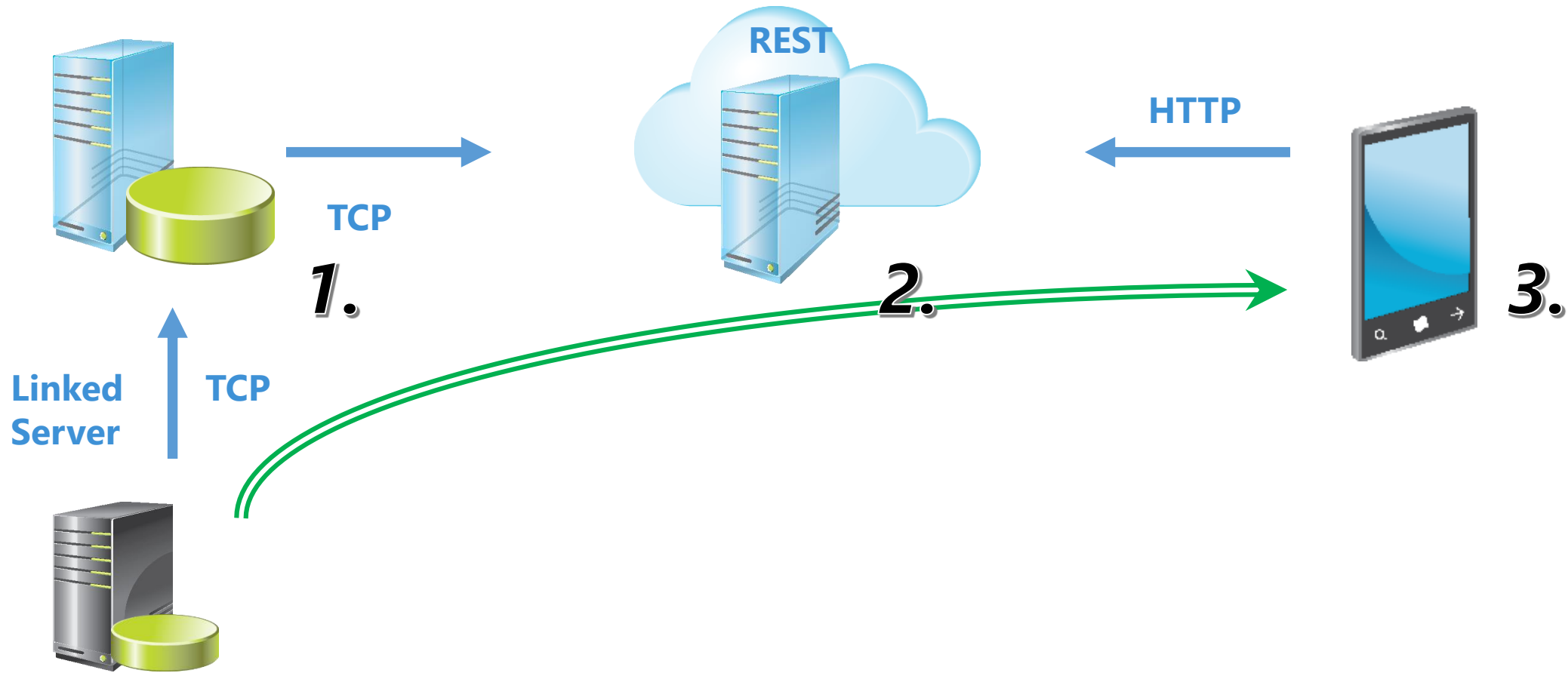
how to connect >> ASP Web-API



Demo



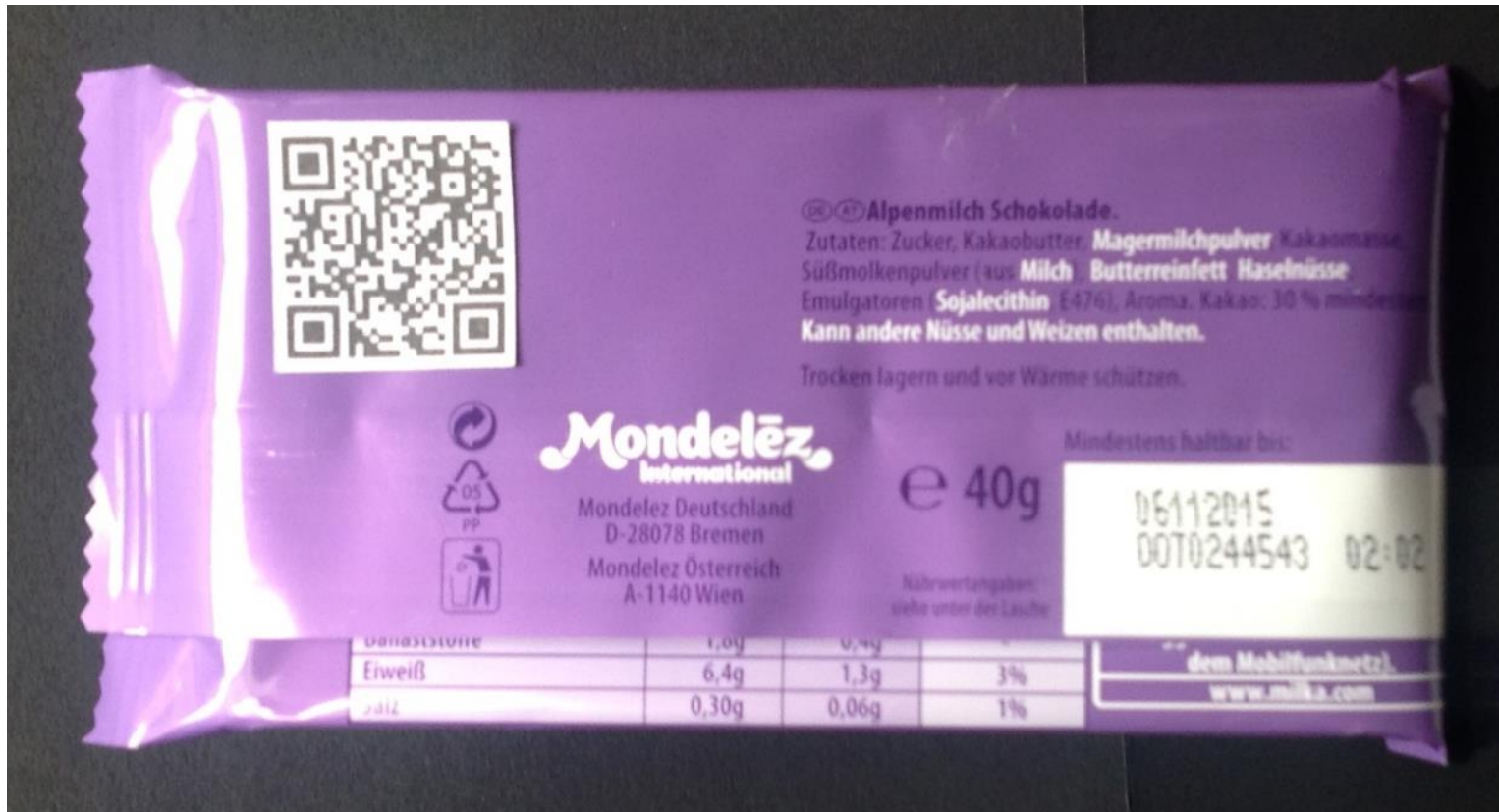
how to connect >> ASP Web-API



