

LS Omni Server Installation 3.x

Guide for local installation

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1 Introduction

This document provides you with full instructions on how to install a local instance of the LS Omni Server and how to connect the LS Omni mobile apps to it. It is assumed that LS Nav/Central (10.xx or later) has been installed with the LS Nav/Central web services up and running.

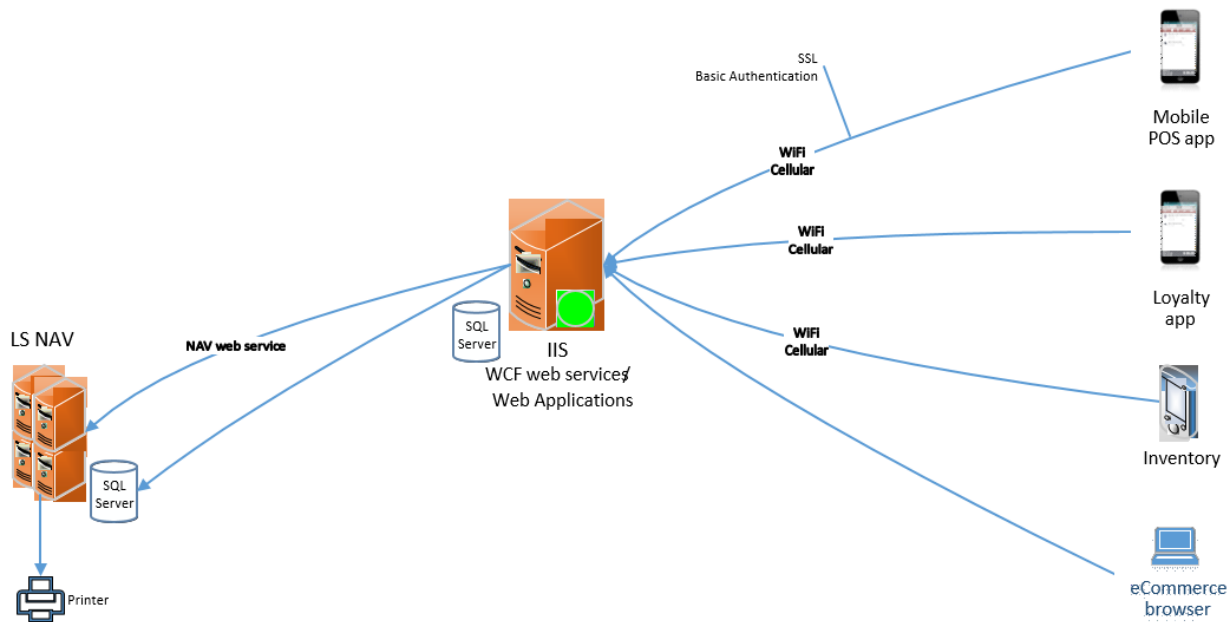
The installation consists of one setup file (**LSOmni.Server.Setup.3.x.x.exe**) that creates a new SQL Server database (default name is **LSOmni**) and IIS WCF web service (default name is **LSOmniService**). These default names are used throughout this installation guide. For more information visit: <http://www.lsretail.com/products/ls-nav/customer-centric-mobile-ecommerce/>

2 System overview

2.1 LS Omni solution

The LS Omni solution consists of the following:

- LSOmniService: a WCF service running under IIS.
- LSOmniWinService: Windows service running on Host Computer.
- LS Omni SQL Server database.
- Mobile apps, all of which communicate with the IIS.



LS Omni Service connects directly to the LS Nav/Central Database. No replication is needed to transfer data from LS Nav/Central Database to Omni Database. Only OMNI_XXXX jobs are needed to prepare some basic data, like prices, discounts and store hours, for LS Omni. Omni Database is only used to cache some data, like user device information, images and web basket that will not be stored in LS Nav/Central.

If LS Omni Service is set to run on a separate database instead of directly on Main HQ LS Nav/Central Database, create a clone of the LS Nav/Central Database and use either SQL Replication or standard LS Scheduler Job to update the Remote LS Nav/Central database. The remote database will be used for Omni to replicate and pull most of the retail data. LS Omni will still need to connect to the Main

HQ Web Services to send in Orders, Sales and look up information about Orders, contacts and other live data.

See **LS Central Configuration for LS Omni 3.x** chapter 11 for more information about running Omni on remote LS Central database.

3 Installation

3.1 Before installation

The installation process requires the following information:

- SQL Server instance (for example, mySqlServer or mySqlServer\MSSQLSERVER)
 - The LS Omni database is created on this machine
 - Default collation used is: "COLLATE Latin1_General_CI_AS". If another collation is to be used, create a new LS Omni database with the required collation in SQL Management Studio. The setup uses existing database.
- LS Nav/Central SQL Server instance (for example, myNavSqlServer\NAVDEMO)
- LS Nav/Central SQL database name (for example, LSNAV)
- LS Nav/Central company name (for example, CRONUS LS xxxxx W1 Demo))
- URL to LS Nav/Central web service (http://localhost:7047/DynamicsNAVxxx/WS/CRONUS LS xxxxx W1 Demo /Codeunit/RetailWebServices)
- A Windows user name and password used for the Windows Authentication against the LS Nav/Central web service.

Make sure the URL to the LS Nav/Central web service is correct. Enter the URL into your browser, for example:

http://localhost:7047/DynamicsNAVxx/WS/CRONUS LS xxxxx W1 Demo/Codeunit/RetailWebServices



```

<definitions xmlns="http://schemas.xmlsoap.org/wsdl/" xmlns:tns="urn:microsoft-dynamics-schemas/codeunit/RetailWebServices" targetNamespace="urn:microsoft-dynamics-schemas/codeunit/RetailWebServices">
  <types>
    <schema xmlns="http://www.w3.org/2001/XMLSchema" elementFormDefault="qualified" targetNamespace="urn:microsoft-dynamics-schemas/codeunit/RetailWebServices">
      <element name="WebRequest">
        <complexType>
          <sequence>
            <element minOccurs="1" maxOccurs="1" name="xmlRequest" type="string"/>
            <element minOccurs="1" maxOccurs="1" name="xmlResponse" type="string"/>
          </sequence>
        </complexType>
      </element>
      <element name="WebRequest_Result">
        <complexType>
          <sequence>
            <element minOccurs="1" maxOccurs="1" name="xmlRequest" type="string"/>
            <element minOccurs="1" maxOccurs="1" name="xmlResponse" type="string"/>
          </sequence>
        </complexType>
      </element>
      <element name="CreateResponseCode">
        <complexType>
          <sequence>
            <element minOccurs="1" maxOccurs="1" name="pResponse_Code" type="string"/>
            <element minOccurs="1" maxOccurs="1" name="pResponse_Text" type="string"/>
          </sequence>
        </complexType>
      </element>
    </schema>
  </types>
</definitions>

```

Finally, make sure IIS is up and running. It is a WCF service application so the .svc must be mapped in IIS (in the Handler Mappings). If you are not familiar with IIS, please read [Appendix D](#) on how to prepare IIS for Omni.

3.2 Get setup programs

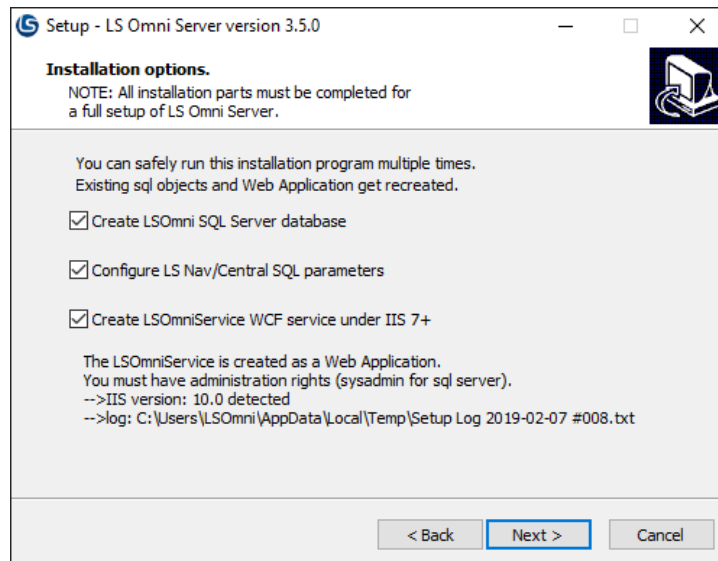
Download the LS Omni installation files from LS Retail Partner Portal, <https://portal.lsretail.com/Products/LS-Omni>

The LS Omni Server installation includes the following install files:

