

Curso de Desarrollo

Dynamics 365 Business Central

ClipDynamics

Web Services

Dynamics NAV puede publicar WebServices utilizando distintos protocolos:

- SOAP (Simple Object Access Protocol)
- OData (Open Data Protocol)

Web Services

Dynamics NAV puede publicar como WebServices los siguientes objetos

- Codeunits
- Pages
- Queries

Web Services

Para poder utilizar Web Services, deben estar habilitados

BC140 - (Running)

The screenshot shows the configuration interface for BC140, which is currently running. The interface has a sidebar with navigation links: General, Database, Client Services, and SOAP Services. Under the SOAP Services section, there are several configuration options:

- Enable SOAP Services:** This option is checked (indicated by a red box).
- Port:** The value is set to 7047.
- SOAP Base URL:** This field is empty.
- Enable SSL:** This option is unchecked.
- Max Message Size:** The value is set to 1024.

Below this section, there is an **OData Services** group with the following settings:

- API Maximum Number of Notifications:** The value is 100.
- API Maximum Number of Subscriptions:** The value is 200.
- API Subscription Delay Time:** The value is 30000.
- Enable OData Services:** This option is checked (indicated by a red box).
- Enable SSL:** This option is unchecked.
- Enable V3 Endpoint:** This option is checked.
- Enable V4 Endpoint:** This option is checked.

Web Services

Servicios Web - Microsoft Dynamics NAV client - connected to Dynamics 365 Business Central

CRONUS España S.A. ▶ Departamentos ▶ Administración ▶ Administración de IT ▶ Servicios ▶ Servicios Web

web serv

INICIO ACCIONES CRONUS España S.A. ?

Nuevo Editar lista Eliminar Volver a cargar Notas Vínculos Actualizar Borrar filtro Buscar Proceso adjuntos Pág.

Departamentos Cartera Ventas y Marketing Compra Almacén Fabricación

Inicio Ventas Compra

Servicios Web

Escribir para filtrar (...) | Tipo objeto

No hay ningún filtro aplicado

Id. objeto	Nombre objeto	Nombre del servicio	Todos los s...	Publ...	URL de OData V4
1544	Workflow Webhook Subscription	WorkflowActionResponse	<input type="checkbox"/>	<input checked="" type="checkbox"/>	No aplicable
1314	Pilas de actividades del portal para contables	AccountantPortalActivityCues	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	http://Murcia2019:7048/BC140/ODataV4/Co...
1315	Pila Finanzas del portal para contadores	AccountantPortalFinanceCues	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	http://Murcia2019:7048/BC140/ODataV4/Co...
1316	Tareas de usuario del portal para contadores	AccountantPortalUserTasks	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	http://Murcia2019:7048/BC140/ODataV4/Co...
16	Plan de cuentas	Chart of Accounts	<input type="checkbox"/>	<input checked="" type="checkbox"/>	http://Murcia2019:7048/BC140/ODataV4/Co...
5500	aoedAccountsPavable	ExcelTemplateAqedAccountsPavable	<input type="checkbox"/>	<input checked="" type="checkbox"/>	http://Murcia2019:7048/BC140/ODataV4/Co...

Web Services

Field	Remarks
Object Type	Specifies the type of the object to expose as a web service. You can select from Codeunit, Page, and Query options.
Object ID	Specifies the ID of the object to expose. You can enter the ID manually, or select it from the drop-down list.
Service Name	Specifies the name of the web service that is created for the specified object. The service name is visible to consumers of the web service and is used for identifying and distinguishing web services.
Published	Specifies whether the web service is available to serve the requests. The service is available immediately when you select this check box.

