

[www.bytescout.com](http://www.bytescout.com)

## **How to create custom template for document parser API in VB.NET with ByteScout Cloud API Server**

ByteScout Cloud API Server: API server that is ready to use and can be installed and deployed in less than 30 minutes on your own Windows server or server in a cloud. It can save data and files on your local server-based file storage or in Amazon AWS S3 storage. Data is processed solely on the API server and is powered by ByteScout engine, no cloud services or Internet connection is required for data processing..

**FOR MORE INFORMATION AND FREE TRIAL:**

[Download Free Trial SDK \(on-premise version\)](#)

[Read more about \*\*ByteScout Cloud API Server\*\*](#)

[Explore API Documentation](#)

[Get Free Training for ByteScout Cloud API Server](#)

[Get Free API key for Web API](#)

[visit www.Bytescout.com](http://www.Bytescout.com)

## **Source Code Files:**

**ByteScoutWebApiExample.sln**

```

Microsoft Visual Studio Solution File, Format Version 12.00
# Visual Studio 15
VisualStudioVersion = 15.0.26730.10
MinimumVisualStudioVersion = 10.0.40219.1
Project("{F184B08F-C81C-45F6-A57F-5ABD9991F28F}") = "ByteScoutWebApiExample", "ByteScoutWebApiExample.vbproj"
EndProject
Global
    GlobalSection(SolutionConfigurationPlatforms) = preSolution
        Debug|Any CPU = Debug|Any CPU
        Release|Any CPU = Release|Any CPU
    EndGlobalSection
    GlobalSection(ProjectConfigurationPlatforms) = postSolution
        {9B91124C-66C3-4BD9-B29E-168C1ABB15AC}.Debug|Any CPU.ActiveCfg = Debug|Any CPU
        {9B91124C-66C3-4BD9-B29E-168C1ABB15AC}.Debug|Any CPU.Build.0 = Debug|Any CPU
        {9B91124C-66C3-4BD9-B29E-168C1ABB15AC}.Release|Any CPU.ActiveCfg = Release|Any CPU
        {9B91124C-66C3-4BD9-B29E-168C1ABB15AC}.Release|Any CPU.Build.0 = Release|Any CPU
    EndGlobalSection
    GlobalSection(SolutionProperties) = preSolution
        HideSolutionNode = FALSE
    EndGlobalSection
    GlobalSection(ExtensibilityGlobals) = postSolution
        SolutionGuid = {4576C9BB-A42D-46A8-9198-7E2982E122FA}
    EndGlobalSection
EndGlobal

```

## ByteScoutWebApiExample.vbproj

```

<?xml version="1.0" encoding="utf-8"?>
<Project ToolsVersion="15.0" xmlns="http://schemas.microsoft.com/developer/msbuild/2003">
  <Import Project="$(MSBuildExtensionsPath)\$(MSBuildToolsVersion)\Microsoft.Common.props" Condition="Exists('$(MSBuildExtensionsPath)\$(MSBuildToolsVersion)\Microsoft.Common.props')>
  <PropertyGroup>
    <Configuration Condition="'$(Configuration)' == ''">Debug</Configuration>
    <Platform Condition="'$(Platform)' == ''">AnyCPU</Platform>
    <ProjectGuid>{9B91124C-66C3-4BD9-B29E-168C1ABB15AC}</ProjectGuid>
    <OutputType>Exe</OutputType>
    <StartupObject>ByteScoutWebApiExample.Module1</StartupObject>
    <RootNamespace>ByteScoutWebApiExample</RootNamespace>
    <AssemblyName>ByteScoutWebApiExample</AssemblyName>
    <FileAlignment>512</FileAlignment>
    <MyType>Console</MyType>
    <TargetFrameworkVersion>v4.0</TargetFrameworkVersion>
  </PropertyGroup>
  <PropertyGroup Condition="'$(Configuration)|$(Platform)' == 'Debug|AnyCPU' ">
    <PlatformTarget>AnyCPU</PlatformTarget>
    <DebugSymbols>>true</DebugSymbols>
    <DebugType>full</DebugType>
  </PropertyGroup>