- *LSOmni.Server.Setup.3.x.x.exe*
- *LSOmni.WinService.Setup.3.x.x.exe*

3.3 Install the LS Omni Server

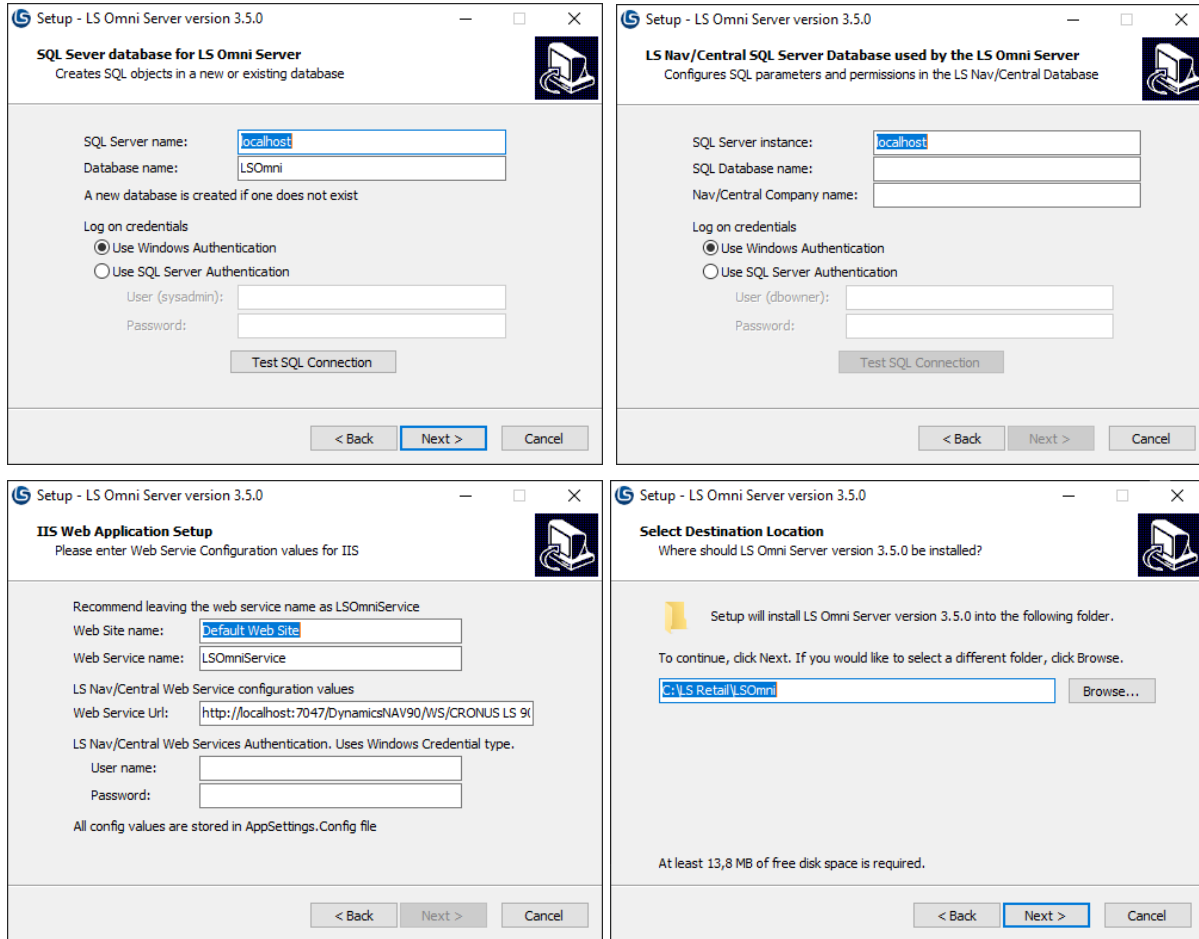
Run the setup program **LSOmni.Server.Setup.3.x.x.exe**. The setup creates the LSOmniService and LSOmni database. The Setup can be run multiple times, but it will override objects in existing LSOmni database and files for the LSOmniService WCF service.



Check all boxes if you plan to use all the functionality provided by LS Omni Server. If doing update on existing installation, uncheck all boxes and only the files will be updated, but configuration will stay the same.

Installation Options:

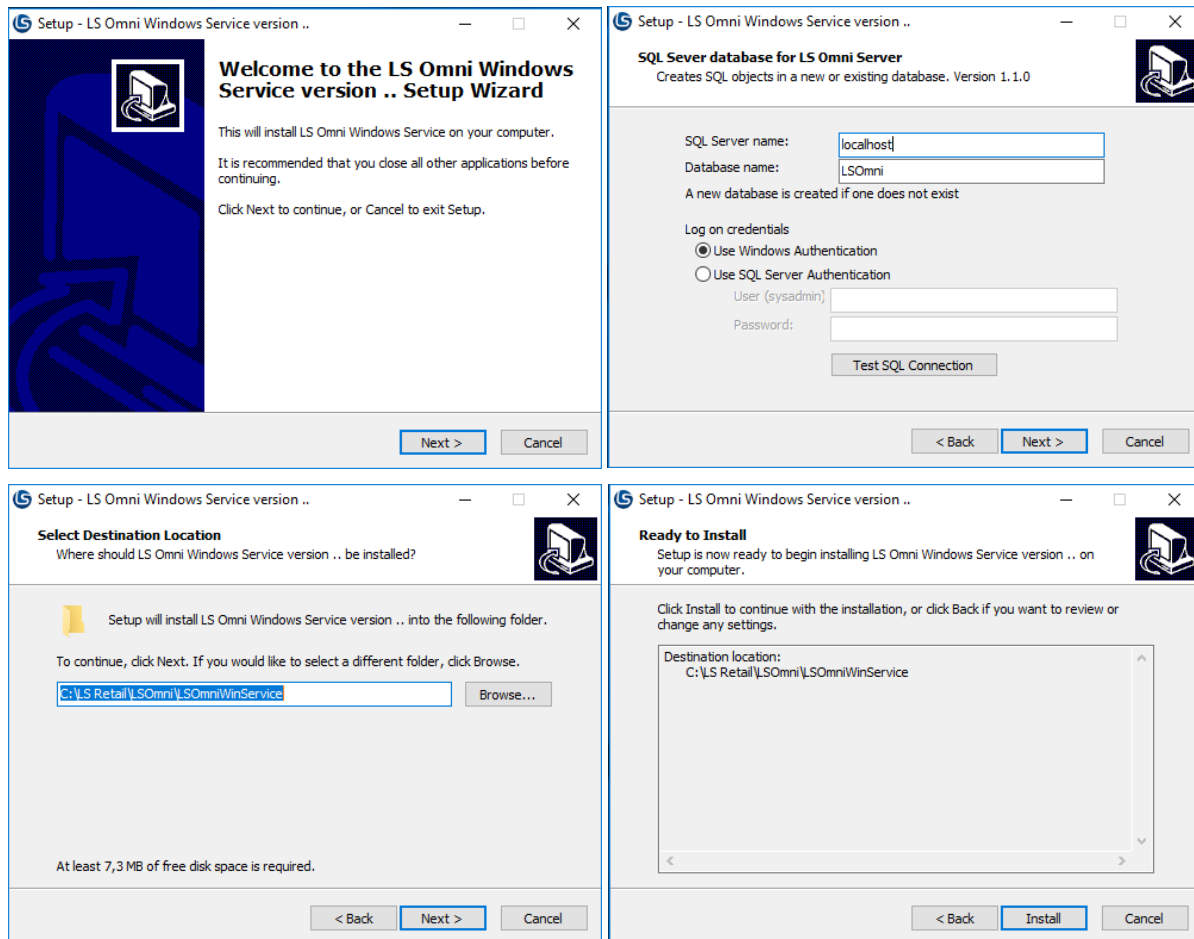
1. Create LSOmni SQL Server database
 - a. Must have SQL Server sysadmin rights to create a new database.
 - b. Creates a new SQL login: LSOmniUser, password: LSOmniUser.
2. Configure LS Nav/Central SQL parameters
 - a. Used to set the connection parameters for LS Nav/Central SQL Database.
3. Create LSOmniService WCF service under IIS
 - a. Must run locally on the IIS machine.
 - b. Creates a new Web Application called LSOmniService.
 - c. Creates a new application pool called LSOmniServicePool. The LSOmniService worker process runs under the identity set in this application pool.



3.4 Install the LS Omni Windows service

Run the setup program **LSOmni.WinService.Setup.3.x.x.exe**. The setup creates the LS Omni Windows Service. The Setup can be run multiple times, but it will override existing files.

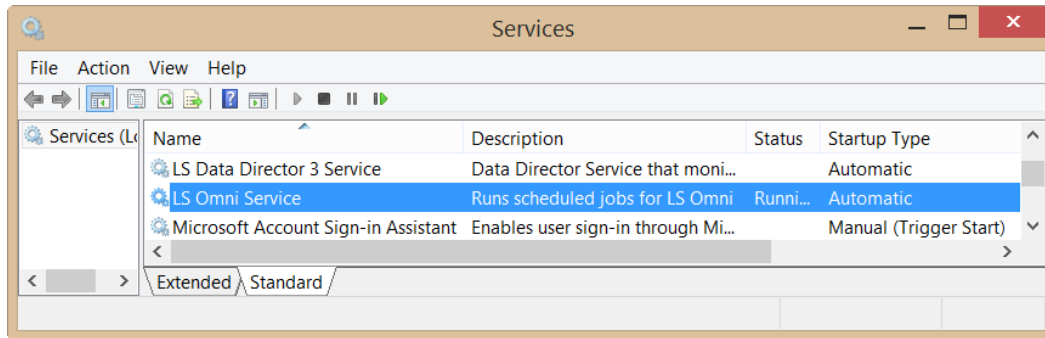
This service monitors the LS Omni database for changes and performs all the tasks/jobs required by the LS Omni Server. This includes sending emails, creating notifications for Click n' Collect orders, database cleanup, etc. This is mandatory install for the Loyalty app but optional for Inventory and Mobile POS.



The setup saves all files by default to `C:\LS Retail\LSOmni\LSOmniService\`, including the SQL scripts that are used. This folder stores log files and the configuration files so remember this folder name. The main configuration files are:

- AppSettings.config
 - Stores all information entered during the setup.
 - The password used for LS Nav/Central web service authentication can be encrypted in this file. See [Appendix B](#).
- NLog.config
 - Controls the details of information logged to the `\log\logfile.txt`.
- mailSettings.config
 - Use any SMTP server available. This is used when a password is reset.

After installation, LS Omni Service should be available and running in Services:



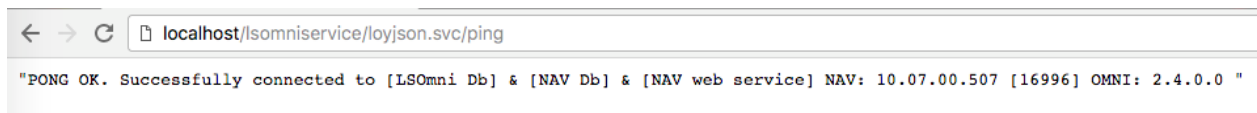
3.5 After installation

After a successful installation, the next step is to validate the data entered during the installation.