Web Services SOAP

Los Web Services SOAP son creados por los siguientes tipos de objetos:

- Páginas
- Codeunits

Web Services SOAP

Para acceder a todos los Servicios SOAP
publicados en una instancia:

`http://<Server>:<Port>/<ServerInstance>/WS/<CompanyName>/services`

*<CompanyName> es opcional

Web Services SOAP



This XML file does not appear to have any style information associated with it. The document tree is shown below.

```
<?xml version="1.0"?>
<discovery xmlns="http://schemas.xmlsoap.org/disco/" xmlns:xsd="http://www.w3.org/2001/XMLSchema" xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance">
  <contractRef xmlns="http://schemas.xmlsoap.org/disco/scl/" ref="http://localhost:7047/BC140/WS/SystemService"/>
  <contractRef xmlns="http://schemas.xmlsoap.org/disco/scl/" ref="http://localhost:7047/BC140/WS/Page/AccountantPortalActivityCues"/>
  <contractRef xmlns="http://schemas.xmlsoap.org/disco/scl/" ref="http://localhost:7047/BC140/WS/Page/AccountantPortalFinanceCues"/>
  <contractRef xmlns="http://schemas.xmlsoap.org/disco/scl/" ref="http://localhost:7047/BC140/WS/Page/AccountantPortalUserTasks"/>
  <contractRef xmlns="http://schemas.xmlsoap.org/disco/scl/" ref="http://localhost:7047/BC140/WS/Page/powerbifinance"/>
  <contractRef xmlns="http://schemas.xmlsoap.org/disco/scl/" ref="http://localhost:7047/BC140/WS/Page/SalesOrder"/>
  <contractRef xmlns="http://schemas.xmlsoap.org/disco/scl/" ref="http://localhost:7047/BC140/WS/Page/UserTaskSetComplete"/>
  <contractRef xmlns="http://schemas.xmlsoap.org/disco/scl/" ref="http://localhost:7047/BC140/WS/Page/WorkflowActionResponse"/>
  <contractRef xmlns="http://schemas.xmlsoap.org/disco/scl/" ref="http://localhost:7047/BC140/WS/Page/Chart_of_Accounts"/>
  <contractRef xmlns="http://schemas.xmlsoap.org/disco/scl/" ref="http://localhost:7047/BC140/WS/Page/ExcelTemplateAgedAccountsPayable"/>
  <contractRef xmlns="http://schemas.xmlsoap.org/disco/scl/" ref="http://localhost:7047/BC140/WS/Page/ExcelTemplateAgedAccountsReceivable"/>
  <contractRef xmlns="http://schemas.xmlsoap.org/disco/scl/" ref="http://localhost:7047/BC140/WS/Page/ExcelTemplateBalanceSheet"/>
  <contractRef xmlns="http://schemas.xmlsoap.org/disco/scl/" ref="http://localhost:7047/BC140/WS/Page/ExcelTemplateCashFlowStatement"/>
  <contractRef xmlns="http://schemas.xmlsoap.org/disco/scl/" ref="http://localhost:7047/BC140/WS/Page/ExcelTemplateIncomeStatement"/>
```

Web Services SOAP

Para acceder a la definición de un Servicio SOAP concreto:

`http://<Server>:<Port>/<ServerInstance>/WS/<ObjectType>/<ServiceName>`

Web Services SOAP

localhost:7047/BC140/WS/SystemService

This XML file does not appear to have any style information associated with it. The document tree is shown below.

```
<?xml version="1.0"?>
<definitions xmlns="http://schemas.xmlsoap.org/wsdl/" xmlns:tns="urn:microsoft-dynamics-schemas/nav/system/" targetNamespace="urn:microsoft-dynamics-schemas/nav/system/">
  <types>
    <schema xmlns="http://www.w3.org/2001/XMLSchema" elementFormDefault="qualified" targetNamespace="urn:microsoft-dynamics-schemas/nav/system/">
      <element name="Companies">
        <complexType>
          <sequence/>
        </complexType>
      </element>
      <element name="Companies_Result">
        <complexType>
          <sequence>
            <element minOccurs="1" maxOccurs="unbounded" name="return_value" type="string"/>
          </sequence>
        </complexType>
      </element>
    </schema>
  </types>
  <message name="Companies">
    <part name="parameters" element="tns:Companies"/>
  </message>
  <message name="Companies_Result">
    <part name="parameters" element="tns:Companies_Result"/>
  </message>
  <portType name="SystemService_Port">
    <operation name="Companies">
      <input name="Companies" message="tns:Companies"/>
      <output name="Companies_Result" message="tns:Companies_Result"/>
    </operation>
  </portType>
  <binding name="SystemService_Binding" type="tns:SystemService_Port">
    <binding xmlns="http://schemas.xmlsoap.org/wsdl/" transport="http://schemas.xmlsoap.org/soap/http"/>
```