```

```

<DefineDebug>>true</DefineDebug>
<DefineTrace>>true</DefineTrace>
<OutputPath>bin\Debug\</OutputPath>
<DocumentationFile>ByteScoutWebApiExample.xml</DocumentationFile>
<NoWarn>42016,41999,42017,42018,42019,42032,42036,42020,42021,42022</NoWarn>
</PropertyGroup>
<PropertyGroup Condition=" '$(Configuration)|$(Platform)' == 'Release|AnyCPU' ">
  <PlatformTarget>AnyCPU</PlatformTarget>
  <DebugType>pdbonly</DebugType>
  <DefineDebug>>false</DefineDebug>
  <DefineTrace>>true</DefineTrace>
  <Optimize>>true</Optimize>
  <OutputPath>bin\Release\</OutputPath>
  <DocumentationFile>ByteScoutWebApiExample.xml</DocumentationFile>
  <NoWarn>42016,41999,42017,42018,42019,42032,42036,42020,42021,42022</NoWarn>
</PropertyGroup>
<PropertyGroup>
  <OptionExplicit>0n</OptionExplicit>
</PropertyGroup>
<PropertyGroup>
  <OptionCompare>Binary</OptionCompare>
</PropertyGroup>
<PropertyGroup>
  <OptionStrict>0ff</OptionStrict>
</PropertyGroup>
<PropertyGroup>
  <OptionInfer>0n</OptionInfer>
</PropertyGroup>
<ItemGroup>
  <Reference Include="Newtonsoft.Json, Version=10.0.0.0, Culture=neutral, PublicKeyT
    <HintPath>packages\Newtonsoft.Json.10.0.3\lib\net40\Newtonsoft.Json.dll</HintPat
  </Reference>
  <Reference Include="System" />
  <Reference Include="System.Data" />
  <Reference Include="System.Deployment" />
  <Reference Include="System.Xml" />
  <Reference Include="System.Core" />
  <Reference Include="System.Xml.Linq" />
  <Reference Include="System.Data.DataSetExtensions" />
</ItemGroup>
<ItemGroup>
  <Import Include="Microsoft.VisualBasic" />
  <Import Include="System" />
  <Import Include="System.Collections" />
  <Import Include="System.Collections.Generic" />
  <Import Include="System.Data" />
  <Import Include="System.Diagnostics" />
  <Import Include="System.Linq" />
  <Import Include="System.Xml.Linq" />
</ItemGroup>
<ItemGroup>
  <Compile Include="Module1.vb" />
</ItemGroup>
<ItemGroup>
  <None Include="packages.config" />
  <None Include="SampleInvoice.pdf">
    <CopyToOutputDirectory>Always</CopyToOutputDirectory>
  </None>
  <None Include="SampleTemplate.yml">
    <CopyToOutputDirectory>Always</CopyToOutputDirectory>
  </None>
</ItemGroup>

```

```
</None>
</ItemGroup>
<Import Project="$(MSBuildToolsPath)\Microsoft.VisualBasic.targets" />
</Project>
```

## Module1.vb

```
Imports System.Collections.Specialized
Imports System.IO
Imports System.Net
Imports System.Text
Imports System.Threading
Imports Newtonsoft.Json.Linq

' Please NOTE: In this sample we're assuming Cloud Api Server is hosted at "https://lo
' If it's not then please replace this with with your hosting url.
Module Module1

    ' The authentication key (API Key).
    ' Get your own by registering at https://app.pdf.co/documentation/api
    Const API_KEY As String = "*****"

    ' Source PDF file
    Const SourceFile As String = ".\SampleInvoice.pdf"

    ' PDF document password. Leave empty for unprotected documents.
    Const Password As String = ""

    ' Destination TXT file name
    Const DestinationFile As String = ".\result.json"

    ' (!) Make asynchronous job
    Const Async As Boolean = True

    Sub Main()

        ' Template text. Use Document Parser SDK (https://bytescout.com/products/develop
        ' to create templates.
        ' Read template from file
        Dim templateText As String = File.ReadAllText("SampleTemplate.yml")

        ' Create standard .NET web client instance
        Dim webClient As WebClient = New WebClient()

        ' Set API Key
        webClient.Headers.Add("x-api-key", API_KEY)

        ' 1. RETRIEVE THE PRESIGNED URL TO UPLOAD THE FILE.
        ' * If you already have a direct file URL, skip to the step 3.
```

```

' Prepare URL for `Get Presigned URL` API call
Dim query As String = Uri.EscapeUriString(String.Format(
    "https://localhost/file/upload/get-presigned-url?contenttype=application/octet-stream&path={0}",
    Path.GetFileName(SourceFile)))

Try
    ' Execute request
    Dim response As String = webClient.DownloadString(query)

    ' Parse JSON response
    Dim json As JObject = JObject.Parse(response)

    If json("error").ToObject(Of Boolean) = False Then
        ' Get URL to use for the file upload
        Dim uploadUrl As String = json("presignedUrl").ToString()
        ' Get URL of uploaded file to use with later API calls
        Dim uploadedFileUrl As String = json("url").ToString()

        ' 2. UPLOAD THE FILE TO CLOUD.
        webClient.Headers.Add("content-type", "application/octet-stream")
        webClient.UploadFile(uploadUrl, "PUT", SourceFile) ' You can use UploadFile()

        ' 3. PARSE UPLOADED PDF DOCUMENT

        ' URL for `Document Parser` API call
        query = Uri.EscapeUriString(
            String.Format("https://localhost/pdf/documentparser?url={0}&async={1}",
                uploadedFileUrl, True)
        )

        Dim requestBody As New NameValueCollection()
        requestBody.Add("template", templateText)

        ' Execute request
        Dim responseBytes As Byte() = webClient.UploadValues(query, "POST", requestBody)
        response = Encoding.UTF8.GetString(responseBytes)

        ' Parse JSON response
        json = JObject.Parse(response)

        If json("error").ToObject(Of Boolean) = False Then
            ' Asynchronous job ID
            Dim jobId As String = json("jobId").ToString()
            ' URL of generated PDF file that will be available after the job completes
            Dim resultFileUrl As String = json("url").ToString()

            ' Check the job status in a loop.
            ' If you don't want to pause the main thread you can rework the code
            ' to use a separate thread for the status checking and completion.
            Do
                Dim status As String = CheckJobStatus(jobId) ' Possible status values: "pending", "success", "error"

                ' Display timestamp and status (for demo purposes)
                Console.WriteLine(DateTime.Now.ToLongTimeString() + ": " + status)

                If status = "success" Then
                    ' Download PDF file
                    webClient.DownloadFile(resultFileUrl, DestinationFile)
                End If
            Loop While status <> "success"
        End If
    End If
Catch
    Console.WriteLine("Error: {0}", response)
End Try