3.6 LS Omni Service running on IIS

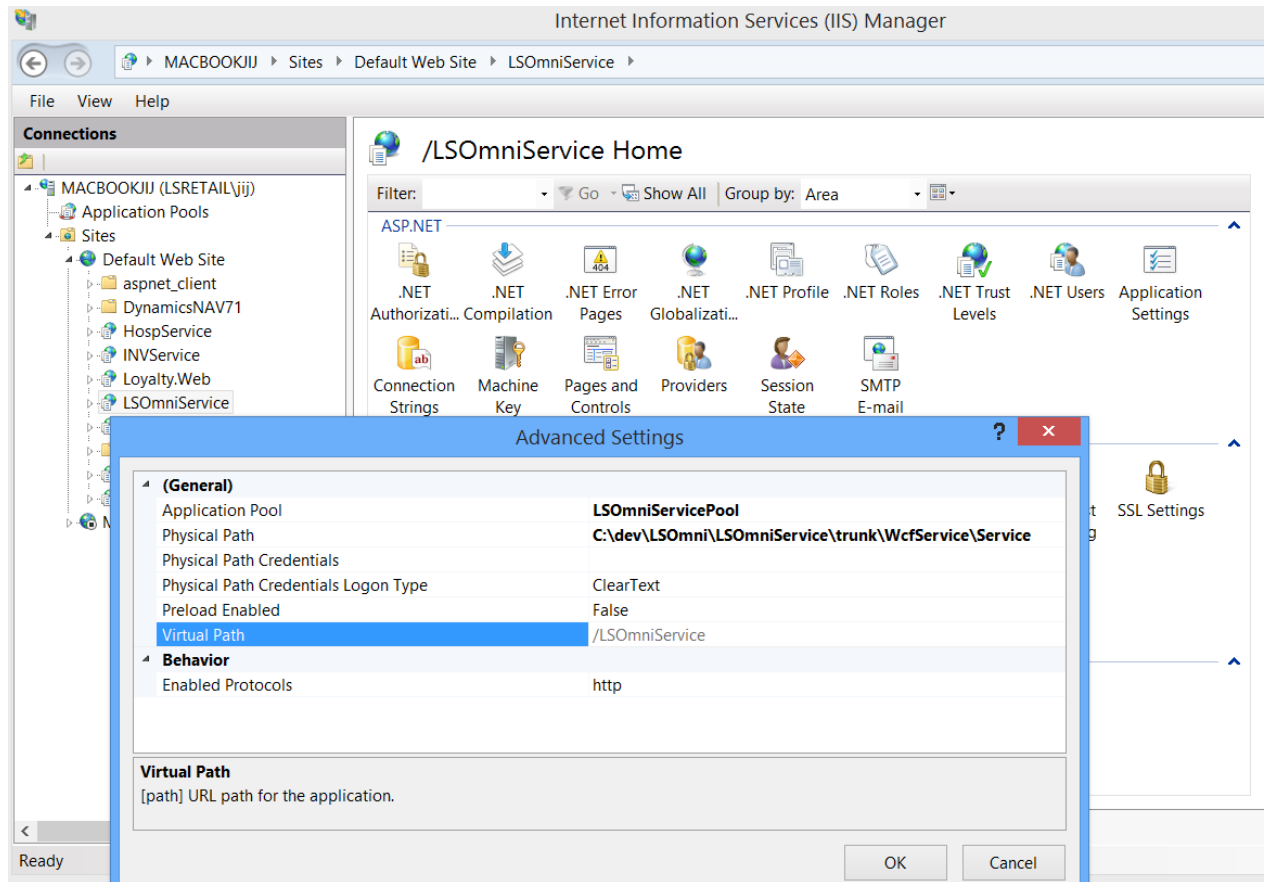
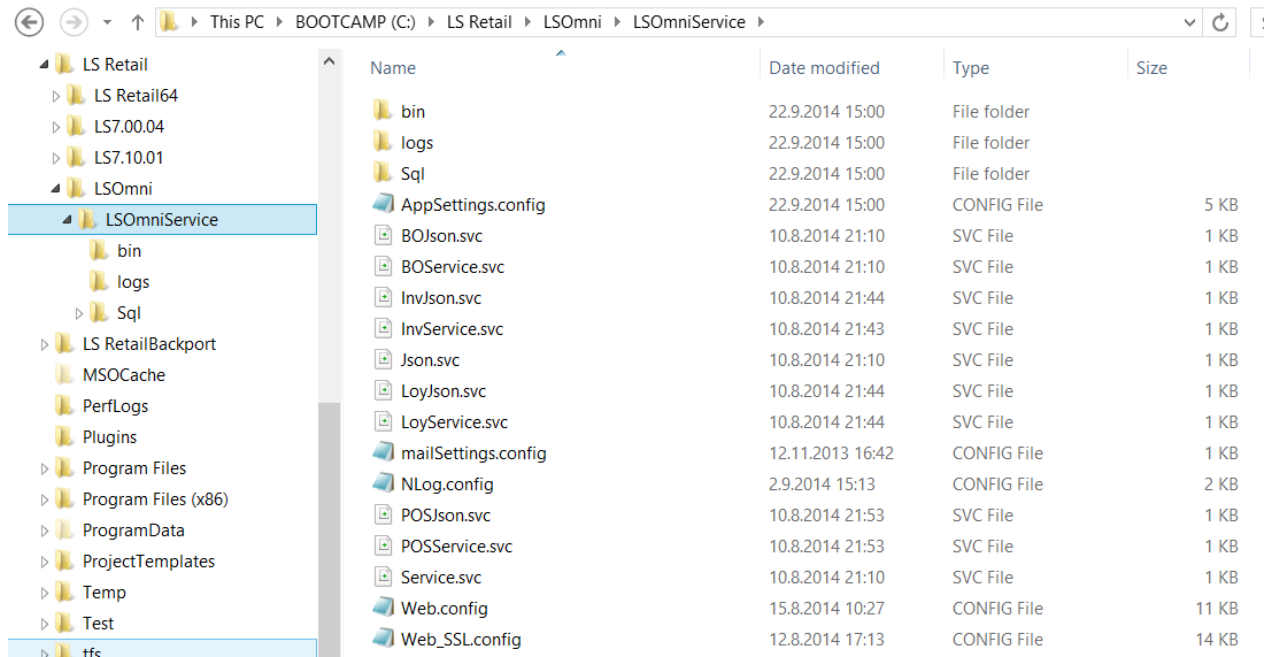
The LSOmniService web service can be “pinged” to see if the WCF web service is working properly. First “ping” them from a browser on a laptop (Chrome/Firefox recommended) and later from a browser on your phone. The ping checks the connection to the LS Omni and LS Nav/Central SQL Server databases and LS Nav/Central web service.

- <http://localhost/LSOmniService/loyjson.svc/ping>



If the ping is successful, a “pong” reply is returned. After a successful ping, an LS Omni app should be able to connect with the web service. If the ping returns an error, please read the Troubleshooting section in [Appendix F](#).

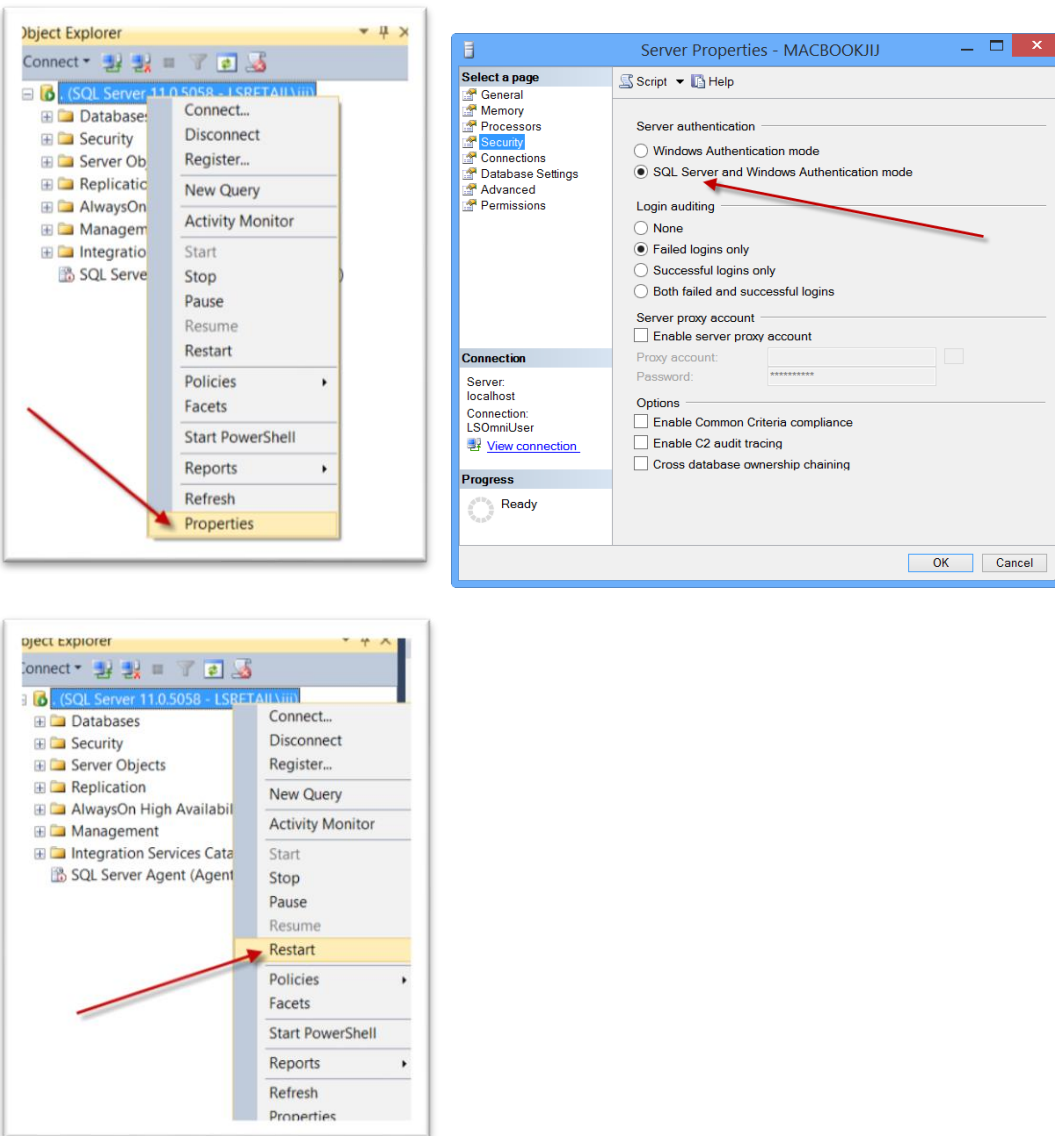
Open Windows Explorer “C:\LS Retail\LSOmni\LSOmniService\”. The \Sql folder has all the sql scripts used and the \logs folder has the **logfile.txt** that is extremely useful. You can change the values entered during the setup in the **AppSettings.config** file. The connection strings to LS Omni and LS Nav/Central SQL databases are stored in the AppSettings.config file (see [Appendix B](#)). The error logging can be controlled with the NLog.config file ([Appendix C](#)). **Note** if you change these configuration files, the LSOmniService web service must be restarted. The web.config should not be changed unless SSL is used.



3.7 SQL Server database

A new LS Omni SQL Server database is created when running the LS Omni Server Setup.

