LS Central 18.4

Installation

October 14, 2021

LS Retail

Contents

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Installation of LS Central

This release can be used for localizations and demonstrations.

The following products are available from the LS Retail Portal for download:

- DD Web Monitor
- LS Commerce
- Kitchen Display System
- LS Data Director

Note: In these instructions references to software versions are in generic form and always refer to the latest version.

Example: In October 2021 *LS Central xx.xx* stands for *LS Central 18.4.*

System Requirements

LS Central has the same system requirements as standard Business Central:

https://docs.microsoft.com/en-us/dynamics365/business-central/dev-itpro/deployment/system-requirements-business-central-v18

LS Data Director System Requirements

The Data Director requires the following hardware and software resources in order to run properly:

Hardware

- At least 1 GB of available RAM. The base processes use around 100-200 MB of RAM for normal operation. The amount of RAM required depends on the size of database queries that DD needs to perform.
- 100 MB disk space for the base application. This is the absolute minimum space required. The additional disk space required when moving data depends on the amount of data and how frequently it is moved. You should have at least 10 GB free on your hard drive for the temporary data generated by the DD.
- A Dual Core processor or better. The DD is a CPU intensive application, especially when processing data, so a faster processor usually means improved performance.

Software

- Refer to DD release notes for details on supported operating systems and databases.
- The DD needs 2-3 user sessions in the database it is processing data to and from. The number of user sessions depends on the functionality used and Data Thread setting in the DD Configuration tool. For normal operation DD uses one session for query data, one session for insert/update and then one or more sessions for incoming TS requests.
- The databases which the DD needs to connect to should have TCP/IP protocol active and port open in Firewall.
- IIS is needed for DD Web Service when running Scheduler Jobs from LS Central 16 or later in the cloud.

LS KDS System Requirements
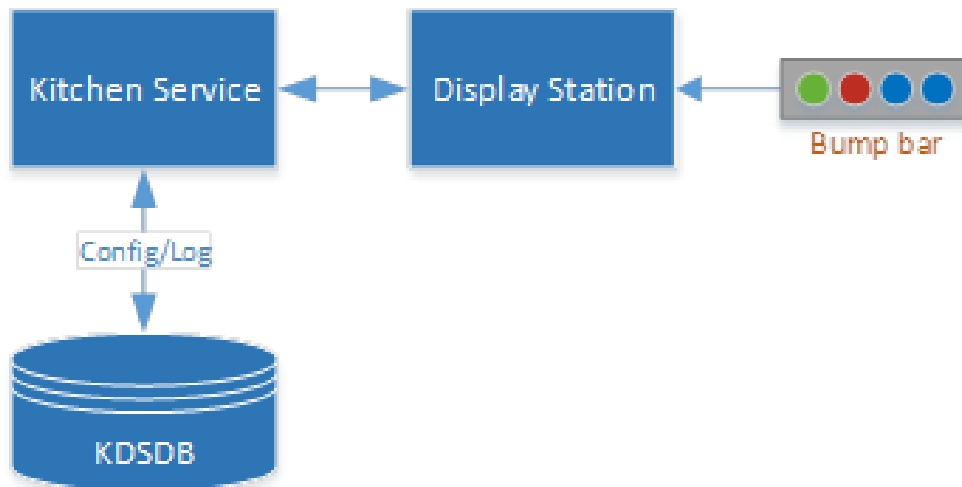
The LS KDS system has the following components:

Component	Description	Requirements
Kitchen Manager	Windows Service	Windows 10 2 GB memory (4 GB preferred)
KDS DB	Kitchen database for • KDS configuration - loaded on startup • KDS logs We recommend having the KDS DB (on SQL Express) on the same computer that runs the KDS server.	MS SQL Express 2014 or higher
Kitchen Display Station	Windows executable (can run on same machine as Kitchen Manager service). It is possible to run multiple instances on same machine and/or on multiple machines with display stations that connect to the same service. The screen can be connected to a computer with a VGA display port or an HDMI port to the computer running the Kitchen Dis-	Windows 10 2 GB memory (4 GB preferred)

	play Station program. The computer running this program must be on the same network as the KDS server (can be a domain or a work group), so it can communicate with the Kitchen Service on the KDS server (Windows Service).	
Bump bars	Connects to a KDS computer to control a display station. Must return an alpha key or numeric keys.	USB interface

LS Central Installation

LS Central is distributed in a single executable file, *W1_LS_Central_ xx.x1.exe.*

Before you start the actual installation, you should run this application. This will uncompress the installation files and store them in an install-ation directory on your hard drive.
The default path for these files is *C:\LS Retail\LSxx.x.*

Prerequisites

Before installing the LS Central extension make sure:

- You have administrator privileges and necessary permissions and licenses to install Business Central, to add the LS Central exten-sion, and to create users.
- Microsoft Dynamics 365 Business Central is installed.
- Microsoft PowerShell is installed.
- The NavAdminTool module has been imported to the PowerShell session.

Additionally, if you are restoring the demo data backup make sure:

- You have a working knowledge of Business Central and Microsoft SQL Server, including how to restore a SQL database backup.

Adding the LS Central Extensions to an Existing Database

Follow these steps to add the LS Central System App and LS Central extensions to Business Central:

- Install the server toolbox
- Install the Data Director

To publish the extensions to the database, run this in PowerShell:

```
Publish-NAVApp -ServerInstance "BC180" -Path 'C:\LS
Retail\LS18.0\Application\LS Central\LS Retail_LS Cen-
tral_System_App_18.0.0.0.app'
Sync-NAVApp -ServerInstance "BC180" -Name "LS Central
System App"

Publish-NAVApp -ServerInstance "BC180" -Path 'C:\LS
Retail\LS18.0\Application\LS Central\LS Retail_LS Cen-
tral_System_App_18.0.0.6827.app'
Sync-NAVApp -ServerInstance "BC180" -Name "LS Central
System"
```

To install the extension:

1. Open the **Setup & Extensions** page.
2. Select **Install** for the LS Central extension.

You can also run the publish and install steps in PowerShell by running this script:

```
Publish-NAVApp -ServerInstance "BC180" -Path 'C:\LS
Retail\LS18.0\Application\LS Central\LS Retail_LS Cen-
tral_System_App_18.0.0.0.app'
Sync-NAVApp -ServerInstance "BC180" -Name "LS Central
System App"
Install-NAVApp -ServerInstance "BC180" -Name "LS Cen-
tral System App"

Publish-NAVApp -ServerInstance "BC180" -Path 'C:\LS
Retail\LS18.0\Application\LS Central\LS Retail_LS Cen-
tral_System_App_18.0.0.6827.app'
Sync-NAVApp -ServerInstance "BC180" -Name "LS Central
System App"
Install-NAVApp -ServerInstance "BC180" -Name "LS Cen-
tral System App"
```

Restoring the LS Central Demo Database Backup

1. Start the Microsoft SQL Server Management Studio, and connect to the database server.
2. Restore the *ls-central-release.bak* backup file, found in the **Application** folder in the installation directory.
3. Install the toolbox by running the *LS Central Service Components.exe*, found in the **Setup** folder in the installation directory.
4. Install the Data Director.
5. Open the Business Central Administration client, and define a service which connects to the database created.
6. Open the Business Central web client, and add the current user, followed by any additional users.
7. Restart the service.

The installation is done. You can now start to use LS Central.

Uninstalling the LS Central Extension

Follow these steps to uninstall the LS Central and LS Central System extensions from Business Central:

1. Open the **Setup & Extensions** page.
2. Select **Uninstall** for the LS Central extension.
3. Select **Uninstall** for the LS Central System App extension.

To unpublish the extension from the database, run this script in Power-Shell:

```
Unpublish-NAVApp -ServerInstance "BC180" -Name "LS Central"
Unpublish-NAVApp -ServerInstance "BC180" -Name "LS Central System App"
```

You can also uninstall (steps 1 to 3) through PowerShell by running this script:

```
Uninstall-NAVApp -ServerInstance "BC180" -Name "LS Central"
Uninstall-NAVApp -ServerInstance "BC180" -Name "LS Central System App"

Unpublish-NAVApp -ServerInstance "BC180" -Name "LS Central"
Unpublish-NAVApp -ServerInstance "BC180" -Name "LS Central System App"
```

LS Central Help Installation

Remote setup

LS Retail hosts the online help on a public server at https://help.ls-central.lsretail.com.

To add the LS Central help website to the Help & Support page in Business Central, set the BaseHelpUrl in navsettings.json to `https://help.lscentral.lsretail.com` as described in https://docs.microsoft.com/en-us/dynamics365/business-central/dev-itpro/deployment/configure-help#online-library

Local setup

Note: As of version 18.0, the Microsoft Dynamics 365 Business Central Help Server has been discontinued. The Business Central online help is available via links on the LS Central Home page and side navigation menu, and directly via this link.