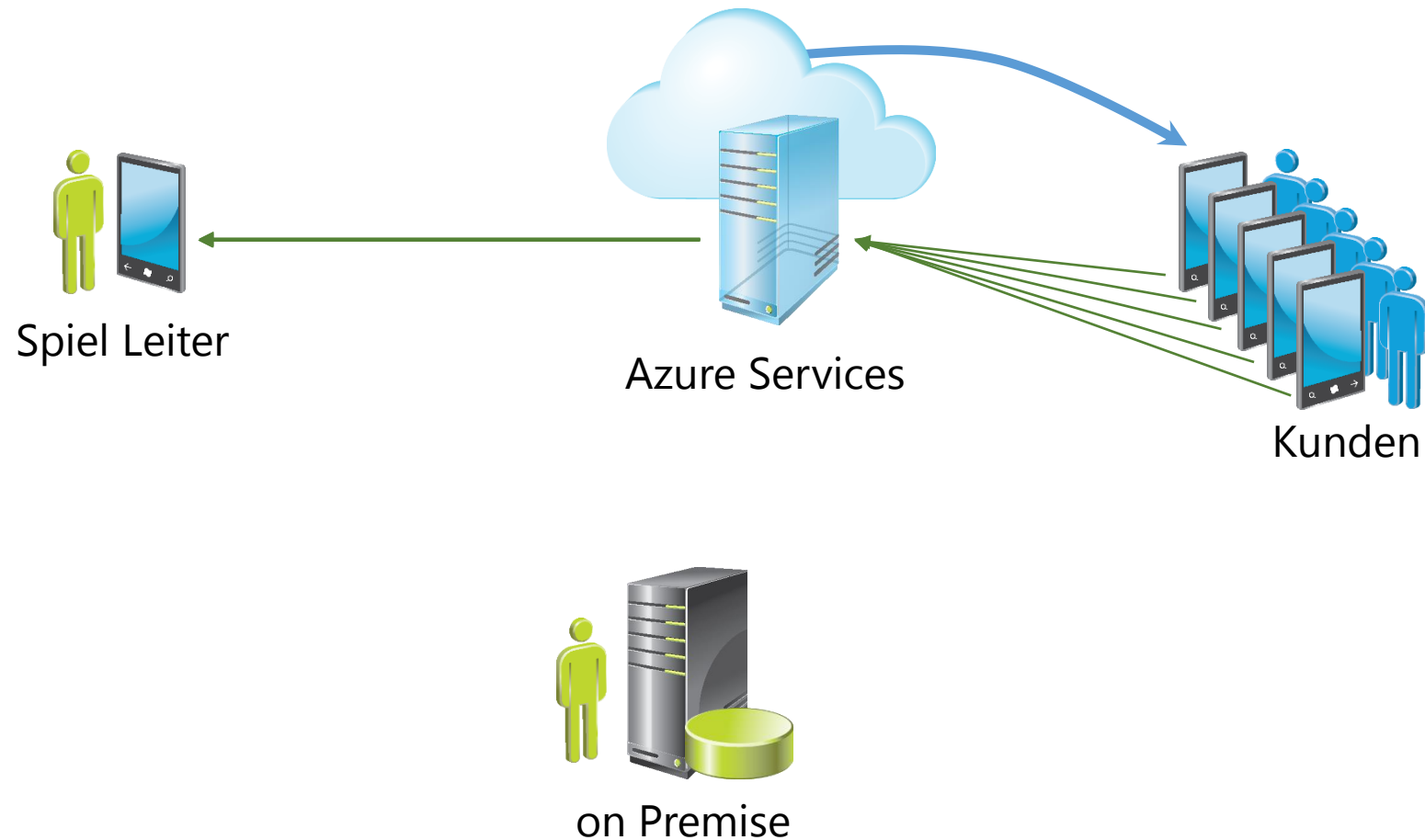
Demo



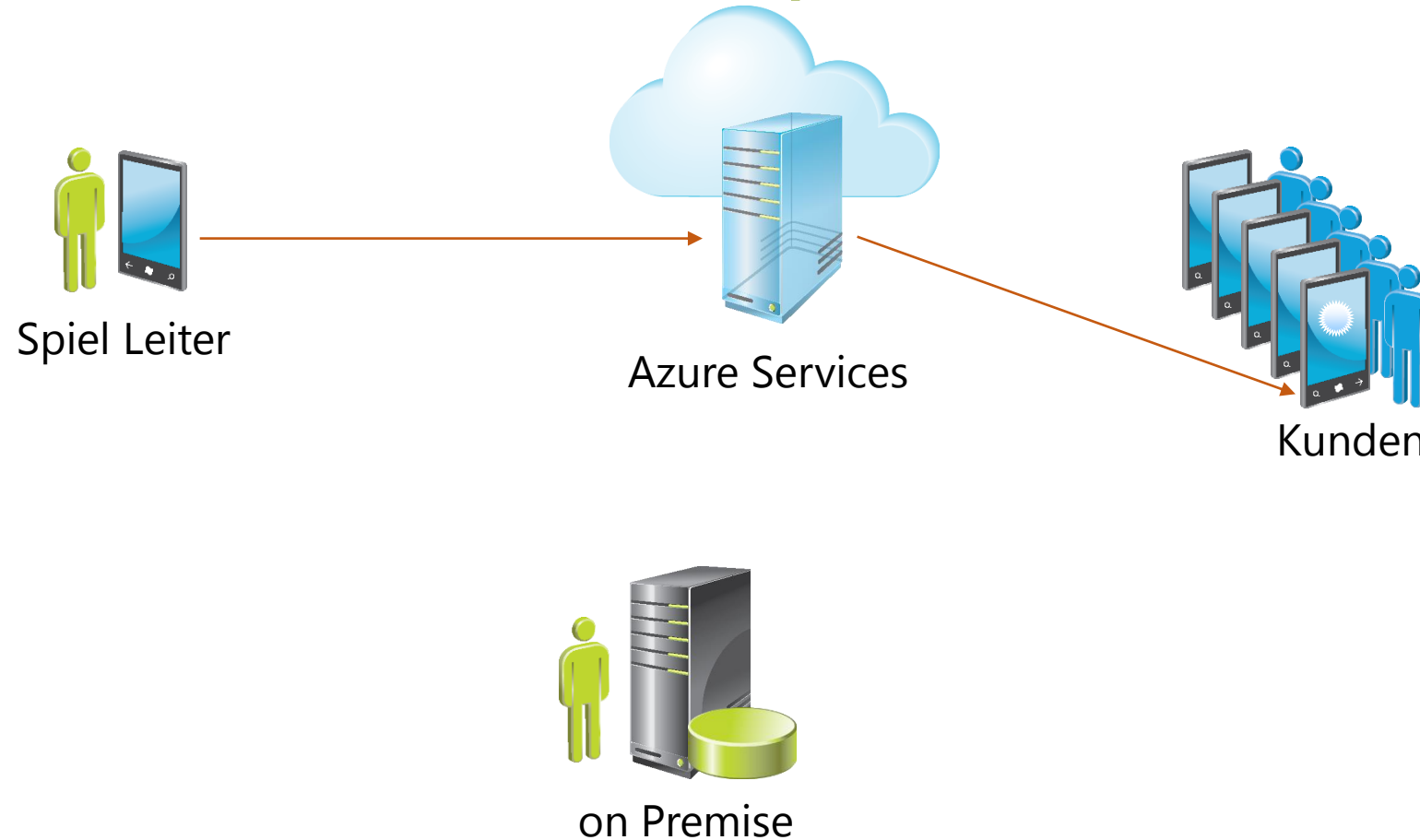
„Schoko Demo“



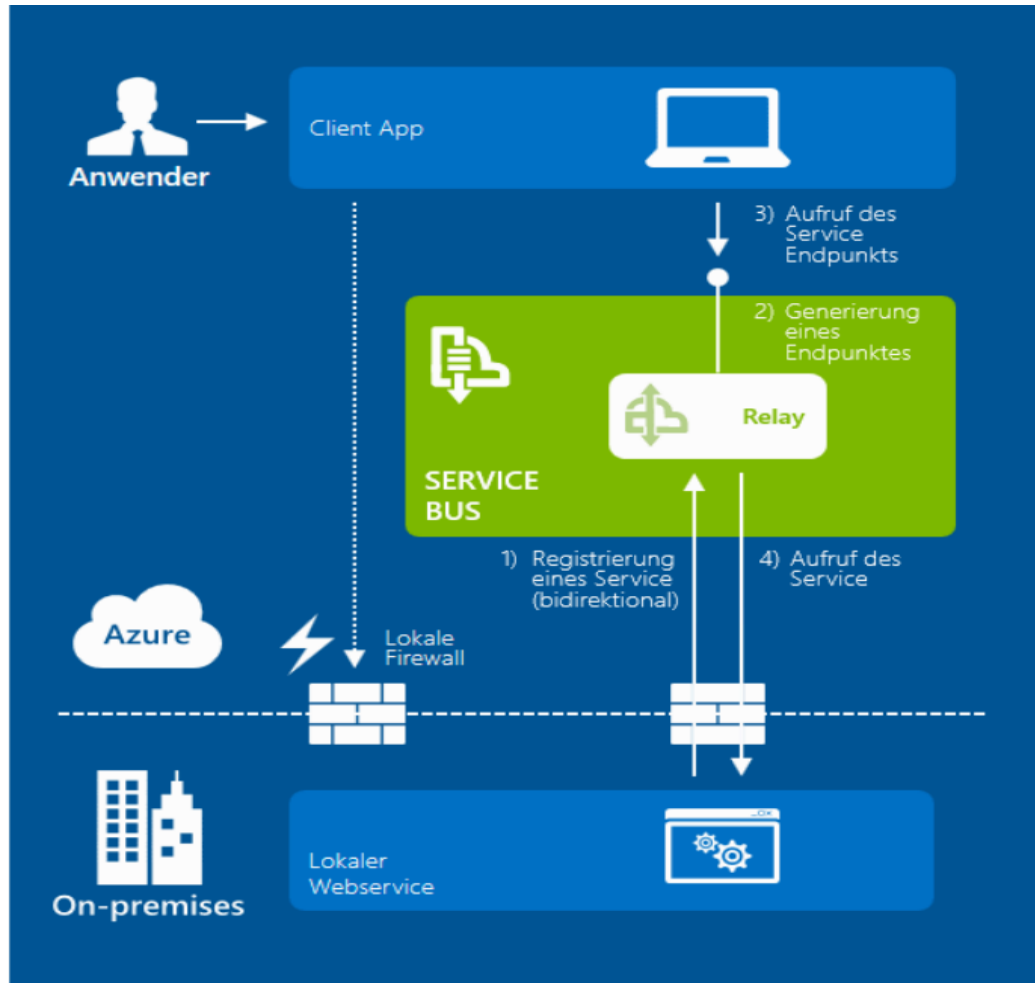