Web Services SOAP

```
<Soap:Envelope xmlns:Soap="http://schemas.xmlsoap.org/soap/envelope/">
  <Soap:Body>
    <Companies_Result xmlns="urn:microsoft-dynamics-schemas/nav/system/">
      <return_value>CRONUS España S.A.</return_value>
      <return_value>Otra empresa</return_value>
    </Companies_Result>
  </Soap:Body>
</Soap:Envelope>
```

Web Services SOAP - Codeunits

Las funciones globales y externas de la codeunit son los métodos que se exponen en el Web Service

Web Services SOAP - Codeunits

Crea una codeunit 60000 WebService con una función

```
[-] [External] UnMetodoSinParametrosNiValorDeRetorno()
```

Web Services SOAP - Codeunits

Publica la codeunit como Web Service

Servicios Web		Escribir para filtrar (...) Tipo o No h						
Tipo objeto	Id. objeto	Nombre objeto	Nombre del servicio	Todos los s...	Publ...	URL de OData V4	URL de OData	URL de SOAP
Codeunit	60000	WebService	TestCodeunit	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	No aplicable	No aplicable	http://Murcia2019:7047/BC140/WS/CRONUS..

Web Services SOAP - Codeunits

← → ⌂ ⓘ localhost:7047/BC140/WS/Codeunit/TestCodeunit

This XML file does not appear to have any style information associated with it. The document tree is shown below.

```
<definitions xmlns="http://schemas.xmlsoap.org/wsdl/" xmlns:tns="urn:microsoft-dynamics-schemas/codeunit/TestCodeunit" targetNamespace="urn:microsoft-dynamics-schemas/codeunit/TestCodeunit">
  <types>
    <schema xmlns="http://www.w3.org/2001/XMLSchema" elementFormDefault="qualified" targetNamespace="urn:microsoft-dynamics-schemas/codeunit/TestCodeunit">
      <element name="Un Metodo Sin Parametros Ni Valor De Retorno">
        <complexType>
          <sequence/>
        </complexType>
      </element>
      <element name="Un Metodo Sin Parametros Ni Valor De Retorno_Result">
        <complexType>
          <sequence/>
        </complexType>
      </element>
    </schema>
  </types>
  <message name="Un Metodo Sin Parametros Ni Valor De Retorno">
    <part name="parameters" element="tns:Un Metodo Sin Parametros Ni Valor De Retorno"/>
  </message>
  <message name="Un Metodo Sin Parametros Ni Valor De Retorno_Result">
    <part name="parameters" element="tns:Un Metodo Sin Parametros Ni Valor De Retorno_Result"/>
  </message>
  <portType name="TestCodeunit_Port">
    <operation name="Un Metodo Sin Parametros Ni Valor De Retorno">
      <input name="Un Metodo Sin Parametros Ni Valor De Retorno" message="tns:Un Metodo Sin Parametros Ni Valor De Retorno"/>
      <output name="Un Metodo Sin Parametros Ni Valor De Retorno_Result" message="tns:Un Metodo Sin Parametros Ni Valor De Retorno_Result"/>
    </operation>
  </portType>
  <binding name="TestCodeunit_Binding" type="tns:TestCodeunit_Port">
    <binding xmlns="http://schemas.xmlsoap.org/wsdl/" transport="http://schemas.xmlsoap.org/soap/http"/>
      <operation name="Un Metodo Sin Parametros Ni Valor De Retorno">
        <operation xmlns="http://schemas.xmlsoap.org/wsdl/soap/" soapAction="urn:microsoft-dynamics-schemas/codeunit/TestCodeunit:UnMetodoSinParametrosNiValorDeRetorno"/>
      </operation>
    </binding>
  </binding>
</definitions>
```