LS Data Director Installation

Prerequisites

There are a few things, as listed below, that you need to keep in mind before setting up the Data Director on Business Central with LS Central.

- You should have a solid understanding of the TCP/IP networking protocol. You should know how IP addresses can be assigned and be able to use tools such as ping and tracert. You must be able to assign names to an IP number, preferably using a DNS server or the local hosts file.
- You should know how to work with Microsoft Windows Services and view events from the Event Log.
- Make sure that you have the necessary permissions to install programs and be able to start and stop services on the computer running the DD service.
- You should have a working knowledge of Microsoft Business Central.
- When using CFront, make sure that you have a Dynamics NAV License file (.flf) that allows you to access the DD application objects within Dynamics NAV.
- The **DD Web Service** is a Windows Communication Foundation (WCF) service that is hosted in IIS and requires IIS version 7 and above. Those who want to install DD Web Service must therefore be familiar with IIS.

Security considerations

Most data communication tools like the DD will need access to your organization's databases in order to move data between them. For security purposes, you should restrict the DD's access to the database tables that it needs to read or write into. This is important because, unlike regular database users, the DD can effectively access any table in your database, as it is not restricted to viewing data via a graphical user interface. By choosing not to restrict the DD's access to your database, you risk giving users access to data that they should not have access to.

Most database systems allow database administrators to set user access permissions relatively easily. It is strongly recommended that you spend some time specifying access permissions for the user account that the DD will use to access your database. For example, the Business Central security system provides a powerful feature that limits a user's access to database tables only, making the user account useless to regular users since they do not have access to the database's graphic user interface. Similar features can be found in most other database systems. If this feature is available, it should preferably be used for all user accounts that the DD uses.

To install the Data Director

DD3 Runs on Framework 4.7 so you need to install it before you install DD3.

1. Install DD3 by running *LS.DataDirector.3.02.xx.Setup.exe*.
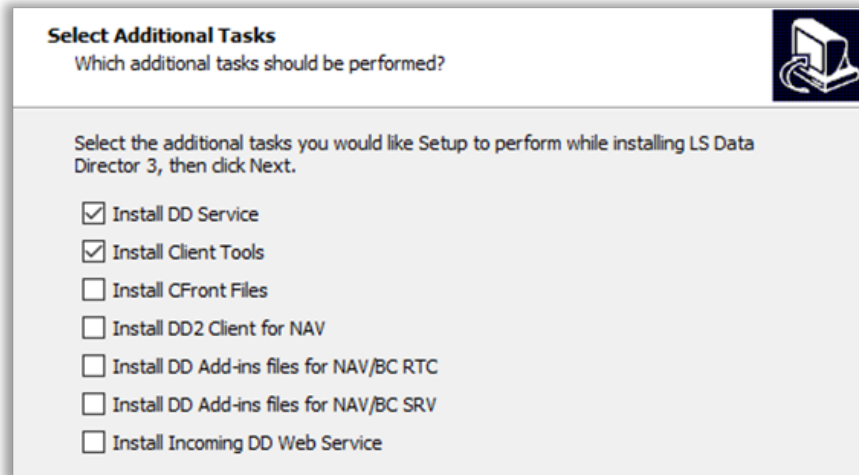
2. If you clear all check boxes, only DD Client files are installed without the Client Tools. These are the files needed for LS Nav, LS Central, or LS One to communicate with the Data Director:

Task	Description
DD Service:	DD Service that handles all the data transfer. If you are installing only client controls for LS Retail products such s LS Central or LS One, to be able to connect to DD Service on another host, then clear this check box and only the Client files will be installed.
Client Tools:	Configuration Tool and Monitoring Tools for Data Director. If you do not want the tools to be available on this host, then clear this check box. DD can be configured and monitored remotely.
CFront Files:	Files required to make a connection to the NAV Database. If you are running an upgrade and have manually updated the CFront files to match your NAV setup, then clear this check box so that the DD does not overwrite the current files.

DD2 Client for NAV:	If you are installing controls for the LS Nav host and the CodeUnits, use either CFront Controls or DD Controls from the previous version of DD (DD2), then select this option. This installs all the DD2 Client files that are needed for NAV to communicate with DD. There is no need to install *LSRetailDDClient-2.28.x.exe* anymore. If you already have DD2 installed on the host, there is no need to select this option.
DD Add-ins files for NAV/BC RTC:	Add DD Client files to the Add-ins folder for latest NAV/BC RTC Client. If there are more than one version of NAV/BC installed, only the newest version will get the files. You must copy the files manually to the Add-ins folder for other versions.
DD Add-ins files for NAV/BC SRV:	Add DD Client files to the Add-ins folder for latest NAV/BC Middle Tier Service.
Install Incoming DD Web Service:	Installs Web Service support to IIS to accept Job Requests via Web Services. (See IIS Setup and Configuration on how to prepare IIS before install.)

If the install cannot find the default install path for NAV/BC, it will bring up selection windows with the install path where NAV/BC is located, both for RTC and Service.

- **To install DD with NAV 2009 or older:**
  Select DD Service, Client Tools, CFront Files and DD2 Client for NAV.

- **To install DD with NAV 2013 or newer (and not support for older NAV):**
  Select DD Service, Client Tools and DD Add-ins files for NAV/BC, both for RTC and SRV.

- **To install DD with OnPrem LS Central 16.x or newer:**
  Select DD Service, Client Tools and DD Add-ins files for NAV/BC SRV.

- **To install DD with Cloud LS Central 16.x or newer:**
  Select DD Service, Client Tools, DD Add-ins files for NAV/BC SRV and Install Incoming DD Web Service.

- **To install DD with LS One Site Manager:**
  Select DD Service and Client Tools.

- **To install DD Client files for POS that will not include DD Service:**
  Clear all check boxes and only the client files will be installed.

Depending on what options you select, changes to DD Configuration will be made to match the selection if this is a new installation.

DD3 can also run with DD2 Service installed, if you want to have both DD2 & DD3 on same computer, you need make sure that either one of them is running or change the Incoming Port on DD2 to another than the Default port 16750.

No configuration is needed to start up DD3 with default settings. After install, the DD will start up with a default configuration. If DD should connect to database with a trusted connection, you need to add Login to the DD Service to log on as a user that has access to read and write the data onto the database.

Open the Configuration Tool and upload the DD license, a demo DD license is installed when the DD is installed. If the DD is connected to NAV 2009 or older, upload the NAV Licenses file also under App Config tab.

Note: At least one DD Web Service needs to be installed in a network where jobs are going to be distributed. LS Central that runs the Scheduler job has to have access to that IIS Service where DD Web Service runs. DD Web Service then has to have access to any Source DD host that jobs will be sent to. No Web Service is required on Destination hosts.

Note: When installing DD for LS Retail NAV 6.x or older you need to change the Path to CFront in the **Distribution Location** card to point to the new folder where CFront is installed. The path is different from the default path that comes with the NAV standard data.

For install options via command line see Install Options on page 15

To test if DD Web Service is running without error, type in a browser:

http://localhost/DDWebService/ddjson.svc/ping

If everything is working correctly, you get an OK as reply.

Supported Systems

Operating systems

The following operating systems are supported and tested:

- MS Windows Server 2016, 2019
- MS Windows 10

Both IPv4 and IPv6 are supported for all operating systems

The following operation systems are supported but not tested:

- MS Windows 8
- MS Windows Server 2008, 2012, 2014

Database servers

The following databases are fully supported and tested:

- MS Dynamics NAV 2018, BC 365
- MS SQL Server/Express 2016, 2019

The following databases are supported but not tested:

- MS Dynamics NAV (4.01, 4.02, 4.03, 5.01, 6.00, 6.01)
  Note: FOB Replication (Import/Export) does not work with NAV
  version 4.xx
- MS Dynamics NAV 2009, 2013 (R2), 2015, 2016, 2017
- MS Dynamics AX 2009/SP1, 2012, 2012 R2
- MS SQL Server/Express 2000, 2005, 2008, 2012, 2014
- MySQL Server
- Any Database that supports either ODBC or OleDB connection

LS Retail back-end systems

The following back-end systems are fully supported:

- LS Nav 11.x (2018)
- LS Central 14.x, 15.x, 16.x, 17.x (BC 365)
- LS One 2017, 2019

The following back-end systems are supported, but not tested:

- LS Retail Store Controller 2.x (LS Retail Suite 20xx)
- LS One 2018
- LS Retail NAV 4.x, 5.x, 6.x, 7.x, 8.x, 9.x, 10.x
- LS Central 13.x (BC 365)
- LS Retail AX 2009