The setup creates the SQL Server login **LSOmniUser**, password **LSOmniUser** and grants this user datareader and datawriter privileges in the LS Omni database. If you have problem logging in with this LSOmniUser, SQL Server can be configured with SQL Server Authentication disabled. The setup will display a warning but allow the setup to continue. Without the SQL Server and Windows Authentication mode enabled the **LSOmniUser** cannot be used. Enable it by opening up the SQL Management Studio, opening the Server properties and restarting, see images below.



The SQL Server connection string is stored in:
C:\LS Retail\LSOmni\LSOmniService\AppSettings.config.

```
<!--SQLConnectionString.LSOmni, sql server connection string -->
<add key="SQLConnectionString.LSOmni" value="Data Source=localhost;Initial Catalog=LSOmni; Persist Security Info=True;User ID=LSOmniUser;Password=LSOmniUser;MultipleActiveResultSets=True;" />
```

In production, this connection string can be changed to use Windows Authentication or any other SQL Server login/password.

LSOmniUser also needs to have read access to LS Nav/Central Database as Omni will access LS Nav/Central database to pull some data from it. In testing and demo environment, you can give **LSOmniUser** sysadmin access to bypass all restrictions. Do not do this in production environment.

3.8 Prepare data in LS Nav/Central

LS Nav/Central demo company has member contacts, offers, coupons, images and so on that make it easy to demo the LS Omni solutions. The demo company data includes the member contact user login: tom, password: tom.1 that can be used to log in without the need to create a new user. For MPOS and INV app, use login 150 with no password.

LS Nav/Central has two Scheduler jobs to prepare prices, discount and Store hours for Omni. These jobs run both CodeUnit 10012870.

- OMNI_INIT prepares data for first time and should be run when new Store is added to Omni Setup.
- OMNI_UPDATE updates the data for Omni and should be scheduled to run at least once a day.

4 Test the setup with mobile apps

To quickly test the mobile apps on your phone against your local LS Omni Server installation, get one of the LS Omni mobile apps from <https://mobiledemo.lsretail.com> (some apps are also available on the platform's app stores).

It is possible to change the LS Omni Server URL to point to the local LSOmniService web service in the settings screen, which is accessible on the login screen. The default URL is:

- <http://lsretail.cloudapp.net/LSOmniService/loyjson.svc> for Loyalty apps
- <http://lsretail.cloudapp.net/LSOmniService/appson.svc> for Mobile POS and Inventory

5 Using LS Omni with eCommerce solution

LS Omni Service has interface to use with external eCommerce platforms. To get access to the WSDL, Connect to

- <http://<omnihost>/LSOmniService/eCommerceService.svc>

Online help and some samples on how to use these function is located here:

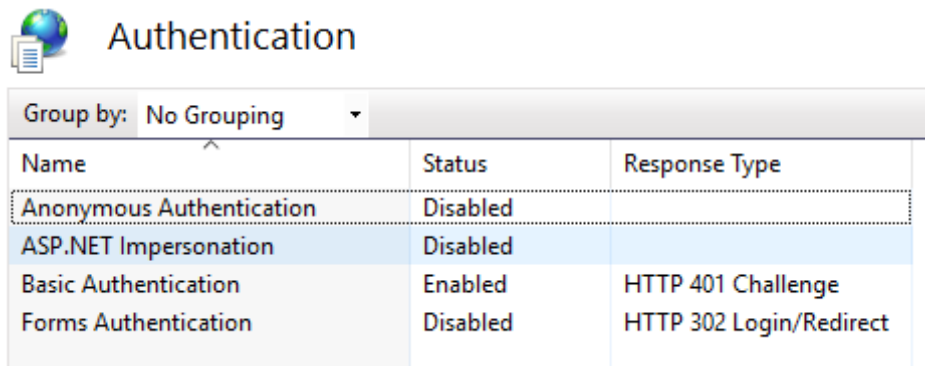
- http://mobiledemo.lsretail.com/lsomnihelp/html/T_LSOmni_Service_IeCommerceService.htm

5.1 Enabling basic authentication to eCommerce API through IIS

To enable authentication, navigate to WebServices.config in the Omni installation folder. Find the configuration for the eCommerceService/eCommerceJson and replace the bindingConfiguration from “myBasicHttpBinding” to “myBasicHttpBinding**Basic**”, or “myWebHttpBinding” to “myWebHttpBinding**Basic**” like so:

```
<service behaviorConfiguration="MgtServiceBehavior" name="LSOmni.Service.eCommerceService">
  <endpoint address="" behaviorConfiguration="MgtServiceEndpointBehavior" binding="basicHttpBinding"
bindingConfiguration="myBasicHttpBindingBasic" contract="LSOmni.Service.IeCommerceService" />
</service>
```

Open the IIS manager and enable Basic Authentication and disable Anonymous Authentication.



The screenshot shows the IIS Manager 'Authentication' feature view. A table lists various authentication methods and their status. 'Basic Authentication' is the only one that is 'Enabled', while others are 'Disabled'.

Name	Status	Response Type
Anonymous Authentication	Disabled	
ASP.NET Impersonation	Disabled	
Basic Authentication	Enabled	HTTP 401 Challenge
Forms Authentication	Disabled	HTTP 302 Login/Redirect

Now the authentication is enabled and a login information to a Omni host user is required for the Omni web reference.

Appendix A: Omni Server Configuration

By default, the AppSettings.config file is located under C:\LS Retail\LSOmni\LSOmniService\. Most values do not need to be changed. Most important are:

- BOConnection.Nav.Url
 - is the url to the LS Nav/Central web service
 - `http://NavWebServiceName:PORTNO (ie. 7047)/NAVSERVICEINSTANCE (ie. DynamicsNAV90008)/WS/NAVCOMPANYNAME (ie. C RONUS)/Codeunit/RetailWebServices`
- BOConnection.Nav.UserName
 - is the Windows account used to authenticate against the LS Nav/Central web service, usually has role SUPER in LS Nav/Central and is dbo or has equivalent rights in LS Nav/Central database.
- BOConnection.Nav.Password
 - is the password for the BOConnection.Nav.UserName
- BOConnection.Nav.Direct
 - true if Omni is running on LS Nav/Central HQ Database. false if Omni is running on Remote LS Nav/Central Database and in that case LS Nav/Central WS will be used more to pull data like order status, transactions and contact info from HQ.
- BOConnection.Nav.WS2
 - true if Omni is running on LS Nav version 11.05 or greater or on LS Central
- LSOmniSQLConnectionString
 - The connection string to the LS Omni SQL Server database
- NavSqlConnection
 - The connection string to the LS Nav/Central database and company
- ECom.Url
 - Url for Final Payment request when eCom is handling payments.
- Security.ValidateToken
 - Overrides the setting in LS Omni Database (Appsettings) Set this to false when using Omni against eCom solution.

You can encrypt the Password with the *LSOmniPasswordGenerator.exe* which can be found in the Tool package. Make sure the password ends with **:encr:** this will tell Omni that the Password is encrypted.

```
<add key="BOConnection.Nav.Password" value="xr53uLy7qRA+ukzeRdqvuw==:encr:" />
```

NOTE: When using a domain then add the domain before the username, DOMAIN\username.

```
<add key="BOConnection.Nav.UserName" value="LSRETAIL\MrRigth" />
```

```

<appSettings>
  <add key="BOConnection.Nav.Url" value="http://localhost:7047/DynamicsNAV80/WS/CRONUS
LS 80 W1 Demo v17/Codeunit/RetailWebServices"/>

  <add key="BOConnection.Nav.UserName" value="NAVWINDOWSUSERNAME"/>
  <add key="BOConnection.Nav.Password" value="NAVUSERPASSWORD"/>
  <!--BOConnection.Nav.EncryptedPassword true/false -->
  <add key="BOConnection.Nav.EncryptedPassword" value="false"/>
  <!-- Encoding, usually utf-8 but chinese uses GB18030 -->
  <add key="BOConnection.Nav.Encoding" value="utf-8"/>
  <!--Timeout in seconds -->
  <add key="BOConnection.Nav.Timeout" value="30"/>
  <add key="BOConnection.Nav.Direct" value="true"/>

  <!--SQLConnectionString.LSOmni, sql server connection string -->
  <add key="SQLConnectionString.LSOmni" value="Data Source=localhost;Initial Catalog=
LSOmni; Persist Security Info=True;User ID=LSOmniUser;Password=LSOmniUser;MultipleActiv
eResultSets=True;"/>
  <!-- License.Key from lsretail, validated in code TRIAL-3CONCURRENTUSERS -->
  <add key="License.Key" value="TRIAL-3CONCURRENTUSERS"/>

  <!--SqlConnectionString.Nav, sql server connection string -->
  <add key="SqlConnectionString.Nav" value="Data Source=NUPUR;
Initial Catalog=NAV71;
User ID=LSOmniUser; Password=LSOmniUser;
NAVCompanyName=CRONUS LS 71 W1 Demo v16;
Persist Security Info=True;MultipleActiveResultSets=True; "/>

  <add key="ECom.Url" value=""/>

  <add key="BOConnection.AssemblyName" value="LSOmni.DataAccess.BOConnection.Nav.dll"/>
  <add key="Infrastructure.Dal.AssemblyName" value="LSOmni.DataAccess.Dal.dll"/>
  <add key="LSRecommends.AssemblyName" value="LSRecommend.dll"/>
  <add key="Security.ValidateToken" value="false"/>
</appSettings>

```

AppSettings Table in LS Omni Database table holds also many configurations.