```

```

        Console.WriteLine("Generated JSON file saved as ""{0}"" fi
        Exit Do

    ElseIf status = "working" Then

        ' Pause for a few seconds
        Thread.Sleep(3000)

    Else

        Console.WriteLine(status)
        Exit Do

    End If

Loop

Else
    Console.WriteLine(json("message").ToString())
End If

End If

Catch ex As WebException
    Console.WriteLine(ex.ToString())
End Try

webClient.Dispose()

Console.WriteLine()
Console.WriteLine("Press any key...")
Console.ReadKey()

End Sub

Function CheckJobStatus(jobId As String) As String

    Using webClient As WebClient = New WebClient()

        ' Set API Key
        webClient.Headers.Add("x-api-key", API_KEY)

        Dim url As String = "https://localhost/job/check?jobid=" + jobId

        Dim response As String = webClient.DownloadString(url)
        Dim json As JObject = JObject.Parse(response)

        Return Convert.ToString(json("status"))

    End Using

End Function

End Module

```

## SampleTemplate.yml

```
templateName: My Custom Template
templateVersion: 4
templatePriority: 0
detectionRules:
  keywords:
    - Your Company Name
    - Invoice No\
    - TOTAL
objects:
- name: total
  objectType: field
  fieldProperties:
    fieldType: macros
    expression: TOTAL{{Spaces}}{{Number}}
    dataType: decimal
    pageIndex: 0
- name: dateIssued
  objectType: field
  fieldProperties:
    fieldType: macros
    expression: Invoice Date {{SmartDate}}
    dataType: date
    dateFormat: auto-mdy
    pageIndex: 0
- name: invoiceId
  objectType: field
  fieldProperties:
    fieldType: macros
    expression: Invoice No. {{Digits}}
    pageIndex: 0
- name: companyName
  objectType: field
  fieldProperties:
    fieldType: static
    expression: Vendor Company
    pageIndex: 0
- name: billTo
  objectType: field
  fieldProperties:
    fieldType: rectangle
    rectangle:
      - 32.25
      - 150
      - 348
      - 70.5
    pageIndex: 0
- name: notes
  objectType: field
  fieldProperties:
    fieldType: rectangle
    rectangle:
      - 32.25
      - 227.25
```

```
- 531
- 47.25
  pageIndex: 0
- name: table1
  objectType: table
  tableProperties:
    start:
      expression: Item\s+Quantity\s+Price\s+Total
      regex: true
    end:
      expression: TOTAL
      regex: true
    row:
      expression: ^\s*(?<description>\w+.*)(?<quantity>\d+)\s+(?<unitPrice>\d+\.\d{2})
      regex: true
```

## packages.config

```
<?xml version="1.0" encoding="utf-8"?>
<packages>
  <package id="Newtonsoft.Json" version="10.0.3" targetFramework="net40" />
</packages>
```

---

## VIDEO

<https://www.youtube.com/watch?v=NEwNs2b9YN8>

## ON-PREMISE OFFLINE SDK

[60 Day Free Trial](#) or [Visit ByteScout Cloud API Server Home Page](#)



[Explore ByteScout Cloud API Server Documentation](#)  
[Explore Samples](#)  
[Sign Up for ByteScout Cloud API Server Online Training](#)

**ON-DEMAND REST WEB API**

[Get Your API Key](#)  
[Explore Web API Docs](#)  
[Explore Web API Samples](#)

[visit www.ByteScout.com](http://www.ByteScout.com)

[visit www.PDF.co](http://www.PDF.co)

[www.bytescout.com](http://www.bytescout.com)