Install and Configure IIS

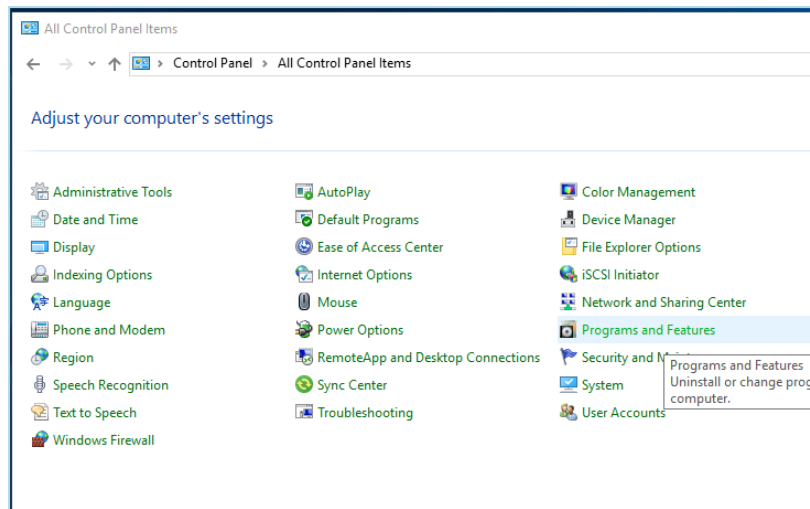Follow these steps to turn on IIS 8 on Windows 8. The procedure is similar on other versions of Windows.
Tip: A quick Google search will give you multiple results on how to install IIS on your machine.
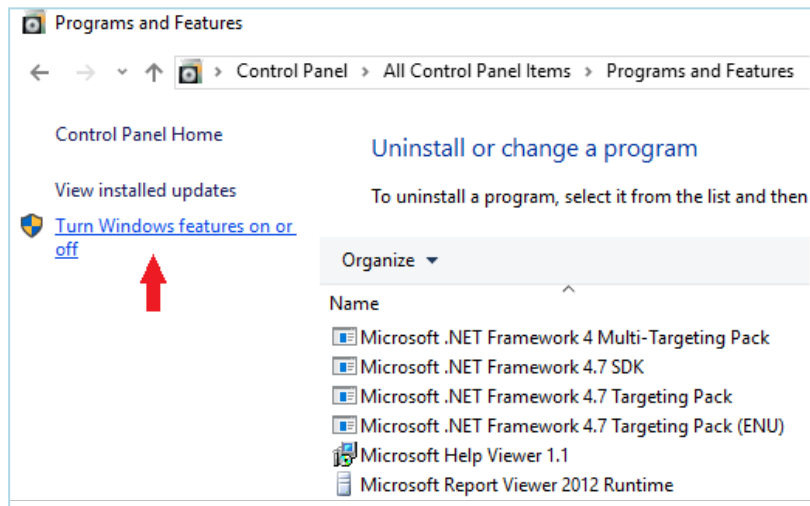http://www.iis.net/learn/install/installing-iis-7/installing-iis-on-windows-vista-and-windows-7

On Windows 10

1. Open the Windows Control Panel (right-click the **Start** button in the bottom-left corner and select **Control Panel**).

2. Select **Programs and Features**:

3. Click **Turn Windows features on or off**:

4. In the **Windows Features**, select the check boxes shown in the below image:
   - 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

5. Click **OK**.

If you completed step 4 successfully, you should be ready to run the *LSCommerce.Service.Central.Setup.4.xx.exe* setup to create the WCF web service.

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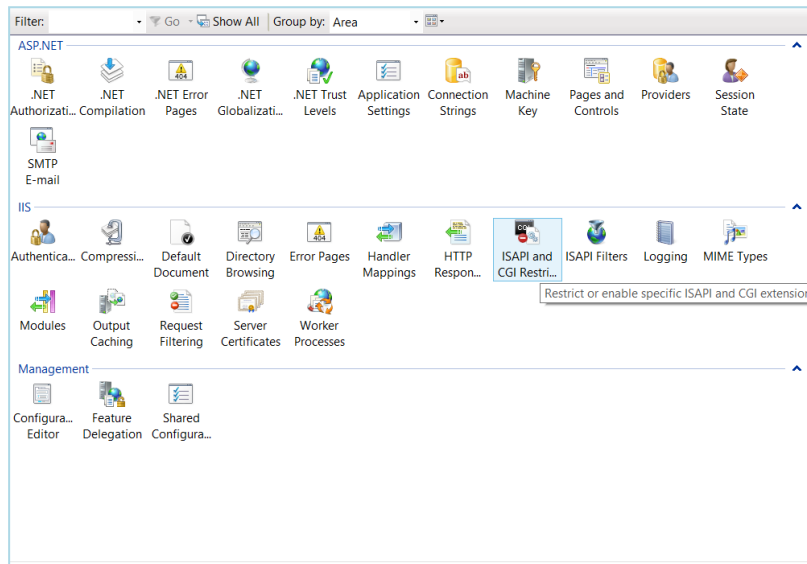   - **ASP.NET**

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. In IIS, select **ISAPI and CGI Restrictions:**

3. Right-click ASP.NET v4, and click **Allow**:

Install Options

LS Data Director Install can be executed with parameters to make use of a scripted installation. You can find details of what options are available here:

http://unattended.sourceforge.net/InnoSetup_Switches_ExitCodes.html

The available tasks are:

- srvfiles: DD Service [Default]
- clitools: Client tools (Config & Job Monitor) [Default]
- cfront: CFront Files
- dd2files: DD2 Client files
- navcli: Add-ins files for NAV/BC RTC
- navsrv: Add-ins files for NAV/BC SRV
- web: Install Incoming DD Web Service to IIS

- Install DD in silent mode with Service and Client Tools:
  /VERYSILENT /SUPPRESSMSGBOXES
- Install Service and Client Files only
  /VERYSILENT /SUPPRESSMSGBOXES /TASKS-
  S="srvfiles,!clitools"
- Install only Client Files, without Service and Client Tools
  /VERYSILENT /SUPPRESSMSGBOXES /TASKS-
  S="!srvfiles,!clitools"
- Install Service, Client Files & Tools and add BC Addins
  /VERYSILENT /SUPPRESSMSGBOXES /MERGETASKS-
  S="navcli,navsrv"

To add path for NAV/BC installation folders, for example if Nav/BC is installed on Docker, and path cannot be found in the Registry, add -NAVSRV "<path>" -NAVCLI "<path>"

It is possible to change default DD Configuration values during install-ation:

- Create *ddconfig.xml* file with the modified values, put the file into the bin folder where DD will be installed, and after installation is done, DD will check for this file before creating the default con-figuration file, and modify those values from the xml file.

Note: This file must be in place before the first start of DD, as DD will only look for this file if default configuration values have not yet been created.

Sample of *ddconfig.xml* file that will set the **Alias** value and change Decimal fix for Database process to BIG and activate debug:

ddconfig.xml   Copy

```
<DDConfig>
        <BaseConfig>
                <Aliases>MyDD</Aliases>
        </BaseConfig>
        <AppConfig>
                <Program Port="3">
                        <Debug>15</Debug>
                        <Param>
                                <DecFix>BIG</DecFix>
                        </Param>
                </Program>
        </AppConfig>
</DDConfig>
```

LS Commerce Installation

The topics in this section provide full instructions on how to install a local instance of the LS Commerce Service and how to connect the LS Commerce Mobile Apps to the service, if apps will be used.

Note: The instructions assume that LS Central has been installed with LS Central Web Services up and running. See Before Installation below for information on how to prepare LS Central for LS Commerce.

You can download the LS Commerce Suite installation files from the [LS Retail Partner Portal](#).

The LS Commerce Server installation includes the following install files:

- *LSCommerce.Service.Central.Setup.4.x.exe* - used with LS Central
- *LSCommerce.Service.One.Setup.4.x.exe* - used with LS One
- *LSCommerce.WinService.Setup.4.x.exe* - used to send emails or notification to the Loyalty App.

The Service setup creates a new LS Commerce Database on SQL Server (default name *LSCommerce*) and adds LSCommerceService to IIS (default name *LSCommerceService*). These default names are used throughout these installation instructions.

See also

Before Installation

Before installing the LS Commerce Service make sure you have the following:

1. LS Central has been set up and is running. The LS Commerce Service setup needs access to LS Central head office data that can either be running in a SaaS setup or on-premises.
2. Windows user name and password used for the Windows Authentication against the LS Central Web Service.
3. URI to the LS Central Web Service.
   - Create and test this URI before the install and be sure it works.
   - Keep a copy of this URI, you will need it during the install.

4. Running IIS Server on the machine that the LS Commerce Service will be installed on. LS Commerce Service is a WCF application and the *.svc* must be mapped in IIS (in the Handler Mappings).