Key	Value	Comment	Data Type
Cache_Image_DurationInMinutes	1440	Image Cache Duration in minutes, 0 is no cache	int
Cache_Menu_DurationInMinutes	0	Menu Cache Duration in minutes, 0 is no cache	int
ContactUs	<p>LS Retail is the leading provider of end-t...	the Contact us text for mobile device	string
Currency_Code	GBP	Local currency code. LSOmni uses this currency cod...	string
Currency_DecimalSeparator		DecimalSeparator (, or .) By default uses the region ...	string
Currency_Postfix		Postfix. Used when currency table does not exist	string
Currency_Prefix	£	Prefix. Used when currency table does not exist	string
Currency_RoundOffSales	0.01	Decimal. RoundOffSales (decimal): 0.01 = 2 decimal ...	decimal
Currency_SaleRoundingMethod	0	Integer: 0/1/2. SaleRoundingMethod: RoundNearest...	int
Currency_Symbol	£	Symbol for currency code. Used when currency table...	string
Currency_ThousandSeparator		ThousandSeparator (, or .) By default uses the regio...	string
Demo_Print_Enabled	false	true/false, true then print receipt in NAV will not be c...	bool
Forgotpassword_email_body	Did you request a password reset for your L...	Email body for the forget password	string
Forgotpassword_email_subject	LS Retail loyalty account password reset	Email subject line for the forget password	string
Forgotpassword_email_url	http://bunga.lsretail.local/SPAN/ForgotPassw...	url for the forget password	string
Image_Save_AbsolutePath		The URL where the images are located. Ex http://my...	string
Image_Save_FolderName		FolderName to save images. Ex: c:\LSOmni\Images. ...	string
Loyalty_FilterOnWebStore	true	true/false, Use filter on WI web store in Nav. For LSN...	bool
LSNAV_Version	8.0	LS Nav version. 7.0, 7.1, 8.0	string
PDF_Save_FolderName		POS Only, FolderName to save PDF slips. Ex: c:\LS...	string
PDF_Slip_Date	Date:	POS Only, Translation of text on PDF slip	string
PDF_Slip_EFTAuthCode	Authorization code:	POS Only, Translation of text on PDF slip	string
PDF_Slip_EFTCardName	Card name:	POS Only, Translation of text on PDF slip	string
PDF_Slip_EFTCardNumber	Card number:	POS Only, Translation of text on PDF slip	string
PDF_Slip_POSNumber	Terminal number:	POS Only, Translation of text on PDF slip	string
PDF_Slip_ReceiptId	Receipt number:	POS Only, Translation of text on PDF slip	string
PDF_Slip_Signature	Signature	POS Only, Translation of text on PDF slip	string
PDF_Slip_Staff	Staff Id:	POS Only, Translation of text on PDF slip	string
PDF_Slip_Store	Store:	POS Only, Translation of text on PDF slip	string
PDF_Slip_Total	Total number:	POS Only, Translation of text on PDF slip	string
PDF_Slip_TransactionId	Transaction number:	POS Only, Translation of text on PDF slip	string
Resetpin_email_body	Your PIN has been reset on your lsretail loya...	Email body for reset pin	string
Resetpin_email_subject	Your PIN has been reset	Email subject lin for reset pin	string
Schemelevel	You need {0} points to become a {1} member.	points needed: {0} nextschemedecryption:{1}	string
Security_BasicAuth_Pwd	XYZ.LSOmniServiceUser.321	BasicAuth password (lsomni way). Used when IIS is a ...	string
Security_BasicAuth_UserName	LSOmniServiceUser	BasicAuth user name (lsomni way). Used when IIS is ...	string
Security_BasicAuth_Validation	false	Boolean, true/false, BasicAuth validation (lsomni way...	string
Security_Validatetoken	true	Boolean, true/false True the SecurityToken is valida...	string
TenderType_Mapping	1=1,2=2,3=3,4=4,6=6,7=7,8=8,9=9,10=10,1...	Mapping between Omni and Nav TenderTypelds. L...	string
TermsOfService	<h1>Welcome</h1> and more text bla bli bla	the terms of service for iPhone ? maybe	string
Timezone_HoursOffset_DD	0	NAV stores everything in UTC, Data Director replicat...	int
Timezone_HoursOffset_WS	0	NAV stores everything in UTC, web service data may...	int

Appendix B: Logging configuration

The logging configuration settings used are stored in the NLog.config file, which by default is located under C:\LS Retail\LSOmni\LSOmniService\. The logger “**minlevel**” key determines how much logging is done. It can be *Trace*, *Debug*, *Info*, and *Error*. Default setup is *Debug* but production “minlevel” should be *Error*. By setting the minlevel to:

- Error: Only logs the error
- Info: Error + logs info about the WCF web requests
- Debug: Info + all the web service calls to LS Nav are logged (Request and Response xml)
 - Very helpful to see the xml sent to the LS Nav/Central web service
 - Logs how long the LS Nav/Central web service call took to execute
 - Logs the incoming data in the WCF web requests
- Trace: Debug + all the sql statements are logged

The logger uses the NLog logging platform, see <http://nlog-project.org/>. For more details about the configuration file, see <https://github.com/nlog/NLog/wiki/Configuration-file>.

```
<?xml version="1.0" encoding="utf-8" ?>
<nlog xmlns="http://www.nlog-project.org/schemas/NLog.xsd"
      xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance">

  <!-- go to http://nlog-project.org/wiki/Configuration_file for more information -->
  <!-- archiveFileName="${basedir}/logs/archives/log.{#}.txt"
  archiveFileName="${basedir}/logs/archives/log.${shortdate}.{#}.txt"
  -->

  <targets>
    <target name="file" xsi:type="File"
            fileName="${basedir}/logs/logfile.txt"
            layout="${longdate} |tid:${threadid}| ${level} | [${machinename}-${windows-
identity}] | ${callsite} | ${message} | ${exception:Format=toString} ${newline}"
            archiveFileName="${basedir}/logs/archives/log.{#}.txt"
            archiveEvery="Day"
            archiveNumbering="Rolling"
            maxArchiveFiles="7"
            encoding="iso-8859-2"/>
  </targets>

  <rules>
    <logger name="*" minlevel="Error" writeTo="file" />
  </rules>
</nlog>
```


Appendix C: IIS Setup and configuration

The **LSOmniService** is a Windows Communication Foundation (WCF) service that is hosted in IIS and requires IIS version 7 and above. Those who want to install LS Omni Server must therefore be familiar with IIS.

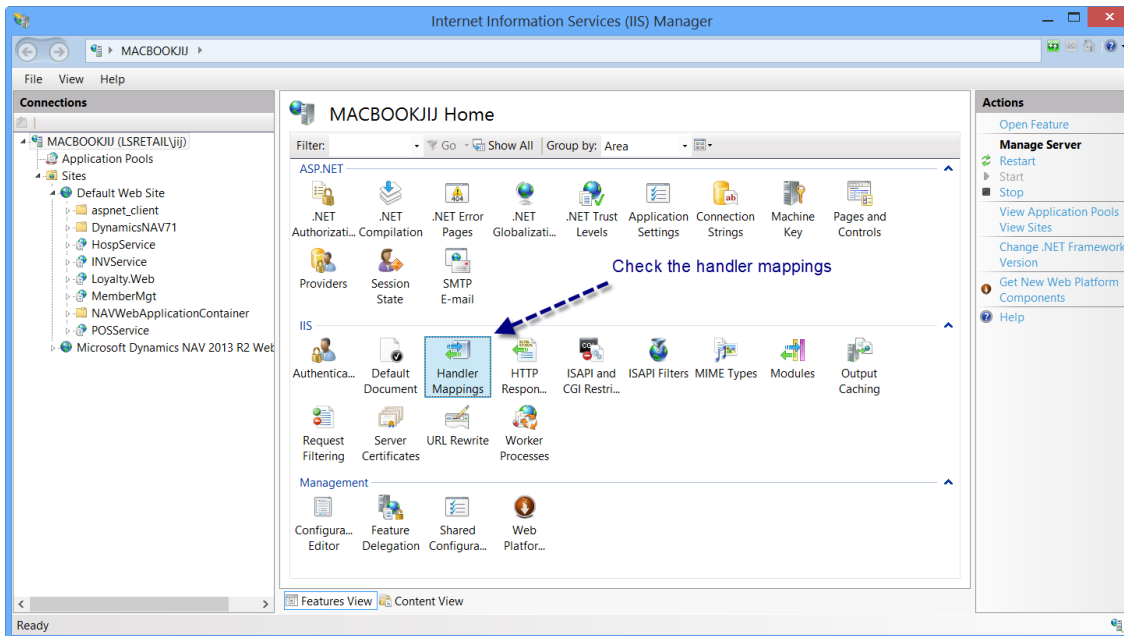
Troubleshooting IIS

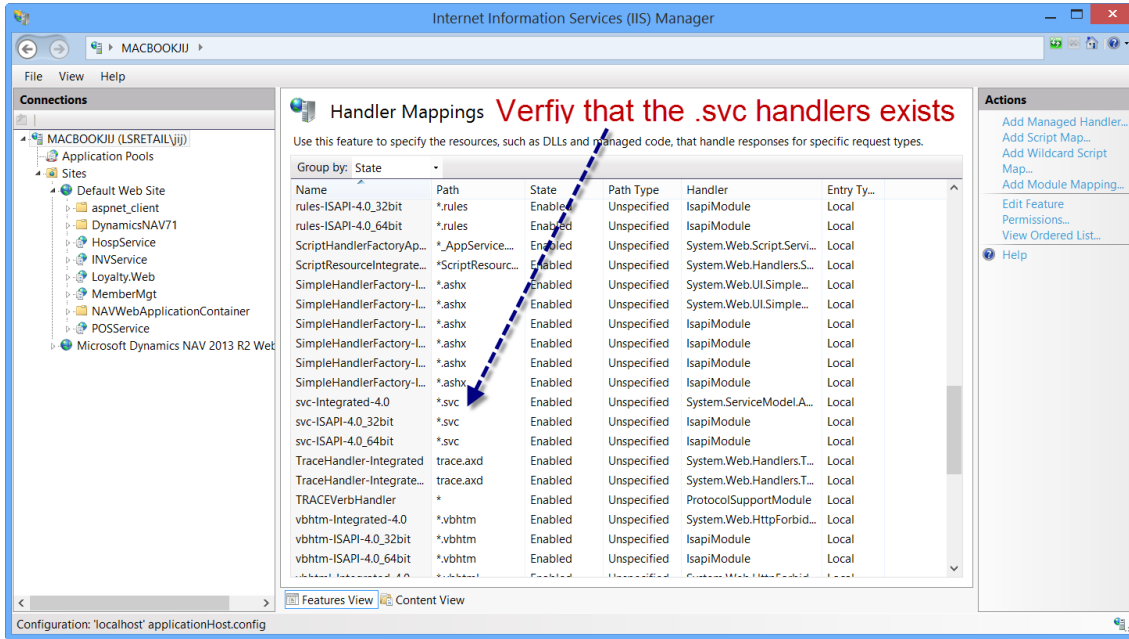
Verify that IIS is turned on

IIS is not turned on by default when Windows is installed. Simply run the IIS Manager (InetMgr.exe) to see if IIS is turned on. See [LS Omni Service running on IIS](#).

