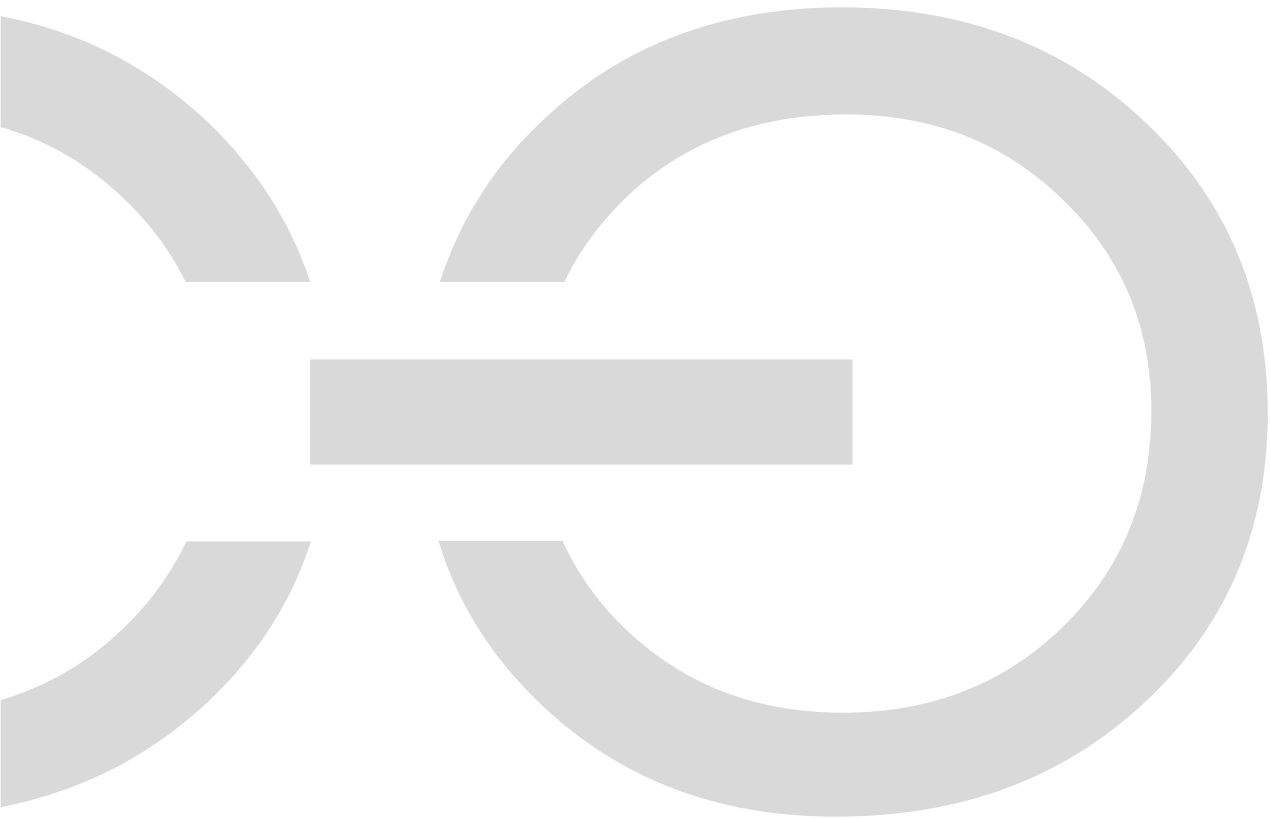


BPS - Connecting to Web API



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1. Introduction

Following document contains informations about server and client side configuration of a WEBCON BPS Webservice. Chapter 2 specifies server side configuration, chapter 3 covers requirements for client side application and provides information about webservice's files and metadata location. Chapter 4 presents most common errors and provides troubleshooting instructions.

2. Server configuration

2.1. AspNetCompatibility

SharePoint web application (which had webservice installed) config file (web.config) should contain entry:

```
<system.serviceModel>  
    <serviceHostingEnvironment aspNetCompatibilityEnabled="true" />  
</system.serviceModel>
```

2.2. BaseAddressPrefixFilters

If SharePoint web application contains numerous http bindings config file of that application (web.config) should have entry that defines used binding:

```
<system.serviceModel>  
    <serviceHostingEnvironment aspNetCompatibilityEnabled="true">  
        <baseAddressPrefixFilters>  
            <add prefix="http://address:80" />  
        </baseAddressPrefixFilters>  
    </serviceHostingEnvironment>  
</system.serviceModel>
```

3. Client configuration

3.1. Address

3.1.1. Version 8.2

WebService address:

WebsiteAddress/_vti_bin/Webservice_8_2.svc,

Where WebsiteAddress is SP site address that is connected to WebCon BPS.

Example:

http://localhost/_vti_bin/Webservice_8_2.svc

Service metadata are available here:

WebsiteAddress/_vti_bin/Webservice_8_2.svc/mex

3.1.2. Version 8.3

WebService address:

WebsiteAddress/_vti_bin/Webcon/Webservice_8_3.svc,

Where WebsiteAddress is SP site address that is connected to WebCon BPS.