See also

[Configuring Web Services for LS Central on-premises](#)

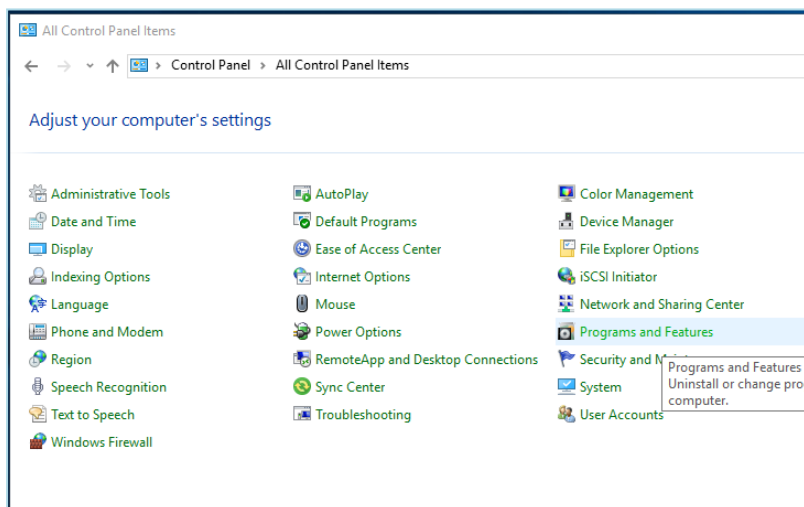[Configuring Web Services for LS Central in SaaS](#)

Install and Configure IIS

Follow these steps to turn on IIS 8 on Windows 8. The procedure is similar on other versions of Windows.
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http://www.iis.net/learn/install/installing-iis-7/installing-iis-on-windows-vista-and-windows-7
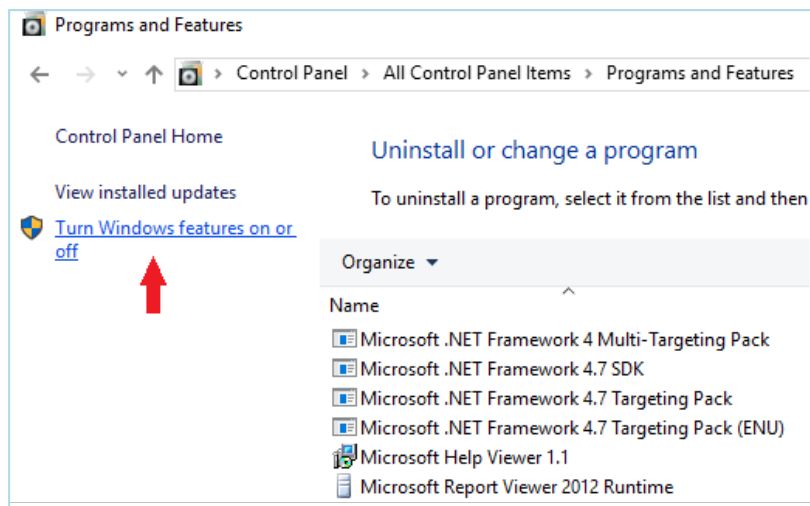
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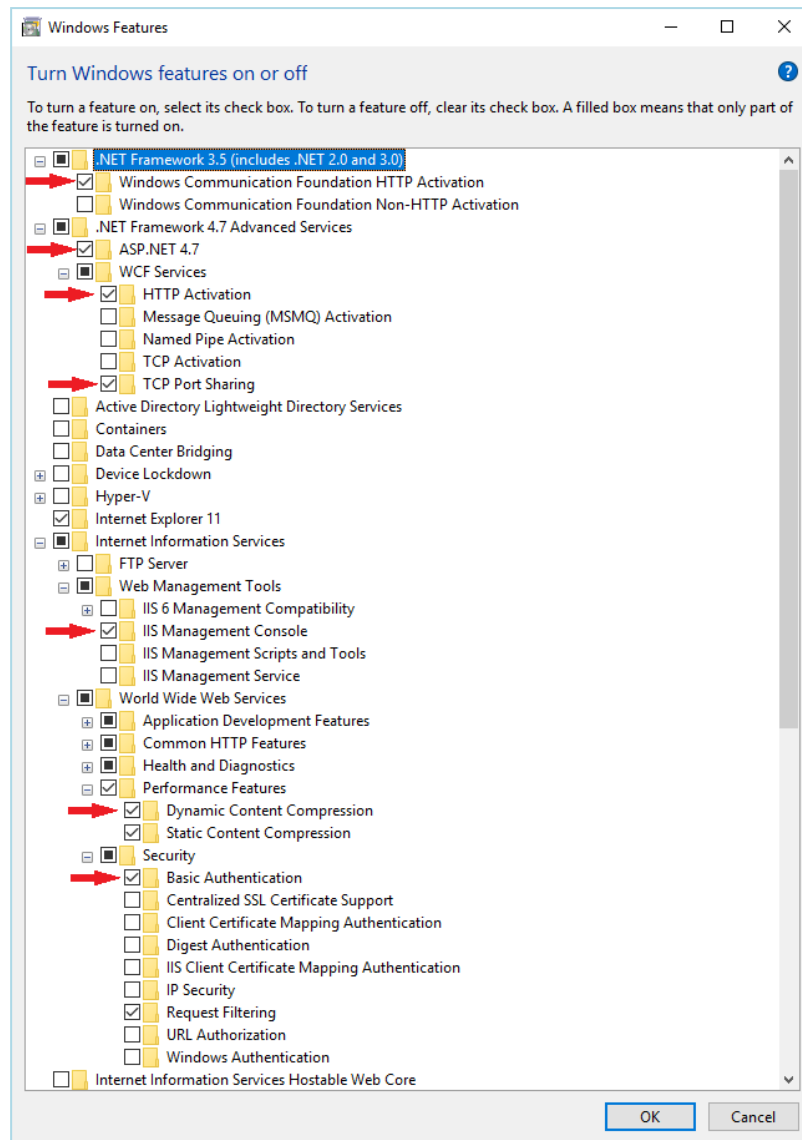2. Select **Programs and Features**:

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   - Internet Information Services
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     - **World Wide Web Services**
       - Dynamic Content Compression
       - Basic Authentication

5. Click **OK**.

If you completed step 4 successfully, you should be ready to run the *LSCommerce.Service.Central.Setup.4.xx.exe* setup to create the WCF web service.

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

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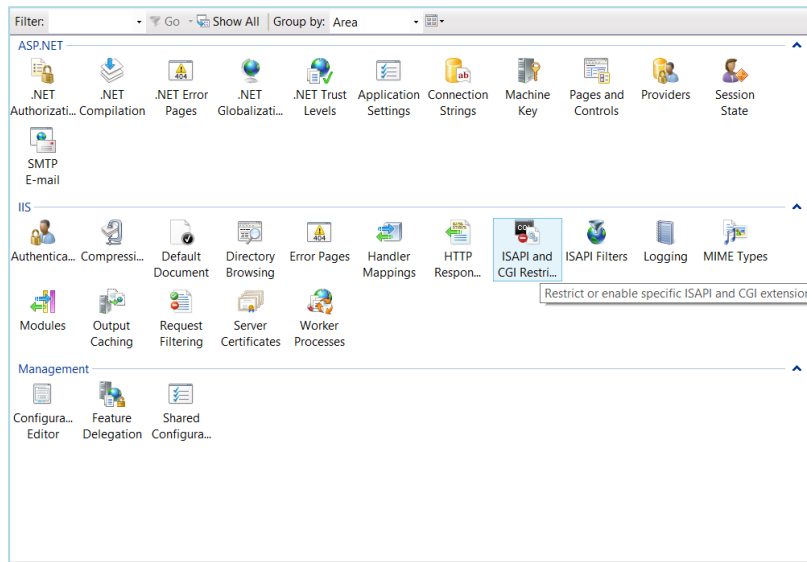   - **ASP.NET**

is selected (inside Windows Features).

The final step is to activate and allow the newly installed .NET 4.7 framework inside IIS:
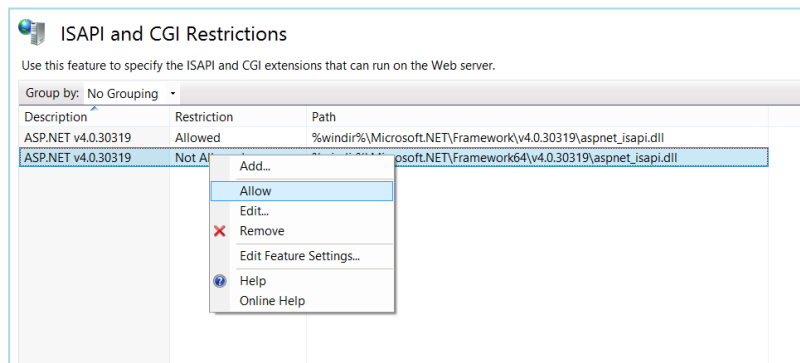
1. Start by looking for and opening Internet Information Services:

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

3. Right-click ASP.NET v4, and click **Allow**:

Install LS Commerce Service

The installation process requires the following information:

- SQL Server instance (for example, *mySqlServer* or *mySqlServer-\MSSQLSERVER*) used to create the LS Commerce database.
  - Default collation used is: *COLLATE Latin1_General_CI_AS*. If another collation is to be used, create a new LS Commerce Service database with the required collation in SQL Management Studio. The setup uses the existing database.