Verify the svc file type mapping

Svc is the file extension used by Microsoft's Windows Communication Foundation to represent a WCF service hosted by IIS. Verify that the svc file type is mapped correctly. Within the IIS Manager tool, double-click "Handler Mappings" in the Features View.

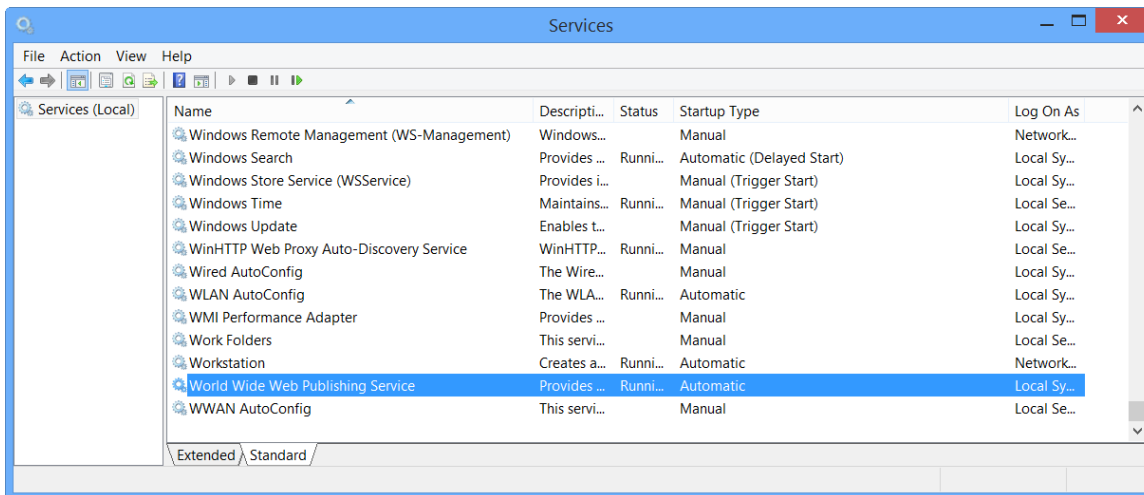




- ✓ If the .svc handlers do **NOT** exist then run „aspnet_regiis.exe -I” from a cmd.exe window (run as administrator).
 - C:\windows\Microsoft.NET\Framework64\v4.0.30319\aspnet_regiis.exe -i
 If this does not work, get help or google your problem. The LS Omni Server will not work without the correct .svc mapping.
- ✓ If the .svc handlers do exist then you are ready to install the LSOmniService; run the LSOmni.Server.Setup.exe setup.

LSOmniService has been installed

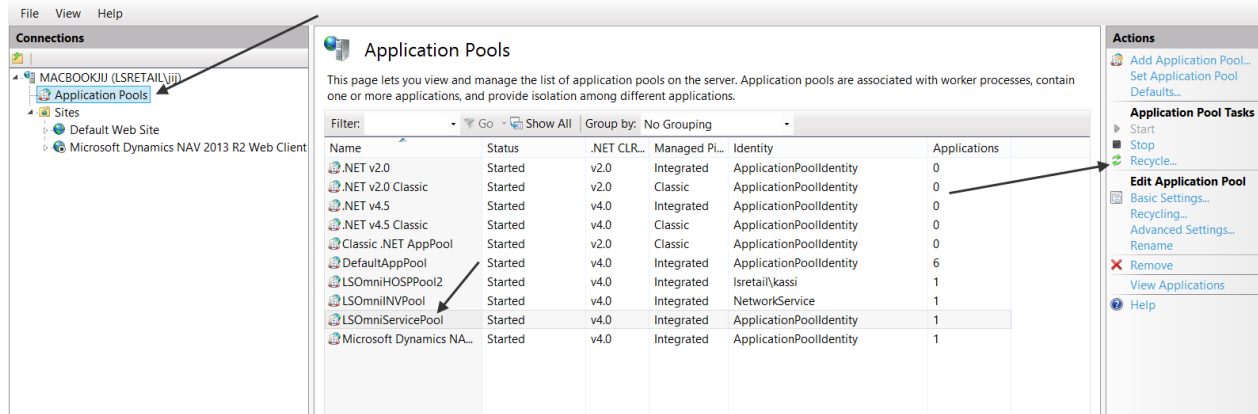
When changing the AppSettings.config file for the LSOmniService you must to restart the LSOmniService worker process. The easiest way is to “touch” the web.config file (add a space and save the file). This will restart the worker process. You can also restart it with the “Services” management console or recycle the LSOmniServicePool application pool.



By default, the LSOmniService is located under the Default Web Site. It can be moved to any website, using any port like any other WCF hosted service (a production environment may want to do this).

We recommend using SSL certificates on production sites.

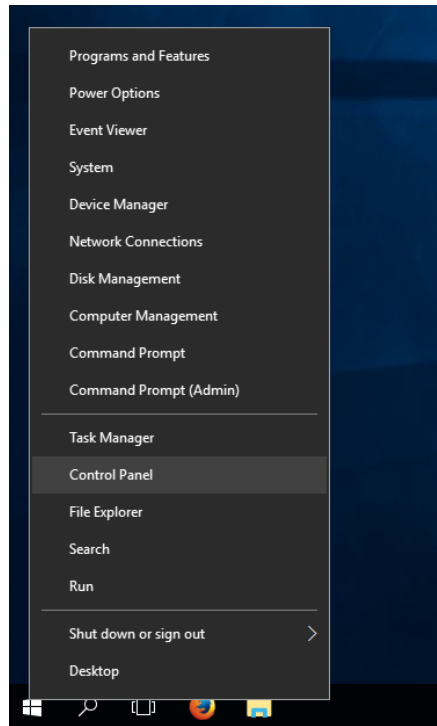
Note that the LSOmniService has its own application pool, **LSOmniServicePool**. The LSOmniService worker process runs under this pool which also determines the identity (Windows account) of the LSOmniService process. For example, you can use the pool identity to connect to the SQL Server using Windows Authentication by modifying the SQL connection string in AppSettings.config.



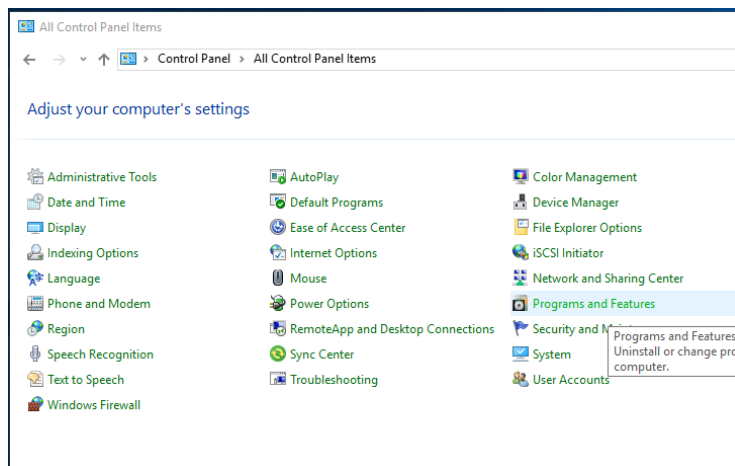
Installing IIS and WCF

The LSOmniService requires IIS 7+ and Windows Communication Foundation (WCF). Windows 7/8/2008/2012 ships with IIS so it must be installed by turning on the Internet Information Services. Please follow these steps to turn on IIS 8 on Windows 8. The procedure is similar on other versions of Windows; a quick Google search will give multiple results on how to install IIS on your machine. <http://www.iis.net/learn/install/installing-iis-7/installing-iis-on-windows-vista-and-windows-7>

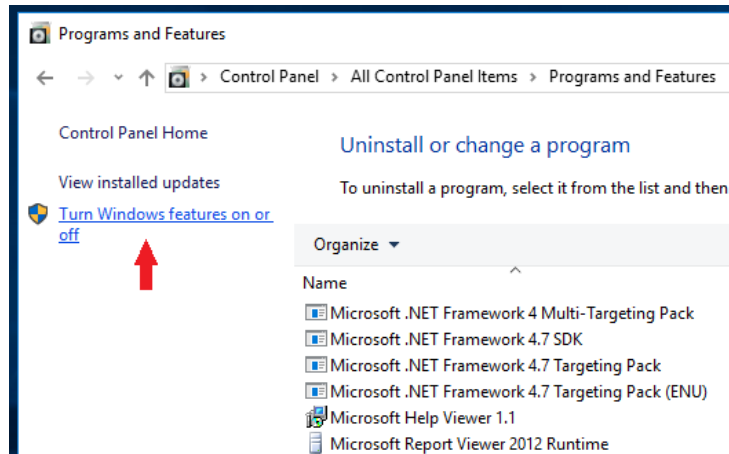
On Windows 10: Start by moving the mouse over to the bottom left corner, right-click on Start and choose Control Panel:



1. Choose Programs and Features:



2. Choose **Turn Windows features on or off**:



3. In the **Windows Features**, select the checkboxes marked on the below picture: +.NET framework 3.5 (includes .NET 2.0 and 3.0)

