WCF and Android Part I

By **deveck**, 2 Apr 2012

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Introduction

The Windows Communication Foundation (WCF) provides a very flexible way of exposing network interfaces to other applications. For cross platform and inter programming language support basically two technologies can be used. SOAP and REST services. The SOAP approach provides far more features out of the box but is not really suitable for mobile devices if speed matters. Therefore this article describes how to create a REST WCF-Webservice which can be consumed on android devices.

WCF part

The WCF part is composed of three files, the service contract, the service implementation and the *app.config*.

The service contract

The service contract defines the webservice methods.

To expose the service via REST, the `WegGet` attribute is required. It specifies the URL of each method, the serialization format (JSON or XML, use JSON for fast processing). If the method has parameters they can either be provided using POST (requires another attribute) or they can be provided by specifying them in the URL as shown in the example. The implementation of this method is straight forward and requires no attributes.

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```
[ServiceContract()]
public interface ISecurityService
{
    [OperationContract()]
    [FaultContract(typeof(WCFFault))]
    [WebGet(UriTemplate="test/{param1}", ResponseFormat=WebMessageFormat.Json)]
    void test(string param1);
}
```

app.config

The application config associates different services with different endpoints and bindings. This configuration does not use any transport security or other security mechnisms. For REST services the `webHttp` behaviour is important.

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```
<configuration>
<system.serviceModel>
  <bindings>
   <webHttpBinding>
    <binding
     name="web_http"
     bypassProxyOnLocal="false"
     hostNameComparisonMode="WeakWildcard">
   </binding>
  </webHttpBinding>
</bindings>

<behaviors>
  <serviceBehaviors>
   <behavior name="http_behavior" >
    <serviceMetadata httpGetEnabled="true" />
```

About Article

A **Technical Blog**, originally posted at http://www.deveck.net/devec and-android

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Mobile WCF Android RES SOAP Services

```
    <serviceDebug includeExceptionDetailInFaults="true"/>
   </behavior>
  </serviceBehaviors>
  <endpointBehaviors>
   <behavior name="web_behavior">
    <webHttp helpEnabled="True" />
   </behavior>
  </endpointBehaviors>
</behaviors>

<services>
  <service name="ServiceImpl" behaviorConfiguration="http_behavior">
   <host>
    <baseAddresses>
     <add baseAddress="http://*:18000/my_service" />
    </baseAddresses>
   </host>
   <endpoint
    address="my_service"
    binding="webHttpBinding"
    bindingConfiguration="web_http"
    contract="IService"
    behaviorConfiguration="web_behavior"
   />
   <endpoint contract="IMetadataExchange"
       binding="mexHttpsBinding" address="mex"/>
  </service>
</services>
</system.serviceModel>
```

Run the service

The service can be mounted to an application container (e.g. IIS) or can be self hosted with just a single line of code:

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```
new WebServiceHost(typeof(MyService)).Open();
```

That's it, browse to *http://localhost:18000/test/myparam*. Next part (coming soon) will describe how to use the service with android.

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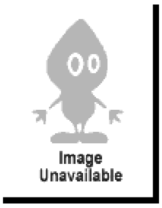
About the Author



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