- LS Nav/Central SQL Server instance (for example, *MySQLServer*)
- LS Nav/Central SQL database name (for example, *LSCentral*)
- LS Nav/Central company name (for example, *CRONUS - LS Retail*)
- URL to LS Nav/Central web service (*http://-localhost:7047/BCxxx/WS/CRONUS - LS Central/Codeunit/RetailWebServices*)
- Windows user name and password used for the Windows Authentication against the LS Nav/Central web service.

Run the setup program *LSCommerce.Service.Central.Setup.4.x.exe*.

The setup creates the LSCommerceService service in IIS and the LS Commerce database. You can run the setup multiple times to update and to recreate and override objects in the existing LS Commerce database.

Installation options

Select check boxes depending on the type of installation. For updating an existing installation, clear all check boxes, and only the files will be updated but the configuration and database will stay the same.

Note: When you are switching LS Commerce Service modes (for example single-tenant to multi-tenant), uninstall LS Commerce Service and install again with the new settings.

Installation options:

Create an LSCommerce SQL Server database

- Create LS Commerce Database. Select this check box to update the database. (**Note:** when updating, all existing data will be deleted.)

- ◦ **Use Multi-Tenant Mode** enables multi-tenancy to use one LS Commerce Service to communicate with multiple LS Central instances. Configurations for LS Central tenants are configured in the Commerce Admin Portal instead of the usual *AppSettings.config* file. See "[Commerce Admin Portal](#)" in the LS Central Help for more information.
  - ◦ **Use WS Mode for LS Central in SaaS** is used when LS Central is in SaaS and it only uses LS Central Web Services to retrieve data. No Direct access to LS Central database.
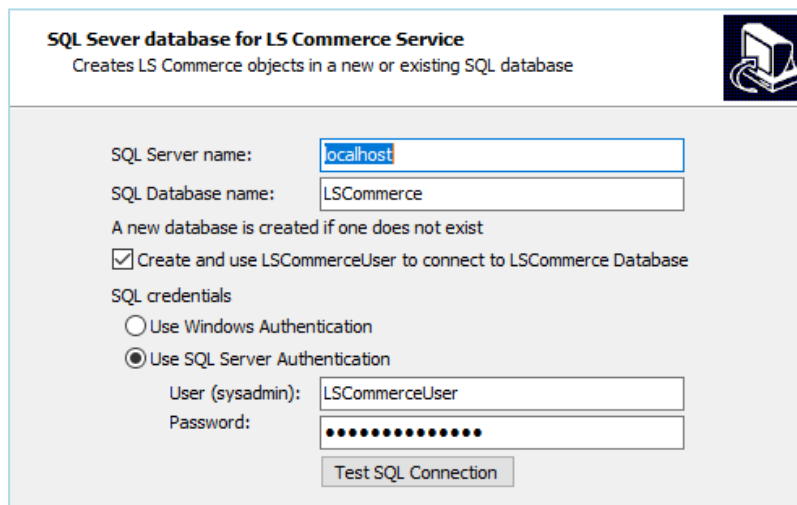
Configure LS Nav/Central SQL parameters

- Configuration needed to connect to LS Central SQL Database. Not used in SaaS or Multi-Tenant mode.

Create LSCommerceService under IIS

- Must run locally on the IIS machine.
- Creates a new Web Application called LSCommerceService.
- Creates a new application pool called LSCommerceServicePool. The LSCommerceService worker process runs under the identity set in this application pool.

SQL Server database for LS Commerce Service

This will create an LSCommerce Database.

- Type in an SQL Server name where the database will be located, and either use the default database name or change it.
- Select the **Create and use LSCommerceUser to connect to LS Commerce Database** check box to let setup create LSCommerceUser with default password LSCommerceUser and use that user as login for the LSCommerce database. If this check box is not selected, the SQL credentials will be used to connect to LSCommerce database.
- SQL credentials are used to create the database and run other scripts during the setup process. This user has to be **sysadmin** on

the SQL Server to be able to create the database. If Windows Authentication is used, the user logged in to the host and running the setup needs to be *sysadmin* on the SQL Server.

The **Test SQL Connection** button tests the SQL credentials provided for the SQL Connection.

LS Central SQL Server Database used by the LS Commerce Service

SQL Server connection setting used to connect directly to on-premises LS Central Database.

- **SQL Server instance**
- **SQL Database name**
- **Company name**
- Select the appropriate LS Central version range depending on which version you are connecting to.
- Choose the **Log on credentials** to use to access the LS Central Database. The user has to have read access to all the tables needed to get data from.

The **Test SQL Connection** button tests the SQL credentials provided for the SQL Connection.

IIS Web Application setup

IIS Web Application Service settings for where LS Commerce Service will installed.

- **Web Site name**: The IIS Web Site to which LS Commerce Service will be added.
- **Web Service name**: Name for LS Commerce Web Service. If you are installing more than one instance of LS Commerce Service, choose a different name for each instance.

LS Central Web Service configuration.

- **Web Service URL**: Web Service URL for RetailWebServices that you created in LS Central. See Before Installation on page 17.
- **User name**: For on-premises, enter a valid LS Central user with access to use the Web Service. For SaaS setup, enter the user name used when creating the Web Service URI
- **Password/WebKey**: For on-premises, enter the password for the LS Central user. For SaaS setup, enter the Webkey from the admin user.

After Installation

Single-tenant

After a successful installation, the next step is to validate the data entered during the installation. Configuration for Single-tenant is stored in the *Appsettings.config* file, located where LS Commerce Service is installed.

Multi-tenant

After a successful installation, the next step is to create the first tenant, see . When you have set up the first tenant, your next step is to validate the tenant configuration.

Note: LS Commerce Admin Portal is only used for Multi-tenant configurations; it is not needed in a Single-tenant setup.

LS Central in SaaS

1. Set correct Protocol for LS Commerce to communicate with LS Central in SaaS.
2. Open the *Appsetting.config* file.
3. Find the following line in this file:
   ```
   <add key="BOConnection.Nav.Protocol" value=""/>
   ```

The default value is **Ss13** but you have to know which value to fill in here for your cloud instance.

Tip: If you are not sure, try one of the valid options **Ssl3 - Tls - Tls11 - Tls12 - Tls13** and see which one works. The most common option for SaaS is **TLs12**.

See also

[LS Central Configuration](#)

LS Commerce Service Running on IIS below

SQL Server Database on the facing page

LS Commerce Service Running on IIS

You can "ping" the LS Commerce Web Service to see if the WCF web service is working properly. First, ping them from a browser on a laptop (Chrome or Firefox recommended), and later from a browser on your mobile phone.

The ping checks the connection to LS Commerce Service and LS Central SQL Server Databases and LS Central Web Service.

- http://localhost/LSCommerceService/appjson.svc/ping
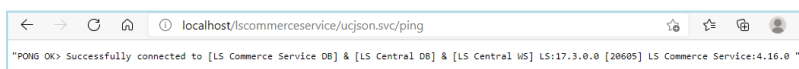
If the ping is successful, a "pong" reply is returned. After a successful ping, an LS Commerce App should be able to connect with the web service. If the ping returns an error, see "[Troubleshooting Communication Between LS Nav/Central and Commerce](#)" in the LS Central Help.

In Windows Explorer, open *C:\LS Retail\LSCommerce\LSCommerceService*. The *\Sql* folder has all the sql scripts used and the *\logs* folder has the *logfile.txt* which is extremely useful.

You can change the values you entered during the setup in the *AppSettings.config* file or in the Commerce admin portal, depending on the setup.

The connection strings to LS Commerce and LS Central SQL databases are stored in the *AppSettings.config* file (see "LS Commerce Service Configuration" in the LS Central Help). You can control the error logging with the *NLog.config* file (see "Logging Configuration" in the LS Central Help).