- **Windows Communication Foundation HTTP Activation**

+.Internet Information Services

- **Web Management Tools**

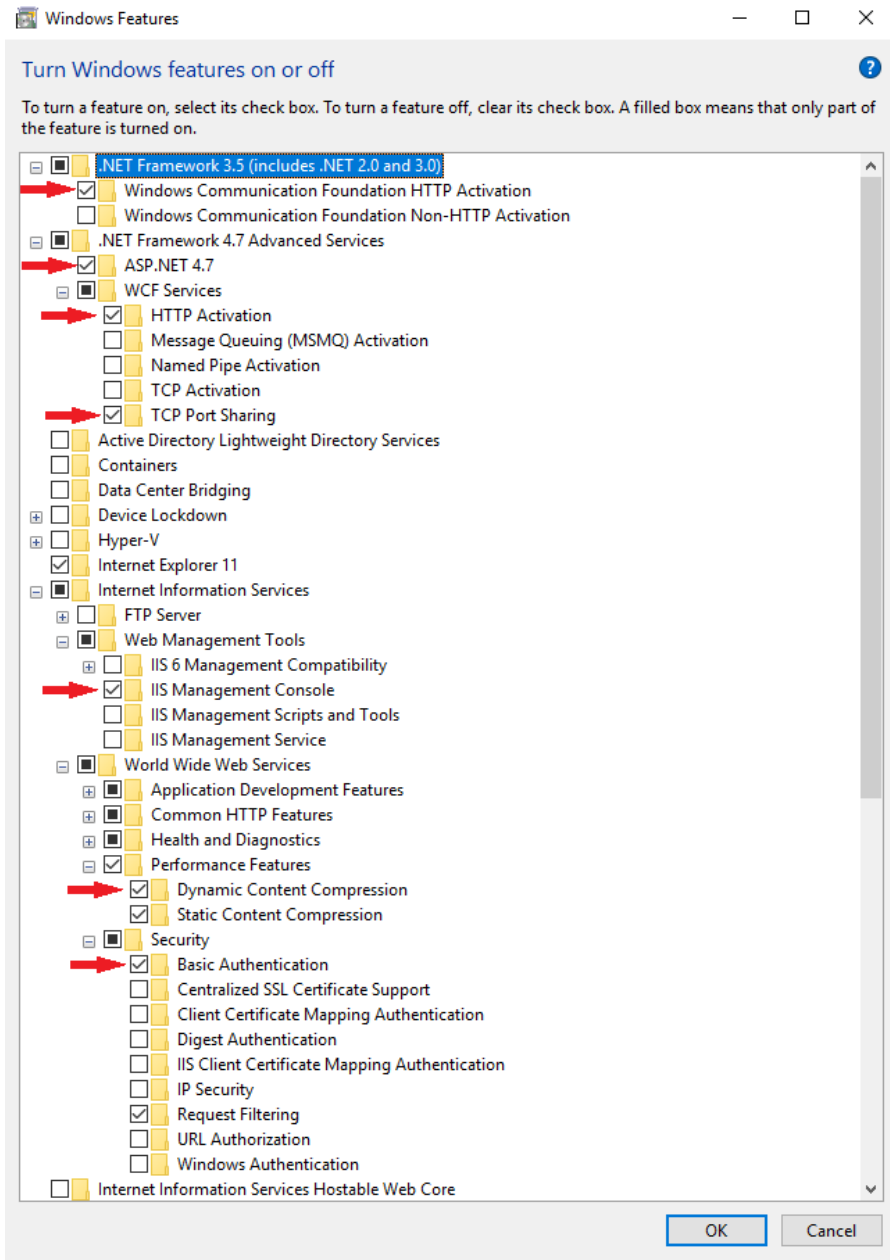
IIS Management Console

- **World Wide Web Services**

Dynamic Content Compression

Basic Authentication

Press **OK**.



If you successfully completed step 4, then you should be ready to run the LS Omni.Server.Setup.exe setup to create the WCF web service.

If **.NET Framework 4.7 Advanced Services** is not an available feature for you, then you have to set up .NET Framework 4.7 (<https://www.microsoft.com/en-us/download/details.aspx?id=55170>).

After installing the .NET framework, make sure that

- + Internet Information Services
 - + World Wide Web Services
 - + Application Development Features

ASP.NET

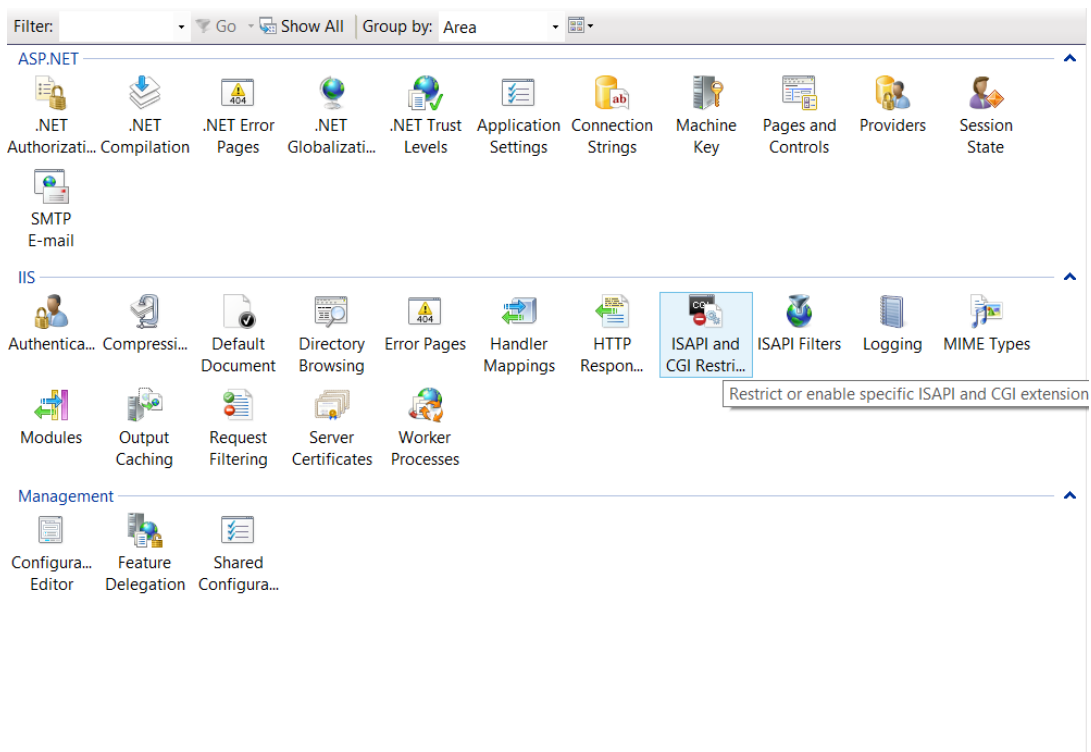
is selected (inside Windows Features).

The final step is to activate and allow the newly installed .NET 4.7 framework inside IIS.

1. Start by looking for and opening **Internet Information Services**:



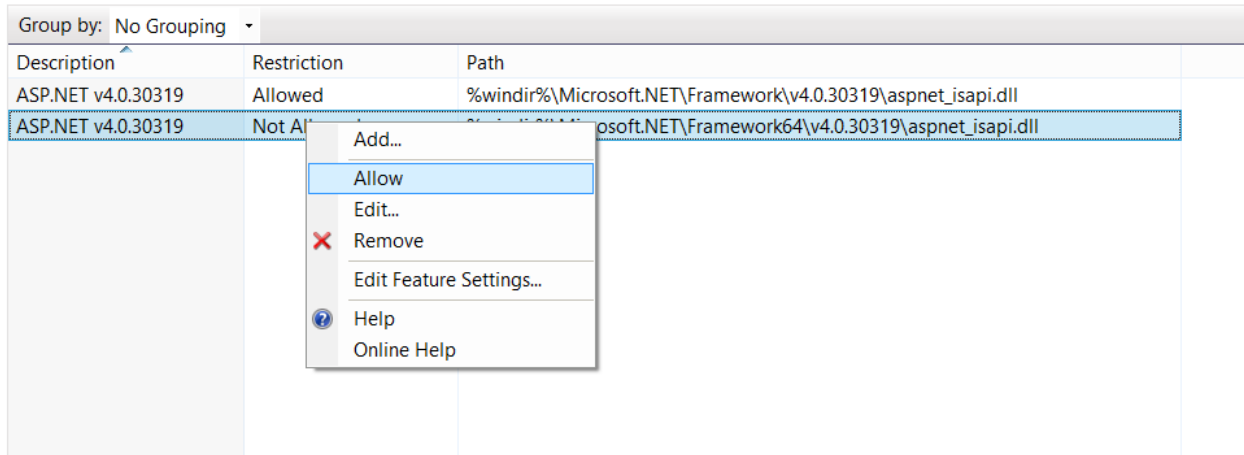
2. Inside IIS, select **ISAPI and CGI Restrictions**:



3. Right-click on the ASP.NET v4 and click **Allow**.

ISAPI and CGI Restrictions

Use this feature to specify the ISAPI and CGI extensions that can run on the Web server.



Microsoft Dynamics LS Nav/Central web service

Note that the LS Nav web service does not use IIS. It is a WCF service running as Windows service hosting a web service.

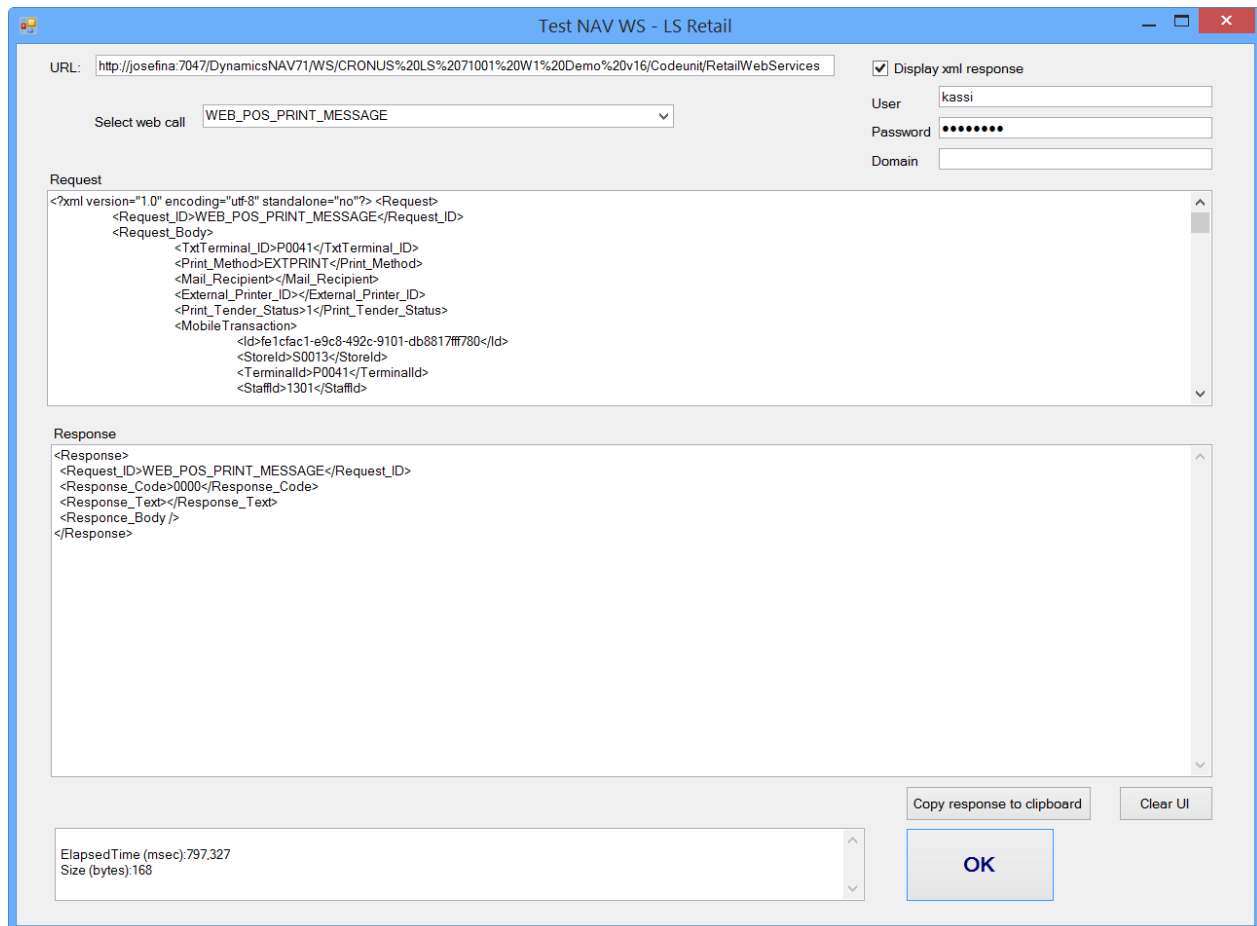
Appendix D: Troubleshooting LS Nav/Central web services