Example:

http://localhost/_vti_bin/Webcon/Webservice_8_3.svc

Service metadata are available here:

WebsiteAddress/_vti_bin/Webcon/Webservice_8_3.svc/mex

3.1.1. Version 2017.1

WebService address:

WebsiteAddress/_vti_bin/Webcon/Webservice_2017_1.svc,

Where WebsiteAddress is SP site address that is connected to WebCon BPS.

Example:

http://localhost/_vti_bin/Webcon/Webservice_2017_1.svc

Service metadata are available here:

WebsiteAddress/_vti_bin/Webcon/Webservice_2017_1.svc/mex

3.2. Application code

Creating webservice's client instance requires presence of web reference inside project. The easiest way to achieve that is to right-click on project, then select "Add service reference" and insert webservice's address.

When we are creating webservice object at client side we should set impersonation, to perform proper authorization.

Example code:

```
BPSWebserviceClient client = new BPSWebserviceClient();
    client.ClientCredentials.Windows.ClientCredential =
System.Net.CredentialCache.DefaultNetworkCredentials;
    client.ClientCredentials.Windows.AllowedImpersonationLevel =
System.Security.Principal.TokenImpersonationLevel.Impersonation;
```

4. Troubleshooting

4.1. Error: This collection already contains as address with scheme http.

Server Error in '/' Application.

This collection already contains an address with scheme http. There can be at most one address per scheme in this collection.
Parameter name: item

Description: An unhandled exception occurred during the execution of the current web request. Please review the stack trace for more information about the error and where it originated in the code.
Exception Details: System.ArgumentException: This collection already contains an address with scheme http. There can be at most one address per scheme in this collection.
Parameter name: item

Source Error:

An unhandled exception was generated during the execution of the current web request. Information regarding the origin and location of the exception can be identified using the exception stack trace below.

Stack Trace:

```
[ArgumentException: This collection already contains an address with scheme http. There can be at most one address per scheme in this collection.
Parameter name: item]
System.ServiceModel.UriSchemeKeyedCollection.InsertItem(Int32 index, Uri item) +15764620
System.Collections.Generic.SynchronizedCollection`1.Add(T item) +65
System.ServiceModel.UriSchemeKeyedCollection..ctor(Uri[] addresses) +42
System.ServiceModel.ServiceHost..ctor(Type serviceType, Uri[] baseAddresses) +266
System.ServiceModel.Activation.ServiceHostFactory.CreateServiceHost(Type serviceType, Uri[] baseAddresses) +42
System.ServiceModel.Activation.ServiceHostFactory.CreateServiceHost(String constructorString, Uri[] baseAddresses) +427
System.ServiceModel.HostingManager.CreateService(String normalizedVirtualPath) +759
System.ServiceModel.HostingManager.ActivateService(String normalizedVirtualPath) +46
System.ServiceModel.HostingManager.EnsureServiceAvailable(String normalizedVirtualPath) +654

[ServiceActivationException: The service '/_layouts/WebCon/WorkFlow/WebService_7.5/WebService_7.5.svc' cannot be activated due to an exception during compilation. The exception message is: This collection already contains an address with scheme http. There can be at
Parameter name: item.]
System.ServiceModel.AsyncResult.End(IAsyncResult result) +15778592
System.ServiceModel.Activation.HostedHttpRequestAsyncResult.End(IAsyncResult result) +15698937
System.ServiceModel.Activation.HostedHttpRequestAsyncResult.ExecuteSynchronous(HttpContext, Boolean FlowContext) +265
System.Web.CallHandlerExecutionStep.System.Web.HttpApplication.IExecutionStep.Execute() +599
System.Web.HttpApplication.ExecuteStep(IExecutionStep step, Boolean& canContinueImmediately) +171
```

Version Information: Microsoft .NET Framework Version:2.0.50727.5440; ASP.NET Version:2.0.50727.5420

If this error occurs you need to configure [BaseAddressFilters](#).

4.2. Error: Operation not valid due to the current state of the object

Server Error in '/' Application.

Operation is not valid due to the current state of the object.

Description: An unhandled exception occurred during the execution of the current web request. Please review the stack trace for more information about the error and where it originated in the code.

Exception Details: System.InvalidOperationException: Operation is not valid due to the current state of the object.

Source Error:

An unhandled exception was generated during the execution of the current web request. Information regarding the origin and location of the exception can be identified using the exception stack trace below.