Note: If you change these configuration files, you must restart the LS Commerce Service web service. You should not change the *web.-config*, unless you are using SSL.
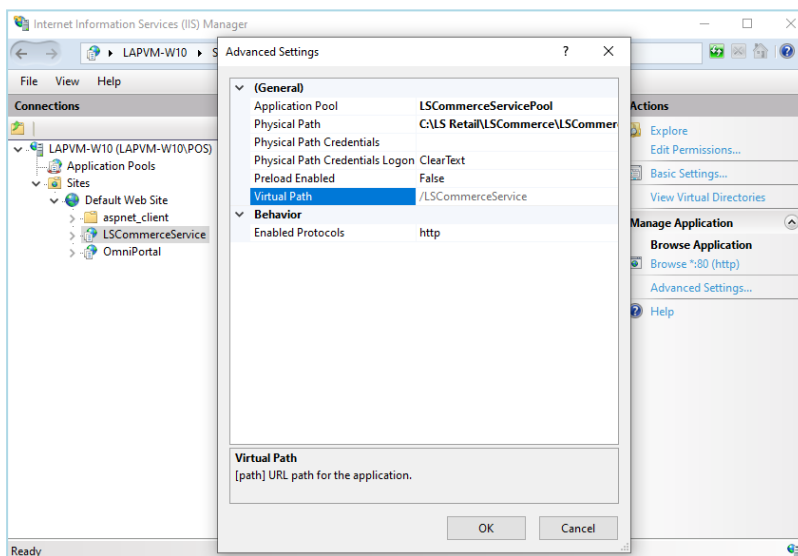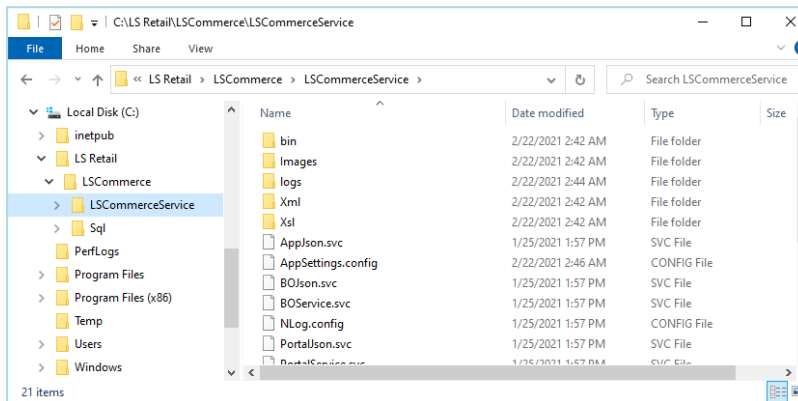
SQL Server Database

A new LS Commerce SQL Database is created during the LS Commerce Service Setup.

The setup creates the SQL Server login **LSCommerceUser** with password **LSCommerceUser**, and grants this user data reader and data writer privileges in the LSCommerce database.

If you have a problem logging in with this LSCommerceUser, you can configure the SQL Server with SQL Server Authentication disabled. The setup will display a warning, but allow the setup to continue. If the **SQL**

Server and Windows Authentication mode option is not enabled, you cannot use the LSCommerceUser.

To enable this option:

1. Open the SQL Management Studio.
2. Open the Server Properties.
3. Restart, see images below:
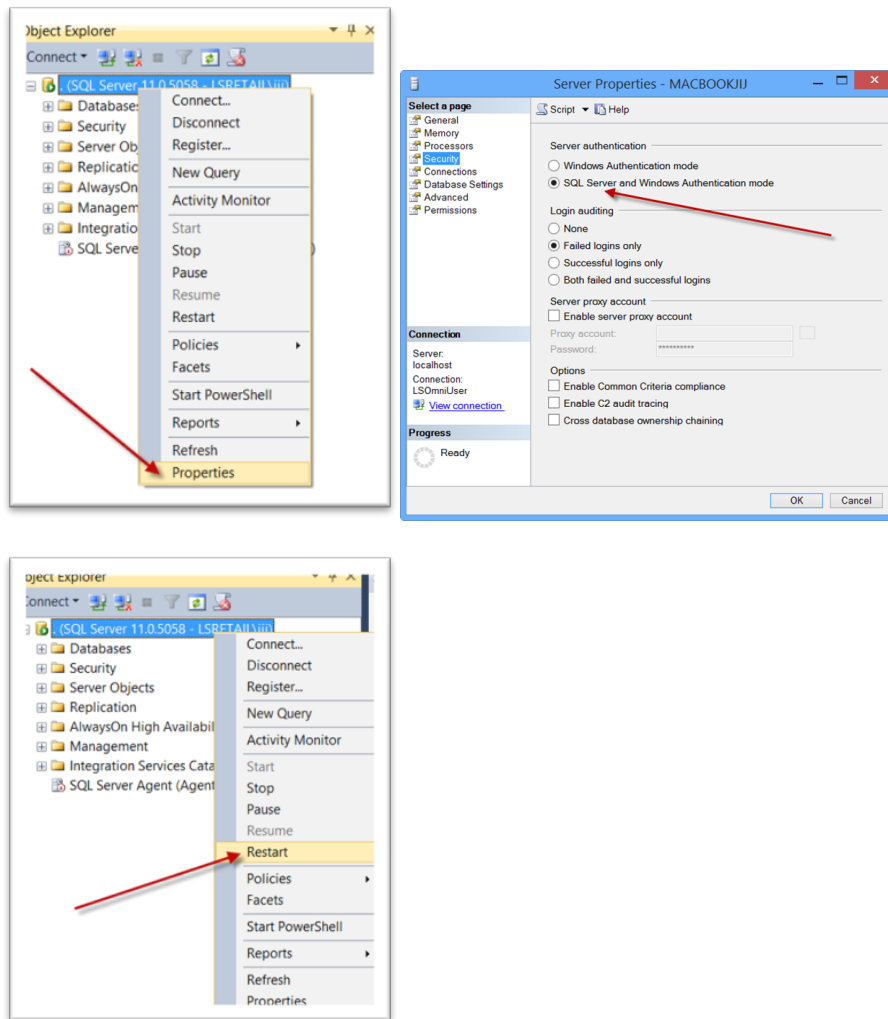
The SQL Server connection string is stored in: *C:\LS Retail\LSCommerce\LSCommerceService\AppSettings.config*

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

Note: In production, you can change this connection string to use Windows Authentication or any other SQL Server login/password.

For LS Commerce Service setup with LS Central SQL access

LSCommerceUser must also have read access to LS Central Database as LS Commerce will access LS Central database to pull some data

from it.

Note: In a testing and demo environment, you can give the LSCommerceUser sysadmin access to bypass all restrictions. Do **not** do this in a production environment.

Setup Command Lines

These command line parameters can be used with the setup to run it in Silent mode.

```
Command     Default Value          Description
-------------------------------------------------------------------
-Cmd        false                  User Command line mode (true)
-NavX       true                   Configure LS Central SQL parameters
-NavSrv     localhost              LS Central SQL Server instance
-NavDb      LSCentral              LS Central SQL Database name
-NavComp    CRONUS - LS Central    LS Central Company name
-NavUsr     LSCommerceUser         LS Central SQL User name
-NavPwd     LSCommerceUser         LS Central SQL User password
-NavWaun    false                  Use Windows Authentication for LS Central SQL
-NavVer     2                      LS Central Version, 0=<15 1=15-17.4 2=17.5>

-SqlX       true                   Create LSCommerce SQL Server database
-SqlDb      LSCommerce             LSCommerce SQL Database name
-SqlSrv     localhost              LSCommerce SQL Server name
-SqlUsr     LSCommerceUser         LSCommerce SQL User name (used to create Db)
-SqlPwd     LSCommerceUser         LSCommerce SQL User password
-SqlCrUsr   true                   Create LSCommerceUser and use for in Constr
-SqlWau     true                   Use Windows Authentication for LSCommerce SQL
-MultiX     false                  Use Multi-Tenant Mode
-WSX        false                  Use Web Service Mode

-IisX       true                   Create LSOmniService WCF service under IIS
-IisSite    Default Web Site       Web Site name
-IisSrv     LSCommerceService      Web Service name
-IisUrl                            LS Central Web Services Url
-IisUsr                            LS Central WS User name
-IisPwd                            LS Central WS User password
```

Samples:

```
LSCommerce.Service.Central.Setup.4.4.0.exe /VERYSILENT
/SUPPRESSMSGBOXES -Cmd true -SqlSrv localhost -SqlUsr
LSCommerceUser -SqlPwd LSCommerceUser -NavSrv loc-
alhost -NavDb BC170 -NavComp "CRONUS - LS Central" -
NavUsr LSCommerceUser -NavPwd LSCommerceUser -IisUsr
super -IisPwd xxx
```

```
LSCommerce.Service.Central.Setup.4.x.exe /VERYSILENT
/SUPPRESSMSGBOXES -Cmd true -NavX false -SqlX false -
IisUsr dd -IisPwd dd.12345
```

```
LSCommerce.Service.Central.Setup.4.x.exe /VERYSILENT
/SUPPRESSMSGBOXES -Cmd true -NavX false -SqlX false -
IisX false
```

LS Hardware Station Installation

- Run the *LS Hardware Station.exe*, found in the **Setup** folder in the installation directory.