Download TestNavWebService tool the from the partner portal (included in Zip file):

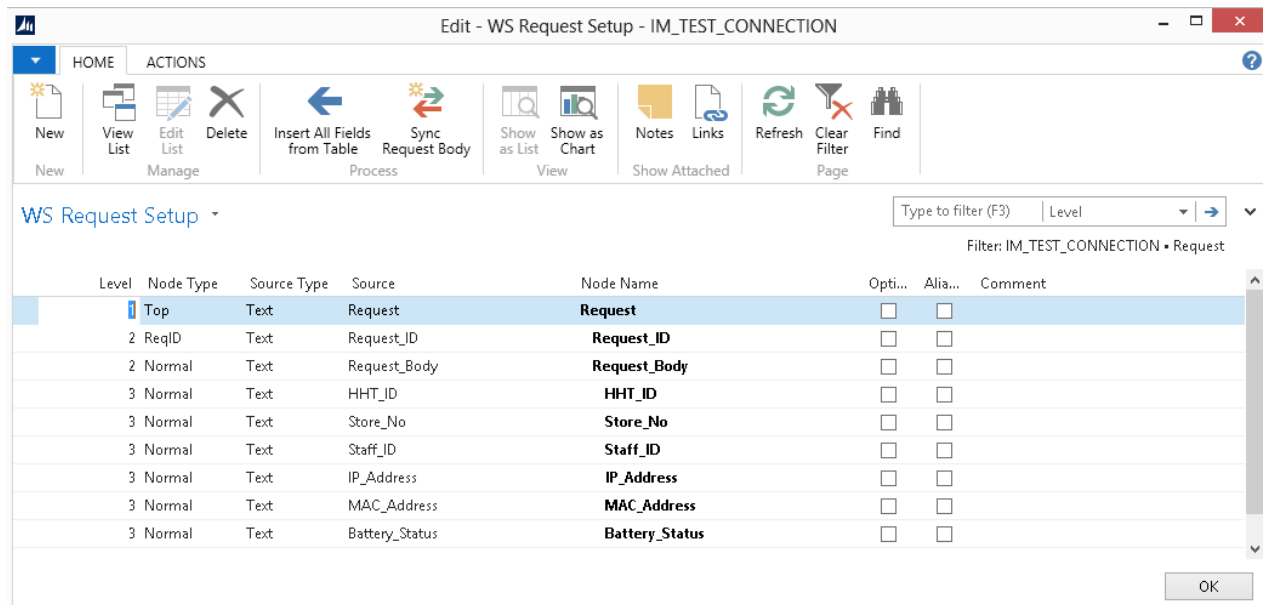
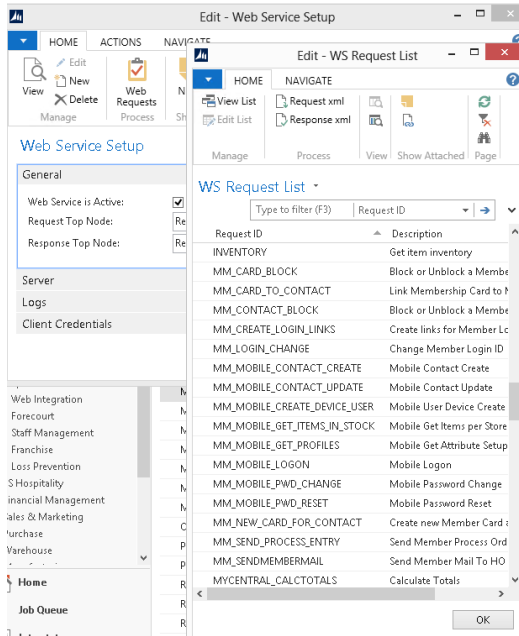
<http://partners.lsretail.com/Products/LS-Omni/Downloads>

Unzip the TestNavWebService_tool.zip and run the TestNavWs.exe from your desktop machine.

Enter the LS Nav/Central Retail User and Password (this is a Windows user that connects to LS Nav/Central web service), and the URL. This test application sends and retrieves data from LS Nav/Central in XML format and is very helpful when debugging LS Nav/Central web services. You can also capture the XML in the \logs\logfile.txt and copy/paste it into this tool.



You can always create a new XML by looking at the LS Nav/Central WS requests.



The XML for IM_TEST_CONNECTION will then be:

```
<?xml version="1.0" encoding="utf-8" standalone="no"?><Request>
<Request_ID>IM_TEST_CONNECTION</Request_ID>
  <Request_Body>
    <Store_No>S0001</Store_No>
    <HHT_ID>P0001</HHT_ID>
    <Staff_ID>S0001</Staff_ID>
    <IP_Address>172.22.20.141</IP_Address>
    <MAC_Address>2297829212</MAC_Address>
    <Battery_Status>89</Battery_Status>
  </Request_Body>
</Request>
```

Appendix E: Troubleshooting communication between Nav/BC and Omni

If an error returns when you ping the web service, **the first thing to do is look at the error log file.** The error logfile.txt is always located in the C:\LS Retail\LSOmni\LSOmniService\logs folder. By default, it logs all the errors and the XML going between IIS and NAV/BC. Look at the end of the file for the last error.

The most common error after installation is the “Unauthorized” error.

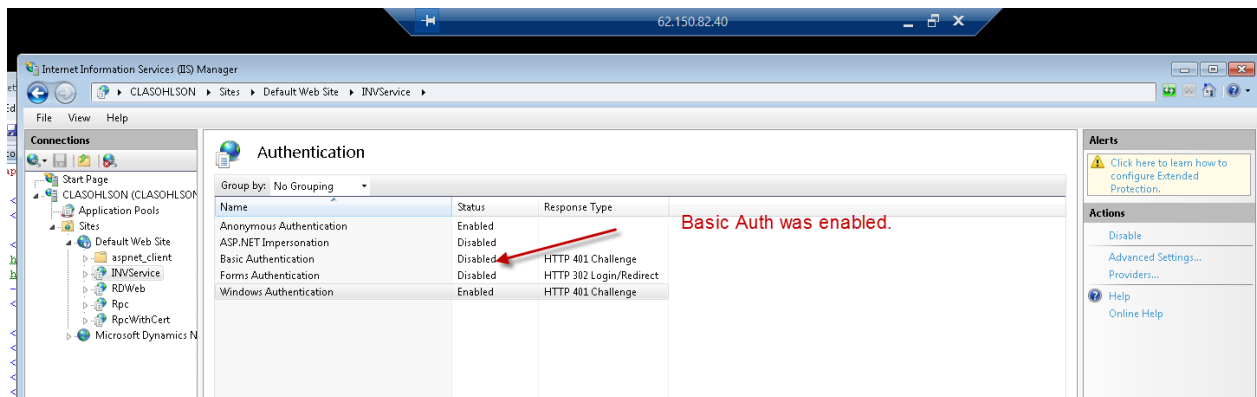
```
2014-05-01 11:38:43.7945 |tid:11| Error | [MACBOOKJIJ-IIS APPPOOL\DefaultAppPool] |
LSRetail.Mobile.WebService.BLL.ContactBLL.Login | Failed to login tom |
LSRetail.Mobile.WebService.HOSP.Common.Util.HospServiceException: Error:GeneralErrorCode:The request
failed with HTTP status 401: Unauthorized. ---> System.Net.WebException: The request failed with HTTP
status 401: Unauthorized.
```

The “Unauthorized” error always means that the LS Nav/Central windows account (domain/user/pwd) specified in the AppSettings.config file does not have permission to execute the LS Nav web service. Make sure the domain, username and password are valid in the AppSettings.config file.

Unauthorized - Ping works from mobile browser but not from mobile app.

By default, the setup program enables anonymous authentication, other authentications are disabled.

If you can PING the LSOmniService from a mobile browser on the mobile device but get *Unauthorized* in the mobile app/Mobile Inventory application then check the IIS Authentication. Make sure that the Basic Authentication is **NOT** set.



Get the correct LS Nav/Central URL

The LS Nav URL that goes into the AppSettings.config is often incorrect. Copy, paste the URL into a browser and validate that it works. A valid URL looks like this.

http://localhost:7047/DynamicsNAV110/WS/CRONUS LS 1100 W1
Demo/Codeunit/RetailWebServices

`http://NavWebServiceName:PORTNO
(ie.7047)/NAVSERVICEINSTANCE(ie.DynamicsNAV110)/WS/NAVCOMPANYNAME(ie.CRONUS LS 1100
W1 Demo)/Codeunit/RetailWebServices`

Test the LS Nav/Central web-service directly

If there are issues connecting with the LS Nav/Central web-services then use the TestNavWs.exe (see [Appendix D](#)). It connects directly to LS Nav/Central web service and bypasses the IIS/WCF layer.

I can ping locally but not from my phone or other computers.

This is most likely a firewall issue. Make sure port 80 is open on your IIS machine.

Service "Codeunit/OmniWrapper" was not found!

This error message comes when omni is configured to use LS NAV/Central Web services 2.0 on a LS NAV instance older than version 11.05. Make sure that LS NAV version is 11.05 / LS Central or greater, or configure omni to use old web services by setting the BOConnection.Nav.WS2 value to false in the appsettings.config file.