Stack Trace:

```
[InvalidOperationException: Operation is not valid due to the current state of the object.]
Microsoft.SharePoint.ApplicationRuntime.SPLayoutsMappedFile.MapLayoutsVirtualPath(String virtualPath) +20734607
Microsoft.SharePoint.ApplicationRuntime.SPVirtualPathProvider.GetCacheKey(String virtualPath) +77
Microsoft.SharePoint.Publishing.Internal.CmsVirtualPathProvider.GetCacheKey(String virtualPath) +31
System.Web.Compilation.BuildManager.GetCacheKeyFromVirtualPath(VirtualPath virtualPath, Boolean& keyFromPPP) +38
System.Web.Compilation.BuildManager.GetVPathBuildResultInternal(VirtualPath virtualPath, Boolean noBuild, Boolean allowCrossApp, Boolean allowBuildInPrecompile) +82
System.Web.Compilation.BuildManager.GetVPathBuildResultWithNoAssert(HttpContext context, VirtualPath virtualPath, Boolean noBuild, Boolean allowCrossApp, Boolean allowBuildInPrecompile) +116
System.Web.Compilation.BuildManager.GetCompiledCustomString(String virtualPath) +39
System.ServiceModel.HostingManager.GetCompiledCustomString(String normalizedVirtualPath) +202
System.ServiceModel.HostingManager.CreateService(String normalizedVirtualPath) +33
System.ServiceModel.HostingManager.ActivateService(String normalizedVirtualPath) +46
System.ServiceModel.HostingManager.EnsureServiceAvailable(String normalizedVirtualPath) +654

[ServiceActivationException: The service '/_layouts/WebCon/WorkFlow/WebService_7_5/WebService_7_5.svc' cannot be activated due to an exception during compilation. The exception message is: Operation is not valid due to the current sta
System.ServiceModel.AsyncResult.End(IAsyncResult result) +15778992
System.ServiceModel.Activation.HostedHttpRequestAsyncResult.End(IAsyncResult result) +15698937
System.ServiceModel.Activation.HostedHttpRequestAsyncResult.ExecuteSynchronous(HttpContext context, Boolean flowContext) +265
System.ServiceModel.Activation.HttpModule.ProcessRequest(Object sender, EventArgs e) +227
System.Web.SyncEventExecutionStep.System.Web.HttpApplication.IExecutionStep.Execute() +80
System.Web.HttpApplication.ExecuteStep(IExecutionStep step, Boolean& completedSynchronously) +171
```

Version Information: Microsoft .NET Framework Version:2.0.50727.5456; ASP.NET Version:2.0.50727.5456

If this error occurs you need to configure [AspNetCompatibility](#).

4.3. Error: InvalidOperationException

Message: An endpoint configuration section for contract 'xxx.BPSWebservice' could not be loaded because more than one endpoint configuration for that contract was found. Please indicate the preferred endpoint configuration section by name.

If this error occurred you need to open app.config file and delete all unused <endpoint> tags alongside with their content or use different object constructor.

Example:

```
BPSWebserviceClient client = new BPSWebserviceClient("MyEndPointName");
```

Where MyEndPointName is value of **NAME** property from <endpoint> tag that we want to use.

Example structure of app.config file:

```
<?xml version="1.0" encoding="utf-8" ?>
<configuration>
  <system.serviceModel>
    <bindings>
      <basicHttpBinding>
        <binding name="Webservice_7_7_BPSWebservice">
          <security mode="TransportCredentialOnly">
            <transport clientCredentialType="Ntlm" />
          </security>
        </binding>
      </basicHttpBinding>
    </bindings>
    <client>
      <endpoint address="http://localhost/_vti_bin/Webservice_7_7.svc"
        binding="basicHttpBinding" bindingConfiguration="Webservice_7_7_BPSWebservice"
        contract="ServiceReference1.BPSWebservice" name="Webservice_7_7_BPSWebservice" />
    </client>
  </system.serviceModel>
</configuration>
```


4.4. Error: FaultException

Message: Incorrect 'Workflow Config WebCon' feature configuration for the web http://sitename (Niepoprawna konfiguracja funkcji WebCon WorkFlow Config na witrynie http://sitename)

If this error occurs you should open app.config file and check if your currently used <endpoint> tag have proper value in property **ADDRESS** and does target site have valid connection with BPS database (WebCon BPS Config - myWebsiteAddress/_layouts/WebCon/WFWebConfig.aspx).

Example structure of app.config file:

```
<?xml version="1.0" encoding="utf-8" ?>
<configuration>
  <system.serviceModel>
    <bindings>
      <basicHttpBinding>
        <binding name="Webservice_7_7_BPSWebservice">
          <security mode="TransportCredentialOnly">
            <transport clientCredentialType="Ntlm" />
          </security>
        </binding>
      </basicHttpBinding>
    </bindings>
    <client>
      <endpoint address="myWebsiteAddress/ vti bin/Webservice 7 7.svc"
        binding="basicHttpBinding" bindingConfiguration="Webservice_7_7_BPSWebservice"
        contract="ServiceReference1.BPSWebservice" name="Webservice_7_7_BPSWebservice" />
    </client>
  </system.serviceModel>
</configuration>
```

4.5. Webservice (ver. 7.7) not found

If your IDE can't find webservice at given address use metadata [address](#) instead.