Web Services SOAP - Codeunits

```
<soapenv:Envelope xmlns:soapenv="http://schemas.xmlsoap.org/soap/envelope/">
<soapenv:Body>
    <Un Metodo Sin Parametros Ni Valor De Retorno xmlns="urn:microsoft-dynamics-schemas/codeunit/TestCodeunit">
        </Un Metodo Sin Parametros Ni Valor De Retorno>
    </soapenv:Body>
</soapenv:Envelope>
```

```
<Soap:Envelope xmlns:Soap="http://schemas.xmlsoap.org/soap/envelope/">
    <Soap:Body>
        <Un Metodo Sin Parametros Ni Valor De Retorno_Result xmlns="urn:microsoft-dynamics-schemas/codeunit/TestCodeunit"/>
    </Soap:Body>
</Soap:Envelope>
```

Web Services SOAP - Codeunits

Crea la siguiente función

```
□ [External] UnMetodoConParametroDeTexto(TextoRecibido : Text) : Text  
[ EXIT(TextoRecibido);  
]
```

Web Services SOAP - Codeunits

```
<soapenv:Envelope xmlns:soapenv="http://schemas.xmlsoap.org/soap/envelope/">
  <soapenv:Body>
    <Un MetodoConParametroDeTexto xmlns="urn:microsoft-dynamics-schemas/codeunit/TestCodeunit">
      <textoRecibido>Hola WebService!</textoRecibido>
    </Un MetodoConParametroDeTexto>
  </soapenv:Body>
</soapenv:Envelope>
```

```
<Soap:Envelope xmlns:Soap="http://schemas.xmlsoap.org/soap/envelope/">
  <Soap:Body>
    <Un MetodoConParametroDeTexto_Result xmlns="urn:microsoft-dynamics-schemas/codeunit/TestCodeunit">
      <return_value>Hola WebService!</return_value>
    </Un MetodoConParametroDeTexto_Result>
  </Soap:Body>
</Soap:Envelope>
```

Web Services SOAP - Codeunits

Crea la siguiente función

```
[External] CrearCliente() : Text
Customer.INIT();
Customer.Name := 'Cliente creado desde WS';
Customer.INSERT(TRUE);
EXIT(Customer."No.");
```

Web Services SOAP - Codeunits

```
<soapenv:Envelope xmlns:soapenv="http://schemas.xmlsoap.org/soap/envelope/">
  <soapenv:Body>
    <CrearCliente xmlns="urn:microsoft-dynamics-schemas/codeunit/TestCodeunit">
      </CrearCliente>
    </soapenv:Body>
  </soapenv:Envelope>
```

```
<Soap:Envelope xmlns:Soap="http://schemas.xmlsoap.org/soap/envelope/">
  <Soap:Body>
    <CrearCliente_Result xmlns="urn:microsoft-dynamics-schemas/codeunit/TestCodeunit">
      <return_value>C00090</return_value>
    </CrearCliente_Result>
  </Soap:Body>
</Soap:Envelope>
```

Web Services SOAP - Codeunits

Haz que la función CrearCliente reciba los siguientes parámetros y los utilice en la creación del cliente:

- Nombre
- Dirección
- Teléfono
- Límite de Crédito

Web Services SOAP - Codeunits

Haz una llamada a CrearCliente utilizando letras
en el Teléfono

Web Services SOAP - Codeunits

Modifica la función
Un Metodo Con Parametro De Texto para pedir
confirmación al usuario

```
[External] UnMetodoConParametroDeTexto(TextoRecibido : Text) : Text
IF NOT CONFIRM('¿Estás seguro que quieres utilizar el texto "%1"?',TRUE,TextoRecibido) THEN
    ERROR('Proceso cancelado por el usuario');

EXIT(TextoRecibido);
```

Web Services SOAP - Codeunits

Utiliza la función GUIALLOWED para no interactuar con el usuario cuando no hay GUI

```
[External] UnMetodoConParametroDeTexto(TextoRecibido : Text) : Text
IF GUIALLOWED THEN
  IF NOT CONFIRM('¿Estás seguro que quieres utilizar el texto "%1"?',TRUE,TextoRecibido) THEN
    ERROR('Proceso cancelado por el usuario');

  EXIT(TextoRecibido);
```

Web Services SOAP - Codeunits

Crea una función ImportVehicle que utilice el XMLPort Import Vehicle como parámetro

```
□ [External] ImportVehicle(XMLToImport : XMLport "Import Vehicle")
XMLToImport.IMPORT();
```