See "How to: Set Up LS Hardware Station" and "Video Tutorial: Setup" in the LS Central Help for more information.

LS KDS Installation

The Kitchen Display Service works with LS Hospitality and LS First Hospitality systems.

This topic focuses on the installation and configuration for the LS Hospitality system.

Note: The **KDS** does not work with the **Offline Call Center**.

System requirements

Kitchen service machine

- Software
  - Operating system: Windows 7.1 or newer
  - Software: .NET Framework 4.5 or newer
- Hardware: Minimum requirements
  - Processor: 2 GHz or faster
  - 2 GB RAM
  - Hard disk: 5 GB free space

Display station machines

- Software
  - Operating system: Windows 7.1 or newer
  - Software: .NET Framework 4.5 or newer
- Hardware: Minimum requirements
  - Processor: 1 GHz or faster
  - 500 MB RAM
  - Hard disk: 2 GB free space

LS Central KDS Web Service

- The KDS configuration is stored in the Dynamics Business Central database. The Kitchen Service calls the **LS Central KDS Web Service** to fetch the configuration. No database connection is needed.

KDS licenses

No license is needed for the KDS, it is included in the LS Central license.

System setup

Every KDS setup needs to go through the same basic steps. Get the latest version of the KDS setup files from the LS Retail Portal, the LS Central Downloads page (select the appropriate release folder, and there open the Setup xx.0 folder where the KDS setup files are located).

1. Install the Kitchen Service application.
2. Install Display Station application on all Display Station machines.
3. Be sure to insert the appropriate default data before starting to configure the layout. See Insert default data.
4. Configure the following layout in the LS Central to get a functioning KDS:
   - Display profile
   - Functional profile
   - Button profile
   - Visual profile
   - Style profile
5. Configure the Kitchen Service settings in LS Central.
   Note: First time use in LS Central requires initialization of the SOAP URL in the Kitchen Service Configuration.
6. Configure the Kitchen Service settings to communicate with LS Central with the LS KDS Utility and restart the Kitchen Service.
7. Configure the Display Stations startup on each computer, where they should run, with the LS Display Station Utility on page 36.

See samples for suggested KDS setup for single or multiple servers.

Install the Kitchen Service application

Complete the setup from the setup file **LS.KitchenService.Setup.exe**. This will install the Kitchen Service and start it.

To create a shortcut to the LS KDS Utility, select the check box **Create a desktop icon for the LS KDS Utility**, if it is not already selected. The KDS Utility is needed to configure the Kitchen Service with the URL to the Dynamics Business Central KDS Web Servvice and credentials, if necessary.

By default the service starts listening on TCP/IP port 17750 and waits for the correct configuration from the LS Hospitality system. If you are upgrading from a previous KDS version, the new version will use the same configuration file as the previous version. If the previous version was using the NAS it must be overwritten with the KDS Utility.

Install the Display Station application

Complete the setup from the setup file **LS.DisplayStation.Setup.exe**. This will install the Display Station. See How to: Set up a Display Station for more information.

Set the Kitchen Service Configuration

This configures the connection information for the Kitchen Service, so it can connect to the correct Business Central Web Service. And other settings for the KDS to run optimally.
See Kitchen Service Configuration for details on how to configure.

Configure the layout of the KDS

All data setup for the **KDS** system is done in the LS Hospitality system. All Display Station configurations are set there, as well as the Kitchen Service connection properties. See KDS profiles for a good starting point.

Data structures

Below you can see the data structures of the Kitchen Display System and their relations.
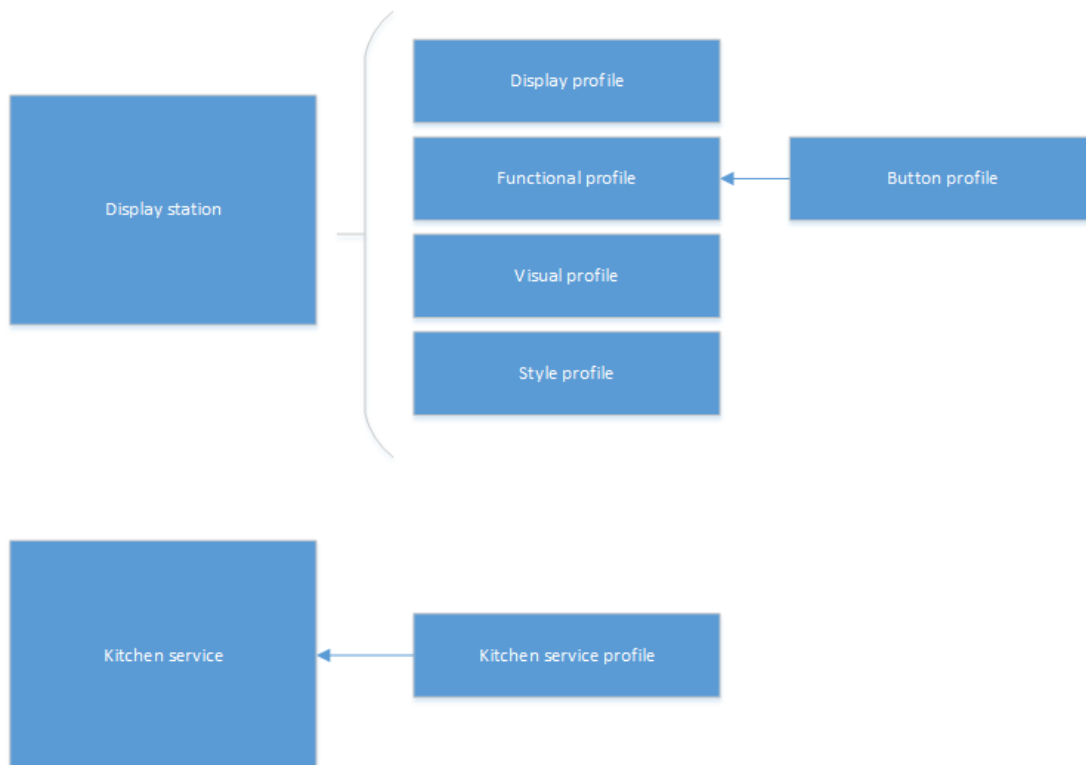
Initially, the KDS configuration in LS Central is empty. It can be populated with predefined demo data in an xml file, *KDS.xml*, which is included in the KDS installation package.
See Import demo data for details on how to import the demo data and insert the default lookup values for the style types and header/footer column types.
The demo data should help you understand the structure of the setup and be a good starting point for the real setup.

LS Central KDS Web Service setup

In order for the Kitchen Service to be able to communicate with the LS Hospitality system, it must know the URL of the Web Service it should connect to. The Web Services are run in the Dynamics Business Central service tier. See Kitchen Service Configuration for more information.

See LS KDS Utility below for information on how to set the Kitchen Service settings.

Troubleshooting

See KDS Troubleshooting if you are having problems getting the KDS to run properly.
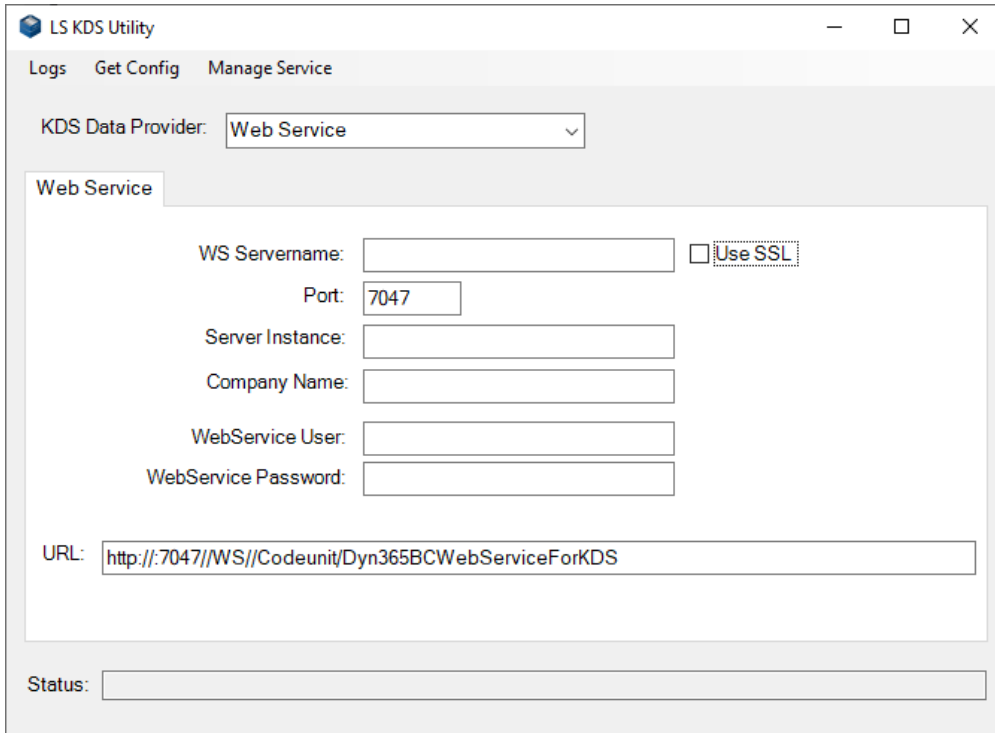
LS KDS Utility

The **LS KDS Utility** is a stand-alone program to manage the configuration of the **Kitchen Service** for various data providers. It is installed with the Kitchen Service setup.
LS Central version 13.04 and later use only a KDS Web Service to supply information to the Kitchen Service. The configuration cannot be sent from LS Central to the Kitchen Service.
The KDS Utility must be used to do that.