„Schoko Demo“ step1 registration



„Schoko Demo“ step2 notification

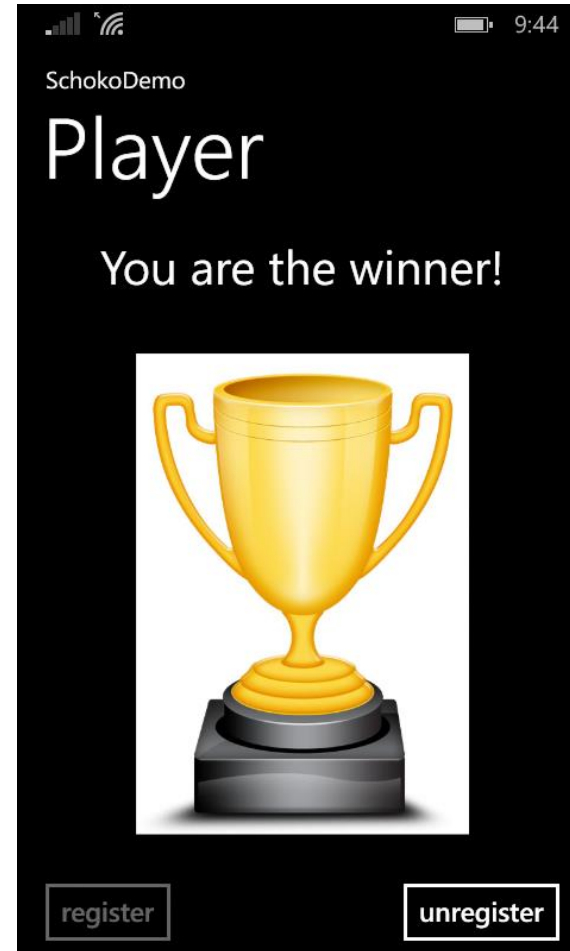
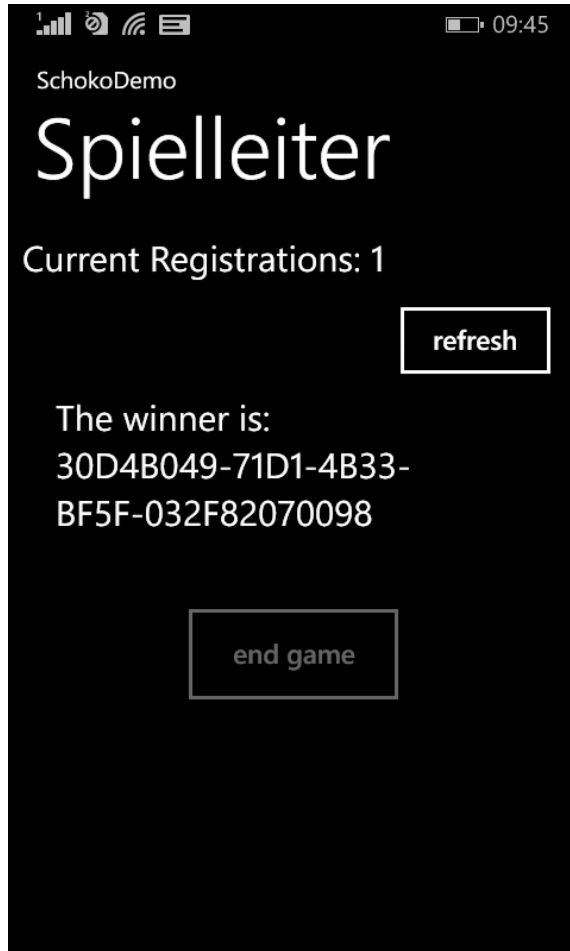


Azure Service Bus



Service Bus





Questions ??



thanks ...

- to my co-programmer Andreas Wendl
- to all the Sponsors
- to SQL PASS Germany

- and
to you for joining my session.





Professional
Association
for SQL
Server

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