Web Services SOAP - Codeunits

Cambia las siguientes propiedades globales en el XMLPort

- UseDefaultNamespace: Yes
- DefaultNamespace: urn:microsoft-dynamics-nav/xmlports/ImportVehicle

Web Services SOAP - Codeunits

```
<soapenv:Envelope xmlns:soapenv="http://schemas.xmlsoap.org/soap/envelope/">
  <soapenv:Body>
    <ImportVehicle xmlns="urn:microsoft-dynamics-schemas/codeunit/TestCodeunit">
      <xMLToImport>
        <Vehicle xmlns="urn:microsoft-dynamics-nav/xmlports/ImportVehicle">
          <Model>SEAT</Model>
          <SerialNo>1111</SerialNo>
          <ListPrice>11111.00</ListPrice>
        </Vehicle>
      </xMLToImport>
    </ImportVehicle>
  </soapenv:Body>
</soapenv:Envelope>
```

Web Services SOAP - Páginas

Tienen los siguientes métodos:

Create

Read

CreateMultiple

ReadByRecId

Delete

ReadMultiple

Delete_part

Update

GetRecIdFromKey

UpdateMultiple

IsUpdated

<https://docs.microsoft.com/en-us/dynamics-nav/basic-page-operations>

Web Services SOAP - Páginas

```
<Soap:Envelope xmlns:Soap="http://schemas.xmlsoap.org/soap/envelope/">
  <Soap:Body>
    <ReadMultiple_Result xmlns="urn:microsoft-dynamics-schemas/page/chart_of_accounts">
      <ReadMultiple_Result>
        <Chart_of_Accounts>
          <Key>12;DwAAAAJ7ATE=6;3306900;</Key>
          <No>1</No>
          <Name>FINANCIACIÓN BÁSICA</Name>
          <Net_Change>-4524457.22</Net_Change>
          <Balance>-4524457.22</Balance>
          <Income_Balance>Balance_Sheet</Income_Balance>
          <Account_Category>_blank_</Account_Category>
          <Account_Type>Heading</Account_Type>
          <Direct_Posting>true</Direct_Posting>
          <Totaling>1..19999999999999999</Totaling>
          <Gen_Posting_Type>_blank_</Gen_Posting_Type>
          <Debit_Amount>82115.57</Debit_Amount>
          <Credit_Amount>4606572.79</Credit_Amount>
          <Balance_at_Date>-4524457.22</Balance_at_Date>
          <Additional_Currency_Net_Change>0</Additional_Currency_Net_Change>
          <Add_Currency_Balance_at_Date>0</Add_Currency_Balance_at_Date>
          <Additional_Currency_Balance>0</Additional_Currency_Balance>
          <Consol_Translation_Method>Average_Rate_Manual</Consol_Translation_Method>
        </Chart_of_Accounts>
        <Chart_of_Accounts>
          <Key>16;DwAAAAJ7AjEAMA==6;3346760;</Key>
          <No>10</No>
          <Name>Capital</Name>
          <Net_Change>-1141655.49</Net_Change>
          <Balance>-1141655.49</Balance>
        </Chart_of_Accounts>
      </ReadMultiple_Result>
    </ReadMultiple_Result>
  </Soap:Body>
</Soap:Envelope>
```

Web Services SOAP - Páginas

```
<soapenv:Envelope xmlns:soapenv="http://schemas.xmlsoap.org/soap/envelope/">
  <soapenv:Body>
    <Read xmlns="urn:microsoft-dynamics-schemas/page/chart_of_accounts">
      <No>1000001</No>
    </Read>
  </soapenv:Body>
</soapenv:Envelope>
```

```
<Soap:Envelope xmlns:Soap="http://schemas.xmlsoap.org/soap/envelope/">
  <Soap:Body>
    <Read_Result xmlns="urn:microsoft-dynamics-schemas/page/chart_of_accounts">
      <Chart_of_Accounts>
        <Key>28;DwAAAAJ7BzEAMAAwADAAMAAwADE=6;3346800;</Key>
        <No>1000001</No>
        <Name>Capital social</Name>
        <Net_Change>-1141655.49</Net_Change>
        <Balance>-1141655.49</Balance>
        <Income_Balance>Balance_Sheet</Income_Balance>
        <Account_Category>Equity</Account_Category>
        <Account_Subcategory_Descript>Recursos propios</Account_Subcategory_Descript>
        <Account_Type>Posting</Account_Type>
        <Direct_Posting>true</Direct_Posting>
        <Gen_Posting_Type>_blank_</Gen_Posting_Type>
      </Chart_of_Accounts>
    </Read_Result>
  </Soap:Body>
</Soap:Envelope>
```