1. Start the **KDS Utility** by double-clicking the desktop shortcut, or locate it in the Start Menu, or as a third option locate the application file *C:\Program Files\LS Retail\Kitchen Service\LS KDS Utility.exe* and double-click it.
2. Start by setting the field **KDS Data Provider** to *WEB Service*. Only the necessary fields for connecting to the Web Service are then shown.
   If you are configuring for the first time, the window will look like this:

If not, the fields are populated with data from the Kitchen Service configuration file.

There are two ways to populate the fields:

- Fill in the fields with the correct data and the URL will be built up from that information
- Copy the SOAP URL from LS Central and paste it into the URL field. The other fields will be filled with the information from the URL string.

The correct URL can be located in the Kitchen Service configuration in LS Central.

Fields to be set are:

WS Servername	This is the host name of the server where the LS Central service tier runs.
Use SSL	Check this box if the web service is using **https** protocol.
Port	This is the port number which the Web Service listens on. This is usually *7047*, but can be different, depending on how the BC service tier is configured.
Server Instance	The name of the BC service tier. Usu-

	ally the value is *BC*.
Company Name	The name of the Company in LS Central.
WebService User	You can leave this field empty, if the Dynamics Business Central service tier is running on the same domain on-premises, and the Log On user on the Kitchen Service is set to a user with authentication to the Web Service. Otherwise, the field should be set with a BC user name which has access to the Web Service.
WebService Password	Password for the Web Service user if a user name is set.
URL	This is the SOAP URL. It can be found in the Kitchen Service configuration in the LS Hospitality system. The Kitchen Service will use this URL to connect to the BC Web Service when it starts up.

3. If changes have been made, click **Get Config** in the top menu to save the Kitchen Service configuration.
   The configuration will be saved in the file *C:\ProgramData\LS Retail\Kitchen\KitchenServiceConfig.config*.
   The utility then tries to connect to the KDS Web Service, and if it is successful it will show a dialog window with some of the information from the web service.
4. Restart the Kitchen Service, either by selecting **Restart Service** from the **Manage Service** menu item, or by starting Windows Services (Services.msc) and restarting it there.
5. There are 2 other options in the **Manage Service** menu item:
   Refresh Service tells the Kitchen Service to fetch the configuration from the web service without restarting the Kitchen Service. This is useful when the configuration of the KDS is changed in the back office.
   Restart all Displays tells the Kitchen Service to turn off all connected Display Stations and restart them.

Note: If there are errors, you can examine the **KDS Utility Log** by clicking **Logs** in the top menu and then **Show Utility Log**. The log file opens in Notepad.

Tip: You can also open the last Kitchen Service log file by clicking **Logs** in the top menu and then **Show KS Log**. This will open the log file in Notepad.
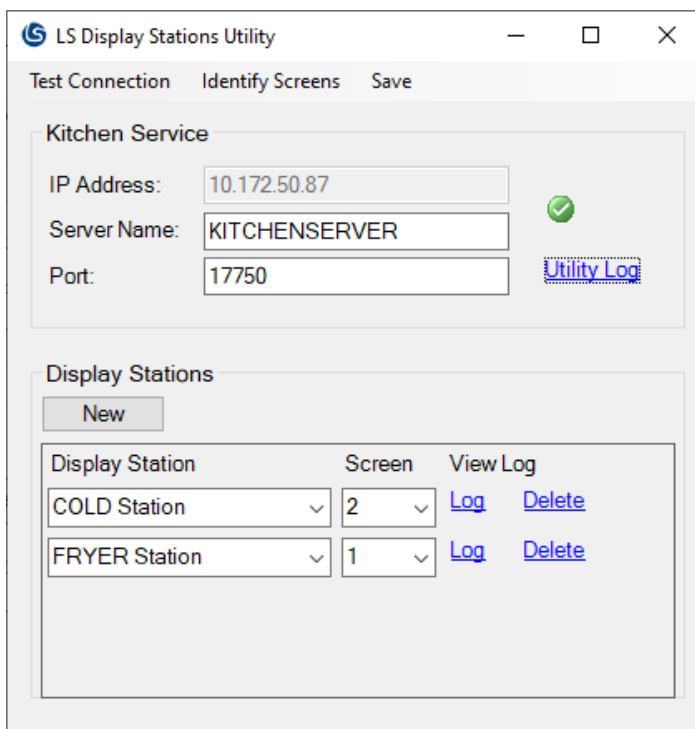
LS Display Station Utility

The **LS Display Station Utility** is a stand-alone utility program to manage the configuration of the **Kitchen Display Stations**. It makes it simple to add or remove Display Stations and it creates a shortcut to start up all the defined Display Stations on the computer.
Note: The utility only manages the Display Station on the computer it is running on. The utility is installed as part of the Display Station setup. A shortcut is placed on the desktop to start it up.

1. Start the **Display Station Utility** by double-clicking the desktop shortcut. Or locate the utility in the Start Menu in the LS Retail folder. The third option is to locate the application file *C:\Program Files\LS Retail\Display Station\LS DisplayStation Utility.exe* and double-click it or create a shortcut to it.

    A window like this opens:

    When the utility starts, it reads the Display Station configuration file and uses the information in it to connect to the Kitchen Service and get the Display Station information from it. If there is no connection, the basic information from the configuration file is shown. If there is no configuration file, for example just after a new installation, the default values for the service are only shown and must be set before continuing.

    The **Top menu** commands:

Com-	Description

mand

|	
Test Con-nection	This command starts by pinging the server specified in the **Server Name** field. If successful, the command tries to connect to the Kitchen Service. If unsuccessful, the command will only show the information from the Display Station configuration file in the **Display Stations** box.
Identify Screens	If there are more than one monitors connected to the computer, this command will show the screen number on each screen.
Save	Saves the new/updated configuration in the Display Station configuration file (*C:\ProgramData\LS Retail\KitchenDisplayStation\Con-figurations.xml*). A shortcut, to start the Display Stations, will also be created/updated on the desktop.

The Kitchen Service box:

IP Address	This is for information only. Shows the IP address of the computer running the util-ity.
Server Name	This is the host name of the server where the Kitchen Service runs. The name in this field is used when the utility connects to the Kitchen Service. **Note:** This must be a host name and **not** an IP address. The Kitchen Service insists on using host names to establish a proper connection between endpoints, that is between the Dis-play Station and itself.
Port	This is the TCP port which the Kitchen Ser-vice is listening on for incoming requests. The default port number is *17750*.
Utility Log link	If you click this link, the utility log file opens in Notepad. It shows all the activity of the running session. The results of everything done is stored there.

The Display Stations box:

New button	Click this button to create a new Display Station line in the box below.
Display Station column	Select the Display Station here. If there is a connection to the Kitchen Service, the drop-down list will show the available stations.
Screen column	If there are more than one screen/monitor connected to the computer, choose the screen number here. If you leave these fields blank, the Display Station will use the screen number value from the Display Station configuration in the LS Central setup. If you enter a value in these fields, it will override the value in the LS Central setup.
Log link	Click to open the log file for the Display Station in this line. This comes in handy if you need to examine the Display Station log file.
Delete link	Click to delete the Display Station from the configuration.

2. When the configuration is done, click **Save** in the top menu to save the configuration and create or update the desktop shortcut. The shortcuts look like this:
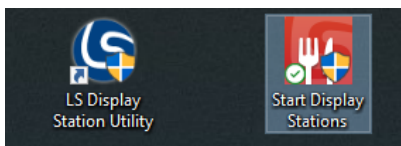
3. Double-click the **Start Display Stations** shortcut to start up all the stations in the configuration file.

    Tip: If something goes wrong, start the **LS Display Station Utility** and examine the Utility log and the logs for the Display Stations.

Service Toolbox Installation

- Run the *LS Central Service Components.exe*, found in the **Setup** folder in the installation directory.

The service toolbox adds a folder containing dlls to the Business Central **Add-ins** folder.