Web Services SOAP - Páginas

```
<soapenv:Envelope xmlns:soapenv="http://schemas.xmlsoap.org/soap/envelope/">
<soapenv:Body>
<Create xmlns="urn:microsoft-dynamics-schemas/page/chart_of_accounts">
<Chart_of_Accounts>
<No>00001</No>
<Name>Cuenta creada desde WS</Name>
</Chart_of_Accounts>
</Create>
</soapenv:Body>
</soapenv:Envelope>
```

```
<Soap:Envelope xmlns:Soap="http://schemas.xmlsoap.org/soap/envelope/">
<Soap:Body>
<Create_Result xmlns="urn:microsoft-dynamics-schemas/page/chart_of_accounts">
<Chart_of_Accounts>
<Key>24;DwAAAJ7BTAAMAAwADAAMQ==6;5516780;</Key>
<No>00001</No>
<Name>Cuenta creada desde WS</Name>
<Net_Change>0</Net_Change>
<Balance>0</Balance>
```

Web Services SOAP - Páginas

Publica la página Course List como Web Service

Servicios Web		Escribir para filtrar (...) Tipo objeto						
Tipo objeto	Id. objeto	Nombre objeto	Nombre del servicio	Todos los s...	Publ...	URL de OData V4	URL de OData	URL de SOAP
Página	50011	Lista Cursos	Courses	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	http://Murcia2019:7048/BC140/ODataV4/Courses	http://Murcia2019:7048/BC140/OData/	http://Murcia2019:7048/BC140/ODataV4/Courses

Web Services SOAP - Páginas

Esta página no tiene los métodos Delete ni Create porque es una página no Editable

Web Services SOAP - Páginas

Se pueden crear codeunits que extiendan una página publicada como Web Service y ofrezcan métodos adicionales

Web Services SOAP - Páginas

Crea una codeunit 60001 – Course Methods

The screenshot shows the Microsoft Dynamics NAV C/AL Editor window titled "Codeunit 60001 Course WebService - C/AL Editor". The code editor displays the following C/AL code:

```
1 Documentation()
2
3 OnRun()
4
5 [External] CreateCourse(Course : Record Course;CourseCode : Code[20];CourseName : Text[100])
6 Course.INIT();
7 Course.VALIDATE(Code,CourseCode);
8 Course.VALIDATE(Name,CourseName);
9 Course.INSERT(TRUE);
10
```

Web Services SOAP - Páginas

Crea una entrada en la lista de Servicios Web para la codeunit.

Tiene que utilizar el mismo nombre de Servicio que la página a la que extiende, pero no estar publicada

Servicios Web ▾

Id. objeto	Nombre objeto	Nombre del servicio	Todos	Publ... los s...
:	60001 Course WebService	Courses	<input checked="" type="checkbox"/>	<input type="checkbox"/>
50011	Lista Cursos	Courses	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

Web Services OData

Los Web Services SOAP son creados por los siguientes tipos de objetos:

- Páginas
- Queries

Web Services OData

`http://<Server>:<Port>/<ServerInstance>/OData/$metadata`

`http://<Server>:<Port>/<ServerInstance>/OData/<web service>`

`http://<Server>:<Port>/<ServerInstance>/OData/<web service>?$format=json`

API

Las APIs son creadas por los siguientes tipos de objetos:

- Páginas
- Queries

API

```
page 50107 CourseAPI
{
    PageType = API;
    Caption = 'CourseAPI', Locked = true;
    APIPublisher = 'clipplatform';
    APIGroup = 'courseManagement';
    APIVersion = 'v1.0';
    EntityName = 'course';
    EntitySetName = 'courses';
    ODataKeyFields = SystemId;
    SourceTable = Course;
    DelayedInsert = true;
    DeleteAllowed = false;
    InsertAllowed = true;

    layout
    {
        0 references
        area(Content)
        {
            0 references
            repeater(RepeaterControl)
            {
                0 references
                field(systemId; Rec.SystemId) { Editable = false; }
                0 references
                field(no; Rec."No.") { }
                0 references
                field(name; Rec.Name) { NotBlank = true; }
                0 references
                field(durationHours; Rec."Duration (hours)") { }
            }
        }
    }
}
```

Llamada a la API

@clientid = <id de la aplicación en Azure>

@clientsecret = <el secreto de Azure>

@scope = https://api.businesscentral.dynamics.com/.default

@tenant = <tenantId de nuestra instalación en el cloud>

@environment = <nombre Del Entorno>

@baseurl = https://api.businesscentral.dynamics.com/v2.0/{{tenant}}/{{environment}}/api

Obtener token de acceso

```
# @name tokenrequest
```

[Send Request](#)

POST <https://login.microsoftonline.com/{{tenant}}/oauth2/v2.0/token>

Content-Type: application/x-www-form-urlencoded

```
grant_type=client_credentials  
&client_id={{clientid}}  
&client_secret={{clientsecret}}  
&scope={{scope}}
```

三

5 references

```
@token = {{tokenrequest.response.body.access_token}}
```

三

Lista de empresas

[Send Request](#)

GET {{baseurl}}/v2.0/companies

Authorization: Bearer {{token}}

Lectura

```
# This information depends on the properties specified on the API Page
@APIPublisher = clipplatform
@APIGroup = courseManagement
@APIVersion = v1.0
@EntityName = course
@EntitySetName = courses
```

```
#####
#      GET Read all existing data
#####
```

Send Request

```
GET  {{baseurl}}/{{APIPublisher}}/{{APIGroup}}/{{APIVersion}}/companies(788a6508-fdb9-f011-af60-6045bdaca4d8)/{{EntitySetName}}
Authorization: Bearer {{token}}
Content-Type: application/json
```

Escritura

```
#####
# POST Insert new data
#####
# @name insertrequest
Send Request
POST {{baseUrl}}/{{APIPublisher}}/{{APIGroup}}/{{APIVersion}}/companies(788a6508-fdb9-f011-af60-6045bdaca4d8)/{{EntitySetName}}
Authorization: Bearer {{token}}
Content-Type: application/json

{
    "no": "",
    "name" : "Un curso creado desde REST Client",
    "durationHours" : 12,
    "price" : 1500,
    "textValue": "Un texto"
}

###
2 references
@systemID = {{insertrequest.response.body.systemId}}
###
```

Lectura de 1 registro

```
#####
#      GET Read 1 record
#####

Send Request
GET  {{baseurl}}/{{APIPublisher}}/{{APIGroup}}/{{APIVersion}}/companies(788a6508-fdb9-f011-af60-6045bdaca4d8)/{{EntitySetName}}({{systemID}})
Authorization: Bearer {{token}}
Content-Type: application/json
```

Ejecución de 1 procedimiento

```
[ServiceEnabled]
0 references
procedure UpdatePrice(var ActionContext: WebServiceActionContext)
begin
    Rec.Price := Rec.Price + 100;
    Rec.Modify();

    ActionContext.SetObjectType(ObjectType::Table);
    ActionContext.SetObjectId(Database::Course);
    ActionContext.AddEntityKey(Rec.FieldNo("No."), Rec."No.");
    ActionContext.SetresultCode(WebServiceActionResultCode::Updated);
end;
```

```
#####
# Execute Procedure on record
#####
Send Request
POST {{baseUrl}}/{{APIPublisher}}/{{APIGroup}}/{{APIVersion}}/companies(788a6508-fdb9-f011-af60-6045bdaca4d8)/{{EntitySetName}}({{systemID}})/Microsoft.NAV.UpdatePrice
Authorization: Bearer {{token}}
Content-Type: application/json
```